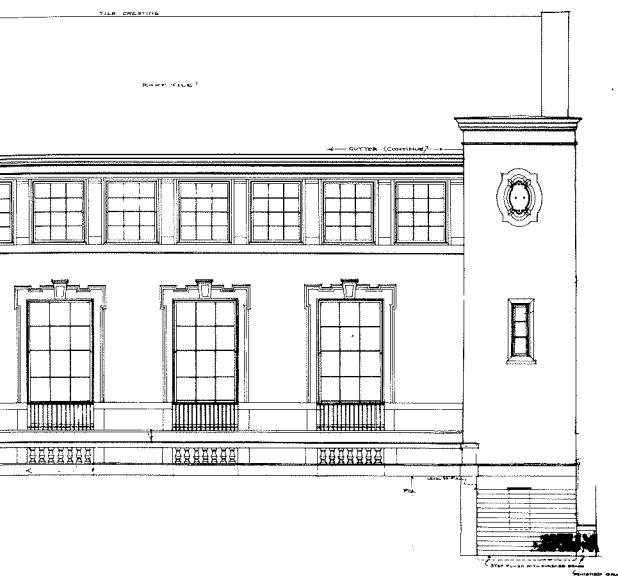


CALTECH'S

THE FRIENDS OF CALTECH LIBRARIES



# THROOP HALL

*By*  
*Judith R. Goodstein*  
*& Alice Stone*

PASADENA, CALIFORNIA

Copyright © 1981, California Institute of Technology  
Library of Congress Catalog Card Number: 81-65793

The photographs in this book are from the Caltech Publications Office, the Caltech Institute Archives, the Pasadena Historical Society, and the *Big T*.

## *Preface*

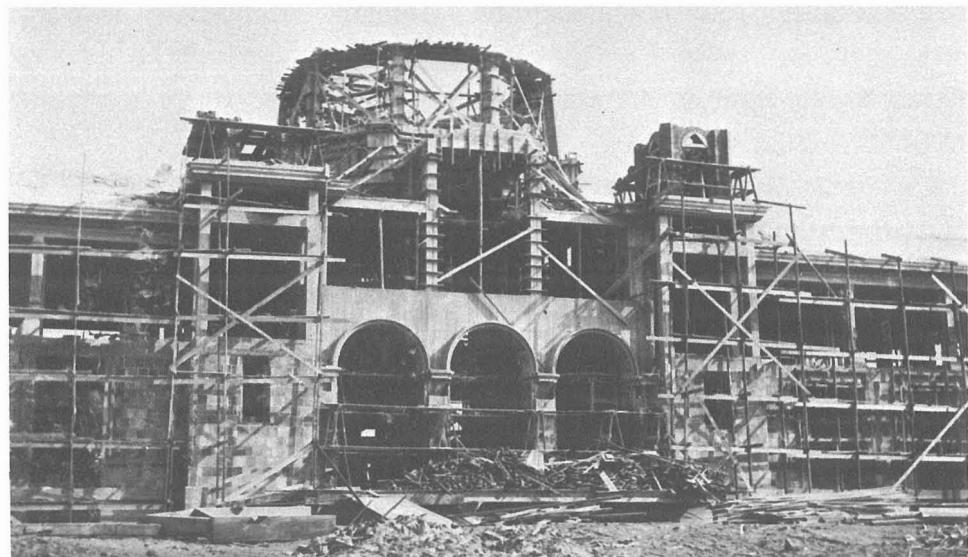
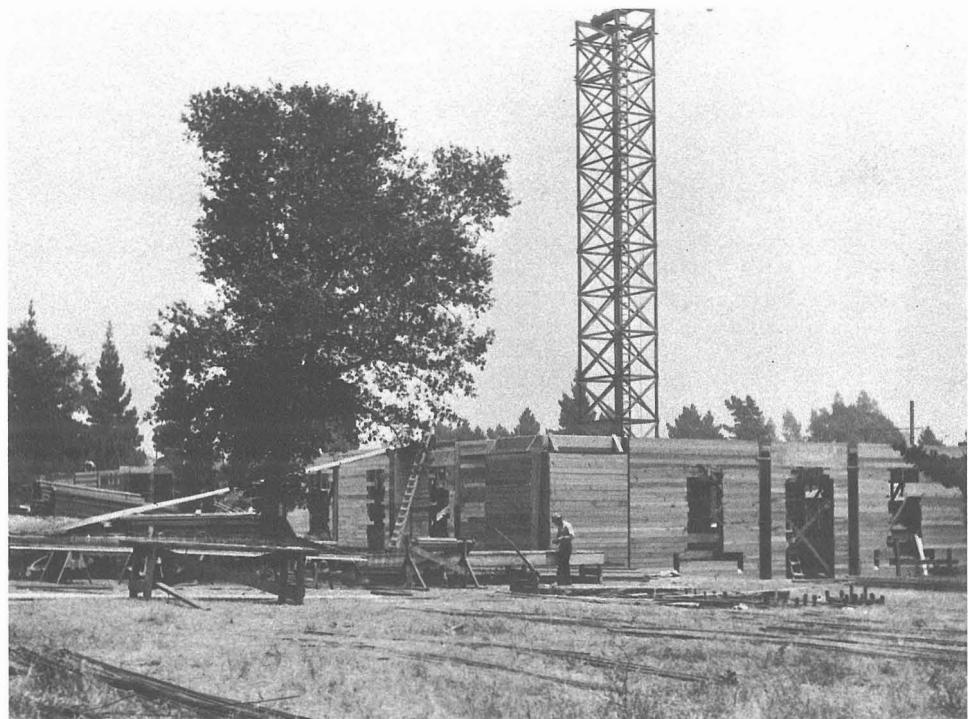
---

THE FRIENDS OF CALTECH LIBRARIES, a volunteer group interested in supporting the work of the Institute's libraries, was founded in 1979. Since then, the Friends have provided for the enrichment of the libraries' research collections, which are used by students, scientists, and scholars from all parts of the globe.

*Caltech's Throop Hall* is the first publication commissioned by the Friends of Caltech Libraries. Built in 1910, Throop Hall launched the school's new approach to technical education and remained the center and symbol of the Institute for the next sixty-three years. The building no longer exists, a casualty of the 1971 San Fernando earthquake. With it went one of the last remaining physical links with the institution of 1891 that went on to become the modern Caltech. This photographic documentary of Throop Hall is the Friends' way of marking the building's special place in Caltech's history.

Many individuals helped in the preparation of this book. The authors wish to thank Kay Walker, Mary Zirin, Susan Trauger, Barbara Wirick, Ed Hutchings, Virginia Kotkin, Chris Tschoegl, and the Institute's Graphic Arts Facilities for their assistance, advice, and patience.

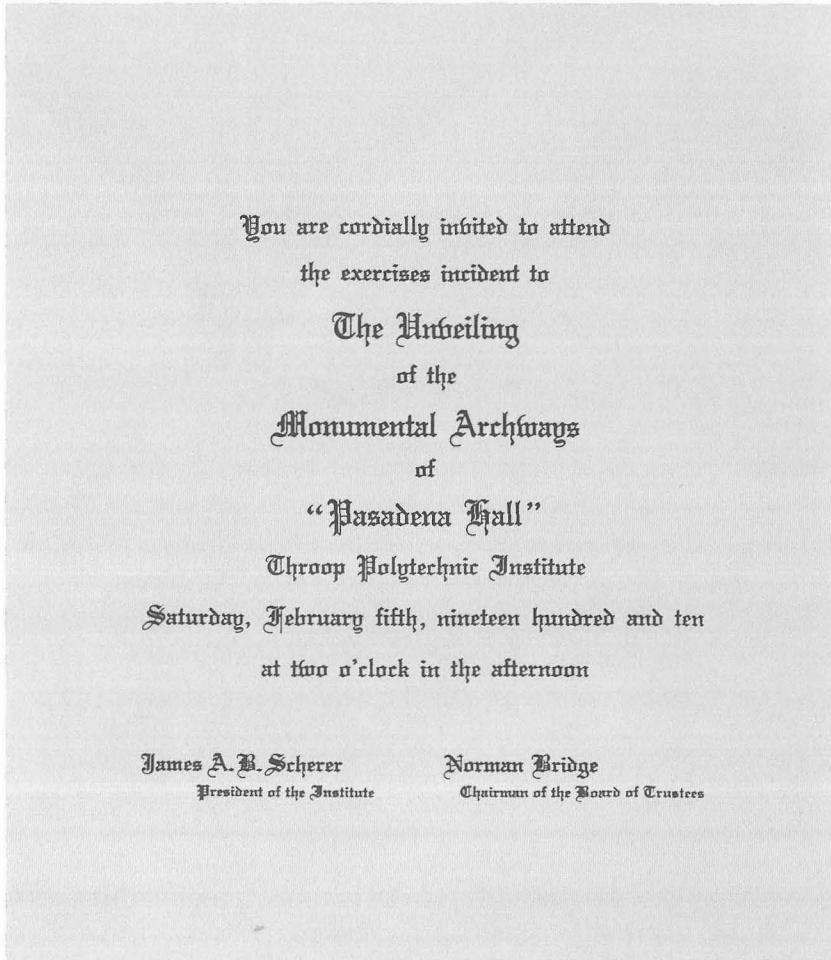
---



*"The chief thing that . . . may be of interest to you, coming as it does from the builder, is a statement of the principal materials. . . . It has taken in round numbers about 7,000 tons of rock, sand and gravel; 5,800 barrels of cement; 180 tons of twisted steel; 150 tons of cement plaster; and 1,000 tons of hollow tile and roof tile."*  
Mr. Crowell's address at the dedication of Throop Hall, June 8, 1910.

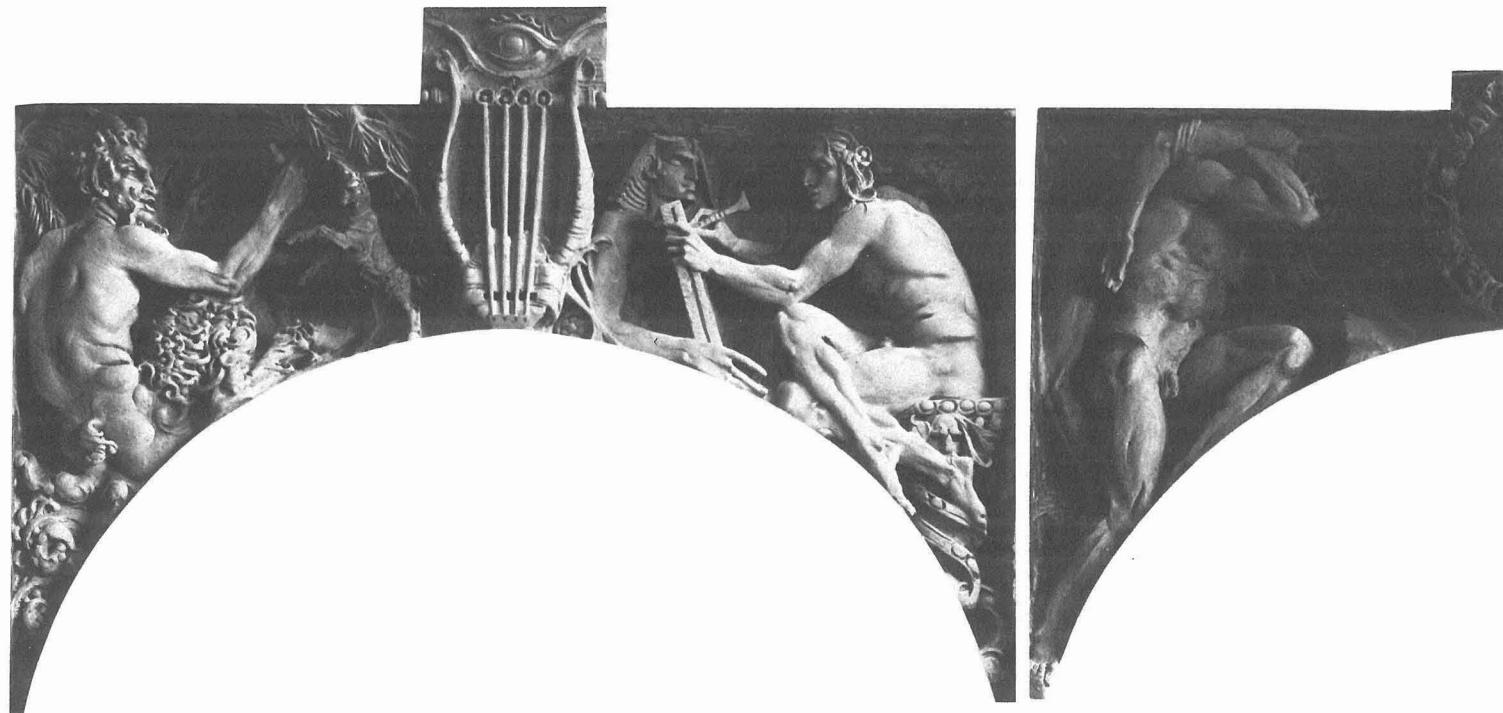
# CALTECH'S THROOP HALL

---



THROOP HALL first opened its doors to the public on February 5, 1910. Known then as Pasadena Hall, it was the first building on the new campus of Throop Polytechnic Institute.

---



*Calder wrote:*

*"The design for the sculptural enrichment of the archways of the Throop Polytechnic Institute is an attempt to give plastic utterance to the aims and scope of the school. The motive for this expression, conceived in a free treatment of Spanish Renaissance, . . . covers the whole field of human effort and intelligence under the heads: 'Nature,' 'Art,' 'Energy,' 'Science,' 'Imagination,' and 'Law.'*

---

The occasion was the unveiling of the main entrance archways framed by the monumental figures by Alexander Stirling Calder, a noted sculptor and Pasadena resident. A crowd of a thousand attended the ceremony, and after the applause, Throop's president, James A. B. Scherer, announced that "the members of the faculty are constituted a committee to show visitors through. . . . Those of you who climb to the tower room . . . will secure a panoramic view of Pasadena unsurpassed for sweep of natural beauty in all this land."

---

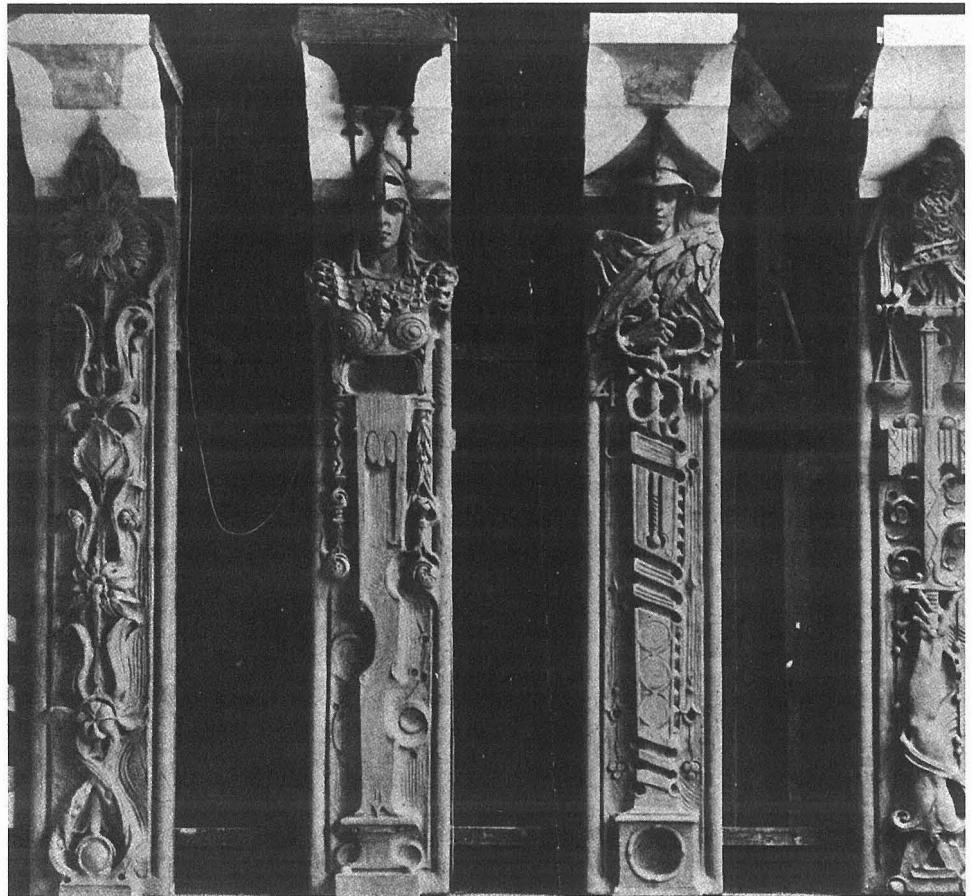


*"Beginning with the spandrel on the left is Nature, in the guise of Pan piping his gentle joy of life. Flanking this is Art, the Poet inscribing his solution of the riddle of life. The left spandrel of the central group represents pure Energy exerting his strength, he knows not why. Then Science, gazing, and lighting his torch at the sun, which forms the central cartouche over the archway. The spandrels over the right archway are: (on the left) winged Imagination exulting in yet unexplored possibilities, and Law with watchful preparedness guarding the ancient tablets of the law."*

---

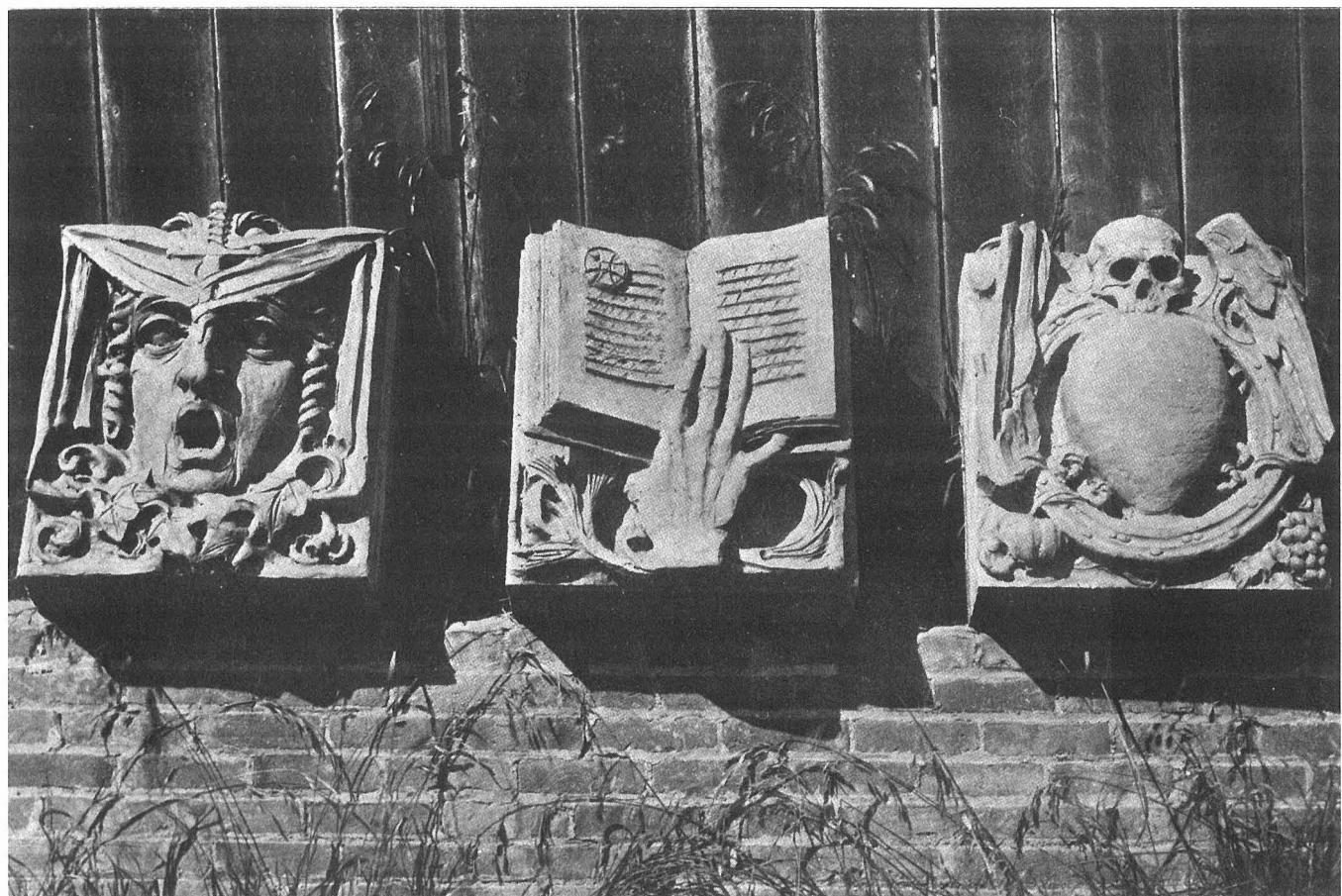
Looking northwest from the tower, the visitors could see the former campus of Throop Polytechnic Institute. Founded by retired Chicago entrepreneur Amos G. Throop as a manual arts school, Throop had been growing contentedly in downtown Pasadena since 1891. The addition of George Ellery Hale, the noted astronomer, to the board of trustees brought a broader vision to the school. In the words of the 1910 Throop *Bulletin*, it was to become "an Engineering College second to none in this country."

---



*The sculptor's description, continued:*

"The pilaster decorations between the arches have as motives the sunflower (relating to nature); a terminal bust of Minerva, protectress of the Arts; a terminal bust of Mercury presiding over Science; and on the right the emblem of the Law.



*"Below the pilasters—a composition representing Life, Death, Eternity, under the sunflower pilaster; Hammer and Anvil below the Science pilaster; a mask below that of Art; while below the Law pilaster is an open book grasped in a hand."*

---

The broader vision coincided with the need for a new campus, as the old was increasingly crowded by the town's business district. A 22-acre site, on the outskirts of Pasadena at Wilson and California in the midst of the orange groves, was a gift of trustee Arthur Fleming and his daughter, Marjorie. Pasadena Hall, eventually to be renamed Throop Hall, was a gift of the citizens of Pasadena.

---

# PASADENA HALL AT THROOP DEDICATED

President Scherer Announces the  
Building Fund Now  
Totals \$382,308

EMINENT EDUCATORS THERE

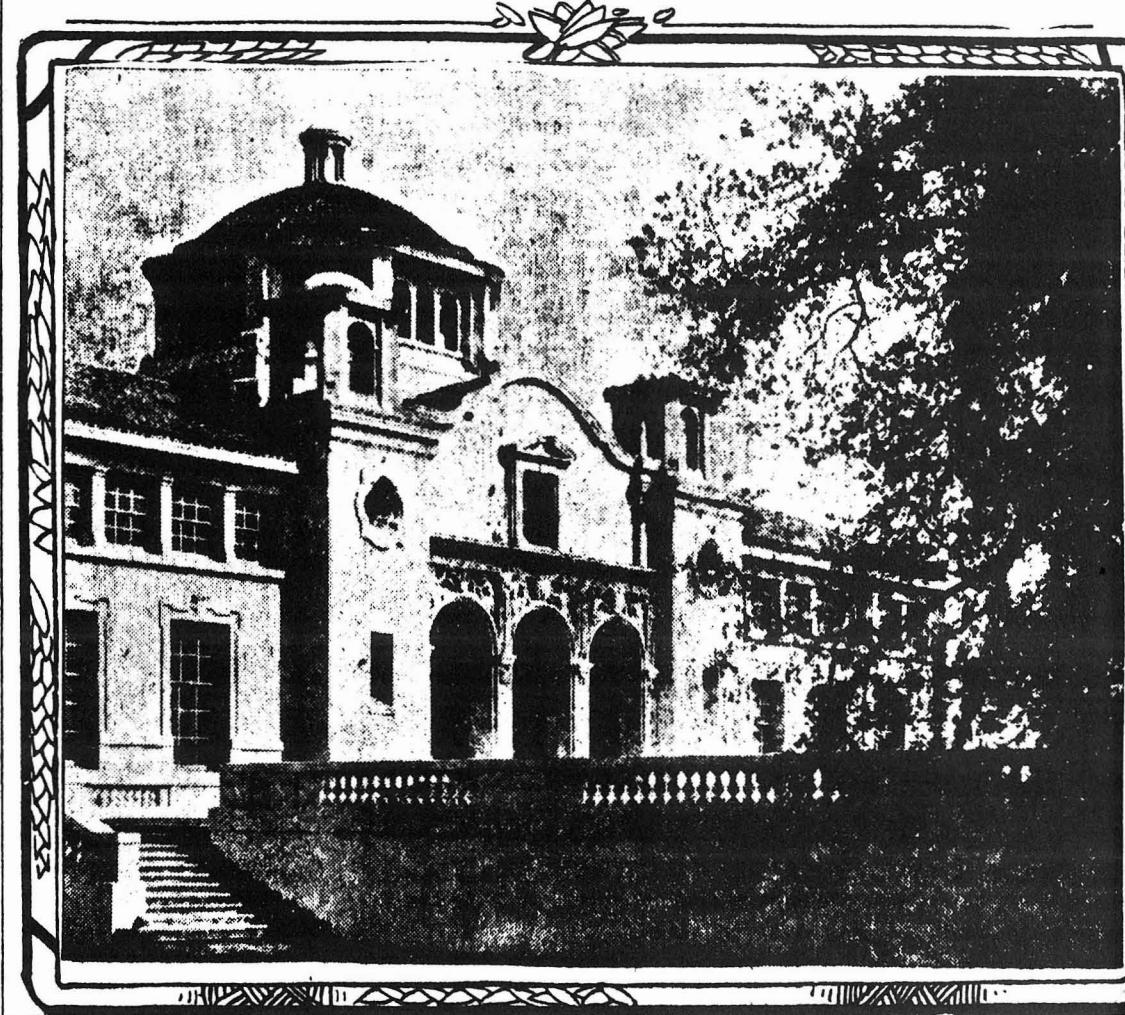
Three Thousand Persons Hear an  
Address by H. S. Carhart,  
Advisor in Engineering

## PRESIDENT SCHERER'S DEDICATION ADDRESS

In dedicating Pasadena hall of Greater Throop Institute, President James A. B. Scherer said:

"I dedicate this building to the kingdom of the truth—to the strength and skill and wisdom, the purity and bravery of youth—for the upbuilding and the betterment of an imperial domain, the great southwest—for the ennobling of humanity by the extension of knowledge and the searching out of wisdom, through drill of steady nerve and dexterous hand and nimble brain in obedience to a righteous will and gentle conscience—in the cause of straight thinking and wise, laborious living—in pledge to human brotherhood—in memory of a prophetic pioneer, as in gratitude to steadfast and unselfish friends who still abide—and in the name of the Father of Light, the Giver of all good and perfect gifts. Thus I dedicate this building. By authority of the board of trustees I name it Pasadena hall. May the city and the school of our pride each be worthy not only of the other, but of the broad motherland of our love and loyalty to the best that life can hold!"

Partial View of Pasadena Hall, Throop Institute, and Men Who Spoke at Its Dedication Yesterday Afternoon



Los Angeles Herald, Thursday, June 9, 1910.

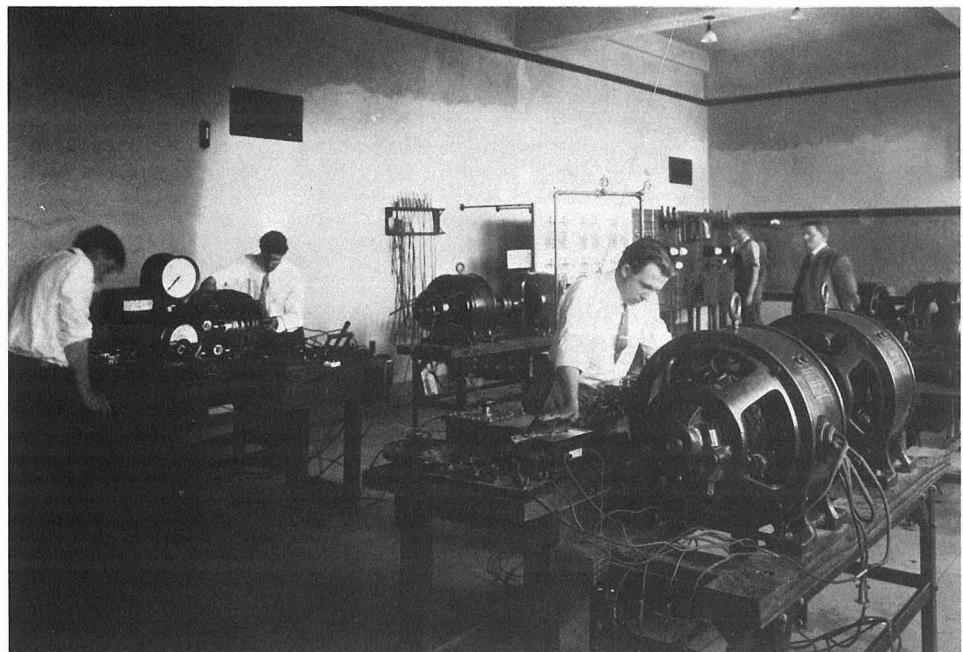
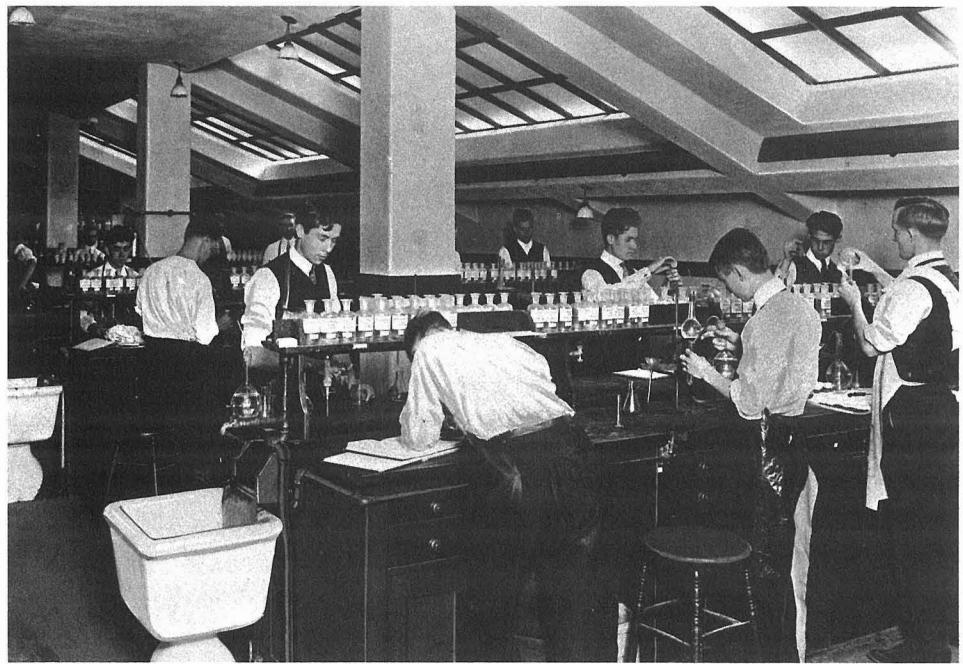
---

Pasadena Hall was formally dedicated on June 8, 1910, but before it could receive students in September, there was work yet to be done. Fortunately, the new faculty was self-sufficient. Royal Sorensen, the first professor of electrical engineering, arrived in August. He remembered:

"Having been informed that we should hustle to get the college ready for . . . the beginning of the college term I proceeded to check what was available for teaching of electrical engineering. There were no electrical power supply arrangements. . . . Having contacted the Municipal Light Department for the light in my home, I extended that contact to ask them to install power on the campus. . . ."

School began on Wednesday, September 21, 1910, for only 31 students, but it was not long before Pasadena Hall was jammed. Jesse DuMond, who later became professor of physics at the Institute, entered as a freshman in 1912. He marveled at the "laboratories and classrooms filling the building completely, from basement to cupola."

---



Pasadena Hall began with \$40,000 worth of laboratory equipment. The chemistry lab (top) was tucked up under the roof. Electrical engineering (bottom) took the south half of the semi-basement, while mechanical engineering occupied the north. Physics was on the second floor.

---

*"The College that Prepares MEN for Modern Life"*



# Throop College of Technology

TRAINING IN  
Electricity and Hydraulics  
Construction and Transportation  
Industrial Chemistry

The Degree of Bachelor of Science conferred, upon the successful completion of a Course of Four Years. Engineering, English and Modern Languages with Civics, Accounting and Economics. Research Work for Graduate Students. A Faculty of 20 University Specialists. Laboratories New and Completely Equipped. A System of Self-Help for Students, including practical wage-earning Experience Free Lectures by Leaders of Thought. Non-denominational by Charter. Best Moral Influences.

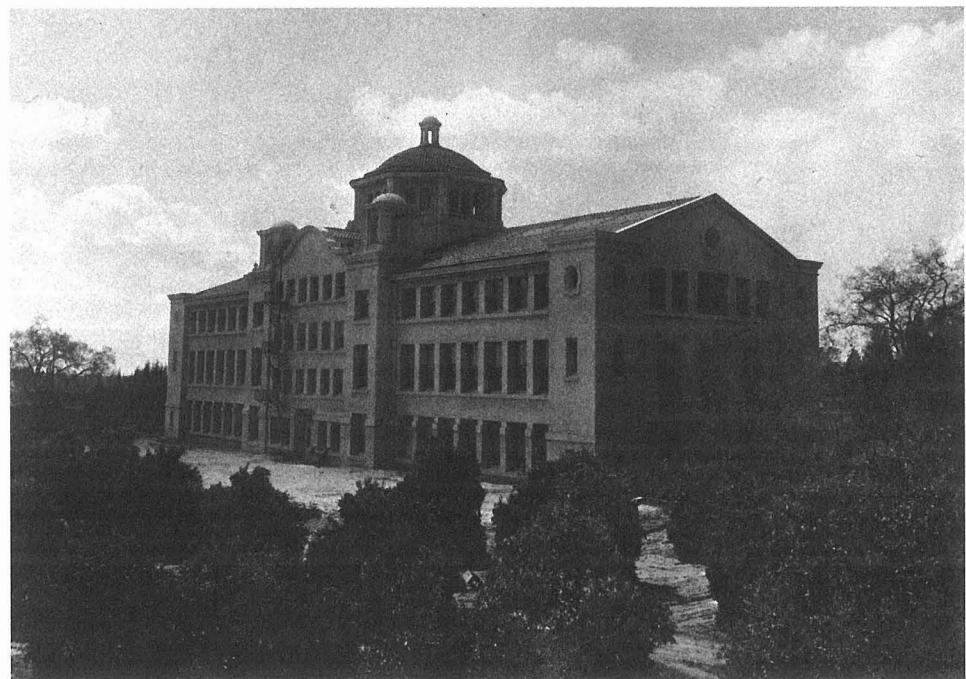
Admits Graduates of Approved High Schools having 15 Recommended Credits

FOR BULLETINS ADDRESS

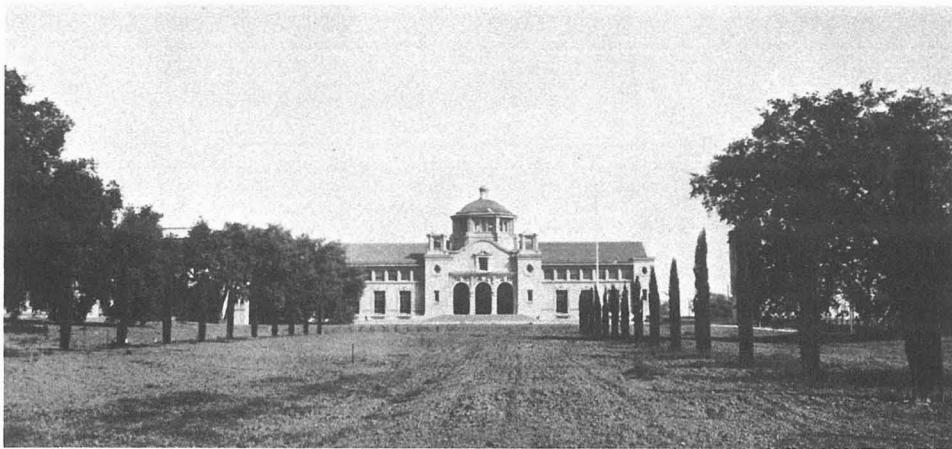
**The RECORDER, Throop College of Technology**  
PASADENA, CALIFORNIA

---

*In 1913, the name was changed from Throop Polytechnic Institute to Throop College of Technology. Throop had become an all male school in 1910, as this ad in the Throop Tech Annual of 1916 suggests.*



*The front yard may have looked like sparse pasture, but the back was a luxuriant orange grove that came right up to the back door. Part of the grove remained until the 1920s.*



*In 1922, (top) the Italian cypresses that march east from Wilson Avenue toward the center of campus were still small and lonely sentinels. By 1937 (bottom) they had grown and guarded biology, chemistry, and astrophysics laboratories—as well as the faculty automobiles.*

---

For some years, the entire college—civil, mechanical, and electrical engineering, physics, languages and English, administration, library, and bookstore—were all housed in Throop. With the construction of Gates for chemistry in 1917 and Bridge for physics in 1922, Throop started to evolve into an administration building, and the campus began to look as it looks today.

---



*One assumes that this graduating class—perhaps about 1918—echoed the sentiments of a popular Throop song:*

*"When our working day is o'er  
And we march through Calder's door,  
We're the jolliest band of boys below the Bay."*



*To practice for the battlefields of World War I, the Student Army Training Corps dug trenches all over campus and attacked every available stronghold.*

---

Architect Myron Hunt (who also did the Pasadena Public Library and the Huntington Library and Art Gallery) had placed Pasadena Hall on the highest point on campus. From its little knoll the building watched the passing parade. One of the most time-honored was the procession of the graduating classes, but with the guns of World War I sounding in Europe, another kind of parade began when military training for the trenches took over.

---



*James A. B. Scherer, president from 1908 until 1920, first established the president's office in Throop.*



*Robert Andrews Millikan presided over the Institute from 1921 until 1945.*

---

The war ended in 1918, with Pasadena Hall nearing the end of its first decade. In 1920, it—and the school—underwent a name change. In February, Throop College of Technology became the California Institute of Technology, and in order to retain the name of the school's founder, Pasadena Hall became Throop Hall.

The school's new name heralded a change in direction. James A. B. Scherer had transformed the school into Throop College of Technology during the previous decade. On the brink of the 1920s the board of trustees had persuaded Robert Andrews Millikan to come from the University of Chicago to continue the transformation into Caltech. Throop Hall, the heart of the campus, later accommodated Lee DuBridge's administration and part of Harold Brown's.

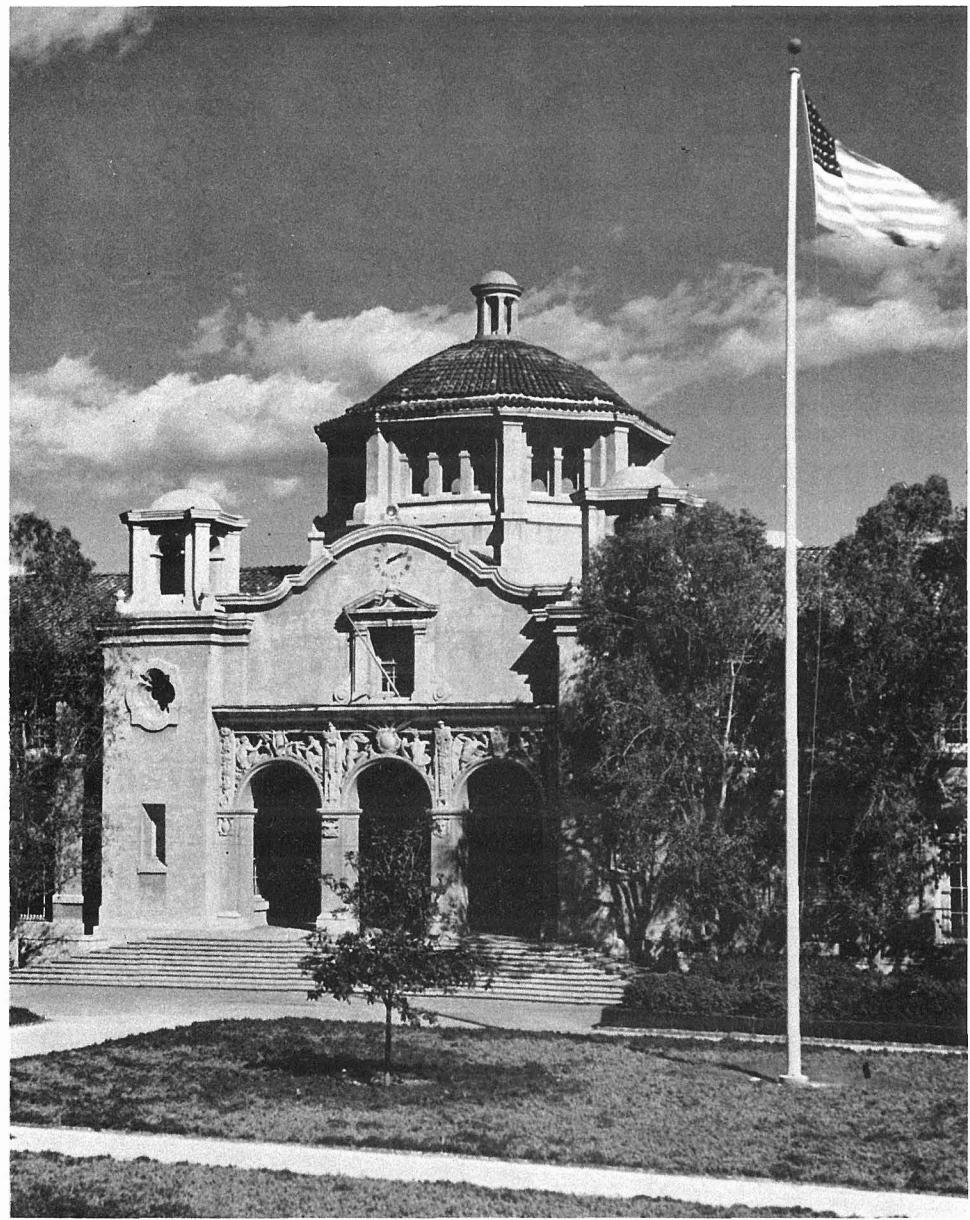
---



*With Throop watching over their shoulders, Millikan (1921-1945) and his successor, Lee DuBridge (1946-1968) conferred in 1951.*



*Harold Brown (1969-1977) occupied the same corner of Throop as his predecessors.*



*When first built, Throop had no clock. It was added in 1941, perhaps to keep time as the war marched onward.*



## To the Students and Alumni of California Institute of Technology

The contributions to the war effort that are being made by you and your faculty are deserving of the highest commendations from the entire nation. We of The Royal are happy for this privilege of congratulating you.

**The Royal**  
Telephone  
Sycamore 6-4311

We know we need not urge you to  
**BUY U. S. WAR BONDS and STAMPS**

PASADENA'S LARGEST AND FINEST LAUNDRY AND CLEANING PLANT

*Throughout its life, Throop Hall was the symbol of Caltech and appeared in drawings, ads, and cartoons of the Institute.*

---

Myron Hunt, with pardonable architectural pride, said at the dedication of Throop Hall that "it is possible, at any time, to convert this sixty-room building into a twenty-room building, without removing a single pipe or a single duct." However, he said nothing about converting a sixty-room building into, say, an eighty-room building, which was done during World War II. Classes for the Navy V-12 officer training program were scheduled from a cubbyhole in Throop as the Caltech community went on a war footing.

---



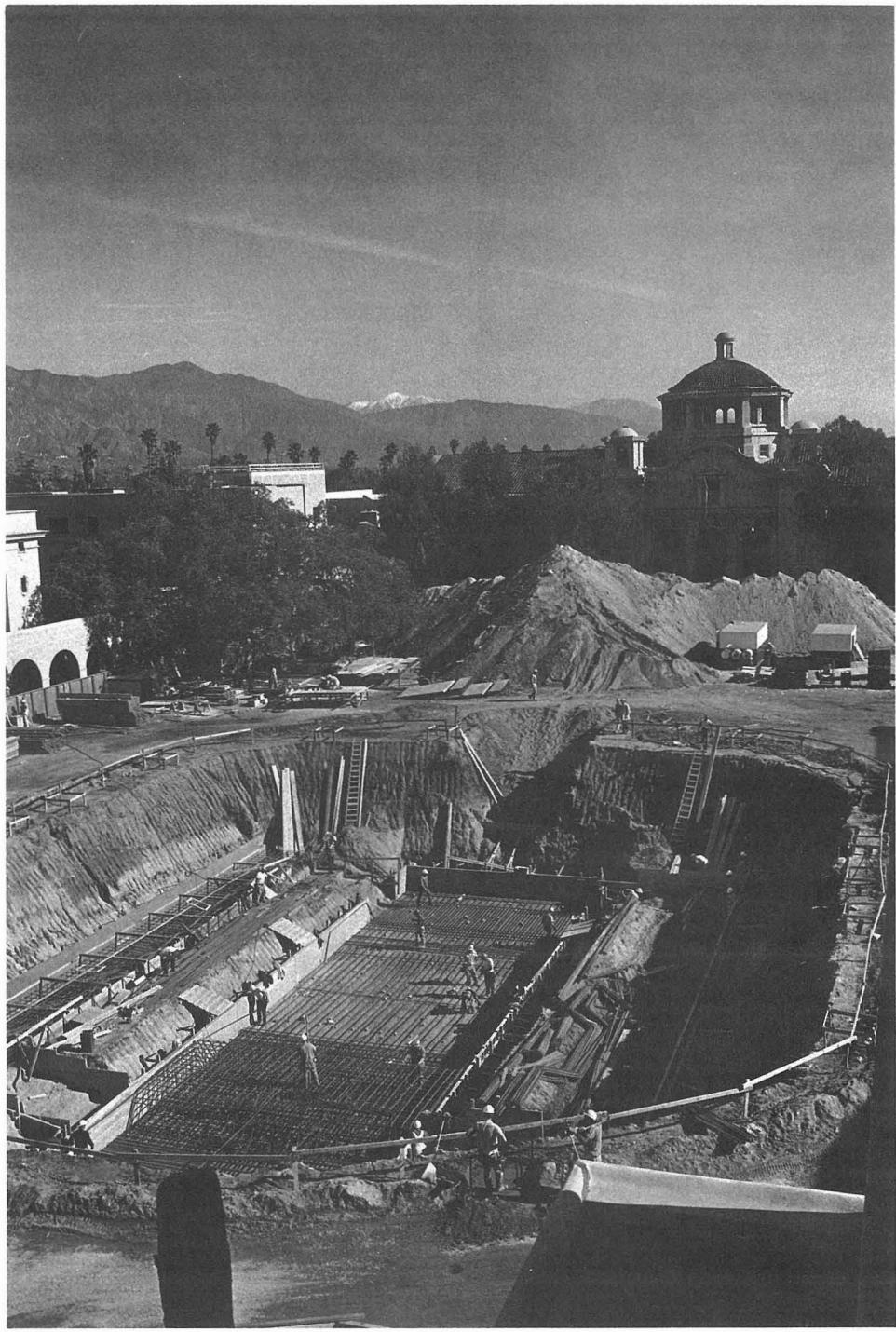
*Real snow mantled Throop in white the night of January 10, 1949.*

---

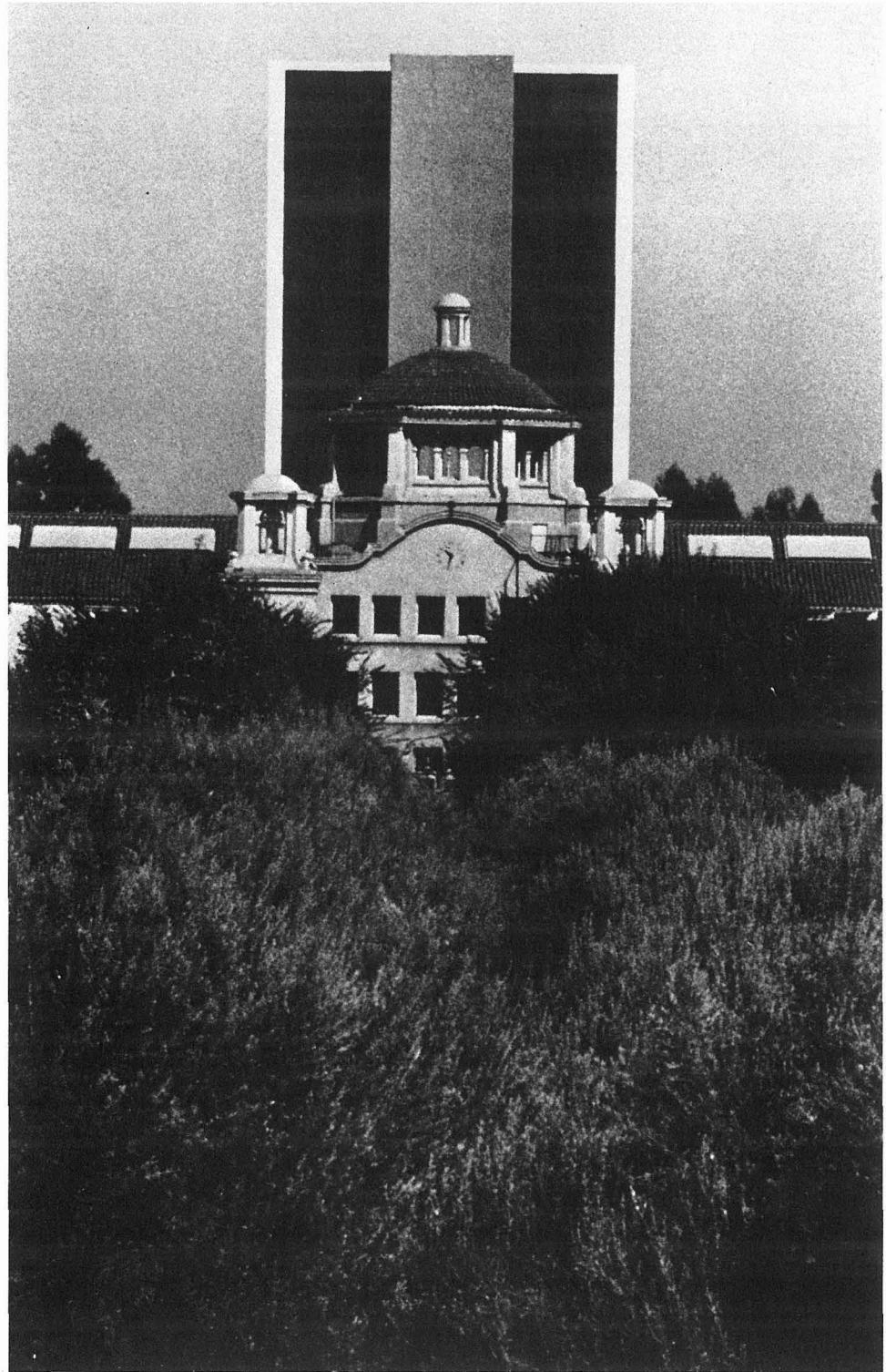
In the 1950s Throop underwent a major remodeling. In the following decade the bookstore went to Winnett, half the double staircase inside was replaced by the admissions office, and purchasing took over the third floor. The southeast corner remained the domain of the president's office.

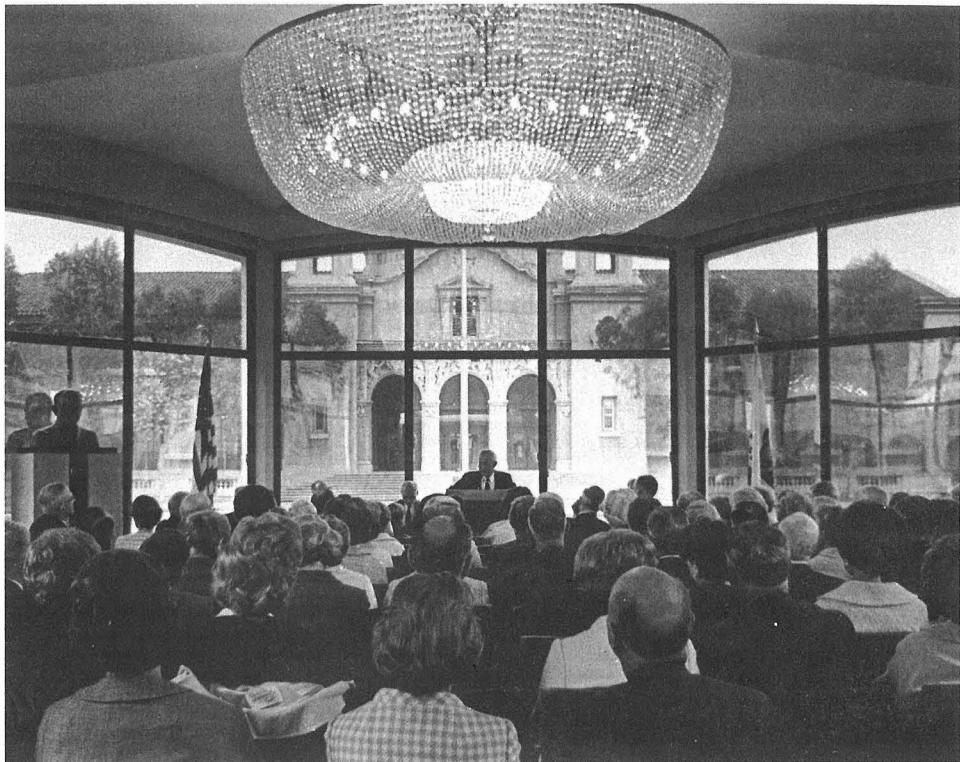
As Throop withstood changes inside, it watched changes outside. The campus grew but left Throop in some semblance of solitary dignity on the little knoll.

---



*Throop played sidewalk superintendent to the construction of Millikan Library.*



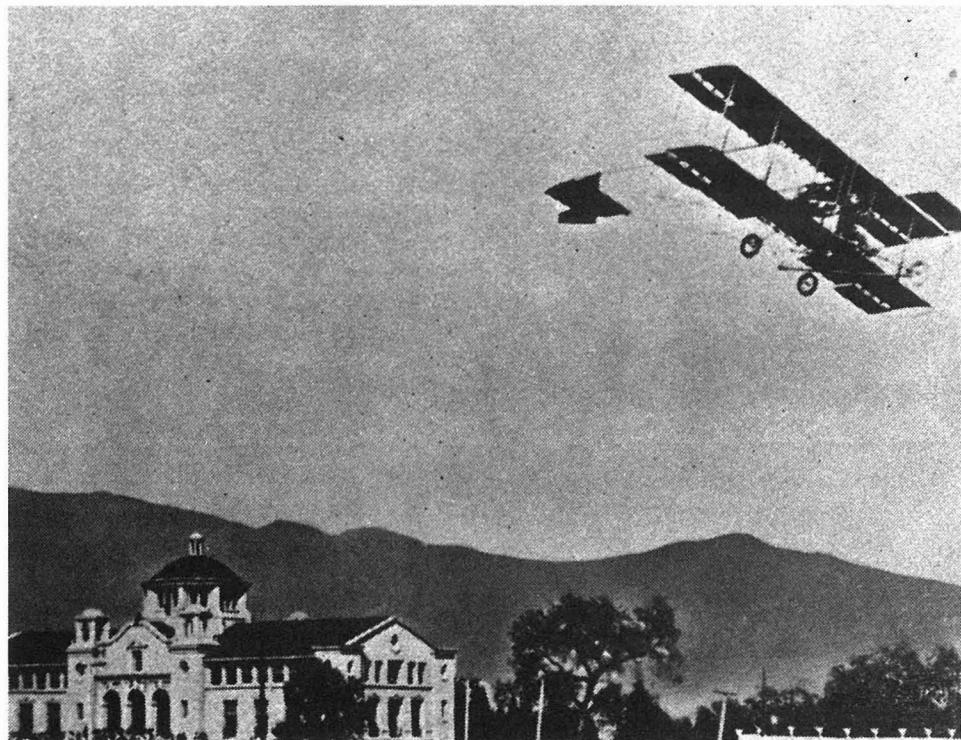


*As the old looked into the new, Millikan was dedicated in June 1967.*

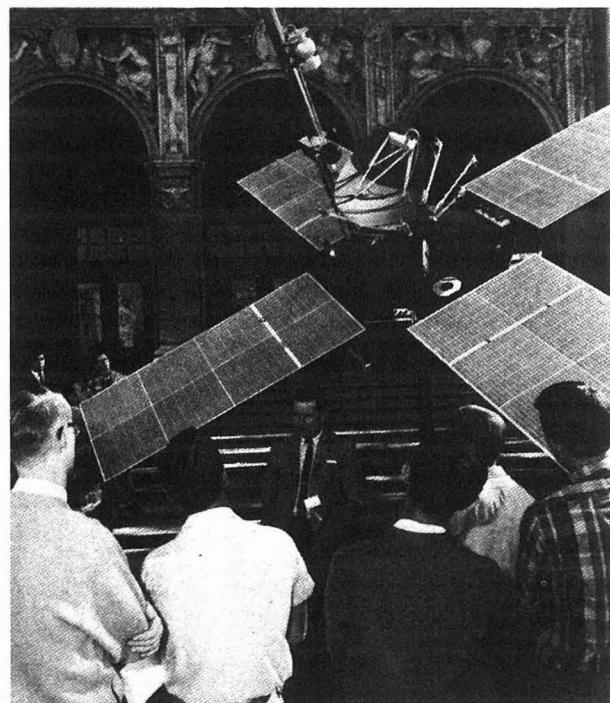
---

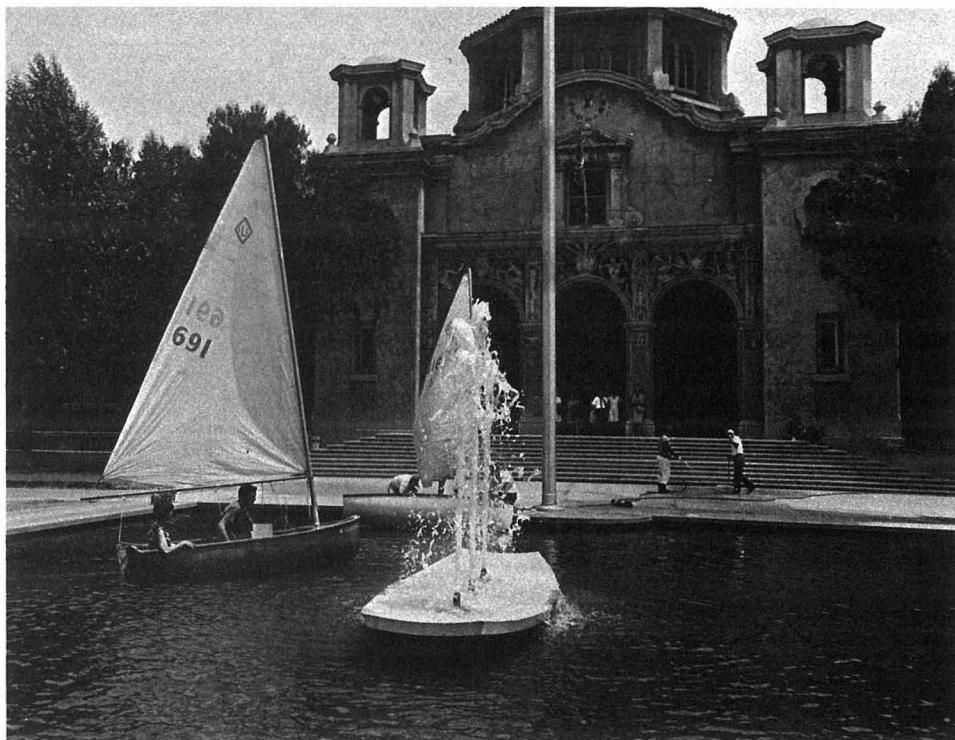
But even before the 1971 earthquake decided Throop's fate, Hunt's Spanish renaissance building was overshadowed by the modern obelisk of the Millikan Memorial Library.

---



*You could never tell what  
you'd find in front of  
Throop. In 1916 a biplane  
soared overhead. By 1965,  
technology was a little more  
advanced, and a model of  
Mariner IV paid a visit for  
Students' Day.*



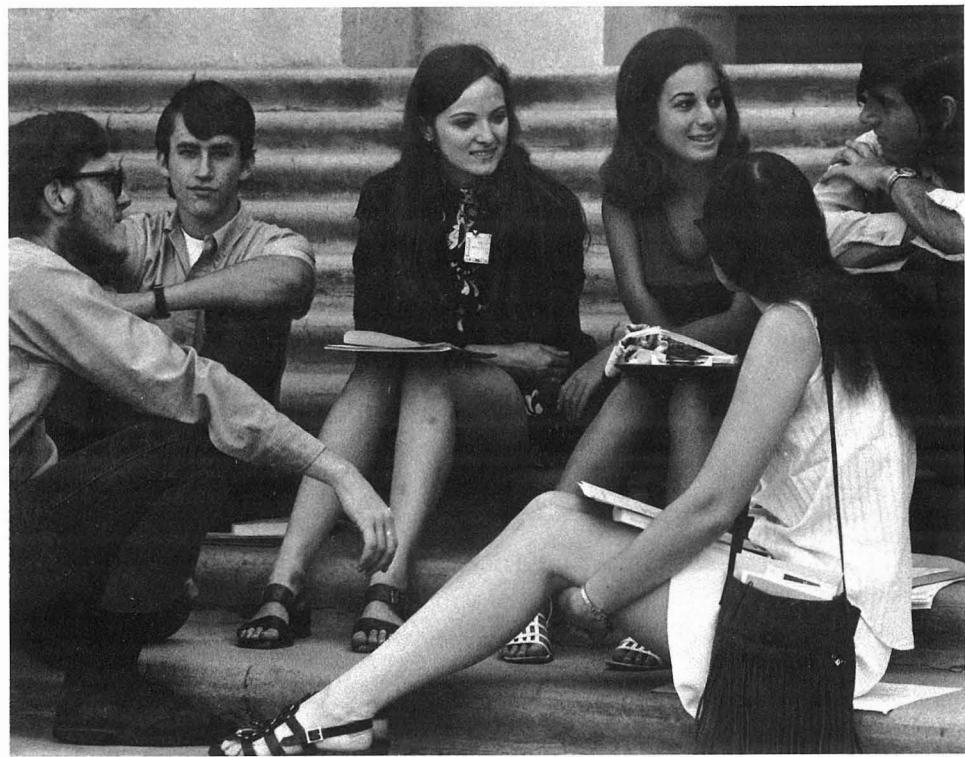


*The Millikan Pond added more possibilities, and somebody went sailing over the bounding main in 1971.*

---

By the end of the 1960s, Throop appeared to grow older faster than other campus buildings of its generation. Some regarded Throop as an anachronism, others found it appealing, but most Caltech people loved it.

---



*Women undergraduates were admitted in the fall of 1970. The steps of Throop were a great place for conversation.*

---

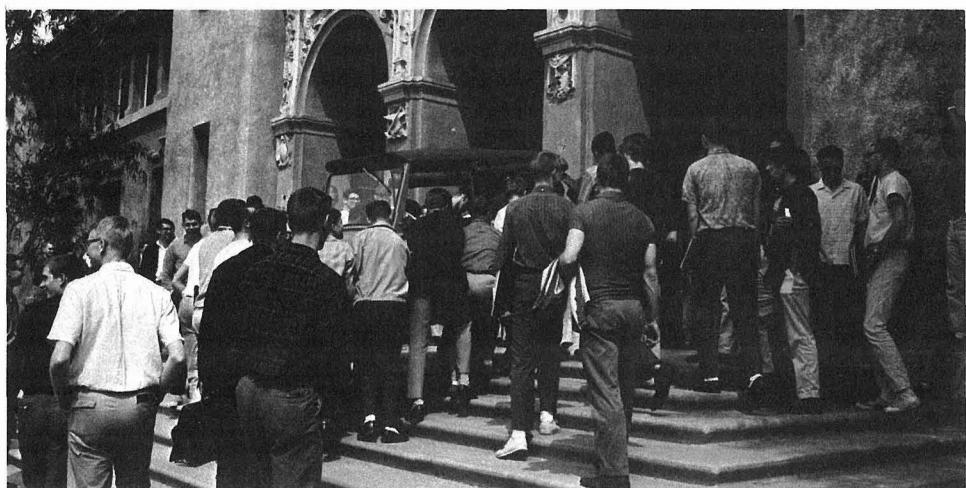
In spite of being thought old-fashioned, Throop remained the center of campus and a focus of student life.

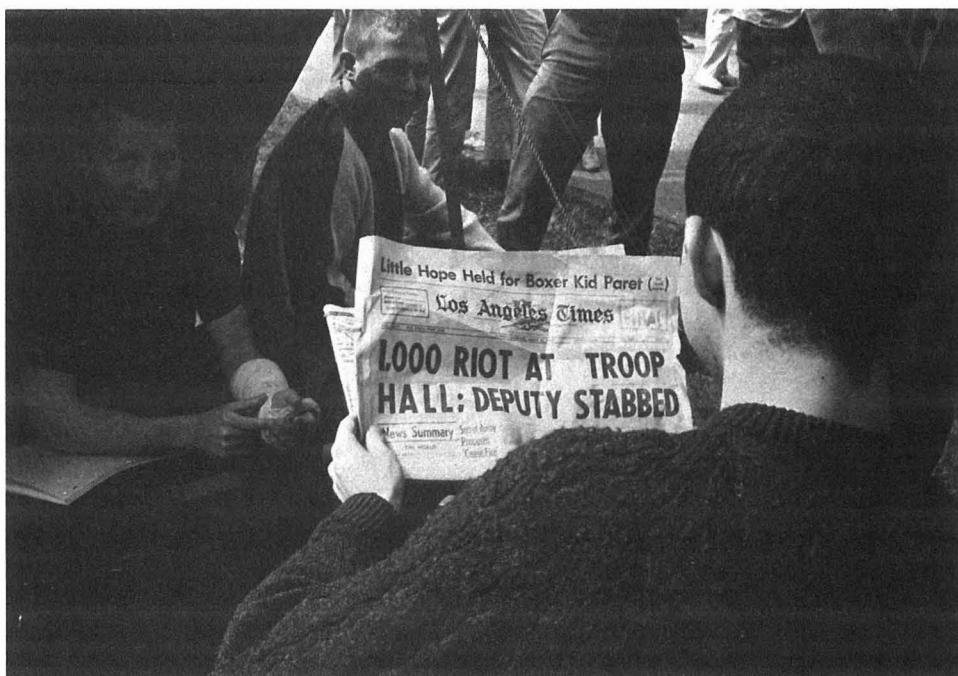
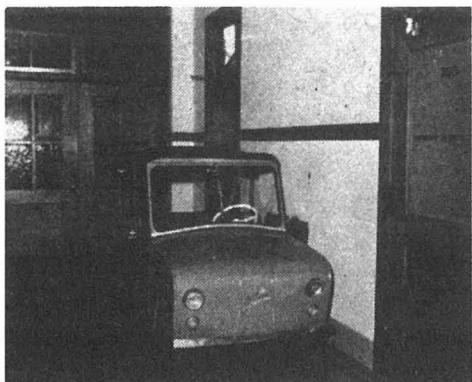
Even Throop's clock didn't escape the student hijinks and turned up with new faces.

---

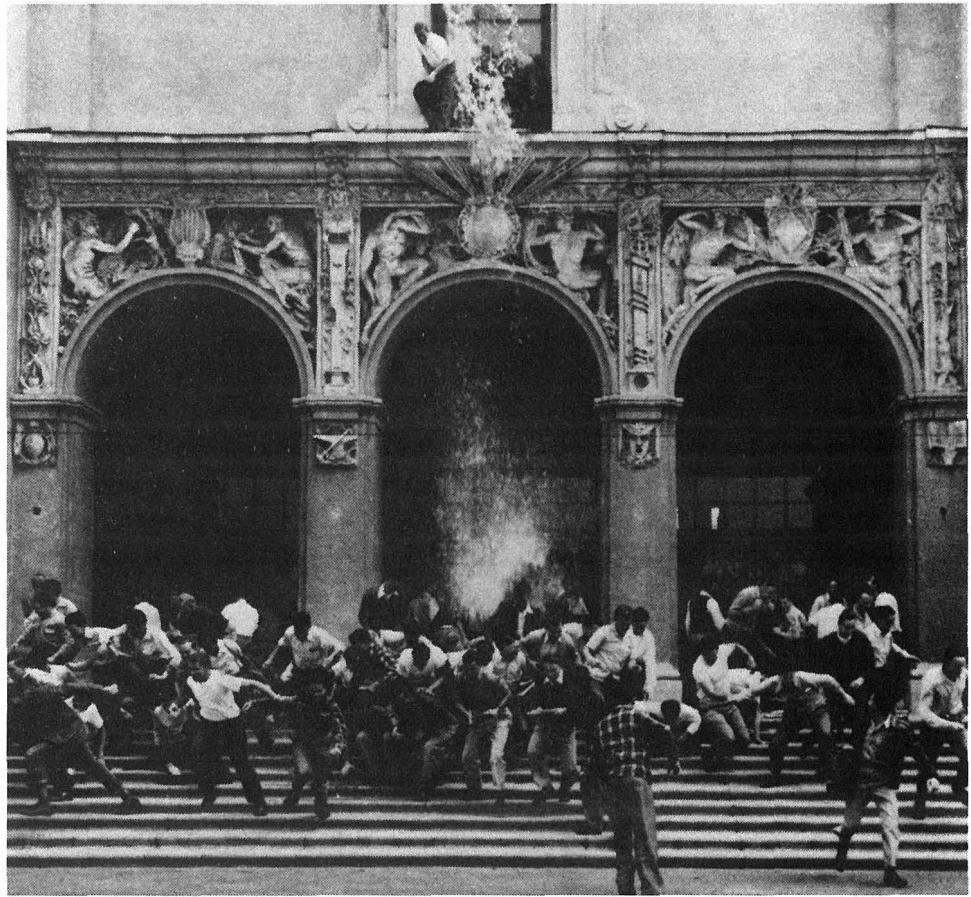


In 1965, the "Fleming House Mickey Mouse Club" transformed the Throop clock. Six years later, somebody followed up with Spiro Agnew.



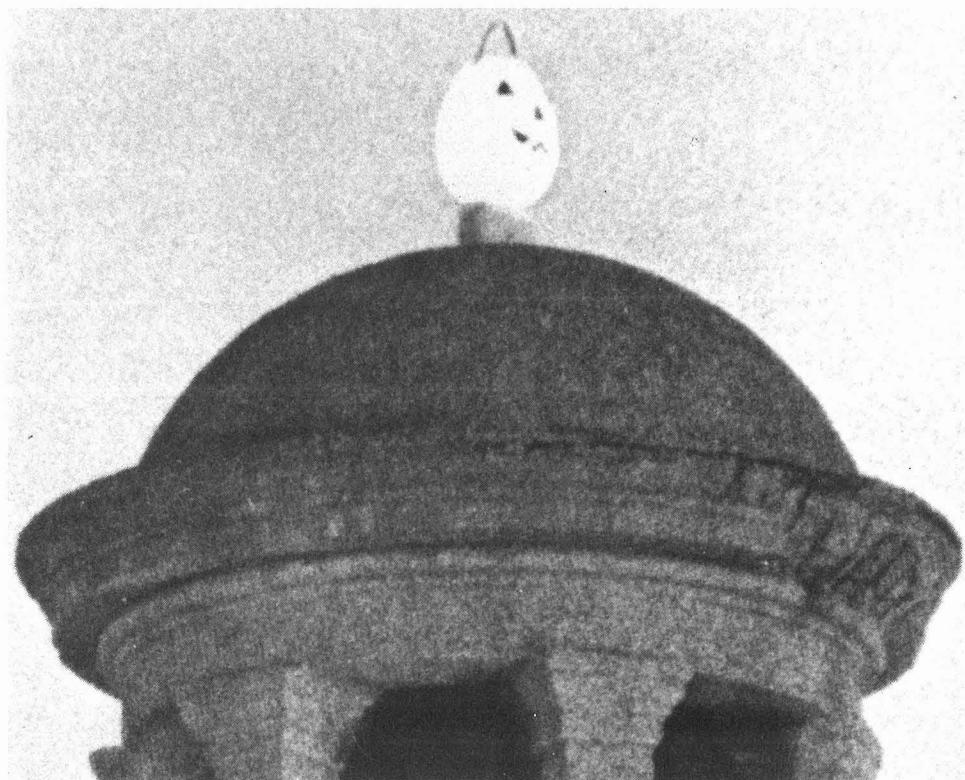
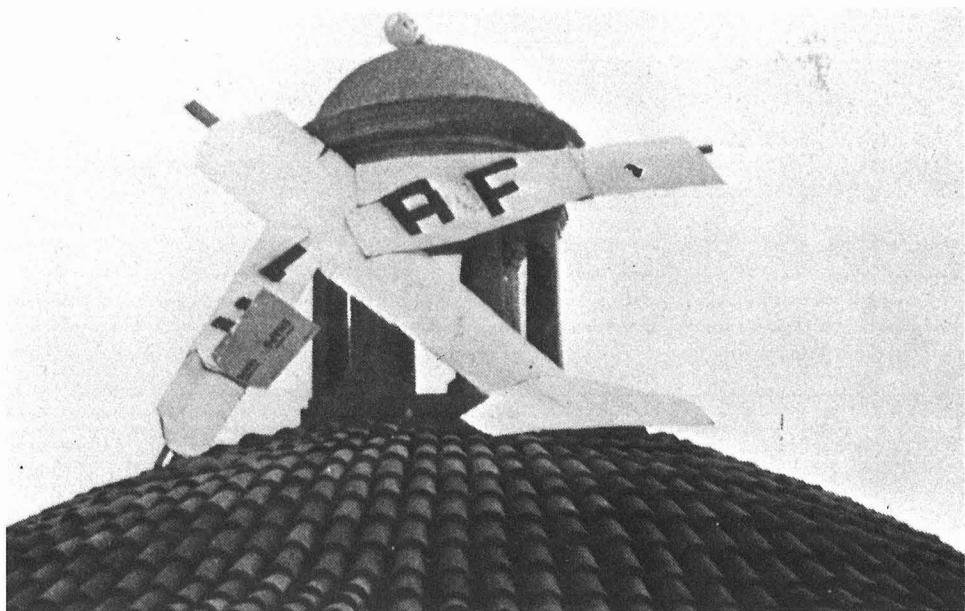


The "Great Parking Rally" by students and selected faculty protested the shortage of campus parking spaces. After songs and exhortations, the students bodily removed a campus mail truck and a Fiat into the hall of Throop. The rally was chronicled in this very privately printed edition of the Los Angeles Times.



*Too many water fights on  
the front side of Throop  
may have been the reason  
for the sign posted on  
the back side.*

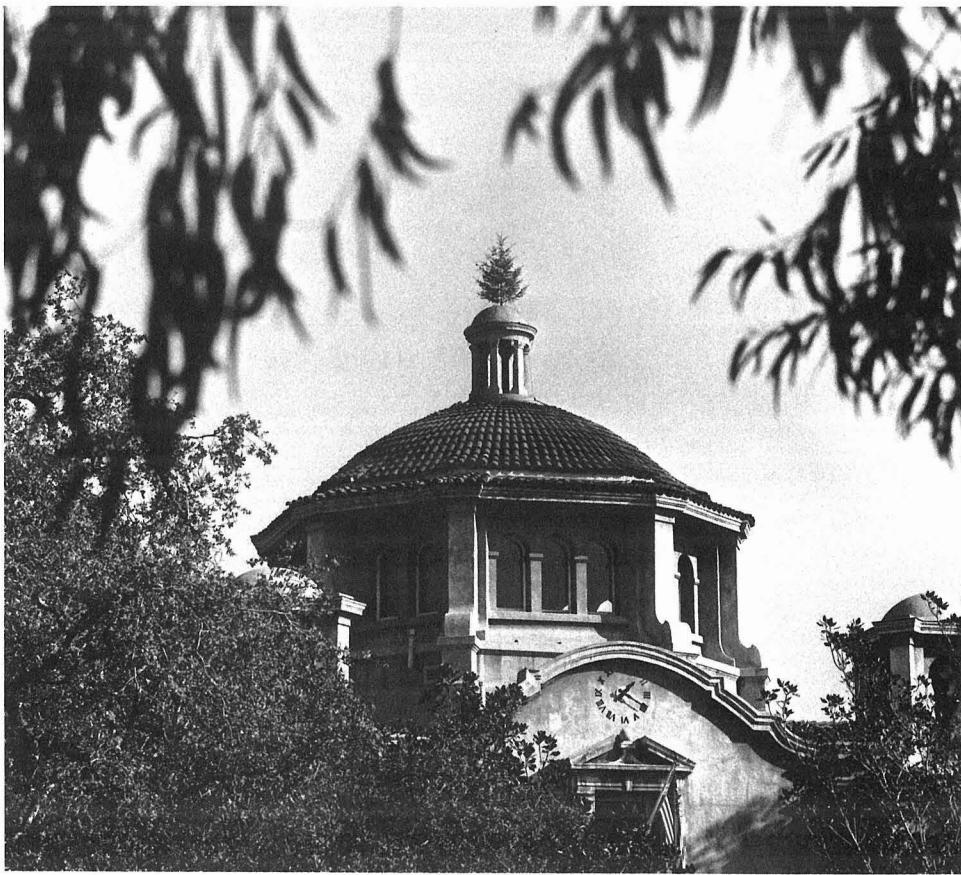




*The Throop tower wasn't really that high, but a paper airplane crashed. A glowing "Great Pumpkin" kept watch for Hallowe'en.*



*Stars, too, made an appearance.*



*With oak and eucalyptus to keep it company, a Christmas evergreen stands proudly on the cupola.*

---

The highest jinks were reserved for the cupola, and almost no season—or reason—went by without its symbol looking over the campus. A Christmas tree heralded the first long break of the academic year and the high spirits of the holidays. And a Christmas tree was the last thing that was ever atop the tower of Throop.

---



*One of Calder's corbels, a haunting hand on an open book, is surrounded by earthquake cracks.*



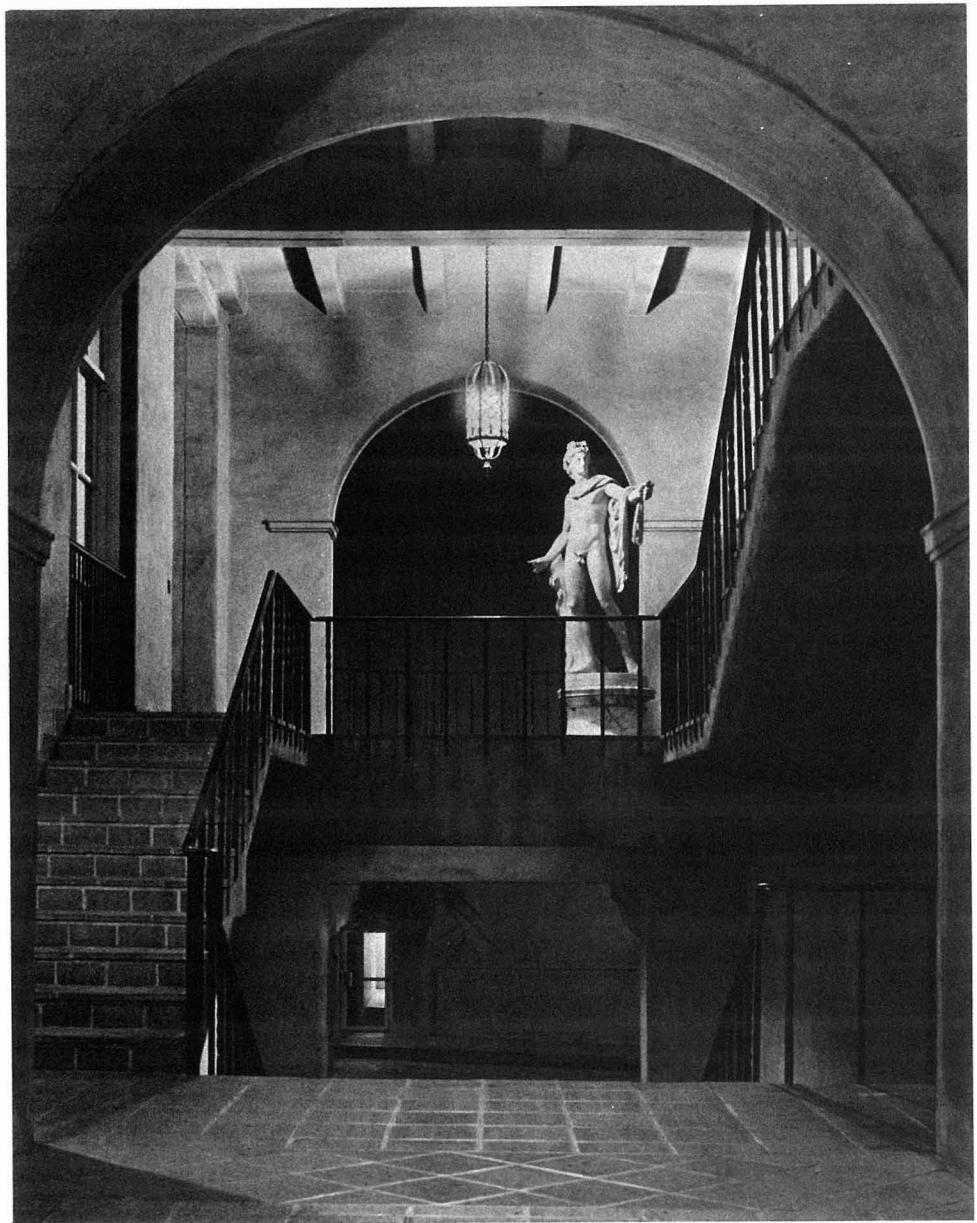
*Student pranksters posted a sign in front of Throop before demolition.*

---

At 6:00 a.m. on February 9, 1971, a 6.6 magnitude earthquake struck Southern California. Throop Hall was a casualty, suffering extensive damage to the nonstructural tile filler walls and exterior facing. After both indecision and inspection, it was declared unsafe.

After months of watching other space being renovated and waiting for another jolt, the occupants finally moved elsewhere. Admissions and the switchboard moved to Dabney, and the president and provost went to the third floor of Millikan.

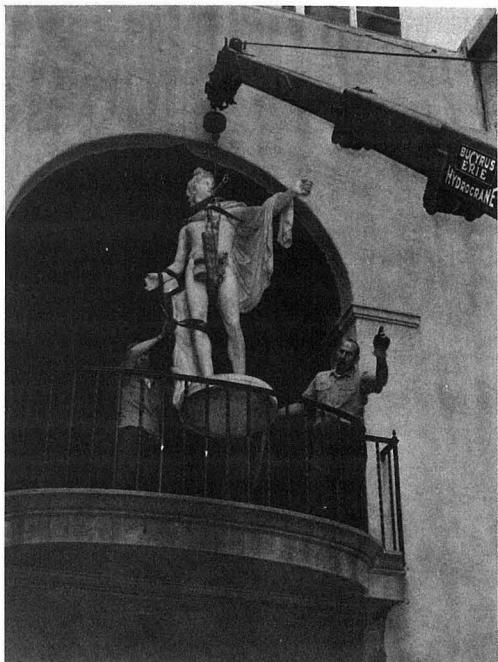
---



---

The human occupants made the move under their own steam, but the other denizens of Throop needed a little help. Apollo was moved to safety relatively early.

---



*Apollo Belvedere—a copy of the statue in the Vatican Museum—was acquired by Myron Hunt's partner Elmer Gray in 1911. Apollo originally occupied Throop's main foyer, but after the 1940s presided over the connecting balcony between Throop and Kellogg, shown here. When Throop came down, so did Apollo.*



*"The desire for the outward manifestations, in the Arts, of our cherished and hidden hopes is inherently and healthily human. . . . Without one vision of the irrepressible optimism of Art, humanity must have perished from the earth."* Alexander Stirling Calder, in "The Usefulness of Sculpture," *The American Architect*, June 22, 1910.

---

Calder's monumental figures, originally slated for destruction, were saved only at the last minute.

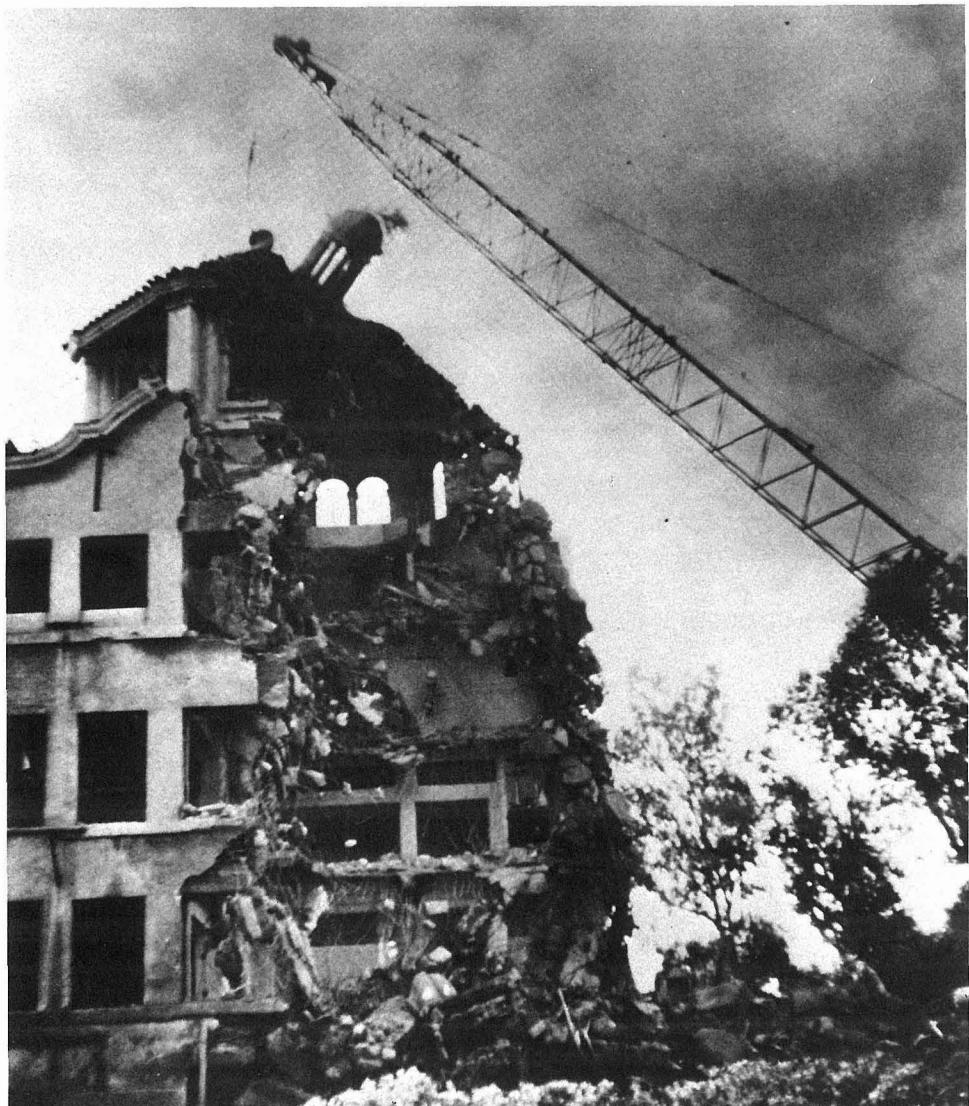
---



---

A final Christmas tree was roped into place and carefully left as long as possible by the demolition crew.

---



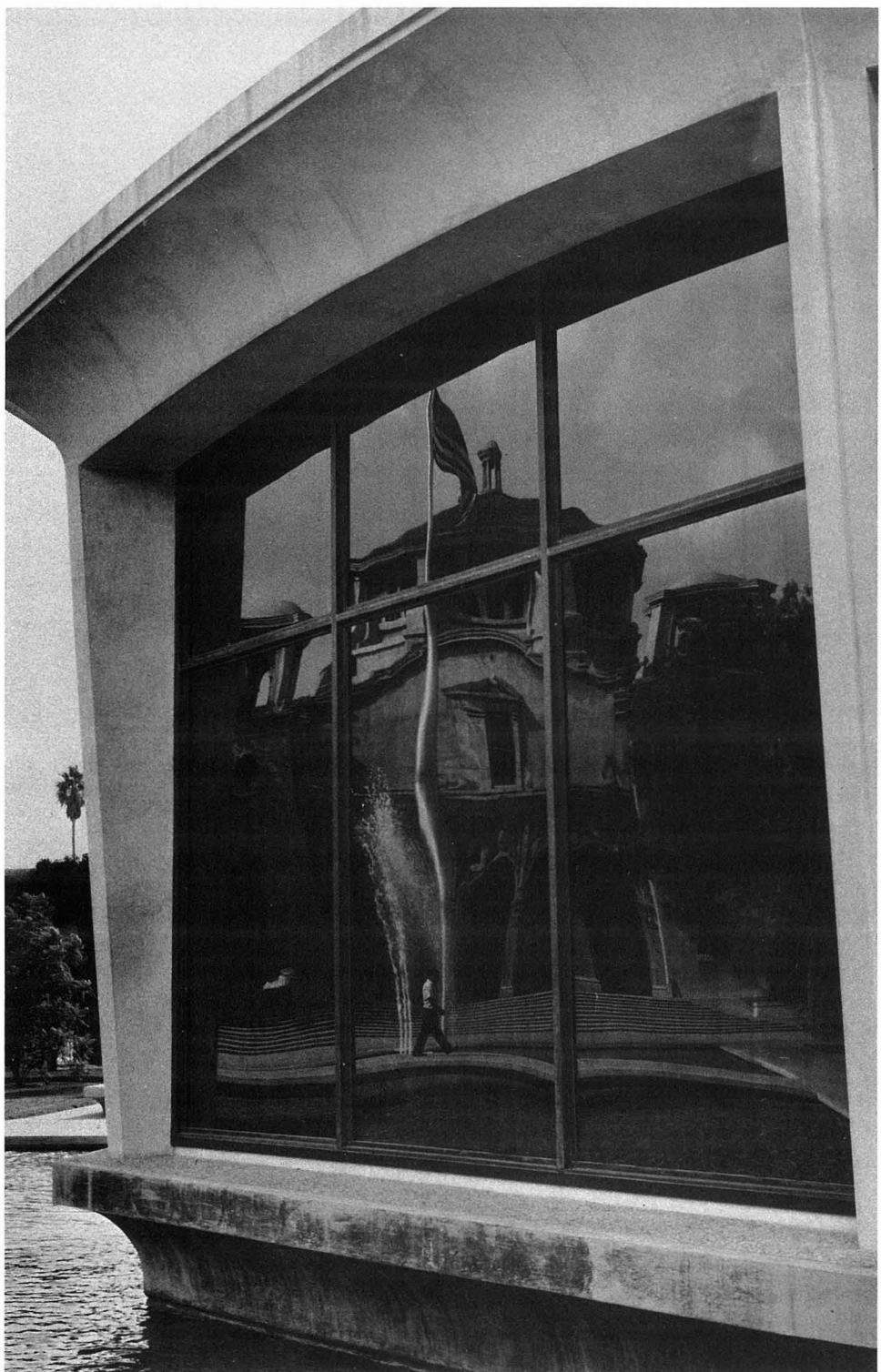
---

In December 1972, a headache ball began pounding the stubborn old structure. Throop returned to dust in February 1973, sixty-three years after Calder's arches were dedicated.

---



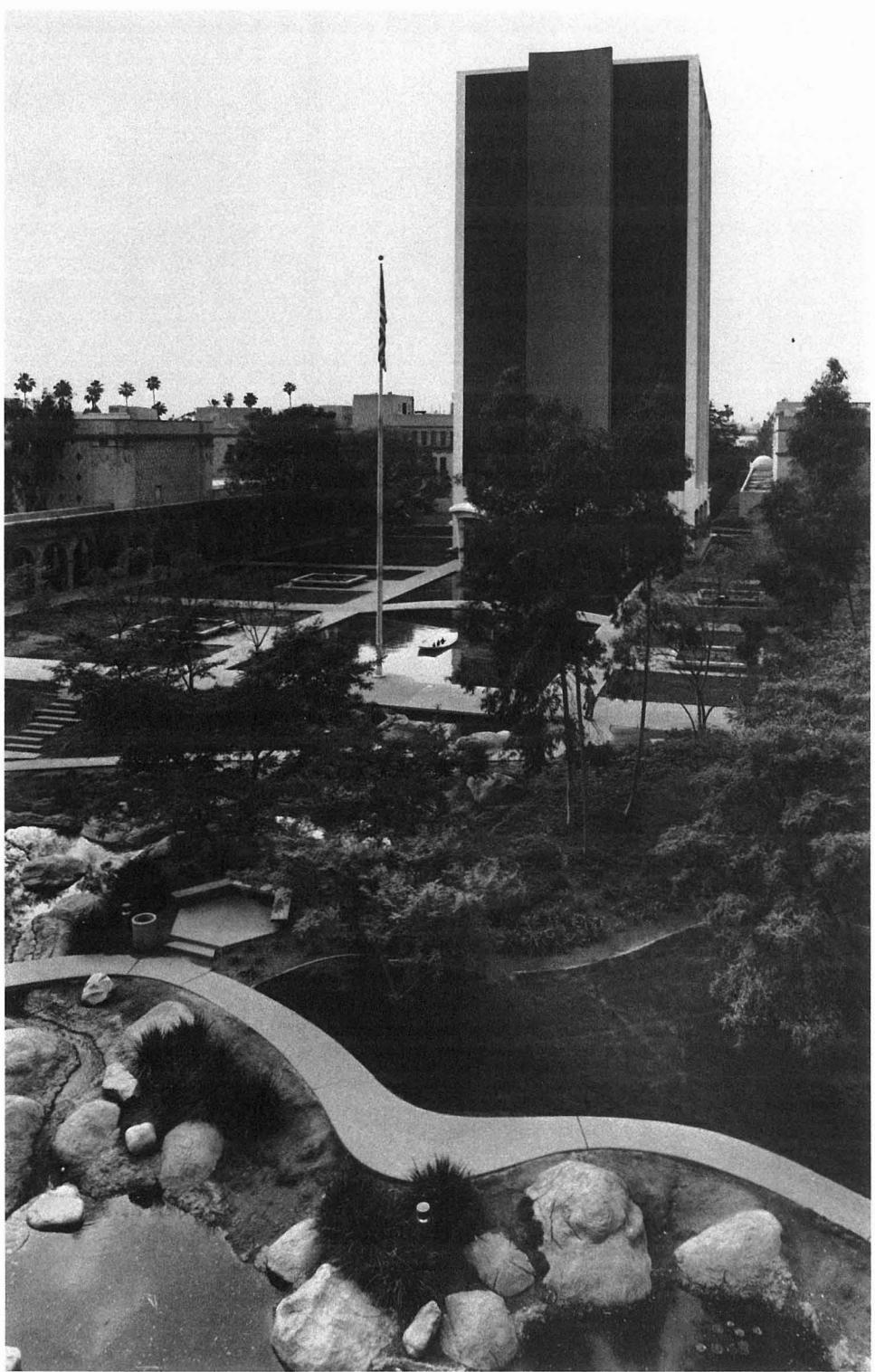
"...the building which you are dedicating is built for the centuries to come.... Beneath that red tile roof is a concrete roof. The dome is of concrete. The floors, the staircases, are of concrete and of unburnable tile. It is fireproof and it is earthquake proof. It is a flexible building. It is an enduring building." Myron Hunt at the dedication of Throop Hall, June 8, 1910.



---

Reflections of Throop linger:

- a Christmas tree donated by the demolition company sits on the little hill and lights the campus for the holidays.
  - a plaque on the side of Kellogg proclaims:  
“The clock above resided for more than three decades on the west face of Throop Hall, the first building at Caltech. . . . The clock was renovated and remounted on a new face by the undergraduate students of Ricketts House and presented to the Institute in 1975.”
  - Apollo Belvedere found shelter elsewhere on campus.
  - Calder’s arches languish in a Pasadena city storage yard, hoping someday to be rescued.
-



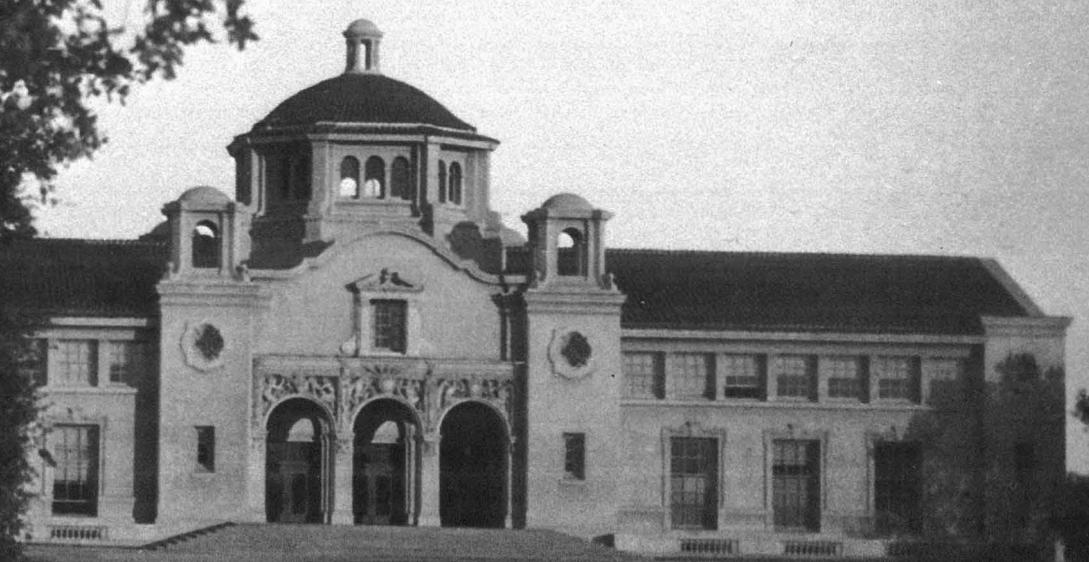
---

Where Throop's halls ran straight and true, paths meander beside  
a little stream.



*This edition consists of 2000 copies  
composed in Linotype Aldus and handset Bembo types  
and printed on acid-free Mohawk Superfine paper.*

*Designed and printed at The Castle Press,  
Pasadena, California,  
May 1981*



THROOP HALL, built in 1910, was Caltech's first building on the present campus. Beloved features were the monumental arches by noted sculptor Alexander Stirling Calder, designed, he said, "to give plastic utterance to the aims and scope of the school."

The devastating 1971 San Fernando earthquake weakened Throop beyond repair. Just before demolition the arches were rescued and moved to storage.

For fourteen years they lay neglected. Then, during a campus construction project, the director of the Institute's Physical Plant thought they might fit in the archway between the two laboratories undergoing rehabilitation.

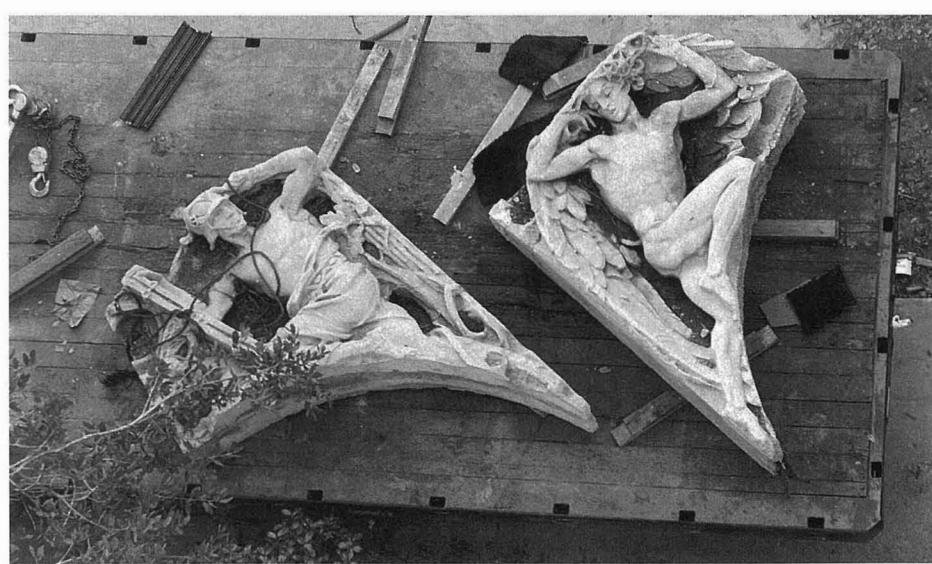
They did, and in 1986 were dusted off, trundled back to campus, and raised in glory once again to watch the passing parade of students, faculty, and staff.

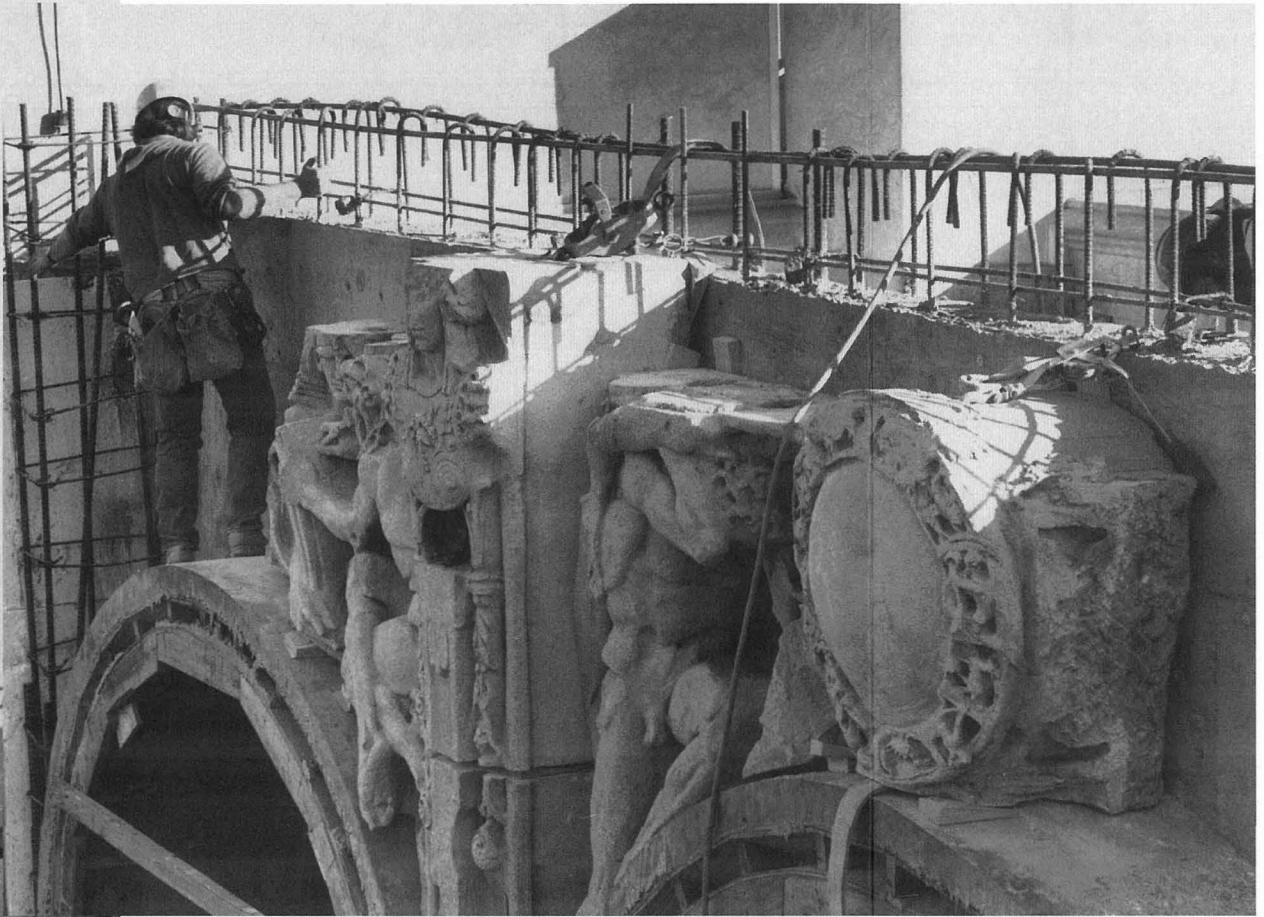


CALTECH'S THROOP HALL

*In the spring of 1986,  
it took four days to  
carefully swing the*

*figures up to their  
new perches.*





*The photographs are  
from the Caltech  
Publications Office  
and the Caltech  
Institute Archives.*

## CALTECH'S THROOP HALL

chronicles the life of the original building through four Caltech presidents, the pranks of countless students, and the passage of years, from biplanes to the spacecraft Mariner IV.

This special edition dust jacket brings the story to an end. Calder's arches are now where they belong—on the Caltech campus, and here, with CALTECH'S THROOP HALL.

(Look inside the dust jacket for pictures of the ascent of the arches.)

## Award of Merit

### CALTECH'S THROOP HALL

Submitted by The Castle Press

Was Selected for the 1982 Western Books Exhibition Sponsored by the Rounce and Coffin Club



TODAY, THE CALDER ARCHES GRACE THE WALKWAY BETWEEN CRELLIN

AND CHURCH LABORATORIES, JOINED IN 1986 AS THE ARNOLD AND

MABEL BECKMAN LABORATORY OF CHEMICAL SYNTHESIS.