Tests of this new chemical substance made in army hospitals in Europe and in civil hospitals in America have shown that it is of value in curing wounds and in causing wounds to heal promptly which for months or even years had refused to yield to treatment. While several new substances and new methods found by medical investigators since the war began have proved extremely useful in combating infections in wounds, "Tethelin" has a field of usefulness all its own—after other methods have rendered the tissues aseptic and wounds sometimes refuse to heal, especially where frostbite, burns, or varicose veins have injured the vitality of the tissues. There are thousands of such cases in Europe to-day and they occupy the hospitals for an exceptionally long time, consuming drugs, time, space, and food, and frequently such cases have to be discharged unhealed. It is precisely these cases—the most expensive and most disabling type of wounds—which "Tethelin" aids, since it stimulates the sluggish tissues and enables nature to work its own repair.

Professor Robertson has relinquished all personal profit from his discovery of this growth-promoting substance. In the agreement by which the regents of the University of California have accepted the trusteeship of this endowment for medical research it is provided that in case Professor Robertson should become physically disabled his present university salary would be continued throughout his lifetime, from the proceeds of the trust, or in case of his death, to his wife for her life time. All income above this contingent charge will go to endow an institute of medical research, devoted to research in medicine, and especially to research in the physiology, chemistry and pathology of growth.

Under the supervisory control of the regents of the university, the researches thus provided for are to be directed by a board of directors, of which the charter members are to be five members of the faculty of the University of California: Dr. F. P. Gay, professor of pathology; Dr. Herbert M. Evans, professor of anatomy; Dr. George H. Whipple, professor of research medicine and director of the George Williams Hooper Foundation for Medical Research; Dr. C. L. A. Schmitt, research assistant in pathology; and Professor Robertson himself. Vacancies on this board must be filled from men engaged directly and primarily in research work of the character mentioned or of some kindred character. No man who ceases to be so engaged may continue to serve as a director, and no director is to contine in service on the board after he arrives at the age of sixty. It is felt by the University of California that one especial value of the establishment of this foundation is the pattern which it sets for a procedure by which other scientific discoverers may dedicate the results of their scientific discoveries to the benefit of mankind as a whole.

THE HEALTH OF MUNITION WORKERS IN ENGLAND

THE report to the British government Committee on the Health of Munition Workers is summarized in the *Journal* of the American Medical Association. Dr. H. M. Vernon has conducted an elaborate investigation for the committee, the members of which realize that the data at their disposal are not yet ample enough to permit them to express a final judgment on the whole question of hours of labor in relation to output, on the one hand, and the well-being of the employees, on the other. But they are strongly of opinion that the evidence collected by Dr. Vernon and his conclusions merit the immediate and earnest consideration of all concerned in industrial organization at the present time. (*a*) Observations extending over a period of thirteen and one half months on the output of workers employed in making fuses showed that a reduction of working hours was associated with an increase of production both relative and absolute. The rate of production changed gradually, and did not reach an equilibrium value before the expiration of four months. Thereafter it remained steady during the period of from three and one half to five months during which it was observed. The gradual change negatives the suggestion that the effect was a mere con-

sequence of the desire to earn the same weekly wage as before the hours were shortened. (*b*) Owing to the reduction of the working time first by a change from a twelve-hour day to a ten-hour day, and subsequently by the abolition of Sunday labor, it was possible to compare output under three conditions. The group of women (numbering from eighty to one hundred) engaged in the moderately heavy labor of turning aluminum fuse bodies provided the following comparative results: (1) When actually working 66 hours a week and nominally 74.8 hours, their relative hourly production was 100 and their relative gross production 100. (2) When actually working 54.8 hours and nominally working from 58.5 to 66 hours, their hourly production was 134 and their gross production 111. (3) When actually working 45.6 hours and nominally working from 49.5 to 58.5 hours, their hourly production was 158 and their gross production 109. It is to be inferred, therefore, that had these women been working, uniformly, a nominal 50-hour week their gross output would have been as large as when they were working a nominal 66-hour week, and considerably greater than when they were working a 77-hour week. (*c*) A group of forty women engaged in the light labor of milling a screw thread on the fuse bodies improved their gross output by 2 per cent. when actually working 54.8 hours a week, the standard being their gross output when working 64.9 hours per week. A further reduction of actual working hours to 48.1 resulted in such an improvement of hourly output that the gross output was 1 per cent. less than when the actual working time was 16.8 hours more. (*d*) A group of fifty-six men engaged in the heavy labor of sizing the fuse bodies improved their hourly output by 37 per cent. and their gross output by 21 per cent. when actually working 51.2 hours, the standards being the hourly and gross outputs observed when the actual weekly hours were 58.2. (*e*) Fifteen youths engaged in the light labor of boring top caps by means of automatic machines produced only 3 per cent. less output when their actual weekly hours of work were 54.5 hours than when they were 72.5 hours. (*f*) A part of the improvement in output was due to the workers starting work more promptly when on shorter hours. At one period the women engaged in turning fuse bodies lost on the average thirty-seven minutes daily by starting work after, and stopping before, the nominal time. Nine months later, when their hourly output was 25 per cent. better, they lost only twenty-six and one half minutes daily in these ways. (*g*) A rest from work on Sunday is followed by a relatively low output on Monday, and this output steadily rises in the course of the week, owing to the increased efficiency produced by practise. Generally, the cumulative effects of fatigue neutralize and overpower this increased efficiency, and the output may fall after the second day (or night) of the working week if the hours are long and the work laborious, or not till after the third, fourth or even fifth day, if the hours are shorter. In the absence of a Sunday rest, the fatigued worker has no opportunity for complete recuperation and his output, though more uniform, remains permanently at a lower level than that shown on Monday by a worker who has rested on Sunday.

ELECTRICAL ENGINEERS AS LIEUTENANTS IN THE U. S. NAVAL RESERVE

1. The Secretary of the Navy has authorized the commissioning of one hundred graduate electrical engineers as lieutenants, junior grade, in the Naval Reserve, and directed that the necessary action be taken to provide these officers at the earliest practicable date.

2. The qualifications for such officers to be in general as follows: (*a*) Citizens of the United States. (*b*) College graduates in electrical engineering. (*c*) Not less than three years' employment in electrical work since graduation. (*d*) Between twenty-five and thirty-five years of age. (*e*) Of character and physique required for officers of the regular service.

3. Pay and allowances of lieutenants, junior grade, are the same as in the regular Navy, and are, approximately: $2,200 at sea; on shore, including allowances for commutation of quarters, heat and light, $2,480. There is an