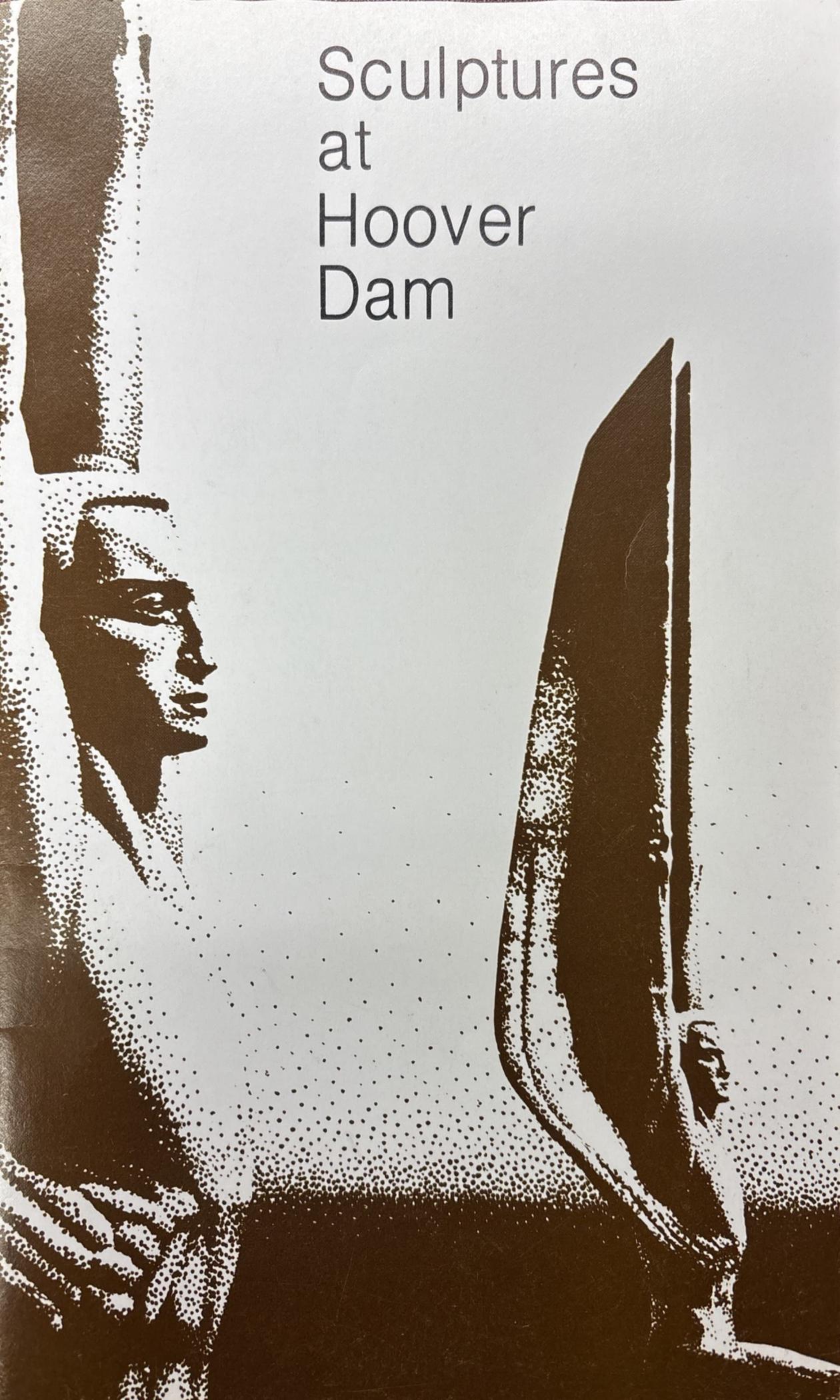


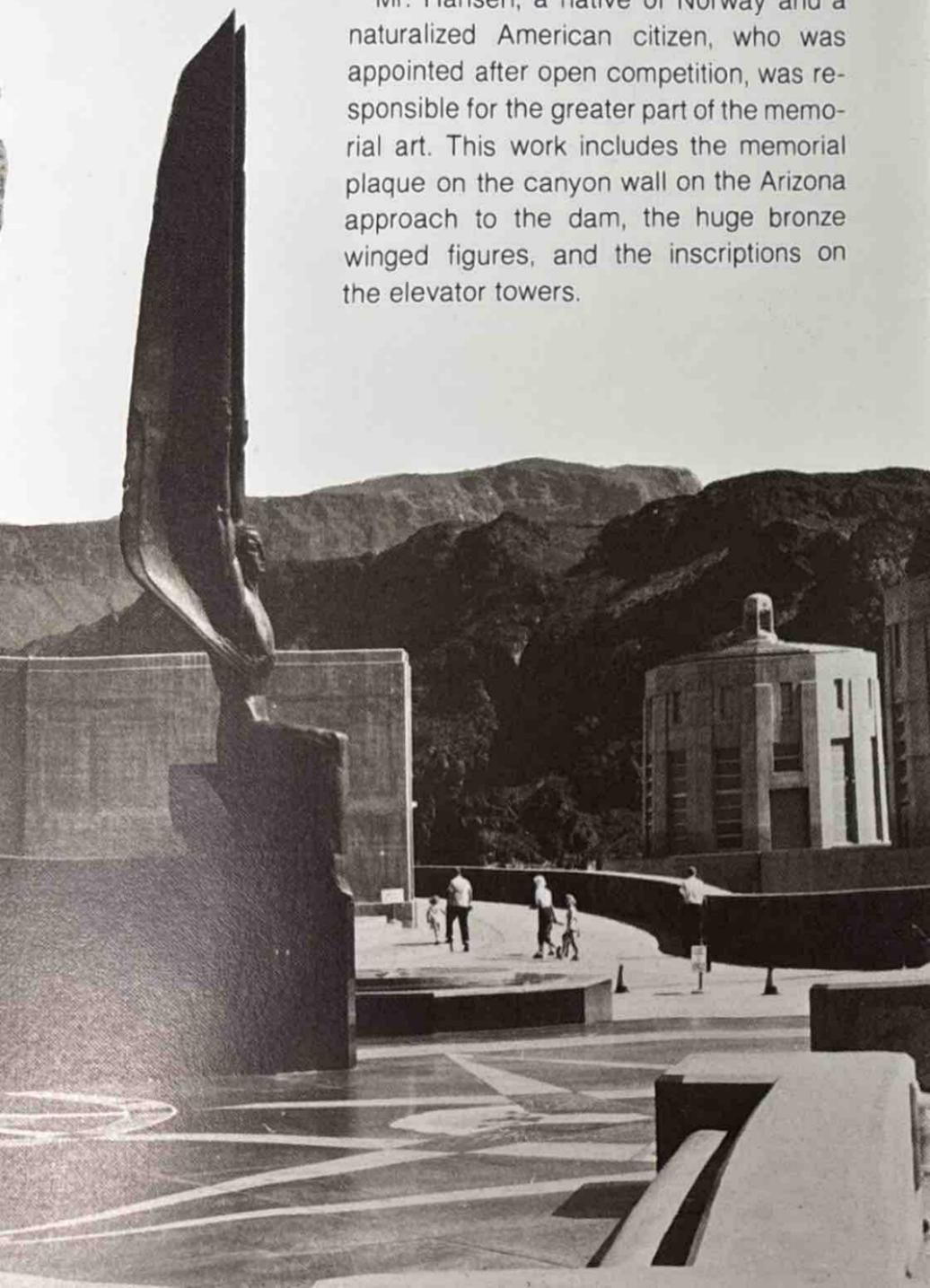
Sculptures at Hoover Dam



Foreword

An achievement of a truly great artist, the sculptures at Hoover Dam are one of the highlights for the thousands of people from all parts of the world who visit this great Reclamation multiple-purpose project on the Colorado River each year. In the following pages, Mr. Hansen has sculptured in words an interpretation of his work at Hoover Dam. It is hoped that through this booklet will come a better understanding and appreciation of his creations.

Mr. Hansen, a native of Norway and a naturalized American citizen, who was appointed after open competition, was responsible for the greater part of the memorial art. This work includes the memorial plaque on the canyon wall on the Arizona approach to the dam, the huge bronze winged figures, and the inscriptions on the elevator towers.



The principal work is located at the Nevada side of the dam, close to the abutment. Here one comes suddenly on a strikingly beautiful monument of dedication. Rising from a black polished base is the flagpole, 142 feet high, flanked by two winged figures. These are said to be the largest monumental bronzes ever cast in the United States. The castings are 30 feet high. Their shells are $\frac{5}{8}$ -inch thick and contain more than four tons of statuary bronze. As symbols they express, according to the sculptor, the immutable calm of intellectual resolution, and the enormous power of trained physical strength, equally enthroned in placid triumph of scientific accomplishment.

The base upon which the figures rest is of black diorite (an igneous rock), quarried near Santa Ana, Calif. In order that the huge blocks might be placed without danger of marring, they were first centered and rested on blocks of ice, the gradual melting of which permitted their being lowered into precise position.

Near the figures, and elevated above the floor, is a compass, framed by the signs of the zodiac.

Surrounding the base, upon which rest the figures, is a terrazzo floor. Inlaid in the terrazzo is a star chart, or celestial map, designed to preserve for future generations the date on which President Franklin D. Roosevelt dedicated the dam. The dedication occurred on September 30, 1935, and at 8:56 that evening the flagpole pointed exactly at the center of our sun; i.e., the center of the ecliptic. The position of the stars shown in the floor is related in hour, minute, and right ascension to this center. Thus our pole star (Polaris), indicating the true obliquity of the North Pole of the

earth, is shown to a split second as of that date and hour.

Also marked on the star chart are momentous historical periods. Marked in the terrazzo is the position of a pyramid (2700 B.C.) when Thuban (Alpha Draconis) was the pole star of the ancient Egyptians—the Biblical Star of Egypt. The incarnation of our Lord, marking the beginning of the Christian era, is indicated midway between the location of Thuban and Polaris. By walking to the rear of the base, upon which rest the figures, one can locate Vega, the pole star yet to be, thousands of years in the future.

The apparent magnitudes of the stars are shown on this chart as they would appear to the naked eye if but a distance of 10 parsecs from our Earth. It requires $3\frac{1}{4}$ sidereal years to travel a distance of one parsec at a rate of 186,300 miles per second. In other words, one parsec represents roughly 19 trillion miles. The actual distance to most of the stars is more than 50 parsecs.

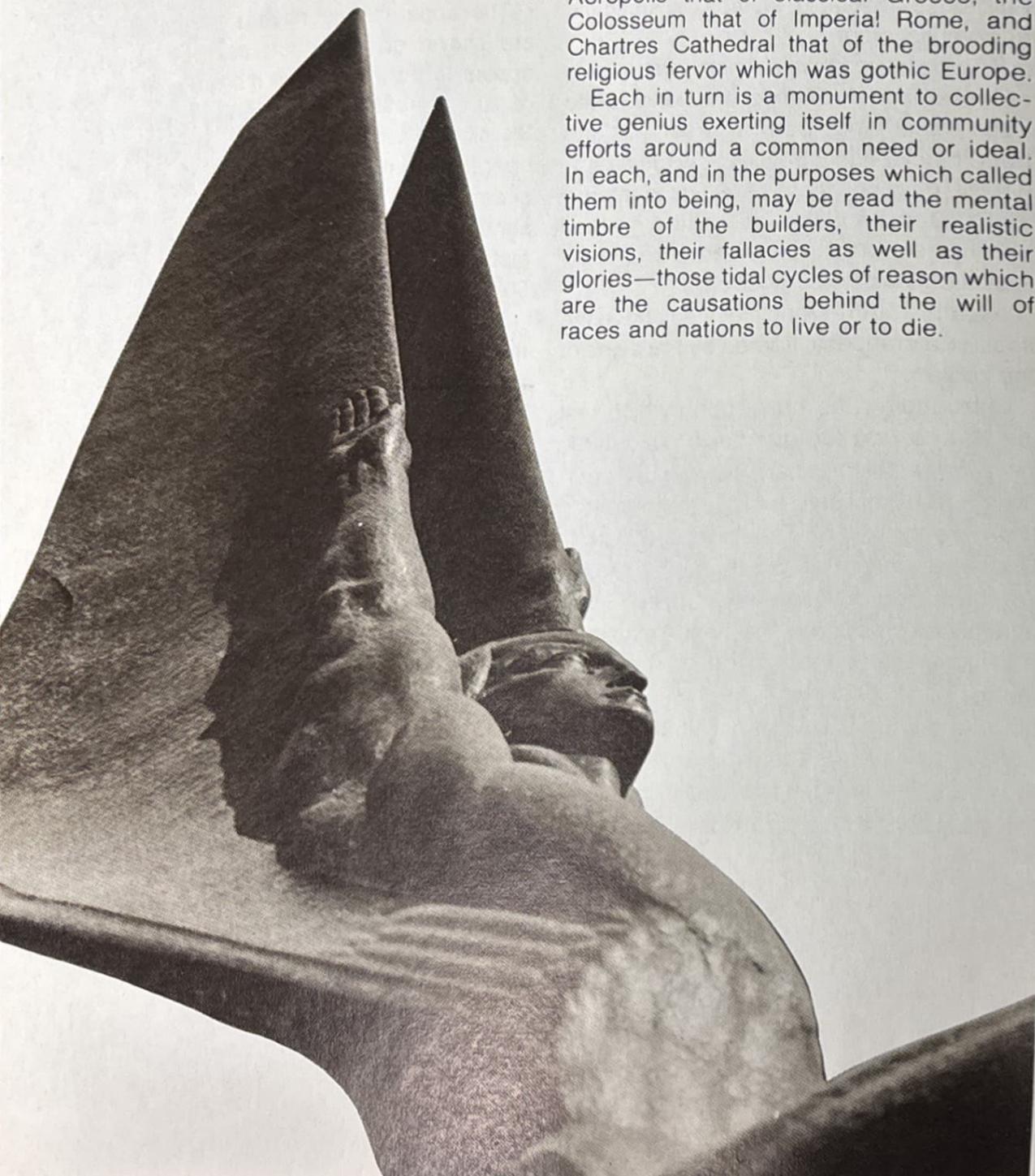
The designer of the star chart, following the calculations of the Naval Observatory, the Smithsonian Astrophysical Laboratory, and other authorities, placed the bodies of our solar system in the terrazzo, correct to the minutest fraction of an inch in the scale of design. One versed in the abstruse mathematics of astronomy may calculate the precession of the Pole Star for the next 14,000 years by studying the design of the star chart. Conversely, future generations may look upon this monument and determine—if no other means are available—the exact date on which engineers and craftsmen of our generation completed this giant structure.

With the Look of Eagles

By OSKAR J.W. HANSEN, *Sculptor*

THE SCULPTURES on the Hoover Dam adorn a major structure of our times. The dam represents the building genius of America in the same sense as the Pyramids represent that of ancient Egypt, the Acropolis that of classical Greece, the Colosseum that of Imperial Rome, and Chartres Cathedral that of the brooding religious fervor which was gothic Europe.

Each in turn is a monument to collective genius exerting itself in community efforts around a common need or ideal. In each, and in the purposes which called them into being, may be read the mental timbre of the builders, their realistic visions, their fallacies as well as their glories—those tidal cycles of reason which are the causations behind the will of races and nations to live or to die.



To the final adornment and completion of these structures a sculptor was assigned. It was necessary to adorn Hoover Dam with sculptures because it is true of sculpture that it gives meaning to man's other works by interpreting man to other men in the terms of man himself. Sculpture presents a synesthesia based upon the origin, evolution, and racial architecture of the human mind and body.

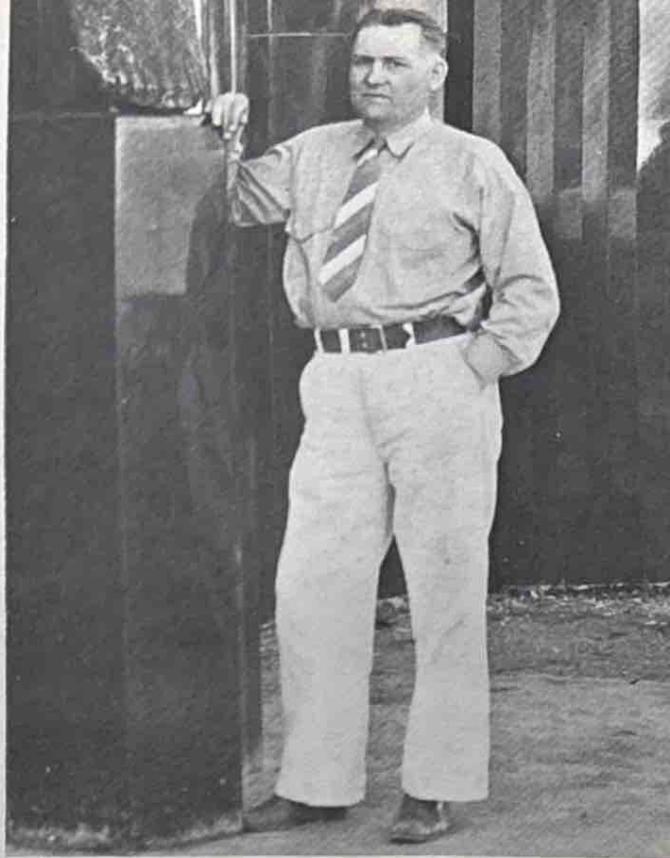
A pyramid, for instance, may present a complex of awe, wonder, and bewilderment to the modern mind. Offhand, such structural prodigies may impress one as works of some race entirely alien in mind and body to our own. (I noted that the stupendous scale of Hoover Dam produces upon the average visitor a similar effect.) The public ask themselves about the builders, "What manner of men were these?"

Then, as now, the sculptor answers objectively through an art which presents the man. To us comes a smile of recognition when we note that the Pharaoh Khafre had a frame which would have sustained an all-American fullback and a face which would have insured his election as alderman in *our* first ward. We look upon the carving of this majestic gusto of 5,000 years ago and decide that this Pharaoh certainly must have been a product from the main stem of the human race.

The historic mission of sculpture is therefore to evoke a pungent realization of man and to make this realization nearly imperishable against the oblivion imposed by time. It may also shape a symbolism in human form in order to convey the very best within the reach of the aspirations and endowment of the race.

In nature the gift of all favors may not be projected into the keeping of one personality. Her wise decree ordains that physical and mental capacities should differ. On the other hand a sculptor may show in a single symbolic image the potential nobility of the race of men. The Hoover Dam is an achievement of peace, and the sculptures there could be dedicated to the finest traditions within the reach of the art.

In such a place as the Hoover Dam, a monument becomes a universal as well as

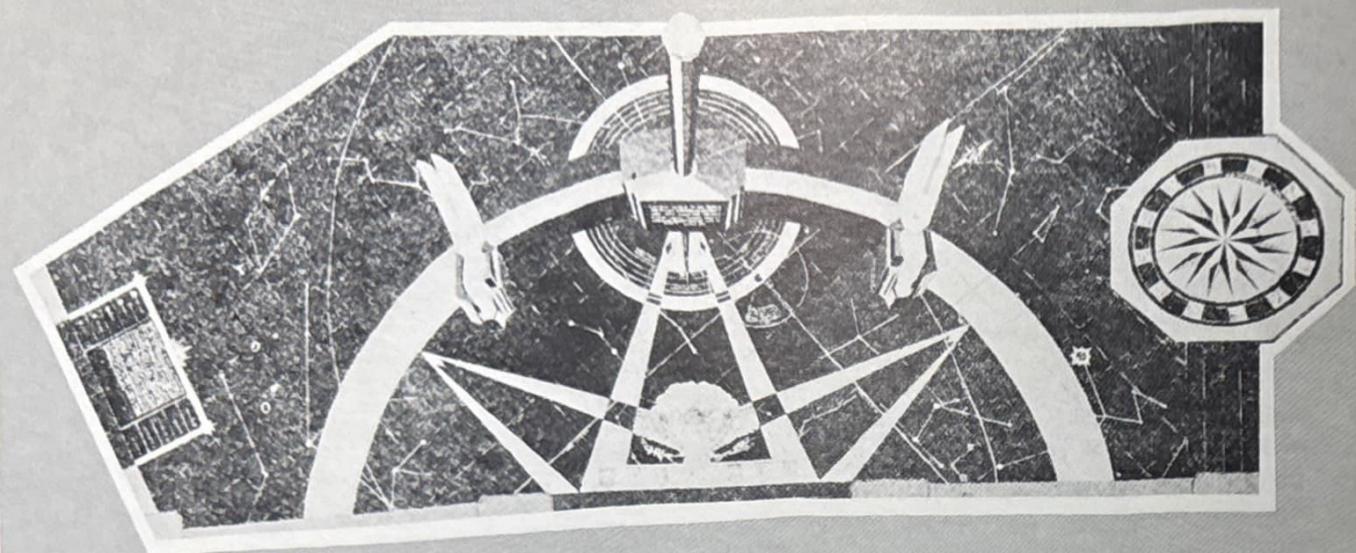


Sculptor Oskar J. W. Hansen. In this article, Mr. Hansen does what an artist can rarely do: He tells with thrilling frankness how a great work came into being and what it means to its creator. He was appointed by Secretary Harold L. Ickes consulting sculptor of the Bureau of Reclamation after a national competition in search of suitable designs. His monument has been admired by millions.

a personal experience. People will not condone the reflection of their own faults in a public monument. That sculpture which draws general approval from a majority in its time therefore reflects in a peculiar sense the aspirations of that milieu.

The second stage in the appeal of a successful monument is the apprehensive curiosity it provokes. *Apprehensive*, because a human being is also a cagey animal who wants to know at once the nature of any appeal which disturbs the even trend of that *inner code* by which he lives. The votary has an immediate need to know how a monument is able to reach into his *own* emotions.

This is legitimate curiosity. It results in such questions as "How do you begin?" and "How do you do it?" How it is done, I shall attempt to explain later.



The best I can do in telling how I begin for my layman inquirer is to give him an *inkling* as to why a monument is a monument. So I will endeavor to tell why the sculptures on Hoover Dam are seated and not standing, why their hands are up and not down, so to speak. I will try to tell you some of the thoughts you would find being weighed in my mind if you *could* come upon it directing my hands in their work.

You would then become aware that the sculptures on Hoover Dam result from my concise application of the knowledge that *the true nature of a substance determines its balance*. I use the word *balance* to convey an image of the characteristic gravitational relationship of a physical body, or of a person, to this universe of which we are a part. Of those human beings with exceptional mental and physical endowments, it is said that they are *finely balanced*. This is a literal as well as a figurative statement.

I hold the balance of a *person* to be established as the *law of his being* at the moment of conception. Not only is he then endowed with the hereditary attributes of species and race; but the *order* of his own individual life pattern is established as an *entity separate* from that of other beings. There is established a *unique magnetic field*. This magnetic field

is the fulcrum against which the physical body is levitated into existence. It remains a constant so long as the *person* lives.

In conformity with the rhythm of a person's magnetic field his body cells live, grow, differentiate, and assemble to become the dimensional implements of his soul. In the flow of this rhythm move the creative impulses of *thought*.

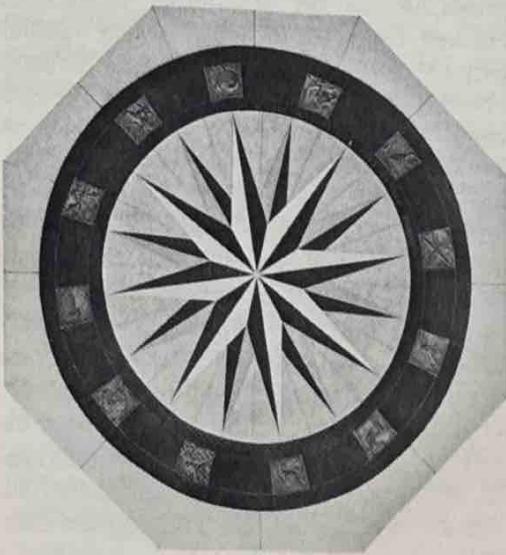
When the memory of this magnetic pattern, or *balance*, is lost, the soul may no longer maintain direction and control over the component cells within the physical body. Some of these cells then divert their activities into *evolutionary directions unrelated to the person* of whom they are a physical part. Some may differentiate at random while other units cease to function. It is said of such a person that "he can no longer call his soul his own." It would be more correct to say that he can no longer call his body his own. A body loses *balance* and dies when it becomes progressively unrelated in its parts to the controls of that magnetic field established as the beginning of a *person*.

This is the "stuff" on which a person's dreams of life are made. Inversely, it may be the "stuff" on which the dreams of universes are made.

The *act* of living is therefore a *strife* to retain *balance*. A person strives thus dur-



The winged figures of the Republic.



The compass at the left of the monument makes a pleasing pattern viewed from above. Arranged about it are the 12 signs of the Zodiac.

ing the entire waking state of his life. Some intensify their sense of *balance* in the steps of the ballet, some do the same with music and song, while others find it in activities of the mind while the seated posture of contemplation permits the body to follow the revolving Earth. A clown evokes our mirth and also our pity because he assumes balances exactly contrary to the true postures of the emotions he purports to convey. One thing in life is certain and that is, whichever occupation a person enjoys the most, it is bound to be one of those which coincide the closest with his *personal need* for keeping in *balance*.

Mental and physical fatigue causes temporary or progressive loss of control over the organisms of the body. After a certain number of hours a person must rest

Details of three of the plaques around the compass.



in freedom from this strife. Sleep, and in a larger sense death, perhaps, are the mechanics through which nature re-charges the human battery.

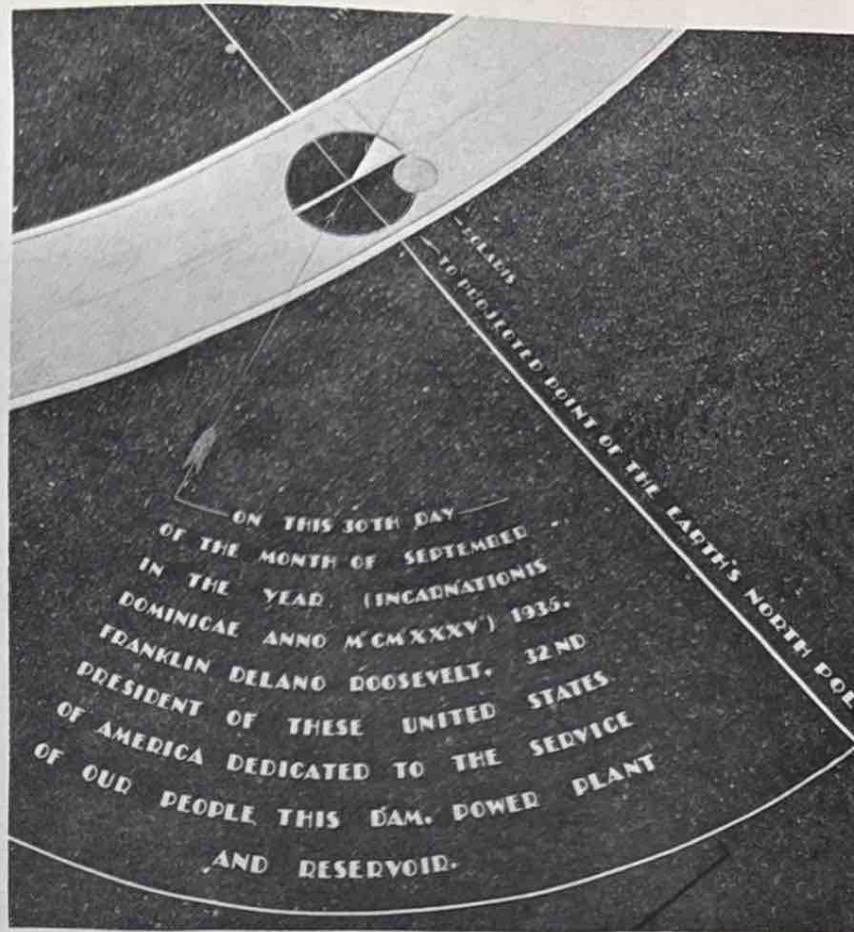
There is *no fixed point of rest* from which a sculptor may project a figure in human likeness. He may not model the two feet on the ground and then evolve on top of these a figure either psychologically or structurally true to nature. His creation, like a human babe, must be first conceived in the mind as a personality. It must then be given structural attributes to implement that personality. The gravitational center of the mobile sphere of a cranium is therefore the *critical point* from whence a sculptor must begin. He then proceeds to plot the exact relationship of this *mobile* center to the gravitational center of Mother Earth.

Since man thus encases the *core of his being* within the thermos bottle of his cranium, it follows that all other members and organs of the human body are organized as specialized equipment ordained to move, defend, feed, reproduce, and maintain in gravitational *balance* the *being* who dwells *in space* within his cranium. It is then readily seen that the members and masses of the human body *must arrange* themselves around a *mean* line drawn from the gravitational center of the Earth to the center of that planetary mass which is a man's head.

You would find me continuing the projection of my sculptured figures on Hoover Dam by transposing my mental picture of a man's cranium and thinking about it in turn as though it were a heavy vessel filled with liquid which someone is trying to balance on top of a long pole. In my mind I would make the observation that the vessel is very full and must be balanced neatly; or that, if it happened instead to be mostly empty, it could be carried at many a rakish angle. I would remember that Mother Nature carries those craniums which contain finely attuned thinking mechanisms in erect bodies with an unfaltering and confident stride. To others she may grant just sufficient balance to keep for them a precarious hold on life.

My thought would then record that there was a point in exact prolongation of the

Portion of terrazzo star map shows position in the equinox towards which the pole of the Earth's equator pointed on September 30, 1935.



Earth's radius where the vessel could be maintained in balance with a *minimum effort* and that away from this vertical there came an *acute angle* where it slid off the end of the pole. My practical conclusions would again transpose this picture for application to my human problem and it would be plain that, in between the perfect vertical alinement of a person and that acute angle where sensibility ends lie the *posture indexes of all human emotions*.

These postures may be matched to their corresponding reflexes in terms of angle and degree much as one would join cams in a worm-gear drive. There is an angle for doubt, for sorrow, for hate, for joy, for contemplation, and for devotion. There are as many others as there are fleeting emotions within the brain of each individual who inhabits the Earth. Who knows not all these postures of the mind if he would but stop to think of them as usable factors for determining proclivi-

ties of character? It is a knowledge bred down to us through the past experience of the whole race of men.

Ordinarily these posture indexes of character are referred to as *expressions*. By adopting this common term we may say, then, that expressions are the bodily reflexes of mental efforts to keep in balance. Then mental efforts may be observed in terms of subtle inclinations of the head or of the whole body, in gestures of the hands, by the pointing of a finger, by the certainty or uncertainty of the stride, or they may be indicated through a mere fluttering of an eyelid as it veils with momentary secrecy the inner turmoil of a soul.

In practice, you would find me referring to posture angles as a writer would refer to the lexicon and dictionary, or an engineer to his tables and slide rule. I select for my figure in sculpture those angles which express the predominant emotions and characteristics of the per-