



E & S Cover, March 1963

Letters

Los Angeles

EDITOR:

Just how did your photographer achieve the effect he got in that March cover picture of the Beckman Auditorium?

R. FISHER '43

In answer to the question concerning the techniques employed in the March cover, our procedures were as follows:

1) A normal Rolleiflex negative (2 1/4 by 2 1/4) was projected onto Kodalith film, an extremely high contrast film normally used for photographic charts, graphs, etc.

2) The resultant high-contrast positive was then contact-printed onto a Kodak Commercial film, a thick-emulsion, blue-sensitive copy film.

This film was solarized during development, a process wherein the film is exposed to a carefully controlled amount of white light midway during the development cycles. This results in very fine lines being formed wherever there are adjacent light and dark areas.

3) Since we felt that white lines on black would be more dramatic, the solarized negative was contact-printed onto Kodak Fine Grain Positive film, a thin-emulsion copy film well suited for preserving the fine lines produced during the solarization process.

4) A print was then made from this "negative"—well, "film"—to the proper size for the magazine cover.

DOUG STEWART
Graphic Arts, Caltech

Arcadia, California

EDITOR:

Individualism, one of the most pre-

cious heritages bestowed upon the men of the Institute, is in jeopardy and I believe my classmates and all other members of the Caltech alumni should be so informed.

Permit me to go back to the January 1961 issue of *Engineering and Science* which contained the unbelievable details of The Great Rose Bowl Hoax performed by "the Fourteen" on the unsuspecting members of the Washington card (rooting) section. Here is clear-cut evidence of brilliant collective individualism.

Recently, the March 8, 1963, issue of *Life* magazine contained a short article illustrating the first U.S. participation in a new Spring fad organized at Caltech by the Piano Reduction Study Group. More evidence of individualism plus team work.

While I have no argument opposing free publicity in a national magazine with the circulation enjoyed by *Life*, there is no excuse for some uninformed writer to refer to the MEN of Caltech as "boys". Not only once, but twice in the same article there is failure to distinguish between infantilism and individualism. This requires a rebuttal.

I challenge my fellow alumni to stand and fight for the basic principles of our heritage and clarify once and for all the public misconception confusing collective individualism with group conformity.

I also challenge "the Fourteen" and the members of the "Piano Reduction Study Group" to reorganize as a unit to represent the entire alumni in our common defense.

Furthermore, while defending our individualism, I challenge this honorable group to go one step further: Make public their collective ideas for solutions to some of the World's most pressing problems . . . i.e.:

"How to peacefully remove Castro and restore freedom and individual dignity to the people of Cuba . . ."

"How to peacefully take down the Berlin wall and prevent duplication of the act in the future . . ."

"How to cope peacefully with the Communist philosophy and bring about its self-destruction, primarily in Latin America . . ."

"How to achieve higher standards of ethics in U. S. private enterprise, before it is too late . . ."

Etc., etc.

Arise, gentlemen, and join me in spirit, strength and brotherhood in defense of our honor and dignity as citizens of the U. S. and members of the alumni of the California Institute of Technology. Hear ye . . . hear ye . . . !!

FRIEND F. BAKER, JR., '40

Books

Alumni Books

THE ANCIENT ENGINEERS

by L. Sprague de Camp

Doubleday \$4.95

L. Sprague de Camp, who got his BS in mechanical engineering from Caltech in 1930, has been a freelance writer, except for the war years, since 1938. *The Ancient Engineers* is his 38th book. Of the other 37, there are 3 listed as historical fiction, 12 science fiction, 11 fantasy, 7 non-fiction, and 4 juvenile. *The Ancient Engineers* belongs in the non-fiction category and is the story of invention and technology from Egyptian times up to the Renaissance. As anyone who has read any of his previous books knows, Mr. de Camp is a tireless researcher and a voracious collector of miscellaneous facts. *The Ancient Engineers* is loaded with them.

MATRIX METHODS FOR ENGINEERING

by Louis A. Pipes

Prentice-Hall, Inc. \$13

Louis A. Pipes, BS '33, MS '34, PhD '35 at Caltech, and professor of engineering at UCLA, has based his book on a course of lectures on matrix calculus and its application to a representative group of physical problems, delivered by him over the last 15 years to engineering students at UCLA. It is "the first book in English that develops matrix algebra and calculus ab initio, and traces the applications of these techniques to engineering problems in dynamics, electric circuit theory, elasticity, the theory of vibrations and their related fields."

Science Paperbacks

Doubleday Natural History Library:

How to Make a Telescope

by Jean Texereau \$1.45

Back of History (revised edition)

by William Howells \$1.45

Animal Behavior

by John Paul Scott \$1.45

Snakes in Fact and Fiction

by James A. Oliver \$1.25

A Guide to Bird Watching

by Joseph J. Hickey \$1.25

Doubleday Science Study Series:

Lady Luck: The Theory of Probability

by Warren Weaver \$1.45