

ENGINEERING | AND | SCIENCE

IN THIS ISSUE



ON THE COVER

The young man on this month's cover is a very tender freshman. He has just stepped off the bus into the sharp sunlight of Camp Radford, in the San Bernardino Mountains—the Institute's new student camp. At first glance he may merely seem to be heading for the cabin to which he has been assigned for the next three days, so he can unload his bedding and gear. Actually, he is doing a good deal more than this—he is beginning his college career.

On pages 11-15 of this issue you'll find some pictures of the early days of the class of '54—some of the things they did at freshman camp, and some of the things that were done to them, back on campus, as they went through their initiation by the class of '53.

SCIENCE AND FREEDOM

President DuBridge's article on page 5, "Science and the Spirit of Freedom," was adapted from a speech delivered at the inauguration of Gordon Gray as President of the University of North Carolina (the pioneer state university of America, by the way) on October 9.

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STAFF

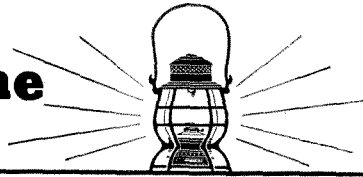
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The Main Line



NOVEMBER, 1950

Last month and the month before we acceded to the superior wisdom of the famous Chinese philosopher who contended that one picture can whip mere yakity-yak in straight falls.

Consequently we substituted full pages of pictures of our newest two trains—the great new *Sunset Limited* between Los Angeles and New Orleans, and the swank all-room *Cascade* between Portland and San Francisco—for our customary column of chit-chat. Now we're back in business at the same old stand.

Streamliners Galore

It has reached the point where streamliners, to us, are like measles to other people. At any rate, we're "all broke out" with them now. With the new *Sunset Limited* and *Cascade* climaxing the passenger end of our great \$316,000,000 improvement program, we can take you all over the place in modern, luxurious comfort. Just look at this streamliner line-up!

For romping up and down the Pacific Coast: Between Los Angeles and San Francisco take your pick of the luxurious, all-Pullman *Lark* or economical Chair Car *Starlight* overnight; or the spectacular, low-cost *Coast* or *San Joaquin Daylights* by day. (Don't forget the *Sacramento Daylight* and streamlined overnight sleeping car service on the *West Coast* between Sacramento and Los Angeles.) Between San Francisco and Portland, choose the swift, scenic *Shasta Daylight* with its low-cost luxury ride, or the new *Cascade*, which shares with the *Lark* the title, "finest overnight sleeping car train in America." No extra fare on any of these.

To the East, too

If you're going east, you can't do better than one of these: From San Francisco ride the extra fine, extra fast, extra fare *City of San Francisco* or the smooth, no-extra-fare *San Francisco Overland*, with its breathtaking daylight trip over the High Sierra. Choice of Pullmans or Chair Cars on both of these—fastest two trains to the East from the Golden Gate.

From Los Angeles there's the

smooth-gliding, low-altitude *Golden State* to Chicago via the Southwest winter playground country. Pullmans or Chair Cars. Moderate extra fare.

Or go east the really new way—via New Orleans on the new *Sunset Limited* from Los Angeles. All-room Pullmans. "Sleepy-Hollow" Chair Cars. Moderate extra fare.

That's a flock of streamliners—but for good measure we'll throw in another. Anytime you're deep in the heart of you-know-where, try a swift ride on our mile-a-minute *Sunbeams* between Houston and Dallas. They're the Texas equivalent of our California *Daylights*.

Fat Tuesday

If it actually is later than you think, you'll appreciate a reminder of the Mardi Gras celebration in New Orleans. No harm in planning now to be on hand between January 28 and February 6 of 1951 for the parades, feasting and general hoop-de-doo.

Color Book

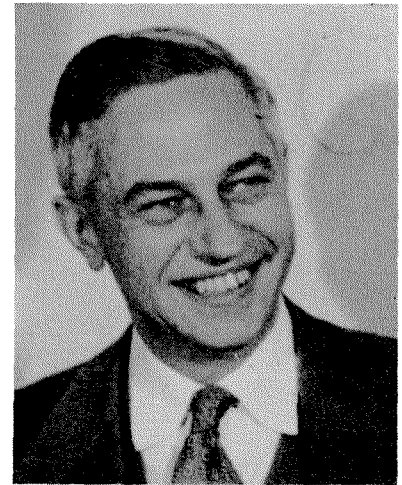
Incidentally, if you'd like to have a full-color preview of a trip to New Orleans on the new *Sunset Limited*, just drop a card to Mr. F. Q. Tredway, Room 735, 65 Market Street, San Francisco. He'll send you one of the prettiest color books about the train, route and scenery you've ever seen. Absolutely free. You can't tell the Audubon Dining Room from the French Quarter Lounge without a color book.

My! How We've Grown!

Thumbing through some old records the other day we ran across some interesting figures on our parent company, the Central Pacific Railroad. Back in 1883 we did a gross business of \$24,744,421, and we paid out \$442,727 in taxes. Last year we did a gross business of \$537,518,704. That was an increase in 67 years of 1995%. However, it wasn't all gravy. We paid out \$53,058,644 in taxes. That was an increase of eleven thousand eight hundred eighty-four percent. We pass this information along in the hope of making you feel better about your own tax burden.

IN THIS ISSUE

CONTINUED



DuBridge

In this timely article Dr. DuBridge discusses, with vigor and clarity, some of the most vital issues of the day.

THEORY OF GAMES

The study of games is tantamount to a study of human behavior in a given economic situation. Though the theory of games is far from complete, it is of steadily increasing interest. On page 8 H. Frederic Bohnenblust, Professor of Mathematics at the Institute, discusses some of the simple principles on which the theory is based.

Anyone who wants further information on the theory of games might note that Dr. Bohnenblust is scheduled to discuss the subject in a Friday Evening Demonstration Lecture at the Institute—201 Bridge, November 10, at 7:30 p.m.

Anyone who wants even further information should find it in John McDonald's popular book, *Strategy in Poker, Business and War* (W. W. Norton, New York, \$2.50).

DIANETICS

Dianetics, which must be just about the biggest thing since Dale Carnegie—or maybe Emile Coué—is, as you probably know, a young and active "science of mind." As such, it has stirred up a certain amount of excitement among science-minded young men—including a good many students at this institution. To date, the theory of Dianetics is largely, if not entirely, confined to a single book, written by its originator, L. Ron Hubbard—until recently a top-notch science-fiction writer. On page 1 of this issue, Charles E. Bures, Assistant Professor of Philosophy and Psychology at the Institute, reviews this book—and in the process, we think, makes the clearest evaluation we've seen of the theory and practice of Dianetics.

S·P The friendly Southern Pacific