general conversazione in Hart House, to which all members of the association and associated societies are invited. Many of the athletic activities of Hart House may be seen, such as boxing, diving, water polo and indoor base-ball. There will be band music and bag-pipe music, and a concert in the music room. A program will be staged in the Hart House theater. Refreshments will be served in the Great Dining Hall of Hart House. Hart House will be open to visitors also on the evenings of Tuesday, Wednesday and Friday.

An exhibit of artistic skating by the Toronto Skating Club, followed by an ice-hockey match, will be given, under cover, on Friday afternoon. All in attendance at the meeting are invited.

The general program of the Toronto meeting, including programs for the sections and for the twenty-one associated societies meeting with the association at Toronto, will be ready for distribution on Tuesday, December 27, at the registration room.

BURTON E. LIVINGSTON,
Permanent Secretary

SCIENTIFIC EVENTS

FOREST EXPERIMENT STATIONS

A RECENT circular by the Forest Service of the Department of Agriculture, entitled "Forest Experiment Stations," outlines what forest experiment stations have done, what they need to do, why they are needed, where they are needed, and what they would cost.

Six stations were established in the West between 1908 and 1913, with a small technical staff at each. In spite of limitations in funds and personnel valuable results have been secured in showing how to plant the Nebraska sand hills, in planting on the western National Forests, in the development of methods of cutting Douglas fir forests, in a study of the relation between forests and streamflow, and many other questions.

The field of forest experiment stations includes forest botany; forest distribution; forestation, from the production, collection, extraction, cleaning, testing and storage of seed, to nursery practise, direct seeding and field planting; silviculture; forest protection; utilization of products, such as naval stores and forage; forest management, or the regulation of the cut with its basis of data on volume, growth, and yield; the effect of forests on streamflow, erosion, and climate; and, underlying these, studies of the fundamental natural laws governing tree growth and the life histories of the individual species and types.

To meet present forestry needs, a program is outlined which includes ten forest experiment stations, each with a technical staff of from 6 to 12 men, and distributed, 5 in the East, 3 in the Rocky Mountains, and 2 on the Pacific Coast. Specifically, they would cover the Southern Pine belt in the Atlantic and Gulf States, the Lake States, the Northeast, including New England and New York, the Allegheny region, the Southern Appalachian Mountain region, the northern, central, and southern parts of the Rocky Mountain system, and the northern and southern parts of the Pacific Coast region.

THE U. S. PATENT OFFICE

WHEN Commissioner Newton was in charge of the Patent Office in July, 1919, he testified before a committee of Congress to the effect that the situation in his bureau was deplorable and that it was in a worse condition at that time than at any other time since he had been in service. His service began in 1891. The present commissioner of patents in his report to the Congress points out that the degeneration has continued steadily since the testimony of Commissioner Newton was given. Between July, 1919, and June 30, 1921, the Patent Office lost 163 of its examiners. The report states that

> These men were scientifically trained and also members of the bar. They have been replaced by inexperienced men, fresh from college, without any knowledge of patent law and without legal training.

During the time the Patent Office has been losing the 163 men aforesaid, the number of applica-