UNIVERSITY AND EDUCATIONAL NOTES

CYRUS H. K. CURTIS, Philadelphia publisher, has given Ursinus College $200,000 to start a fund for a new natural science building which will cost $450,000.

DR. GEORGE H. CLAPP recently made a gift of $15,000 to the endowment fund of the Carnegie Institute, Pittsburgh. This is the second donation to the institute by Dr. Clapp to be duplicated by the corporation. His previous gift amounted to $25,000.

DR. DANIEL J. McCARTHY has been appointed director of the newly established neurological foundation of Temple University, Philadelphia.

PROFESSOR H. E. CLIFFORD has been appointed acting dean of the engineering school of Harvard University during the absence of Professor Hector J. Hughes, who has leave of absence for the second half of the academic year.

THE appointment of Dr. Alfred E. Emerson as associate professor in the department of zoology is announced by the University of Chicago. Dr. Emerson, who went to Chicago from the University of Pittsburgh, will have charge of developing the work in the general biological aspects of entomology.

DR. JOHN WYLLIE, of Glasgow, has been appointed to the new Elliot chair of public health and preventive medicine at Queens Medical College at Kingston, Canada, established through the gift of $50,000 from Samuel Insull, of Chicago.

G. G. MOE, associate professor of agronomy at the University of British Columbia since 1922, has been promoted to a professorship and appointed head of the department.

PROFESSOR F. E. WEISS will retire at the end of the present session from the George Harrison chair of botany and the directorship of the botanical laboratory of the University of Manchester. He has held these appointments since 1892.

DISCUSSION

M MU VERSUS MU MU

IN this journal for November 8, 1929, may be found on page 453 a note by Mr. John P. Camp entitled "The Micrometric Muddle." It includes the following sentences:

Certainly the system should be definitely put in order. What to do about it is not so easy to decide; for though it might seem proper to insist on strict adherence to the present authorization of the Bureau of Standards it can be argued that their system is that of the physicists who are a minority and that the biologists and chemists besides being greatly in the majority use the terms and symbols most widely distributed in scientific literature.

In this journal for March 4, 1927, on page 233, I devoted twenty-one lines to indicating that $m\mu$ and $\mu\mu$ should mean, respectively, the 10^{-9} and 10^{-12} parts of the meter. In that note the suggestion contained in the next quotation was made to account for the origin of the error involved in taking $\mu\mu$ to represent 10^{-9} meter, i.e., 10^{-6} mm. "Probably this error arose from the following sequence of folly: 1μ equals 0.001 mm, hence the symbol μ denotes the multiplier 10^{-3}. Therefore $\mu\mu$ must mean $(10^{-3})(10^{-3})$ mm or 10^{-6} mm." Doubtless the use of the word "probably" weakened the main argument to such an extent as to prevent the earlier note from receiving the serious attention of many open-minded readers.

In the present note it will be shown beyond peradventure that the only consistent and logical definitions of $m\mu$ and $\mu\mu$ are 10^{-9} meter and 10^{-12} meter, respectively. In order to prove my point it will be necessary to review the history of the origin of the symbol $\mu\mu$. This history should not be without interest for the reasons that it does not seem to be sufficiently well known and that it throws helpful sidelights on the question of the alleged "muddle."

In the year 1883, J. Springer published a book, entitled "Lehrbuch der Spektralanalyse," from the pen of a very prominent physicist, Professor Heinrich Kayser, to whom experimental spectroscopy owes an incalculable debt. The following quotation is a true translation of the footnote occurring on page 11:

Here, as well as throughout the entire book, the wave lengths shall always be given in millionths of a mm. Since there still exists no simple notation for this quantity and as it is the most suitable for all wave measurements, I have introduced for it the new notation $\mu\mu$ which is derived from the symbol μ, for a thousandth of a mm, just as mm is obtained from m. Accordingly we may have the lengths: m, mm, μ, $\mu\mu$ each of which is the one one-thousandth part of the preceding unit.

This idea is faulty and unjustifiable in at least two respects. In the first place it is tacitly admitted by Kayser that the left-hand m in mm denotes one thousandth, and that m had this signification prior to his knighting the Greek μ to the Order of the Thousandth. Hence, even in the same line, he writes two different symbols having the same operational power, that is, 10^{-3}. This procedure is unscientific since it adds a superfluous quantity to the terminology and thus violates a canon of beauty demanded of scientific presentation—brevity consistent with clarity and generality.

Again Kayser's premise ". . . the symbol μ, for a thousandth of a mm, . . ." is false. The unit of length in the metric (metre-ic) system was, and still