

The
COSMETISTE

The
COSMETISTE

EIGHTH
EDITION

Geneva Beaudoin.

April 17. (Tues)

733 1/2 hrs up to Sat Sept 1-

Geneva Socia. 1097 1/2 hrs
11320 Patton

Nails 3 sections

6 parts

111

vaso-constrictor - contracts - closes

Mayfair School

of

Beauty Culture

Thermal - heat -

Hygiene - Study of Health

Neutralizer - peroxide before tint
neutralizes

Aniline derivatives - coal tar derivatives
found in dyes.

Compound dyes - (Vegetal & mineral)

Metallic - combination of metals.
mineral

THE COSMETISTE

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2 great divisions of the Nervous system.
(posterior roots of spinal nerves - sensation)
(anterior - motor)

Cerebral spinal nerves -

Sympathetic nerves - spinal - sensory

Vascular points in unbroken skin

Sabaceous orifices of hair & hair & sebaceous glands

Nails susceptible to diseases.

Geneva Beaudoin

THE COSMETISTE

A HANDBOOK ON COSMETOLOGY WITH SPECIAL
REFERENCE TO THE EMPLOYMENT OF
ELECTRICITY IN THE CARE OF THE
HAIR, SCALP AND FACE

Mayfair School
of
Beauty Culture

92 ILLUSTRATIONS

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EIGHTH EDITION

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- Nervous System -
- 1 - {Cerebro Spinal System - (inside) - voluntary - sensation
 - 2 - {Peripheral Nervous System - (outside) - to spine & brain & {send out
 - 3 - Sympathetic - involuntary (motor) sensation

Motor Nerves - muscles, motion

Sensory nerves - throughout skin.

31 spinal nerves on each side of spinal cord.

Notes.

Polarity - enters or leaves

Pos. pole - decrease vascularity

Neg. - increases

Study of Bacteria - Domestic - General - Personal

Dermatitis - apply sweet milk or calamine lotion

Retouch 4-6 weeks.

$\frac{1}{2}$ t oil - a day

1 pt perspiration a day.

Neck - Thorax - leg - arm

Hair follicle - $\frac{1}{12}$ - $\frac{1}{16}$ inch below scalp.

Blood - nutritive fluid of the body - red, white corpuscles.

Lymph - minus red corpuscles - (diluted blood)

Plasma - transparent, slightly yellowish fluid part of the blood. or lymph deprived of its corpuscles (white)

Blood Vascular System -

Heart - vessels - & blood.

2 Branches of Vascular System
Blood & Lymph System.

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$\frac{1}{3}$ in weeks -
 hair grows $\frac{1}{3}$ inch day

Cosmetic: Beautifying, especially the complexion or hair.

ist : One professionally skilled in, or makes practice of.

Cosmetiste: One professionally skilled in the treatment of the complexion (skin) and hair of women, by means of physio-therapeutic modalities and cosmetics.

Chapter I

STERILIZATION

The student should at the outset clearly understand methods of sterilization in order that she may be fully informed as to how to protect her patrons and herself from infection or contagion when she finally enters the rank and file of this profession as a full fledged Cosmetiste.

Sterilization relative to beauty shops should justly be given a great deal of attention. The demand for clean, sanitary shops operated by efficient and well trained Cosmetistes is growing to great proportions.

It should be the aim of the Cosmetiste to follow proper methods of sterilization and to understand the use of appropriate chemicals, solutions, etc., to perform this very necessary part of her work.

The Cosmetiste is not required and in fact should not audibly diagnose any condition of skin or scalp but she should be able to recognize such in order to protect herself and patrons.

To meet these demands and to furnish reliable information relative to this subject this chapter gives concise and clear instructions showing simple and effective means for sterilization as employed in the beauty shop.

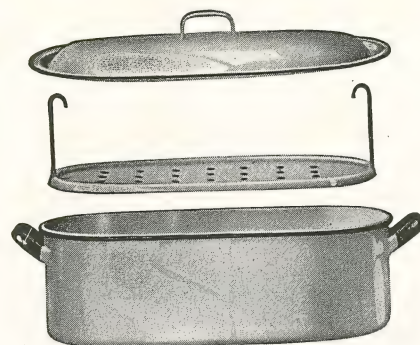


Fig. 1. Wet Sterilizer

The wet sterilizer (an enameled receptacle as illustrated) is to hold a 4% formalin solution or any of the approved germicidal solutions used for this purpose, in which combs, brushes, manicure instruments, etc., are to be immersed for at least 20 minutes.



Fig. 2. Dry Sterilizer

The purpose of this dry sterilizer is for vapor sterilization only and is a container suitable for combs,

brushes, etc., after their sterilization in chemical solutions.

MODES OF STERILIZATION

1. Moist Heat.
2. Dry Heat.
3. Chemicals.
4. Vapors.

First, Moist Heat—means steaming or boiling. Used in sterilization of instruments, towels, head bands, bandages, etc.

Second, Dry Heat—means baking. Used where moist heat would destroy articles to be sterilized. Rarely used in our work.

Third, Chemicals—means solutions used for sterilizing. Usual method employed by the Cosmetiste.

Fourth, Vapor—Method employed to keep instruments, combs and brushes, etc., sterile after they have been sterilized.

STERILIZATION OF ELECTRICAL APPLIANCES

Extreme caution should be taken in the sterilization of electrical appliances or instruments. Chemicals have a corrosive action and are likely to destroy wires, joints, connections and electrodes especially if these are of the bipolar type.

A pad of cotton saturated with grain alcohol is in most cases the safest and most economical.

Acid or alkaline solutions all have a tendency to corrode metals, destroying same or causing a short circuit.

Alcohol or stronger ammonia will neutralize such and stop corrosive action.

1 gal water - 2 1/2 oz of formaldehyde - (2% sol.)
 1 " " - 5-6 " " (4% sol.)

If uncertain as to how best to proceed safely, to sterilize any piece of electrical apparatus, better inquire of manufacturer of same for instruction.

4% SOLUTION OF FORMALIN

Water 64 oz. Formaldehyde 2 1/2 oz.

Used to sterilize combs and brushes and all instruments as manicure instruments, etc. After freeing the combs and brushes of all hair, scrub them well in hot water with yellow (laundry) soap. Then immerse them in 4% solution for a period of 20 minutes. Rinse with clear hot water, dry and place in dry sterilizer until ready to use.

2% SOLUTION

22 oz. water. 1/2 oz. Formaldehyde.

Used to cleanse hands after care of scalp and face that shows signs of infection or contagion, also for shampoo boards, enameled dishes, chairs, tables, utility stands, etc.

(1% sol.) 1 pt - 1/8 oz F
 1% SOLUTION

32 oz. water. 1/4 oz. Formaldehyde.

This strength solution is for sponging face, arm-pits, etc.

Some of the chemicals used to make solutions suitable for the use of the Cosmetiste along with the strength of each and their advantages and disadvantages are as follows:

Solution	Strength	Time	Advantages and Disadvantages
Alcohol	Full	20 min.	expensive.
Iodine	75%	20 "	effective, expensive, stains.
Carbolic Acid	95%	20 "	effective, expensive, burns.
Lysol	1%	20 "	cheap, disagreeable odor.
Bichloride of Mercury	1 to 1000	20 "	cheap, corrodes .
Formalin	4%	20 "	cheap, does not stain or corrode, has irritating fumes.

These solutions will all produce complete asepsis when used according to directions. Weaker solutions of the same chemicals, used for sterilizing, act as antiseptics. Each has a definite purpose and should be well understood before attempting their use.

RULES FOR MAKING SOLUTIONS

5 drops to one ounce 1% *60 drops one tea cup*
 25 drops to one ounce 5% *60 drops - 1 teas. full*
 8 drops to one pint 1:1000 *5 drops 1 oz or 1% solution*
 60 drops to one gallon 1:1000 *60 drops of formalin*
 1 teaspoonful—60 drops
 Ordinary Glass—8 oz. *with 60 drops or 1 cup of H₂O =*
 Teacupful—6 oz. *a 2% solution for sterilizing*
 One pint—16 oz. *instruments*
 One quart—32 oz.

BORIC ACID SOLUTION

Water 1 gallon - *1 qt*
 Boric Acid 6 3/4 oz. - *1 3/4 oz.*

Used for pads on the eyes. Diluted for use in the eye cup.

For hot packs in cases of bruises or any infection.

SODA SOLUTION

Water 1 gallon

Soda $1\frac{1}{2}$ oz.

Used for sponging face to free it of all traces of oil when employing phoresis, for bleaching or astringent effect. Used also in the Electrolytic cup in cases of extreme oiliness.

SODA CHLORIDE (SALT SOLUTION)

Water 1 gallon

Salt 32 oz.

Used in electrolytic cup for removing oil from the face, also used as a stimulant.

In all cases use either sterile water boiled 20 minutes, covered while boiling, and left covered till used, or distilled water, may be bought at drug store.

There are several germicidal and antiseptic preparations on the market that may be used by the individual shop owner. Prove their effectiveness before adopting them for use in your shop.

This is a good lotion for sponging face after using creams but does not remove *all* traces of oil.

FINISHING LOTION

Aromatic spirits of Ammonia, 1 dram

Oil of Lavender flowers, rose, violet, or any desired odor, 30 drops.

Baking Soda, 2 teaspoonfuls.

Distilled water, 1 quart.

Directions for making—Add oil of flowers to ammonia, pour into water, then add soda and shake well. Then filter until clear.

Filter paper may be had at drug store.

Place large funnel in gallon bottle and line with filter paper. Pour solution to be filtered through as many times as is necessary to make the solution clear. All solutions are better filtered several times.

Bernay tablets or Germitabs are excellent antiseptics. Four tablets to a quart of water.

Chloro-Zol put up in capsule form. Add contents of one capsule to one pint of water.

Chloro-Zol may be used in wet sterilizer if desired.

Always remember that yellow soap (laundry soap) and hot water is one of the best antiseptics we have and may be used in washing hands, combs, brushes, towels, head bands, etc. Then immersing all instruments into a 4% formalin solution and leaving them twenty minutes and then rinse in boiling water, dry and place them in a dry sterilizer where the vapors or fumes of clear formaldehyde or any approved solution are kept, they will remain sterile until ready for use. The addition of about one-half ounce of glycerine to an ordinary glass of 4% formaldehyde solution will prevent corroding of the metal instruments.

Place a porcelain tray with either blotting paper or cotton saturated with Formaldehyde in a dry sterilizer and close and keep it closed air tight.

A FEW QUESTIONS AND ANSWERS

1. Q. Why is sterilization necessary?

A. To protect our patron and ourselves and to prevent the spread of disease generally.

2. Q. Explain the difference between germicidal and antiseptic?

A. Germicidal, destruction of germs. Antiseptic renders them inert or inactive and prevents their growth.

3. Q. How long are instruments, towels, etc., sterile after sterilizing them?

A. Just so long as they are kept in sterile containers.

4. Q. Is hot soapsuds a good antiseptic?

A. Yes. Especially if yellow (laundry) soap is used, as alkali in soap with hot water kills bacteria.

5. Q. What is the cause of infection?

A. Bacteria or germs entering the broken tissue or abrasion in the skin or absorbed by the mucous membrane. However, if the blood is kept pure by the use of proper foods, exercise, etc., the blood will absorb the bacteria or germs and shortly annihilate them.

6. Q. Will freezing destroy bacteria?

A. No but it does retard their growth.

7. Q. What effect does light have on germs?

A. Sunlight exerts a distinct bactericidal effect and the electric lights now so generally used for the treatment of disease, if they are of the proper construction and applied in the correct amount of wattage or candle power and for a definite length of time, add very materially to the treatment of germ conditions. Heat is the standard and universal method of bacterial destruction.

8. Q. What course would you pursue if it became necessary for you to disinfect your shop?

A. Make inquiry of the Board of Health of your city or of your own physician and follow their instructions explicitly. Although you may be perfectly cognizant of all the rules to follow, this would avoid any further controversy of the matter.

9. Q. How would you sterilize combs and brushes?

A. Remove all loose hair from the combs and brushes, wash them thoroughly in strong yellow (laundry) soap and hot water. Then immerse in 4% formaldehyde solution or any of the solutions approved for this purpose for 20 minutes, remove from solution, rinse in clear water and dry thoroughly. Place in dry sterilizer until ready for use.

10. Q. How to sterilize metal instruments?

A. Cleanse as described for combs and brushes or in 60% alcohol, wrap in sterile gauze and keep in sterilizing compartment till ready for use. Remember that metal corrodes and rusts easily so be careful that they are thoroughly dry before wrapping them. The addition of $\frac{1}{2}$ oz. of glycerin to 8 ounces of solution will prevent rusting to a certain degree.

11. Q. How would you disinfect the hands?

A. Scrub well in yellow (laundry) soap and hot water, thoroughly clean the nails. If it becomes necessary to further cleanse the hands after caring for a patron that shows signs of infection or contagion a 2% solution of formaldehyde or a 1:1000 solution of Bichloride of Mercury or any of the approved solutions may be employed.

BACTERIA

Bacterium is the lowest form of the vegetable kingdom consisting of a single cell; its basic principles are protoplasm, its requirements are heat, moisture and food. Bacteria are germs. Bacteria are divided into two classes; saprophytes, those which feed on dead organic matter and are highly useful in maintaining the chemical balance between the animal and the vege-

etable kingdoms and parasites or pathogenic bacteria which feed on the living body and produce disease.

This division is not absolute however as many saprophytes may become poisonous, for instance if they gain entrance to an already infected area and feed on the dead organic matter present. Under these circumstances they will cause a worse condition by producing poisonous substances. It is necessary that the bacteria be pathogenic in order that infection take place.

Bacteria may be present in great numbers in various parts of the body and yet an infection may not take place as they must find favorable environment to their nutritional requirements. The resistance of the individual attacked must be sufficiently weakened to permit of their development. They must also invade the area in large enough numbers to accomplish this.

Bacteria differ very much within the same species as to degree of their power to cause disease and must be especially virulent.

The field must be favorable to their growth and multiplication and this requires light, moisture, oxygen, temperature and the presence of chemical poisons.

Light hinders and retards their development, direct sun-light proving quickly fatal, the blue and violet rays being the most deadly.

Moisture is essential to their growth and multiplication.

The reaction of bacteria to oxygen varies. While most bacteria thrive best in the presence of free oxygen some get their oxygen through preliminary reduction of organic compounds.

Temperature is one of the most important factors in controlling the development of bacteria. Below a

certain temperature their growth will not occur. Above this minimum an increase in their growth is evident until a certain degree is reached and above this maximum growth ceases and when a still higher temperature is reached destruction of bacterial life is entire. Different types of bacteria vary as to these degrees of temperature.

The bacteria range in size but when we realize that some 400 million of average size could be packed into a grain of granulated sugar some idea of their smallness may be comprehended.

As a rule the shape of bacteria is either spherical or round (coccus) rod-like (bacillus) curved or spiral (spirillum) so it will be noticed they are like tiny balls, sticks or corkscrews.

They multiply by splitting in half but they are often found in pairs (diplococci) chains (streptococci) and groups (staphylococci).

Food supply, moisture and a favorable temperature are the three conditions which chiefly govern bacterial life and under these conditions bacteria will abound.

In soil the amount of bacterial life varies according to organic food and moisture.

In water their numbers vary with the extent of recent contact with the soil and of sewage contamination.

The bacteria are present in the air only as they have been dried and wafted about by wind currents, etc. On the high seas and remote mountain regions germs are found in very small numbers.

On the surface of the human body bacteria are found in abundance. On the warm moist mucous membrane they are still more abundant, also in the food accumulation between uncared for teeth.

The absolute necessity of care of the body is thus realized.

The infective agent in practically all the bacterial diseases of man is discharged in the excretions of the body such as the kidneys, intestines and sudoriferous and sebaceous glands or elimination of the skin.

The necessity of the daily bath and the correct foods to control this elimination is plainly recognized.

More and more we are realizing the necessity of extreme cleanliness especially in the care of the shops where beauty culture is done and of every one performing this practice.

"CLEANLINESS SHOULD BE OUR WATCHWORD".

Amotile Bacteria—Bacteria incapable of motion.

Infectious Bacteria—Pathogenic bacteria or specific infection.

Parasitic Bacteria—Bacteria which multiply in human body.

Pathogenic Bacteria—Disease producing bacteria.

Virulent Bacteria—Pathogenic bacteria which multiply rapidly.

HYGIENE AND SANITATION

In many cities and states throughout the country, health and sanitation regulations pertaining to the beauty parlor and the work done in same, have been enforced by city and state departments of health, or are being considered by them.

It is our object to so instruct the Cosmetiste that in whatever state she may want to practise her art, she will be well informed on all the necessary rules by which to abide and will be fitted to stand a State Board examination if required to do so.

In the reception room of your shop simplicity, and

a certain degree of smartness and individuality in decorations and furnishings should be carried out. A favorite color scheme may be followed, but bear in mind that carpets, furniture and draperies which collect dust, not only require a great deal of care to keep them in order but are not as easily cared for. Therefore, polished floors with small rugs or even linoleum and wicker furniture with movable cushions and drapes are much more preferable and are surely more sanitary.

Pictures, diplomas, etc., should be neatly framed and hung in the reception room, not in the booths.

The partitions should be of such material as is easily cleaned, for example, white enameled metal or enameled wood or wall board. They should allow of free circulation of air and sufficient ventilation.

The booths should be kept scrupulously clean, that includes the walls as well as mirrors, shelves, cabinets, of whatsoever kind, including chairs, containers, combs, brushes, electrical equipment, etc., especially the floors.

Directions for sterilization of these several articles are given elsewhere in this chapter.

A sufficient supply of hot and cold running water with proper sewerage should be maintained at all times.

In all dealings with the public, strict asepsis should be observed.

It is a part of your business to see that your patrons who place themselves in your care, are fully protected, and you should take all necessary precautions to protect them against infection and transmitting disease from one person to another.

Observe the rules laid down by the laws in the respective cities and towns.

All operators should observe personal hygiene. They should bathe daily to avoid body odors and linen should be changed often. In some shops, a strict rule is adhered to, of daily bathing and change of clothing.

Avoid eating foods that cause stomach odors as onions, garlic, etc., as this is very offensive to patrons.

Care of the teeth is very essential.

All operators should be garbed in clean white uniforms.

It is very important to see that plenty of clean towels, headbands, etc., are always available. These should be kept in air tight container where formaldehyde gases or other approved germicidals recommended for this purpose may be employed to keep them sterile.

There are many specially prepared cellulose products manufactured to-day, which aid materially in sanitary work in the beauty shop.

The subjects of sterilization, sanitation and hygiene, are so thoroughly covered in this book, that if you study it well, and observe the methods herein recommended, you will be repaid and feel that you are doing your part toward raising the standard of your profession to a higher plane and have the satisfaction as well, of knowing that your patrons have been given the protection against infection to which they are rightfully entitled according to all the laws of hygiene and sanitation.

REVIEW

1. Define sterilization.
2. Why is it necessary to sterilize?
3. How many modes of sterilization are there?
4. Explain how each one is used.
5. Name solutions used for sterilization.
6. Name solutions most suitable for the use of the Cosmetiste.
7. Name some of the advantages and disadvantages of certain solutions.
8. How do you sterilize electrical appliances?
9. Define each of the following words: Bacteria, Antiseptic, Aseptic, Contagion, Deodorant, Germicide, Hygiene, Infection, Inoculation, Pathogenic, Sanitation, Toxic.
10. How do you sterilize hands, nails, combs and brushes, instruments, towels, headbands?
11. What is meant by wet sterilizer? Dry sterilizer?
12. What advice given in Hygiene and Sanitation?
13. How are the different solutions employed in the practices of the Cosmetiste?
14. How do you sterilize the skin?

NOTES

Deodorant.
4 parts of distilled water
1 " aluminum chloride
Apply with cotton
(Ask druggist to mix it (125))

THE COSMETISTE

Chapter II

FOOD

It is not our intention to go deeply into the matter of foods and their values; if you are not perfectly well and wish to know what you should eat you can do no better than consult the Food Table at the end of this chapter on page 44.

No one genuinely desirous of treading the road to health, success and happiness can afford to be without same. They will safely guide one through the maze of ignorance concerning food values and make it possible to enjoy the advancing years of life without reflection on bitter experience.

Having personally verified the value of the tables given, I do not hesitate to recommend the observance of same.

All foods may be divided into acid and base forming foods, and the acid formers are those which produce acidosis, known medically under various names such as anæmia, malnutrition, neuritis, nervous prostration, pellagra, rheumatism, tuberculosis, etc. This condition of acidosis may be feeble or violent and between these two extremes it can register a hundred degrees of intensity, each of which is given a different name by the doctor, depending on what organ or gland of the body is most affected.

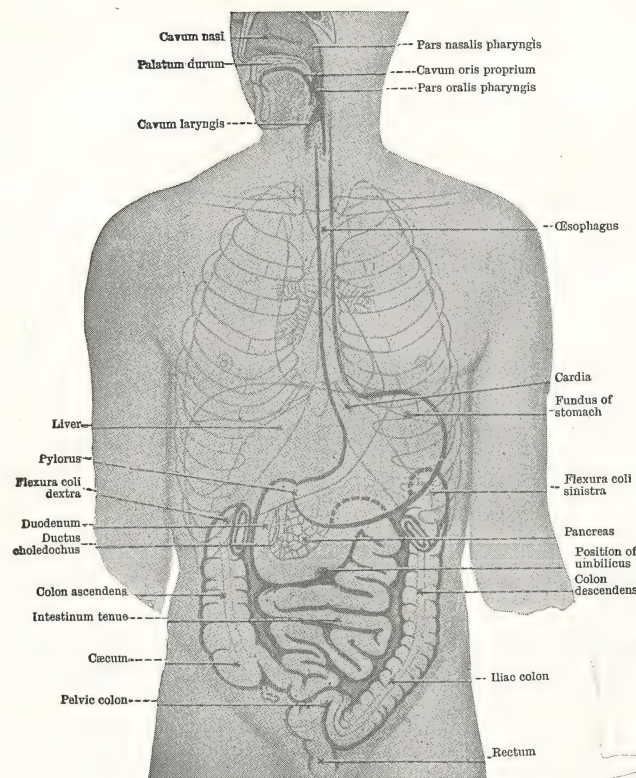


Fig. 3. Alimentary Canal

The chief acid formers of today are meat, including fish and fowl, white sugar, white flour and its bread and cake products, white rice, starches and eggs. All refined foods are of the acid producing kind.

When the acids manufactured in the body, such as lactic acid, uric acid, carbonic acid, phosphoric acid and sulphuric acid are allowed to remain unneutralized through some failure of life's processes, they attack the tissues.

The food minerals and vitamins upon which life depends must be in the food man eats, that his body may take them from that food.

If you are pale or anæmic, if your energy is quickly exhausted, if you feel all run down and little like undertaking the commonplace duties of the day, **LOOK TO YOUR FOOD.**

It has been shown that the liver has three times as much work to do on a meat diet as on a meatless diet.

**WE ARE OLD WHEN WE ARE TIRED.
OLD AGE IS A STATE OF CHRONIC
TIREDNESS.**

Fatigue is produced by chemical changes of an acid character in the tissues.

Extreme fatigue, whether nervous or physical, produces a change in temper causing irritability and often overpowering the noblest qualities.

The skin of anæmic women is white.

The flesh of anæmic women is flabby.

The muscles of anæmic women lack tone.

When iron is withdrawn from their blood, the roses vanish from their cheeks. Cosmetics applied from the outside, deceive neither God nor man.

There are no whoops of joy, no outbursts of bouyant energy, no cries of bounding gladness, no hops, skips or jumps, no fountains of eternal youth, vigor, life or health in a bottle of beef, iron and wine, or a box of rouge.

That the people are beginning to wake up to the danger of a devitalized diet and the disastrous results following in its wake is evidenced by the increasing demand for whole wheat bread made from whole wheat from which none of the valuable minerals so needed in the human system have been extracted.

White flour and its products, such as bread, rolls, cake, gravies made with same, is nothing but a broken staff and if you lean upon it you will have broken health. Many think they are improving white bread when they toast it, but this does not change its lack of nourishment. Rye bread made from white rye flour from which the valuable mineral elements have been carefully bolted out in the milling process, belongs in the same category.

White or polished rice such as is ordinarily offered for sale, has been robbed of its valuable mineral elements to be found in the brown coating of natural brown rice. That is one reason why white rice when fed exclusively will cause the condition known as beriberi, starving the blood and tissues until they can no longer resist the germ of disease. Potatoes from which the skin has been removed prior to cooking or frying, likewise lack the valuable mineral salts to be found in the skin and because of the starches found in the body without the mineral salts and cellulose found in the outer and inner skin, will cause acidosis. Potatoes should be eaten baked or cooked with the skin.

If your condition is anæmic, avoid fried potatoes. A spoonful of mashed potatoes with some greasy gravy made up with white flour or starch to thicken it, may be a filler, but will not furnish vitality.

White sugar, robbed of its mineral salts, principally its calcium salts will, when taken into the human system, rob the blood stream of its calcium and the blood in turn will rob the bone structure, making same even in young people brittle and porous like the bones of old people. Naturally, the teeth will be attacked at the most vulnerable spot, the apex or root

end, causing early decay and resulting in dentist's bills. That candies come under this same category is to be understood.

There are plenty of natural sweets to satisfy the needs of the body, such as figs, dates, raisins, honey, old fashioned brown sugar.

Fresh fruit is one of the most valuable allies to combat disease and all of them are rich in vitamins. Do not get the idea that fruit acids are acid forming, no, it has been proven conclusively that fruit acids overcome acidosis. Dried fruit is also wholesome, but care must be taken when buying same to ascertain if this has been sulphured or bleached, and even figs and the white Sultana raisin are likely to have been subjected to this process to get an even color. Eating fruit so sulphured or bleached with sulphurous acid has a dire effect upon the kidneys.

With the exception of prunes, currants and dark raisins, practically all dried fruits including crystallized ginger root, candied fruit peel, fancy figs, dates, maraschino cherries, dried mushrooms, etc., are all bleached unless otherwise stated on the container.

The use of foods and appetizers put up with vinegar, which is nothing but acetic acid, is also to be prohibited. The juice of lemons is far superior in flavor and is beneficial to the system.

VEGETABLES

Investigation has shown that among anæmic people, the anæmia is closely associated with intestinal putrefaction and that an improved condition of the blood quickly follows upon an increased use of vegetables.

There is abundant proof that the salts contained in same, aid in bringing the blood up to normal and thus

fortify the tissues against disease, provided such vegetables are eaten raw or if boiled, the water is not thrown away, for it has been proven that boiling extracts most of the salts and whereas the residue of fibre is valuable in promoting the cleaning of the intestines, it is the whole of the vegetable that is needed, not one part of it only. Rarely, not often, does an individual present an idiosyncrasy against vegetables.

A warning must also be given as to canned vegetables. Never eat such as have stood in their juice in open cans for any length of time. They should be removed from the cans as soon as opened.

Where the body has been abused with a diet mostly all acid-forming, correction must be made by substituting the alkaline or base-forming foods and thereafter keep the diet at least balanced.

Meats should be eaten with green leafy vegetables like lettuce, celery, etc., likewise potatoes and other starchy foods, never meat and potatoes together, for we have here two acid formers which cannot be balanced by the small dish of vegetables usually served and possibly spoiled by the addition of vinegar.

For a general health rule; two glasses of hot water on rising in the morning, followed a half hour later by the juice and fibre of an orange, with a cup or two of luke warm milk is quite sufficient for breakfast to maintain you in top notch condition.

The wide-mouthed full-lipped person will not think this sufficient and so she will want a full meal, with coffee or tea as stimulant to overcome the comatose condition consequent of the heavy breakfast. Persons with protruding or spread teeth will eat more than they can digest and gastric disturbances with

consequent irritability and inefficiency will follow as the result.

If you have a so-called sweet tooth for candy, etc., don't kick if you suffer from catarrh. A glass of milk in the forenoon with a little fresh fruit may be desirable.

A light luncheon, deferring the heaviest meal of the day to dinner in the evening, will allow you to do a maximum amount of work. McFadden's book, "Eating for Health and Strength" and a careful study of physical culture exercises will teach you what to eat and how to exercise. Do not think that your daily work brings the needed exercise. The majority of muscles remain idle and need to be exercised to maintain balance.

In conclusion it may be said that while for those who are enjoying perfect health, a partial meat diet with three or four meals per week, involves no risk, those who wish to overcome the various conditions mentioned in this book, where a change of diet is suggested, had better follow these rules as the quickest road back to health.

THE CIGARETTE AS RELATED TO DISEASE, MORTALITY AND NATIONAL LIFE

What is said here about the effect of smoking on men and boys, applies equally to women and girls and with results far more consequent.

The statements following are taken from an article appearing in the Medical Times in April, 1916—by D. H. Kress, M.D.

Numerous experiments have in the past been conducted for the purpose of ascertaining the effect of the smoke of burning tobacco or nicotine, upon animal

life. That nicotine, the constituent of all tobacco smoke, is sufficiently toxic to kill in minute doses, has been many times demonstrated.

In taking up the study of the cigarette, we have to do not merely with tobacco and nicotine, but with products which are added to tobacco in the manufacture of cigarettes, and the paper in which the tobacco is rolled. The smoke of the cigarette is derived from the burning of a combination of tobacco, paper and glycerin, and various unknowns which are added purely for commercial purposes. Some of the products added are harmless in themselves, but the aldehydes which are developed by their combustion are exceedingly harmful. The aldehydes present in the smoke of the cigarette are responsible for much that has in the past been ascribed to nicotine. One of Thomas A. Edison's assistants, in conducting experiments in his laboratory, chanced to inhale the fumes of burning glycerin with almost fatal results.

Mr. Edison has analyzed the smoke of a great many cigarette papers and he claims that he found the aldehyde, known as acrolein, present in every case. He attributes the injury resulting from the use of cigarettes chiefly to this agent. He says: "The injurious agent in cigarettes comes principally from the burning paper wrapper. The substance thereby formed is called 'Acrolein.' It has a violent action on the nerve centers, producing degeneration of the cells of the brain, which is quite rapid among boys. Unlike most narcotics this degeneration is permanent and uncontrollable."

The London Lancet, in referring to its findings three years ago in the examination of the smoke of the cigarette said:

"To aldehydes the poisonous effects of crude, immature whisky are ascribed, although they occur in relatively small quantities, *but the furfural contained in the smoke of only one Virginian cigarette may amount, according to our experiments, to as much as is present in a couple of fluid ounces of whisky.* Furfural, the principal aldehyde, which we have found present in marked quantities in the cigarette smoke of a very popular tobacco, is stated to be about *fifty times as poisonous as ordinary alcohol*, and small doses cause 'symptoms of transient irritation, such as ataxia, tremors and twitching,' while in adequate quantities furfural 'gives rise to epileptiform convulsions, general muscular paralysis, ending in paralysis of the respiratory muscles.'"

Cigarette smoking is common in England. The practice was introduced into England somewhat earlier than into America. The results are therefore possibly more apparent. The average British workman is a poorly developed, ambitionless subject. Three-fourths of the applicants for the army and navy were in the past rejected as unfit. Nearly all of them exhibited the stain upon the fingers, of the cigarette.

General Lyttleton, in referring to the recruits of the army and navy says they are physically immature and of an exceedingly low order of intelligence.

He says further:

"The cigarette is playing havoc with the British army, and if something is not done soon, Great Britain will be defended or rather, left undefended by a collection of weak-minded and weakbodied youths, capable of no real effort of any kind."

As for America, "We are now a nation of smoke inhalers."

"The earlier in life the habit is formed, the greater is the injury sustained"—

"A pulse tracing which I took showed the heart in a most defective condition."—

The classes of diseases, as headache, disordered digestion, malaise, it is said, diminished at least one-half in the first three months after the order to stop smoking, went into effect.

The Secretary of the Navy recently said that only one out of every six of the applicants for the navy were accepted. The young men who were rejected were not considered infirm by their friends. They were volunteers. They were young men who thought they were in health, and were unconscious themselves of having any physical infirmity.

Life insurance companies each year find they have to reject more and more of the applicants for insurance.

Insurance companies also find it necessary each year to reject a larger percentage of middle-aged men who apply for life insurance, owing to the presence of organic diseases.

It is generally recognized that any habit of life which places an extra tax upon the kidneys, heart or other vital organ, wears them out prematurely. Among such habits the use of cigarettes as practiced today from youth up, now holds first place.

Insurance companies reject cigarette fiends as poor risks. A careful study of six Canadian insurance companies found the mortality rate of non-smokers to be 59, and that of moderate smokers 93.

Dr. Robert N. Wilson of Philadelphia, in an article in the New York Medical Journal of September 11, 1915, from an exhaustive study of tobacco as a factor in diseases of degeneration says: "It is my confident belief that between tobacco now in the general use and abuse, and the various forms of food toxemias, can be divided the responsibility for the vast amount of arteriosclerosis that is not attributable to syphilis and old age."

A tobacco crippled heart cannot stand the extra strain that is placed upon it in these diseases and is apt to fail up.

In the Phipps Institute of Philadelphia it was found that the mortality from tuberculosis is greater among smokers than it is among non-smokers.

The chief injury comes not from smoking cigarettes, but from inhaling the smoke.

Fleig found that by continuous exposure of guinea pigs to tobacco smoke, not one of the number thus exposed developed into normal and healthy animals. He also discovered that when a pregnant mother was exposed to smoke, the young were either born dead or dwarfed and far beneath the normal weight.

In the city of Vienna, where women are employed largely in cigarette manufactories, only seven children out of each one hundred born, manage to reach the first year of life. The mortality among them is 93%, while in the city it is but 35%.

Dr. Herbert Tidswell of England, in observing a large number of families of smokers and non-smokers, found that abortions were more common among the wives of smokers than among the wives of non-smokers. The smokers' wives also suffered from a higher degree of sterility.

FOODS ADDENDA

We add herewith two tables of foods, table No. 1 listing those foods which are predominantly acid, and No. 2 such as are alkali-producing or acid neutralizing.

These tables are from an article by Chas. E. Stewart, M. D., Battle Creek, Mich.

Cranberries, prunes and plums are listed in Table No. 1, for while the ash is alkaline, they contain substances which form hippuric acid in the body.

In Table No. 2, those foods marked with an asterisk, have been found especially efficient in reducing the acidity of the body. Auto-condensation, a form of high frequency electric current, is also a valuable adjunct in the hands of a competent physio-therapist.

Table No. 1
ACIDITY OF CERTAIN FOODS
Per Hundred Grams

Bread, white	2.7
Bread, whole wheat	3.0
Corn, sweet, dried	5.95
Crackers	7.81
Cranberries	*
Eggs	11.10
Egg white	5.24
Egg yolk	26.69
Fish, haddock	16.07
Fish, pike	11.81
Meat, beef, lean	13.91
Meat, chicken	17.01
Meat, frog	10.36
Meat, pork, lean	11.87
Meat, rabbit	14.80
Meat, veal	13.52
Oysters	30.00
Oatmeal	12.93
Peanuts	3.9
Prunes, Plums	*
Rice	8.1

Table No. 2
ALKALI-PRODUCING FOODS
Per Hundred Grams

Almonds	12.38
Apples	3.76*
Asparagus	.81
Bananas	5.56*
Beans, dried	23.87
Beans, lima, dried	41.65
Beets	10.86
Cabbage	4.34
Carrots	10.82
Cauliflower	5.33
Celery	7.78
Chestnuts	7.42
Currants, dried	5.97
Lemons	5.45
Lettuce	7.37
Milk, cow's	2.37
Muskmelon	7.47*
Oranges	5.61*
Peaches	5.04
Peas, dried	7.07
Potatoes	7.19*
Radishes	2.87
Raisins	23.68
Turnips	2.68

REVIEW

1. Why should we choose our food with great care?
2. Name some of the chief acid forming foods.
3. What are some of the results of the use of too much meat?
4. Why avoid white sugar, polished rice and all bleached foods?
5. What foods would you use in place of afore mentioned?
6. What natural sweets may be indulged in with safety?
7. Why should fresh fruits be freely indulged in?
8. Is vinegar good in food? Why not?
9. What advice would you give your patron as to food?
10. What are some of the effects of cigarette smoking?

Chapter III

THE BONES OF THE HEAD, FACE, ARM
AND HAND.

BONES—The hard tissue forming the frame work of the body.

The skeleton, the hard, bony framework of the animal body or of an adult man or woman is made up of some two hundred bones, the number depending on the age of the individual. There are about eight more bones in the infant than in the adult. These bones grow together as maturity is achieved. The twenty-eight bones in the skull of an infant become twenty-two in the skull of the adult and sometimes they grow to still less in number in the skull of the very old.

✓ Its functions are, it serves to preserve the shape of the body, forms cases for the protection of the vital organs and gives attachment to muscles and forms levers of movement.

A section of bone is composed of two kinds of tissue. The external, which is dense like ivory, termed compact tissue. The internal, a spongy tissue resembling lattice work, called cancellous tissue.

The composition of the bone is 67% earthy matter and 33% animal matter. If there is a deficiency in the earthy matter a condition of rickets, caries, etc., exist.

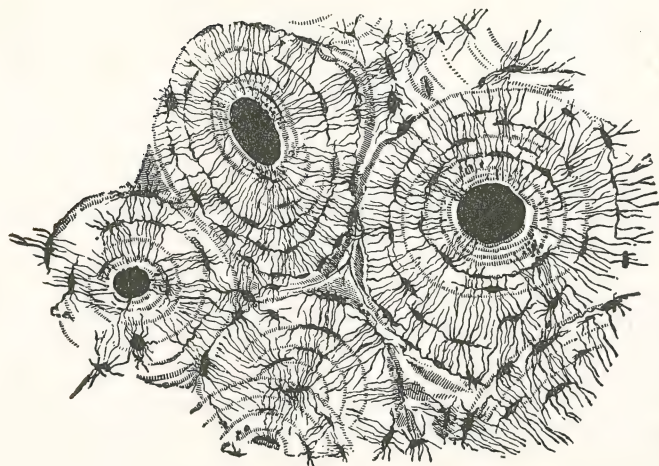


Fig. 4. Transverse section of compact tissue bone. Magnified.

The color of the bone is light pink externally and deep red within.

The bones receive their blood supply through the periosteum, a fibrous membrane in which the bones are enclosed. The chief function of this periosteum is to protect the bones from injuries. It acts as a shock absorber.

The periosteum, by means of a network of blood vessels carries nutriment to the bones and waste matter can be eliminated.

Nerves are distributed freely to the periosteum and accompany the nutrient arteries into the interior of the bones.

This does not furnish all the nourishment of the bones, however, as you will notice that the bone gets softer as it nears the center where is found the "medullary canal" or the marrow of the bone which carries nourishment to every part of the bone.

The marrow is the birth place of the red blood corpuscle so you can readily see that the function of the bone marrow is of utmost importance.

The long bones are supplied by a nutrient artery which supplies the marrow with blood.

The layers of bone are separated from each other by small spaces called lacunae. Passing through the bony layers and connecting the lacunae are many fine channels which serve to convey nourishment to the bone cells.

The ends of the bones are made smooth by layers of cartilage, a fibrous tissue which has no blood vessels but is nourished by lymph which filters through it by means of small spaces and canals resembling closely the lacuna and canaliculi of bone. A non-vascular elastic tissue softer than bone.

The bones of the head, arm and hand are the bones which mostly concern the Cosmetiste.

The skull is divided into the cranium and the face.

The cranial bones, eight in number are: one occipital, two parietal, one frontal, two temporal, one sphenoid and one ethmoid.

The occipital bone forms the back and under part of the skull. It is perforated by a large opening which transmits the spinal cord to the spinal canal from which rises the occipito-frontalis muscle. The cerebellum rests on its inner or upper surface; the external surface gives attachment for the muscles.

The parietal bones form the sides and top of the cranium joining in the median line and being placed between the occipital bone behind and the frontal bone in front.

The frontal bone forms the forehead also the roof of the orbit on the upper surface of which rests the

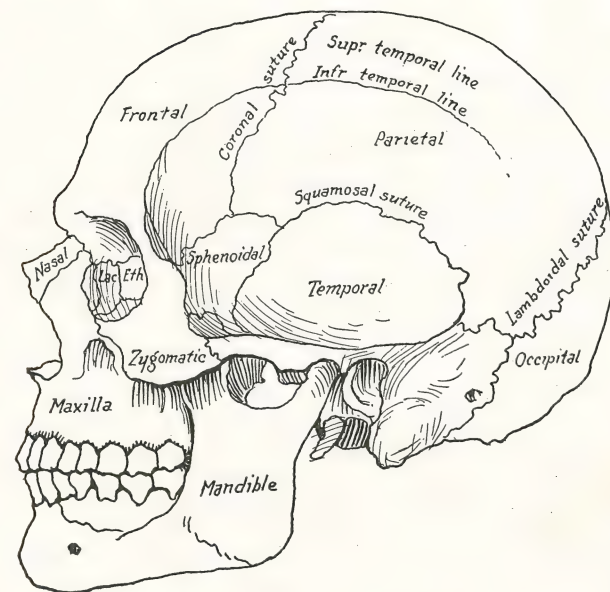


Fig. 5. Side view of the skull

brain. The corrugator muscle rises from the frontal bone.

The orbital plates are separated by the ethmoid bone which is spongy and filled with perforations which transmit the nerves of smell to the nose.

The temporal bones consist of a squamous or scale-like portion which overlaps the parietal bone and a petrous or stony portion which helps form the floor of the cranium. The petrous portion lodges in the internal and middle ear.

The sphenoid bone resembles a butterfly in shape. It is the keystone of cranial architecture binding the bones of the head firmly together.

The facial bones, fifteen in number are:

- 1 Two nasal bones forming the bridge of the nose.
- 2 Two superior maxillary (the upper jaw).

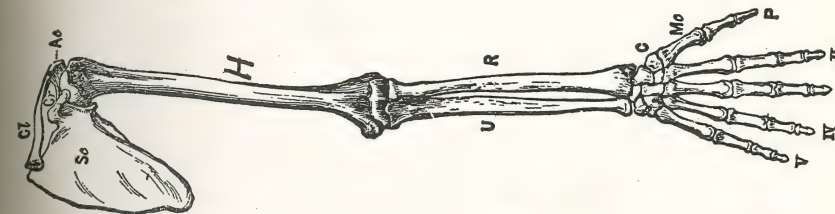


Fig. 6. The appendicular skeleton of the left upper limb. Cl. clavicle; Sc. scapula; Ac. acromion process; Cr. coracoid process of scapula; H. humerus; R. radius; U. ulna; C. opposite the eight carpal bones; Mc. opposite the five metacarpal bones; P. pollex, or thumb; II. index, III. middle, IV. ring, V. little finger.

- 4 Two lacrymal, forming a portion of the inner wall of the orbit.
- 5 Two zygomatic malar or cheek bones.
- 6 Two palate bones forming the back part of the roof of the mouth and the corresponding portion of the floor of the nose and the floor of the orbit.
- 2 Two inferior turbinated bones which are scrolls of bone placed in either nostril.
- 3 One vomer forming the partition between the nostrils.
- 7 One inferior maxillary mandible (lower jaw) horseshoe in shape which joins with the temporal bone above and being freely movable below to permit of its use in talking, chewing, etc.

¶ One hyoid bone, this is U-shaped, situated in the neck just above the larynx and gives attachment to many muscles of the tongue and throat.

BONES OF THE ARM

One humerus or armbone which consists of a long cylindrical shaft, having a rounded head above for articulation with the scapula and a broad flattened lower extremity for articulation with the forearm bone.

In the forearm: Two bones, one ulna, one radius.

The ulna lies on the inner side of the forearm when the palm of the hand faces upward. The upper extremity which joins the humerus has two processes, the olecranon, forming the point of the elbow and coronoid process which completes the hinge joint of the elbow in front.

The lower end of the ulna is small and does not articulate with any bone of the wrist.

The radius lies on the outer side of the forearm. It has a cup shaped head for articulation with the humerus. The rounded edge of the head fits in a concavity of the ulna and is surrounded by a sling-like ligament which allows its head to rotate. The lower extremity is larger and is hollowed out to fit the wrist bones.

The wrist.

The wrist or carpus consists of eight small bones in two rows.

Upper row: navicular or scaphoid bone, the lunate or semilunar, the triangular or cuneiform and the pisiform bone.

Lower row: the greater multangular or trapezium, the lesser multangular or trapezoid, capitate or magnum and the hamate or unciform bone.

The hand.

The hand consists of five short cylindrical bones called the metacarpal bones to the lower extremity of which are attached the finger bones or phalanges, there being two for the thumb and three for each finger.

The bones are not anywhere near as inclined toward development to the extent that the muscles are, but there is a vast difference between the bony structure of one who develops himself through physical exercise and one who does not.

You will also find that one who enters into this activity will react more readily to injuries, bruises or strains than the individual who does not pay attention to this physical development.

REVIEW

1. Define bones.
2. Define skeleton.
3. How many bones in the individual skeleton?
4. Is there ever any distinction in the number of bones in the infant and the adult?
5. What bones frequently unite later in life?
6. What is the function of the bones?
7. Of what is a section of bone composed?
8. What percentage?
9. What is the color of bone?
10. From what source does the bone receive its blood supply?
11. What is the function of the periosteum?
12. From what does the bone receive its nourishment?
13. Define marrow.
14. Define lacunae.

15. Define cartilage.
16. How many bones in the human skull?
17. Name the cranial bones.
18. Name the facial bones.
19. Name the bones in the arm, wrist and hand.

NOTES

Os
The bones in the wrist are:

- 1- scaphoid
- 2- semilunar
- 3- cuneiform
- 4- pisiform

- 5- trapezium
- 6- trapezoid
- 7- Os Magnum
- 8- Unciform

NOTES

THE COSMETISTE

Chapter IV

BLOOD

DEFINITION

The blood is the nutritive fluid of the body that flows through the veins and arteries. The blood is the vascular system.

There is a constant interchange in this fluid to supply the materials necessary to the different cells.

The blood is red in color, very red in the arteries and of a bluish tinge in the veins. It is sticky to the touch, is salty to the taste and has a peculiar odor.

The normal temperature of the blood is 98 degrees. It represents about 1-16th of the body weight. The functions of the blood are as follows:

1. To carry water to the tissues.
2. Also oxygen to tissues.
3. Carries waste products of the tissues to the eliminative organs.
4. It carries secretions of the numerous organs of the body to the tissues that need them.
5. Aids in protecting body from infection.
6. Assists in equalizing outside temperature of the body.
7. It is antiseptic and helps to heal all abrasions of the skin.

The blood is composed of small solid particles known as corpuscles or cells that float in a fluid, called plasma.

A cell is a mass of protoplasm containing a nucleus or essential part, both nucleus having arisen through the division of the corresponding elements of a pre-

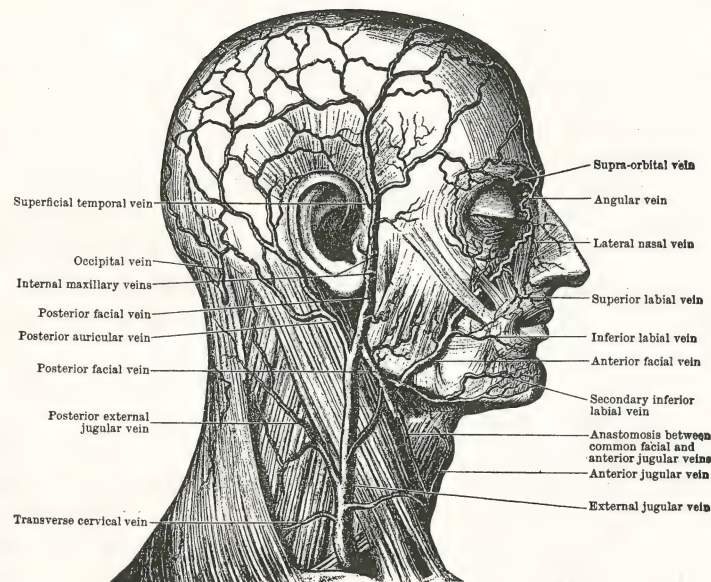


Fig. 7. Blood Vessels of the Head and Face

existing cell. It is a unit mass of protoplasm. (The material which forms the essential constituent of a living cell.) Capable under suitable conditions of performing the vital functions of metabolism growth and reproduction. When cells have reached their limit of growth, division takes place, the process, in the majority of cases being of an exceedingly complicated nature.

Plasma is the transparent, slightly yellowish fluid part of the blood, or is lymph deprived of its corpuscles.

Corpuscles are the solid portion of the blood.

The blood circulates through the body by means of tubelike vessels known as arteries and veins and it is in constant motion due to forces exerted by the heart, the larger arteries and veins, respiration and muscle movement.

An artery is a vessel passing blood from the heart. A vein is a vessel for returning the blood to the heart. The blood vessels of the skin are under the control of delicate nerve fibres running along their walls and these nerves are influenced by atmosphere and climatic conditions, bath and electricity, but especially do they respond to hand friction, massage and exercise.

The arteries carrying the blood from the heart to all parts of the body, have three coats, outer or aro-
lar elastic coat, a middle or muscular coat and an inner or endothelial coat.

After the blood flows through to the capillaries, it is collected by the veins, which are made by small branches joining to form larger branches and these again joining larger trunks.

The veins have three coats like the arteries but are thinner, less elastic and when empty collapse.

*carries blood
to all parts of the
body.*

They have valves at intervals to prevent the backward flow of the blood.

The main arteries that supply the head and face are the carotid arteries located on each side of the neck.

Capillaries are minute vessels which connect small branches of the veins and arteries. They form a net work in all parts of the body. The walls of the capillaries consist of a single layer of epithelial cells. Through these walls the nutriment and oxygen of the blood pass to the tissues and tissues discharge their waste in the blood.

By the time the blood stream reaches the capillaries of the skin it has lost the impelling force of the heart's beat and must therefore depend largely on external influences to keep the blood moving. The need for massage, exercise, bathing, etc., is plainly manifest. Massage accompanied by electricity is much more beneficial.

The red corpuscles carry oxygen to the tissues, they are formed in red bone marrow and spleen, are about 1-3200 of an inch in diameter and decrease in sickness.

The white corpuscles are ^{larger} about 1-2500 of an inch in diameter and increase in sickness, believed to devour bacteria present.

The red versus white corpuscles ordinarily exist in the proportion of 500 to 600 red to one white.

Blood protects the body in a great many ways.

In case of inflammation caused from injury or infection, we first notice a sensation of irritation, then an increase of blood to the parts affected, causing redness, temperature, swelling and pain.

If this condition continues, a congestion results.

The white corpuscles become very active when entering infected tissues.

If the white corpuscles are victorious in their battle, they destroy the bacteria, remove all the germs and find their way back to the blood, but if the bacteria are the victors, the white corpuscles are destroyed.

They then form the bed in which pus germs grow and form pus.

Pimples which contain pus, or pustules as they are classed in our chapter on lesions, are examples.

REVIEW

1. Define blood.
2. Name functions of blood.
3. What is blood composed of?
4. What is the normal temperature of the blood?
What is its percentage of weight in body?
5. Define plasma.
6. Define a cell.
7. Define protoplasm.
8. What are blood corpuscles? Describe them.
9. Describe just how inflammation takes place.
10. What is an artery?
11. What is a vein?
12. How does the blood circulate?
13. Define capillaries.
14. Of what benefit is massage to circulation of blood?

Blood Vascular system -
Heart - vessels - & blood.

NOTES

THE COSMETISTE

Chapter V

GLANDS OF THE BODY

A study of the glands of the body and their functions, is very necessary as a great many conditions arise in which these glands are involved.

DEFINITION

✓ A gland is an organ which separates any fluid from the blood. A secretory organ.

While we do not treat the glands pertaining to digestion we do advise with patrons as to diet, especially when treating extremely oily skin or Acne condition.

The salivary, gastric and intestinal glands secrete the various fluids necessary for the digestion of food. The kidney and sweat glands are excretory and pass waste products out of the circulation.

LYMPHATICS

The lymphatic glands vary in size and shape, some the size of a small seed, others like a bean. They are round or oval in shape. They appear at intervals in the lymphatic channels. They have the power to produce white blood corpuscles and to filter the lymph as it passes through them.

Lymph is a pale, almost colorless, slightly alkaline albuminous liquid or fluid that bathes all the tissues of the body. It is a diluted form of blood, and is only minus the red corpuscles.

The blood circulates through thin-walled capillaries and as it flows, the plasma (fluid part of the blood and lymph) is forced through and becomes mixed with the white corpuscles that are forced through by the same process; this forms the lymph.

The function of the lymph is to bathe all the tissues of the body that the blood does not reach. In this process it takes to the blood the necessary material for repair and reproduction and carries away all waste matter and returns it to the eliminative organs, where it is thrown off by the skin, if the skin is in a normal condition, therefore the lymph is rightly named, "the sewer of the body."

The interchange between blood and lymph occurs in two ways.

Dialysis and Osmosis.

DEFINITION

Dialysis—Separation of substance from a mixture through porous membrane.

Osmosis—Passing of fluids through a membrane.

The lymphatic system has no capillaries, but their spaces unite to form lymphatic vessels through which the lymph is taken to lymph glands.

The lymph vessels finally empty into the thoracic duct and this empties into the veins going directly to the heart where it is cleansed and sent out as pure, clean blood through the arteries.

A duct is a tube for the passage of secretions and excretions or a conveyance for liquids of the body.

Massage is one of the best known means for aiding the lymphatics in their work of liberating the body of its waste material. The intake of oxygen as noticed in deep breathing exercises, also drinking water adds to the oxygen in the system.

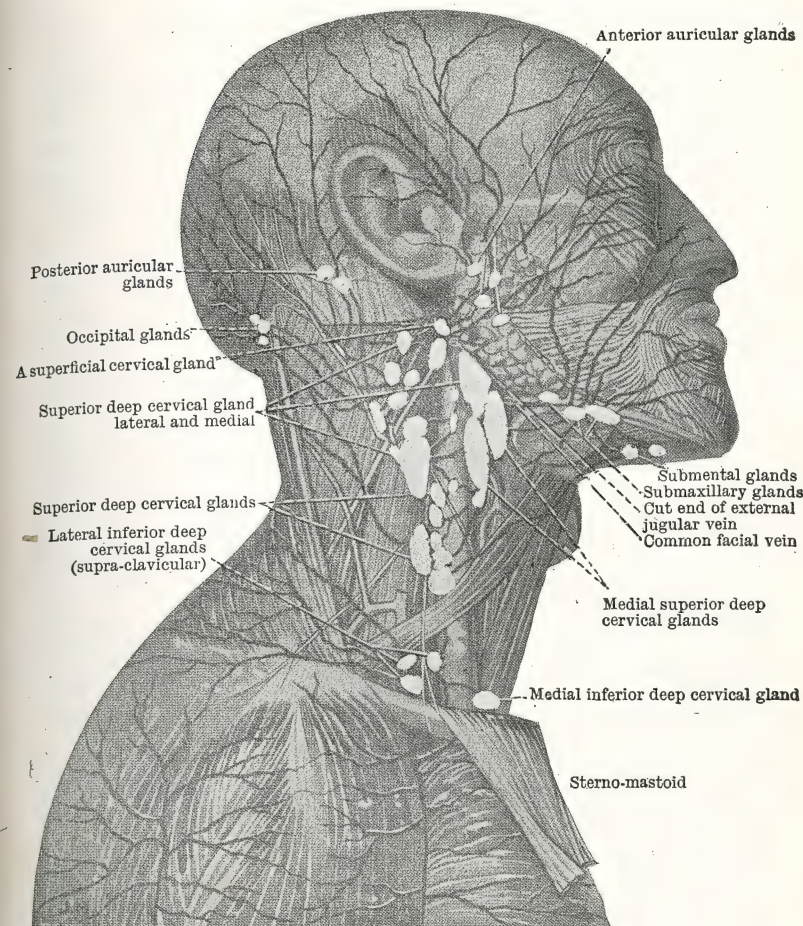


Fig. 8. Glands of Face and Neck

There are from 500 to 600 lymph glands in the human body. They occur singly or more often in groups.

The most common disease of the lymph glands is tuberculosis.

SEBACEOUS GLANDS

The sebaceous glands are the oil glands of the body. They are situated in the deeper layers of the skin and their function is to secrete oil, called sebum which keeps the skin flexible and the hair soft and glossy. There are several hundred thousand of these glands in the body.

When there is an alteration from normal, in the activity of these glands several conditions arise, namely:

Comedones, Milium, Seborrhea, Acne in all its forms, and Steatoma.

Seborrhea is in two forms: Seborrhea Sicca or dry dandruff, and Seborrhea Oleosa or oily dandruff. These conditions arise when the oil glands are not secreting as they should, either through lack of or excessive flow of oil. We find that in extreme cases of this disease, plugs of sebum can be pressed out of the pores of the scalp. ("A pore is a minute circular opening or orifice upon a free surface and is the opening of the oil or sweat glands") We also find seborrhea in the eye-brows and other parts of the body. Seborrhea is infectious. Care should be taken to wash combs, and brushes after using, also sponge hat bands, and change pillow slips frequently. Do not use combs, brushes, etc., belonging to others.

Comedones, commonly called blackheads, are fatty plugs of waste matter which obstruct the opening of the sebaceous gland, preventing the gland from justly accomplishing its duty. They may be found on any part of the body where dirt clogs the sebaceous glands, especially if the glands are inclined to be more or less inactive through faulty elimination.

Careful diet along with proper bathing is necessary to hinder the formation of these obstructions which are sometimes very hard to express. We will learn about the treatment of these unsightly blemishes in the chapter on Acne.

Milium or Milia, are small white nodules in the skin, the name being derived from the word millet, a small seed kernel. They are usually found on the face. Not painful, but very conspicuous, especially when appearing in large numbers. Usually occur in dry skin. They grow to large proportions.

They should be removed with the comedone extractor, an incision the size of the seedy formation being necessary to press them out.

Steatoma, wens, sebaceous cysts. They are round, soft enlargements of the sebaceous glands, forming a sac, containing the sebum not excreted by the glands. They are situated under the skin that is usually normal in color, other than when the wens are grown to large proportions, then the skin is stretched and appears very white.

They may be situated on any part of the body but when found on the scalp are often irritated by the combing of the hair, therefore their removal is recommended. When very small, may be treated as comedones or milia, (see chapter on Acne), but if they increase in size, should be treated by a physician.

SUDORIFEROUS GLANDS

The sudoriferous glands are the sweat glands of the body. Their importance will be most realized when we understand that the skin and its appendages take care of fully 28% of the body elimination necessary to health.

They number between two and three million. From

a pint to a pint and a half of perspiration a day is thrown off by these glands.

Any disease of the sweat glands causes either a diminished or increased flow of these secretions and is accompanied with a disagreeable odor.

DISEASES OF SWEAT GLANDS

Anidrosis—diminished, no perspiration, skin is dry, and when very hot weather prevails, skin feels as if burning.

Sometimes associated with psoriasis, erysipelas and eczema.

✓ Hyperidrosis—superfluous or overmuch, excessive. Cases where perspiration streams down face, neck and different parts of the body. *scalp perspiring*

✓ Bromidrosis—where the odor is conspicuous, becoming in some cases foul-smelling; occurs on feet, under arm-pits, etc.

✓ Uridrosis—the presence of urinous materials in the perspiration.

✓ Chromidrosis—when perspiration shows a color. Seldom seen. When the color of blood, called Hemadrosis.

Sudamen or Sudimina—whitish vesicles caused by the retention of sweat in the suderific ducts.

Miliaria Rubra—Prickly heat. Usually occurs in very warm weather, an inflammatory disorder of the sweat glands characterized by small red vesicles or papules accompanied by burning and itching. Limited as a usual thing to covered portions of the body.

Treatment: for all these conditions; exercise in open air, change your diet as this is very essential,

drink freely of water also frequent bathing is very necessary.

Massage aided by electricity, sponging of different parts of body with solutions recommended for their soothing qualities as Calamine Lotion or dusting with good medicated powders, especially antiseptic in extreme cases. The use of colored lights (Chapter XXVI) are also great aids in treating these conditions.

REVIEW

1. Define a gland.
2. What glands have to do with the digestion of the food?
3. What are the excretory glands?
4. Define lymph.
5. What is the function of the lymph glands?
6. Define Dialysis.
7. Define Osmosis.
8. How many lymph glands in the human body?
9. What is the most common disease of the lymph glands?
10. Define sebaceous glands.
11. What is their function?
12. If there is an alteration in the activity of these glands what conditions arise?
13. Define suderiferous glands.
14. What is their function?
15. How many are there?
16. Name and describe the diseases of sweat glands.
17. What aids very materially in the functioning of the glands of the body?

Chapter VI

MUSCLES

DEFINITION

Muscle is an organ which, ^{is composed of thousands of} by contracting, produces the movements of our body. They are composed of a fibrous tissue that has the power to contract, and represents about forty-five per cent of the weight of our body.

The functions of the muscles are all our movements, as running, walking, laughing, crying, working, playing, etc.

A knowledge of the muscles of the face, head and neck and the function of each is very necessary to all who massage or in other ways treat the skin.

The Cosmetiste detects a flabby skin as soon as she touches it, and knows that the muscles need to be strengthened by building up the system and necessarily correcting diet, etc., that may have been abused, or neglected through illness, dissipation or otherwise.

Any form of massage, either with or without the aid of electricity, will help to improve this condition, although the most beautiful skin in the world cannot be maintained by the operator alone. She must have

the co-operation of the patron herself in the daily care of same.

The blood supply has its part in this building up process and is very materially increased during vigorous exercise.

The amount of oxygen is increased, helping the lymph vessels to get rid of waste materials.

DEFINITION

Massage is a scientific mode of systematic manipulations upon the nude skin of the human body in a passive condition. It includes percussion, friction, kneading of the muscles, exercising the joints.

The physiological effects of massage include the incitement of the nerve centers, a healthy rise of temperature, acceleration of the blood current to the arterioles, promotion of constructive metamorphosis and the nutrition of tissues, also destructive metamorphosis, excretion of waste products and a general increase of muscular force.

Its effects upon the nervous system are soothing, and by skillful, gentle manipulation the acutest pains gradually depart.

Under the treatment of a scientific operator, morbid mental states give place to hope and cheerfulness and all the functions of the body are performed with increased energy, causing those benefited by massage to say: "Life is worth living."

The most eminent physicians in Europe and in America give massage a prominent place among topical health restoring agents. What massage really does: Improves the functions of the skin; stimulates and soothes tired nerves; strengthens muscles and

makes the tissues firmer; attracts blood to the surface thereby stimulating the lymph supply.

Destroys waste matter and in this way increases nutritive elements in the blood.

Helps to erase fine lines.

Wrinkles on the face mean that facial habits have been formed through deep thought and study, which must not be condemned, as a lineless brow does not denote much gray matter in the cranium, but rather, "rooms to let" so to speak.

We, as Cosmetistes, may help our patrons to relax and rest during their period of recreation or relaxation, while in our shop, to such an extent that the muscles and nerves will be recuperated and rejuvenated.

He or she may then feel that they have been well repaid for time spent.

Of course, lines formed by habits of doubt, fear, anger, ill-humor or sour temper may be remedied by advising your patrons to change their habits of thought, exercise and diet which will build up the body as well as the power to overcome these unnecessary lines.

The co-operation of electricity in this work is taken up at length in another chapter.

Massage will be of real help and bring about corrective results only when scientifically given.

It is impossible to place too much emphasis on this subject, especially on the attitude of the operator while doing her work.

She must love the work she is doing. Nothing within the scope of the Cosmetiste offers her efficiency as does her *ability* to give a beneficial and restful massage.

Keep your thoughts well on the work at hand. You are trying to overcome faults in your patrons face caused by overwork, overworry, dissipation, etc., so control your own thoughts, study your moods and search out your weaknesses. If you are inclined to tell people of your troubles, remember they are not concerned. So try to transmit to your patron good, clean, constructive thoughts and in return you will get the desired results. When we have learned that success must come through our ability to do our work correctly, willingly and obediently, we will find our mental efficiency so enlarged that we are able to send our patron away with the thought of contentment and a desire to return to us for further treatments.

As time goes by, we find that positions of trust and confidence are given to the constructive thinker and women who lose their temper, constantly complaining and allowing themselves to indulge in pessimistic thoughts are gradually replaced by those having ability and bright, happy dispositions.

MUSCLES OF HEAD, FACE AND NECK AND THEIR FUNCTIONS

The Epicranius or Occipitofrontalis—moves the entire scalp, wrinkles and raises eyebrows.

Levator palpebræ superioris—lifts the upper eyelid.

Orbicularis palpebrarum—closes eye.

Corrugator supercillii—draws eyebrows downward and inward, and wrinkles forehead.

Procerus or Pyramidalis nasi—depresses eyebrow.

Dilator naris anterior and posterior—dilates the nostril.

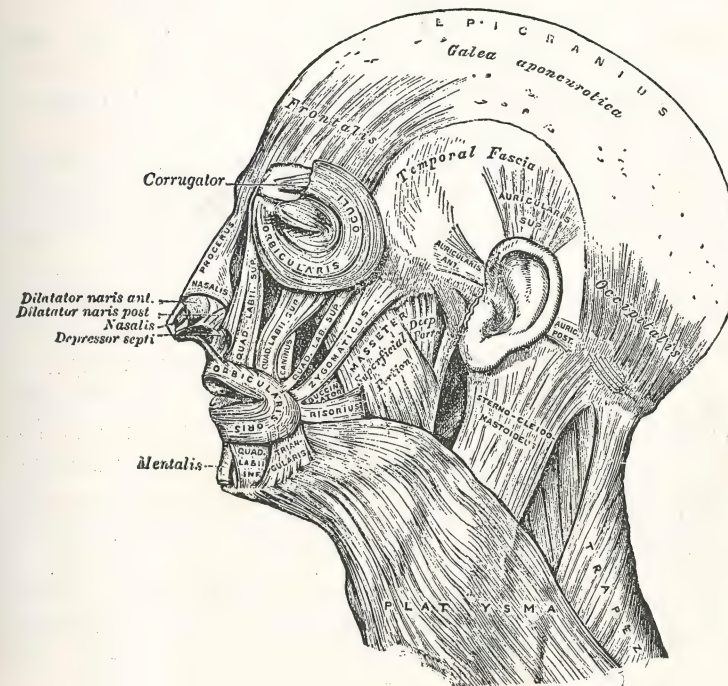


Fig. 9. Muscles of the Head, Face and Neck

Depressor septi—contracts nostril.

Compressor nasi—compresses nostril.

Depressor anguli oris—depresses angle of mouth.

Levator labii superioris—elevates upper lip.

Levator labii inferioris—elevates lower lip and wrinkles chin.

Risorius—draws out angle of mouth and compresses cheek.

Zygomaticus—elevates lips outward; acts with the Levator anguli oris, elevates angles of the mouth.

Buccinator—compresses cheeks, retracts angle of mouth.

Orbicularis oris—closes the mouth and pushes lips forward.

Masseter—muscle of mastication.

Pterygoid internal and external—draws jaws forward.

Temporalis—brings the incisor teeth together and shuts the mouth.

Platysma myoides—wrinkles the skin and depresses the mouth.

Sternocleido-mastoid—depresses and rotates head.

Trapezius—draws the head backward or sidewise.

Mentalis—chin muscles—wrinkles chin.

REVIEW

1. Define muscle.
2. What are the functions of muscles?
3. Name the principal muscles of the face, head and neck, and their functions.
4. Define massage.
5. Name some of the effects of massage.
6. When if ever should massage be omitted?

Resistance—any interference of current.

NOTES

2 Branches of the Vascular system
Sympathetic system
Blood

Unstripped muscles ^{smooth muscle} not attached to bones, found in walls of hollow organs
Stripped attached to bone
Both act only when stimulated by the nerves—Involuntary muscle—have no tendons.

Striped—smooth, unstripped—cardiac
have control & are attached to bones

Tendon—fastens muscle to bone.

Ligaments—unite bones to bones—hold bones together at joints

NOTES

THE COSMETISTE

Chapter VII

NERVES

DEFINITION

Nerves are the mediums through which sensations are conveyed from all parts of the body to the brain, then sent out to the body tissues and organs. They cause us to be conscious of our environments.

Their origin is in the brain and spinal cord. Their fibres are distributed to all parts of the body. They follow the general course of the blood vessels as a rule, but are fewer in number.

The function of the nerves is conveying impulses.

The sensory nerves, those transmitting impulses to the nerve center are situated near the surface of the skin. This is where the skin gets its function of sensation.

Those carrying back a reply are called the motor nerves.

This establishes an inter-communicating or central system whereby we are sensible to all our surroundings.

Nerve tissue consists of connective tissue sheaths; they differ in size and shape.

The nerves are fed by the arteries, enclosed in the connective tissues, shielded by the bones, obedient to the muscles, and assisted in their work by the veins and lymphatics.

We must realize the importance of the study of them that we may help our patrons to keep them in normal condition.

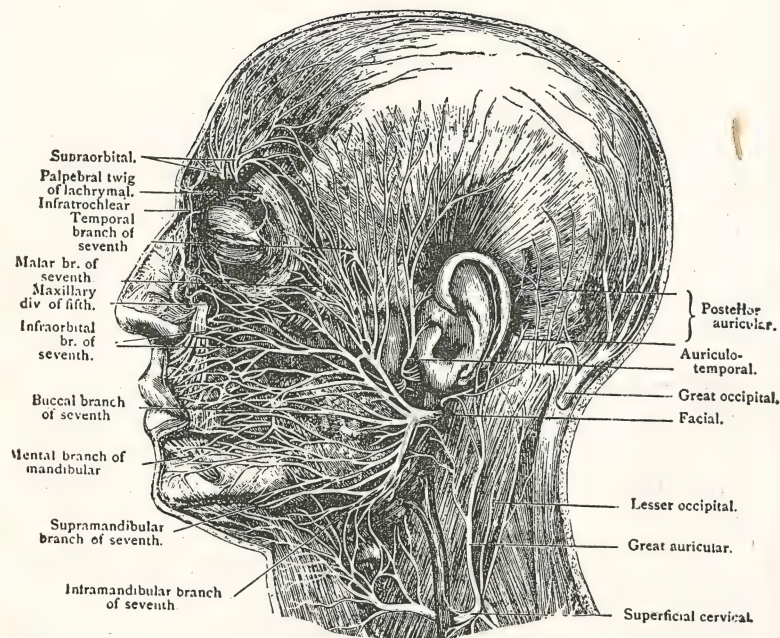


Fig. 10. Nerves of Scalp, Face and Side of Head

The nerves may be stimulated and strengthened, provided we know their functions and location on the face and head so that we give a scientific massage. The aid of electricity in this massage is dealt with in chapters on treatments in which different electrical apparatus are used.

A list of the nerves of face, neck and scalp and the muscles they supply.

The Facial nerve supplies—

Frontalis muscle of scalp.

Orbicularis Palpebrarum and Corrugator muscle of eyelids.

With its branches supply—

Levator Labii Inferioris and Superioris,

Levator Anguli oris,

Zygomaticus,

Levator labii inferioris,

Triangularis,

Buccinator,

Orbicularis Oris and

Risorius of the mouth,

Procerus,

Compressor nasi,

Depressor Septi.

Dilator Nares Posterior and Anterior of nose, and the cervical branch of this nerve also supplies—

Platysma myoides of the neck.

The Posterior auricular branch of Temporal nerve supplies—

Occipitalis of the scalp.

Oculi motor nerve supplies—

Levator Palpebra Superioris of the eyelids.

Mandibular nerve supplies—

Masseter, Temporalis,
Pterygoid Externus and Internus muscles of mas-
tication.

Branches of the third and fourth cervical nerve and
accessory nerve supply—
Trapezius muscle of neck.

The accessory nerve and branches from the second
and third cervical supply—
The Sterno-cleido-mastoid of the neck.

REVIEW

1. Define nerves.
2. What is their function?
3. Name the two principal divisions of the nervous system.
4. How are the nerves fed?
5. Name the principal nerves of the face, neck and scalp and the muscles they supply.
6. What are the best known means of stimulating the nerves in our work?

NOTES

Anterior auricular —
5 & 7 branch of facial nerve — in front of ear
Posterior auricular — behind ear

NOTES

THE COSMETISTE

Chapter VIII

SKIN

DEFINITION

Skin is the external covering of the body; it is an elastic, flexible membrane. It varies in thickness according to the locality on the body. The elbows and knees, palms of hands and soles of feet are covered with a thicker skin than other parts of the body.

The thickness of the skin also varies considerably in different individuals and races.

The skin has various functions which are all important for the Cosmetiste to understand. They are:

Heat regulation	Protection
Absorption	Elimination
Respiration	Sensation

Its color is determined partly by the pigment in the upper layers and partly by the blood in the lower strata or layers.

The function of the pigment is mainly protective, it serves to shield the underlying structures from the actinic effects of light.

The origin and chemical nature of the pigment are still undecided questions. By some specialists it is believed to be carried up from the corium by leucocytes, by others that it is due to the migration of pigmented cells from the papillary layer or due to the breaking down of blood pigment in the connective tissue and then transported by leucocytes. Other good authorities claim this pigment is produced in the cells of both the epidermis and cutis layers, also it is

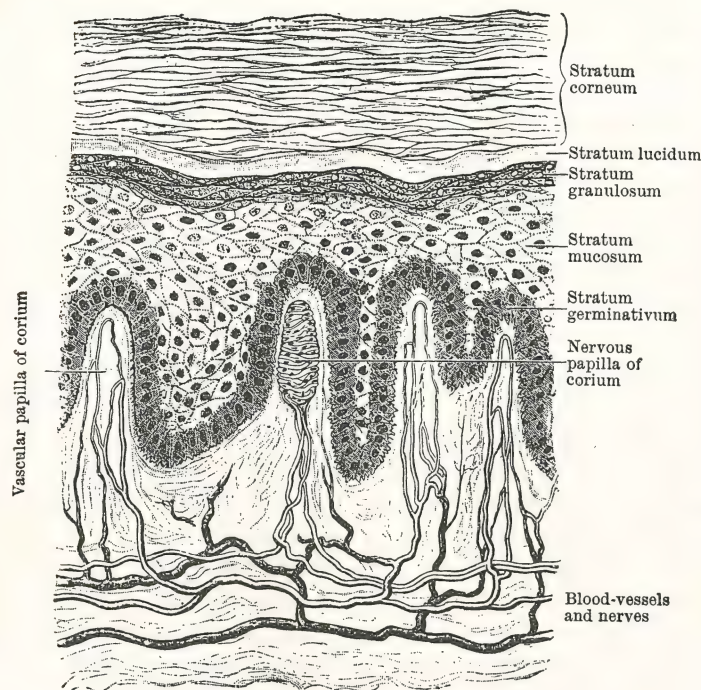


Fig. 11. Section of Skin

probable that epidermal pigment has been carried into the connective tissue by the lymphatics.

Melanin is the name for a number of black pigments occurring in the body.

Chemically, melanin is characterized by the presence of sulphur and the absence of iron.

HEAT REGULATION

If a person is enjoying perfect health, the body is kept at nearly the same temperature, even when exposed to heat or cold.

When it is warm, the body throws off perspiration through the sudoriferous glands. As this moisture is evaporated, the heat is decreased.

ABSORPTION

The skin does not readily absorb water and other solutions, but it will absorb creams and oily or fatty substances.

By the use of electricity, solutions may be introduced through the unbroken skin into the deeper-seated tissues. This process is called Phoresis.

RESPIRATION

Inspiration and expiration of air by the lungs. The importance of this function of the body may be realized when one knows that water, carbon dioxide, and traces of nitrogen are expelled, at the same time such gases as oxygen, are absorbed by the skin. Hence the frequent bathing and change of clothing are very necessary.

PROTECTION

The skin is a protective covering. Exposure to the elements has a tendency to toughen it; cold contracts it, and warmth relaxes it. Some skins are dry, some oily, according to the state of health and kind of employment engaged in. Certain work, constantly irritates the skin and continual exposure coarsens it.

ELIMINATION

A very important function, the skin is provided with excretory glands, oil and sweat, which maintain a flexible surface, also the impurities are thrown off in this way. The process of elimination may be aided by massage, exercise, bathing, etc.

SENSATION

The skin is very sensitive, the nerve ends noticing any little change the mind may convey: as cold, heat, moisture, etc.

The skin is divided into several layers. We will consider the following sufficient for our study.

The Epidermis or scarf-skin.

Corium or true skin.

Sub-Cutis.

These in part are sub-divided as follows:

Epidermis	Stratum Corneum
	Stratum Lucidum
	Stratum Granulosum
	Rete Malpighian <i>coloring matter</i>
Corium	Papillary
	Reticular Layers
Sub Cutis	

EPIDERMIS

The Epidermis contains a horny, ill-defined layer, also the coloring matter or pigment of skin.

CORIUM OR TRUE SKIN

Contains the blood, nerve and lymph supply, some hair follicles, sweat and oil glands, connective tissue fibres.

The ever present coating of fatty matter which is supplied by the sebaceous glands, help to render this skin covering impervious to fluids and guards it against the action of many chemical irritants.

The pilosebaceous orifices or the hair and sebaceous glands are vulnerable or susceptible points in the unbroken skin for it is through these openings that bacteria may gain access.

SUB-CUTIS

The sub-cutis layer contains deeper seated hair follicles, fat cells, more connective tissue fibres, more nerve, blood and lymph supply, as well as more sweat and sebaceous glands.

The accompanying figure gives a good view of the sections of the skin.

The skin is a most remarkable covering, it possesses properties to rebuild itself, to stretch and shrink at will. It transmits all sensations, protects the body against invasion of infections.

These resistance powers are lost through and by dissipation, lack of exercise and wrong diet, disregard to hygiene and sanitation of living rooms, and places of business.

The Cosmetiste may be of great aid in helping her patrons in taking good care of themselves.

Wrong modes of living in a majority of cases, is the cause of ruined and blotched skin. Cosmetics are good if used properly and right ones are employed. See chapter on Cosmetics.

Advise your patrons how to take care of themselves, as to proper diet, exercise, bathing, etc. See chapter on Foods.

Skin and scalp are first to show improper care. Hair and nails being appendages of the skin, the hair will show its lack of care by the loss of lustre, while the nails become ragged and brittle.

REVIEW

1. Define skin.
2. Name functions of the skin.

3. What determines its color?
4. What is the function of the pigment?
5. Tell something about pigment.
6. Define melanin.
7. Name divisions of the skin.
8. Describe each.
9. Where are the oil glands situated? The sweat glands?
10. What are the appendages of the skin?
11. What is the principal cause of ruined or blotched skin?
12. What protects the skin against the action of irritants?
13. What are the vulnerable points in the unbroken skin?

NOTES

THE COSMETISTE

Chapter IX

THE SKIN AND ITS LESIONS

DEFINITION

Lesions are structural tissue changes in injury or disease, or any hurt, wound or local degeneration.

There are two symptoms of these lesions: the Subjective or sensations, such as the subject, patient or patron may feel as burning, pain, itching, feverish condition, etc., and

The Objective signs of the skin diseases, as pimples, pustules or any surface eruption that manifests itself in various forms on the surface of the skin. By these manifestations the operator, specialist or physician may determine the trouble.

The lesions appear in three consecutive stages, as Primary, Secondary and Tertiary, but we only need to study the Primary or first stages and Secondary or second stages, as the Tertiary or third stage is too deeply seated to be considered by the Cosmetiste and requires the attention of the physician or surgeon.

PRIMARY

Macula
Papula
Pustule
Vesicle
Tubercula
Bullæ
Pomphus
Phyma

SECONDARY

Crusts
Squama
Cicatrices
Pigmentations
Excoriations
Rhagades
Ulcers

Macula—A stain or spot, small patch or discolored spots on the skin, they vary in size, shape and color. They are neither elevated or depressed. They may differ from a small dot-like spot or may cover a large portion of the skin, also the color may be a pink, dark red, purple or even black. Occasionally there is a tendency to slight elevation as in measles. When this occurs the qualifying descriptive term "Maculopapular" is employed.

Papula—A small solid elevation of the skin, differs in size from a small seed to pea or bean, and in color from pink to dark brown. They may be permanent or disappear quickly. They may develop in lesions containing fluid or pus, such as

Pustules—Lesions containing pus. They indicate an inflamed duct or gland, found in acne, eczema, etc.

The most frequent location for a pustule is in a hair follicle, or in an independent sebaceous gland. A scar resulting from pustules depends upon the extent of tissue destruction also upon the inclination of the individual to this scarring.

Vesicles—A small sac-like blister. A circumscribed elevation of the epidermis containing a fluid. Seen in vesicular type of eczema, acne artificialis, dermatitis, etc.

Tubercula—A solid elevation of the skin, larger in size and deeper seated than the papula. Does not contain a fluid, differs in size from a coffee bean to an olive; very stubborn, yielding slowly to treatment, are apt to leave scars, as they involve a great amount of tissue. Appear in acne indurata, leprosy, syphilis, tuberculosis, etc. The term tubercle refers solely to lesions of a certain form and type, and implies no relationship whatever to tuberculosis.

Bullae—A large blister or bleb or cutaneous vesicle filled with watery fluid.

For example, a blister from a burn or any outward application or irritation, as on the heel, from rubbing of shoe, etc.

Pomphus—A wheal, a white or pinkish elevation or ridge on the skin. Found in hives, rash from nettles, after stroke or slap on skin, has a burning, stinging sensation. Firm to the touch. Also found in urticaria, nettle rash, an ephemeral skin eruption with itching.

Phyma—Any skin tumor or cutaneous tubercle, only larger than tubercles; they may be formed of lymphatic vessels, glandular constituents produced by exudation into the tissue, especially from the corium.

Tumors appear in the following forms:

Fibroma	non(malignant)	<i>virilant</i>
Cystoma	}	malignant
Carcinoma		
Sarcoma		

Not treated by the Cosmetiste.

SECONDARY CLASS ARE AS FOLLOWS:

Crusts—Scabs. Consist of particles of foreign matter, as loosened hair, serums, dried pus, etc.

Some are firmly fastened to the surface of skin and some are easily separated. Their size and shape differ according to part of body involved.

Found in Acne, Eczema, Psoriasis or on the ordinary scratch or sore.

Squamae—Scales, or scale-like substances, part of the epithelium, cast off. The skin is continually throwing off the surface cells, as scales, but it is only when an excessive amount is cast off through some diseased condition, that it is particularly noticeable. They may be fine particles from the head, face or other parts of the body as in seborrhea or pityriasis or in large sheets such as we see in cases of scarlet fever.

They may be found upon macules and pustules when healing, tumors, psoriasis, eczema, and in parasitic conditions of the skin.

Cicatrices—A scar; the mark left by a sore or wound. New structure of the connective tissue that has been destroyed through some disease affecting the corium. They are found in Acne, Smallpox, improper use of electric needle, or in operation where tissue has been destroyed.

Pigmentations—The discoloration of a part by pigment; the deposition of pigment. Stains left on the skin after lesions are healed.

Excoriation—A superficial loss of substance, such as that produced on the skin by scratching; they are found on parts of the skin afflicted with itching. Found in eczema, scabies, in some nervous conditions or skins affected by insect bites.

Rhagades—Clefts, chaps or fissures of skin, usually found on skins affected by some chronic con-

dition. Found in eczema, syphilis, cracked lips, at the juncture of the ear, in psoriasis, etc.

Not treated
Ulcers—An open sore other than one caused by accident or operation or any other wound. A loss of substance on a cutaneous surface, causing gradual necrosis. It may be an acute or chronic condition. The secretion may be profuse or scanty, emitting offensive odor; or it may be covered by a crust. They occur in syphilis, leprosy, bed sores, or varicose veins. Not treated by the Cosmetiste.

Phyma -
Cancer -

REVIEW

1. Define a lesion.
2. Name symptoms—Describe each.
3. Name stages of lesions.
4. Name divisions of these stages.
5. Describe each.
6. Name lesions treated by Cosmetiste.

NOTES

THE COSMETISTE

Chapter X

ACNE

DEFINITION

Acne is a chronic inflammation of the sebaceous (oil) glands, and their excretory ducts, caused by retained secretions. If the sebaceous glands are not properly functioning, pimples, papules, comedones, pustules, etc., will appear on the surface of the skin in its attempt to take care of all secretions. The sebaceous glands keep the skin in a flexible, pliable condition if they are throwing off the necessary amount of oil, but if they refuse to do this, we have a dry condition.

The cause of Acne: When there is an over-production of this oily matter called sebum, and it plugs up the excretory ducts leading up to the surface, the opening of which is called a pore, we then have a condition called Acne. As this thickened sebum stagnates in the dilated pore, it forms what is known as a comedone or blackhead; this can be removed with a comedone extractor. See cut No. 12. Its appearance is very much like a worm with a black head. This black color is due to oxidation as it comes in contact with air and dust.

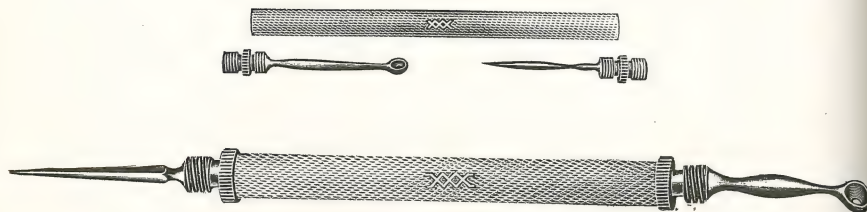


Fig. 12. Comedone Extractor

Acne appears most frequently in children at the age of from twelve to sixteen years, or puberty, the age at which the reproductive organs become functionally operative, and when the glands produce an increased amount of secretions. It usually disappears about the age of thirty-five or forty years, without any special treatment, however if treatment and persistent exercise, diet, etc., is not carefully heeded its tendency is toward a thickened, coarsened, scarred tissue later in life. It is most frequently found on the face, neck, shoulders and back, and may spread all over the body, although the last named condition is rarely found. Acne is usually accompanied with seborrhea of the scalp.

It is due to over eating and wrong food. Putting more food into your stomach than it can digest or assimilate, causing a stagnation, putrefaction and because the excretory organs are not able to carry off all the poisons, the system is trying to get rid of the excess by throwing it off through the skin, causing unsightly conditions. Slight eaters may have this same unsightly condition; here it is not caused by excess of food, but by a wrong or improper diet. For

suggestions to correct a wrong diet, see chapter on Foods.

Sometimes these oil glands become very much congested, when papules appear and slowly develop into pustules, containing a germ. The germ frequently associated with Acne Bacillus is the Staphylococcus, (common bacteria), found especially on human skin as in pustules, boils, etc., containing a white, lemon yellow or golden color pus. This germ has been described as the cause for Acne but has not been definitely proven in all cases. In fact, the primary causes are those which bring the skin into a receptive condition for invasion and that would class the germ itself secondary as the germ generally found on the skin is not a disease-producing germ.

If these pustules are not taken care of properly, the pus often causes scars or acne pits. They should be opened very carefully so as not to bruise the skin as this sometimes causes little moles, by a thickening of the epidermis.

Most physicians are too busy to care to give local treatment for Acne, of which there are several different forms.

FORMS OF ACNE

Artificialis;	Indurata,
Vulgaris, Pustulosa or	Punctata,
Simplex,	Albida,
Cachecticorum,	Rosacea.

Acne Artificialis—An acute inflammatory eruption, consists of small red papules and vesicles accompanied by severe itching. Often follows the use of some internal or external rem-

edy which irritates the skin; the wrong kind of cream, powder, rouge or cosmetic in general or the eating of certain kinds of food or the application of hair dyes. Sometimes appears in the form of dermatitis or inflammation of the skin. When caused by tar products it is called Picealis.

Treatment: Relieved by applications of soothing lotions such as Calamine Lotion, etc., until all itching or burning has subsided and then treated as Acne Vulgaris. Discontinue the use of whatever is causing the irritation until all eruptions disappear.

Acne Vulgaris—Pustulosa or Simplex. The most common kind of Acne and the one we most generally come in contact with.

This usually begins with the appearance of comedones on the face, the cause being the sebaceous glands refusing to throw off the required amount of sebaceous matter. It is only a step however to a chronic inflammatory state when papules, pustules, tubercles and other lesions will follow. It is caused by improper diet, lack of exercise or neglected hygiene of the body or all three.

Many people, while afflicted with acne, appear to be in good health; the presence of Acne however, shows an improper elimination through the regular channels. A corrected diet is of utmost importance.

HOME TREATMENT FOR ACNE

Daily baths should be followed by vigorous rubbing with coarse towels. Towels dipped in salt water and allowed to dry, are excellent for this.

Scrub face with flesh brush using a medicated soap.

Don't neglect the use of this flesh brush as the friction of the brush rouses the circulation and restores

Dialysis - separation of a substance from a mixture thru a membrane



Fig. 13. Acne Vulgaris

tone and color to the skin. It also aids in removing dead cuticle and opens pores thereby putting the skin in a receptive condition for further treatment.

Deep breathing exercises and daily brisk walks in the open air are essential. Eating mostly vegetables, raw and cooked, fruits, whole wheat bread and drinking freely of fresh water, also lemon juice in the water without sugar, taken $\frac{1}{2}$ hour before meals is an excellent cleanser for liver and kidneys. (See chapter on foods.)

The diet recommended must be persisted in if favorable results are to follow and is just as necessary as the local treatments.

The use of Acne cream for night cream is essential.

Shop Treatment. First cleanse with cleansing cream, or medicated soap, then use four hot cotton pads with antiseptic solution, as hot as can be borne by patron, or better still use Vapor and Steam

Generator (See chapter on this.) In some cases the Electrolytic Cup. (See chapter on this.) Then express all comedones, and open pustules with comedone extractor and sponge with antiseptic lotion to remove pus. Blue glass screen of the Sun-Aero Hair Dryer or Face Lamp (see chapter XXVIII) over bare skin for antiseptic effect, always with pads of cotton moistened with boracic acid solution over eyes. Then apply Acne cream and High Frequency currents (See chapter on this) which stimulates and increases the activity of the glands; this is very necessary. Deep back and shoulder manipulations only. We do not massage over Acne or any other condition where lesions are present as it has a tendency to spread infection.

Remove cream and sponge with antiseptic solution, be sure that every trace of oil is removed. Employ Multiple Facial electrode for stimulation. Acne Lotion with positive galvanism (See chapter on Galvanism) on the face is necessary. Make up with medicated powder and no rouge. The perfumed powder and rouge irritates the face. Also the use of a medicated soap on the face in oily condition and cleansing cream in a dry condition, using acne cream for an over night application. If the scalp is involved, an antiseptic tonic should be used daily; using Electric Comb for stimulation. Witch Hazel is good if scalp is oily.

The use of auto vaccine in very stubborn cases, should be left to a responsible physician.

Some skins have a greater tendency toward scarring than others, Acne often leaving scar pits. They are especially annoying on the face. This condition

may be greatly relieved by treatments with High Frequency currents using the facial electrode.

In some cases of Acne, an oily skin, large pores and blackheads only are present, others you will find macules, papules, indurations, pustules and sometimes small boils. This condition develops very slowly and gradually grows worse. The skin is very oily or dry, relaxed, and almost always accompanied with seborrhea of the scalp.

The predominating lesion names the variety of Acne, as if papules are present Acne Papulosis; Pustules, Acne Pustulosa; Indurations and deeper seated papules, Acne Indurata, etc. Most of these lesions, in fact, all begin in the glands, from a lack of elimination of secretions of the glands.

Any one of the following conditions or any combinations of these conditions may contribute to the primary cause of acne: improper diet (See chapter on food), especially if one has a systemic intolerance to sugars, starches, coffee, meats, etc., lack of exercise, poor circulation, anæmic condition, menstrual disturbances, constipation, intestinal fermentation, improper bathing or lack of this practice altogether, also external use of powders and irritating cosmetics which have a tendency to block the gland openings. This last mentioned however plays the smallest part as patients find recurrence of these lesions after discontinuing the use of these harmful cosmetics.

Acne often returns after the most rigid local treatment, if the systemic condition has not been corrected, therefore advise your patrons to co-operate with you in overcoming any trouble they may be able to correct themselves, as to foods, etc. Acne if not treated and the diet corrected, eliminating such foods

as cause this condition, will remain for several years, perhaps indefinitely.

The presence of seborrhea should also be treated locally by the operator. As before mentioned, this Acne condition is sometimes caused by a uterine or gland trouble so when the Acne condition will not respond to your treatment, advise your patron to consult a physician who specializes in the treatment of the commoner diseases of women and you can follow his direction as to further treatment. Severe cases may resist treatment for many months and if the treatment is not continued long enough, relapses are frequent.

Acne Cachecticum—This is found ^{weakened} frequently in cases where subjects are much debilitated. The lesions are most frequently found on the back and are usually very deep and yield slowly to treatment as the systemic condition must be overcome before any improvement can be expected.

Acne Indurata—In this form you usually find the lesions are characterized by their crowding; tubercles forming a large hard base, are usually found on jaw, are painful and sore to the touch, showing very little on surface as they spring from deeper seated sebaceous glands. When they do appear on the surface, they are red or purple and represent a bruised condition.

Treatment: Acne Vulgaris treatment is given for this condition. Plenty of high frequency current should be used. Massage is especially good for these cases when lesions do not show on surface.

Acne Punctata—A lesion sometimes found in Acne where a comedone is surrounded by pus. Open

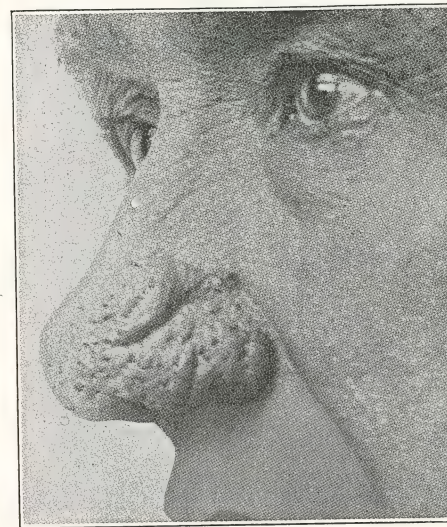


Fig. 14. Acne Rosacea

and express pus and be sure comedone is pressed out with comedone extractor, otherwise more pus will form.

Acne Albida—A condition where milium are present. Usually accompanied by a very dry condition. The milia are little seed-like formations underneath the epidermis.

Treatment: If no comedones and pustules are present, treat as dry skin, employ the Vapor and Steam Generator, removing all milia with comedone extractor. No soap should be used on face. Use Acne cream in place of tissue cream. Once in a while give the regular Acne Treatment.

Rosacea—Is really in a class by itself. It is a chronic congestion of the skin of the face. It makes its appearance as an extremely irritating condition,



Fig. 15. Milia

usually confined to the central, vertical portions of the face, which becomes very red, sometimes is accompanied with small red papules and milia, the superficial blood vessels becoming very much dilated.

Inflammation—first stage.

Broken capillaries—second stage.

Hypertrophy or enlargement of parts—third stage. This is usually found from too free a diet of sweets, stimulants, rich gravies, condiments, red meats, tea, coffee and other stimulating foods and drinks. Causing a gastro-intestinal disturbance.

Treatment—first stage.

1. Cleanse with cleansing cream.
2. Employ use of Vapor and Steam Generator or packs of cotton wet in hot water.
3. Removal of milia if any are present.

4. Sponge face gently with soda solution to remove all traces of cream as oil resists galvanism.

5. Red light over bare skin (with pads on eyes) for tonic effect.

6. Apply methene liquid with ball electrode, positive galvanism on face from ten to fifteen minutes; this decreases vascularity, can be used only with electricity as skin does not absorb liquids.

7. Apply stronger Astringent Cream and use facial high frequency electrode ten to fifteen minutes.

8. Remove cream and wash off methene if any remains, with white soap and water (must be carefully done) then use Multiple Facial Electrode. (Chapter XXVII.)

9. Apply a good cream for soothing effect and foundation for powder.

10. Make up: Medicated powder; no rouge.

A methene ointment is recommended to place in nostrils at night and the usual diet and home treatment for Acne.

Broken Capillaries as found in the second stage may be treated with electrolysis by very experienced operators. This is accomplished by the evascularization method as described in chapter on electrolysis. Hypertrophy, the third stage, should never be treated by the Cosmetiste; must be under physician's care.

The chief causes are the acid-forming foods such as meats, sugar, white bread, starches, and animal fats. (See chapter on foods.) Definite instructions as to home treatment should be given. Each patient has to be studied as to the best treatment or combination of treatments for individual conditions.

The Multiple Facial Electrode is to be recommended in cases of Acne. (Chapter XXVII.) The strength of the current should be such as can be conveniently borne, and strong enough to make the face decidedly red.

Following this treatment, the face is very much reddened, and after several hours this gives place to a more blanched appearance than it had previous to the treatment. This treatment should be given two or three times a week until the tendency of the Acne to reappear has passed away. The application of the multiple facial electrode should continue for from five to fifteen minutes or governed by the amount of redness produced and the strength of the current the patron can endure. Always remember to have skin free of all oil when using this electrode.

The faradic current can also be employed in treatment of Acne, no massage is given however. Have the patron hold both electrodes as directed in chapter on Faradism. The circulation is increased and nervousness is allayed thereby bringing about a general stimulation.

PIGMENTED SPOTS LEFT AFTER ACNE

Frequently, after chronic cases of Acne are cured, there remain pigmented spots. These are but secondary lesions left after pustules are healed, and must not be disregarded, if the appearance of your patron's skin is rightly considered.

These lesions are characterized by the formation of brown colored spots of different size upon the skin which may be due to mechanical agents as friction, repeated scratching or undue pressure being brought to bear when using the comedone extractor or like in-

struments or the employment of gauze or cotton in removing pus or comedones, or in use of chemical agents employed in treatment of this condition, this pigment is increased. More about the causes of this pigment in the skin is found in chapter on Skin.

BLEACH TREATMENTS

The process of which is given in chapter on facial treatments are recommended for this condition.

REVIEW

1. Define Acne.
2. What is the chief cause of Acne?
3. What are the principal lesions found in Acne? Describe them.
4. At what age does Acne usually occur? At what age disappear?
5. What glands are usually involved when Acne is apparent?
6. What is the germ associated with Acne?
7. Name forms of Acne. Describe them.
8. What is the most common form of Acne?
9. What advice do you give for home treatment? What advice as to food?
10. Give process of treatment in shop and tell why you do each thing.
11. Does Acne leave scars?
12. What do you recommend under these circumstances?
13. Is vaccine recommended for Acne?
14. How do you treat Acne Artificialis? Acne Rosacea?

15. What is a comedone extractor? What kind is best?
16. How do you treat broken capillaries?
17. Why do you avoid massage in treatment of Acne?
18. If pigmented spots are left after Acne how are they treated?

NOTES

Dry Skin Treatment -

Squiffing Cleansing cream

Muscle Oil

Tissue Cream

High Frequency.

Black Heads -

color - Black (outside) - yellow - brown - red - yellowred (pus)

Chapter XI

PIGMENTATIONS OF THE SKIN

ANOMALOUS AND OTHERWISE

One of the chief conditions you will encounter in your work as facial operator is Pigmented Anomalies, such as tan, sallowness, and that bane of childhood days, freckles. These are technically known as Lentigo. Sensitive skins, constant exposure to sun's rays while bathing, boating or any of the numerous sports in the open air and sunlight are apt to bring about this result.

Freckles are yellowish, brown or black pigmentary, circumscribed macules varying in size, shape and location; in size from pinhead to that of a pea most always found on the face and hands but always on exposed regions, when individual is subject to them, and in great variation as to color and number. In some cases there are only a few scattered spots while in others a large area of the face or surface of the body may be thickly covered with them. They may appear at any time in life although in very early childhood, at the age of three or four years, they are rare-

Freckles - yellow - brown - black

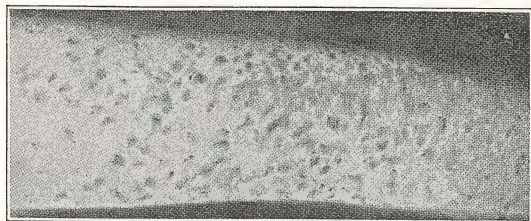


Fig. 16. Lentigo or Freckles

ly met with. Their appearance may be very rapid or develop slowly. They appear as summer approaches and fade away more or less as cool weather appears, sometimes almost entirely disappearing but returning with the sunny weather. They do not cause any real trouble but are very disfiguring and cause the patron a great deal of annoyance.

In some instances, as the person gets further along in years they become covered with thin, greasy scales, sometimes degenerating into a growth that becomes warty and elevated. Both sexes and all ages are subject to them, but they are generally seen in their greatest development in early life, becoming less marked in advancing years.

The cause of freckles is that nature is trying to protect the skin by pigmentation, but whereas in brunets this is evenly diffused and in blonds is absent, here we have it showing in spots. Thus we have mulattoes with freckles, indicating that they are a mixture of brunet and blond. Blonds with red hair and a light complexion are most apt to be subject to them.

Treatment: Any bleach treatment is highly recommended, also the use of the bleaching cream for home treatment. This is a safe and sane way to take care of it but other methods may be resorted to, as peroxide of hydrogen and ammonia in equal parts, witch hazel and peroxide equal parts, or glycerine and lemon juice equal parts. Always remember that all these applications cause the skin to become very dry and peel which really is the only effect to bring about the result wanted.

Bleaching lotions are sold for Lentigo. Be sure and recommend the one you know is safe for your patron to use as these lotions frequently cause a chemical reaction and the patron might have an idiosyncrasy toward this particular chemical.

Electrolysis may be employed when in the hands of an expert. It is better however to use proper prophylactic measures than to try to free the skin of the blemish after its appearance. Protecting the face and arms by use of creams and powders and avoiding the direct actinic rays of the sun or intense light near the seashore or high altitudes is a far better way. After the harm is done it is too late and often causes the patrons no end of expense and time, when if you teach them to take care of the skin under all conditions of weather and kinds of exposure they will be very grateful to you. It is good salesmanship on your part to advise your patrons along these lines.

Sunburn is another condition we have to handle. This may easily be classed as a form of dermatitis and should be treated as such. It is a painful inflammatory condition varying as to the extent of exposure and the tenderness of the skin of the individual. In mild cases only a slight peeling is noticed while in ex-

treme cases, blisters appear. This should be relieved under all circumstances, using one of the many soothing lotions recommended. Calamine lotion is one of the best known lotions for this condition. This is put up by most laboratories compounding cosmetics. Saturate pads of cotton in this lotion and place on afflicted parts. Water and soap should never be used. Keep the surface covered with cold creams, vaseline or some similar preparation until all irritation has subsided. This not only soothes but has a tendency to keep the skin soft, fine and pliable. Use a good antiseptic powder over the cream to prevent further chance of exposure.

Never try to bleach this condition until it is entirely healed or you will have a worse condition than the first. After the sunburn is healed, however we usually find a tanned condition remaining. This should be treated as any other tan.

Tan is a condition where a brown color is imparted to the skin of brunets by long or constant exposure to the sun or wind.

After exposure, if the skin is sensitive and tender it should be treated as sunburn. Remember that some textures of skin, tan before they burn and some tan with the ordinary amount of exposure to sun and air. In case a person is afflicted with excessive or chronic tan, bleaches are recommended once or twice a month for shop treatment and constant use of bleaching cream for home treatment. Also remember that the treatment with the refining powder and bleaching lotions restores the customary soft texture of the skin which is apt to be coarsened by constant exposure.

The skin of the face however, is not the only part

of the body to be considered in the bleaching process, as shoulders, hands and arms must be treated also. While the skin of the face usually responds very quickly to treatment, the skin of the hands and arms will be found to be much more resistant.

A good bleach: Lactic acid 1 oz. Glycerine 1 oz. Rose Water 6 oz. This mixture may be applied with cotton pledgets. More severe cases may be bleached by employing the following: Mercuric Chloride 1 part, Alcohol 25 parts, Water 74 parts. This causes a peeling of the epidermis and should be carefully used.

Remember this condition may be prevented if not wholly to a large extent, if the patron is taught to use all precautions to protect the skin. Use a good cream (just a small amount is necessary) for protection and plenty of good powder over it.

CHLOASMA

Chloasma—Colored skin or an increase of pigment occurring from several different causes. Chloasma Gravidarum, the brown discoloration of pregnancy. Chloasma Hepaticum, a form following dyspepsia, called liver spots.

Symptomatic Chloasma is still another form caused from systemic condition such as Cancer, Syphilis or Acne where the secondary lesions must be treated.

These yellowish, brownish and sometimes black patches vary in size and shape. Those from liver usually make their appearance on the neck under the ear and spread over more or less surface fading away into the surrounding tissue. It appears rapidly or slowly, sometimes almost unnoticed, but gradually a deposit

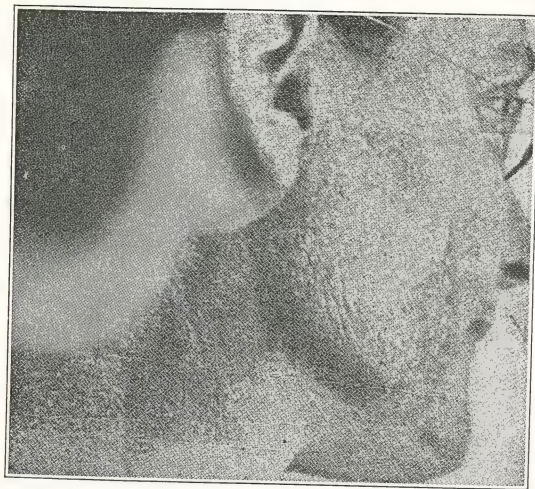


Fig. 17. Chloasma

of pigment is fixed without any other change in the skin. There is no elevation or irritation, the skin remaining smooth. Frequently a slight oiliness is noticed. The face and neck is the usual site for this condition to appear, although occasionally it is found on the trunk or other parts of the body. This condition may also arise after external applications such as mustard plasters, friction of clothing, (as high, tight collars,) etc., but it usually disappears after the medicaments, etc., causing the local irritation are discontinued.

This (Chloasma) should not be confused with Leucoderma, however, which is caused by a migration of pigment. The two accompanying illustrations will show very plainly to the student the difference in the two conditions.

Therefore we may divide Chloasma into two distinct classes. Those produced from external and the others due to internal causes.

The first or external class includes all those produced from local or external agents, as irritation due to pressure, friction or similar causes or sometimes the sun's rays play a part in this. Sometimes prolonged exposure to strong electric lights may cause this, although to a very slight extent.

The second class is a more important variety, however, as this form includes all the various pigmentations caused from organic or systemic diseases such as Acne, Syphilis, Cancer, Malaria, Uterine and Ovarian disturbances and many other functional disturbances. Sex has a very decided influence, as this condition rarely appears in the male.

Treatment: The only relief the Cosmetiste has to offer is the use of the bleach as explained in our shop treatment and the use of preparations which can be applied at home.

Since it is usually impossible for the Cosmetiste to ascertain the underlying cause, it is advisable to have such a person consult a competent physician for corrective measures.

The cases we would be most apt to come in contact with are the blemishes on the face. The external treatment by the process employed, draws the pigment to the surface and causes the peeling of the outer or upper layer of the epidermis.

The various bleaches and remedies externally recommended and used by the Cosmetiste, usually give temporary and sometimes a permanent relief, especially where the cause no longer exists.

LEUCODERMA

Leucoderma—Light skin, a congenital condition of defective pigmentation of the skin, absence of pigment in patches.

Albinism—A congenital condition, a deficiency of pigment in the tissues.

Vitiligo—A skin disease attended with the formation of smooth, light-colored patches. It occurs in youth and adult life. Cases of this condition show a decided contrast to the aforementioned. A close examination will always find the lighter skin and the edges of these spots are sharply defined. The cause of this trouble is unknown although it has been attributed to a nervous affection. They are characterized by white or rosy pink spots, surrounded by darker skin. The spots cannot be helped, but a bleaching around the spots and in close proximity to them will help to lighten the pigmented circle.

By the inexperienced, this condition is very easily confused with Chloasma but if one will notice that in Chloasma there is a collection of pigment and in Leu-



Fig. 18. Leucoderma or Vitiligo



Fig. 19. Vitiligo or Loss of Pigment in Hair

coderma there is a migration of pigment leaving white or pink spots decidedly outlined, there will be no misunderstanding about it, and it will also be noticed that this defined outline in Leucoderma is the darkest part of the pigmentation. The skin in these pink, white or lighter sections is also particularly smooth and fine in appearance.

This condition does not only appear on the face, but may manifest itself on any part of the body. It also is apt to appear in any race, in fact in the colored race it is quite common and accounts for the fact that every little while we read of some colored person who has suddenly turned white. The source of this trouble has never been traced although it is attributed to unknown toxins or poisons in the system and has

been known to appear in extreme cases of nervous affection. Also it is noticed that in warm climates where the natives are inclined to pass most of the time out of doors, in the sunshine and warm winds this condition is increased. The spots should be protected from exposure when possible.

The degree of coloring of the human skin has always held an important place among the physical criteria of race. The cause is unknown.

The pigmentation of the skin is by no means peculiar to any particular race, but is common to all human beings. It is simply more abundant in some races than others. This abundance is attributed to different causes. Recent observations have ascribed it to the epidermis producing a peculiar oxydating fermentation. Among other causes of pigmentation of the skin the most frequent is due to the presence of a coloring matter originating from the red pigment of the blood. Its presence is due to the rupture of blood vessels. The skin is soaked in blood, the red blood corpuscles break down and this condition scientifically called "haemoglobin" is gradually transformed into this condition.

Cure is very uncertain and can never be promised. There are cases recorded where the cure has taken place spontaneously, however.

Treatment: Our general bleach treatment is recommended for this condition, bleaching around the spots where the pigment is darkest. Avoid getting any of this bleach on the pink or white spots as they are easily irritated and should be soothed. By the careful application of cream to these spots before applying the bleach to the pigmented area, irritation is avoided. Be sure the pigmentation is well bleached before a general bleach is given so as to bring all

down to normalcy. Sell your patron night cream recommended for her particular case. In all cases use the knowledge you have acquired in the study of these anomalies in your treatments and you will not go astray. Sometimes this loss of pigment occurs in the hair, and we find a lock of white hair or a bunch of white hair in the eyebrows and lashes as shown in illustration.

Bruises, stains from bruises may be almost if not quite completely eradicated by free use of vinegar to parts affected. *wrap in brown paper.*

Bathe the bruises *at once* with warm vinegar and discoloration will be prevented.

Sprain: -
Vinegar & salt, heat, dips in brown paper & saturate
apply brown paper to swelling. Apply
steamer towel to **REVIEW** *keep heat on*

1. Define pigmentation.
2. Name the pigmentations we treat.
3. Define Lentigo.
4. What is the cause of freckles?
5. What precautions should one take who is subject to freckles?
6. How do you treat freckles?
7. How should you treat sunburn?
8. How do you treat tan?
9. Define Chloasma. What causes it?
10. Would you treat this condition and if so how?
11. Define Leucoderma. What is the cause?
12. How would you treat this condition?
13. Define Albinism.
14. Define Vitiligo.

15. Give process of one general treatment for these conditions.
16. What is meant by phoresis and what current of electricity is needed to perform this work.

Chapter XII

SKIN DISEASES

The correct care of the skin makes it necessary that the Cosmetiste be familiar with the appearance of skin diseases most commonly met with in order to protect herself and others against the ever present danger of infection.

DERMATITIS MEDICAMENTOSA

Dermatitis or inflammation of the skin, under this term, due to drugs taken internally or absorbed into the skin is encountered under various names such as blebs, erythema, gangrene, papules, pustules, purpura, tubercules and vesicular, mostly all accompanied by burning and itching.

When these eruptions follow the taking of some medicine they are likely to make their appearance suddenly in a highly colored form after a few doses and again only after continued use. Usually they also disappear in a short time if the cause is discontinued. As an exception to this rule the dermatitis may not show itself after the drug has been discontinued.

This reaction of the peculiar constitution of certain individuals to certain drugs is the cause in a large majority of cases and likely the same drug produces the same effect in different individuals though not always.

Blonds, and especially women and children, are

said to present such idiosyncrasy affected by some drug most frequently. Brunets being rather the exception.

A weakened state of health and consequent improper elimination makes the system rather susceptible and the first thing to do, if it has not been done already, is to stop the use of the drug and treat the lesion externally. Metal, bromides, coal tar derivatives, antitoxins, iodoform, belladonna, turpentine and possibly a hundred other drugs are known to produce such dermatitis.

DERMATITIS VENENATA

An inflammation due to local action of an external poison and therefore includes all the inflammatory conditions of the skin caused by the action of corrosives, alkalis, acids, plants, dye stuff, vaccines, serums, etc. Some cannot tolerate the use of arnica, mustard or iodine or the use of certain dyes in clothing in contact with the skin. Hair dyes unless of established reputation must be considered as causative and even then an idiosyncrasy may bring on an eruption.

Since the symptoms of this are rather varied it is fortunate that the condition looks so much like eczema so that diagnosis is comparatively easy. As to removing the irritating cause that may be easy or practically impossible. In the treatment, naturally the cause must be removed and all other sources of irritation such as soap and water kept away. Remove the content of blisters but not the skin forming same. Calamine lotion applied every few hours will prove soothing and ordinarily no other treatment is required.

FURUNCLE

Better known as a boil is caused by bacteria which enter through a hair follicle or sweat gland indicated by a painful deep seated swelling gradually rising above the surrounding surface. The center of this prominence softens in a few days and forms a slough or core. The formation is favored by constitutional or digestive derangement and local irritation and infection as is often found by a whole crop of boils coming after the first.

The treatment which has proven the simplest and most effective is fulguration with the high frequency current. With the fulguration electrode properly adjusted and used as described in chapter on High Frequency, the pain is quickly relieved and the boil, if not yet fully cored, usually aborted.

XANTHOMA

A lesion with the formation of yellow neoplastic



Fig. 20. Xanthoma

growths upon the skin especially the eyelids. The growth consists of flat patches or nodules slightly raised above the surface varying in size from a pin's head to a bean. The growth may be removed by fulguration or electrolysis.

EPITHELIOMA

This condition ordinarily known as a skin cancer should not be treated except by a competent dermatologist. Even though you are able to diagnose the lesion make no effort to treat it but turn it over to a physician who specializes in the treatment of skin diseases. A certain form of epithelioma sometimes develops from an ordinary wart or mole, therefore when treating such begin with the only method which is



Fig. 21. Epithelioma

quite safe so far as irritation and infection from instruments is concerned, that is, fulguration. This when carefully carried out, starting with a long and rather infrequent spark will cause the area being fulgurated to become anesthetized, probably from the tiny shocks. Gradually the rate of sparking may be increased until under a shower of sparks the neoplasm

blanches. There is no infection from this and in a short time the lesion disappears. ?

But in order to become proficient treat a few warts on the hand first to get the proper experience before you begin to treat any on the face.

ERYSIPELAS

A specific contagious inflammation of the skin tending to spread over large portions of the cutaneous surface, the usual indications being pain, heat, redness, swelling.

Affects the head, face and hands more frequently than other parts of the body. Particularly prevalent in the spring of the year. The eruption which begins on the first or second day consists of dark red spreading patches of erythema with edema and infiltration of the underlying tissues. The affected parts become swollen and painful and there is intense itching and burning. The eruption begins to disappear about the fourth day, the patient begins to convalesce after eight days. There is little question but that the wrong diet is the primary cause of this lesion which nature tries to expel with such violent eruption and that if the system is normal there is little chance of infection.

A competent physician only should treat this as far as application of medication is concerned but fasting and a diet of fresh fruit will speed recovery.

IMPETIGO

Impetigo is the most common of the pustular eruptions and is characterized by the formation of separate pustules somewhat like smallpox. They may attack any part of the body but are most likely to appear on the face and limbs. Impetigo Contagiosa is frequent

among children of the poor where sanitation and proper feeding is neglected.

KELOID

Keloid is a tumor-like fibrous growth usually occurring *at the site* of a scar.

A new growth or tumor of the skin consisting of whitish ridges, nodules and plates of dense tissue more apt to be found in the colored than in the white race. Authorities believe that it is a constitutional disease and local applications alone are likely to prove a disappointment. A proper diet before the lesion is



Fig. 22. Keloid

removed with the high frequency current applied with the facial electrode, first in direct contact with and afterwards separated a little so as to produce a shower of short sparks will result in a sort of crust which will fall off in 7 to 10 days. Thirty or more treatments are required to effect a cure.

SYPHILIS

A contagious venereal disease leading to many structural and cutaneous lesions due to a micro organism, the *Spirochæta Palida*. It is generally propagated by direct or indirect venereal contact or by inheritance. Through the lymphatics it extends to the skin mucosa and nearly all the tissues of the body.

In the so-called hereditary form in children it is characterized by coryza, cutaneous eruptions, wasting of tissues, malformed teeth. *→ running of nose*

The disease is transmittable through common drinking cups, towels, water closet seats, contact by the hands or kissing but mostly by illicit sexual indulgence. None of the so-called medical treatments have proven efficient as a cure but a course of fasting followed by a milk diet has given positive results reported by certain institutions.

The initial lesion—chancre—if it appears on the lip closely resembles a cold sore.

The Cosmetiste is warned against any sore appearing on the lip or mucous membrane of the nose or eye which has existed several weeks.

Do not treat lesions you are not able to recognize by physical diagnosis. Also remember that all secretions as saliva, perspiration, etc., are carriers of this germ.

HERPES SIMPLEX

Fever blister, cold sore, is a skin disease with patches of distinct vesicles, appearing on the mucous membrane, such as the lips and nose, in the mouth and on the tongue.

An attack seldom extends over a period of more than one week.

REVIEW

1. Name the skin diseases spoken of in this chapter.
2. Describe them briefly.
3. Would we treat any of these conditions?
4. Why? How?
5. Which ones are contagious? Infectious?
6. What causes a cold sore?
7. What is a fever blister?
8. Define Herpes Simplex.

NOTES

Pimples & Blackheads.

Wash parts thoroughly with soap & water 5 or 6 times a day.

("Lotion Alba") One dram of potassium sulphuret.

One dram of zinc sulphate

To four ounces of distilled water

Dissolve separately before mixing them

Method: - apply enough lotion before retiring to form a film of powder on the skin

Hand Lotion.

1c Oatmeal boiled with water.

Put in bag, let drip (?) (add few drops of lemon, or toilet water) or
Rose Water & Glycerine.

NOTES

Coarse Pores: -

Wash thoroughly with soap & warm water, (make suds of soap, do not use cake on face). Rinse off thoroughly.

6 Teaspoonfuls of Epsom Salts

To a quart of warm water, dissolve thoroughly

Method: - Take a wad of cotton & lave or saturate pores with the solution, but don't rub in hard. Take a dry piece of cotton & pat off excess liquid. Finally unless skin is extremely oily apply a bit of cream.

$\frac{1}{2}$ c oatmeal in 2 c water - juice of $\frac{1}{2}$ lemon
boil - softens skin.

THE COSMETISTE

Chapter XIII

FACIAL TREATMENTS

In this chapter, the object is, to give the Cosmetiste an outline of the treatments which if followed will bring about most satisfactory results. Years of observant study and practice have proven these directions to be thoroughly reliable and adaptable to meet existing conditions as found, to the mutual satisfaction of both, operator and patron.

Please bear in mind that "Practice makes Perfect"

GENERAL DIRECTIONS

First, the operator who seriously aims to succeed, must fully understand the work and so, the best instructions obtainable are vitally necessary. The shop should be equipped with the most sanitary and practical equipment obtainable, such as a proper facial chair, galvanic, faradic and high frequency apparatus, good lighting arrangement. Avoid all strong irritating light.

See to it that your cosmetics are of the best.

Choose the most quiet and undisturbed booth in your shop for facial work. Help your patron to relax by keeping yourself quiet and avoiding all unnecessary conversation.

Protect your patron's wearing apparel, jewelry, etc.

Be sure that your own hands are perfectly clean and fingers smooth so that in giving the massage no unpleasant roughness may annoy your patron. Avoid body odors that would be unpleasant to your patron, by daily bathing, strict mouth and teeth hygiene also care in diet, abstaining from food such as onions, garlic, etc., at times when you are on duty in the shop.

Study carefully the preceding chapters, remembering well that a full understanding of the histology of the skin, its functions and the blood, glands, muscles and nerves and their functions and supply is necessary to the making of a good facial operator.

Consider the nature of your patron's skin so that you may give advice and treatment in keeping with good service. Rigid attention to various skin conditions as they come to your notice in your numerous patrons, reaps its own reward.

Advise your patron that a shiny nose and forehead during the warm weather may be prevented by bathing the face in cologne or spirits of camphor.

Also advise her against the habit of washing the face with water immediately upon reaching a washstand while travelling. Remove traces of dust and smoke with a good cleansing cream, patted on, left for a few moments and then removed by means of a soft towel, a lifting motion always and do not drag the skin nor rub too hard.

Don't try to apply cream to a cold skin as the absorption will not be as complete.

See that plenty of cotton and gauze pads are kept made up. Also covered glass jars for these pads. Pads of cotton for make-up, eye pads, etc., should be always on hand.

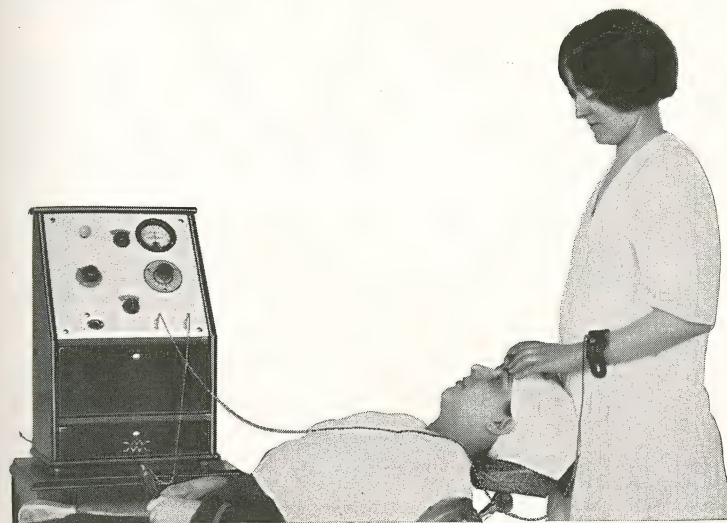


Fig. 23. Wrist Electrode as used for Massage

Apply and remove all your creams, lotions and masks in a scientific manner, that proper results may be brought about.

If a shampoo is to be given always do this work after the facial.

Protect your patron's eyes from rays of light at all times with pads wet in boric acid or witch-hazel solution.

After you have applied the cleansing cream, then prepare all electrodes, etc. This gives the cream about 7 or 8 minutes to thoroughly cleanse the skin before it is removed.

This is the time to notice the exact condition to be remedied and to later advise your patron as to correct creams and lotions to use.

After proper cream has been applied for the facial massage help your patron to relax by a few heavy manipulations on the shoulders and back of neck before proceeding with the practical facial massage.

The general cleansing of the face is the first essential in facial treatments.

Remember the skin must be clean in order to make it clear.

To cleanse the surface a good cleansing cream, one made only for cleansing, should be employed. A cream that is soft and melts easily when applied to the skin's surface is essential to accomplish this cleansing.

This will remove all makeup and surface dirt and then if this is followed with a scientific cleansing by use of the Vapor and Steam Generator as described in Chapter XXIX a thorough removal of all impurities and effete matter in the pores will be realized.

The use of the electrolytic cup is given in Chapter XXX.

The comedones and milia, if there are any present, should then be removed with comedone extractor described in chapter X. You will find this to be an easy matter after this vaporization process.

The skin should then be gently sponged with a good lotion such as the finishing lotion, the formula for which is given in chapter 1, or use a good antiseptic lotion (witch-hazel) if there are any comedones or pustules present.

The use of a therapeutic light should now be employed, the color and type depending on the condition being treated.

Heat is not as stimulating as it is enervating so tends to relax the nerves and that way relieve the tension in the blood vessels and glands and aid very materially in their general improvement, so use red light over skin when free from all make up and creams.

The directions for use of these lights and effects of same are given in chapter XXVI.

Always remember to protect your patron's eyes from the glare of the light by applying pads of cotton wet in boric acid solution or witch-hazel.

The application of suitable creams for the special treatment being given is next in order. The economical use of all creams, lotions and cosmetics in general by the operator, will be appreciated by the shop owner as this counts very materially in the profits of the shop. Study well the chapter on cosmetics (chapter XXI) to further understand their use.

Avoid rough, heavy massage, violent slapping, too strong electrical currents and lotions which only tend to discourage the patron in the habit of receiving facials.

Do not try to sell to your patron during the time she is having this work done but insist upon quiet and relaxation, but do not neglect this privilege when you have finished with the treatment.

In the selling of your facial treatments try and convince your patron that new faces for old cannot be had in one or two treatments, nor by masks, or by the use of so-called all around day and night creams

or "every purpose creams". Convince them that the creams, lotions, powder, rouge, etc., best suited to their type of skin and the ones you would recommend are the particular ones for her especial condition.

The cream that suits one skin will leave another rough or irritated. The same with cosmetics in general. This indicates an idiosyncrasy toward a particular chemical and may be corrected by choosing another cream, powder or rouge as the condition may indicate.

Over this cream that you have applied give the best massage you know how to give, that is to lift the tissues, strengthen the muscles, stimulate and soothe the nerves, accompanied with the electrical current best suited to overcome the existing condition being treated. Remember at all times that a lifting, upward, outward movement of the fingers given with a light smooth rhythmic motion is best to bring about correct results.

Proper facial manipulations aids greatly in reducing large pores (notice manipulations in this chapter). Lines on the face can be ironed out by firm scientific massage. To drooping muscles and tissues comes a new firmness and rapid and better circulation also a soft and velvety texture to the skin. Study paragraph on massage in chapter VI.

If the Cosmetiste realized the value of the use of electricity to aid in stimulation of glands, blood supply and the skin in general she would never give a facial treatment without this wonderful aid, employing it in the modality indicated for the treatment of the condition manifested. Study chapters XXIV and XXV.

The cream should be very carefully removed after the massage and if there is a tendency toward sagging skin, if coarse pores are evident or the tissues are soft and flabby, the galvanic current with the positive electrode as the active electrode, the patron holding the negative electrode, should be employed.

The skin must be free from all oils so a careful sponging with an alkaline solution is necessary (soda solution) as oil resists galvanism. Study carefully chapter XXIII to further understand this current.

The use of the eye cup in connection with your facial treatments is strongly recommended.

The make-up should be given very scientifically and the instructions in chapter XXI should be carefully carried out.

The use of a vibrator on the face is not recommended as it has a tendency to break down the underlying tissues and to stretch the outer layer of the skin.

In general stimulation of the skin the multiple facial electrode is highly recommended and a full description and directions for its use is given in chapter XXVII.

For the best results with Muscle oil use the automatic "Patter" Fig. 31 page 169.

Do not neglect the study of the purpose of each cream, oil and lotion as recommended and described in chapter XXI that you may fully understand why their use is advised in the outline of special treatments to follow.

In giving a wrinkle mask, mud pack, clay pack or whatever name it may be called, they should be scientifically applied and just as scientifically removed in order to bring about correct results. They are recommended especially for sagging skin and

especially when a reduction of weight is noticed to overcome this sagging. Remember that when the fatty tissues are reduced the outer layer of the skin must be very scientifically cared for in order to tighten this layer. More on this subject will be found in chapter XXI.

There are many different packs but all tend to overcome a sagging, wrinkled condition so use your judgment in the one best fitted to the type of skin to be treated.

If the skin needs to be bleached a mask may be given for this condition. Study well chapter XI to further understand these conditions and follow treatments given for bleaching.

In removing masks use a piece of cotton about four inches square covered with gauze. Wet the pad and moisten mask all over, then remove it from around the eyes first. Be careful not to get any in the eyes and do not drag the tissues. If it is possible get good instructions on this and follow them carefully.

When employing electricity in your treatments study the chapters on each modality and do not use the currents too strong.

The facial massage clientele should be increased by advertising and suggestions made to the patron as to what she needs in this branch of beauty culture.

Every facial massage has a certain amount of therapeutic value and this service should be brought to the attention of your patron by impressing upon her mind the necessity for this service at least once or twice a month according to the condition of her skin. This can be deftly brought about by attractive signs in your booths and instructing your operators to suggest them to their patrons.

Foundation creams should be recommended when the skin is dry and also a protection cream recommended to avoid freckles, tan, etc., during the summer vacation or when on long hikes or out in the open for a stretch of time.

A bleaching cream should be mixed with the astringent or tissue cream when the skin indicates the need of it.

If your patron is troubled with a downy fuzz on the face, arms or neck advise the use of depilatory and if the directions are carefully carried out as given in chapter XVIII the results will be very satisfactory.

If the hair is too coarse to be taken care of in this way or if warts, moles or broken capillaries are evident then electrolysis may be resorted to and when done by one understanding the work, is surely very effective.

The process of the several facial treatments are as follows:

CLEAN UP FACIAL

1. Cleanse face with cream.
2. Apply suitable cream for skin being treated.
3. Red light over cream.
4. Massage.
5. Remove cream.
6. Sponge with lotion and
7. Apply make-up.

GENERAL FACIAL TREATMENT

1. Cleanse face with cream.
2. If the Vapor and Steam Generator is available always use it at this time.
3. Remove comedones and milia.
4. Red light over bare skin.
5. Apply suitable oils and creams for skin being treated.

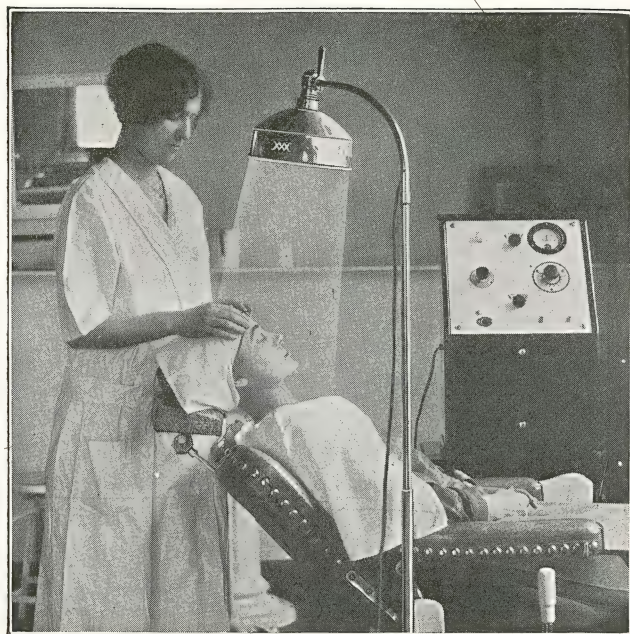


Fig. 24. Floor Lamp for Facial

6. Red light over cream.
7. Massage.
8. Use electricity indicated by condition of skin.
9. Remove cream.
10. Sponge with finishing lotion.
11. Use multiple facial electrode or galvanic current.
12. Make-up.

DRY SKIN TREATMENT

1. Cleanse face with cream and with Vapor and Steam Generator.
2. Red light over bare skin.
3. Pat in muscle oil, using Patter to more scientifically pat in this oil.

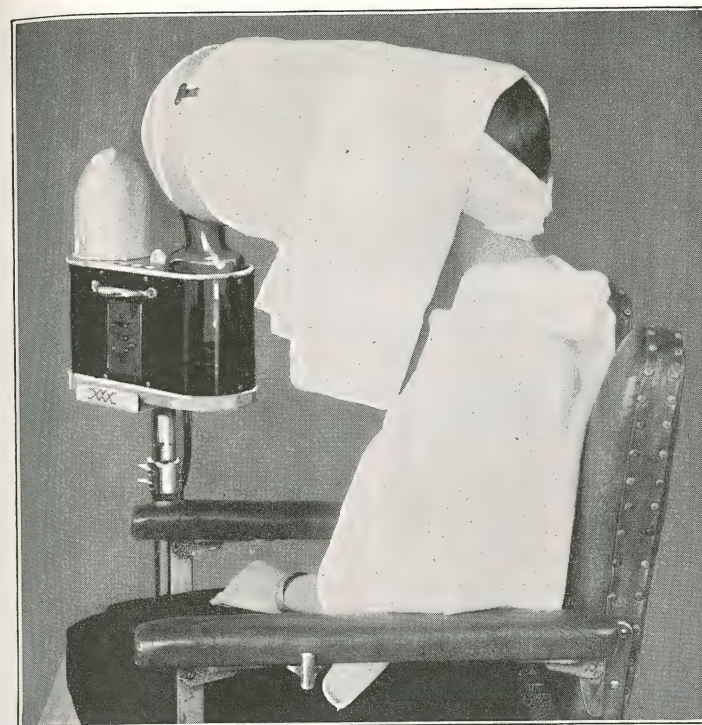


Fig. 25. Use of Vapor and Steam Generator

4. Apply tissue builder and bleaching cream.
5. Red light over cream.
6. Massage. Facial electrode, Violet Ray.
7. Remove cream.
8. Sponge with finishing lotion.
9. Stimulate skin by use of multiple facial electrode.
10. Foundation cream.
11. Make-up.

ASTRINGENT COARSE PORE TREATMENT

1. Cleanse face with cream.

2. In this treatment the further treatment of the face with the Vapor and Steam Generator is very necessary.

3. Remove milia and comedones.

4. Red light over bare skin.

5. If skin is oily perform phoresis with astringent lotion, if skin is dry omit this.

6. Apply cream indicated by skin being treated—whether oily or dry.

7. Red light over cream.

8. Massage.

9. Use electric current indicated by skin being treated, faradic if skin is oily, high frequency if skin is dry.

10. Remove cream.

11. Sponge face with finishing lotion.

12. If extra stimulation is necessary employ multiple facial electrode.

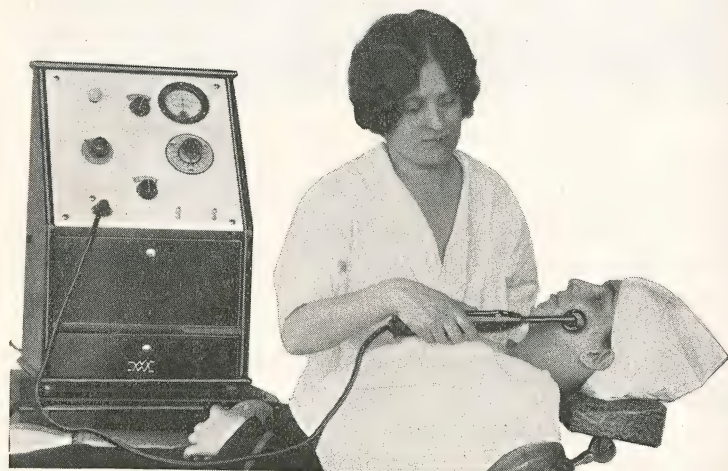


Fig. 26. Glass Facial Electrode as Used in Treatment of Acne and Dry Skin

13. Foundation cream if skin is dry.

14. Make-up.

— albidia
ACNE TREATMENT

1. Cleanse with cleansing cream if skin is dry, medicated soap if skin is oily.

2. Employ Vapor and Steam Generator.

3. Remove comedones, open pustules.

4. Sponge with Antiseptic Lotion.

5. Blue light over bare skin; 5-10-15 minutes as needed.

6. Apply Acne Cream. (*albidia in place of tins*)

7. Employ Facial High Frequency electrode 10 to 20 minutes.

8. Give manipulations on back of neck and shoulders only.

9. Remove Cream.

10. Sponge with antiseptic lotion.

11. Apply Acne Lotion, Positive Galvanism or use Multiple Facial Electrode.

12. Make-Up. Medicated Powder. No Rouge.

METHENE TREATMENT FOR MILIA
OR ACNE ROSACEA

1. Cleanse with Cleansing Cream. *milia Reg pole*

2. Employ Vapor and Steam Generator.

3. Remove comedones and milia.

4. Sponge Face with Soda Solution.

5. Red Light over bare skin.

6. Apply Methene Tincture with ball electrode, positive electrode on the face.

7. The use of Astringent Cream is recommended over the Methene.

8. Facial High Frequency electrode over cream for 10 or 15 minutes.

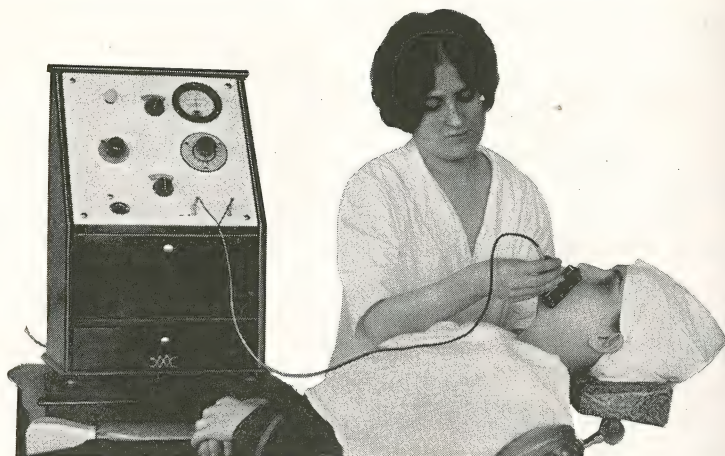


Fig. 27. Use of Multiple Facial Electrode

9. Give manipulations for back of neck and shoulders to relieve congestion.
10. Remove cream.
11. If traces of Methene remain, wash off Methene with white soap and water.
12. Employ the Multiple Facial electrode.
13. Pat in a little Tissue Builder Cream for protection and foundation for powder.
14. Make Up. Medicated Powder. No Rouge. Recommend electrolysis for treatment of prominent capillaries.

BLEACH TREATMENT

1. Cleanse face with cream.
2. Remove comedones and milia if any are present.

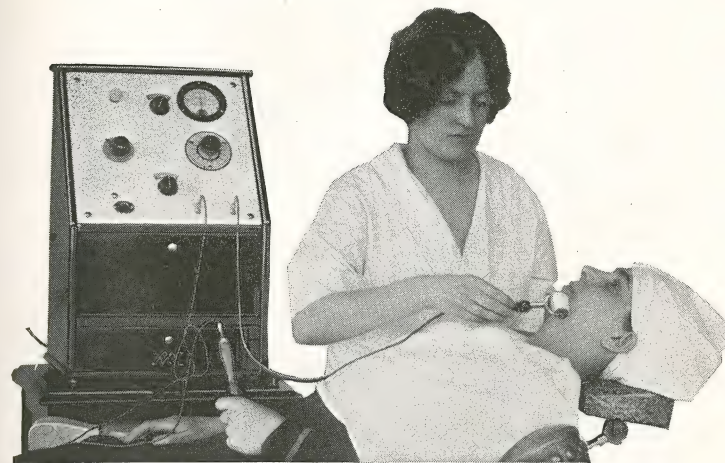


Figure 28. Use of Roller Electrode in performing Phoresis

3. Sponge face with soda solution.
 4. Perform phoresis with bleaching lotion.
 5. Apply bleach mask. This may consist of bleach mask in whatever brand of cosmetics you are now using.
 6. Dry mask with red light.
- Note: Unless otherwise directed by chemist who prepared special mask being used.
7. Remove mask as directed.
 8. If the bleaching mask causes an irritation apply cotton pads saturated with a soothing (calamine) lotion and allow to remain till irritation is relieved. Allow lotion to dry on face and omit massage.
 9. If no irritation is present give massage with suitable cream and the faradic current.



Fig. 29. Use of Hand Lamp

10. Remove cream.
11. Sponge with finishing lotion.
12. If skin is inclined to be flabby employ the positive electrode of the galvanic current, patron holding negative electrode.
13. Make-up.
14. Advise patron to have bleach treatment when she is not going out same evening also advise her not to use water for cleansing the face the same day the treatment is given.

Study chapter XI for conditions of skin for which this treatment is recommended.

In giving a wrinkle mask, mud pack, clay pack or whatever name it may be called the process of the

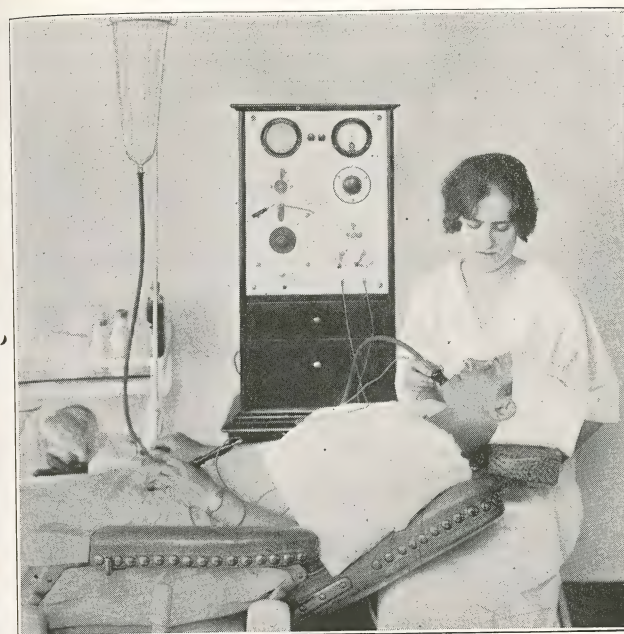


Fig. 30. Cleansing face with Electrolytic Massage Cup

general facial treatment may be followed. Apply mask after number 10 removing same after drying with red light 20 minutes and proceed with treatment as directed or if irritated, follow directions in bleach treatment.

A MILD BLEACH FOR SENSITIVE SKIN

1. Cleanse with Cleansing Cream.
2. Employ Vapor and Steam Generator.
3. Red Light over Bare Skin.
4. Pat in Muscle Oil.
5. Apply Tissue Cream.
6. Manipulations.
7. Apply mask of almond meal and corn meal,

equal parts mixed with milk, over gauze wet in milk. This gauze should be about eighteen inches square.

8. Dry with Red Light about 20 minutes.

9. Remove mask by lifting the gauze from the face.

10. Sponge face with milk until freed of all the powder.

11. Pat in a little Muscle Oil if skin appears dry.

12. Make Up. Medicated Powder.

HOME CARE

Advise your patron on the care of her skin during the interim of shop treatments.

The cleansing of the skin at home should be done just as scientifically as in giving special treatments. This is very essential and advice on this matter is very gratefully accepted by the majority of women.

All skins should be cleansed with cream. Cream has a tendency to "pick up" and retain in its grasp all particles of dust, soot, and make-up on the face. Tell your patron of the particular kind of cream that should be used for cleansing. Tell her to pat it on and do not rub it in as that has a tendency to further clog the pores. The patron may be advised that if an occasional bath with soap and water seems to be the thing for the face that this may be indulged in if the skin is not too dry and a good soap is used, one that agrees with her particular skin.

A thorough cleansing with cream first will help to overcome a dry condition. A foundation cream should be applied before putting on make-up.

If the skin is very oily pat on a good skin tonic which is astringent in effect before make-up is applied.

When cream is used for the cleansing it should be

patted on, left on a few moments and then gently removed with soft cloth with an outward and upward movement.

If treating face at night after cleansing then comes the suitable cream for each particular skin and you should pay a great deal of attention to this, selling your patron only that which she should have. The advice you give and the cosmetics you sell should be scientifically understood and the information you give her on use of same should be a matter of common sense and sound judgment.

THINGS TO REMEMBER

1. To always have a comfortable facial chair.
2. A quiet booth.
3. Plenty of clean towels, head bands, etc.
4. See that patron's hair is thoroughly protected from creams and lotions.
5. The best cosmetics to be had and those you can readily recommend to your patrons should be used. If this line is not procurable in the nearby drug or department store at a bargain price it is an advantage to you.
6. The best equipment such as violet ray, wall plates, therapeutic lights, etc., should be in your shop in giving the scientific treatments. Follow advice given in chapters on this equipment.
7. Protect the eyes of patrons while using lights by placing pads of cotton saturated in boric acid solution or witch-hazel over them.
8. An eye wash such as boric acid solution used with eye cup is very beneficial at close of treatment. Do not use same cup on both eyes as infection might

be spread from one eye to the other if any were present.

9. Prepare all electrodes, masks, cosmetics, etc., during time of cleansing the face.

10. Keep all creams and lotions covered when not in use.

11. Always use spatula for removal of creams from jars.

12. Use covered glass containers for pads of cotton and gauze.

13. Shaker top containers are the thing for the face powder.

14. Don't fail to sell cosmetics to patrons for home use.

15. Impress patron with fact that she cannot get best results from home treatments alone. Perfect relaxation is necessary to get value received during treatment.

16. See that the eyebrows are well shaped.

17. Suggest a manicure and maybe a hand and arm massage to further enhance the outline of the beautiful arm and hand during the time a facial treatment is being given.

18. Blend all creams to the consistency of soft butter before applying them as the thick, heavy creams drag the tissues.

19. See that the face, neck, back of ears, etc., are perfectly free of creams before make-up is applied.

20. Be sure that you are using the best of cosmetics, that is those that are free of harmful ingredients. Avoid acids that dry the skin, powders that clog the pores, in fact, use sound judgment and investigate thoroughly the line of cosmetics you are using and advertising.

Each thing used in the foregoing treatments are fully described in chapters on the different apparatus and the one on cosmetics.

In removing masks use a piece of cotton about four inches square covered with gauze, wet the pad and moisten mask all over, then remove it from around the eyes first. Be careful not to get any in the eyes and do not drag the tissues. If it is possible, get good instructions on this and follow them carefully.

Learn your manipulations thoroughly that you may give massage in a most scientific way to strengthen the muscles and stimulate and soothe the nerves.

The use of ice is recommended in finishing a treatment as this has an astringent and stimulating effect and helps to keep the tissues hard.

MUSCLE STRAPPING

Muscle strapping is today recognized as a real boon to the woman of advancing years with relaxing and flabby muscles.

This treatment is notably effective and especially beneficial to the woman who has passed the age of thirty-five years and perhaps is trying to rid the body of adipose tissue. Systematic exercise and careful diet will reduce the body but she needs the advice and treatment of the well informed Cosmetiste to aid her in keeping the face and neck in conformity with the rest of the body.

Here, the correction of muscles lacking in firmness and needing more than the ordinary facial treatments to overcome this condition is imperative.

This does not apply alone to the facial muscles and double chin, but includes the neck, shoulders and back as well.

A knowledge of the facts in the science of facials is necessary to overcome many conditions the average Cosmetiste comes in contact with in her daily observation of these conditions as they exist.

As years go by the scientifically trained Cosmetiste is instructed in the proficient methods of facial treatments so necessary to discriminating women.

The results of these treatments as applied to the muscles, restore contractility and aid in breaking down the accumulated fat cells. A series of treatments is however necessary to bring about these results. A course of ten treatments covering a period of six weeks should be considered essential and certain home treatments recommended by the Cosmetiste strictly adhered to. Complete quiet and comfortable surroundings should be maintained during the time these treatments are being given that the required amount of relaxation and rest for the patron may be assured.

Insist upon all conversation being dispensed with and the patron being made comfortable in every way.

The clothing should be removed so that chest, shoulders and upper part of back are easily treated.

The hair should be completely protected from the cosmetics to be used.

Plenty of towels should be employed to protect the lingerie.

Apply cleansing cream, having been patted to an oily state, liberally over face, neck, chest and shoulders.

While this is on the face, all electrodes to be used should be prepared, also any other apparatus or preparation necessary to the treatment.

Remove cream carefully maintaining a light, but firm touch with an outward and upward movement. If there are many fine lines use red light over bare skin.

Pat in Muscle Oil around eyes and wherever fine lines are to be found, to feed tissues and to soften dry, neglected skin.

One spatula of Tissue Builder Cream mixed with a like amount of Bleaching Cream till all is well blended, is then applied. Apply to face and neck with patting movement. Carefully avoid getting oil into the eyes as it irritates them.

With pads of cotton wet with witch-hazel over eyes, use red light over cream. This aids the skin in absorbing more of the cream but if the face is fat and no fine lines are evident this can be omitted.

If neck and shoulders are wrinkled employ the Violet Ray with facial electrode for ten minutes to increase glandular activity and deep stimulation of tissues.

Next comes the manipulations. These consist of a series of vibratory movements with the palms of the hands given to a rhythmic count of five.

1. Hands under chin lift up on the Platysma muscle and continue vibrations up from corners of mouth stimulating Zygomaticus muscle to the Temporal nerve, vibrate.

2. With second and third fingers of each hand vibrate on Mentalis muscle, vibrate up with palm of hand on Quadratus Labii Inferioris and Superioris muscles of face to corner of eye.

3. Hands under chin lift up on Platysma muscle, vibrate up on Zygomaticus to Maxillary nerve at side of nose.

4. Hands under chin, lift up on Platysma muscle to Maxillary, out over Zygomaticus to Temporal nerve in over Frontalis muscle and down on Corrugator muscle.

5. Hands under chin and lift up on Platysma muscle to Maxillary nerve, out over Zygomaticus to Temporal nerve, in under eye, stimulating Orbicularis Oculi to Infratrochlear nerve, down on the nose stimulating Procerus, up on nose to Infratrochlear nerve and out over eye to Temporal nerve.

6. Vibrate up on Corrugator.

7. Vibrate at corners of mouth stimulating Orbicularis Oris muscle out over Buccinator and Masseter muscles to ear, vibrate on Auricular nerve and around under ear to Facial nerve.

8. Rotate rim of ear vibrating with thumb on Auricular nerve.

9. Slide to Temporal nerve, vibrate in on Frontalis to Infratrochlear nerve up on Corrugator muscle to hair line.

10. Vibrate on Infratrochlear, out under eye to Temporal in over eye to Infratrochlear, vibrate.

11. Vibrate out under Frontalis to Temporal.

12. Hands under chin, lift with first finger above jaw and other fingers below jaw vibrate out and vibrate on Auricular and Facial nerves.

13. Under chin, vibrate to Facial nerve.

14. Cup thorax, vibrate up on Sterno Cleido Mastoideus muscle to Facial nerve.

15. Down low on neck, vibrate out and up to Facial nerve.

16. Vibrate on back of neck, stimulate Great Occipital and Trapezius muscles out on shoulders and slide off.

17. Wring neck to thoroughly relax muscles.

The kneading movements on the back should be governed by the amount of fat accumulation to be removed.

Now comes the strapping which is a series of tapping movements on all the lines previously worked upon. Do not strap over any bony prominencies as bruises are apt to result.

This strapping movement can be much more scientifically done if the "Meyer Automatic Patter" is employed for this work.

Remove cream, sponge with finishing lotion and if skin is inclined toward dryness apply a skin toning lotion employing positive galvanism on face, patron holding negative electrode. If skin is inclined to be

The tapping movements referred to in paragraph 3 are usually given with patters shaped like spatulas attached to a flat steel strip about 12 inches long and very flexible to allow of a vibrating motion. With one of these in each hand and a wrist movement the operator gives a rhythmic patting or tapping along the lines to be eliminated.

It requires considerable wrist flexibility and stamina to do this with just the right degree of touch and the motor driven automatic patter does the work much more satisfactorily and in less time. The strength of the pat as well as the number can be regulated.

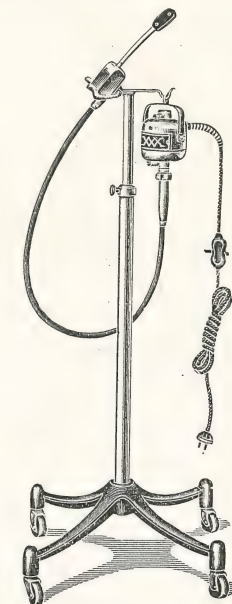


Fig. 31.
Automatic Patter

oily follow the same process applying an astringent lotion. Ice may be used if desired after this treatment.

Now apply a pad of cotton wet in lotion formerly used and tie up chin strap tightly at top of head.

The eyes are then covered with witch hazel pads and patron allowed to rest five minutes or a longer time if convenient to operator and patron.

Any traces of lotion are removed with dry cotton pledget and a suitable make up given.

FACIAL MANIPULATIONS

1. **FOREHEAD**—Begin at center of forehead. Employ *second* and *third* fingers of both hands, stroke up with a heavy stroke to the hair line, five strokes until *temporal nerve* is reached. Vibrate on *temporal nerve*, slide to *auricular nerve*, vibrate, back to *temporal nerve*, vibrate, repeat this *three* times, finishing in *center of forehead*.

2. **CORRUGATOR MUSCLE**—Vibrate with *second* and *third* fingers of each hand up on *corrugator muscle*, five vibrations until hair line is reached. Repeat *three* times.

3. **SMOOTHING CORRUGATOR MUSCLE**—With *second* and *third* fingers of each hand smooth up to hair line on *corrugator muscle*, repeat five times with each hand.

4. **SMOOTHING THE BROW**—Vibrate on *infratroclear nerve* with the *second* finger of each hand. Then, with all fingers flat and relaxed, stroke up and out with a heavy stroke to *temporal nerve*, vibrate. Five rotations, under eye with *second* finger,

resting and vibrating on *infratroclear nerves*. Repeat *three* times ending on *infratroclear nerve*.

5. **OUTLINE EYEBROWS**—With *first* and *second* fingers, five rotations, stimulating muscle of *supraorbital nerve*. Vibrate out to *temporal nerve*, five vibrations. Rotate under eye with *second* finger, five rotations ending on *infratroclear nerves*. Repeat *three* times.

6. **NOSE**—Rotate down the sides of nose, with *second* fingers, five rotations, stimulating muscle of nose, resting on *maxillary division* of fifth nerve, vibrate. With *second* and *third* fingers rotate *up* heavy on *maxillary nerves*, lifting the *quad ratis labii superioris* muscles and thereby stimulating and strengthening them. Slide back to *Infratroclear nerve*. Repeat *three* times. Slide over forehead to *temporal nerves*, vibrate, then slide to *auricular nerve*, vibrate, left hand resting on *auricular*, make

7. **CUPIDS BOW**—With thumb and *second* finger of right hand, lifting and stimulating *triangularis*, *zygomaticus*, *orbicularis oris* and *caninus*, helping to overcome the drooping corners of mouth. Repeat *three* times.

8. **OUTLINE JAW**—Hands under chin and lift, *first* finger vibrating on *mentalis muscle* and thereby stimulating branches of *facial nerve*. Other *three* fingers below and relaxed, five vibrations to *facial* and *auricular nerves*. This corrects double chin or flabby condition of same. Repeat *three* times.

9. **STROKING NECK AND CHEST**—Begin with left hand at tip of chin, stroke neck and chest first with one hand then the other, five strokes down and out, each hand resting on shoulder, repeat back

to center of chest with five strokes, this stimulates *cervical branch of facial nerve* and strengthens *Platysma Muscle*, then slide hands and rest second fingers on *facial nerves*.

10. ROTATE EARS—Rotate around rim of ears with thumb, other fingers on back of ears. At fifth count rest side of thumb on *auricular nerve*, vibrate. Repeat three times.

11. RESTING EYES — Slide to *temporal branch of facial nerve*, vibrate, slide in over *frontalis muscle* resting second fingers on *infratroclear nerves*. Stroke out over eyes with all fingers down, vibrate on *temporal nerve*, repeat three times resting on *Infratroclear nerve* to finish.

12. CHEEK BONE—Vibrate with second and third finger out on cheek bone, five vibrations, to *temporal nerve*.

13. CHEEK—Slide thumb to cheek bone and while resting it there lift muscles of cheek with fingers in five distinct lines, repeat three times.

14. FAN MOVEMENT—With the tips of the fingers, give a stimulating touch similar to playing piano in five distinct lines on cheek.

15. LIFTING CORNERS OF MOUTH — Vibrate from corners of mouth, all fingers down, five vibrations to *auricular nerve*, vibrate, (be careful to always give a lifting vibration) repeat three times.

16. CHIN—With *second* and *third* fingers of both hands, resting on *mentalis muscle* rotate up and out, lifting *mentalis*, *quadratus*, *labii inferioris* and *triangularis muscles* and stimulating the *mandibular*

branch of the facial or seventh nerve. Repeat three times.

17. VIBRATE ON CHEST—Slide to chest and with all fingers down give five vibrations out to shoulders.

18. ROTATE SHOULDERS — Back, three times.

19. SPINE—Slide in and down to about fifth vertebrae and vibrate up each side of spine with second and third fingers of both hands stimulating branches of the *spinal accessory nerves* and strengthening the *sterno cleido mastoidus* and *trapezius muscles* vibrating on *occipitalis nerve* at base of skull, vibrate and *pull head*.

20. SLIDE OUT TO SHOULDERS—Rotate shoulders and repeat eighteen (18) and nineteen (19) three times. Then slide hands gently out and off shoulders.

REVIEW

1. What are the necessary requirements for a successful facial operator?
2. What is recommended as necessary equipment, apparatus, cosmetics, etc., for giving facial treatments?
3. Name the different conditions encountered and give process of treating these conditions.
4. What processes of sterilization, hygiene and sanitation should be used in giving facial treatments?
5. Why use electricity in giving facial treatments?
6. Why use the different lights in facial treatments?
7. Define muscle strapping.
8. For what condition would you give muscle strapping treatment?

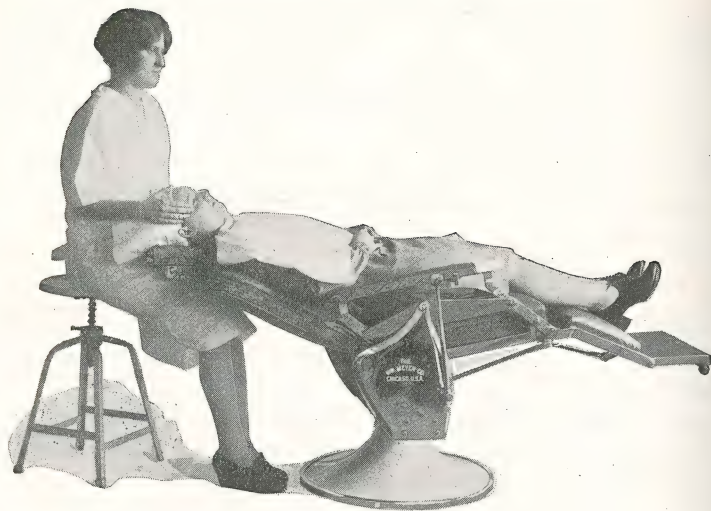


Fig. 32. Facial Chair

To do facial work correctly which also includes the neck, shoulders and upper spine requires that the patron be placed in the corrective position. This makes it necessary to readjust, so far as possible, the shoulders, back and head to a normal position. This is usually not the position which the patron normally holds. The sagging face and stooped shoulders are associated with malposture. Usually there is pressure at the first to third dorsal vertebrae and rigidity and bulge of neck muscles. A properly constructed facial chair will help to correct this and cause relaxation.

A so-called facial couch may be very easy and comfortable to rest in but will tend rather to increase the slouch and not to correct it.

Blue Book - N. G.

NOTES

Comedone Treatment.

Cleanse face with Cleansing cream
Apply neg pole of Galvanic for 7 min. Have
patron hold pos.

Apply massage cream

Apply Infra-Red rays at distance of
18-24 inches & use during manipulation

Massage face for 10 min with finger tips
using Secondary Faradic or Sinusoidal
current with wrist electrode.

Patron holds carbon stick.

Free the face from cream, remove comedones

Wrap carbon electrode in cotton wet
with astringent & pos. pole.

Customer hold other pole. Massage 10 min

NOTES

Coarse Pore Treatment.

Cleanse face with cleansing cream.

Neg. pole Galvanic for 7 min.

Apply massage cream, finger manipulation for 20 mins, using Secondary Faradic - sinusoidal.

Remove cream - cover face covered with cotton wet in astringent.

Press down tightly to face.

Massage face over cotton for 10 min with the massage roller, attached to Positive pole, Galvanic current.

Apply make up.

THE COSMETISTE.

Chapter XIV

HAIR

It is very necessary that the Cosmetiste should learn what the hair is, how the hair grows and when we can promise results and why.

A hair is an appendage or an outgrowth of the skin derived from the same epithelial cells that constitute the structure of the skin. It forms below the surface in a bulb or club shaped process resembling somewhat the bulb of a tulip in shape.

The bulb contains the Papilla which supplies the necessary nourishment for the growth of the hair. Each hair has its own Papilla therefore it is from the Papilla that every new hair starts its growth, and if the Papilla is destroyed because of lack of nourishment, the old hair will fall out and no new hair grow. As long as the Papilla remains healthy even if one becomes bald, hair may be persuaded to grow by increased stimulation and nourishment. Massage is one of the best known agents to increase the growth of hair and increase the blood supply.

Just as the skin varies on different parts of the body so the hair differs also. With the exception of the palms of the hands and the soles of the feet the entire surface of the body is covered with a soft downy hair called the Lanugo (lan-u'-go) hair.

Occasionally lanugo hair, for some unknown cause, becomes hypertrophied and then gives rise to the monstrosities that are so eagerly sought for by circus

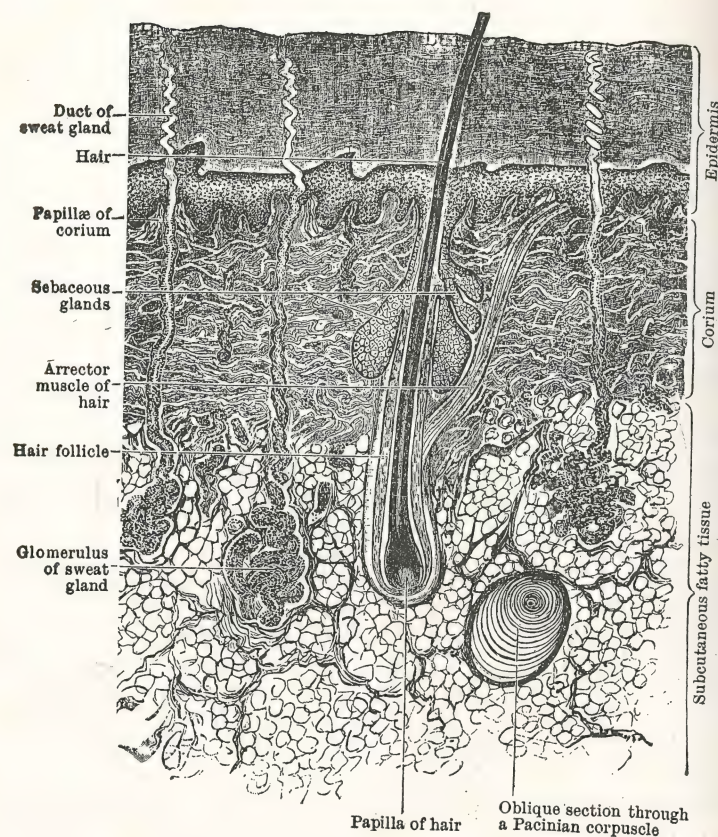


Fig. 33. Section of skin showing hair follicle, papilla, arrector muscles, etc.

agents. When this occurs upon the face of women it becomes a deformity. Hypertrichosis is an abnormal growth of the hair, superfluous hair.

The second variety is the strong hair which develops at different periods of life on different portions of the body. It undoubtedly was originally lanugo hair.

The scalp is covered with a stronger growth. The hair whether it be on the body or scalp is constructed the same way. It consists of the hair shaft which is above the surface and the hair follicle and Papilla beneath the skin.

The hair follicle which is the depression or sac like inversion containing the root of the hair is found one-twelfth to one-sixteenth of an inch beneath the scalp. They are present at time of birth and no amount of stimulation will increase their number but will only tend to keep them in a healthy condition. Scant and luxurious hair is therefore a matter of the number of hair follicles in the scalp.

We study three layers of the hair as follows:

1. Cuticle—Outer layer of horny scales like the shingles on a roof.
2. Cortex or corticle layer—A fibrous substance, the middle portion consists of elongated cells. It is the principle structure of the hair. In this layer is found the pigment or coloring matter.
3. Medulla—Central pith of small round cells, when full of air the hair looks white. This layer also contains some pigment.

The hair bulb contains all the elements necessary for growth of hair. The hair itself has no blood vessels, so it depends upon Papilla for nourishment and growth.

The normal growth of the hair is from four and one half to nine inches a year. Very necessary to the normal growth is a thick, pliable, easily movable scalp as that promotes the natural elements to come to the roots of the hair and supply necessary nourishment and food supply.

The Papilla is the productive organ of the hair. A

vascular process of connective tissue extending into and nourishing the root of a hair.

Each hair is supplied with a muscle called the Arrectores Pilorum which causes the hair to stand on end when frightened and will produce goose flesh when muscle contracts.

The hair is supplied with Sebaceous glands that keep the hair soft, pliable and glossy.

BLOOD SUPPLY

The blood supply of the hair is derived from Arterial branches which surround the hair follicles in the form of a Capillary network between the external and middle layers of the connective tissue sheath and from small Arterial loops which penetrate the Papilla from below.

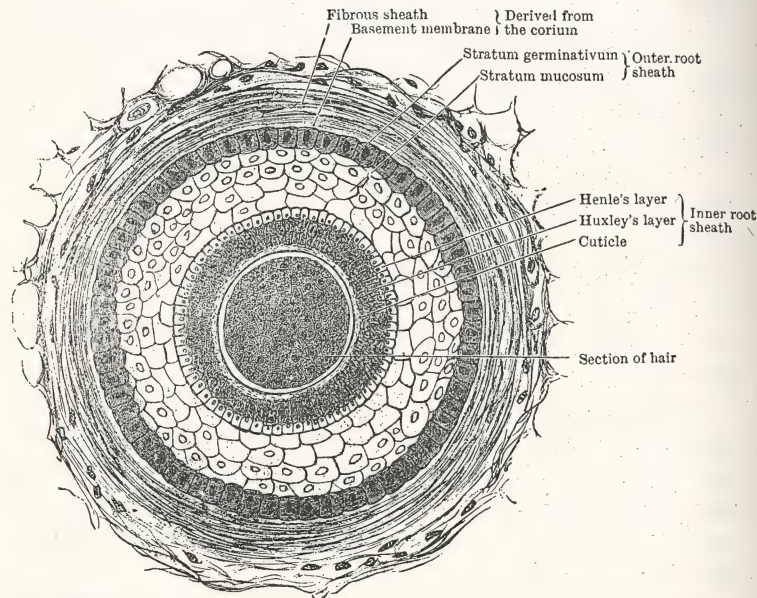


Fig. 34. Transverse section of hair follicle, highly magnified

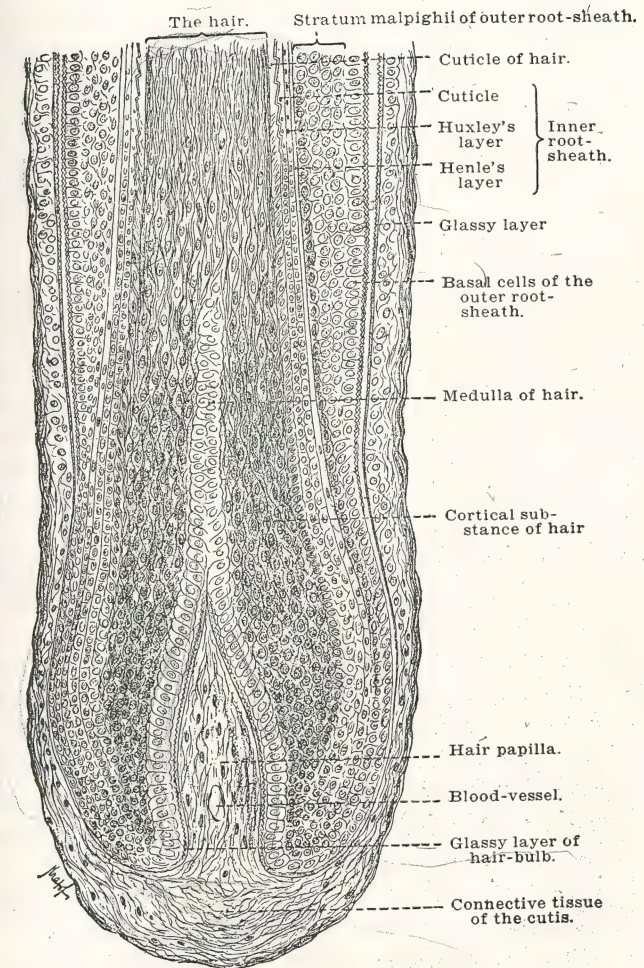


Fig. 35. Section of hair follicle and hair shaft greatly magnified

NERVE SUPPLY

Nerve terminals exist in the hair follicles. They do not extend to the hair shaft. The color of the hair is due to the amount of pigment in or between the cells of the second layer or fibrous substance. The source of the pigment is not satisfactorily determined, but without doubt is derived from the coloring matter of the blood as is also the pigment of the body.

LENGTH OF LIFE OF HAIR

The length of life of the hair varies with the sex, age, character of the hair, and peculiarity of the individual. Each hair has its determined length of life which is not the same for every hair of the same sort. What may be the circumstances that determine the period of its existence is not known. The lifetime of the eyelashes is from one hundred twenty-five to one hundred fifty days. *125-150 days*

The length of life of the hair on the head varies from two to six years. Shaving and cutting the hair makes it coarser and stimulates its growth. The average number of hair to the square inch on the head varies in different parts of the head. About one thousand on the crown and four hundred to six hundred on the anterior portion. Approximately one hundred thousand to one hundred fifty thousand on the entire head of an adult. This varies somewhat in the different colors of the hair as:

1. One hundred forty thousand for light blond hair.
2. Ninety thousand for red hair. *175 sq in*
3. One hundred ten thousand for brown hair. *coarse*
4. One hundred thousand for black hair. *150 hair sq in*

It also varies in different races, however, as this is not necessary for us to know and is foreign to our

purpose we content ourselves with mere statements of facts.

Hair differs in shape from round to flat. Whether a hair is to be curly or straight is dependent largely upon its contour. The straight hair being round, oval hair wavy and flat hair very curly or kinky. Atmospheric conditions play an important part in the curliness also.

The finest hair is found in blond races.

The uses of the hair are as follows:

1. As a protection from cold. The hair is a poor conductor so preserves the heat of the body.
2. As a protection or defense. The hair forms a thick elastic cushion and is thus an admirable defense to the skull against blows and falls.
3. As a promoter to beauty. Of the full head of hair as a promoter to beauty, little need be said, as it will be conceded by all, that this is an adornment.

The chemical composition of hair is approximately as follows:

Carbon	44%	Hydrogen	6%
Oxygen	30%	Sulphur	5%
Nitrogen	15%		

HYGIENE OF THE HAIR

This is very important and necessitates the most careful attention to the instructions as to the shampooing and treatment of the hair and scalp.

Any foreign matter which might cause irritation or result in diseases of the scalp should be avoided, or in other words, the scalp should be kept perfectly clean.

This can be accomplished by shampooing at regular intervals, careful drying and the necessary application of tonics and oils. As a rule a shampoo should be given every two or three weeks remembering that

the proper drying has more to do with it than we may realize. Before a shampoo the hair should be brushed thoroughly. For the best results in shampooing use a water soluble oil, applying it hot to the scalp and root ends of the hair and massaging thoroughly. If this is done under the warm rays of a lamp as illustrated in Fig. 36 or by means of the electrically heated



Fig. 36. Hot Oil Treatment under Lamp

hot oil comb, Fig. 45, the oil will spread evenly over the scalp and hair. After this it is only necessary to rinse out the excess oil with warm water, no soap

being required. Water which is comfortably warm to your own hand about 118° Fahrenheit is recommended. The rinsing should be done thoroughly, special rinses being optional with the customer.

The water soluble oil above mentioned is usually a mixture of mineral and vegetable oil, the latter being sulphonated to make it water soluble. It will therefore absorb excessive oil from oily hair as well as give up some of its oil in case of dry hair, thus serving both purposes. It is also very beneficial in seborrhea. Do not apply "hot" water to the ends of long hair if the hair is inclined to be dry and discolored but keep them dry until the scalp is thoroughly cleansed.

To remove any accumulated powder and cream from around the hair line, scrub carefully with a small brush.

For a soap shampoo use a good liquid soap. Tincture of Green Soap is good if the hair is oily but if the hair is dry a dissolved Castile Soap the formula for which is given in the chapter on Cosmetics should be used.

Wet the hair then apply the warm soap, a little at a time until a good lather is obtained. Then rinse and add more soap. Make as many applications as are necessary, but more than three are seldom required. For the best cleansing action rub with a firm even stroke as long as it is needful to bring up a good lather.

Never rub hard soap on the hair for some will remain under the shingle like formation in the cuticle, will dull the hair, keeping the natural oils away and cause the iron to stick in waving.

Brush the hair constantly while drying, lifting it free from the scalp. A gentle massage on the back of the neck will relieve any possible congestion.

Do not become discouraged if at your first attempt to shampoo with soap the hair appears to be sticky. This is most likely due to insufficient rinse water or the water may be much chlorinated.

Frequently bleached, dyed or hennaed hair is very stiff and mats easily. In such cases rinse thoroughly and treat with lemon or vinegar rinse to cut the soap and free the hair from stickiness.

Rub well, rinse well and dry well.

Care should be taken in the selection of the brushes and combs. Do not use too stiff a brush on a sensitive scalp. Make certain of the sterilization of combs and brushes by washing them with a yellow (laundry) soap and water, after removing all loose hair, then immerse in 4% formaldehyde solution, or any of the approved antiseptics or germicidal solutions on the market, for twenty minutes, then rinse in hot water, dry thoroughly and place in dry sterilizer until ready for use.

Immersing the brushes in strong alum water before drying will stiffen bristles.

This dry sterilizer is air tight and a porcelain dish with cotton or blotting paper saturated with formaldehyde in same — the fumes or vapor will tend to keep the articles therein sterile.

Be sure and advise your patrons as to the cleaning of their own combs and brushes at home, also to keep their hat bands, and nets, in fact everything that would come in contact with the hair, properly sterilized after each shampoo especially if seborrhea is present. Even pillow slips should be changed at that time.

PERMANENTLY WAVED HAIR

The care of permanently waved hair is essentially the same as the care of hair not waved.

Since the process of permanent waving has a tendency to dry the natural oil out of the hair leaving it dry and brittle, hot oil treatments especially those with water soluble oils are recommended to overcome this condition and to bring back a near to normal condition of the hair again. The use of gas heated dryers where the burnt gas and air are mixed is to be avoided in the interest of the patron, because such harsh drying has the effect of straightening the curled hair and making it brittle again.

A dryer equipped with a lamp is of special value in drying permanently waved hair because it gives a "sunshine dry" to the hair. The infra-red rays of the lamp stimulate the scalp and hair roots and leave the hair in a healthier condition.

This, if supplemented with a high frequency treatment given with a rake electrode, Fig. 83, is a combination treatment from which real beneficial results can be expected.

Do not brush hair which has been permanently waved. Comb it carefully, dampening just a little with warm water, placing the waves with the fingers, or water waving combs.

The veil or net used over the wave before drying should be of such white material as is easily sterilized.

Avoid the use of celluloid combs in water waving. Celluloid is a very inflammable and combustible material known to have caught fire from a gas jet 2



Fig. 37. Drying Hair with Dryer equipped with Lamp

NOTE: When the hot air from a hair dryer strikes the hair and scalp it takes up a certain percentage of moisture before it is pushed on by the hot air following. This rapid removal of the moisture causes a drop in temperature at the surface of the scalp which the patron experiences as a chill. Such a chill will in some cases cause the most unpleasant after feeling with stiffness in the neck.

If the dryer is equipped with a radiant lamp, the rays falling on the same area will counteract the chilling of evaporation leaving the patron relaxed and comfortable.

feet away. Some have been found to melt at but slightly above the heat of boiling water and when in this state are as dangerous as dynamite. Shop insurance does not cover the use of celluloid combs. Many damage suits because of disastrous results following the use of celluloid combs have been brought against shop owners who neglected to heed this warning and heavy damages assessed.

Hard rubber combs of a reliable manufacture are not subject to such combustibility nor do they warp so easily.

The difference in the cost is but little, but taking a chance may mean the ruination of your entire future.

Do not keep gasoline, chloroform, ether or benzine around. For dry cleaning use Carbon tetrachloride. This is non-inflammable and will not leave a ring when used. This liquid is also known under such trade names as Carbona and Pyrex.

In reviving the permanent wave or natural wave, after a shampoo, place the head in Vapor and Steam Generator as described in chapter XXIX and in a few moments the wave and natural curliness will return. The wave may then be set and dried by the foregoing process.

PULLING THE HAIR

Although we say never to brush permanently waved hair, that does not mean to neglect this stimulating treatment so necessary to the successful growth of hair.

With the first and second fingers of the left hand, hold a section of the scalp firmly and at the same time

pull a small division of the hair (say one inch square) with the right hand. If this is done thoroughly, covering the entire scalp, it draws the blood to the surface, loosens the scalp, also strengthens the Arrectores Pili muscle.

Unless these muscles are exercised and strengthened either by pulling or brushing, they become weak and so do not perform their function of holding the hair in the scalp.

See that every loose or dead hair is removed after this treatment, also, as they retard the growth of the new hair. This is very essential, that the health of the hair may be retained.

SEBACEOUS GLANDS

The sebaceous glands in the body are usually associated with or are in close relation to a hair follicle. The size of the gland bears no relation to that of the hair follicle to which it is connected. The smallest sebaceous glands are those found on the scalp.

PIGMENTATION OF HAIR

The color pigment cell is a form of hollow passage extending the full length of the hair. The color of a hair is determined by the amount of the color which is contained in the cells. Hair of itself has no color. Whatever color it appears to be, is determined by the color pigment which is contained therein. If the hair is colorless it denotes an absence of this pigment. If the red pigments predominate we have red hair, if the black predominates it assumes a black appearance and we have black hair, etc.

A good illustration is, take a glass tube, it is colorless, but if we fill this tube with any particular color we then to all appearances have colored the glass but it is only the color showing through this transparent tube. Similarly with the hair, it appears to be of the color of the pigment with which it is supplied although known to be colorless. Science has never been able to discover of what substance color pigment consists nor has it been discovered what bodily element produces color pigment although there are many authoritative statements on the subject.

When the hair turns gray it simply means that the color pigment has either left the hair or that nature has failed to produce color pigment of such a quantity as to color it.

The cause of the difference between brunet and blond is the amount of pigmentation or color in the hair, skin and eyes. We are here concerned with the hair only. Blonds are generalistic and quick in thought, brunets are more specialistic and slow. Brunets, with increasing age, as a rule get more generalistic and distributive in thought and this manifests itself in the loss of pigment showing in the hair. Blonds also become more distributive but since the pigmentation in their hair is very light the loss is not noticeable. That people get gray or white over night through some cataclysm or other occurrence, where a thousand thoughts are impressed on the brain in a relative short time is but a proof of this contention.

Hair starts to lose its color at the roots as it is from this source that it is supplied with color.

The following formula may be employed to stimulate and thereby act as a deterrent to graying, falling and thin hair.

To 1 pint of hot water, add
 1 teaspoon of borax,
 1 drachm of salts of tartar,
 1 ounce of almond oil.

A few drops of any of the essential oils as lavender, bergamot, lemon or cloves may be added as a perfume.

TREATING CHILDREN'S HAIR

Much has been said in beauty journal and text book on the care of the hair of the adult but very little about the care of the child's hair.

A great deal of attention should be paid to this however as we can notice this in the slow, weak production of the growth of baby's hair.

When the child is born do not try to remove the accumulation which is on the scalp with a strong soap. Use water soluble oil, warming it and massaging it gently into the scalp with the finger tips. It may then be rinsed with warm water, preferably with a soft sponge dipped into the water and the water removed by using a soft towel as a blotter. After this a good cream may be applied lightly.

This should be done daily for several weeks, i. e., apply the hot oil, massage gently into the scalp and sponge off with warm water. Never use soap if you can help it, least of all a hard soap, but if you must use soap then use a pure castile soap solution.

As the child advances in age this needs to be done but once or twice a week and should be continued until the child is six or eight years old.

While parents may consider this needless or extravagant, they can rest assured that such care in

early life will be amply rewarded by the splendid results.

Never use a sharp toothed comb on the child's head but a soft brush is better till a full head of hair is realized.

Teach your patrons to bring their children into your shop for special treatments and care and you will have begun to build up a future clientele for your shop.

REVIEW

1. Define hair.
2. Define papilla.
3. What is lanugo hair?
4. Define follicle.
5. Name the layers of the hair.
6. What is the name of the muscle with which each hair is supplied?
7. What glands supply a necessary element to the hair? What is this element?
8. How does the hair receive its blood supply?
9. How does the hair receive its nerve supply?
10. What is the natural life of hair?
11. On what does the curliness of the hair depend?
12. What are the uses of the hair.
13. Give a comprehensive answer on hygiene of the hair.
14. What care should be given the combs and brushes?
15. How do you care for permanently waved hair?
16. Give process of scientifically dried hair and best methods used and why used.
17. How is the color of the hair formed?
18. What advice do you give on care of children's hair?

Hair slope or stream?

Parallela rows of hair pointing in the same direction in any part of the body.

What is a cowlick?

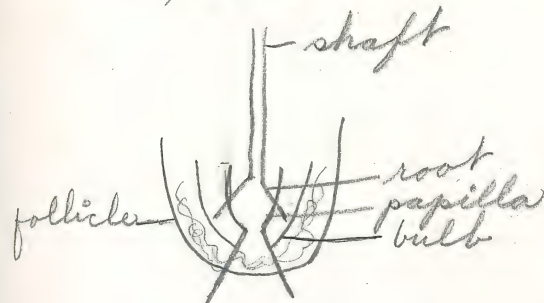
When two hair slopes from opposite directions meet, they form a hair drest. When two slopes extends in opposite directions for a given point, they form a parting. at the end of either of these lines a whorl or cowlick will form?

Why is H.F. so valuable?

H. F. has been known to restore hair to normal color. after flu, typhoid, scarlet fever.

NOTES

Hair



NOTES

THE COSMETISTE

Chapter XV

DISEASES OF SCALP

We will only deal with the diseases that we would actually come in contact with in shops. Those we treat and those we do not treat.

The diseases that we treat are: First: Seborrhea-Sicca or Dry Dandruff, Seborrhea-Oleosa or Oily Dandruff. An infectious condition spread from one patron to the other by use of unclean combs, brushes, hats, pillow slips, etc. Do not use these articles belonging to others.

Seborrhea is usually accompanied or prefaced by an oily condition of forehead and nose. It can be readily noticed that a sebum exists in so much that it could be classed as a Hypersecretion of the Sebaceous Glands effecting the follicles. The degree of oiliness varies in different cases. Young people are more apt to have this condition existing than adults.

If a portion of the scalp is pinched up between the thumb and forefinger a comedone-like formation is squeezed out of the follicle mouths. This is the characteristic lesion of the disease. This is also often accompanied with Hyperdrosis which in time if unchecked, will cause a diffuse Alopecia.

Treatment: Hot Oil Treatments are recommended for this condition with free use of High Frequency current of electricity; using an antiseptic oil or a hot tar oil if the patron prefers this, as tar is drying. Extreme cleanliness and sanitary measures should be observed using a good antiseptic tonic frequently, to keep Seborrhea dissolved. Massage should be insisted upon and every measure resorted to, to bring about a great deal of stimulation and improvement in circulation.



Fig. 38. Psoriasis

Second, Psoriasis: A form of inflammatory skin disease that somewhat resembles Eczema but differs in the following characteristics. It makes its appearance on the extensor surfaces only, has a circumscribed outline, but, no serum when scales are lifted. These scales are silver-like and pile up in spots. No

promise can be made as to cure though it can be greatly relieved.

Food plays a very important part in the control of this condition as idiosyncrasies in different people, toward certain foods, quite frequently increases this trouble. One should pay very close attention to diet, following the advice given in our chapter on foods.

The X-Ray in the hands of a capable practitioner specializing in such work is recommended in stubborn cases.

Never promise a cure in Psoriasis, which although it may be relieved and sometimes disappears for a long time, is likely to recur. Supposed to be a systemic condition due to nervous or some liver or intestinal disturbances.

Treatment: Remove all scales by use of oils and shampoo with tar soap. The hair is seldom affected by Psoriasis but when the disease is unusually severe may cause a temporary falling out of same. The Hot Oil treatments are especially good with plenty of High Frequency.

This condition is found on exterior surface parts of the body as: elbows, hips, knees, etc. The use of the Blue Lamp of sufficient power to be effective if used as outlined in the chapter on Lamps has proven beneficial in a number of cases.

Third, Eczema: Inflammation of the skin with exudation of lymph. Is not classed as a disease of itself but is the result of some drug, hair dye, shampoo, etc., that irritates the skin or from some medicine or food taken that does not agree with the individual. Appears in following forms.

Erythematous—This is a form of Eczema, when the skin becomes very red accompanied by intense

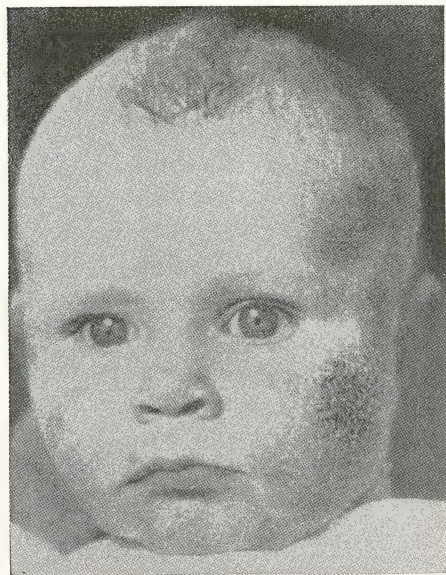


Fig. 39. Eczema

itching, burning, smarting, swelling, etc. Spreads very rapidly, is scaly and exudes serum.

Papular or Papulosum—A form marked by intensely itching papules of a deep red color. These papules vary in size and redness.

Vesicular or Vesiculosum—That marked by the presence of Vesicles. Sometimes develops from papular type, swelling, small blisters are seen and a weeping surface.

Pustular or Pustulosum—The stage of Eczema where pustules are present. Found oftenest on scalp and is supposed to be the result of poor nourishment. This is sometimes caused by improper food or drugs taken internally. Some systemic conditions will also cause the appearance of this eruption on the skin.

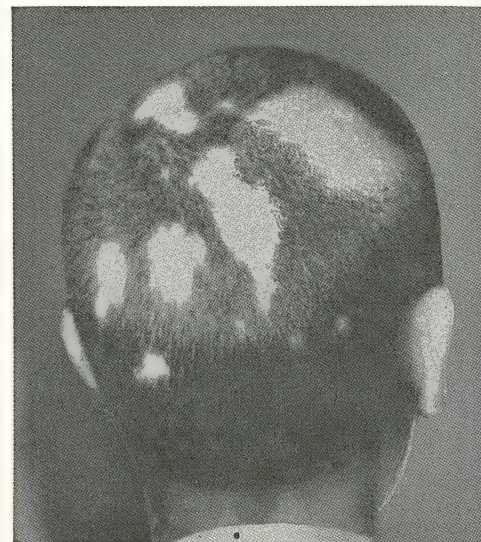


Fig. 40. Alopecia

Do not manipulate over any condition where lesions are present as it sometimes causes them to spread to other parts of the face or scalp.

ALOPECIA

Pages could be devoted to this subject but the main thing to remember in this condition is that the patron should consult a specialist if it is stubborn and yields slowly to treatment. Alopecia is loss of hair or baldness.

Alopecia Areata—Falling of hair, leaving bald spots might be caused by Syphilis, Anemia or from some other source. It starts suddenly, hair falls in patches, leaving smooth bald places of various shapes, usually circular. No ordinary treatment has any beneficial effect. It needs very vigorous treatment.

Coal oil - benzene

Horn

sometimes resorting to painting of spots with iodine and blistering after which the new hair may be found to grow. Systemic condition must be considered and consultation with physician is necessary.

Alopecia Adnata—When one has falling of hair from birth or congenital baldness.

Alopecia Pityrodes—Rapid loss of hair and a fine bran-like deposit appears on scalp accompanied by intense itching, also hair is lusterless and brittle.

Senile Alopecia—Loss of hair from old age.

Alopecia Symptomata—Loss of hair as a result of illness.

For all these conditions nothing better than Hot Oil Treatments and shampoos properly given can be recommended. Always consult a specialist on skin and hair in connection with your work and follow his directions as to the cause of the falling hair. In other words, find out the cause of the Alopecia and then treat the condition accordingly.

Canities (pronounced kan-ish'-e-ez)—Grayness of hair or absence of color.

Senile Canities—Gray hair caused from Old Age.

Premature Canities—When the hair turns gray early in life as seen in young people. Sometimes can be restored by use of High Frequency and massage, also some hair tonics that are recommended will darken the hair if used continually, such as sage tea, etc.

Accidental Canities—Result of fright, or where hair growth has been restored on bald spots in Areata, when hair comes in white.

No real cure can be promised in any case of Canities although it has been reported that in certain cases of gray hair, when treating the scalp by use of High

Frequency Currents for certain diseases the patient's hair has returned to its original color.

Up to this time we have dealt with non-contagious or infectious conditions of the scalp. The following diseases may be classed as diseases the Cosmetiste does not treat in her shop on account of their contagion or infection.

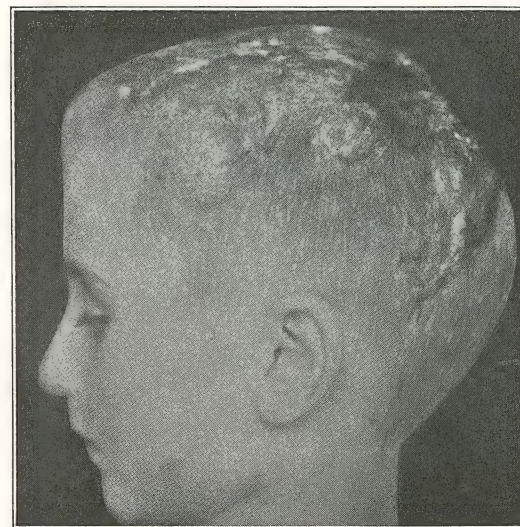


Fig. 41. Trichophytosis, or Ringworm

1. **Trichophytosis** (trik-o-fi-to'-sis)—or Ring-Worm is extremely contagious. It forms in small round patches or rings. This disease does not appear only on the scalp, but may extend all over the body and is sometimes quite painful. The hair all around the edge of the patch affected appears as though it had been broken off. The center, however, is sometimes covered with small scales, or may be clear or a vesicular condition may exist. Do not treat this but be able to recognize it.

2. Favus—Another highly contagious disease found on the scalp caused by a fungus-like growth. This affects the hair follicle. The lesions are cup shaped and hair growth rarely if ever returns. Leaves a cup-shaped scar. A mouse-like odor always accompanies this disease. Never treated by the Cosmetiste.

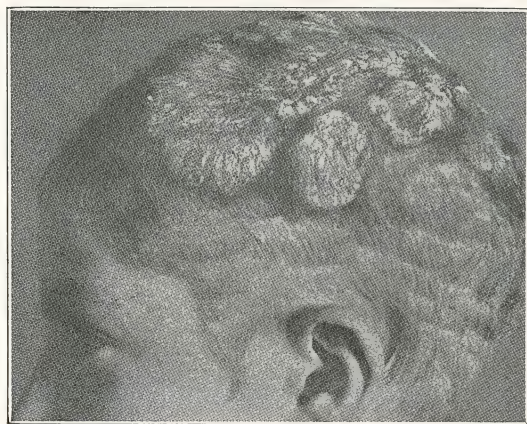


Fig. 42. Favus

3. Syphilis—A description of this condition will be found in chapter on Skin Diseases.

4. Pediculosis Capita—Lice on the head. Although this condition is usually associated with uncleanliness and carelessness, some cases are a result of accidental communication in milliner shops, schools, traveling and in numerous other ways. Intense itching sometimes fools our patrons to thinking they have some other scalp condition. This scratching will often cause Eczema. So always examine your patron's head carefully if she complains of severe itching and watch out for any appearance of

nits on the hair. As the treatment of this condition necessitates a great deal of precaution to avoid trouble to other patrons, the treatment should usually be given at the patron's home.

Larkspur and Ether equal parts is a safe and sure remedy to apply to the full length of the hair. This should remain on hair for several hours or over night. Then shampooed and a strong vinegar rinse given to dissolve the nits. This treatment should be repeated every other day until no signs of nits are found. The first application will destroy the Pediculi.

Be careful not to spread this to others by the careless use of combs and brushes. Sterilize hat bands and treat extra hair same as hair on head.

RESUME

Non-Contagious Diseases	{	Seborrhea { Oleosa Sicca
		Eczema
		Psoriasis - diet
		Alopecia
		Canities
Contagious Diseases	{	Tricophytosis
		Favus
		Syphilis
		Pediculosis Capita infectum

REVIEW

1. Name the common diseases of the scalp.
2. Name those you treat and those you do not treat.
3. Tell why you do treat the first and do not treat the latter diseases mentioned.
4. Give general treatments for those you do treat.
5. How do you treat Alopecia, Pediculosis Capita, Psoriasis?
6. How do you treat Seborrhea, Canities, Eczema?
7. What forms of electricity do we use in treatment of hair?
8. Why use colored lights in treatment of hair and scalp?

NOTES

THE COSMETISTE

Chapter XVI

SCALP TREATMENTS

SPECIAL SHAMPOOS AND RINSES

GENERAL DIRECTIONS

The general directions for giving scalp treatments are practically the same as for facial, i. e. your electrical equipment, towels, hair cloths, etc., so read these directions in chapter on facial treatments before proceeding with your study of the scalp treatments.

Scalp treatments are to be given for the various ordinary conditions that come within the practice of the Cosmetiste, such as Seborrhea, or Dandruff, both dry and oily or the various Alopecia and other results of general bad health or dissipation.

As has been stated elsewhere, in normal health the growth of the hair is from $4\frac{1}{2}$ to 9 inches per year or on the average about one-half inch per month, but in ill health this normal growth is diminished and it will require a number of treatments to bring the scalp back to normalcy.

The number of treatments required cannot be foretold, in some cases treatment may have to be continued for months, while in others excellent results are obtainable in a much shorter time.

The following treatments tend to put the scalp in a healthy condition and keep it so. They stimulate the blood supply, increase glandular activity, soothe the nerves, and by the application of the antiseptic remedies, will render germs inert or destroy them.

Any amount of liquid tonic applied to the hair shaft, has a superficial effect only, and will not remedy diseased conditions of the scalp. The skin will not absorb liquids other than oils. Bear this in mind when recommending or using a scalp tonic. All oils and pomades applied to the scalp will be absorbed and reach the root of the hair, thereby feeding the source of hair supply and increasing its growth.

The health of the hair depends on cleanliness. Shampoo at least every two weeks, better still every ten days, always drying the hair properly, stimulating the scalp and hair with lamp.

The hot oil treatments are especially effective before and after hair dyes, bleaches and hennas to keep the hair soft and glossy, as dyes, hennas, etc., make the hair dry.

The use of a tonic to clean the scalp well, and put it into a receptive condition for further treatment, also gives the operator a chance to inspect the scalp, so that she may not be handling a contagious condition or one of Pediculosis that might easily spread to other operators or patrons in her shop.

The Antiseptic Oil is used to overcome an infectious condition, and may be used on any hair, fine coarse, light or dark as the case may demand.

The Tar Oil is used especially to overcome an oily condition of the scalp.

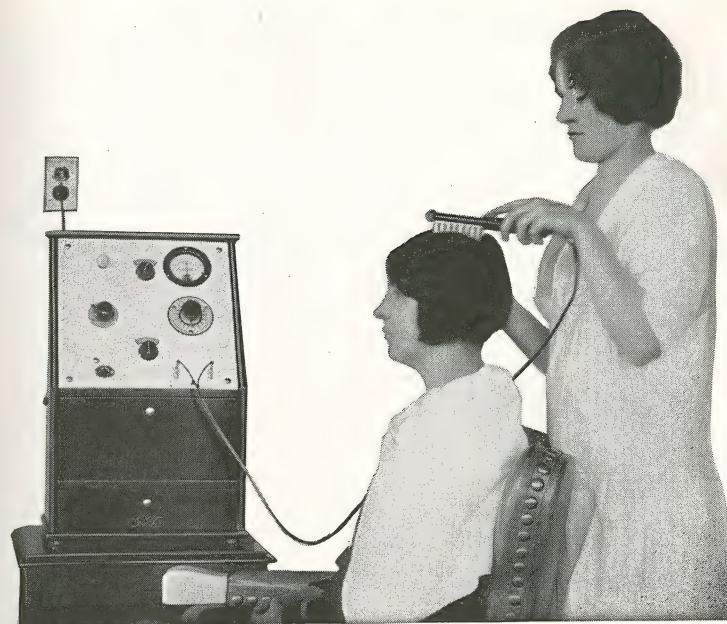


Fig. 43. Use of Electric Comb in treating scalp

FOR GENERAL STIMULATION OF THE SCALP

1. Employ the Vapor and Steam Generator as directed for *treatment* of scalp.
2. Give good shampoo as directed. (Chapter on Hair.)
3. Dry hair thoroughly but avoid causing excessive dryness which might cause brittleness.
4. Use Blue Lamp. Try to reach every spot on the scalp by lifting the hair.
5. Employ Electric Comb Electrode.
6. Follow by application of scalp pomade applied carefully to scalp only, so as to avoid making the hair

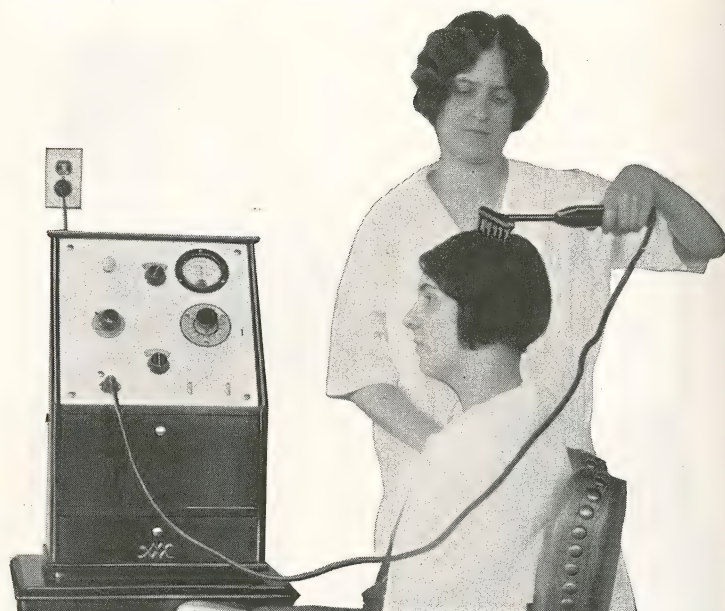


Fig. 44. Use of Ideal Scalp Electrode in scalp treatment

greasy. This may be done with a toothpick or hair pin, and then carefully massaged into the scalp.

7. Then employ rake High Frequency electrode.

HOT OIL TREATMENT

1. Loosen Seborrhea with rotary movement of comb.
2. Brush hair carefully to remove all Seborrhea.
3. Apply scalp tonic with pledget made of cotton and gauze to thoroughly clean the scalp.
4. Give a good massage, following instructions in manipulations.
5. Apply Anti-septic Oil, Tar Oil, or Pomade as mentioned in above treatment.



Fig. 45. Applying Hot Oil with electrically heated Comb.

6. Rake High Frequency electrode, from 5 to 20 minutes, according to stimulation needed by patient.

7. Leave oils on over night if possible, or at least one hour, radiate during this time with red light and follow this with five or six minutes of scalp steaming and massage and then shampoo.

Note: In previous editions of the Cosmetiste the use of liquid castile soap was advocated solely. Advancement in science has brought out the superior advantage of water soluble oils for this purpose. Such water soluble oils, are usually a blend of mineral oil and sulphonated vegetable oils. The use of such is superior and therefore recommended.



Fig. 46. Trilite. For applying Blue and Red Light

8. Dry with warm dry towel and radiate with blue light lifting the hair to reach every part of the scalp.

9. Follow with Electric Comb.

The same treatment as above may be given when hair and scalp is very oily, substituting tar oil for antiseptic oil. Tar is very drying.

Everything that will increase the activity of the glands, and improve the circulation, will add to the growth of the hair, and means much to future hair health. Real benefit will be derived from general massage, and electrical treatments.

Be sure to sterilize all extra hair, hair pins, ornaments, combs, hat linings, nets, etc., and instruct your patrons to cleanse their combs and brushes with strong suds of yellow (laundry) soap and hot water and see that pillow cases are clean after each shampoo.



Fig. 47. Brushing the hair

A certain degree of regularity should be followed in all these treatments. Every week is best, but in some cases of extreme stages of germ conditions or general debility, twice or even three times a week is not too often. However as we advise against more than one shampoo a week, such treatments only



Fig. 48. Applying tonic in scalp treatments

should be given as do not require being followed by shampoos more often. This is when the pomade is used as directed in No. 5 in treatment for general stimulation of scalp.

In cases of Eczema, Psoriasis and other skin diseases which may appear on the scalp, Hot Oil Treatments are best.

These treatments are also recommended before and after permanent waves and hair dyes.

Remember that the Blue Screen of the Sun-Aero Hair Dryer, Rake High Frequency electrode, also Electric Comb cannot be used too frequently.

For falling hair after flu, typhoid or scarlet fever, etc., these treatments are always recommended.

For gray hair, the rake High Frequency electrode has been known to restore original color.

In Alopecia Areata, the use of High Frequency, sparking the bald spots, also painting spots with Iodine frequently enough to cause peeling, but not to the point of blistering, is found very beneficial.

In all cases have your patrons consult a capable physician and you also should be in close touch with such a physician whom you may consult at any time when you feel it necessary to do so.

HOT OIL SHAMPOO

1. Thoroughly brush and comb hair.
2. Apply tonic to free scalp of Seborrhea.
3. Use Electric Comb.
4. Massage scalp.
5. Apply Antiseptic Oil stimulating the absorption of same with the red light.
6. Employ the Vapor and Steam Generator for a few moments as directed in chapter XXIX.
7. Shampoo.

The use of this oil is recommended at any time, especially if hair is dry and brittle, bleached or dyed. After the shampoo stimulate the scalp and hair by using a lamp equipped dryer or better still use the blue light as shown in Fig. 46 for 10 to 15 minutes.

EGG SHAMPOO

Not generally recommended as the egg is often left on the hair, but if hair has been bleached and it is hard to rinse all the soap out then use the yolks and whites beaten separately. Rinse hair with warm (not hot)

water, rub in the yolks of the eggs and rinse out, then apply the white and rinse out.

Thorough rinsing is absolutely necessary so that none of the egg is left on, then rinse with lemon, (strained) and after this rinse with clear tepid water.

Unless great care is taken to rinse the hair properly and get rid of all the egg used, the hair will be sticky and not fluffy after this shampoo.

DRY SHAMPOOS—EGG OR POWDER

EGG

Beat the whites (only) and add one-half teaspoonful of salt. Rub into hair and allow to dry, then brush out. Makes hair light and fluffy.

POWDER

Any good dry shampoo powder may be used for this process although the dry shampoo is not generally recommended, in some instances though it is necessary to resort to this kind of treatment. Dust powder thoroughly through hair and brush out with brush covered with gauze.

SINGEING AND TRIMMING OF HAIR

Singeing of the hair is not recommended, the hair growing as it does from the root, is not benefited thereby, no more than singeing the finger-nail will cause same to improve.

Trimming of the hair is recommended as it keeps the hair of uniform length and makes it grow coarser.

In cases where following a fever the hair falls out badly and becomes matted and snarled, it is better to cut or shave same. If, however, permission of cutting the hair is withheld, this condition may be handled by freely oiling the hair and carefully picking it apart.

Comb from the ends, gradually working upward until the scalp is reached. The process will likely take several days and cause a great deal of extra work for the attendant and unnecessary fatigue for the patient. This may be avoided, if the hair is cut or shaved in the beginning.

Loss of vitality in the body will cause the hair to fall out.

RINSES

LEMON RINSE

Juice of one lemon, strained through cloth and added to one quart of water poured over head after shampoo, especially good over blond hair.

Cuts the soap and when rinsed out thoroughly with clean water, leaves the hair soft and glossy and is very highly recommended; may be used for any hair.

If citric acid is employed to take the place of the juice of the lemon the following formula may be used.

$\frac{1}{4}$ oz. of citric acid
1 pint of hot water

Dissolve the acid in the hot water. Cool and bottle and reduce about one-fourth when using for a rinse.

VINEGAR RINSE

One tablespoonful of vinegar to one quart of water. Used after shampoo. Rinsed off same as lemon rinse. Used for dark hair only.

GOLDEN GLINT

See directions on package.

HENNA RINSE

Henna leaves (one handful) steeped into tea, one quart of water, and poured over hair and allowed to

remain on any given time from 5 to 15 minutes then rinsed well in clear water. Gives red shades.

SAGE TEA RINSE

Prepared and used the same as Henna leaves. Darkens Hair. Very good.

CAMOMILE TEA

Prepared and used the same as Henna leaves. Considered a tonic for the hair.

BLUE RINSE

For white or gray hair to make it whiter.

Seven or eight drops of any good Hair Whitener or Blue Rinse (do not use ordinary Bluing as this makes hair brittle.) One quart of water. Place a small bowl below shampoo board in basin, pour rinse over hair several times then rinse with clear warm water.

TO REMOVE YELLOW STREAKS FROM WHITE HAIR

Two tablespoonfuls peroxide, 1 tablespoon salt, 1 pint water. Pour over hair. Leave on for 20 minutes. Rinse thoroughly. Then give Blue Rinse.

This condition may be corrected by using same process as bleach for hair, applying pack to yellow streaks only. See chapter on dyes.

SCALP MANIPULATIONS

1. NERVE MOVEMENT—With *third* fingers vibrate on *infratroclear nerves* stroke up and out with all fingers down to the *temporal nerve*. With *second* and *third* fingers rotate three times, slide to *auricular* and rotate three times over ear to *post auricular*, rotate three times, to *facial nerve*, rotate three times, to *great auricular*, rotate three times to *occipitalis*, rotate with the right hand fingers three times steadying

head with left hand, thumb and second finger on *temporal nerves*. Repeat three times.

2. CUP THE EARS—With *both* hands forming a cup and with the *second* and *third* fingers on *temporal nerve* the *heel* of the hand on the *great auricular nerve*, move the head *forward*, lift the head *straight up*, then to the *back* and *down* completing a rotation in this movement. Repeat three times.

3. FRONT HAIR LINE—With the *second* and *third* fingers, begin in *center* of *forehead* at hair line and rotate all along the hair line until the *auricular nerve* is reached. Vibrate on nerve, slide back to center and repeat movement three times.

4. BACK HAIR LINE—Steady the head as in number one (1). Begin at *post auricular nerves* with *thumb* and *second* finger of *right hand* and rotate all along the hair line until the *thumb* and *finger* meet, then rotate over the *occipitalis nerve* with the *second* and *third* fingers of *right hand*.

5. TWISTING MUSCLES OF NECK — Steady the head with left hand as in number one (1), then with *thumb* and *second* and *third* fingers of *right hand* twist the *muscles* of *shoulder* beginning near the *facial nerve* and ending at *tip* of *shoulder*. Repeat three times on each side, *changing position* of hands in order to do this.

6. TURNING HEAD—With left hand under chin to support head and right hand spread across back of head, throw head forward as far as is possible then to the right side and so on around making a complete circuit. Turning head in each direction completing three circles.

7. STIMULATING NERVES OF SPINE— Steady head with left hand as in number one (1),

at the same time vibrate with ball of *thumb* of *right* hand on *occipitalis nerve*. Continue vibrating down over *spine* for six vibrations, sliding up to *occipitalis* and repeat three times.

8. EACH SIDE OF SPINE—With *thumb* and *second* finger of *right* hand vibrate down each side of *spine*, six vibrations, sliding up to *occipitalis* and repeating three times.

9. ROTATE ENTIRE SCALP very lightly with *both hands*, *spreading* hands so that the tip of each finger touches the scalp and thoroughly covers the *surface* of *scalp* stimulating and moving the entire *Occipitofrontalis Muscle*.

REVIEW

1. Give general directions for scalp treatments and necessary equipment for same.
2. When should you use a liquid tonic?
3. When use an antiseptic oil? When a tar oil?
4. What part does sterilization play in treatment of scalp?
5. How often should these treatments be given?
6. Why is High Frequency current so valuable an adjunct in treating the scalp?
7. Name the different shampoos and when given.
8. When would you give a dry shampoo?
9. What about singeing and trimming the hair?
10. Name the different rinses and when given.
11. How often should a shampoo be given?

Chapter XVII

HAIR DYEING—TINTING
BLEACHING AND HENNAS

There always has been and always will be a demand for hair dyeing. Many people hold their position because of youth, so many will resort to hair dyeing to retain the resemblance of youth.

There are some who dislike gray hair and again others to whom gray hair is very unbecoming.

The first consideration before dyeing hair must be the condition of the hair and scalp.

The scalp must be in a healthy condition, free from all lesions of whatsoever kind, as eczema, psoriasis, etc., as the dye is more easily absorbed into the system if there is an abrasion of the skin. The danger of absorption of the dye by the skin is greater where abrasions exist, also the patron must be healthy, no indications of kidney trouble, worry, anger, etc.

If a woman, a dye must not be given during her menstrual period.

If the hair has been previously dyed or hennaed, or any similar preparations have been applied, it will be necessary to remove same by the application of hot oils or any of the dye removers on the market recommended to do this work. After applying these oils, steam or excessive heat must be employed to complete the action of the oils.

The Vapor and Steam Generator supplies just the necessary amount of steam and heat needed for this particular work and if directions given for use of this particular apparatus are followed, results are gratifying in the average cases.

If the hair is too dark, it will necessarily have to be bleached. Sometimes streaks are apparent, then still more Hot Oils must be given.

First, a careful test must be given to see if there is a possibility of consequent Dermatitis. This is done by painting the gland behind the ear or in the elbow. If any irritation occurs within twenty-four hours, no dye should be given. Serious cases have occurred when this rule has not been closely adhered to, and the eyes, face, in fact in some, the entire body has been involved. This happens when the patron has an idiosyncrasy for this particular drug. This condition has also brought about the predicament of a complete loss of hair.

If you insist that the hair dyeing is done entirely at the risk of the patron who wishes the dye, none of these terrible results will occur, as they will gladly submit to the test and follow your advice.

Remember these cases are not exceptions to the rule. They are found in every shop.

For this reason be sure you understand the dye you are using and the application thereof. If you are foolish enough to take the word of a salesman and use a dye for the first time without making these most important tests, it may cost you a great deal of trouble, perhaps your entire business.

THE TEXTURE OF THE HAIR

If it is coarse and wiry and very dry, advise Hot Oil Treatments until hair is softened. Selecting the shade is also important. This may be done when giving the test, by taking a lock of hair and trying the dye for the shade wanted. Remember brown shades and black are easiest, while a little more care will be necessary in using red, drab and blond shades.

PREPARATION OF BOOTH

A little care in preparing your booth for this work will repay you. Place paper over the walls, shelves and floor. Have the chair covered and suitable covering such as towels, rubber aprons, etc., to protect your patrons' clothing. Have plenty of absorbent cotton handy so that a stray drop may quickly be blotted from patrons' face.

Provide yourself with rubber gloves to prevent the staining of your own hands. Protect your own clothing with proper covers also.

PREPARATION OF PATRON

Before preparing the dye, shampoo patrons' hair and be sure that every bit of dirt and oil is removed and the hair dried with the Sun-Aero. Comb the hair free from all snarls. Do Not brush or massage the scalp to bring the natural oils to the surface, as this hinders the action of the dye. Protect your patron and yourself as explained above.

THE DYE

There are only two kinds of hair dye on the market, Liquid and Paste. The liquid dye consists of one and two bottle dyes.

One bottle dye is a ready mixed dye and will dye immediately the shade selected. It is necessary to use a lighter shade than the one desired, as it grows darker after application. The process of the one bottle dye is the same as the two bottle dye.

If the two bottle dyes are to be used, mix the contents of the bottles as instructed in directions, in a small *glass* tray. Do not mix more than you need for the amount of hair to be colored, as the dye evaporates. Brushes for the application of the dye usually come with the dye.

After saturating the brush with the dye, shake it gently over glass dish, so it will not spatter on patron's face, or soil the walls or floors more than necessary.

Read the directions accompanying the dye you are using, as some explicit instructions may be necessary for that particular dye.

Apply to strands of the hair (not on the scalp) and comb and comb to evenly distribute it. Apply well to roots and around hair line where the white shows most, do not use too much dye that it runs to the ends and will make them darker than other parts of the hair.

After each section has been treated, it may be rolled up and pinned. Proceed with each section alike then let the hair down and comb again and again until hair is dry. Do not use any artificial process, nor the sun for drying the dye, do not even fan it dry as the hair must be left to dry naturally in order that the dye may be absorbed.

Leave on fully twenty minutes to half hour from time of finished application, then shampoo thorough-

ly. A lemon rinse may be given. Employ Sun-Aero to dry the hair.

If dye accidentally gets on skin around forehead or neck, it may be removed with alcohol, cleansing cream, lemon juice or ordinary soap and water. Hand sapolio may also be used for this purpose.

Occasionally you will find hair that will not take the dye or perhaps remain on for a certain time and then lose its color, this is usually the cause of a worn out condition of the hair and need of Hot Oil Treatments is very apparent. Some times going over the head with peroxide before applying the dye will avoid this trouble.

Sometimes one side of the head will take the dye and the other side will not. Then give the patron a hot oil treatment and leave the oil on all night. The next day, shampoo in the same way as previously instructed. Apply peroxide to hair on side of head that did not take the dye, and leave on till dry. Then follow with usual process, using same number or shade as before. Apply to entire head of hair. Leave dye on a few minutes longer than first application and follow with shampoo as already explained.

These idiosyncrasies cannot be explained, but must be dealt with.

Each dye is a lesson in itself as very seldom two heads take alike. This tells us how important a thorough knowledge of this subject is to every one who wants to undertake hair dyeing. Be sure you understand the dye you are using.

TOUCH UPS

It is absolutely essential to keep an accurate record of all dyes given. A card record is indispensable.

This card should show the name, address, telephone number, the condition of hair before dyeing, kind of dye, number of shade, the outcome and condition after dyeing, the amount charged for previous work and also a space for any special remarks.

Then when your patron comes for a touch-up, that is several weeks after first application of dye, all you have to do is to refer to your records.

Prepare your patron in the same way as previously mentioned. Use same shade. Great care must be exercised in applying the dye, not to overlap the line of previous dye. Put the liquid on with a brush toward the scalp, pressing the brush against the gray roots. Leave on a little longer than the first application as the gray hair resists the dye. Do not comb as in the first application as you want to keep the dye at the roots.

Shampoo and dry the same as previously instructed.

Remember the Sun-Aero Hair Dryer is superior for this purpose.

PASTE DYE

A double boiler and wooden spoon or paddle is required to mix paste for either Egyptian or Henna Dye, as metal may cause a chemical reaction. Mix paste with cold water to consistency of flour gravy, then cook in double boiler until steaming hot. Keep hot until ready to apply. Give shampoo, two soapings and rinse thoroughly, do not dry the hair, apply paste as hot as can be borne to crown of head first, then all over hair and to the ends, leaving hair line till last as this takes the color more quickly, leave on required length of time, see instructions on package, according to patron's needs. Egyptian Henna gives

only red shades. The lighter the shade of hair and the longer it is left on, the redder the hair will be. The idiosyncrasy of the patrons' hair plays a very important part as some hair takes henna more quickly than others.

With the paste dye, follow directions on box. This is applied same as Egyptian Henna but after it is applied it must be covered with hot towel, newspaper, then oil cloth, to keep it steaming as this is really the process of the dye. It shows the color more the second day. Gives the color that is marked on the box. You are again warned to follow directions given on package very carefully.

HAIR BLEACHING

The peroxide used in connection with dyes and to bleach the hair should be of the very best. Peroxide deteriorates very quickly so secure peroxide that is fresh and properly sealed and do not use it after it has stood unsealed for any length of time as it loses its strength and thereby will not perform the work for which it is intended.

Bleaching of the hair is really a detriment to the hair and should be handled very carefully.

Mix ordinary talcum powder or white henna with peroxide enough to make a thick paste. If a red shade is desired, use a few drops of ammonia, the more ammonia, the redder the shade.

Give shampoo, two soapings, and rinse thoroughly, do not dry the hair, then apply paste as thick as possible and all over the hair, especially at the roots, and full length of hair the same process as Egyptian Henna paste.

Note carefully that this process does not injure hair, the solution is held on the full length of the hair, by means of the talcum powder, thereby giving a uniform bleach.

The following process may be used but not recommended as the peroxide runs down to the ends of the hair and bleaches them too much.

Peroxide and ammonia may be applied with a brush in liquid form combed and combed to distribute well.

After either is left on required time or so as to bleach hair as much as patron desires, rinse off and give one soaping and follow with lemon rinse.

If it is convenient a booth appropriately fitted up for dyeing, bleaching, etc., is best especially in shops where a great deal of this work is done. Painted black for instance.

DYEING OF EXTRA HAIR

Always dye extra hair at the owners risk. Sometimes the cleansing may alter the color to such an extent that the owner herself would not recognize it.

make switch darker

For Red Shades, henna may be used, adding a pinch of logwood, according to the shade required. Use a small pinch of copperas to set the dye.

For Drab Shades. After cleansing the hair: To one quart of water add $\frac{1}{4}$ teaspoon of Pyrogalllic Acid.

If Darker Shades are wanted add to this a pinch of Black Diamond Dye (used for silk and wool.)

For Darker Shades of brown or black, add more of the acid and dye.

ANOTHER FORMULA

One handful black tea, either Lipton's or Ridgways.

One quart water.

Allow to boil until thoroughly steeped and very dark, then add Copperas the size of a pea to set the dye.

FOR DARK HAIR

One teaspoonful Black Diamond Dye in one pint of boiling water and add one teaspoonful of vinegar.

Attention!! Be sure all peroxide used is of the proper strength or it will not do its work satisfactorily. Buy that which is fully guaranteed, its strength and state of preservation vouched for, or have it tested by some one who knows.

For further information as to hair dyeing we refer you to the book "Canities" by Florence E. Wall, published by the Notox Co.

REVIEW

1. What is the first consideration in treatment of scalp?
2. If the hair has been previously dyed what precautions are necessary?
3. Describe Dermatitis caused by hair dye.
4. What care given to texture of hair, preparation of booth and patron when giving a dye?
5. How many kinds of dye on the market?
6. When is each kind recommended?
7. What is necessary if touch ups are to be given?

8. Describe process of applying the dye.
9. Describe process of henna paste dye and Egyptian henna.
10. Give process of hair bleaching.
11. How do you color extra hair?
12. Give full process of removal of old dyes.

*Para-phenylene-diamine ÷ coal tar
product - rarely used - causes poisoning
(used in earlier days for color)*

Chapter XVIII

ELECTROLYSIS.

The use of electricity for Electrolysis, requires a knowledge of the histology of the skin and hair. A concise statement of the anatomy of the hair is found in the chapter on hair.

DEFINITION

Electrolysis is the conversion of galvanic electricity into chemical action, and the cauterization is brought about by the liberated acids or alkalies.

Heat is not a factor in this case. If any heat is produced, it is so small a fraction of a degree as to be almost incapable of sensation. If one of the electrodes be placed on the cheek, the patient will experience a metallic taste so marked, that he or she may think a piece of brass is in the mouth, this is really the chemical action of the current produced in the body.

The amount of these substances which appear, depends upon the strength of the current and the length of time the current is allowed to pass. The effect of the current may be limited to an almost microscopical point, and it may be carried to any depth beneath the surface of the skin.

The problem remaining, is how to accomplish this result without disfigurement; for while patients will tell you that they do not care how much of a scar remains, so that they can get the offending hair out of the way, yet when they come into possession of scars, they have many times repented of their statements and would have willingly taken back the hair, as these could have been cut off or pulled out.

There are exceptions which make it difficult to follow the hair to its papilla.

In some instances the shaft of the hair turns at an obtuse angle just above the papilla so that the papilla is situated at one side of the point where the tip of the needle would reach, and if the current were continued the follicle would be pierced and the needle would not have destroyed the papilla.

In other cases the structures within the follicle are so dense and fill it so completely as to prevent the carrying of the needle along the shaft of the hair to the depth of the follicle.

In the case of lanugo hair starting from the crypts in the side or from the bottom of the sebaceous gland there is great difficulty in reaching with any degree of certainty the papilla.

The resistance of the body to the passage of a current is so great that with the number of volts of electromotive force used in epilation by electrolysis, there is but little or no difference to be observed in the rapidity of the action or extent of the destruction of the tissue around the needle whether the cells be large or small.

ELECTRODES

The negative electrode of the galvanic current is the one to be connected with the needle if this is steel, al-

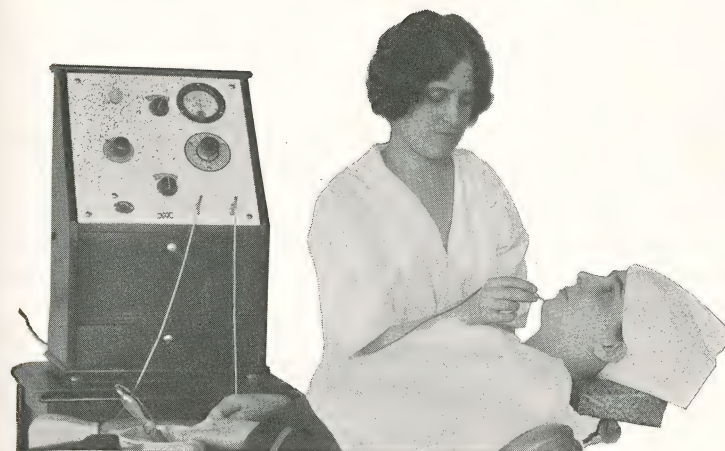


Fig. 49. Use of Midget Needle Holder in Electrolysis

though when a platinum needle is used the positive pole of the galvanic current may be employed with the same results.

Most expert operators use the steel needle and connect the positive pole with the patient as follows:

A small amount of Sodium Bicarbonate (baking soda) is dissolved in a shallow dish of water placed convenient to the patient to put the fingers of one hand in. A carbon cylinder electrode rests in the solution and to this is attached the cord connected with the positive pole.

The patient may then at the command of the operator, put the fingers into the dish or lift them, thus breaking the current.

THE NEEDLE HOLDER

This is made in various forms, but the smaller and lighter it is made, the easier it is to manipulate without fatigue.

Most electrolysis needle holders on the market date back to the time when this work was undertaken by a few doctors who specialized in all kinds of electrical treatments and when the removal of superfluous hair was not the fine art it has become since the Cosmetiste took hold of it.

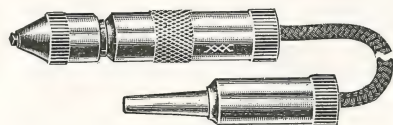


Fig. 50. Midget Needle Holder

Those old fashioned needle holders are altogether too heavy and even too long to be used in all places, especially under the chin, and this little holder shown in Fig. 50 with the cord screwed directly into it and weighing but one quarter ounce, overcomes all these objections. It will not slip in the hand owing to knurling around the center affording a convenient hold, and the grip of the chuck is such as to hold the shank of the finest needle, yet it is easily released.

Electrolysis operators who desire to increase their speed and avoid fatigue, will do well to add this to their equipment at once.

THE NEEDLE

The success of the operation depends as much upon material, shape, size and construction of the needle, as upon all the other apparatus.

If the needle be connected with the positive electrode of the galvanic current, the platinum or preferably one of Irido-platinum should be used on account of its resisting the corrosive action of the oxygen chlorine and the acids. With this exception, or in case a large needle is required, the steel needle is preferable.

The all important point about the needle is its shape. A sharp pointed needle is a detriment rather than a benefit.

The needle best adapted to all cases, is the well-known Hays bulbous pointed needle, the neck behind the bulb point being considerably thinner than the point itself. This point should never be sharp, but always blunt and rounded.

It is always well to have an assortment of needles on hand; three sizes, known as fine, medium and large being available. While the fine needles are applicable in nearly every case, the large ones are occasionally useful in the removing of hair from those faces in which the follicles are comparatively large and the hair grows from a shallow crypt from the side of the follicle.

The needle has a large stem for holding same while being ground to shape. Break it off at the point where indicated, and insert the thin shank into the jaws of the needle holder so that it will project about three-eighths of an inch or a little more.

It is much easier to determine the depth the needle is inserted into the skin if the needle projects a short distance, than if it extends one-half or one inch beyond the chuck of the needle holder. Some of the other advantages of having the needle point but three-eighths of an inch beyond the jaws of the holder, are

that the needle being thin and of poor conducting material offers less resistance to the current and that the needle is more firm and more readily guided when so held.

EPILATION FORCEPS

Figure 51 shows a cut of epilation forceps recommended. The requisite in these instruments is that the point shall be about one-eighth of an inch broad and so ground that by whatever part of the jaws the hair may be caught, the hold will be firm.



Fig. 51. Epilation Forceps

MAGNIFYING GLASS

The naked eye is best. After trying various forms of magnifying glasses and abandoning them you will find that when both eyes are used, the stereoscopic effect is superior to the advantage gained by magnifying glass which permits the use of but one eye.

For while the distances are slight, it is essential to have exact vision which is only possible by stereoscopy and the use of both eyes.

Any glass of such magnifying power and dimensions as to preclude the use of both eyes, will soon be abandoned by the operator.

However, if in need of glasses to assist you in this work, we recommend:

BINOCULAR MAGNIFIER

Fig. 52. This is ideal when doing electrolysis and has many advantages over anything that has yet appeared. Among these advantages are the following:

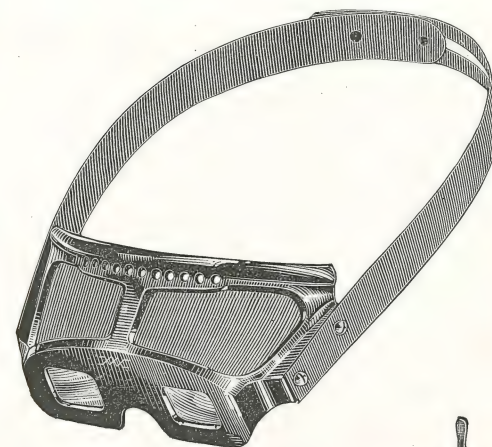


Fig. 52. Binocular Magnifier

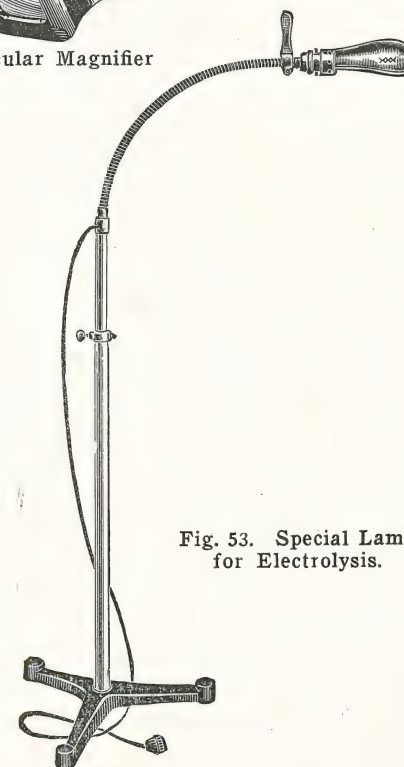


Fig. 53. Special Lamp for Electrolysis.

Great magnifying power with a perfectly flat field, there being no distortion.

Absolute and comfortable binocular vision.

No obstruction to the view of surrounding objects.

Easily and quickly adjusted.

May be worn over spectacles or eyeglasses.

ARTIFICIAL LIGHT

Have a good light on your patron's face. If daylight is not available, provide yourself with a good lamp that will direct the rays onto the surface to be treated in such a way as to avoid shining into patron's or your own eyes. See Fig. 53.

BEGINNING YOUR TREATMENT

When using a wall plate, set your selecting levers to get the Galvanic Current. Turn your rheostat up to ten (10) or fifteen (15), then test for polarity. (*Definition*—Polarity is indicated by the chemical action which takes place at the terminals where the current enters or leaves).

By placing the metal tips of your conducting cords in a small glass or porcelain dish of water, observe the bubbles which appear on them. A few may appear on the positive, and stick, but the negative pole releases bubbles.

The amount of the galvanic current to be used must be determined by the patron. If the point of the Rheostat is at from one to three, the milliammeter will register about one milliampere. Much practice is necessary however, in learning proper adjustment of wall plate or battery in order to determine the amount of current necessary for successful removal of hair.

It is always the safer plan to commence with a few

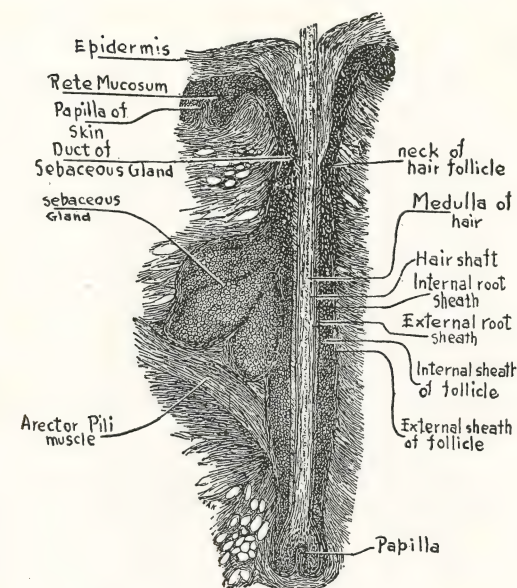


Fig. 54. Hair Follicle

cells from two to four, depending upon the freshness of the cells, or a small amount of current from the wall plate and gradually increase the current until the desired point is reached, rather than reverse this mode of procedure.

Then place the negative cord tip of the galvanic current in your needle holder and the positive cord tip in the carbon electrode which has been previously prepared by placing in dish of solution, *turning the rheostat back until ready for work*. Then you are ready for your patron.

Place her in a comfortable position in a facial chair. Have plenty of sterile cotton and gauze pads, moisten one with alcohol and sponge part of the face or neck to be treated either for hair, warts or moles. This

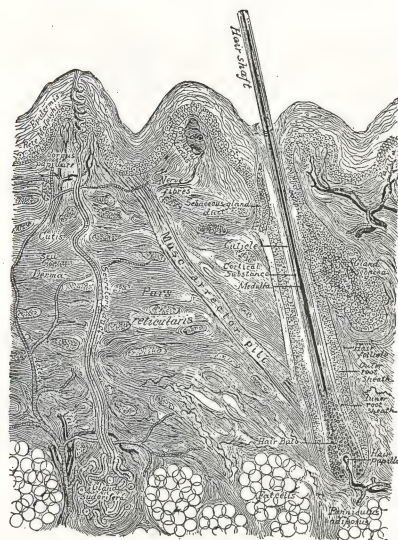


Fig. 55. Showing Needle in follicle

should be carefully done and the surface of the skin well dried. If the skin is moistened by perspiration or by being recently washed, the action of the electricity upon the surface layer is apt to be much more marked than in cases where the skin is dry or oily. The action of the current may be lessened on the external layers of the skin, where it is not desirable to have the electrolysis take place by means of the application of some oleaginous substance.

Then sterilize your needle. Have your own hands cleansed thoroughly and nails in good order.

When a wall plate is used for electrolysis the milliammeter is very essential as to amount of current used to protect you in any possible legal entanglements you may encounter in your work.

When a battery is used for electrolysis you are governed by the number of cells used, therefore the meter

is not so essential, although it will be found very convenient.

After the first test for polarity on a battery, no further tests are necessary for subsequent treatments, if the battery is used. When a wall plate is used, the test must be made every time electrolysis is attempted.

The cords are already connected with the battery of wall plate and two to three cells of battery or three milliamperes of galvanic current from the wall plate are switched into the circuit. Observe carefully in which direction the hair leaves the skin and insert your needle parallel with the hair, letting drop easily without any persuasion on your part to the depth of the follicle, remaining there the required length of time, sixty to seventy or eighty seconds as the hair may indicate. Different hair require difference in time. The patient is then directed to place her hand into the solution. Should the current be strong enough there will, in the course of five or ten seconds, appear a little froth about the needle.

If this should not occur, the galvanic current is too weak to overcome the resistance interposed by the patient, and more of this current should be gradually used until the desired result is obtained. Try to lift the hair with the forceps at the end of sixty seconds and if it does not pull out readily, try again, allowing a little more time, remembering well that if the hair does not lift out easily, the hair papilla, which is the source of the hair growth, has not been destroyed and more time is necessary. It may be well, should the hair now still remain firmly fixed to use force enough to remove it, after which the needle can again be inserted into the follicle when it

will ordinarily follow in the course of the removed hair and reach the papilla which may not have been destroyed.

If, before this has been accomplished, the amount of gas disengaged around the needle be great and the appearance of the tissues indicates that there has been such a destruction of tissues as may result in a noticeable scar, or something approximating thereto, it will be wise on your part to desist from operating on this hair.

Should the hair be allowed to remain, it is quite liable to cause irritation to the sore which results. Therefore pull out the hair, knowing that it will return again, and that upon your second attempt, success may be demonstrated by the ease with which the hair is removed.

Should the patient be very sensitive to the electrical current, less pain is produced when the needle is introduced before the current is completed. The patient is then directed to put the fingers into the solution, and before the needle is removed, is requested to remove the fingers from the solution. By this means, the slight shock on making and breaking the current is much less than when the needle is introduced without the current having been broken as above described. The needle is however more easily inserted if a small amount of current is on while inserting.

In case the root sheath is of such dimensions and firmness that it most effectually blocks the way at the neck of the follicle, particularly that layer given off from the corium, should an attempt be made to carry the needle to the papilla, there is great danger of piercing the above mentioned fibrous layer near the

neck of the follicle, and so far from the papilla that its destruction becomes a question of great doubt.

Allow the current to pass as soon as the needle is arrested at the neck of the follicle. In place of using pressure, and endeavoring to carry the needle forward through the resisting medium, try to make the needle pass around the hair and to produce cauterization upon the row of cells at the constriction, and carry this to such an extent that when traction sufficient to remove the hair is made upon it, the hair with the root sheaths will come away intact. The needle can now readily be introduced in the track of hair, and will reach with a considerable degree of certainty the papilla so as to destroy it.

A case in which a lanugo hair springs from the side of a sebaceous gland, or one of its crypts, the direction of the hair after it leaves the skin is different from its direction beneath the surface of the skin. Should a coarse needle be used, the sebaceous gland will be put more upon the stretch and the possibility of reaching the papilla will be increased. If, however, the hair should not be destroyed, the current should be continued as long as is safe to do so without scarring. Of course a portion of the sebaceous follicle will by this means be destroyed, and after the lesion is healed the hair may again be operated upon with increased prospect of its eventual removal, but in the operation, that particular sebaceous follicle may have been almost if not quite destroyed before the desired result is attained.

Where the hair is of the variety something between that of the lanugo hair and the ordinary hair, while it does not reach as far below as do the ordinary hair, it

is deep enough to be more firmly fixed than the lanugo hair.

If in this case the needle is carried down by the side of the hair and too much pressure used, with the electrolytic action, to cause it to pierce the follicle, the papilla may not be destroyed.

The hypothetical cases above given include nearly if not all of the variations which we find in the different cases of hairy growths.

Usually the hair found upon the upper lip conforms to the first hypothetical case, while that upon the chin, especially if the skin is of close texture and the hair have been repeatedly removed, is of the type of the second case, while the third case is usually found in those people whose skin is coarse, the pores large and the hair are hypertrophied lanugo hair.

In the illustrative cases, the negative pole of the galvanic current has been the one attached to the steel needle and is the one that should be used.

In the negative electrode used for electrolysis, we have the action of potassium and sodium hydrate, which destroys the tissues without coagulating the albumin.

In addition to the liberation of the caustic alkalies, we have also the appearance of hydrogen which on account of its high diffusibility, passes between the interstices of the cells and causes a mechanical disintegration of tissue. A certain portion of the hydrogen becoming mingled with the albuminous fluids of the tissues, forms a froth which appears around the needle and serves as an index to the strength of the current and the rapidity of the destruction of tissue.

Were the positive pole used with the steel needle, there a permanent indelible stain would be left, due

to the formation of insoluble salts or oxides with the metal of the needle.

In no operation where human life is not involved, does experience count for more than it does in this comparatively simple and easily executed procedure.

Whenever it is possible to watch the operation as performed by an experienced Cosmetiste, it is advisable that this should be done. There are many little points in the technic of the operation that contribute materially to its success which can be better mastered by observing the operation than by reading any description of it.

It is recommended that the beginner attempt the removal of hair situated on portions of his or her own body other than the face and that no attempt be made on the face until the student is sure that he understands at least the working principles of electrolysis. Only a partial experience can be gained in this manner however.

With the bulbous pointed needle used, the lesion is more cylindrical in shape and the destruction of the tissue around the part is not so great.

The amount of destruction of tissue depends primarily upon the strength of the galvanic current and secondarily upon the length of time that it is allowed to continue. A current which may destroy the tissues surrounding the needle for sufficient distance to include the hair papilla within ten seconds, is strong enough to cause great pain to the patient and leaves a scar.

A weaker current under like circumstances, will accomplish this same result of destroying the hair papilla, but the time consumed will be proportionately lengthened. The patient however will not suffer so

much pain as was experienced when the stronger current was used.

In consequence of the action of the caustic alkalies and the hydrogen on the tissues surrounding the needle and the collection of the fluids at the negative pole, by reason of electrical osmosis, we find the volume of the tissues increased so that they may be slightly raised above the surface. In immediate proximity to the needle the tissues become whitened and appear almost as if they had been frozen; from this it gradually shades into an erythematous blush and from this verges into the normal color of the skin.

This lesion in some instances after the needle has been removed looks very much like a mosquito bite, or the sting of some other parasite. If left to itself, the center of the lesion where the destruction was most complete, dries down and forms a brownish eschar. The redness soon disappears, and but for the small eschar or crust, there is hardly anything noticeable after three days. In some cases however, the inflammatory action is more marked and a week or ten days intervenes before the effects of the electrolysis have entirely disappeared. In the centre of the lesion we will find that the tissue is completely destroyed; a little farther out the impairment of the vitality is so minute as to make it doubtful if destruction has taken place. For this reason it is always advisable NOT to remove the hairs too close together at one treatment, forming one large eschar, and consequent scar with possible pitting of the skin.

The hair in some of these cases has been destroyed, the skin as well however, as is shown by an unsightly scar.

Failure to destroy the hair is also evinced by the hair growing through these scars.

There is no other method by which the sensitiveness to pain in different persons can be so readily demonstrated as by means of electrolysis. Each patient is a law unto herself. Some patients become very sleepy and at times almost lose themselves under the operation, others on whom this same current is used, suffer so that the current has to be diminished.

If the current is painful, the number of cells may be reduced or more resistance of a rheostat be introduced until the point is reached where the current may be borne by the patient.

In some cases, the pain will be found to be greater on one side of the face than on the other. As a general rule the pain is most severe on the upper lip near the edge of the nostril, also when applied in those regions where the bone is covered only by the skin. As there are exceptions to all rules, so occasionally we find patients who complain most bitterly when electrolysis is performed on the chin, and can bear the same current on the lip with comparative ease.

Where the skin is very sensitive, we sometimes notice a slight hemorrhage when the needle is lifted out. This is caused by the needle puncturing the little artery in the hair follicle. No damage is done, but if the flow of blood is copious, it can be stopped by applying the positive electrode of the galvanic current to the part, patron holding the negative.

If in the treatment the skin is put upon the stretch or in certain cases, if the sentient nerve distributed to that portion of the skin be pressed upon firmly, the pain will be found to be lessened.

The use of local anesthetics is not recommended; in many states forbidden by law, this constitutes an infringement on medical practice.

Occasionally patients are met with, who are peculiarly sensitive to the galvanic current. This idiosyncrasy has been found in patients who are over the medium weight and are ordinarily considered the picture of health. In these cases, if the galvanic current were made to transverse any distance through the tissues so as to pass across or in the direction of the pneumogastric or other large nerve trunks, a peculiar faintness, nausea and dizziness, almost resembling intoxication, and lasting from fifteen minutes to a half hour would supervene. In such cases, the positive electrode should be used upon the surface of the skin close to the point of electrolysis. In each case when this method is employed, it is successful in preventing these unpleasant symptoms.

Because of the caustics liberated at the poles, any germs which may have been upon the needle when it was introduced, would in all probability be destroyed or their activity very decidedly lessened. It is however advisable under all circumstances to see that the needle is perfectly clean (sterilization necessary) and that if there is much of an acne eruption upon the face, to avoid removing those hair contiguous to such eruption.

AFTER TREATMENT

After the operation is performed, there is little danger from absorption from without, the crust forming a comparatively good protection.

However, the sponging of the part treated with some good antiseptic such as witch-hazel or alcohol,

then applying a soothing and healing cream or oil (astringent cream or a phenol preparation) is very necessary, dusting this over with a medicated powder and advising patron as to furs, clothing, veils, etc.; also their own hands coming in contact with the part treated.

As you have really entered the pores of the skin in the process of electrolysis, after treatment should be very carefully attended to.

1. Sponge face with alcohol or witch-hazel.
2. Apply a good astringent cream and use red light over this.
3. Remove cream and sponge with a phenol preparation to assure a good germicidal effect.
4. Dust with a good medicated powder.
5. Advise patron to keep all clothing, furs and her own hands off, do not cleanse with water for 48 hours. Also advise her not to remove any little crust formation that may be noticed, especially when moles and warts are treated. Treatment for removal of warts and moles simply consists of dusting with medicated powder and keeping perfectly dry.

LENGTH OF TIME REQUIRED TO REMOVE HAIR

Let us take for our illustrative case, one of those in which the needle readily passing by the side of the hair, reaches the bottom of the follicle contiguous to the papilla.

In case you should have one of this character for your first patient, the ease with which you accomplish the result, will, in all probability, make you over-confident.

Sixty hair per hour, is underrating, rather than overstating the truth. If a strong current be used,

possibly a hundred hair may be removed within this time; but when this is done, the probability of scarring the face is decidedly increased. In cases of great difficulty, the number of hair removed per hour may fall below the estimate of sixty.

Hair situated on the lip and cheeks require less time than do those on the chin, and in those situated on the neck, the element of time is greatest.

There will surely occur times of discouragement, therefore you should forwarn your patient that some hair will return. They are usually morbid on the subject of a facial blemish; so much so that they are determined to have you remove all the lanugo hair that may be found upon the face.

They forget their appearance when they first came to you. Were it possible to prevail upon patients to have a photograph taken before the operation of the part of their face where the growth had been, the comparison would aid very materially in overcoming any discouragement. In every case, we can absolutely promise that eventually every hair will be permanently removed.

In some cases, success has been so great that two or three per cent would be all that would return; on the other hand, in some of the difficult cases, as high as 30 per cent have returned.

A better understanding of the technic of the operation, has, however reduced very markedly this percentage.

In some cases, new hair will begin to make their appearance in a few days from the time you begin to remove the hair. You know these are not returns. Upon questioning the patient you will find that a week or ten days previous to the time she consulted

you, she had stopped removing the hair, and now the returns from her daily use of the epilation forceps are beginning to appear.

The minute scar already described has served a good turn, for getting the patient in a strong light and putting the skin upon the stretch you will be able to demonstrate to the patient by means of a hand mirror, the scars through which no hair appears.

Occasionally a hair is found piercing one of these minute scars; that hair is a return, but the hair that is not surrounded at the surface of the skin with a whitish scar, is not a return.

The length of time required for the hair to return is from three to six weeks.

In large pigmented and hairy moles, it is not of much advantage to use care in the preventing of a scar, because the scars themselves will after a time, become white and thereby diminish the appearance of the brown discoloration, especially when the patient is a few feet distant.

It is always better, when you find from the appearance about the needle, that the lesion is getting of such a size as to leave a possible scar, to stop the electrolysis, remove the hair, allow the lesion to heal and when the hair returns, attempt its removal again.

It is self-evident that a hair can eventually be removed, but a scar cannot be removed, and occasionally even with the greatest of care, the face will be pitted.

Allowing the eschar to remain as long as possible and the use of some substance which serves as a protective (Phenol and medicated powder) are advised, there is much less danger of pitting. In many cases, the lesion will have disappeared within three or four

days, while a week or ten days may be required for others.

TIME CONSUMED IN, AND FREQUENCY OF TREATMENTS

Ordinarily a treatment of half an hour is sufficient, while occasionally work of two or two and a half hours on a single case at one setting may be done. This must be determined however by the close proximity of the hair on the patient's face as in previous paragraphs we are told not to work too closely together on account of destruction of too much tissue. Also it has been observed that in the latter part of the treatment, the work performed has not been as satisfactory as when both patient and operator were less fatigued.

DOES ELECTRICITY STIMULATE THE GROWTH OF THE HAIR?

This is a question that is occasionally asked by patients and has repeatedly been asked by physicians. In the majority of cases, the question may be answered in the negative, while there remain a few cases in which the question is unanswered. Reviewing several cases, they may be divided into several classes according to the growth of the hair.

One class has a distinct growth of large hair upon a definite portion of the face with no graduation from these large hair to the fine lanugo hair so usually found upon faces. The removal of these large hair, permanently cures the case, and there seems to be no tendency of the hair to return. In this class of cases the question is emphatically answered: No!

Another class of the hairy growth varies from the long thin lanugo hair to the thick, heavy hair usually

found in the beard. When the very heavy and medium hair have been removed, a few of the lanugo hair take on an increased growth, as probably they would have done had not any hair been removed by means of electrolysis.

Still another case is where the hairy growth is just commencing and very closely resembles that upon the face of a young man on which the hairy growth is beginning to appear.

In this case, there is a tendency which may persist for some time and after the larger hair are removed, the finer hair take on growth as in the former case.

In the last two cases, while we cannot answer the question with a decided NO that we did in the first instance, we can at least state that in all probability the electric current does not stimulate the growth any more than would any other means which would increase the flow of blood to the parts temporarily.

In many cases that have been under observation for some time, the tendency to hairy growth gradually disappears, and eventually the patient ceases treatment.

Therefore the general opinion is that the hairy growth is but very slightly stimulated by means of electrolysis and it need not enter as a factor into the case at all.

DEPILATORIES, ETC.

The application of any chemical which will penetrate deeply enough to destroy the hair papilla must therefore of necessity destroy the skin as well. That such is the fact, is proven by the results obtained in numerous cases in which some caustic has been used.

When hair are forcibly pulled out, we find that usually one of four things occurs: First, the hair

may be removed, leaving behind it both root sheaths in situ in the follicle; in another instance both sheaths may be removed with the hair; in still another instance the inner sheath may be removed, the outer sheath remaining; and finally, the hair may carry with it both root sheaths, and on account of their firm attachment at the neck of the follicle, the sheaths turn upon themselves like the finger of a glove stripped over the hand, and are left hanging from the follicle, but turned wrong side out.

The removal of hair on back of neck, arms, etc., by shaving or depilatories, etc., should be more carefully done.

Shaving encourages the growth of hair; depilatories, while in most cases retarding it, unless applied by experts, are apt to cause dermatitis.

Do not remove hair on back of neck of young children by these methods, as it only destroys the natural hair lines and in after years, because of the stimulated growth, will necessitate the constant removal of hair, by shaving or electrolysis.

The use of depilatories, etc., may be recommended in cases where the growth of hair is abundant on arms, armpits and in shaping of hairline, on older women, as it almost always lessens the growth to a very marked degree.

This work must be very carefully done. If it is not done by those understanding the work, it is apt to cause *dermatitis*.

The best time to employ the treatment with depilatory is immediately before a bath, thus eliminating any traces of its odors on the body after its use. Also remember that if it is used when one is to re-

main quiet for a few hours, the risk of irritation is lessened.

Do not wash the skin with soap and water immediately before applying the paste.

Mix the depilatory powder with enough water to make a paste about the consistency of soft butter, that can be easily spread over the surface to be treated. Always mix in a porcelain or glass dish and with a bone or wooden spatula, metal spoons and dishes should never be used for this mixture as a chemical reaction is the result of the barium sulphide, an ingredient in all depilatories.

Leave on till it begins to dry, say 3 minutes.

If a burning sensation is sensed, remove very carefully so as to avoid irritation.

A good way to test if the hair is loosened, is lift it with a spatula and see if the surface of the skin is free from hair.

Remove with lukewarm water, do not rub the skin, but pat it thoroughly dry.

Apply astringent cream as this aids in contracting the pores and is also soothing and healing.

Then if a bath is taken, especially after treatment of arms and legs, do not use soap, but treat the surface gently and pat dry after which apply cream generously or better still, an application of phenolin which relieves all burning sensation and is very healing.

Remain quiet for a few hours till nature adjusts itself, and you will realize a perfectly smooth surface of the skin treated.

This treatment weakens the hair shaft and after repeated applications, discourages the growth of hair to such an extent that it refuses to grow, much to the delight of the individual treated.

These treatments should be quite a source of revenue to the beauty shop soliciting this particular type of treatments.

Careful thought should be manifested in the choice of the depilatory to be used.

There are depilatories and then more depilatories.

A depilatory so compounded as to avoid burning or irritation to the skin should be used. Such depilatory is obtainable.

DON'TS

Don't use a sharp pointed needle for removing hair.

Don't attach needle to positive pole.

Don't use too strong a current.

Don't continue current too long or a visible scar will appear.

Don't attempt to remove too many hair in close proximity to each other.

Don't forget your sterilization of instruments used, your patron's face, or field of operation, your own hands, or any article that may be used in your work.

Don't use a blunt needle if removing warts, moles, etc., but always a sharp No. 9 cambric needle or little finer if necessary.

Don't use too weak a current. More current is needed for this than for removal of hair.

Don't attempt to work upon rapidly growing warts or moles. Let the physician do this, or advise you.

Don't attempt to use faradic current for electrolysis.

Don't use positive pole in needle holder when using steel needle.

Don't have poor connections of batteries or electrodes.

Don't attempt electrolysis on young children.

RESUME

Essentials for results in Electrolysis

1. Battery or wall plate with galvanic current.
2. Bulbous needles (fine, medium, coarse) attached to negative current.
3. Common sewing needles for warts or moles.
4. Introduction of needle into hair follicle.
5. Complete destruction.
6. Epilation Forceps to lift hair after treating it.

Requirements for the Operator

1. Knowledge of electrolysis.
2. Careful sterilization of all instruments used.
3. Good eyesight, aided if necessary with proper glasses, artificial light, etc.
4. Ability to do the work.
5. Judgment of length of time to treat.
6. Care in directions for working.
7. Correct after-treatment.
8. Correct advice to patients for care after treating.

REVIEW

1. Define electrolysis.
2. What current used for electrolysis?
3. Why?
4. Define direct current. Galvanism.
5. Define polarity.
6. How is the polarity determined?
7. Which electrode is used in the needle holder?
8. What type of needle is best used for removal of hair?
9. What type of needle holder is best for this work?
10. What kind of a needle do you use when treating Nevi?
11. Why is it necessary to have a milliammeter on wallplate or battery?
12. How is the amount of current, necessary to do this work, determined?
13. How much time is required to remove hair?
14. What will happen if the needle forms the positive electrode?
15. Is electrolysis painful?
16. Is sterilization necessary in doing electrolysis?
17. What preparation necessary before treatment is begun?
18. Give process of treatment after electrolysis.
19. What advice given to patron for care after treatment?
20. What must be destroyed to stop the growth of the hair?
21. Could a scar be caused in doing this work?
22. What percentage of hair removal could you promise?
23. How can it be determined whether or not the same hair has returned?

24. Define eschar.
25. How can a scar be avoided?
26. How do you determine the length of time for treatment?
27. Does electrolysis stimulate the growth of hair?
28. What do you think of the use of depilatory?
29. Also the waxes for the removal of hair.
30. Name some of the essentials for results in this work.
31. What are the necessary requirements for the operator?
32. Are local anesthetics recommended?

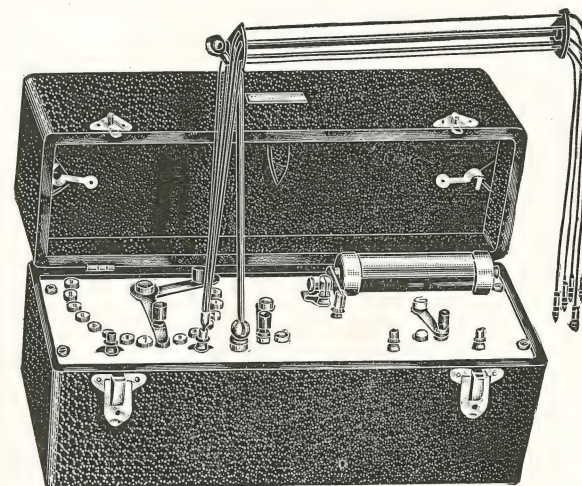


Fig. 55A. Multiple Needle Holder with 16 Cell Battery

The Multiple Needle Holder in the hands of the expert will reduce the time required to remove a certain amount of hair. Six to eight needles can be kept working in this way. The attachment can be removed in a moment from the battery plate, folded up and put aside when not required.

NOTES

THE COSMETISTE

Chapter XIX

NEVI-NEVUS

DEFINITION

Nevi is a small circumscribed malformation of the skin sometimes of hereditary basis. A cutaneous blemish either congenital or acquired, either pigmented or otherwise. A congenital angioma of the skin.

Their foundation is laid in embryonic life. They develop slowly therefore become apparent at different periods of life.

Nevi varies in color, size and form according to the section of skin involved. Some are pigmented, some are not, others have stiff bristly hair, still others are covered with a downy growth. The sebaceous and sudoriferous glands may be involved, as well as portions of the corium when a vascular condition will exist.

Soft nevi or common moles may be with or without pigment, vary in size, sometimes grow like bunches of grapes or in chain-like formations. They may be just flat and discolored in early life and when the body becomes matured, will sometimes grow very rapidly.

A small mole sometimes assumes uncomfortable

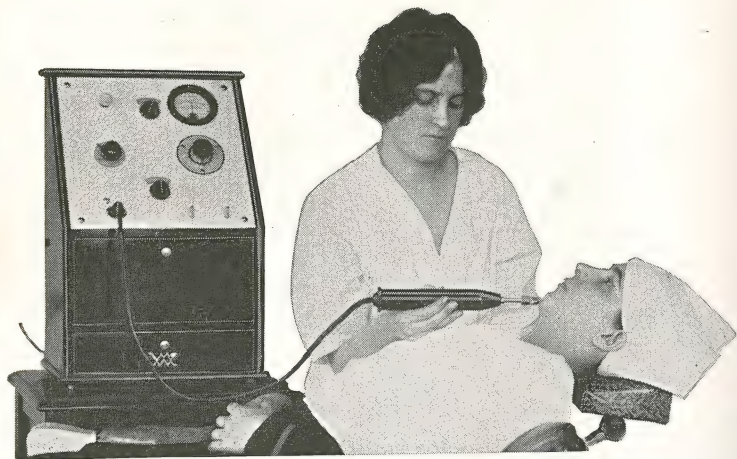


Fig. 56. Fulguration in removal of Flat Nevi

proportions and also develops a growth of bristles. For this reason all growths should be removed as soon as noticed.

Araneus Nevi—Bright red spots with small branches, like capillaries emerging. Here the blood supply must be cut off when the mole will usually disappear. If it does not, further treatment is necessary. Use evascularization process.

When downy or bristly hair is evident, we call it **Nevus Pilosus**. Another form is **Nevus Linearis** or when moles occur in lines, it may be pigmented or unpigmented, they may appear on body or face and neck. When hair is present remove hair first.

Nevus Lipomatodes or **Steatoma**—wens as classed in diseases of the sebaceous or oil glands. They grow to enormous size on any part of body and frequently

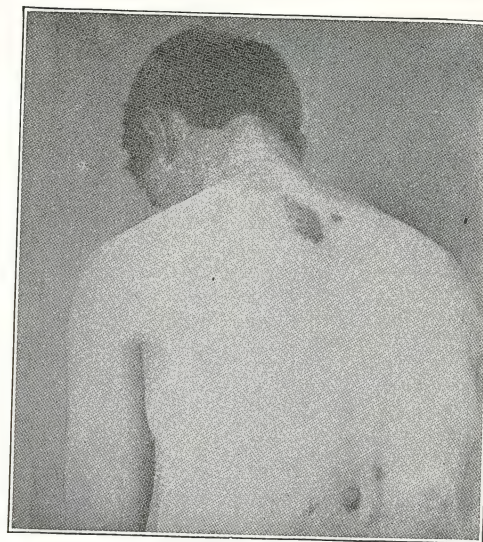


Fig. 57. Nevus Pilosus

become small fatty tumors. Not generally treated other than with the surgeon's knife. A general stimulating treatment given for the morbid condition of the glands will assist in removing them and keep others from forming.

Telangiectodes form of **Nevus**—which consists of a network of small blood vessels. They sometimes become very much engorged. They emerge from a center as **Araneous** or may spread over the surface as in **Rosacea**. They disfigure the face and other parts of the body on which they may be found.

They may be classed as **Angious**—a tumor formed of blood vessels or **Angioma Cavernosum**—filled with blood sinuses sometimes called **Telangiectatic**—composed of dilated blood vessels, a vascular birth mark. This is usually too deeply seated to treat by ordinary



Fig. 58. Telangiectodes

methods as they very rarely are helped by any method. Evascularization process is employed if treated.

Verrucosus — or wart-like moles, sometimes smooth, sometimes furrowed and often covered with a hairy growth.

Verruca Vulgaris—papillomata or warts, while they are not included in Nevi, their treatment is essentially the same. Warts are infectious.

A Hyperplasia (overgrowth of a part due to multiplication of its elements) of the papilla of the skin, forming a small projection.

The yellow pigmented spots usually found on the eyelids called Xanthoma (Zanthoma) can also be treated by electrolysis. It is a wart like growth, appearing as a rounded, flat or slightly raised yellowish

patch, occasionally found also on other parts of the body, vary in size and shape from a pin head to size of a pea, they are soft smooth patches of a chamois color. Usually occur in middle life, more common in women than men, exact cause not known. The form we treat is classed as Xanthoma Palpebrarum.

In treatment of warts and moles a sharp needle such as a common sewing needle (No. 9) should be used.

More current is needed for this work as we must cut off the blood supply and destroy more tissue.

Insert needle on a level with the normal skin and push it through the growth so that the point of the needle is visible on opposite side. See Fig. 59.



Fig. 59. Destruction of Growths

Allow it to remain until needle is easily moved back and forth showing tissue has been destroyed around it. Then remove needle and insert it again, in a checker board style.

The number of insertions depends on the size of the growth.

EVASCULARIZATION

DEFINITION

The destruction of vascular capillaries.

It is very necessary to thoroughly understand this process of treatment in order to accomplish results. It is employed in treating flat nevi such as Nevus Araneus, Nevus Vascularis, Acne Rosacea in second

form, or any little broken capillaries that are unsightly.

A common sewing needle in needle holder and negative electrode in needle holder as in removal of hair, is employed. Squeeze the flesh between the fingers and enter the source of blood supply directly with the needle.

Treat each little branch separately. You have then cut off the blood supply and destroyed the walls of the capillaries, robbing the blood of any channel in which to flow. Do not attempt to treat a case of congenital vascularis as it is rarely relieved by any treatment. They are usually very deep seated and involve a vast amount of tissue.

Treatment of Nevi by use of fulguration point is fully described in Article on High Frequency.

REVIEW

1. Define Nevi.
2. How may the different forms of Nevi be determined?
3. Why is it usually advisable to remove Nevi?
4. Name the different forms of Nevi; describe them.
5. Describe the treatment of common Nevi.
6. What form of electric current is employed for this purpose?
7. Is there more than one form of electric current recommended for this purpose? If so why?
8. How do you treat broken capillaries?
9. Define evascularization.

Chapter XX

CARE OF HANDS, ARMS AND NAILS

Very few people attach enough importance to the care of the hands.

When it is remembered that the hand is offered in salutation to our friends, that it performs numbers of the most delicate offices at every moment of the day, that it touches many objects through which it may convey the germs of infection—when all these things are justly considered some idea of the importance of the daily care of the hands may be realized.

The normal skin of the hand and arm is primarily the same as on other parts of the body; it differs however in the following characteristic: the skin is tougher on the back of the hand than it is on the arm, since it is subject to the elements and comes in contact with different objects. The skin in the palm of the hand is thicker than the skin on the back of the hand for it comes in contact with everything the hand picks up. Further study of the skin in chapter on Skin.

Massage may be employed to good advantage in treatment of the hands and arms. It will increase their suppleness and flexibility. The movements are executed from the wrist to elbow and shoulder, on the arm; and wrist to finger tips. (See directions for massage). It is especially efficacious where there are enlarged joints. Massage of the arms is also helpful

when they are thin and scrawny, and where there is a chronic coldness or clamminess, for this condition is due to poor circulation of blood and massage will improve same; high frequency currents can also be employed for this condition.

MASSAGE OF HAND AND ARM

1. Cleanse with cleansing cream.
2. The use of the Red Light as directed is now recommended.
3. If arms and hands are thin and skin dry, pat in plenty of Muscle Oil and Tissue Cream.
4. If they are plump and a normal skin exists, the Tissue Cream is sufficient. A little Bleaching Cream may be added to whiten the skin.
5. Red Light over cream.
6. Now the massage is given with Faradic Current.
7. A massage is now given following manipulation as directed. (See end of chapter).
8. Remove cream.
9. Sponge with Finishing Lotion.
10. Make up with Liquid Powder.
11. If a manicure is not given at this time, the nails should be cleaned and buffed. Towels should be used to remove cream in this treatment. Use cotton pads in applying finishing lotion and liquid powder.

BLEACHING OF HANDS AND ARMS

This can be done by following any facial bleach treatment, although the skin on the hands and arms is much more difficult to bleach and therefore more treatments may have to be given to bring about desired results.

CHAPPED HANDS

Chapped hands are hands from which so much of the natural oils have been removed that there is not a sufficient amount of it left to combat the entrance of dirt in the sensitive portion of the skin.

This condition where the skin of the hands appears roughened, cracked or fissured, usually occurs in cold weather and may be due to improper drying after washing, or to lack of cleanliness. Many preparations may be recommended for this condition of which the shop owner is cognizant and will usually have a stock on hand. A good formula is given in chapter XXI on Cosmetics.

The treatment as given under No. 6 in process of manicure, will remedy this condition however.

The make up of the hands and arms: Liquid powder is best for this as it does not rub off and therefore lasts for an evening. This should be applied with a wet sponge or cotton pad and patted dry in order not to cause streaks. Formula in chapter on Cosmetics. A little dry powder may be dusted over this. *(should always be used)*

THE NAILS

The proper and scientific care of the nails add much to the general personal appearance of the individual as those who have well manicured nails help to create an impression of perfect grooming.

The present mode of manicuring the nails dates from more or less recent times. Even the ancients did not neglect the nails in so far as attention to these members was concerned, but it was more in the form of artistic adornment or decoration as well as improving the general appearance.

The Orientals tint or stain the outer surface with coloring matter of various hues, such as red, gilt, etc.,

tear from dead cuticle to live tissue - Hangnail
 Hangnail:-

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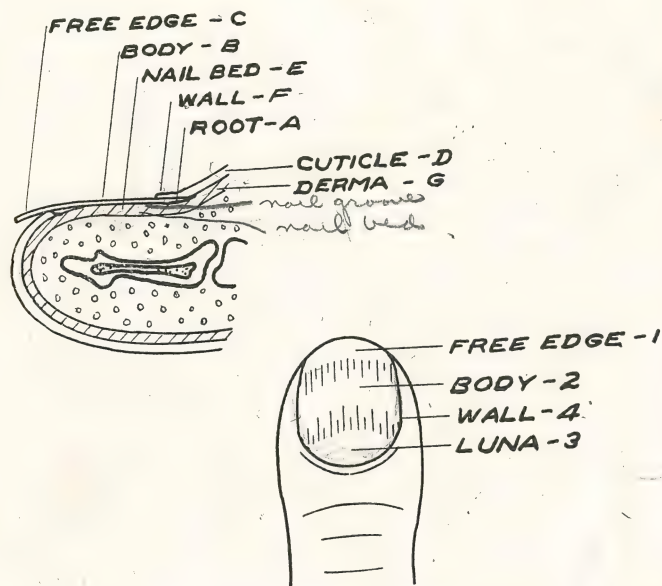


Fig. 60. Section of Finger Nail

according to their own individual taste and desire. They even resort to injections of dyes into the matrix of the nails.

The length of the nails denoted caste in society.

The growth of the nails: It is necessary for the Cosmetiste to thoroughly understand the growth and structure of the nails. We will therefore attempt to give in a brief chapter the anatomy of these appendages of the skin.

DEFINITION

Nails are the growth of clear, horny cells of the Epidermis joined together in a continuous plate or a thickened portion of one of the layers of the Epidermis.

5 bones in hand - metacarpals -

Full nail grow - 161 days

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Atrophy - wasting of nails - growing smaller

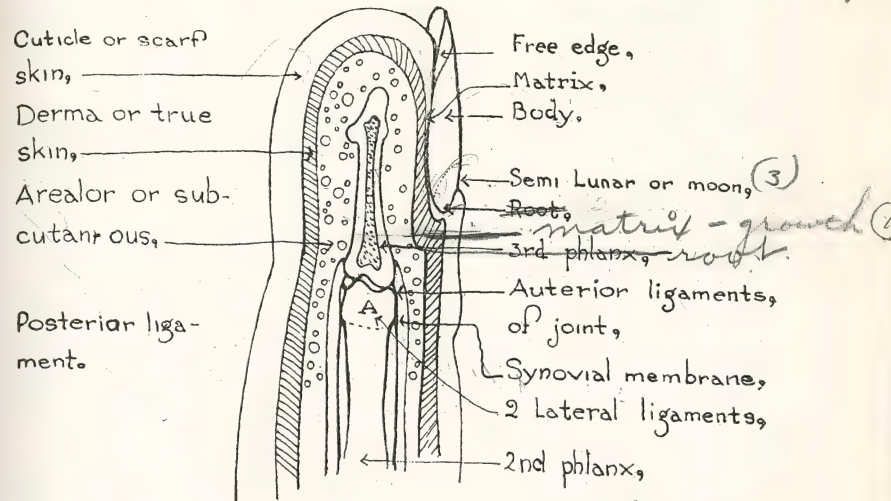


Fig. 61. Section of finger and nail

Sections of the nail:

Illustration 1

- a Nail Root
- b Nail Body
- c Free Edge
- d Cuticle
- e Matrix
- f Wall
- g Derma

Illustration 2

- 1 Free Edge
- 2 Body of Nail
- 3 Luna or Moon
- 4 Mantle

The nail consists of three distinct portions, namely: 1, Free Edge; 2, Body of Nail; 3, Nail Root. Directly beneath the body of the nail and upon which the latter rests is a portion of the corium known as the bed of the nail and that part of the nail bed situated under the nail root a little forward of the root is known as the Matrix. This is supplied with blood vessels (Vascular) and is very sensitive.

The Matrix of the nail nourishes the nail during its growth by constant multiplication of cells and hardening process, occurring by the changing of the cells into true nail cells.

On either side of the nail bed is a fold of skin called nail wall; between the nail wall and nail bed we find a furrow called the nail groove.

Located at the base of the nail is a semi-lunar area, which is known as the luna or half moon. When the nail leaves the base of the finger it is partially covered by the cuticle or scarf skin, and this is called the Eponychium. Located directly beneath the free edge is also found an extension of the Epidermis which is known as the Hyponychium.

When a nail is torn out or injured a new one grows if any germinative cells remain. If just part is destroyed misshapen nails are the result.

COMPOSITION OF NAIL

Carbon	51.09%
Hydrogen	6.82%
Nitrogen	16.90%
Oxygen	22.39%
Sulphur	2.80%

A GOOD MANICURE

1. Begin at little finger of left hand, file and bevel nail using finger board for beveling. Be careful not to file into corners as that makes fingers sore and forms callouses. Corners should be attended to later in the process.

2. Put left hand in bath of soapy water. A little perfume may be added, also a little liquid rouge to make it look more attractive. An antiseptic may also be added to this bath such as tablets recommended

Soak nails in oil 10-15 min every night

for this purpose. Dishes containing the bath should be glass.

3. File and bevel right hand as in number one.

4. Take left hand from bath and dry with towel; do not rub but pat the hand dry, using no pressure on nails as pressure may cause injury. Cleanse nails carefully with orange wood stick made soft and spongy on end. (This can be done with nail file.) Apply bleach and oil to all fingers on left hand, then return to little finger and loosen Cuticle using a Cuticle remover if necessary, also powdered pumice which may be mixed with oil if the nails are soft and peel easily. Cut corners with scissors.

It is rarely necessary for the operator to resort to the clippers, in fact they should be avoided wherever possible except in cases where the nails have been long neglected, nor is it advisable to use scissors to cut away exuberant cuticle. It is far better to use the cuticle remover, cream or solvent. Raise corners with orange-wood stick or finger board (these may be used at any time), do all trimming of hang nails, etc., in fact finish each finger as you go. When at third finger of left hand

5. Put right hand in bath, and finish left hand.

6. If the nails are thin, dry and brittle, apply more of the nail cream and use the Red Light over the cream, that it may be more easily absorbed; this also helps to overcome dryness of nails. The Red Light has a similar effect on the skin of the hand as when it is used over the bare skin on the face. Chapter XXVI.

In extreme cases employ the oil treatment; i.e., heat the oil to a comfortable temperature for the fingers (by placing a receptacle containing the oil in



Fig. 62. Manicureen and Lamp

a dish of warm water) and submerge the nails in same and allow to remain for at least ten minutes (longer time if possible). The effect is very gratifying and especially if nails are very dry and brittle. This may be recommended for home use as well.

7. Take right hand from bath and proceed from number four.

8. See that nails are free from oils and pumice, then apply paste and polish with powder polish.

9. When both hands are finished, scrub them gently with brush in the bath and rinse with clear water and dry gently, then buff with clean buffer.

10. Always remember to sterilize all instruments,

*Equal parts - Glycerine - Bay rum - Hand lotions.
1% carbolic acid.*

have your own hands clean and everything in order before you start your work.

Remember that the first consideration of the operator working upon patrons is sterilization of all instruments to be used. This is fully explained in our Chapter on Sterilization, so no mistake need be made.

If through carelessness of the operator an infection occurs this must not be slighted but proper care must immediately be given and the patron instructed what to do.

If an abrasion due to carelessness of operator or otherwise is noticed when manicure is finished apply a phenol preparation and protect it with a strip of gauze or a piece of cotton saturated with phenol and covered with adhesive tape.

TO TREAT AN INFECTED NAIL

1. Cleanse with Alcohol.
2. Open with sterile needle and remove pus.
3. Cleanse with peroxide.
4. Apply iodine, followed by
5. Wet dressings of Boric Acid solution, hot, and as often and as long as needed. If necessary, send patron to physician.

SHAPING NAILS

The shape of the nail in filing depends on shape of finger and whim of patron, although operator may advise her as to the most effective, conducive to general improvement in appearance of nails and hands.

INSTRUMENTS USED IN MANICURING

Buffer, emery boards, steel file, brush, orange wood sticks, cuticle pusher, scissors and nippers are

practically the only instruments used in manicuring.

The buffer illustrated is best because of its lightness in weight, the changeable chamois makes it easily antiseptic. It does not cramp the hand of the operator, tiring it out before the work is fairly begun, neither does it heat the nail as a padded buffer is apt to do causing discomfort to the patron and dire results to the nails being treated.

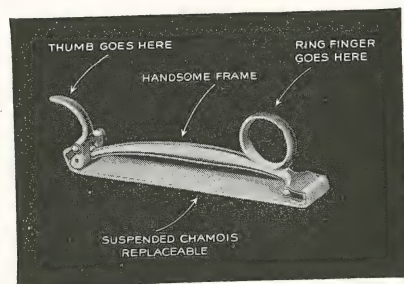


Fig. 63. Nail Buffer

Emery boards and orange wood sticks should be of the best procurable.

The steel file should be flexible, not too fine or too coarse. A six or seven inch file is the best length also select one that does not *cut* on the edge.

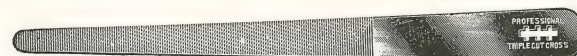


Fig. 64. Nail File

The cuticle pusher should not be sharp so as to tear the cuticle neither should it be too blunt as this will crowd the cuticle and have a tendency on account of its bulkiness to tear the cuticle.



Fig. 65. Cuticle Pusher

Nippers should be sharp and light in weight. A great deal of practice with the use of them is necessary in order to be an adept and proficient in the employment of same.

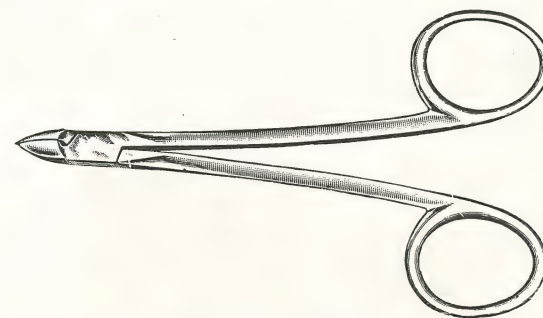


Fig. 66. Nippers

The scissors should be sharp and pointed. The long ones are by far the best but this we leave to the operator as each manicurist has her preference.

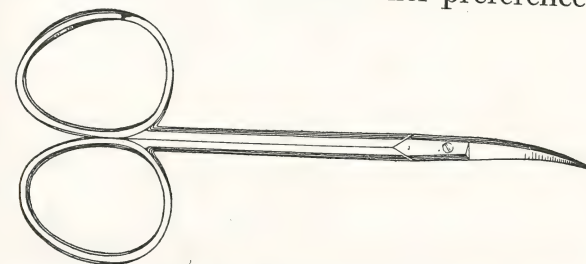


Fig. 67. Manicure Scissors

Be sure to procure the best as poor steel will not stand the strain and will spring out of shape.

All steel instruments should be of the best. Those illustrated are the best in shape and construction.

A brush is necessary to scrub the nails before and after the manicure.

The manicure table as well as its equipage should be chosen with a thought of efficiency and durability.

The height of the table should be from thirty to thirty-two inches and not more than fifteen inches wide. A glass top which is easily kept clean is best.

The container for the necessary cosmetics as cream or oil, bleach, powdered pumice, etc., should be attractive and durable. One may be selected to harmonize with the color scheme in your shop as well as a bowl also a powder container making a complete ensemble.

They are beautiful in shape and color and just the right size to make them adaptable to the high class salon.

DISEASES OF THE NAILS

Manicuring should be made as scientific as chiropody and those practising this profession should be just as capable of taking care of infected and abnormal nails as the chiropodist is to care for the feet. The advice to patrons should be scientifically given and necessary cosmetics recommended.

Every manicurist encounters the condition known as splitting nail (*Onychorrhexis*) caused from various conditions such as congenital dryness and hereditary tendencies. Sometimes this predicament is the result of trade customs as, when one works with chemicals, metals, etc.

This condition should be taken care of by professionals who understand the nature and cause of the splitting. Letting the nails grow long and keeping them well oiled and protected from further splitting by application of adhesive tape is recommended.

In some cases the removal of the entire nail is necessary but a complete cure is not always affected.

White spots or (*Leuconychia*) are caused from injury to the matrix or bed of nail. The nail is soft and thin in the region of the root. As the ageing portion is gradually pushed forward the completed portion loses all connection with the blood supply of the nail bed. When this process is interfered with as it so often is through improper use of the cuticle pusher or orange wood stick the soft growth is injured, the cuticle is broken and these white spots are the result.

Too vigorous use of these instruments should be avoided, also too close cutting of cuticle should not be resorted to if these injuries are to be avoided.

Too strong soap solutions while doing laundry work and the handling of irritating chemicals injure the tissues but this probability is not as great as the careless use of nippers, scissors and blunt instruments of all kinds.

Biting of the nails should be treated as a disease. This is called *onychophagy*. It is usually the result of dryness and improper care of the nails also a nervous temperament or tendency. This condition is most frequently found among children and can be cured if the child is taught to care for the nails the same as big sister and mother.

Manicures should be given periodically and the patron taught to keep the nails well oiled and if necessary bandage them in oil dressings every night.

After a few weeks of this special care it will be found that the habit is broken and then if the dryness is averted through constant care the nails return to a normal condition.

The wearing of cotton gloves at night saturated with oil is a splendid practice.

Onychia is defined as an inflammation of the nail matrix with suppuration (formation of pus). It is usually due to bacterial infection after an injury to the tissues around the nail. A cut in manicuring the nail, particularly under septic conditions and when neglected, often leads to the development of the disease.

Paronychia (Felon) is an inflammation of the tissues surrounding the nail. It is due to infection by bacteria where the tissues have been accidentally cut by an instrument not properly sterilized. It may occur subsequently to inflammation of matrix if this condition progresses. This should be treated by physician although wet dressings may relieve it temporarily.

Both Onychia and Paronchia may also be of systemic origin.

HANG NAILS

Hang nails are caused by dryness of the cuticle and improper care being given it. Avoid cutting the cuticle as this causes hang nails if not properly done. Hang nails are a splitting of the epidermis at the side of the finger nail. They should be carefully trimmed off to avoid their being torn further. Recommend oil treatment if the patron is bothered with them.

The use of the styptic pencil should be avoided as it is not a germicidal process and not a satisfactory astringent and danger of infection is possible.

HAND AND ARM MANIPULATIONS

1. With the hands around arm far above elbow, thumbs on muscle and fingers underneath, twist the muscle of the arm down to the wrist. Slide back to position with heavy stroke. Repeat three times.

2. Same position of forearm, manipulate over the three muscles in the same manner. Repeat three times on each muscle.

3. Over back of hand from knuckles to wrist in like manner.

4. Each finger with same movement.

5. Make the palm of the hand pliable by the same motion.

HOME CARE OF THE HANDS AND NAILS

Give your patron sound advice on the home care of the hands and nails. If she is a housekeeper and as such has to put her hands frequently during the day into water the skin will become irritated and red because of the chemical which may be in the water and the alkali in the soap.

This can be counteracted by laving the hands in water containing the juice of a quarter of a lemon followed with a rinse in tepid water. This will keep the skin soft and free from chapping.

The deftness which she may acquire in pushing back the cuticle around the nail when wiping the hands with a soft linen towel will not delay her many appreciable number of seconds and still it will add much to the appearance of the hands at all times.

Whenever it is possible wear rubber gloves for dusting, etc., and at all times advise the use of nail cream freely.

Do not neglect to recommend the necessary application of hand lotions at any time during the day to those needing this toilet requisite.

Never let a time pass to sell to your patrons the needful cosmetics for home use and always remember

you, as a Cosmetiste, are in a better position to recommend these cosmetics than the average drug clerk, owing to your knowledge of the skin and its needs.

Excessively perspiring hands are annoying. This condition may be found in either cold or warm weather. This is usually the result of some physical condition but to obtain temporary relief the hands, and the feet if so affected, may be relieved by bathing the affected parts several times daily with a mild soda solution about a teaspoonful of ordinary soda to a pint of water.

REVIEW

1. Define nails.
2. Name sections of nail—Describe them.
3. Why should we manicure? \
4. Will a new nail grow after injury?
5. What causes white spots? Corrugated nails?
6. Of what is a nail composed?
7. Give process of a good manicure.
8. How do you treat an infected nail?
9. How is the shape of the nail determined when giving a manicure?
10. What instruments used for manicuring?
11. How are these instruments sterilized?
12. What are the common diseases of the nails?
13. How do you care for chapped hands?
14. How do you care for tanned arms and hands?
15. Give process of good massage for hands and arms.

NOTES

Divisions of Nail - 3 sections
Free edge - body - root

Divisions of Nail Bed.

(posterior) matrix - nail proper (anterior)

Mantle - the covering of the nail

Pterygium - abnormal growth of the skin

Onychoraxis - abnormal growth of nail.

3 Zones of the Nail Bed

1 - Proximal - at matrix

2 - Central - main portion

3 - Distal zone - thin line preceding free edge

Nail grows $\frac{1}{30}$ inch a week

NOTES

THE COSMETISTE

Chapter XXI

COSMETICS AND THEIR USES BY THE COSMETISTE

DEFINITIONS

Cosmetics are external applications intended to improve or beautify the skin and hair.

Cosmetic—Beautifying, especially the complexion or hair.

... ist—One professionally skilled in or makes practice of.

Cosmetiste—One professionally skilled in the treatment of the complexion (skin) and hair of women, by means of physio-therapeutic modalities and cosmetics.

SHAMPOOS

CASTILE SOAP

This is the best soap for cleansing the hair, as it is mild. Shampoo mixtures in which strongly alkaline substances as yellow soap or strong powders are found, should be avoided. While they cleanse the hair, they leave it in a dry, brittle state which causes it to break and split.

Castile soap is the standard soap to be used for shampooing. Here we give you something definite about soaps. Castile soap is a product named from Castile, a province of Spain, the place where it was first made five or six centuries ago. The product is

described as a hard soap made of olive oil exclusively, saponified by lye, containing no artificial coloring, odor or perfume. This soap has for several hundred years proven a soap of superior quality. It has no superior in value as a cleanser of the most delicate skin and of hair and has medicinal values.

Beware of certain domestic soaps branded as Castile which have lately come under the ban of the Federal Trade Commission. Such soaps, said to be made of vegetable and animal fats excluding as they do any approach to genuine Castile soap should be subject to a taboo by the Cosmetiste.

A GOOD FORMULA

1 large bar, about 1 lb., of pure Castile Soap (shaved fine)

1 gallon of water

1 teaspoonful of baking soda

1 teaspoonful borax

Heat this gently until all the soap is dissolved

Do Not Boil! Boiling separates the oils and alkalies originally used in making the soap and spoils its cleansing proclivities.

TAR SOAP

Tar soap is good to use in cases of extremely oily scalp.

Of the many ready prepared shampoo mixtures, nothing will be said. Do not use any of them, unless you are convinced of their harmless qualities.

TONICS

Tonic simply tends to cleanse the surface of the scalp. Remember that the skin does not absorb liquids, therefore the growth of the hair cannot be

benefited, except in as much as these tonics tend to clean the surface of the scalp and make it receptive for the treatment which is to follow. Tonic is recommended for this use only.

BRILLIANTINE

Brilliantine, if it is of the best, is recommended for the hair. The foundation of the best Brilliantine is Castor Oil and nothing better than Castor Oil can be found for a dressing on the hair, especially if the hair is dry.

However, Castor oil has a tendency to blister the scalp if used too profusely and allowed to remain on the scalp too long before a shampoo is given. Glycerine is apt to become very gummy.

A GOOD FORMULA

Three parts Castor Oil

One part Glycerine

Ten parts Alcohol

Any perfume desired

A little poured on the palm of the hand and then rubbed on the brush, is the best means to apply it to the hair. This distributes it evenly.

ANTISEPTIC OIL

Antiseptic Oil is always recommended for treatment of the hair. It should be heated before applying. Good brands of this oil are put up by different chemists.

TAR OIL

Tar Oil may be used on oily hair and has a tendency to correct this condition when used in connection with massage and electricity as given in chapter XVI. Heat it in a double boiler, as tar is inflammable.

Although we are told that the use of Tar Oil has a tendency to darken the hair and we are advised against its use on light or gray hair, we have found through investigation that the tar itself does not darken but many of the so-called Tar Oils are mixed with ingredients that cause this to happen. We recommend Tar Oil for extreme cases of Alopecia and especially if an oily condition exists.

POMADE OR POMATUM

Pomade is food for the scalp and its use is highly recommended.

FORMULA

Cold Cream, 1 oz.
Precipitated Sulphur, 60 grains
Salicylic Acid, 20 grains
Directions for use in Chapter XVI.

CREAMS USED FOR THE FACE

First of all, those to cleanse the face should be considered.

Cream as a cleanser will do far more good and does not have the drying effect of soap and water with its alkalinity which robs the skin of its natural oils.

The *cleansing cream* should be a soft, easily melted sort, one that is readily absorbed by the skin, as this kind will penetrate down into the deeper tissues dis-

solving and removing all effete matter. It should be used in every case of normal or dry skin.

Apply by the patting process, leave it on for at least seven or eight minutes, then remove with soft linen cloth or preferably a cotton pad covered with gauze, which of course, for sanitary reasons, should be discarded after each treatment. (Substitutes for these pads are made of different types of cellulose products.)

Soap and water should be resorted to only when the skin is dripping with oil or when an acne condition exists. The liquid medicated soaps are the best since they do not have a tendency to clog the pores as the hard soaps do. Use as directed in chapter XXX on Electrolytic Cup.

The face should be thoroughly cleansed with either cream or soap as outlined above, before applying cream for night use and before applying powder and rouge at any time.

Creams should always be patted, instead of rubbed on the face. In massage after the application of the cream, an upward, outward stroke should be maintained so as not to cause the muscles of the face to sag. A gentle stroke is best; do not treat the face as roughly as we treat other parts of the body—it would break down the tissues.

NIGHT CREAMS

Explicit instructions should be given to customers as to the kind of cream to use and how to apply it to correct the specific condition. The evening is, of course, the best time to apply such, since then the body usually relaxes and there is more time to let the cream remain for the proper period to accomplish its purpose.

Tissue Builder Cream is to be used when the skin is normal or dry. The latter condition is clearly indicated by the appearance of fine lines and wrinkles.

Tissue Builder Cream should incorporate as one of its ingredients Lanolin Oil, as this is one of the best agencies we have to build up the tissues which is so necessary when a dry condition exists.

Lanolin Oil and Goose Grease are easily absorbed by the skin. Lanolin Oil is preferable as it does not become rancid.

Tissue cream may be used as a foundation cream for make-up.

Muscle Oil is mentioned here, although it is not a cream; it should be used in connection with the Tissue Builder Cream.

It is patted onto the face immediately after the cleansing process has taken place, or preferably after the Electrolytic Cup or Vapor and Steam Generator is used. It will overcome an abnormally dry skin and is one of the best remedies known for that condition. Be careful how you apply it near the eyes, as it acts as an irritant on the mucous membrane.

Astringent Cream is advised if the skin is oily and coarse pores are evident. It has a mild astringent effect. If the skin is dripping with oil (so to speak) a *stronger astringent cream*, which is very much more effective, may be used. A little of this (about the size of a bean) should be mixed with the Tissue Cream and used in case of a dry skin when coarse pores are conspicuous.

Bleaching Cream is rarely used alone. It is mixed about half and half with the Astringent or Tissue Cream and will whiten the skin very perceptibly. Be careful that you use a bleaching cream minus

Benzoin as this causes little fine lines and wrinkles in the skin. All bleaching creams are drying in effect.

Acne Cream should contain phenol for germicidal and healing purposes. It is an ointment that will assist in reducing the inflammatory condition of the oil glands.

Never Mix Acne Cream with other creams as a chemical reaction will occur. It is in a class by itself.

Foundation Creams, also known as *vanishing creams*, are not recommended as they dry too quickly and when taken off roll up in lumps on the skin, dragging same and causing lines. Tissue cream may be used to advantage if a foundation cream must be used.

Protection Cream is recommended for use to keep the skin from tan, freckles, etc. It is a protection from actinic rays of the sun.

Methene Ointment should be recommended to use in connection with Methene tincture in case of Rosacea. Applied in nostrils at night.

Mineral Oils. The base of the best of facial creams is mineral oil. It is a fact that mineral oil does penetrate and is easily absorbed by the skin but is not absorbed into the tissues and blood. Mineral oil is used as a medium, and is the best known medium, for carrying the necessary ingredients that are needed to build up the tissues, into the skin where they are more readily absorbed. Or, in other words, mineral oil acts as a vehicle to convey the necessary ingredients to overcome the various conditions, into the underlying tissues that they may be absorbed by the tissues and blood.

Mineral oil should be used in as small quantities as is necessary to perform the work.

The lanolin oil is the best tissue builder known.

Vegetable and animal fats are not easily absorbed by the skin, so are not as good for the base as mineral oils. They also deteriorate quickly, become rancid and impure from oxidization and take on bacteria readily.

CLAY PACKS

Clay packs, wrinkle pastes, etc. Most of these preparations are dry powders, such as Fuller's earth, kaolin, etc., mixed to the consistency of a flour gravy and spread over the face uniformly. Some are mixed ready to use and others come in form of a powder to be mixed with a lotion, as the bleaching lotion, witch-hazel, etc.

Fuller's earth comes in seven or eight different degrees of fineness and purity. Best grade imported. Some is used for cleaning purposes, so one must choose carefully and understand the different grades in order to be able to make the correct choice. The chemist preparing your cosmetics could best advise you.

Almond meal should be carefully selected also. This is best left to your chemist as when this is used it sometimes causes a great deal of irritation.

These masks are of real benefit when applied directly to the face after all cream is removed, spreading the paste carefully so as not to drag the skin. Allow it to dry for twenty minutes, either naturally or by employment of red light. Then with a cotton pad covered with gauze and wet in water, moisten the mask all over to begin with. Carefully remove it so as not to pull the skin. May be applied to a dry,

wrinkled skin with no harm whatever, if oils and creams are employed to overcome the extra dryness caused by these masks. They are of real benefit when used as directed. They help to contract the superficial layer of the skin, and are a decided help to an oily or pimply skin.

FORMULA

Two tablespoons Almond meal.
One tablespoon Fuller's earth.
One-half teacup Witch-Hazel.

Four ounces Fuller's earth.
One ounce Kaolin.
One ounce Magnesia.
Three ounces Witch-Hazel.

MASKS

The products used in mud massage are obtained from volcanic regions or mineral sources. In the manufacture, some other medical ingredients are used with the product.

The mineral properties of the mud or powder are for stimulating the blood and increasing its activity, and as they have an astringent effect prevent the formation of wrinkles and aid in removing them.

They are also great aids in cleansing the skin of all impurities.

White of egg may be employed and is very beneficial as an astringent mask.

LOTIONS

A sponging lotion is very necessary to use after removing cream. Many kinds are on the market, but the finishing lotion (formula given in chapter on Sterilization) is one of the best and most economical. This is used on any part of the face, ears

or neck where traces of cream may be found. Cotton pads with which to sponge the face are sanitary and therefore the best. This lotion is very refreshing and may be used at any time.

Emphasis should be placed on the necessity for scrupulous care in removing all traces of cream, with this or a similar lotion, before using powder or rouge.

Astringent Lotion is drying in effect, therefore indicated for oily skin. It is a splendid foundation for powder for this condition. Is preferably applied with electricity as described in chapter on Galvanism.

Witch Hazel is one of the best astringent lotions we have. When used warm it is especially effective and may be followed by the application of ice on the face. Witch-Hazel is a strong antiseptic and should be used freely.

Witch Hazel was discovered by the Indians. It was used by them as a soothing and healing agent. In the early part of the 19th century an exhaustive study was made of the curative properties of this product distilled from the twigs of the Hamamelis Bush and its therapeutic value was proven a fact. To be sure that the Witch Hazel you are using is pure and not adulterated watch for the approval by the U. S. Pharmacopeia.

Witch Hazel is manifold in its uses: as, an antiseptic, deoderant, astringent for oily skin and large pores, soothing and healing, also to mix with Fuller's Earth and use as a mask.

Witch Hazel is invaluable for the bath in summer as it is cooling and will alleviate skin irritations peculiar to hot weather and acts as a tonic to flesh and nerves. It will also relieve prickly heat.

Bleaching Lotion may be used for a sallow skin or for freckles. The best time to apply this lotion

is after all traces of cream have been removed; it may be used as a foundation for powder. Is preferably applied with electricity as in chapter on Galvanism.

Acne Lotion may be used for Acne as directed in chapter on Galvanism. For home use, recommend *Witch-Hazel* as the best lotion for this condition.

Methene Tincture, used in treating Acne Rosacea. Not more than one teaspoonful should be used for one treatment. Must be applied with the Positive Galvanic electrode to parts affected.

Calamine Lotion—A soothing lotion prepared by the chemist. Recommended for sunburn or at any time when a soothing effect is needed as in dermatitis, after hair dyes, irritation after bleach treatment, also used for burns or any case of extreme itching, as in Acne Artificialis, Eczema or after improper use of cosmetics of any kind.

FORMULA

Powdered Calamine	2 drachms
Zinc Oxide	2 drachms
Carbolic Acid	20 drops
Lime Water	1 ounce
Distilled Water	3 ounces

POWDERS

Too much attention cannot be given to the correct use of powders if perfect skin health and beauty are to be maintained.

The dry skin requires a powder which has a slightly oily base which will not only help it to cling, but nourish the skin as well. If the choice of powder be one which is dry but chemically pure, and agrees with the customers skin, a little tissue cream may be applied as a foundation. In this case, do not use a lo-

tion before applying the cream. For vacationing and exposure to the sun's rays, wind and dust, protection cream well covered with powder should be used as a protection.

There is a powder put up by most chemists, which is absorbent. It is dry, thereby devoid of oil and absorbs the natural oil of the skin causing it to cling to the skin. This is especially good for the oily skin. For oily skin never use a powder with a cream base as this will only make the skin more shiny.

Different weights of powder are needed according to the peculiarity of the individual skin to which it is applied, meaning a small amount of oil blended with the powder. One of medium weight is most universally used however, but you must really try this out for it is something to be decided individually.

The shade or tint also must be chosen in each individual case, although the following suggestions may be of some help.

Blonde types should use the flesh tints.

Medium Dark and Brunette types, the cream color.

There are many tints of powder on the market. They are all good, if well chosen.

A medicated powder should be employed in all cases of eruptions on the face. One of the essentials of perfumed powders is perfumed oils and sometimes not only a very inferior grade of oil is used, but the perfume is synthetic, and the combination proves very often irritating instead of soothing. This also explains what might appear otherwise as an idiosyncrasy, why some powders can not be tolerated by some people. The use of all vegetable powders, such as rice, starch, etc., should not be permitted as they

ferment in the pores, thereby clogging them and causing a coarse pore condition.

Avoid all powders containing arsenic, mercury, mica, etc., stick to those passing the food and drug act.

The liquid or cake powders may be used very satisfactorily for evening make-up, especially if the skin is clear and smooth. However warn against a too constant use of liquid powders because they clog the pores.

A GOOD FORMULA

To five and one half ounces of sterile water, add one-half ounce of toilet water, one Bernay or Germi-tab (or any antiseptic that is recommended) and one large cake of powder. Shake well each time before using.

Apply with pad of cotton previously wet with water. Be sure skin is free from all traces of oil or cream. If necessary, repeat the application, going over the surface between times, patting with the finger tips to insure a uniform coating. Rubbing will cause it to streak.

This powder neither rubs off, washes off, nor is it affected by perspiration. The skin surface must be well cleansed with cream after its use, as soap and water does not remove it.

APPLICATION OF POWDERS

It is always necessary to apply powder after a facial for protection against any effect of wind and weather, using a cotton pledget for the purpose. Sift a little powder on your patron's chest, (do not dip cotton pad into a dish of powder) pat it over the surface of the skin and blend it in with your finger tips, applying several layers or coats as it were.

Many patrons that have never been able to use powder before, owing to an irritation caused from the use of pads, find this process more satisfactory as it does not leave the skin rough and dry.

ROUGES

Rouges should be carefully chosen and judiciously used. In applying them keep the shape of the face of the patron you are making up, well in mind; a broad face needs just a little on the middle of the cheek, on a narrow face it can be carried well out toward the ear, a little over the eyelids make the eye look brighter; if the chin is of the receding type, a little rouge will seemingly build the chin out. Beware of too much rouge on the high cheek bones, always remembering that rouge accentuates a spot, therefore study carefully the characteristics of the face you are making up, before applying rouge. Remember that a natural line and color claims approbation.

It is always better to use too little than too much.

In cases of Acne or any eruption on the skin, rouge will only aggravate the condition as it is irritating.

LIP ROUGE

If lip rouge is to be used, a little darker shade than the one on the face should be chosen. The outline of the Cupids Bow should be perfected. If the mouth is large be careful not to bring the rouge out to the corners as this only accentuates the size of the mouth. A little rouge should also be placed inside the lips to make their appearance more uniform.

EYEBROWS AND LASHES

If the eyebrows and lashes need a little color to make them appear more prominent, it is well to use a good cosmetic to color them. They should be well

cleansed of creams and powders, by means of a small brush, before application of the eyelash tint.

By placing a small piece of gauze directly under the eyelashes the coloring may be easily applied and a splashy effect avoided.

Always remember the necessary thing in make-up, or application of powders, rouges, etc., is to leave the patron looking fresher and younger. The made-up woman while she may attract a great deal of attention, is not always the one that is most admired. Therefore see that all cosmetics are used with great discretion and natural outlines be retained.

COSMETICS FOR MANICURING

Cuticle Oil—This comes ready for use, but one may substitute olive oil with a drop of liquid rouge for coloring.

Nail Cream—This may be used same as oil and really is more convenient for shop use.

Nail Bleach—Comes in paste and powder form. Paste is best as it has an oil base and does not dry the nails as much. Should not be left under the nails on account of this drying effect.

Cuticle Remover—Comes in liquid and salve form. It acts as a solvent and should be used very sparingly since it will make the fingers sore and nails brittle.

Its use is advised only when a great deal of cuticle must be removed.

Nail Paste—Is to be applied after the manicure is finished and ready for the polish. Gives a pink tint to the nails and supplies the oil that has been removed in the process of manicuring.

Nail Polish Powder—Many brands are advertised. You must make your own choice as to quality, etc.

Nail Polish Liquid—As with the powder, so with the liquid polish, many different makes are on the market. Of their merits nothing will be said.

Nail Enamel—Some patrons demand a nail enamel, but as both nail enameling and varnishing are considered a lack of refinement, they should be tactfully advised against.

Hand jellies, lotions, etc., should be used to keep the hands soft and pliable. Choose for yourself the kind you will use.

A GOOD FORMULA

Glycerine, Rose Water, Bay Rum and Camphor equal parts, makes a very good lotion and will keep the hands soft and white.

REVIEW

1. Define cosmetics.
2. What is the best soap for shampoos?
3. Name some other soaps that may be used and for what recommended.
4. Should tonics be used and why?
5. Name some of the oils used on the scalp and for what purpose.
6. Name different creams used and for what condition is each recommended.
7. For what is Muscle Oil intended?
8. What oil forms the best base for creams and why?
9. Why recommend an Astringent Lotion?
10. Name one of the best.
11. For what is Calamine Lotion intended?
12. Tell us something about face powders.
13. Name the necessary cosmetics in manicuring and tell something about each one.

Chapter XXII

ELECTRICITY

Electricity—the Latin name for which is *electricus* or *electrum* meaning amber.

Electricity is a condition, agency or force in nature, to which are due numerous phenomena.

This force of nature, called ether, is present everywhere and is one of nature's own elements.

The Cosmetiste is not concerned with the theory of electricity, suffice it to say she or he has learned that it lights lamps, runs motors, heats various appliances, and in the telegraph, telephone and radio, transmits messages, voice, music, photographic impressions, etc.

Leaving the elemental form of electrical generation which has no practical use in the art of the Cosmetiste, what we are concerned with, is the practical form of electricity generated by either chemical or mechanical means, available in shape of dry cells such as are used for flash lights and portable batteries, or the 110 volt commercial current used for house lighting and power purpose.

Electricity, as used in the work of the Cosmetiste, is in the form of Galvanic current for phoresis, electrolysis or coagulation.

Faradic and High Frequency current giving sedative or stimulative effects and in the latter form also destructive effects.

Dry cells have an outer container of zinc for the positive element which forms the negative electrode, and in the center a carbon rod forming the negative element and the positive electrode. A chemical solution, also absorbent material and solid chemical substances fill in the space between the two elements and remains so for a long period of time, since the top is sealed over with pitch to prevent evaporation.

Only when the two elements are connected by some conductor of electrical energy, like a piece of wire or metal connected to the terminals, is a strong chemical action set up within, which action lasts while the outside connection or circuit is maintained, until the chemical solution within becomes exhausted. Thus we have chemical action within the battery converted into electrical energy outside of the battery.

If a couple of short wires are attached to the dry cell and touched to the tongue, a strong metallic taste and a slight burning or drawing sensation is felt.

If the carbon of one cell and the zinc of a second cell are connected together with a wire, and the two short wires attached to the other zinc and carbon electrode, the burning or stinging sensation will be stronger when the wire ends are touched to the tongue, and with each cell added the sensation will increase until it becomes intolerably sharp. A number of such dry cells connected together, are called a battery.

Batteries serve best where portability is desired or required.

Due to impurities in the commercial zinc used in a dry cell, a slight local chemical action takes place continuously from the moment the solution is poured in and this action will eventually, in about 6 to 12 months, destroy the cell whether it is used or not and it is therefore not practical to try and keep cells in reserve, they must be ordered fresh from the dealer.

In the illustration, Fig. 68, is shown a combination galvanic and faradic battery of the latest type where the cells used require no disconnecting or re-connecting of wiring when replacing same, thus eliminating the possibility of a short circuit from that source and saving time.

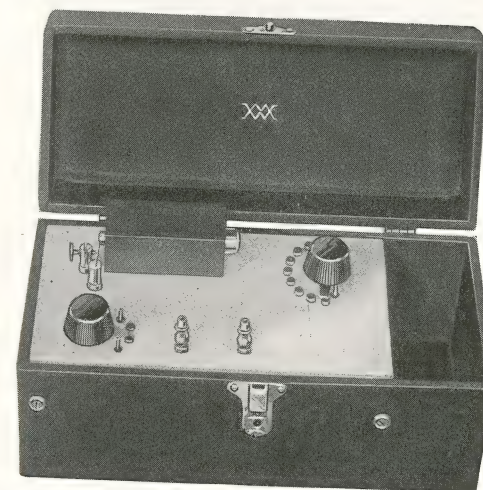


Fig. 68. Galvanic and Faradic Battery (6 cell)

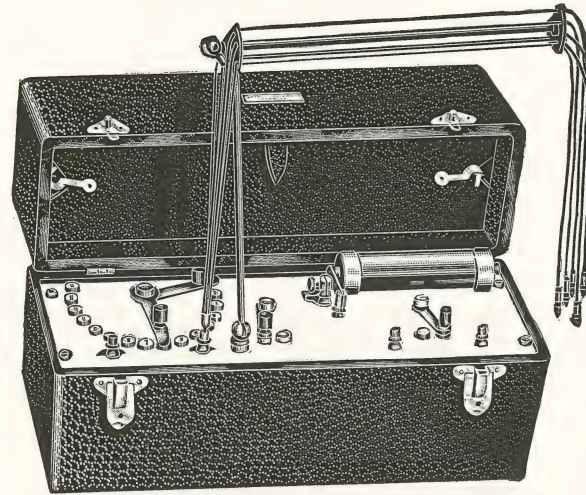


Fig. 69 Galvanic and Faradic Battery (16 cell)
with Multiple Needle Holder

Figure 69 shows a 16 cell battery, two cells of which are used to operate the faradic coil while the other 14 cells are for galvanism. This battery is fitted up in the same manner as the one in Fig. 68.

The battery with the double selector switch is best because you can choose different groups of cells for your work and the cells not in use will recuperate partially during this time.

Where the commercial 110 volt current is available, a wall plate as shown in Fig. 70 is the most practical, labor saving and economical device for obtaining galvanic or faradic current.

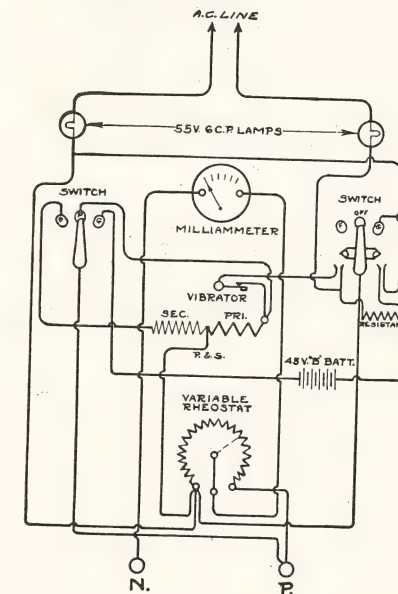


Fig. 70. Wall Plate Circuit.

If the service current is 110 volt direct or continuous, meaning that it flows always in one direction, then after passing through a lamp or other resistance to limit the amount, the current is divided partly flowing through the circuit A, and partly through customers circuit, the resistance of each allowing adjustment through the rheostat.

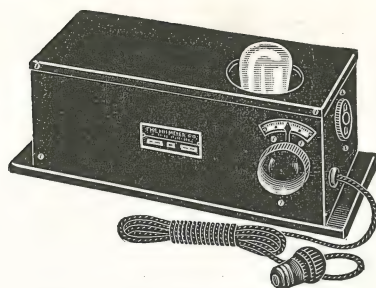


Fig. 71. Electronic Rectifier

When the current is alternating it must be converted into a continuous or direct current before it can be used for electrolysis or phoresis, and the latest and most efficient method is with an electronic rectifier.

It is noiseless, has no moving parts to get out of order or require lubrication, has no fluid, needs no attention.

Where several wall plates of a type not adapted to the ultra modern electronic rectifier are to be used, a motor generator, consisting of a motor directly coupled to a generator of 110 volt direct current will answer the purpose well, but the oiling of the bearings and the cleaning of the commutators must be carefully attended to, otherwise the apparatus soon becomes noisy.

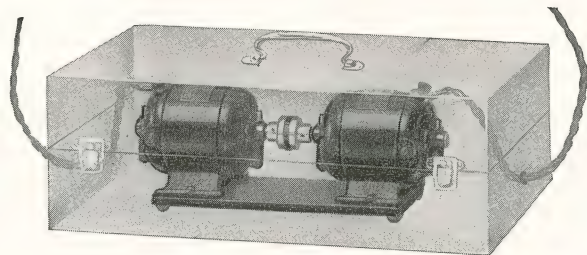


Fig. 72. Motor Generator

Such motor generator may be of small size to be used one for each wall plate or of a larger size to operate several wall plates as required.

To operate a faradic coil from the commercial 110 volt alternating current requires no rectification, in fact, the alternating current can be properly controlled through a suitable rheostat to deliver the same physiological effects as the induction coil, doing away with the care and maintenance of same.

FARADIC CURRENT

In contra distinction to the galvanic current which flows continuously in one direction, the faradic current fluctuates up and down as rapidly as the vibrating armature attached to the coil allows. Thus with a short or long spring we get rapid or slow vibrations.

There are usually two windings on the iron core; first the primary, consisting of comparatively few turns, since all it has to do is to magnetize the core as to attract the armature and interrupt the circuit.

The secondary winding with its many turns of wire has a higher voltage or "kick," and is therefore used more in the work of the Cosmetiste, stimulation as a rule being desired.

The regulation of the faradic current, when obtained from a battery, is usually by means of a damper or shield over the core, see Fig. 73, this is pulled out to increase the stimulation. When the coil is operated from the lighting circuit, a rheostat is used, the same as for the galvanic current.

In operating the faradic coil, be sure you know how to adjust the armature contact screw.

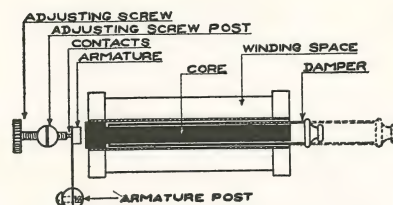


Fig. 73. Diagram of Faradic Coil

The novice, as a rule, on finding the vibrating armature will not start when the switch is closed, begins to screw in the contact screw, jamming the armature against the core and possibly bending the spring, when a light tap with the finger-tip after making sure that the armature has room to vibrate and make and break contact, is all that is required.

There are a few pointers about the care of a battery which the beginner should master thoroughly before attempting to operate one.

Short circuits are the chief source of batteries out of order. To prevent them:

Never allow the cord tips of the cords to touch each other when using the galvanic current.

Nor the electrodes connected to same.

Never let the Selector Switch levers remain in contact across two adjacent buttons.

Never forget to turn "off" the faradic coil switch when through using same.

Read the directions which come with a battery or other apparatus carefully before attempting manipulation, the manufacturer sends them for that purpose. If you are looking for expensive experience, put them to one side or in the waste basket and then write for instructions.

When you write, give all the facts stating what you cannot get and what you did to attain it. But if you are not in a hurry, just say the apparatus does not work, and let them guess what the real trouble is.

HIGH FREQUENCY CURRENTS

High frequency currents as used in the beauty shop should primarily produce stimulation and must therefore have considerable potential or electrical force to jump, but must not be of such volume as to be difficult to control. High Frequency currents oscillate or alternate so rapidly that if taken through a metal or carbon electrode such as are used for faradic currents, no pulsations will be felt. These oscillations are so rapid that the sensory nerves are not affected.

The current is therefore not applied by the regular comb or brush or facial electrode, instead, an insulator is interposed between the skin and the conductor, this insulator being of thin glass in the shape of a facial electrode, or rake or scalp electrode.

When the inside of these glass electrodes is exhausted of air, and then sealed, it will, when excited with a high voltage current, give a purplish light within, hence the term "violet-ray."

The greatest care must be observed in handling such vacuum electrodes and they must not be permitted to spark toward metallic objects or it will result in a puncture and loss of vacuum and the electrode will function no longer.

High Frequency Current apparatus should be so designed that it is easily manipulated and that all parts needing replacement, are readily accessible.

Figs. 74, 75, 76 show a type of High Frequency current generator which has proven very reli-

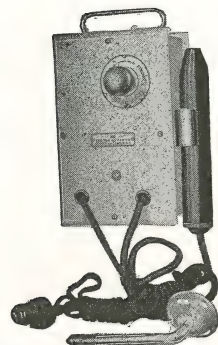


Fig. 74. High Frequency Apparatus

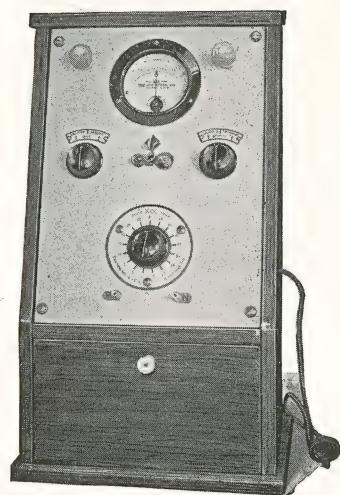


Fig. 75. Modern Galvanic and Faradic Wall Plate.

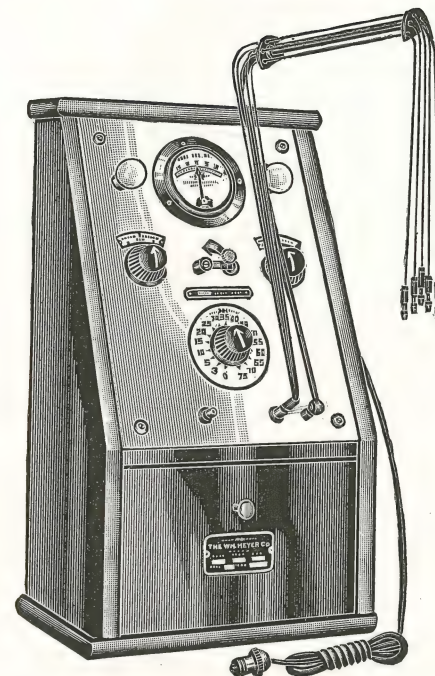


Fig. 76 Electrostat Combining Galvanic, Faradic and High Frequency Current with Multiple Needle Holder for Electrolysis

able and efficient. The conductor, connecting the handle, which holds the electrode, with the High Frequency apparatus, has to be heavily insulated with rubber to prevent sparking from same to hand when touched, and this has made the cord quite heavy and unwieldy.

In the latest type apparatus, the High Frequency coil is contained in the handle itself and as a result, the connecting cord can be left of a size where it is light, flexible and convenient to handle.

Fig. 76 shows such an apparatus in which High Frequency, Galvanism and Faradism are all combined into one outfit and arranged with a simple method of current selection.

Such apparatus proves a convenience and time saver for the busy shop.

CONDUCTING CORDS

These should be of the standard type copper ribbon wound spirally on a thread core with a sufficient number of conduction to insure good current carrying capacity, all covered with a braid for protection and each end fitted with a nickel plated tapered tip to insure good contact with the terminals of the battery or wall plate.

The cord tips should be inserted into the binding posts of the Wall Plate or Battery with an inward, rotary motion in order to hold them more securely.

Cords which have been long in use and occasionally wet with some solution become useless because of the conductors breaking or being corroded.

If this break is near the ends, it can be easily repaired by unscrewing the cord tip, pulling the sleeve down on the cord beyond the damaged place, cutting away the cord there fanning out or knotting the

metal strands and screwing back the cord tip which will hold the cord ends and insure good conduction.

The length of the cord should be sufficient to insure convenient manipulation.

ELECTRODES

THEIR PREPARATION, USE AND CARE

An electrode is a means by which the electric current enters or leaves the field of action.

When applied to the body the electrodes transmit the current to and from the part being treated.

Both, for sanitary reasons, should be covered with a thin layer of cotton or gauze, evenly distributed, moistened with water. After the treatment this should be removed, new cotton being used for every treatment or patron.

For the same sanitary reason do not use an electrode with a permanent pad which is used and re-used.

REVIEW

1. Define electricity.
2. Describe a dry cell.
3. Describe a battery.
4. When is a battery preferred?
5. Which kind is best?
6. What especial precautions should one take in caring for batteries?
7. How is the faradic current obtained?
8. Describe a faradic coil.
9. Describe a rectifier.

10. Tell what it is used for and why.
11. Describe the different electrodes.
12. How should they be cared for?
13. Why do we need conducting cords?
14. Describe them.

NOTES

Neg Pole - current flows to -
Pos. Pole - current flows from

Chapter XXIII

GALVANIC CURRENT

The galvanic current is a constant uninterrupted current of electricity flowing in one direction, thereby producing the same marked effect constantly at each electrode. Electricity is silent but in order to distinguish the galvanic current from the faradic or violet ray we call it a silent current. In using this current from a wall plate, it is advisable, always at the beginning of a treatment to determine the polarity after having turned on the current, by placing the tips of the conducting cords in a glass or cup of water, never metal, holding them about one inch apart.

This is indicated by gas bubbles (hydrogen) arising from the negative tip. A few bubbles will sometimes form and "stick" at the positive tip.

In employing the galvanic current, if just the effect of contacting the pores, or hardening the tissues, as in the closing of the ordinary facial massage, is desired, the carbon cylinder electrode covered with a thin layer of cotton or gauze and moistened with water is connected to the negative current and given patron to hold. A similar one, or the carbon roller electrode, as illustrated (see Fig. 77) is prepared in the same way and attached to the positive current and applied to the face.

Care should be taken not to drop these carbon electrodes as they are easily broken.

Since many operators, especially beginners, have difficulty in properly rolling the cylinder electrode the carbon roller electrode is recommended.

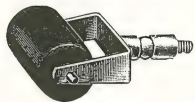


Fig. 77. Roller Electrode

A wooden handle is necessary when employing any of these carbon electrodes for your work.



Fig. 78. Wooden Handle

The strength of the current to be used, is determined by the patron.

If you are performing phoresis, prepare the electrodes same as described. Apply solution to the electrode to be used on face and attach to the current polarity (either positive or negative) recommended to get desired effect, as described.

The negative cord tip is the one to be connected with the electrode if a dilating or dissolving effect is desired, as when using the Electrolytic Cup or Electrolysis needle, the positive cord tip is attached to a carbon cylinder electrode with which the patient makes contact.



Fig. 79. Carbon Cylinder Electrode

Definition—Phoresis is the forcing of liquids through the unbroken skin into the deeper tissues of the body by means of the galvanic current.

Forcing a negative element from the negative to the positive electrode, is termed anaphoresis; while the reverse, i. e., forcing a positive element from the positive to the negative electrode, is termed cathoresis.

A definite understanding of the chemical action or reaction of the many lotions and solutions to be used, is necessary, since many have an affinity for the positive pole which is acid in effect, while others have an affinity for the negative pole which is alkaline in effect.

REMEMBER—The unbroken skin will not absorb liquids unless aided by electrolysis. For instance, if we put water or any liquid on the face, it only has a superficial effect unless the galvanic current is used when solutions can be carried into the deeper tissues.

If we wish to bleach the skin, we must apply the bleaching lotion on the negative electrode to the part to be bleached, since this lotion having an affinity for the positive pole will be drawn toward it.



Fig. 80. Ball Electrode

On the other hand, if we are applying methene liquid, use the positive pole (with the ball electrode) saturated in methene tincture on the part of the body to be treated, since then it will be drawn toward the negative pole held in the hand. The astringent and acne lotions are employed with the positive electrode same as methene.

The strength of current to be used, is determined by the amount of resistance to be overcome on that part of the body of the person undergoing treatment.

When choosing dry cell batteries, it is not necessary to test for polarity before using, after the first testing, since this is already determined by the wiring or construction of batteries.

In selecting the electrodes, those of carbon are found to be more sanitary than those of metal permanently covered with sponge or some other absorbent material, because they can be better sterilized.

After the ordinary facial massage, to contract the pores and harden tissues to make the skin less receptive to dirt and dust, the positive current is to be used for the electrode applied to the face. Turn the rheostat on carefully after placing the electrode on cheek of patron and when she senses a metallic taste in the mouth you know she is receiving the amount of current to bring about desired results, more current may be added if necessary to bring this about. If the wall plate is equipped with a reliable milliammeter to indicate the amount of current flowing it is advisable to note this and thus gradually determine at what current flow the best results are obtained at the least inconvenience to the person treated. Roll over every part of face and neck until all the surface shows decided results, (about 10 minutes). Then allow face to dry before applying powder.

Remember to roll the electrode on the face, not drag or use undue pressure, and do not leave in contact with any particular spot, as this is annoying to the person being treated.

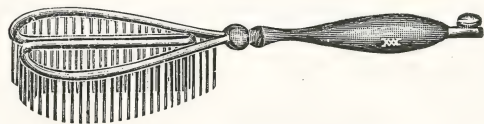


Fig. 81. Sanitary Hair Brush

SANITARY HAIR BRUSH

The sanitary hair brush is to be used with the galvanic current attaching the negative electrode to brush for opening the pores and to increase the vascularity in treating a dry scalp.

Attach the positive electrode in cases of oily scalp when an astringent effect is needed. This also hardens the tissues and has a tendency to contract the pores, thereby decreasing the amount of oil thrown off by the oil glands.

In every case when using this brush, the scalp must be free from all dirt and oil and the polarity definitely determined.

Galvanic current is a current flowing constantly in one direction from the positive to the negative pole outside the battery or cell and from negative to positive inside the battery or cell.

In treatment, this is of the greatest importance, and we must never forget that each pole has a definite action, of which we take advantage, and upon which we depend for our results.

Technically speaking, the galvanic current is one generated from chemical cells, but whether derived from a cell or a machine, the galvanic current in its action, is chemical.

POSITIVE POLE

Collects oxygen.

Decomposes metals, except gold, platinum and aluminum.

Decreases pain, thereby has a sedative effect.

Reduces inflammation.

Hardens the tissues.

Has an astringent effect. Contracts all contractible tissue.

Decreases vascularity or diminishes blood supply. Blanching tissue. Stops bleeding or forms a clot.

Contracts the pores. Produces oxygen and acid reaction.

NEGATIVE POLE

Gives off hydrogen bubbles when tested in water.

Dissolves, softens and liquidifies, so is always indicated for the needle when electrolysis is being done.

Increases vascularity or promotes the flow of blood.

Increases inflammation.

Does not decompose metals.

There is another application of the chemical quality of the galvanic current of which we avail ourselves. This is the so-called ionization or the employment of this current for the introduction of chemicals into the tissues which is in reality, little more than a reversal of the principle of polarity already expressed. Remembering that the negative pole attracts metals and alkaloids, and that the positive pole attracts acids, we can see at a glance how best to gain this effect.

Contrary to the old original idea substances cannot be passed *entirely* through a part such as a shoulder joint but certain solutions can be *forced sufficiently deep* that they are absorbed by circulation.

REVIEW

1. Define galvanism.
2. Define polarity.
3. How is it determined?
4. What electrodes are used for galvanism and why?
5. Define phoresis.
6. Define anaphoresis.
7. Define cataphoresis.
8. Name the effects of galvanism and all the uses it can be put to.
9. What types of electrical apparatus produce galvanism?

NOTES

Chapter XXIV

FARADIC CURRENT

The Faradic Current is an induced current, caused by a galvanic current being interrupted, it has little or no chemical action, is of high voltage and low amperage.

It is used with excellent results for massage of scalp and face and for electric baths.

It being an interrupted current, much the same effect is produced on the muscles of the body as one would get from general exercise.

In using it, watch the effect on muscles as they contract and the blood vessels become more prominent.

The effects of this current are:

In the exercise the muscles are developed.

The circulation of the blood is increased.

Sleep is encouraged and some authorities declare that one-half hour use of this current is equal to four hours of sleep.

A tonic effect of this current is even felt by operators using this current while working on patrons as the faradism passes from the battery through their finger tips to the face or scalp being treated.

Anemic and poorly nourished people have received wonderful benefits. Even a sensation of lameness is often removed.

Building up of tissues is very perceptible in use of this current, and stimulation is increased.

In nearly every instance this current is used by passing it through the finger tips of the operator to the face or scalp of the patron as in this way the two results, massage and electricity are combined, producing a very pleasant and beneficial effect.

A correct knowledge of the muscles, nerves, their functions and nerve supply, knowing just the required amount of pressure to exert and being able to locate the nerve centers and stimulate them correctly is very important.

The employment of electricity in our work, may appear very simple, but to really become a good operator necessitates patient application after the careful study of same.

Decided results in treating tired eyes, may be obtained by massaging over the cranial and facial nerves, also around the orbicularis palpebrarum muscle.



Fig. 82. Wrist Electrode

The electrodes used with the faradic current are the carbon cylinder and wrist electrode.

The operator places the wrist band, preferably on her left wrist with the electrode on top of the wrist,

the patron holding the carbon cylinder electrode. In cases where the patron requires more current than the operator can comfortably endure, prepare the second carbon cylinder electrode and have the patron hold them both. This method of using the *faradic* current is for general body stimulation and toning only, since no current now passes through the operator's fingers.

In most treatments the patron holds one electrode and the operator applies the wrist electrode to her own left wrist, thus completing the current; then follows any mode of manipulation she has been taught, always remembering that poor massage is worse than none. See figure 23, page 147 for correct adjustment for giving facial massage.

As some parts of the face are more sensitive than others it is well before starting the massage to inquire of patron, just the strength of current he or she may find most pleasant.

In scalp massage, a stronger current may be used, and the scalp moistened, as the hair offers a great deal more resistance to the passage of the current.

In cases of a very florid condition of face as in Acne Rosacea the faradic current should not be used, as it only increases this vascular condition.

Omit the use of it also when patron has many filled teeth.

The feet also may be treated following the same process as in either scalp or facial.

Small lean people show more reaction than large fleshy ones, also weak and anemic people are not as good subjects as those that are strong and well.

REVIEW

1. Define faradism.
2. What kind of a current is it?
3. Name effects of current.
4. When is this current employed?
5. What electrodes used with this current and why?
6. What kind of electrical apparatus produces faradism?

NOTES

Chapter XXV

HIGH FREQUENCY CURRENT

The High Frequency current, also called Violet Ray because of the violet light seen in the air evacuated glass applicators is, as used by the Cosmetiste, a current of high voltage and low amperage of such rapid oscillation as not to affect the sensory nerves.

It is stimulating to the glands, making them more active, and thereby increasing elimination of the various organs of the body. Promotes oxidization and also has an anaesthetic effect.

In contact with the skin, it has a deeper effect on the tissues. When held at some distance, it takes the form of a spray and gives a surface effect, such as is used to remove Nevi, or treating for Alopecia Areata, also in some cases of Acne when pustules are very large.

The ozone and nitrous oxide generated when the glass electrode surface comes in contact with the skin produces a decided deodorizing and germicidal effect.

When used over cotton, gauze, silk, wool or oil, the slight gap adds to the stimulating effect of the current. This is easily noticed when using the High Frequency Current for scalp or facial work, where it is always applied over oils or creams.

The usual application is by means of one electrode, i. e., the operator merely connects the applicator to the handle and proceeds with the treatment. The patron does not need to hold an electrode.

Another way in which this current may be used is, the patron holds the auto condensation electrode connected to the active terminal in both hands and the operator proceeds to give a finger massage of either face or scalp. The effect is not as noticeable as when the applicator connected to the active terminal is brought in direct contact with the skin, but affords a very pleasant form of massage.

When using a spray effect on the parts to be treated, the result is only superficial, though if a concentrated spark is directed to one spot, a blister may be made. In using fulguration in the treatment of acne or to destroy growths of nevi or warts, a specially designed electrode is used having a tiny wire from which a stream of sparks is sent out which will coagulate the blood supply, thus cutting off nourishment, causing the wart to shrivel and disappear.

To confine the sparks from the fulguration electrode, a glass tube with a small opening or orifice is placed adjustably over the electrode, allowing a measure of regulation of frequency and strength of sparks. See Fig. 56.

The orifice of the glass tube is placed on the growth and the current is turned on very gradually, thus causing local anesthesia and making the operation practically painless.

The sparks must have a whitish appearance; if they become yellow and flame like, the result will be a burn, like with ordinary cautery and there will be an odor of burning flesh. That is not true fulguration.

A wart will first turn pink and then blanch. The time required varies with the size and may require more than one application especially if more than one blood vessel supplies nourishment, for all must be plugged or coagulated.

When moles are treated, a serum may exude after the first treatment and eventually the whole top may slough off.

Patron should be advised as to care of part treated, etc., not to wet same or apply creams, but keep dusted with medicated powder until healed and scab comes off of its own accord so as not to cause a scar.

In cases of scars or pits left after small pox, or Acne, the employment of High Frequency applied by the facial electrode, is very beneficial. New tissue cells formed by the increasing active hyperemia build up the tissue under the scars to such an extent that they are less noticeable.

High Frequency may easily be classed as one of the greatest, if not the most valuable agencies for good, yet discovered by man.

It is soothing to tired, weary nerves, improves digestion, produces sleep by its soothing method and the supply of oxygen in the blood is increased.

It is a valuable asset in scalp work, helping in the eradication of seborrhea, stops falling hair and itchy scalp, since baldness and falling hair is due to faulty action of the glands and blood supply, also stimulates the nerve energy with which each hair is supplied.

Time however, is an important factor in the treatment of these conditions and the length of time that your patron has been afflicted with any particular case, must be considered. The average person has spent quite some time in acquiring this state of affairs and therefore cannot expect hair to return over night, so to speak.

The general or systemic condition must be dealt with and treated accordingly by a physician understanding the case.

Care should be taken in learning how to administer

this valuable adjunct so as to become an efficient Cosmetiste. Learn to do your work in such a way that your patrons will remember your treatments with satisfaction and not with any degree of fear or regret.

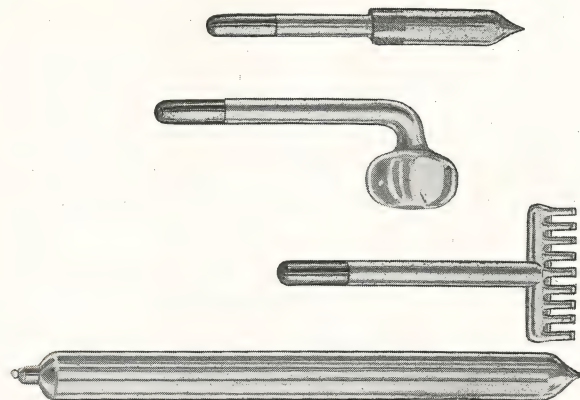


Fig. 83. Glass Electrodes for use with High Frequency Current

The current itself being germicidal it is only necessary to wash the electrodes carefully with ordinary (laundry) soap and warm water and keep them where they will not be easily broken.

WHAT KIND OF HIGH FREQUENCY APPARATUS SHOULD I BUY?

That is a question you yourself must decide, making your decision, bearing in mind that certain types of apparatus are meant for professional, but others for home use only.

Every high frequency or violet ray outfit having the apparatus all contained in the big bulky handle, with the applicator or electrode at one end and the adjusting screw at the other, must be classed as such,

even though there are hundreds, nay thousands, in use in shops.

This crop of toys is the result of the public having experienced marked benefit from the use of larger and more powerful machines in physicians' offices, and some bright geniuses trying to make it a panacea for all ills in the shape of a home cure outfit.

In the advertisements, you see a chesty Samson stroking his biceps, or a beauteous dame stroking a limb, with an applicator through which just sufficient violet ray trickles to prove that there is at least the effect.

Neither of these athletic persons need the puny contraption, they are not suckers enough to invest, and those who need it would not be benefited, because the thing lacks volume.

None of those outfits furnish more than ten milliamperes, the average is about five. To get results, especially in facial and scalp work, requires up to 25 milliamperes, and still more in shoulder and neck treatment, where up to forty milliamperes is needed, which can be furnished by a machine of larger capacity only.

Therefore, as a professional violet ray or high frequency current generator, the small single piece outfit, so attractively offered in a red cotton plush lined case, is a fake, and don't imagine that your customer is not wise to it. Most likely she has one of those things at home, bought in the hope of helping herself with home treatment for rheumatism or sciatica, and found to be useless. She won't tell you that, but she'll put you down for a fool or a knave.

A professional machine consists of two pieces, the handle with the electrode which connects with the

box in which the current is generated, this box being connected with the electric service current by means of a cord and plug.

This box can then be made of adequate size to hold the necessary coils and parts, and the handle which holds the glass electrode or applicator can be shaped conveniently small in diameter to be held with the hand for easy manipulation without becoming fatigued.

You may as well use drug store advertised cream, as to use professionally, such apparatus sold by same.

If you want the best, then get an apparatus combining galvanic, faradic and high frequency current in the same cabinet.

REVIEW

1. Define High Frequency.
2. What effect has this current?
3. How applied?
4. For what treatments is this current employed?
5. Describe electrodes used with this current.
6. For what purpose is each one.
7. What kind of electrical apparatus produces high frequency?
8. How do you sterilize electrodes used for high frequency? Is this necessary?
9. Define Violet Ray.
10. Tell something about the kind of High Frequency apparatus that is most efficient to buy and use.

NOTES

Chapter XXVI

LAMPS FOR FACIAL AND SCALP

The efficiency of a lamp, other things being equal, is in direct proportion to the wattage of the light bulb used.

A 200 Watt light for instance mounted into a proper reflector eight inches in diameter will cover the face evenly and requires only half of the time to secure a certain amount of absorption as compared to the 100 Watt or 32 c. p. light and of course the 50 Watt or 16 c. p. will have to be used four times as long to get the same results.

Here also comes the question of whether the white or the red or the blue light should be used and how far into the tissues does the light penetrate. First of all bear in mind that the sun's rays consist of visible and invisible rays and that eighty per cent of these are of the invisible or heat rays. The light coming from these lamp bulbs is practically the same as the sun's with the exception of the actinic rays which are almost entirely absent here and our light consists therefore of light and heat rays only.

The white light which is a combination of all the others will of course penetrate deepest and the volume of infra-red or invisible red or heat rays is the maximum obtainable from these lamp bulbs.

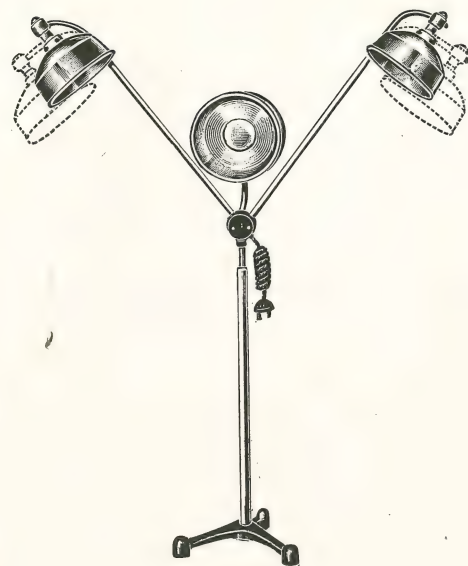


Fig. 84. Trilite

By using red or blue lamp bulbs or glass screens of the same color and interposing same before the white light the other rays are filtered out. With the red glass we have thus almost all heat rays and with the blue glass almost all light rays.

The white light is usually constructed with some form of reflector and incandescent lamp bulb fitted into same. The type most common in use employs a lamp of 16 or 32 candle power. Lamps of higher candle power mounted in reflectors designed to distribute the rays evenly are however becoming prominent because of popular demand. This demand being based on a desire for greater efficiency.

All these lamps are made to operate on the 110-115 volt direct or alternating lighting current circuit.

The hood of the lamp designed to be held in the hand is usually of aluminum, highly polished on the inside to give good reflection instead of absorbing or diffusing the rays. Where the inside has to be dull finished it indicates lack of proper design, to eliminate hot spots and causes a reduction in efficiency.

To compare two different makes using the same candle power lamp bulb, hold them equi-distant from the ears and ascertain which throws the most heat and just how this heat is distributed or concentrated.

Besides the hand lamp there is one that is attached to a floor stand, the upper part of which is flexible and admits of adjustment to different positions. See cut No. 86, also see Fig. 32.

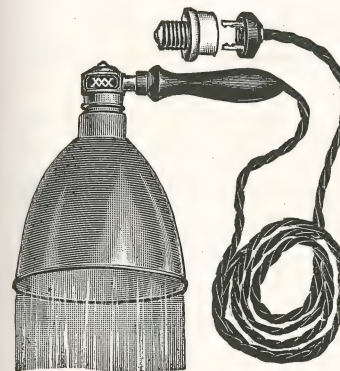


Fig. 85. Hand Lamp

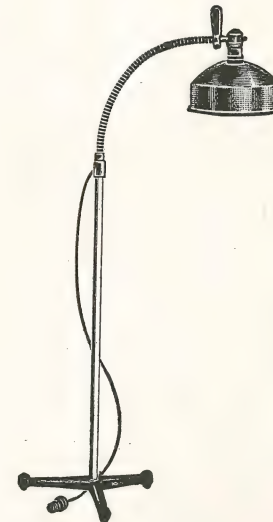


Fig. 86. Floor Lamp

THE LAMP BULBS

The lamp bulbs most commonly used are 16 or 32 candle power carbon filament bulbs.

LIGHTS

THE WHITE LIGHT

The White Light is a valuable therapeutic agent, it has a direct bacterial action; therefore destroys germs. Adds to the number of leukocytes in the blood thereby increasing resisting power of the individual. Relieves pain especially in congested areas and where nerve centers are irritated, as the back of the neck and around and in the ear.

The White Light which is a combination of all the other colors will penetrate deepest and the volume of infra-red or invisible red or heat rays represent a maximum obtainable from carbon lamp bulbs.

THE BLUE LIGHT

The Blue Light has an antiseptic, tonic and irritating effect on the bare skin, is deficient in heat rays, has a sedative effect on the nerves, used in all cases of germ conditions on the face and scalp. Its rays have more than just a superficial effect on the part of the body where used.

Always used over bare surface of body. This does not mean bare of clothing only, but every trace of oils, creams, lotions, powder or anything that soils the skin, or covers it, or fills the pores, as all this retards the chemical action of the light on the tissues.

Used with very decided effect in cases of acne, pimples, blackheads and the other eruptions found on face; also in treatment of the scalp for Seborrhea, Dandruff, etc., and in Psoriasis, indicated by scaly, dry, almost bleeding surface of skin, found on face,

scalp and all extensor parts of the body such as the elbows, hips, etc.

Ultra-violet rays in the sun's spectrum are the short waves as compared to the heat or long waves.

The two main effects of these rays are: local antiseptic action and general stimulating action, the first being the same regardless of age, the latter decreasing in proportion to age.

When produced by means of the mercury quartz lamp, the actinism will be found to be very strong, producing the condition which we call sunburn, very rapidly. Such a condition, technically known as erythema, appears as redness or inflammation, and with overexposure, as blistering.

Such ultra-violet light, besides the sun as a source, is also produced by the carbon arc lamp and the mercury vapor quartz lamp. The latter is especially fast acting, and should be used only by competent physiotherapists.

The carbon arc lamp, while ten times as slow in chemical action as the mercury lamp, is still a therapeutic measure which should not be undertaken without a thorough course of instruction and clinical experience in physio-therapy under a competent medical instructor.

THE RED LIGHT

The Red Light has very little, if any chemical rays, same being filtered out, but has very strong heat rays, stimulating and tonic effect when used over the bare skin, and penetrates more deeply than the blue light.

Recommended for treatment of dry, scaly, shrivelled skin, when a great many fine lines are present.

Also may be used in manicuring, when the same conditions are present on the hands.

Used over creams on face, neck, arms and hands to aid the skin in the absorption of same, by its heat rays.

Apparently the Red Light has a very specific effect upon the skin and renders it resistant to bacteria.

The instruction for the use of these lights should be carefully followed to bring about the desired results.

Make certain that the color you are using is the one indicated, that your patrons' eyes are well protected with cotton pads saturated in witch-hazel or boric acid solution.

Do not use too close to surface of skin or too long in one spot to cause discomfort to the patron. Hold the lamp in such a way that the full rays of the light fall on the part of body to be treated, moving it about in such a manner as to protect the eyes from full rays as much as possible.

Raising and lowering it to a count of 1-2-3 is a safe rule to follow, lowering it on first count and raising it on three, moving it about from one part of face to another, until the entire surface is treated the same amount of time. In most cases it is used from five to fifteen minutes for each treatment, according to stimulation desired, which can be seen and should be closely watched.

To ascertain how near the light may be brought to the surface to be treated, test it on yourself over that part and note the distance. Brunets can, as a rule, stand more than blonds because the latter lack the pigmentation in the skin.

When using lamps of high candle power or wattage, it is advisable to use a clear glass lamp and a blue or red glass screen to get the desired effect. Clear lamps are less expensive and have a longer life.

Such a screen mounted in a metal frame provided with clips to hold same to the rim of the lamp hood is shown in Fig. 84.

The effect of the light absorption may be described to some extent due to the increased pigmentation and the pigment is not to be regarded merely as a protecting cover against the irritating effects of the short waves of the Ultra Violet rays.

REVIEW

1. For what purpose are the lights employed in our work?
2. Tell about the efficiency of the different light bulbs.
3. What color is best?
4. Tell effects of each color.
5. How do you choose a radio bell?
6. What advantage has the floor stand lamp?
7. Tell all the different treatments the lights are used for and why.
8. When are the glass screens employed?
9. Why are the lights so valuable in our work?

Chapter XXVII

MULTIPLE FACIAL ELECTRODE AND
ELECTRIC COMB ELECTRODE
FOR SCALP

In the use of galvanic or faradic current for facial and scalp treatments to complete the circuit of the current, it is usual for the patron to hold one electrode in the hand while the other is applied to the part of the body to be treated and when performing phoresis (forcing liquids through the unbroken skin into the deeper tissues) this method must be used to get results.

But in general stimulation of face and scalp with the faradic current and the new Multiple Facial Electrode and Electric Comb Electrode, this is not necessary since both electrodes are brought into contact with the skin, very close to each other, thus eliminating the necessity of the current flowing through the vital organs and having an adverse effect upon same. Some people are peculiarly sensitive to the current, that, when same passes through vital organs and through tissue, especially across or in the direction of the pneumogastric or other large nerve trunks, a feeling of faintness or dizziness almost akin to intoxication supervenes.

All such possibilities are avoided by the use of the Multiple Facial Electrode and Electric Comb Elec-

trode, which are so constructed that a constant flow of the current from positive to negative poles, i. e. from one metal edge of tooth to the other one in close proximity and forming the complete circuit through the upper layer of the skin, eliminates the current passing through vital organs or nerve centres.

It should be employed when a general toning effect is desired like in conditions of sagging, anæmic or even painful muscles. The beneficial effect extends into deeper tissues, relieving congestion. It has a remarkable sedative effect and will relieve pain, hardens tissues and has an astringent effect on the glands.

Recommended in all cases of extremely oily or dry skin and for Acne when the glands and muscles are very inactive.

To obtain maximum effect from the use of these electrodes, the skin must be free from all oils.

ELECTRIC COMB ELECTRODE

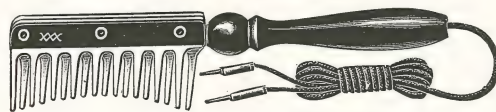


Fig. 87. Electric Comb

From the foregoing explanation it is very easily seen how much safer this new Electric Comb electrode is as compared to the old style single electrode comb or brush, where the current has to pass through

all the delicate nerve centers and brain cells of the head down to the hand, thus disturbing these parts which have their own perfectly balanced electrical circuit and causing dire possibilities.

With the Electric Comb electrode all this is eliminated, the current traverses merely the skin, causing whirls of sinusoidal currents much akin to a faradic sensation, but smoother and not having the nasty intense sting as from the application of a galvanic electrode. It is very stimulating to the glands of the scalp, increasing the blood supply and producing a sedative effect on the nerves. It also lifts all seborrhea or scales of whatever nature from the scalp, so it can readily be brushed out of the hair.

A thorough investigation with careful observation as to beneficial results has proven this method far superior to the old way when the negative electrode of the galvanic current is connected to the Sanitary Metal Hair Brush and applied to the scalp, if the condition of the scalp was dry, the patron holding the positive electrode during the treatment, or reversing the polarity if the scalp is oily.

One reason why no results are produced by rubbing the scalp with finger massage, is that this surface rubbing tends towards breaking down the hair bulbs, and the bed of the hair. The hair growth is promoted by a more gentle treatment such as outlined above, with the Electric Electrode which should be followed by manipulation over the neck nerves and spine neck tissues, thereby relieving irritation and congestion and increasing the amount of blood supply to the roots of the hair.

This is best used immediately after shampooing the scalp when it is clean and free from all scaly con-

ditions and oily substances, thus obtaining with the electrical current the best possible result.

May be used on any scalp, especially effective when very sensitive, anæmic or exceedingly oily or dry conditions exist.

The twin terminals of the attached cord on these electrodes are placed directly in the binding posts of the wall plate or battery and the selecting levers turned to the faradic current. The rheostat is adjusted to just the right amount of current the same as when using this modality for the massage.

The skin must be free from all oils so it is best used after facial is finished except make-up and on scalp immediately following a shampoo.

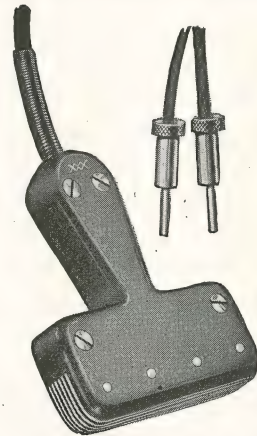


Fig. 88. Multiple Facial Electrode

REVIEW

1. Describe these electrodes.
2. For what purpose used.
3. What is the effect of each electrode?
4. Why are they preferable to other methods?

Chapter XXVIII

THE SUN-AERO DRYER

In chapter XVI it has been explained in detail how to use the Sun-Aero most effectively for the hair and scalp, but nothing has as yet been said about the advantages of same over a dryer delivering hot air only, or a lamp giving radiant light and heat only.

Hot air when turned onto the moist hair and scalp, will always give a chill feeling, due to the rapid evaporation of the moisture, and this chill feeling causes a contraction of the scalp and decrease of the blood circulation.

Some people with delicate, sensitive scalps, are so effected by this, that they have a slight cold as an after effect, and are therefore loath to have their hair shampooed in a shop, preferring to do it at home, where the drying is not forced.

That the method of quick drying of the hair by means of gas heat as used in some dryers, is destructive to the hair, is well known, but it may be interesting to learn that the carbon monoxide gas given off by the gas flames, is positively poisonous, and if it were confined in a small room, would soon vitiate the air.

Many a person has been found dead in a bathroom where a small gas heater was used to warm same, and this is in no way different. The poison gas is blown into the open pores of the scalp and the operator who

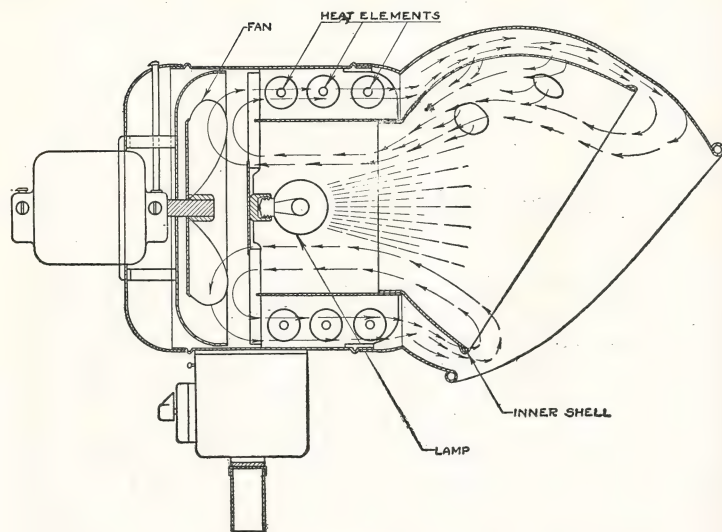


Fig. 89. Recirculating Hair Dryer showing Construction

All dryers, of whatever construction they may be, have a motor and a fan to blow or propel the air and a heating wire, usually coiled, thru which the air passes on its way to the hair. The greater the volume of air blown the more electric current needed to heat it. The higher the speed of the motor the more wear there is on the motor shaft and bearings.

If the motor is of a type using carbon brushes, even when operated on alternating current, such carbon brushes must be replaced from time to time and if not replaced in time or with such as are not suited, will damage the motor, necessitating expensive repairs or replacements. Some A.C. motors have a starting clutch and this must also be replaced in time.

The most advanced A. C. motors have no clutches or brushes and require oiling at the end of a long period only.

has to breathe same continuously, cannot retain good health.

When human hair is dried at a temperature which causes the oil and fluid in the hair and scalp to evaporate or volatilize, all the subsequent application of oils will not replace same, no more than a salt solution will replace the blood in the body.

To overcome the chilling effect of the hot air blown onto the scalp, radiant heat rays from an incandescent lamp rich in infra red rays, are projected on the same spot where the hot air is blown, and will neutralize the chilling effect of the rapid evaporation. These heat rays from the lamp bulb have, however, more than a mere surface effect. The heat rays penetrate deeply into the skin, arousing the sluggish circulation and bringing the blood to the surface, where the highly stimulating light rays from the lamp can do their beneficial work.

The effects are practically the same as result from drying the hair with a warm breeze in the sun.

The Sun-Aero deserves special attention because of the lamp feature especially in the type shown on page 368. For drying the finger wave it is necessary to absorb the moisture out of the solution used, usually made up with a gum, such as gum arabic, quince seed, linseed and the like and therefore the temperature of the air used can be considerably higher than in ordinary shampoo drying. To accomplish this, the same air is recirculated and passed over the same heating element again and again and the higher temperature thus gained promotes the quick setting of the gum.

Such recirculating dryers have however one weakness, since the suction of the fan in the rear draws

the air backward, very little heat comes in contact with the hair just in front of the center tunnel. The lamp placed in this central tunnel overcomes this and aids in bringing the air quickly to a suitable drying temperature. Since all customers have not the same sense of temperature what is comfortable for one may be too hot for another and while this may in a great many be simply a neurotic state of mind yet it is well to have a suitable means for changing the heat especially for cases which by the red choleric face indicate high blood pressure.

The simplest means of satisfying such customers that they are comfortable is to provide the dryer with a pendant switch by which she can change the heat. It may take a few minutes longer to dry but being satisfied, she is sure to come again.

The motor of a dryer used on alternating current should be of the induction instead of the commutator and carbon brush type, so as to require no attention, for carbon brushes wear and have to be replaced and if hard will wear down the commutator. As a rule such motors have to run at a much higher speed or the commutator will gum up and the high speed wears out the bearings much quicker.

Some alternating current motors have what is known as an automatic starting clutch or switch. For ordinary use this works fairly well but with a hair dryer which may be started and stopped many times a day it has not shown itself as practical.

Also with a dryer which requires frequent oiling this is likely to be forgotten and the result will be expensive replacements.

For drying the shampoo, dryers which blow the air are in common use and may be of the type shown in Fig. 90 which has the advantage of a large nozzle

and consequent large volume of air, can be set at a convenient angle and permits the use of both hands for working the hair and massaging the scalp. The infra-red rays coming from the lamp will penetrate the thickest hair almost instantly and warm the scalp.

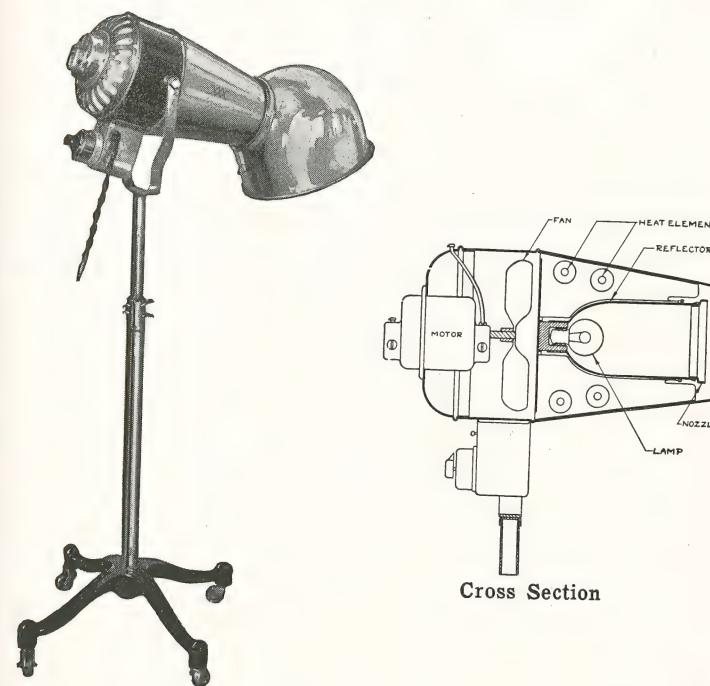


Fig. 90. Dryer with Radiant Lamp and Detachable Hood

REVIEW

1. Describe the essential parts of the electric hair dryer.
2. What is the disadvantage of so-called gas electric dryer?

4. What is the disadvantage of motors with brushes?
5. What are the disadvantages of high speed motors?
6. What effect has hot air on a moist surface?
3. What is the benefit of the lamp in a dryer?

NOTES

Chapter XXIX

VAPOR AND STEAM GENERATOR

The scientific care of the hair and scalp is one of the fundamentals of beauty culture.

Hair growth is largely dependent upon this scientific care.

After the hair has been heated and reheated through repeated permanent waving or as in summer, rather constantly exposed to the sun and the wind without much thought for care, thus drying the oil from the hair shafts, arises the necessity for stimulating treatments to counteract the causes of restricted hair vigor and the consequent drying out of the natural oils.

Not many women will during the summer seek to obtain the essential oil treatments to offset the depleting causes. If they did there would be no annoying split ends or general dryness.

When the hair is dry, oil must be supplied to the hair to put elasticity into it and care must be taken that this oil is not removed again by alkali.

Practically all soaps are alkaline even so-called bland soaps. For alkali saponifies the oil and that is the reason why alkalines should not be brought in contact with the hair. The essential parts of soap are lye (an alkali) and oils or fats.

The cleansing value of oils is well known, there is however the objection that ordinary, (not water soluble) oil must be washed out with a soap shampoo, and while such treatment is possibly better than none at all, the saponification of the oil nullifies the result

sought. This objectional feature of the use of oils has been overcome by water soluble oils.

To aid in the absorption of the oil, the customer is first placed under the hood of the scalp steamer for about 5 or 6 minutes and the attendant works the hair and scalp under the hood. The hair is then quickly dried with a dry warm towel and the oil applied hot. This can be done by heating the oil in a small pan to the right temperature and then applying it with a cotton pledget, parting the hair at about an inch apart and rubbing it well into the scalp and root ends of the hair.

A simpler and more economical method is to apply it with an electrically heated comb. The oil will attain the proper temperature, while the steam treatment is being given and after the rough drying with the towel, may be applied with a rotary motion, the oil coming through the hollow teeth of the comb. In this way no time is wasted with heating the oil in a pan or working the hair with a comb while trying to apply the oil with the pledget.

When the water soluble oil has been well massaged into the scalp and hair all that needs to be done is to rinse in the usual way with warm water.

A properly processed water soluble oil will not only supply the lack of natural oil in dry hair but will also help to overcome excessive oily hair by absorbing some of the excess oil. It is equally valuable as an antiseptic in correcting seborrhea.

Water vapor has also proven of great benefit as a prelude to facial treatment. Instead of parboiling the skin with a steaming hot towel, hardening the secretions and burning the tissues, this process which will cleanse the pores thoroughly and stimulate the glands effectively is recommended.

FACIAL TREATMENT

1. Get your patron ready for the treatment by placing her in the facial chair, adjusting headband and cleansing the face with any one of the many cleansing creams recommended.

The length of time it takes to perform the necessary vaporization depends on the condition of the skin of the individual being treated. If the skin is dry leave the face in the instrument about 10 or 15 minutes. If the skin is oily it will respond more quickly owing to the pores being more active. If an acne condition is being treated there should be a free action of the glands noticeable by little bubbles present on each pore. In acne the glands should be thoroughly cleansed and this process performs this work perfectly.

2. Then if there are any comedones present they should be removed at this time, using comedone extractor described in chapter on Acne. Also remove with sterile pad all moisture on face.

3. Apply a good astringent cream and massage face, using faradic current to stimulate nerves and strengthen muscles. Be sure that this is done in a scientific manner keeping well in mind the position of the muscles and their nerve supply so that you do not cause more harm than good.

4. After massage is finished, remove all cream, sponging with soda solution to remove all traces of cream since oil resists galvanism, and

5. Use Multiple Facial Electrode which gives permanent tone to sagging muscles, the far reaching effects of which can hardly be estimated. The superior results obtained by use of this electrode over the old type are explained in chapter on electrodes.

6. Apply a good face powder for protection and to remove the shiny appearance after so thorough a cleansing.

7. If the skin is dry, proceed from No. 2 as follows:

Remove comedones and milia which is apt to be found in extremely dry conditions, especially if sebaceous glands are not as active as they should be, then

8. Use Red Lamp with Sun-Aero Steamer over bare skin as previously directed for its stimulating effect on glands that have not been throwing off the necessary amount of oil to keep the skin flexible and free of fine lines.

9. Apply Muscle Oil to aid still more in supplying lack of oil (be sure that this is patted on) over this pat Tissue Builder cream mixed with an equal amount of bleaching or whitening cream as in nearly every case of dry skin a sallow condition is present. Do this while red light is still over face.

10. Then use Facial High Frequency electrode over this cream to stimulate glandular activity, from five to fifteen minutes according to stimulation noticed. Massage is given here if much sagging is noticed.

11. Remove cream and sponge with any approved sponging or finishing lotion and

12. Dust over with good face powder.

13. If treating Acne use either medicated soap (for oily skin) or cleansing cream (for dry skin) and employ Vapor and Steam Generator a little longer in this case. Proceed from number 4, remove all comedones and milia first before skin dries and then open all pustules, vesicles and other lesions present. Sponge face with a good antiseptic solution such as

Witch Hazel, etc., and use Blue Lamp with Sun-Aero as previously instructed for from 10 to 15 minutes and apply a good Acne cream. Follow this with facial High Frequency electrode over cream from ten to twenty minutes as the case may require.

14. Never, never massage the face when Acne is present as infection may be spread to other parts of face by so doing.

15. Remove cream and sponge again with an antiseptic.

16. Dust with a good medicated powder, (free from all perfumed oils as they cause irritation).

17. In all cases pat on your creams and oils, as you do not disturb the tissues in so doing.

18. Be careful to advise and apply only such face powders as are approved by the food and drug act and will not be as apt to have cases of dermatitis occurring from same although some people have idiosyncrasies affected by different powders and may have to change on that account only.

Also avoid rice and all vegetable powders as they ferment in the pores of the skin, and cause a clogging resulting in comedones.

19. In cases of Rosacea the use of vapor will stimulate the glands and improve the local circulation, then proceed as directed on page 157, but bear in mind that Acne Rosacea is but the result of a cause, gastro-intestinal in character which requires a doctor's care and attention.

Next apply Astringent cream and Facial High Frequency Electrode from 5 to 15 minutes.

Remove cream.

Wash off methene with white soap and water.

Apply a very little Tissue Cream for foundation and dust over with medicated powder.

In treating oily skin (when skin is dripping with oil) after steaming, apply astringent lotion as directed in chapter on galvanism, when performing phoresis after which proceed from No. 3 and finish treatment.

Instead of parboiling the skin with the steaming hot towels *hardening the secretions* and burning the tissues a process that will cleanse the pores thoroughly and stimulate the glands effectively is found in the Vapor and Steam Generator.

The skin made up as it is of numberless pores which have become clogged with impurities needs to be attended to very carefully.

Moisture already exists in the pores, sebaceous and sudoriferous glands of the skin and it needs only this *safe and sane* method whereby the moisture is intensified to such an extent that the impurities in the pores may be expelled by dilation of these pores *without any special pressure or strain* being put upon the muscles of the face as always happens when steaming the face which causes a permanent sagging of the muscles.

This process cleanses the tissues comfortably, completely, efficiently and effectively. There is no tenseness but perfect relaxation.

Enlarged pores are the result of clogged pores. If there is a lack of stimulation and glandular activity then they are not functioning as they should and comedones, milia and large pores are the result. To reduce their size and make them less noticeable they must evacuate this sebum and so must be aided in this process by the best known method.

A correct facial treatment means one with no im-

pairment to the facial muscles. When the muscles are stretched the facial expression is changed thereby losing their youthful contour. The operator should acquaint herself with the best method obtainable to bring about results.

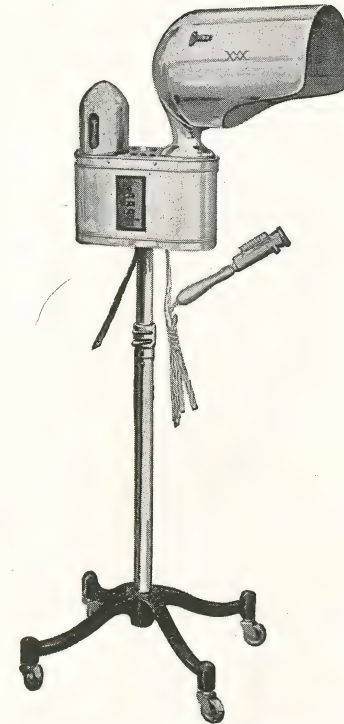


Fig. 91. Scalp Steamer

The Steamer here shown is of the conventional type with metal hood to cover the head. On page 382 a cross section of the Steamer shows how the different parts are arranged. The inverted water bottle with its valve which opens automatically when placed into the metal holder. The short pipe which connects same with the boiler, which when heated

by the electric heating coils surrounding it will rapidly turn into steam which rises upward under the hood. Care must be taken to soften the water used or it will clog up the boiler.

To remove old dye, it is necessary to apply heat to the oil used as a dye solvent. Moist heat has a great affinity for oil and will break it up so that it can be readily removed.

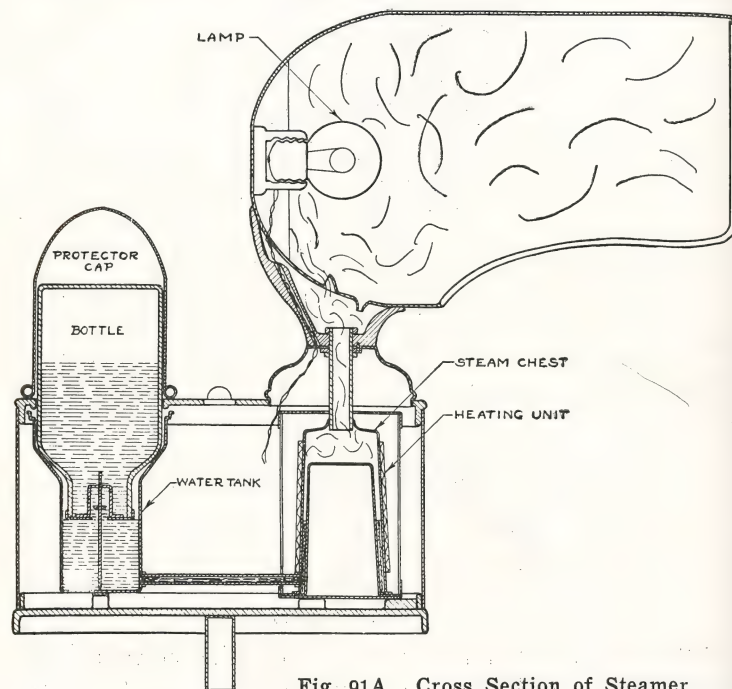


Fig. 91A. Cross Section of Steamer

When placing the patron under the hood of the steamer make sure that the towel covers up to the hair line and that no air can enter at the back of the neck otherwise the cool air will flow in there pushing the steam to the top, changing same into water and

preventing the steam from acting on the scalp and hair.

In certain cases of very oily hair it may be better to give a second steaming after the hot water soluble oil has been applied, not so much for the steaming as for the spreading and absorption of the excess natural oil, by the oil shampoo and promote its readier removal.

REVIEW

1. On what is hair growth largely dependent?
2. What is the usual cause of loss of elasticity of the hair?
3. Give the principal components of soap.
4. What is the advantage of water soluble oils?
5. Why the hot oil treatment?
6. What temperature should the rinsing water be?
7. What is the value of Vapor in facial treatment?

NOTES

THE COSMETISTE

Chapter XXX

THE ELECTROLYTIC WATER MASSAGE CUP

To be used by the Cosmetiste as a preface to any facial treatment for thoroughly cleansing the skin.

It is designed to use electricity in conjunction with water flowing through the cup and the resultant suction of the cup gently lifts the skin, cleansing the pores of all impurities and stimulating same.

The complexion is benefited to a noticeably marked degree. Recommended in any facial treatment, especially in cases of Acne, and when the skin is very oily, also when the pores are filled with sebaceous matter that is difficult to remove with the comedone extractor.

With careful attention paid to the instruction on the use of this little instrument, one may become an expert in this line.

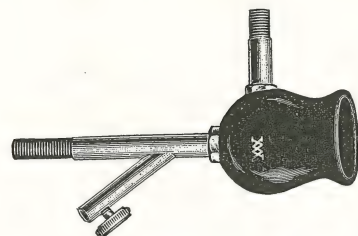


Fig. 92. Electrolytic Water Massage Cup

HOW TO USE CUP

A glass container of about two (2) quarts is elevated to about five or six feet from the floor in a convenient spot in your facial booth. Better still if your utility stand provides for a container of this kind. Fill tank full of water tested for temperature to suit the face. The galvanic current is used for this. Place the negative tip in the binding post of the cup, the patron holding the positive electrode.

A rubber tube leading from tank to cup, carries the water to the face, while another rubber tube leading from the cup to a receptacle on the floor carries it off.

Be sure that the end of the tube in the pail on the floor is covered with water, otherwise it will suck in the air, and cause the tube on the face to be pushed away. Keep the cup well on the face with very light pressure, as too heavy a pressure easily causes bruising of the skin and broken capillaries which are hard to correct.

Work slowly; apply cup to fleshy part of face first, (centre of cheek for instance, as the suction is secured more quickly) until suction is felt, then by gently moving it over the face, and not raising it, you will soon be able to use it without any loss of water.

SOLUTIONS TO USE

A saline or salt solution used when considerable stimulation is needed. This is also an alkaline solution, but is not generally used as such in this work.

A soda solution, a much stronger alkaline than the salt solution, is used when cleansing the pores of oily substances, does not irritate and may be used on most sensitive skins.

A medicated soap, either in liquid form or if powdered, made into a paste by adding water and beating to the consistency of the white of an egg, then patted on face, and cup used over this in cases of extremely oily skins, in Acne where pustules and germ conditions need to be corrected. This is especially good, as a cleansing cream only adds to and increases this condition.

WHEN NOT TO USE CUP

In cases of very dry, scaly, sensitive or easily irritated skins, we do not recommend the use of the cup.

Also in cases where lesions are present, such as Eczema, where the use of water is prohibited, as this would only add to the affliction.

When a too florid condition is noticed especially if capillaries appear on nose and cheeks, it would be wise to eliminate use of cup, as this will only increase the size of the capillaries, and cause still more vascularity.

CLEANSING OF SKIN BEFORE MASSAGE

It is quite necessary to thoroughly cleanse the skin before proceeding with any form of massage.

A good cleansing cream should be applied on face and neck and left on while preparing necessary electrodes, electrolytic cup, Vapor and Steam Generator, or any process that is to be resorted to.

Treatments in which the Electrolytic Cup, also the Vapor and Steam Generator are used will be found in Chapter on Facial Treatments.

STERILIZATION

This little instrument should be thoroughly cleansed with yellow (laundry) soap and hot water.

Let it stand in the suds until every trace of cream is dissolved, using a small wire to clean out the tubes. Then submerge the entire cup into any approved germicide solution and allow it to remain not less than twenty minutes. Thoroughly rinse with hot water, dry and wrap in sterile gauze and place in dry sterilizer until ready to use again.

REVIEW

1. When is the use of this apparatus recommended?
2. Describe the cup and explain how it is used.
3. What effect does this apparatus have on the face?
4. How does it cleanse?
5. What solutions used with this cup and what is the effect of each one used?
6. When do you avoid use of same?
7. How is this instrument sterilized?

NOTES

Chapter XXXI

QUESTIONS ON ELECTRICITY

Q. Define direct current?

A. A current whose direction never changes.

Q. Define alternating current?

A. An electric current that does not flow steadily in one direction, but completely reverses its direction or polarity at certain definite intervals. In other words, the current flows first in one direction and then reverses and flows in the opposite direction.

Q. Define a volt?

A. The unit of electro-motive force.

Q. Define ampere?

A. The unit of current strength.

Q. Define an ohm?

A. The unit of resistance.

Q. Give Ohm's law?

A. It takes one volt of electro-motive force to drive one ampere of current strength, through one ohm of resistance in one second of time.

Q. Define galvanic current?

A. A constant current. Uninterrupted current of electricity flowing in one direction. Low voltage.

Q. Define faradic current?

A. A pulsating current. The pulsations being produced by a rapid make and break arrangement in the circuit. The voltage is usually high and the amperage low.

Q. Define high frequency current?

A. A current of such frequency as not to affect the sensory nerves. More than 10,000 periods per second.

Q. Define a rheostat?

✓ A. An adjustable resistance. A current controller. An instrument for bringing a definite amount of resistance into a circuit.

Q. Define polarity?

A. Polarity is indicated by the chemical action which takes place at the terminals where the galvanic current enters or leaves a fluid conductive substance.

Q. Define the term negative electrode or terminal?

A. It is that electrode or terminal toward which the current flows.

Q. Define the term positive electrode or terminal?

A. It is that electrode or terminal from which the current flows.

Q. Why is the milliammeter used on a wall plate?

A. Because it is necessary to know how much current is used in the galvanic circuit, especially when doing electrolysis.

Q. Define a milliammeter?

A. An instrument to measure the current flow to one thousandth part of an ampere.

Q. Define a volt meter?

A. An instrument to measure the electro-motive force.

Q. How do you connect up dry batteries for electrolysis?

A. In series, the carbon of one cell is connected to the zinc of the next cell.

Q. In a dry cell, which is positive, the carbon or zinc?

A. The carbon is positive.

Q. What is meant by internal resistance of a cell?

A. The resistance that is offered by the material or the liquids between the two electrodes of a battery.

Q. Which is best for electrolysis, the battery with the double selector or single selector switch and why?

A. A double selector switch because you can select different cells from the battery.

Q. Is a wall plate satisfactory to use for electrolysis?

A. Yes.

Q. Is there an advantage in either battery or wall plate?

A. The battery gives a very smooth current, therefore very satisfactory, but unless carefully handled, the dry cells wear out rapidly. A wall plate being connected with the electric service, the current is always available.

Q. Is the current from a wall plate sufficiently smooth for electrolysis?

A. Yes, very satisfactorily so.

Q. What material is the best conductor of electricity and why?

A. Copper. Because it offers the least resistance.

Q. Why are some metals better than others for the conducting of electricity.

A. Some metals are better, because they offer less resistance to the electric current.

Q. How do you adjust the armature for the buzz on the wall plate?

A. Screw the adjusting screw away from the armature spring, see that the hammer is from $1/32$ to

Faradic - H 15 - high voltage - low amperage
Galvanic - low voltage - high amperage

1/16 of an inch away from the core. Now screw the adjusting screw up until it touches the armature spring or until you get a buzz. When this happens turn off the switch and throw the switch on again. If the wall plate again starts to buzz, it is in proper adjustment. If it does not, keep adjusting this screw until you get a buzz whenever the switch is switched on. Be careful not to force the screw too close on to spring as spring will bend out of shape.

Q. What results do you get if the tip of the adjusting screw makes its contact alongside of the platinum rivet in the vibrator spring?

A. No results are obtainable.

Q. How do you correct this?

A. By making such adjustments, that both platinum line up perfectly.

Q. How do you clean the platinum tipped contact screw and vibrating spring on faradic coil?

A. To clean the platinum tipped contact screw and vibrating spring use a piece of 000 sandpaper (about 2 inches long and 1 inch wide.). Fold this paper in the center so it is $\frac{1}{2}$ inch wide with the sand surface to the outside. Screw the contact screw toward the vibrator spring so that it slightly touches it. Then insert the sandpaper between the platinum contacts and move it gently back and forth several times, which is usually sufficient to clean them. You may use the fine side of your finger boards for this.

Q. Why are the numbers on the dial in front of the Rheostat?

A. To serve as an approximate reference for position to allow a certain amount of current to flow.

Q. What kind of gas is liberated at the negative pole?

A. Hydrogen gas.

A cell - container which contains an ^(electrolyte) exciting solution in which is immersed the mineral elements each of which react to the acid, one more forcible than the other.

Q. How is electricity produced?

A. By mechanical or chemical means.

Q. What kind of lamp is used on wall plate?

A. Carbon lamp.

Q. What size of lamps are used on wall plate?

A. It depends upon the wall plate. On some wall plates a 16 c. p. 60 watt lamp is used—on other wall plates 30 to 50 watt lamps. Use one of the strength indicated on the wall plate but always a carbon lamp.

Q. Why is the lamp placed on the wall plate?

A. The lamp is used as a resistance to limit the amount of current which can flow through the wall plate.

Q. Why are more dry cells on the galvanic side in a battery than on the faradic side?

A. In the galvanic cells we have not the stored up energy through the coil as in the faradic coil in the faradic side of the battery.

Q. What kind of plugs would you use for plugging in a wall plate so your polarity would not change?

A. A plug that can be reversed, such as a screw plug or T plug, known also as a polarized plug.

Q. Are you sure you always have the right polarity when you use a polarized plug?

A. No.

Q. Why not?

A. Because sometimes a change is made in the line. For instance, when there has been trouble, the electrician in correcting the trouble, may change the polarity.

17. F - alternating, direct - Galvanic - direct - Faradic - direct, alternating

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THE COSMETISTE

Sinusoidal - alternating

Q. How many windings has an induction or faradic coil?

A. Two windings. They are called primary or first winding, the one next to the core, and the secondary or second winding, one farthest away.

Q. Which layer contains the coarse wire in an induction or faradic coil?

A. Primary winding.

Q. Which is the stronger current?

A. The secondary is stronger.

Q. What kind of current is used to operate high frequency apparatus?

A. Either alternating or direct current.

Q. What kind of a current does a dry cell battery produce?

A. Direct current.

Q. Which is a good conductor—salt water or distilled water?

A. Salt water.

Q. Can electricity be produced without heat?

A. No.

Q. What effect will it have if cream or oils get on contact points or connectors of the wall plate or high frequency apparatus?

A. Will cause a poor contact.

Q. Name other places where poor contact is the cause of decreased current conduction?

A. On the commutator of the motor generator rectifier, and the commutator of the Sun-Aero Hair-Dryer.

Q. Could you short circuit the wall plate by touching the cord tips together if the switches are set on Galvanic?

A. The milliammeter is apt to burn out.

*Tesla - medium voltage - medium amperage
D'Arsonval - low voltage - high amperage
Oudin - high voltage - low amperage*

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Q. Could you short circuit the wall plate by touching the cord tips together if the switches were set on Faradic?

A. No. Would not burn out the windings as the lamp is in the circuit.

Q. Can you test your faradic cords for an open circuit?

A. Yes.

Q. How do you proceed?

A. Put the switches on "G" and insert one of your cord tips into one terminal, have rheostat pointer on "off" and momentarily touch the other terminal with other tip of same cord. If the meter needle swings the cord is all right, if there is no indication with the meter needle, the cord has an open circuit.

Q. Why must the vibrator spring have a small piece of platinum riveted to it? and why is the tip of the screw made of platinum?

A. Because there is a terrific heat at this point and platinum will stand a white heat without disintegrating.

Q. What is a closed circuit?

A. A circuit in which the wiring is complete and current flows.

Q. What is an open circuit?

A. A circuit in which the current will not flow due to an open switch.

Q. What is a broken circuit?

A. A circuit in which the current will not flow due to a break in the wire.

Q. How long should a dry cell battery last with ordinary use?

A. Approximately six months to one year.

Terminals of High Frequency - points of connection or contact

Q. Is the life of a dry cell guaranteed?

A. They are not guaranteed.

Q. Why are dry cells not guaranteed?

A. Because they deteriorate from the moment they are made.

Q. Give another reason why dry cells are not guaranteed?

A. Because they can be short circuited in a few moments.

Q. Is it advisable to buy dry cells for stock to have handy when a run down cell must be replaced?

A. It is not advisable.

Q. Why not?

A. A dry cell deteriorates more rapidly when standing idle on the shelf than when used moderately in a Battery.

Q. What makes the electricity in the cell?

A. The action of an acid upon a metal.

Q. What is meant by an open circuit battery?

A. One whose circuit is closed only as the current is needed.

Q. What causes a dry cell to deteriorate or become exhausted?

A. The moisture within evaporates or the zinc container is destroyed by local electrolytic action.

Q. What does this sign (+) mean, and this one (-)? Describe them.

A. The plus sign (+) means positive or out going current. The minus sign (-) means negative or incoming current.

Q. How do you connect up a plug?

A. One wire placed under each of the two binding screws in such a way that the fine wires do not touch each other.

H F - germicidal - relieves congestion
Tesla - terminals 1 or 2
D'Arsonval - always 2
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Q. What causes short circuits?

A. Anything which causes the current flow to be diverted from its regular circuit.

Q. Of what material are rheostats generally made?

A. Metals, usually in the shape of wire, having resistance enough to overcome a specified number of volts and amperes.

Q. Why is a rheostat used?

A. To reduce the current to the desired voltage and amperage.

Q. If the voltage is rated at 220 volts or higher, can a wall plate be used and if not can the winding of rheostat be changed to make it suitable?

A. The rheostat winding will remain the same but the voltage must be reduced to 110 volts before it reaches the wall plate. This is accomplished by suitable resistance outside of the wall plate. *(transformer)*

Q. If cord tips are too small to fit socket of terminal or too large to go into the opening how would you correct same?

A. Cut off part of small end of the metal tip, if too large file them down to the size to fit.

Q. Can a wall plate be used satisfactorily on alternating current?

A. For the galvanic side it is not satisfactory.

Q. Why is alternating current not satisfactory for galvanism?

A. Because for galvanism we need a uni-directional current.

Q. What do we need, to be able to use A. C. for our wall plate?

A. We need a rectifier to transform the alternating into a uni-directional current.

Q. Name the types of rectifiers in common use.

A. 1. The chemical rectifier consisting of 5 cells containing an electrolyte which, with the elements immersed into the solution, changes the alternating into a direct current.

2. The motor generator, consisting of an A. C. motor directly connected to and driving a D. C. generator.

3. The electric rectifier consists of a set of kenetrons to act as valves and inductive and non inductive capacity to change the current from a pulsating to a steady flow.

Q. Is faradic current pulsating or continuous?

A. Pulsating.

Q. Is high frequency current oscillating or alternating?

A. Oscillating.

Q. If your high frequency electrode looks all right but does not light up, what is wrong?

A. It may be punctured and the vacuum destroyed.

Q. Can high frequency electrodes be repaired?

A. Yes, very satisfactorily if they are not broken to pieces.

Q. How can we increase or decrease the current on our high frequency apparatus?

A. By adjusting the vibrator adjusting screw.

Q. Does oil or cream affect the high frequency handle and cords and contact point?

A. Yes it does.

Q. In what way?

A. The insulation on the cords disintegrates the rubber, absorbs the oil and cream and causes sparking and on the contact points it acts as a non-conductor and prevents good contact.

Chapter XXXII

GOING INTO BUSINESS

Of the relatively large number of women who yearly start out as beauty shop owners, after taking a course of professional study and training in some beauty culture school, followed by a shorter or longer period of service as operator, but few have any business training and the majority are therefore doomed to fail as shop managers or owners, unless they make a careful study of and apply successful business methods.

To be in business means to profess to serve others, but unless this is actually proven to those who want service, they will ignore such offer and will get their requirements elsewhere.

The often-heard remark, "Do you think I am in business for my health?" leads one to believe that they are not, and that is one reason why so many fail.

Only those who are in it for their health, and treat their business accordingly, giving adequate service, will succeed, the others have failed before they started.

Any time your patron is made to feel that she has not received full value, you unsell yourself. It makes no difference how small your charge, what she wants is service.

Foolish people think they can cut the service when they cut the price. The customer is not interested in that part of the transaction, but expects all the service

which goes ordinarily with the job. So either give it or stay out of it, but don't try to excuse failure to give all that the customer has a right to expect on a fair price basis, because you are offering it at a cut price.

And, as James J. Hill, who started life as a Mississippi river boat deck hand, and finished as the president of the Great Northern Railroad, expressed it: *"If you want to know whether you are going to be a success or failure in life, you can easily find out. The test is simple and infallible. Are you able to save money? If not, drop out. You will fail as sure as you live. You may not think so, but you will. The seed of success is not in you."*

It is therefore not so much a question of "making" as of "saving" money. Those who aim to save money, do not overbuy, and since they pay cash, will always get a better price. Never put your money on what you do not understand, whether it be a shop of equipment or stock or bonds. Nobody having an income of less than five thousand dollars a year, has, according to Babson, the right to jeopardize this income by speculating in stocks. Buy good bonds with your savings.

If you are going into business, the first thing to think of is location. This is important. Choose one where the largest number of people pass during business hours. Especially women going to employment, as this is the type of woman that spends the most money in a beauty shop. Then consider the room, its adaptability to your business as to light, air, warmth in winter and coolness in summer. The choice of a north or east front protects your shop windows from the glaring sun and will save much expense in displaying your goods.

Do not imagine that because there are already say four apparently successful shops in a certain neighborhood, in one of which you have worked as an operator, that this is a reason for starting a fifth shop. Learn all about the amount of business the other shops are doing and if the population is not increasing and you have nothing to offer, and are hoping to take away some customers from the shop you are working for, the chances are nine out of ten, you will fail, but if you have something special or exceptional to offer, then you may succeed.

The haphazard opening of a place of business without consideration of location, price consideration, window space, etc., is the height of folly, and spells ruin to anyone foolish enough to attempt it. If the big corporations seek to ascertain how many persons are passing a given point before they ever think of renting a store, surely the same cautious procedure should be employed by the small shop owner.

The average beauty shop does not do sufficient business to warrant an exorbitant rental. Tabulate accurately the monthly expenses to make certain that the rent will not take up most of the income.

A location where your patrons may park their cars is an advantage.

When you have decided on a location and found the space which you know to be suited to your purpose, then look to your lease.

Before you sign your lease, consult a reliable lawyer, one you can depend on for his truth and veracity, have him read it over for you, and see that there is no *catch* in it. Signing contracts without reading them is risky business, and may mean excessive cost of installing the equipment or maintaining the premises. Look carefully to the sanitation, plumbing,

electrical wiring and concessions such as extra wiring, plumbing, redecorating, or the changing of partitions, granted without extra cost.

Consult with a reliable firm on the beauty shop equipment you intend to purchase before actually signing your lease and have them examine the premises with a view to keeping down the initial cost of installation. Expensive disappointment is averted by this method of procedure. Remember once the lease is signed it is too late. Consult those who know what your specific requirements will be, and be on the safe side.

If you are contemplating buying out a shop, have it carefully inventoried by one who understands such values, to avoid deception as to the value and usefulness of the equipment you are getting. The lease, in this instance, must also be carefully scrutinized.

When buying used equipment, get the price on new equipment first, and then make your comparison. Bear in mind that the equipment must meet up-to-date requirements, and unless it is practical, it is a loss at any price.

Do not buy equipment for the primary reason that it is cheap. Cheap goods, as a rule, are deficient in quality, and some jobbers make a rule of pushing such because they make a bigger profit on same.

To give them this bigger profit, the manufacturer has to sacrifice quality. Naturally, the resale or second-hand value of such goods is very low, although some unscrupulous jobbers make two or three profits on them by repossessing them when the shop fails, and refinishing them. Therefore, go to a reliable jobber who does not specialize in cheap, unknown brands of goods. Especially be sure that your electrical equipment is of a make which does not repre-

sent an experiment, but know that a manufacturer of national reputation is behind it.

Some jobbers sacrifice honor and principle to profit. Then when the unknown manufacturer fails, you are stung because you can get no repairs and no service, therefore make certain that the jobber guarantees you service.

The size of the shop depends on the number of people it is intended to serve.

The reception or waiting room should receive careful attention for it is here that your prospect will get her first impressions. Color should enter into the scheme of things and good taste must be displayed. Quiet, soothing colors such as gray and blue with maybe a touch of rose, or green and mauve with now and then a little pink, are good. If you are in doubt as to the best colors to use in your particular space, consult some one who is familiar with such work. Consider carefully the taste of the class of people you intend serving.

Any plan of arrangement is naturally based on the space available. Do not crowd your reception room. Some comfortable chairs, a lounging couch and a table with the current magazines on it, and the proper lights, warmth, air, etc., are imperative and will relieve the tension of waiting. The manicure tables may be in this room also.

The universal booth or the booth in which every branch of the work can be done so that your patron is not disturbed by having to move about, is best, but one or two booths just for marcelling, as well as a permanent wave booth with comfortable chair are necessary.

Have an effective appointment system. Provide for the day and date at top page, columns headed with

the name of each operator, and below, the hours, well marked, so that she may know just how long she will be busy with each patron. At the end of the day, each operator hands in a report of work done and amount taken in. In this way it is easy to add the receipts when the day's work is done.

A card index should be kept with the name of each patron, her address, telephone number and remarks about the treatment she has received, the condition of her skin, hair, etc. This not only gives you a mailing list, but enables you or your operator to note at a glance the requirements of any patron, thereby eliminating any misunderstanding that might otherwise arise. It gives the patron a sense of satisfaction, if her likes and dislikes are remembered.

Do not handle inferior toilet goods. Make your choice of one or several well-known brands (not carried in the drug store). Cater to your patrons' likes and dislikes, and fill orders from any one line that they may want. There is a vast amount of money to be made in the sale of toilet goods, and you have the best chance of getting a good share of all the money that is being spent every year for such goods. You can make the toilet preparations you sell, pay your rent. The beauty shop which deals in toilet articles, perfumes, hair goods, etc., shows at the end of the month much greater profit, than the shop which deals in service exclusively.

Proper display is essential to the sale of these goods. A show window is an asset to any shop. Impressions are made on the human mind by attractive arrangements. Seeing is what makes them stop and give favorable attention, the first link in the chain of successful selling.

Do not crowd this space, but feature one thing at a time. For instance, one display may be some cream you are specializing in, another hair goods, etc. A show case is another means of advertising if your reception room space will allow for one. A shallow wall case with goods on display in each booth, will give the customer something to look at while being served. Do not neglect these spaces as they must be dressed to be attractive.

No matter how completely equipped the shop may be, if the window and showcase show neglect and are slovenly kept, they do not serve the purpose for which they are intended—to advertise goods.

Your dealer will furnish you with plenty of display cards, empty cartons of the brand of powders, rouges, etc., you are selling which may be used for your show window. Make special displays for holidays such as Fourth of July, Christmas, etc., also seasonal suggestions as for summer vacation time, etc.

If your shop will allow it and you are so located, added lines such as lingerie, hosiery, etc., and you know how to sell these, will pay you.

Experience has proven that in some locations the addition of one or two closely allied lines will share the overhead expenses and build up the business at the same time.

The ability to sell the merchandise of your shop should be developed, for you yourself, and the operator, alike, must know how to suggest to patrons the cosmetic applicable to their especial case. Without this ability an operator is not valuable to the shop owner.

Watch your stock. Do not allow your operators free access to this as in many instances a material

loss is sustained by so doing. In fact we know of an instance where the operator who was planning on going into business helped herself so liberally to preparations that she was able to make quite a display at the time of her opening. Install a simple bookkeeping system, and keep your books carefully that you may know at a glance just how you stand financially. Look out for leaks and loop holes in the revenue of your shop.

Items like shampoo soaps, tonics, hair pins, etc., which are used in large quantities in the service, must be handled economically, or they may cause the expenses to overbalance the profit. Teach your operators to practice economy.

Keep a careful check on such items as gas, electric current, laundry, maid service, replacement of breakage, or they may eat up your profit.

Now as to your operator—This is such a vast subject that I hesitate to advise. Be the boss, so to speak, of your own business. Have a certain standard and certain rules laid down, that apply equally to all employed in your place of business. Have a talk with them all, once in a while, plainly outlining your requirements about certain work, methods, salesmanship, etc.

Allow the operators to make suggestions, for they may prove of value to you. Do not drive your employees, but have it understood that a certain amount of work is expected of them.

Do not assume an air of superiority toward the employees. Be willing to work with them, and you will be able not only to get more out of them, but know how they are doing their work. Find constructive things for the employees to do, while they are not busy with patrons, a certain amount of the up-keep

of the shop should devolve upon each one, and see that each one does her part. Do not become too intimate with your employees, this is apt to breed familiarity and cause jealousy among them. Be interested in them and what they are doing and see that a certain degree of morale is always existent. Be just in your dealings with all, and insist on the same from every one in your employ.

See that every operator knows just exactly what that word means. (One who operates or does a certain mechanical or professional **work**.)

As to specializing, that is up to you to decide whether you want to carry out such a plan or have every operator understand all work well enough to take care of each patron for all of her work.

The problem of an equitable wage or salary plan, requires careful consideration. That plan where every operator gets 50% of the charge for actual work done, also a percentage on sales of preparations, is very good, as it creates a desire upon the part of the employee to solicit business, and she realizes she is receiving as much as if she were actually in business herself.

ADVERTISING

Be very conservative about your advertising and investigate thoroughly the medium you intend using, before spending your money.

Undoubtedly your shop is well equipped, and is bright, cheerful and sanitary. The money spent to give it this inviting appearance was an initial outlay in advertising.

The actual amount you should spend on advertising, depends upon your location and the methods you employ, and your experience will tell you how

much or how little is necessary. Don't make a big splurge once or twice a year, but advertise steadily and consistently. Advertising keeps your name and your work before the people of your locality, and that is why steady advertising is urged in preference to the intermittent kind.

Make your ads attractive, but not too wordy. Change the copy weekly, daily if in a daily paper. Have an attractive booklet prepared, one that tells what you do. Gauge your advertising to the class of people you are catering to.

To keep in touch with the various activities dealing with beauty culture, it is necessary to subscribe to the trade magazines. Do not limit yourself to one, for in order to get an unbiased opinion on any subject, you must read several.

WHAT SIGN ON YOUR WINDOW OR DOOR

The usual sign, "Beauty Parlor" smacks, to my mind, of the days when the sign, Sample Parlor was all too frequently occupying the best street corners. "Beauty Shop" is more up to date, but "Beauty Shoppe" goes back to the time where a lack of modern conveniences and progress was an outstanding feature.

There is, however, another word far more direct, far more potential, far more conveying to the present day business woman, and that is "Service". "Beauty Service", "Cosmetiste Service", those are words you may emblazon on window or door if you are prepared to carry out what they mean.

Does the public care whether you are a graduate of one school or another? Not in the long run. It is not going to blame your school if you fall down on

the job, it is not going to quit that school, it is going to quit YOU. It does not care whether you graduated from a Pinkham or Milanello or Panetella school, but it does care about what you can do for it. Professional men, like doctors and dentists, do not attempt to call attention to the medical college they came from, they have learned by experience.

Your school, your name, etc., is as nothing to the public, which wants service, it will patronize you in proportion as you give this service.

SHOP LIABILITY INSURANCE

Shop liability insurance is, without a doubt, another important feature, as this protects the shop owner from all claims made by patrons for work done in your shop. There are, however, only a few companies that carry this insurance.

CHAPTER XXXIII

SELLING

Selling has been defined as "an enthusiastic and understanding demonstration of an honest conviction". As definitions go, that isn't bad, but it doesn't go far enough. You may know your proposition thoroughly whether you are selling service or merchandise. You may believe in it, and present it intelligently without landing the order.

Why?

Often because you have tried to do the whole job yourself. You have failed to get help from the one who could, and would many times, help you the most—the prospect.

Selling consists in presenting ideas, establishing their truth and getting rid of counter ideas. Management usually sees to it that the saleswoman gets some instruction in presenting whatever she is selling. It furnishes her with adequate evidence to verify or back up the claims she makes for the product. Generally speaking, management does not devote the proper attention to showing the saleswoman how to get rid of the counter ideas that are instinctively thrown up by the prospect as a barrier to the sale. Nine times out of ten the prospect's objections are not real hindrances to the sale but are sign posts pointing to her interests which will enable a saleswoman to understand the basis on which the sale can be made.

More than that, the prospect will co-operate to give her the order.

Answering objections is one of the most profitable details of selling in which a manager can train her operators.

There are in general two classes of objections which the prospect may offer.

1st. Excuses or put-offs which the prospect gives in the opening part of the interview for the purpose of safeguarding her time.

2nd. Objections given by the prospect after the saleswoman has presented her story which really express an opinion of long standing in the prospect's mind.

The cause of the first class of objections is lack of interest on the part of the prospect. These objections should be ignored. The saleswoman must steer away from them and talk about something in which the prospect is really interested. It is a well recognized trait of human nature that we are interested only in those things about which we know something. The so-called objection that the prospect offers early in the interview rarely means anything, except that she is making a habit response. She is simply protecting her time. She may say: "I can't afford it", "I have all I need" or "I am in a hurry now". They all mean the same thing.

The saleswoman must be careful not to challenge these opening statements. Our expressed opinions are apt to be personal and if they are challenged we will fight for them. We will feel called on to hunt up reasons to defend them and make them appear rational. The result? An argument.

There is no use trying to convince a prospect that she can afford something she has not seen and be-

believes she does not want. The problem is solved by shifting the prospect's attention to something she knows about and is interested in.

Someone has said that the whole basis of salesmanship can be summed up in one sentence—"You 'you' her and get her to 'yes' you". No prospect will accept at once the point of view the saleswoman herself has arrived at only through a series of sequential steps in thinking. First an idea in terms of "you" must be started in the prospect's mind, an idea related to the prospect and her affairs. Her confidence is gained by agreeing with the things she has to say about those affairs. When the saleswoman has her prospect's confidence she can begin to get affirmative action and agreement on her own suggestions.

The second class of objections, real objections, from the prospect's viewpoint, must be handled differently. Usually these result from ignorance or incomplete understanding concerning the service or product being sold. As such, the saleswoman must admit that the prospect is entirely right from her point of view. Then her attention can easily be directed to some phase of the topic under consideration to which her objection does not apply. With this as a starting point, she can be led to a new and correct viewpoint without antagonizing her.

If the saleswoman is fair enough to admit the truth of what the prospect says, it disarms the prospect. Generally she will be a good enough sport to consider the amendment offered. In this way, the saleswoman can actually get the cooperation of the prospect.

For practically every objection based on a misunderstanding of the service or merchandise being sold a conciliatory answer that will start the prospect in

the direction of a sale can be devised, if the saleswoman will do a little thinking in advance.

There is one thought that must be uppermost in the mind of every saleswoman who aims at securing the prospect's cooperation. The saleswoman must believe "This prospect needs me". If a saleswoman can be genuinely interested in the one she is trying to turn into a customer and will work wholeheartedly to help her, that thought somehow gets over to the prospect and the saleswoman begins to win confidence and help. Whether you call it telepathy or something else, our thoughts have a way of communicating themselves to those we try to sell. If the saleswoman thinks only of her commission when she is talking with her prospect, that thought cannot help reach the prospect and the latter's confidence and cooperation vanish. Unconsciously, but surely, she stops helping to make the sale easy.

When a prospect wants something, she goes ahead and buys it, if she is able. Until something has made her want the commodity or the service, she resists spending her money. Here it is that advertising and the saleswoman enter. Naturally, the prospect interposes objections, but as the saleswoman answers those objections, holding her interest and good will all the while, the prospect begins to want or feel the need of what the saleswoman has to sell. At that point she begins to sell herself and the remainder of the job is easy. That, in a word, is why it is important for managers to see to it that the operators understand the nature of the objections generally offered and how to answer them.

(Credit for the thoughts here expressed by an experienced sales manager, and somewhat re-written to make them apply to "The Cosmetiste", is due to "Printers Ink".)

Salesmanship requires enthusiasm over your chosen branch of work, and to evidence this in a quiet, tactful way to the customer.

Your appearance, including dress, posture, deportment, as noted by the customer at the first glance, may be the making of the sale.

Never get chatty with another operator while serving a customer; give her your undivided attention.

Shop owners should beware of operators with pop eyes, an indication of talkativeness.

If your customer is inclined to talk, be a sympathetic listener, but if you want to make a sale, then keep leading toward that point, and do not let her run away with the conversation.

You have one big advantage which you should use to its full measure. Your customer comes to you, she knows at least one particular need which she expects you to satisfy, therefore she is sold on the proposition, and all you have to do is prove it to her in a practical way.

If your service falls short of her expectation, then you lose the chance of having a permanent customer. Study your customer while performing your service, note what she really needs, and make your sales appeal accordingly.

If she should disagree with you, listen courteously to what she has to say, don't tell her she is mistaken, but repeat practically what she has said, correcting the erroneous part so as to make her think along the right line.

Beware of forcing your customer to buy against her better judgment. Such methods are resented and will result in driving business away.

A knowledge of the person you are trying to sell to, is fully as important to you as the knowledge of

what you are trying to sell. "Know myself, my goods and my prospect" should be your motto.

The blond is always interested in the latest developments but the brunet prefers to stick to well established and proven things; rapid fire talk will confuse her. Cultivate her friendship, but for the blond, let the appeal be strictly business. Never argue, especially with one who has a bigger nose than yours, you'll get the worst of it if you do.

The woman with the pointed chin and the long finger nails wants beauty; money and price means little or nothing to her, but the one with the square chin, especially if she has squat nails, can be interested in buying things for home use, her fingers are just itching for work.

The round faced woman inclined to overweight, loves her ease, and appreciates what you do for her, but see to it that she gets a full dollar's worth for every dollar she spends, if you want to retain her patronage.

The fine-haired, fine-textured woman wants deft, delicate attention, while the coarse-haired, coarse-textured one wants more vigorous treatment.

Do not attempt familiarity with the woman with the high, thin nose; don't get chatty, she will resent it.

The person with the short upper lip is subject to flattery, the more so, the shorter the lip, but the one with the long upper lip is sober in thought and does not like it.

The pouting lips are likely to express unpremeditated thought, say possible harsh things not really meant, but the indrawn lips indicate that the owner weighs the matter carefully before giving expression to her thoughts.

In conclusion, train yourself to the point where service becomes a living part of you. If someone is hard to please, just think how many have failed, and if you satisfy her, you will have less trouble in meeting the next case, and very likely this hard-to-please, discriminating woman will go out and tell others what a perfect service you gave her.

The indolent, indifferent, half attentive, snobbish, slouchy, gum-chewing operator, is not an asset but a liability.

Telling a customer her faults or commenting on her facial blemishes and scalp troubles, will scarcely endear you to her; she knows about it. But if you tactfully speak to her about the specific lotion you have, and what it does, the chances are she will buy.

GLOSSARY OF TERMS

A

Ability (ă-bîl'î-tî) Quality or state of being able to perform.
Abnormal (ăb-nôr'măl) Deviating from the type.
Abortion (ă-bôr'shŭn) An immature product.
Abrasion (ăb-ră'zhŭn) Rubbed off or a broken place in the skin.
Absorb (ăb-sôr'b') To suck up or take in.
Absorption (ăb-sôr'p'shŭn) Act of drinking or taking in.
Acceleration (ăk-sêl'êr-ă-shŭn) Quickening the natural progression or process of.
Accessory (ăk-sês'ô-rî) Aiding or contributing to.
Accidental (ăk'sî-dên-tăl) Happening by chance.
Acetic (ă-sêt'ic) acid. Pertaining to or producing vinegar. A certain colorless biting fluid.
Acid (ăs'id) A sour substance. A substance. A substance typically soluble in water.
Acidosis (ăs'id-ô'sis) Increased acidity, or rather decreased alkalinity of the blood.
Acne (ăk'nê) See Chapter X.
Acquired (ă-kwîrd') To gain as one's own.
Acrolein (ăk-rô'lê-in) The substance formed in the burning of paper wrappers on cigarettes.
Actinic (ăk-tin'ik) The property of radiant energy by which chemical changes are produced.
Acute (ă-kût') Attended with severe symptoms. Having a short and relatively severe course.
Adnata (ăd-năt'ă) See Chapter XV.
Affinity (ă-fîn'î-tî) That attraction which exists between different elements causing them to form chemical compounds.

Albida (ăl-bî'dă) A form of Acne characterized by milia.

Albinism (ăl'bî-nîz'm) The condition of a person born with a deficiency of pigment in the skin, hair and eyes.

Albumen (ăl-bŭ'mên) The white of an egg.

Albumin (ăl-bŭ'mîn) Any of a class of proteids forming the most important constituent of serum in blood and found also in milk, muscle and in vegetables.

Albuminous (ăl-bŭ'mî-nŭs) Pertaining to albumen or albumin.

Alcohol (ăl'kô-hôl) A colorless, volatile, inflammable liquid which is the intoxicating principle in fermented and distilled liquors.

Aldehyde (ăl'dê-hîd) Alcohol deprived of two atoms of hydrogen.

Alimentary (ăl'î-mên-tă-rî) Of or pertaining to nutrition. The alimentary canal extends from the mouth to the anus.

Alkali (ăl'kă-lî) Any one of a class of compounds which form salts with acids and soaps with the fats.

Alkaline (ăl'kă-lîn) Having the reaction of an alkali. Soda, salt.

Alkaloid (ăl'kă-loîd) An organic substance especially one occurring naturally in plants or animals having alkaline or basic properties.

Alopecia (ăl-ô-pe'shî-ă) Loss of hair.

Alternating (ăl-têr-năt'îng) Occurring or succeeding by turns one following the other. A current of electricity which reverses periodically in direction of flow.

Aluminum (ăl-ŭ'mĭn-ŭm) A bluish silver-white malleable metal, notable for its lightness and its resistance to oxidation.

Amber (ăm'bēr) A yellowish translucent resin, found fossil. It takes a fine polish and by friction becomes strongly electric.

Ammonia (ă-mō'nĭ-ă) An extremely pungent gaseous compound of hydrogen and nitrogen.

Amotile (ă-mō'til) Incapable of motion.

Ampere (ăm'pār) The practical unit of electrical current.

Amperage (ăm'pēr-āj) The strength of a current of electricity measured in amperes.

Anaphoresis (ăn-năf'ō-rē-sis) A disease of the sudoriferous glands causing insufficient perspiration. Electric. When the active is one which seeks the anode instead of the cathode. Forcing chemicals from the negative terminal toward the positive terminal by means of the galvanic current.

Anaemia (ăn-nē'mĭ-ă) A deficiency in the blood or its constituents causing pallor, debility, etc.

Anaesthesia (ăn'ēs-thē-si-ă) Entire or partial loss or absence of feeling.

Anaesthetic (ăn'ēs-thēt'ik) An agent that anaesthetizes as cocaine (local) or ether (general).

Anaesthetize (ăn'ēs-thē-tiz) To render insensible by an anaesthetic.

Anatomy (ăn-năt'ō-mĭ) The science of the structure of animals.

Angioma (ăn-jĭ-ō'mă) A tumor the cells of which tend to form blood vessels or lymph vessels.

Angious (ăn'ji-ŭs) A tumor formed of blood vessels.

Anguli (ăn'gŭ-lĭ) Shaped like an angle.

Anhidrosis (ăn-id-rō'sis) A deficiency of sweat.

Annihilate (ăn-nĭ'hĭ-lăt) To reduce to nothing. To destroy the form or essential character of.

Anode (ăn'ōd) The positive terminal of an electric source.

Anomalous ăn-nôm'ă-lŭs) Abnormal exceptional; unusual.

Anterior (ăn-tē'ri-ēr) Before or in front of.

Antiseptic (ăn-tĭ-sĕp'tik) Tending to prevent or arrest pus formation by destroying or checking the growth of the bacteria causing it.

Antitoxin (ăn-tĭ-tōk'sĭn) Any defensive protein either existing normally or developed in the body as a result of the implantation of a poison and acting as a neutralizer of poison.

Apex (ă'pĕks) The tip, point or angular summit of anything.

Apparatus (ăp-ă-ră'tŭs) Things provided for a certain work.

Appendage (ă-pĕn'dāj) Something attached to a principal or greater thing.

Appliance (ă-plĭ'ăns) A device for a given purpose.

Applicator (ăp'li-kă-tōr) Apparatus for applying.

Araneous (ăr-ănē-ŭs) Similar to a cobweb.

Areata (ăr-rē-ă'tă) Occurring in patches.

Areolar (ăr-rē-ō'lăr) Outer coat or small area around arteries.

Armature (ăr'mă-tŭr) A steel spring by the magnetic movement of which an electric current is induced.

Arnica (ăr'nĭ-kă) Any of many herbs of the aster family.

Aromatic (ăr'ō-măt'ik) Pertaining to or containing aroma; fragrant.

Arrectores Pili (ăr-ĕk'tō-rĕz pĭ-lō'rŭm) The minute involuntary muscles of the skin whose contraction produces the appearance called goose flesh.

Arterial (ăr-tē'ri-ăl) Pertaining to the arteries.

Arterioles (ăr-tē'ri-ōlz) Small arteries.

Arteriosclerosis (ăr-tē'ri-ō-sklē-rō'sis) Abnormal hardness and dryness of the arterial coats resulting from chronic inflammation.

Artery (ăr'tēr-ĭ) A vessel carrying blood from the heart.

Articulation (ăr-tĭk-ŭ-lă'shŭn) A joint or juncture between the bones of an animal.

Artificial (ăr-tĭ-fish'ĭ-ăl) Not natural.

Artificialis (ăr-tĭ-fish'ĭ-ăl-is) A form of acne which is due to external irritation.

Asepsis (ă-sĕp'sis) Free from germs.

Aseptic (ă-sĕp'tik) Free from harmful organisms.

Astringent (ăs-trĭn'jĕnt) Contracting or drawing together the tissues.

Ataxia (ă-tăk'si-ă) Irregularity in the functions causing an inability to coordinate voluntary movements.

Athletic (ăth-lĕt'ik) Strong; robust.

Auricular (ô-rĭk'ŭ-lăr) Pertaining to the ear.

Auto (ô'tō) A prefix meaning self.

Auto Condensation (ô-tō-kōn'dĕn-să'shŭn) See chapter XXV.

B

Bacteria (băk-tĕ'rĕ-ăh) A widely distributed group of vegetable microorganisms.

Bactericide (băk-tĕ'rĕ-sĭd) A substance which destroys bacteria.

Bacilla (bă-sĭl'ĭ) Bacteria.

Barium (bă'ri-ŭm) A chemical element of the alkaline-earth group.

Base (băs) That on which a thing rests for support. The chief ingredient of any thing viewed as its fundamental constituent.

Battery (băt'ēr-ĭ) An apparatus of one or more wet or dry cells for generating voltaic electricity or for producing united electrical effect.

Belladonna (bĕl'ă-dōn-ă) A European strong scented, poisonous plant the leaves and roots of which are used for medicine.

Beneficial (bĕn'ĕ-fish'ăl) Confering real improvements to a desired end.

Benzoin (bĕn'zō-ĭn) A balsamic resin obtained from a tree of Sumatra and Java. It is used as a stimulant and as a perfume.

Beri-beri (bĕr'ĭ-bĕr'ĭ) An acute disease chiefly of India and Ceylon marked by inflammatory changes in the nerves producing great muscular debility, painful rigidity and malnutrition.

Bernay tablets (bŭr-nă') Special tablets dissolved in water and used as an antiseptic.

Binocular (bĭn-ōk'ŭ-lăr) Adapted to the use of both eyes.

Bipolar (bĭ-pō'lăr) Having two poles.

Blackhead (blăk'hĕd) A plug of sebaceous matter. A comedone.

Bleb (blĕb) A vesicle. A blister.

Blemish (blĕm'ish) Any mark, spot or defect marring the appearance.

Blond (blōnd) A person of fair complexion with light hair and eyes.

Blood (blŭd) The fluid circulating in the heart, veins and arteries of animals.

Bolted (bōl'tĕd) Sifted, refined, purified as by sifting.

Bone (bōn) The material of the skeleton of most vertebrate animals.

Boric acid (bō'rĭk-ă-sĭd) Any acid derived from boric oxide.

Brittle (brĭt'l) Easily broken. Not tough.

- Bromide** (brō'mīd) A binary compound of bromine with another element or a radical.
- Bromidrosis** (brōm-id-rō'sīs) Foul smelling perspiration.
- Brunet** (brōō-nēt') A person having brown or olive skin, brown or black hair and eyes.
- Bruise** (brōōz) To injure, as by a blow without laceration.
- Buccinator** (būk'sin-ā-tōr) Shaped or sounding like a trumpet.
- Bulb** (būlb) A rounded enlargement of one end of a part.
- Bulbous** (būlb'ūs) Bulblike in shape or structure.
- Bullae** (bōōl'ā) A bleb or blister.

C

- Cachecticum** (kā-kēk'ti-cō-rūm) A form of acne characterized by general ill health and malnutrition due to a chronic constitutional affection.
- Calamine** (kāl'ā-mīn) Lotion. A soothing lotion.
- Calcium** (kāl'si-ūm) A soft silvery-white metal the basis of lime.
- Callous** (kāl'ūs) Hardened.
- Camomile** (kām'ō-mīl) A genus of herb used as a tonic.
- Canaliculi** (kān-ā-lik'ū-lā) A small groove or channel.
- Cancellous** (kān'sē-lūs) Having a spongy or porous structure.
- Caninus** (kān-i'nūs) A muscle of the mouth.
- Canities** (kān-īsh'ē-āz) Grayness of hair.
- Canities Accidental** (āk-si-dēn'tāl) Grayness of hair happening from fright.
- Canities Premature** (prēmā-tūr) Gray hair before the usual time.
- Canities Senile** (sē'nīl) Gray hair in old age.
- Capitate** (kāp-i-tāt') The large bone of the wrist.
- Capillary** (kāp'i-lā-rī) Any one of the minute vessels which connect the arteries and veins.
- Capsule** (kāp'sūl) A membrane or saclike structure inclosing a part or organ.
- Carbolic acid** (kār-bōl'ik) See phenol.
- Carbon** (kār-bōn') An elementary substance in nature which predominates in all organic compounds and occurs in three distinct forms, black lead, charcoal and the diamond.
- Carbon dioxide** (dī-ōk'sid) A heavy colorless and odorless gas which extinguishes a flame. It is unfit for breathing. Plants absorb it from the air and decompose it assimilating the carbon and returning most of the oxygen.
- Carbon monoxide** (mō-nōx'id) A colorless, odorless gas. It is very poisonous.
- Carbonic** (kār'bōn-ik) acid. A transparent odorless gas.
- Carcinoma** (kār'si-nō-mā) A malignant tumor or cancer.
- Caries** (kā'ri-ēz) Decay.
- Carotid** (kā'rōt-id) The chief arteries passing up the neck and supplying the head with blood.
- Carpal** (kār'pāl) A wrist bone.
- Carpus** (kār'pūs) The wrist.
- Cartilage** (kār'ti-lāj) A translucent elastic tissue. Gristle.
- Castile** (kās-tēl') A province in Spain from which a kind of fine hard soap made from olive oil is named.
- Cataclysm** (kā't-ā-kliz'm) Any violent change involving sudden and great alterations.
- Catarrh** (kā-tār') An inflammatory affection of the mucous membrane especially of the nose and air passages.
- Cataphoresis** (kā-tāf'ō-rē-sīs) The anodal or positive diffusion used to introduce chemicals into the body.
- Category** (kā'tē-gō-rī) A class or division as for discussion.

- Cathode** (kāth'ōd) The negative terminal of an electric source.
- Causative** (kōz'ā-tiv) Acting as a cause.
- Cautery** (kō'tēr-i) Searing as with a hot iron.
- Cauterize** (kō'tēr-iz) To burn or sear with a caustic.
- Cauterization** (kō'tēr-i-zā'shūn) Act of searing some part by means of a caustic.
- Caustic** (kōs'tik) Capable of destroying or eating away by chemical action.
- Cavernosum** (kāv-ēr-nō'sūm) A tumor made up of a connective tissue framework inclosing large spaces filled with blood.
- Cell** (sēl) The structural unit of which animals or plants are built up. Protoplasmic units. Electric. A receptacle containing electrodes and an electrolyte for generating electricity or for producing electrolysis.
- Cellular** (sēl'ū-lār) Consisting of or pertaining to cells.
- Cellulose** (sēl'ū-lōs) An inert substance the chief component of the solid part of plants, linen, paper, etc.
- Cerebellum** (sēr-ē-bēl'ūm) A large lobe of the back part of the brain.
- Cerebrum** (sēr-ē-brūm) The largest part of the brain of man filling the entire upper portion of the skull.
- Cervical** (sūr'vi-kāl) Pertaining to the neck.
- Chancre** (shāng'kēr) The primary lesion of syphilis.
- Channel** (chān'ēl) That through which anything passes. Means or medium of passing.
- Characterize** (kār'āk-tēr-iz) To indicate, delineate or describe the character of.
- Chemical** (kēm'i-kāl) A substance got by chemical process or used to produce chemical effect. Composition of substances.
- Chloasma** (klō-āz'mā) A cutaneous discoloration occurring in yellowish brown patches and spots.
- Chloride** (klō'rid) Any binary compound of chlorine, a yellowish-green gaseous element of suffocating odor used for disinfecting or fumigating.
- Chlorine** (klō'rīn) An element ordinarily isolated as a poisonous greenish-yellow suffocating gas. It is abundant in common salt.
- Chlorophyll** (klō'rō-fil) The green coloring matter of plants and corresponding to the red color of the blood in animals.
- Chloro-Zol** (klō'rō-zōl) A special tablet used for preparing an antiseptic.
- Chromidrosis** (krō-mīd-rō'sīs) Secretion of colored sweat.
- Chronic** (krōn'ik) Continuing a long time.
- Cicatrices** (sik-ā-trē'sēz) The skin or film which forms over a wound later contracting to form a scar.
- Circumscribe** (sēr'kūm-skrib) To draw a line around.
- Circuit** (sūr'kit) The complete or any part of an electrical current including usually the generating device.
- Circulate** (sūr'kū-lāt) To move in a circle as the blood.
- Circulation** (sūr'kū-lā'shūn) The movement of the blood in the vessels of the body.
- Citric** (sit'rik) Acid. Pertaining to or designating a tribasic acid extracted from lemons or any of the citrous fruits.
- Clavicle** (klāv'i-k'l) A bone of the shoulder girdle joined to the breast bone and shoulder blade and called in man shoulder blade.
- Clot** (klōt) A mass or lump of coagulated matter.
- Coagulate** (kō-āg'ū-lāt) To curdle or congeal.

- Coccus** (kōk'ūs) A spherical bacterium.
- Cognizant** (kōg'nī-zānt) Aware, sensible.
- Comatose** (kōm'ā-tōs) Like coma. Dull. Heavy. Morbidly drowsy.
- Comedone** (kōm'ē-dōn) A plug of dried sebum in an excretory duct of the skin. A blackhead.
- Compact** (kōm-pākt') Closely united. Dense. Close. Solid.
- Complexion** (kōm-plēx'shūn) Hue or general appearance of the skin especially the face.
- Composition** (kōm-pō-zīsh'ūn) The make up or state or quality of being put together.
- Compressor** (kōm-prēs'ēr) That which presses.
- Concave** (kōn'kāv) Hollow, curved or rounded.
- Concavity** (kōn-kāv'ī-tī) State of being concave.
- Condensation** (kōn-dēn-sā'shūn) Act or process of reducing, making closer more compact or concentrative.
- Conducting Cords** (kōn-dūkt'ing kōrdz) Strands of copper wire, insulated by means of which the electrical current is carried from the wall plate or battery to the electrodes which are used for treatment.
- Congenital** (kōn-jēn'ī-tāl) Existing at the time of birth.
- Congestion** (kōn-jēs'chūn) Overfullness of the capillary and other blood vessels in any locality or organ. Local hyperemia.
- Connecting Cords** (kōn-nēkt'ing kōrdz) The insulated strands of copper wire which joins together the apparatus and the commercial electric current.
- Constitutional** (kōn-stī-tū'shūn-āl) Belonging to or affecting the physical or vital powers of an individual.
- Constituent** (kōn-stīt'ū-ēnt) That which composes or makes up. The element of.
- Constriction** (kōn-strīk'shūn) Act of drawing together, tightening, contracting.
- Constructive** (kōn-strūkt'iv) Building up. Setting in order.
- Contagion** (kōn-tā'jūn) Transmission of a disease by direct or indirect contact. The communication of disease by mediate or immediate contact or by effluvia by a person or object from the sick to the well.
- Contagiosa** (kōn-tā-jī-ō'sā) Impetigo. A form of impetigo marked by flat vesicles that become pustular then crusted.
- Contiguous** (kōn-tīg'ū-ūs) In contact; touching; adjoining.
- Contour** (kōn'tōor) The outline of a figure or body.
- Contract** (kōn'trākt) To draw together. To acquire by contagion.
- Contractible** (kōn-trākt'ī-b'l) Capable of contraction.
- Convalesce** (kōn-vā-lēs') To recover health and strength gradually after illness.
- Convulsion** (kōn-vūl'shūn) A violent and involuntary contraction or series of contractions of the muscles.
- Copious** (kō'pī-ūs) Large in amount.
- Copperas** (kōp'ēr-ās) A green substance used in ink, in dyeing blacks, etc., called also green vitriol.
- Core** (kōr) The heart or most vital part. Electric. A bundle or bar of iron wires used to concentrate and intensify an induced magnetic field.
- Corium** (kō'rī-ūm) The derma or deeper vascular and sensitive layer of the skin.
- Coronoid** (kōr'ō-noid) The crown shaped process of the large bone of the forearm.

- Corpuscle** (kōr'pūs'l) A small blood cell.
- Corrode** (kō-rōd') To diminish gradually by chemical action.
- Corrosive** (kō-rō'siv) The action of eating away by degrees. Diminishing gradually by chemical action or the like.
- Corrugator** (kōr'roō-gāt'ōr) A muscle that wrinkles the brow.
- Corrugated** (kōr'roō-gāt'ēd) To form or shape in wrinkles or folds or alternate ridges and grooves.
- Cortex** (kōr'tēx) The chief part of the hair shaft. The outer layer of an organ as distinguished from its inner substance.
- Corticle** (kōr'tī-kāl) Of, pertaining to or consisting of cortex especially that cortex of the brain or kidneys.
- Corysa** (kō-rī'zāh) An acute catarrhal affection of the nasal mucous membrane.
- Cosmetics** (kōs-mēt'iks) Any external application intended to beautify the complexion or hair.
- Cranial** (krā'nā-āl) Of or pertaining to the cranium.
- Cranium** (krā'nī-ūm) The skull of a vertebrate.
- Criterion** (krī-tē'rī-ūn) A standard of judging; rule; test.
- Crude** (krōod) In a natural state. Unripe; immature; imperfect. Wanting finish.
- Crust** (krüst) A hard mass of dried secretions, blood or pus on the skin.
- Crypt** (krīpt) A simple gland or glandular cavity. A follicle.
- Cuneiform** (kū'nē-ī-fōrm) The wedged shaped bone of the wrist.
- Current** (kūr'ēnt) A movement of electricity similar to the motion of a stream of liquid or the rate of such a movement.
- Cutaneous** (kū-tā'nē-ūs) Existing on or affecting the skin.
- Cuticle** (kū'tī-k'l) The very thin or outer layer of the skin or hair.
- Cutis** (kū'tīs) The derma or deeper layer of the skin.
- Cycle** (sī'k'l) Circle. The complete round of the electric current, one negative and one positive wave.
- Cylindrical** (sī-līn'drī-kāl) Pertaining to or having the form of a cylinder.
- Cyst** (sist) A closed abnormally developed sac containing fluid or semi fluid or morbid matter.
- Cystoma** (sist-ō'mā) A tumor containing cysts of pathologic origin.

D

- Dandruff** (dān'drūf) Scales formed on the scalp which come off in small flakes of the epidermis.
- De-** (dē-) from, down, away. A prefix denoting from, down, away.
- Debilitate** (dē-bīl'ī-tāt) To weaken.
- Debility** (dē-bīl'ī-tī) Weakness; feebleness; loss of strength.
- Decompose** (dē'kōm-pōz) To separate into the constituent parts.
- Defective** (dē-fēk'tiv) Incomplete; imperfect.
- Deficiency** (dē-fīsh'ēn-sī) State or quality of being deficient. Wanting; lacking.
- Degenerate** (dē-jēn'ēr-āt) To become or grow worse than originally.
- Deodorant** (dē-ō'dēr-ānt) An agent or solution to deprive of odor especially an offensive odor.
- Depilatory** (dē-pīl'ā-tō-rī) Having the quality or power to strip of hair.
- Depressor** (dē-prēs'ēr) That which depresses or draws down.
- Derma** (dūr'mā) The sensitive layer of the skin beneath the epidermis.

Dermatitis (dŭr-măt-ti'tis) Inflammation of the skin.

Dermatologist (dŭr-mă-tôl'ô-jist) One who understands the science of the treating of the skin; its structure, functions and diseases.

Destructive (dê-strŭk'tiv) Tending to destroy.

Deteriorate (dê-tê'rî-ô-răt) To make, or grow worse.

Deterrent (dê-tŭr'ênt) That which prevents.

Detriment (dê'trî-mênt) Injury or damage or that which causes it. Loss or damage.

Development (dê-vêl'ôp-ment) Act of laying open or unfolding by degrees or in detail.

Devitalize (dê-vi'tăl-iz) To destroy vitality.

Di- (dî-) A prefix denoting separation.

Diagnose (dî-ăg-nô's) To recognize a disease from its symptoms.

Dialysis (dî-ăl'i-sis) Separation.

Diet (dî'êt) A course of food selected with reference to a particular state of health.

Diffuse (dî-fŭz') To pour out and spread as a liquid.

Diffusibility (dî-fŭz'i-bil-i-ti) Capable of being diffused or poured out and spread.

Digest (dî-jêst') To separate, arrange. To convert into an absorbable form.

Digestion (dî-jê's'chŭn) Act or process of digesting.

Dilate (dî-lăt') To enlarge, to expand.

Dilator (dî-lăt'ôr) That which enlarges.

Dilute (dî-lŭt') To make thinner by mixing especially with water.

Diminish (dî-mîn'ish) To make smaller or less; reduce.

Diplococci (dîp-lô-kôk'ŭs) Bacteria exhibiting pairs.

Dis- (dis-) A prefix used to denote away, apart, asunder.

Disease (dî-zêz') Any deviation from a state of health.

Disinfect (dis-in-fêkt') To free from infection.

Disinfectant (dis-in-fêk'tănt) An agent used to destroy pathogenic bacteria.

Disinfection (dis-in-fêk'shŭn) Act of being disinfected.

Disintegrate (dis-in'tê-grăt') To separate or decompose into its component parts. Reduce to fragments or powder.

Dissipation (dis-i-pă'shŭn) A dissolute wasteful course of life. Distraction especially in frivolity.

Dissolve (dî-zôlv') To separate into component parts; break up.

Distill (dis-til') To let fall in drops.

Distillation (dis-tî-lă'shŭn) The operation of driving off gas or vapor from liquids or solids as by heat in a retort and condensing the products in a receiver.

Distortion (dis-tôr'shŭn) Act of twisting out of natural or regular shape.

Distributive (dis-trîb'ŭ-tiv) Tending to divide among several or many.

Dry Cell (dri sêl) See Chapter XXII.

Duct (dŭkt) A tube or vessel by which the fluids of the body are conveyed.

Dye (dî) To stain or color.

E

E (ê) Prefix meaning out, out of, from.

Eczema (êk-zê-mă) An inflammatory itching disease of the skin.

Edema (ê-dê-mă) Swelling due to effusion of watery liquid into the connective tissues.

Effete (ê-fê't) Worn out as with age; exhausted of energy.

Efficacious (êf-i-kă'shŭs) Powerful to produce the effect intended.

Efficiency (ê-fish'ên-si) Quality or degree of being able to produce results.

Efficient (ê-fish'ênt) Characterized by energetic and useful activity.

Efluvia (ê-flŭv'î-ă) An ill-smelling exhalation, especially if of noxious character.

Electricity (ê-lêk-tris'i-ti) An imponderable, invisible force in nature. A term applied to that unknown power in nature which produces electric phenomena. An agency producing magnetic, chemical and thermal phenomena.

Electrical (ê-lêk-tri-kăl) Consisting of, containing, producing or produced, or operated by electricity.

Electrode (ê-lêk'trôd) Either terminal of an electric source. The conductors by which the current is administered to the individual.

Electrolysis (ê-lêk-trôl'i-sis) The breaking up of a compound substance by the action of electricity. The process of chemically decomposing compounds or fluids by means of the galvanic electric current.

Electrolytic (ê-lêk'trô-lit-ik) Pertaining to electrolysis or an electrolyte.

Electromotive force (ê-lêk-trô-mô'tiv fôrs) The force which by reason of difference in potential produces electric currents.

Electron (ê-lêk'trôn) An extremely minute corpuscle or charge of negative electricity the smallest that is known to exist.

Element (êl'ê-mênt) One of the constituent parts or principals of anything.

Eliminate (ê-lîm'i-năt) To set aside as unimportant. To expell from the system. To excrete.

Elimination (ê-lîm'i-nă-shŭn) Act of expelling or excreting.

Eliminative (ê-lîm'i-nă'tiv) Relating or tending to eliminate.

Elongate (ê-lôn'găt) Extend; stretch out.

Embryonic (êm-brî-ôn'ik) Of or pertaining to an organism in the early stages of development.

Endothelial (ên'dô-thê'li-ăl) A thin lining of the interior of the heart, blood vessels, lymphatics, etc.

Energy (ên'êr-jî) Internal or inherent power or capacity for performing work.

Ephemeral (ê-fêm'êr-ăl) Beginning and ending in a day or continuing a short time.

Epicranius (êp-i-kră'nê-ŭs) See Chapter VI.

Epidermal (êp-i-dŭr'măl) Pertaining to or arising from the outer layer of the skin.

Epidermic (êp'i-dŭr'mîk) Pertaining to or arising from the outer layer of the skin.

Epidermis (êp-i-dŭr'mîs) The outer epithelial layer of the skin. The cuticle.

Epilation (êp-il-ă'shŭn) The removal of hair by the roots.

Epithelial (êp-i-thê'li-ăl) A cellular tissue or membrane covering a free surface or lining a cavity.

Epithelioma (êp-i-thê'li-ô-mă) A malignant growth consisting mainly of epithelial cells.

Epithelium (êp-i-thê'li-ŭm) The covering of the skin and mucous membranes consisting wholly of cells of varying form and arrangement.

Eponychium (êp-ô-nîk'ê-ŭm) The horny embryonic structure whence the nail is developed.

Equipment (ê-kwîp'mênt) Anything used to fit out; to furnish for service.

Eradication (ê-răd'i-kă'shŭn) Act

of plucking by the roots; to destroy utterly.

Eruption (ē-rŭp'shŭn) A visible lesion of the skin due to disease marked by redness or papular condition, or both.

Erysipelas (ēr-ī-sĭp'ē-lās) An acute infectious disease accompanied with a diffused inflammation of the skin and mucous membrane.

Erythema (ēr-ī-thē'mā) Abnormal redness of the skin due to capillary congestion.

Erythematous (ēr'ī-thē-māt'oŭs) A skin disease marked by abnormal redness of the skin.

Eschar (ēs'kār) A dry slough, crust or scab.

Ethmoid (ēth'moid) A bone forming part of the walls of the nasal cavity.

Evaporate (ē-vāp'ō-rāt) To pass off in, or change into vapor.

Evascularization (ē-vās'kŭ-lār-ī-zā'shŭn) The destruction of a vessel or duct which conveys blood to a part.

Excoriation (ēks-kō'rĭ-ā'shŭn) Act of stripping or wearing off the skin of.

Excretion (ēks-krē'shŭn) That which is thrown off or eliminated by the body.

Excretory (ēks-krē-tō'rĭ) Pertaining to or serving for excretion.

Exercise (ēks-sēr-sĭz') A putting into action, use, or practise. Exertion for the sake of improvement.

Exposure (ēks-pō'zhŭr) Act of being open to view; unprotected, as from the weather.

Extensor (ēks-tēn'sōr) A muscle which serves to extend or straighten out a limb or part. The outer most part.

External (ēks-tēr'nāl) Outward; visible.

Exuberant (ēgz-ŭ'bēr-ānt) Characterized by abundance; plentiful.

Exudation (ēks-ŭ-dā'shŭn) Act of discharging from a body through pores or incisions as sweat, moisture or other liquid.

Exude (ēks-ŭd') To sweat out.

F

Facial (fā'shāl) Pertaining to the face.

Faradic (fār-ā'dĭk) An electric current induced in one coil of wire by interrupting the current in another adjacent coil usually wound on an iron core.

Faradism (fār-ā-dĭz'm) or Faradization (fār-ā-dĭ-zā'shŭn) A form of electrical treatment for stimulating activity of the tissues.

Fatigue (fā-tēg') Condition of body cells or organs which have undergone excessive activity with resulting loss of power.

Favus (fā'vŭs) A contagious disease of the skin produced by a vegetable parasite.

Fermentation (fŭr'mēn-tā'shŭn) A chemical change with effervescence as that produced by yeast.

Fibres (fĭ'bērz) Thread like structures.

Fibroma (fĭ-brō'mā) A tumor composed mainly of fibrous or fully developed connective tissue.

Fibrous (fĭ'brŭs) Containing, consisting of or like fibres.

Filament (fĭl'ā-mēnt) A thread or threadlike object.

Filter (fĭl'tēr) Anything porous through which liquid is passed to cleanse or strain it.

Fissure (fĭsh'ŭr) A narrow opening made by separation of parts.

Flabby (flāb'ĭ) Wanting firmness; flacid.

Flexible (flēk'sĭ-b'l) Pliable; not stiff.

Florid (flōr'id) Flushed with red.

Fluctuate (flŭk'tŭ-āt) To roll back and forth. To cause to move as a wave.

Fluid (flōō'id) Having particles which easily move and change their relative position without separation of the mass and which easily yield to pressure.

Follicle (fōl'i-k'l) A small cavity or gland. The sac containing the hair root.

Food (fōōd) Nutriment taken into an organism for growth or repair and to maintain life.

Forceps (fōr'sēps) A pair of pincers or tongs especially for delicate operations.

Formaldehyde (fōr-māl'dē-hĭd') A gas possessing powerful disinfectant properties.

Formalin (fōr'mā-lĭn) An aqueous or watery solution of formaldehyde, 40%.

Formation (fōr-mā'shŭn) The manner in which a thing is formed or shaped.

Formula (fōr'mŭ-lā) A prescribed method or rule. A recipe or prescription.

Friction (frĭk'shŭn) Act of rubbing one body on another.

Frontal (frŭn'tāl) The bone of the forehead.

Frontalis (frŭn-tāl'is) See Chapter VII.

Fulgeration (fŭl'gŭ-rā'shŭn) Act of flashing or sparkling with special electrode and high frequency current.

Fuller's earth (fōōl-ēr-z-ŭrth') A soft earthy substance resembling clay, used in cleansing cloth and wool of grease. Also used for masks.

Fumes (fŭmz) Aromatic smoke as of incense.

Fumigation (fŭ-mĭ-gā'shŭn) Vapor raised in the process of disinfecting.

Function (fŭnk'shŭn) The proper action of anything. Power of acting.

Fungus (fŭn'gŭs) A morbid spongy growth.

Furfurol (fŭr-fŭr'āl) An oily substance.

Furuncle (fŭ-rŭn'k'l) A boil.

G

Galvanic (gāl-vān'ĭk) Current electricity especially as produced by chemical action. Named for Galvani (1737-1798).

Galvanism (gāl'vā-nĭzm) Current electricity especially as produced by chemical action. Named for Galvani (1737-1798).

Gangrene (gān-grēn') The dying of tissue due to interference with local nutrition.

Gastric (gās'trĭk) Pertaining to the stomach.

Gastro intestinal (gās-trō' ĭn-tēs'-tā-nāl) Pertaining to both the stomach and intestines.

Germ (jŭrm) A bacilla; a microbe; an embryo in its early stages.

Germicidal (jŭr-mĭ-sĭd'āl) Destructive to germs.

Germicide (jŭr-mĭ-sĭd') Any chemical especially a solution that will destroy germs.

Germinative (jŭr-mĭ-nā'tĭv) Having power to grow or develop.

Germitabs (jŭr-mĭ-tābz) Special tablets when dissolved in water form an antiseptic solution.

Gland (glānd) A secreting organ of the body.

Glandular (glān'dŭ-lār) Containing or bearing glands or gland cells.

Glycerine (glĭs'ēr-ĭn) A sweet sirupy colorless liquid got by saponification of natural fats and oils.

Gravidarum (grāv'id-ā'rŭm) Chloasma. That form which occurs at child birth.

H

Haemoglobin (hē-mō-glō'bĭn) The normal coloring matter of the red blood corpuscles of vertebrates.

Hair (hâr) A slender threadlike out-growth on the body of animals.

Hamelis (hâm-âm-ê'lis) A shrub of eastern North America having hazel-like leaves and small yellow flowers appearing after the leaves have fallen. Witch-hazel is an extract of this plant.

Hamate (hă-mât') A bone of the wrist.

Havoc (hăv'ök) Wide and general destruction.

Health (hêlth) State of being hale or sound in body, mind or soul.

Heart (hârt) A hollow muscular organ which, by contracting rhythmically keeps up the circulation of the blood.

Heat regulation (hêt rêg-û-lă-shûn) Temperature controlled.

Hemorrhage (hêm'ô-râj) Any discharge of blood from wounded or ruptured blood vessels.

Henna (hên'â) An Asiatic thorny tree or shrub. Its leaves yield a reddish orange dye and a cosmetic.

Hepaticum (hê-păt'i-kûm) Chloasma. A skin discoloration following dyspepsia.

Hereditary (hê-rêd'i-tă-rî) Descending ancestor to heir.

Herpes (hûr'pêz) An inflammatory skin disease characterized by the formation of small vesicles in clusters.

Herpes Simplex (sîm'plêx) Cold sore.

High Frequency (hî-frê'kwêns-sî) An electrical current rapidly oscillating producing stimulation thereby increasing cell production and glandular activity.

Hippuric Acid (hîp-ûr'îk) A crystallizable acid from the urine of domestic animals more rarely found in human urine.

Histology (hîs-tôl'ô-jî) The science of the minute structure of organic tissues.

Humerus (hûmêr-ûs) The bone of the upper part of the arm.

Hydrate (hî'drât) A compound formed by the union of water with some other substance.

Hydro (hî'drô) Prefix combining form from Greek meaning water.

Hydrogen (hî'drô-jên) A gaseous element colorless, tasteless, odorless, inflammable and lighter than any other known substance.

Hygiene (hî'jî-ên) (hî'jên) The science of preserving health.

Hyoid (hî'oid) A bone at the base of the tongue.

Hyper (hî'pêr) A prefix denoting over, above, beyond.

Hyperemia (hî-pêr-ê'mî-â) A superabundance or congestion of blood.

Hyperidrosis (hî-pêr-îd-rô'sîs) See Chapter V.

Hyperplasia (hî-pêr-plă'sîs) An abnormal increase in number of the tissue elements.

Hypersecretion (hî-pêr'sê-krê-shûn) An abnormal secretion.

Hypertrichosis (hî-pêr'trîk-ô'sîs) A condition of excessive development or abnormal growth of the hair.

Hypertrophy (hî-pêr'trô-fî) To develop to an unusual or abnormal degree.

Hypo (hî'pô) A prefix signifying under; beneath, less quantity, deficient degree of.

Hyponychium (hî'pô-nîk'ê-ûm) The epidermic layer upon which the body of the nail rests.

Hypothetical (hî-pô-thêt'î-kăl) Involving a formal condition.

I

Idiosyncrasy (îd-î-ô-sîn'kră-sî) A characteristic distinguishing an individual.

Illicit (î-lîs'î't) Not allowed; improper.

Immerse (î-mûrs') To plunge into; dip; sink.

Immunity (î-mû-nî-tî) State of resisting the development of disease. Secure against disease.

Impetigo (îm-pê-tî'gô) An inflammatory skin disease characterized by isolated pustules.

Indurata (înd-û-răt'ă) A form of acne with chronic, livid, hardened lesions or formations.

Induration (înd-û-ră'shûn) A hardened mass or formation.

Inefficiency (înd-ê-fîsh'ên-sî) Quality, state or fact of being incapable.

Infection (înd-fêk'shûn) The implantation in the tissues of the body of living pathogenic organisms in such a way as to favor their growth and permit their toxins to injure the tissues.

Infectious (înd-fêk'shûs) Having qualities that may infect.

Inferioris (înd-fê'rî-ôr-îs) Below; lower.

Infiltration (înd-fîl-tră'shûn) The accumulation in a tissue of substances not normal to it.

Inflammation (înd-flă-mă'shûn) A morbid condition consisting in congestion of blood vessels and exudation of serum and blood corpuscles. It is manifested by redness and swelling with heat and pain.

Infra-red (înd-fră-rêd) Pertaining to or designating that part of the spectrum lying outside of the visible spectrum at its red end.

Infratroclear (înd-fră-trôk'lê-âr) A pulley shaped muscle near the oculi.

Ingredient (înd-grê'dî-ênt) A component part of a combination or mixture.

Injury (înd'jôo-rî) Damage or hurt done or suffered.

Inoculation (înd-ôk-û-lă'shûn) The introduction of bacteria or other organisms into abrasions in the skin that will produce or prevent disease.

Insoluble (înd-sôl'û-b'l) Incapable of being dissolved or very difficult to dissolve.

Insulate (înd'sû-lăt') To separate by non conductors, as to prevent transfer of electricity or heat.

Insulation (înd-sû-lă'shûn) Material used or for use in insulating.

Insulator (înd-sû-lă'têr) That which insulates. *porcelain*

Internal (înd-tûr'năl) Inside; inner part.

Inturnus (înd-tûr'nûs) Interior.

Interpose (înd-tûr-pôs') To thrust in. To introduce in between parts.

Interstice (înd-tûr-stîs') A space between one thing and another.

Intestinal (înd-tês'tî-năl) Pertaining to the intestines.

Intolerance (înd-tôl'êr-âns) Quality or state of being unable to endure especially refusal to allow to others the enjoyment of their opinions.

Invasion (înd-vă'zhûn) The incoming or first attack of anything hurtful.

Iodine (î'ô-dîn) A non-metallic element occurring in bluish-black scales.

Iodoform (î-ô'dô-fôrm) A crystalline volatile antiseptic having an unpleasant odor.

Ionization (î-ôn-î-ză'shûn) The act of separating or converting into ions.

Irritation (îr-î-tă'shûn) A condition of morbid excitability and undue sensitiveness of a part of the body.

-itis (-î'tîs) A termination denoting inflammation of the part to the name of which it is attached.

K

Kaolin (kā'ō-līn) A pure white clay used to form the paste of porcelain.

Keloid (kē'lōid) A new growth or tumor of the skin, consisting of whitish ridges, nodules and plates of dense tissue. Peculiar to the colored race. Sometimes due to hypertrophy of a cicatrix.

Kneading (nēd'ing) Working and pressing usually with the hands.

L

Leuco- (lū'kō-) Combining form meaning white.

Leucocyte (lū'kō-sīt') A white blood corpuscle.

Leucoderma (lū'kō-dēr'mā) Abnormal whiteness or albinism in patches.

Leuconychia (lū'kō-nīk'ē-ā) A whitish discoloration of the nails. White spots.

Ligament (līg'ā-mēnt) A tough band of usually white fibrous inextensible tissue serving to connect parts as the articular extremities of bones, or to hold an organ in place.

Linearis (līn-ē-ār'is) Pertaining to or resembling a line.

Lipomatodes (lī-pō-mā-tō'dēz) Nevi of a fatty nature.

Liquid (līk'wīd) Flowing freely like water.

Liquify (līk'wī-fī) To make liquid.

Log wood (lōg'wōd) The very hard brownish heartwood of a Central American tree. It is much used in dyeing.

Lotion (lō'shūn) A liquid preparation used for bathing the skin.

Luna (lū'nā) The whitish moon shaped crescent at the root of the nail.

Lunate (lū'nāt) The crescent shaped bone of the wrist.

Lymph (līm'f) A colorless alkaline fluid of the body.

Lymphatic (līm-fāt'ik) Pertaining to, containing or conveying lymph.

Lysol (lī'sōl) A brown oily liquid soluble in water, made by dissolving coal-tar oil of a certain grade in fat and then saponifying. It is used as a disinfectant.

M

Macula (māk'ū-lā) A spot or blemish on the skin.

Macular (māk'ū-lār) Characterized by maculae.

Macule (māk'ūl) A blotch or stain on the skin.

Maculo papular (māk'ū-lō pāp'ū-lār) Both macular and papular.

Magnesia (māg-nē'zhī-ā) An earthy white substance, slightly alkaline.

Magnetize (māg'nēt-iz) Convert into a magnet. To communicate magnetic properties to.

Magnify (māg'nī-fī) To increase the importance of. To exaggerate.

Magnum (māg'nūm) The largest bone of the wrist.

Malaise (mā-lāz') An indefinite feeling of bodily uneasiness.

Malformed (māl-fōrmd') Badly or abnormally formed.

Malformation (māl-fōr-mā'shūn) Abnormal or badly formed structure.

Malignant (mā-līg'nānt) Virulent or tending to produce death.

Malnutrition (māl'nū-trīsh'ūn) Faulty nutrition.

Malpighian (māl-pīg'ī-ān) Layer of skin containing coloring matter.

Mandible (mān'dī-b'l) The bony part of the lower jaw.

Mandibular (mān-dīb'ū-lār) Pertaining to the jaw.

Manicure (mān'ī-kūr) The care of the hands and nails.

Manipulation (mā-nīp'ū-lā'shūn) Act or process of treating, working or operating with the hands or by mechanical means especially with skill.

Mantle (mān't'l) The cover of the nail.

Marrow (mār'ō) A soft tissue filling the cavities of the bone.

Massage (mā-sāzh') Manipulation, friction, pressure.

Masseter (mā-sē-tēr') A chewer. A muscle of the jaw.

Mastication (mās-tī-kā'shūn) Grinding with the teeth.

Matrix (mā'triks) The ground work in which anything is cast. A formative part.

Matured (mā-tūrd') Fully developed. Completely worked out.

Maturity (mā-tū'ri-tī) State or quality of being mature.

Maxillary (māk'sī-lā-rī) Pertaining to the jaw.

Medicamentosa (mēd'ik-ām-ēn-tōs'ā) Dermatitis. Pertaining to or caused by a drug.

Medicated (mēd-i-kāt'ēd) Impregnated with anything medicinal.

Medication (mēd-ī-cā'shūn) Act or process of medicating.

N

Nail (nāl) The horny scale or plate on the fingers and toes of man and other animals.

Nape (nāp) The back part of the neck.

Narcotic (nār-kōt'ik) A drug which in moderate doses relieves pain but in poisonous doses produces stupor and convulsions.

Nasal (nā'zāl) Pertaining to the nose.

Nasalis (nā-zāl'is) A muscle of the nose.

Nasi (nā'zī) A muscle of the nose.

Navicular (nā-vīk'ū-lār) The boat shaped bone of the wrist.

Necrosis (nēk-rō'sis) Death of a circumscribed portion of tissue or bone.

Negative (nēg'ā-tiv) Expressing denial or refusal.

Negative terminal (tūr'mī-nāl) The end of the conducting circuit of the electric current manifesting alkaline reaction. The zinc plate in a battery.

Neoplasm (nē-ō-plāz'm') A tumor. A tissue growth more or less distinct from that in which it occurs.

Nerve (nūrv) A sinew or tendon.

Nervous (nūr'vūs) Spirited. Abounding in nerves. Affecting the nerves.

Neuritis (nū-rī'tis) Inflammation of the nerves.

Neutralize (nū'trāl-iz) To destroy the peculiar properties of.

Nevus (nē'vūs) nevi, pl. (nēvī') A birth mark; A pigmented spot on the skin either congenital or acquired.

Nicotine (nīk-ō-tīn') A poisonous alkaloid the active principles of tobacco.

Nit (nīt) The egg of a louse.

Nitrogen (nī'trō-jēn) A colorless gaseous element tasteless and odorless constituting about four-fifths of the atmosphere by volume and a constituent of all living tissue.

Nitrous (nī'trūs) Designating a compound of nitrogen in its lower valence.

Nodule (nōd'ūl) A small roundish mass or lump.

Non- (nōn-) A prefix meaning not.

Nonconductor (nōn-kōn-dūkt'ōr) Any substance that does not readily transmit electricity, light or heat.

Noncontagious (nōn-kōn-tā'jūs) Not transmitting disease.

Nonvascular (nōn-vās'kū-lār) Not supplied with small blood vessels.

Normal (nôr'măl) Regular; natural.
Nostril (nös'trıl) An external opening of the nose.
Nourishment (nūr'ish-měnt) Nourishment.
Nucleus (nū'klē-ūs) An organ, typically a rounded or oval mass of protoplasm present in most plant and animal cells and regarded as essential to their growth. A sphere shaped body within a cell forming the essential and vital part.
Nude (nūd) Naked; bare; unclothed.
Nutrient (nū'-trī-ěnt) Nutritious.
Nutritment (nū'trī-měnt) That which nourishes; food.
Nutrition (nū-trish'ūn) The process of nourishment or food.
Nutritive (nū'tri-tive) Pertaining to nutrition.

O

Objective (ōb-jěk'tiv) Pertaining to an object of action or feeling.
Occipital (ōk-sip'i-tāl) The bone which forms the posterior part of the skull.
Occipitofrontalis (ōk-sip'i-tō-frōn-tā'lis) See Chapter VI.
Oculi (ōk-ū-lī') Pertaining to the eye.
Offensive (ō-fě'n'siv) Giving offense; disagreeable; obnoxious; distasteful.
Oleaginous (ō'lē-āj'i-nūs) Oily.
Olecranon (ō-lěk'rān-ōn) The large process forming the head of the ulna.
Onychia (ō-nīk'ē-ā) Ulceration of finger nail matrix.
Onychophagy (ō-nīk-ōf'ā-jē) The morbid habit of eating or biting the nails.
Onychorrhaxis (ōn-īk-ō-rěks'is) Splitting of the nail.
Operative (ōp'ēr-ā'tiv) Capable of acting; effective.

Orbicularis (ōr-bīk'ū-lār-is) A muscle of the mouth; circular.
Orbit (ōr'bīt) Course; circuit.
Orbital (ōr'bīt-āl) Pertaining to the bony cavity of the eyeball.
Organic (ōr-gān'ik) Pertaining to substances derived from living organisms.
Organs (ōr'gāns) Parts or structure adapted to perform some specific function.
Orifice (ōr'i-fis) A mouth or aperture; a small opening.
Origin (ōr'i-jin) The first existence or beginning.
Oris (ōr'is) An opening; mouth.
Oscillation (ōs-i-lā'shūn) Act of changing repeatedly back and forth.
Osmosis (ōs-mō'sis) See Chapter V.
Ovarian (ō-vā'rī-ān) Pertaining to the ovaries or female productive organs.
Oxide (ōk'sid) A binary compound of oxygen with an element or radical.
Oxidize (ōk-si-diz') To combine with oxygen; to deprive of hydrogen as by action of oxygen.
Oxidization (ōk-si-dī-zā'shūn) The act of combining with oxygen.
Oxygen (ōk'si-jěn) A colorless, tasteless, odorless, chemically active gaseous element occurring in the free state in air.
Ozone (ō-zōn') A faintly blue active form of oxygen produced by the silent discharge of electricity in air or oxygen and otherwise.

P

Palate (pāl'āt) The roof of the mouth. A popular designation for the pendulum of the palate.
Palpebrarum (pāl-pē-brā'rūm) Pertaining to the eyelid.
Panacea (pān'ā-sē-ā) A remedy for all diseases. A cure-all.

Papilla (pā-pīl'ā) A small conic or pimple-like projection or eminence. A vascular process of connective tissue extending into and nourishing the root of a hair. The mass within the corium upon which each hair bulb rests.
Papillary (pāp'i-lā-rī) Pertaining to a papilla.
Papillomata (pāp'pīl-lō-mā'tā) An epithelial tumor formed by hypertrophy of the papillae of the skin.
Papula (pāp'ū-lā) A small elevation of the skin.
Papular (pāp'ū-lār) Characterized by pimples.
Papule (pāp'ūl) A pimple.
Para- (pār'ā-) A prefix meaning alongside.
Paralysis (pā-rāl'i-sis) Impairment of function. Loss of the power of voluntary motion or sensation.
Parasite (pār'ā-sīt) A plant or animal living in, on, or with some other living organism at whose expense it obtains food and shelter.
Parasitic (pār'ā-sīt-ik) Of the nature of an organism which lives on other organisms.
Parasitical (pār'ā-sīt-ikāl) Pertaining to plants or animals which live upon or within a living organism.
Parietal (pā-rī'ē-tāl) One of the cranial bones.
Paronychia (pār-ō-nīk'ē-ā) A felon.
Pathogenic (pāth'ō-jěn-īk) Pertaining to the development or cause of disease. Disease producing.
Pediculi (pē-dīk'ū-li) Lice.
Pediculosis Capita (pē-dīk'ū-lō-sis cāp'i-tā) Lousiness of the hair of the head.
Pellagra (pē-lāg'rā) A skin affection with severe constitutional and nervous symptoms.

Penetrate (pēn'ē-trāt) To enter into; to permeate; to pass into or through something.
Percussion (pēr-kūsh'ūn) Striking smartly.
Peri- (pēr'i-) A prefix used to signify around, near, surrounding.
Periosteum (pēr'i-ōs'tē-ūm) The tough fibrous membrane surrounding a bone.
Permalite (pēr'mā-lit) A light for drying the permanent wave after the wave is set.
Peroxide (pēr-ōk'sid) An oxide containing more oxygen than some other oxide of the same element.
Peroxide of Hydrogen, much used as an antiseptic in the form of an aqueous solution.
Perspiration (pūr'spī-rā-shūn) The fluid secreted by the sweat glands on the surface of the body. Sweat.
Pessimistic (pēs-ī-mis'tik) A distrustful and gloomy view of things.
Petrous (pēt'rūs) Stony, rocky.
Phalanx (fā'lānks) pl. Phalanges (fā-lān'jēz) The finger bones.
Phenol (fē'nōl) Carboic acid. Is caustic and neurotic poison. In dilute solution is used as an antiseptic.
Phenomena (fē-nōm'ē-nā) Observable facts or events. That which strikes one as strange, unusual or unaccountable.
Phoresis (fōr'ēs'is) Forcing liquids into the deeper tissues through the unbroken skin by means of the galvanic current.
Phosphoric (fōs-fōr'ik) acid. Any of the three oxyacids of phosphorus known as ordinary acid.
Phyma (fī'mā) A circumscribed swelling on the skin larger than a tubercle.
Physical (fiz'i-kāl) Relating to natural or material things.
Physio- (fiz'i-ō-) Combining form from nature.

Physiological (fiz'i-ō-lōj'i-kāl) Dealing with physiology as the study of the functions of the organs and parts of the body during life.

Physio therapy (fiz'ē-ō thēr'āp-ē) The use of natural forces, such as light, heat, air, water, and exercise, in the treatment of disease.

Picealis (pis-ē-ā'lis) A form of acne caused by the use of tar products.

Pigment (pig'mēt) A coloring matter.

Pigmentary (pig'mēn-tā'ri) Pertaining to producing or containing pigment.

Pigmentation (pig'mēn-tā'shūn) An excessive deposition of pigment in the skin.

Pilosebaceous (pī'lō-sē-bā-shūs) Pertaining to the hair glands and sebaceous glands.

Pilosus (pī'lō-sūs) Covered with hair.

Pimple (pim'p'l) Any small pointed elevation of the cuticle.

Pisiform (pī'si-fōrm) A small circular bone of the wrist.

Pith (pith) The soft spongy interior marrow or kernal.

Pityriasis (pit'i-rī-ā-sīs) A skin disease characterized by branny scales.

Pityrodes (pit-i-rōdz') Alopecia. Rapid loss of hair accompanied by a fine bran like deposit on the scalp.

Plasma (plāz'mā) The watery part of the blood.

Platinum (plāt'i-nūm) A heavy, almost silver white metallic element ductile and malleable but very resistant to most chemicals. It has several times the value of gold.

Platysma (plā-tiz'mā) A broad flat muscle of the neck.

Pliable (plī'ā-b'l) Flexible; easily bent.

Pneumogastric (nū-mō-gās'trik) Of or pertaining to the lungs and stomach.

Poisonous (poi'z'n-ūs) Having the qualities or effects of poison.

Polarity (pō-lār'i-ti) Particular state (positive or negative) with reference to the two poles on the battery or wall plate.

Pollex (pōl'ēks) The thumb.

Pomade (pō-mād') Perfumed ointment.

Pomphus (pōm'fūs) A whitish or pinkish elevation of the skin.

Pore (pōr) A minute opening on the skin.

Porous (pō'rūs) Full of pores.

Portability (pōr'tā-bil'i-ti) Quality or state of being easily carried about.

Positive terminal (pōs'i-tiv tūr'mī-nāl) The end of the conducting circuit manifesting acid reaction. The carbon plate in a battery.

Post- (pōst-) A prefix signifying behind, back of or after.

Posterior (pōs-tē'ri-ēr) Coming after or behind.

Potassium (pō-tās'i-ūm) A soft light silver-white metal of the alkali group always occurring combined as in sylvite, saltpeter, etc.

Predicament (prē-dīk'ā-mēt) Condition; especially an unpleasant, unfortunate or trying position.

Pregnant (prēg'nānt) Teeming with or full of ideas; being with young.

Premature (prē'mā-tūr) Happening, arriving, existing, or performed before the usual time.

Primary (pri'mā-rī) First; primitive; original.

Procerus (prō-cē'rūs) The pyramidal nasal muscle.

Productive (prō-dūkt'iv) Having the quality or power of producing.

Profession (prō-fēsh'ūn) Vocation; Those engaged in a calling collectively. That of which one professes knowledge.

Prognosis (prōg-nō'sis) Opinion as to the probable time it will take for the cure of a disease.

Prominencies (prōm-i-nēn'siz) Projections beyond line or surface of something.

Prophylactic (prō-fī-lāk'tik) Defending or preserving against disease.

Protection (prō-tēk'shūn) Act of shielding from injury.

Proteid (prō'tē-id) Any of a class of very complex substances present in all living cells, both animal and vegetable, and necessary in the diet of animals. All contain carbon, hydrogen, nitrogen and oxygen and usually a little sulphur.

Protein (prō'tē-in) Proteid.

Protoplasm (prō'tō-plāz'm) The material basis of life. A substance found in all living things whether plant or animal.

Psoriasis (sō-rī-ā-sīs) A chronic skin disease characterized by circumscribed red scaly lesions.

Pterygoid (tēr'i-goid) Wing like. A muscle which draws the jaw forward.

Puberty (pū'bēr-ti) The age at which the reproductive organs become functionally operative.

Pulsation (pūl-sā'shūn) A single beat, throb or impulse.

Pumice (pūm'is) A highly vesicular volcanic glass used especially powdered as an abrasive.

Punctata (pūnk'tā-tā) A form of acne in which the lesions are pointed papules with a comedone in the center.

Purpura (pūr-pū'rā) A disease characterized by the formation of purple patches on the skin and mucous membrane.

Pus (pūs) A liquid inflammation product made up of leucocytes suspended in a serous exudate.

Pustular (pūs'tū-lār) Consisting of pustules.

Pustule (pūs'tūl) A small circumscribed elevation of the cuticle with inflamed base containing pus.

Pustulosa (pūs'tū-lō'sā) A form of acne characterized by pustules.

Putrefaction (pū-trē-fāk'shūn) Act or process of decomposition. Rotten.

Pyramidalis nasi (pēr-ām'id-ā-lis nā'zī) See Chapter VI.

Pyro- (pī'rō-) Prefix meaning heat or fire.

Pyrogallie (pī-rō-gāl'ik) A poisonous white crystalline substance obtained chiefly by the action of heat on gallic acid.

Q

Quadratus (kwōd-rā'tūs) A muscle of the lower jaw.

R

Radius (rā'di-ūs) The outer bone of the fore-arm.

Re- (rē-) Prefix denoting back to original or former state or position.

Recognize (rēk'ōg-niz) To avow knowledge of; identify.

Rectifier (rēk'ti-fī-ēr) An apparatus to convert an alternating current of electricity into direct current.

Recuperate (rē-kū'pēr-āt) To recover health or strength.

Rejuvenate (rē-jōō'vē-nāt) To make young or vigorous again.

Relax (rē-lāks') To make loose; open; to unbend.

Relaxation (rē-lāk-sā'shūn) Making lax or loose; less severe or tense.

Reproductive (rē-prō-dūk'tiv) Pertaining to reproduction or the process by which plants and animals give rise to offspring.

Residue (rēz'ī-dū) That which remains after a part is taken; remainder.

Resistance (rē-zīs'tāns) Act or capacity of striving against defeat. Electric. The opposition of a substance to the passage through it of an electric current.

Respiration (rēs-pī-rā'shūn) The act of breathing or inhaling.

Respiratory rē-spir'ā-tō-rī) Of or pertaining to respiration.

Revivicate (rē-viv'ī-kāt') To cause to revive or restore.

Reticular (rē-tik'ū-lār) Having the form of net work.

Rhagades (rāg'ād-ēz) Fissures of the skin.

Rheostat (rē'ō-stāt) Any contrivance for regulating the electrical current by means of variable resistance. An adjustable resistance.

Rheumatism (rōō'mā-tīz'm) A painful disease of the muscles and joints accompanied by swelling and stiffness.

Rickets (rīk'ēts) A constitutional disease of childhood in which the bones become soft and flexible from retarded ossification due to the deficiency of the earthy salts caused by lack of proper nutrition.

Ringworm (rīng'wūrm) Any parasitic skin disease in circular patches.

Risorius (rī-zō'rē-ūs) A muscle of the mouth.

Rosacea (rō-zā'shā) A form of acne accompanied by chronic inflammation of the central vertical part of the face generally due to free use of stimulants.

Rotate (rō'tāt) To turn; revolve.

Rouge (rōōzh) Any of various

cosmetics used to give a red color to the cheeks or lips.

S

Salicylic (sāl'ī-sil'ik) acid. A white crystalline acid. It is used as an antiseptic and in its salts, in treating rheumatism.

Saliva (sā-lī'vā) The weakly alkaline fluid consisting of the secretions of the glands that discharge into the mouth.

Salivary (sāl'ī-vā-rī) Producing saliva.

Sanitary (sān'ī-tā-rī) Pertaining to health.

Sanitation (sān'ī-tā-shūn) The use of methods to bring about favorable conditions of health.

Saponification (sā-pōn'ī-fī-kā'shūn) Act, process or result of converting into soap.

Saprophyte (sāp'rō-fīt) Any organism living on dead or decaying organic matter.

Sarcoma (sār-kō'mā) A tumor made up of a substance like the embryonic connective tissue.

Saturate (sāt'ū-rāt) To cause to become completely penetrated or soaked. That which has absorbed all that it can hold.

Scab (skāb) An incrustation over a sore or wound.

Scabies (skā'bī-ēz) The itch. This disease is attended with intense itching together with the eczema caused by scratching.

Scalp (skālp) That part of the integument of the head which is hairy in both sexes.

Scapula (skāp'ū-lā) The shoulder blade.

Scaphoid (skāf'oid) A boat shaped bone.

Scar (skār) A mark remaining after a wound or ulcer is healed. A cicatrix.

Sciatica (sī-āt'ī-kā) A painful inflammation of the nerve running down the back of the leg, called the sciatic nerve.

Scientific (sī-ēn-tif'ik) Agreeing with or depending on the rules or principles of the systematized knowledge of facts.

Scrupulous (skrōō'pū-lūs) Implying hesitation as to action or decision from difficulty in determining what is right or proper; careful.

Sebaceous (sē-bā'shūs) Secreting fat.

Seborrhea (sēb'ō-rē-ā) An abnormal secretion of the sebaceous glands.

Seborrhea Oleosa (ō-lē-ō'sā) An oily condition.

Seborrhea Sicca (sīk'ā) A dry condition.

Sebum (sē'būm) The secretion of the sebaceous glands.

Secondary (sēk'ūn-dā-rī) Being in second place, degree or stage of formation.

Secrete (sē-krēt') To separate, elaborate and emit as a secretion.

Secretion (sē-krē'shūn) That which is secreted.

Secretory (sē'krē-tō-rī) Pertaining to or promoting secretion.

Sedative (sēd'ā-tiv) Tending to calm, allay irritability and irritation.

Semilunar (sēm-ī-lū'nār) The crescent shaped bone of the wrist.

Senile (sē'nīl) Characteristic of old age.

Sensation (sēn-sā'shūn) Act of feeling or apprehending through a sense of the senses.

Sensory (sēn'sō-rī) nerves. Nerves carrying sensations.

Sentient (sēn'shī-ēnt) Experiencing sensation and feeling.

Septi (sēp'tī) A dividing wall.

Septic (sēp'tik) A substance that promotes putrefaction.

Serum (sē'rūm) The watery residue of an animal fluid after coagulation.

Sewage (sū'āj) The contents of a sewer or drain.

Sewerage (sū'ēr-āj) Removal of sewage and surface water by sewers.

Shaft (shāft) A stem or stalk. The long slender part of the hair above the scalp.

Shampoo (shām-pōō') To subject the scalp to washing and rubbing with some cleansing agent as soap and water.

Sheath (shēth) A case or covering enclosing or surrounding some organ.

Simplex (sīm-plēks') Common; simple.

Sinus (sī'nūs) A cavity, recess or depression. A channel for venous blood.

Sinusoidal (sī-nūs-oid'āl) Current. An alternating current in which the potential rises periodically from zero to a maximum and then gradually returns to zero.

Skeleton (skēl'ē-tūn) The bones of a human being or animal collectively.

Skin (skīn) The external covering of an animal body.

Skull (skūl) The bony framework of the head.

Slough (slūf) To separate as dead matter from living tissues. To discard.

Sodium (sō'dī-ūm) A waxy silver-white metallic element of the alkali group occurring abundantly as in common salt.

Solution (sō-lū'shūn) Process by which a substance is absorbed into a liquid.

Solvent (sōl'vent) A substance (usually liquid) capable of, or used in, dissolving something.

Spatula (spāt'ū-lā) A flexible, knife-like implement for handling creams, drugs, etc.

Specialist (spēsh'āl-ist) One who devotes himself to some special branch of learning, art or business.

Specialistic (spësh-äl-îs'tîk) Pursuing a special mode of action or development.

Specific (spê-sîf'îk) Definite; explicit.

Spectrum (spêk'trûm) A variously colored band into which light is dissolved in passing through a prism. By causing a white light to pass through a prism this spectrum is obtained in which several colors form a series from deepest red through orange, yellow, green, blue, indigo to deepest violet.

Sphenoid (sfê'noid) A compound bone at the base of the cranium.

Spherical (sfêr'i-câl) Like a sphere.

Spine (spîn) The back-bone.

Spirillum (spî-rîl'ûm) Spiral or coil-like.

Spirochaeta palida (spî-rô-kê'tâ pâl'i-dâ) A spiral organism, the pathogenic parasite of syphilis.

Spleen (splên) A highly vascular gland-like ductless organ in the left side of the abdomen.

Squama (skwâ'mâ) A scale like structure.

Squamous (skwâ'mûs) Scaly; pertaining to the anterior upper portion of the temporal bone of man and various mammals.

Stagnation (stäg-nâ'shûn) Lack of action. Cessation of activity.

Staphylococci (stäf'i-lô-kôk'kî) A genus or form of bacteria made up of cocci aggregated into irregular masses common bacteria.

Steatoma (stê-ât-ô'mâh) A sebaceous cyst.

Stereoscopic (stêr-ê-ôs'kô-pîk) Where two pictures appear as one and stand out in relief.

Sterile (stêr'il) Free from germs.

Sterility (stê-rîl'i-tî) Condition of being unfruitful. Barren.

Sterilization (stêr'il-îz-â'shûn) The process of freeing from all germs.

Sterilizer (stêr-î-lîz'êr) That which sterilizes. A receptacle for sterilizing.

Sterno cleido mastoid (stûr'nô kli'dô mäs'toid) See Chapter VI.

Stimulant (stîm'û-lânt) An agent increasing functional activities.

Stimulate (stîm'û-lât) To rouse or animate to action or more vigorous exertion.

Stimulation (stîm-û-lâ'shûn) Act of stimulating.

Stratum (strâ'tûm) (pl. strât'â) A layer.

Stratum corneum (kôr'nê-ûm) The outer epidermic layer of the skin.

Stratum granulosum (grân-û-lôs-ûm) A granular layer of the skin.

Stratum lucidum (lû'sîd-ûm) A clear epidermal layer of the skin.

Streptococci (strêp'tô-kôk'kî) Bacteria having cells which divide in one direction only forming chains.

Structural (strûk'tûr-âl) Pertaining to structure or a structure.

Structure (strûk'tûr) Manner of building; form; make.

Styptic (stîp'tîk) Stopping bleeding; astringent.

Subcutaneous (sûb-kû-tâ'nê-ûs) Situated under the skin.

Subcutis (sûb-cû'tîs) A deeper layer of the skin.

Subjective (sûb-jêk'tîv) Of the nature of or pertaining to the subject.

Submerge (sûb-mûrj') Sink or plunge anything under water or other fluid.

Sudamen (sû-dâm'ên) See Chapter V.

Suderiferous (sû'dôr-jî'êr-ûs) Producing or secreting sweat.

Sudorific (sû-dôr-îf'îk) Causing or inducing sweat.

Sulphide (sûl'fid) A binary compound of sulphur.

Sulphur (sûl'fûr) A non metallic element occurring native and combined.

Sulphuric (sûl-fû'rîk) acid. A heavy corrosive oily liquid. Pertaining to sulphur.

Supercilli (sû-pêr-sîl'î) Superior.

Superficial (sû-pêr-fîsh'âl) Pertaining to the surface.

Superfluous (sû-pûr'floo-ûs) In excess of what is wanted or is sufficient.

Superioris (sû-pê-rî-ôr'îs) A muscle which elevates. Upper of two.

Supervene (sû-pêr-vên') To come as something additional.

Suppuration (sûp-û-râ'shûn) Pus.

Supra (sû'prâ) A prefix signifying over, above, before.

Supraorbital (sû-prâ-ôr'-bî-tâl) Above the orbit or eye.

Susceptible (sû-sêp'tî-b'l) Capable of admitting any change or condition.

Symptom (sîmp'tûm) The effects accompanying disease.

Symptomatic (sîmp-tûm-ât'îk) Of the nature of a symptom.

Symptomatic Alopecia, Loss of hair from illness.

Symptomatic Chloasma, A form of chloasma accompanying disease.

Synovia (sî-nô-vî-â) A transparent viscid lubricating fluid secreted by the lining membranes of joints.

Synthetic (sîn-thêt'îk) Products put together by the process of making a compound by union of simpler compounds or of their elements.

Syphilis (sîf'i-lîs) A contagious venereal disease marked by structural lesions.

System (sîs'têm) An assemblage of objects united by regular interdependence. A group of organs which especially contributes toward one of the more important vital functions.

T

Telangiectatic (têl-ân'jê-êk-tât'îk) Dilatation of the capillary vessels and minute arteries forming a variety of angioma.

Telangiectodes (têl-ân'jî-êk-tô-dêz) A form of Nevi with dilated capillary vessels.

Temperature (têmp'êr-â-tûr) Degree of heat or cold.

Temporal (têmp'ô-râl) Sides of the skull; temple.

Temporalis (têmp'ô-râ'lîs) Pertaining to the temple or sides of skull.

Terminal (tûr'mî-nâl) Of or pertaining to the end or extremity.

Tertiary (tûr-shî-â'rî) Of the third order, or place of information.

Texture (têks'tûr) Disposition of microscopic structure.

Theory (thê'ô-rî) A body of principles or laws presenting a clear and systematic view of a subject.

Therapeutic (thêr'â-pû-tîk) The healing art. That part of medical science which treats of the discovery and application of remedies for disease.

Thoracic (thô-râs'îk) Pertaining to the thorax.

Thorax (thô'râks) The part of the body between the neck and the abdomen.

Tinge (tînj) A degree, usually slight of some color, taste, or of something foreign infused into, or added to, something.

Tissue (tîsh'û) A collection of cells with their lying between substances forming one of the structural materials of an animal or plant.

Tissue, connective (kô-nêk'tîv) A general name for all those tissues of the body that support the essential elements.

Tonic (tôn'ic) Increasing the strength or tone of the system.

Toxemia (tôk-sê'mî-â) A form of blood poisoning.

Toxic (tók'sík) Due to or of the nature of poison.

Toxine (tók'sín) Poisons produced by bacterial action.

Trans- (tráns-) A prefix used to signify over, across, beyond, through.

Transmit (tráns-mít') A transfer, as of a disease.

Transverse (tráns-vûrs') Lying or being across. To turn across.

Trapezium (trá-pē'zī-ûm) One of the bones of the wrist in the lower row.

Trapezius (trá-pē'zī-ûs) As hung in a trapeze.

Trapezoid (tráp-ē-zoid) Smallest bone in the second row of the wrist.

Tremers (trē'mērz) An involuntary trembling or quivering.

Triangular (tri-án'gū-lār) Having three angles or corners.

Triangularis (tri-án'gū-lār-ís) Like a triangle, three parts or sides.

Trichophytosis (trík-ō-fi-tō'sís) Ringworm.

Tubercula (tū-bēr'kū-lā) A small rounded morbid growth.

Tubercular (tū-bēr'kū-lār) Pertaining to tubercles.

Tuberculosis (tū-bēr'kū-lō'sís) An infectious disease due to a specific bacillus characterized by the formation of tubercles.

Tumor (tū'mēr) A mass of new tissue which persists and grows independently of its surrounding structures and which has no physiologic use.

Turbinate (túr'bi-nāt) Shaped like a top.

Turpentine (túr'pēn-tín) A semi-fluid the exudation of the terebinth tree.

U

Ulcer (ül'sēr) A superficial sore discharging pus.

Ulna (ül'nā) The inner of the two bones of the forearm.

Ultra- (ül'trā-) A prefix signifying beyond, extraordinary.

Ultraviolet (-vī'ō-lēt) Outside the visible spectrum at its violet end. Those scarcely visible rays of the spectrum which are beyond the violet rays.

Un- (ün-) A prefix meaning not.

Unciform (ün'sī-fōrm) A bone of the wrist.

Uric (ū'rik) acid. A white odorless acid found in urine and some organs of the body.

Uridrosis (ū'rid-rō'sís) The presence of urea in sweat.

Urticaria (ūr'ti-kā'ri-ā) A skin disease characterized by the sudden appearance of smooth, slightly elevated patches which are usually whiter than the surrounding skin and attended by severe itching.

Uterine (ūtēr-in) Pertaining to the uterus an organ of all female mammals in which the young is contained and nourished before birth.

Utility (ū-tīl'ī-tī) Quality or state of being useful.

Utilize (ū-tī-līz) To make useful.

V

Vaccine (vāk'sín) Any material for preventive inoculation.

Vacuum (vāk'ū-ûm) A space entirely devoid of matter; a space from which the air has been exhausted.

Valve (vālv) A structure which temporarily closes a passage or orifice or permits flow in one direction only.

Vapor (vā'pēr) Any substance in the gaseous state thought of with some reference to the liquid or solid form.

Vaporization (vā'pēr-ī-zā'shûn) Act or process of converting water into steam or vapor.

Varicose (vār-ī-kōs') Irregular or knotted.

Vascular (vās'kū-lār) Supplied with small vessels. Pertaining to a vessel for the conveyance of a fluid as blood or lymph.

Vascularis (vās'kū-lār'is) A nevus involving a part of the cutaneous vascular tissue.

Vascularity (vās'kū-lār-ī-tī) Supplied with vessels for blood.

Vehicle (vē'hi-k'l) A means of conveyance. A substance in which medicaments are carried into the deeper tissues.

Vein (vān) A vessel carrying blood to the heart.

Venenata (vē'nē-nā-tā) Dermatitis; a form due to local action of an external poison.

Venereal (vē-nē'rē-āl) A disease arising from illicit sexual indulgence with an infected person.

Verruca (vēr-ō'kâ) A wart.

Verrucosus (vēr-ō-kō'sūs) Wartlike.

Vesicle (vēs'ī-k'l) A small circular elevation of the skin or cuticle containing a clear watery fluid.

Vesicular (vē-sīk'ū-lār) Composed of vesicles.

Vibrate (vī'brāt) To swing. To mark or measure by oscillation.

Vibrator (vī'brā-tēr) An instrument electrically driven causing a swinging, shaking sensation on the body producing stimulation.

Vinegar (vīn'ē-gēr) A sour liquid used as a condiment or as a preservative got by fermentation of dilute alcoholic liquids as wine, cedar, etc. It contains acetic acid.

Violet ray (vī'ō-lēt rā) Same as High Frequency so called on account of the violet color in the glass applicator.

Virulent (vir'ōō-lēnt) Extremely injurious to life or health.

Vital (vī'tāl) Containing life; living.

Vitality (vī-tāl'ī-tī) The principle of life. State or quality of being vital. Power of enduring or continuing.

Vitamine (vī'tām-in) A basic compound found in rice, yeast, lentil, etc. An antineurotic substance. One of a class of substances of unknown composition existing in minute quantity in natural foods and necessary to normal nutrition and growth.

Vitiate (vīsh'ī-āt) To contaminate; spoil; corrupt.

Vitiligo (vīt-ī-lī'gō) A skin disease consisting in the development on various parts of the body of smooth milk white spots due to the disappearance of the natural pigment.

Volatilize (vōl'ā-tīl-īz) To exhale or evaporate.

Volt (vōlt) The unit of electric motive force.

Voltage (vōl'tāj) Potential difference expressed in volts.

Vomer (vō'mēr) A bone in the nose.

Vulgaris (vül-gā'ris) Common.

Vulnerable (vül'nēr-ā-b'l) Liable to injury.

W

Wall-plate (wōl-plāt) An electrical machine so constructed as to produce both the galvanic and faradic currents. It consists of a connecting cord, resistance light, or coil, milliammeter, faradic coil, rheostat, selecting levers, binding posts and conducting cords.

Wart (wōrt) A small elevation of the skin more rarely of the mucous membrane.

Watt (wōt) The electrical unit of energy.

Wattage (wōt'āj) Amount of electric power expressed in watts.

Wen (wēn) A sebaceous cyst.

Wheal (hwēl) A flat burning or itching eminence on the skin. The mark made by a stroke.

Witch-hazel (wīch-hā'z'l) An extract of the bark of the shrub *Hamamelis Virginiana* of eastern North America reputed as a remedy for bruises, sprains, etc.

X

Xanthoma (zăn-thō'mă) A disease attended with the formation of yellow neoplastic growths upon the skin especially that of the eyelids.

X-Ray (ěks-rā) The Röntgen rays. These rays were discovered by the German physicist Wilhelm Röntgen and were called x-rays by him.

Z

Zinc (zīnk) oxide. A white amorphous salt. It is used in form of dusting powder or in ointment.

Zygomatic (zī-gō-măt'ik) Pertaining to the malar or cheek.

Zygomaticus (zī-gō-măt'ti-kūs) Muscle controlling the upper lip.

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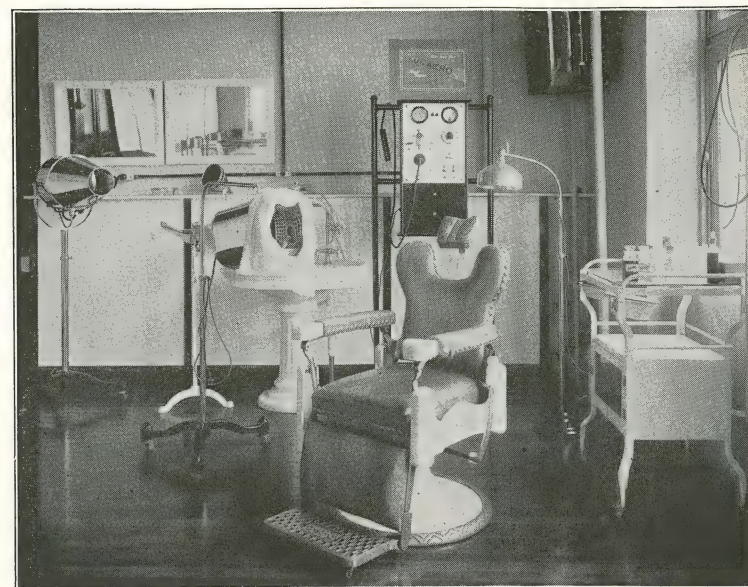
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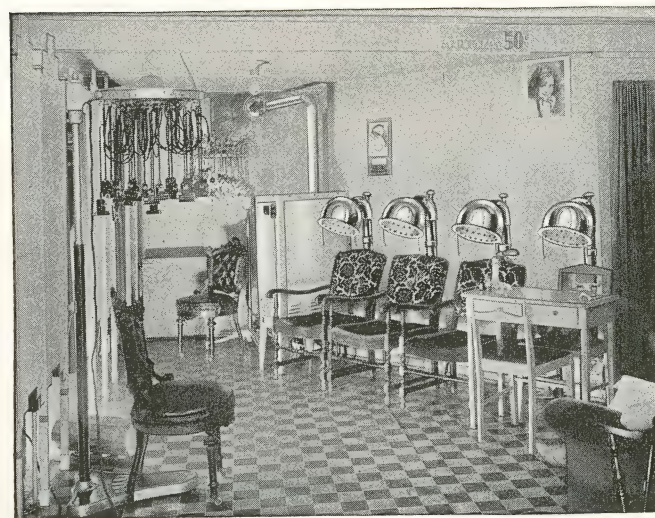
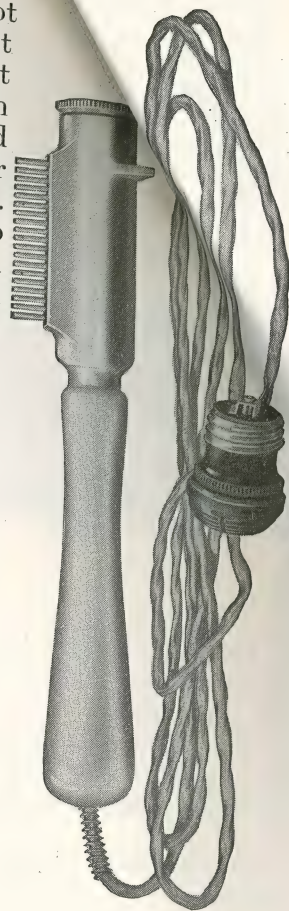
The above illustration shows some of the equipment of our instruction department where teachers and instructors desirous of post graduate work, are invited to come and get free instruction. Shop owners desiring special instruction in any particular work are also invited.

Write our Instruction Department for appointment.

As stated, there will be no charge, it is our pleasure to cooperate.

For the application of Hot Oil in scalp and hair treatment the ordinary practice is to heat the oil in a small metal pan and then apply it with a wad of cotton, parting the hair with a comb to reach the scalp. The oil will of course start to cool again the minute the pan is removed from the stove and therefore other means have been suggested for accomplishing this. If the oil is heated and then applied with a device like the Thermo Comb, much valuable time will be saved and the oil applied at a temperature where it is readily absorbed by the hair and scalp.

This method is also most economical of the oil, none being wasted in dripping or absorbed by the cotton. The Thermo Comb can also be used for the application of heavier medications made up with cold cream or vaseline.



GAS HEATED MULTIPLE DRYER

The advantage of the gas heated dryer is in the lower cost of operation. While it costs anywhere from three to five cents to dry a finger wave with the electric dryer, it costs only about one-third of a cent to dry with gas heat.

There are today not less than ten different makes of gas heated multiple dryers on the market and in any one of them we can say you get what you pay for. The very low priced kind draw the air over the gas flames using a mixture of hot air, carbon monoxide and dioxide gas which are poisonous to dry the hair and for the customer to breathe.

The regulation of temperature is by hand valve only.

A higher grade has an oven for heating the air and the burnt gases are drawn off through a vent. The regulation is possibly semi-automatic with considerable fluctuation. Proper venting to the outside of the shop cannot be done because the cold air will come down the vent pipe and blow out the flame filling the oven and shop with unburnt gas. The oven is just a sheet or castiron box and the air blower is of such size that there is considerable difference between the air force and temperature of the last as to the first dryer.

There are several other weaknesses but the price is in line with what you get.

As to the number of hoods which can be attached to a unit it depends on what degree of efficiency the buyer is satisfied with and what they pay for.

The highest class is a scientific product with every part correctly proportioned. The gas burners, pilot, as well as main burner, are controlled by electro-thermostats and valves, the crown sheets of the air heating oven is of metal not affected by the gas used in that particular city. The oven has tubular flues for the effective heating of the air and the burnt gases are drawn off by a forced draft into a vent pipe and out of the shop.

The motor and blower are so proportioned that proper air pressure is maintained in the hood farthest from the oven as well as the nearest. The customer can regulate the air on her head to a comfortable degree.

A dial thermometer indicates at all time the temperature of the air touching the customer's hair. The electro-thermostatic controls are adjustable and function in a few seconds, maintaining the desired temperature. The accidental stopping of the electricity shuts off the gas flow, there is no chance of the shop becoming filled with gas fumes.

Send for descriptive folder.

Prices on application.

DERMA-VAC FACIAL METHOD

The vacuum process of removing impurities and exudates from the skin, especially the face and neck and stimulating the underlying tissues has proven its value so that more detail as to its application is warranted.

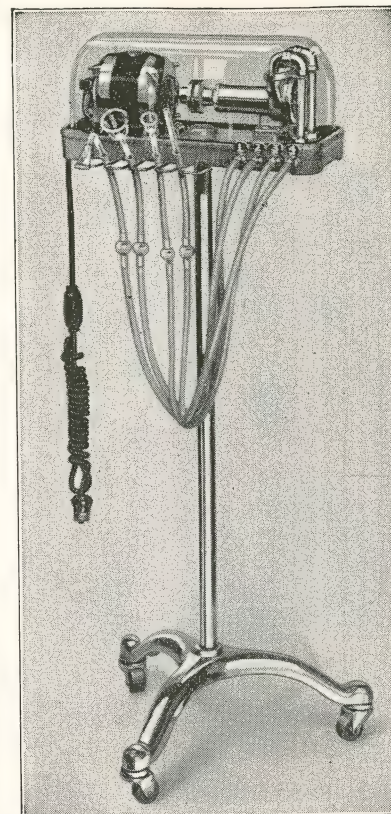
A statement made to the effect, that a suction process gives danger of broken capillaries and separating of the outer layer of the skin from the underlying tissues, is not based on knowledge of fact. The person making such a statement is not familiar with such process and those who have used same for years testify to the contrary.

First the skin is cleaned with a special cleansing cream for absorbing and removing surface dirt and grease. Then a pack compound to soften hard surfaces such as blackhead covers, etc. is applied and removed, after which the vacuum applicators as suited to the specific condition are to be used. For blackheads, instead of the so-called comedone extractor with which the surface crust is first opened with the lance end and then the blackhead pressed out by pushing the ringed end down on it, the surface is softened by the pack for several minutes and then the applicator with the small opening is applied. The suction from the motor driven pump creates a vacuum sufficient to cause the blackheads to come out without bruising the surrounding skin. Sunken surfaces may be treated with larger applicators adapted to stimulate the tissues by raising and relaxing them much like a massage but with the advantage which comes by the vacuum stimulated circulation.

Fine lines are treated in the same manner by a special applicator and even the first treatment has shown that such lines can be eradicated by this method of using a vacuum process.

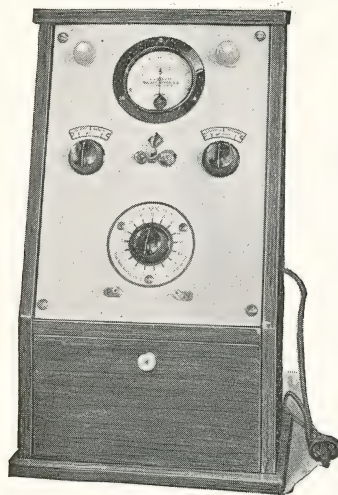
Send for descriptive folder.

Prices on application.



The wall plate illustrated will work on the alternating current without requiring a rectifier.

You simply place a radio "B" battery into the compartment in back of wall plate, connect it to the wires furnished for that purpose, plug in on the 110 or 115 volt current and set switches for either galvanic or farradic current whichever is to be employed. You will secure a smooth current, easily adaptable and under perfect control.

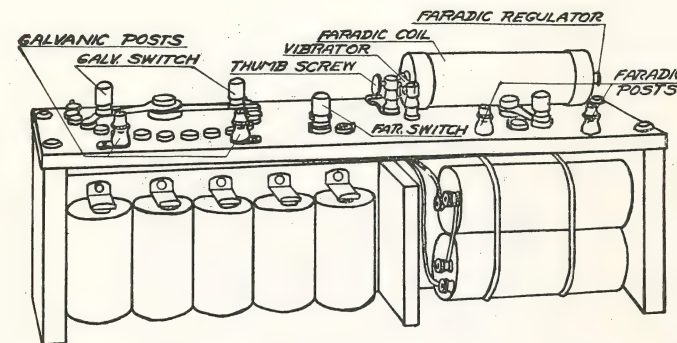


This wall plate is mounted in a mahogany finished frame, with the switchboard in white enamel and is very attractive in appearance.

It fills a long-felt want in that it saves the price of an expensive rectifier where only alternating current is available.

A compartment in the lower front part of the apparatus furnishes ample room for electrodes used with the wall plate.

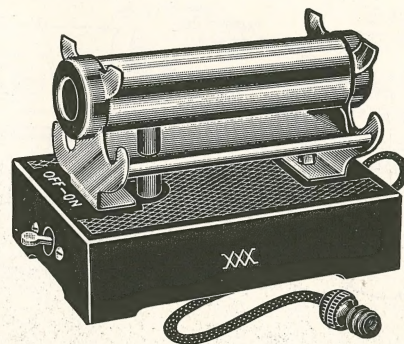
The 45 volt standard large vertical Eveready "B" battery is recommended for use with this wall plate.



Batteries have been a favorite with the cosmetistes for many years, and would be more in use if it had not been for the fact that, whenever a battery became exhausted, it was necessary to let an electrician do the work of replacing the cells. Frequently he knew nothing about it, and succeeded only in botching the job.

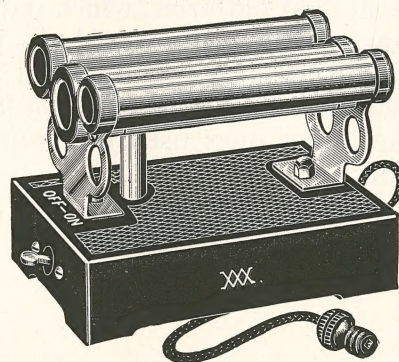
To eliminate him, or if wanted, at least make him harmless, the No. 2 and 4A Meyer batteries are fitted for regular flash light batteries, which require no wiring connection. All you need to do is, pull out the old cell and push in the new one. All the grief of mixing the wires is eliminated and, the batteries last as long as the larger ones used heretofore, but cost only a fraction.

Meyer Marcelling Iron Heaters have no superior, they are quick heating, either the tip or the whole iron as desired, and will keep their attractive finish, showing their value, when others have entirely discolored.

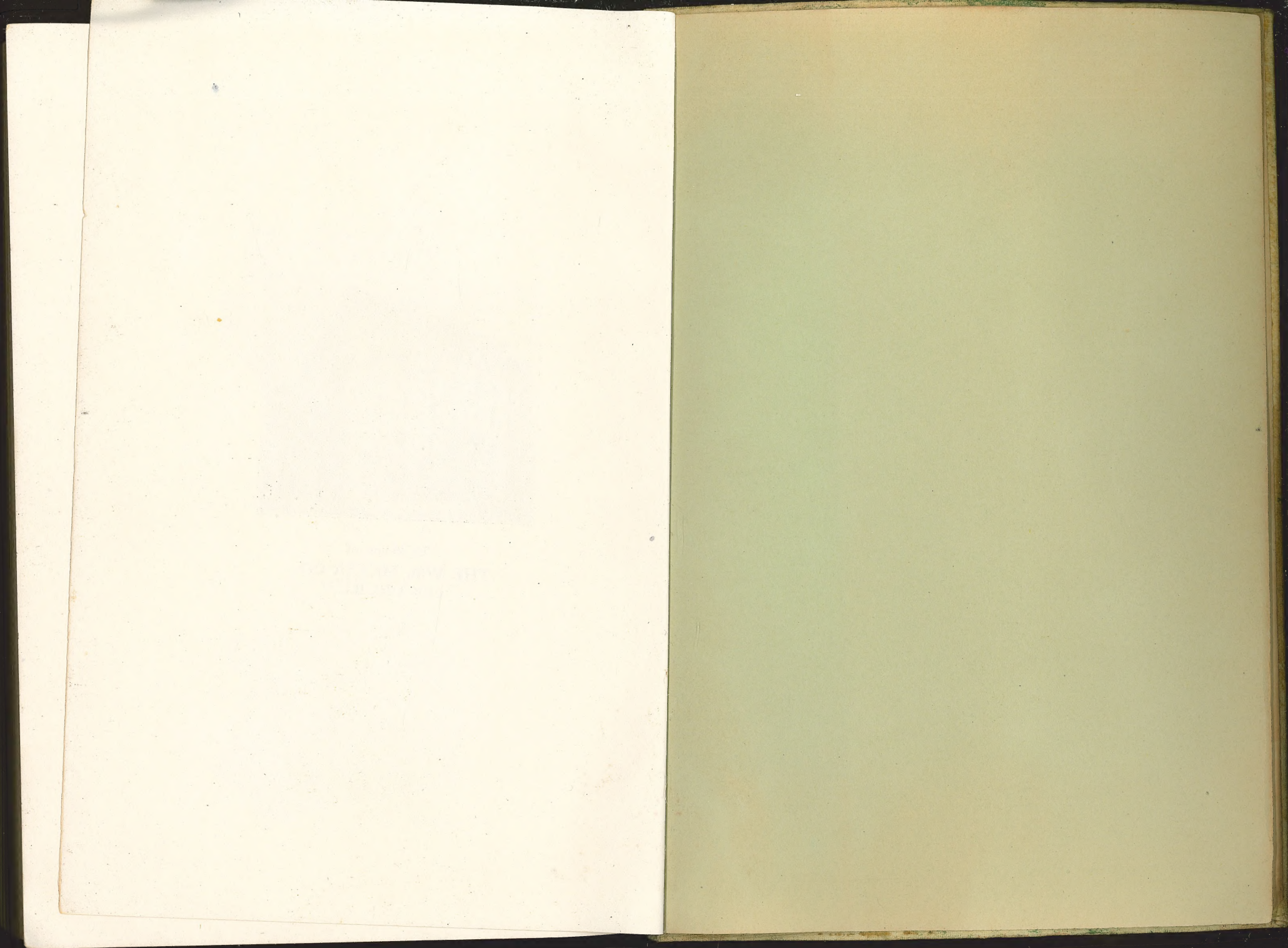


The Duo Heater has the advantage of keeping two irons going at just the right temperature, no matter how long kept in the heater, it saves time and worry. You don't have to try the iron every time to see if it is too hot.

DUO



The Home of
THE WM. MEYER CO.
CHICAGO, ILL.



Vanity Ballroom
of 14201 E. Jefferson. at Newport.

The
COSMETISTE

The
COSMETISTE

EIGHTH
EDITION