

government assistance, documents must be presented showing the existence of suitable lands and other facilities to maintain such establishments.

UNIVERSITY AND EDUCATIONAL NEWS

It is planned to build a hospital on the campus of the University of Washington, Seattle, to cost a million dollars and which is to form the nucleus for a medical department of the university.

WILLIAM P. BROOKS, Ph.D., director of the Massachusetts Agricultural Experiment Station, has resigned his position. Dr. Brooks has been connected with the Massachusetts Agricultural College since 1889, previous to which he was professor of agriculture for twelve years in the Imperial College of Japan. He will continue in the service of the experiment station as consulting agriculturist.

PROFESSOR W. C. SABINE, acting director of the Jefferson Physical Laboratory of Harvard University, has retired and is succeeded by Professor Edwin H. Hall.

DR. PAUL F. GAHR, of the department of physics at Wells College, has been appointed acting professor at Cornell University, where he will assist in the Students' Army Training Corps two days a week.

E. C. AUCHTER, associate professor of horticulture at the University of West Virginia, has been employed by the Maryland State College to head the department of horticulture.

ROBERT O. CALDWELL, Ph.D. (Princeton, '18) formerly professor of physics at Geneva College, has accepted a position as assistant professor of physics at West Virginia University.

THE following appointments have been made at Marquette School of Medicine: Mrs. Paul M. Smith, M.A. (Wisconsin), formerly assistant in botany at University of Wisconsin, as instructor in bacteriology. Mr. C. A. Hills, M.A., formerly instructor in physiology at the University of Kansas, now in charge of laboratory work in physiology and pharmacology, as

instructor. Mr. A. H. Hersch, M.A., formerly instructor in biology at the Kansas State Agricultural College, as instructor in the department of anatomy and biology.

DISCUSSION AND CORRESPONDENCE

MR. ABBOT'S THEORY OF THE PYRHELIO- METER

TO THE EDITOR OF SCIENCE: Referring to Mr. Abbot's open letter to me, published in SCIENCE, June 21, 1918, I should like to make a few remarks. The important points can be taken as two, which require attention.

1. The first is that my research ranks as an "interesting speculation" without "quantitative value." After adapting the Boyle-Gay-Lussac Law, $P = \rho RT$, to atmospheric physics, the computations proceed by using only the standard formulas of thermodynamics, kinetic theory of gases, and electron physics; the checks are always complete and numerous; the results are in full agreement with observational data, so that Mr. Abbot's statement implies that these laws have no application in free atmospheres, which few will admit. The results have succeeded in clearing up a long series of heretofore unsolved problems, circulation, thermal data of various types from the adiabatic strata to the top of the various atmospheres, the origin of atmospheric electricity and magnetism, the thermodynamic environment of several spectra in the sun, and the end is not in sight. The Planck theory of radiation, the Bohr origin of spectrum lines, and the electron-atomic data are already seen from a new point of view. There are few computations whose data interpenetrate and are supported by so many distinct series of physical laws as are these, and the evidence is that they form the basis for future developments in atmospheric physics.

2. The second point is that Mr. Abbot reiterates this argument: that his well-known method of discussing the pyrheliometric observations must be correct, because it produces the same solar constant, 1.94×10^8 cal./cm.² min., when repeated many times at many stations. If the method is erroneous it can not be made valid by repetition. It will be recalled that