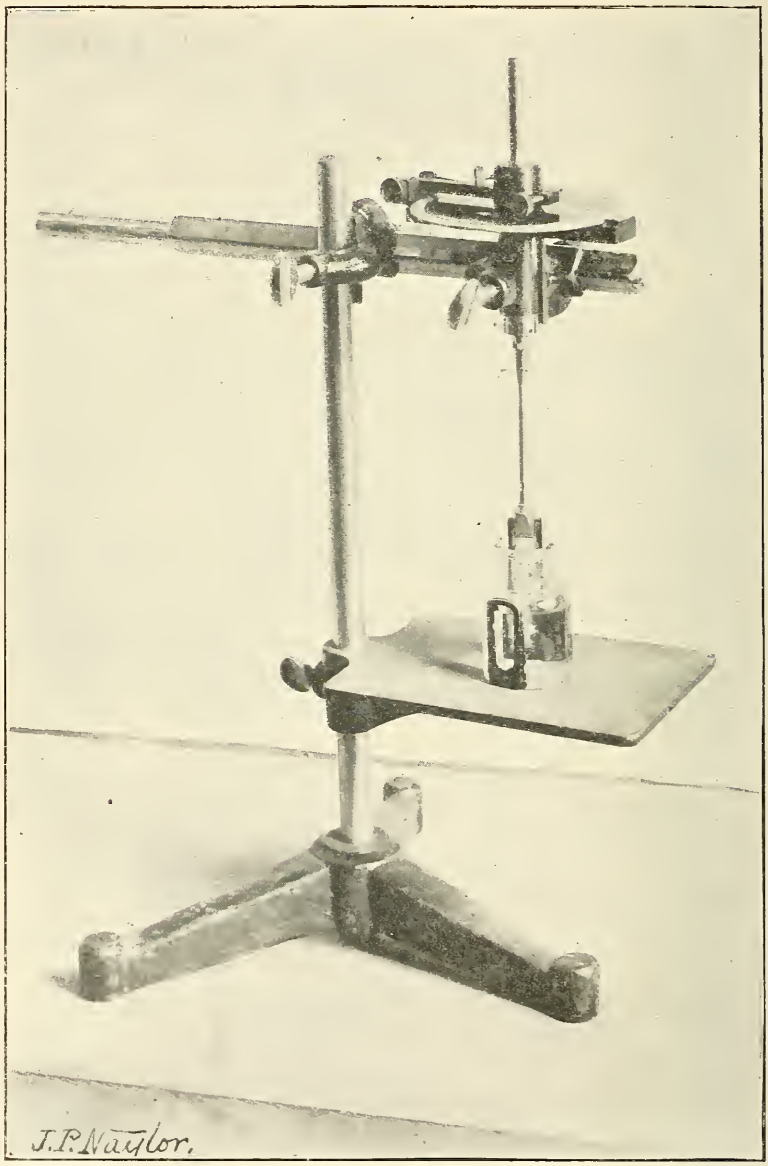
A Convenient Laboratory Device.

By J. P. Naylor.

For the last year we have been using a little device at Minshall Laboratory that has proven serviceable in so many ways that it is thought that it might be of sufficient interest to other members of the physics Section to merit bringing it before you. Used in connection with the "Universal Supports," now so common in physical laboratories, the piece is so contrived as to be adapted to a large number of experimental purposes.

The apparatus consists of a four and one-half inch circle divided to half degrees, and supported by a hollow spindle or axle. The spindle is carried by a sleeve, about three inches long, having at one end a strong crossbar. This crossbar is fitted at one end with a vernier reading on the divided circle to three minutes of arc and at the other end with a slow motion screw and clamp arranged to act upon the circle. The hole through the spindle will take a ten millimeter rod which can be clamped, by means of a screw, at any desired point. To this rod are attached the various pieces that make it possible to use the device in so many different ways. In fact, it is in the hollow spindle that the adaptability and general usefulness of the apparatus lies.

Perhaps merely mentioning a few of the purposes for which it can be used will best suggest its adaptability in laboratory or investigation work. It can be used for measuring the torsion of wires by twisting, for the torsion head of an electro-dynamometer, for measuring the indices of refraction of plane parallel plates, for measuring the angles of prisms, for making up a Kohlrausch total-reflectometer, for measuring the indices of liquids by Wallaston's method, for arranging a Wallaston's goniometer, for making up a simple polariscope or sacharimeter, as a support for measuring the angular aperture of a microscope objective or photograph lens, and for many other purposes. In fact, the apparatus can be used in a large majority of cases where the measurement of an angle is an essential part of the work. The figure shows the use of the apparatus in making up a Kohlrausch total-reflectometer.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