library of the college. Miss Hunter-Baillie is now represented by the children of her two younger sisters —Henrietta, who married the Reverend J. Maconechy, of All Saints', Norfolk Square, and Agnes, who married the Reverend R. B. Oliver, of Whitwell, Isle of Wight. In the Oliver family she had two nephews—the Reverend B. L. Baillie Oliver and the late Matthew William Baillie Oliver, F.R.C.S., whose early death three years ago was a great blow to her. These two nephews have left no descendants. A daughter of Mrs. Maconechy became the wife of Dr. T. Battersby Jobson; of that marriage there are four children. Thus, of the ten children born to John Hunter and his wife Agnes Paul, in the farmhouse of Long Calderwood two centuries ago, there are now only eleven lineal living descendants, representing the fifth and sixth generations. Although these are all that are descended from the Calderwood branch of Hunters, there is another line of Hunters which traces its origin to a senior brother of the John Hunter who became laird of Long Calderwood. The representative of this senior branch is Colonel C. S. Hunter, D.S.O.—*The British Medical Journal.*

SPECIAL CORRESPONDENCE

THE PUGET SOUND BIOLOGICAL STATION

MARINE biological stations meet a definite need by affording professors and students of institutions far from the ocean an opportunity to study the marine flora and fauna. The famous station at Naples has added immensely to our knowledge of the flora and fauna of the Mediterranean; and the station at Woods Hole, Mass., has done similar service for our Atlantic forms; and equally valuable has been the annual assembling of investigators whose discussions and personal acquaintance have enabled many of them to accomplish what they could not have done in the seclusion of their own laboratories.

The Puget Sound Biological Station is comparatively new, but it is offering increasing facilities to students and investigators. It is situated on San Juan Island in Puget Sound, between Vancouver and Seattle, and is maintained by the University of Washington under the efficient direction of Professor T. C. Frye. The coast line is ideal and there is a wonderful display of plant and animal life. Immense brown algae a hundred feet long can be seen from the laboratory windows; and, at night, every stroke of an oar brings a phosphorescent flash from flagellates or jelly fish. Land flora is equally rich, with eight genera of Gymnosperms within botanizing reach.

As early as 1895, biologists were becoming impressed by the wealth of material and small classes were held at various places. In 1903, Professor Trevor Kincaid urged the establishment of a permanent station and the next year, with Professor T. C. Frye, he spent six weeks at Friday Harbor, a small town less than two miles from the present station. Their laboratory was a table three and one half by ten feet, under a Douglas fir tree. There was no class work; but in 1906 they were given the use of an abandoned fish cannery and they offered one course in zoology and one in botany. The cannery was soon sold, but an enterprising citizen of Friday Harbor gave them four acres of land and the university built a laboratory and dining-hall. For a time, Professor Kincaid was director, but since 1913 Professor Frye has been the director and the station has continued to develop, with increasing laboratory space and increasing facilities for research. In 1922 the unused military reserve of 484 acres was secured and permanent buildings were erected. There are now five laboratories for class work, one for research, a stock room and a dining-room, besides cottages for the director and curator. The students and investigators live in comfortable army tents. Library facilities are increasing.

The station has a steamer which makes almost daily trips, with no additional expense to the student, so that there is an opportunity to visit almost every island in Puget Sound. There is a large dredge which brings up deep-sea life in perfect condition. Besides, the station is near the heart of the salmon industry, so that forms which might not be secured in any other way can be gotten from the immense fish traps.

While courses are offered only during the summer, arrangements are being made to keep the station open for research throughout the year.

Teachers and investigators are brought in from all parts of the country and even from abroad. Specialists in various fields have catalogued material, so that identification of much of the flora and fauna is well under way. The following partial list of men who have been at the station as teachers or investigators will give some idea of the work:

J. M. Aldrich, U. S. Natural History Museum, insects; Rupert S. Anderson, Columbia University, phosphorescence; Charles E. Bessey, plant morphology; C. M. Child, University of Chicago, animal senescence; Bruce Fink, Miami University, lichens; E. M. Griffin, Reed College, corals; H. H. Gran, Oslo, Norway, diatoms; N. L. Gardner, University of California, marine algae; Harold Kylin, University of Lund, Sweden, marine algae; Trevor Kincaid, University of Washington, oysters; Wm. Kellogg, Williams College, clams; W. C. L. Muenscher, Cornell University, plant diseases; E. B. Powers, University of Tennessee, animal ecology; V. E. Shelford, University of Illinois, animal ecology; E. C. Starks,

Stanford University, fishes; Josephine Tilden, University of Minnesota, algae; Elda Walker, University of Nebraska, plant morphology; R. B. Wylie, University of Iowa, plant morphology; Charles Zeleny, University of Illinois, embryology.

In 1928 the total number of students was 132, of which forty-two were graduate students doing class work and twenty were graduate students doing research. Besides, there were six teachers doing research.

Expenses are light, but work is strenuous. There are no tourists, even for a single night. Play is encouraged, so that at the end of nine busy weeks one feels that he has had a vacation while he was teaching or doing research.

CHARLES J. CHAMBERLAIN
UNIVERSITY OF CHICAGO

THE AMERICAN MEDICAL ASSOCIATION OF VIENNA

THERE exists in Vienna the American Medical Association of Vienna, which is a well-developed organization founded for the purpose of facilitating post-graduate medical work for English-speaking physicians. All the English medical courses given under the auspices of the University of Vienna are administered through this organization.

Many Americans come to Vienna for post-graduate medical work and apparently profit by so doing. Many others write to professors and business organizations asking for information, indicating a lack of knowledge of our organization.

We have an annual membership of nearly 1,000 new doctors, who come from various parts of the world, and who obtain their work through our organization. It is thoroughly well organized, with four secretaries to orient new members and assist them in obtaining medical courses, housing, money matters, shopping, sightseeing, etc.

For further information, address The American Medical Association of Vienna, Vienna VIII. Alserstrasse 9, Austria.

RALPH A. REYNOLDS

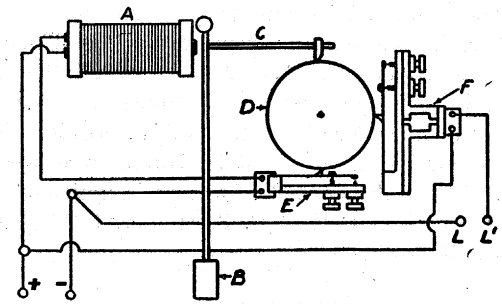
SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN IMPROVED CHRONOGRAPH

A VAST number of instructors in laboratories of experimental physiology have had difficulties with time clocks. For a number of years a Harvard chronograph has been used in the department of physiology and pharmacology of the Michigan State Laboratory. Because of the conditions imposed the results were not at all satisfactory.

Due to a reorganization of the laboratory courses in 1925–26 whereby all students were required to perform a regular series of physiological experiments, the load upon the clock and the consequent annoyances resulting from its malfunctioning became unbearable. In casting about for a remedy the difficulties were casually stated to Mr. Phippeny, at that time operator of WKAR. After making a careful survey of the situation Mr. Phippeny stated that the pendulum-driven Harvard chronograph should satisfactorily meet our conditions provided certain changes were made in the wiring.

The large pendulum-driving magnet (Figure 1 *A*)



was rewound with No. 30 B & S enameled copper wire, and the connecting wires on the chronograph were rearranged in such a manner (see Figure 1) that the pendulum is driven by a shunt from the main source of current. In order to meet our needs for time magnets at fifteen or twenty desks a 24-volt storage battery and a rectifier were installed, and the bobbins of the Harvard signal magnets were rewound with No. 38 B & S enameled copper wire.

Current is supplied to the desk from a line of about 100 feet attached at *L L'* and enclosed in overhead conduits. Readily removable drop cords of proper length extend to the desks. When not in use these cords are removed and stored. When the conduit was installed three wires were placed therein so that two different time intervals would be obtainable at all desks, and a special three-prong plug was used upon the drop cords. To allow for this an extra time bar takeoff *F* was to be placed upon the proper support and suitable connections made. Although this has not been carried to completion the special three-point plug has frequently prevented students from plugging into the 110-volt current which is also carried about the laboratory in conduits.

During the time this chronograph has been in operation there have been two difficulties with which we have had to deal. The small storage batteries originally installed were found to be inadequate and it was necessary to charge them continuously when all the desks were occupied. The variations caused