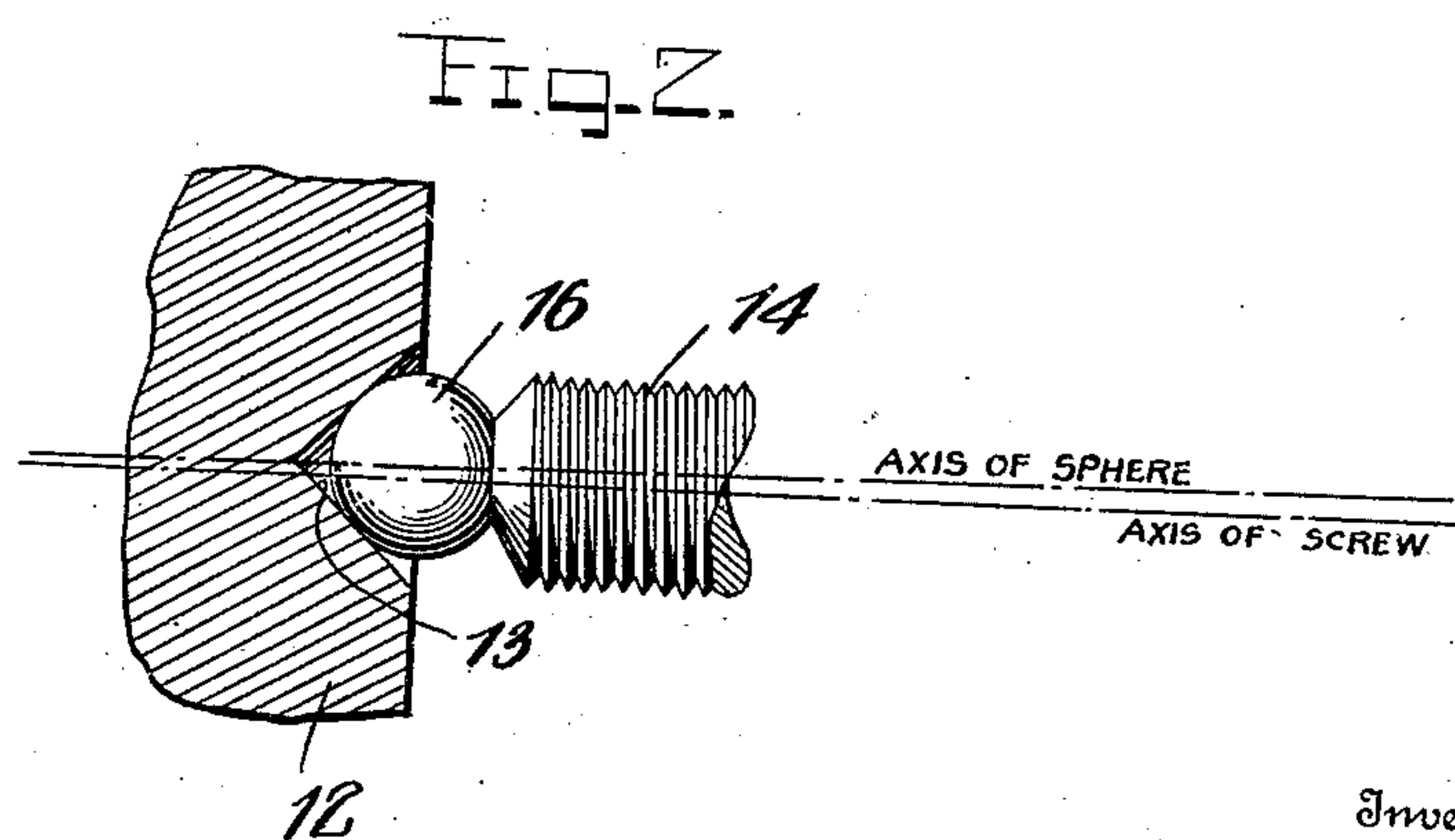
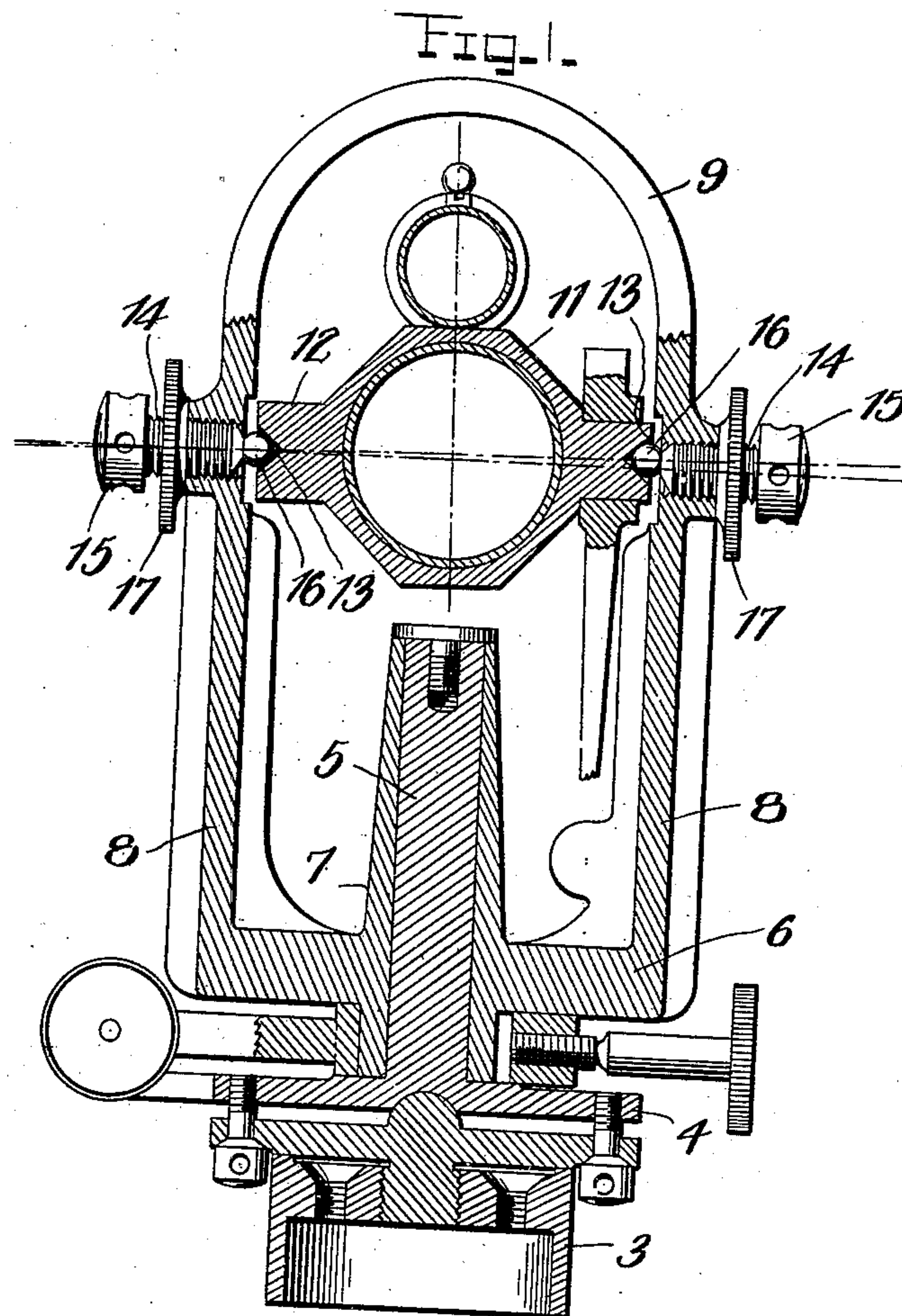


917,799.

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SOLAR ATTACHMENT.
APPLICATION FILED DEC. 21, 1908.

Patented Apr. 13, 1909.



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SOLAR ATTACHMENT.

No. 917,799.

Specification of Letters Patent.

Patented April 13, 1909.

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To all whom it may concern:

Be it known that I, GEORGE N. SAEGMULLER, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Solar Attachments, of which the following is a specification.

In solar attachments for transits, and the like, it is of course very essential that the horizontal axis of the telescope should be exactly horizontal when the polar axis is vertical.

The primary object of the present invention is to provide novel, simple and effective means for adjusting the said horizontal axis, said means being such that there is very little liability of the accidental shifting of the axis, and said means furthermore permitting a much more simple and stable supporting structure or frame for the telescope.

The preferred form of construction is illustrated in the accompanying drawings, wherein:—

Figure 1 is a vertical cross sectional view through the attachment. Fig. 2 is a detail sectional view on an enlarged scale of the eccentric journal bearing.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a mounting 3 of any desired character is employed, on which is located the usual adjustable plate 4 having a central upstanding stem or post 5. On this post is journaled the novel structure, which includes a supporting frame formed of a single piece. This frame includes a base 6 having an extended bearing 7 for the post or stem 5 and standards 8 integral with and rising from the opposite sides of said base. The upper ends of the standards are connected, and consequently effectively held against spreading by a yoke 9 integral with said standards. Arranged within this frame, between the standards 8 is the usual telescope 10 carried by a suitable mounting 11, that has opposite gudgeons 12 provided in their ends with tapered sockets 13. Journal screws 14, threaded through the standards 8, have heads 15 at their outer ends, while their inner ends are provided with substantially spherical integral projections 16 that are engaged in the sockets 13, and consequently form bearings on which the telescope can swing. One of these projections 16 is pref-

erably concentric to the axis of the screw carrying it, but the other is disposed eccentrically to said screw, as will be evident by reference to the drawings. Check nuts 17 are preferably threaded upon the screws and engage the standards to hold said screws against accidental rotation. With this construction, it will be evident that if the screw carrying the eccentric projection is rotated, the horizontal axis upon which the telescope swings, will be raised or lowered so that an accurate adjustment can be obtained, and when the check nuts 17 are tightened, there is little liability of its axis accidentally shifting. The structure moreover is exceedingly simple and furthermore permits the use of a single-piece supporting frame, which is rigid so that it will not spring or become misshapen.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. In an instrument of the character described, the combination with a sighting device, of spaced journal bearing elements therefor, one of said journal bearing elements being rotatable and having an eccentric engagement with the sighting device.

2. In an instrument of the character described, the combination with a sighting device, of spaced journal bearing elements therefor, one of said journal bearing elements being rotatable, said device and rotatable element being provided one with a socket, and the other with a portion engaged in the socket and disposed eccentrically to the axis of rotation of the element.

3. In an instrument of the character described, the combination with a support, of a telescope having a socket, and a screw threaded into the support and having an eccentrically disposed projection at its inner end that engages in the socket.

4. In an instrument of the character described, the combination with a support, of a telescope, and a journal screw threaded into

the support, said screw and telescope being provided one with a tapered socket, and the other with a substantially spherical portion engaged in the socket and forming a journal bearing for the telescope.

5 5. In an instrument of the character described, the combination with a support, of a telescope having a mounting provided in one side with a tapered socket, and a journal screw threaded into the support and having a partially spherical inner end engaged in the socket.

10 6. In an instrument of the character described, the combination with spaced supports, of a swinging telescope located between the same and having tapered sockets in its opposite sides, and screws threaded through the supports and having journal balls engaged in the sockets, one of said balls being disposed eccentric to the axis of rotation of the screws.

7. In an instrument of the character described, the combination with a base, of spaced standards integral with and rising from the base and a yoke integral with and connecting the upper ends of the standards, a telescope located between the standards and including a mounting having outstanding gudgeons, said gudgeons having tapered sockets in their ends, screws threaded through the standards and having substantially spherical projections on their inner ends engaged in the sockets, one of said projections being disposed eccentrically to the axis of the screws carrying it, and check nuts threaded on the screws.

In testimony whereof I affix my signature, in presence of two witnesses.

GEORGE N. SAEGMULLER.

Witnesses;

HENRY C. THON,
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