of pedagogy, in forestry and in scientific branches related to the industries of Vermont."

A GIFT of $50,000 to Cornell University by Mrs. Florence O. R. Lang, of Montclair, N. J., will be used in the construction of a new building to house the shops of the Sibley College of Mechanical Engineering.

THE will of Octavia Williams Bates, of Baltimore, leaves to the library of the department of law of the University of Michigan, a bequest of $20,000. A bequest of $5,000 is made to the Detroit High School Scholarship Fund Association, an organization designed to lend money to graduates of the Central High School of Detroit, so that they may attend the university. A number of other legacies for private and public purposes are provided. When all these are settled, the remainder of the estate is to go to the University of Michigan. Miss Bates was a graduate of the literary department of the university in 1877, and of the law in 1896.

DR. A. M. HILTEBEITEL has been appointed instructor in mathematics at the University of Pennsylvania. Dr. H. B. Smith has been appointed instructor in the same department for the ensuing term, to fill the vacancy caused by the temporary absence of Professor Evans.

AT the Massachusetts Agricultural College Dr. Guy Chester Crampton has been appointed associate professor of entomology. Dr. Crampton is a native of Alabama. He graduated from Princeton in 1904, took two years of graduate work at Cornell University, receiving his M.A. there in 1905, followed by two years at the universities of Freiburg, Munich and Berlin, where he received his Ph.D in 1908. He was an instructor in biology at Princeton from 1908 to 1910 and since the summer of 1910 has been professor of zoology at Clemson College.

DISCUSSION AND CORRESPONDENCE

NUMERICAL NOMENCLATURE

THE recent proposal of Professor James G. Needham[1] to use numbers and symbols as aids in zoological nomenclature, which has been sympathetically discussed by Professor Henry B. Ward[2] and destructively criticized by Professor T. D. A. Cockerell[3] in the columns of SCIENCE, has reminded me that one of the earliest attempts at entomological classification employed the numerical method which Professor Needham appears to think likely to prove useful. In the year 1766 (one hundred and forty-five years ago) the Rev. Jacob Christian Schaeffer, D.D., began the publication of an illustrated work upon the insects found in the vicinity of Regensburg, his home, and brought it to a conclusion in the year 1779. The title of the work is given in Latin and German as follows: "Icones Insectorum circa Ratisbonam indigenorum coloribus naturam referentibus expressæ. Natürlich ausgemahlte Abbildungen Regensburgschen Insecten." The indices of the several volumes show that they might have served as models for Professor Needham. Opening at random I find the following in volume I.:

	No.
CICINDELA,	1
	2
	3
	4
	5
SPHINX.	
	No.
Fam. I. Al. angul.	1
	2
	3
	4
	5
	6
Fam. II. Al. int. caud. simpl.	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
Fam. III. Al. int. caud. pil.	1
	2

[1] SCIENCE, N. S., Vol. XXXII., p. 295.

[2] SCIENCE, N. S., Vol. XXXIII., p. 25.

[3] SCIENCE, N. S., Vol. XXXII., p. 428.

In volume III. we find *Hesperia malvæ* Linn. designated as the "Siebender sechsfüssiger Tagfalter mit schiefen Flügeln," etc.

"Verily, there is nothing new under the sun!"

For my part, I sympathize with all attempts to secure a fixed and simple system of nomenclature, but to revert to what were the methods of good old Dr. Jacob Christian Schaeffer in this twentieth century is not, in my opinion, the correct solution of our difficulties.

The troubles of the student of nomenclature are not, I suspect, as great as they appear to be to those who do not possess the necessary apparatus of books and who have devoted more time to questions of morphology than to questions of taxonomy. I have not at present the leisure to take up the questions involved in this discussion as I should like to do, but simply wish to remind the readers of SCIENCE that the method of numerical designations was employed nearly a century and a half ago for an extensive fauna, and that the numbers for a good many species in various genera are therefore already "preoccupied."

W. J. HOLLAND

SCIENTIFIC BOOKS

Respiratory Calorimeters for Studying the Respiratory Exchange and Energy Transformations of Man. By FRANCIS G. BENEDICT and THORNE M. CARPENTER. Published by the Carnegie Institution of Washington. 1910. Pp. 210.

This contains a full description of the latest models of respiratory calorimeters. Two are mentioned, the "chair calorimeter" designed for individuals for six- to eight-hour periods during which they can remain comfortably seated in a chair, and the "bed calorimeter" for use at night or for the sick or bed-ridden.

The measurements of heat eliminated by man as made by this apparatus are based upon the fact that the subject is enclosed in a heat-proof chamber through which a current of cold water is constantly passing. The amount of water is carefully weighed. The temperatures of the water entering and leaving the chamber are accurately recorded at frequent intervals. The walls of the chamber are held adiabatic, thus preventing a gain or loss of heat. Thermo-electric couples connected with a galvanometer notify an observer of temperature changes of the walls. The observer then corrects this by arbitrarily cooling or heating the outer metal walls, a second cold water current accomplishing the former and electric wiring the latter, both systems being outside the inner chamber. The heat given to the first described water current circulating within the inner chamber, is exactly equal to the heat eliminated by radiation and conduction by the subject. To determine the total heat elimination, the latent heat of water vapor evaporated from the skin and lungs must also be added. The sensitiveness of this apparatus is very great. Foreigners as well as fellow countrymen have pronounced it a wonderful machine. In addition to the determination of heat elimination, the carbonic acid outgo and oxygen ingo are determined through an accessory apparatus which provides for the analysis of the circulating air.

The apparatus is costly in the first instance and requires many workers to control. In the hands of Dr. Benedict it has received notable improvements, and it is both wise and fortunate that he has had the splendid generosity of the Carnegie Institution to support his undertaking.

GRAHAM LUSK

The Metabolism and Energy Transformations of Healthy Man during Rest. By FRANCIS G. BENEDICT and THORNE M. CARPENTER. Published by the Carnegie Institution of Washington. 1910. Pp. 255.

This work contains a very valuable compilation of statistics obtained from observation on many normal men who had been occupants of the respiration-calorimeter of Atwater, Rosa and Benedict. As a rule records of the protein metabolism are not recorded, which leaves an important gap unfilled. The authors state that the work of Zuntz and others who used respiration apparatus of the Zuntz type is "as accurate as can be expected with apparatus of this type." The recently published work of Durig, how-