

A POCKET SPECTROPHOTOMETER.

By P. G. Nutting.

The instrument here described is very small and inexpensive and requires practically no adjustment or calibration. Its sensibility is ample for all but precision work, while its simplicity and compactness recommend it for general laboratory use. Aside from its extremely small size, the use of this combination of amici and nicol prisms is believed to be a novel feature in spectrophotometers.

As may be seen from Fig. 1, the instrument is essentially a pocket spectroscope with two nicols added, one before and one behind the

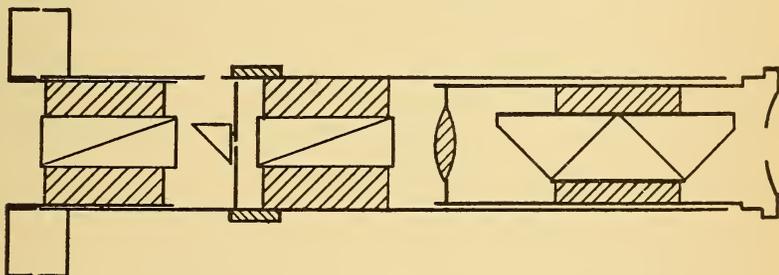


Fig. 1.

slit. The first nicol may be rotated about its axis, thus varying the intensity of the light coming from directly in front of the instrument but leaving the light coming from the side unaffected. The amount of this rotation is read off on the attached circular scale 5 cm in diameter.

For more accurate work or for comparing lined spectra (say an arc with a Nernst lamp) an ocular and ocular slit are added as in Fig. 2. This slit is kept of constant width (say 0.2 mm) and displaced laterally for settings on various spectrum lines.

The figures are of the actual dimensions of the instrument. Such an instrument was recently constructed for the Bureau of Standards by the firm of R. Fuess, of Steglitz, from designs by the

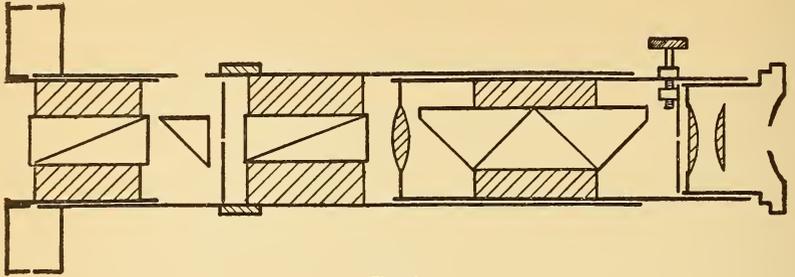


Fig. 2.

writer similar to Fig. 1, and to the excellence of their optical and mechanical workmanship is due the surprisingly high order of accuracy and sensibility of which this spectrophotometer is capable.

O