Professor Hamilton was an excellent teacher and upheld the highest educational and ethical standards in respect to teacher effort and student response. His interest in young men was manifested by his fostering attitude toward college athletics. He was the faculty representative in college athletic conferences and chairman of the Athletic Board. He supported the highest standards of intercollegiate athletics and regarded games as sports rather than business enterprises.

Contacts with students in their academic, athletic, financial and organized capacities gave Professor Hamilton keen insight into and sympathy with their various institutional activities, and he was highly esteemed by students as well as the faculty. In a final substantial act he showed his interest in them by leaving a bequest of $6,000 for the student loan fund.

J. T. WILLARD

KANSAS STATE COLLEGE,
MANHATTAN

RECENT DEATHS AND MEMORIALS

J. E. OSTRANDER, from 1897 to 1928 professor of mathematics and civil engineering at the Massachusetts State College at Amherst, died on October 19 at the age of seventy-three years.

DR. JOHN ROBERTS CAULK, professor of clinical genito-urinary surgery since 1914 at the School of Medicine of Washington University, St. Louis, died on October 13 at the age of fifty-six years.

THE first of a series of six paintings of pioneers of American medicine, to be prepared for the American College of Surgeons, shows the surgeon Dr. William Beaumont with Alexis St. Martin, half-breed trapper, who was the subject of his study of the digestive process. Other pictures, all painted by Dean Cornwell, of New York, will show Ephraim McDowell, who performed the first successiful abdominal ovarian operation; Dorothea Lynde Dix, crusader for good treatment of the feeble-minded and insane; Dr. Oliver Wendell Holmes, pioneer in combatting puerperal fever; Crawford W. Long and William Thomas Greene Morton, pioneers of anesthesia, and Major Walter Reed, conqueror of yellow fever. It is planned to exhibit the paintings at medical centers throughout the country.

SCIENTIFIC EVENTS

THE SALMON FISHERIES OF FRASER RIVER

THE International Pacific Salmon Fisheries Commission, established under the treaty of 1937 between the United States and Canada to regulate the sockeye salmon fisheries of the Fraser River, has now under way a program of scientific investigations, with headquarters at New Westminster, B. C.

Its staff has designed and is using a tag to mark migrating sockeye salmon, which will be of interest to the many who use such tags to study the biology of fish. It is similar in form and attachment to that used in striped bass investigations by Merriman and by others. Two celluloid discs are used, held on opposite sides of the back of the fish by a nickel pin run through the firm tissue below the last rays of the dorsal fin. One disc has a number and the address of the commission printed on the side next the fish. The discs differ from previous tags in their color and eye-like pattern, adapted as shown by experiments to be most readily seen under the conditions met by migrating salmon. A white circular tag, 13.5 mm in diameter, has a central round red spot 7 mm in diameter. The white contrasts with the red color of the spawning sockeye, the red in a white field with its silvery condition as it approaches the river. The pattern attracts attention of observers quickly, and can be seen after the fish itself has been lost to sight. It should be plainly visible on the spawning grounds.

The use of both pattern and color seems to be fortunate, judging by its initial success. Returns have been unusually high, over 50 per cent. of the first lot of thirty having been returned within three weeks, prior to the beginning of the heavy fishery. The forthcoming survey of the spawning grounds should recover more.

This tag is designed to do two things. One is to follow the course of the fish through the commercial catch and to connect the particular "run" of fish tagged with its particular spawning grounds. As far as known, no intensive work to this end has been done on Pacific salmon. The second is to determine the percentage of fish which escape the commercial catch and reach the spawning grounds. In other words, to determine the population on the spawning grounds.

This is not a new method of estimating populations, other investigators on other species having proposed it for use in lakes, etc., and its use is common in marine investigations to show the "intensity" of a fishery.

In the present instance it follows an attempt, over many years, by officers of the Canadian Department of Fisheries to estimate the escapement to particular spawning grounds. The use of tags may, if successful, make such estimates more accurate. If, for example, a thousand tagged salmon are released on a spawning ground, and only five hundred are visible, any count of untagged fish must be correspondingly multiplied. The count of all fish must then be multiplied by two