

LIGHT ON THE SPOT

Light "piped" through a curved rod of Lucite can be concentrated exactly where it is most needed, for all kinds of surgical and dental work.

plastic can be molded and polished to keep the light within it; at the desired point the surface is broken and the light pours out there.

Science News Letter, February 4, 1939

RESEARCH

## List Shows University Research Expenditures

EADING universities of the nation in research expenditures are California, Chicago, Columbia, Harvard, Illinois and Michigan, according to a survey contained in the report of the National Resources Committee by its science subcommittee. These six schools spend over \$2,000,000 a year on research each.

In the group spending between \$1,500,000 and \$2,000,000 a year for research are Cornell, Minnesota, Wisconsin and Yale.

In the \$1,000,000 to \$1,500,000 bracket are four schools: Massachusetts Institute of Technology, New York University, Ohio State University and the University of Pennsylvania.

Spending between \$500,000 and \$1,000,000 yearly for research are: Duke, University of Iowa, Iowa State College, Johns Hopkins, Missouri, Nebraska, Northwestern, Penn State, Princeton, Purdue, Rochester, Rutgers, Stanford and Texas A. and M.

Science News Letter, February 4, 1939

HISTORY OF SCIENCE

## Ancient Rome Ruled Out As Benefactor of Science

## Borrowed Ideas and Techniques Freely, But Were Not Originators, Declares New York University Scientist

ARE WE deeply indebted to ancient Rome, in the line of science?

No, declares Dr. William Salant, guest professor at New York University Medical College.

Dr. Salant has looked into the Roman record for scientific achievement, and has questioned the verdict of those who regard ancient Rome as one of the world's centers of scientific progress.

His view, argued in the Scientific Monthly, is that science has its roots in society, but the state of society was unfavorable to science both in Roman Republic and Empire.

The Romans carried totalitarian government to an extreme that wiped out individual freedom, left no incentive to those who might have spent years developing a new principle or process. Rome scorned pure science. War and practical matters were occupations for a Roman.

And, since military conquest brought in thousands of captives, there was plenty of cheap labor—hence no need to worry over technological improvements.

So little were the Romans scienceminded, that Dr. Salant declares, "when surveying beyond the simplest type was needed, Greeks had to be employed."

Romans borrowed glass-blowing techniques from Egypt and Phoenicia. They got architectural ideas from Etruscans, and craft and art notions from the Greeks. But, unlike the Greeks, who would have been stimulated by these foreign innovations, the Romans were not inspired. They lacked originality,

says Dr. Salant, dismissing Rome's inventions as unimportant.

Rounding up a verdict on various sciences, he declares:

"That no work of merit on mathematics was produced by Romans is well known. The same was true of astronomy. In the natural sciences Pliny was the outstanding figure, but his work was mere compilation and much of it was worthless. Medicine did not fare much better."

From Rome, it appears, we can learn that it takes more than the economic factor alone to stimulate science, despite those who would reduce history, as well as politics, to economic formulas.

Science News Letter, February 4, 1939

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