

THE FRANKLIN INSTITUTE.

(Proceedings of the Stated Meeting held Thursday, October 20, 1920.)

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, October 20, 1920.

PRESIDENT DR. WALTON CLARK *in the Chair.*

Additions to membership since last report, 15.

Reports of progress were presented by the Committee on Library, and the Committee on Science and the Arts.

Mr. Coleman Sellers, Jr., Vice-President of the Institute, was recognized. He gave a brief account of the life and work of Dr. Joseph Priestley and presented to the Institute for its collections an air pump once the property of Doctor Priestley.* On motion of Dr. A. S. Cushman, duly seconded, the thanks of the Institute were extended to Mr. Coleman Sellers, Jr., and Mr. Horace Wells Sellers, the donors.

Doctor Hoadley was then recognized, and presented Mr. Edward Payson Bullard, Jr., of Bridgeport, Conn., to whom had recently been awarded the Howard N. Potts Medal for his Mult-Au-Matic machine. Doctor Hoadley said:

" Mr. President:

" One of the important functions of The Franklin Institute is that of granting recognition to inventors who have succeeded in putting into practical operation an invention that is of service to man.

" The investigations, required to determine who among the legions of inventors are worthy of such recognition, are put by the Institute, into the hands of the Committee on Science and the Arts.

" This Committee is composed of sixty members, each of whom is of wide experience and has expert knowledge in some scientific or technical field.

" Whenever an invention, that promises to be of sufficient merit, comes to the attention of the Committee, it is referred to a Sub-Committee on New Subjects and Preliminary Examination for consideration and if it meets with the approval of this Sub-Committee it is recommended to the General Committee for investigation. On being accepted, a Sub-Committee of investigation is appointed, consisting of members who are especially qualified to make an investigation in the field covered by the invention.

" This takes into account the originality of the invention, the soundness of the scientific and mechanical principles upon which it is founded and its success when put into practical application.

" Recognizing the value of the work done by the Committee on Science and the Arts, former members of the Institute have placed at its disposal certain funds from the income of which medals can be provided for inventions of especial merit.

* Mr. Sellers' remarks will appear in the next number of the JOURNAL.

"A little less than a year ago an invention of Mr. Edward Payson Bullard, Jr., was brought to the attention of the members. This is a mechanical device, the purpose of which is to increase the rate of production in the manufacture of parts of machines that are made in quantity.

"The fundamental idea of this invention is that of a multiple lathe, the operating parts of which are placed at equal intervals around a central vertical axis. The metal blanks from which the finished parts are to be made are firmly clamped upon pedestals that surround the central axis. These pedestals are rotated at speeds that are predetermined as required. Placed vertically above each pedestal is a tool carrier that clamps the required cutting tools.

"At the first station of this machine the finished work is removed and the new blank is inserted. When this is done the pedestals revolve bringing the blank to station 2, where a certain part of the work is done. The next movement of the pedestals brings the work to station 3, where further work is done. In this way the blank is brought successively under the different tools, and on reaching the last station it has become a finished product. To invent such a machine and to bring it to its present state of perfection in which it automatically turns out duplicate parts at a high rate of production has required years of intensive application in design, in testing and in modification, and to secure the correlation of all the operations required has called for a high degree of mechanical skill and ingenuity.

"The Sub-Committee of investigation closes its report with these words: 'For the originality and completeness with which this machine has been developed, for its adaptability to a large class of work, and for its economic value on account of its productiveness per man, per hour, per square foot of floor space, we recommend the award of the HOWARD N. POTTS GOLD MEDAL to Edward Payson Bullard, Jr., of Bridgeport, Connecticut, for his Mult-Au-Matic Machine Tool.'

"I have the honor to present Mr Bullard, the inventor of the Mult-Au-Matic."

The President presented the Medal and Certificate to Mr Bullard, who thanked the Institute for the honor conferred upon him.

Joseph S. Ames, Ph.D., LL.D., Director of the Physical Laboratory, The Johns Hopkins University, Baltimore, Md., then presented the paper of the evening, entitled "Einstein's Principle of Relativity and Its Bearing Upon Physics." It was shown that Einstein has introduced into the interpretation of the phenomena of nature, as observed on the earth, an entirely new concept and an entirely new method of approach. An account was given of his method and attention was called to some of the conclusions obtained by it and to their verification by experiment and observation. Especial emphasis was laid on the fact that Einstein has developed a method and not a theory. After a discussion of the subject the thanks of the meeting were conveyed to the speaker.

Adjourned.

R. B. OWENS,
Secretary.