

The population is taken as 39,209,518. It may be added that in 1913 the marriage rate was 151 per 10,000, the birth rate 191, and the death rate 176.

### UNIVERSITY AND EDUCATIONAL NOTES

THREE million dollars has been collected by the University of Pittsburgh toward the \$10,000,000 required for the erection of the fifty-two story building which it is planned to erect.

THE Neurological Institute of New York will become a part of the new Columbia University-Presbyterian Hospital Medical Center.

THE School of Pharmacy of the Pharmaceutical Society of Great Britain has been admitted as a school of the University of London in the faculty of medicine for a period of five years as from January 1, 1925.

WILLIAM W. STIFLER, acting professor of physics at Williams College, has accepted an appointment as associate professor of physics at Amherst College.

HORACE B. ENGLISH, professor of psychology at Antioch College, has been appointed associate professor of psychology at Wesleyan University. Herbert Gurnee (Wesleyan, '22) will also join the department.

DR. C. LADAME has been appointed to the chair of psychiatry in the University of Geneva in succession to Dr. R. Weber, who has been made emeritus professor.

### DISCUSSION

#### DECAY AND REGENERATION OF RADIO-LUMINESCENCE

It is well known that the luminescence produced in certain materials subjected to the action of the radioactive rays decreases with time and that the color of the luminescence changes, while at the same time the material itself also changes in color. From experimental work covering more than two years and still under way, we are led to believe that the decrease in luminescence of phosphorescent zinc sulfid, etc., is probably due to the masking of the radiation luminosity by the color which the material acquires, due to the action of the radiation.

For example, small glass tubes containing radon initially glow quite brightly with a yellowish-green light, but the glass soon turns either brown or blue, and in the course of a few days the tubes glow very faintly if at all. If the tubes be heated sufficiently to just discharge the coloration, the glow returns. This operation can be repeated with no apparent change in

the property of the glass to glow under the action of the radon rays.

The coloration of the glass is not a surface phenomenon, and the color produced, whether brown or blue, seems to reach a color depth beyond which further radiation produces no apparent increase in the coloration.

Since the observation of the behavior of glass under radiation and the restoration of its luminescence by discharging the coloration by heating, phosphorescent zinc sulfid has been investigated. Here again the visible radio-luminescence and the phosphorescence decrease as the coloration increases, and eventually zinc sulfid, which originally gave a brilliant phosphorescence in daylight, no longer responds, and it is only faintly responsive to alpha radiation. However, on heating this zinc sulfid just sufficiently to discharge the coloration, no difference in any of its properties can be detected between such revived zinc sulfid and some of the same material which has not been subjected to radiation.

This investigation is being continued and a more detailed report will be given later.

CHARLES H. VIOL,  
GLENN D. KAMMER,  
ARTHUR L. MILLER

RADIUM RESEARCH LABORATORY,  
STANDARD CHEMICAL COMPANY,  
PITTSBURGH, PENNSYLVANIA.

#### BAUXITE AND SIDERITE

UNDER the caption "Bauxite associated with siderite," published in Volume 35, Number 3, of Bulletin of the Geological Society of America, Mr. E. F. Burchard, of the United States Geological Survey, has published a description of the bauxite deposits of northeast Mississippi, the opening paragraphs of which are so worded as to leave an unfavorable impression of the work of geologists who preceded Mr. Burchard in Mississippi. Besides the various members of the State Geological Survey, numerous eminent geologists from other states and from the Federal Survey fall within this list. While Mr. Burchard was in Mississippi he visited the office of the State Geological Survey and was treated cordially and with due consideration, hence I do not think that he intended to be inconsiderate of this department, or of others, in his remarks.

In the opening sentence of his article Mr. Burchard said, "A new bauxite field in northeastern Mississippi was discovered in an interesting way by J. W. Adams, of Tusculum, Alabama, in 1921." Then, after quoting Hilgard's description of what has since turned out to be bauxite, he says:

More than sixty years elapsed between the publication