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## THE JANUARY NUMBER OF

# ART and ARCHAEOLOGY

WILL CONTAIN THE FOLLOWING ARTICLES, ELABORATELY ILLUSTRATED:

## CLASSICAL ARCHITECTURE AT THE PANAMA-PACIFIC EXPOSITION, SAN FRANCISCO

By H. Rushton Fairclough

## THE SEVEN WONDERS OF THE ANCIENT WORLD

I. THE PYRAMIDS, By Edgar J. Banks

## MASTERPIECES OF ABORIGINAL AMERICAN ART

IV. SCULPTURE, By William H. Holmes

## CHINESE AND JAPANESE SCULPTURE AND PAINTING. I

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## LESSER KNOWN MASTERPIECES OF ITALIAN PAINTING. IV

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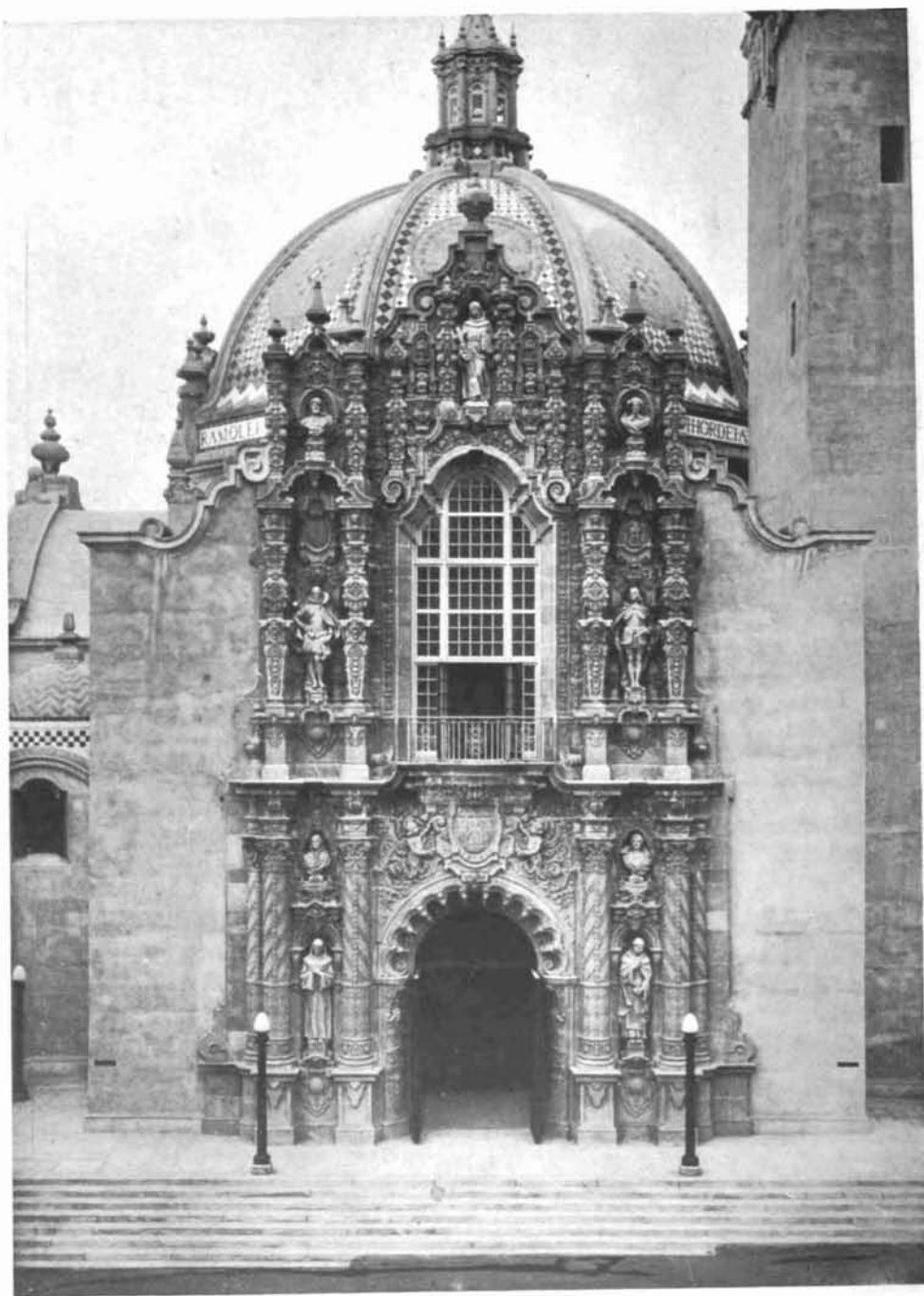
SAMPLE COPY ON REQUEST

## San Diego's Dream City

### The Exposition located in the Harbor of the Sun

Three years ago in the heart of the city of San Diego, the southernmost of Uncle Sam's Pacific ports, there was a four-hundred-acre tract of land on which there was not a single building. Neither was there much in the way of foliage. For longer than the memory of man that tract of land had been untouched by water, only by the rare rainfalls which strike the city of the southwest by the Harbor of the Sun. As a result, the adobe soil was packed hard and seared by the almost constant sun. In the canyons and on the mesa there grew nothing save cactus and sagebrush and chapparal.

That was three years ago. Today on that mesa stands a gorgeous city of old Spain, and the land about the buildings, even down to the depths of the canyons is covered with a thick growth of semi-tropical foliage, with lofty trees and spreading shrubs and low bushes, through whose deep green flashes the crimson of poinsettia, and the tecoma, and the bright gold of the California poppy. The magic garden has taken the place of the desert. He who saw the land three years ago and sees it again today, would think that some modern Aladdin had come this way and rubbed his lamp, or that a Merlin had waved the magic wand and caused the Dream City to spring up. It has been a species of magic but not the sort affected with the wand. Styles in magic have changed in the last few centuries, and the only wand which the magician of San Diego used is known more commonly as a spade, or a trowel or a garden hose. The effect however is as tremendous as the effect of old time sorcery.—*National Magazine*.



FAÇADE OF THE CALIFORNIA BUILDING,  
PANAMA-CALIFORNIA EXPOSITION.

# ART AND ARCHAEOLOGY

VOLUME II

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## ANCIENT AMERICA AT THE PANAMA-CALIFORNIA EXPOSITION

EDGAR L. HEWETT

### INTRODUCTION

TO ONE who has had familiar acquaintance with nearly all the American expositions, beginning with the Centennial, 1876, it is a great privilege to have been able to take part in this wonderful creation at San Diego—an exposition distinct from all its predecessors, historically, artistically, and scientifically. Conceived by local genius and executed with the assistance of specially qualified collaborators, in each department it forms a splendid setting for the celebration of the Isthmian wedding of the Atlantic and the Pacific. San Diego was selected as an appropriate city for the celebration, since it is the American port nearest the western gate of the Canal and besides has a sentimental claim in the fact that its port was the first north of Mexico to be entered by a European ship. Cabrillo, after rounding Cape Horn, explored the western coast and cast anchor in the broad bay behind Point Loma in 1542.

The reason why this Exposition appeals with such overpowering force to the imagination of the visitor may not at once be apparent. It is not stupendous as the international expositions, but an achievement far removed from these and possible only in the far Southwest. Should one venture to explain the fascination almost certainly felt by the imaginative visitor, he will think first

of the superb site with its deep verdant valleys, of the many-arched Cabrillo Bridge which leads over a profound gorge to the splendid Ocean Gate; of the songs of many unseen birds echoing back and forth from the embowered slopes; of the domes and many-storied towers which rise beyond—dreams of grace and embodiments of permanency and strength; of the long arcades wreathed in ever-blooming vines through which one finds his way; of the shady and deeply secluded paths from which glimpses are had of the distant blue sea. All of these and more conspire with the soft sunlight and the sweet-scented air to dreams of Arcady. Is this then not all a dream! It was December at San Diego and the whole East was in the clutches of a fierce zero winter.

The charm of this Exposition is, however, not confined to its superficial features, for aesthetic attention has been extended equally to the interiors in many ways; but the serious side of human affairs, the arts and industries, history, science, and education are here given exceptional attention, the central idea being the history of man and more especially man in the early stages of his development. For the first time in the history of expositions the story of the physical man is made a chief attraction, and native American culture is presented

in a manner more illumining than ever before.

Aside from the great group of exhibits brought together by Doctor Hewett in illustration of the highest achievements of aboriginal America—the work of the Maya race—the Exposition embodies

science, are destined to serve a great purpose as the nucleus of a permanent museum in San Diego. The readers of ART AND ARCHAEOLOGY will keenly appreciate the fact that this splendid result must be placed largely to the credit of the Archaeological Institute



FIG. 1. PREHISTORIC INDUSTRIES: SOAPSTONE MINING AND POT MAKING (*See p. 103*)

under his special department numerous exhibits of great historic and scientific interest, reference to some of which will be made later in these pages.

These exhibits as a whole, which have been the recipients of interested attention on the part of the public and of unstinted praise on the part of men of

of America, and more especially to the credit of the School of American Archaeology, through the enterprise of its able director, Dr. E. L. Hewett, and the enlightened support of Col. D. C. Collier, first president of the Exposition.

W. H. HOLMES.

## I

## SPANISH RENAISSANCE ARCHITECTURE: THE CALIFORNIA QUADRANGLE

CONSIDERATION of the exhibit of Ancient America is inseparable from that of the California Building in which it is housed. No one can view this noble structure, built in imperishable concrete, without a feeling of profound obligation to the architect, Mr. Bertram G. Goodhue, and his able assistant Mr. Carleton M. Winslow, under whose personal supervision it was constructed. The California Quadrangle furnished the artistic keynote to the Panama-California Exposition. It established a plane of lofty idealism for the Fair and for the future great city of San Diego. It will be the imperishable monument of the year 1915. It did not seem appropriate that the Quadrangle should be devoted to transitory uses, such as displays of state resources, so well done in the various buildings of the California counties. It afforded an opportunity for perpetual benefit to the public. Its architecture, a rich inheritance from the past, particularly from old Spain and Mexico, suggested the idea of devoting it to that which Europeans saw when they first looked upon the New World.

It seemed especially fitting that the California Building should enshrine the memorials of the race that ran its course in America before the continent was seen by Europeans. The native American civilization so impressed the Spanish conquerors when they first saw the shores of Mexico and Central America, that they carried back to the Old World glowing accounts of rich empires, opulent cities, and powerful monarchs. We now know that they made many mistakes

in the interpretation of what they saw. Yet, as the science of archaeology brings to light the remains of the ancient American world, we must admit that the enthusiasm of the Spaniards was not without justification. The brilliancy of the new race suggested another Orient. The ruins of Central American cities seemed to entomb another Egypt.

In the absorption of building a great English-speaking nation, we have lost sight of the part played by Spain in American history, likewise of the great works of the native American race which we know in its decadence. The object of the exhibit of Ancient America is to present a picture of the Golden Age of that race—a chapter of human history that is as worthy of study as are the records of its contemporaries of the Old World.

The California Quadrangle (figs. 2, 3, 7) comprises the buildings surrounding the Plaza de California, a paved square which is entered at the east end of the Puente de Cabrillo (Cabrillo Bridge) through the most imposing arch of the Exposition (fig. 4). This has been named the Ocean Gate, for the double reason that it faces the sea, lying to the west of the city, and that in its sculptured motive it represents symbolically the union of the Atlantic and Pacific Oceans by the completion of the Panama Canal, the event which the San Diego Exposition was designed to celebrate. The reclining figure on the left represents the Atlantic, that upon the right the Pacific. The waters of the two seas are being mingled. Between is seen the great seal of the city of San Diego.

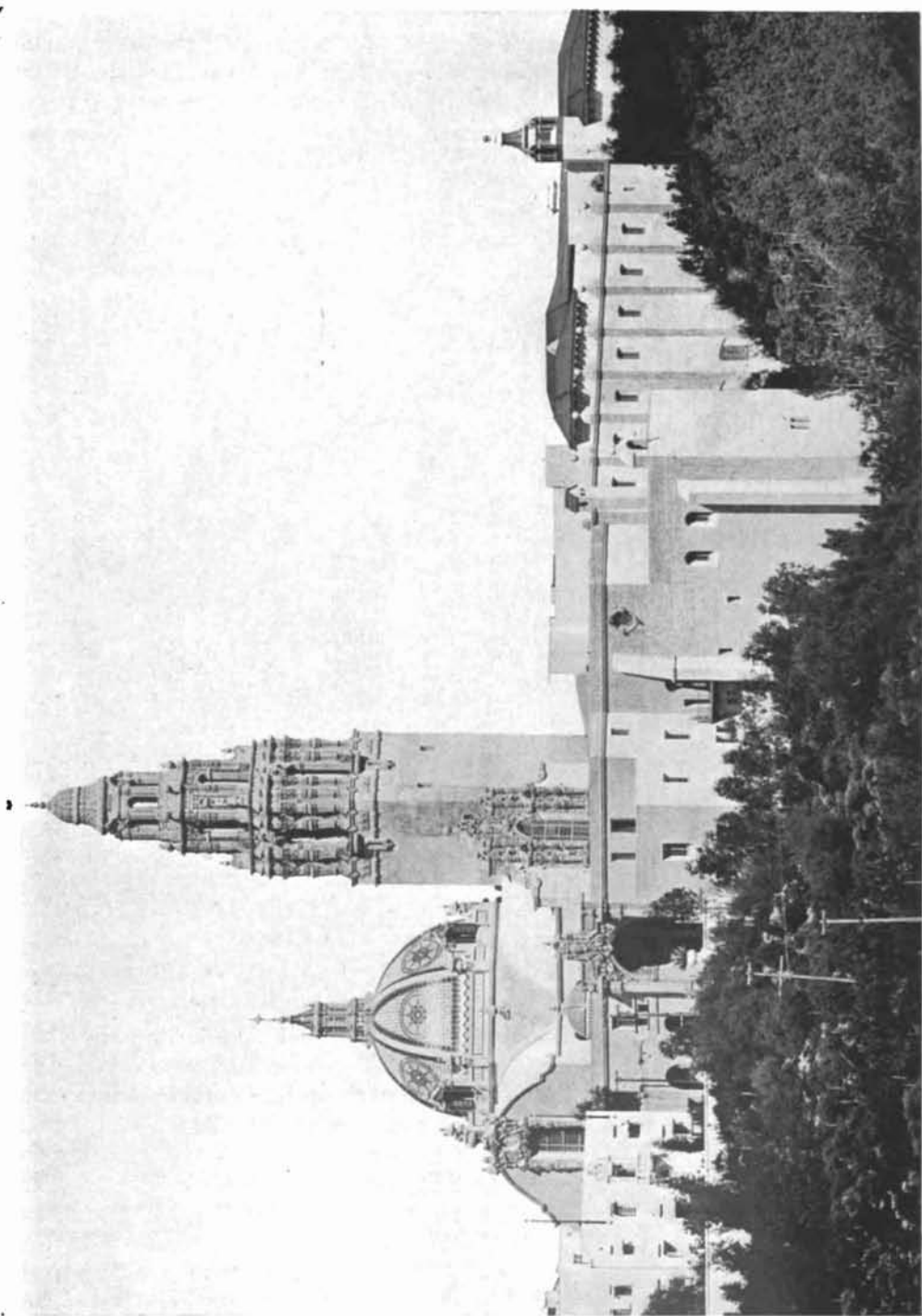


FIG. 2. THE CALIFORNIA QUADRANGLE. PANAMA-CALIFORNIA EXPOSITION.

The effect of the gate as it is approached by way of Cabrillo Bridge is that of a rich and dignified entrance to a walled Spanish city.

The entrance to the Quadrangle from the east is by way of the Prado Gate, less pretentious and yet of strong architectural value. A minor entrance is under the arcade at the northeast corner by way of the Garden Gate which opens from the Plaza into the gardens to the north and east of the Quadrangle. It is one of the best of all the gates and doorways of the entire Exposition group.

The south side is occupied by the Fine Arts Building. It is in plain California Mission style. In front are to be seen the massive arched portales which are extended on the east and west sides to meet the wings of the California Building. The portales are roofed with vigas (wooden logs) in the early Mission style of New Mexico and California.

The Quadrangle contains numerous architectural details that will interest both layman and architect. The doorways at the entrances of the President's rooms, the room of the California State Commission, the office of the Director of the Exhibits in the Quadrangle, and the doors of the Fine Arts Building are worthy of notice.

The north side is occupied by the California State Building. It is the dominant architectural feature of the Exposition, and to be fully appreciated must be studied from many points of view. One of the most impressive is that from under the portales of the Fine Arts Building. This view is particularly for close study of architectural details. A point of especial interest is from the balconies of the New Mexico Building, from which the full value of the tower and dome is appreciated. For certain historic fea-

tures of the architecture no place is better than from the gardens northeast of the building. From here the arrangement of small domes is best seen. For the architectural relation of the Quadrangle to the Administration, Fine Arts, and adjacent buildings on the Prado, one should study the illustration first presented (fig. 2).

The California Building is a fine example of Spanish Renaissance architecture. The style is that of the eighteenth century cathedrals of Mexico and Central America. For its more remote genealogy one must go back to Spain, Italy, and the Moorish lands.

Every lover of art will be interested in working out the archaeology of this magnificent building. Aids to this purpose are afforded in a room in the Fine Arts Building devoted to the architecture of the Exposition. Masterpieces of ecclesiastical architecture of the last fourteen centuries have furnished elements of utility and beauty, which are marvelously combined. For the immediate progenitor of the dome see that of Taxco, most beautiful of all the churches of Old Mexico. For its remote ancestry we go back to the Duomo in Florence. The cluster of domes recalls St. Mark's in Venice and Santa Sophia in Constantinople. The use of inscriptions about the base is common in Spanish churches. The legend at the base of the California dome, beautifully expressive of the Golden State, reads:

*Terram frumenti hordei ac vinearum in qua ficus et malogranata et oliveta nascuntur terram olei ac mellis."*

[Deuteronomy 8:8. "A land of wheat and barley, and vines and fig trees and pomegranates; a land of olive-trees and honey."]

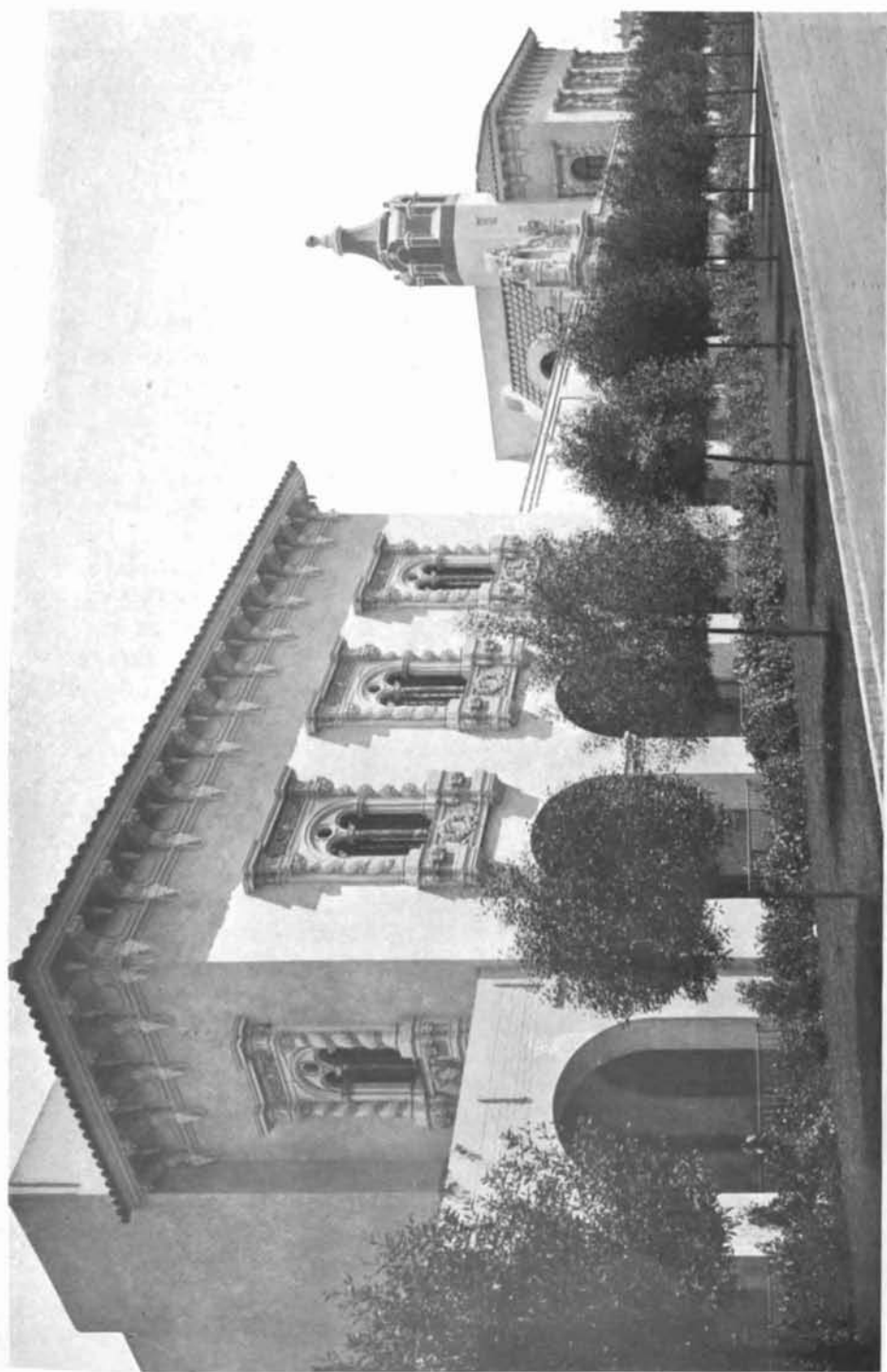


FIG. 3. SCIENCE AND EDUCATION BUILDING, PANAMA-CALIFORNIA EXPOSITION.

Prototypes of the tower are numerous in Spain, as for example in Cordova and Seville. A strikingly beautiful effect is obtained by the concentration of ornament at the summit of the tower and in the center of the façade, in the sudden relief of a large expanse of bare wall with luxuriance of decoration. The embellishment of tower and dome with tile in brilliant colors is a fine Oriental touch, which it is hoped will be extensively used in Southern California.

The main façade will repay careful study (frontispiece). The best place from which to see this is from under the portales on the south side of the Plaza. It has been said of this façade, "There is no finer Spanish Renaissance façade in existence."<sup>1</sup> Statues of noted characters connected with the history of San Diego have been placed in the niches. At the top, in the place of honor, stands Fray Junipero Serra, of the order of St. Francis, Father-Presidente of the missions in both Alta and Baja California, who arrived at San Diego in 1769. Immediately below, at the right as you face the building, is the statue of the Portuguese navigator, Juan Rodriguez Cabrillo, who discovered the Bay of San Diego

in 1542. Above Cabrillo is the bust of his patron, the Emperor Charles V of Spain. At the left is the statue of Don Sabastian Viscaino, who sailed into San Diego Bay on the tenth of November, 1602. Above Viscaino is the bust of his patron, Philip III of Spain.

Below Cabrillo is the bust of Don Gaspar de Portolá, first Spanish governor of Southern California. Below Viscaino is that of George Vancouver, the English navigator who sailed into the harbor on the twenty-seventh of November, 1793, and made notes upon the condition of the Spanish settlement.

In the lower niche at the right is the statue of Fray Antonio de la Ascension, Carmelite historian and prior of the little band that accompanied Viscaino. At the lower left hand is the statue of the Franciscan priest Luis Jaume, who accompanied Father Serra, and who died at San Diego Mission at the hands of the Indians. He may be considered the first Christian martyr of California.

Immediately above Viscaino is the coat of arms of Spain, and above Cabrillo that of Mexico. The coat of arms of the state of California is seen over the main doorway, and the shield of the United States of America at the top of the façade above the statue of Father Serra.

<sup>1</sup>The Panama-California Exposition and the changing civilization of the great Southwest, by William Templeton Johnson. *The Survey*, July 3, 1915.

## II

### ABORIGINAL AMERICAN ART AND CULTURE

Inside the California Building will be seen the most important works of the ancient peoples of Central America. They present a picture of an age of which Americans generally are not well informed, namely, that which preceded the coming of the Europeans to the

western continent. Knowledge of American history usually begins with the period of discovery and conquest, and follows down to the present time. Here we begin at the usual point and looking backward view the history of an American civilization that reached its zenith

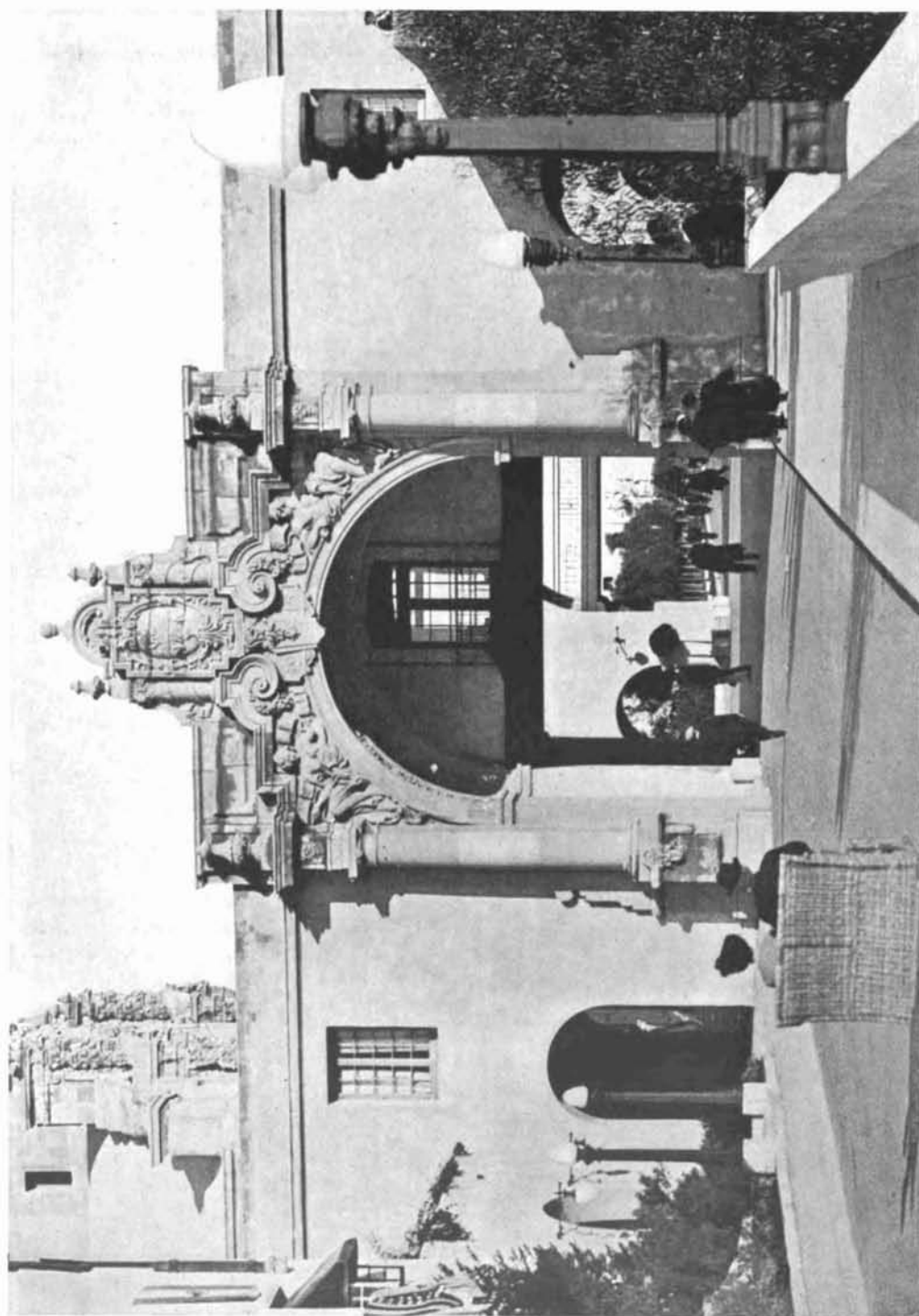


FIG. 4. THE OCEAN GATE. PANAMA-CALIFORNIA EXPOSITION.

and went down before it was known to white men.

The cities that have long lain buried in the tropical jungle have been the subject of much misleading romance. Fantastic theories about these people, their Oriental or Egyptian origin, their empires, kings, queens, and courts, the mystery of "vanished races"—all this may be dismissed. There is nothing mysterious about it. The ancient temple builders of Central America were Indians. All the characteristics of the race are seen in these ancient monuments. Like other races they slowly struggled up through a long period of evolution, matured, for a time expressed their mental and spiritual power in great works, ran their course and died, as is inevitable with individuals and races when they grow old.

It would be misleading to pretend that any connected history of the Central American cities could be written at this time. Their records, in the form of hieroglyphic inscriptions, are a sealed book, except as they relate to notation and chronology. None of the characters used in the writings of the Mayas bear any resemblance to those of the Egyptians or any other ancient people. All reports to the effect that Orientals have been able to interpret the symbols of the Central American monuments, or understand the language of the native people, may be put down as false.

For the study of the hieroglyphic writings we must depend mainly on the inscriptions carved in stone. These, found on monuments, walls, tablets, and lintels, have survived the ruin of ages. Sacred books, or codices, were once numerous, but now only three are known to exist. Large numbers of them were destroyed at the time of the Spanish

conquest of Yucatan on account of their supposedly pagan character.

Nothing can be set down as final with reference to the date of any Central American city in terms of the Christian calendar. In the subject of Maya chronology there is little agreement among students. Certain authorities, who are worthy of the highest respect, date the Maya cities as early as the twelfth century, B.C. Others place them in the early part of the Christian era. The writer is disposed to favor the latter view.

Among the older cities are Copan, Quirigua, Tikal, and Palenque; the later are Chichen Itza, Uxmal, and other cities of northern Yucatan. When America was first seen by Europeans, the Central American cities lay in ruins in the jungles, as they do now.

Evidences of a long period prior to the setting up of the sculptured monuments and the inscription of hieroglyphic tablets have been found at Quirigua in Guatemala. No proof exists to show that this civilization was derived from Egypt or the Orient. On the contrary, it appears certain that during a period of many centuries it rose, flourished, and declined upon the soil of Central America. In this it resembled the Egyptian, which ran its entire course in the Valley of the Nile.

It is customary to speak of the people of all the Central American cities as the Mayas, but that they were all of one stock cannot be claimed with certainty. It could not be proved that the people of Copan and Quirigua in the Motagua Valley spoke the same language or that they were of the same stock as the people of Yucatan or the Usumacinta Valley in Mexico. The fact that they used the same architectural principles in building and the same hieroglyphic

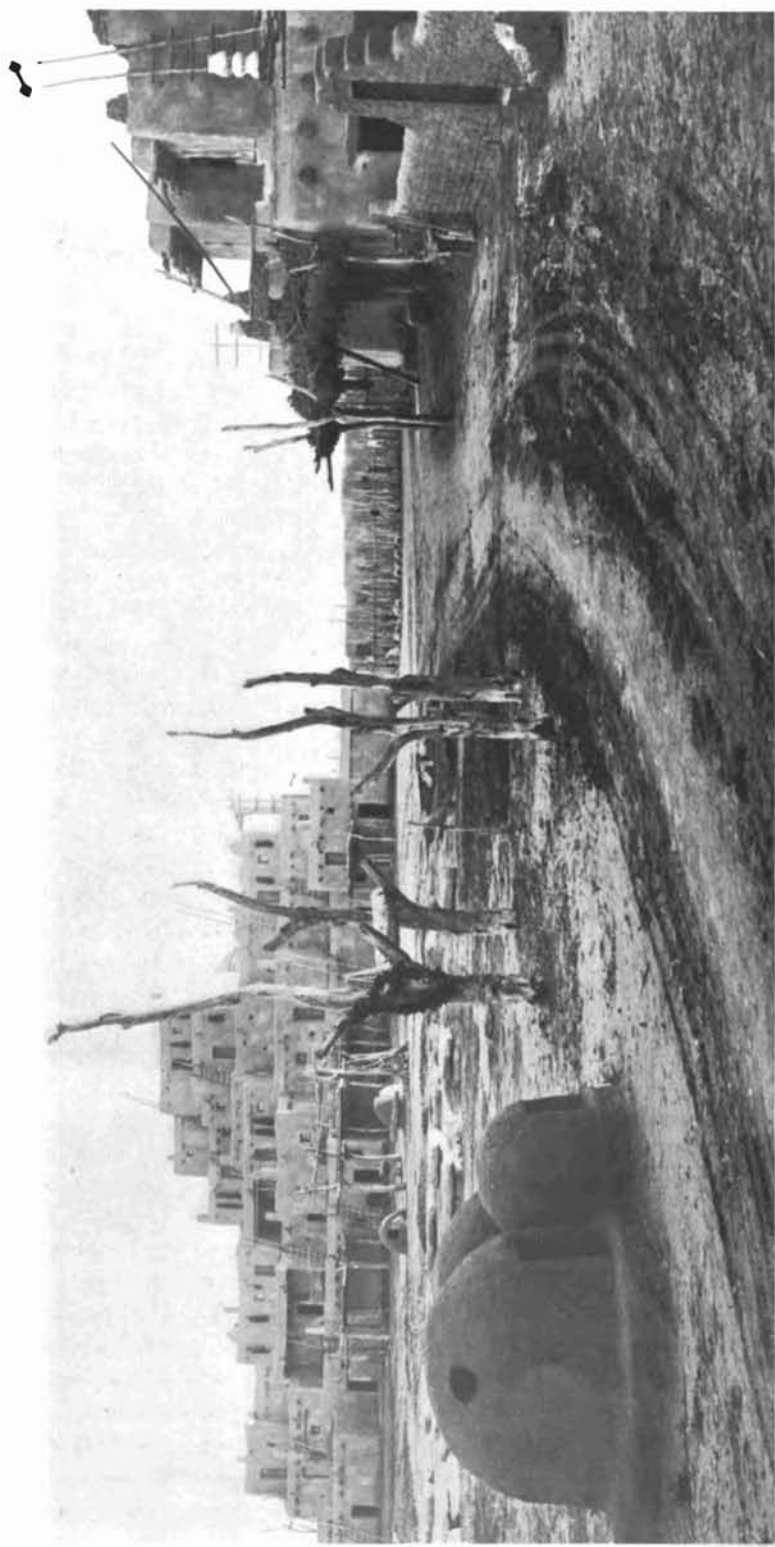


FIG. 6. THE PAINTED DESERT, PANAMA-CALIFORNIA EXPOSITION.

symbols is not conclusive of linguistic or ethnic identity. In the Rio Grande Valley in New Mexico it is not uncommon to find two Indian towns less than twenty miles apart where the people speak entirely different languages, yet build their houses and sanctuaries in the same way, and use practically the same symbolic characters.

The ancient cities of Central America may properly be spoken of as "Temple Cities." Among the ruined buildings there is little to suggest residential use or domestic life. It is probable that the ancient people lived much as do those of the present time, in houses of bamboo, or other light material, thatched with palm. This civilization was profoundly religious in character, a trait of the entire American Indian race. With probably no other people known has religious ceremony been so generally intermingled with all the activities of life. As the condition of society called for nothing elaborate in residence building, so also political organization was such as to require little in the way of public buildings for civic purposes. Monarchy was unknown. The government was theocratic and republican in character. There was no splendor of courts and no state government to provide for.

Religious life was highly organized. Everything else was subservient. The mysteries of the priesthood necessitated sanctuaries, shrines, altars, gorgeous vesture, and representation of gods. Imposing ceremonies, processions, and rituals demanded temples, sacred precincts, and facilities for the display of magic power with which to awe the populace. The building of a city meant the erection of temples and statues and their embellishment with images, inscriptions, and symbolic decorations.

The art of the Mayas, the strength and beauty of which is illustrated in this building, gives a perfect picture of the racial mind. In their architecture, painting, and sculpture they uttered their deepest thoughts concerning life. If art is great in proportion as it reveals the experiences of life, then this is great art. With marvelous order and with technique entirely adequate to their purposes, the Maya artists tell in their sculpture what was of most concern to them—tell of human dignity and divine power—tell in a way that was perfectly naive and honest, of their belief in the efficacy of ritual, ceremony, symbolic ornamentation, gorgeous vesture in dealing with divinity—tell of profound veneration for life and life forces, even though enshrined in bird or beast. Man, Nature, God, Life—here was their realm of thought—here was their religion, and their art cannot be separated from it.

The most conspicuous characteristic of their art is order. Note this in both their architecture and sculpture. We do not recognize the work of individual artists. Technique was racial in character and was adequate for their needs of expression, which is the main thing in style. It was progressive in its development, and one can readily trace improvement from age to age. While not an infallible guide, yet one finds it possible by studying this phase of Maya art alone, to determine the order of construction of the various monuments in a city, just as in modern cities one sees at a glance which are the buildings of the early days and which belong to later and more mature times.

Of painting there is little surviving with the exception of that found on vases. Color was used on statues and in the buildings, but only a few fragmentary



FIG. 6. NEW MEXICO STATE BUILDING, PANAMA-CALIFORNIA EXPOSITION.

examples remain. In ceramic art there was the same fine sense of order and, judging from the few authentic specimens we have, the art was well advanced.

The works relating to Ancient America that are displayed in the California Building may best be seen in the order in which they are here presented.

### III

#### A. THE VESTIBULE: THE FARNHAM HISTORICAL FRIEZE

On the wall is to be seen first the historical frieze by Mrs. Sally James Farnham, the original of which, in bronze, adorns the room of the governing board in the Building of the Pan-American Union, in Washington. With the generous permission of this board and the courtesy of Hon. John Barrett, Director-General, this replica was obtained. It is justly regarded as one of the important achievements in modern American sculpture (figs. 8, 9).

1. Right of entrance to the rotunda: Landing of Columbus, October 12, 1492.

2. Left of entrance: Balboa taking possession of the Pacific Ocean in the name of the King of Spain, September 1513 (fig. 8).

3. Right (east) wall: Cortés, Conqueror of Mexico, with his army: his Indian wife, Marina, at his side, the conquered Aztec chief, Montezuma, borne in a litter by his warriors. The panel at the left of this tablet represents Mineral Wealth of Mexico, mined by the Indians to enrich the conquering Spaniards. The panel at the right end represents Agricultural Wealth of Mexico. These vertical panels are framed by columns, the designs of which are taken from the sculptured monoliths at Copan in Honduras (fig. 9).

4. Left (west) wall: Pizarro, Conqueror of Peru, leading his army to the subjugation of the Incas. The panel at the left of this tablet represents a llama driver of the Andes. The panel at the right end represents a vaquero, or cowboy, of the pampas.

Below the Farnham frieze will be seen copies of four remarkable sculptures from the sanctuaries at Palenque, one of the most important ancient cities of Central America.

1. Right of entrance to the rotunda: Figure in bas-relief from the pier on the right side of the entrance to the Sanctuary of the Temple of the Sun at Palenque. In this tablet the face is ghostly in appearance. Comparison with the make-up of characters in the dramas of the North American tribes, in which shades of ancestors are impersonated, leads one to suspect that this figure is designed to represent the spirit of a deceased person. The garb indicates a character which among the Indians of our Southwest we would call a medicine-man. Note the symbolic head-dress, the jaguar mantle thrown over the shoulders and hanging down the back; also the decorated wrist and ankle bands. The straight tube held in the mouth, with the smoke or flame which appears to issue from it, suggests the ceremonial pipe or cloud-blower of the Pueblo Indians.

2. Left of entrance to the rotunda: Figure in bas-relief from pier on left side of entrance to the sanctuary above mentioned. The vesture is that of an Indian priest. Note the elaborate plumed head-dress, necklace of beads, richly embroidered mantle, sash and apron, leggings and sandals. The face is that of a living person. Above the head and in front of the face are hieroglyphic characters.



FIG. 7. THE CALIFORNIA BUILDING FROM THE NORTHEAST.

3. Right (east) wall: This is the famous altar-piece known as the Tablet of the Cross. It occupies a wall of the Sanctuary in the Temple of the Cross and corresponds in many respects with the altar-pieces in other temples, such as the Temple of the Sun nearby. The tablet is of limestone, and the figures are sculptured in low relief. The cross is here used as an altar, and as in other parts of Ancient America, probably represents the Four World Quarters. Perched on the top is the Quetzal, the Sacred Bird of Central America. The two priestly figures in ceremonial attitude before the altar are in the act of presenting offerings. Remembering certain rituals and the significance of the cross among northern Indian tribes, this suggests a birth ceremony in which occurs the Invocation to the Four Winds. Columns of hieroglyphic inscriptions are seen at the right and left. The entire original of this altar-piece may now be seen in the National Museum of the City of Mexico. One panel of it was, from the year 1842, kept in the city of Washington, D. C. As an act of international courtesy it was, on the recommendation of Secretary of State Elihu Root, after his visit to Mexico City in 1906, and by action of the Secretary and Regents of the Smithsonian Institution, returned to the government of Mexico.

4. Left (west) wall: This is another remarkable altar-piece known as the Tablet of the Sun Mask. It occupies the back wall of the Sanctuary of the Temple of the Sun and corresponds closely in many respects to panels in the other temples. The tablet is of limestone and the figures are sculptured in low relief. The two priestly figures are in the act of making offerings, doubtless, to the deity to whom the temple is dedicated.

Each stands upon the back of a grotesque human figure, and between these are two other figures of remarkable design, clothed in jaguar skins, supporting upon their upraised hands, Atlas fashion, a massive table upon which is the great mask with expanded eyes and protruding tongue. Columns of glyphic inscriptions occur at the right and left, and two small inscriptions near the upper margin of the tablet.

On opposite sides of the outer entrance to the vestibule will be seen upon the walls panels of hieroglyphic inscriptions from Palenque (fig. 10). These are the halves of what was formerly a single hieroglyphic panel. They afford an excellent example of the glyph carving in which Palenque appears to have surpassed all other Central American cities.

Above the door, between the vestibule and the rotunda, is a Maya inscription (fig. 11) arranged in the form of an initial series, expressing the date of the opening of the California Building to the public, that is, January 1, A. D., 1915. The difficult problem of correlating a date in the Christian calendar with one in Maya chronology, expressing it correctly, year by year, and day for day in Maya hieroglyphic characters, was undertaken by Mr. Sylvanus G. Morley. The reading worked out by him and accepted as nearly a correct rendering as could be offered at the present time is Cycle 13, Katun 8, Year 3, Month 10, Day 13, 6 Ben, 7 Uo. Without going into a technical explanation of Mr. Morley's reading, it may be stated for the benefit of those who have not studied Maya chronology, that the date here expressed as it might have been by an ancient Maya scribe, places the construction of this temple in the year 5363 of the Maya calendar.



FIG. 8. DISCOVERY OF THE PACIFIC BY BALBOA. REPLICA OF THE BRONZE ORIGINAL BY MRS. S. J. FARNHAM IN THE BUILDING OF THE PAN-AMERICAN UNION, WASHINGTON.

## B. THE ROTUNDA: REPLICAS OF CENTRAL AMERICAN MONUMENTS

1. On passing through the door leading from the vestibule to the rotunda, everyone should notice the splendid columns reproducing the portal of the temple which is situated on the top of the pyramid, commonly called El Castillo, at Chichen Itza, Yucatan. The name appears to the writer so unsatisfactory that he prefers to designate it as the Temple of Sacrifice, for reasons which will appear later. These majestic columns are here reproduced for the first time under the direction of Mr. W. H. Holmes. The motive is the Plumed Serpent known all the way from the United States to Central America, and doubtless having throughout the same significance. The Avanyu of the ancient cliff-dwellers represented the major deity of these people; having to do with water, springs, streams, rain, and consequently with growing crops. The bird in Southwestern mythology was the emblem of the sky gods, as the reptile was of earth deities. In the Plumed Serpent we have a representative of both. In all probability the Quetzalcoatl (*quetzal*, bird; *coatl*, reptile) stood for a similar concept of deific power in Central America.

2. In the center of the rotunda (fig. 11) is a large relief map of Central America, made by the School of American Archaeology, showing the distribution of the ancient Temple Cities. Fifty sites are shown on the map. Note especially the location of Quirigua, Copan, Palenque, Tikal, Uxmal, and Chichen Itza, from which cities the various works of art and architecture shown in this building are derived. Note that these cities are mostly in the lowlands, in a region that is now extremely unhealthy for the white race, as well as the Indian. In the absence of known causes



FIG. 9. CONQUEST OF MEXICO BY CORTÉS. REPLICAS OF THE BRONZE ORIGINAL BY MRS. FARNHAM IN THE BUILDING OF THE PAN-AMERICAN UNION, WASHINGTON.

for the depopulation of Maya cities, one is disposed to attribute it to the development of diseases, such as caused the deterioration of ancient civilizations of southern Europe. At the time of the Spanish conquest, the native cultures of the salubrious highlands were flourishing, while those of the hot, fever-stricken lowlands languished or were extinct.

3. Arranged around the rotunda are replicas of the great monoliths of Quirigua. These remarkable monuments surpass everything else of their kind on the American continent. They are of two classes, namely, sculptured shafts, or stelae, and huge zoomorphic figures which bear the same kind of hieroglyphic inscriptions and show the same sculptural features as the shafts. Both types appear to have had the same purpose, which doubtless was to serve as memorials of great men and women who occupied high positions as priests or rulers. Inscriptions were usually placed upon the narrow sides of the shafts, and the animal designs are likewise covered with hieroglyphics and decorative elements. In the wealth of sculpture at Quirigua there is a noticeable absence of war implements and scenes of combat. This would seem to indicate a peaceable race. One notes also the absence of scenes of sacrifice, cruelty, or

bloodshed. In the delineation of the human figure proportion was ignored. Little attention was paid to anatomical details. There is nothing in the dress, vesture, or insignia on which to base a determination of sex, but male figures are always bearded and female beardless. In the arrangement of the monuments about the Plaza at Quirigua, it is of interest to note that the north end was given over to monuments of men, while those south of the center are women's monuments. Nearly all are double-figured and in no case do the figures duplicate. There can be little doubt that these are portraits.

The story of the making of these reproductions is of great interest. The building of tracks and scaffolds; the transportation of vast quantities of glue, plaster, and clay; the repeated experiments ending in many failures, but ultimately in per-

fect success in the use of glue molds in the tropics; the handling of heavy masses with scanty mechanical appliances; the problems of crating, packing, and transporting, and finally setting up the monuments in the rotunda of the California Building; repairing, pointing, coloring, finally achieving replicas correct to a hair line and preserving not only the art of the monuments but the very texture of the stone—is an im-



FIG. 10. HIEROGLYPHIC INSCRIPTION, PALENQUE.



FIG. 11. DATE OF THE CALIFORNIA BUILDING IN MAYA GLYPHS.

S. G. Morley.

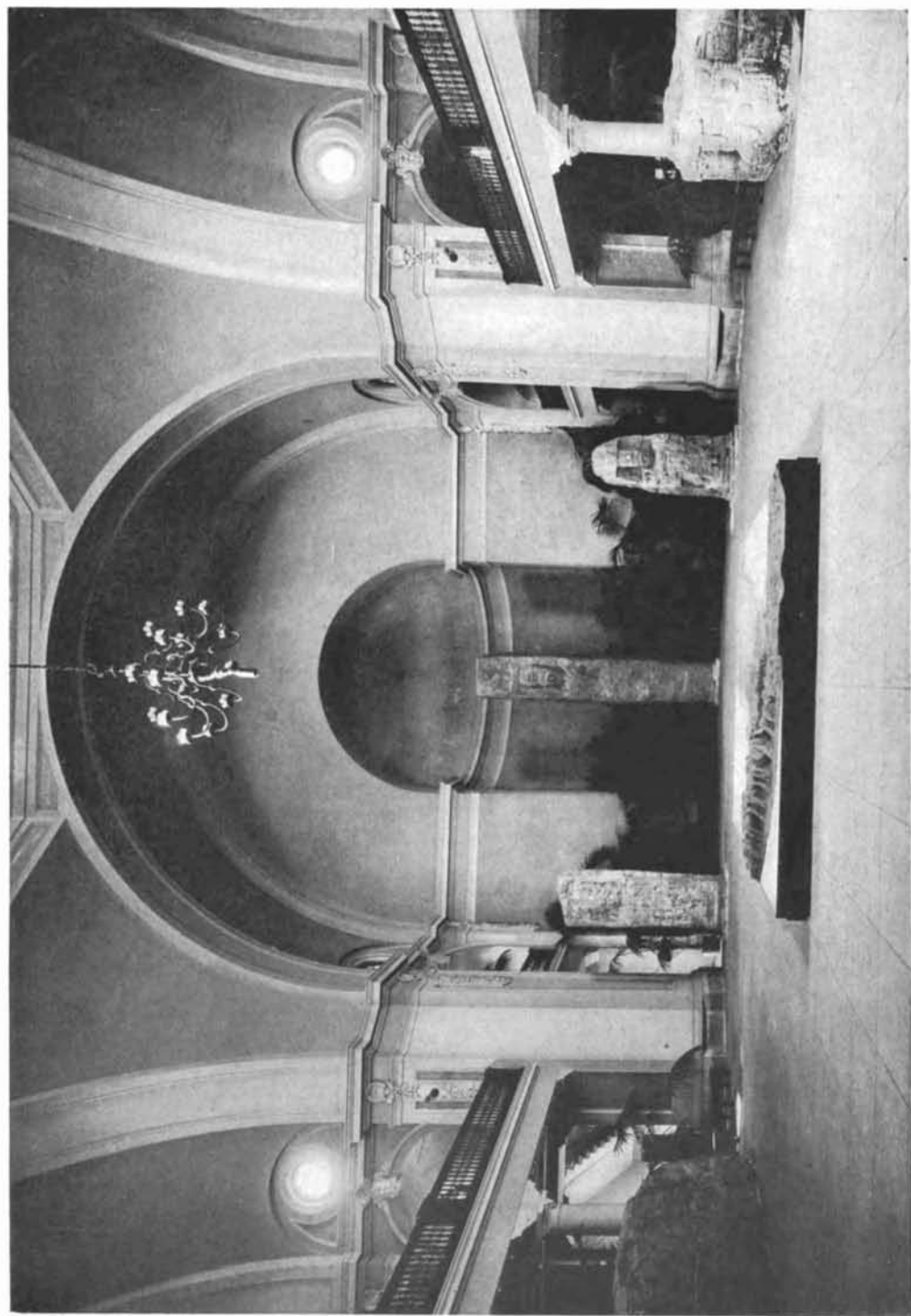


FIG. 12. ROTUNDA OF CALIFORNIA BUILDING WITH REPLICAS OF THE GREAT MAYA MONUMENTS.



FIG. 13. THE GREAT TURTLE. SCULPTURED STELE, QUIRIGUA.

portant chapter in Central American archaeology.

Beginning at the left side of the rotunda on entering, we may notice the monuments in order. The first, called by Maudslay the Great Turtle (fig. 13), is the crowning achievement of native American art. In the beauty of its design, the richness of its execution, and the breadth of its conception, it is not approached by any other American example. The figure seated in the mouth of a mythic animal, which probably stands for some deific earth power, is that of a young woman bearing the manikin wand and ceremonial shield, and wearing the crown and elaborated head dress which characterize the costumes of all the sculptured figures at Quirigua. The entire surface of the block is carved. The principal inscription occupies the back part of the monument. The people who executed this probably reached the limit of their powers, for no later work of the people of Quirigua equals it, and a marked change in style appears in those of later date. The making of this replica of the greatest of all Central American sculptures became possible through the generosity of Mr. George W. Marston of San Diego.

The next monument is a shaft belonging to the group having low pedestals. On the front is a bearded figure, standing, with hands resting upon a breastplate or bundle, which extends from shoulder to shoulder. Unlike the figures on the other monuments, the personage here represented does not carry scepter and shield, but instead holds the ceremonial bundle above referred to. On the back of the shaft is a grotesque figure in low relief, which stands in a peculiar position with one knee flexed and, instead of being presented full-face, is in profile.

The figure represents the Death God. On the narrow sides of the monument are columns of hieroglyphic inscriptions.

The next monument seen in making the round of the rotunda is an enormous shaft, the largest at Quirigua, in fact, the largest in the whole Maya world. It is placed in the center of the apse of the cathedral-like interior. It is between twenty-six and twenty-seven feet high, and the original has an unknown projection below the surface. It is approximately five feet broad and three and one-fourth feet thick. The original leans thirteen feet from the perpendicular; consequently it is usually spoken of as the "Leaning Shaft." The writer has been able to prove that this monument never occupied a vertical position, in short, that the builders found themselves unable to raise it. The weight of the original is upward of one hundred thousand pounds. The material is red sandstone. The block was quarried some five or six miles from the temple area and hauled by means of ropes pulled by hundreds of individuals down the inclined way which leads from the quarry to the water. There it was probably loaded upon boats, floated down the Motagua to a point opposite the city, then brought in by means of the canals to the sacred precinct where it was erected. The human figures, both male, sculptured upon the two broad faces are the most imposing to be seen in Quirigua. They are of heroic size, and have the appearance of great strength. Each figure bears a manikin wand in the right hand and the tasseled shield in the left. The two narrow sides are covered from top to bottom with hieroglyphic inscriptions. The necessary means for the reproduction of this monument were generously furnished by Mr. Joseph W. Sefton of San Diego.



FIG. 14. "THE QUEEN," SCULPTURED STELE, QUIRIGUA.

The next monument, called *The Queen*, is eleven and one-half feet high (fig. 14). Upon its opposite faces are sculptured female figures in high relief. The faces are full and beautifully rounded. The figures are very short. The one facing the rotunda bears the manikin wand and tasseled shield. It was the last monument set up at Quirigua, and while lacking in the cruder strength of the older and larger shafts, and in the rich beauty of the *Great Turtle*, it displays a fineness of workmanship not to be seen in the earlier groups.

The last monument in the rotunda is one belonging to the zoö-morphic group (fig. 15). It is carved to represent a huge dragon-like monster. From the mouth issues a human head with bearded face, the head crowned in the same manner as those upon the sculptured shafts. The hands rest upon the chest. On the arms and legs of the monster, which extend back along the sides and around the rear of the figure, are inscriptions in the intricate and elaborate style known as the full-figure hieroglyphic. The monument is generally known as *The Dragon*.

## V

### C. THE BALCONIES: THE VIERRÀ FRESCOS OF ANCIENT CITIES OF AMERICA

We may begin a description of the works of art upon the balconies surrounding the rotunda with the east side. The object of the entire display in the California Building has been to give a broad picture of Central American culture, omitting everything commonplace and showing the great achievements of the people in city building, architecture, art, together with their environmental conditions, religious ceremonies, industries, occupations, and beliefs. This has been done without introducing a single case of museum specimens.

First to be noticed are the frescoes, extending around the interior of the building on three sides. These were painted by Mr. Carlos Vierrà of the School of American Archaeology. They show six of the most important ancient cities of Central America. They illustrate the typical arrangement of Maya cities, together with the different types of buildings used in their architecture, all of which were probably for religious

purposes. The so-called temples were used for religious observances, and the palaces were sanctuaries of the priesthood. With the exception of Quirigua, little restoration has been introduced in the paintings. They may be accepted as a fair representation of the appearance of these cities as they now lie in ruins, and have lain for many centuries. Considerable restoration has been done in showing the temples at Quirigua. The excavation of the city has not proceeded nearly so far as is indicated in the painting. It will be convenient to describe these frescoes in the order of their arrangement as we pass around the three balconies.

Quirigua (fig. 16) is situated in the flood-plain of the Motagua River in the Republic of Guatemala. This valley is one of incomparable richness of soil. The vegetation is indescribably dense. The city is devoid of written history and tradition is silent concerning it. The architectural remains consist of



FIG. 18. THE DRAGON. SCULPTURED STELE, QUIRIGUA.

ruined temples upon massive terraces of red sandstone, grouped about a Great Plaza and two smaller rectangular courts. These constituted the Sacred Precinct of the city. In architecture Quirigua is less imposing than other ruined cities of Central America. In sculptured monuments it is unequalled. These are arranged about the Great Plaza and in the Ceremonial Court south of it. There are thirteen of the greater monuments and three of lesser importance. Eight examples are installed in the California Building.

The ruins of Quirigua have been uncovered by the School of American Archaeology, which commenced excavations there in the spring of 1910. The work was made possible by generous contributions from members of the St. Louis Society of the Institute for three years. It received also an equal amount of financial aid from the United Fruit Company. The rest of the expenditure has been borne by the school, the exposition, and private subscribers. At the beginning it was a completely buried city. The ruins presented the appearance of earth mounds covered with enormous trees and dense jungles. Only a part of the Sacred Precinct was uncovered. It is estimated that five years will be needed to complete the work. Excavations will be resumed in 1916. The story of the uncovering of Quirigua will stir everyone who enjoys a battle with difficulties. The mechanical problems involved were usual in archaeological research. The destruction of a mass of tropical vegetation amounting to thousands of tons per acre, the removal from the buildings of trees a hundred and fifty feet high and twenty-five feet in circumference without destroying monuments, stairways, and walls was an enormous task.

Great stumps with roots spreading out over the mounds and penetrating them in every direction added to the difficulty of excavation. Two seasons were devoted to this part of the work alone, and happily all was finished without injury to a single monument or inscription.

The ruins of Copan (fig. 17) are situated in the Republic of Honduras not far from the frontier of Guatemala. It is in the valley of the Copan River, a tributary of the Motagua, upon the banks of which, some thirty miles away, we find the ruins of Quirigua, from which it is separated by the mountain range which forms the boundary between Guatemala and Honduras. Copan may be reached on horseback in two days from either Zacapa or Gualan on the railway which extends from Puerto Barrios to Guatemala City.

Unlike the majority of the Central American cities, Copan was situated in the hills at an elevation of approximately two thousand feet above sea level. The district is not heavily forested, as is the main valley of the Motagua, though from early accounts it would appear that the city was formerly surrounded by a heavy jungle.

Of Copan there is but little that is satisfactory in recorded history. We have a description of the ruins in a letter of Diego Garcia de Palacia written in 1576 to King Philip II of Spain. He speaks of "ruins and vestiges of a great population and of superb edifices of such skill and splendor that it appears they could never have been built by the natives of that province." His description of the ruins will still pass as reasonably accurate. As to his information gained concerning them he states—



FIG. 16. QUIRIGUA.



FIG. 17. COPAN.



FIG. 18. TIKAL.

FIG. 16-18. MURAL DECORATIONS. PANORAMIC VIEWS OF ANCIENT MAYA CITIES  
BY CARLOS VIERRA.

I endeavored with all possible care to ascertain from the Indians, through the traditions derived from the ancients, what people lived there or what they knew or had heard from their ancestors concerning them, but they had no books relating to their antiquities, nor do I believe that in all this district there is more than one, which I possess. They say that in ancient times there came from Yucatan a great lord who built these edifices but at the end of some years he returned to his native country leaving them entirely deserted.

Little of value was recorded concerning Copan until the year 1839 when Mr. John L. Stephens explored Guatemala, and with the aid of Catherwood, the artist, prepared a most interesting and valuable account of the ruins. For the first really important investigation of Copan we are indebted to the English explorer, Mr. Maudslay. Next in importance was the work of the Peabody Museum, Harvard University, prosecuted during the years 1891-1895. As results of these expeditions we have the valuable reports of Mr. Maudslay and of the Peabody Museum which afford a more satisfactory body of literature concerning Copan than is to be found of any other Maya city. Unfortunately, the excavation of Copan was prematurely terminated, so that this great city has only partially told its story. A fact that should not be forgotten is that the Copan River is rapidly cutting into the temple area, causing serious destruction each year. Furthermore, great loss is occasioned by the vandalism of the native population. Unless these two causes of destruction can be speedily arrested, the loss at Copan will be irreparable.

Tikal is one of the largest of the ancient cities of the Maya people (fig. 18). Its ruins occupy an area of approximately a square mile. It covers three natural

terraced hills, and like most other Maya cities, was composed mainly of temples built upon pyramidal bases. The walls of the temples are of enormous thickness in proportion to the room space as at Quirigua. The situation of Tikal is in the interior of Guatemala in the Department of Peten. Because of its extreme isolation the city has been seen by but few travelers. There is little authentic history of the place. Mention is made of its having been explored in 1848, and various other reports have been published during the latter part of the last century. The best known and the most satisfactory are those of Mr. Alfred Maudslay and Mr. Teobert Maler. During the last few years the ruins of Tikal have been under investigation by the Peabody Museum, Harvard University. An important development of the culture was the remarkable wood carvings that have been rescued from the temples. From nowhere else in Central America, and from but few places in the world, do we have such beautiful examples of ancient wood sculpture.

Palenque (fig. 19) is situated in the state of Chiapas, Mexico, bordering on the Republic of Guatemala. It is in the heavily wooded hills to the west of the Usumacinta River. The original meaning of the name Palenque is not certainly known, nor is anything definite known as to its history. In his expedition to Honduras in 1542-1546, Cortés must have passed within a short distance of the place. As no mention is made of it in the account of that expedition, it would seem certain that the city must have been completely in ruins and buried in the tropical jungle at that time.

There are dim traditions concerning the origin of Palenque, but these have little historic value. Like Tikal and

the southern cities, Copan and Quirigua, it flourished during the Ninth Cycle of the Maya Calendar which, as quite generally held by American students, would correspond to the early centuries of the Christian era.

Juarros, the historian of Guatemala, states that the ruins of Palenque were discovered about 1750. Brasseur de Bourbourg gives 1746 as the date. The first explorations of the ruins which led to important results were those of Captain Antonio del Rio in 1787. Among the most important explorations and accounts of this ancient capital are those of Du Paix, Waldeck, Stephens, Charnay, Maudslay, and Holmes.

Chichen Itza (fig. 20) was one of the largest and most important of the ancient Yucatecan cities. Its ruined buildings cover an area of, at least, a mile square, and minor structures are to be found in every direction for a distance of several miles. It belongs to a later time than Palenque and Quirigua, and appears to have been contemporaneous with Uxmal and Mayapan. The ruins are in the northeastern part of the Peninsula of Yucatan, about one hundred miles from Mérida, the capital. The ancient city takes its name from a tribe, the Itzas, which is supposed to have founded it, and from two natural reservoirs, called *cenotes*, around which the city was built. Numerous evidences of Aztec culture are to be seen at Chichen Itza. In fact, it is by some authorities held to have been an Aztec rather than a Maya city. While the investigations of Chichen are insufficient to establish beyond question any important facts as to its history, students have reached the conclusion that it had its origin as a settlement of Maya people in the early centuries of the Christian era, and that

after its first period of development it underwent a change of occupancy, passing into the hands of the conquering Aztecs from the Mexican plateau.

Important buildings in Chichen, all of which are to be seen in Mr. Vierra's paintings, are the Pyramid of Sacrifice. Place of a Thousand Columns, Ball Court, Temple of the Tigers, Temple of the High Priest's Grave, Casa Colorada. Temple of Acatzib, and the Monjas.

The city of Uxmal (fig. 21) must have ranked in importance with Chichen Itza, and in some respects was more magnificent than that great religious center. It is in northern Yucatan, about fifty miles west of the capital, Mérida. It is reached partly by rail and partly by horse trail without great difficulty. It contains probably the finest examples of Central American architecture of the later period, and like Chichen Itza has noteworthy Aztec features. Architectural sculpture here reached its highest development, the upper zone of the temples and palaces being loaded with ornament in the form of stone lattice-work and beautiful tracery. Façades of vast extent are lavishly decorated with conventionalized motives. The pyramids resemble the one at Chichen Itza in style and magnitude. As compared with the southern cities, Quirigua and Copan, and with Palenque, the representative city of the western Maya area, Uxmal and Chichen Itza are poor in hieroglyphic inscriptions. Nowhere, however, has more beautiful sculpture in the round been found than at Uxmal. It is less known than any of the other cities named. No excavations of any importance have been carried on there, due largely to the deadly fevers for which the place is celebrated.



FIG. 19. PALENQUE.



FIG. 20. CHICHEN ITZA.



FIG. 21. UXMAL.

FIGS. 19-21. MURAL DECORATIONS. PANORAMIC VIEWS OF ANCIENT MAYA CITIES  
BY CARLOS VIERRÀ.



FIG. 22. THE QUARRYMEN.



FIG. 23. THE SCULPTORS.



FIG. 24. THE BUILDERS.

FIG. 22-24. PANELS FROM SCULPTURED FRIEZE BY MRS. JEAN BEMAN SMITH,  
PORTRAYING SCENES FROM MAYA LIFE.

## VI

## SCULPTURED FRIEZE OF ANCIENT AMERICAN LIFE

Returning to the east balcony, we may next notice the sculptured frieze which is placed above the frescoes just described, and which likewise extends around the interior of the building on three sides. This frieze is the work of Mrs. Jean Beman Smith, and is worthy of a more extended description than can here be given. It is a continuous band of sculpture in low relief. The entire length is 150 feet. The panels are each 9 feet long by  $3\frac{1}{2}$  feet wide and are set in the wall at a height of 11 feet from the floor. The highest relief in the molding is about 2 inches. By coincidence the breadth of the frieze and the height of the relief correspond to those of the Parthenon frieze. The number of figures is about 150. There is no repetition, and all of the ornament, dress, and architectural design are purely Maya. The character and style of the work is also largely that of the ancient artists.

We may begin with the panel at the north end of the east gallery, and as with the frescoes, follow around the interior from left to right. The first panel (fig. 23), entitled *The Sculptors*, shows a scene of ancient activity, such as might have attended the building of Copan or Quirigua, namely, that of decorating one of the huge monoliths to be set up in the Plaza. The second, *The Builders*, (fig. 24), represents the construction of a temple under the direction of a priestly figure. Here may be seen the stone cutters, naked save for their square aprons, wielding their stone hammers, chisels, and other implements. Other toilers with carrying bands around their foreheads and over their shoulders are bringing the finished blocks to the

builders of the wall. In the third panel is shown the serpent dance, comparable in arrangement and action to what may be witnessed every summer among the Hopi Indians of our Southwest. It is noticeable that the serpent and bird symbolism of the Cliff Dwellers are here developed into the gorgeous feathered serpent designs of the Maya columns and altar-pieces.

In the fourth panel is seen the transportation of a huge monolith through the tropical forest to the river where, after being loaded upon boats and transported to the city, the sculptors will decorate it and a multitude of workmen will erect it in the Plaza. The last panel on this side (fig. 22) shows *The Quarrymen at work* removing a block that has been detached from a ledge preparatory to hauling it, upon rollers, down the inclined highway to the river.

On the south gallery the first panel shows the entrance to a temple of Copan. About the doorway is an elaborate mosaic with symbolic serpents intertwined. The priest and assistants officiate before an altar in the background from which rise the sacred fires. In the foreground the altar receives the offerings of the people. A priestess, in rich costume, with netted skirt and ceremonial headdress, officiates, as musicians pass about the altar in procession. The theme of this panel, namely, a Ceremony of Dedication, is beautifully developed in the luxury and splendor of decoration, elaborately carved figures and hieroglyphics, and the activities of the participants.

The companion panel to the right (fig. 25) represents a Ceremony of

Divination. It shows priests and people in ceremonial grouping before a monument which has just been erected. Incense issues from the sacred pipe and floats to the six directions. In the great portal is a priestess in flowing headdress.

Passing to the west gallery we see the most dramatic theme that Mrs. Smith has chosen for her expression of Maya activities. It is the Sacrifice of the Virgins. It is developed in three panels entitled The Procession (fig. 26), the Sacrifice, and the Return of the Oracle (fig. 27). The tradition on which it is based is set forth in the ancient chronicles. It was a propitiatory sacrifice of virgins to the rain gods in time of drought. The maidens prepared for the sacrifice are seen in the first panel proceeding along the paved causeway to the altar upon the brink of the Cenote of Sacrifice. From here at daybreak occurred the plunge into the water of the Holy Well, from 70 to 100 feet below. If, perchance, a maiden survived this plunge, she might be rescued at midday, after which the artist conceives her to have been accepted as an oracle. In the third panel is seen the Return of the Oracle, her approach to the altar in the form of a cross, upon the top of which, as in the Cross of Palenque, is seen the sacred Quetzal, and before which is seated the lord of the city upon his tiger-headed throne. The story of this sacrifice is quaintly told in a letter written by three of the original conquistadores of Yucatan in response to a circular sent out by the

Council of the Indies in 1579 asking for information about the discovery and conquest of the country and the native inhabitants.

The next two panels depict the ceremonial ball game known to the Aztecs as *tlachtli*. It was described by Herrera as one of the diversions of Montezuma and his court, but doubtless was little understood by those early observers. The presence of the ball court at Chichen Itza and Uxmal is an evidence of a strong development of Aztec culture in northern Yucatan.

The first panel represents the assemblage of the spectators upon the great walls of the ball court. An Indian maiden bears the ball, which, according to the account of the chronicler, was "made of the gum of a tree that grows in hot countries, which having holes made in it distils great white drops which soon harden and being worked and moulded together turn as black as pitch." The second panel shows the game in progress. The ball was struck with any part of the body and sometimes it was necessary that it should rebound from the hip upon which was fastened a piece of stiff leather. The successful players were rewarded with loads of mantles and sometimes with gold and feather-work. The ball had to be cast through a hole in a great round stone fixed upon the wall of the court at a considerable height from the floor. Whoever succeeded in this remarkable feat, which rarely happened, was entitled to the mantles of all the spectators.



FIG. 25. CEREMONY OF DIVINATION.



FIG. 26. SACRIFICIAL PROCESSION OF THE VIRGINS.



FIG. 27. RETURN OF THE ORACLE.

FIGS. 25-27. PANELS FROM SCULPTURED FRIEZE BY MRS. JEAN BEMAN SMITH,  
PORTRAYING SCENES FROM MAYA LIFE.

## VII

## OTHER REPLICAS AND RECONSTRUCTIONS

Upon the balconies are replicas of some other monuments of Quirigua. The one standing upon the south balcony belongs to an early period of Maya sculpture. The monument is double-figured, the one on the south side being badly defaced, evidently by the falling of a tree which has shaved off the principal features. The figure on the north is well preserved, and is one of the strongest examples at Quirigua. The monument is at the north end of the Plaza. Both figures are bearded. The one on the north side holds a scepter in the left hand and the right bears a tasseled shield. On the narrow sides are hieroglyphic inscriptions in the best style of glyph carving that has been found.



FIG. 28 ALTAR-PIECE OF ZAPOTE WOOD. TIKAL.

On the west wall of the south balcony is in some ways the most remarkable specimen of Maya art that has been chosen to illustrate the aesthetic achievements of these extraordinary people. It is a replica of a famous wood carving (fig. 28), an altar panel of zapote wood, sculptured in low relief, from the Temple of the Sun at Tikal, Department of Peten, Guatemala. The design is exceptionally elaborate and in execution is not excelled by any similar work in America. The subject is a richly costumed personage, holding a standard or baton in his right hand, his face framed in the open mouth of a grotesque monster. He is enclosed beneath the arched body of a feathered serpent of extraordinary design, the head appearing at the left. Perched on the serpent arch above is the figure of a mythical bird-monster, probably representing some important deity of the Maya pantheon. Hieroglyphic inscriptions occur at several points. Note especially the two exquisite portrait faces in the lower right-hand part. The original of this specimen is now preserved in the Museum at Basel, Switzerland.

The examples taken to show the greatest achievements of the Central American people in architecture are placed upon the east and west balconies. The first to be described is the one on the east side. It is called *El Castillo* (fig. 29), or as the writer prefers to name it, the Temple of Sacrifice. The structure is in the main well preserved, minor restorations being required at several points, but not involving the introduction of any feature not reasonably well verified. The pyramid is approximately 190 by 230 feet at the base, 80 feet in height, and about 60 feet square at the summit. In design and execution this structure is of excep-

tionally high order, indicating great progress in architecture. It has four grand stairways, each about 30 feet in width and bordered by balustrades, those on the north side (front) terminating at the base in two great serpent heads about 10 feet in length, each carved from a single block of limestone. The pyramid is built of coarse rubble, cemented and faced with blocks of hewn limestone, neatly dressed and tastefully panelled.

The temple which surmounts the pyramid is about 44 by 48 feet at the base and 24 feet in height. It is well preserved save that a portion of the façade has fallen as the result of the decay of the wooden lintels which spanned the wide doorway. The walls and roofs are four feet or more in thickness, and the stones of the facing were so well cut and fitted as to require little mortar.

As usual in Yucatan buildings, the exterior walls of the lower story are quite plain and are separated by a heavy molding from the upper story which is ornamented with panels and surmounted by a cornice. In this case the cornice was, according to Maudslay, crowned by a coping of open fretwork of exceptional beauty. The lower story is pierced by four doorways, that on the north wing being 21 feet wide and 8 feet 6 inches high, divided by two great stone columns. These support the wooden lintels and are carved to represent the feathered serpent divinity of Yucatan mythology. Passing into the outer chamber or vestibule between these columns and through a second doorway, the visitor enters a large chamber spanned by two high pointed arches, the separating walls being replaced by two square sculptured columns. This chamber was doubtless a sanctuary and served some important purpose in the religious rites of the people.

The model was built under the direction of Wm. H. Holmes of the U. S. National Museum.

The final example of architecture presented and the one which may be said to represent the last word in the building art in Ancient America has been placed on the west balcony (fig. 30). The great building here shown is called

débris. The upper terrace, shown in the model, is 20 feet in height, and is ascended by a stairway of 30 steps, 120 feet long. The main terrace is about 20 feet in height, and is so extensive, covering several acres, that it could not be shown in the model. The foundation platform is only a few feet in height. The building proper is a massive rectangular



*Reconstruction by W. H. Holmes.*

FIG. 29 THE TEMPLE OF SACRIFICE, CHICHEN ITZA.

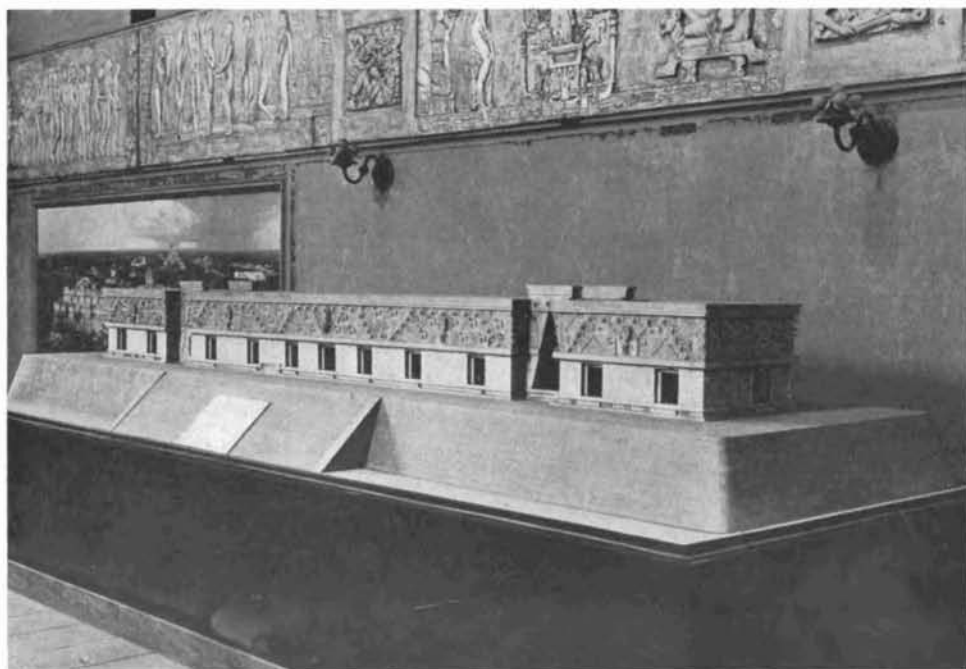
"The Palace" or "House of the Governor," and is one of the chief structures in the ruined city of Uxmal. The age of the city is not known, but the building is still well preserved, and but little restoration was necessary in completing the model. It is built of hewn limestone and is 320 feet long, 40 feet wide, and 28 feet high. It rests on a triple terraced

pyramid, now almost wholly buried in structure with vertical walls, perforated by eleven rectangular doorways on the front, and a doorway at each end. It is pierced also by two pointed archways, 24 feet in height, passing entirely through the building. These arches are walled up and divided into chambers. In the model one is closed and the other is left open to show the construction. The building is exceedingly massive, about

one-half of the entire bulk being solid masonry. The walls, faced with cut stone and with rubble filling, are from three to five feet thick, excepting the back wall which is nine feet thick. There are no windows or roof openings, and the back rooms are necessarily very dark. The chambers are spanned by high pointed arches faced with hewn stone, the insloping ceiling wall being connected by

elaborately costumed human figures, grotesque masks, and geometric fretwork, the whole including not fewer than ten thousand hewn stones, separately carved and laid in mortar against the concrete filling of the wall, forming a great mosaic.

The use to which the building was devoted is not known. Since it appears to have been in many respects the most prominent structure in the city, it was



*Reconstruction by W. H. Holmes.*

FIG. 30 THE PALACE, UXMAL.

flat capstones. The lower half of the wall, fourteen feet in height, is plain and contains the doorways, nine feet high, which were spanned originally by wooden lintels now entirely rotted away. The upper wall-zone, fourteen feet in height, is separated from the lower by a heavy molding and surmounted by a wide cornice. The intervening space is richly decorated with sculptures consisting of

probably occupied by dignitaries of the priestly establishment. The model was constructed under the supervision of Mr. Wm. H. Holmes.

The work prepared to finish the picture of Ancient America presented in the California Building is a rectangular panel by Mrs. Smith, finished but not yet cast and set in place. It is called *The Spirit of the Past* (fig. 31). This

panel is of great size, requiring the entire space of twelve feet square below the large cathedral window. The theme is developed by means of a shrouded, brooding figure, looking out across the ruins of contemporary civilizations—the Maya, Greek, Egyptian—the spirit that has witnessed the growth, decline, and death of the great nations of the world, that has been cognizant of all the forces that have shaped human

events, and that the artist conceives as eternally brooding over the affairs of man, from nation to nation and from age to age through all the cycles of time. The inscription for this panel, from the writings of Charles Kingsley, is an appropriate thought to place at the end of the archaeological exhibit:

So fleet the works of men back to their  
earth again,  
Ancient and holy things fade like a dream.



*By Mrs. Joan Berman Smith.*

FIG. 31 "THE SPIRIT OF THE PAST"—SCULPTURED PANEL.

## CURRENT NOTES AND NEWS

### *Primitive Arts and Industries*

In the preparation of the exhibits at the Panama-California Exposition relating to the culture history of the native American race, and the division devoted to Ancient America, Director Hewett was in personal charge throughout. The foundation for the culture history exhibit was laid by the preparation, under the personal supervision of Mr. W. H. Holmes, of a series of groups illustrating, by means of lay-figures, such important steps in the beginning of native American culture as the manufacture of stone implements, the working of ancient soapstone quarries of Catalina Island (fig. 1), the prehistoric obsidian workers of California, the beginnings of sculpture among the ancient Mexicans, primitive copper mining on Isle Roy-

ale, Lake Superior, and prehistoric iron mining in the state of Missouri. This valuable exhibit was further extended to embrace collections representing the evolution of the stone art from its simplest forms to the highest achievements of the shaping of stone and the manipulations of metal.

A series of village group models, illustrating houses and house life in the most important culture areas from Greenland and Alaska to Patagonia were prepared under the direction of Dr. Walter Hough of the U. S. National Museum. Like the series just described representing the evolution of art in stone, this has proven to be of exceptional educational value.

### *Reproductions of the House Life of American Indians*

Field work extending over a period of three years carried on by Mr. John P. Harrington of the School of American Archaeology has resulted in the preparation and installation in the Indian Arts Building of important exhibits reproducing the houses and house life

of the Mohave Indians of the Colorado basin and of the coast and island peoples of California. These reproductions are accurate in every detail and invaluable in preserving phases of native material culture which must in their normal habitat soon completely disappear.

### *The Painted Desert*

Through the munificent generosity of the Santa Fé Railway Company, it became feasible to construct a full sized replica of a typical Indian pueblo (fig. 5), and to fill it with representatives of living tribes, the Pueblo, Navaho, Apache, and Havasupai, engaged in their customary occupations. This exhibit has proved to be one of the most attractive and important features of the Exposition,

and is credited to the genius of Mr. Jesse L. Nusbaum, of the School of American Archaeology. The extent of the work, the accuracy of the reproduction of the rocky site and the completeness of every detail of arrangement and construction places this exhibit on a plane of achievement far above anything of the kind ever undertaken. It is indeed a masterpiece.

*Exhibit of the State of New Mexico*

New Mexico stands foremost among the states of the Union in recognizing the value of its antiquities and making them an asset in the welfare and development of the state. The extensive collections brought together in the state building comprise archaeological and ethnological models prepared by Mr. Percy Adams of the School of American Archaeology at Santa Fé, besides extensive series of specimens, photographs, transparencies, and many other exhibits illustrating the history, archaeology and

ethnology of New Mexico. The building (fig. 6) in the archaic mission style of the Rio Grande Pueblos, antedating the oldest California missions by a century and a half, is one of the most effective in the Exposition city. A replica of this structure will be erected in Santa Fé at a cost of sixty thousand dollars on a site donated by the people of that city, contiguous to the ancient Palace of the Governors, as an addition to the Museum of American Archaeology.

*Physical Anthropology*

The highly elaborated exhibit illustrating the physical history and relative status of the races of man occupies, with the laboratory pertaining to it, five rooms in the Science and Education Building. It was prepared and installed by Dr. Ales Hrdlička of the United States National Museum, who, with the sanction of the Secretary of the Smithsonian Institution, undertook the ardu-

ous task of collecting the material from many sources near and remote. After close observation of the attention paid to this exhibit by the general public and by scholarly visitors from many countries, the Director of Exhibits expresses the view that among existing exhibits within this important field of research it is without a rival and constitutes a distinct and eminent achievement in science.

*A Permanent Museum at San Diego*

There has been formed recently by leading citizens of San Diego a Museum Association, which has for its object the development and maintenance of a public museum for the city. After the close of the Exposition it is hoped that adequate buildings will be placed at the

disposal of the Museum by the City Park Board, and that the Exposition stockholders may turn over the valuable permanent collections to the Museum, as contemplated in the original plans agreed upon by the officers of the Exposition and the Institute.

*The International Congress of Americanists*

The meeting of the International Congress of Americanists will be held in Washington, D. C., December 27-31, 1915, in conjunction with the Second Pan-American Scientific Congress. The Archaeological Institute of America will

hold a joint session with the Americanists on Friday, December 31. Delegates who expect to attend the Congress will kindly communicate with the Secretary, Dr. Ales Hrdlička, U. S. National Museum, Washington, D. C.

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