

inclined to the horizontal at an angle of 45° is another screw geared to a frame on which moves a circle carrying the fixed holder which receives the plate to be measured.

Each plate after it has been put in the holder can be subjected to three movements: a movement of rotation, which serves the purposes of orientation, and two rectilinear movements, one of which takes place on the horizontal and the other on the inclined plane. Each of the rectilinear movements can be roughly read off by means of the millimetre scales attached to the planes. Fractions of a scale division are determined by means of the micrometer screws. The head of each screw is divided into one hundred parts, and this is further divided into ten by estimation. Since, then, one turn of the screw corresponds to one minute of arc, it is possible to read to $0.6''$ by means of the micrometer divisions.

It is hoped that in five or six years all the plates required from each observatory will have been obtained,

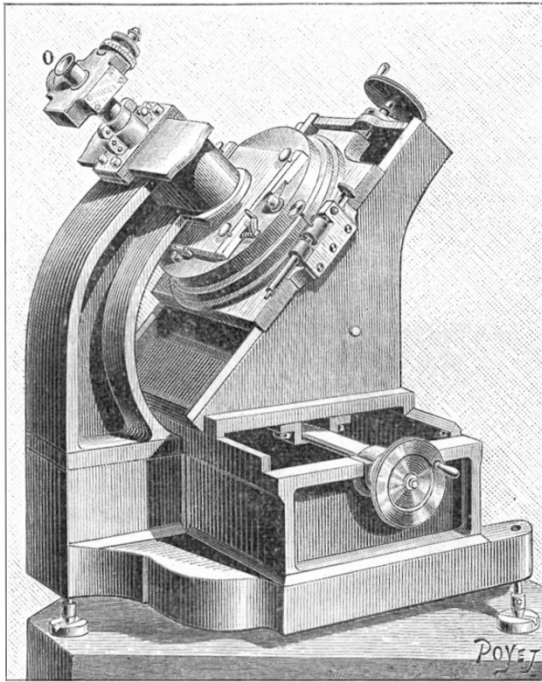


FIG. 2.—Instrument for Measuring Star Photographs. O, Observing Microscope.

but the measures can hardly be completed in less than ten years, and the computations to which they give rise will occupy about the same length of time. This rate of progress, however, cannot be regarded as slow for it must be remembered that the results will occupy forty ponderous volumes of one thousand pages, each page containing the positions of fifty stars.

When the immense labour involved is taken into consideration, one ceases to wonder that some of the co-operating observatories are unable to keep up with the measurements. It is to be hoped that lack of funds may not be allowed to prevent the obtaining of proper assistance in such cases, or to retard the publication of the results as soon as they are ready.

SMITHSONIAN INSTITUTION: HODGKINS FUND PRIZES.

IN answer to inquiries, and in further explanation of statements made in the Hodgkins circular (NATURE, vol. xlvii. p. 611), it may be added that *any* branch of
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natural science may offer a subject of discussion for the Hodgkins prizes where this subject is related to the study of the atmosphere in connection with the welfare of man.

Thus, the anthropologist may consider the history of man as affected by climate through the atmosphere; the geologist may study in this special connection the crust of the earth, whose constituents and whose form are largely modified by atmospheric influences; the botanist, the atmospheric relations of the life of the plant; the electrician, atmospheric electricity; the mathematician and physicist, problems of aerodynamics in their utilitarian application; and so on through the circle of the natural sciences, both biological and physical, of which there is perhaps not one which is necessarily excluded.

In illustration of the donor's wishes, which the Institution desires scrupulously to observe, it may be added that Mr. Hodgkins illustrated the catholicity of his plan by citing the work of the late Paul Bert in atmospheric electricity as a subject for research, which, in his own view, might be properly submitted for consideration in this relationship.

While the wide range of the subjects, which the donor's purpose makes admissible, cannot be too clearly stated, it is equally important to emphasise the fact that the prizes in the different classes can be awarded only in recognition of distinguished merit.

S. P. LANGLEY.

NOTES.

PROF. VIRCHOW was elected honorary president of the Berlin Medical Society on Monday.

THE death is announced of Prof. Léon Lefort, vice-president of the Paris Academy of Medicine.

PROF. SCHAUTA, of Vienna, has received the Cross of a Knight of the Order of the North Star from the King of Sweden.

A DISPATCH from Valparaiso announces that a volcanic eruption has occurred near Calbuco, causing great damage to that town.

WE are glad to learn that Prof. von Helmholtz is recovering from the injuries he sustained from falling down a companion ladder on board the *Saale*, while returning from his recent visit to America.

THE Franklin Institute has received the sum of one thousand dollars from Mr. A. A. Boyden, to be rewarded as a premium to any resident of North America who shall determine by experiment whether all rays of light, and other physical rays, are or are not transmitted with the same velocity.

MISS ORMEROD has received a report from her correspondent on crop insect pests in Norway to the effect that the Hessian fly is now for the first time recorded as occurring in Norway and doing damage to barley. Specimens of the infested straw, showing the presence of the flat brown chrysalis of the *Cecidomyia destructor*, were sent with the report.

DR. J. W. GREGORY has returned from East Africa after a very successful investigation of the geology and natural history of Mount Kenia and the neighbouring region. His observations, and the large number of geological, zoological, and botanical specimens collected during the expedition, add considerably to our knowledge of the character and capabilities of British East Africa.

WITH reference to the reported outbreak of cholera at Greenwich, Dr. Thorne Thorne reports that, whilst in certain important respects the materials that have been investigated suggested that