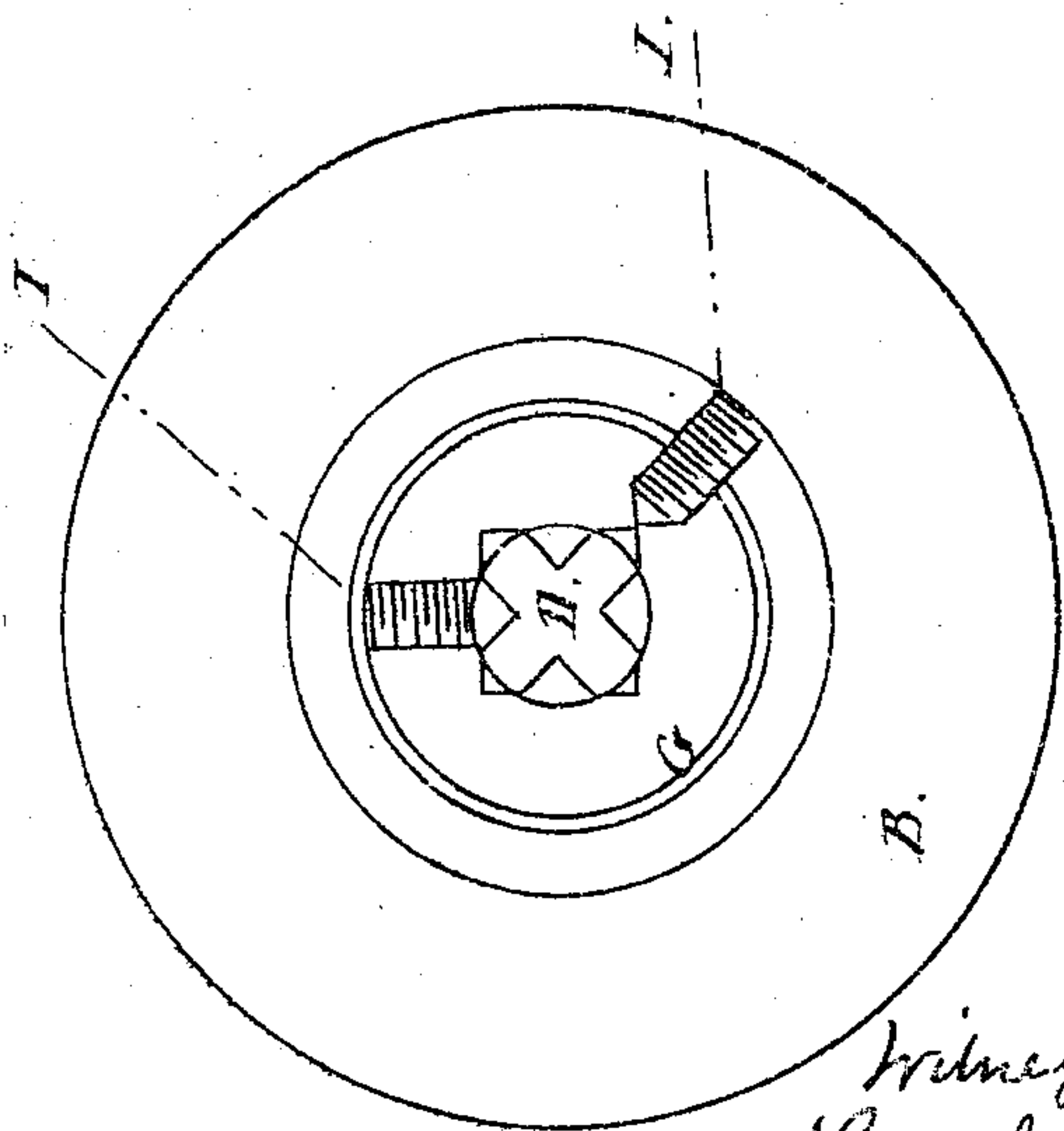
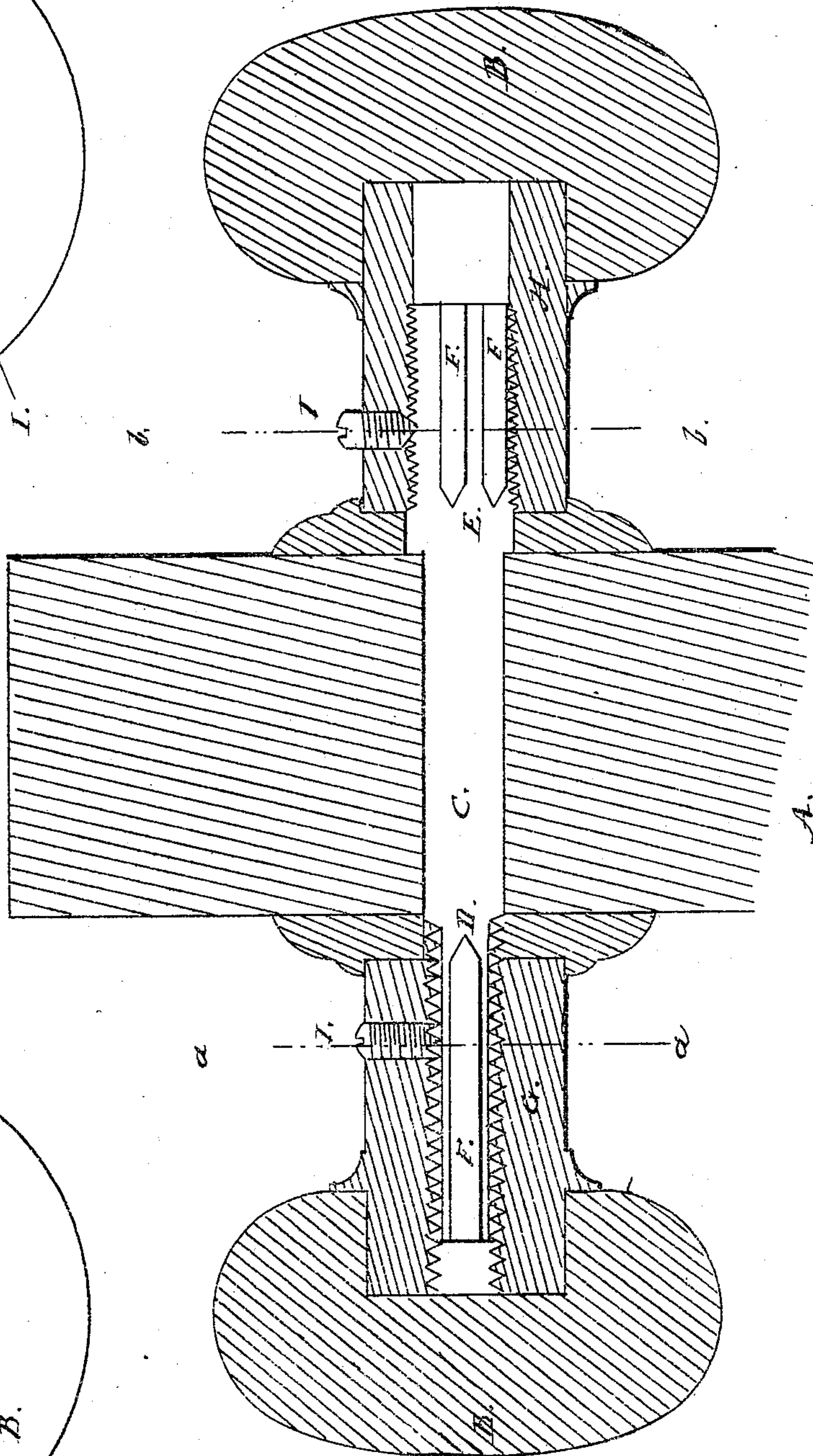
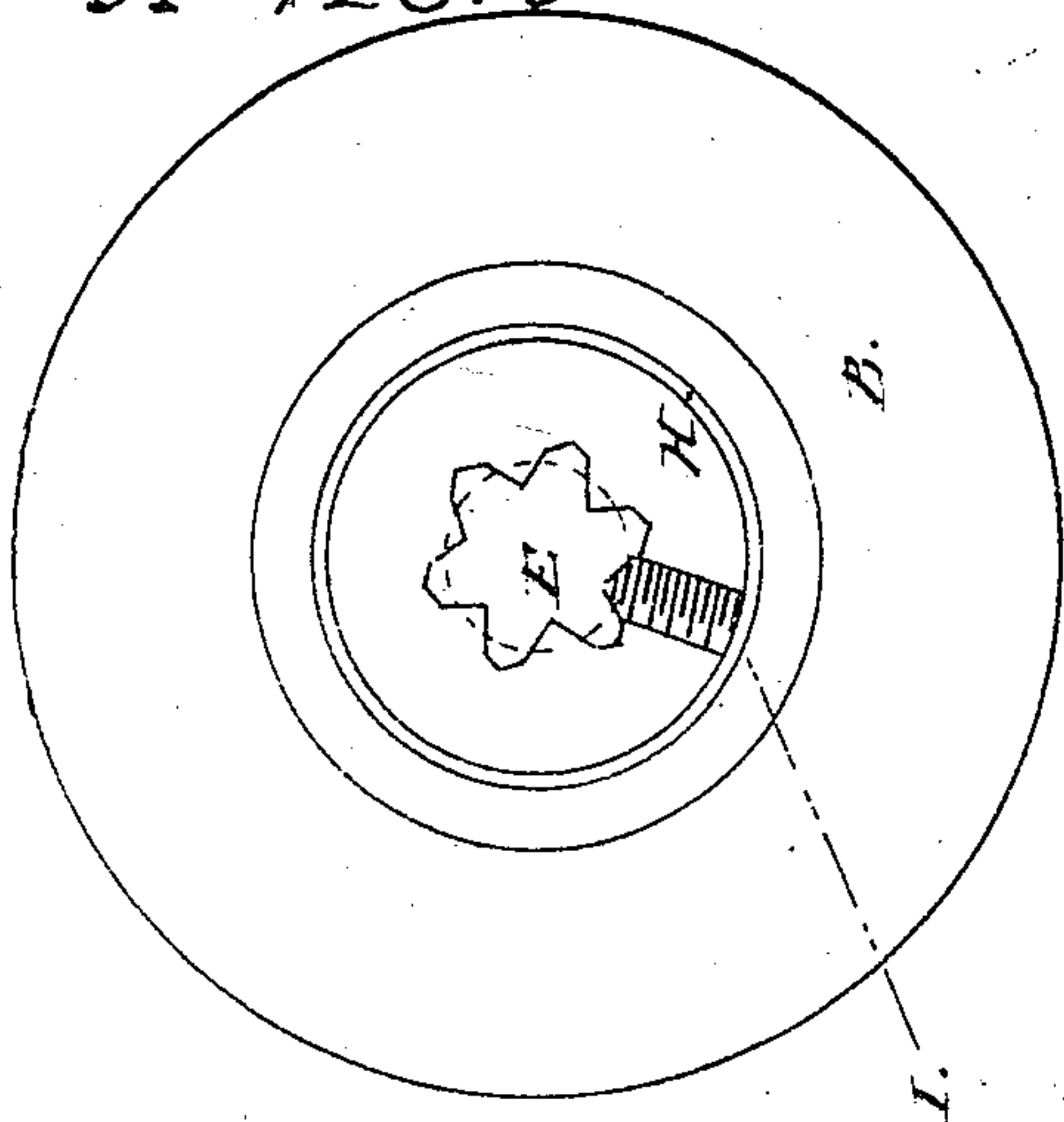


A. Dawes.

Adjusting Knobs to Spindles.

N<sup>o</sup> 72815

Patented Dec. 31, 1867.



Witnesses.  
Samuel H. Hallowell  
Curtis Abbott

Alfred Dawes



# United States Patent Office.

ALFRED DAWES, OF HUDSON, MASSACHUSETTS.

*Letters Patent No. 72,815, dated December 31, 1867.*

## IMPROVEMENT IN ADJUSTING KNOBS TO SPINDLES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALFRED DAWES, of Hudson, in the county of Middlesex, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in the Adjustment of Door-Knobs upon their Spindles; and I do declare the following to be the full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section of the knobs and spindle, as adjusted to a door.

Figure 2 is a transverse vertical section of the shank of the knob B through the line *a a*, of fig. 1, showing the knob.

Figure 3 is a like section of the shank of the knob B through the line *b b* of fig. 1, also showing the knob B.

A represents the door; B B, the knobs; C, the spindle; D, the square, and E the sexagonal end of C; F, the slots or grooves in the ends of the spindle; G, the shank of the knob screwing upon D; H, the shank of the knob screwing upon E; I, the set-screws.

My invention consists in certain improvements in the construction of that class of knobs and spindles made to screw the one upon the other, by which the knobs are made fast upon the spindles at any desired point, and can be fitted to doors of any thickness. I cut the threads of the screw of different degrees of fineness on the two ends of the spindle, say the one making twelve turns to one inch, and the other fifteen turns to one inch. These screw-threads should extend about as far as the spindle is intended to project through the door on each side, and should be cut in the corners, and not extend far into the sides or faces of the spindle. The knob must have female screws, cut with corresponding threads, each to receive its end of the spindle. One end of the spindle I make a little larger than the other, and cut it with five, six, or more sides, instead of four, and extending as far along the spindle as the knob is intended to reach. The other part of the spindle is made square, the same as those now in use. In each face of the spindle, at each end, and as far as the screw-threads extend, or nearly as far, I cut a groove. In the shank of each knob, and at right angles to the spindle-hole, I cut two or three screw-holes, extending down to the said spindle-hole, and located relatively to each other in the circumference of the shank, as follows; that is to say, the second one hundred and thirty-five degrees, or three-eighths of the circumference of the shank, from the first; the third two hundred and forty-seven and one-half degrees, or eleven-sixteenths of the circumference from the first. I have adopted these distances as the most practicable, though I do not confine myself to any specific degree of distance.

The operation of these devices is this: When the knobs are applied to the door, and one of them brought to about its proper position, it must be turned upon its spindle until one of the holes in the shank is brought opposite to one of the grooves in the spindle, and a small screw (in the drawings) driven through said hole until its point enters said groove. The other knob must then be screwed upon the spindle until both knobs are made to set closely upon the surfaces of the door, but not so tight as, by their friction, to prevent the action of the catch-spring. If, when both knobs are brought into the exact position, it is found that neither of the holes in the last knob coincides with a groove in the spindle, then, by turning backward one and forward the other knob, a point will be attained on the spindle when both knobs will fit the door exactly, and one or the other of the holes in each shank will coincide with one of the grooves in each end of the spindle. The differences in the threads of the screws, and the number of grooves on the two ends of the spindle, and the positions of the holes in the shanks of the knobs, enable me to place the knobs and make them fast at any distance from each other, and, consequently, to exactly fit doors of any thickness.

I do not find it necessary or best, in all cases, to use all these devices, but in knobs designed for doors where great exactness is demanded, I adopt them all. In other cases, the different screw-threads and two or three holes, or even one, in the shank of one of the knobs, enables me to bring the knobs into a position sufficiently close to the door for all practical purposes. Indeed, sometimes two holes in the shank of one of the knobs, with the same screw-threads at each end of the spindle, will be sufficient, even when both ends of the spindle are of the same size, and square, or when one of the knobs is made fast upon its end of the spindle. The grooves may be dispensed with by cutting the points of the hold-fast screws square off and driving them full against the flat faces of the spindles, but I do not think the knobs remain so firm or so long in place.

Having described my improvement, I claim, and wish to secure by Letters Patent, the following:

- 1 Knobs and spindles, screwing the one into the other by screw-threads of different degrees of fineness on the two ends.
2. In the shank of door-knobs that screw upon their spindles, the making two or more screw-holes for the reception of the set-screws, so placed in the circumference that no two are opposite, at the same time, to the faces of the spindle.
3. The making one end of the spindle, for door-knobs, with a different number of sides from the other.
4. The combination of door-knobs and spindles, screwing the one upon the other, with the spindle having a different number of sides, and screw-threads of different degrees of fineness in the two ends, and having one, two, or more screw-holes in the shank of the knobs to receive the hold-fast screws; all for the purposes and in the manner substantially as described.

ALFRED DAWES.

Witnesses:

SAMUEL WELLS, Jr.,  
CURTIS ABBOTT.