
A revolving diagonal enables eye-pieces to be brought into position in rapid succession, just as a nose-piece on a microscope makes it possible to change objectives quickly and easily. It consists of a tube, screwed at each end, for fixing to the telescope, and containing a prism, which acts as a total reflection, or a first surface, prism, according to the end which is presented to the source of light, the tube having holes cut in two places to allow of the passage of the reflected light.

A hollow cube, pierced on all sides, revolves round this tube, and into four sides of the cube are screwed, at right angles to the tube containing the prism, four sockets for receiving the eye-pieces.

By revolving the cube, eye-pieces of various powers can be brought into position quickly and easily, a small stop indicating when the correct place is reached.

The eye-pieces being screwed into short tubes, or adapters, which slide into the sockets, may be focussed by pushing the adapters more or less into the sockets, and as eye-pieces of various powers are successively brought into position, each is in focus without any fresh use of the focussing screw of the telescope.

I believe the revolving arrangement to be a convenience which has not been made before.

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P. is a prism fixed in a tube ending at
C. C'. in collars screwed for attaching to telescope.
M. M. are discs with milled edge fixed to the tube, enabling the tube and prism to be held while the eye-pieces are rotated.
T. T. T. T. are tubes attached to a hollow cube that rotates round the tube that holds the prism.
DT. DT. are draw tubes or DT. DT. adapters holding the eye-pieces and sliding in the tubes T.
When the Sun is to be observed the diagonal is attached to the telescope by the collar C, and the course of the rays is Sun P.A., and by rotating the cube each of the tubes T can be successively brought into the position A. When a star is to be observed the diagonal is attached by C', and the course of the rays is Star P.B., and, again, any eye-piece is brought into position by rotating.

Notes on Reflecting Telescopes and the Making of Large Discs of Glass for them. By A. A. Common, F.R.S.

In May 1884 I read a "Note on a Method of Reducing the Friction of the Polar Axis of a Large Telescope." In this note I gave a new possible form of reflecting telescope. M. Loewy must have been working at the same subject at the same time, for he gives in the June number of the Bulletin Astronomique the identical arrangement, carrying it further and developing the complete Coudé reflecting telescope. In thinking over the best kind of telescope to erect in a situation that is much better than my present observatory, but which is unfortunately much exposed to wind, I have been again disposed to think that a modification of the arrangement of the Coudé telescope as suggested by M. Loewy or of the arrangement suggested by myself—for it is a modification of both—might be used with good effect. This combination, as I have since found, is not new, having been described by a Mr. Benjamin Martin about 150 years ago, according to Dr. Dick, who illustrates it on pp. 288 of his Practical Astronomer.

Shortly, it may be described as exactly what M. Loewy describes in the Bulletin Astronomique as the complete Coudé reflector, but without the front or outer large plane mirror; that is, a plane mirror pierced with a hole of proper size, placed in front of the concave at a distance somewhat less than its focal length. Optically the arrangement is as given in fig. 1.

There are two ways in which such an optical combination may be used equatorially: the first, to swing the whole on a polar axis, so that the whole can be moved in declination to any