book for foreign visitors, in which I have pasted photographs taken at the time of registration. Lately, I have devised a scheme for a permanent collection which I think will be of interest.

On strong cardboards (8 by 10 inches) I have mounted the photographs, and at the top of each card is printed the name, the locality, the date, the name of the photographer, the name of the donor and the corresponding number of the negative. These mounts are then arranged alphabetically in permanent filing cases on the card-catalog system, so that they can be readily looked over. The back of each card is furnished with transverse lines for remarks which are frequently full and relate to the career of the worker shown in the photograph.

In this way I have already accumulated for the Bureau of Entomology a collection of more than 700 photographs of entomologists of all times and of all countries, and it is growing rapidly.

The advantages of the system are compactness, ready reference and practically impossible fading. The collection often includes several photographs of the same man, taken at different periods of his life, and frequently at his desk or in the laboratory.

The interest of such a collection to students and other workers is very great, as every one must realize.

Wherever possible, I have adopted Dr. Marcus Benjamin's idea, as shown in his collection of past presidents of the American Association for the Advancement of Sicence and in his other collection of bishops of the Episcopal Church, adding samples of the handwriting of the person photographed. Entomologists are urged to send me their photographs for this collection.

L. O. HOWARD

BUREAU OF ENTOMOLOGY,
U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.

FRANK H. BIGELOW

WHEN death claims a friend the first note is personal. Dr. Bigelow was my classmate at Harvard. He entered the Episcopal ministry and was assistant pastor at St. John's here in Washington. He was also attached to the Weather Bureau and stressed the mathematical problems of meteorology. He soon realized that he was a mathematician and not a clergyman. His work became known internationally. He accepted a call from Argentina to organize the weather service of that country. He never came back to Washington. He retired at 70 and went to Vienna to continue studies in mathematical research. At the time he was in Argentina we kept up occasional correspondence. Just a short time ago he showed his customary interest in my family. He sent my boys, who are keen philatelists, some rare postage stamps. He had just spent a few weeks in Berlin, and I venture to quote a few observations on our fiftieth anniversary of the class of '73:

In the name of old '73 I salute you again. I wish very much I could have been there to see the 36 faithful once more.[1] Their group pictures are so changed that I can hardly make out half a dozen. The names call up the fires of 50 years ago, and that is better after all. I infer that you are very well and flourishing, and I wish to send greetings to Mrs. Wiley and those two boys, wishing you all joy and happiness for their coming years.

My absence from the United States is for longer than I anticipated when we sailed away in 1910. My work went on without interruption till 1921, and then I had to knock off on account of diabetes which played havoc with my eyes. Enough of them is left to make life agreeable, and with margin for some study in science, as you can see from No. 5.[2] We have been in Europe nearly three years and find more diversion here than in Washington. We have put in some 60 operas and concerts in Vienna, where music is religion. This was a wonderful experience. It is amazing to see the operas, concerts and restaurants crammed with people every day in the year. I can see no sign of poverty. We had a rousing month in Southwest Germany, in August, 1923, and I could see no sign of distress or preoccupation of any sort. Nearly all the precepts of political economy which I learned at Harvard are now in the fat, and your boys may have a try at the johnnie cakes being cooked.

Amice, vale.

HARVEY W. WILEY

WASHINGTON, D. C.

SCIENTIFIC BOOKS

Galvano-magnetic and Thermo-magnetic Effects. By L. L. CAMPBELL. Number seven of *Monographs on Physics,* edited by Sir J. J. Thomson and Frank Horton, Sc.D. Longmans, Green & Co., New York, 1923. 307 pages, 8vo.

THIS monograph brings together historical, experimental and theoretical accounts of the Hall effect, the Ettinghausen effect, the Nernst effect and the Righi-Leduc effect.

A thin sheet of metal is placed in and normal to a strong magnetic field. When an electric current flows through the sheet of metal a transverse electric potential-difference is developed (the Hall effect) and a transverse temperature difference is developed (the Ettinghausen effect). When a flow of heat takes place along the sheet of metal a transverse electric potential-difference is developed (the Nernst effect)

[1] The number of classmen attending the fiftieth reunion.

[2] He refers to his last published paper, "Atmospheric physics—as applied to a reformed meteorology," 61 pages, printed in Vienna, in April, 1923.