

No. 756,640.

PATENTED APR. 5, 1904.

C. E. IRONS.

ANCHOR.

APPLICATION FILED AUG. 6, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

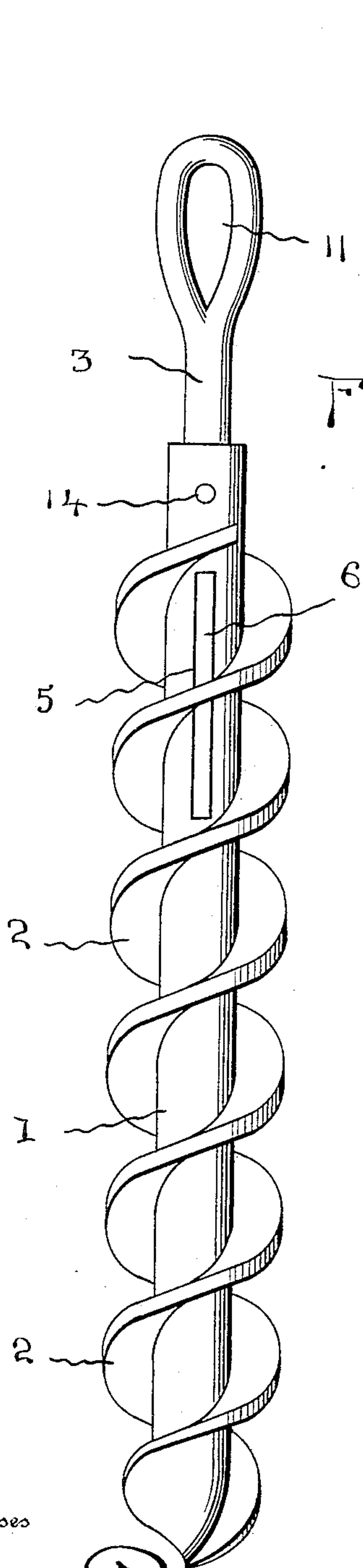


Fig. 1.

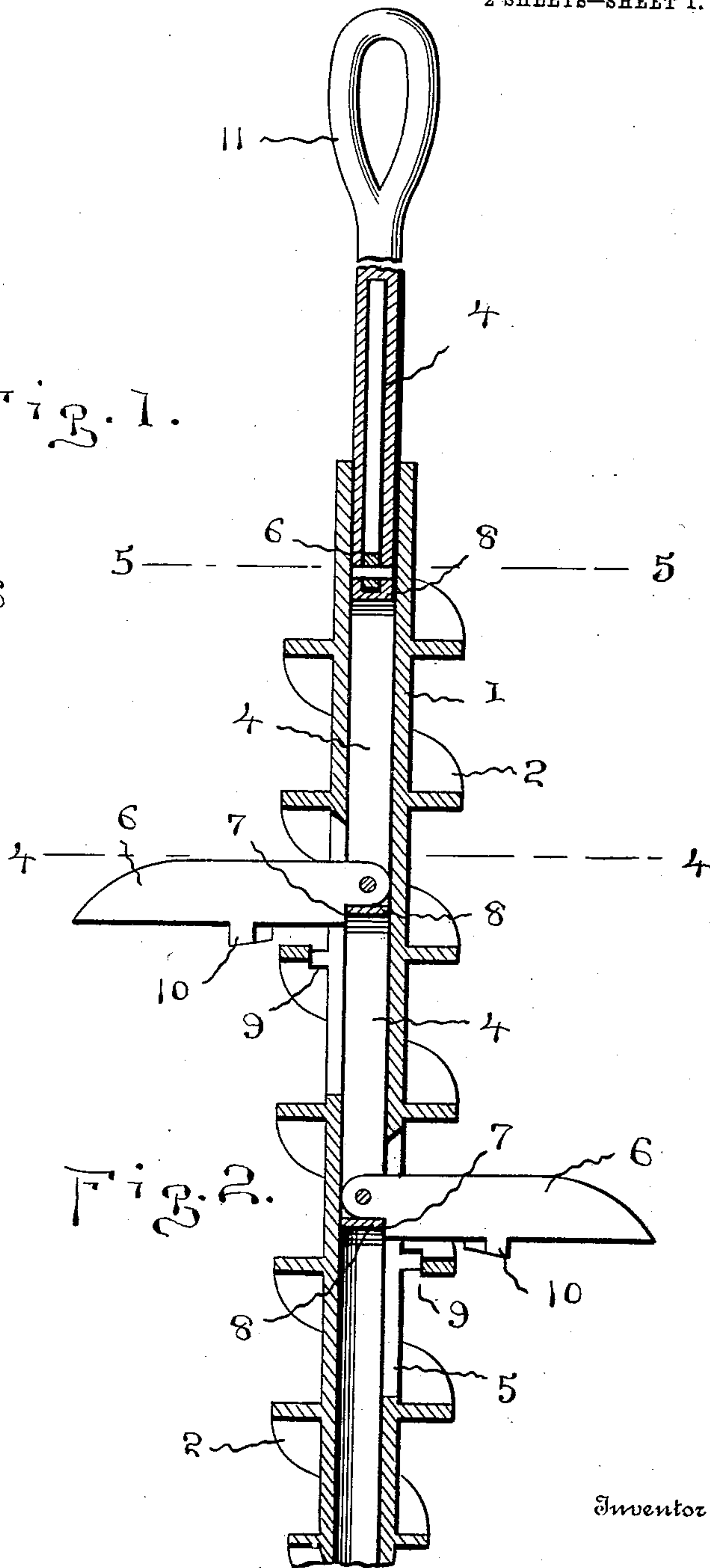


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

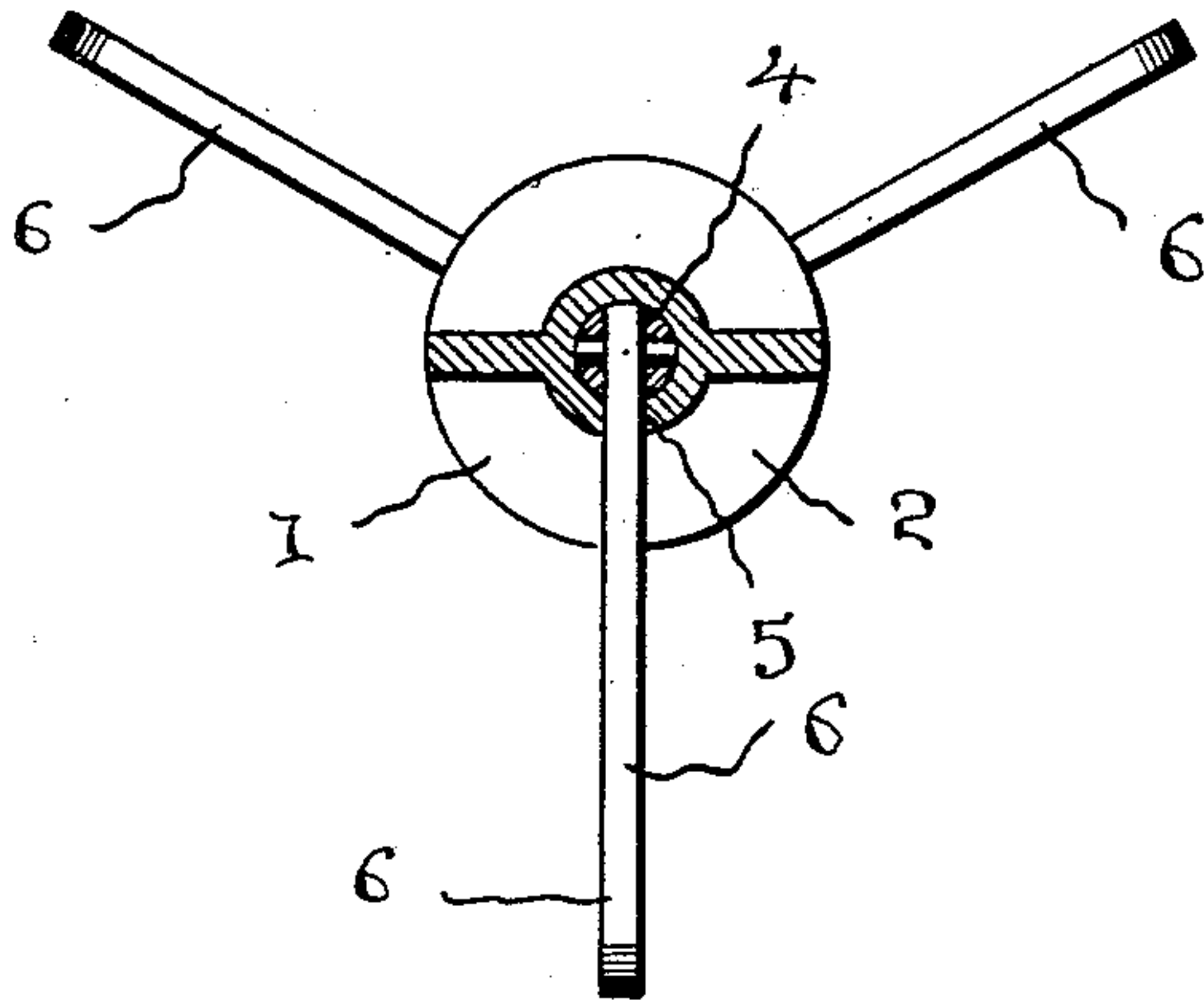


Fig. 5.

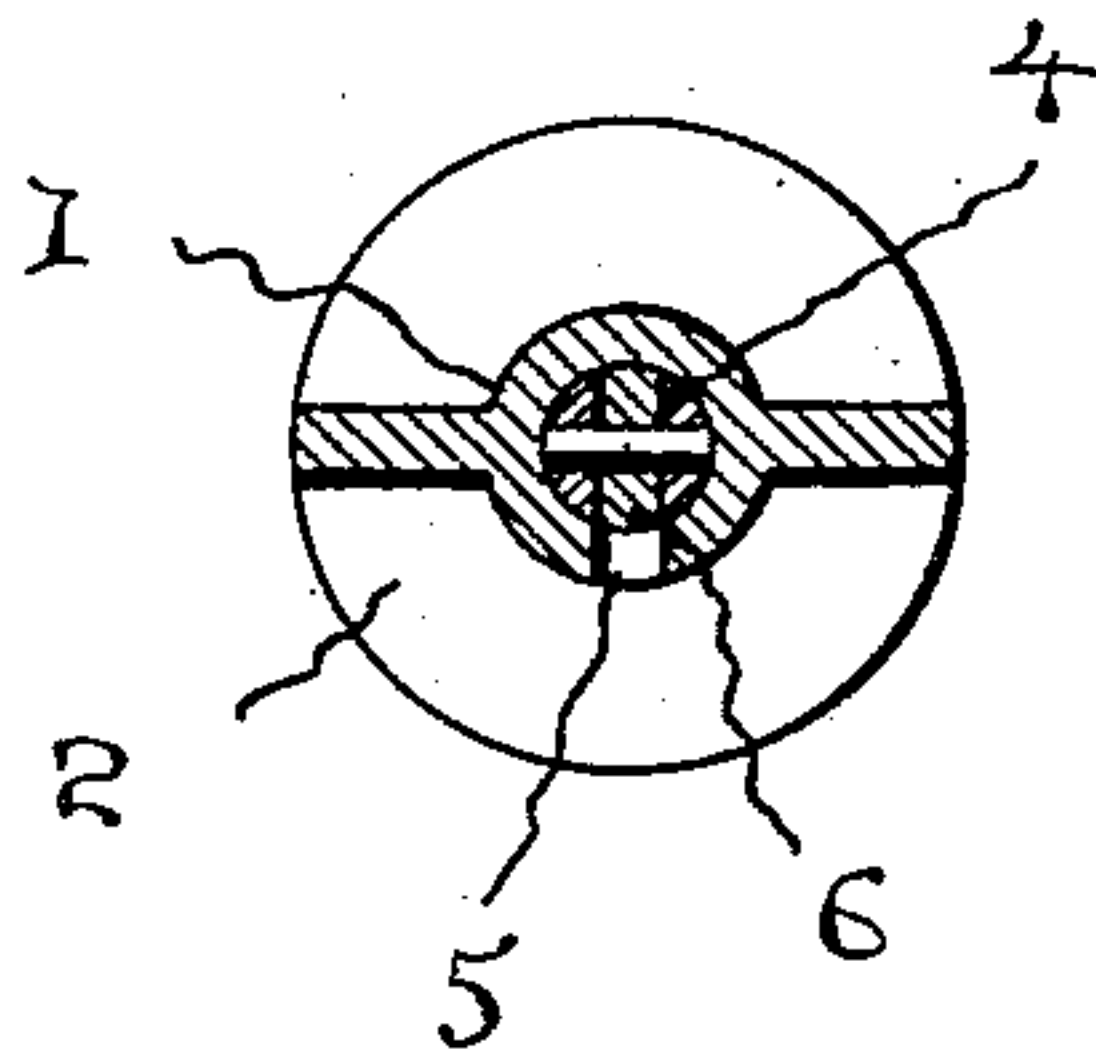
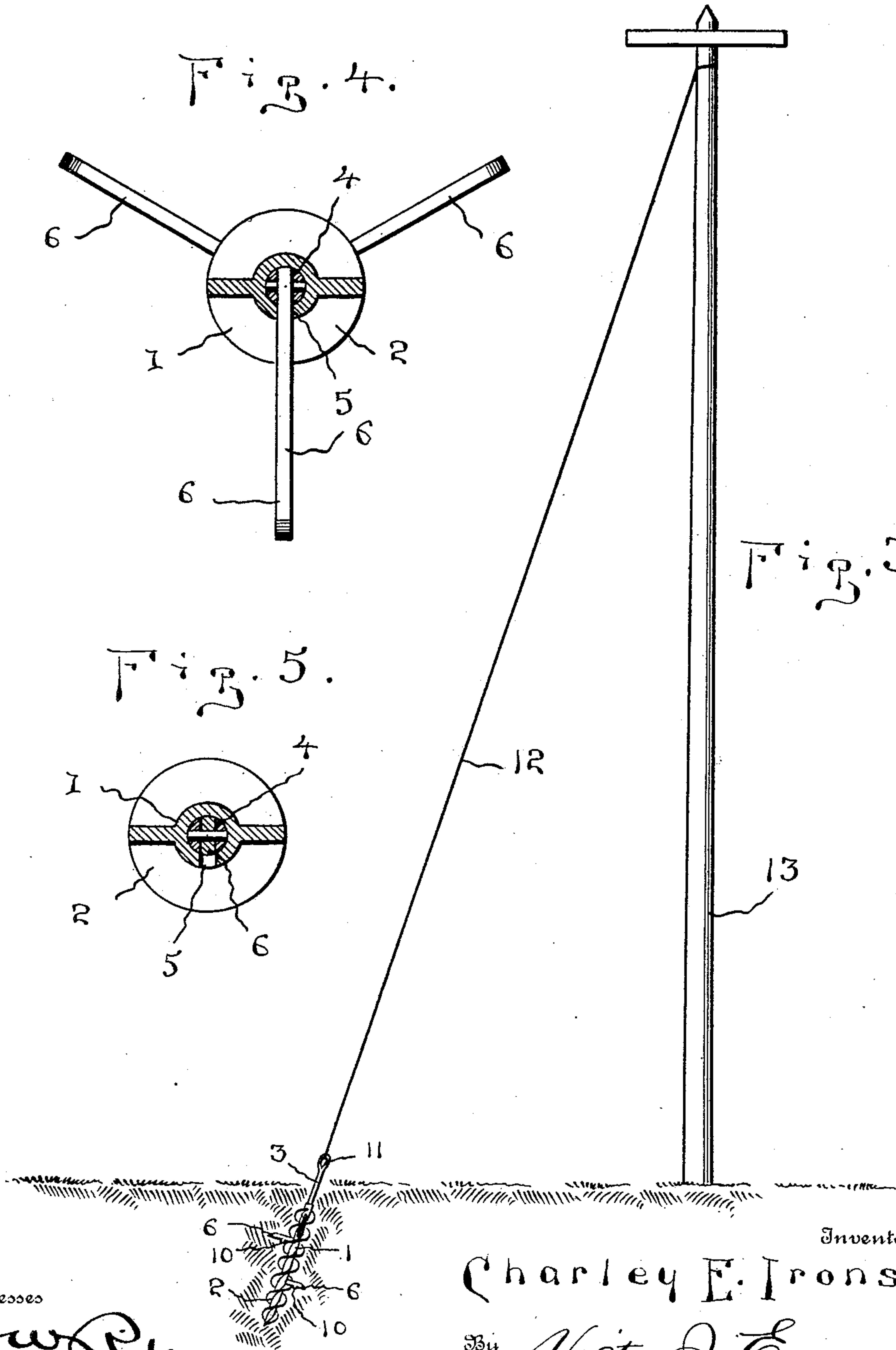


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLEY E. IRONS, OF LIMA, OHIO.

## ANCHOR.

SPECIFICATION forming part of Letters Patent No. 756,640, dated April 5, 1904.

Application filed August 6, 1903. Serial No. 168,481. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLEY E. IRONS, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented new and useful Improvements in Anchors, of which the following is a specification.

My invention has relation to anchors for retaining a vertical member in applied position against accidental canting or displacement; and its primary object is to provide a new and useful device of this character which may be readily and quickly inserted into the soil and retained therein against displacement and which also may be readily and quickly removed from applied position.

The invention consists in the construction, combination, and arrangement of parts hereinafter fully described, claimed, and illustrated in the accompanying drawings, which disclose the preferred embodiments of my invention, and in which—

Figure 1 is a side elevation of a device constructed in accordance with my invention. Fig. 2 is a central longitudinal sectional view thereof, the wings being in position to retain the anchor in applied position. Fig. 3 is a side elevation of a telegraph-pole and the anchor, illustrating the manner in which the anchor is adapted to retain a vertical member in applied position against accidental canting or displacement. Fig. 4 is a sectional view on the line 4 4 of Fig. 2, and Fig. 5 is a similar view on the line 5 5 of Fig. 2.

Referring to the drawings by reference-numerals, 1 designates a hollow post cylindrical in cross-section and having its lower end closed and terminating in a point to facilitate the insertion of the anchor in the soil. The exterior of the post is provided with spirally-arranged flanges 2 to form screw-threads, whereby the anchor may be inserted or removed from the ground by imparting a rotary motion thereto. A plunger 3 is mounted within the post to have a reciprocating movement therein, and it is provided with a plurality of longitudinally-arranged elongated slots 4, which communicate with similar slots 5 in the post 1. Wings 6 are fulcrumed within and near the lower ends of the slots 4 to normally assume a vertical position within the slots on

the interior of the post; but when the plunger is moved upward they are adapted to be projected through the slots 5 and assume a horizontal position, as clearly illustrated in Figs. 1 and 2 of the drawings. The lower outer edges of the wings are cut away to provide shoulders 7, which are adapted to abut against the edges of the lower walls 8 of the slots 4 to prevent the wings from dropping beyond a horizontal position. The upper inner edges of the wings are slightly curved downwardly to abut against the correspondingly-curved upper edges of the slots 5. The curvature of the wings permits their passing the adjacent portions of the flanges 2 when the plunger is moved downward to draw the wings within the post and also causes the flanges to move outward to assume a horizontal position through virtue of their contact with the curved portions of the slots 5 when the plunger is moved upward. The portions of the flanges 2 adjacent the slots 5 are cut away, as illustrated at 9 in Fig. 2 of the drawings, to permit of the free inward and outward movement of the wings, the wings having their outer edges provided with lugs 10, adapted to occupy the cut-out portions 9 when the wings are drawn within the slots 4 to provide the flanges with continuous surfaces, whereby all liability of soil packing between the flanges and wings during the insertion of the anchor in the ground, consequently impeding the free movement of the wings 2, is obviated. The outer edges of the wings are adapted to lie flush with the exterior of the post 1 when they are drawn within the post to prevent any soil from entering the interior of the post when inserting or removing the anchor. The upper end of the plunger is provided with an eye 11, which is adapted to receive one end of a cable 12, having its opposite end secured to a telegraph-pole 13 or other vertical member to retain it in its applied position against accidental displacement or canting.

The operation of the device may be described in the following manner: The plunger is moved downward in the post to draw the wings therein to be held in such position by means of a bolt 14, passing through the post and engaging the plunger. The anchor is then insert-



ed into the soil by imparting thereto a rotary motion. After the anchor is inserted a sufficient depth into the soil the plunger is caused to be moved upward to cause the wings to assume a horizontal position, which when in a horizontal position prevents the anchor from being extracted from the soil. After the plunger has been moved to its extreme outward movement one end of a cable having its opposite end secured to a vertical member may be secured to the eye 11. The anchor may be extracted from the soil by drawing the wings within the post and imparting a reverse rotary movement to the anchor. The spiral arrangement of the flanges 2 not only facilitates the insertion and removal of the anchor, but also assists the wings in retaining the anchor in applied position. It is apparent as the upward movement of the plunger causes the wings to assume a horizontal position that the tension of the cable 12, which retains the plunger in its extreme upper position, will retain the wings in their horizontal position against accidental displacement.

Having thus fully described the invention, what is claimed as new is—

1. A device of the character described, comprising a post provided with flanges, a plunger provided with slots, wings mounted within the slots to be projected from or drawn within the casing, shoulders upon the wings to engage the lower walls of the slots, and means for retaining the plunger in position to retain the wings within the casing.

2. A device of the character described, comprising a hollow post provided with spirally-

arranged flanges and slots, a plunger mounted therein to have a reciprocating movement and provided with slots to register with the first-mentioned slots when the plunger is moved downward and wings mounted in the slots in the plunger to be projected when the plunger is moved upward and drawn within the post when the plunger is moved downward.

3. A device of the character described, comprising a hollow post provided with spirally-arranged flanges and slots, said flanges being provided with cut-out portions adjacent the slots, a plunger mounted therein, wings carried by the plunger and adapted to be projected from or drawn within the post and lugs upon the wings to occupy the recesses when the wings are drawn within the casing.

4. A device of the character described, comprising a hollow post provided with slots and spirally-arranged flanges, said flanges being provided with cut-out portions adjacent the slots, a plunger mounted within the post and provided with slots, wings mounted within the plunger's slots to be projected from or drawn within the post, lugs upon the wings to occupy said cut-out portions when the wings are drawn within the casing, and shoulders upon the wings to engage the walls of the plunger's slots to prevent the wings dropping beyond a horizontal position.

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

CHARLEY E. IRONS.

Witnesses:

BENJAMIN F. GRANT,  
JACOB M. GRANT.