

No. 885,690.

PATENTED APR. 21, 1908.

W. DUBOIS.

GLOBE.

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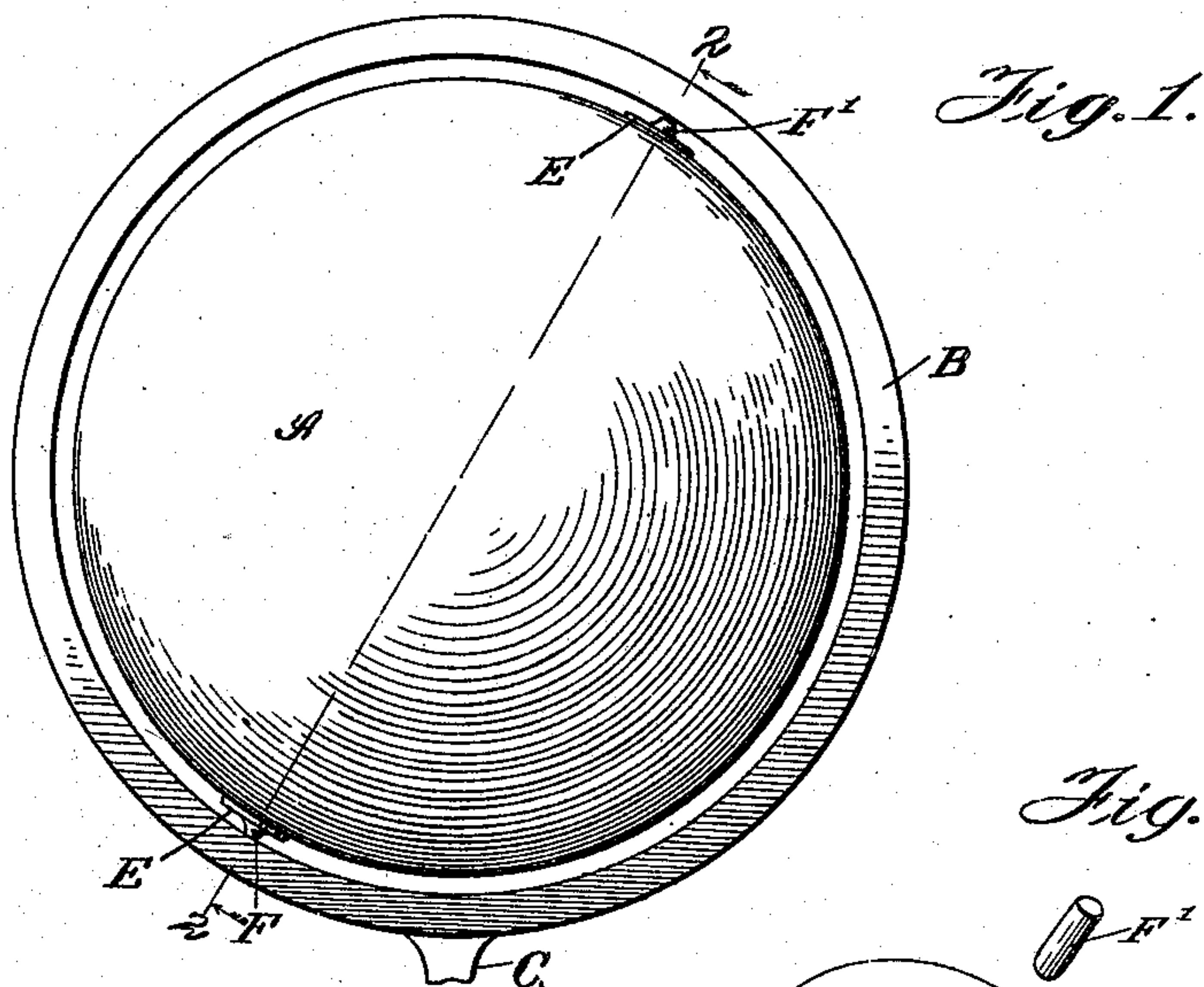


Fig. 1.

Fig. 2.

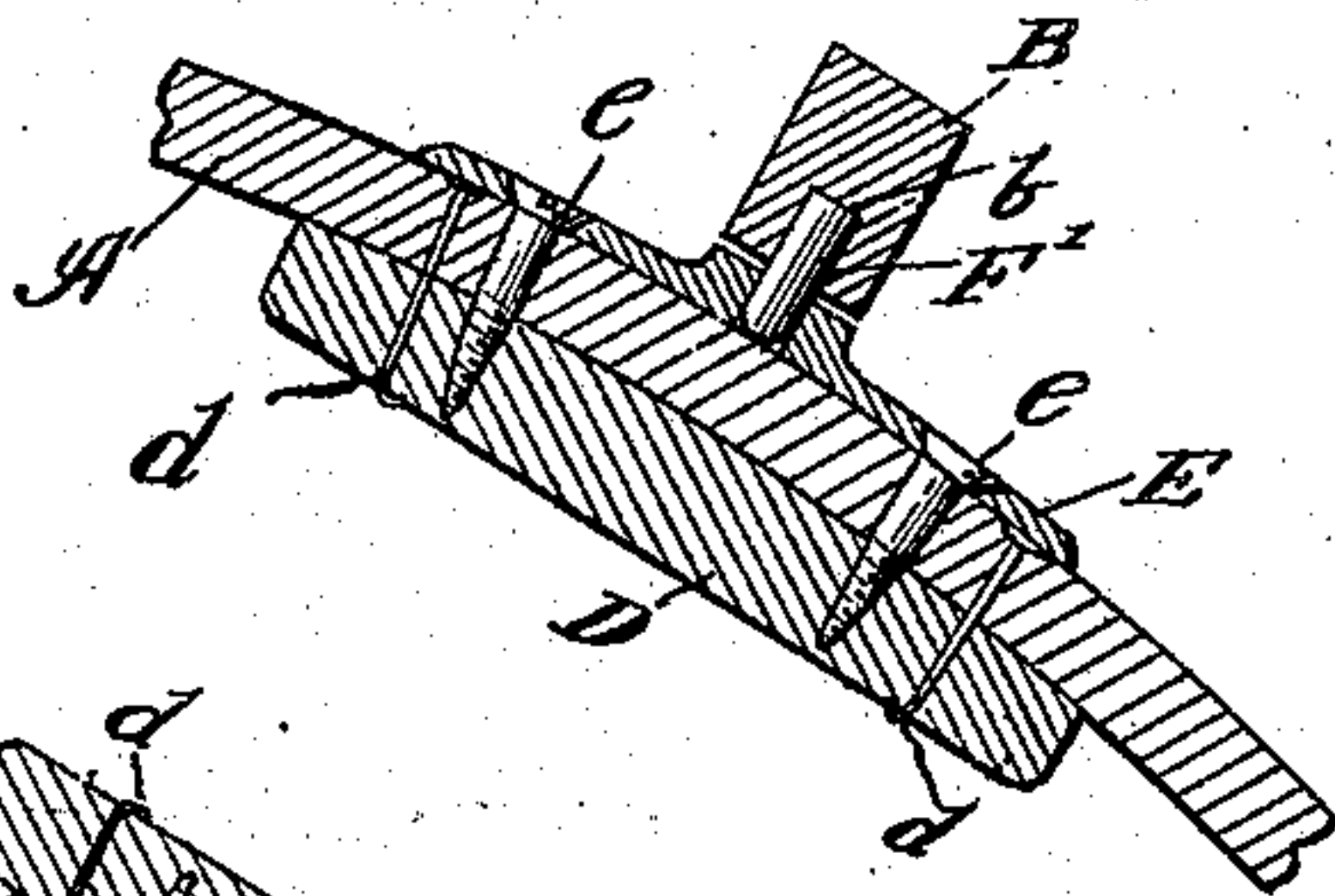


Fig. 4.

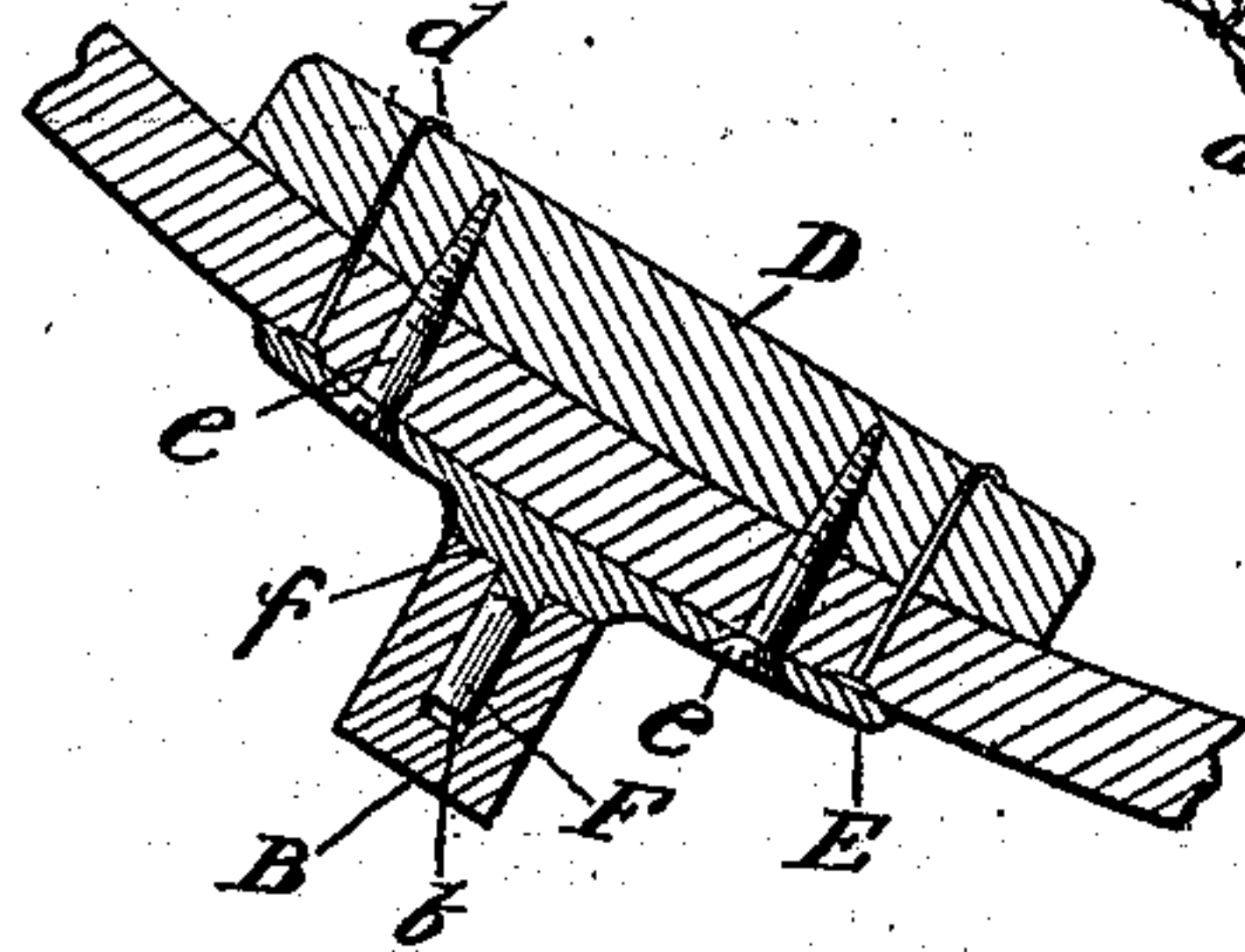


Fig. 3.

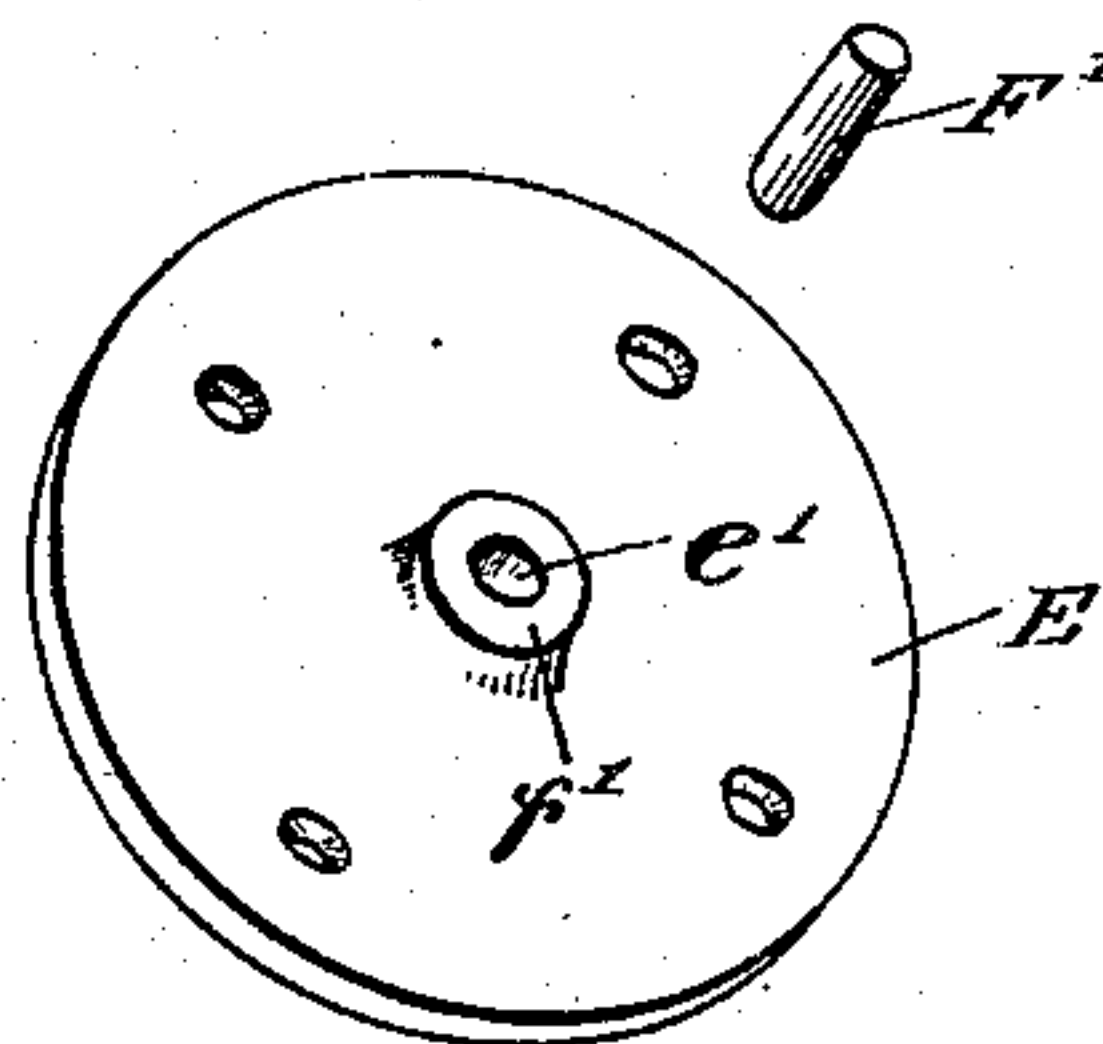
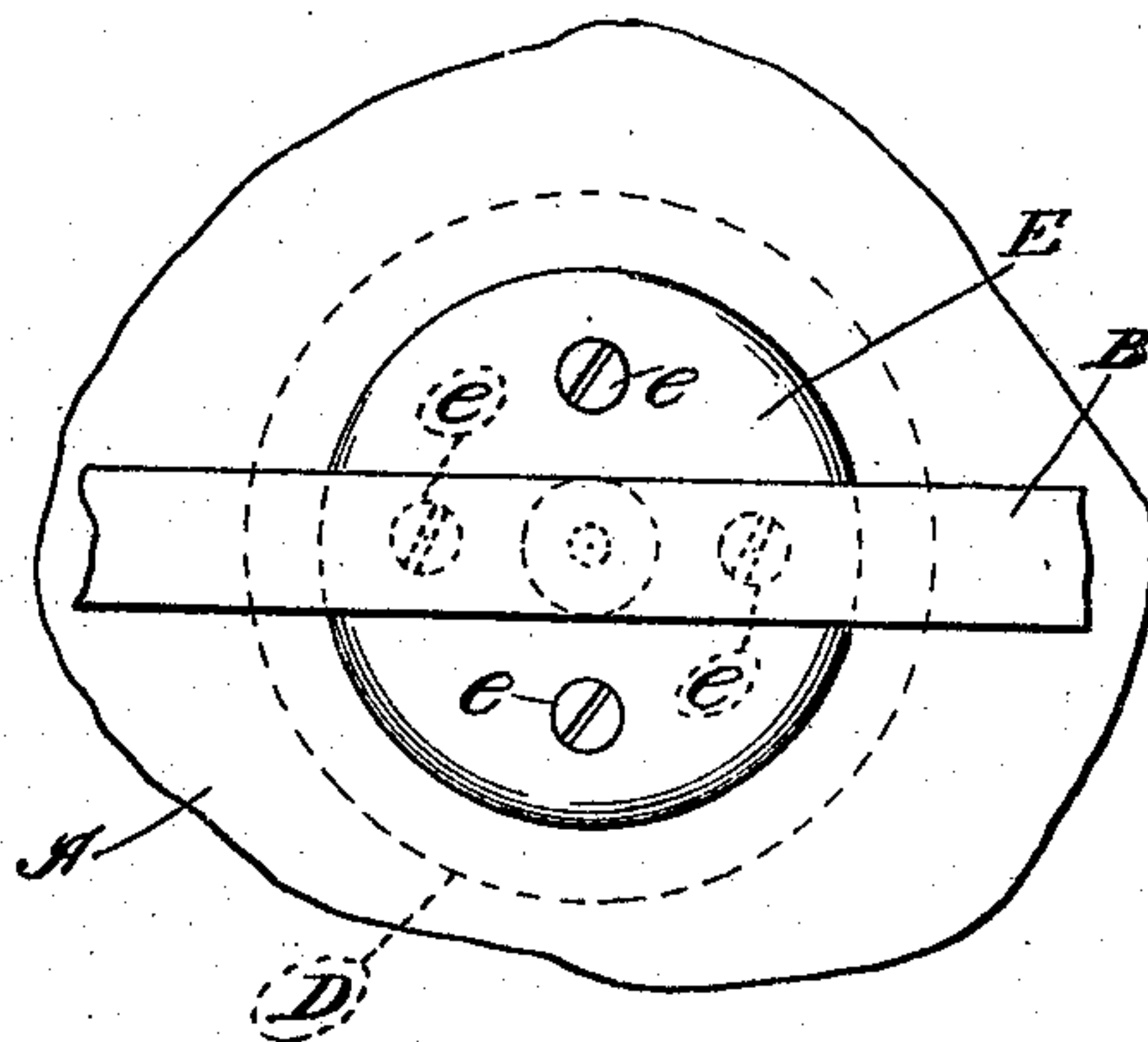


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

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GLOBE.

No. 885,690.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed December 14, 1905. Serial No. 291,760.

To all whom it may concern:

Be it known that I, WILLIAM DUBOIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Globes, of which the following is a specification.

The present invention relates to the means for revolubly mounting the globe proper in or upon its support, whatever the construction or character of the latter may be.

Some globes are mounted in a complete ring technically known as the "meridian", others in a semi-meridian and still others upon a stand of simple construction. All of these devices and others that may be used for the purpose are comprehended by the term "support" as used in this specification.

When a meridian or semi-meridian is used the globe is journaled at both of its poles, but where a simple stand is used it is journaled at the south pole only; and excepting as hereinafter specifically stated the present invention is not limited to its use at both poles of the globe.

The invention consists in the features of novelty that are hereinafter described with reference to the accompanying drawing, which is made a part hereof and in which:

Figure 1 is an elevation of a globe embodying the invention. Fig. 2 is an enlarged section thereon on the line 2—2, Fig. 1. Fig. 3 is a perspective view of two of the parts. Fig. 4 is a view similar to Fig. 2 showing a modification. Fig. 5 is a plan view looking toward one of the poles.

A represents the globe and B the support therefor, which, in the illustration given, is a complete meridian carried by a base or pedestal only a fragment of which is shown at C. At each of the poles the globe is supported by an axle, the axis of which is coincident with the axis of the globe and it is in the novel construction and arrangement of this axle and the parts that coöperate with it that the present invention resides.

At each pole a block D, preferably of wood, is secured against the inner face of the globe by any suitable means. The drawing shows nails *d* driven through the shell of the globe and through the block and clenched, and it may be assumed that glue also is used. The block is put in place and secured before the two halves of the globe are secured together. It is preferably circular and of sufficient size to

firmly support the shell and strengthen it at the places hereinafter described.

E is a metal plate secured to the outside of the globe. This plate has a spherical concavity in its under side and is preferably in the form of a disk of less diameter than the block D, perforated at such points that its retaining screws *e* after passing through the shell of the globe enter the block and there find secure anchorage. These screws not only secure the plate in place, but by drawing the block and plate together they clamp the shell of the globe between them and thus the shell is additionally braced and strengthened. By making the plate of less diameter than the block, when strains are put upon the plate, its edge is prevented from digging into or breaking through the shell of the globe. As before stated, the plate is preferably circular, but I desire to have it understood that any plate or other fitting secured to the globe at a pole thereof and affording a support or bearing for the inner end of an axle which does not extend from pole to pole of the globe, the outer end of which is supported by the support, B, is within the scope of the invention.

The axle may be integral with or rigidly attached to the plate E, as shown at F in Fig. 4, in which case its outer end will occupy a socket *b* in the support B so as to be capable of revolving therein, or it may be formed separate from both the plate and the support, as shown at F' in Figs. 2 and 3, in which case its inner end will occupy a socket *e'* in the plate E so as to be capable of revolving therein while its outer end occupies the socket *b* either snugly, so as to be incapable of revolving therein, or loosely so as to be capable of revolving therein. Regardless of these details I believe myself to be the first to support a globe by means of a short axle extending from the support to a plate or fitting secured to the globe at a pole thereof and terminating at said plate.

When the axle and plate are integral a shoulder *f* is formed near its base so that when used at the South pole of the globe this shoulder may bear upon the support B and take the wear, and when they are not integral a similar shoulder surrounds the socket *e'*. Either of the two forms may be used at both poles of the globe, or one form at one pole and the other form at the other, as shown in Fig. 1, where the integral axle F is used at the

South pole and the separate axle F' at the North pole.

In assembling the parts (assuming each axle to be integral with its plate) the blocks D are first permanently secured in place and the two half sections of the globe are then secured together. One of the plates E (say the one at the South pole) is then secured to the globe and the outer end of its axle inserted in its socket *b* in the support. The North pole axle is then inserted in its socket in the support, the globe being meanwhile held with its axis inclined somewhat from the position which it is ultimately to occupy. The globe is then moved to its ultimate position (in reaching which position its North pole will pass beneath the concave under side of the plate) and the plate is secured to it by driving in the securing screws. But before the plate is finally secured to the globe the latter is revolved with a view to determining whether or not its axis is coincident with the common axis of the axles, and if it is found that they are not coincident, the plate is shifted about on the globe until they are, after which the plate is secured. This capacity for exact adjustment is one of the principal advantages of the invention. It is attainable by reason of the fact that the plate is freely adjustable on the globe in directions transverse to its axis. In some instances, especially in globes of the better class, it is of the utmost importance that they be mounted truly, and to do this is extremely difficult, if not absolutely impossible, where the axles proper (by which is meant the portions which project from the globe at its poles) are carried by a post located within the globe and extending from one pole to the other. This is because ultimate accuracy in mounting a globe of this class depends upon the accurate placing of the internal post and to accurately place this post is next to impossible because it must be done as the half sections of the globe are being put together.

Other advantages of a globe embodying my invention are that it is simple and inexpensive while at the same time it is strong and durable; it has no axle bearings built out upon or attached to the meridian, and its parts may be readily assembled and taken apart and reassembled whenever occasion requires it.

What I claim as new and desire to secure by Letters Patent is:

1. The combination of a globe, a support, a plate secured to the globe at a pole thereof, and an axle separate from the support and plate and arranged between them, the support and plate having means for engaging the axle and holding it in place, substantially as described.

2. The combination of a globe, a support, a plate secured to the globe at one pole thereof,

an axle separate from the support and plate and arranged between them, both the support and plate having sockets for receiving the ends of the axle, and means for supporting the globe at the other pole, substantially as described.

3. The combination of a globe, a support, a plate secured to the outside of the globe at one pole thereof, an axle separate from the support and plate, and arranged between them, both the support and the plate having sockets, closed at one end, for receiving the ends of the axle, and means for supporting the other pole of the globe, substantially as described.

4. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, means for permanently securing the strengthening block to the globe, a plate arranged on the outside of the globe opposite said block, and freely adjustable in directions transverse to its axis, means for securing the plate to the globe, a support, and an axle extending from the support to the plate and terminating at the plate, substantially as described.

5. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, means for permanently securing the block to the globe, a plate arranged on the outside of the globe opposite the strengthening block and freely adjustable on the globe in directions transverse to its axis, fastening devices passing through the plate, through the shell of the globe and into the block, a support, and an axle arranged between the support and plate and terminating at the plate, substantially as described.

6. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, means for permanently securing the block to the globe, a plate arranged on the outside of the globe opposite the strengthening block, and freely adjustable relatively to the block, means for securing the plate to the globe, a support and an axle extending from the support to the plate and terminating at the plate, substantially as described.

7. The combination of a globe, a strengthening block arranged within the globe at a pole thereof, a plate arranged on the outside of the globe opposite the strengthening block, said plate being of less diameter than the strengthening block, means for securing the plate in place, a support and a short axle extending from the support to the plate, substantially as described.

Sworn to and subscribed before me at Chicago, Illinois, this 13th day of June, 1907.

WM. DUBOIS.

Witnesses:

E. J. DALTON,
R. R. STEELE.