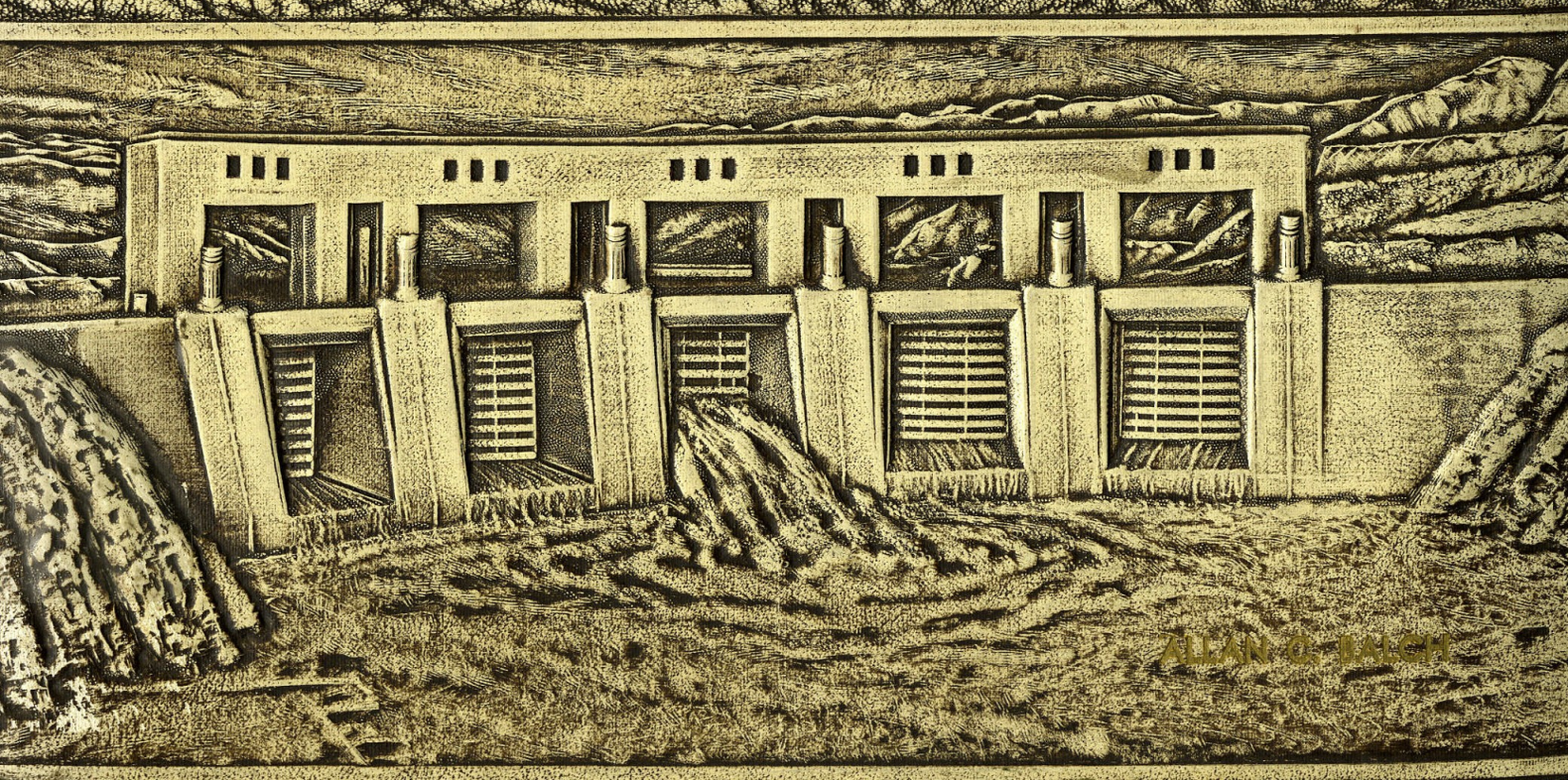
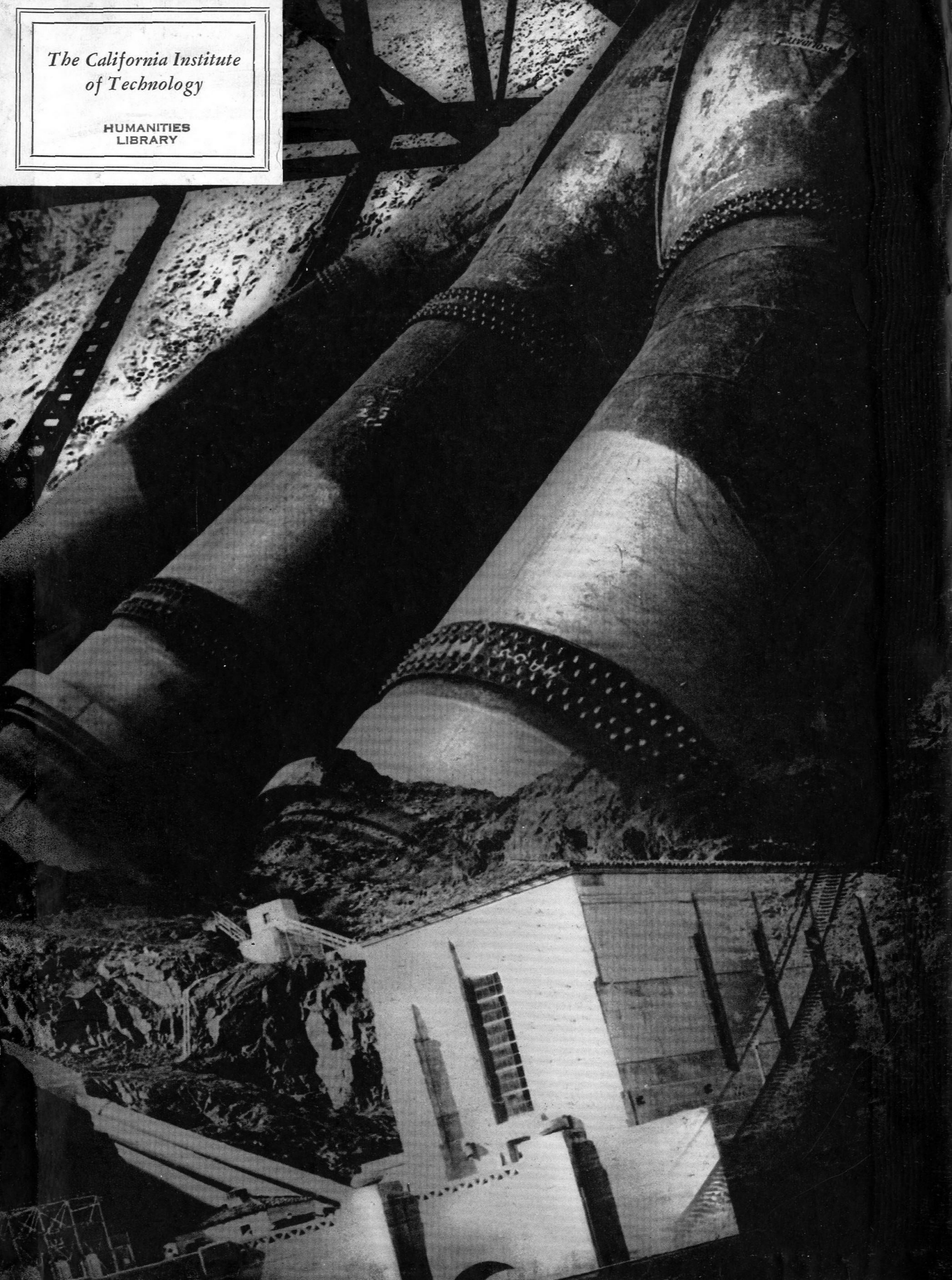
BIG T

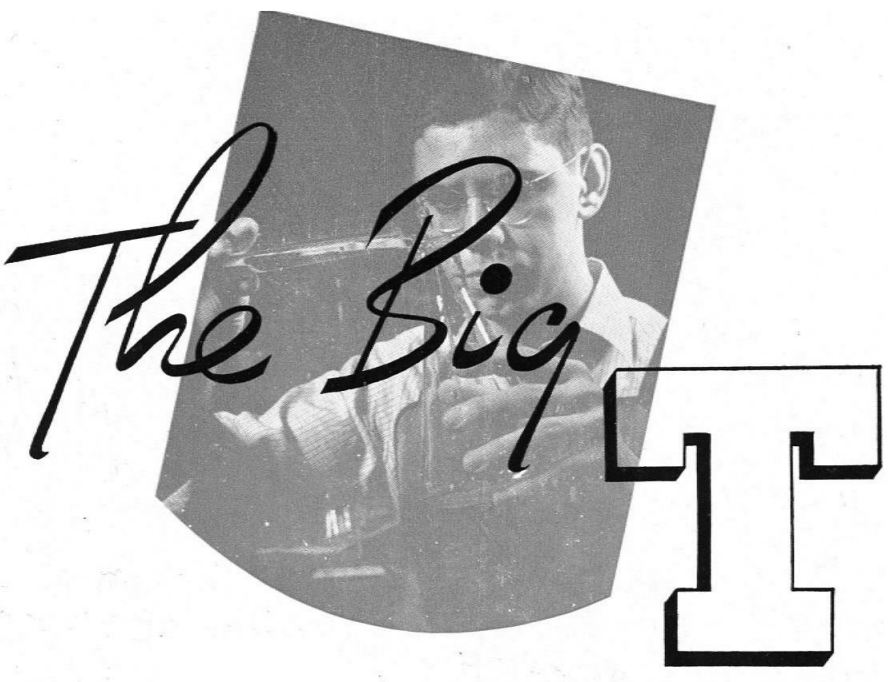


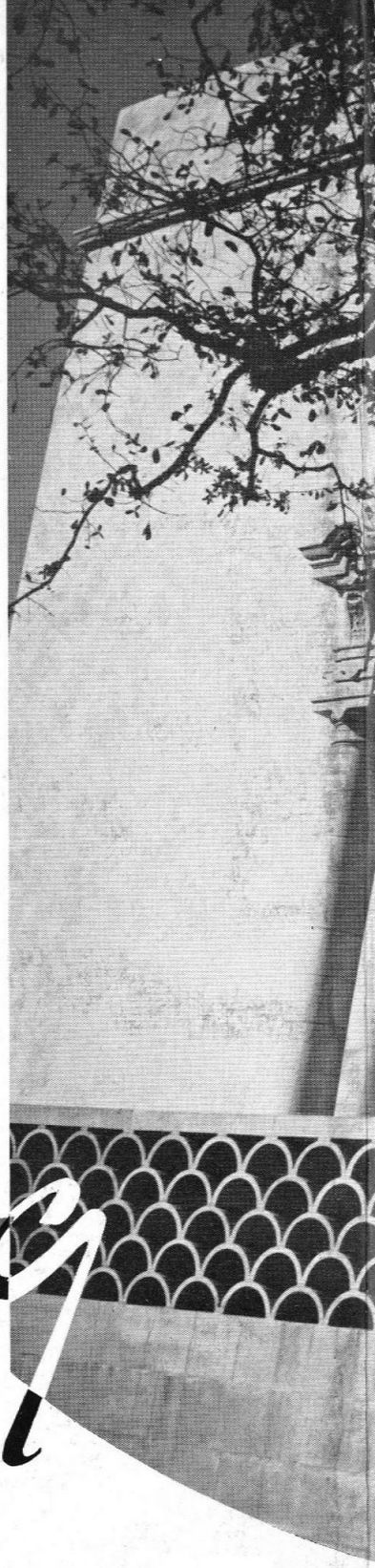
ALAN G. RAUCH

The California Institute of Technology

HUMANITIES LIBRARY

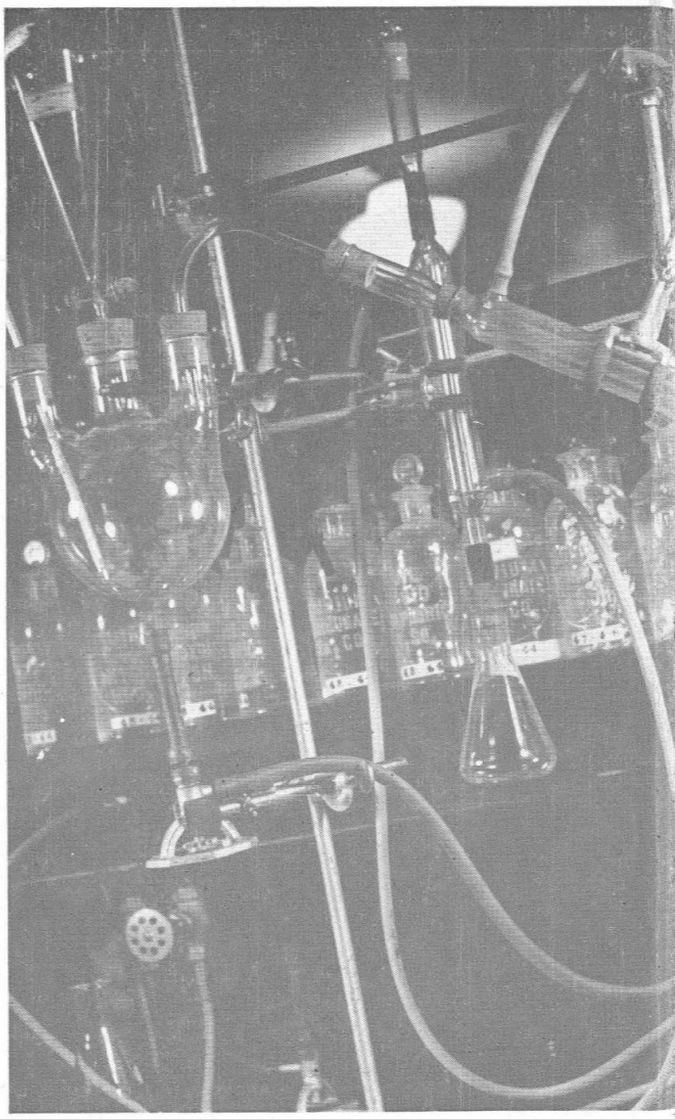


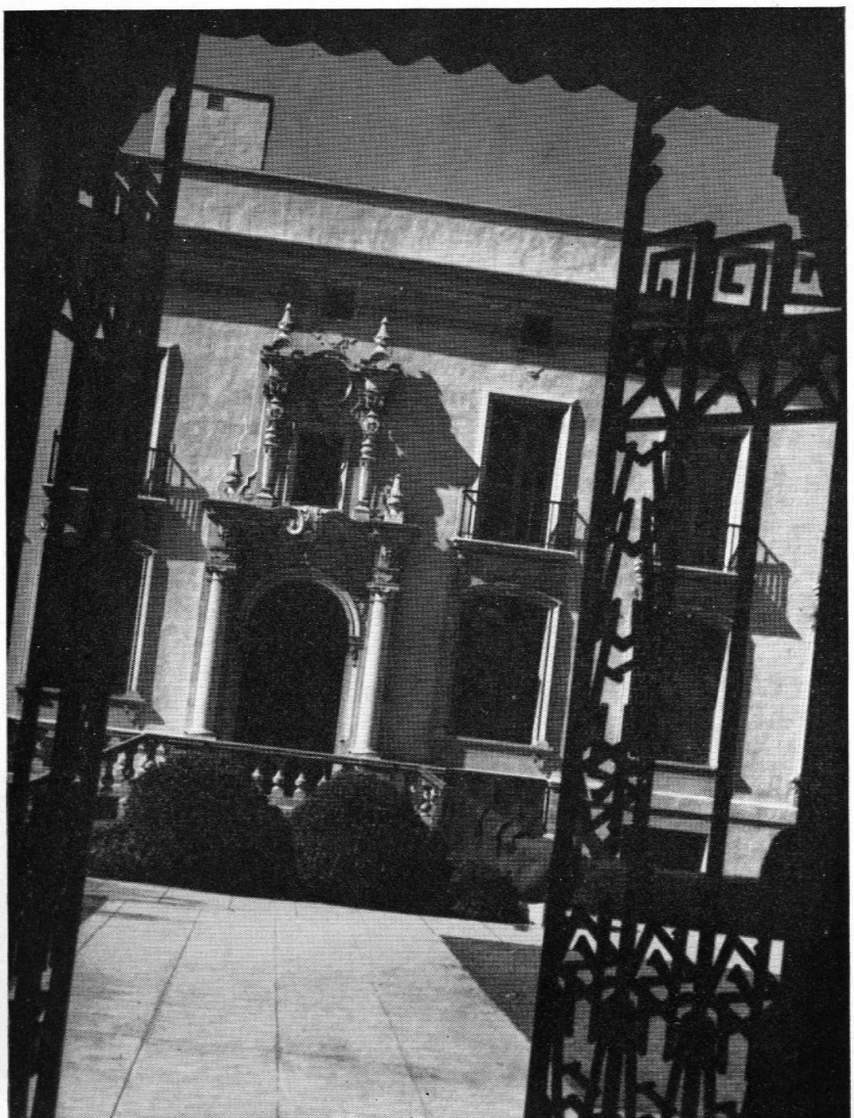

The Big T

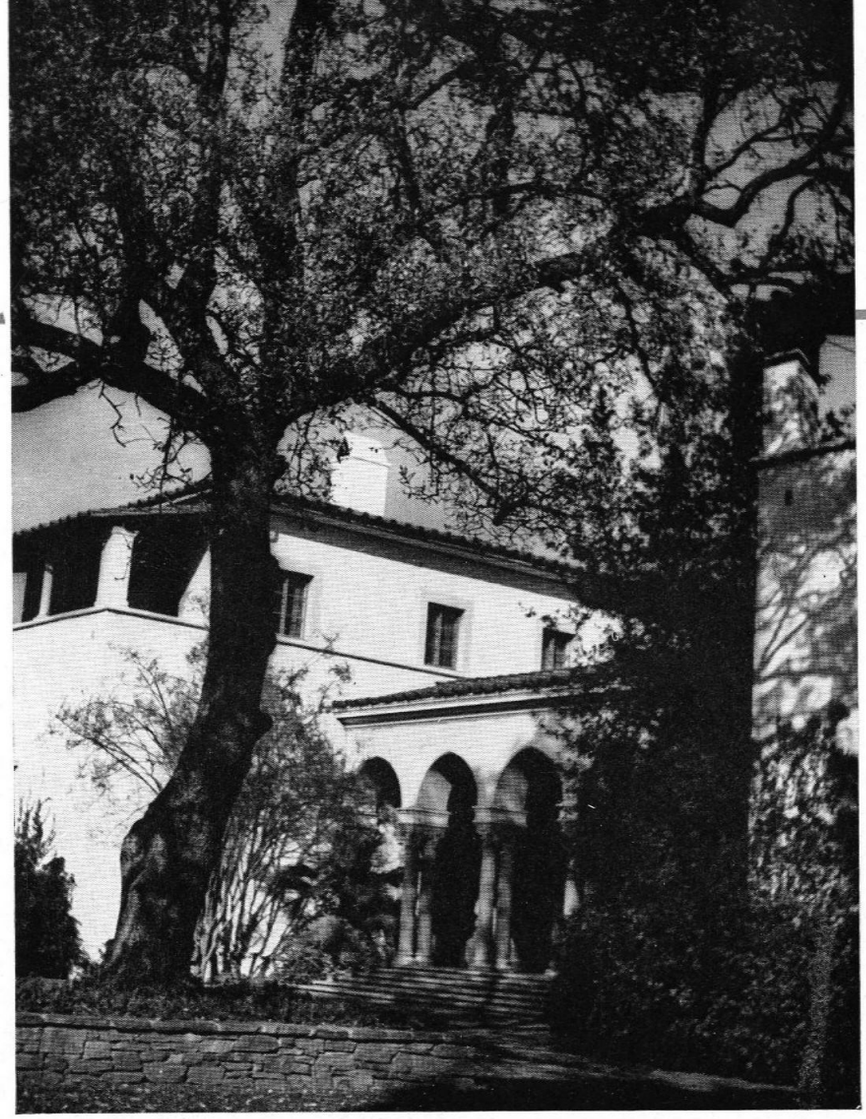


The Big

Published by the Associated Students, California Institute of Technology, Pasadena, California. Copyright 1939 by Harold S. Mickley and Arthur Root, Editors; N. H. Anderson, Business Manager.

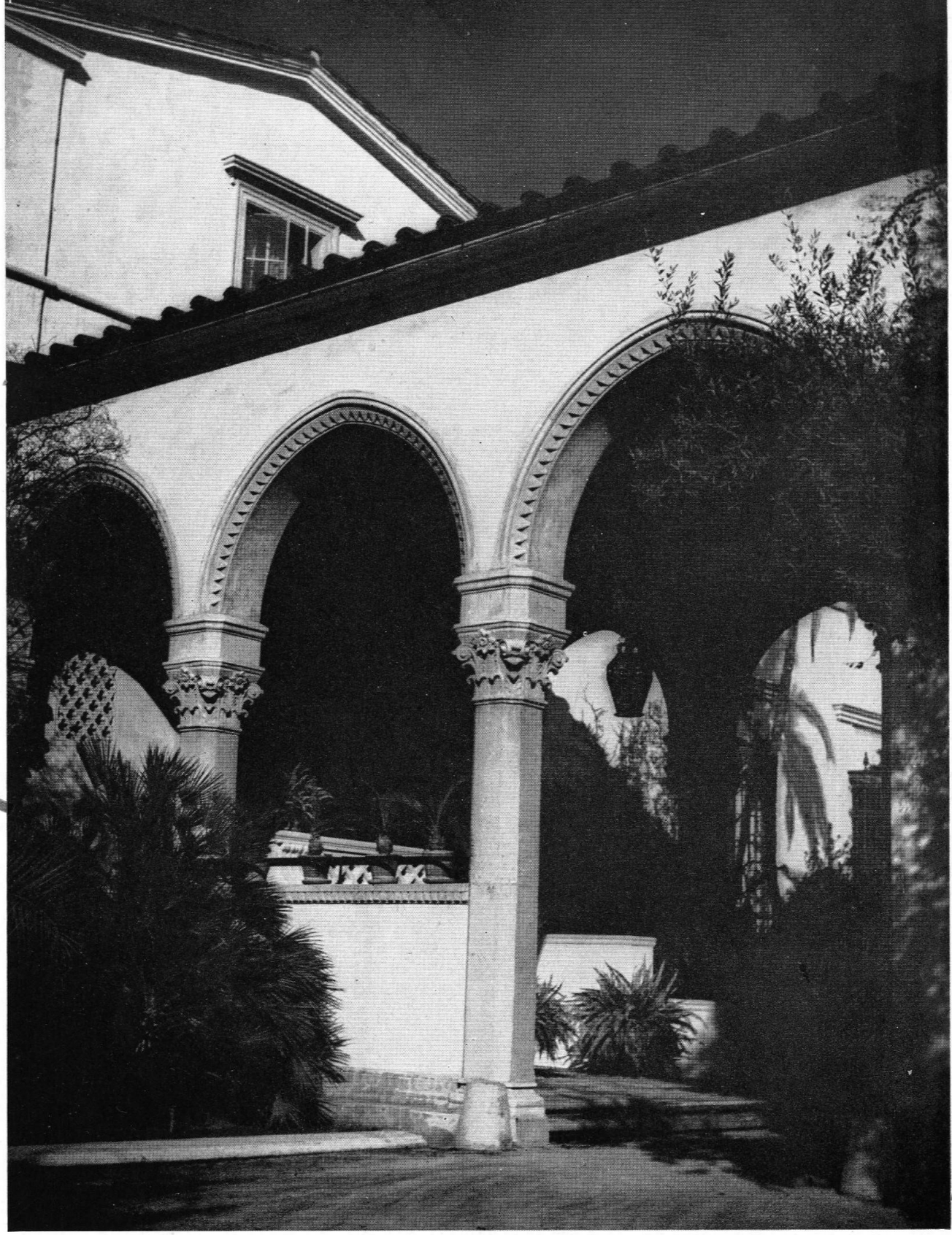




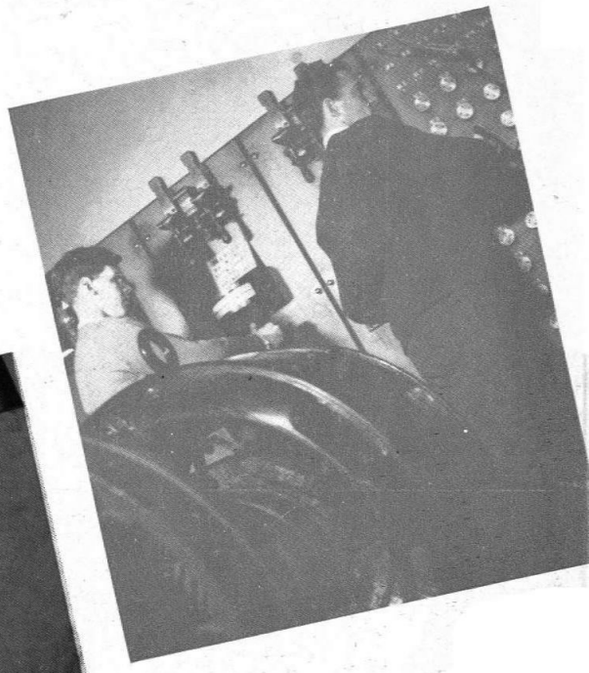


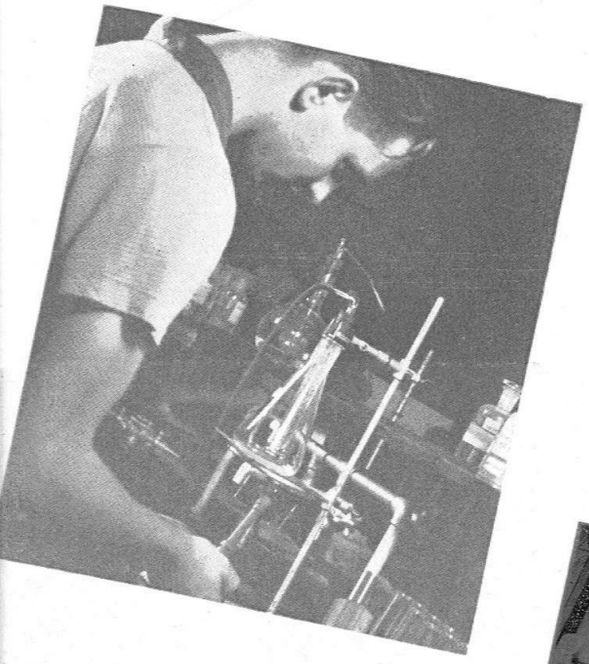
This book is humbly dedicated to those men who have given their lives in the conquest of nature. They are the ones of whom the world knows but little, yet who have contributed much to its happiness. From their hardship, perseverence, ingenuity, has come our present richer life.

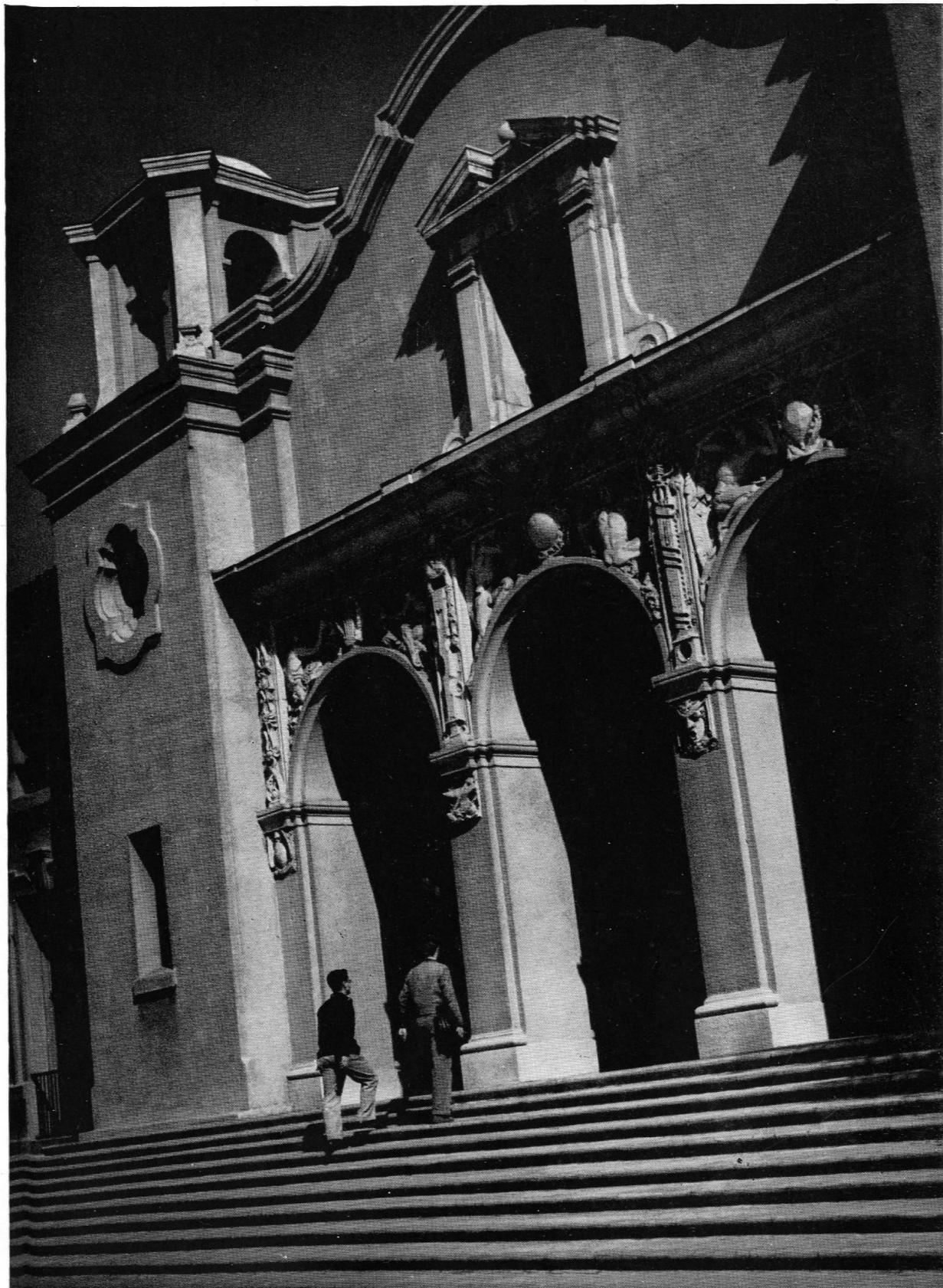
IN MEMORIAM

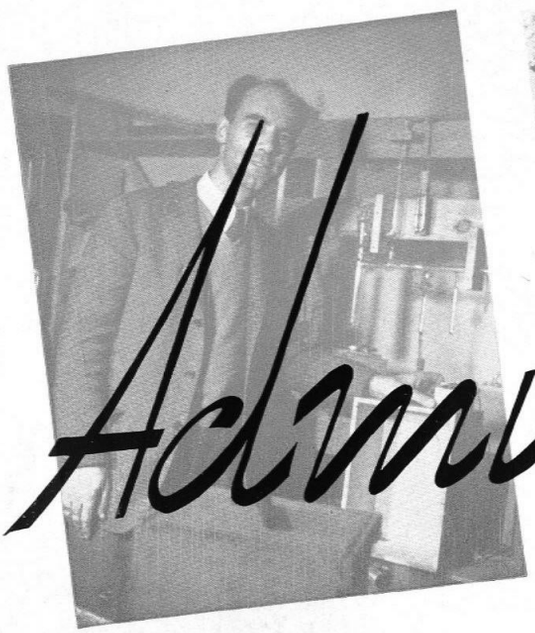


F. CHANDLER INGALLS
LEONID V. MALEEV
HIRAM W. WADSWORTH

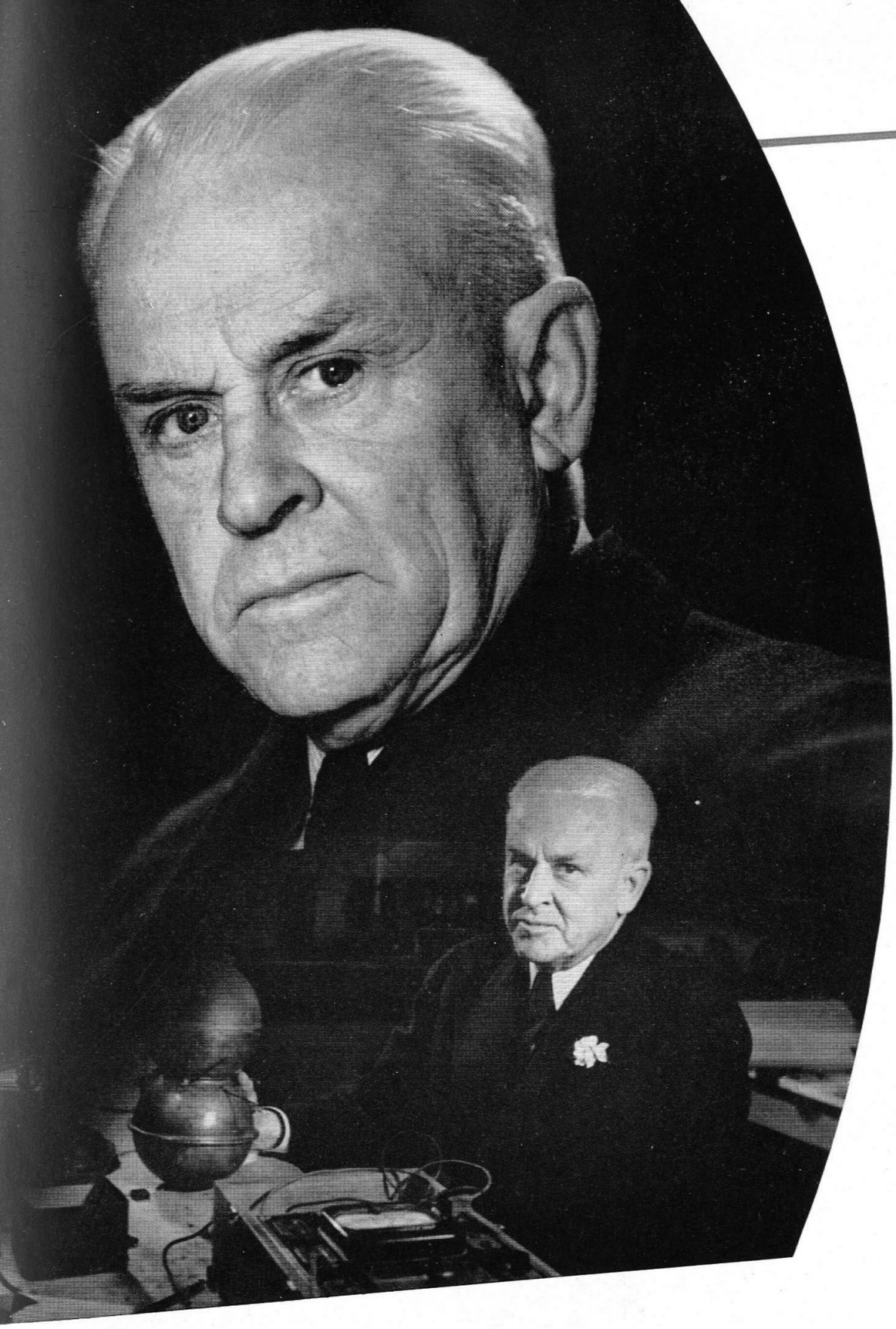


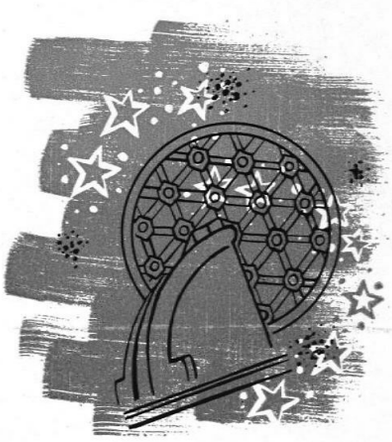






Administration





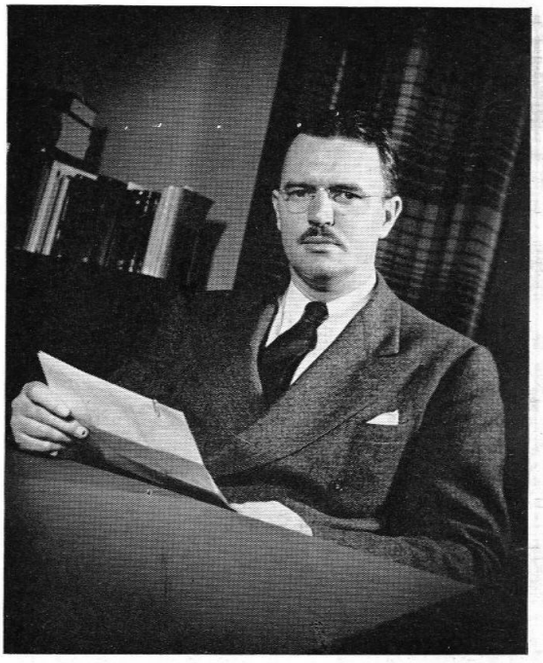
FACULTY

Dean Hinrichs

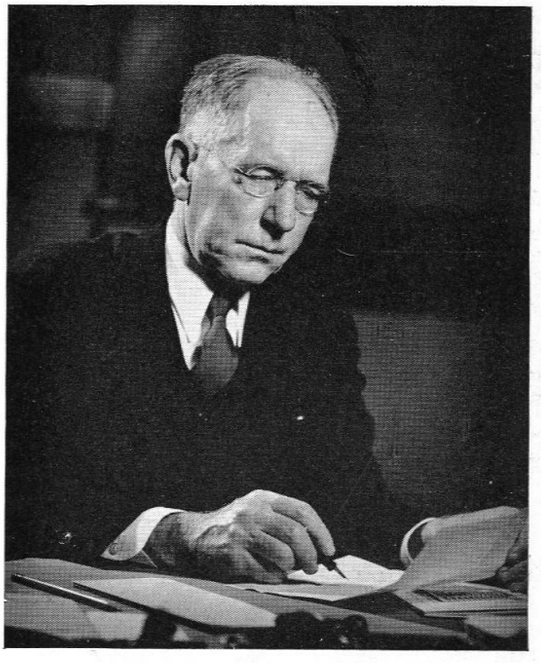
Dean Untereiner

Registrar P. S. Fogg

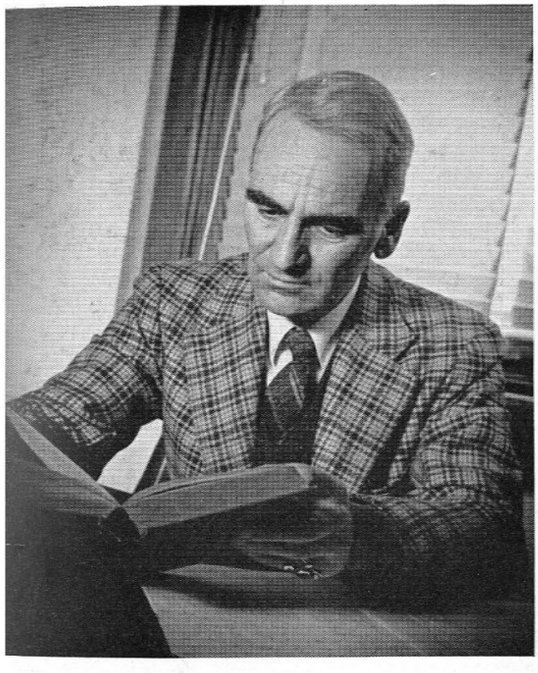
Comptroller E. C. Barrett

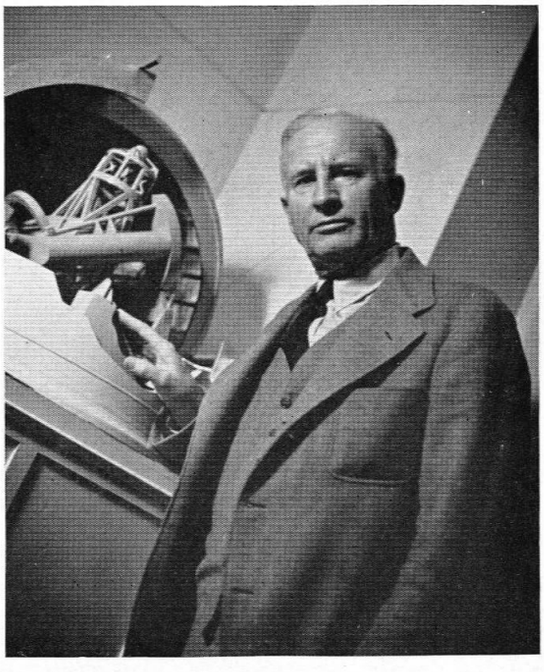


The military bearing of **Dean of Upperclassmen F. W. Hinrichs Jr.** may cause the erring student to quake in his boots, but once he has penetrated the outer shell he realizes that here is a sincere friend. The Dean has proved that there is a warm spot in his heart for the student body . . . . . Foster mother of the freshmen, **Dean Ray Untereiner,** is the first person to hear the many troubles of the yearlings. His wise counsel has been a great aid in helping the bewildered first year man to get his bearings . . . . . Home office of the dreaded blue slips is that of **Registrar Philip S. Fogg.** It is his unpleasant duty to inform all below average students that the day of reckoning is not far ahead unless he turns his talents to snaking instead of bulling . . . . . It is no easy job to keep track of the finances of an institution as large as the California Institute, but **Comptroller Edward C. Barrett** has proved himself well able to cope with the problem. A large part of the success of the business department is due to his ability and experience . . . . . As **Chairman of the Observatory Council** that coordinates all of the work of design and construction of the new two hundred inch telescope, **Max Mason,** has a difficult task to perform. His duties as a member of the **Executive Council** of the Institute make him a busy man indeed . . . . . **Dean of the Graduate School, Richard Tolman,** advises those students working for higher degrees and coordinates the activities of the graduate school with those of the undergraduate departments. As a member of the **Executive Council** he plans the policies of the Institute . . . . . **Professor of Mathematics, Eric T. Bell,** is famous both for his scientific treatisies and for his popular scientific fiction. His "amazing stories" combine both fantasy and mathematical reality . . . . . When the Guggenheim Laboratory of Aeronautics was erected in 1928, **Professor Theodore von Karman** came from Germany to direct the work here and at the Guggenheim Airship Institute at Akron, Ohio. His work in the design of modern airplanes has made him a recognized authority in aeronautical circles.



DEPARTMENT HEADS



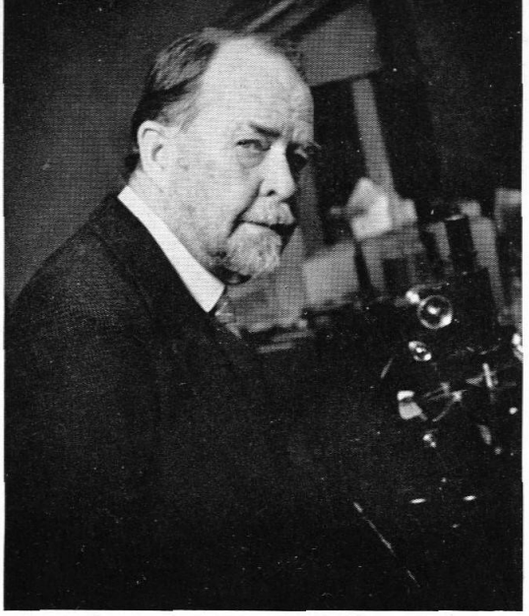


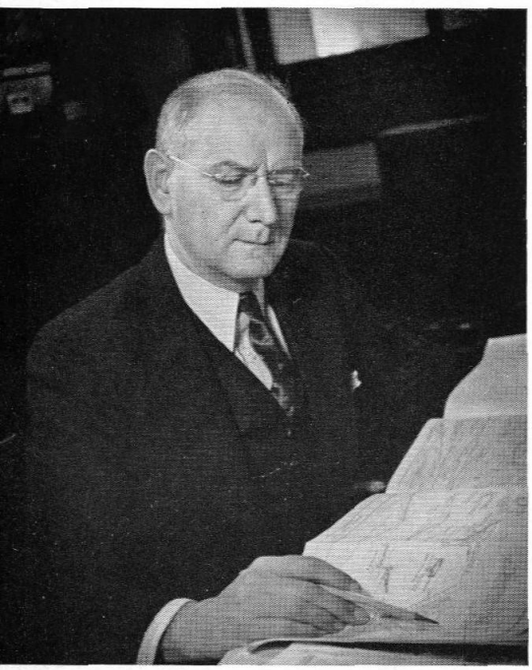
Eric Bell

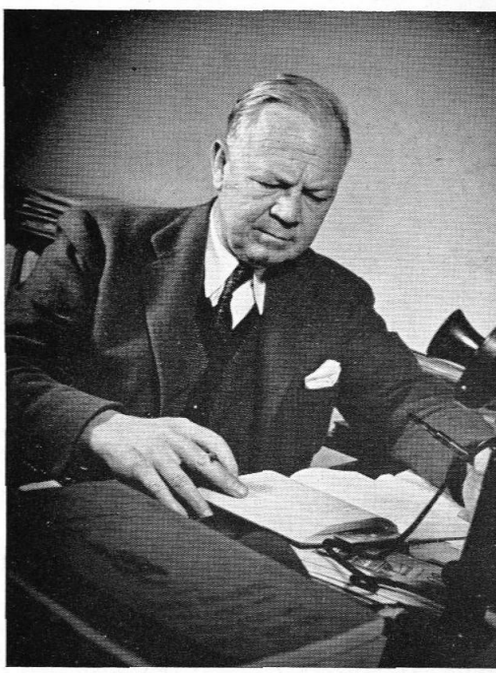
Max Mason

Richard Tolman

Theodore von Karman







Robert Daugherty

Franklin Thomas

Thomas H. Morgan

Royal W. Sorensen

Linus Pauling

Clinton K. Judy

The success of the work here at the Institute in the fields of Mechanical and Hydraulic Engineering has largely been due to the organizing ability of **Professor Robert Daugherty.** The author of a textbook on hydraulics, he has contributed much to the establishment of that subject to its proper place as a true science. . . . **Nobel Laureate, Chairman of the Biology Division,** and **Member of the Executive Council, Thomas Hunt Morgan** is no arm-chair biologist. The examination of millions of Drosophila has provided him with positive proof of his theories of heredity, and has contributed much to the advancement of that field. Not content with this, however, he has conducted research into the field of experimental embroyology where again his theories have borne fruit. . . . Complicated apparatus and involved mathematics are the foundations of **Professor Linus Pauling's** contributions to chemistry. Although he is the **Director of the Gates and Crellin Laboratories of Chemistry,** he still finds time to continue his important researches into crystal structure, the size of ions, and the nature of the chemical bond. Dr. Pauling attributes his rapid rise in the chemical world to his good looks, but those who know say it is due to sheer ability, helped of course by his curly hair. . . . **Professor of Civil Engineering, Franklin Thomas,** not only directs the activities of that department, but also acts as the advisory head of the Caltech Musicale. These duties, combined with his interest in the local chapter of Tau Beta Pi, make him one

DEPARTMENT HEADS

of the most active faculty members. . . . **Royal W. Sorensen, Professor of Electrical Engineering, Chairman of the Physical Education Department,** and **Chairman of the Faculty Committee,** came to Tech in 1910, intending to stay only five years. He remained because he found so many things to be done, and has been busy ever since. . . . **Professor C. K. Judy, Chairman of the Division of Humanities,** came to the Institute as its only teacher of English in 1909 when Tech engineers were still rough and ready, but not much else. Since then there has grown under his direction the present excellent Humanities Division, which has the sometimes difficult task of broadening and civilizing the freshmen in four short years. . . . **William B. Munro, Professor of History and Government, and Member of the Executive Council,** is one of the most popular lecturers here at Tech. He likes to allow his listeners to form a hackneyed and unsound opinion and then to demolish it with a few well chosen statements. His humor is sometimes slightly satirical, and his store of anecdotes is immense. Dr. Munro knows history thoroughly, for he has written several authoritative texts and was head of the Harvard History School before coming to Tech. . . . When the Elysian Park landslide was attracting so much attention, **John Bulwalda, Chairman of the Division of Geological Sciences,** was called in because of his ability and experience as a physical geologist. He had a great deal to do with the planning of the new Mudd and Arms Laboratories of the Geological Sciences, and his directive ability has been of great value in the co-ordination of the geological department.

William B. Munro

John P. Bulwalda

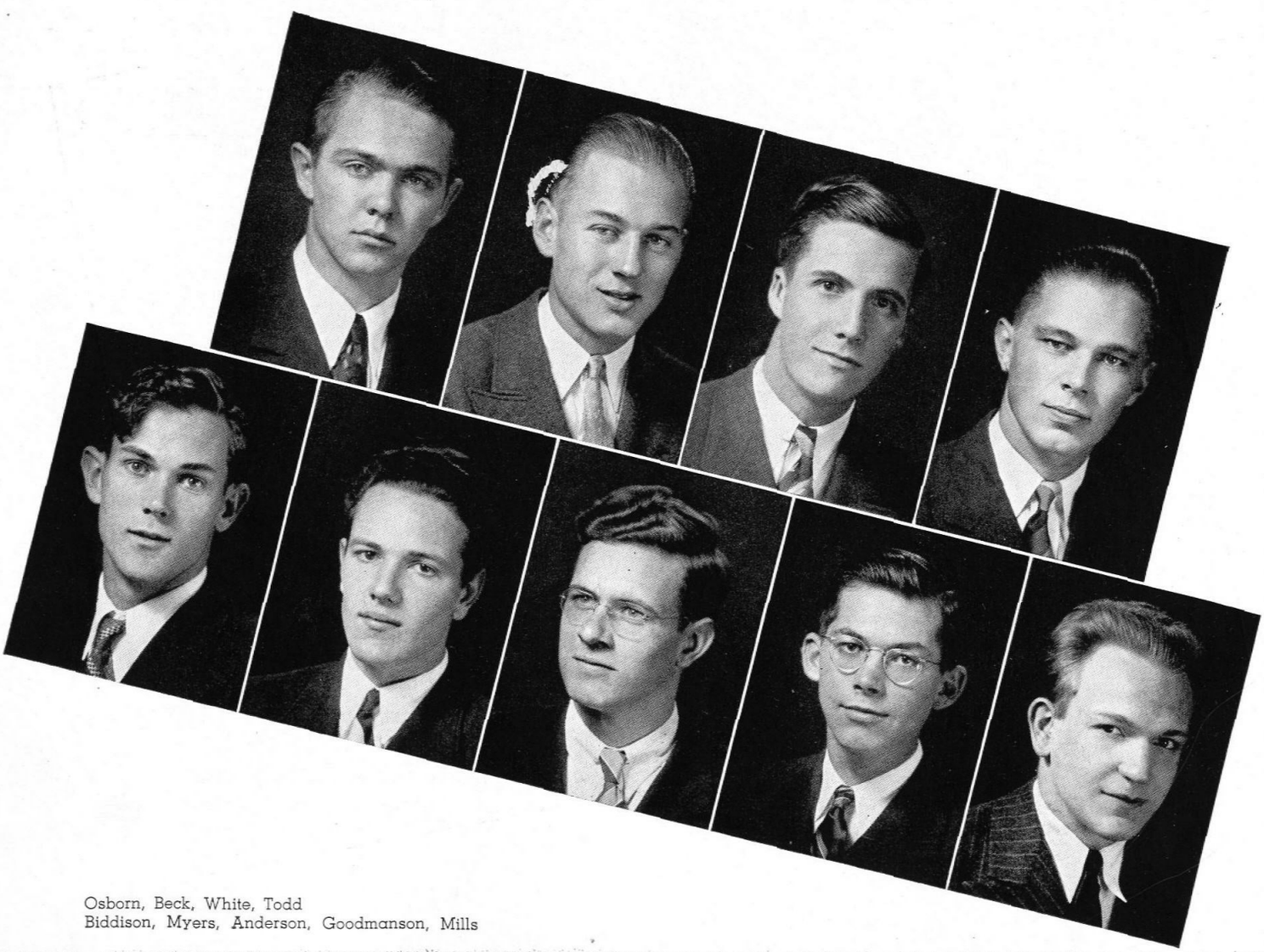
STUDENT ADMINISTRATION

BOARD OF DIRECTORS

The Board of Directors, under the guiding wing of Pres. Osborn, did honor to C.I.T. in pursuing the student body business during a year marked with such headlines as: "Caltech Returns to Conference." "P.J.C. Riot at Caltech." "Caltech Cruel to Goldfish, Is Claim of Humane Society."

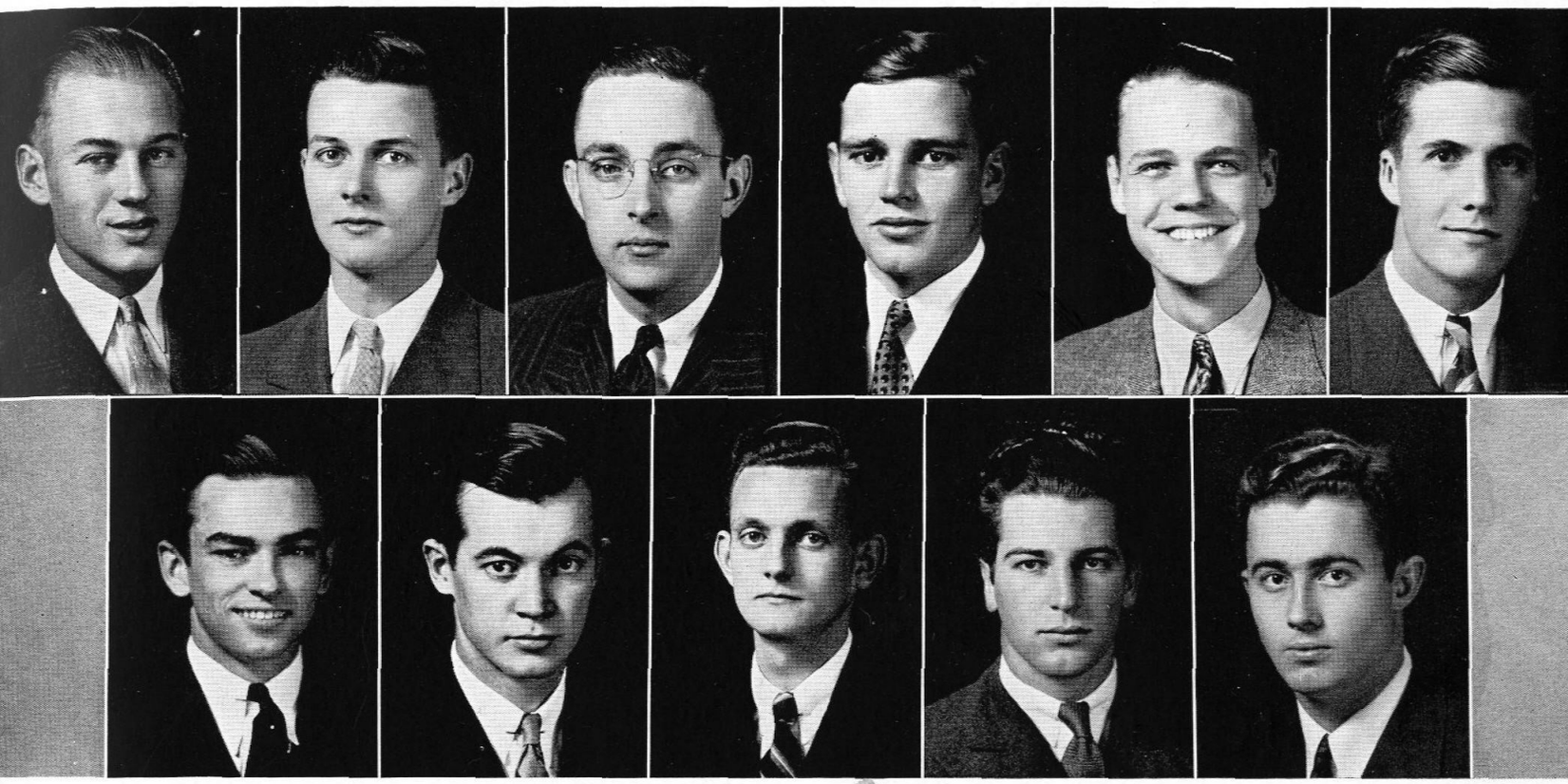
Every effort this year was expended toward the success and improvement of our athletic situation, especially since re-entrance into the So. Conference. The plight of Caltech teams hasn't been too sunny in the past, but through the everlasting efforts of Board members, the good old Caltech spirit was raised and a huge step in the direction of a future gymnasium was taken.

Since regular meetings are held every Tuesday evening, the Board is a very active and efficient mechanism of the student government. It has the power to plan a budget and authorize expenditures, make awards and appointments, and in general supervise the student body activities.



Osborn, Beck, White, Todd
Biddison, Myers, Anderson, Goodmanson, Mills

BOARD OF CONTROL

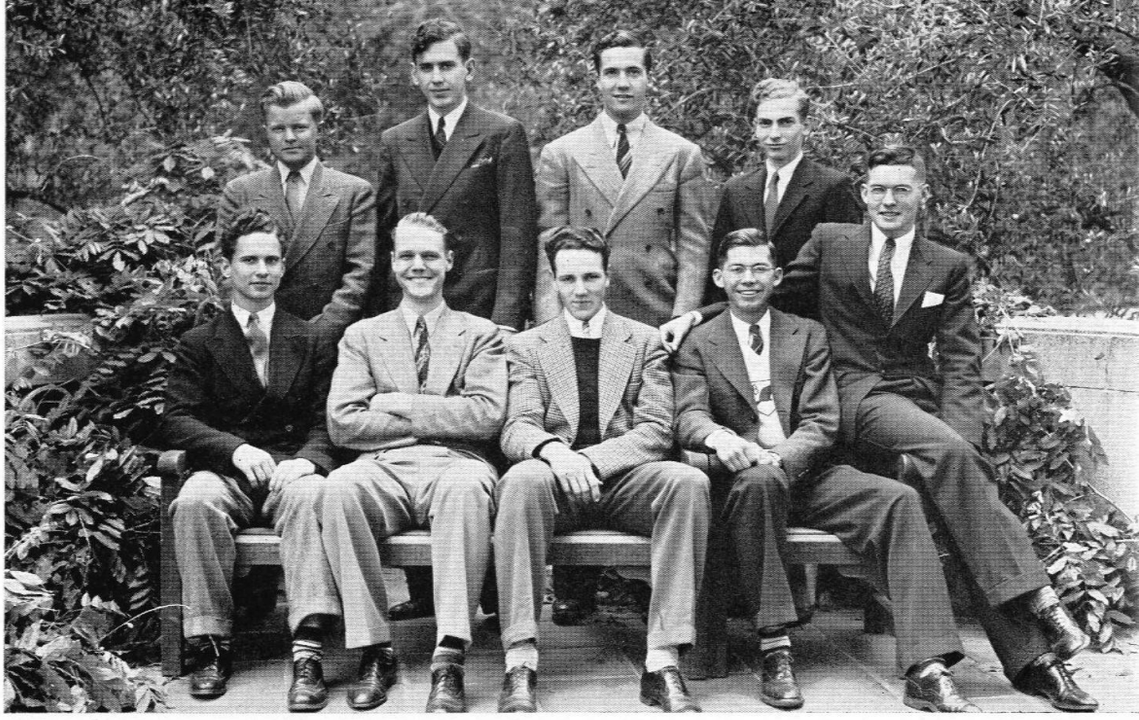


Beck, Paul, Norton, White, Spielberger, White
Weir, Reynolds, Farrington, Lakos, Hicks

The Board of Control is the judicial body of the Associated Student Body and its primary duty is to enforce the Honor System. The Board continued the policy established last year, which was to prevent violations before they could occur rather than to punish them.

Under the able leadership of student body vice-president Duane Beck, the Board had a most successful year. Few violations of the Honor System occured and the Board took active steps to acquaint the student body more fully with the principles and applications of the Honor System. This was done in conjunction with the Faculty-Student Relations Committee by means of publishing a small pamphlet describing and explaining the Honor System. The policy of publishing cases in brief in the "California Tech" was again followed.

A subsidiary of the Board of Control was the Court of Traditions. This body consisted of four men, one from each class selected from the Board and its duty was to enforce and promote college traditions. One new tradition promoted this past year was the establishment of a victory flag, which is to be raised on the flag pole after each conference victory. Members of this year's court were: Robert White, chairman; Gordon Weir; Eugene Lakos; William Hicks; and Duane Beck, ex-officio.



Lewis
MacKay
White
Dawson
Hart
Spielberger
Myers
Goodmanson
Campbell

NEW OFFICERS

At the close of the second term, the Board of Directors for the coming year was elected. Popular Lloyd Goodmanson was voted to head the corporation. Others elected were: Jack White, vice-president; Bob Myers, secretary; Bob Spielberger, treasurer; Wallace MacKay, publicity manager; Don Campbell, athletic manager; Don Dawson, rally chairman, and Joe Lewis and Wilson Hart, representatives-at-large.

PUBLICITY COMMITTEE

Campbell
MacKay
Marriot
Longfelder
Kupfer
Root
Thomas
Anderson
Oder

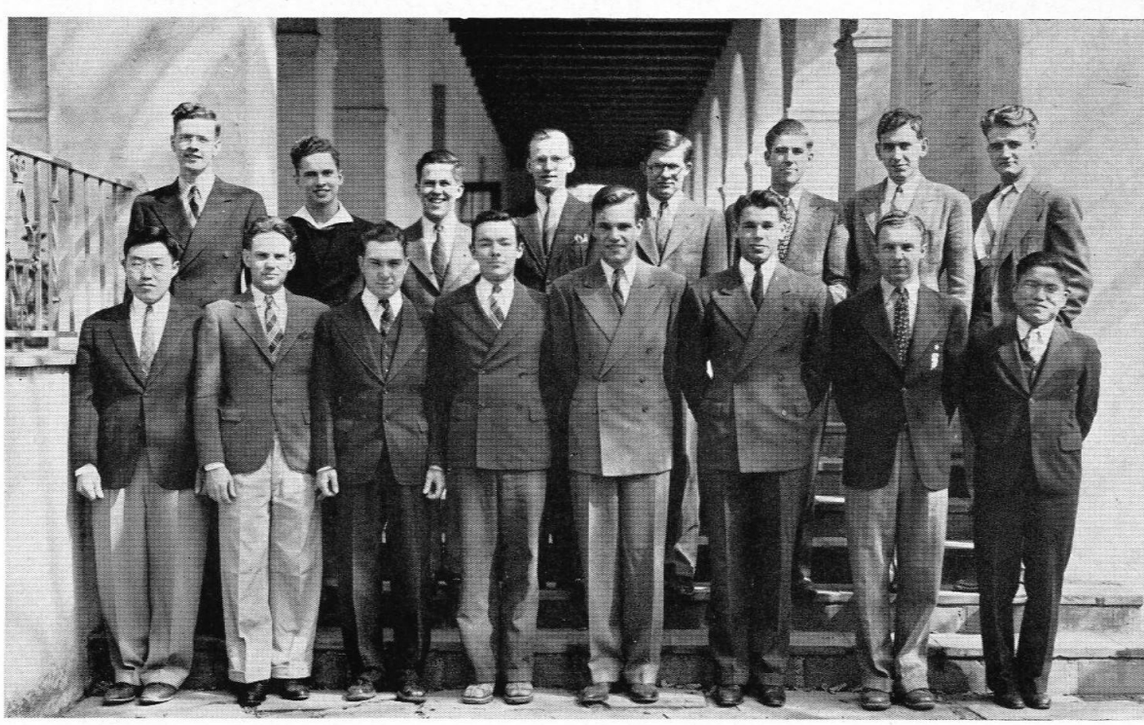
The publicity committee, headed by Keith Anderson, secured publicity for the student body in newspapers and newsreels. Coverage of all athletic contests, social highlights on the campus, and such special events as Rodeo Day and Exhibit Day was obtained by this committee, as well as the publicizing of the activities and honors of individual students in their hometown newspapers.

INTERHOUSE COMMITTEE

Guillou
Flint
White
Palmer
Manildi
Carstarphen
Ropp
Paul
Richards

The Interhouse Committee is made up of the presidents and vice-presidents of the four Houses and Throop Club. Its function is to coordinate House activities. Weekly luncheon meetings are held, at which House policies are discussed. Members were: W. Ropp, chairman; W. Brown, C. Ingalls, J. Manildi, R. Richards, C. Paul, C. Carstarphen, A. Guillou, R. White, G. Axtman, C. Palmer, D. Flint, and W. Norton who acted as non-voting secretary.

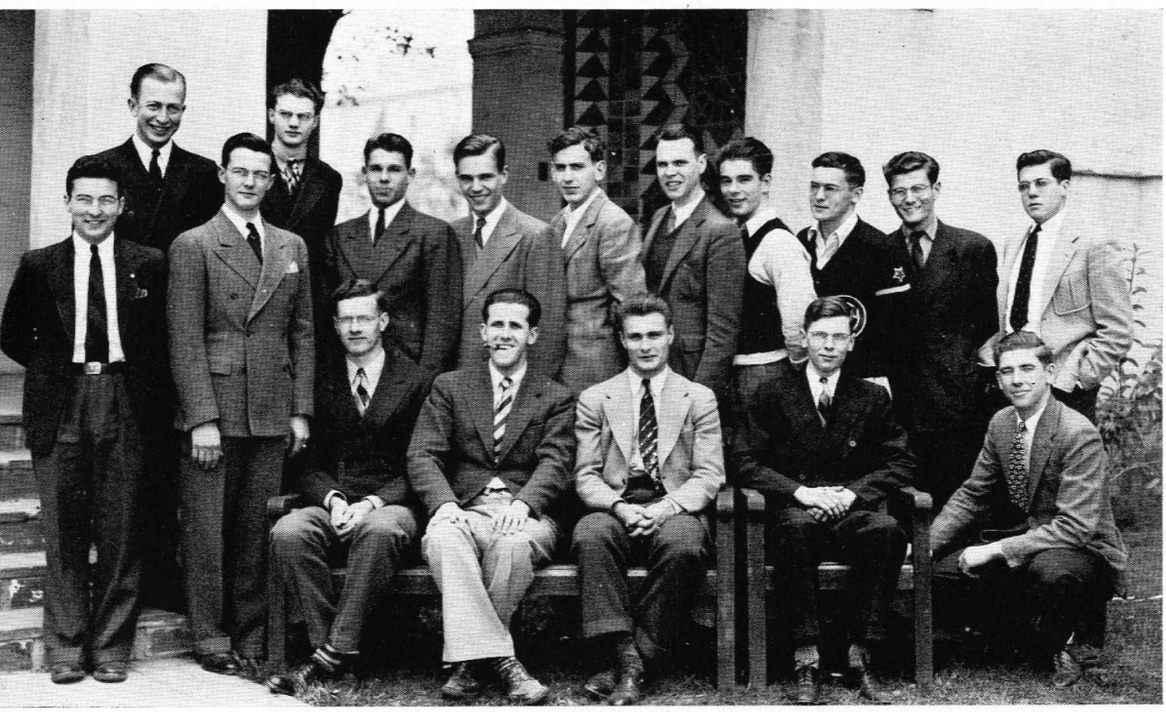
EXHIBIT DAY COMMITTEE



Anderson, Hart
Palmer, Braithewaite
Staatz, Strong
MacKay, Foster
Tomiyasu, Crane
Spooner, Gold
Steinmetz, Thomas
Palmer, Nakada

Under the chairmanship of David Steinmetz, this year's Exhibit Day Committee staged one of the most successful Exhibit Day programs that Tech has had. Although the total attendance was nearly 20,000, the efficient handling of the traffic prevented the occurrence of any major traffic jams. An innovation this year was in the program, which was a special edition of the California Tech edited by the Press Club.

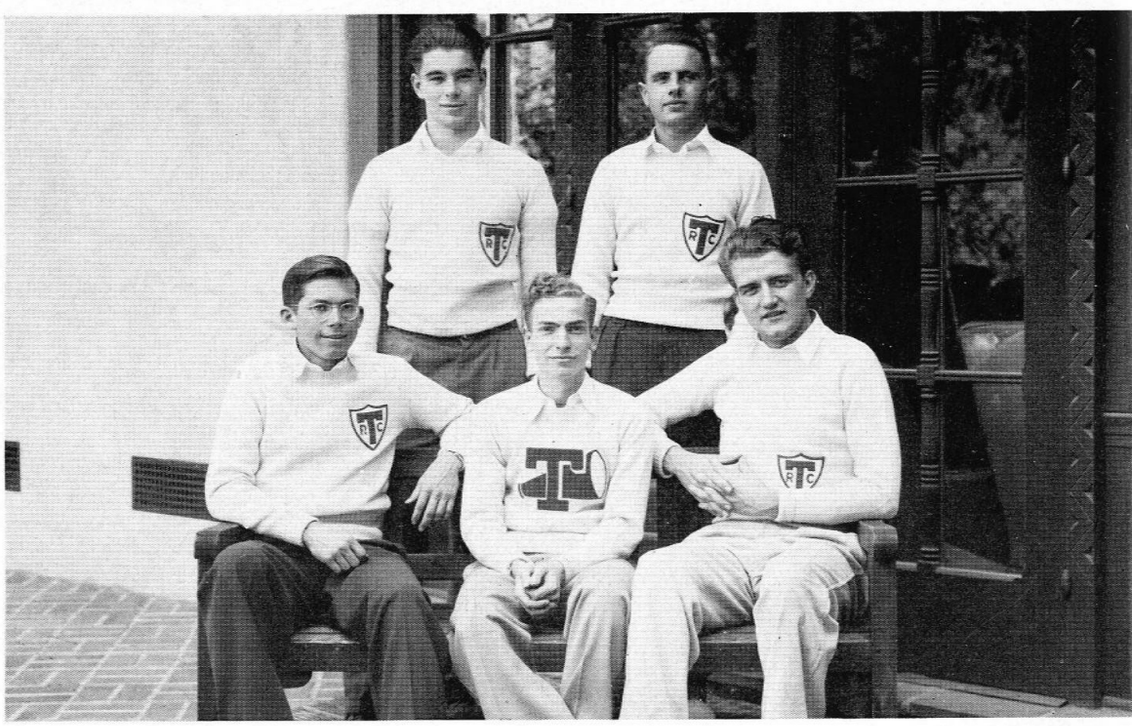
ELECTION COMMITTEE



Richards, McClung
Thomas, Steinmetz
MacKay Smith
Widdoes, Campbell
Marriot, Chapin
Davis, Paul
Anderson, Longfelder
Reimers, Root
Strong

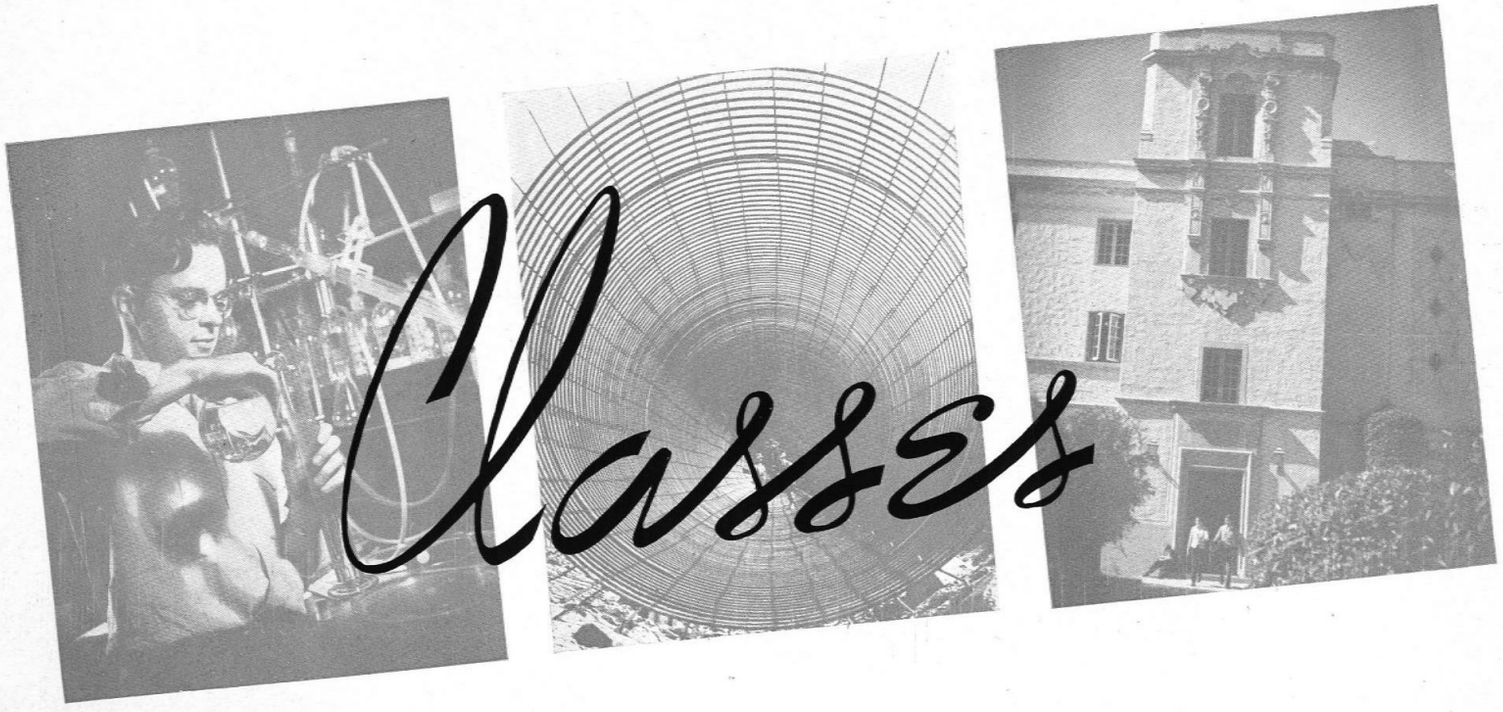
Controlling one of the most important of the student body functions, the Election Committee is composed of men who are carefully chosen to insure fair elections. This committee must speedily count and tabulate the results of all elections. This year the chairman of the committee was Harlowe Longfelder, who instituted several changes to obtain more accurate results.

RALLY COMMITTEE

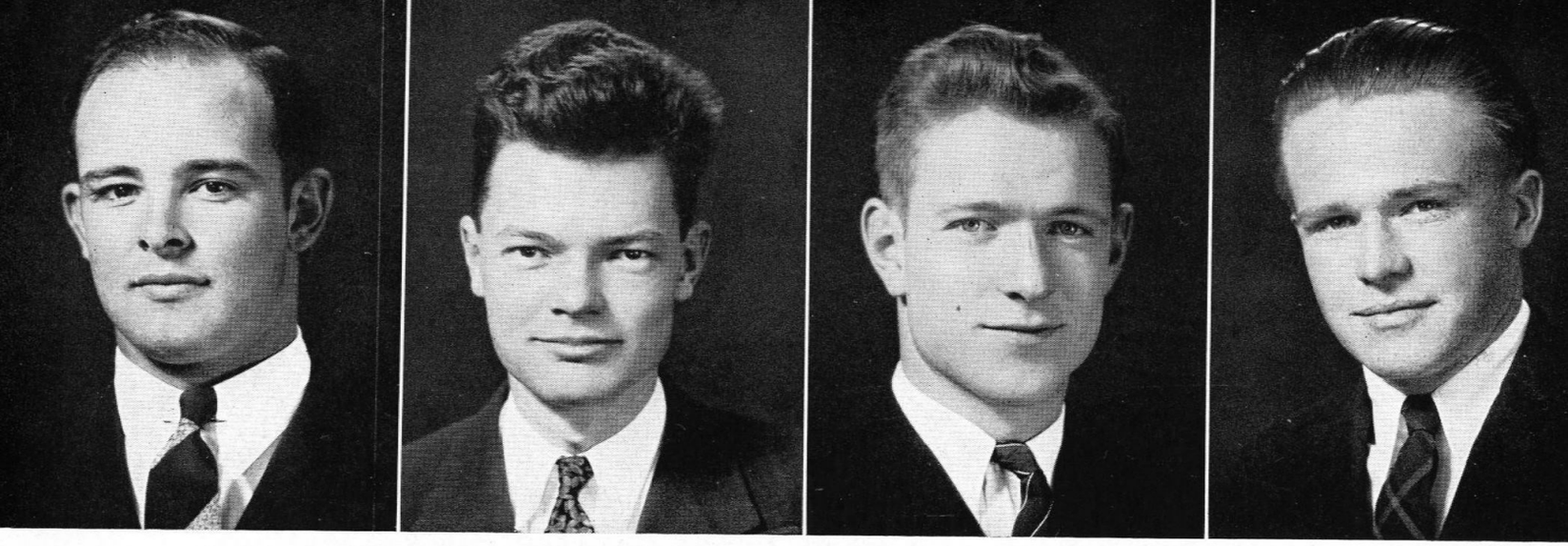


Widdoes
Blight
Goodmanson
Dawson
Foster

The most important function of the Rally Committee was the handling of the pajamarino, the traditional rally which was held before the Oxy game, at which three hundred and forty-seven pajama clad Techmen were present. Under the leadership of Lloyd Goodmanson, several football and basketball rallies, and numerous entertainments were presented.


Classes

SENIORS



LAWSON
President

DIEHM
Vice-President

BRAGG
Secretary

SNYDER
Treasurer

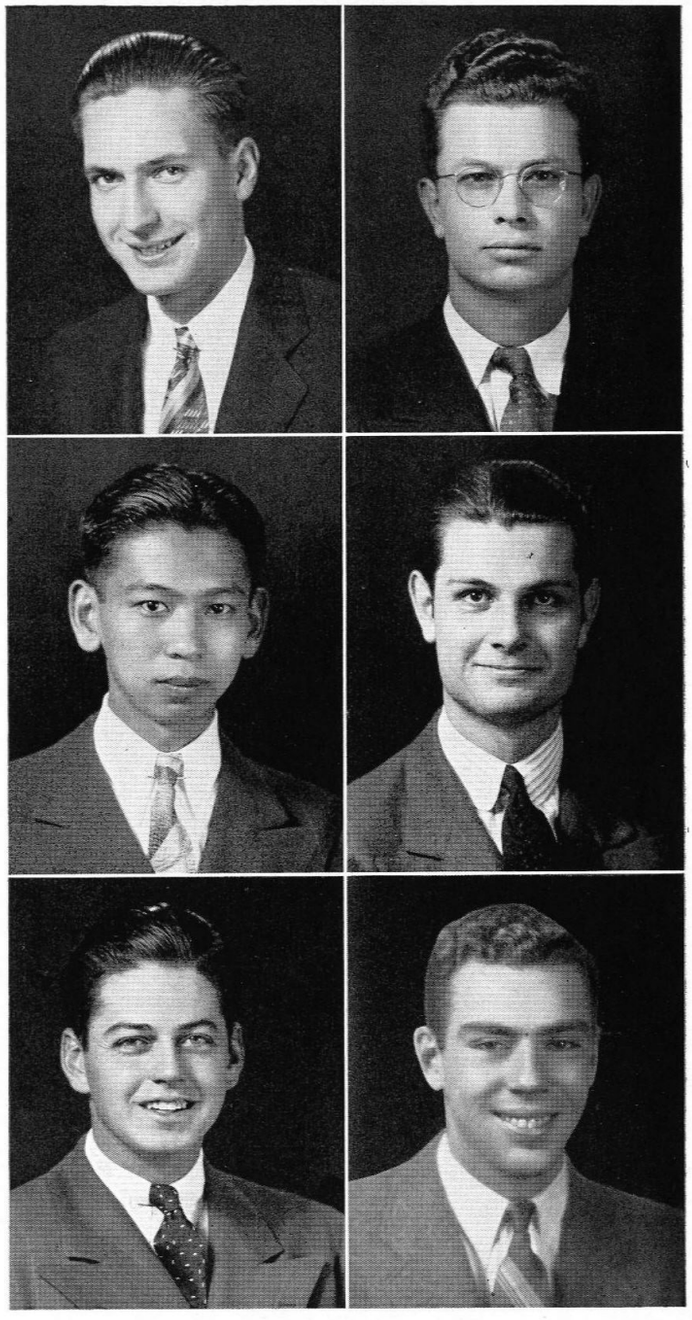
SENIOR CLASS

'Way back in 1935, a group of bewildered youngsters arrived at Caltech, some of which were destined to become the class of '39. On being informed of the traditional Freshman-Sophomore Rodeo, the group made plans to stem what had heretofore been inevitable defeat; and although they fought valiantly, they were forced to yield to the experienced and shady tactics of the Sophomores. As losers, they presented an elaborate rodeo dance, which was enjoyed by all who attended. The officers for the year were Caulfield, president; Spotts, vice-president; Norton, secretary; and Macleish, treasurer.

As the class reached its Sophomore year, a number of men decided that they did not like the Institute and a number of others found that scholastically the Institute did not like them. Those who remained, however, assuming the full dignity of their new position, developed to a high degree the technique of mass abduction and rendered to the Freshmen a crushing defeat at the Rodeo. This year's executives were White, Paul, Frampton, and Thomas.

In the Junior Year, the class, becoming ever smaller but being restocked by unsuspecting transfers, elected as their officers Osborn, president; Sullivan, vice-president; Guillou, secretary; and Anderson, treasurer. This time the class viewed the Rodeo from the sidelines and fulfilled its duty in seeing that no improprieties were practiced. The class also helped in presenting the Garden Party and the Junior-Senior Prom, both of which met with great success.

As the class of '39 reached its final year, it began to regard the past with longing, and view the future with doubt and wonder. Officers elected were Lawson, president; Diehm, vice-president; Bragg, secretary; and Snyder, treasurer; who were ably assisted by a number of committees which arranged the social program and handled such problems regarding graduation as announcements, class gifts, etc. The Senior Year reached its social climax with the Junior-Senior Prom and the Junior-Senior Garden Party. Although some of the class plan graduate work and others plan to enter industrial life, they all regard their years at Tech as a source of many pleasant memories.



CLARENCE RUSSELL ANDERSON

Russ is noted for his sense of humor, and is an asset to any bull session. When it comes to jitterbugging he really shows how it should be done. He is a member of Ricketts House and the A.S.M.E., plays baseball, and writes for the Calif. Tech.

NOAH H. ANDERSON, JR. **Key, ¶, B**

Money handling is Tex's specialty. He is Business Manager of this book, Treasurer of the A.S.M.E., Fleming House, Junior Class, and Assistant Treasurer of the A.S.B. He was on the "Tech," staff, and belongs to the Beavers and the Press Club.

GEORGE ASAKAWA **TBII**

Applied chemistry has been George's main interest. Hailing from San Diego, he lived in Dabney House four years, during which time he has made himself so well liked, plus good grades, that he was elected into Tau Beta Pi. Member of the Chem Club.

GRICE AXTMAN **B**

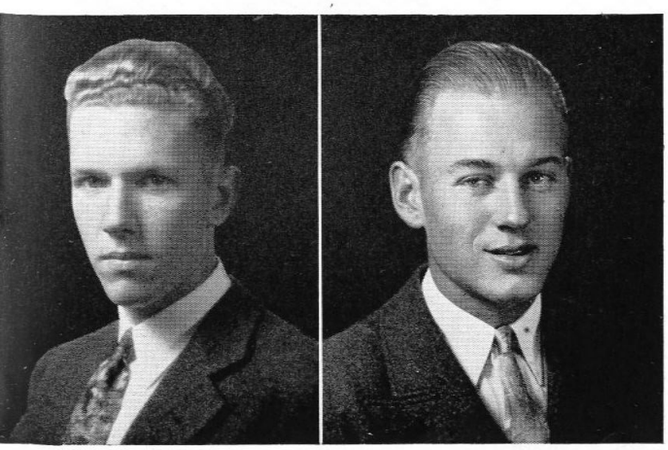
Axy is just about Tech's No. 1 musician. Leader of his own dance band, President of the Orchestra, and Manager of the Band, besides being a Beaver, President and Social Chairman of Throop Club. Between times he majors in applied chemistry.

JOHN ALLEN BATTLE

Outside of his geology, Johnny spends a great deal of his time in social activities involving a certain beauteous Tri-Delt from Southern Cal. A frosh baseballer, Johnny has since been on the athletic teams of Fleming House, of which he is a member.

CHARLES H. BAUER, JR.

Charlie has made a name for himself in tennis, being on the frosh, varsity, and interhouse teams. He spends his spare time working on a boiler. His geniality and dependability gave him the position of U.C.C. in Dabney. A member of the A.S.M.E.



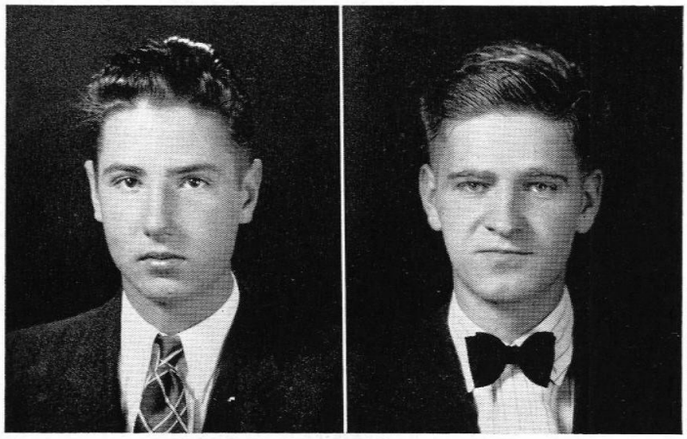
LEO ROY BEARD

From P.J.C., Leroy has been interested in civil engineering since he entered Tech. He has done his best to raise the average in C.E. and has exhibited a great deal of interest in the American Society of Civil Engineers, in which he is active.

DUANE WESLEY BECK **3 Keys, ¶, B, T**

Versatility is Duane's middle name, being Vice-President of the Student Body, Beavers, A.S.M.E., and President of the Press Club. He received letters in football and basketball and performed the almost impossible by earning three Honor Keys.

SENIORS



JOHN WILLIAM BLACK

"Energetic Jack", an ace on the handball courts, hails from Saskatoon. Also a badminton player of no mean ability. He is an authority on automobiles and gasoline engines. He puts plenty of fight into whatever he is doing—even a game of fantan.

LAWRENCE BORGESON

Borgy, electrical engineering major from Pasadena, is best known for his interest and activity in the A.I.E.E. He was a transfer from Pasadena Junior College and has been a familiar figure in Throop Club, to which he has belonged since at Tech.

RICHARD BRADSHAW

Athletics have been Dick's long suit at Tech. He was out for rugby, track, swimming, and won a numeral in frosh football. A Fleming man, he hails from Huntington Park and is studying civil engineering. Dick belongs to A.S.C.E. and is Ritchey's pal.

KENNETH R. BRAGG **T**

"K. R.", San Marino's gift to Tech, has distinguished himself as chief rowdy of Fleming's Alley 1 and as chairman of the Sr. Ditch Day committee. Four years a big gun on Tech's track teams—captain this year. He is an M.E. and class Sec'y.

JAMES WILLIAM BRAITHWAITE

Bill, one of the many athletic Flemingites, hails from Arcadia. He was captain of his frosh track team and has been on the varsity track team for three years. Bill divides his time between aeronautical engineering and that certain girl.

CLAUDE H. BROWN, JR. **B, T**

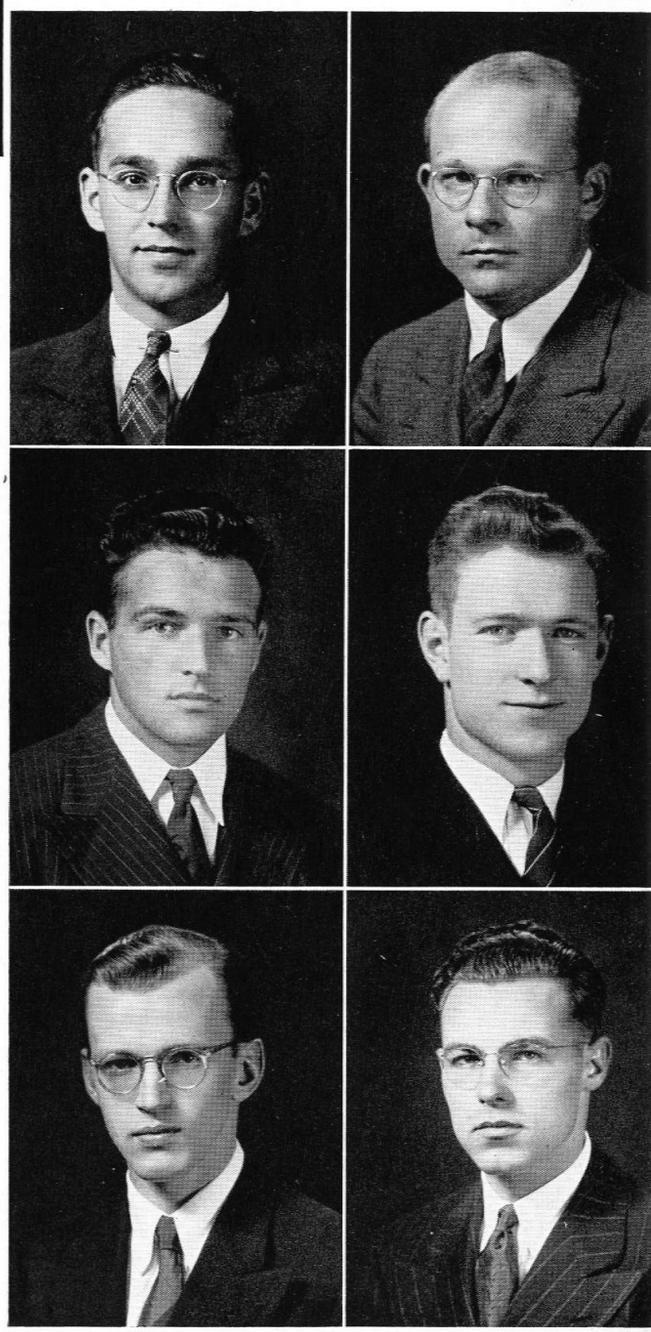
Football captain in '37, Fanny returned this year to coach the frosh line and study mechanical engineering. Vice-President and Social Chairman of Throop Club, a Beaver, a Varsity Clubber, and a member of the A.S.M.E., Brown is well liked by all.

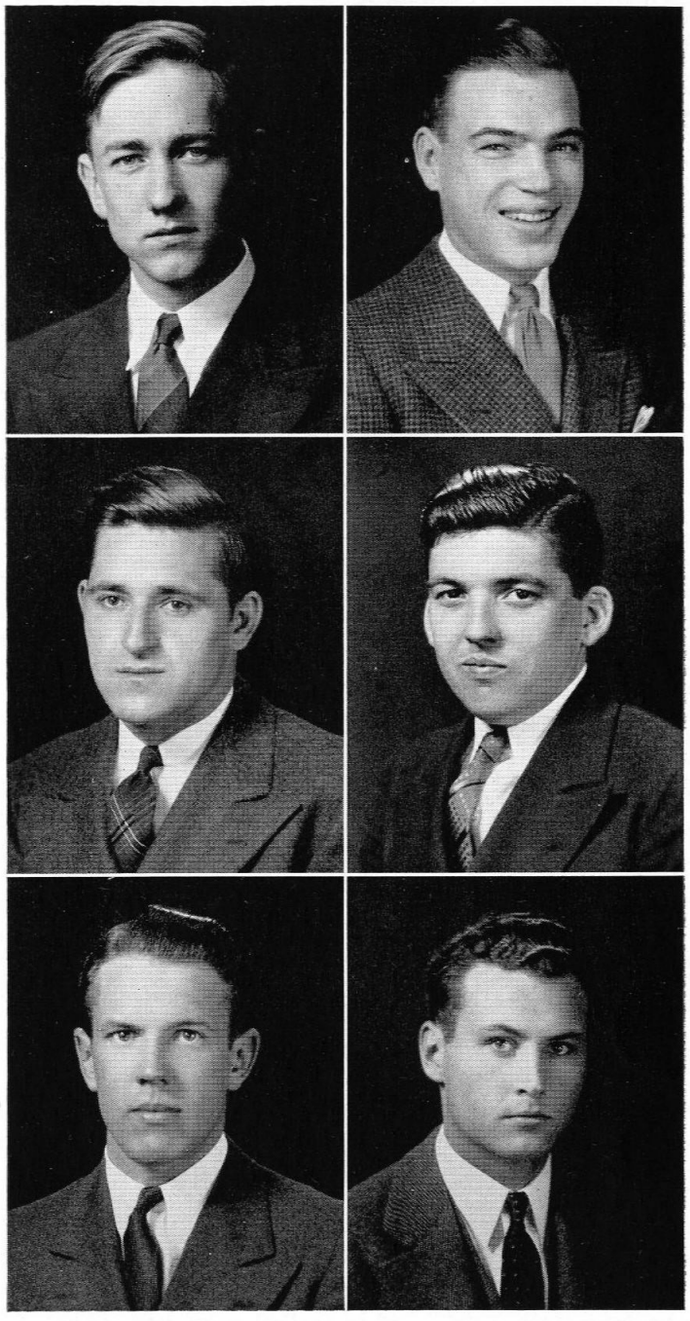
WILLIAM E. BERG

The Biology Department will seem rather dull when Bill leaves, as he is always ready to provide a laugh. He is often seen in the company of Streightoff, and held the tough position of Biology Exhibit Day Chairman. He is a member of Dabney House.

RICHARD H. BISHOP

Dick came from Milwaukee to Tech to become an engineer. Ph 1 and Ph 2 took their toll, however, and we have Bishop, the physicist. A scholarship student, he is interested in music and model railroads, and keeps an intriguing photo album.





PERRY H. BROWN **T**

A Throop Clubber from Los Angeles, Brown majored in mechanical engineering and joined the A.S.M.E. When it comes to automobiles, even the profs listen to Perry's lucid explanations. Went out for track and scrub football.

WILLIAM LOWE BROWN

Due to his reputation as an all around good fellow, Bill was elected Vice-Pres. and Social Chairman of Ricketts House. Faithful service as head of the stage crew made him a Drama Club member. Noted for his crib playing and trips to S.C. A.I.E.E.

JOHN JAKE BROWNE **T**

Jake's great love is the Navy. As an M.E. who transferred from Annapolis, he stood out in varsity football, and in house sports he was a great asset to Ricketts House. He likes to play with munitions and has several times scared his Clovis neighbors.

FRANCIS L. CARLISLE

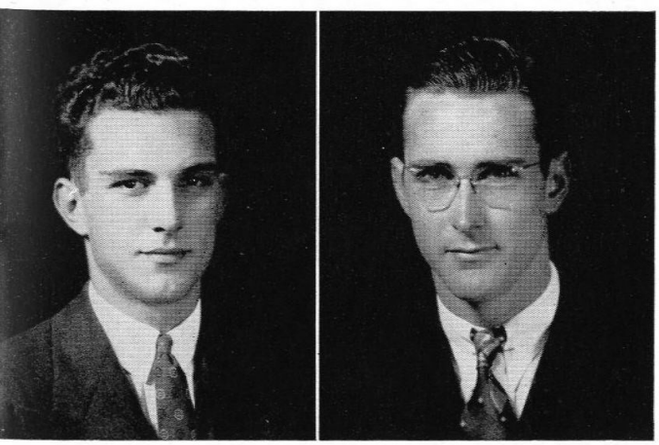
Model airplanes, archery, and sail boats take up most of Francis' leisure time. In between these activities he finds time to belong to the A.S.M.E., and he always seems to have the day's assignment in machine design. His home town is Pasadena.

CHARLES F. CARSTARPHEN **B, TBII**

Chuck is one of the most popular men in his class, being President of Dabney House, Sec. of TBII and A.S.M.E. Active in athletics, he won numerals in basketball, baseball, and was a mainstay of the Ski Club and Dabney's wrestling team.

ROBERT TRISSEL CARTER

Bob is known to his friends as "Sugar", due to certain aspects of his social activities. An applied chemist, he is a member of the Chem Club. Bob, a Dabneyite, was out for frosh football and tennis and has since participated in house athletics.



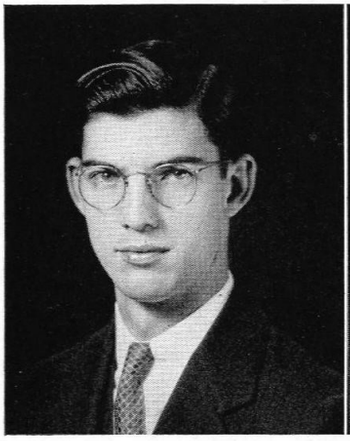
KENNETH COLLINS **TBII**

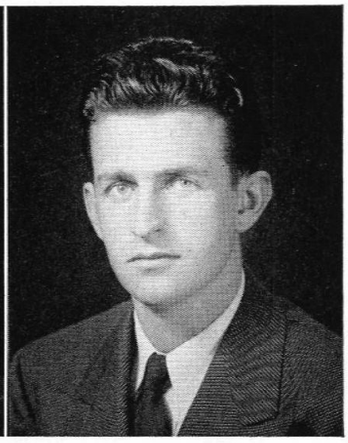
Ken's another fellow who likes to dabble in photography in his spare time. Being an electrical engineer, he is also a member of the A.I.E.E. and was recently elected into Tau Beta Pi. He comes from Pasadena, transferring from P.J.C. in '37.

RONALD B. CONNELLY

"Double-barreled Ron", they'll call him, for if he doesn't bowl them over with his M.E. degree, he can always shock them with the E.E. A member of the Huntington Park three (Bradshaw, Ritchey, and Connelly), he is a witty conversationalist.

SENIORS





GEORGE O. CROZIER **T**

"Croz" has been a mainstay of Ricketts athletic teams, having participated in interhouse basketball, softball, and track. He served as a U.C.C., and is noted for ability as a headwaiter. A three year letterman in baseball and an A.S.M.E. member.

HARRY OWENS DAVIS, JR.

Harry is a mechanical engineer hailing from Los Angeles. He plays varsity baseball and house tennis, and is Secretary of the student branch of the A.S.M.E. He still finds time to handle the Tech accounting, and make regular social contacts with U.C.L.A.

PHILIP DEVIRIAN **T, TBII**

Says little, but does much. After four years of faithful service to the team, "Deev" won his letter in football this year for his fine work in the line. Also a trark man. He has been assisting Dr. Knapp on the Grand Coulee pump tests. From Altadena.

BARRY DIBBLE **TBII**

Barry entered Tech with the class of '39 a married man, and since then he has passed out the cigars twice. Among his fellow physicists Barry is known as a good pal despite his average raising. His hobby is holding long conversations on sociology.

WALTER A. DIEHM

If you should happen upon a radio or candid camera bull session, it's a good bet that Walt is in the middle of it. Walt is Vice-President of the Senior Class and the A.I.E.E., and has played four years of frosh and varsity basketball.

HERMAN ENGLANDER

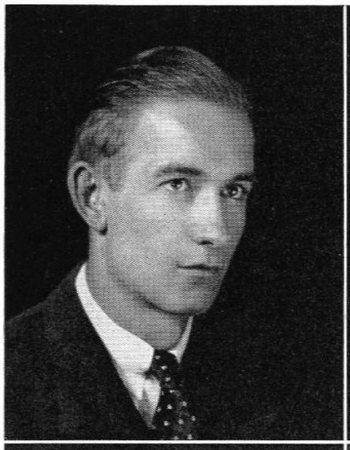
Herman's record shows that he has been interested in developing both his brain and his body. He is majoring in mathematics and is an ardent member of the Chess Club. Weight lifting is his hobby. He is a socially active member of Dabney House.

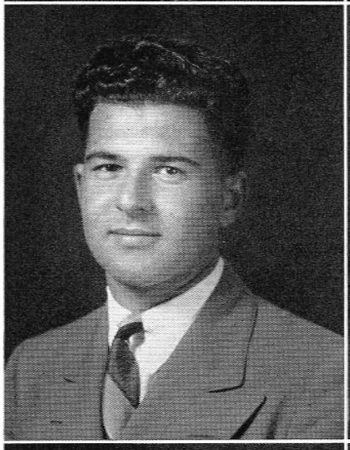
C. HOWARD CRAFT

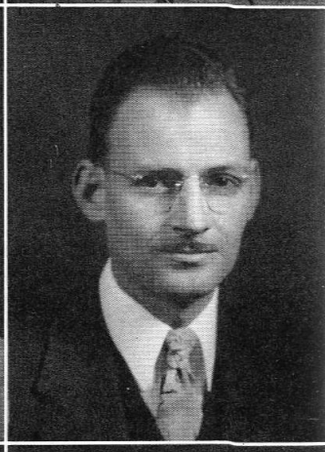
Crafty came from Elsinore as a sophomore. He has made himself well known for his work in the Glee Club and Orchestra. He served his fellow chemists as Treasurer of the Chem Club. Plays tennis, and is interested in music and stamps.

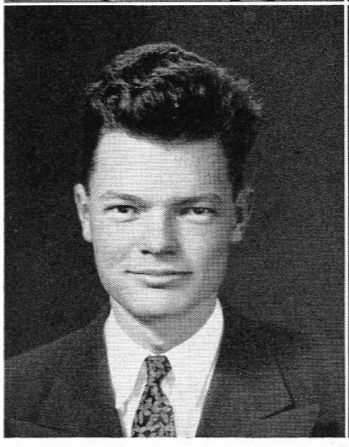
VIRGIL K. CRAWFORD

Virgil's likeable manner and lively sense of humor make him well liked among all the fellows. He lives at Burbank, studies applied chemistry, is a member of the American Chemical Society, and is interested in pigeons, drawing, and woodworking.









JOHN C. EVVARD

John is a physics major, having transferred from Phoenix J. C. in 1936. He is active in house athletics and open tennis, as well as in both photography and radio. Still he has time for his main hobby, women. Should it be "woman", John? Fleming.

RICHARD A. FISCHER

Answers to "Richy", "Powerball", "Chiefy", or any one of several other aliases. Is an E.E., from Glendale and lives in Dabney. Has hard time getting up for eight o'clocks. A track man when energetic, but a first-class jitterbug always.

DELOS E. FLINT **Key, B**

Wherever there is a good argument or debate you'll find "Quiet Flint". Besides being a debater and a member of PKD, A.I.M.E., Beavers, and Newman Club, he has played four years of football, been Throop's athletic manager, and majored in geology.

WILLIAM R. FRAMPTON, JR. **TBII**

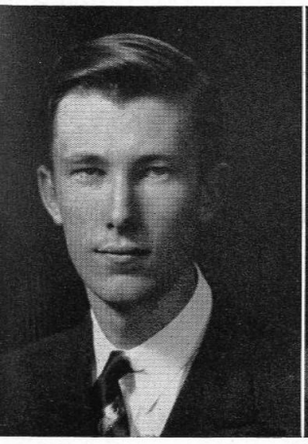
Even though an applied chemist, Bill has found time to take part in football and wrestling for Ricketts House. He was Secretary of his class as a sophomore and is a member of Tau Beta Pi and the Chem Club. An accomplished pianist and social lion.

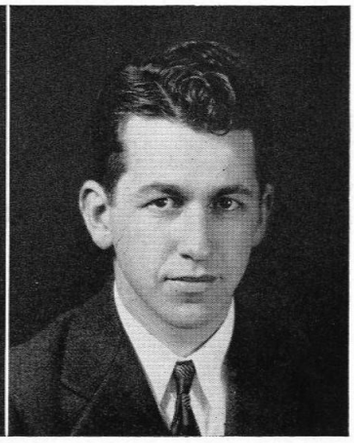
STUART FRASER

A Dabneyite and thereby a good skier, Stu was a member of the Ski Team and considers skiing his hobby. A good musician, he played in the Band and Orchestra for two years. He is very interested in mechanical engineering and is a member of A.S.M.E.

JAMES SCOTT GASSAWAY

J. Scott rode a motorcycle from L. A., and how he survived his hair raising experiences is still a mystery. Gassaway joined the A.S.M.E. and played tennis. Interested in camping and cabinet making.





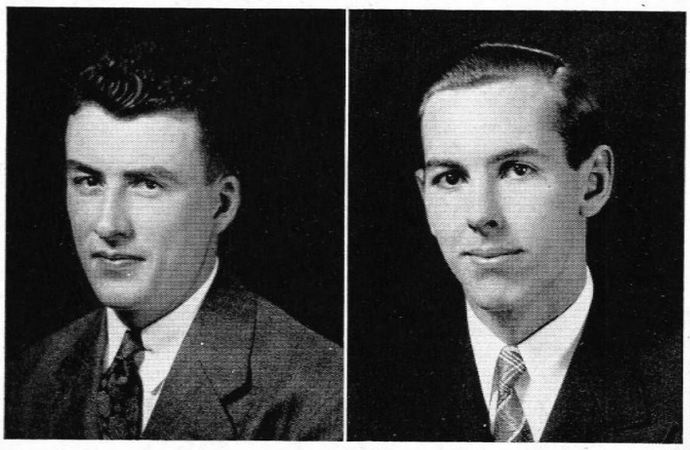
RAY VAN DEUSEN GERHART

Ray is the tall, slim fellow with a ready hello who can usually be found playing bridge or chess in the Throop Club lounge. He hails from Pasadena, is an applied chemist, and plays a slick game of tennis when the occasion demands. Chem Club.

JOSEPH JOHN GOMBOTZ

Gombotz is a geologist from San Marino. Joe is widely known for his sense of humor and is a member of the Throop Club, the Geo-Paleo Club, and the Chem Club. When not engaged in snaking, he has been active in tennis, football, and boxing.

SENIORS



ALBERT PENNINGTON GREEN **TBII**

A. P. is an electrical from Hollywood (and who'll ever forget his stories of that metropolis?). Green played tennis and was a member of the A.I.E.E. He's been the Cataloguer of Tau Beta Pi this year.

WILLIAM M. GREEN **TBII**

Bill transferred here from the University of Utah, and his ease at making friends has made him a very popular member of Blacker House. Besides making a good record in his E.E. course, he has been a member of the Glee Club, A.I.E.E. and TBII.

JOHN R. GRIFFITHS **T**

"Griff", by his spirit of fun and geniality, has made his four years here an eventful period. He has been a football player and a member of Blacker House, Publicity Committee and Varsity Club. He is a geologist and hails from Santa Barbara.

EDGAR A. GRISWOLD **T**

"Grizzy", sturdy 200 pound football player deluxe, has three stripes on his varsity sweater for being a mainstay of Tech's line. After football he wrestled for Dabney—is an associate member. A member of A.S.C.E., lives in L. A., and goes steady.

ROBERT C. HAGEN

Many of the Ricketts House social functions have been successful due to Bob's clever planning, and his managing of "Der Blitz" will never be forgotten. A geologist, he thrives on the dust which comes from tramping over the hills. Rooms with Norton.

MARCUS A. HALL

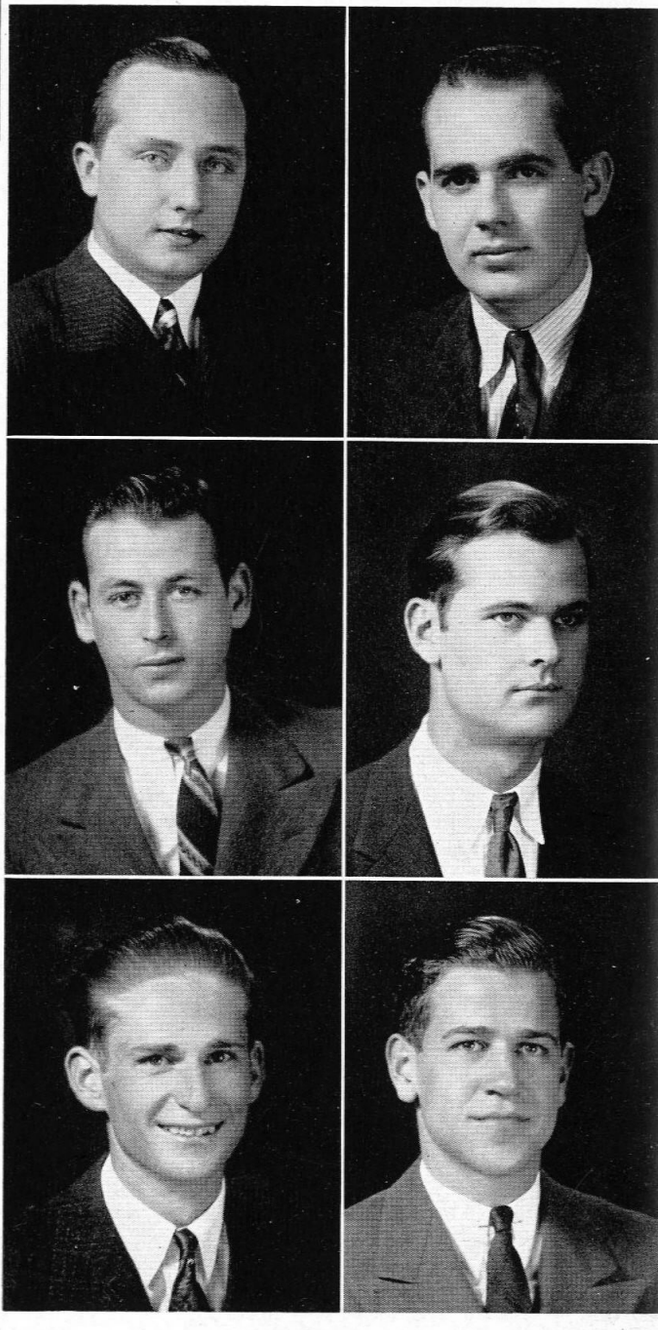
Marc likes to spend his spare time skiing, swimming, or taking pictures, depending upon the season. Otherwise he keeps busy at mechanical engineering, track, and cross country. He is a member of the Election Committee, A.S.M.E., and Dabney House.

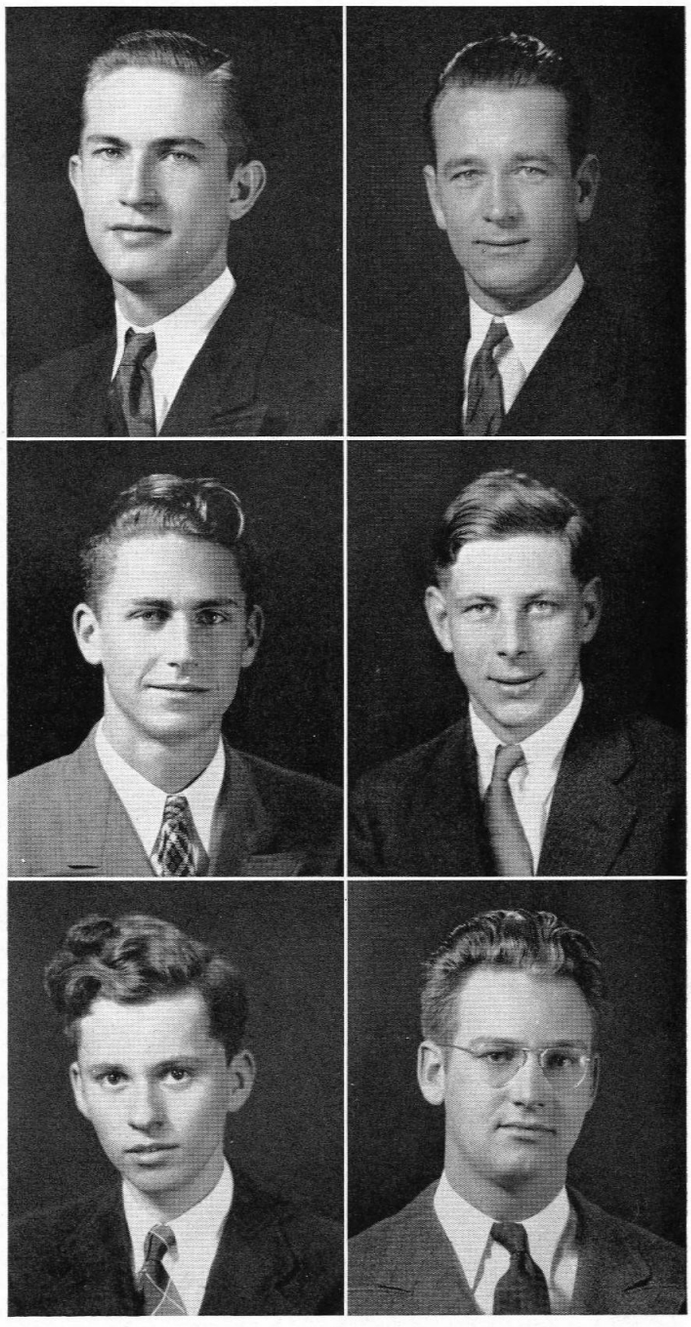
JACK H. GOODELL **T, TBII**

Jack is one of the most popular mechanicals in the class, despite the fact that he entered as a junior and is a persistent average raiser. A member of Throop Club, Goodell made a letter in varsity football and was a member of Tau Beta Pi.

HARRY ALLEN GOODIN, JR. **T**

Quiet "Hare" (or "Hair"), an M.E., hails from South Pasadena. He is a four year basketball letterman, has also participated in interhouse football and baseball. Lives in Fleming's notorious Alley 1. Often seen with Bragg. Never misses a dance.





HAROLD V. HANCE

Hance is known for his ability to make friends with both students and instructors. He has worked for the Musicale and is a member of the A.I.E.E. Hails from Los Angeles and is interested in amateur radio.

ANDREW L. HANNON

Andy always has a friendly word of encouragement for his friends and is very well liked about the campus. His well-rounded program has included Blacker House Treasurer and house football and baseball. He is an E.E. and is from Los Angeles.

ROBERT W. HAUSSLER

Nearly any afternoon you can find Bob in the gym working out at his favorite sport, boxing. Bob comes from Los Angeles, is a civil engineer and Vice-President of the A.S.C.E. If you'd like to go a round or two, he's the man to see.

ERNEST MICHAEL HIEHLE

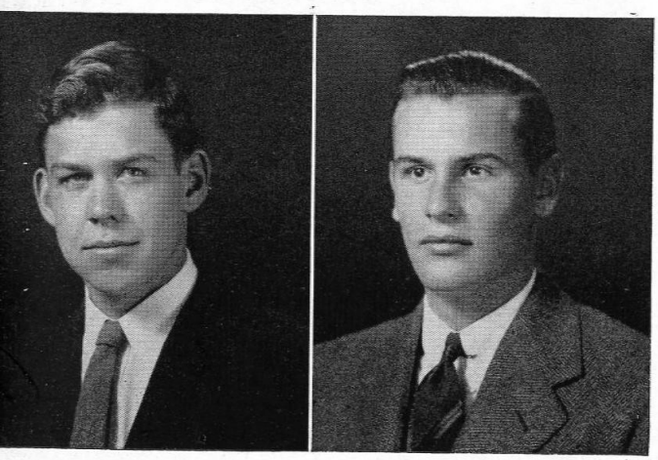
Sparky is a confirmed radio bug who is always anxious to talk radio to some poor innocent. Hailing from Walnut Park, he is often seen with a certain brunette from that city. An E.E. and Throop member, he ice-skates and is a demon chess player.

FREDERICK C. HOFF

Fred's stories about his home town, Elgin, Minnesota, are surpassed only by his unorthodox mechanical engineering conference talks. He has been a member of the A.S.M.E., frosh football manager, and assistant editor of the "California Tech." Y.M.C.A.

DAVID ELMORE HOYT

Dave, or "Dee", is an E.E. from San Marino. Is seen quite regularly at Tech affairs with a vivacious young blonde. Photography, tennis, and hiking take up the remainder of his spare time. Also active in interhouse and class activities.



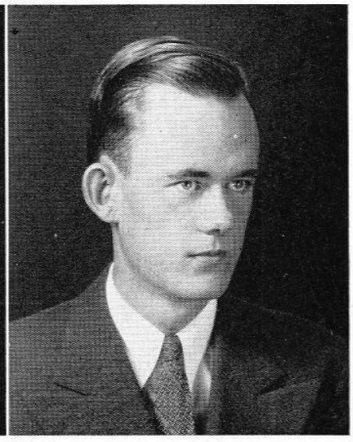
F. CHANDLER INGALLS **Key, B, TBII**

Although the entire school was stunned at the tragic death of Chan on Feb. 28, 1938, his spirit of friendship, the manifestations of his brilliant mind, and the memory of his countless achievements will always live in the minds of his fellow students.

ROBERT B. KIMBALL **TBII**

Bob has been an outstanding student and very active in interhouse athletics. Radio, tennis, and women are among his diversions. Is a member of the A.I.E.E. and lives in Dabney. Hall is his roommate. On Senior Prom committee. From Glendale.

SENIORS

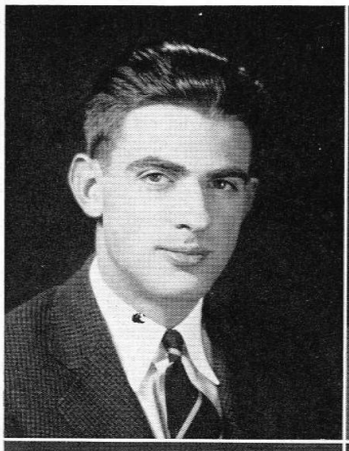


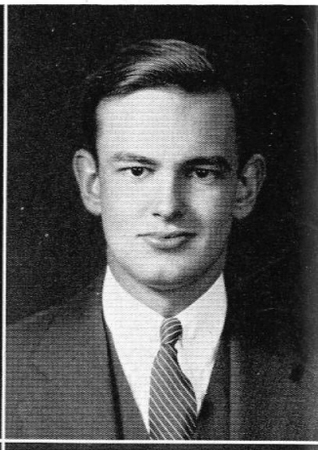
JOHN KONECNIK

Herkimer, New York, is the hometown of mechanical engineer Konecnik. John has joined both the A.S.C.E. and the A.S.M.E. Editor of the frosh news in the 1935 Big T. A Throop Clubber, interested in mountaineering and skiing. Member of Sigma Xi.

ROBERT KYTE

While majoring in applied chemistry, Bob served as Pres. and Sec. of the Chem Club. He is an active Dabney House member and has served on the "California Tech" staff, as track and cross country manager, and as Asst. Editor of the Chem Club journal.





LEO SILVIO LAVATELLI ¶

One of the star dramatists of the class: "Persian," "Braggart Warrior," "Amphytrion," "Churl," and the lead in "Dr. Faustus." President of Drama Club, Publicity Manager of Ski Club, and member of the Press Club. Feature editor of the "Tech."

DONALD G. LAWRIE B

Don is a mechanical engineer from Milwaukee, Wisconsin. He proves his all-around ability by his varied activities. A.S.M.E. Secretary '38 and Chairman '38-9, Jr.-Sr. Intramural Manager, Fleming House Social Chairman, plus his hobby, photography.

WILLIAM G. LAWSON B, T

"Bebo" has been Senior Class President, Secretary and Social Chairman of Fleming, Vice-Pres. of the A.S.M.E., a two year letterman, and football captain. His interest in athletics and good sportsmanship won him the Wheaton Trophy.

CURTIS M. LEE Key, T

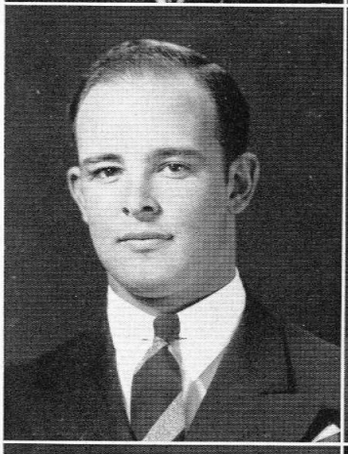
A two year letterman, Curt has been a heavy hitter on the baseball team for three years. He is interested in music, being the President of the Glee Club and a member of the Quartet. He was President of the Newman Club and a member of the A.S.M.E.

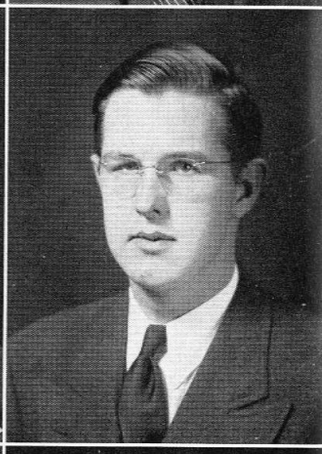
MELVIN N. LEVET

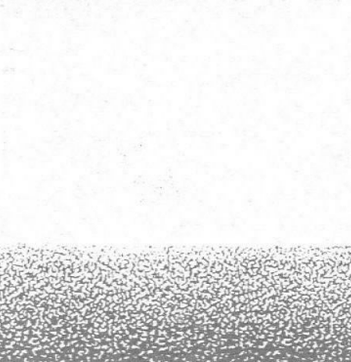
Baseball is Mel's specialty: frosh numeral, varsity letter, captainship, Rawling's Trophy, and this year the Frosh coach. In addition he has had time to study geology, manage the Glee Club, work on the "Tech," join Throop Club and the Geo-Paleo Club.

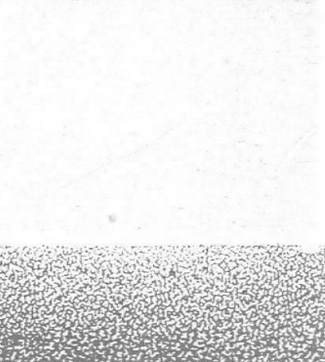
HARLOWE J. LONGFELDER Key, ¶, B

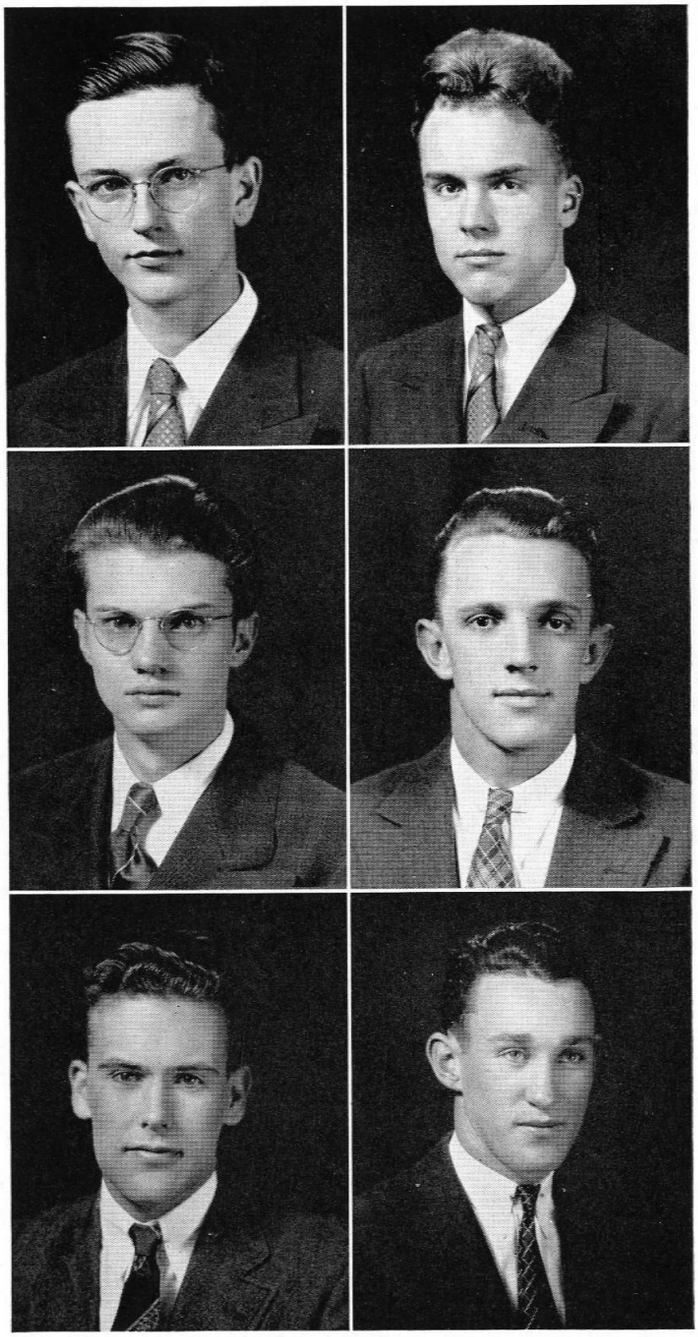
Author of the "Toreador's Column" in the "Tech," Harlowe has entertained the campus for four years. A future aeronautical, he is a member of the A.S.M.E. and the Press Club and was Treas. of Ricketts, Sec. of the Y.M.C.A. and Election Comm. Chairman.











KENNETH GORDON MACLEISH **TBII**

Ken has spent a large part of his time with his studies, and has achieved remarkable success. He is also well liked for his brilliant humor and friendliness. Ken is a physicist, a member of TBII, and lives in Blacker. Home: Santa Barbara.

TYLER MATTHEW **T**

Big blonde Tyler has been one of the stars of the track team for three years. He has three varsity letters and won the Decathlon last year. An electrical, he found time for journalism, singing in the quartet, and following a hobby, philately.

RODERICK McCLUNG **Key, ¶**

In his year as Editor of the "Tech," Rod has transformed a small staff into a group of 50 alert newshawks. Famed for his marathon tennis matches in the open, his applied mech solutions, and his wild stories of life in Winslow, Ariz. A.S.M.E.

FRANK EWING McCREERY **T**

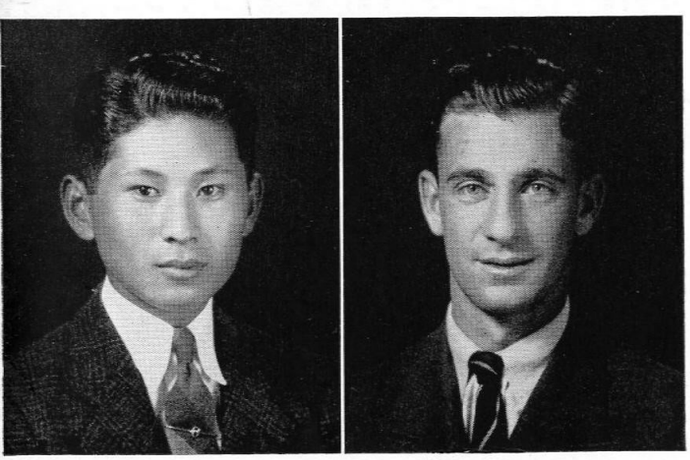
Mac, the "Coronado Kid," is an all-around athlete and has four varsity and two frosh awards in football and track. "Junior," as he is often called, is an M.E. and a one-woman man. He makes frequent trips to Coronado.

JAMES ROBB McKINLAY

Radio is one of Mac's leading interests, so his studying electrical engineering has been quite natural. Known for his likeable manner, McKinlay hails from Glendale and is a member of the Glee Club and the A.I.E.E.

W. DEMING MERRICK

If it's a good joke or a yarn about a motorcycle, Merrick is either telling it or listening. Deming came to Tech from Glendale and has studied electrical engineering. He is a member of the A.I.E.E. and is a master at three dimensional tit-tat-toe.



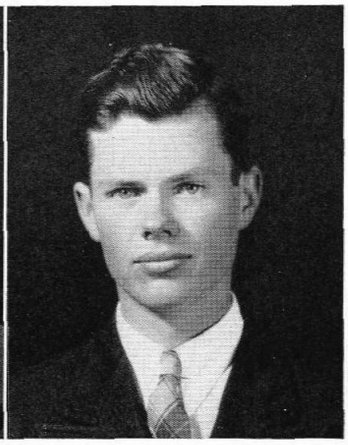
GEORGE K. MORIKAWA

Known as Watanabe, George is an A.S.M.E. and Dabney House member of good repute. He obtained frosh basketball numerals and participates in house athletics to relieve the monotony of snaking. He is recognized as an excellent ping-pong player.

WALTER H. MUNK

Walter came here from Vienna, Austria, and his adaptability to American ways and his genial friendship have won him a large number of friends. He has been a member of the Walrus Club, Captain of the Ski Team, winner of the Conger Peace Prize.

SENIORS



JAMES T. OGG

Quiet and unassuming, Jim Ogg is a familiar figure in the electrical engineering department. His professional interest has made him an active member of the American Institute of Electrical Engineers. Jim came to Tech from nearby Eagle Rock.

JACK OSBORN **3 Keys, B, T**

Ozzie's friendliness, his remarkable ability of leadership, and his extraordinary initiative has enabled him to fill the Presidency of the A.S.B. very successfully. He has been winner of three Honor Keys, President of PKD, football, and basketball.

EDWARD HAIG PARKER

Ed may be recognized by his great physique and his characteristic geniality. He comes from Los Angeles and is a two year track letterman and non-resident member of Ricketts House. He is an applied chemist, and his chief hobby is his married life.

CARL H. PAUL **B**

Carl has been one of the most active seniors. He has participated in interhouse athletics, frosh and varsity baseball, is a member of the A.S.M.E., Ski Club, and Board of Control, has been Vice-President of Dabney House, and President of Beavers.

JOHN M. PEAT, JR.

Pete's mischievous grin and his firecrackers were the bane of the Ricketts U.C.C., but as a geologist and a yachtsman, Pete is hard to beat. He was Vice-President of the Sailing Club and was an outstanding member of the Ricketts House athletic teams.

CHARLES E. PETTINGALL

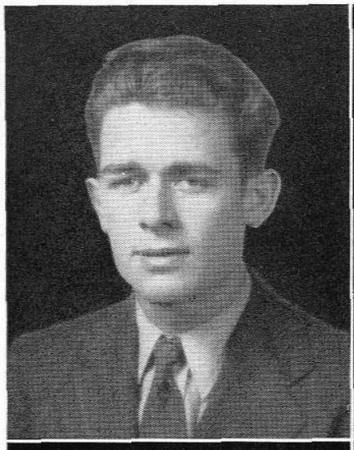
Came to Tech via U.S.C. and P.J.C. He is a Throop Club member and an accomplished skier. Plays a mean game of tennis and badminton. An M.E., he admits he has a weakness for women; they for him, according to Oakley. Commutes from Burbank.

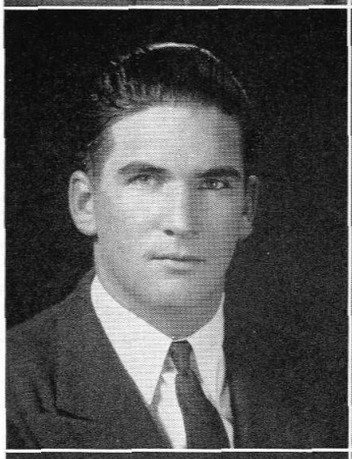
WILLIAM MEAR NORTON, JR. **B**

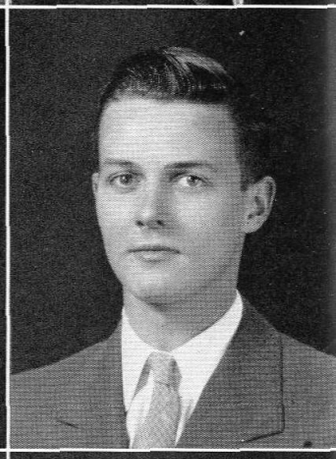
As a member of the Board of Control, Chairman of the Ricketts House U.C.C., Secretary of the Interhouse Committee, and as a Beaver, Bill exerted great influence. As an M.E. Bill was Chairman of the A.S.M.E. A good yachtsman and pianist.

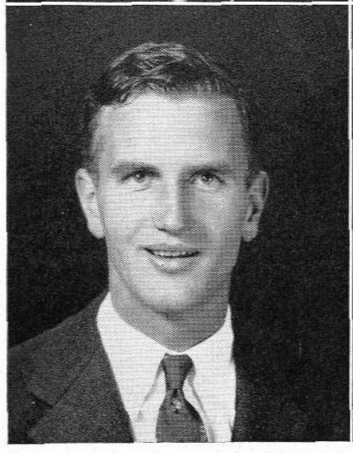
SPENCER W. OAKLEY

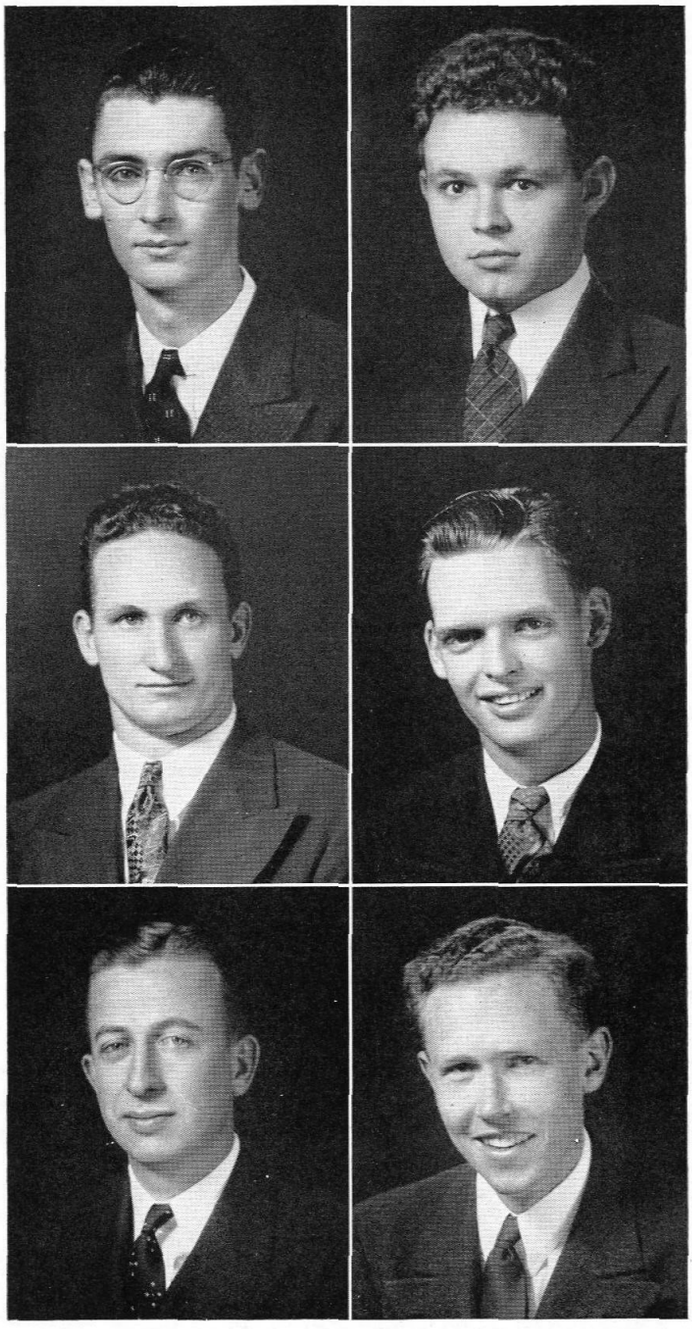
Spence says his hobby is girls, but he found time for other things also while at Tech. An M.E. his greatest activity is skiing. He also played basketball and tennis for Ricketts House. He was a member of the A.S.M.E. He is a badminton enthusiast.











RICHARD K. POND **TBII**

"Wall Street Dick," he's been known as since his talks on stock market engineering. An ace draftsman, his services are always in demand. Worked on impact research last summer. A track man and a member of A.S.M.E. and Ricketts House.

KEATS A. PULLEN

Keats is a physicist hailing from Los Gatos, California. His varied interests include radio, music, and photography; and although a transfer student, has made himself an active member of the Photo Club and the Caltech Musicale. Fleming House.

LEO JAMES RAINWATER

Aside from copping high honors in applied physics and an assistantship at Columbia next year, Jim amazed all by being so un-snakelike as to participate in frosh track, cross country, wrestling, swimming, Band, and his full share of bull sessions.

LOUIS J. REGAN

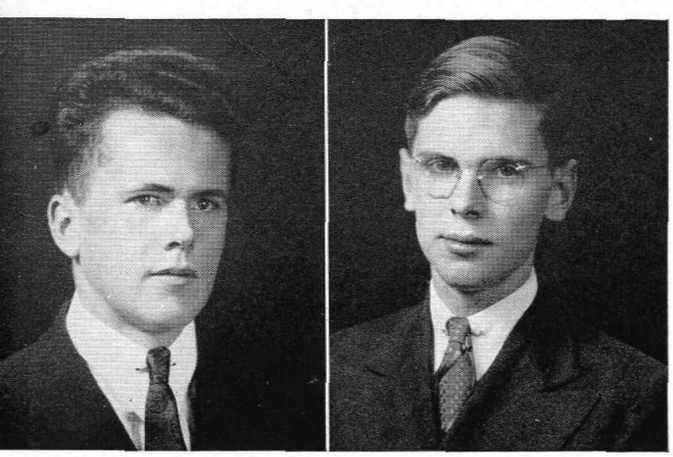
A lover of the "wide open spaces," Louis naturally turned to geology. Well liked in his department he is a consistent average raiser. A socialite, and fond of attending Dabney House dances, Louis intermixes golf with his other activities.

RAYMOND G. RICHARDS **2 Keys, B**

Ray is noted for his initiative and good fellowship. He has twice won an Honor Key, and besides being V. Pres. of Blacker House and Chairman of the Employment Committee, he has been a member of several dance bands. Ray is an M.E. from Exeter.

JAMES C. RITCHEY **TBII**

Although he claims his hobby is loafing, "Ritchey's" friends know him as one of the hardest workers in the class. A civil engineer and a Tau Beta Pi man, he has also gone out for swimming and water polo. He came to Tech from Compton J. C. in '36.



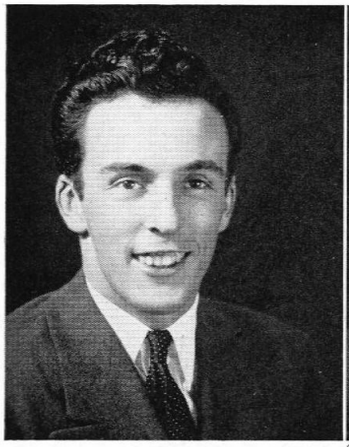
F. A. ROBERTSON

Although to many Francis appears quiet and reserved, he really has a manner of friendliness and likeability. He is a member of the Throop Club and the Chem Club. His course is applied chemistry, and he resides in South Pasadena.

WILLIAM ARTHUR ROOT **Key, ¶, B**

Art, as Editor, devoted his senior year to give you your "Big T." His numerous activities won him that coveted Honor Key. Chairman Senior Picture Committee; Election and Publicity Comm., Beavers, "Tech," Press Club, Stage Crew, A.I.E.E., Ricketts House.

SENIORS

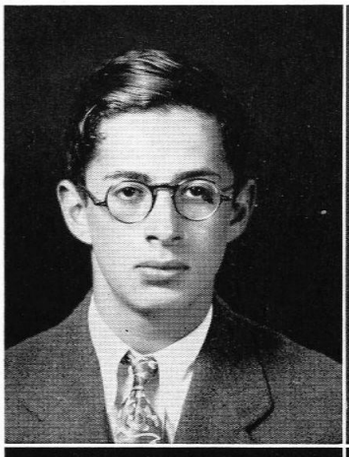


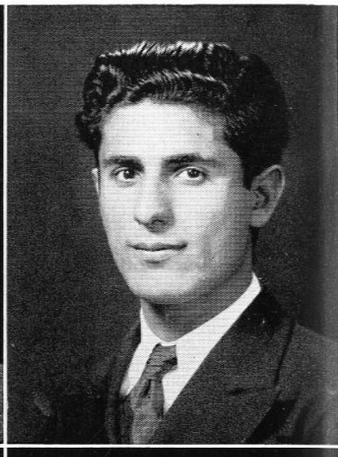
WILLIAM F. ROPP **Key, B**

Bill has distinguished himself along executive lines, being Pres. of Ricketts House, Chrman of the Interhouse Committee, Treas., Sec. ,and Vice-Pres. of the class of '38, Chrman of the Jr.-Sr. Prom., frosh football, track, and varsity track.

BERT V. ROUDEBUSH **TBII**

Among the fellows, Bert is known for his genial friendliness and pleasing sense of humor. He is a member of Tau Beta Pi and Throop Club, and his liking for golf has made him a member of the golf team. Bert is an applied physicist and lives in Glendale.





SYLVAN RUBIN

His friends will remember Sylvan for his tricky signature and his ability to eat his lunch and discuss "e and m" simultaneously, missing neither a bite nor an equation. Rubin has done a great deal towards making the Walrus Club a success.

RALPH J. RUGGIERO

Ruggiero is known for his unorthodox opinions and his inherent friendliness. He majored in physics and has taken an active interest in the Band and was a member of the debate squad. Commutes from Los Angeles.

HUGH M. RUSH

A disciple of Icarus, Hugh decided to leave airplane piloting to take up aeronautical engineering at Tech. He is well known among the aeronauts for his dry humor and his anecdotes concerning the "good old days" of wooden planes and iron men.

CARL SCHNEIDER **T**

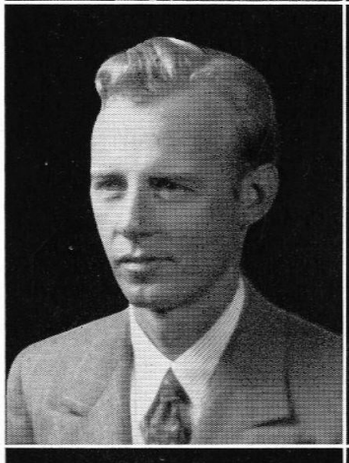
Bud is an electrical engineer from Beverly Hills. A varsity letter proves him an able man in cross country and varsity baseball, besides doing an excellent job as Secretary of the A.I.E.E. and keeping up with his hobby, "ham" radio. A member of Fleming.

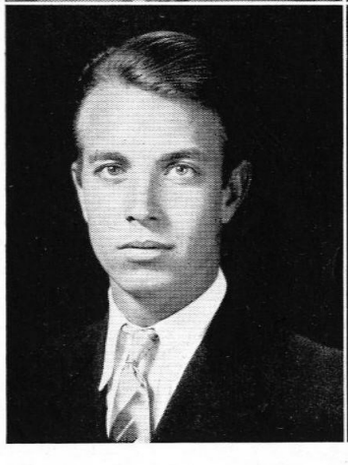
DAVID HOLCOMB SCOTT **TBII**

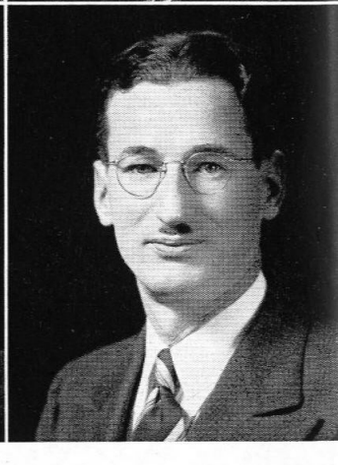
"Flash" acquired his nickname and a Tau Beta Pi key by means of his average raising in geology. He is talented in other directions as he is an expert fencer and boxer. Between athletics and studies, he amuses himself playing a guitar.

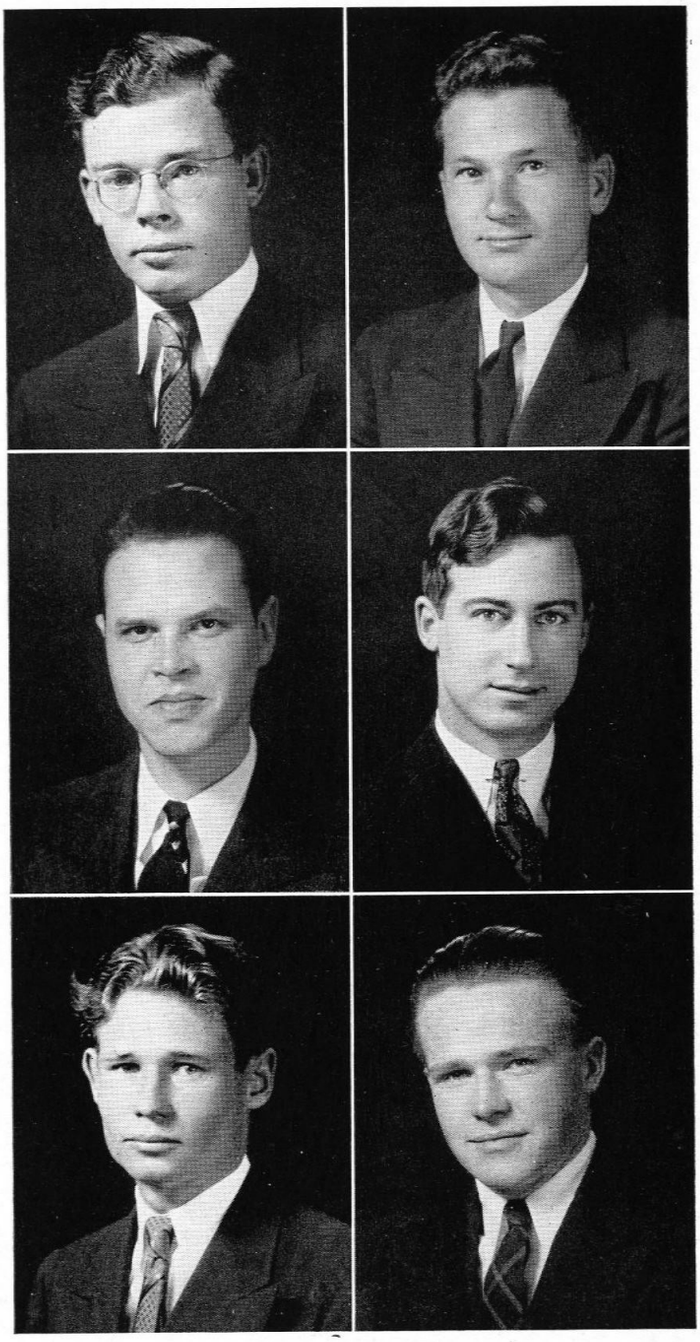
QUIDO M. SHULTISE

Noted among juicers for his wit, Q. M. "Pop" Shultise plans a career in radio engineering. He is an active member of both the A.I.E.E. and the Institute of Radio Engineers. Quido's hobby and main interest is his wife and his children.









GEORGE W. SINCLAIR

A rabid Benny Goodman fan, "Sin" dotes on amateur radio. Entering as a sophomore, he has stayed out of school alternate years to work. Noted for his wry humor and ability in bull sessions, especially measurements lab. Member Throop and A.I.E.E.

JOSIAH E. SMITH **T, TBII**

"Smiling Joe" has been one of the top track men in the distance events during the past three years. He comes from Corona. Has a wide circle of friends among the M.E.'s and aeronauts. A member of Tau Beta Pi.

PAUL L. SMITH ¶

Paul did a tremendous amount of work on the "Tech," serving as News and Feature Editor. Football and basketball. Chairman of Peace Day and Walrus Club. Smitty is an amateur magician of note, a member of Pasadena Magicians' Guild.

PHILIP E. SMITH **Key, TBII**

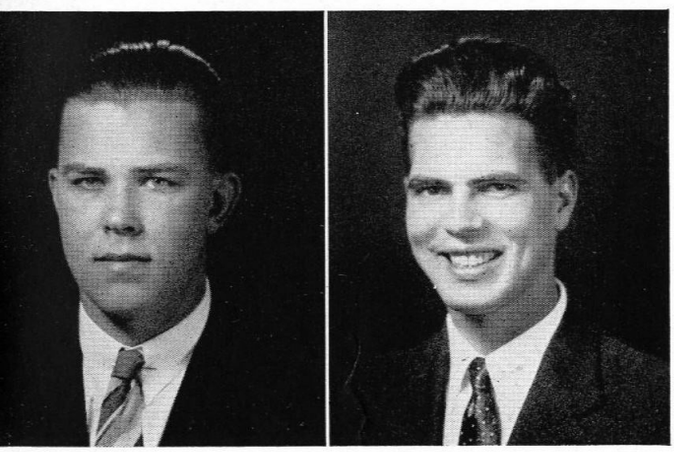
Phil, Tech's mainstay in dramatics, has been active in every play since his freshman year and is noted for his humorous feminine impersonations. V. P. of PKD, Treas. TBII, Treas. and V. P. Chem Club, Sec. Drama Club, Debate, "Big T," "Tech," Blacker House.

ROBERT LOUIS SMITH

If you need a good man for a surveying party or want to learn to ice skate, then Bob is the man to see, for he is not only a civil engineer and a member of the A.S.C.E., but a crackerjack ice skater as well. His home town is Hollywood.

WILLARD M. SNYDER

Willard's success at Tech was along financial lines, judging by his being Treasurer of the "Y," the A.S.C.E., and the Senior Class. A member of Dabney House, won a letterman sweater as senior football manager. A civil and a member of A.S.C.E.



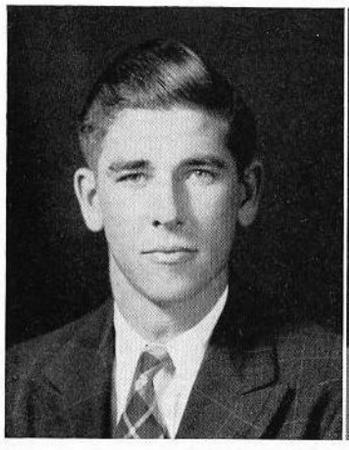
COLLIS K. STEEL

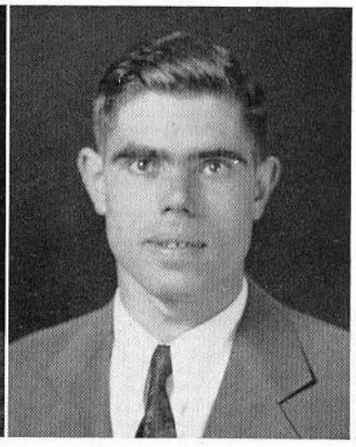
Collis is an electrical engineer in Blacker House. He appears rather quiet, but underneath he has a great capacity for warm friendship among his fellows. Collis is a member of the A.I.E.E. and is interested in amateur radio and photography.

J. EUGENE STONES

Gene has shown his interest in Y.M.C.A. activities. Has been putting himself through school as an applied physicist and was a scholarship man during the freshman year. A socially active Dabney man, he has followed the hobby of leather craft.

SENIORS





CONSTANTINE SVIMONOFF **T**

Stan won two varsity letters in football, playing the position of running guard. He also played on the rugby and baseball teams. Entering as a transfer from Bakersfield J. C. in his junior year, Stan is a civil engineer and belongs to the A.S.C.E.

ROBERT F. TANGREN **TBII**

Fulton's genial smile and willing aid to others made him well liked in aeronautics. This, combined with his scholarship, elected him a Tau Beta. His hobby is the Guggenheim Wind Tunnel. A member of Throop Club, he played on its athletic teams.

ROBERT W. WHITE **TBII, T**

Versatile "Whitey" scored heavily in athletics and scholarship. A varsity baseballer and captain in his senior year, he is also President of Tau Beta Pi. Bob was V. P. of Fleming and a mainstay of their house athletic teams in many sports.

ROBERT W. WINCHELL **T**

Bob, as he is better known, is a local boy, his home being in Beverly Hills. Bob plays varsity golf for Tech and still has much time for his hobby, "ham" radio. A member of Fleming House, his sense of responsibility gave him a position on the U.C.C.

UDENE EARL YOUNGER

W6NBK to his fellow radio enthusiasts, Younger hails from Los Angeles. When he isn't broadcasting he listens to Jan Garber or Wayne King. Plays tennis and attends the Walrus Club meetings. Majors in physics.

LESTER G. ZUKERMAN

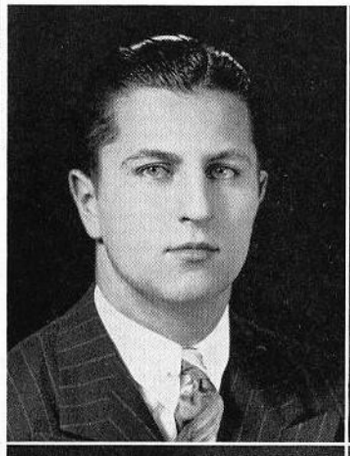
Zukie has been an active member of the A.I.E.E. and the Drama Club and a mainstay of the Walrus Club. He is a regular contributor to the "Tech" with his thought provoking column, "The Big Circus." He has served as manager in track and football.

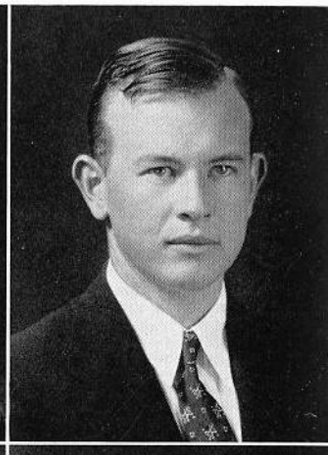
HERBERT DAVIS STRONG, JR. **Key, ¶, B**

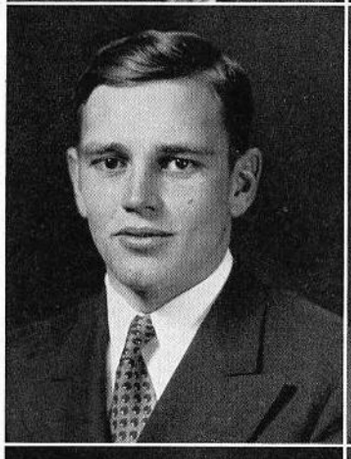
The efficient Sports Editor of the "California Tech" hails from Glendale. He was scrub football captain for '38 and active in house athletics, serving as Ricketts' Athletic Manager. "Happy Herb" is a Press Club member and A.S.M.E. Vice-Chairman.

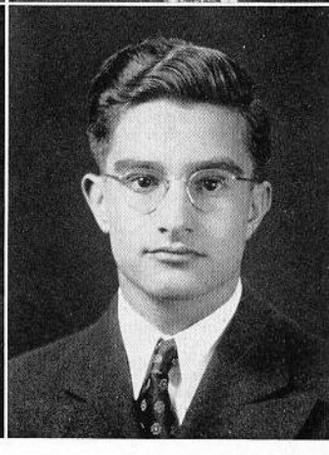
EDWIN F. SULLIVAN **B, T**

Think of the "Y" and you think of "Sully," for Ed has been "Y" President for two years and Secretary for one. Besides this he has been President of the A.S.C.E., a varsity basketball letterman two years, a Beaver, and Vice-President of his Junior Class.









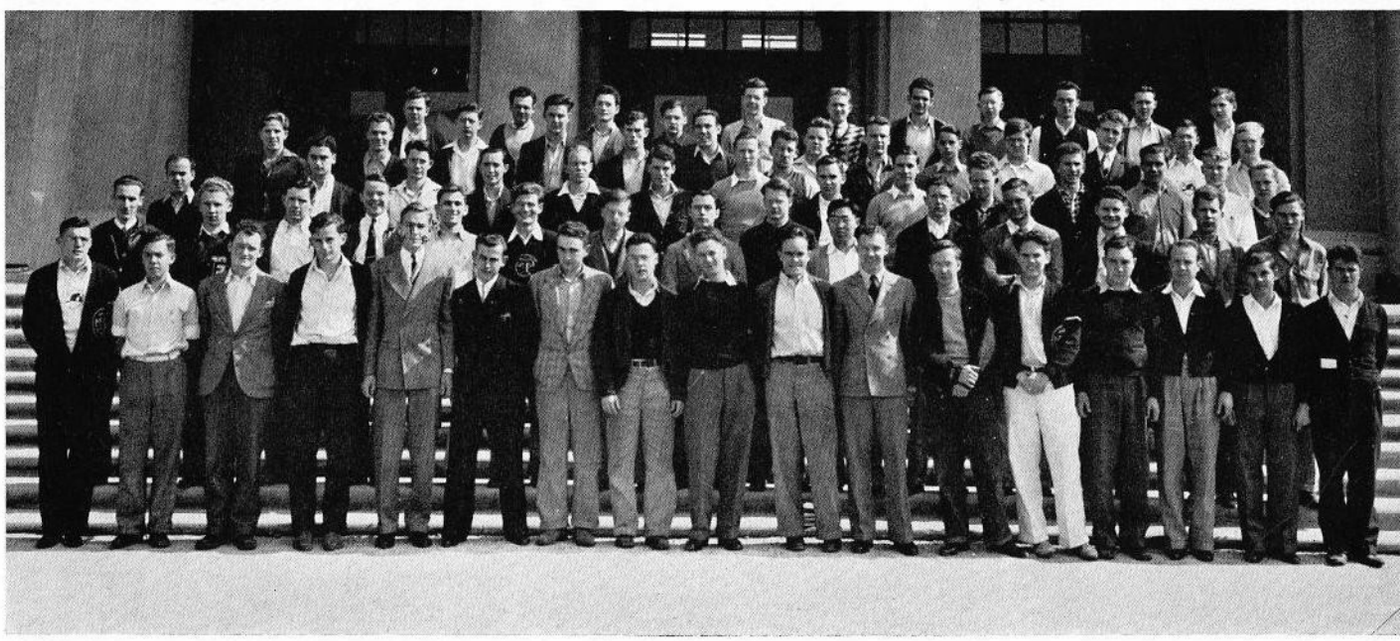
LOWER CLASSES

Biddison
Stone

White
Nakada

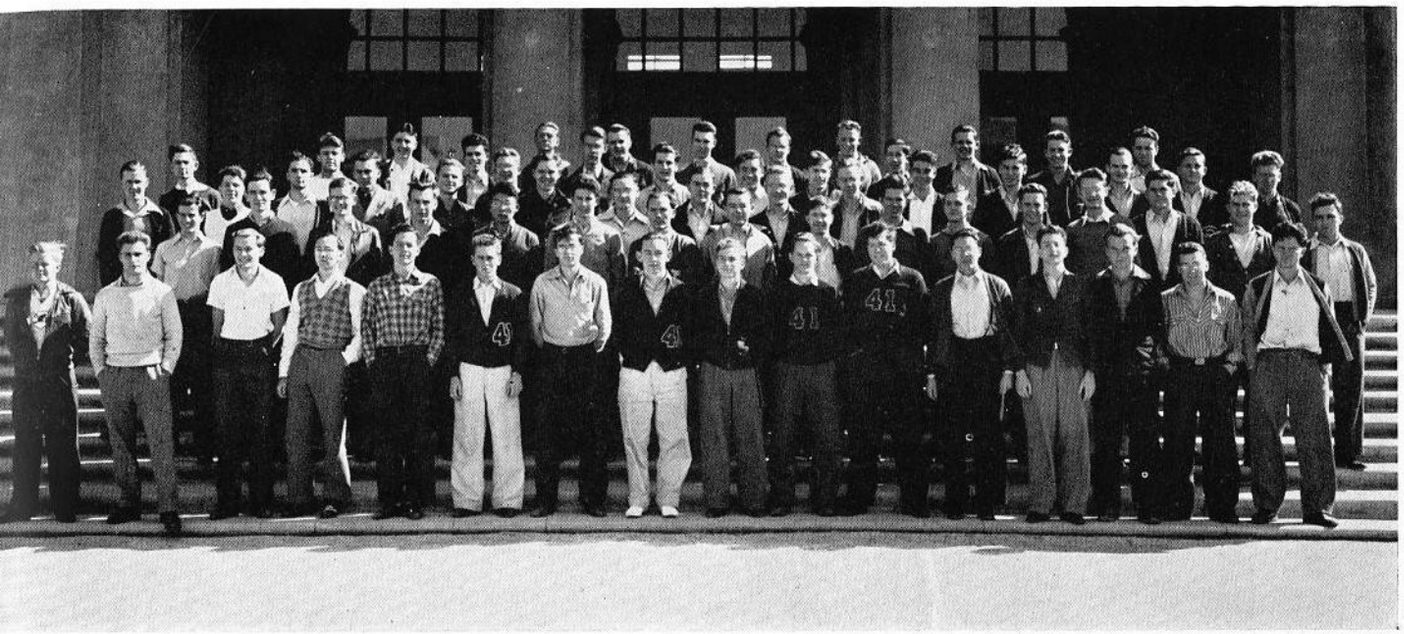
Three years ago 175 Freshmen entered Tech. This class then and now, was an experimental class. It went on to do much scholastically, in politics, and in varied extra-curicular activities. Five members received honor keys in their Sophomore year. During the past year it had five men on the Board of Directors. It efficiently handled Rodeo Day, and helped present the Garden Party and the Junior-Senior Prom, both of which met with great success. The officers for the past year were Biddison, president; Walter, vice-president; Nakada, treasurer; and Stone, secretary. The class members of the Board of Control were Spielberger, Weir, and Marriott.

JUNIOR CLASS



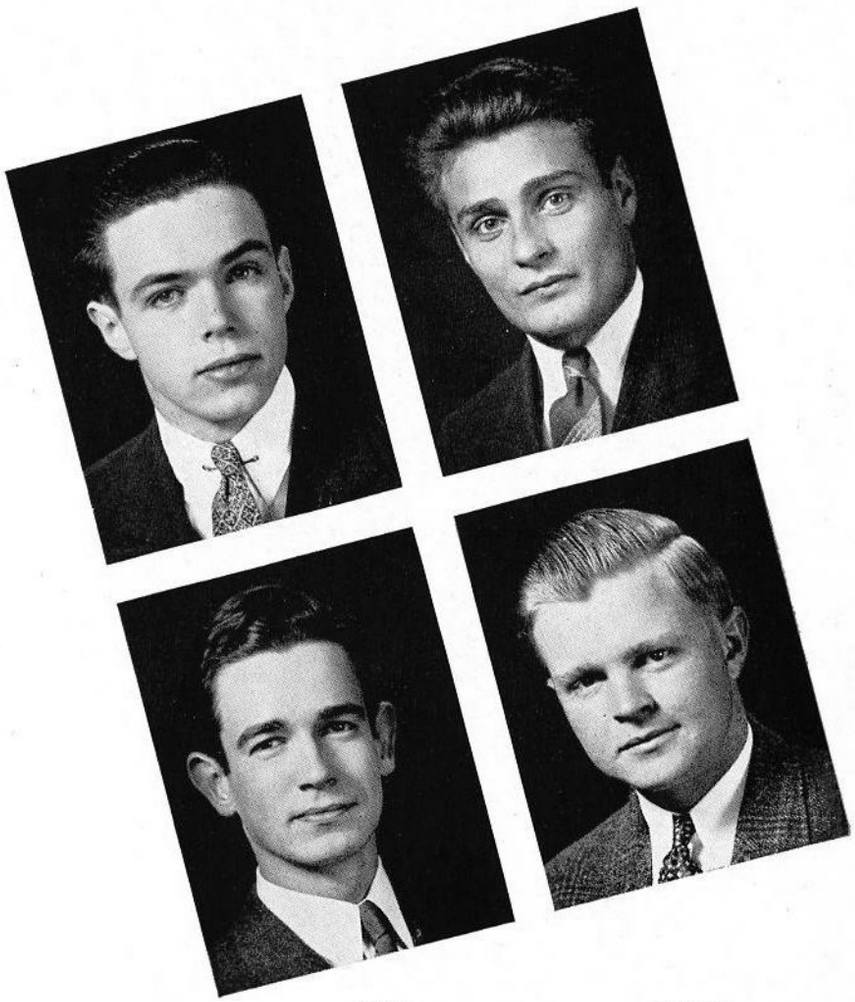
First row: Campbell, Lolmaugh, Powell, Oder, Brunner, Tielroy, Ray, Samuel, Cleveland, Van Dyke, Palmer, Paul, Crane, Spooner, Waymen, Fleming, Love. Second row: J. Glassco, R. Glassco, Burton, Watson, Nagle, Marriott, Baumgarten, Compton, Varnes, Tomiyasu, Sullivan, Worcester, Acker, Daams, Adams. Third row: Strickler, Hofmann, Jacobs, Quarles, Merryfield, Kupfer, Grigg, Brose, France, Mayer, White, Mike, Witts, Hankey, Day, Meyer. Fourth row: Hofman, Kemp, Vetter, Gewe, Biddison, Barber, Staatz, Harper, Epstein, Staatz, Foster, Goodmanson, Dove. Fifth row: Larson, Love, Davis, Hardingbergh, Anderson, Billheimer, Crawford, Sandiford, Fenton, Bennett, MacKay.

SOPHOMORE CLASS



First row: Lewis, Reimers, Faust, Frost, Kimball, Stewart, Thomas, Schubert, Dawson, Cooper, Chapin, Chop, Trauerman, Rominger, Davis, Billman. Second row: Greenhalgh, Bramball Partlow, Edwards, Kashiwabara, Pollycove, Bezdecheck, Gold, Tyler, Bowlus, Farrington, Harr, Half, Sneed, Boult, Snodgrass. Third row: Quiet, Schaff, Barber, Jones, Smith, Taylor, Billmeyer, Frank-Jones, Walker, Wright, Zebb, Widdoes, Weiss, Noble, Nock, Nutter. Fourth row: Dennington, Corcoran, Levinsen, White, Wallace, Canby, Lakos, Hill, Porter, Brooks, Vail, Wood, Boen, Sohler, Eusey, Myers.

The strong class of '41 again experienced a very successful year. As sophomores they easily downed the frosh in the annual rodeo, winning every event handily. The Sophomore A.S.B. formal, held at the Flintridge Country Club, met with the gigantic approval of the large attendance. Sophomores held many key positions in campus life of the year—in honorary organizations, publications, student body and house offices, and in numerous other extra-curricular activities. Tech's varsity teams were strongly bolstered by the sophomore athletes, who proved invaluable in every sport. The class of '41 again proved a well-knit unit, excelling in all phases of student life—scholastically, socially, athletically.



Bolles
Bramhall

Reimers
Lewis

Hicks
Blight

Brown
Hendrickson

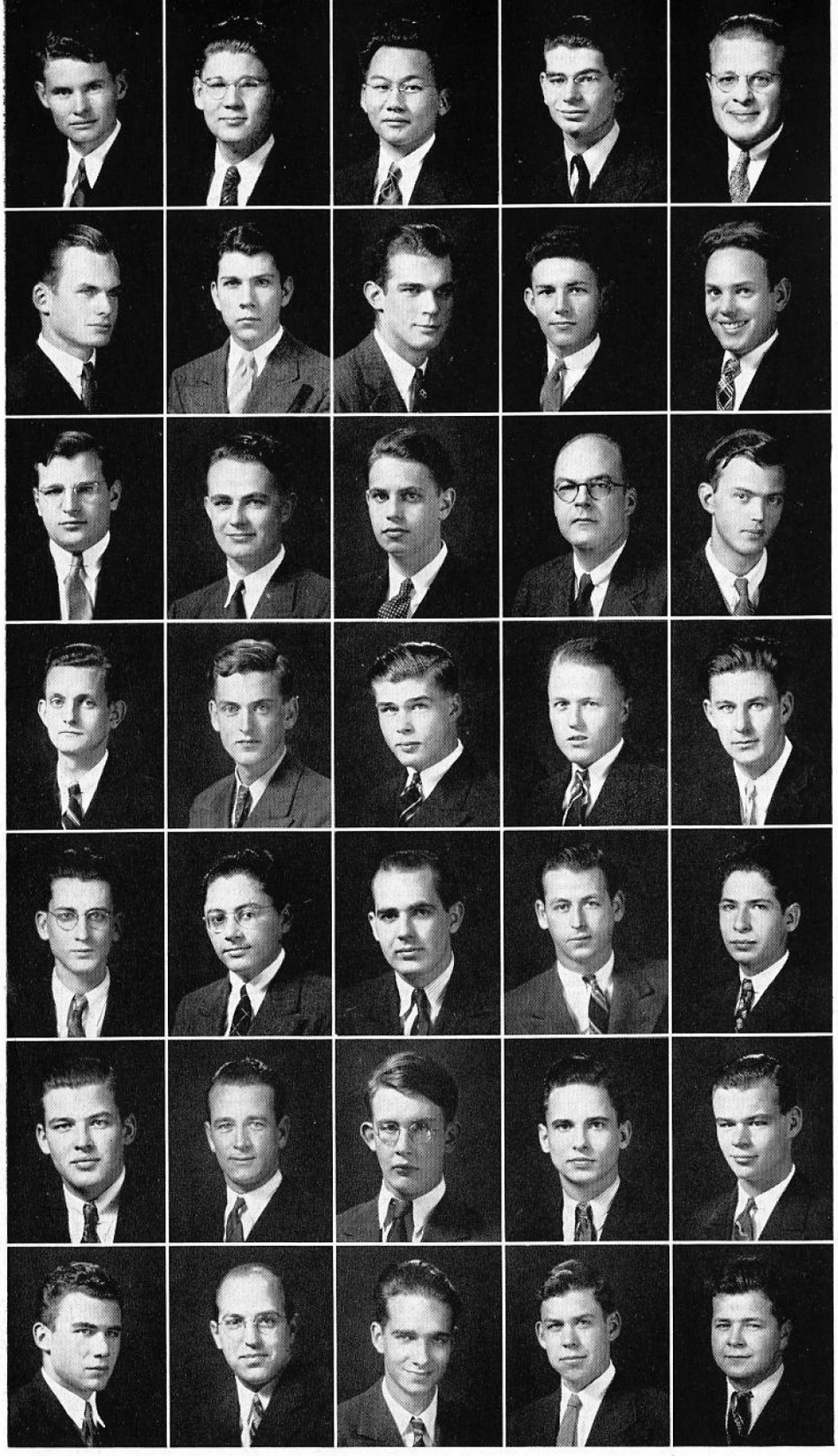
The Freshman Class made a remarkable record this year, excelling in both athletics and intellectual activity. A freshman camp was held at the start of the year in the San Bernardino mountains to acquaint the frosh with their future and their classmates. On returning from camp the football team defeated Pomona on Pomona's home field for the first time in Tech history. Throughout the year, the athletic and debate teams many times brought home the honors. The freshmen acted as guards over the bonfire that was to blaze at the Pajamarino, and protected the Beaver from the over-confident, alien hands of Tech's opponents. A Y.M.C.A. group was formed which met weekly at a lunch in lower Blacker to enjoy a talk by some notable speaker. Most original accomplishment of the class was the formation of the undergraduate Experimentation Club.

FRESHMAN CLASS

First row: Urbach, Turner, Seegman, Savit, Jenks, Hunt, Jacobson, Cunningham, Cohn, Marshall, Webster, Truesdall, Rubel, Irving, Burkhart, Wood. Second row: Conner, Janes, Hicks, Hendrickson, Hobbs, Harris, Grossberg, Pearson, Miles, Schureman, Maguire, Pichel, Ridland, Grossberg, Lessing, Kafitz, Van Ness, Cox, Kennedy. Third row: McKibben, Holser, Saye, Night, Blight, Curtis, Paul, Bell, Gayer, Schneider, Jerrems, Willittts, Steele, Howton, Hokum, Hanson, Allen, Apple, Accord. Fourth row: Head, MacKenzie, Bluementhal, Horn, Hogan, Help, Hovey, Elliot, End, Merrick, Fuss, Foster, Rhyne, Dave, Ellis, Jones, Carr, Smith, LeFever, Franzini, Brown, Edwards. Fifth row: Brockman, Bowen, Bluemle, Drake, Kendall, Lind, Siebel, Comb, Bruce, Green, Ban Becker, Hill, Woods, Locanthi. Sixth row: Oechsli, Staley, Vail, Goddard, Smith, Stone, Mader, Roese, Wilson, Gillette, LaForge, Brown, Weller, Allen, Hedrick, Glover, Lawrence, Healy, True.

Houses

STUDENT HOUSES



Acker
Ayres
Ban
Beller
Carey

Noble
Carter
Clarke
Conner
Crane

Dickerson
Edmund
Epstein
Eagleson
Fahs

Farrington
Foster
Geitz
German
Gewe

Gillings
J. Green
W. Green
Griffiths
Grossberg

Hall
Hannon
Harris
Hart
Hayes

Hines
Hofeller
Hovey
Ingalls
Janssen

Successful participation in all branches of campus activities has been the aim and the achievement of Blacker House members. An indication of Blacker's rise in athletics may be seen in the undefeated wrestling and handball teams. In general the house teams were stronger than last year because of increased interest on the part of the house members.

Under the direction of David Steinmetz the social program was both full and distinctive. Blacker members enthusiastically received four formal dances, concluded by a spring formal in the court. Dr. Harvey Eagleson, the Blacker resident-associate, planned the campus treasure

BLACKER HOUSE

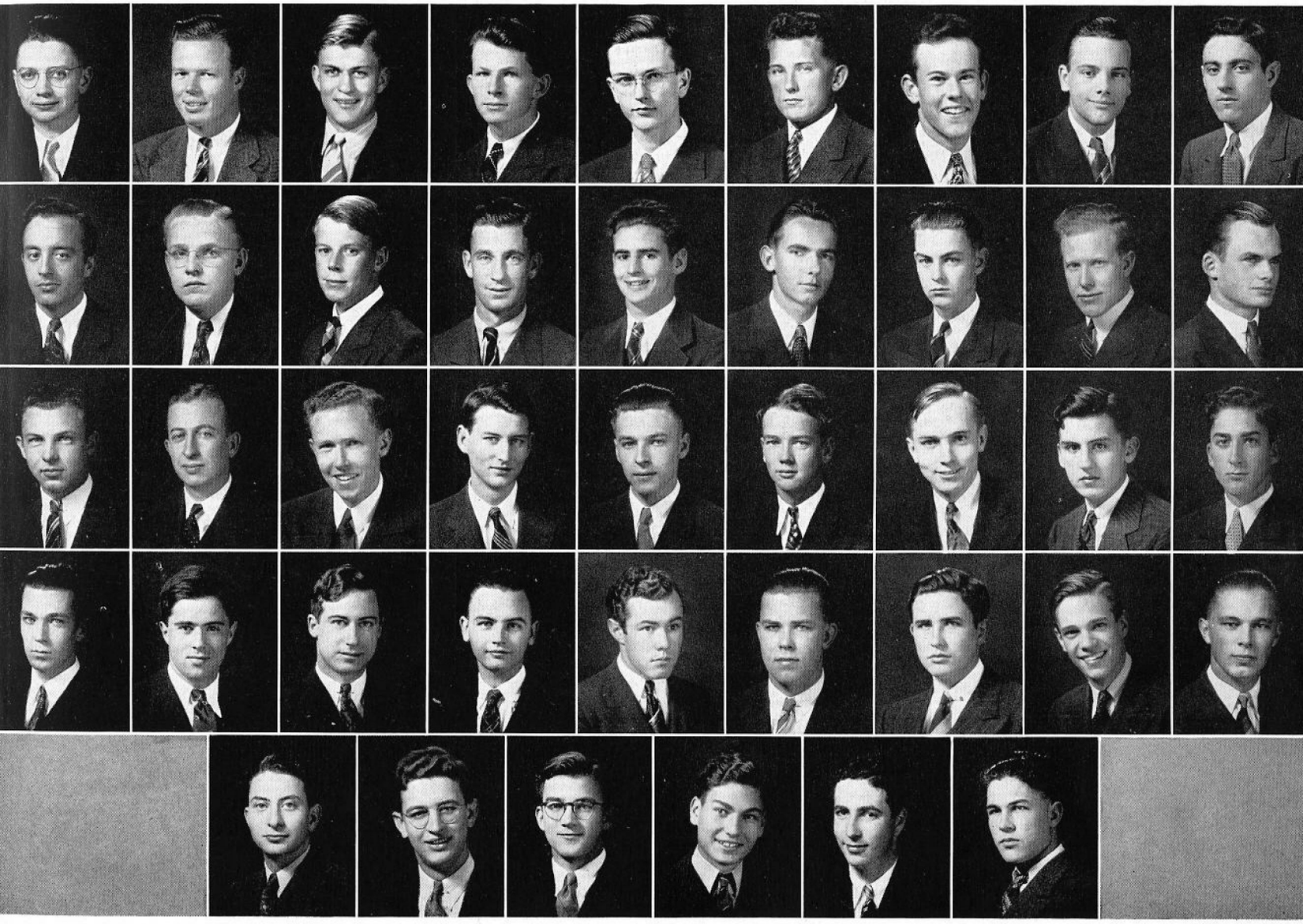
hunt which was intriguing and strenuous. A nursery party was presented by the senior class. The juniors offered the black and white formal. By popular request the sophomores provided a hay ride and the lowly frosh did nobly with a German beer garden theme. Finale of the social season was a tea dance at the Cocoanut Grove.

Since a Blacker man was elected Second Representative at Large in the last student body election, Blacker continues to be represented on the Board of Directors. Exhibit Day chairman was also a Blacker member.

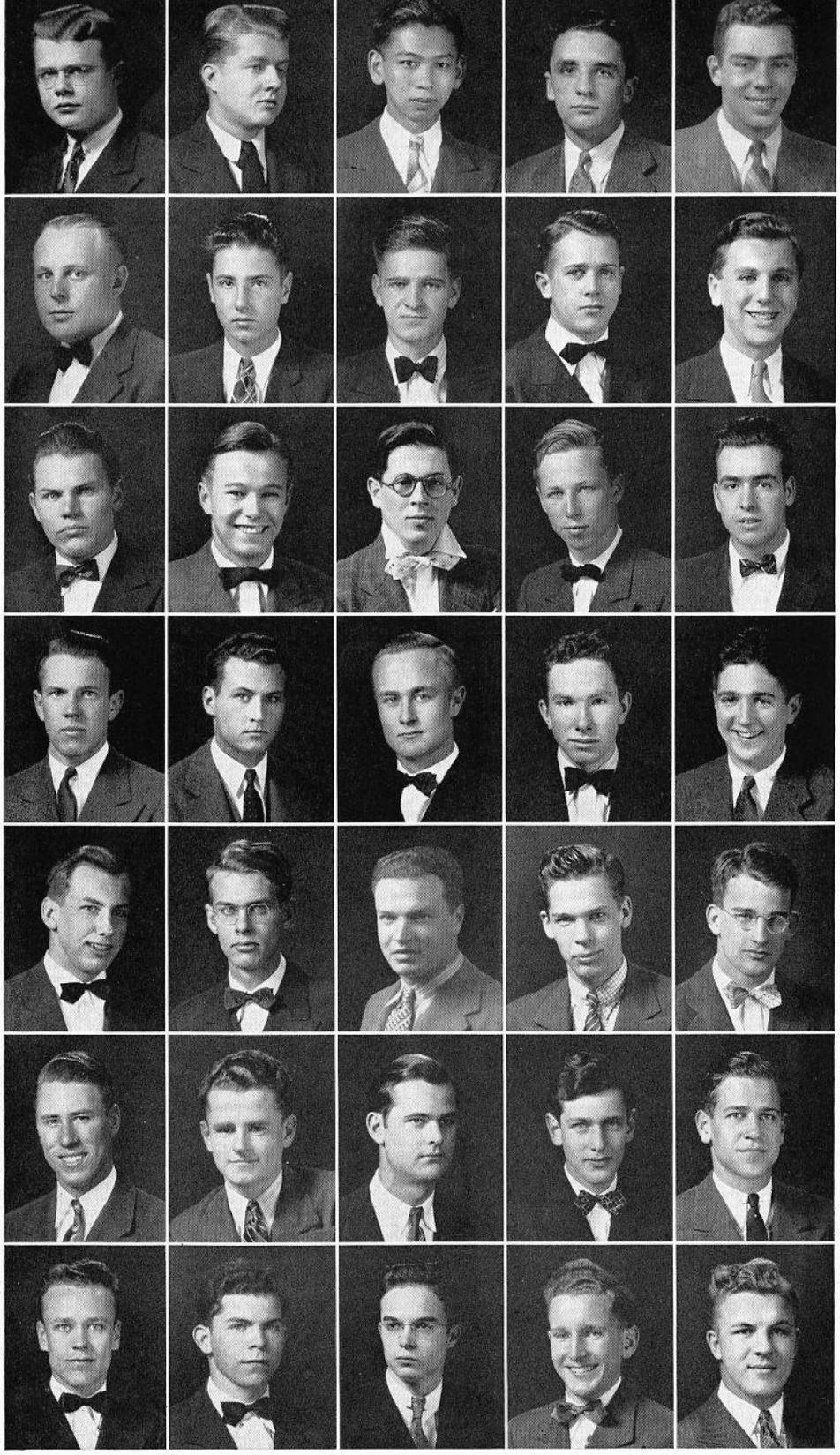
Officers for the year were: F. Chandler Ingalls, president; Joseph Manildi, vice-president; Andrew Hannon, treasurer; Paul Farrington, secretary; and John Small and John Spikes, athletic managers.

Discobolus again graced Blacker's mantle by virtue of a victory in wrestling over Dabney.

For the third consecutive year Abe Lincoln, the forensic trophy, remained in Blacker's care, nor was its possession challenged during the current year.



First row: Kluge, Kuttler, LaBombard, Longwell, Macleish, MacRostie, Mahoney, Makepeace, Maker. Second row: Manildi, Marshall, McKibben, Munk, Moran, Neiswander, Newby, Nickerson, Noble. Third row: Palmer, Richards, Ritchey, Rinker, Rupert, Saye, Scarborough, Schneider, Schureman. Fourth row: Silvertooth, Small, Smith, Spalding, Spikes, Steel, Steele, Steinmetz, Todd. Fifth row: Trauerman, Vetter, Webster, Weiss, Wolfe, Wilson.



Alcock
Arvin
Asakawa
Barber
Bauer

Becker
Berg
Bishop
Bishop
Bluementhal

Boardman
Boyer
Brewer
Brose
Carr

Carstarphen
Carter
Clark
Cobb
Corcoran

Dixon
Elliot
Englander
Fischer
France

Fraser
Given
Griswold
Grossberg
Hall

Harper
Hedrick
Hill
Hobbs
House

This year Dabney had a very fine social program. The highlights of the season were: the famed Dabney Hodge-Podge, a formal dance at the Hollywood Roosevelt, the formal given by Dr. and Mrs. Munro, and the annual Spring Dance. These were supplemented with many informal dances, snow parties, skating parties, and inter-alley contests. This year the non-resident associates of the house started a very successful policy of inviting the house officers to their homes.

Dabney has had men participating in all varsity sports, and has made a good showing in the field of athletics. Although now ranking fourth in interhouse sports, Dabney has done well when it is considered

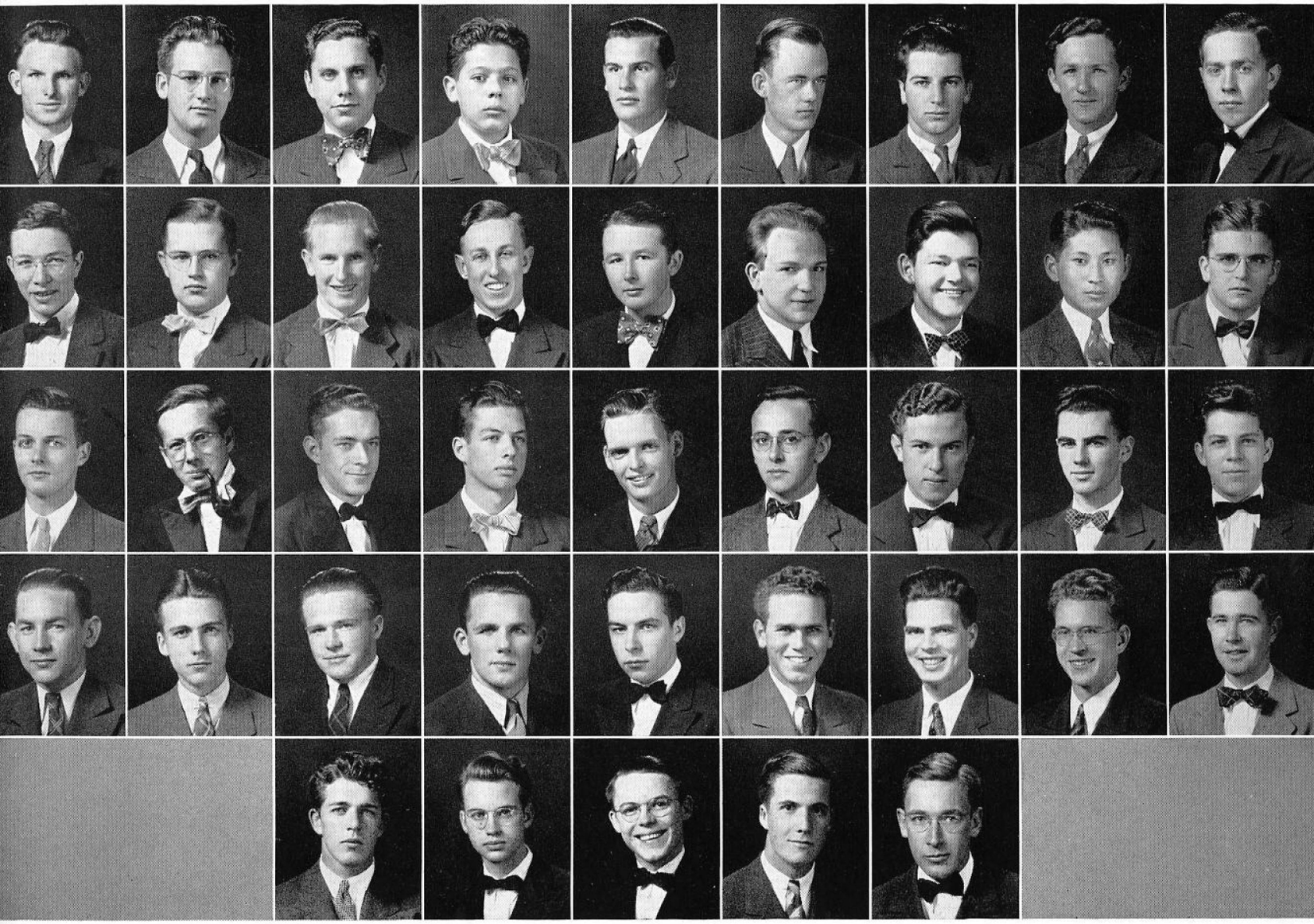
DABNEY HOUSE

that it is the smallest house on the campus. Dabney won both interhouse ski meets, and an undisputed claim to the Lilly Trophy.

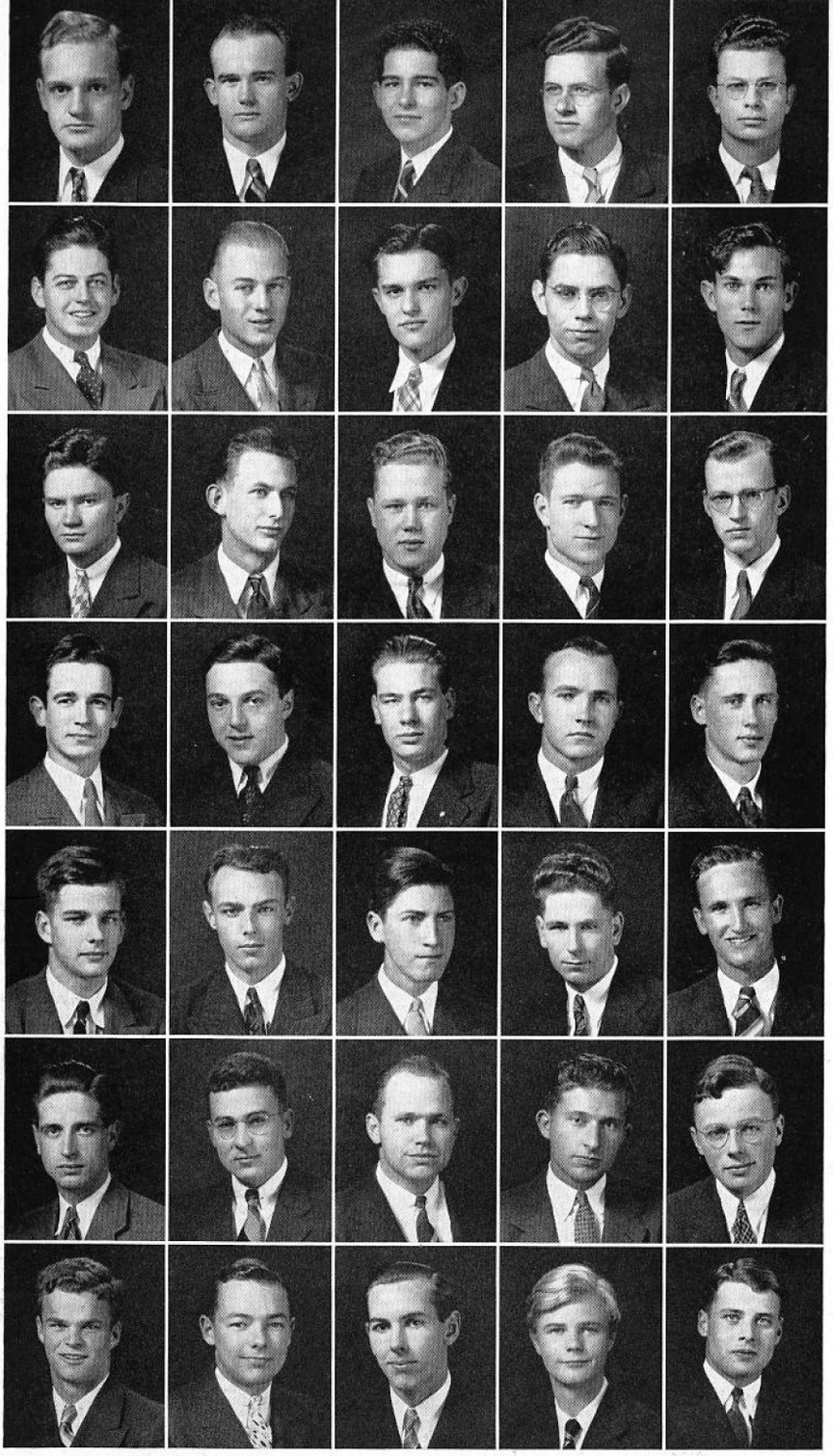
In political activities the house has had members on the Board of Directors, the Board of Control, and the Court of Traditions. Members of Dabney were also active in the Y.M.C.A., played in the orchestra and the band, and sang in the glee club.

Although Dabney is the smallest house on the campus, it is not the smallest in spirit as members have been active in all phases of student life. Its small size helps foster this very fine attitude that exists in the house.

The men who led the house this year were: Charles Carstarphen, president; Carl Paul, vice-president; Mark Mills, secretary; Robert Alcock, treasurer; and John Barber, athletic manager. The resident-associate this year was Dr. Donald S. Clark.



First row: Howenstein, Hoyt, Irving, Jacobson, Kimball, Kyte, Lakos, LeFever, Lolmaugh. Second row: Lutz, McLain, Menard, Merrick, Miles, Mills, Moore, Morikawa, Noland. Third row: C. Paul, R. Paul, Payne, Pichel, Regan, Robinson, Routt, Ruebel, Schaff. Fourth row: Schubert, Smith, Snyder, Sohler, Stevens, Stewart, Stone, Taylor, Tyler, Vail, Wallace, Watson, White, Woods.



Abraham
Albrecht
Allen
Anderson
Anderson

Battle
Beck
Bell
Berman
Biddison

Billman
Bowen
Bowles
Bragg
Braithewaite

Bramhall
Brewer
Brockman
Brown
Bruce

Callaway
Capron
Cleary
Cleveland
Curtis

Davis
Davis
Evvard
Fisher
Fox

Gillette
Gold
Goodin
Greenwood
Guillou

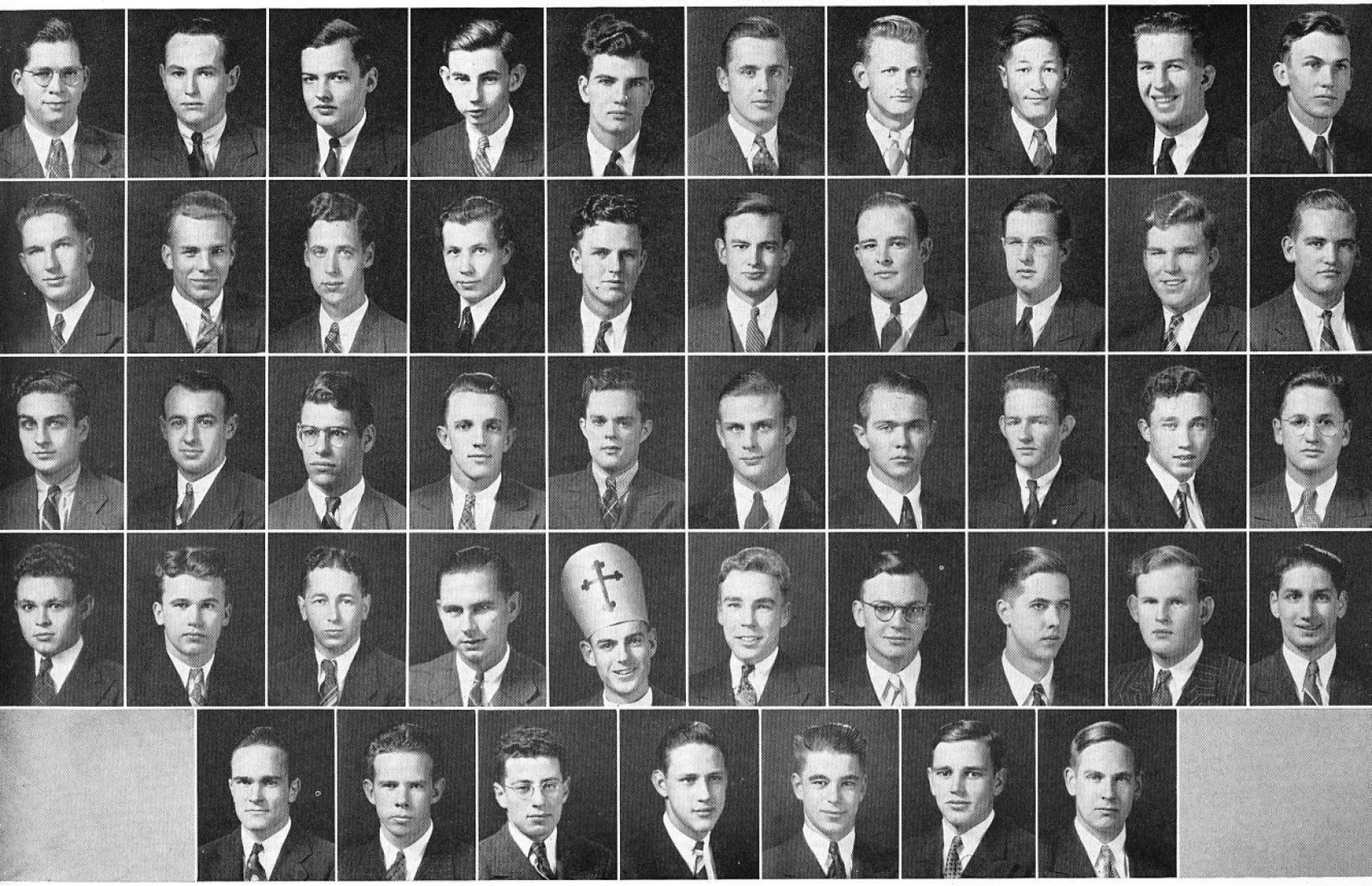
Fleming House has again been an outstanding organization on the Tech campus due to the leadership and activity of Alfred Guillou, president; Bob White, vice-president; Noah Anderson, treasurer; George Bramhall, secretary; Bill Lawson, entertainment chairman; James Kemp, athletic manager; Donald Lawrie, social chairman, and the willing cooperation of all members. Not only were Fleming men active and many times victorious in athletics but they participated in many social and student body activities. Fleming was particularly honored to have the student body president, the vice-president, and several other important officers as members of the house.

FLEMING HOUSE

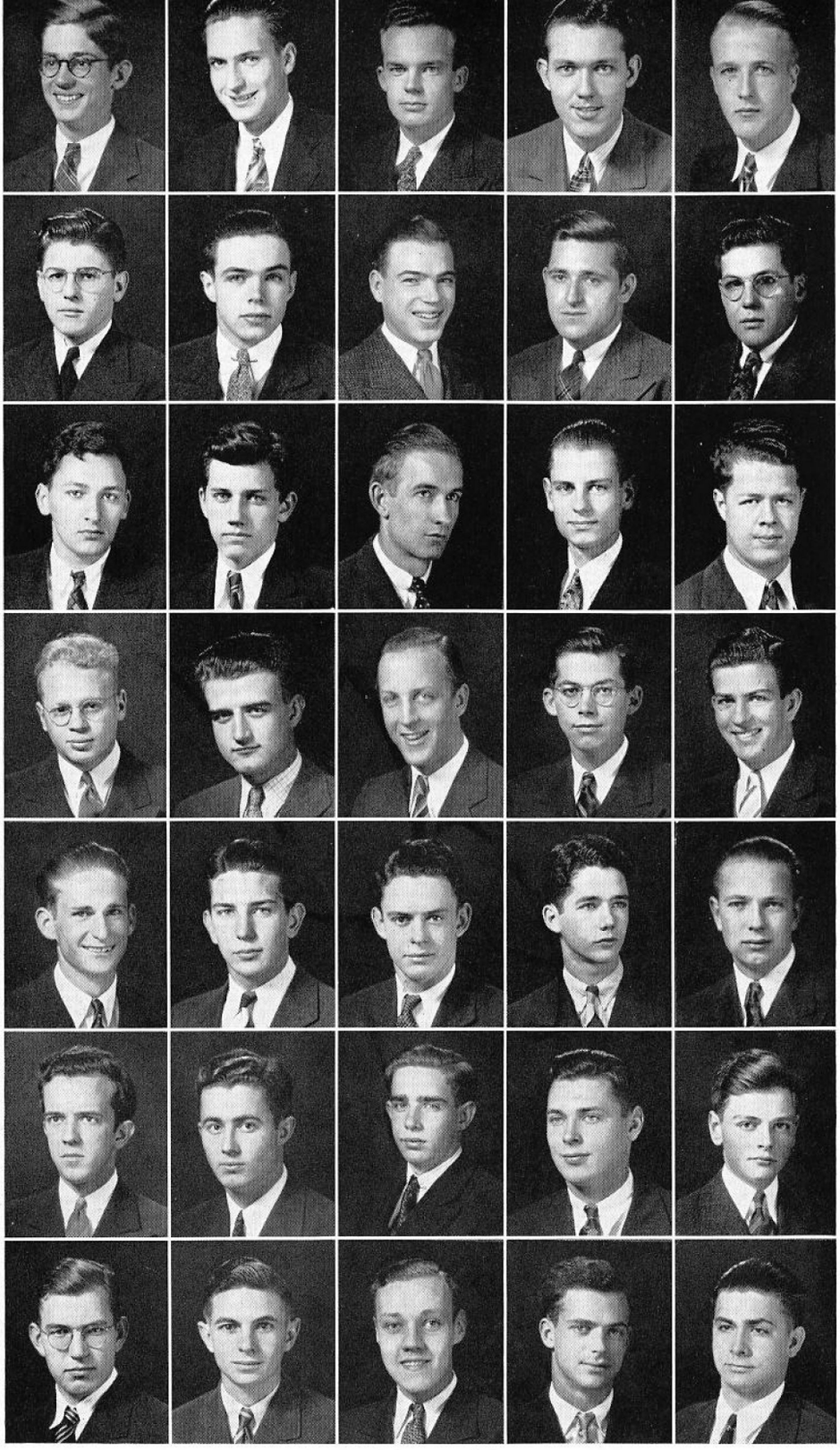
Fleming's grade average has been sufficient to allow its members to live without great fear of retirement.

The bronze interhouse athletic award has been over Fleming's mantle for five years. It is thought by many that with favorable fortune and the continued excellent support of all Fleming men the much coveted award shall stay in Fleming lounge. During the last year Fleming men have been successful in many house athletic contests as well as in frosh and varsity sports. It is with particular pride that Fleming notes its victory in basketball this year. For the last four years Fleming has held the championship in that special sport.

Fleming enjoyed an interesting and varied social program throughout the past year. Smokers, roller skating parties, house sport dances, and a few outstanding formals kept the members busy. Perhaps the most outstanding affair was the formal dinner dance held at the fine Annandale Country Club. The third term holds for Fleming this year, as in past years, the lure of an all day beach party. The inter-alley contests, while not parties, might be termed social events and will long be remembered.



First row: Hafner, Hall, Hardinbergh, Hassard, Hirons, Hogan, Horne, Ikawa, Ingersoll, Jones. Second row: Jongeneel, Kemp, Kepler, Langerud, Larson, Lawrie, Lawson, Lee, Lind, Loeffler. Third row: Main, Maxwell, McClain, McCreery, Mickley, Oakes, Osborn, Pickles, Porter, Price. Fourth row: Pullen, Roese, Schneider, Skalecky, Stevens, Stone, Stroud, Thayer, Thompson, Urbach. Fifth row: Van Dyke, Veysey, Wahrhaftig, Weller, Widdoes, White, Winchell.



Allen
Anderson
Bangs.
Bennett
Benson

Bluemle
Bolles
Brown
Browne
Chapin

Cohn
Cox
Crozier
Densmore
Dessel

Fiul
Foster
Frampton
Goodmanson
Greenhalgh

Hagen
Hanson
Harr
Harris
Haupt

Hendrickson
Hicks
Holser
Jones
Kennedy

Keyser
Kingsmill
Kyllonen
Le Grand
Long

Ricketts House again completed a banner year, proving itself most versatile. This year saw the house officers—William Ropp, president; William Brown, vice-president; Harlowe Longfelder, treasurer; Bill Chapin, secretary; and Herb Strong, athletic manager—carry out a very successful and varied program with the cooperation of the house members. New, very popular, resident associate was William O. Wetmore.

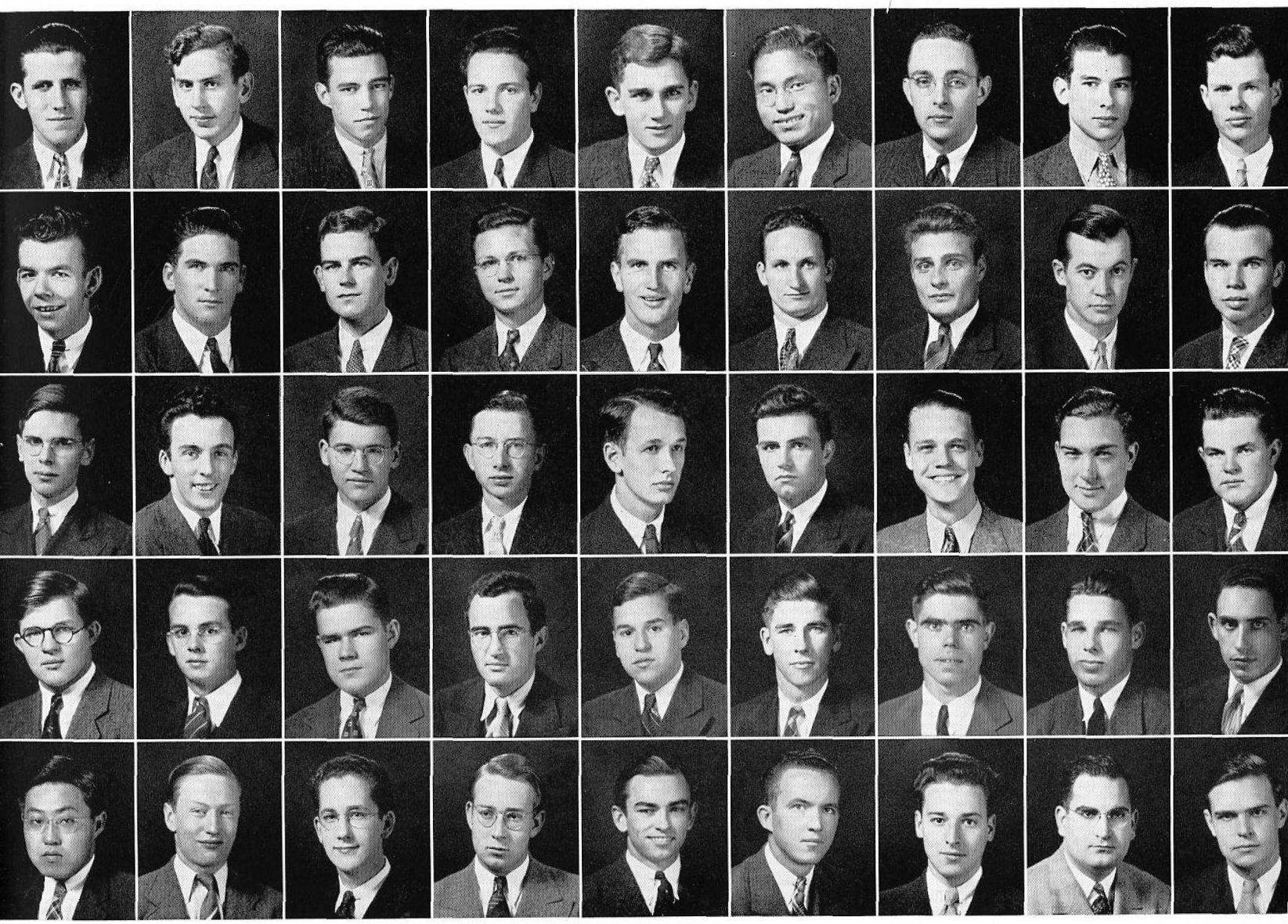
Again Ricketts was unequaled in social activities; its formal, held at the Cocoanut Grove, found fifty couples having a thoroughly enjoyable evening. To all the dances Ricketts men turned out full force. Especially notable in the program were the class dances, successful

RICKETTS HOUSE

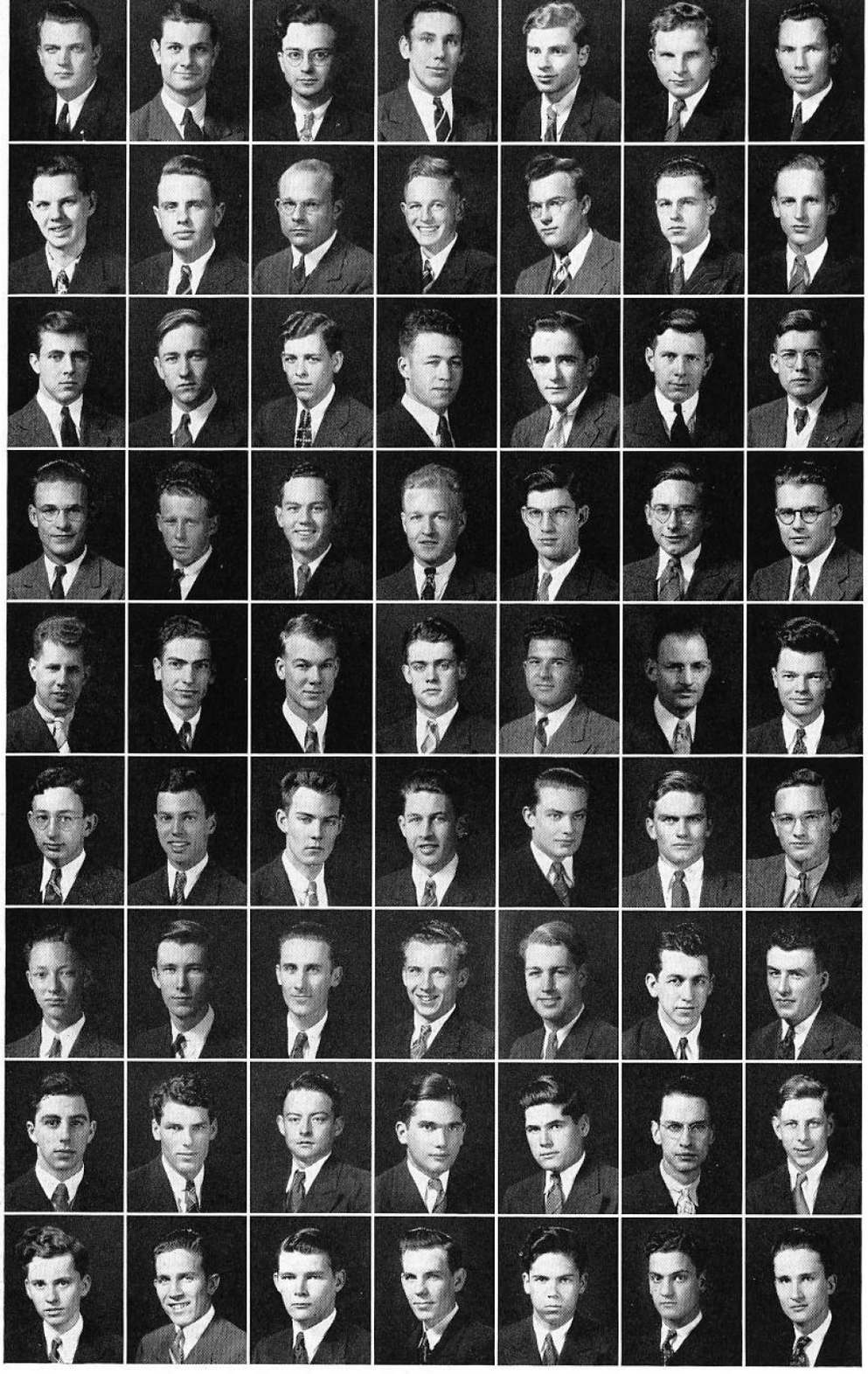
for two years, and the spring dance. An off-campus orchestra barn dance took place in the early spring. A bowling party was included among the stags.

This year was one of the least successful in recent Ricketts athletic history, although the football team, the greatest in house annals, won the championship easily (undefeated, untied, and unscored upon). At the present time, with the final point score untotaled, it looks as though the Ricketts runner-up jinx for the interhouse trophy is still operative. Discobolus was held throughout the year unchallenged. Intercollegiate athletics again claimed many of the members of the house.

To complete the well-balanced program Ricketts participated in a diversity of extra-curricular activities. Again Ricketts men occupied editorship positions in most of the publications and dominated in many student body committees. In the spring student body elections four Ricketts men were elected to the Board of Directors, including the president. Class officers, Board of Control members, and honorary organization positions help to complete the picture.



First Row: Longfelder, MacKay, Meyer, Myers, Nagle, Nakada, Norton, Nyborg, Oakley. Second Row: Oechsli, Parker, Partlow, Paul, Peat, Rainwater, Reimers, Reynolds, Rominger. Third Row: Root, Ropp, Rutherford, Sandiford, Schrader, Snodgrass, Spielberger, Spooner, Staatz. Fourth Row: Staatz, Stadum, Staley, Stone, Stowell, Strong, Sullivan, Thomas, Tobin. Fifth row: Tomiyasu, Trindall, Turner, Van Ness, Weir, Wetmore, F. Wood, H. Wood, Young.



Anderson
Axtman
Baldwin
Barber
Baumgarten
Beers
Bezdeckeck

Billmeyer
Blight
Borgeson
Brandt
Brooks
Brown
Brown

Brown
Brown
Brown
Brumfield
Burkhard
Burton
Campbell

Carlson
Carson
Casserly
Cooper
Craft
Cunningham
Cyr

Daams
Dawson
Day
Denniston
Devirian
Dibble
Diehm

Drake
Ellis
Elmer
Eusey
Faust
Flint
Frank-Jones

Franzini
Gerhart
Glassco
Glassco
Glover
Gombotz
Goodell

Green
Grigg
Hatcher
Head
Head
Hiatt
Hiehle

Hoff
Hofmann
Howton
Hudspeth
Hunt
Jacobs
Jerrems

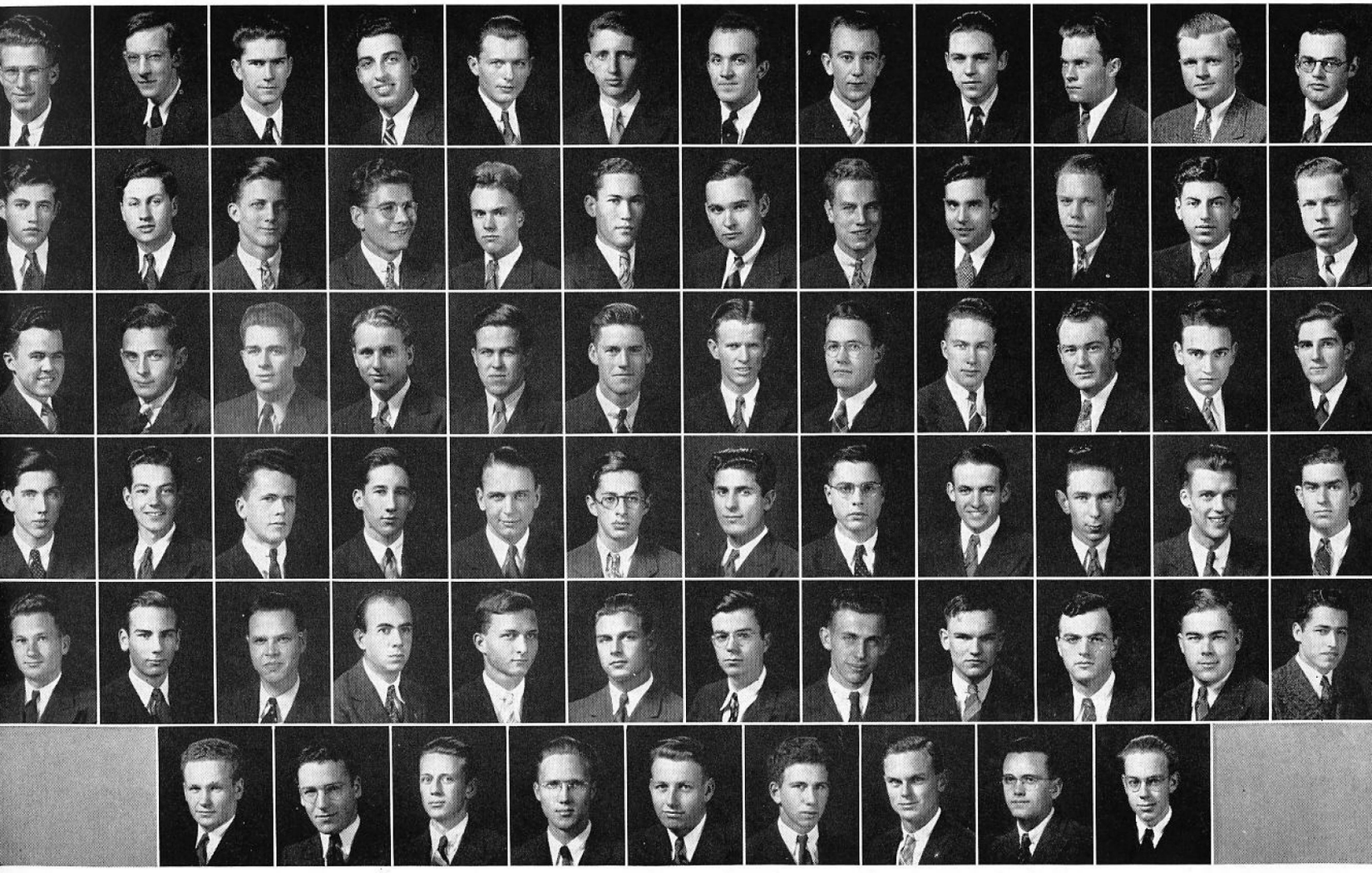
The Throop Club has increased in size and strength within the past few years until it now stands as the largest and one of the strongest houses on the campus. The club is composed of non-resident members of the Institute and offers many advantages and facilities. The lounge is open to members at all times, including the use of the new radio-phonograph which was presented to the club last fall. In addition, a library is maintained which includes old exam papers, daily newspapers, books, etc. Various games are supplied, and, in general, a place of relaxation is provided.

THROOP CLUB

Social events included many dances, among which was an unique "Night in Hell," an exchange dance with the off campus women of Occidental, and an extremely complicated treasure hunt.

In athletic events, the Throop Club held its own in all activities, winning its share of all contests and events.

The officers of the year were: president, Grice Axtman (first and second terms) and Charles Palmer (third term); vice-president, Charles Palmer (first and second terms) and Delos Flint (third term); secretary, Kenyon Howard (first term) and Robert Anderson (second and third terms); treasurer, Bill Marriott; social chairman, David Shisler; athletic manager, Don Walter; publicity manager, Jack Tielrooy; lounge chairman, Ted Weaver; pledgemaster, Don Campbell; and librarian, Don Dawson.



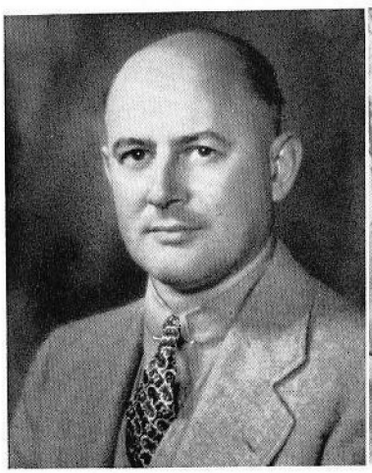
First row: Jones, Jones, Kendall, Kohl, Konecnik, Larson, Lawrence, Lawrence, Lessing, Lessing, Levet, Lewis, Love. Second row: Lyle, MacKenzie, Maguire, Marriott, Matthew, Mayer, Mayer, McConnell, McCormick, Meyer, Miller, Mitchel. Third row: Moore, Oder, Ogg, Olsen, Palmer, Partch, Pierson, Pettingall, Piatt, Powell, Ray, Rhyne. Fourth row: Richards, Ridland, Robertson, Roen, Roudebush, Rubin, Ruggiero, Samuel, Sattler, Seegman, Shisler, Smallberg. Fifth row: Smith, Smith, Smith, Strickler, Sturdevant, Thiele, Thomas, Tielroy, True, Truesdell, Wagner, Walker. Sixth row: Walter, Weaver, White, Williamson, Wilson, Wilts, Worcester, Wyckoff, Zebb.

Athletics

-8.52x 3.41-5.37x 3.64-8x
7.18+

C O A C H E S

"Fox" Stanton

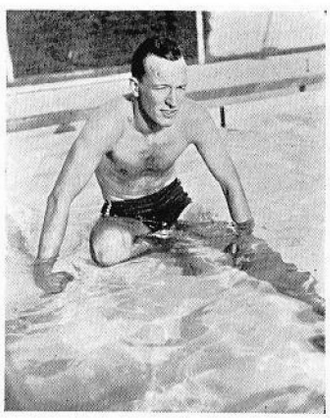


Hal Musselman

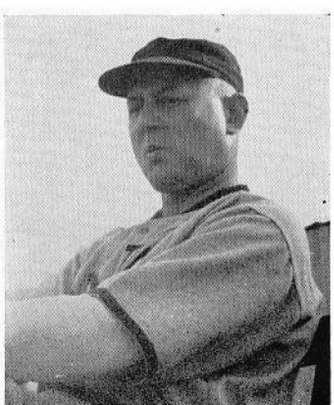
Doctor Hanes

Coach Cooper

Coach La Salle



Hugh Bradner



Coach Musselman

One of the hardest teaching positions here at Tech is that of a coach. Very few of the students have had any previous athletic experience, and it is necessary to work with this green material.

Coupled with this difficulty is that of the lack of adequate equipment. The basketball, swimming, and other indoor sports teams do not have a gymnasium of their own, and it is necessary to travel to other schools to practice. The locker and shower facilities of the home field are almost non-existent, and it is a common experience to find men dressing in extremely overcrowded conditions. The extremely rigid scholastic standards of the Institute present another obstacle in the path of successful teams. Many potentially great athletes find it impossible to go out for a sport and keep up in their classwork.

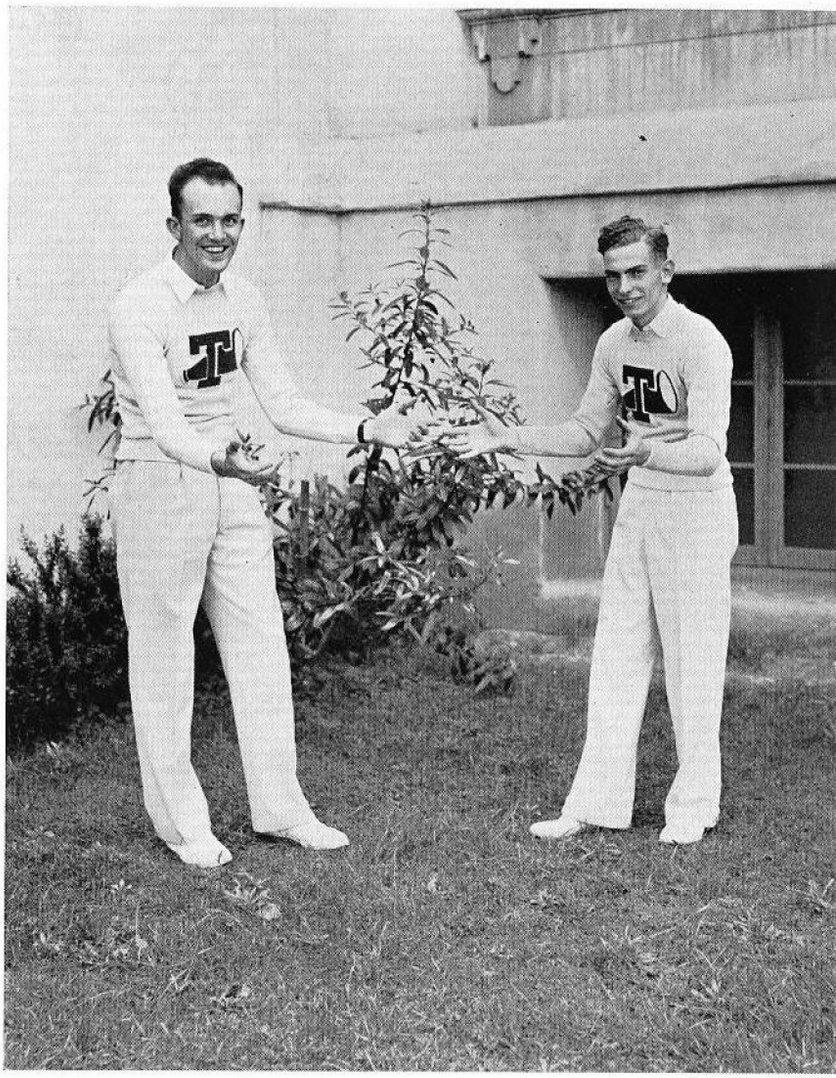
Coaching the track and varsity football teams is "Fox" Stanton. Manager of Athletics Hal Z. Musselman coaches varsity baseball, and Mel Levit handles the frosh. Varsity and frosh swimming and water polo are under the direction of Hugh Bradner, while Coach Cooper handles varsity basketball. Frosh football is headed by Clay Smith and Claude Brown, while frosh basketball is dominated by John Price. Clay Smith also coaches the frosh track team, while two students, Bill Brumfield and Mark Mills take care of boxing and wrestling. Doctor Hanes is the trainer of all the teams.

Y E L L LEADERS

One of the most difficult tasks here at Tech is that of yell leader. His is a thankless task, yet a very necessary one. He performs a definite service in attempting to urge on our athletic teams by infusing in them some of his own and the students spirit.

Losing teams are not conducive to school spirit, and the yell leader must spend a great deal of time building up the moral of the student body. Their cooperation is an important factor in the production of winning teams, and it is up to the yell leaders to see that the students get behind the men on the field and aid them in every way possible.

The yell leaders are responsible for all organized yelling and cheering at all games and rallies.

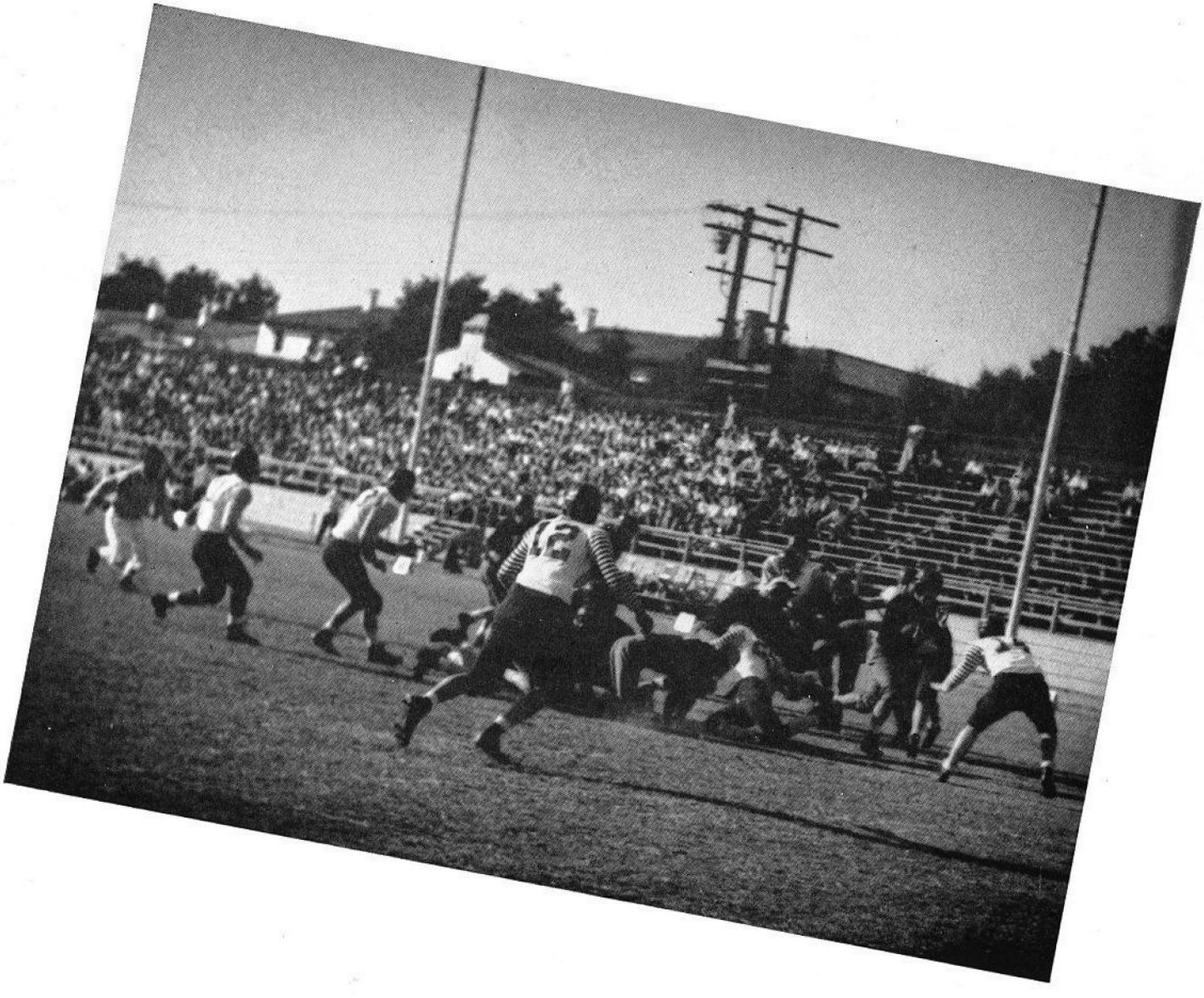


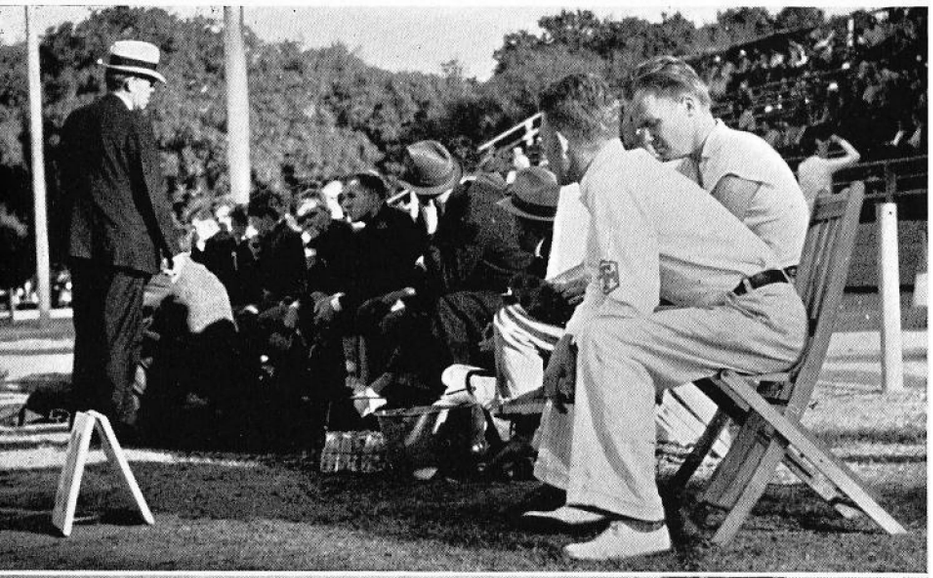
Lawrence Dawson

One of the most difficult schools to enthuse, Tech is nevertheless capable of a great deal of spirit. Applied in the right way, it can make a losing team into a powerful foe, and often means the difference between victory and defeat. Once they have been weaned from their slide rules, the students become a powerful motivating force. Don Dawson, assisted by Bruce Lawrence has done an excellent job. The spirit of the student body, as evidenced by game attendance and pre-game rallies, this year was better than for many years.

Dawson and Lawrence have begun a tradition that, if carried out, will result in athletic teams at Tech that will once again head the conference.

FOOTBALL

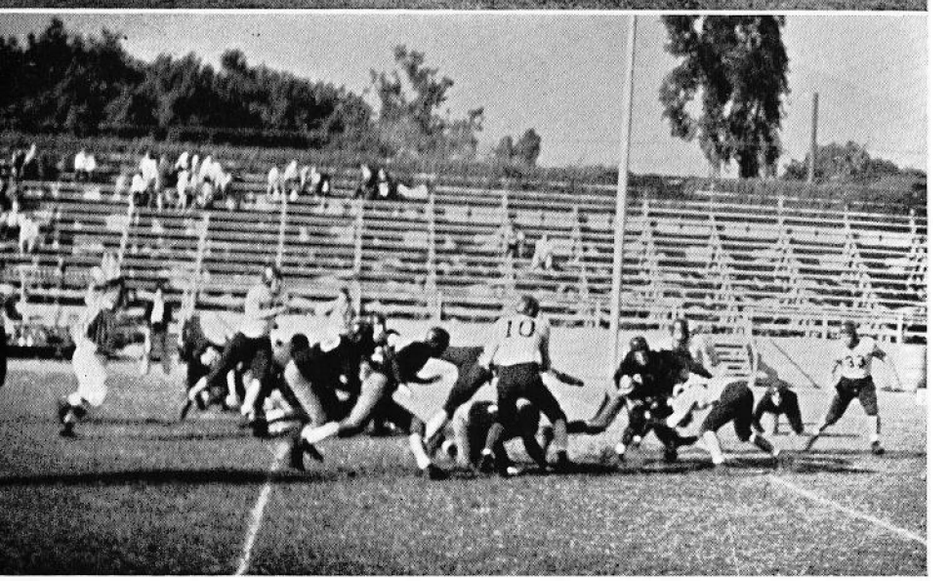




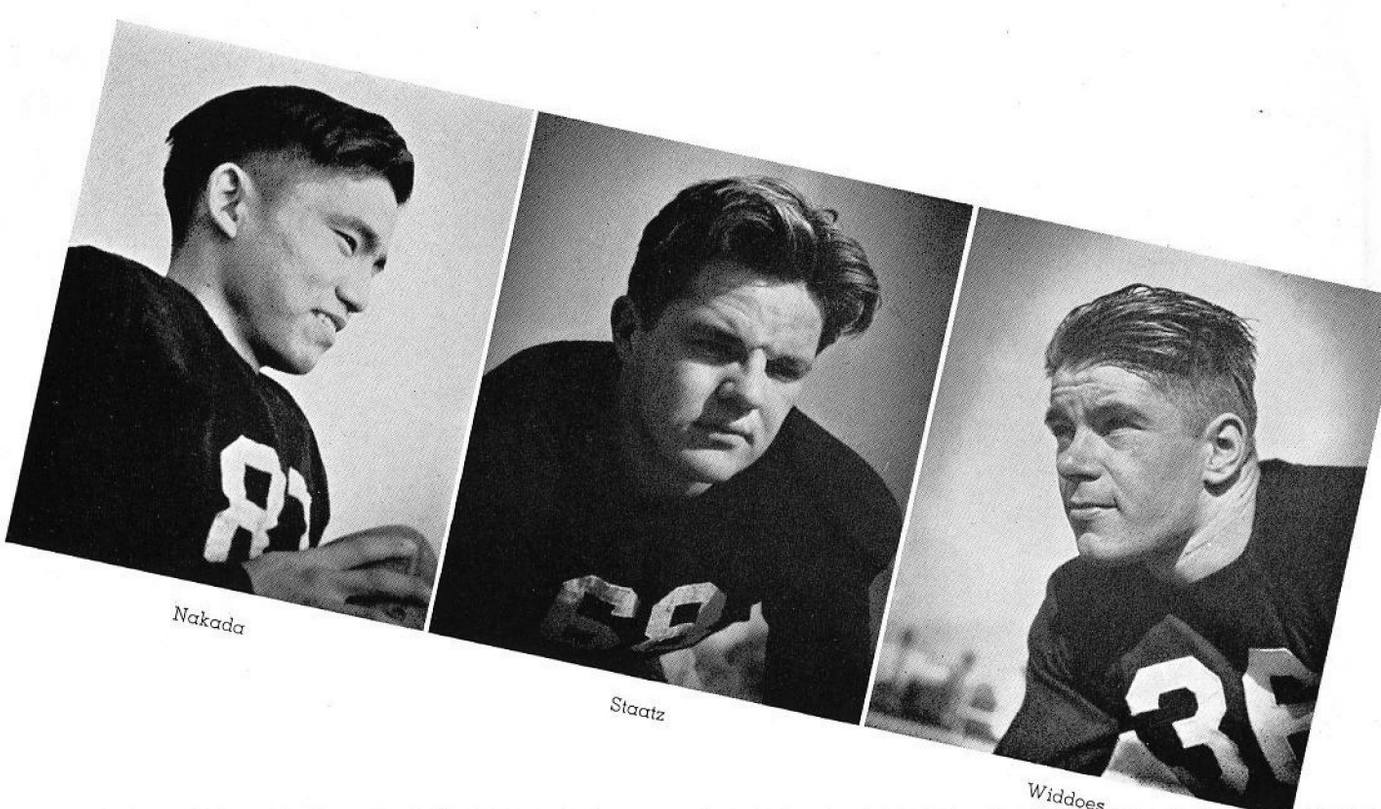
The bench gets its instructions

This year's Tech Varsity was again characteristic of the "Fox" Stanton coached teams in that it showed more fight and grit per pound than any team it played all season, but as customary was outweighed in all but one encounter. The moral and spirit shown by this year's squad was excellent. The Engineers scored a victory over the La Verne Leopards, 13 to 6, in next to the last game of the season for their lone victory.

Loyola's powerful grid machine proved more than Tech could cope with in the first game of the season. Although holding the Lions 13 to 0 at the half, the opposition's reserve proved too great and the game ended 51 to 0. The Tech offense remained spectacular until the last gun, with the pigskin floating through the air on nearly every play, which kept the Loyolans on their toes to the end.



Thrown for a loss



Nakada

Staatz

Widdoes

FOOTBALL

San Jose State, highest scoring team in the United States last year, was Tech's second opponent. Again the Beavers fought brilliantly for the first eleven minutes, keeping the Spartans from scoring on several occasions. Long gallops of fifty and sixty yards, however, gave the Statesmen touchdowns which eventually resulted in a score of 52 to 0, in spite of the fact that Tech held them scoreless from the start of the third quarter until the last four minutes of the fracas.

Redlands was the first Conference opponent the Stantonmen played, and in spite of some inspired playing the Engineers trailed by a score of 18 to 6 at the end of one of the most thrilling games of the season. An intercepted pass on the Redlands thirty-six by Johnny Small paved the way for the lone Tech tally. Line plays by Small and Sohler finally resulted in Sohler's four yard touchdown plunge. The Bulldog's ground attack was nipped in the bud and they were only able to score by the aerial route.

Next week the Beavers traveled to the San Diego Marines, and returned nursing a 38 to 0 defeat. Once again the Engineers held the Devil Dogs 6 to 0 at half time, but lack of weight began to tell soon in the third quarter. San Diego fans were the best sportsmen of the year in cheering for the tricky Stanton offensive attack.

Stroud

Sohler

Eusey

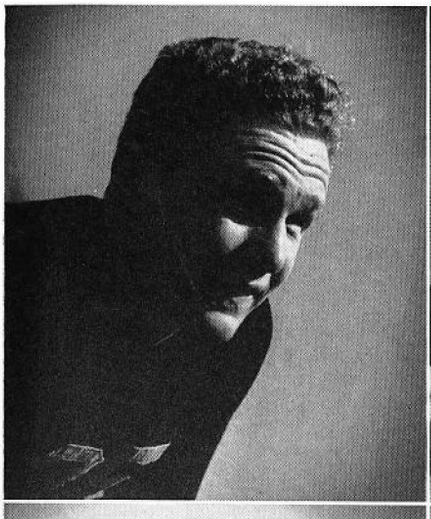
FOOTBALL

The next Conference game, this time with Pomona, saw the Engineers at their zenith of play although they lost to the League Champion by 20 to 7. The line work of the Beavers was their best all season. A twenty yard pass from Beck to Jake Browne accounted for the lone touchdown, with Don Walter converting. McCreery and Hofmann both played topnotch ball game.

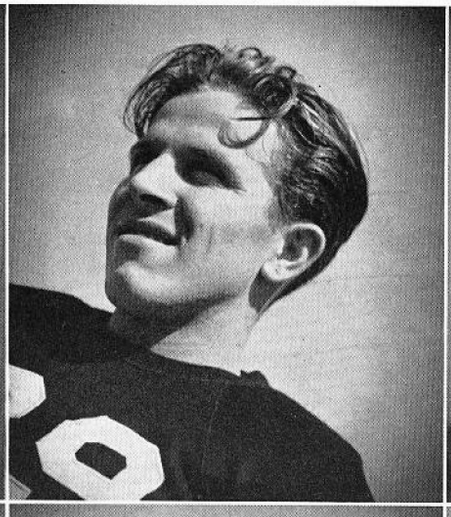
The Engineers experienced a letdown after the Pomona game, and lost to Occidental 25 to 0. Glenn Groves' long runs scored all the touchdowns. Tech's closest scoring threat ended on the Oxy sixteen yard line. Outstanding for Tech were Capt. Lawson, Biddison, and McCreery.

The La Verne Armistice Day game repaid the handfull of spectators who journeyed to La Verne. Tech's classy field work was more superior than the 13 to 6 victory would indicate. The first Tech score came after a sustained drive of five first downs, when a tackle eligible pass carried Griswold into pay dirt. Second score was the result of a sixty yard march, with Sohler scoring and Walter converting. Duane Beck played outstanding ball, as did both Eusey and Small.

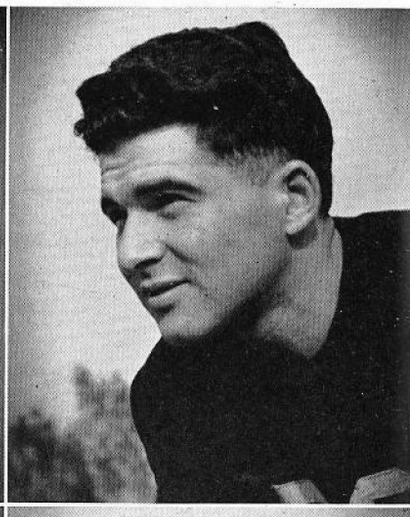
Walter

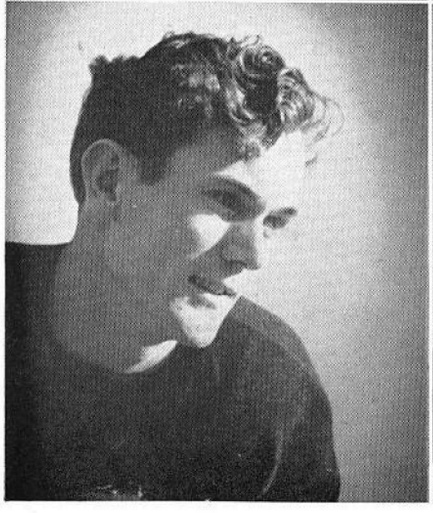


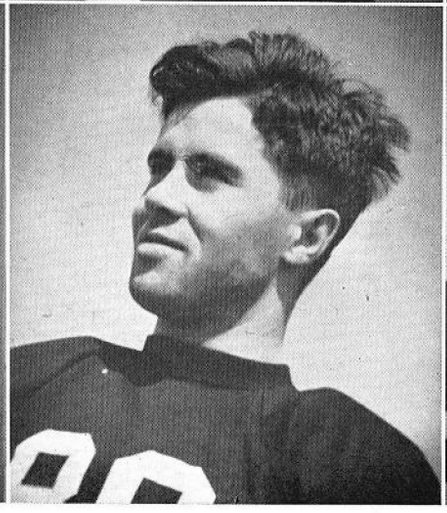
Hoffman

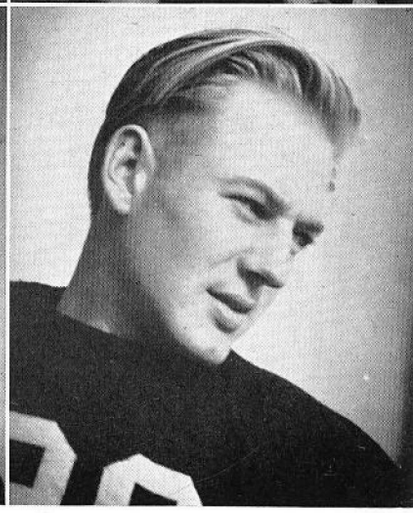


Devirian





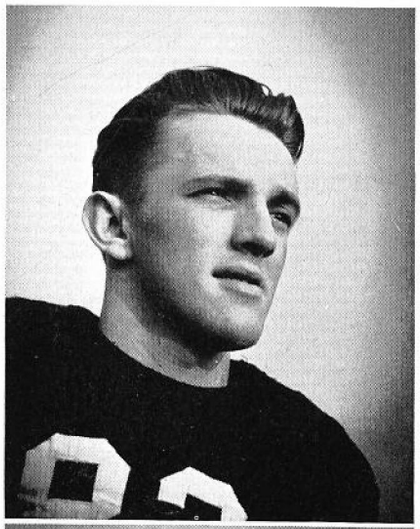


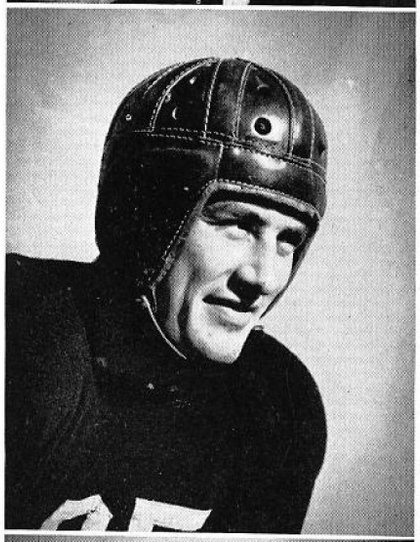


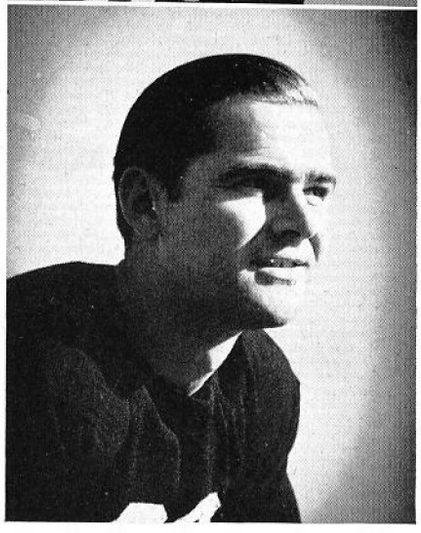
Biddison

Small

Beck







McCreery

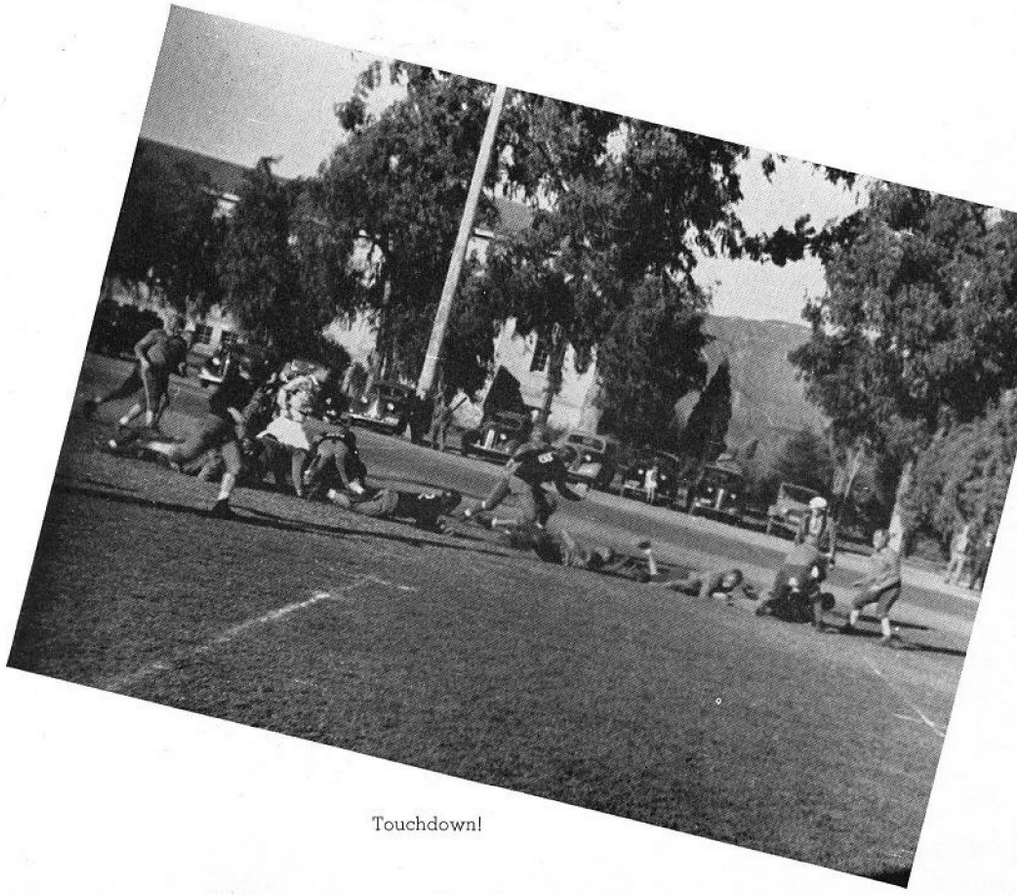
Goodell

Griswold

Tech lost the mythical Pasadena City Championship to Pasadena Junior College, 39 to 6. Jackie Robinson, ebony flash, was the winner's team. The Tech touchdown came in the last few seconds of play. After Sohler had been called back from a touchdown by a penalty, he retaliated and threw the next pass to Beck to score the final touchdown, which brought the curtain down on the season of the high spirited, well named, Fighting Engineers.

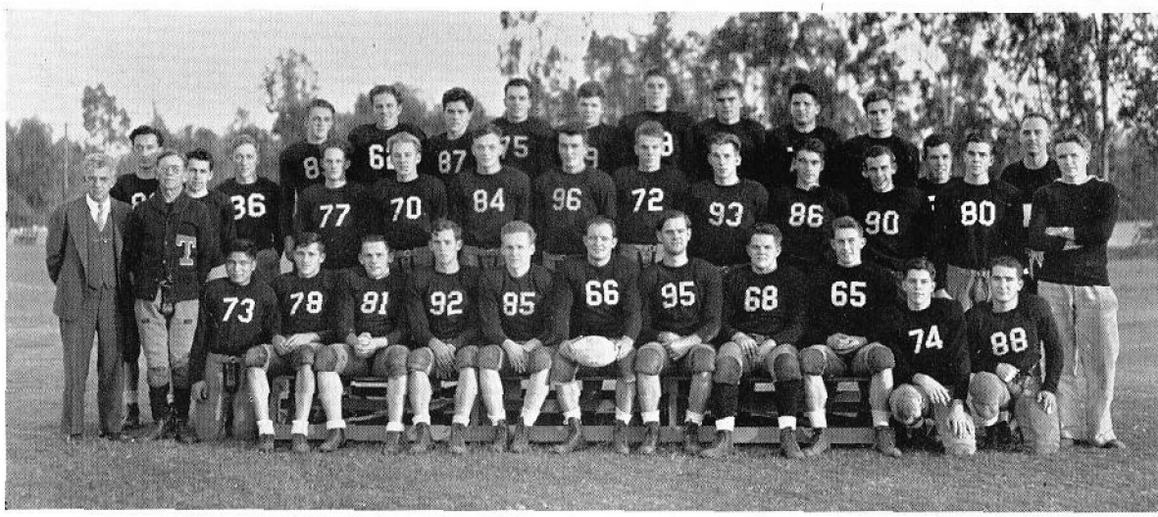
Five returning lettermen were the nucleus of this year's squad. The number of men who turned out was rather scarce. This lack of substitutions was heavily felt in all of the games and partially accounts for the several defeats which were incurred. Captain William Lawson, the dynamic leader of the Beaver team, who did much to bolster up the spirit and fight of the players, was awarded the Wheaton Football Trophy at the annual grid banquet which was held in Culbertson Hall.

The first string was composed of Walter and Lawson at ends, Griswold and Biddison, assisted by Eusey, at tackles, Dumont Staatz and Sviminoff at guard positions, and Jack Goodell at center, who was pushed near the end of the season by scrappy Larry Widdoes. In the backfield Duane Beck was the signal caller, with Jake Browne and Frank McCreery at half positions, and Stan Sohler in the fullback berth.

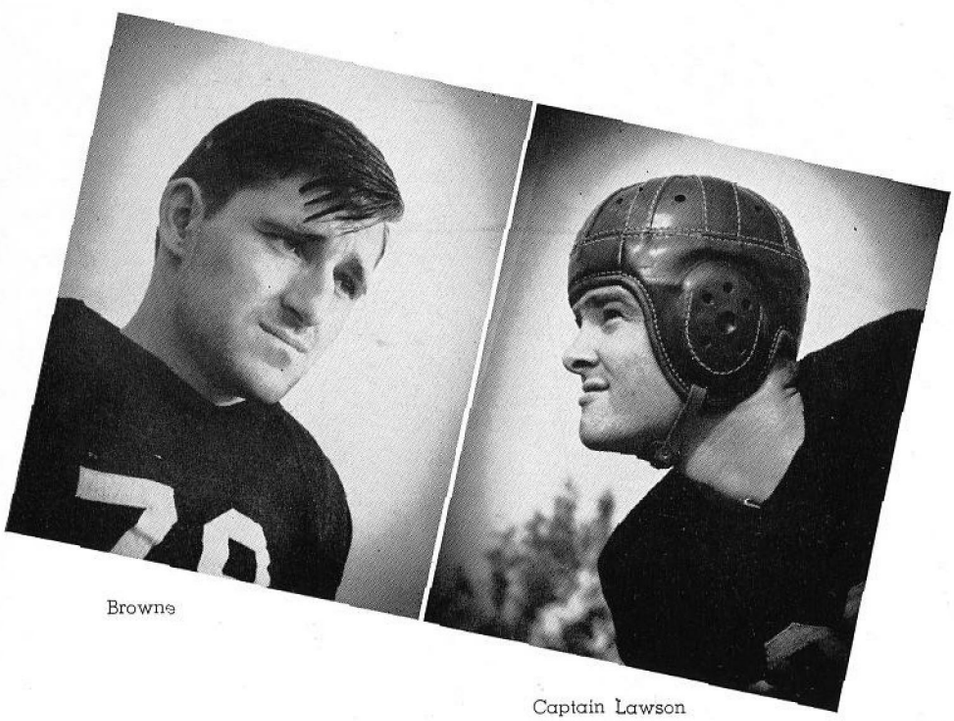


Touchdown!

The varsity defense and offense was gradually smoothed out as the season progressed. The "scrub" team, coached by H. Z. Musselman and headed by Captain Herb Strong, aided considerably in developing the tricky running plays and flashy aerial attacks. Although only a few of the scrubs were enabled to enter into actual competition, they were the backbone of the team's preparation. Besides aiding materially the development of the varsity, many of the scrubs showed great improvement, and as a result will probably become the nucleus of next year's varsity squad.



First row: Nakada, Browne, Sohler, Biddison, Walter, Lawson, Griswold, Staatz, Eusey, Schaff, Vartikian. Second row: Doctor Hanes, Coach Stanton, Gombotz, Brown, Cooper, Beck, Stroud, Goodell, Kemp, Ingersoll, Widdoes, Tielrooy, MacIntosh, Snyder. Third row: McCreery, Hoffman, Small, Rogers, Strong, Flint, Devirian, Reimers.

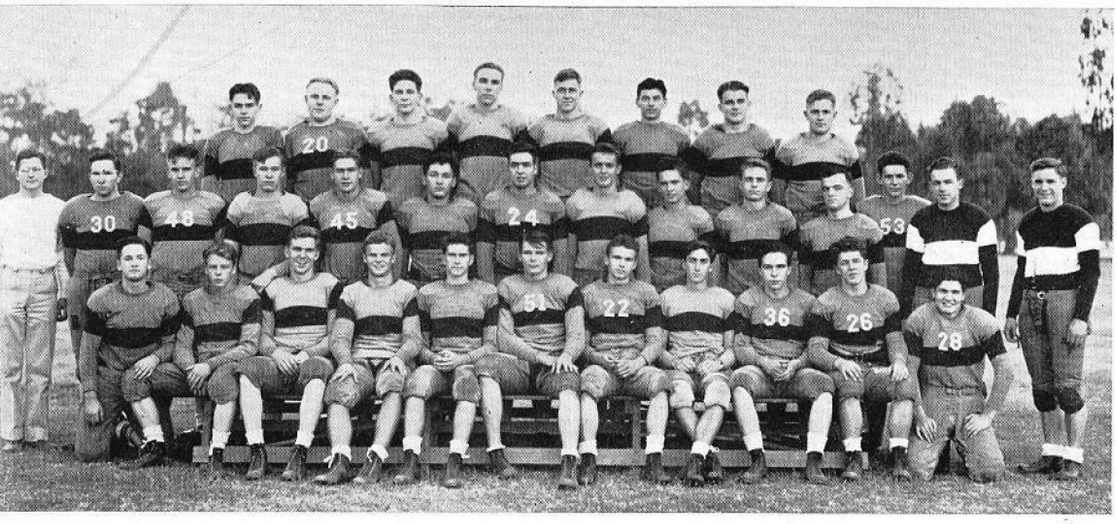


Browne

Captain Lawson

Hard hitting Don "Whitey" Walter played top notch football the entire season, and was a mainstay in the Tech line. Because of his leadership, ability, and remarkable service to the team this year, he was elected Captain for the 1939 grid season.

VARSITY



First row: Price, MacArthur, Lind, Gillette, Kendall, Howton, Roese, Schureman, Stevens, Vail, Ersoz. Second row: Johnson, Cobb, Bevans, Boyer, Elliott, Cohn, Carr, Hogan, Hart, Blight, Truesdell, Conner, Coach Brown, Coach Smith. Third row: Lessing, Becker, Hanson, Stone, Browne, Miller, Cyr, MacLean.

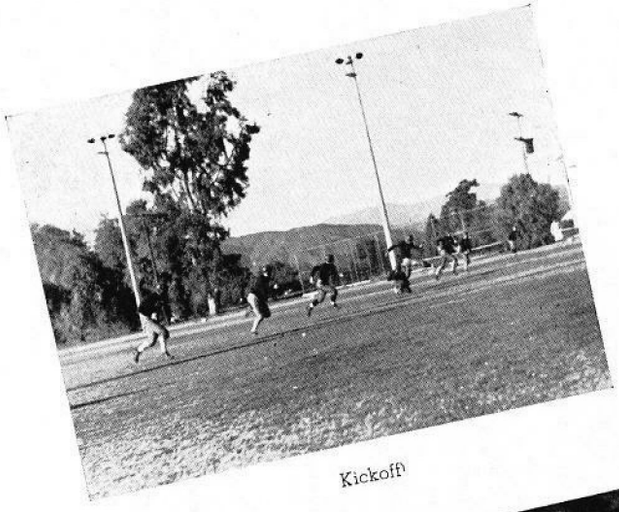
F R O S H

The Tech frosh football team boasted of tremendous man power at the beginning of the season, but as the season progressed injuries and slide-rules kept the players away from the field.

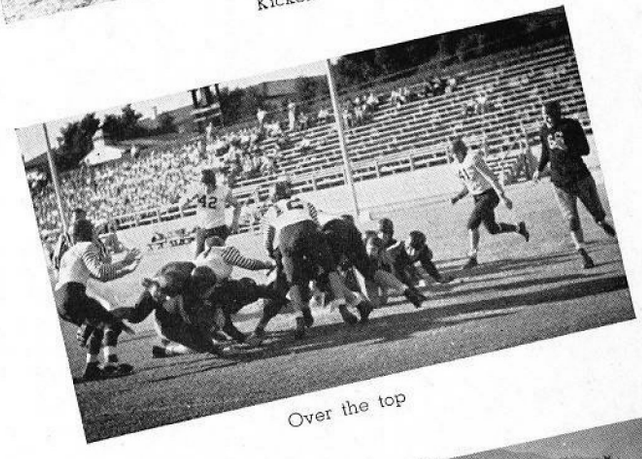
Coached by Claude Brown, last year's varsity captain, and Clay Smith, three year letterman, the frosh rounded into shape rapidly for their first match with the P.J.C. Spartans. However, the team had a few rough spots and was nosed out 20 to 12 in the final count.

The frosh highlight was the Pomona game, when the Beaverbabes came back to win 27 to 20 after trailing 20 to 2 at the halftime. Midterms and blue slips began to take their toll and the yearlings lost to Webb 20 to 6 in a game that saw Webb's superiority in the air, and the Beaver's superiority on the ground. In a preliminary to the Oxy varsity game, the frosh were walloped to the tune of 29 to 0 by a spanking good Oxy Tigerette eleven. The Redlands game was probably the strongest of the entire season, with all substitutes entering the game, including the manager.

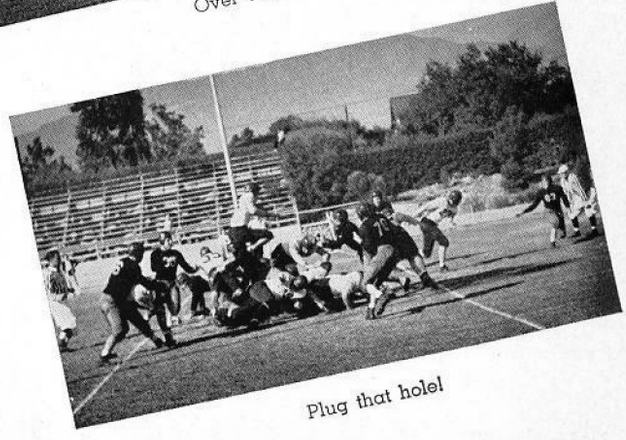
First stringers included Warren Gillette, George Lind, Dave Browne, Dave Howton, William Boyer, Douglas MacCarter, Thomas Elliott, Art Blight, Paul Becker, Rob Cyr, Henry Roese, Cliff Truesdell, and Harrison Price. Many of these men should prove valuable to next year's varsity squad.



Kickoff



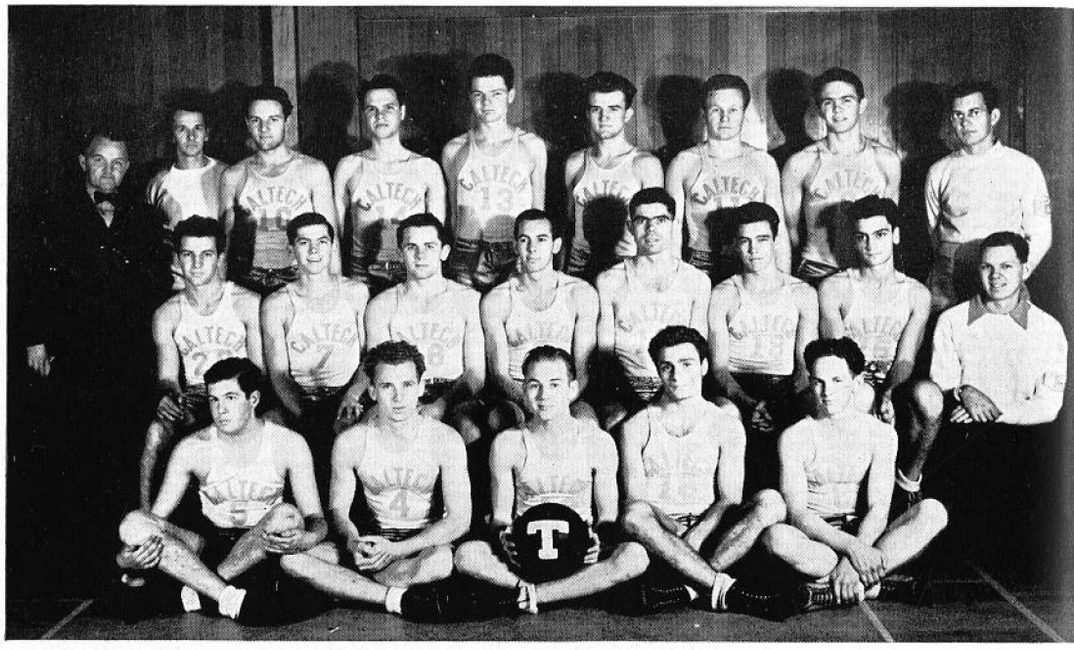
Over the top



Plug that hole!

BASKETBALL

BASKETBALL



First row: Chapin, Glassco, Beck, Reimers, Cooper. Second row: Lakos, Goodmanson, Sohler, Goodin, Sullivan, Meyer, Jacobs, Billmeyer. Third row: Coach Cooper, Schrader, Myers, Smith, Diehm, Foster, Walter, Osborn, Keyser.

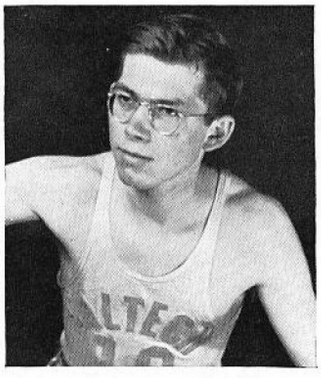
Although failing to win a conference game, this year's varsity casaba squad was one of the strongest Beaver fives in recent years. With five returning lettermen, led by Captain Duane Beck, and several frosh numeral men, headed by high-scoring Bob Myers, the team flashed championship form at times.

Still, as always, handicapped by the lack of their own gym, the basketeers practiced this year at P. J. C. New coach for the year was George Cooper.

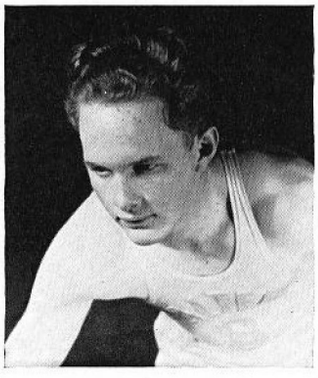
The league opener with Pomona resulted in a 57-28 defeat for the Techmen. Inability to hit the hoop consistently helped to spell defeat for the Beavers.

The best league game turned in by the cagers was the first Occidental tussle. Although holding a 24-14 halftime lead, the Beavers were nipped by a closing Tiger rally, the game ending 45-41. Bob Myers high-pointed for the evening with 19 digits.

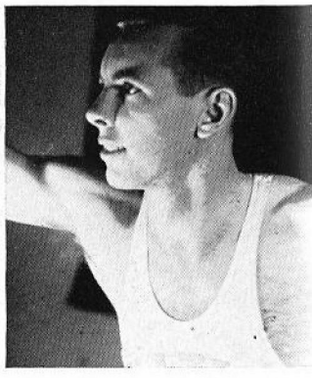
Walter



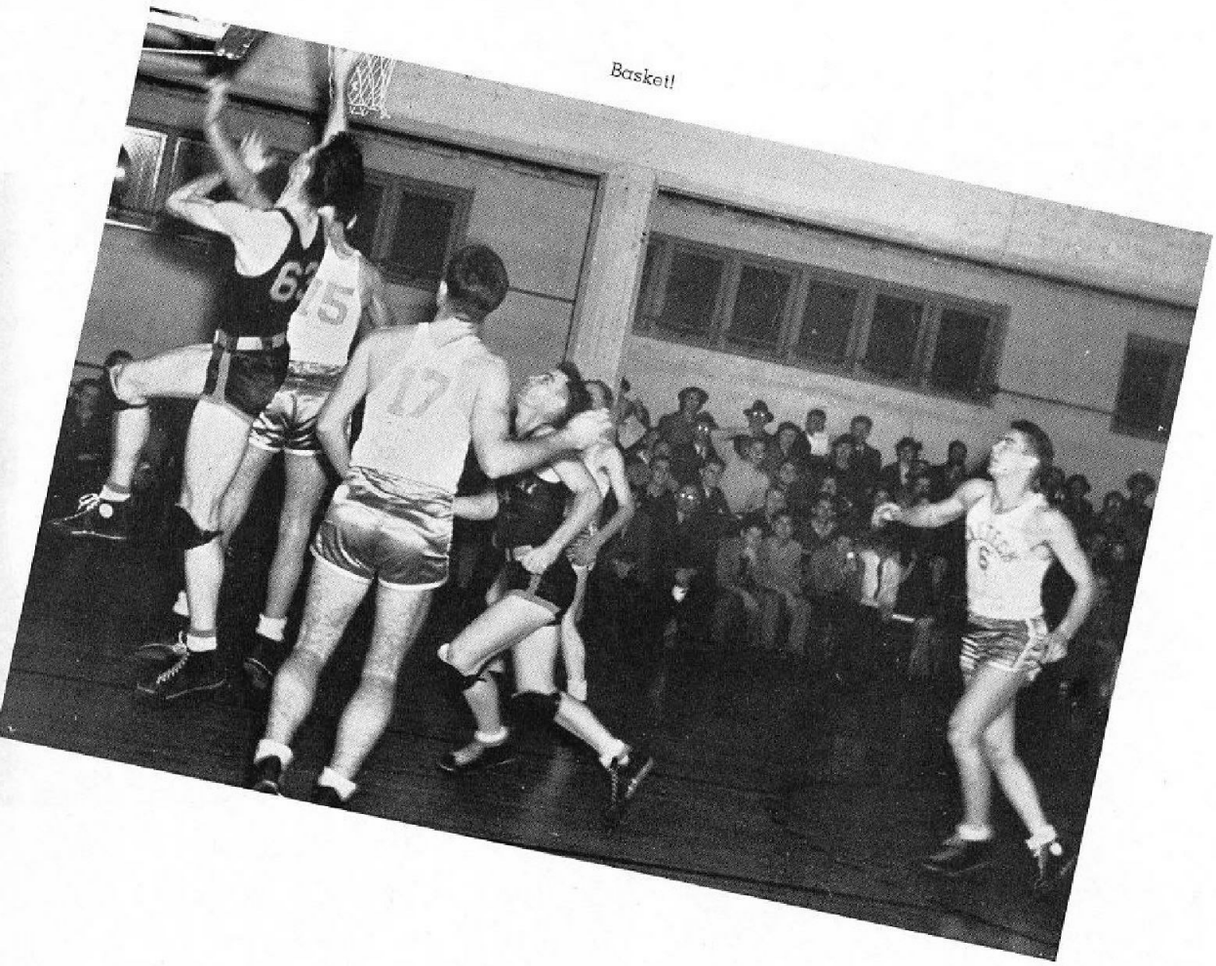
Goodmanson



Cooper



Goodin



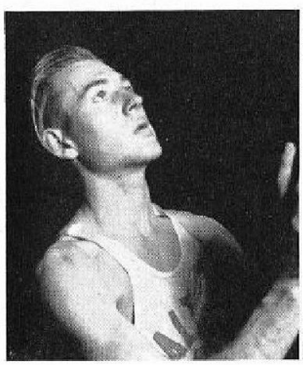
Basket!

Lettermen for the year included Capt. Beck, Goodin, Sullivan, Osborn, Myers, Goodmanson, Cooper, Walter, and Sohler. Led by captain-elect Lloyd Goodmanson, five of these men will return next year, and are looking forward to a more successful season.

The smooth Redlands five handed the Engineers their next defeat. Although trailing the Beavers at the three-quarter mark, the Bulldogs pulled away to chalk up a 45-32 win. Traveling to the Border City, the varsity cagers were massacred, 65-14, by the San Diego State hoop squad. Conference champions, the Aztecs had one of the strongest college teams in the entire country.

The Techmen fell victims to the Whittier Poets in their next tussle, swallowing a 65-47 defeat. Then the second Oxy fracas resulted in a 52-23 Bengal victory. The fast Chapman team gave the Engineers a 66-36 licking in a non-conference game.

The last conference tussle saw Pomona hand the Beaver five a 55-35 loss, with Morris, Sagehen center, setting up a new conference scoring record of 34 points. Even though they were leading La Verne at the half, the Tech basketeers dropped their season finale to the Leopards, 55-40.

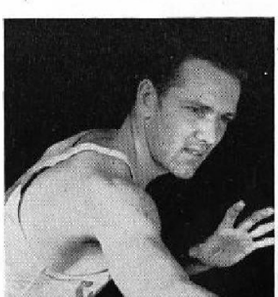


Beck

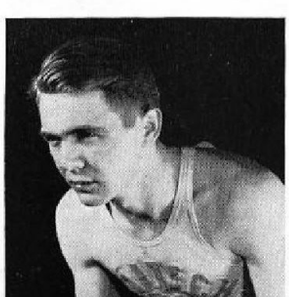
Sullivan

Sohler

Myers



Osborn



First row: Carter, Allen, Kendall, Bluemle, Le Fevre. Second row: Larson, Weller, Albrecht, Gayer, Van Ness, True. Third row: Price, Miller, Cox, Roese, Marshall.

FROSH BASKETBALL

Experiencing a disastrous season, the frosh casabamen emerged from their schedule without a mark in the win column. Practicing in the Eagle Rock High School gym, the frosh were handicapped this year by the lack of experienced material. However, much improvement was shown throughout the year. John Price, Y. M. C. A. secretary, mentored the yearlings this year.

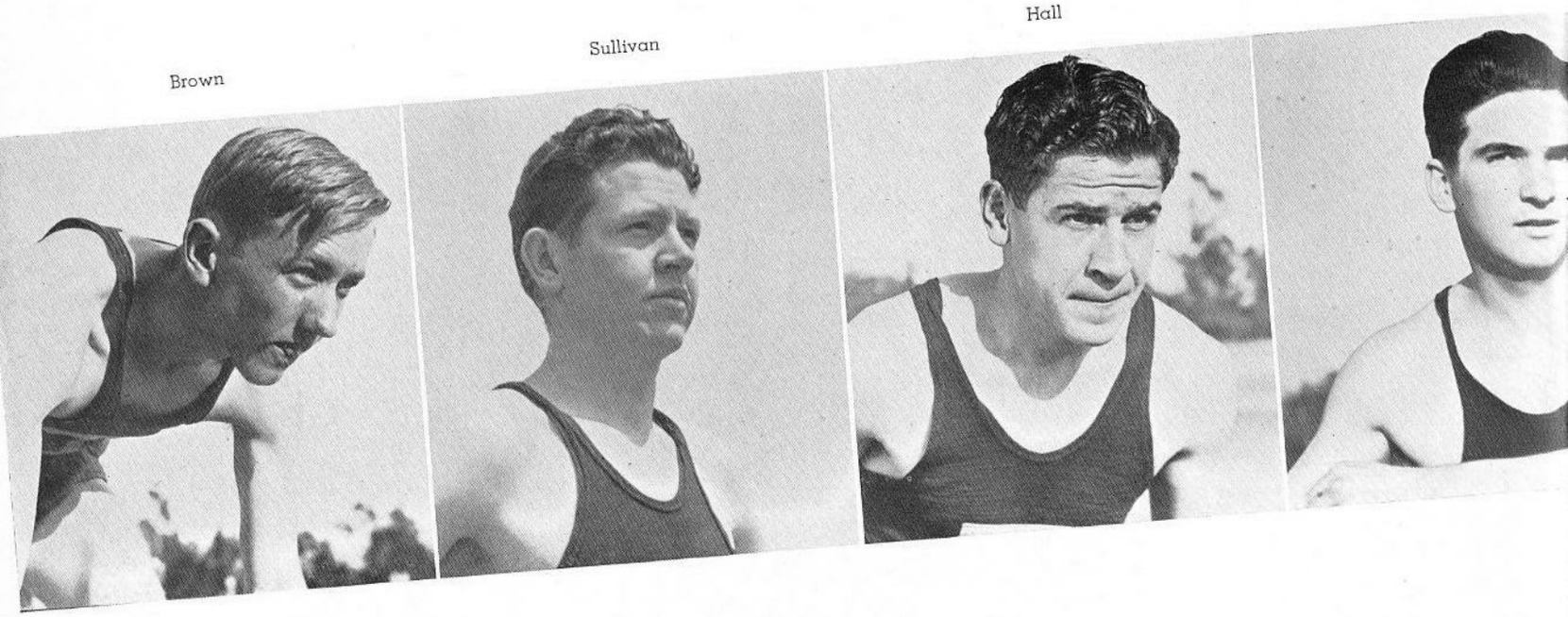
Webb School furnished the peagreeners with their first defeat, dishing out a 44-24 setback. Then the powerful Whittier frosh followed this by dealing the Beaver Babes an 85-15 loss.

The Tech frosh showed much improvement in their tilt with the Oxy yearlings, but still went down in defeat, losing 57-33. The next reverse was administered by the tricky Chapman squad, when the frosh tasted a 70-22 beating.

The Engineer first-year-men turned in a better brand of ball against the Pomona Sagechicks, but again emerged the losers, the final tally standing 50-38. The season ended with another loss as the baby Flat-tails were outclassed by the La Verne frosh 51-34.

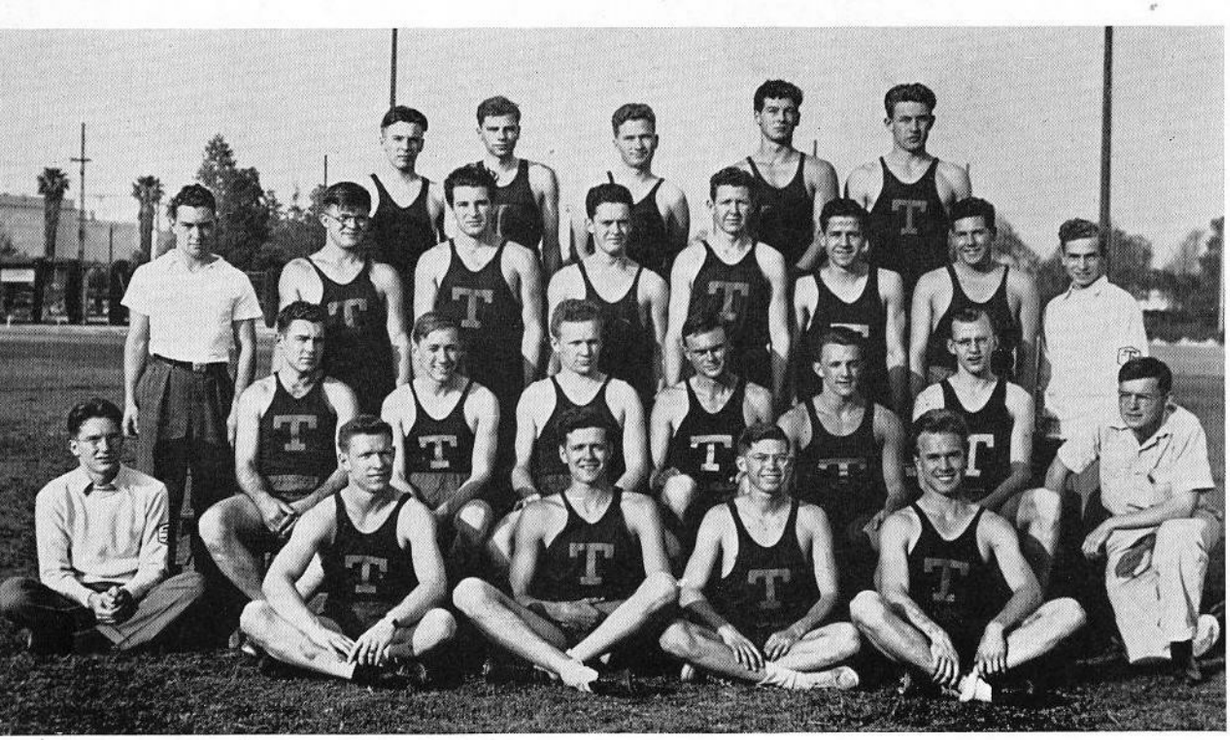
Numeral-winners were Capt. Kendall, Gayer, True, Albrecht, Van Ness, Miller, and Bluemle.

TRACK



TRACK

Picking out their tough competition first, the Tech tracksters elected to tangle with their cross town rivals, Pasadena Junior College. The meet proved to be a Bulldog runaway on a muddy track with the Beavers trailing 100⅔ to 30⅓. In this meet the Tech frosh and varsity combined forces to score nearly one-fourth of the points. Frank McCreery jumped 21′ ½″ to tie for first in the broad jump. Bowers, Young, Eusey, Schneider, Densmore, and Bragg grabbed seconds. Eusey put the shot 39′ 3¼″.

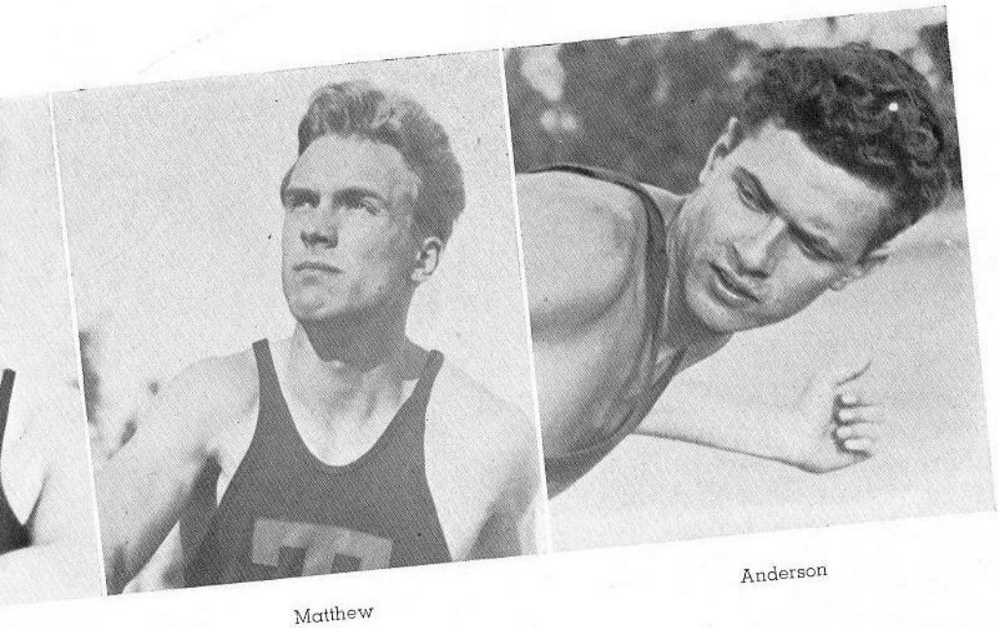


Back row: Rupert, Baumgarten, Smith, Vaughan, Eusey

Third row: Spooner, Staatz, Lakos, Haar, Sullivan, Hall, Chapin, Dawson

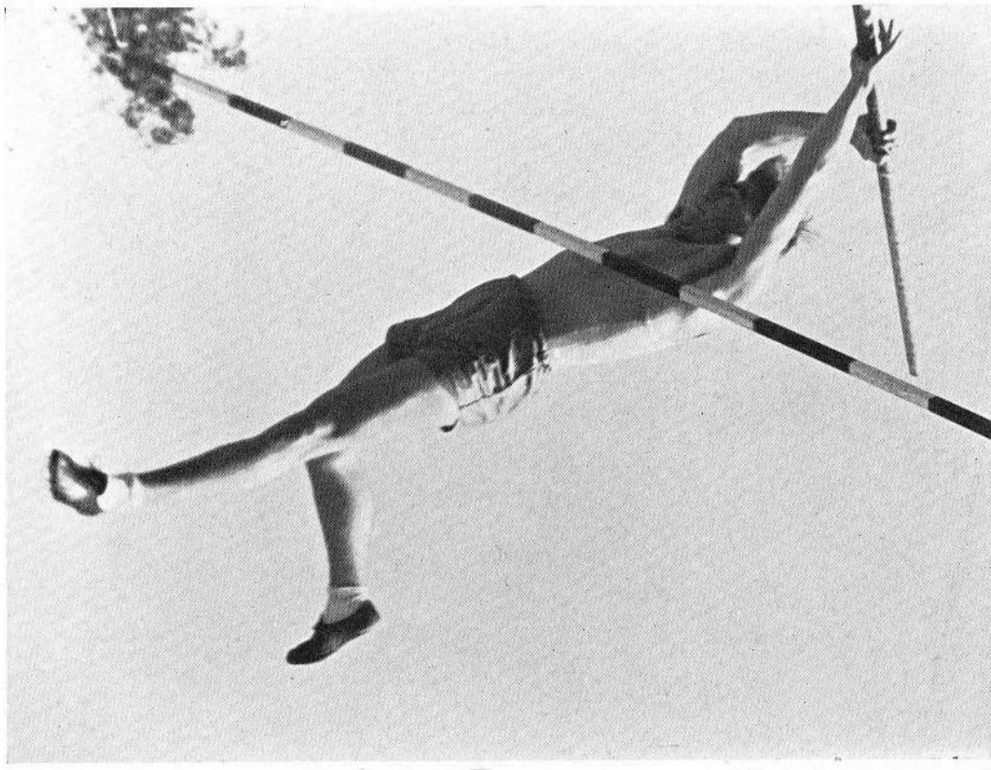
Second row: Jongeneel, Brown, Walter, Worchester, McCreery Braithewaite, Campbell

First row: Bragg, Anderson Goodmanson, Matthew



Matthew

Anderson



Gayer goes over the high bar

Glendale Junior College nosed out the Tech team 67 to 64 the following week. Captain Bragg accounted for first places in the 100, 220, and the discus, while Perry Brown won the 440 in 52.9 seconds. Young won the javelin throw, McCreery the broadjump, and again Eusey took second with a heave of 39' 3¼'', the same as in the previous meet. Frosh Schneider won the mile and took second in the two mile, while Bowen grabbed second in the 220 and third in the 100.

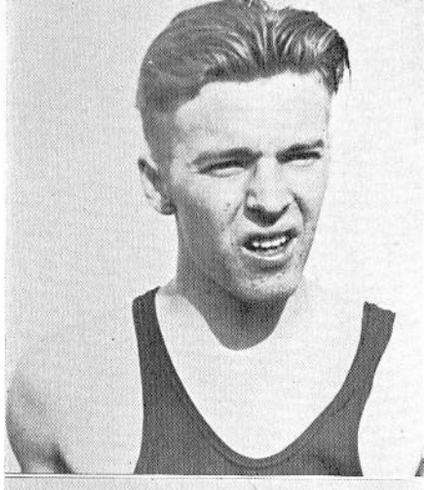
The Southern California College Relays were held at Oxy and the Tech squad managed to carry home seventeen medals. The frosh medley relay of Gillette, Bowen, Densmore, and Schneider, running the 220, 220, 440, and 880, respectively, set a new record of 3:41.9 minutes, erasing the old mark of 3:47.0 minutes held by Pomona. The frosh four man half mile team was nosed out at the finish in a race that tied the San Diego State record. Braithwaite, Perry Brown, Harr, and Bragg ran third in the four man half mile. In the novice four man mile relay the Tech team came in fourth. Pomona nosed Tech out by one point to take second in the final point standings. Oxy placed fifth.

T R A C K

In the varsity Oxy-Tech meet the Beavers were on the low end of a 91½ to 39½ score. Bowers leaped 6' 3" to tie for first, and Tyler Matthew soared 12' 6" to win his special event. Joe Smith, recently converted to the mile from the 880, surprised everybody by romping home the victor. Rupert won the two mile run. Bragg took second in the 100, 220, and discus throw, while Perry Brown lost out in a 440 nip and tuck finish to Sherman Danby with a time of 51.6 seconds. Don Walter grabbed two thirds in the hurdles.

Playing host in a five way meet, Tech was second to Santa Barbara, 74 to 51½, while Chapman, La Verne, and Loyola trailed in order. Bill Braithwaite distinguished himself by copping the 100, as did Keith Anderson in winning the 880. Perry Brown won the quarter and Bragg took second in the sprints.

Tech lost the last meet of the season to Redlands with a score of 48⅛ to 82½, with Lloyd Goodmanson being the Tech star by scoring first in the hurdle runs and tying for third in the pole-vault. Rupert won the two mile, and McCreery leaped 20' 11" to annex his favorite event.



Rupert

Walter

Bragg

Ropp leads

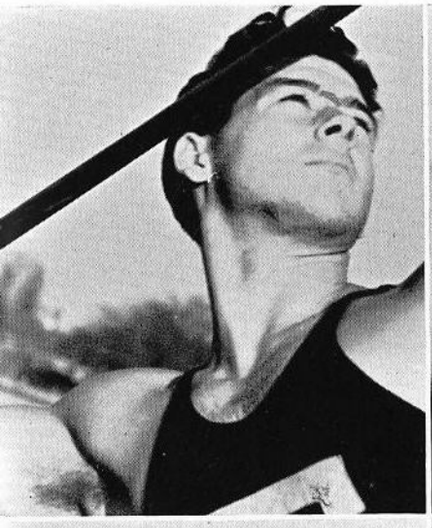
Go!

This year's varsity track awards numbered fifteen, of which eight were won by graduating seniors. In spite of the loss of these men, all dependable point makers, the replacements coming up from the Frosh squad make the prospects for next year's team look better than ever.

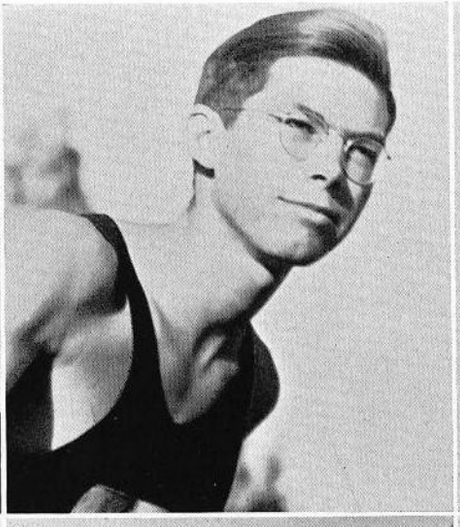
Coach Stanton recommended letterman sweaters for Keith Anderson in the 880, Captain Kenny Bragg consistent placer in the 100, 220, and discus, Bill Braithwaite, flashy sprint man, Perry Brown, speedy one lap relay man, Merrit Eusey, sophomore shot putter, Lloyd Goodmanson, hurdler and polevaulter, Marcus Hall distance man, Tyler Mathew in the pole vault and high jump, Frank McCreery, diminutive broad jumper, Ed Parker discus and shotputter, Stanley Rupert, sophomore distance star, Josiah Smith, 880 and mile, Dick Sullivan, high jumper, Robert Young and Richard Vaugn, javelin tossers, and Don Walter, hurdle expert.

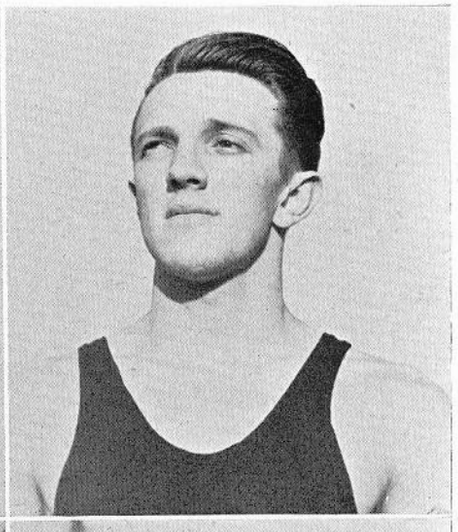
Densmore leads again

Vaughan



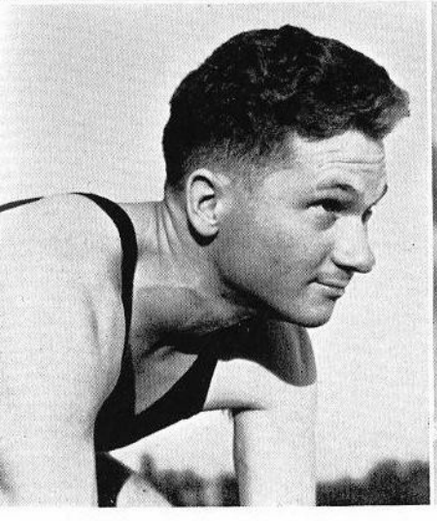
Goodmanson



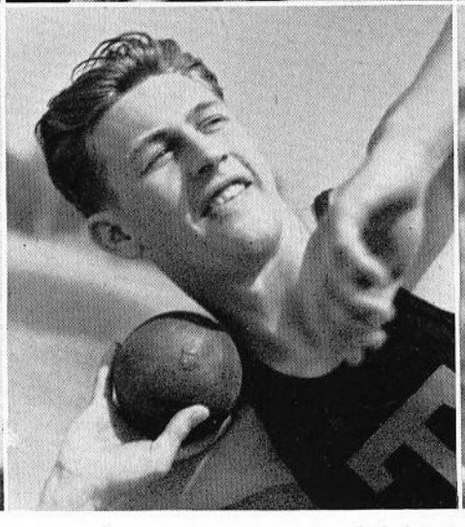


McCreery

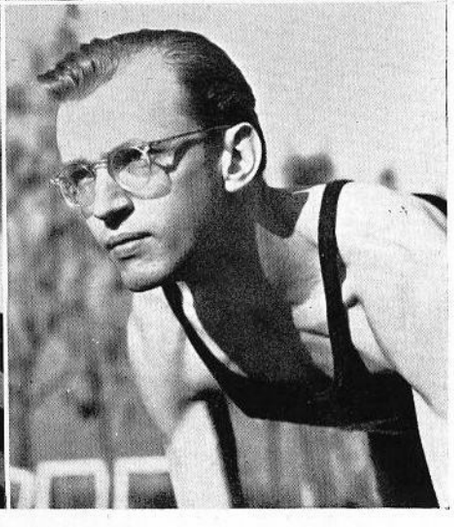
Braithwaite



Smith



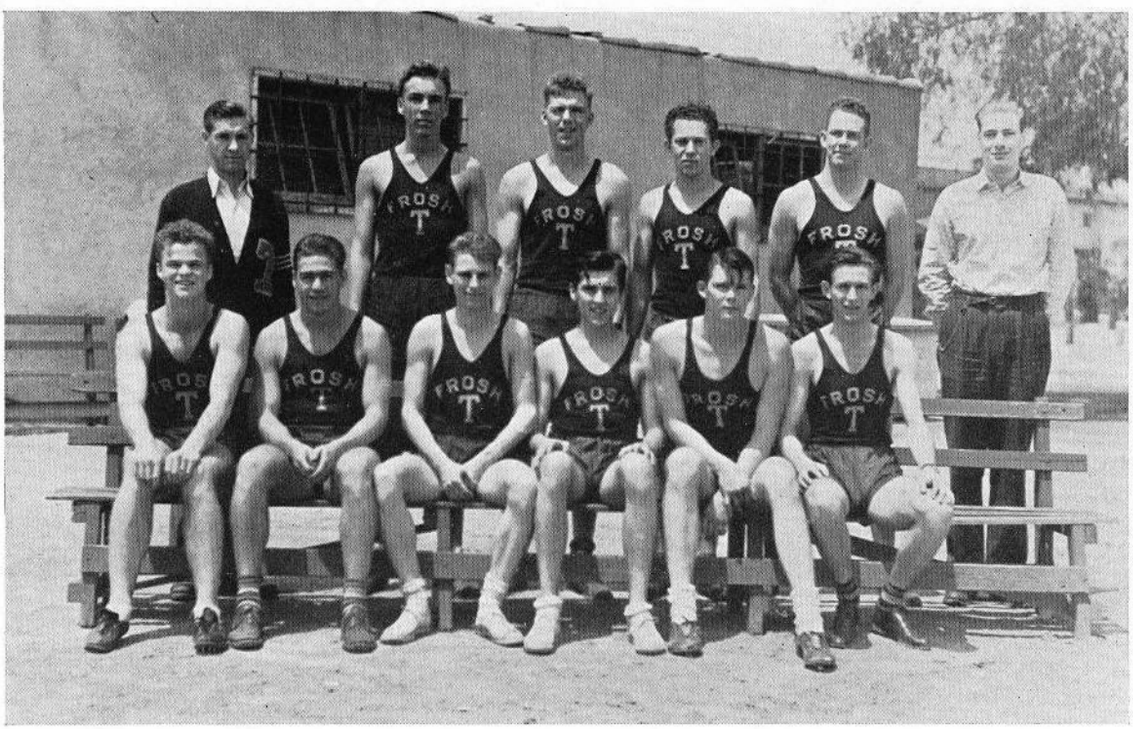
Eusey



McCreery tosses the spear

Bragg wins the two-twenty

FROSH



First row: Gillette, Elliott, Densmore, Schneider, Howton, Bowen. Second row: Coach Smith, Stone, Lind, Willets, Siebel, Brockman.

BASEBALL

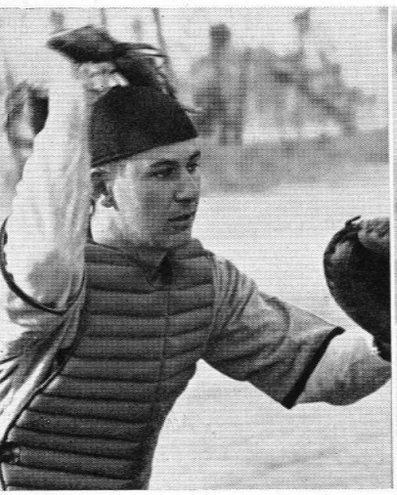
Out at first!

The turnout for varsity baseball this year was very encouraging to hard working Coach Musselman when thirty-eight men reported in suits. There were six returning lettermen and the rest were mainly from the hard hitting frosh team of last year.

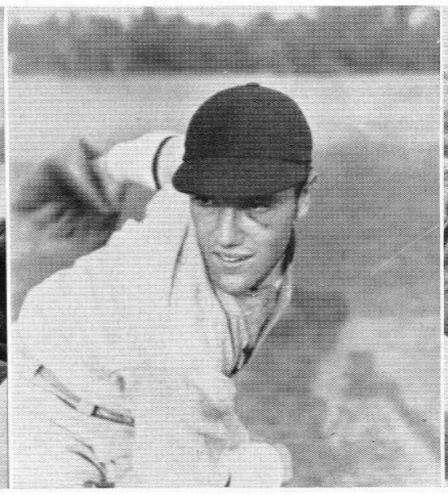
In practice games the Beavers were able to win five out of twelve games. A large number of games were played this year because of an abundance of pitchers which included Bob Myers, Jim Kemp, Glenn Billman, and George Crozier.

The first league encounter found the Engineers meeting the Redlands nine in Tournament Park and losing by a score of 9 to 2 against the chucking of Dick Pazder.

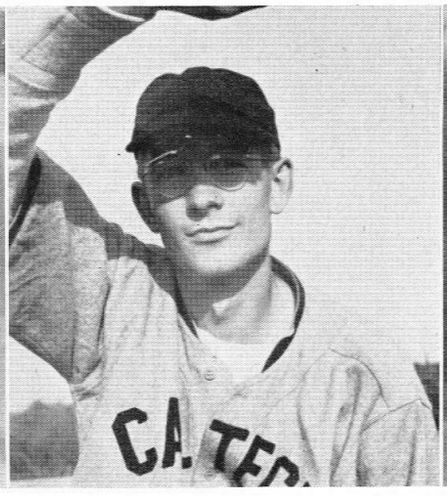
Gewe



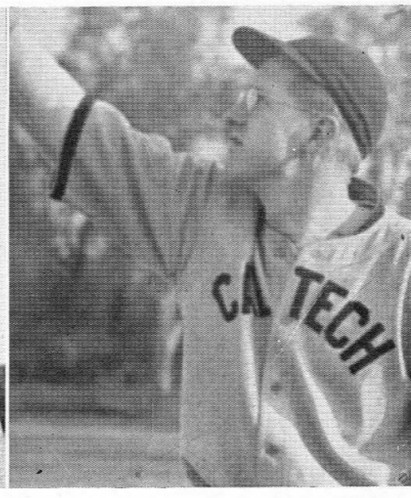
Myers



Crozier

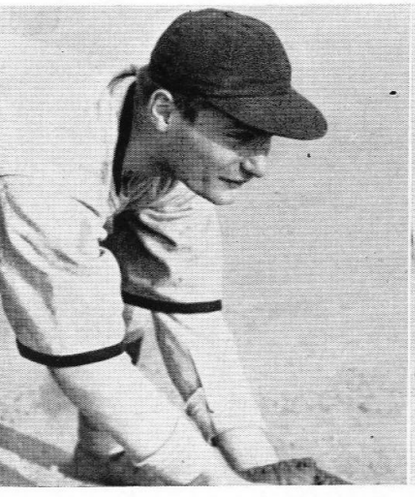


Lee



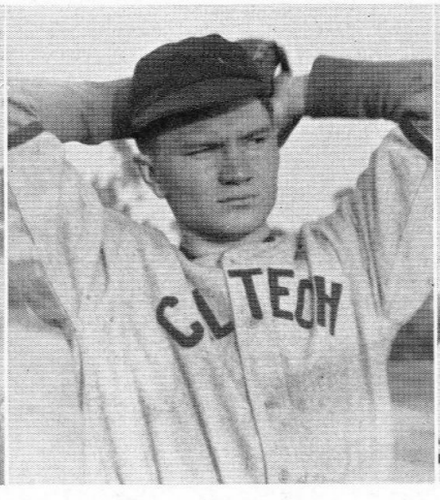
B A S E B A L L

First row: Van Dyke, Engelder, Strickler, Porter, Tobin, Cleveland, Silberstein, Noble. Second row: Schneider, R. Meyers, G. Meyer, Billman, White, Kemp, Reimers, Clark, Johns. Third row: Longfelder, Strong, R. Myers, Crozier, Corcoran, Gewe, Lee, Bowles, H. Davis, Coach Musselman.

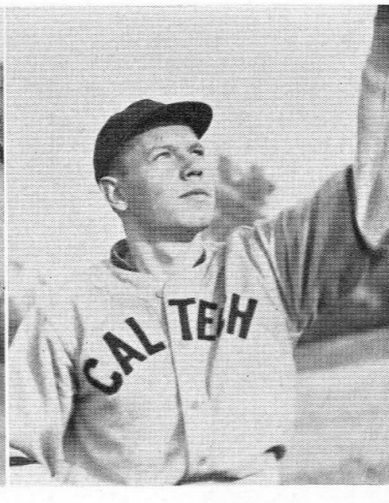


Reimers

Strong



Billman



Meyer

Caltech's second conference opponent was Whittier, who will probably be League Champs with San Diego runner-up. The Poets were able to hammer out double header victories 11 to 0 and 7 to 2 to rout the Beavers in a game which showed the potentialities of the squad with some brilliant spots of field work.

San Diego was Tech's third league opponent, and although they lost 7 to 1 and 4 to 0 the Techmen played their best game of the year to date, and showed that the possibilities of winning several future games were very good.

It's a hit!

BASEBALL

The following Wednesday, Oxy came over to Tech and limped back home with a 7 to 3 defeat. Coach Musselman said that it was the best played game by a Tech ball team in six years. Jim Kemp on the mound kept the visitors to four scattered hits, while the home forces connected for ten hits, when needed, to win the game. Engelder at first, Reimers at second, Bob Myers at short, and White at third proved to be a smooth working field. George Meyer behind the plate was getting off some good pegs. The outfield of Billman, Crozier, and Strong covered the field in good fashion in aiding the team to win their first conference victory.

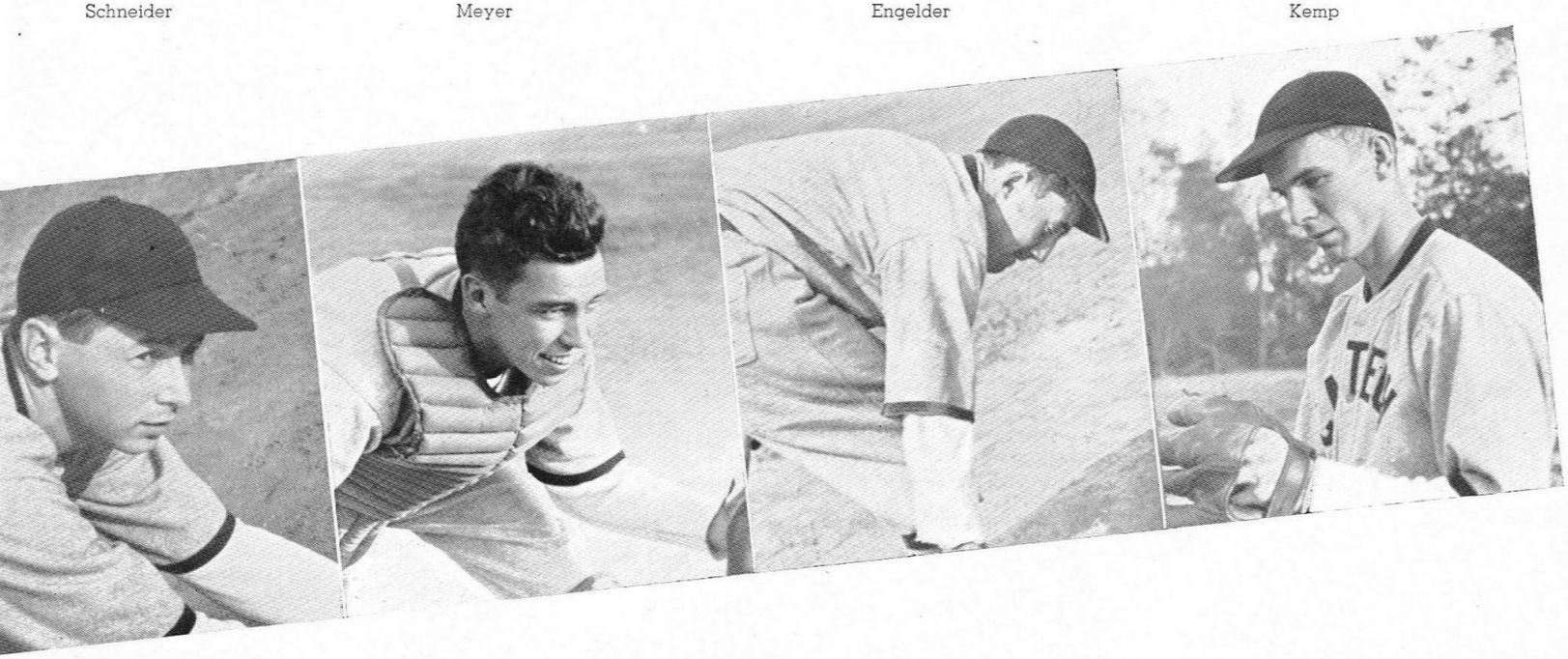
The chances for remaining game victories look good at midseason. The leading Tech hitters were Clark with .500, Billman with .364, and Strong with .308. Bob Myers made a splendid recovery after getting hit in the eye with a pitched ball in the Woodbury game a month earlier, and returned to aid materially in the Oxy victory.

Coach Musselman recommended thirteen ball players for lettermen sweaters at the end of a season that saw Tech push Pomona into the cellar position in Conference standings.

Captain Bob White, stellar third baseman, received his second letter and led the team with distinction to climax a worthy athletic career.

Sophomore Glenn Billman alternated between pitching duties and flashy fielding, and should be of great service to next year's team. Versatile George Crozier, three year veteran of the diamond, was first string shortstop and also relief pitcher. Crozier hit .286 and was known for his good throwing arm. Lead-off batter, Paul Engelder, three year letterman, was the spark plug of this year's team. His loss will be felt deeply.

Schneider Meyer Engelder Kemp

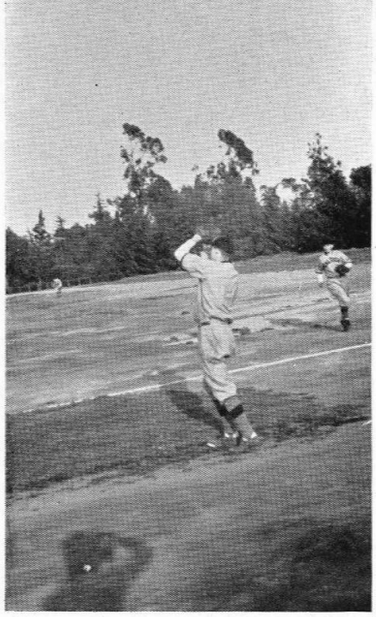


Bob Gewe, back in school again after a year's absence, won his second letter in right field and substituted as a catcher when needed. Jim Kemp had first interest on the pitching mound, but also looked good in centerfield. Kemp pitched when the Engineers toppled the Oxy Tigers in their first game. Curtis Lee, senior right fielder, started hitting in the last few games of the season to lead the team with an average of .364.

Sophomore George Meyer caught nearly every game for the Beavers and finished with a batting average of .318. Bob Myers, of basketball fame, won his letter at pitching and at short. Myers' pitching won the Pomona game at the end of the season.

George Reimers was kept very busy attending to his second base job, and although a sophomore, cinched his position when the season was yet young. Selmer Schneider took over second base when Reimers got tired. Both second basemen kept the infield and bench talk lively at all times. Herb Strong, senior right and left fielder, accounted for a batting average of .280 to win his letter and end his four years at Tech.

Captain White



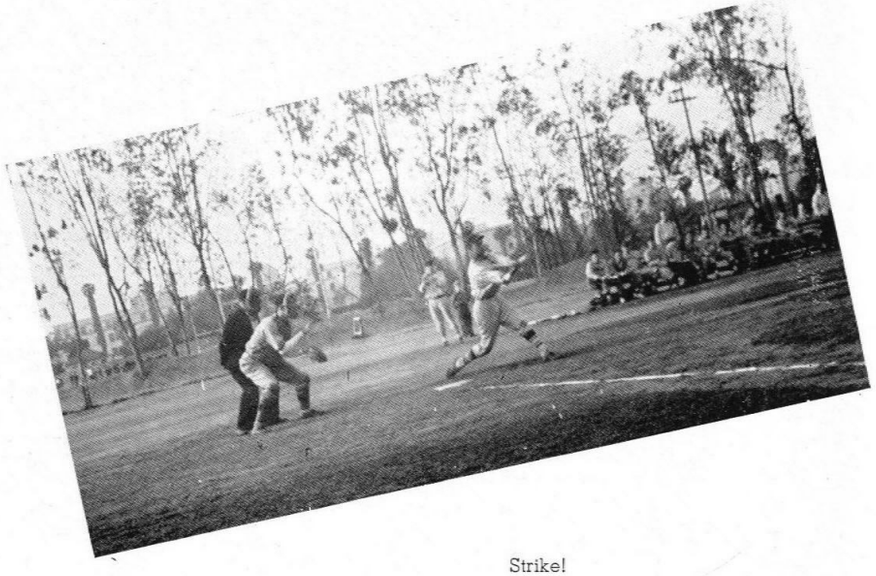
Warming up

F R O S H

First row: Hedrick, Roese, Stone, True, Lawrence, Hogan. Second row: Coach Levit, Le Fever, Allen, Rhyne, Stevens, Piatt, Oechsli.

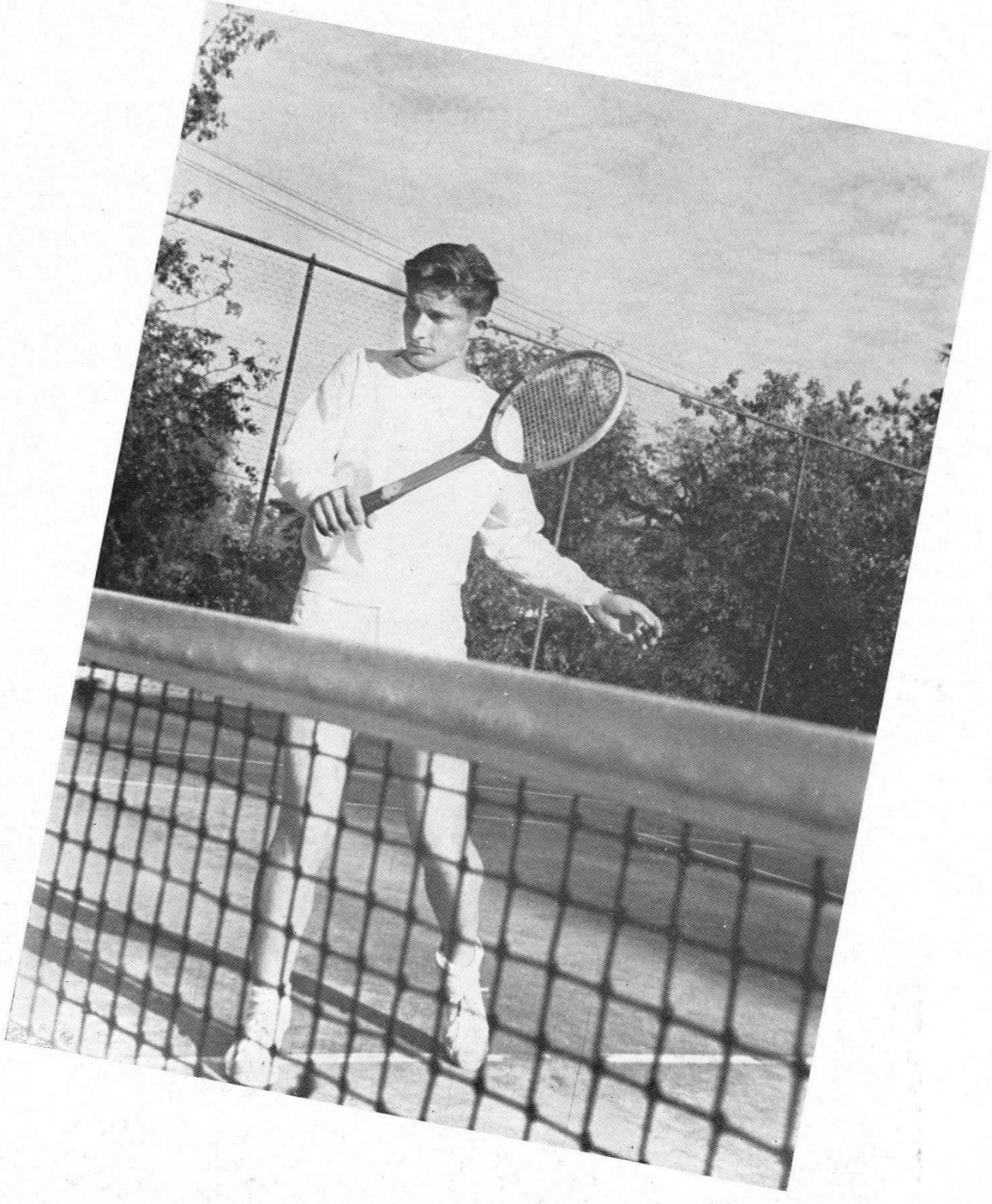
Under the able tutelage of Coach Mel Levet, last year's varsity baseball captain and a three year letterman, the yearling Engineers have been coming into form nicely. To date the frosh have only played two games because of a late season start. Both games were with Oxy, and the Beaverbabes won the first one with a score of 5 to 4.

Hedrick fanned out seventeen batters in the Oxy game to take mound honors. The starting lineup for this encounter consisted of Langdon. Hedrick, Henry Roese, Gerald Hogan, Ralph LaFever, Leighton True, Russell Rhyne, Theodore Bluemle, Harvey Lawrence, and Jack Stone. Some of the frosh material will be of considerable value to the varsity team next year.



Strike!

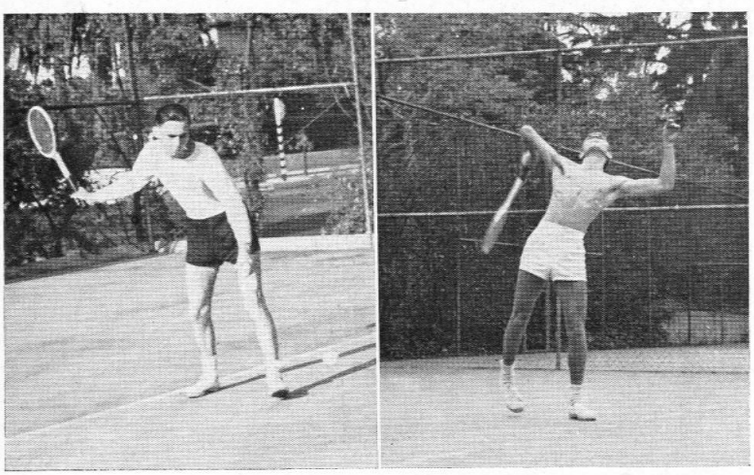
TENNIS



Harper hits a high one

T E N

Captained by Fred Brunner, this year's tennis team has made an excellent showing, as Tech returned to the Conference this year. In a practice match which showed the Beaver power P.J.C. was toppled 13 to 9. A practice match with U.C.L.A. was lost, but the netmen came back strong to down Pomona twice in successive matches with a score of 6 to 3 both times. Still riding high, the Engineers defeated Whittier 8 to 1 but lost the next two matches to Oxy 5 to 4 and 7 to 2.

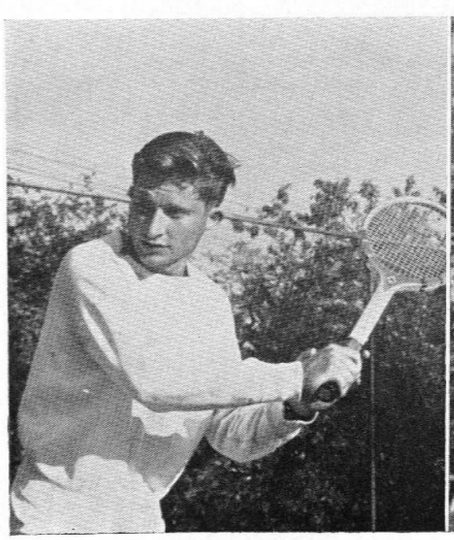


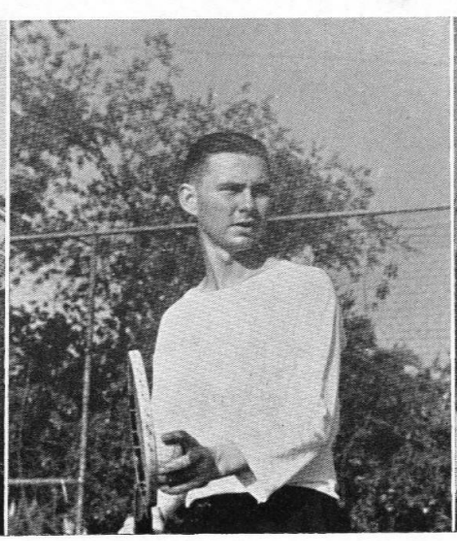
Skalecky picks it up

Brunner serves it hot

Skalecky

Turner





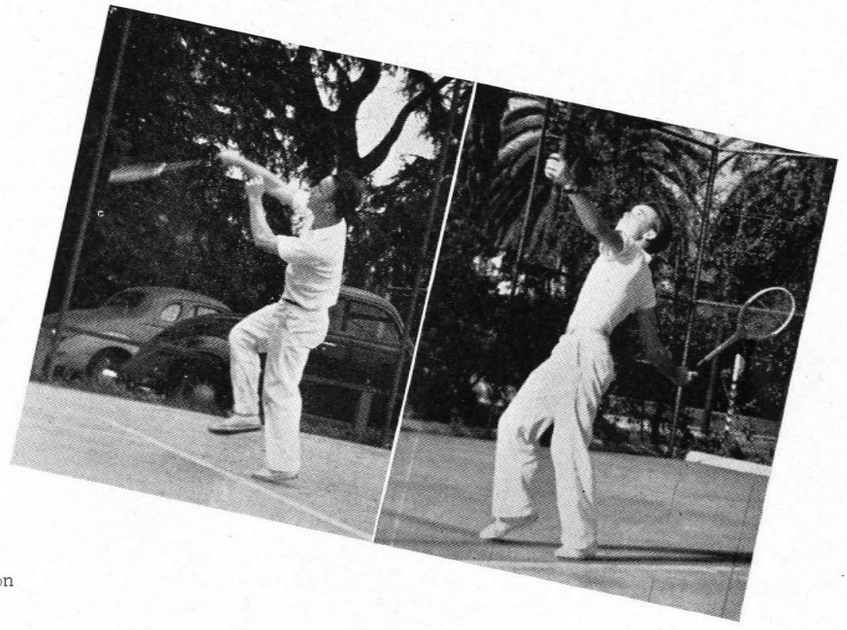
Fisher

N I S

Coached by Joseph La Salle, and headed by Captain Brunner, the team was composed of Joe Rominger, Bob Fisher, John Harper, Dale Turner, and Frank Skalecky. At present the Tech team is standing high in the league ratings.

Fred Brunner has had only one defeat in singles, and that was to Bobbitt of Oxy a week after Brunner sprained his ankle in the first Oxy match. The tennis team has had the highest ranking of any of the Tech teams in major sports.

Next year's varsity team should be an all around winner, with nearly the entire team returning next year.

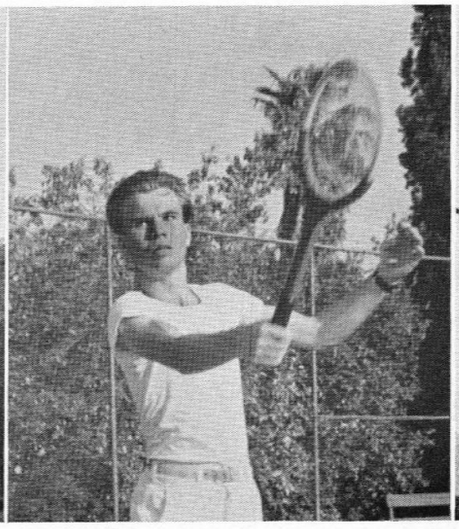


Turner in some fast action

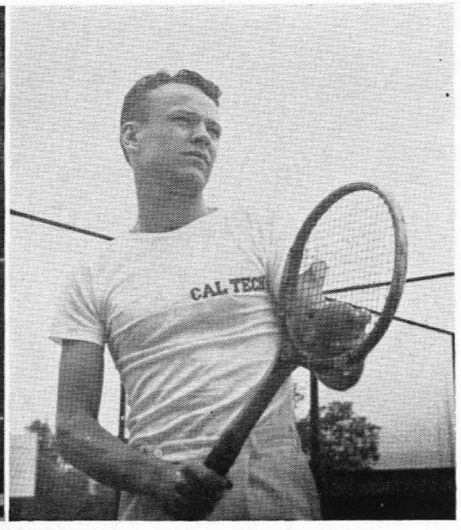
Rominger looks it over

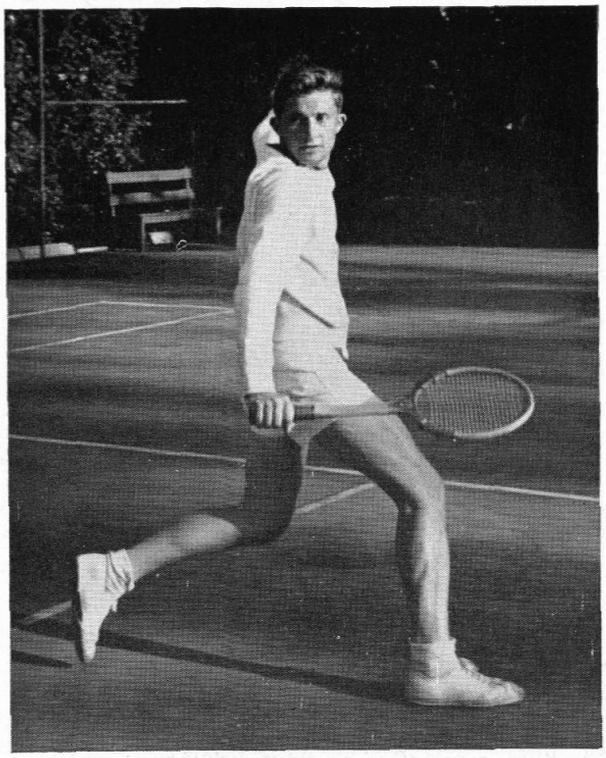
Brunner

Rominger



Harper



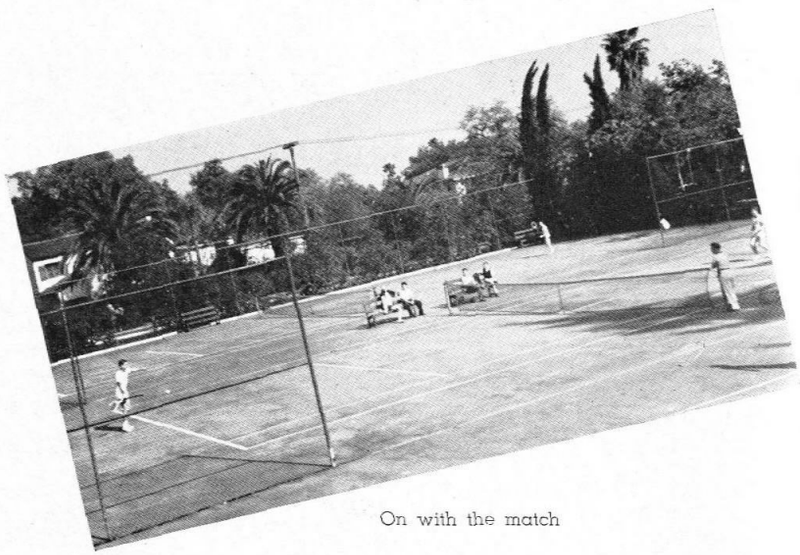


Fisher puts it over

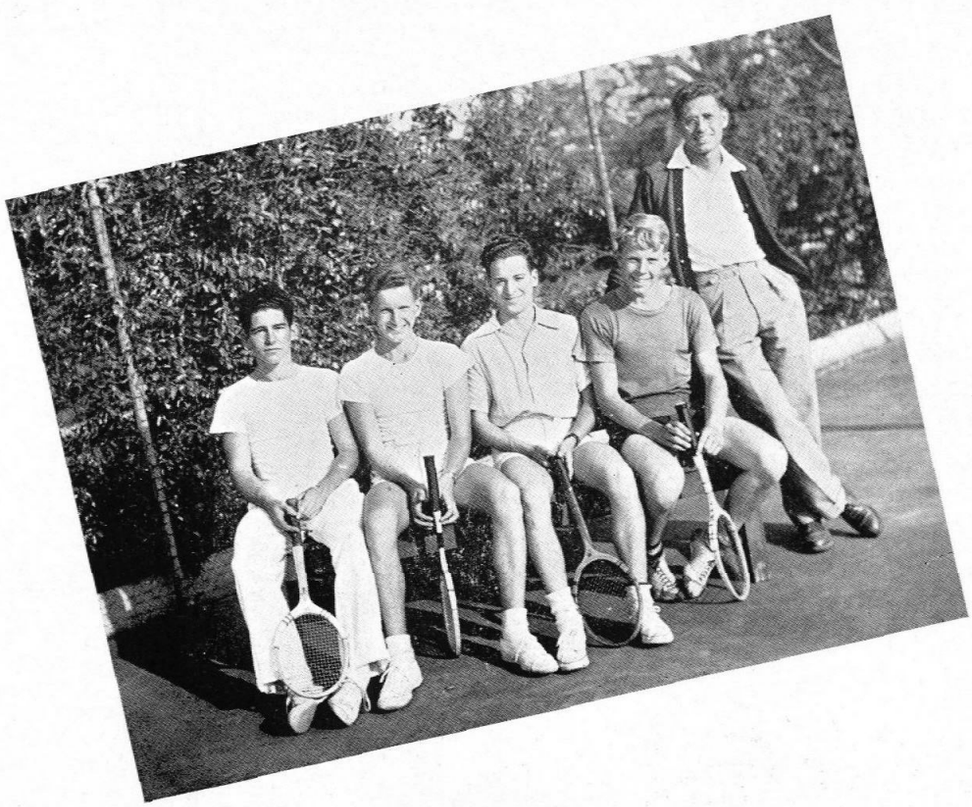
FROSH

The frosh racketeers played through a good season with twin victories over the Occidental frosh, 9 to 0 and 8 to 1, and twin losses to Pomona, 2 to 7 and 1 to 8, and returned to the victory column with an 8 to 1 victory over Burbank.

The frosh had a lively squad this year and several good players have been discovered. At present the tennis squad consists of Martin Gayer, Charles Pearson, Paul McKibben, Robert Hobbs, Arnold Grossberg, Frank Wood, Paul Allen, Art Blight, and Norman Glover. Because of the yearlings' success this season, some of the players should have a good chance to make the varsity next year.



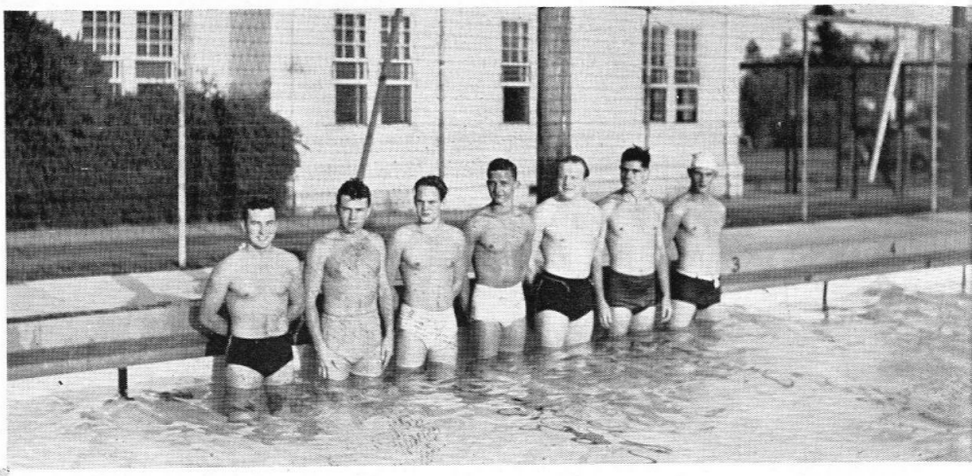
On with the match



Allen, Hobbs, Wood, McKibben, Coach LaSalle.

MINOR SPORTS

VARSITY SWIMMING

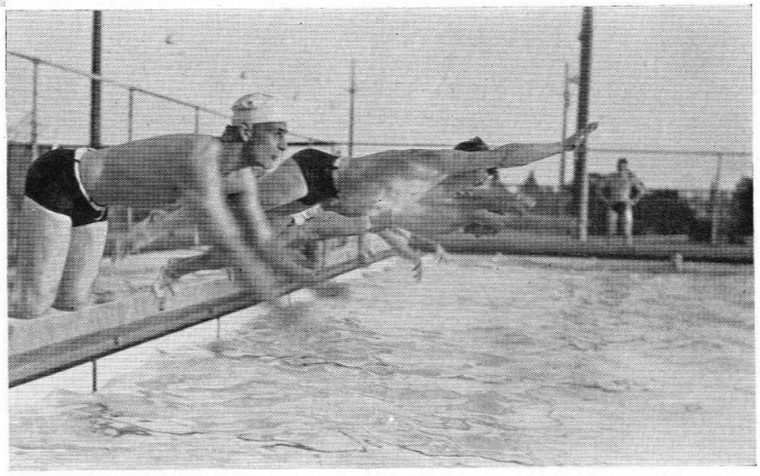


Davis, Snodgrass, Crane, Sturdevant, Carey, Sullivan, Oakes.

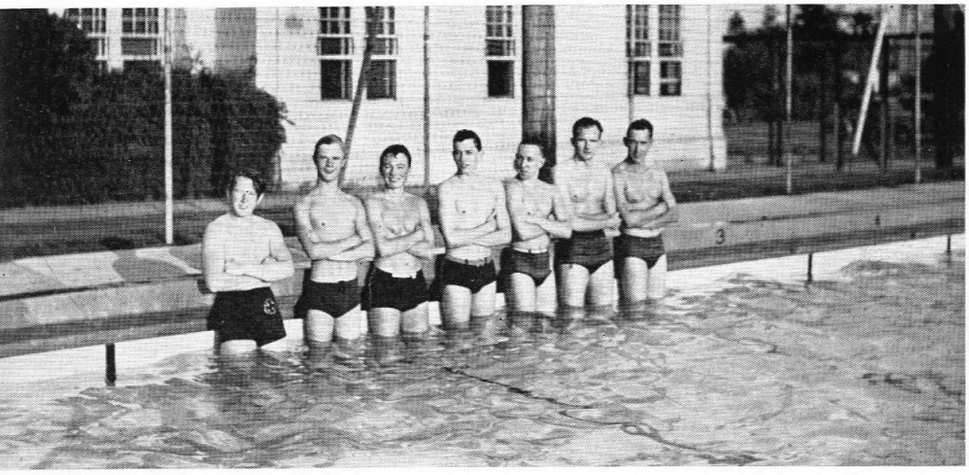
With varsity swimming just underway, the paddlers have only had two meets. One with Occidental which was lost by a score of 47-22, and the other with the Glendale Junior College which was won 46-32. The Beavers showed good form in the Glendale J. C. meet with Sturdevant taking three first places; the 100 yard free style, the 200 yard free style, and the 400 yard free style, in addition to swimming on the winning relay team. Snodgrass took first in the diving and also swam on the winning relay squad.

This year's team had only a handful of men, but each was capable of entering and garnering points in several events.

When this book went to press, the frosh team had yet to prove itself in actual intercollegiate competition. Practice meets, however, proved that the small group of men possessed a great deal of ability. They should prove a valuable addition to next year's varsity squad.



The teams have been seriously handicapped by the lack of a pool of their own to practice in. Much valuable time was wasted in travelling back and forth to various pools, and it is sincerely hoped that someday in the near future Tech will have a pool of their own.

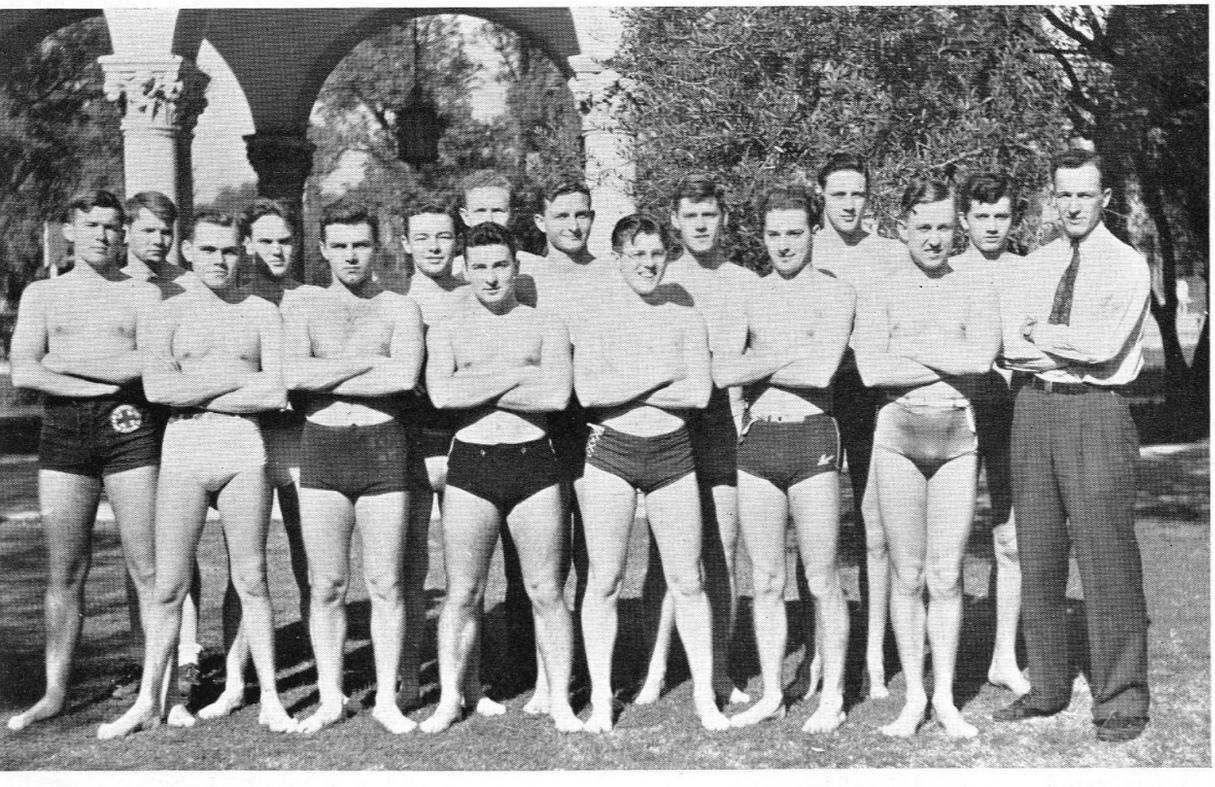


Mills, Greenwood, Fox, Cox, Merrick, Albrecht, Woods.

FROSH SWIMMING

Captain Don Campbell's unceasing work to round up a water polo team was well rewarded by the excellent showing they made against such powerful teams as Fullerton J. C., Compton J. C., Los Angeles J. C., U.C.L.A., U.S.C., and Occidental. Although having difficulty getting into the win column against such competition, the team deserves much credit for the commendable showing they did make. Awards were given to Snodgrass, Sturdevant, Davis, Campbell, Gold, Hayes, Partch, Buss, and Crane.

The Frosh team had the same schedule except for U.C.L.A. and U.S.C. Frosh awards went to Drake, Merriam, F. Wood, G. Woods, Dixon, Cox, and Weller.



First row: Campbell, Buss, Snodgrass, Davis, Bluemle, Wood, Merrick, Coach Bradner. Second row: Van Camp, Crane, Gold, Ritchey, Sturdavent, Partch, Weller, Cox.

INTERHOUSE SPORTS

Ricketts Football Champions

Fleming Softball Champions

Ricketts Track Champions

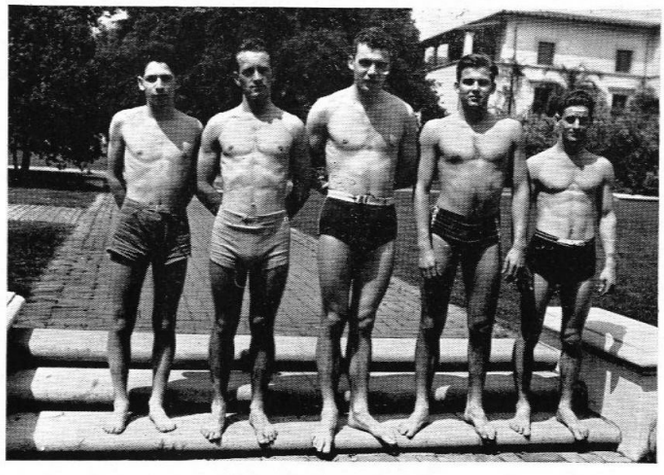
At the present writing although several house sports are still unscored, it appears as though Fleming has again cinched the prized Interhouse Trophy. The present totals find Fleming leading with Ricketts, Throop Club, Dabney, and Blacker following in that order.

Ricketts started the first term off with a bang by producing a powerful aggregation of gridders who ended the schedule unbeaten, untied, and unscored upon. The Fleming softballers captured the indoor baseball title, and the Throop leather lungers nabbed the cross country crown.

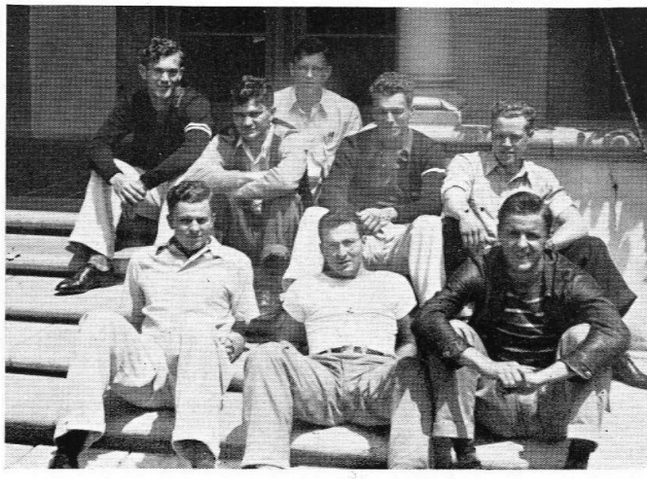
In the points awarded for varsity sports rating for the trophy, Fleming copped the honors with Throop second. Throop was awarded first in frosh rating, with Fleming, Dabney, Blacker, and Ricketts trailing.

Second term competition saw Fleming trounce their opponents to take top casaba honors. The Ricketts and Throop hoopsters tied for second, with Dabney and Blacker tied for fourth. Blacker won the first place points in handball with Throop, Fleming, Ricketts, and Dabney bringing up the rear.

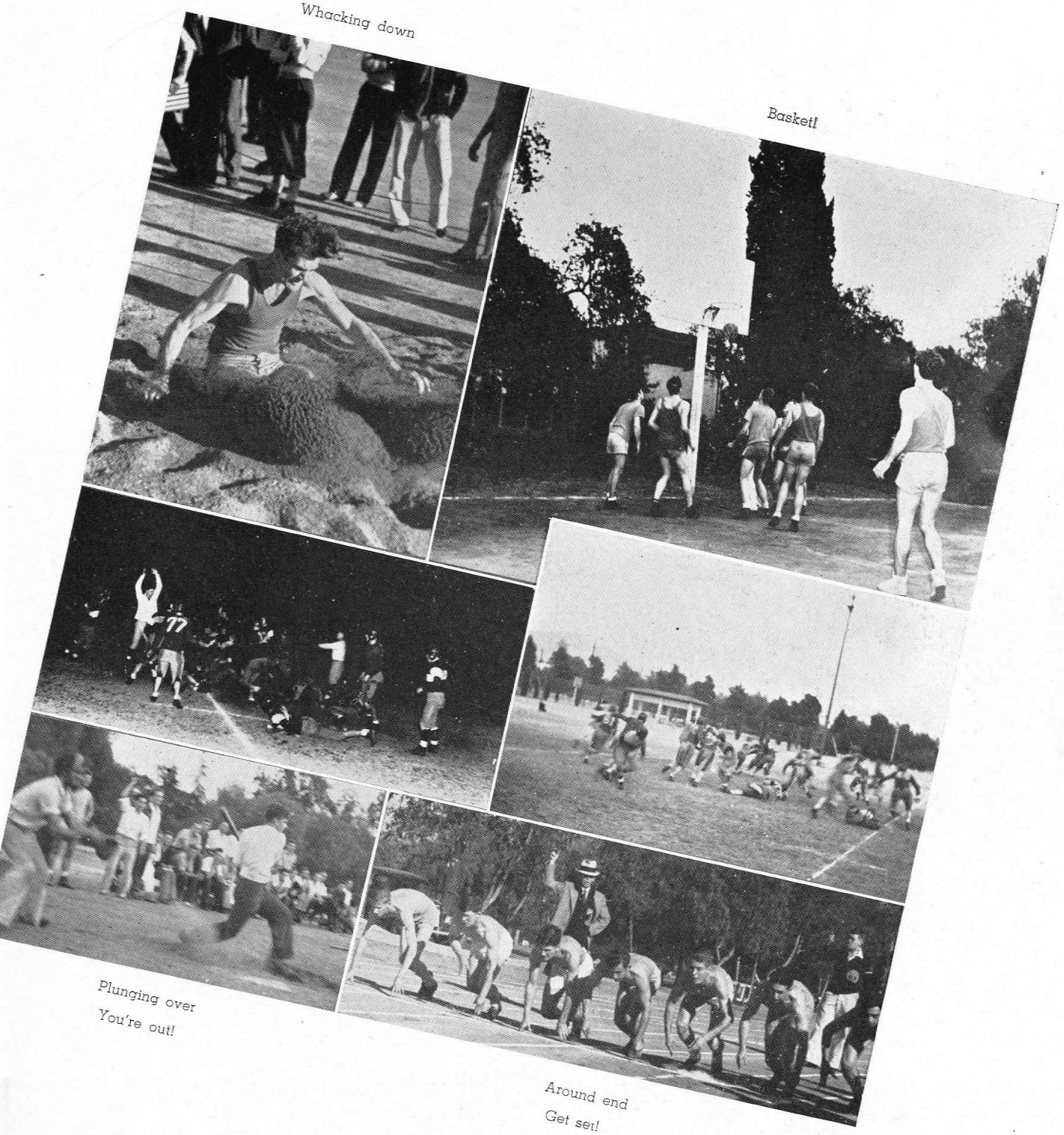
The Ricketts spikesters again ran, jumped, and distanced their way to the interhouse track championship, nosing out the Fleming cindermen for the high place. Blacker's grapplers eked out a win over the Ricketts pachyderms to grunt off with the house wrestling title.



Blacker Wrestling Champions



Fleming Basketball Champions



Whacking down

Basket!

Plunging over

You're out!

Around end

Get set!

Varsity basketball rating went to the numerous Ricketts cagers, while the frosh points were split between Throop and Fleming.

House contests are still left in tennis, baseball, and swimming. Ricketts or Fleming should win the net crown this year, and Fleming's big guns should hit their way into the horsehide win column. The swimming spree should again be a struggle between the Ricketts splashers and the Fleming paddlers.

Discobolus, which travels from house to house, spent most of the year in Ricketts. A challenge trophy, it rested for short intervals on the mantels of Dabney, Blacker, but always seemed to end in the Ricketts lounge.

VARSITY CROSS COUNTRY

Coach Hanes, Marriott, Grigg, Anderson, Payne, Stevens.
Jerrems, Densmore, Schneider, Greenwood, Fiul.

Schneider takes first.

As usual, the turnout for varsity cross country was very large, with the main part of the team being moulded around Captain Keith Anderson, William Bezdecheck, Claud Rupert, Robert Grigg, Jean Stevens, Bill Marriott, Erwin Baumgarten, and Charles Payne. In the Conference League finals at Claremont the Tech team placed fourth.

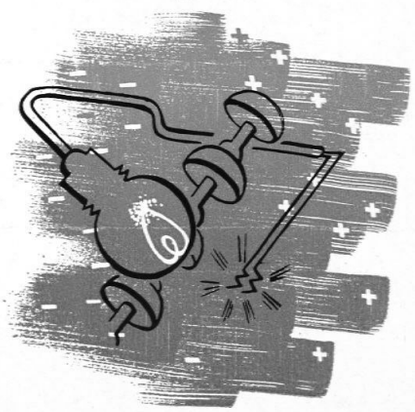
The frosh leather lungers had almost as big a turnout as did the varsity, and managed to take a very close second in the league finals. The yearling team consisted of Densmore, Schneider, Vail, Jerrems, Greenwood, and Ellis.

YOSEMITE SKI TEAM

Three skiers who won their letters last year, several new men, and a few skiers who had improved considerably since last year formed a strong team that defeated all other Southern California teams at the Pacific Coast Intercollegiate Championships at Yosemite, March 3-4-5. The team made a good showing against the smaller schools in the Vanderbilt Races at Donner Summit, and placed fifth in a field including California, Nevada, and Stanford.

First row: Cleary, Woods, Fraser, R. Head, Payne, Second row: B. Head, Munk, Langerud, Harrison.

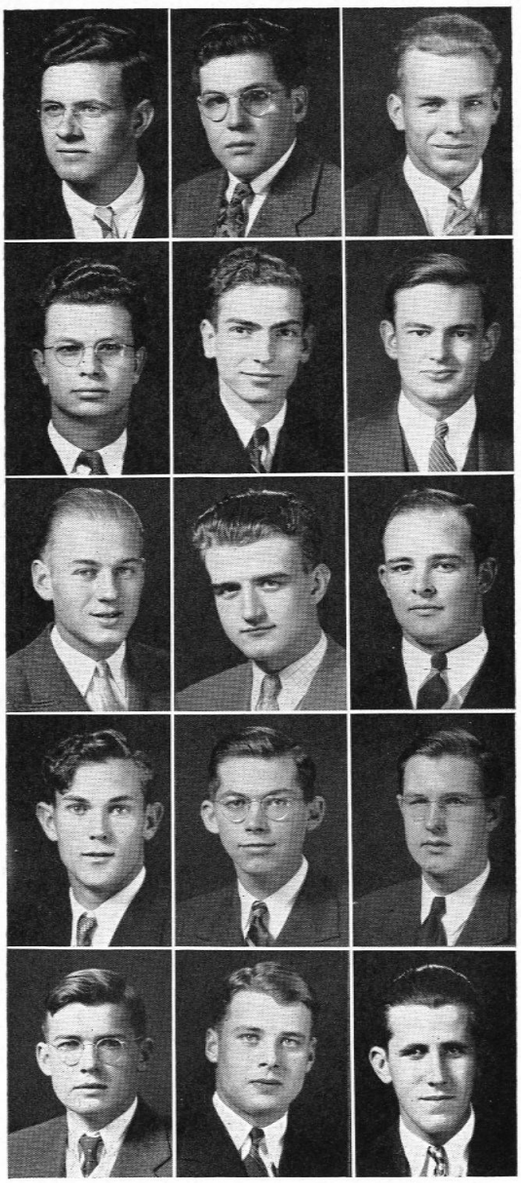
Activities



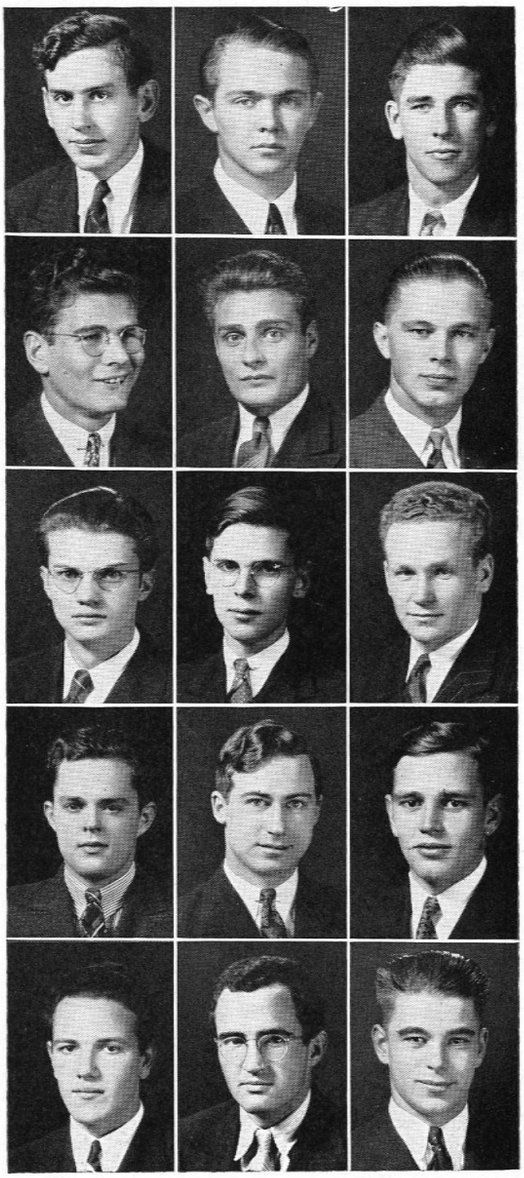
HONOR KEY

The highest honor that the Corporation can bestow upon a member for extra-curricular service is the Caltech Honor Key. To win a Key one must make a total of thirty honor points in the last term of the school year and the first two terms of the next year; a special dispensation being made for seniors.

Honor points are gained by participation in any of the numerous student body activities. The number of points awarded for any given activity is fixed by the Honor Point Committee, and approved by the Board of Directors.

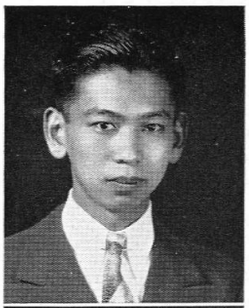


Anderson
Anderson
Beck
Biddison
Campbell
Chapin
Dawson
Foster
Goodmanson
Guillou
Kemp
Lawrie
Lawson
Lee
Longfelder



MacKay
Marriott
McClung
Mickley
Myer
Osborn
Reimers
Root
Stone
Smith
Strong
Todd
White
Widdoes
Walter

TAU BETA PI



Asakawa

Devirian

Green

Kimball

Brown

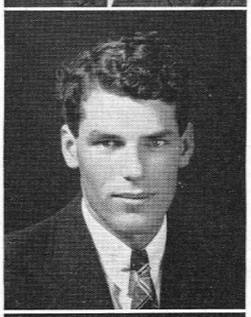
Dibble

Goodell

Kohl

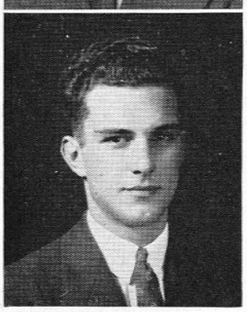
Carstarphen

Frampton



Grigg

Longwell



Collins

Green

Ingalls

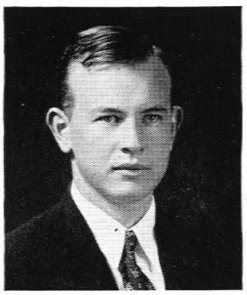
Mackay

Scarborough

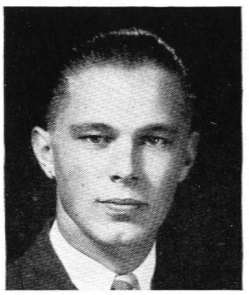
Scott

Smith

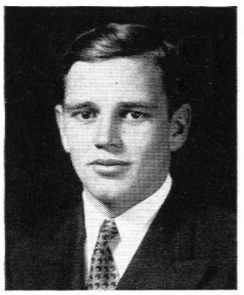
Smith



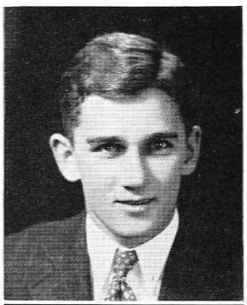
Tangren



Todd



White



MacLeish
Manildi
Mickley
Mills

Nagle
Pond
Roudebush
Ritchey

On the Caltech campus is located the California Beta Chapter of Tau Beta Pi, the national honorary scholastic engineering fraternity established in 1885 at Lehigh University. Each year, selections of members are made from the upper quarter of the senior class and the upper eighth of the junior class. To become a member, a student must participate and show great interest in outside activities as well as be able to excel scholastically. Within the chapter are several of the school's best athletes, and leaders in forensics, dramatics, and publications.

The first group of pledges was taken into the organization in November. An ice skating party was held at the Polar Palace, and in spite of the forced landings, the outing was a success. A grueling month of exacting pledge duties culminated in a fine banquet at the Athenaeum. During the second term, the pledge party was held at a bowling alley. The banquet at the Athenaeum was followed by a talk by Mr. Junian Hines, of the Metropolitan Water District, who was initiated into the Tau Beta Pi that evening. A twenty minute skit was presented by the incoming members, and although it was very bad, the pledges derived much pleasure from presenting it.

The third term saw many social functions. A banquet in Los Angeles at the Clark Hotel was given for the seniors by the alumni association The main social event was the Tau Beta Pi Formal Dance, held in Dabney Hall. An enormous bent, the insignia of the organization, was suspended above the dancers, and lent atmosphere to the evening. A beach party, with dates, was held at the very last of the third term.

Officers for the year were President: Robert White; Vice President: Mark Mills; Corresponding Secretary: Charles Carstarphen; Recording Secretary: Chandler Ingalls; Treasurer: Philip Smith; Cataloguer: Albert Green.

BEAVERS

First row: Lewis, Anderson, Biddison, Goodmanson, Kemp, Lawson, Paul, Lawrie, Brown, Beck. Second row: Strong, Myers, Norton, Carstarphen, Hicks, Stevens, Richards, Axtman, Marriott, Foster, Palmer, White, Walter. Third row: Root, Flint, Steinmetz, Longfelder, Manildi, Widdoes, Dawson.

The Caltech Beavers form an honorary service organization who are by charter limited to fifty men or less. Its aims are to stimulate all Student Body activities, to promote friendly relations between colleges, and to extend all possible courtesies to visitors. Members of the organization may be easily recognized by their sleeveless white sweaters with the Beaver emblem on the front.

These members are Tech men who have done the most outstanding work in promoting school spirit. They consider it their duty to encourage participation in, and attendance at, all Student Body activities and attempt to infuse some of their own spirit for the "alma mater" into the Student Body as a whole. The success of the Oxy bonfire-pajamarino was due to the enthusiasm and hard work on the part of the Beavers in conjunction with the Rally Committee.

VARSITY CLUB

After several years of inactivity, in which nearly all existing Varsity Club members graduated, there has been a promising movement among the few existing members toward the reorganization and the revitalizing of this once powerful campus group. Late in the spring of 1939 this movement was well under way, many new members having been taken into the club, among them many active sophomores. Under the splendid leadership of Cydnor Biddison as president, it is hoped that the club will once again become the most active organization on the campus.

The main purpose of the Varsity Club is to extend and stress the advantages that intercollegiate athletics can give to athletes. The club, with a watchful eye on character, sponsors intercollegiate competition as being one of the most efficient ways of rounding out a man's life.

A small golden pendant, facsimile of the varsity T worn by varsity letter winners, is the distinguishing mark by which the prominent Varsity Club members can be recognized. The fortunate few that are eligible to wear these distinctive T's are elected by the active members of the club from the athletes who have earned a varsity award in a major sport. Senior managers and outstanding minor sports lettermen are the only exceptions to this rule.

The club expects to live up to the standards set in previous years under the outstanding leadership of Cydnor Biddison as president; Dumont Staatz as vice-president; and Lawrence Widdoes as secretary-treasurer.

First row: Parker, Myers, White, Kemp, Osborn, Beck, Biddison, McCreery, Hall, P. Brown, C. Brown, J. Browne, Schneider. Second row: Matthew, Staatz, Small, Goodmanson, Cooper, Skalecky, Walter, Lawson, Sohler, Marriott. Third row: Widdoes, Nagle, Stroud, Crozier, Sullivan, Goodell, Smith, Gewe, Brunner, Hoffman.

THE CHURL

"The Churl" was presented by Pi Kappa Delta in the first term. The play was one of the best which has been given, and it attained record breaking audiences at both its matinee and evening performances.

The play deals with a courtesan who succeeds in securing costly presents from a pompus, but stupid, army captain throught vile trickery. The male lead, Dinarchus, was played by Dwain Bowen, a promising freshman; while the feminine element was portrayed by Phil Smith, an old timer at the art, and Leo Lavatelli, a veteran actor but a newcomer to the field of feminine impersonation. The title role, Stratilax, was played by Gordon Weir, another veteran of the stage; and a creditable performance was also made by Dick Powell, a new man.

The other members of the cast included Wilton Stewart, Alvin Piatt, Ken Stevens, and Wilson Hart.

As usual, the play was directed by Dr. Stanton and Dr. Eagleson. The ingenious makeup and costumes were designed by Mrs. Graham Laing and Mrs. Wallace Sterling, while much credit goes to the hard working stage crew who set up the lighting and scenery.

"If you were to kill—"

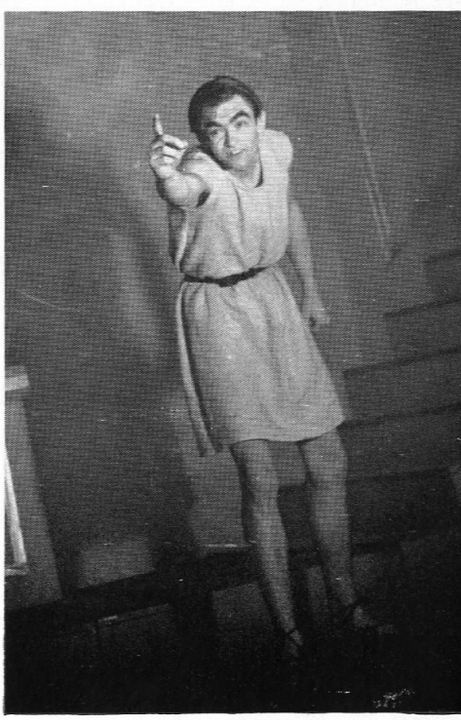
The cast takes time out.

First row: Weir, Hayes, Piatt. Second row: Powell, Lavatelli, Smith, Bowen, Stevens, Hart.

As this book went to press, rehearsals for "The Drummer" had begun. The play was written by Joseph Addison in the early part of the Eighteenth Century and deals with the situation caused by the antics of a "deceased" army officer in an allegedly haunted house, who finally proves himself to be very much alive.

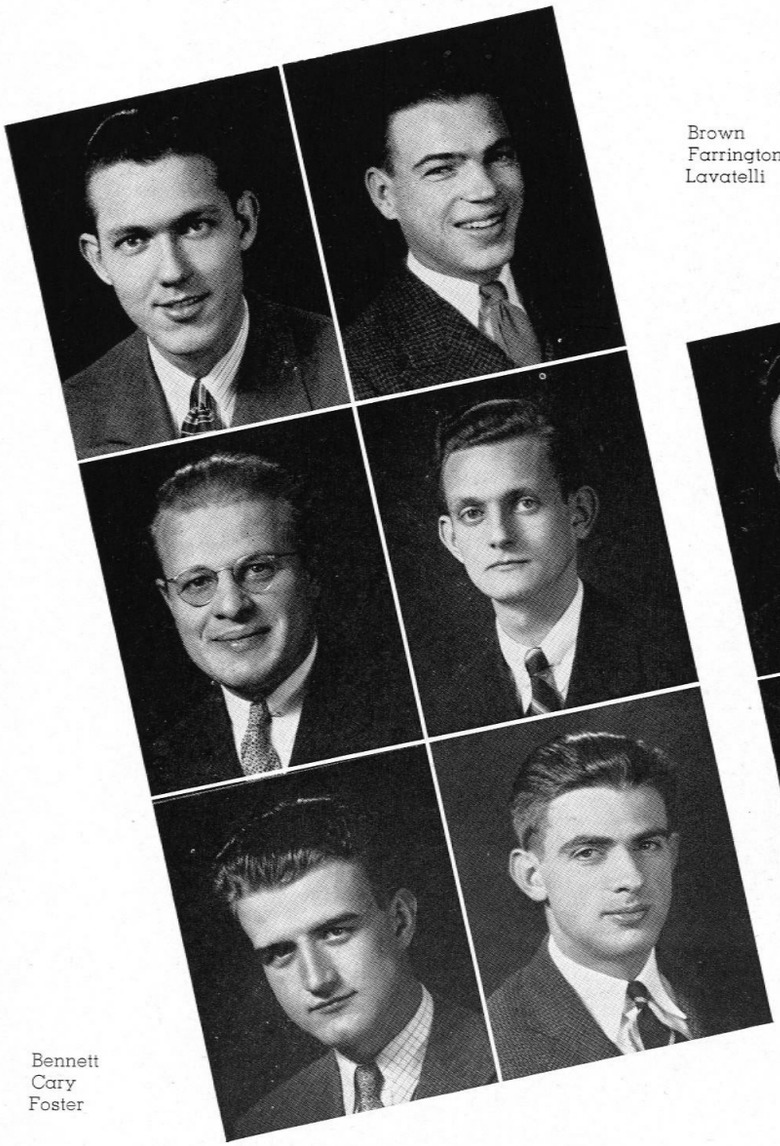
The play is being directed, as usual, by Drs. Eagelson and Stanton and the cast includes the old timers Phil Smith and Gordon Weir as ravishing women and Ray Richards, Stan Rupert, and Dick Powell as male actors. New men in the play include Harry Steels, Myron Pollycove, Gil Hofeller, Joe Trindle, and Boyd Marshall.

In view of the amusing plot, the talented cast, and the able directors, the play promises to be a great success.

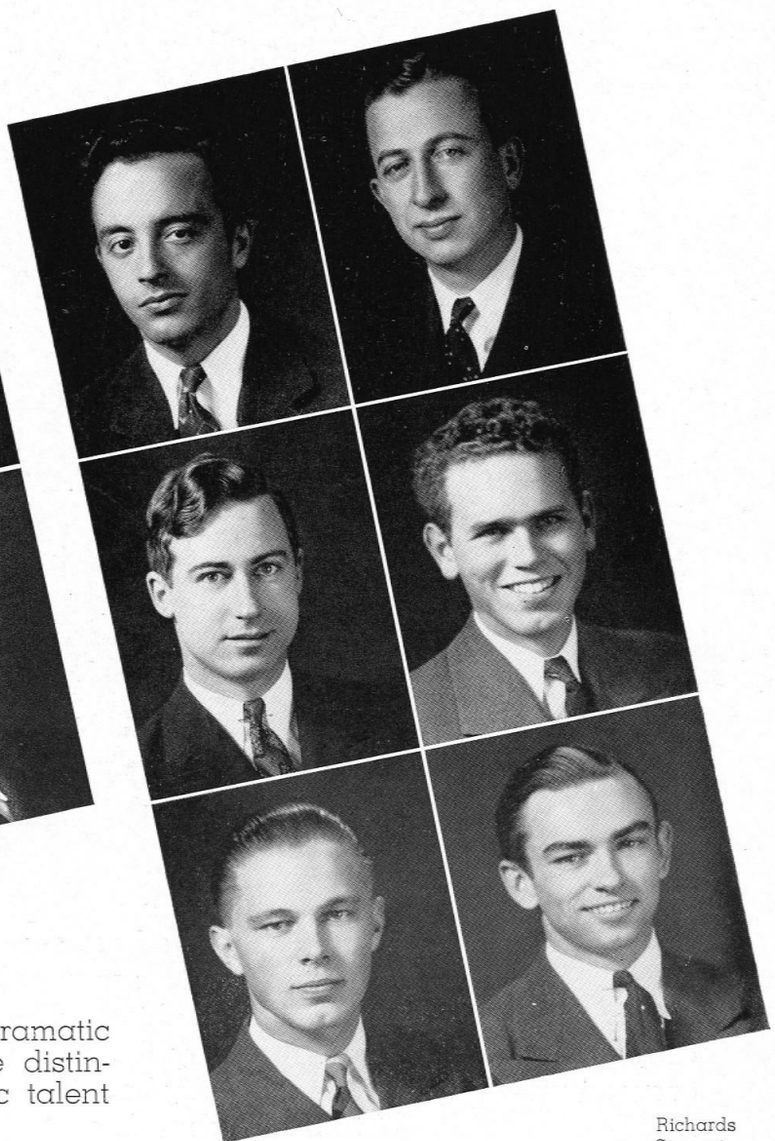


"I accuse you and—"

DRAMA CLUB



Brown
Farrington
Lavatelli



Bennett
Cary
Foster

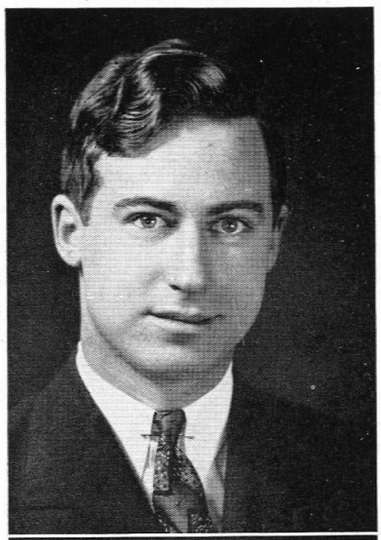
Manildi
Smith
Todd

Richards
Stewart
Weir

The Drama Club is the Tech honorary dramatic society. Members include those who have distinguished themselves either by their dramatic talent or by their work in stage production.

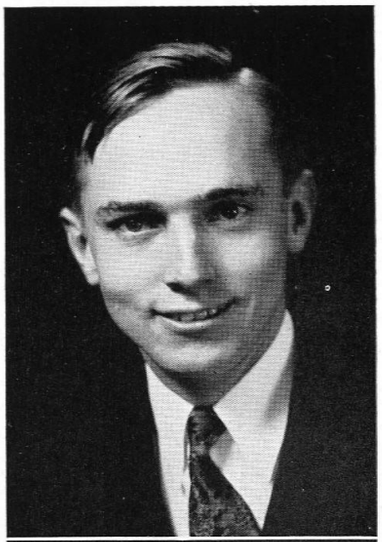
The principal work of the club consists in the presentation of the third term play. As this book is being printed, active preparations are being made for the presentation of "The Drummer"—a play which promises great success.

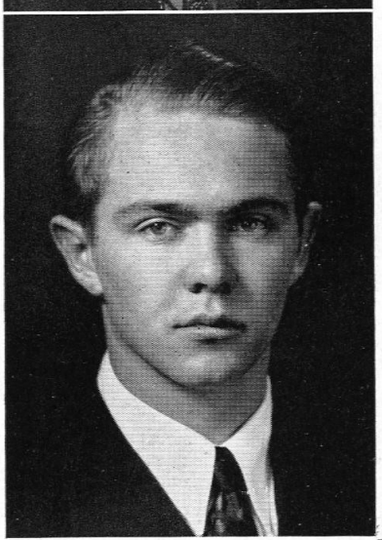
This year's officers are Leo Lavatelli, president; Ray Richards, vice-president; Phil Smith, secretary-treasurer. The other members are John Carey, Joe Manildi, Gordon Weir, George Todd, William L. Brown, Dwight Bennett, Wilton Stewart, Gerald Foster, and Paul Farrington.



Smith

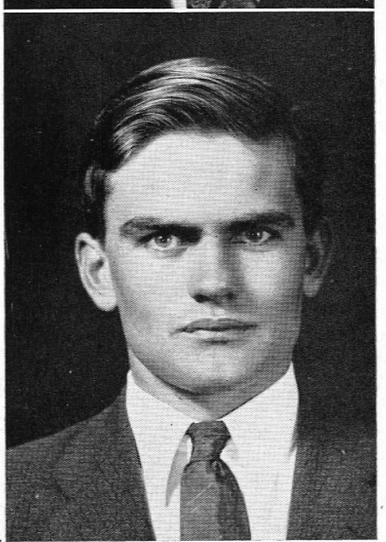
Scarborough





Osborn

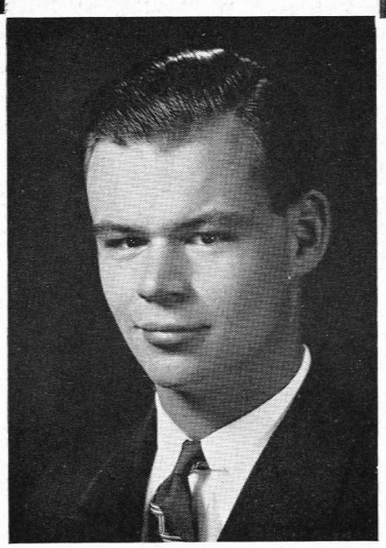
Flint



K

P

D



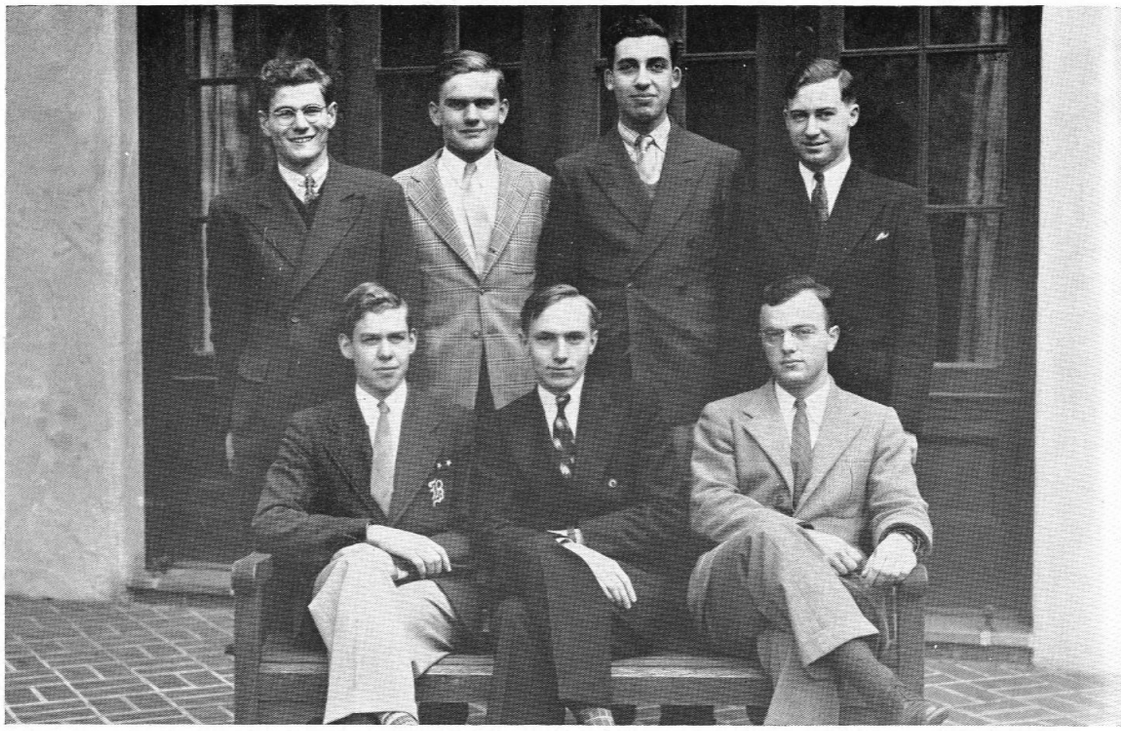
Hayes

The California Gamma Chapter of Pi Kappa Delta is the Caltech branch of the famous national forensics honor society. Its members are carefully chosen from those who have distinguished themselves in the field of public speaking and debate; and although it comprises a small group, it is one of the most active organizations on the campus.

Aided by Pasadena J. C., the chapter was host at this year's Pi Kappa Delta regional debate tournament, at which schools from all over the western United States were represented.

The Pi Kappa Delta Chapter also sponsored and managed as usual this year's annual classical play, "The Churl"—a play which achieved remarkable success. Proceeds from the play were used to defray the expenses of debate trips.

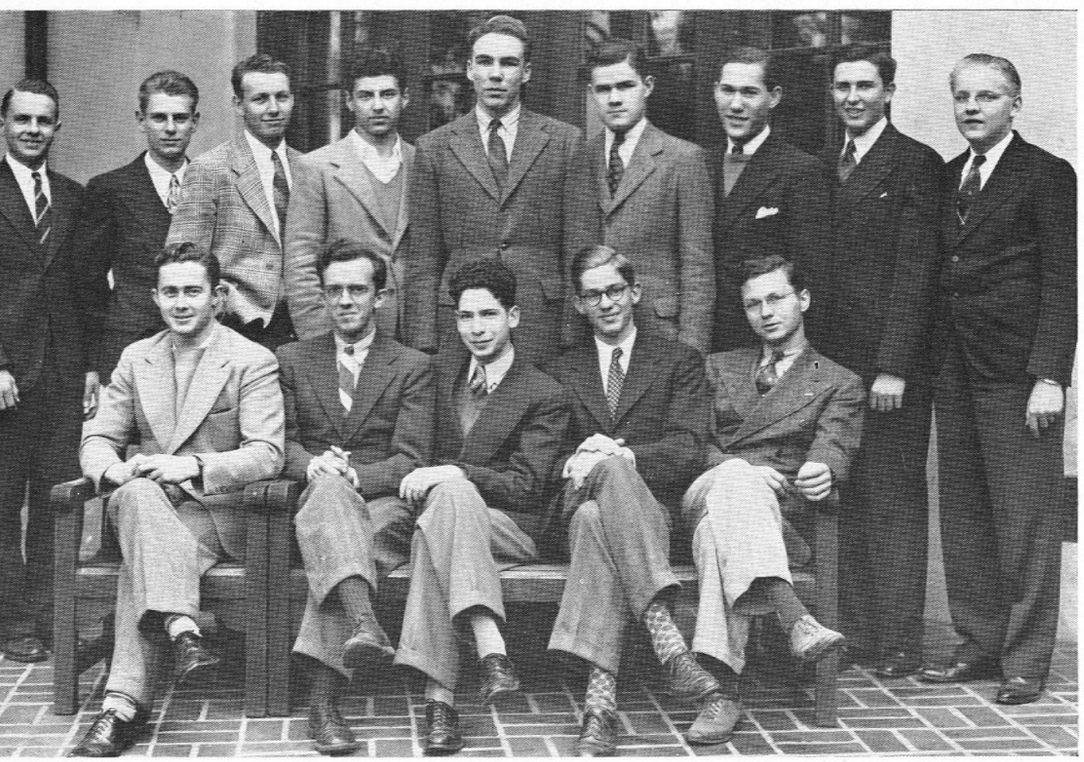
First row: Ingalls, Scarborough, Truesdell. Second row: Marriott, Flint, Kohl, Smith.



The Caltech debate squad this year showed great promise but was unsuccessful in obtaining many decisions. The outstanding characteristic of most of the teams was not oratorical fluency but economic soundness of argument. The governmental policy of "Pump Priming" was the topic argued, and a sincere effort was made to discover its true effects.

Under the coaching of Dean Untereiner and the managing of Robert Buss, the squad participated in the tournaments at Bakersfield, Redlands, Pasadena J. C., Stockton, Linfield, and Caltech. The team of Robert Buss and Clifford Truesdell represented Caltech in more than thirty-five debates and succeeded in placing at Redlands and at Stockton.

A course in the fundamentals of debate for those without previous experience was offered the Freshmen by Dean Untereiner and John Price.



First row: Hicks, Hendrickson, Grossberg, Allen, Paul. Second row: Blight, Densmore, Wilson, Miller, Stone, Staley, Mayer, Steele, Marshall.

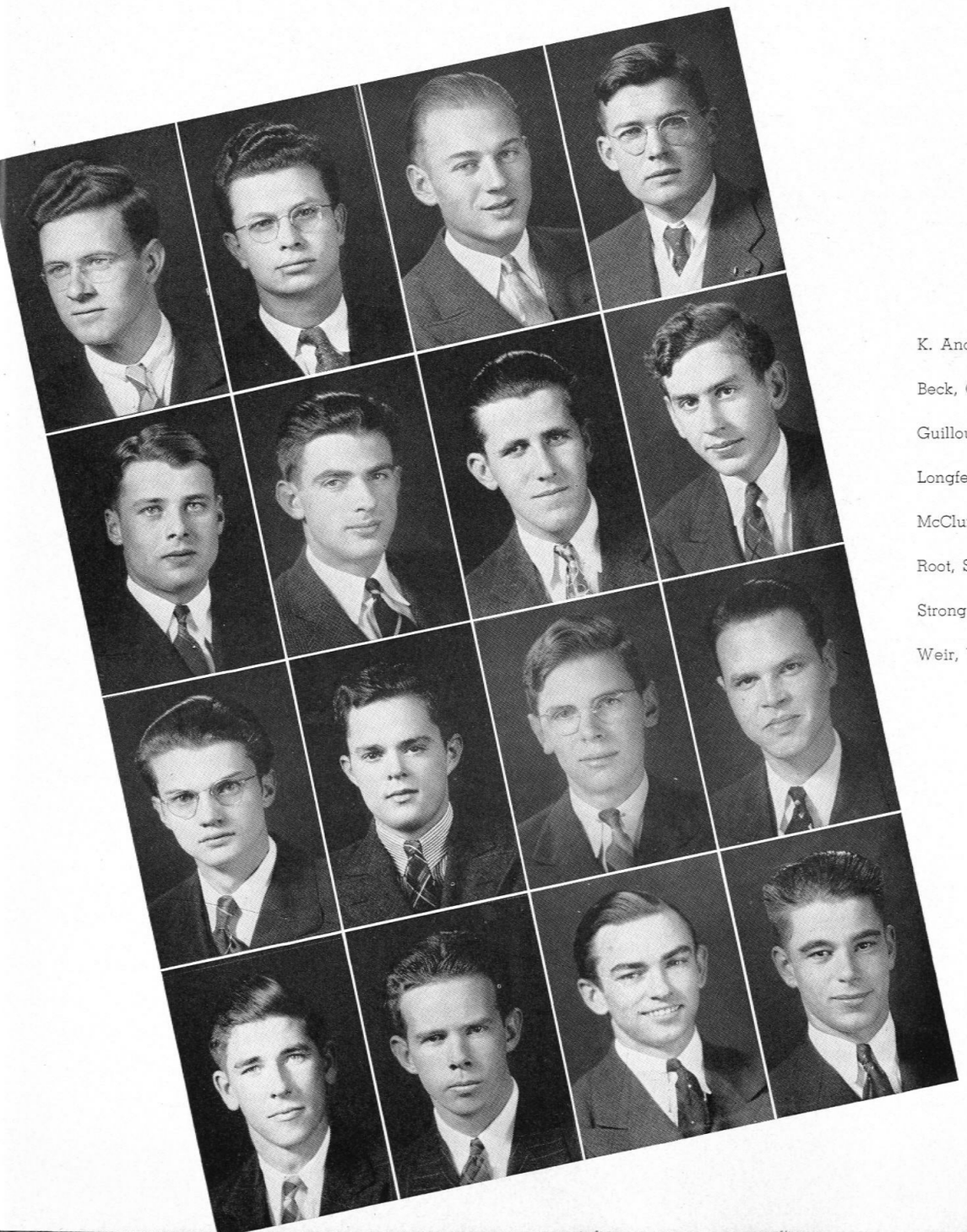
D E B A T E

PRESS CLUB

The Press Club is composed of those men on the campus who have distinguished themselves in the field of journalism. Membership is elective and the club, by charter, is limited to twenty members.

This past year was an especially active one for the Press Club. It sponsored a dance in the second term which was one of the most successful social events of the year. The members also edited a special Exhibit Day edition of the California Tech, of which more than twenty thousand copies were distributed free to the public.

Officers were: Duane Beck, president; Keith Anderson, vice-president; Al Guillou, secretary; and Harold Mickley, treasurer.



K. Anderson, N. Anderson

Beck, Campbell

Guillou, Lavatelli

Longfelder, MacKay

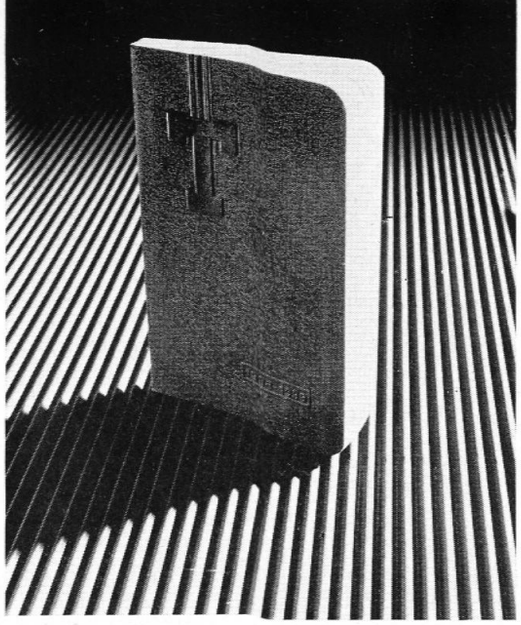
McClung, Mickley

Root, Smith

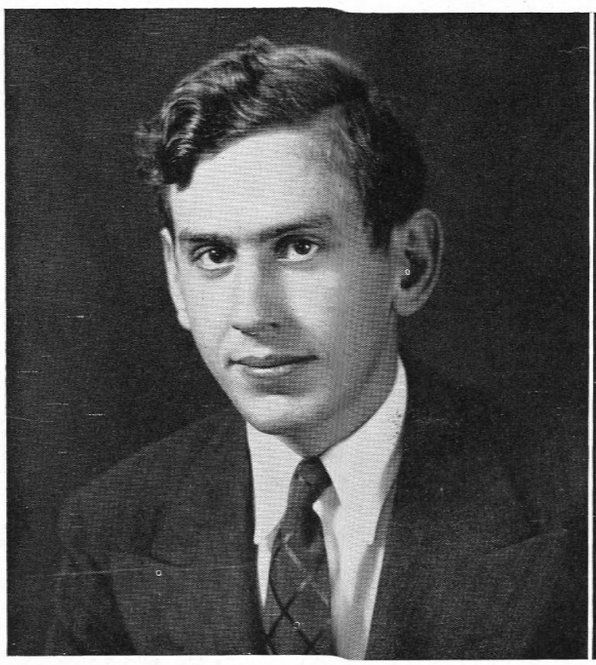
Strong, Veysey

Weir, Widdoes

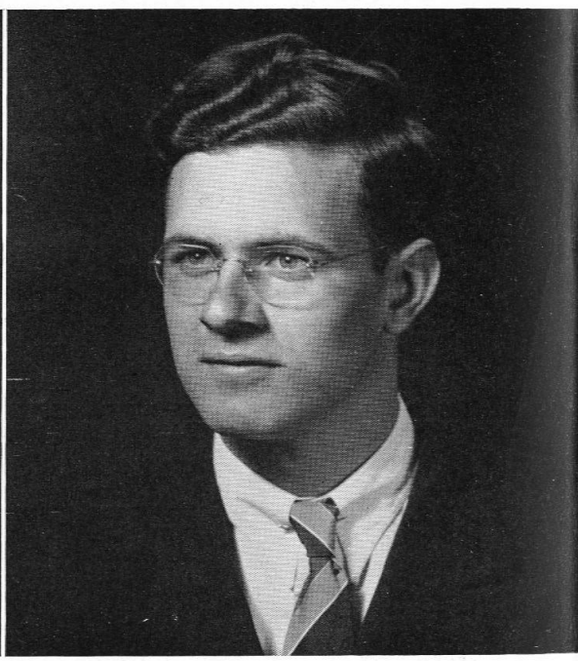
LITTLE T STAFF



1938-1939 Little T



Wallace MacKay



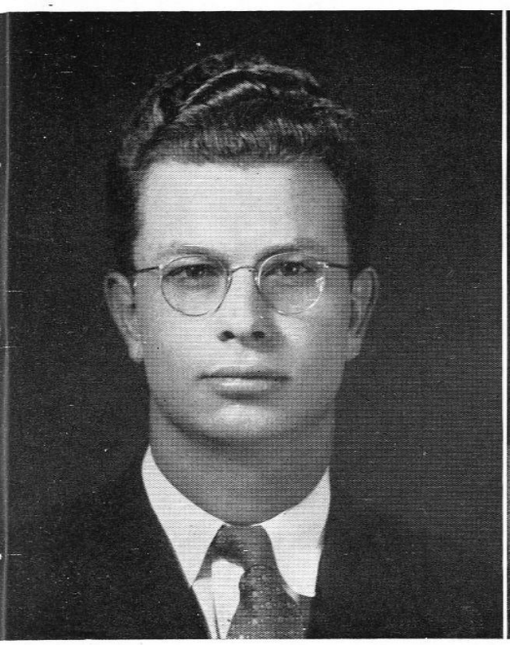
Keith Anderson

The Little T, campus handbook, is issued once a year at fall term registration —and serves as Frosh "bible" for newcomers to Caltech.

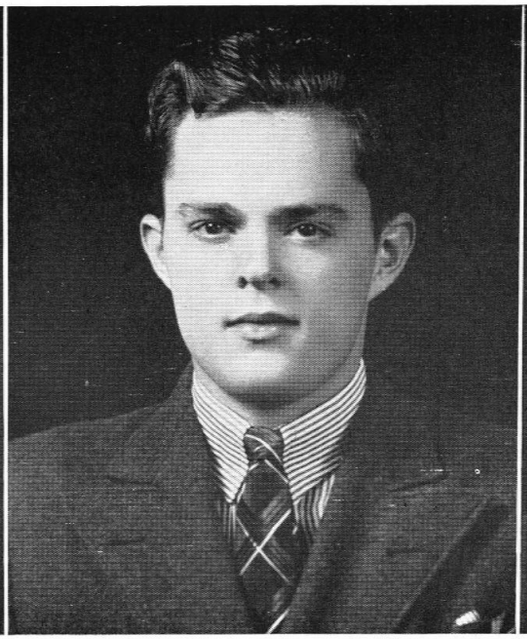
The handbook, one of the three campus publications, contains a complete student directory, digest of activities and athletics, indexed list of local advertisers, and a city map.

Editor and business manager for the Little T are chosen near the end of each year by the Board of Directors, and they complete the work on the publication during the summer, in time for incoming freshmen to take their copy to camp with them.

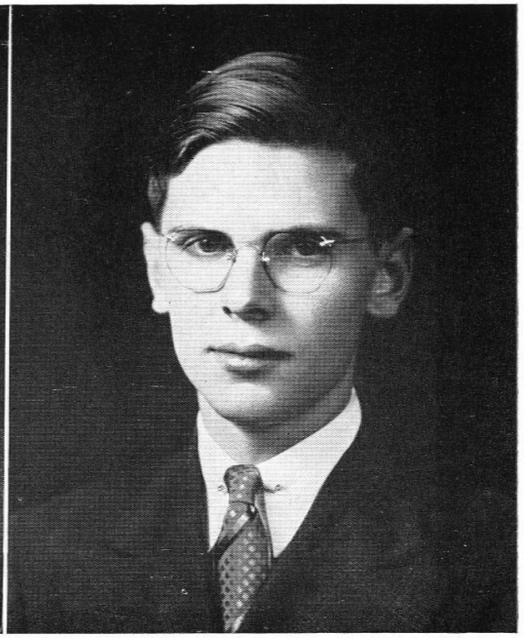
N. H. Anderson, Bus. Mgr.



Harold Mickley, Editor



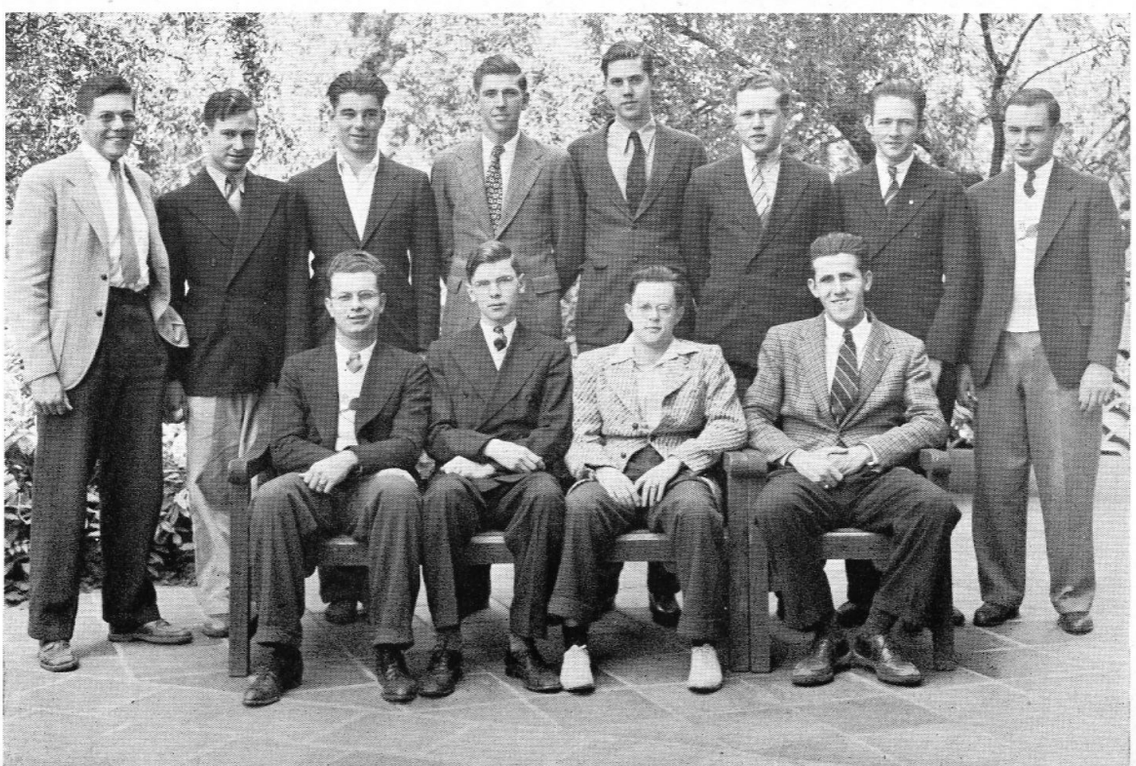
Arthur Root, Editor



BIG T STAFF

The creation of a destinctive yearbook is the dream of every annual editor. The staff of the 1939 Big T have tried to make this year's edition an outstanding one. We hope that our efforts will please you, the reader, and will justify the confidence you have shown in us.

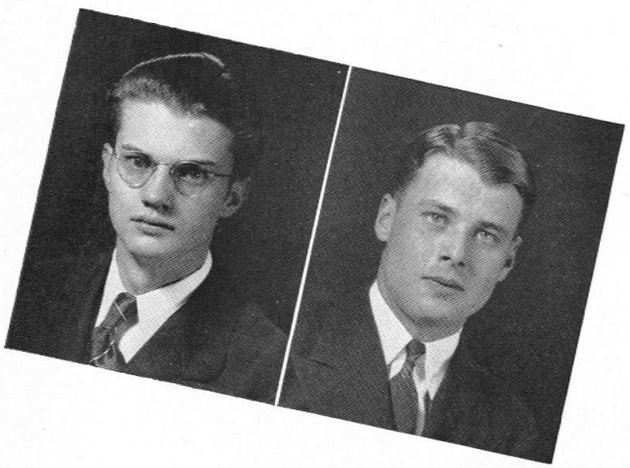
Front Row: Anderson, Root, Mickley, Longfelder. Back Row: Chapin, Smith, Widdoes, Strong, Thayer, Bowles, Pickles, Lawrie.



CALIFORNIA TECH

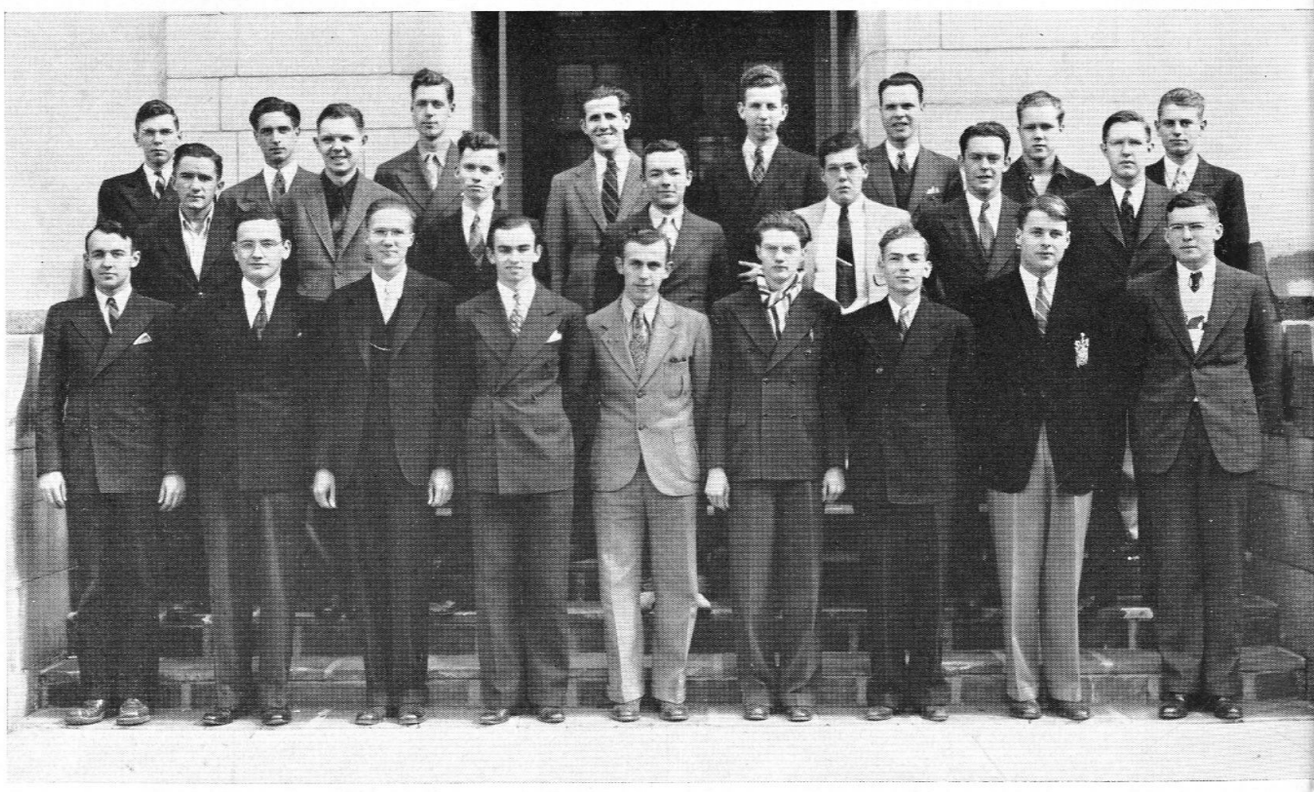
The salient feature of Editor McClung's reign was the organization of a strong staff for the future editor. Thorough news coverage was provided by Syd Gold, news editor, and his assistant, Paul Kepler. Paul Smith edited the feature page, which was marked by the appearance of the official campus stooge, "Willowby", written by Gordon Weir. Herb Strong, sports editor, and his assistant, Bill Chapin, followed Tech teams, and technical editor, Glyn Frank-Jones, Tech scientists. George Barber covered the social beat.

Al Guillon, business manager, and Fred Hoff, assistant editor, provided the editor with unusually capable support.

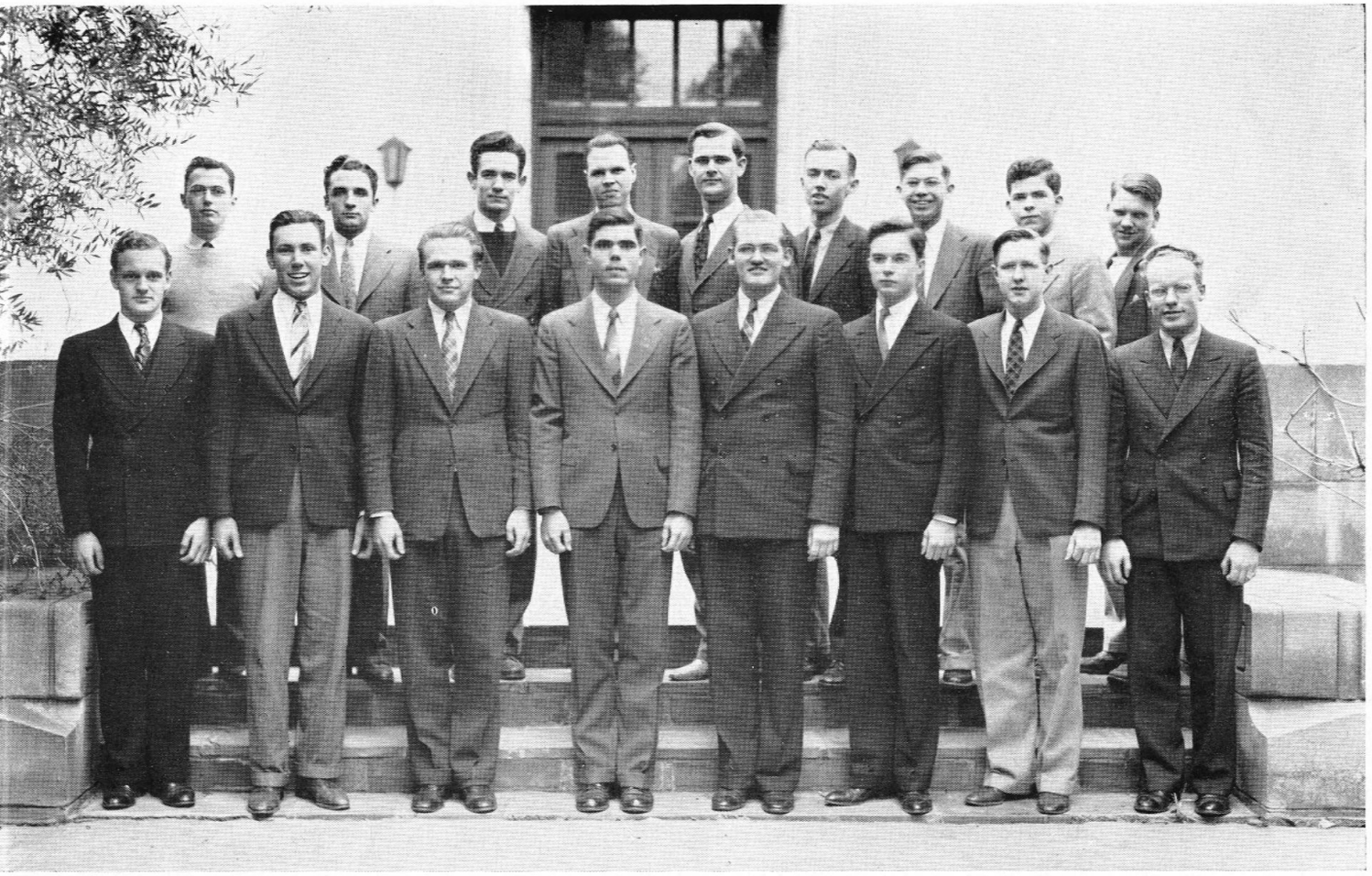


McClung, Editor

Guillou, Business Manager



First row: Maxwell, Frank-Jones, Williamson, Weir, Tielrooy, McClung, Dawson, Guillou, Campbell. Second row: Birkhead, Billmeyer, Hoff, Gold, Chapin, Harr, Lee. Third row: Root, Davis, Kepler, Longfelder, Veenhuyzen, Smith, Bowles, Densmore.



First row: Barber, Schneider, Sullivan, Loeffler, Hill, Lee, Price. Second row: Compton, Bramhall, Smith, Griswold, Hill, Goodmanson, Hedrick, Van Camp.

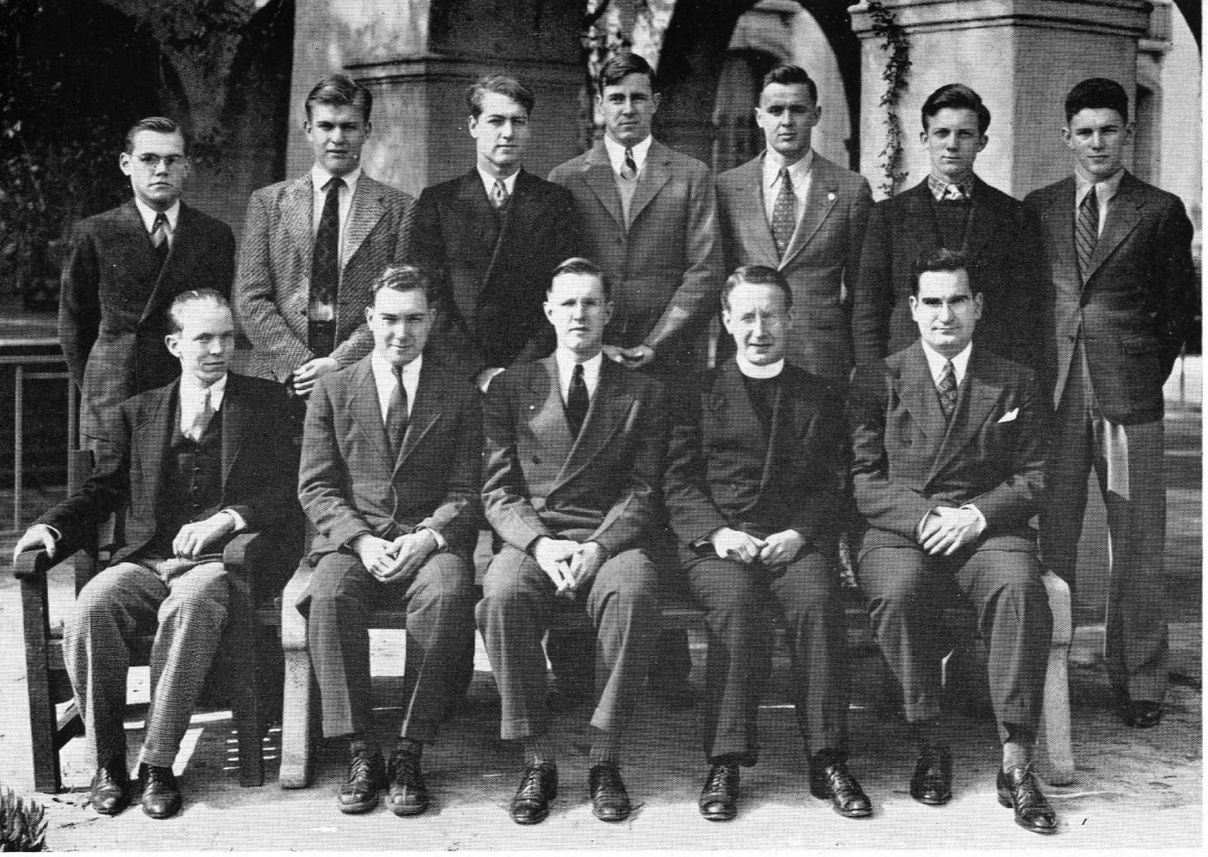
Y. M. C. A.

During the two years since the "Y" first felt John Price's excellent leadership, the "Y" has made most rapid strides.

This year the Freshmen have responded marvelously after getting a good start with Frosh Camp and tea dance. During the term the Freshmen have overflowed the weekly Frosh luncheons, attended two retreats, and enhanced other "Y" activities with their cooperation.

Successes appear in this year's presentation of religion, education and service. With the cooperation of campus religious groups the students have been given the advantage of Christmas and Easter Vespers, a series of religious luncheons, and two Bible study groups. Also presented were several co-educational discussions, the Walrus Club, Peace Day, sex lectures, Far Eastern Service campaign, and intercollegiate conferences. Service to students included loans, part time jobs, book exchange, adding machine, typewriters, and books and magazines.

The officers who served this year were: Edwin Sullivan, president; Donald Loeffler, vice-president; George Barber, secretary; and Willard Snyder, treasurer.

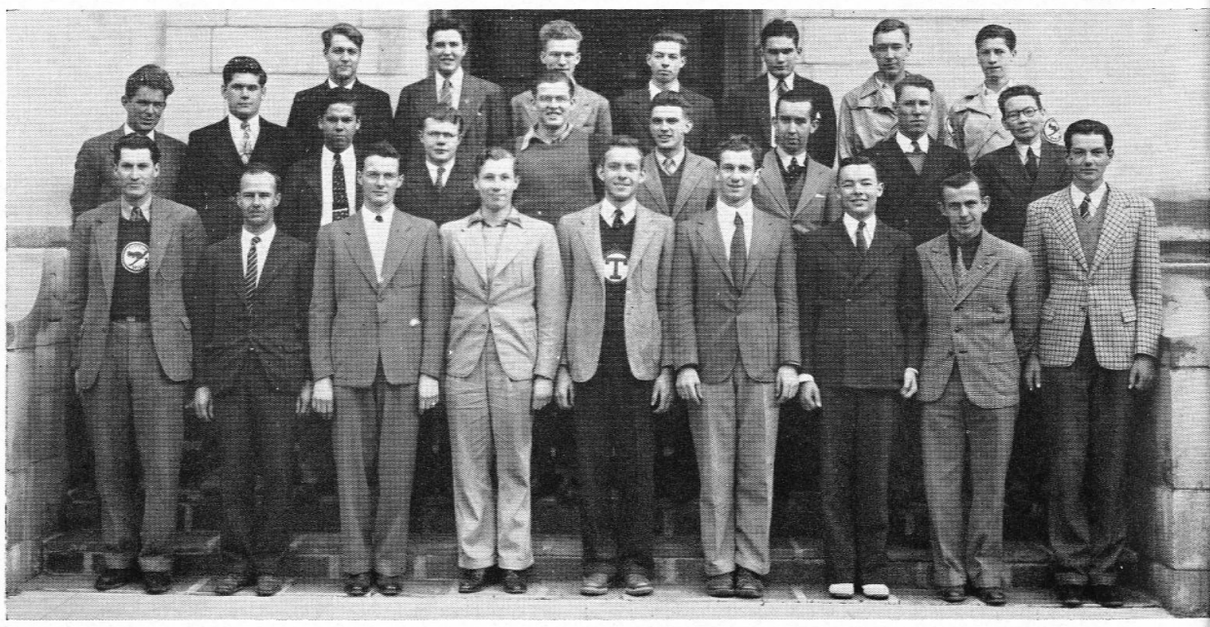


First row: Kupfer, Spooner, Lee, Fr. O'Shea, Wood. Second row: Buss, La Bombard, Glover, Browne, Hogan, Maguire, Conner.

NEWMAN CLUB

The Newman Club is an association of Catholic students, meeting every two weeks in the second and third terms, to discuss religious questions and to acquaint the various members more intimately with each other. Under the understanding guidance of the chaplain, Fr. O'Shea, and the capable leadership of its hard-working president-secretary, Curtis Lee, the Club this year enjoyed an interesting and fruitful series of lectures by outside speakers.

SKI CLUB



First row: Garner, Kiehle, Paul, Langerud, Payne, Munk, Gold, Tielrooy, Ridland. Second row: Bowles, Head, Hunt, Alcock, Hall, Lavatelli, Kybal, Fraser, Harrison. Third row: Glover, Steele, Cooper, Pichel, Head, Woods, Cleary.

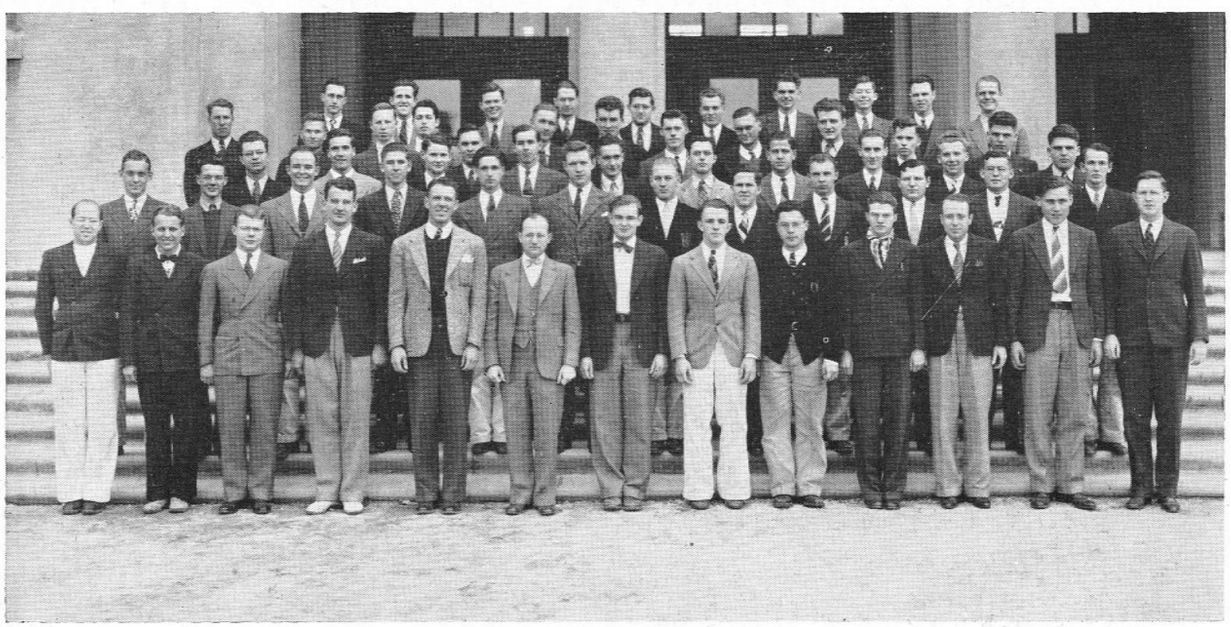
General campus interest in Tech's newest sport was one achievement of the Ski Club during its second season. Activities started during the summer at a work party at Snow Valley. At the end of the season, President Chuck Payne presented the Lilly Interhouse Ski Trophy to Dabney House, which easily won both of the Interhouse meets. The season ended with a banquet in honor of Mr. and Mrs. John Lilly, who were visiting in Pasadena at the time of the second Interhouse meet.

A. S. M. E.

The American Society of Mechanical Engineers student branch at Tech is open to junior, senior and graduate mechanicals. Membership offers several outstanding advantages. Students are brought into contact with industry in Southern California and actual working engineering problems through the medium of field trips. The student branch is invited to attend the monthly dinner meetings of the Los Angeles chapter of the parent society and, thus, come in contact with experienced men in their prospective field, which provides inspiration at the time and may prove exceedingly useful in the future. Student membership in the society is the easiest and most economical path of entrance to Junior Membership and a continuation of these privileges following graduation. In addition, each member receives a monthly copy of "Mechanical Engineering" during the school year, and opportunity is offered for competition for several sizeable money prizes by presentation of technical papers at the annual Southwestern Division Student Conference in the spring.

This year's members have been more than usually active. Some sixty men parted with the nominal membership fee in September, and they have shown much interest in the field trips conducted; these included inspection of the aircraft carrier "Lexington," Hancock Oil Co. refinery, Firestone Tire and Rubber Co., and Aluminum Co. of America. Some seventeen men went to the convention in San Francisco where they attended the technical sessions and inspected the World's Fair. At one of the dinner meetings in Los Angeles, more than thirty Tech men attended which was a record attendance of student members at a parent society meeting.

Much credit and appreciation goes to Dr. Clark who has been the faculty advisor. The two groups of semi-annual officers for the last year were: Donald Lawrie and William Norton, chairmen; William Lawson, Herb Strong, Charles Carstarphen, Harry O. Davis, N. H. Anderson, and Robert Spielberger aiding at the positions of vice-chairman, secretary, and treasurer.



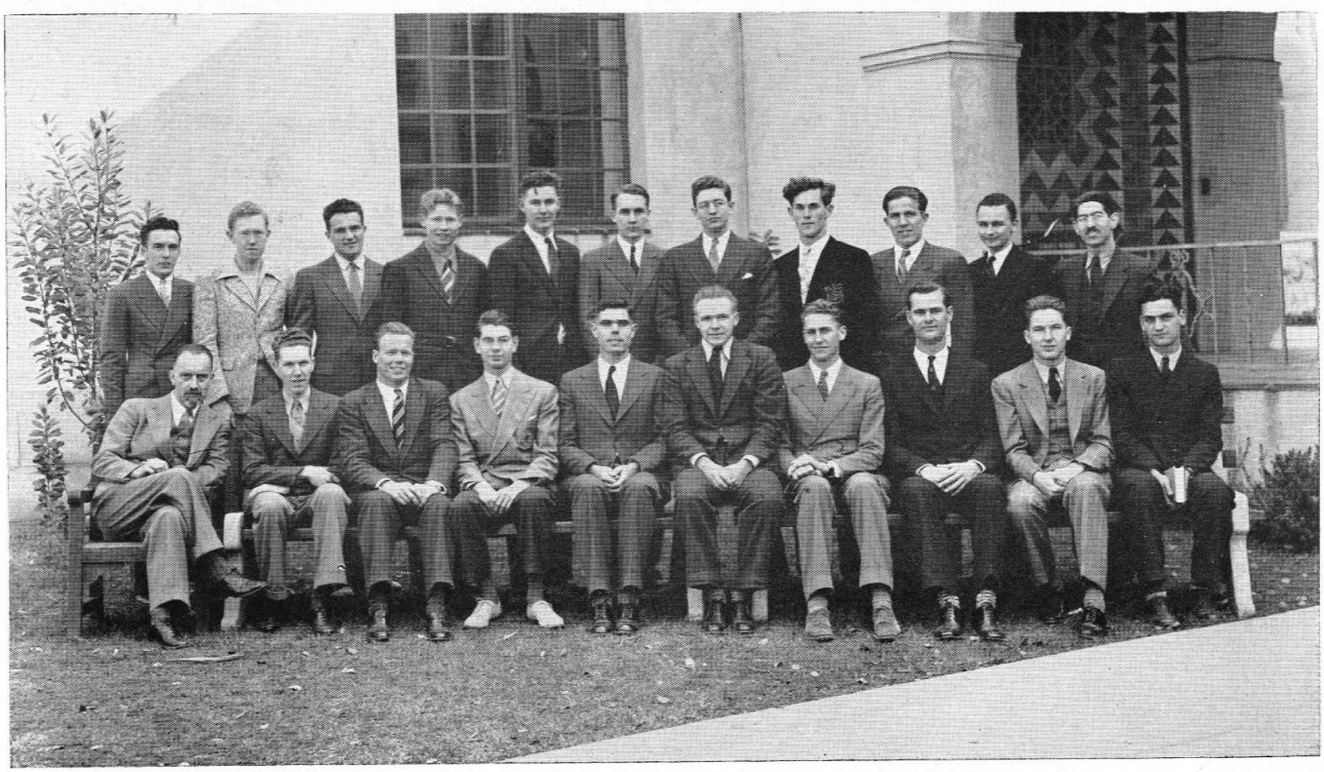
First row: Hofeller, Oldson, Alcock, France, Carstarphen, Professor Clark, Lawrie, McCreery, Samuel, McClung, Waymen, Adams, Lee. Second row: Payne, Paul, Lawson, Strong, Davis, Bragg, Beck, Palmer, Palmer, Dickerson, Campbell, Schrader. Third row: Anderson, White, Nickerson, Mayer, Goodin, Anderson, Compton, Hall, Glassco, Glassco, Whittlesey. Fourth row: Frazer, Smith, Brose, Walker, Crozier, Goodell, Partch, Worchester, Foster, Hoff, Whittlesey. Fifth row: Connelly, Longfelder, Oakley, Hiatt, Brown, Kemp, Crawford, Goodmanson, Smith, Spielberger.

A. S. C. E.

The Caltech student chapter of the A. S. C. E. has completed another year of educational activities—activities which acquaint the civil engineering student with modern engineering practice, and with the practicing engineer.

With the kind and able assistance of Mr. Harry Dennis of the Southern California Edison Company as contact member for the group, the students were able to make a number of inspection trips in addition to the frequent meetings held on the campus. The student members also have the opportunity of meeting the distinguished members of the Los Angeles chapter of the society at their monthly meetings to which the students are invited. Each year the Los Angeles chapter members are guests of the junior chapter on the Tech campus for their May meeting.

The officers for the student chapter this year were Edwin Sullivan, president; Robert Haussler, vice-president; Roy Beard, secretary; and Willard Snyder, treasurer.



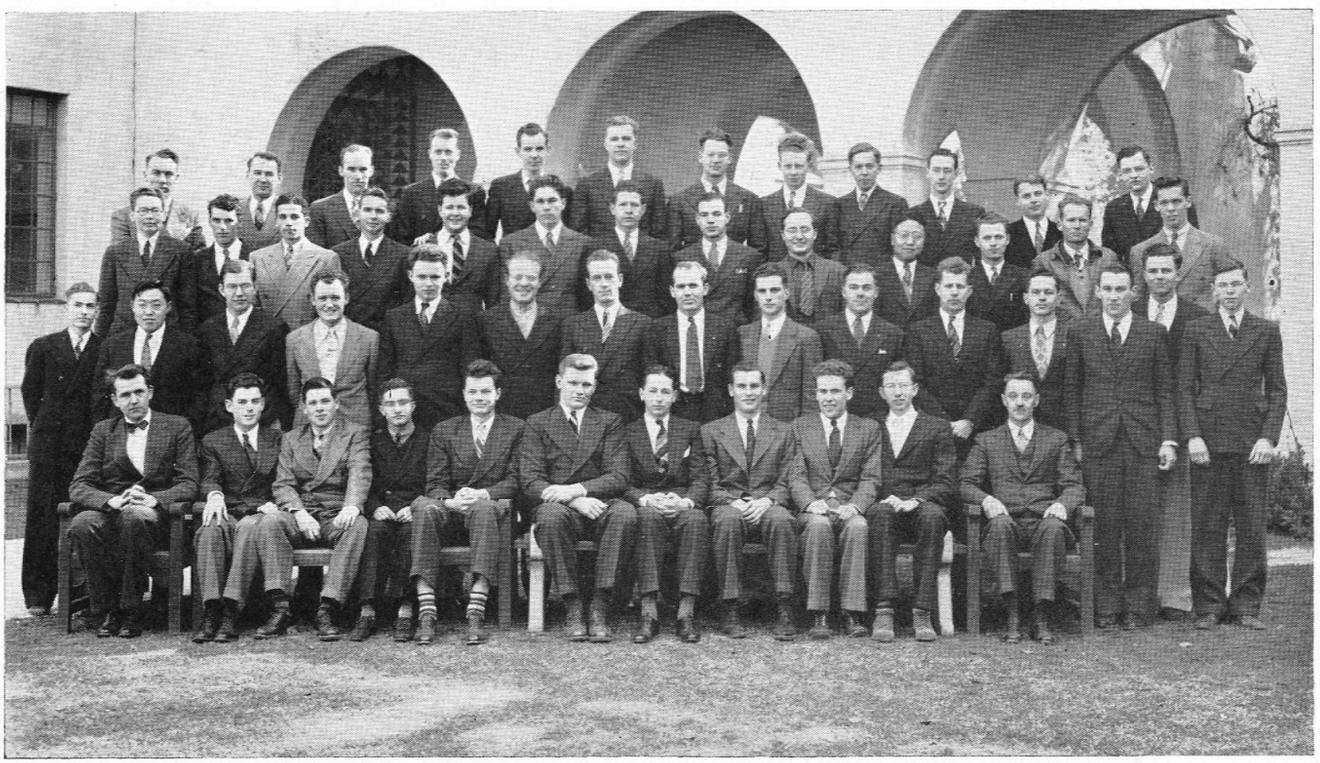
First row: Professor Martel, Beard, Kuttler, Beller, Sullivan, Snyder, Haussler, Griswold, Jongeneel, Jacobs.
Second row: Ropp, Ritchey, Bradshaw, Smith, Gewe, Guyton, Vetter, Biddison, Hofmann, Spaulding.

A. I. E. E.

In an attempt to supplement the students' engineering education with a well rounded technical program of interesting industrial activity, this year's Student Branch of the American Institute of Electrical Engineers under the able guidance of its student counselor, Professor F. C. Lindvall, managed to present a program of no less than thirty interesting field trips and speakers. Getting off to an early start the Branch, headed by Chairman David Sherwood, and assisted by Vice-Chairman Walter Diehm, and Secretary-Treasurer Carl Schneider, immediately enrolled junior and senior electrical engineeing students practically one hundred percent.

A considerable number of power equipment installations were inspected, which included the Edison Company's steam and diesel plants and, of course, Boulder Dam. Among other fields investigated were electric motor manufacturing, railroads, battleships, air conditioning, new transformer design, cable manufacturing, telephone systems, sound reproduction, new elevator design, film processing, geophysics, oil refining, radio studios, and economics in industry.

This year Tech played host to U. S. C. at the annual joint U. S. C.-C. I. T. Section Meeting held at the Athenaeum, May 9, 1939. Tech men presenting papers were Engelder and Pullen.



First row: Professor Lindvall, Stevens, Brewer, Zukerman, Diehm, Sherwood, Schneider, Kimball, McKinlay, Sandiford, Professor Maxstadt. Second row: Dawson, Tomiyasu, Keyser, Powell, Pullen, Carey, Hannon, Green, Collins, Wagner, Daams, Casserly, Merrick, Larson, Root. Third row: Harrison, Grigg, Alonso, Nieswander, Janssen, Wilson, Sullivan, Brown, Green, Tao, Weinstein, Stevens, Fischer. Fourth row: Unholtz, Tonaff, Mouat, Rideout, Morgan, Steel, Hoyt, Carson, Lelmaugh, Connelly, Guillou, Hardenburgh.

CHEMISTRY CLUB

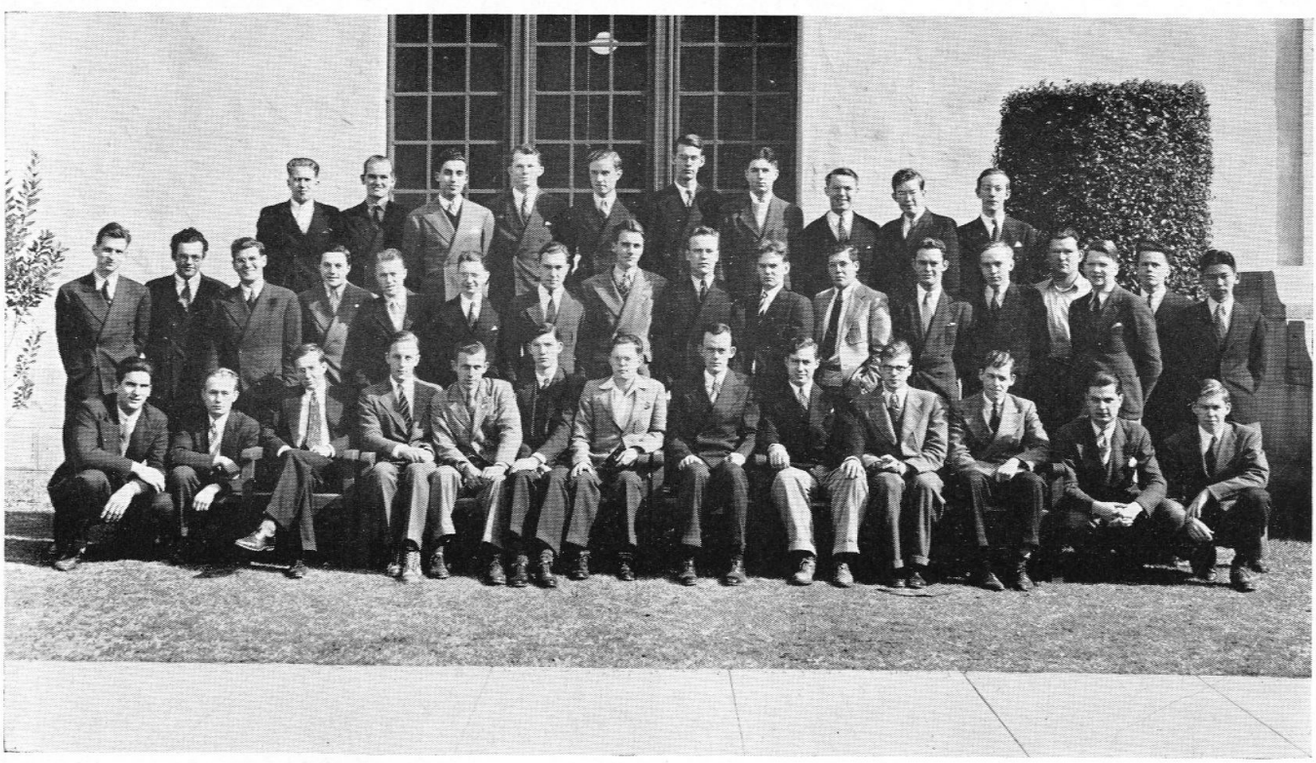
The Chem Club at Caltech has been organized as an independent society for a number of years for the benefit of Chemistry majors, especially upperclassmen. Last year it became an organized unit of the Student Affiliates of the American Chemical Society, and in this, the first full year of affiliation it has become one of the most active of the A.C.S. groups in the country.

The activities of the Club have been varied. It has had a considerable group of excellent, well known speakers at its meetings, has taken a large number of field trips to various industrial plants in the Los Angeles region climaxed by the annual trip to Trona, near Death Valley, to see the potash and borax plant there, and held its annual banquet.

Besides these normal activities, the Club has sponsored a journalistically excellent but financially unsuccessful magazine under the editorship of James Watson, made contacts with the personnel departments of several eastern chemical companies and collected a small library of their pamphlets, and sponsored a meeting of undergraduates chemists of all Southern California colleges. Considerable interest has also been shown in the monthly meetings.

This large increase in the activities of the Club has been largely due to the leadership of Robert Kyte, president, and Dr. Arnold Beckman, sponsor, seconded by the other officers: Ervine Baumgarten, first vice-president; Philip Smith, second vice-president; Bertram Scarborough, secretary; and Howard Craft, treasurer.

First row: Parker, Sargent, Paul, Frampton, Tielrooy, Craft, Mickley, Kyte, Smith, Baumgarten, Brown, Axtman, Ingalls. Second row: Crawford, Love, Marriott, Brewer, German, Kluge, Spooner, Smith, Harper, Crane, Chapin, Harr, Scarborough, Buchzik, Van Camp, Robertson, Asakawa. Third row: Billheimer, Loeffler, Kohl, Longwell, Routt, Elliott, Corcoran, Watson, Freehafer, Thiele.

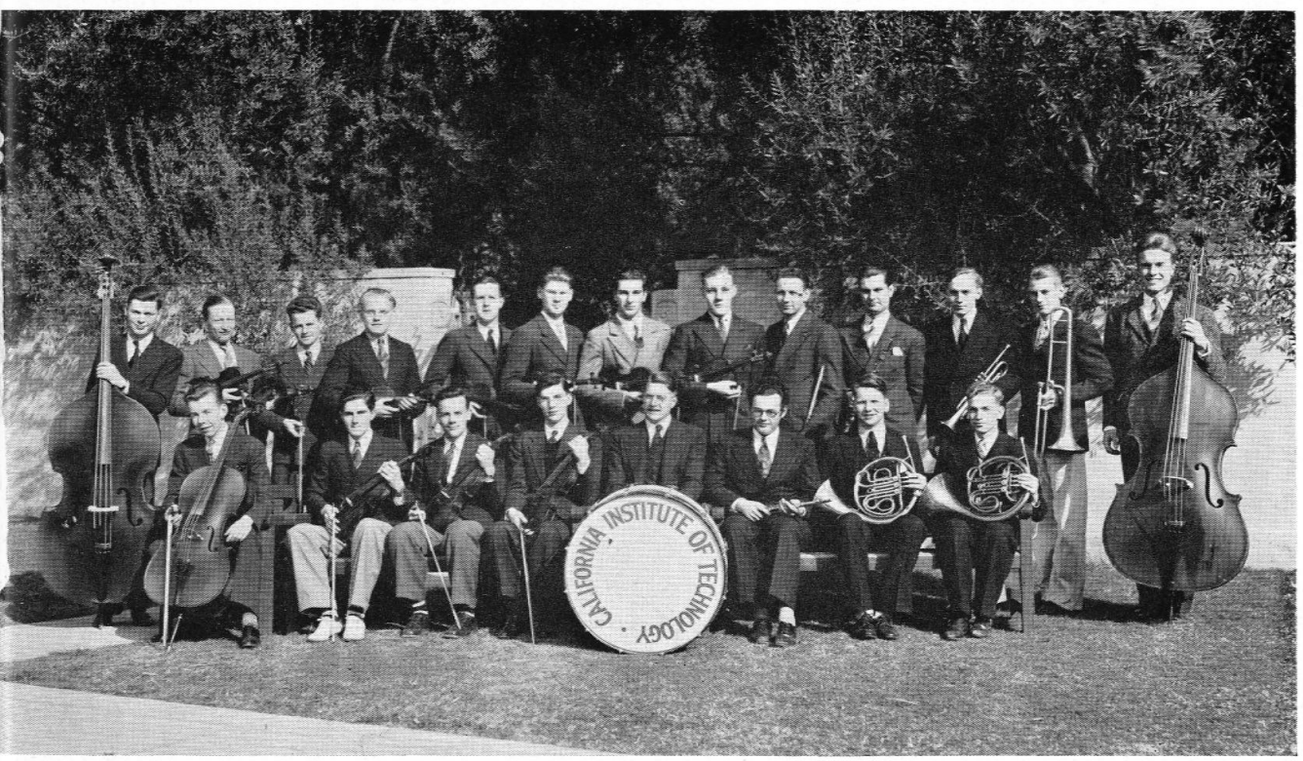


ORCHESTRA

The Cal Tech Orchestra functioned this year under the directorship of Leon V. Metcalf. Rehearsals were held weekly in the practice room in the old dormitory. Several successful appearances were made by the Orchestra in conjunction with the Glee Club, the most notable performance being that given at the Gold Shell Concert. These public concerts are always well attended and are given a high rating by the residents of this community. As usual, their regular assembly concert was presented and met with high praise from the attending students.

The primary aim was not, however, to prepare for public performance. It was, rather, to give advanced music students an opportunity to profit by and enjoy playing of concert type music.

The group, consisting of about thirty men, operated under the leadership of Mr. Metcalf, director; assisted by Volney Rasmussen, president; Bernard Love, assistant director; and John Brockman, manager.



First row: Oechsli, Rhyne, Makepeace, Craft, Mr. Metcalf, Love, Van Camp, Dawson. Second row: Jones, Trindle, Given, Marshall, Lee, Ayers, Lakos, Kyllonen, Wilson, Axtman, Scarborough, Densmore, Matthew.

First row: Pearson, Knight, Taylor, Axtman, Scarborough, Freehafer. Second row: Foster, Dickerson, Haupt, Richards, Jongeneel, Trindle, Van Camp.

BAND

Again, under the dynamic leadership of Andre L. Strong, the Band enjoyed another highly successful season. Membership was the largest in years. Attired as usual in orange shirts, the Band did much to set aflame that spirit which is so much a part of college life.

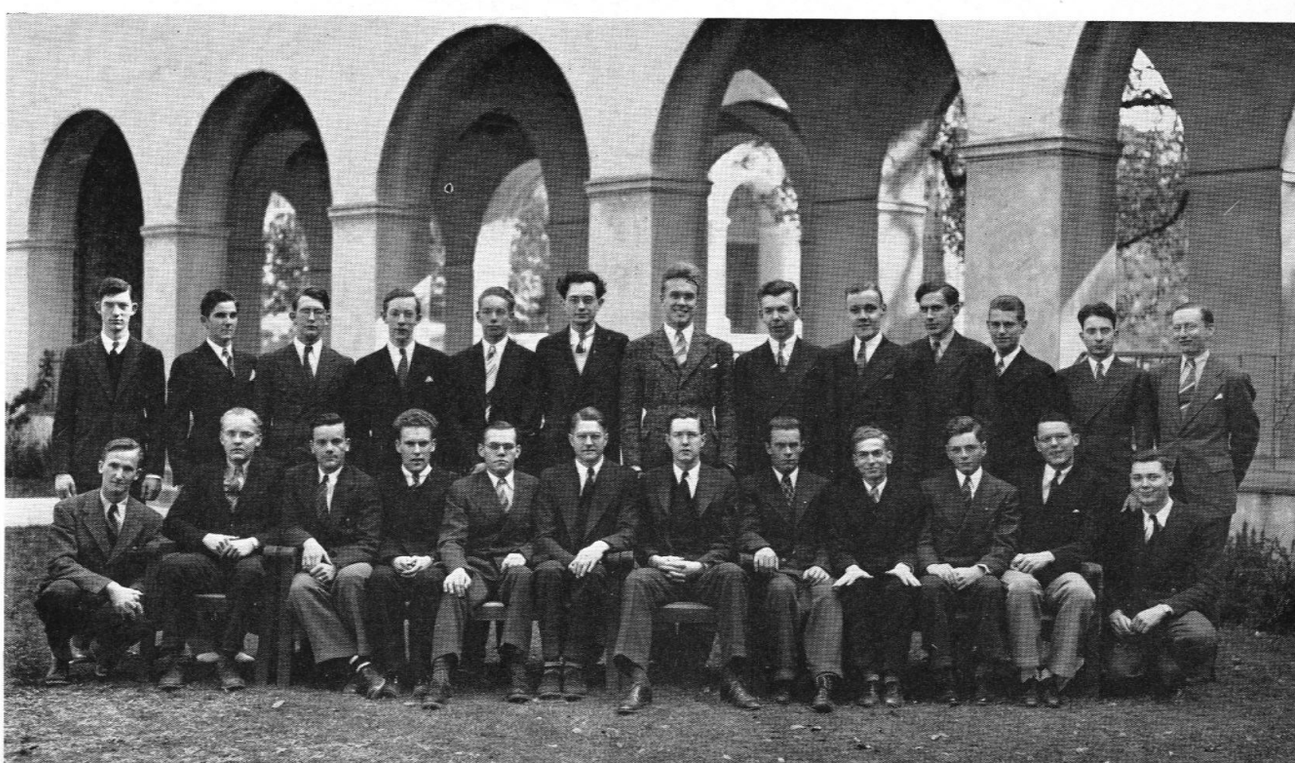
As always, appearances were made at all home games in the Rose Bowl, and in addition a bus was chartered for the trip to the game with Pomona. Other appearances included the rallies in Culbertson Hall, the pajamarino, the election activities, and the New Year's Tournament of Roses Parade. The season was concluded with a Monday assembly in Culberton, at which a very entertaining program was prestned.

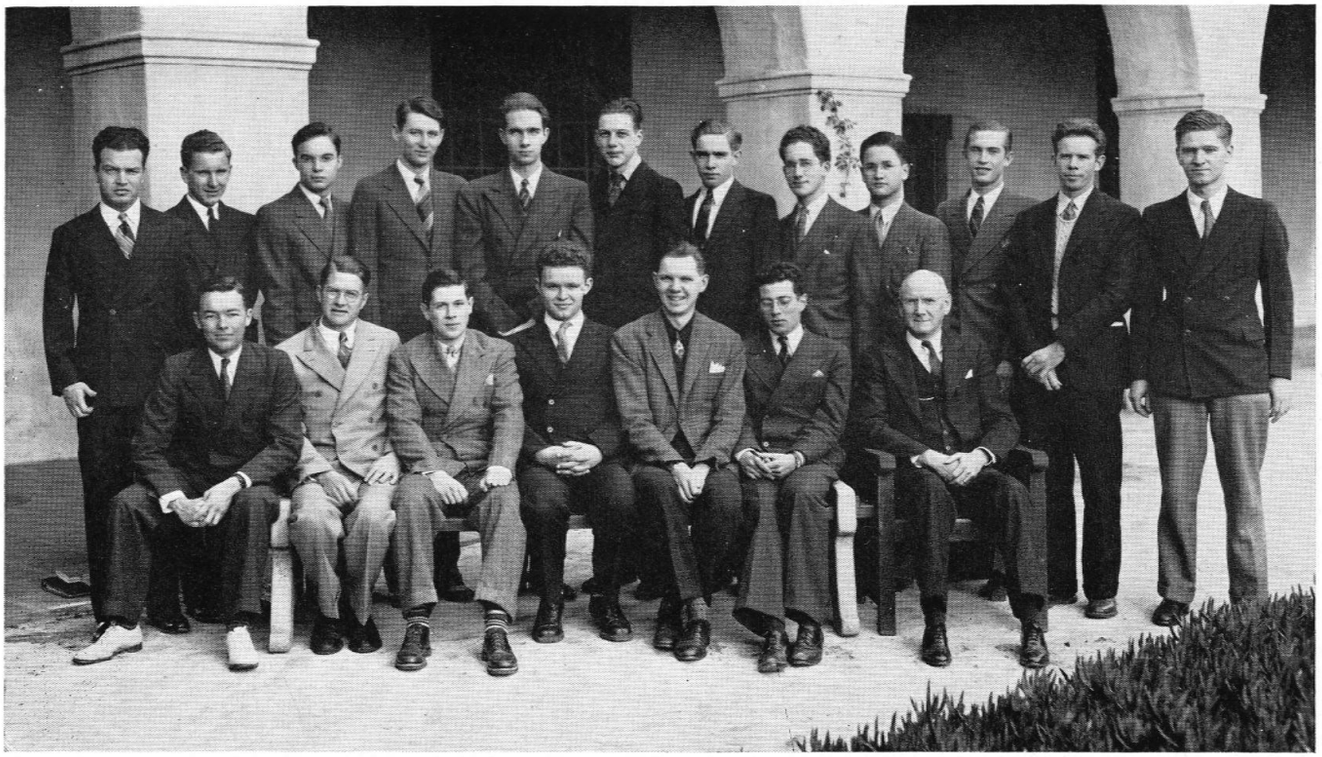
Lee, Van Camp, Craft, Matthew.

The Glee Club, under the inspired direction of our new composer-conductor, Mr. Leon Metcalf, has reached a new high point of excellence, with some thirty members in regular attendance. First of a number of engagements came a blackface minstrel show in the December 5, Monday assembly. Outstanding for the spring term was the appearance at Pasadena's Gold Shell. Officers for the year were Curtis Lee, president; Lawrence Baldwin, secretary; and Robert Harris, librarian.

GLEE CLUB

First row: Curtis, Marshall, Makepeace, McKinley, Buss, Mr. Metcalf, Lee, Levet, Dawson, Kennedy, Watson, Jones. Second row: Craft, Rhyne, Harris, Johnson, Mader, Baldwin, Matthew, Oechsli, Kyllonen, Mackay, Densmore, Trauerman, Trindle.





First row: Gold, Mr. Metcalf, Brewer, Pullen, Billmeyer, Wahrhaftig, Professor Thomas. Second row: Englander, Hobbs, Hill, Rinker, Hovey, La Forge, Holser, Turner, Price, Hance, Veysey, Bishop.

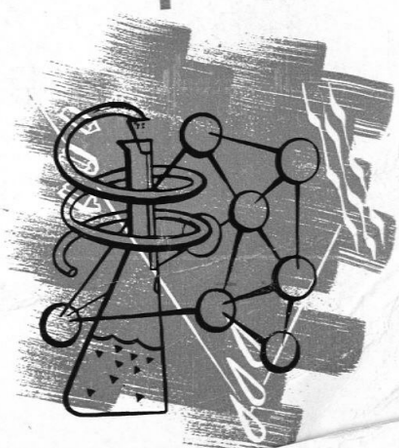
MUSICALE

Growing rapidly in its second year, the Cal-Tech Musicale has expanded from a small group of students playing classical recorded music for their own enjoyment, to one of the most popular entertainment sources on the campus. Drawing music lovers from Pasadena and the surrounding areas, the Musicale presents each Sunday night of the school year, a program of recorded masterpieces, given in the restful atmosphere of Dabney Lounge. At these concerts well known musicians, conductors and critics act as commentators to give brief discussions or interesting sidelights on the music played.

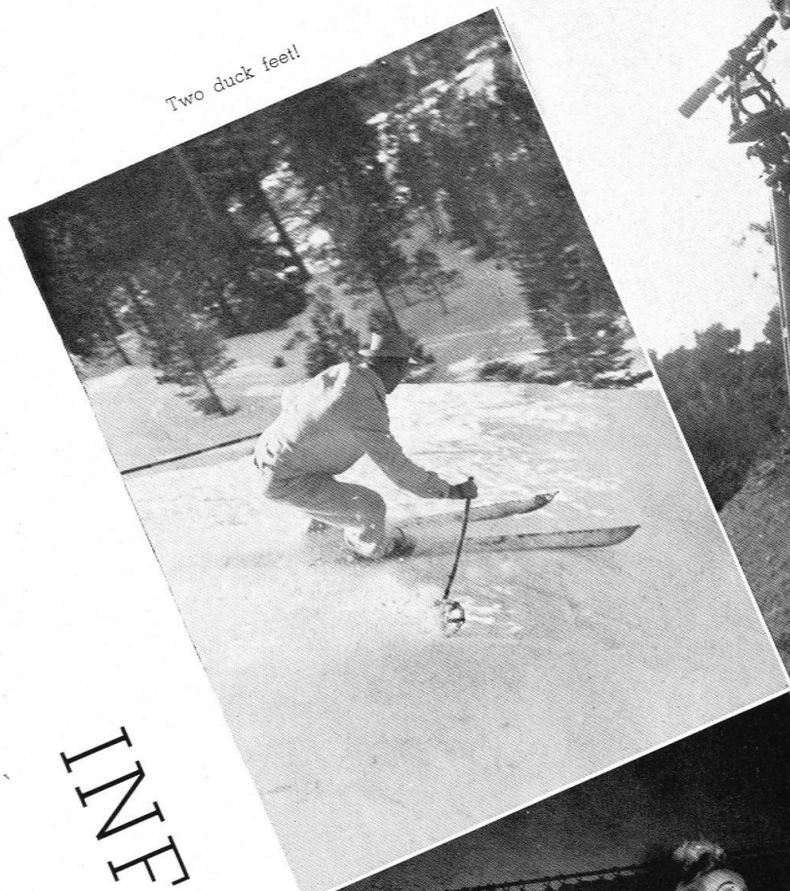
It was in large measure due to this series of concerts that Cal-Tech was presented by the Carnegie Corporation of New York, a collection of one thousand fine recordings, a library of scores of books on every musical subject, and costly reproduction equipment, the gift being valued at about three thousand dollars. This equipment is now used by the Cal-Tech Musicale, and has proven to be a great improvement over the student owned machines relied upon before its arrival. It has provided a wide variety of music, suitable for all occasions.

Alex Brewer has succeeded Keats Pullen as president of the Musicale, Fred Billmeyer and Rolfe La Forge are business and program managers, respectively, and Clyde Wahrhaftig heads the record committee. The Executive Committee is open to all students; and the faculty advisors are Professor Thomas, Dr. Maxstadt, and Mr. Metcalf.

Campus Life



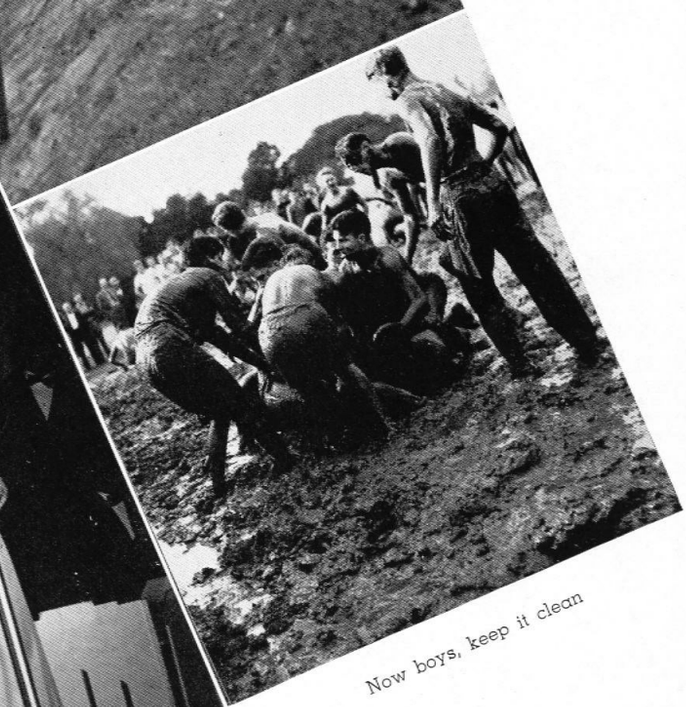
INFORMAL SHOTS



Two duck feet!

And a railroad is born!

Dot Cordray charms



Now boys, keep it clean

McCarthy's rival

Prodigal returns

Anderson looks it over

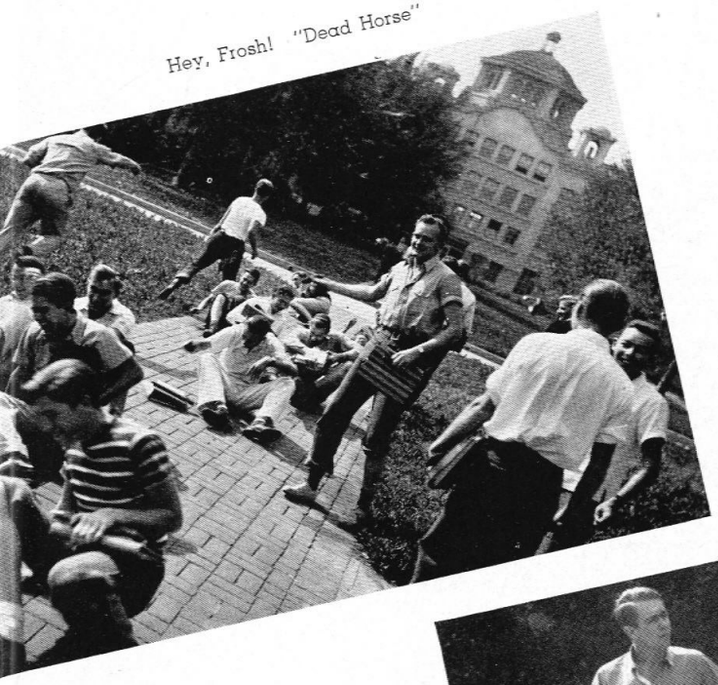
Listen and learn!

Happy? Guess so!

Gee, stiff shirts 'n all

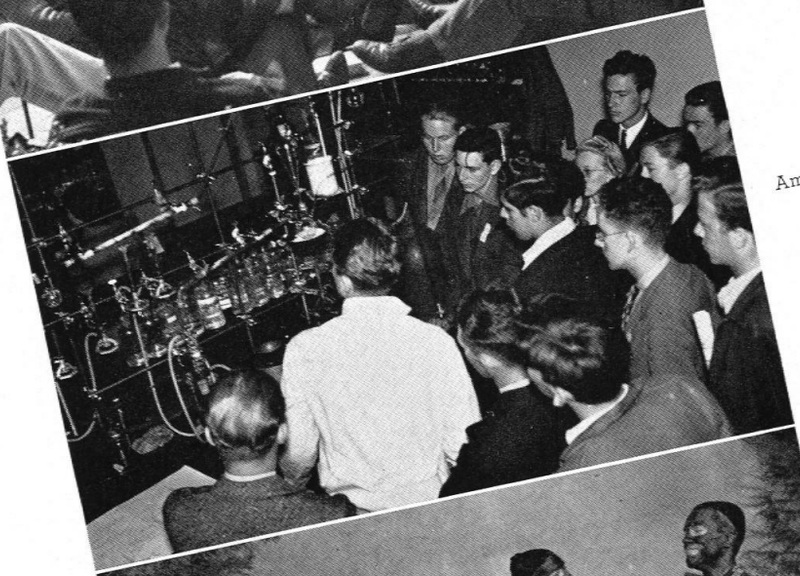
INFORMAL

SHOTS

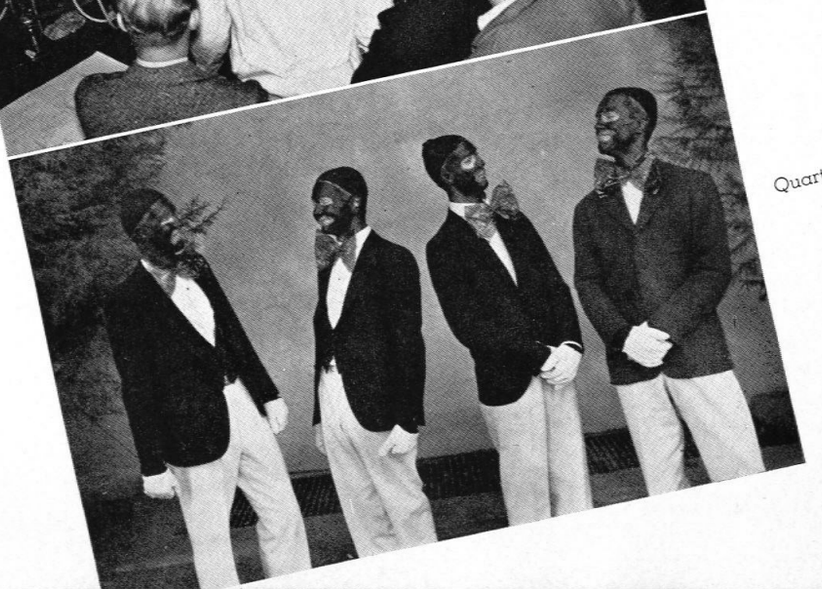


Hey, Frosh! "Dead Horse"

Talking it over



Amazing the multitudes



Quartette goes blackface

Lookie! An Indian

Ruffians!

Tech in the raw!

INFORMAL

Quiet you lugs!

SHOTS

What's her address?

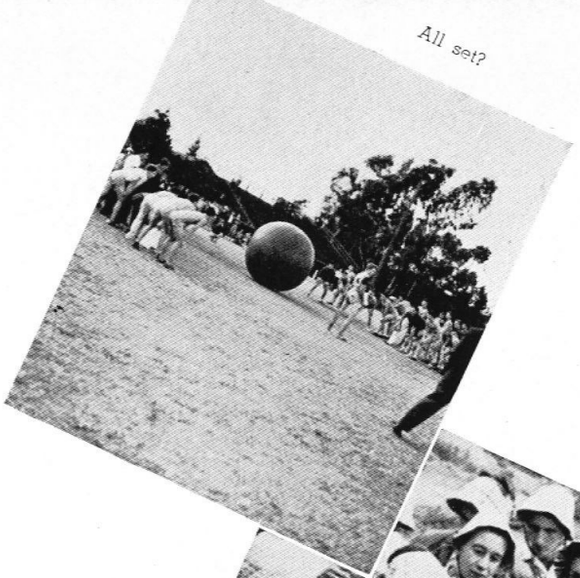
Sittin' in the sun

Campbell gives orders

There she goes!

Nearly half done

INFORMAL SHOTS



All set?

Frosh plan retribution

Heil, Osborn!

Center—Frontier days at Throop
Lower—Pajamas go to town

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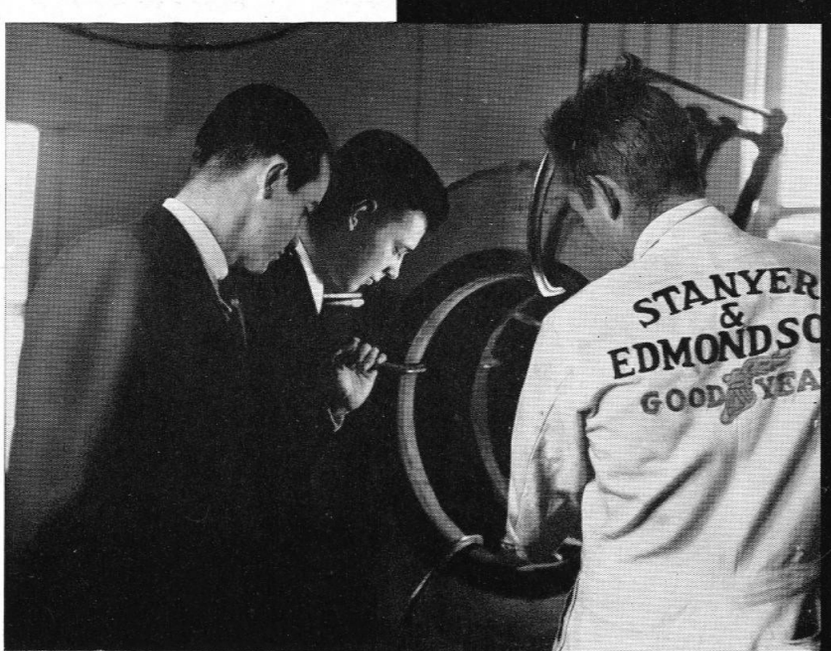

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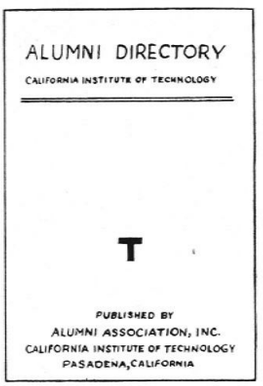

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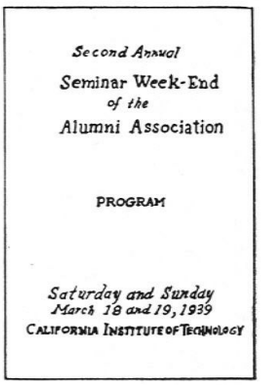
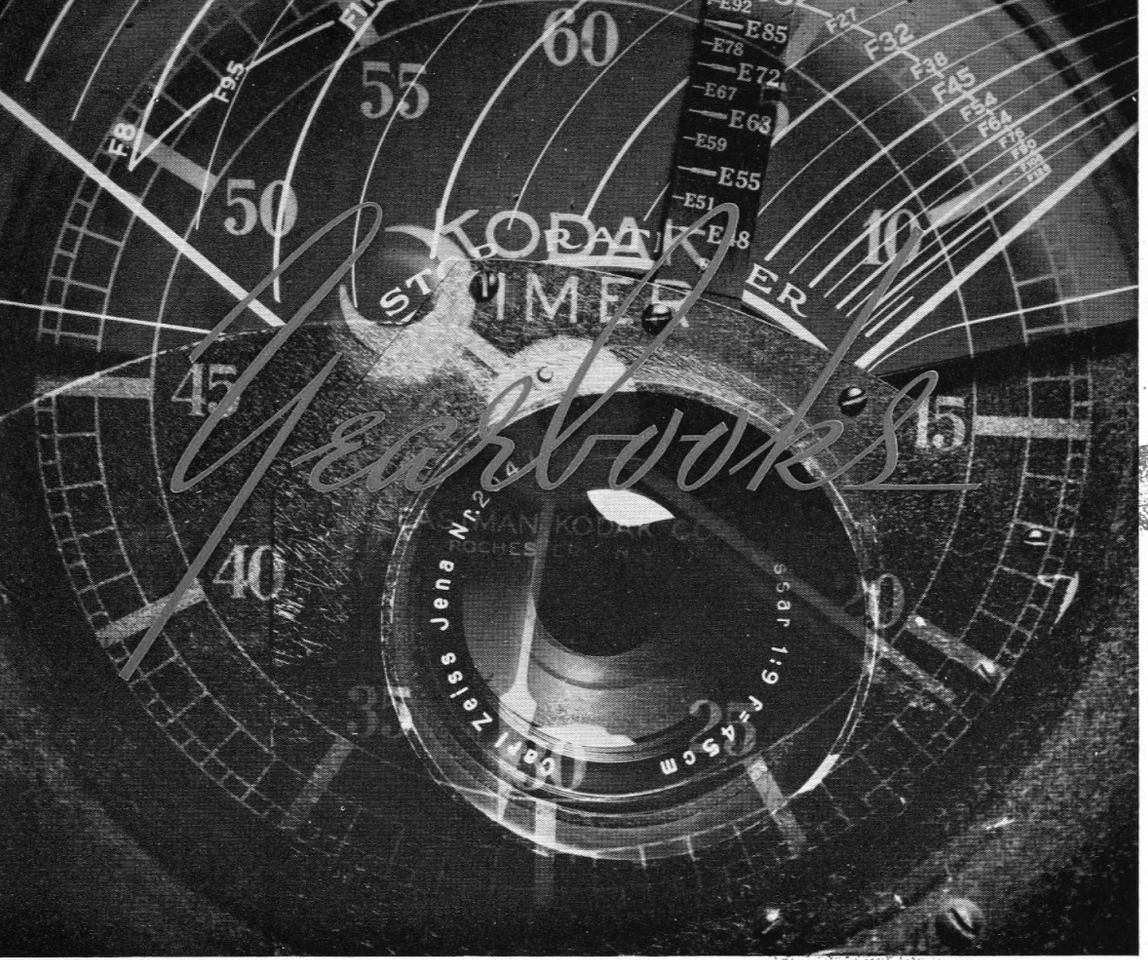
May I invite each of you to investigate the many and diversified advantages that are available to you in becoming a member of our Association. Your membership, I can assure you, will result in an investment paying high dividends.

Yours very truly,

J. E. Kinsey.

President.





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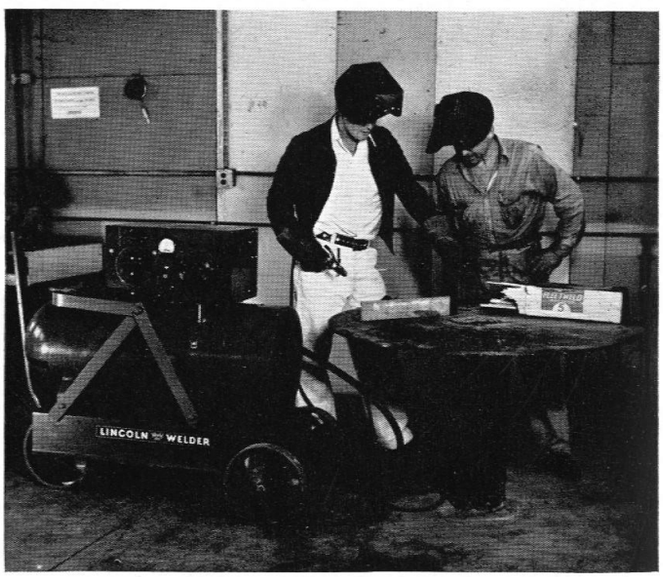

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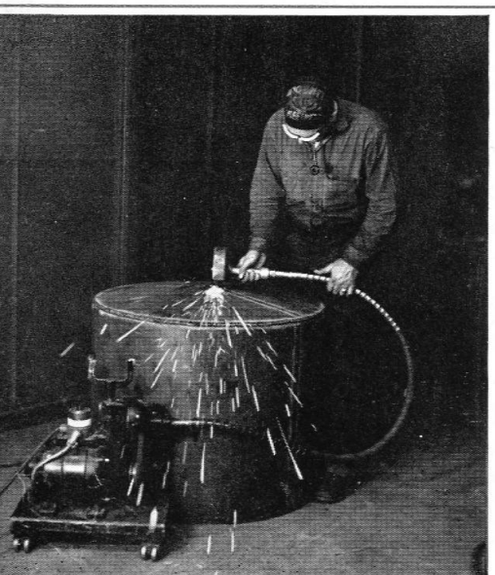

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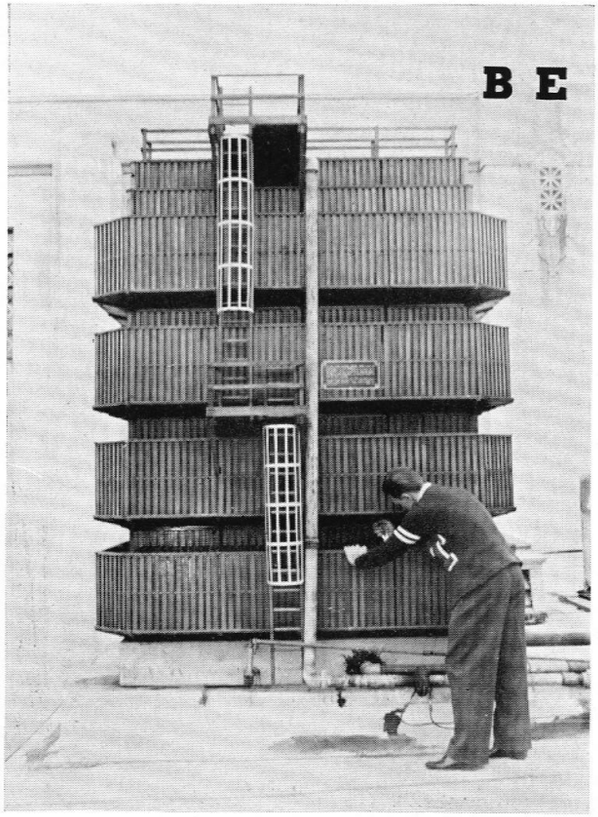

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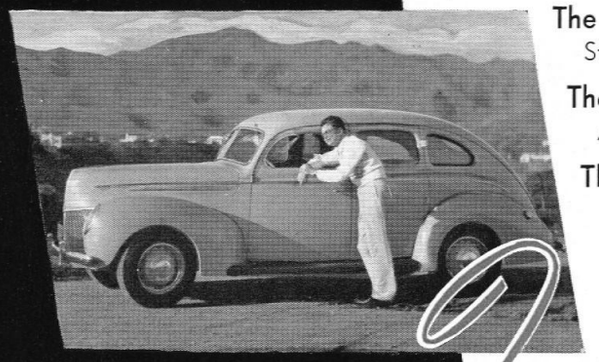

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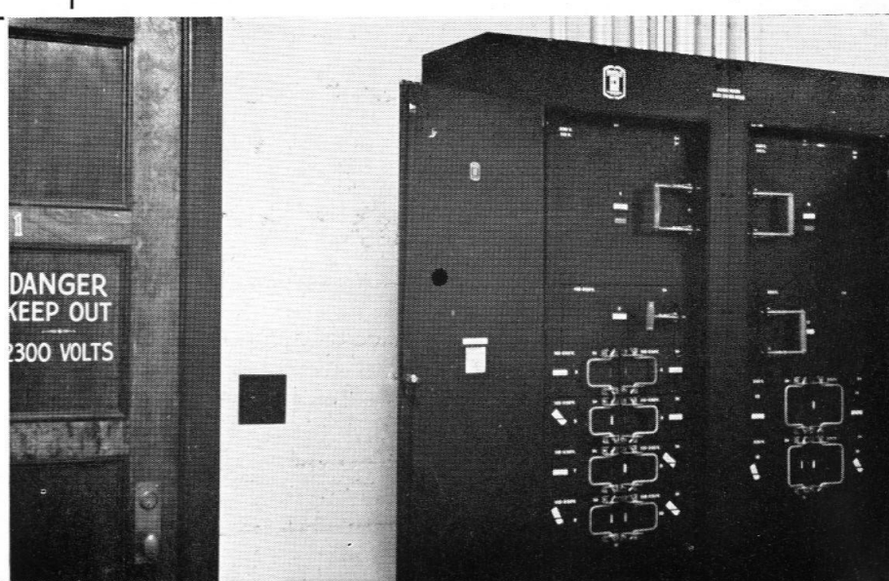

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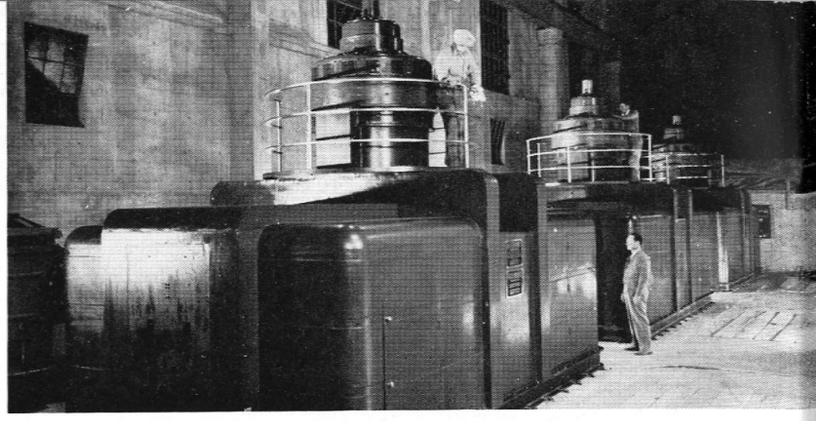

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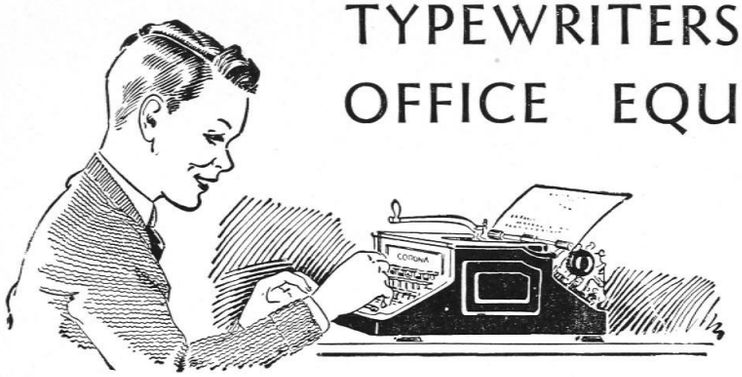

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It is agreed that as each man takes the final step he is to be paid ten (10) dollars by each of the others married or otherwise. Also each agrees to pay him for each child, rates being on a progressive scale : 1 dollar for first, 2 dollars for the second, 3 dollars for the third, etc. Besides each agrees to pay the lucky fellow (or is he?) double for twins, and triple for triplets, etc. In case of divorce it is agreed that all money collected upon marriage be returned.

SIGNED in order:

Frank Skalecky Jr.
Robert White
Jack Osborn
W. G. Lawson
Delos Flint
N. H. Anderson Jr.
Harry O. Davis Jr.

A. W. Guillon, Jr.
Donald G. Lawrie
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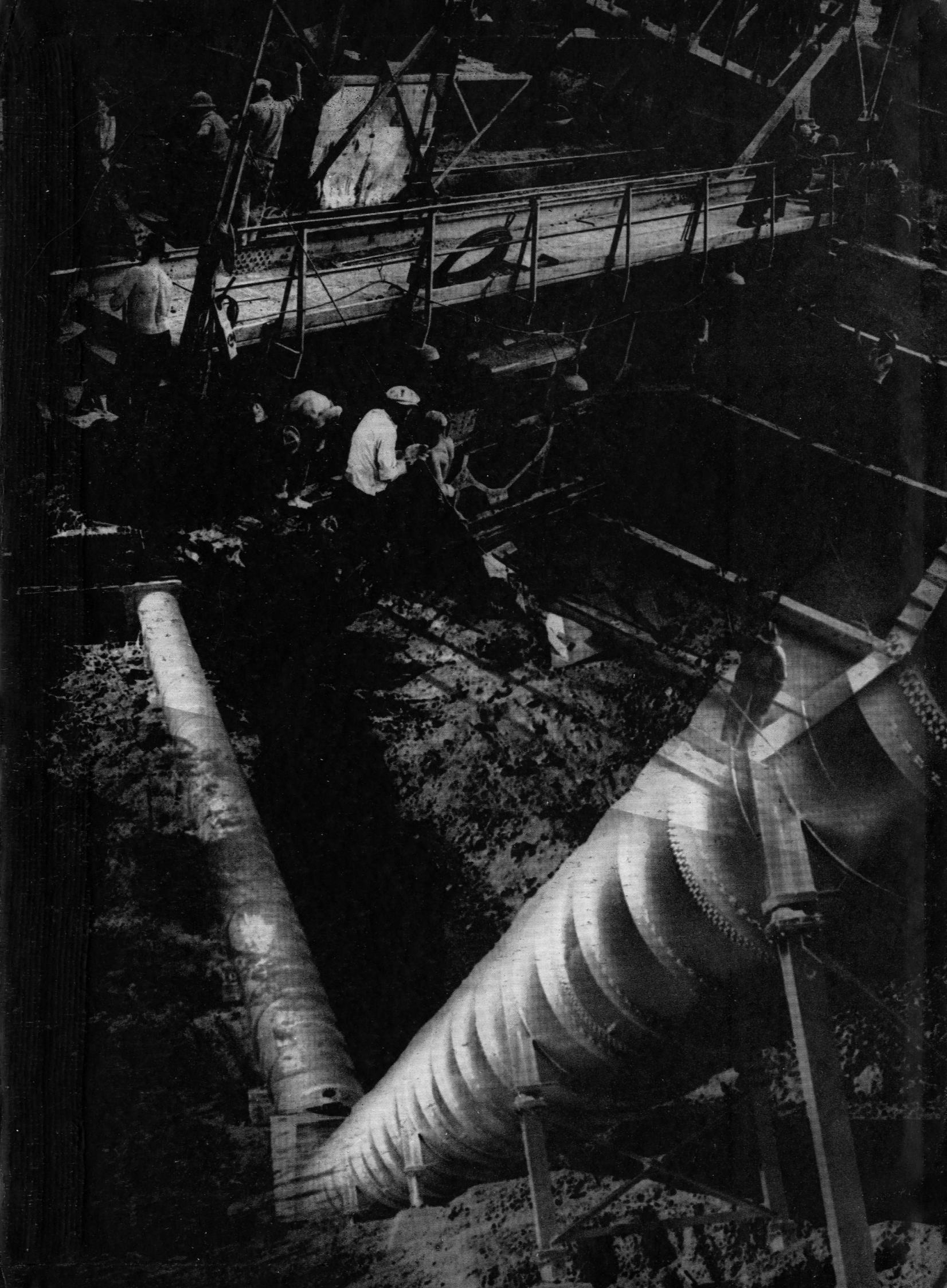
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