

THE
ULTRA-VIOLET



Its Use:

PHOTOTHERAPY
STERILIZATION
PHOTOCHEMISTRY



COOPER HEWITT ELECTRIC Co.

HOBOKEN, NEW JERSEY

The Ultra-Violet

Its Use: Phototherapy Sterilization, Photochemistry

THE therapeutic use of the ultra-violet has been extended slowly and conservatively since the time of Finsen, having had a much wider application in Europe than in this country. With the improved apparatus and methods now available this work is being advanced rapidly in many of the leading hospitals. The ultra-violet has been found of some value in a large number of diseases and of great value in some. Of these may be mentioned the following:

- Bone and Joint Tuberculosis
- Tonsil and Pyorrhea Infections
- Infectious Skin Lesions
- Hyperacidity
- Rickets

and a large number of more specific pathological conditions of interest to the specialist.

The practical application of ultra-violet to the sterilization of water is a development of the past ten years. A variety of outfits are made under the R. U. V. patents and may be used in combination for any capacity. They are sold under a guarantee that the water delivered by the sterilizer will be free from pathogenic or disease producing bacteria. These R. U. V. sterilizers using Uviarc lamps are in continuous operation in hundreds of drinking water systems where protection from typhoid must be certain, and in swimming pools where chemical methods are objectionable. Of the many users, nearly all of whose names are familiar, only a few can be mentioned:

Drinking Water.

- French Lick Springs "Pluto Water"
- Great Lake Steamers (Nearly all)
- Marshall Field & Co., Chicago, Ill.
- Sprague Warner & Co., Chicago, Ill.
- Statler Hotel, Detroit

Swimming Pools.

- Great Lakes Naval Training Station
(One of eight pools under Government inspection).
- Detroit Athletic Club
- Fleischmann Baths
- Palisades Park "Ocean Pool"
- Madison Square Garden Pool.

While the application of the ultra-violet to chemical processes is as broad as the whole field of chemistry, there are a few specific processes and reactions which may be pointed out as typical. The far ultra-violet has been found effective in polymerizing and in promoting oxidation in the linseed and tung oils. A closely related process is the photochemical bleaching of ordinary linseed oil to produce "artist's oil." The substitution of ultra-violet radiation for sunlight has been effective on a commercial basis in the "solarizing" process of finishing patent leather. Several processes for the hydrogenation of oils in the preparation of cooking and salad oils have been worked out and are applicable where the ordinary catalysts are objectionable. Many patents have been issued covering halogenation processes and some of them are in commercial use. Ultra-violet radiation can be used without the aid of any other catalytic agent to effect the synthesis of sulphur dioxide and oxygen, and while the process has had no industrial application as yet, like many others, is so promising as to be worthy a more extended investigation than has yet been given it. The factors involved are so many and complicated that each case of commercial application must be handled on its own merits and no attempt can be made here to summarize the possibilities.

Cooper Hewitt Products

COOPER HEWITT ELECTRIC LAMPS

For industrial illumination.

For photography.

UVIARC (*Ultra Violet Arc*) LAMPS

Uviarc Test Cabinets for color fastness.

Labarc for physical laboratory work.

Uviarc Laboratory Outfit for experimental work.

COOPER HEWITT ELECTRIC CO.

HOBOKEN, NEW JERSEY

Boston: 161 Summer St.
Chicago: Old Colony Bldg.
Cincinnati: First National Bank
Bldg.
Cleveland: Engineers Bldg.
Detroit: Ford Bldg.
Hoboken: 95 River St.

Los Angeles: Keese Engineer-
ing Corp.
Milwaukee: Security Bldg.
Philadelphia: Drexel Bldg.
Pittsburgh: Westinghouse Bldg.
St. Louis: Title Guaranty Bldg.
Syracuse: University Bldg.

THE
ULTRA-VIOLET



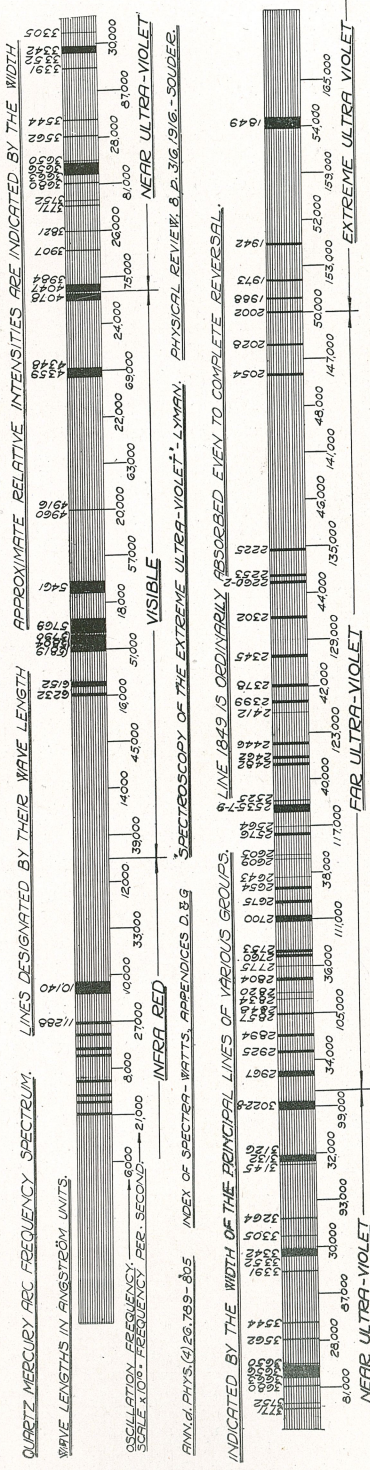
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STERILIZATION
PHOTOCHEMISTRY



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"MERCURY ARC FREQUENCY SPECTRUM."

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Sterilization, Photochemistry

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