

Geological Survey, sent Geologist George H. Ashley into Fulton County to make an investigation. He reports that undoubtedly these hills contain several million tons of low-grade red iron ore and may contain a small amount of high-grade brown ore and more low-grade brown ore. Mr. Ashley found that three drill holes have been sunk into a shallow, canoe-shaped basin of red shale forming the "Meadow Ground." The basin is readily measured in length, breadth and depth. If all ore, it would hardly contain 30 million tons. The rocks are well exposed and show practically no iron except the iron coloring the rocks. Lowrie's Knob, if a solid hill of ore, would contain only about 100 million tons. The rocks here are likewise well exposed. A pocket of brown ore has been worked out on the east side by the old Hanover furnace, yielding about 75,000 tons of ore (46 per cent. iron). The "cove" fault runs through Lowrie's Knob and Dickey's Mountain, so that the rocks forming them stand on edge and locally are crumpled. Dickey's Mountain contains some low-grade sandy iron ore on the west side, possibly five million tons, as the bed cuts off against the fault. A little brown ore, 14 inches by 2 feet thick (38 per cent. iron), was dug for the Hanover furnace, but abandoned as impossible. The black shales of the Devonian are present in the region, but no suggestion of carbonate ore was seen.

A U. S. WEATHER BUREAU station has been installed at the University of Notre Dame, Notre Dame, Ind., by Mr. J. H. Armington, of the Chicago Station. Among the instruments located in the Science Hall, there is a triple register for wind velocity, wind direction, rainfall or sunshine as received on the roof by the anemometer, wind vane, tipping bucket rain gauge or sunshine recorder respectively. There are also two mercurial barometers and their barograph as well as complete equipment in the way of tables, record-books, report-books, etc., a few duplicate instruments and a snow gauge. There are on the roof, in a sheltered tower, wet and dry bulb, and maximum and minimum tem-

perature thermometers with their thermograph. Professor Thomas A. Irvin, Ph.D., of the department of physics, has charge of this station which, in conjunction with the university observatory, posts on the Science Hall Bulletin complete daily reports of meteorological and astronomical observations.

SIR WILLIAM HARTLEY has presented to the University of Liverpool a wireless installation designed mainly with a view to experimental and research work of an advanced nature. For transmitting purposes a short aerial about 100 feet above ground has been erected on the roof of the electrical laboratory, and in connection with this a standard Marconi receiver has been arranged such as is used on board ship, and this combination forms a small standard power station. This has been licensed by the post office, and time and meteorological messages are received twice daily from the Eiffel Tower in Paris. The transmission range is only about 40 or 50 miles, save under very favorable conditions, as the post office regulations limit the amount of power that can be sent out of a station to one third horse-power. Professor Marchant, of the electrical engineering laboratories, is at present engaged in testing detectors, but later in the year he proposes to hold wireless classes for ships' captains and others interested.

#### UNIVERSITY AND EDUCATIONAL NEWS

MR. WALTER MORRISON, of Baliol College, has given \$10,000 to Oxford University as the nucleus of a pension fund for professors.

J. CARLETON BELL, Ph.D. (Harvard), managing editor of the *Journal of Educational Psychology*, and director of the psychological laboratory in the Brooklyn Training School for Teachers, has been appointed professor of the art of teaching in the University of Texas. Dr. Bell will devote his attention chiefly to the experimental investigation of problems of teaching.

IN the College of Medicine of the University of Virginia, as we learn from the *Journal of the American Medical Association*, Dr. Jacob Michaux, one of the original members

of the faculty, resigned the chair of obstetrics and was made professor emeritus of obstetrics. Dr. Paulus A. Irving, who has moved to Farmville, Va., was made emeritus professor of pediatrics. Dr. John F. Winn, formerly professor of clinical obstetrics, was elected professor of obstetrics, and Dr. Virginius Harrison associate professor of the same branch. Dr. Francis W. Upshur was chosen professor of materia medica and therapeutics, and Dr. C. Howard Lewis was made professor of pharmacology and also associate professor of physiology, these two physicians dividing the chair which was formerly held by Dr. Virginius Harrison. Dr. E. C. L. Miller was elected professor of bacteriology and physiologic chemistry.

MR. HARRY N. EATON, A.M. (Harvard, '06), instructor in geology in the University of Pittsburgh, has been appointed assistant professor of geology in the Pennsylvania State College.

At a recent meeting of the Yale Corporation, Jacob Parsons Schaeffer, M.D., Ph.D., was promoted from assistant professor to be professor of anatomy in the Yale Medical School.

NATHANIEL CORTLANDT CURTIS, professor of architecture in the Alabama Polytechnic Institute, has recently been elected to the chair of architecture in Tulane University of Louisiana.

E. S. McCANDLISS, a graduate of Purdue University of the class of 1908, has been appointed instructor in civil engineering in the Missouri School of Mines.

PROFESSOR B. H. HIBBARD, of the Iowa State College, has been appointed associate professor of agricultural economics in the College of Agriculture of the University of Wisconsin.

FRANCIS E. LLOYD, for four years professor of botany in the Alabama Polytechnic Institute, and plant physiologist to the Alabama Experiment Station, has been appointed MacDonald professor of botany in McGill University. Professor Lloyd's address will remain unchanged till September 10 next.

#### DISCUSSION AND CORRESPONDENCE

##### THE DOME THEORY OF THE COASTAL PLAIN

TO THE EDITOR OF SCIENCE: Recently the writer's attention has been called to an article published in SCIENCE of April 5 by Mr. G. D. Harris in which he claims the entire credit for the discovery and promulgation of the "dome theory" of the accumulation of oil in the Gulf coastal plain. The statements in this paper are so misleading to those unfamiliar with the history of the development of this region, that the writer feels it necessary to state briefly some of the facts and to quote some of the geologists who were familiar with the early work.

The article in question is as follows:

##### OIL CONCENTRATION ABOUT SALT DOMES

In several national, state and private publications the writer has called attention to the remarkable concretionary growth and bodily movement upwards of huge masses of rock salt in Cenozoic deposits along the Gulf border. The bearing of the structures produced in the neighboring beds by such growths and movements on oil concentration was duly set forth in Bulletin 429 of the U. S. Geological Survey. Recently he has had the opportunity of testing the value of his "dome theory" for locating oil "pools" in a region far away from any known oil occurrences. Reference is here made to Pine Prairie, south central Louisiana, where the Myles Mineral Company has had the courage to try out the theory and has discovered by the means a new oil field. The director writes: "I consider this a most remarkable vindication of a theory originated by you, and we attribute a large measure of our success thus far to your advice."

Space should not be taken here to discuss the probable exact location of oil in connection with these domes; that is a matter depending largely on the approach of the salt domes to the surface, size, location, etc. These matters have been outlined at least in the U. S. Geological Bulletin already referred to. But the location of oil by means of a theory unheard of ten years ago does seem worthy of record at this time. Another fact that should be impressed upon the mind of the public now is the absolute worthlessness of stocks in companies putting down wells "near" the dis-