

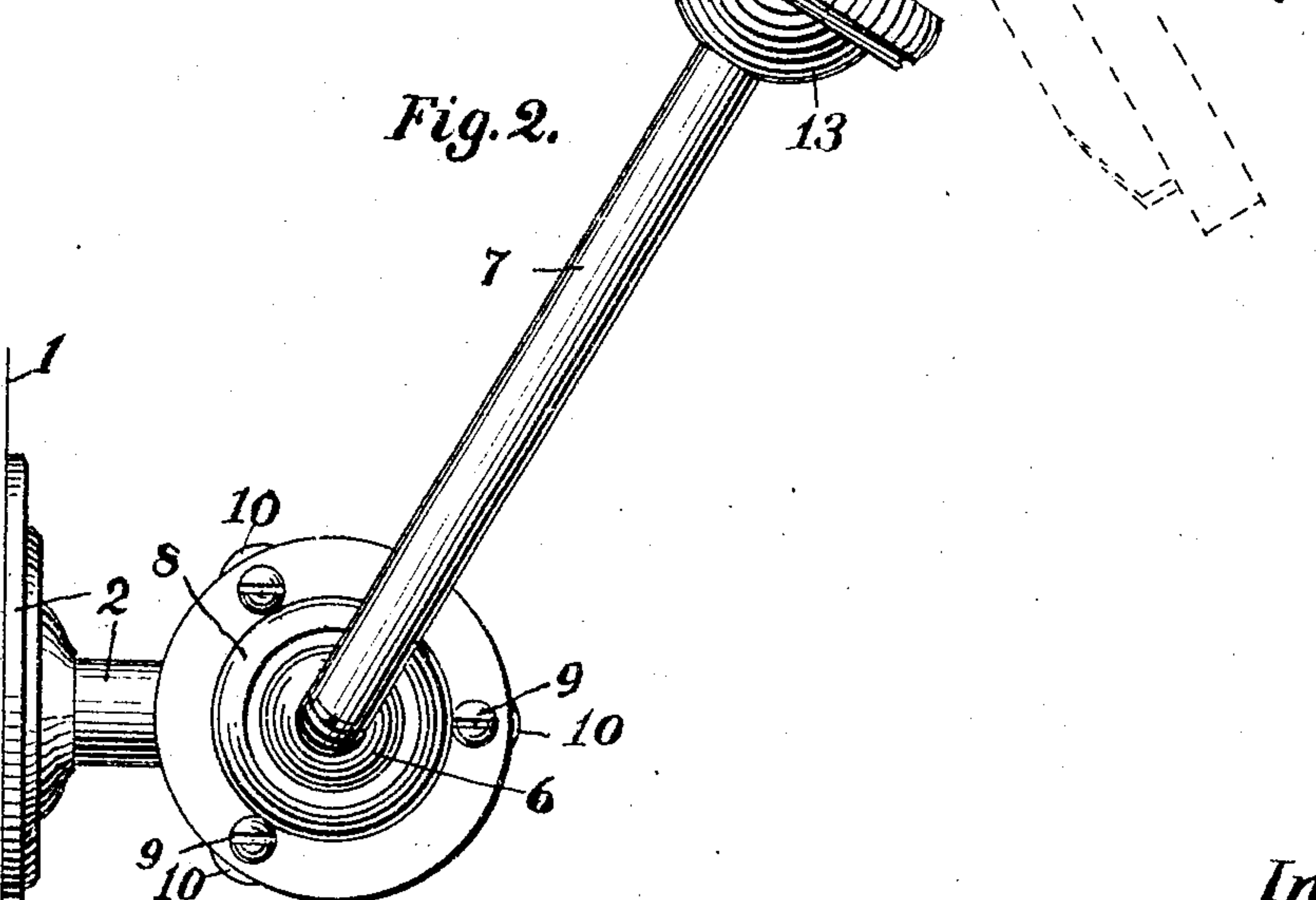
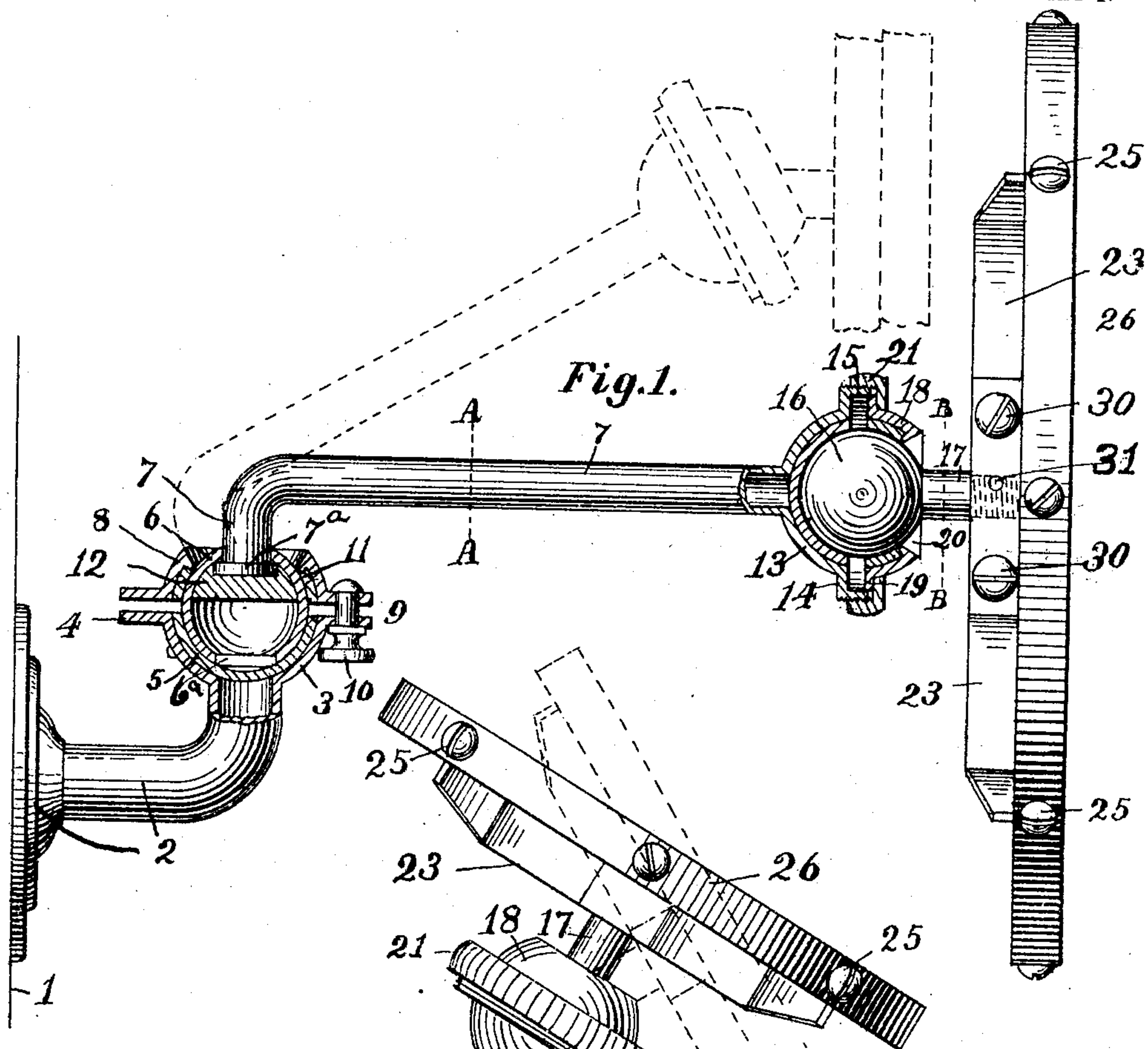
No. 775,003.

PATENTED NOV. 15, 1904.

J. P. EUSTIS.
MIRROR HANGING DEVICE.
APPLICATION FILED JUNE 7, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses.
John A. Lee
J. H. Stevenson

Inventor.
John P. Eustis.
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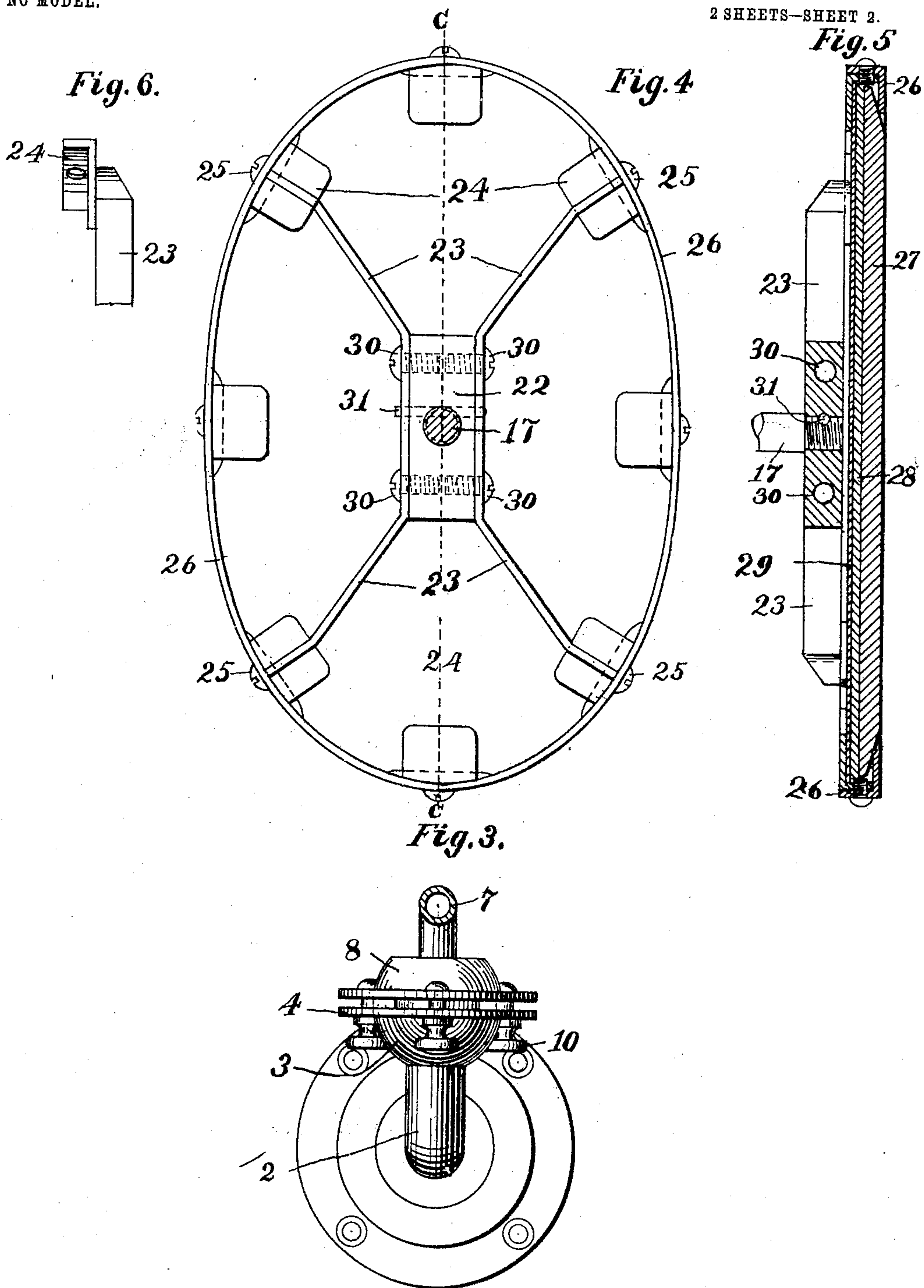
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UNITED STATES PATENT OFFICE.

JOHN P. EUSTIS, OF NEWTON, MASSACHUSETTS.

MIRROR-HANGING DEVICE.

SPECIFICATION forming part of Letters Patent No. 775,003, dated November 15, 1904.

Application filed June 7, 1904. Serial No. 211,531. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. EUSTIS, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Mirror-Hanging Devices, of which the following is a specification.

My invention relates to "mirror-hanging devices," and especially that class of hanging devices which enables the mirror to be adjusted to various positions and angles; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings and to the claims hereto appended, and in which my invention is clearly pointed out.

Figure 1 of the drawings is a sectional elevation of a mirror-hanging device illustrating my invention with the mirror-supporting members extended at a right angle to the wall to which it is attached and the face of the mirror parallel to said wall. Fig. 2 is a plan of the same parts with the supporting-arm moved into a position oblique to said wall and the front face of the mirror at a right angle to said arm. Fig. 3 is a sectional elevation, the cutting-plane being on line A A on Fig. 1 and looking toward the wall. Fig. 4 is a sectional elevation, the cutting-plane being on line B B on Fig. 1 and looking at the back of the mirror. Fig. 5 is a section on line C C on Fig. 4; and Fig. 6 is a side elevation of a portion of one arm of the spider, secured to the back of the mirror-frame.

In the drawings the line 1 represents the inner face of the wall of the room in which the mirror is hung. To this wall is firmly attached the tubular bracket 2, the end thereof which projects into the room being bent upward, so that the axis of that portion shall be perpendicular, and terminates with a hemispherical socket 3, provided with an annular flange 4 and having secured therein a lining 5, of cork or other suitable frictional material, in which lined hemispherical socket is fitted a ball 6, formed upon or secured to one end of the pipe 7, having a portion at one end bent at a right angle to its main body, as shown. The socket 3 has secured thereto the flanged ring-cap 8 by means of the bolts 9

and milled nuts 10, said ring-cap having secured therein a frictional lining 11 and has formed in its upper side a circular opening, frusto-conical in form, considerably larger than the diameter of the pipe 7, to permit of an oscillating movement of the ball 6 and the pipe to which it is attached in any direction. The end of the perpendicular portion of the pipe 7 has formed thereon an annular collar 7^a, which is introduced into the interior of said ball, which is made hollow, through a circular opening 6^a in the bottom thereof, while the body of the pipe 7 just fits a similar but smaller opening in the top of said ball, said pipe and ball being brazed together or permanently united in any other well-known manner and reinforced by partially filling the chamber of said ball about the collar 7^a with metal in a molten state, as indicated at 12 in Fig. 1. The other end of the pipe 7 has secured thereto by brazing or otherwise the hemispherical socket or cup 13, having an annular flange 14 in a plane at a right angle to the axis of the main body of the pipe 7, upon the outer edge of which is formed a cylindrical flange 15, the outer surface of which is screw-threaded, as indicated in Fig. 1. The socket 13 has fitted therein a ball 16, constructed and secured to the stud 17 in the same manner that the ball 6 is made and secured to the pipe 7, said socket being lined with cork or other suitable frictional material, as in the case of the socket 3.

A cap 18, in the form of a segment of a sphere and having an annular flange 19 around its larger perimeter and a frusto-conical opening 20 cut through its outer side to permit the passage of the stud 17 and having secured therein a lining of frictional material in the same manner as in the case of the ring-cap 8, is fitted to the side of the ball 16 in which is set the stud 17, and is adjustably clamped to said ball by means of the ring-like nut 21, the inwardly-projecting flange of which contacts with the flange 19 of said cap 18, said nut having its peripheral surface milled or otherwise provided with means to facilitate the operation of the same by hand.

The stud 17 is screwed into the central block 22 of the frame-carrying spider, comprising

said block and the radial arms 23, each having formed upon or secured to its outer end a foot 24, composed of two members at a right angle to each other, by means of which and the screw 25 said arm is secured to the mirror-frame 26, as shown in Figs. 1, 2, and 4. The mirror-plate 27 and the fiber board and metallic backing-plates 28 and 29, respectively, are secured in the said frame in the same manner as shown and described in the Letters Patent No. 753,967 granted to me March 8, 1904. The arms 23 are secured to said block 22 by the screws 30, and the stud 17 is locked against unscrewing from its bearing in said block 22 by the pin 31, fitted to holes through said block and engaging a notch in the side of the shank of said stud, as shown in Figs. 1 and 4.

By the employment of two ball-and-socket joints in a mirror-supporting device between the mirror and the wall to which it is connected, with their mean or central axes at right angles to each other, as herein set forth, a great advantage is obtained in the very much greater range and variety of adjustment which may be imparted to the mirror—as, for instance with my invention the mirror may be raised above or depressed below its normal or central position and still maintain its face in a perpendicular position and parallel to said wall, as shown in Fig. 1, or at different angles to said wall, as shown in Fig. 2. The mirror may by virtue of the two ball-and-socket joints be swung into a position with one edge thereof in contact with the wall and the supporting-arm 7 parallel, or nearly so, to said wall.

The operation of my invention will be readily understood from the foregoing without further explanation here.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a mirror-hanging device, the combination with a mirror-frame of a jointed supporting-arm, attached at one end to the mirror-frame, and at its other end to a fixed support, the parts of said jointed arm being

united by two ball-and-socket joints, so constructed and arranged relative to each other, that their axes when in their normal or central positions, are at right angles to each other.

2. In a mirror-hanging device, the combination with the mirror-frame of a supporting-arm made in three sections, one of which is rigidly secured to said frame, another to a fixed support, and a third or central section having a portion of its length bent at a right angle to its main body; and two ball-and-socket joints connecting the sections of said supporting-arm, said ball-and-socket joints being so constructed and arranged relative to each other, that their axes when in their normal or central positions, shall be at right angles to each other.

3. In a mirror-hanging device, the combination of a bracket secured to a fixed support, and provided with a hemispherical socket, the open side of which is in a horizontal plane; a cap secured to said socket, and the axis of which is vertical; an arm having a short portion thereof bent at a right angle to its main body; a ball secured to the end of said short section and mounted in said socket; a second hemispherical socket secured to the end of the main body of said arm with its open side in a plane at a right angle to the axis of the main body of said arm; a cap secured to said socket; a ball mounted in said socket and provided with a stud or shank which when in its normal or central position is in axial line with the main body of said bent arm; a spider or multipied stand firmly secured by its center upon said ball-shank; and a mirror-frame firmly secured to the several feet of said spider.

In testimony whereof I have affixed my signature, in presence of two witnesses, on this 3d day of June, A. D. 1904.

JOHN P. EUSTIS.

Witnesses:

N. C. LOMBARD,
CHAS. E. FOLSOM.