

J. R. FLETCHER.
 KNOB ATTACHMENT.
 APPLICATION FILED AUG. 28, 1909.

943,740.

Patented Dec. 21, 1909.

2 SHEETS—SHEET 1.

FIG. 1.

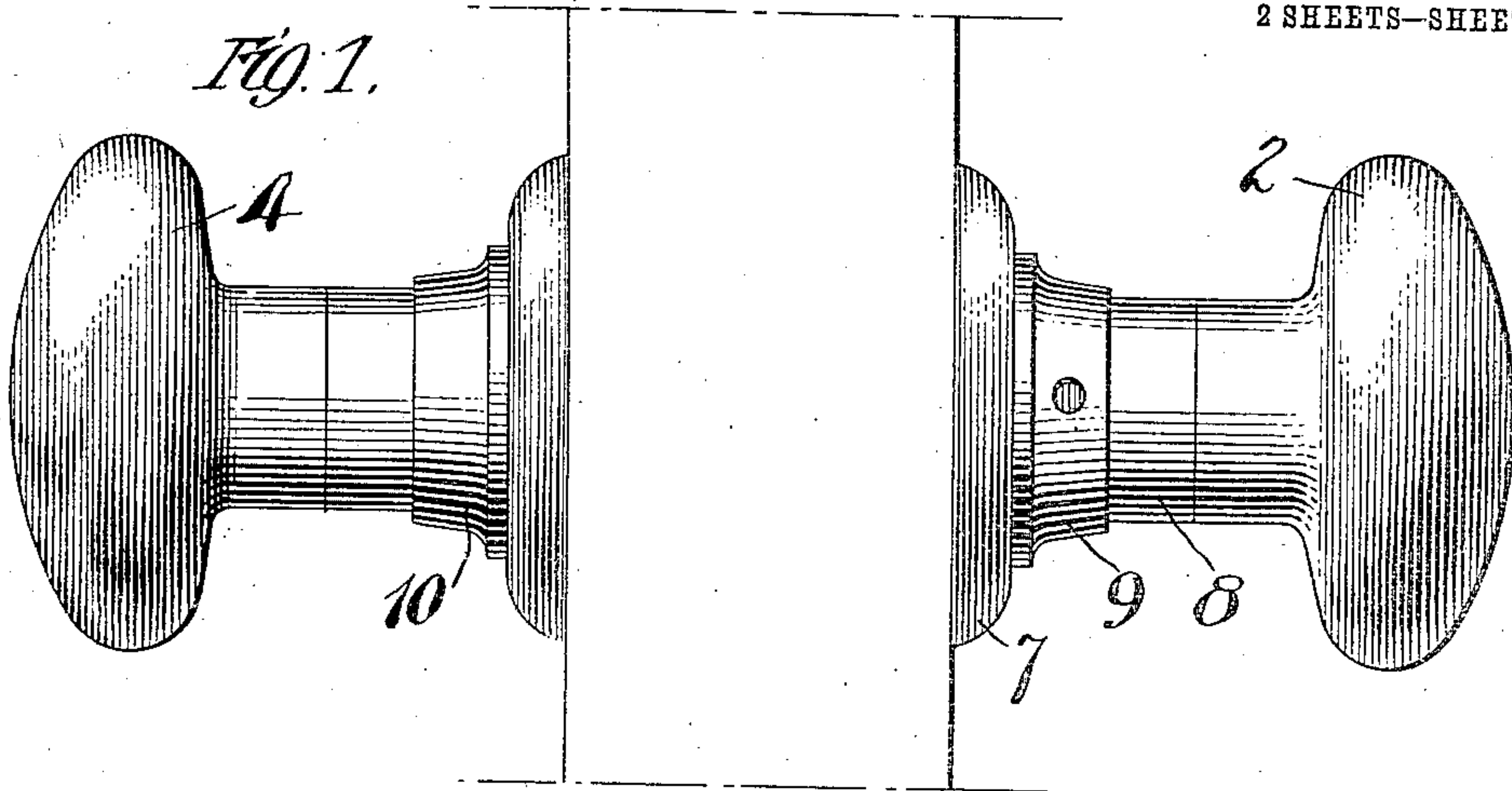


FIG. 2.

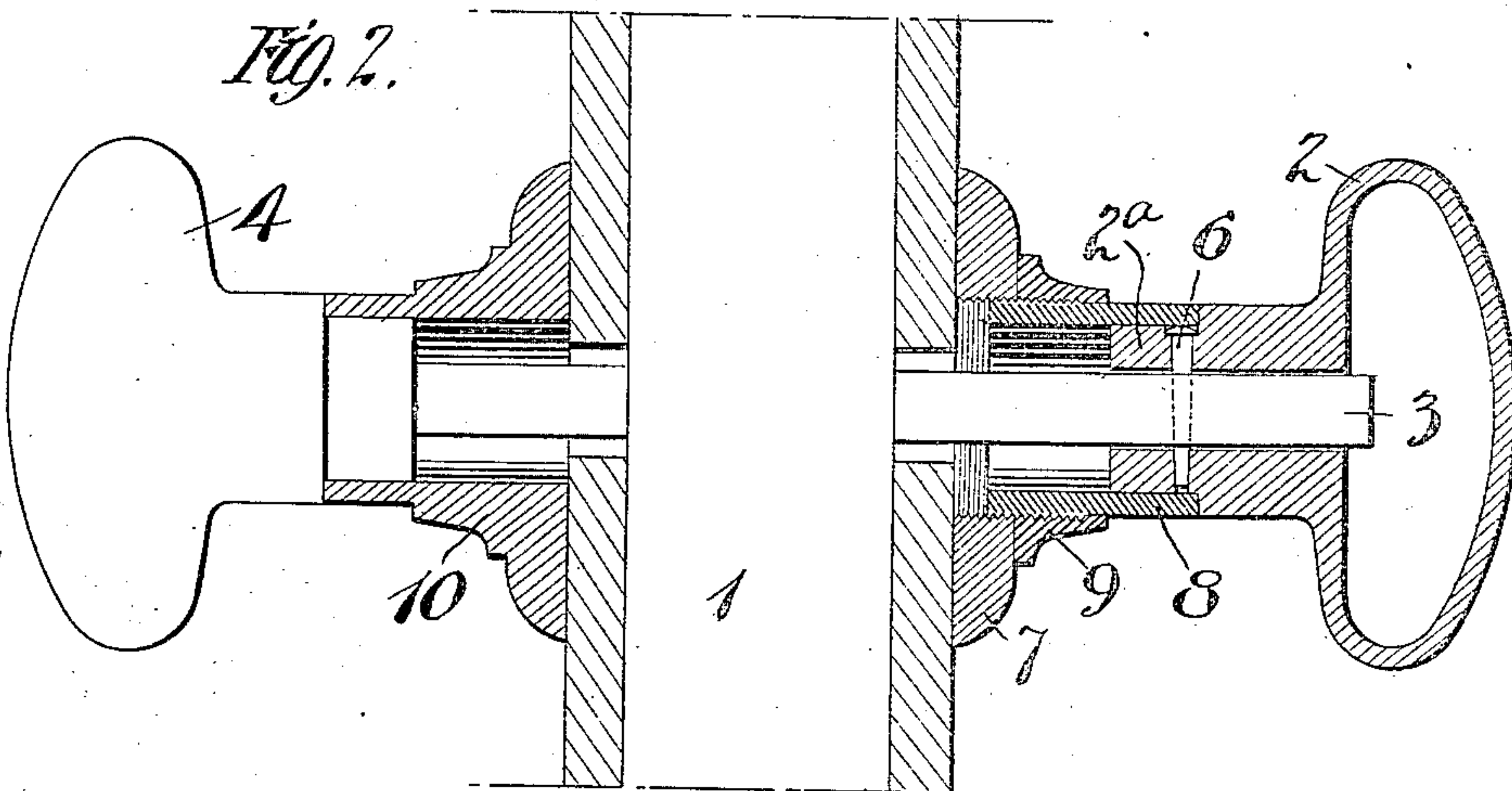
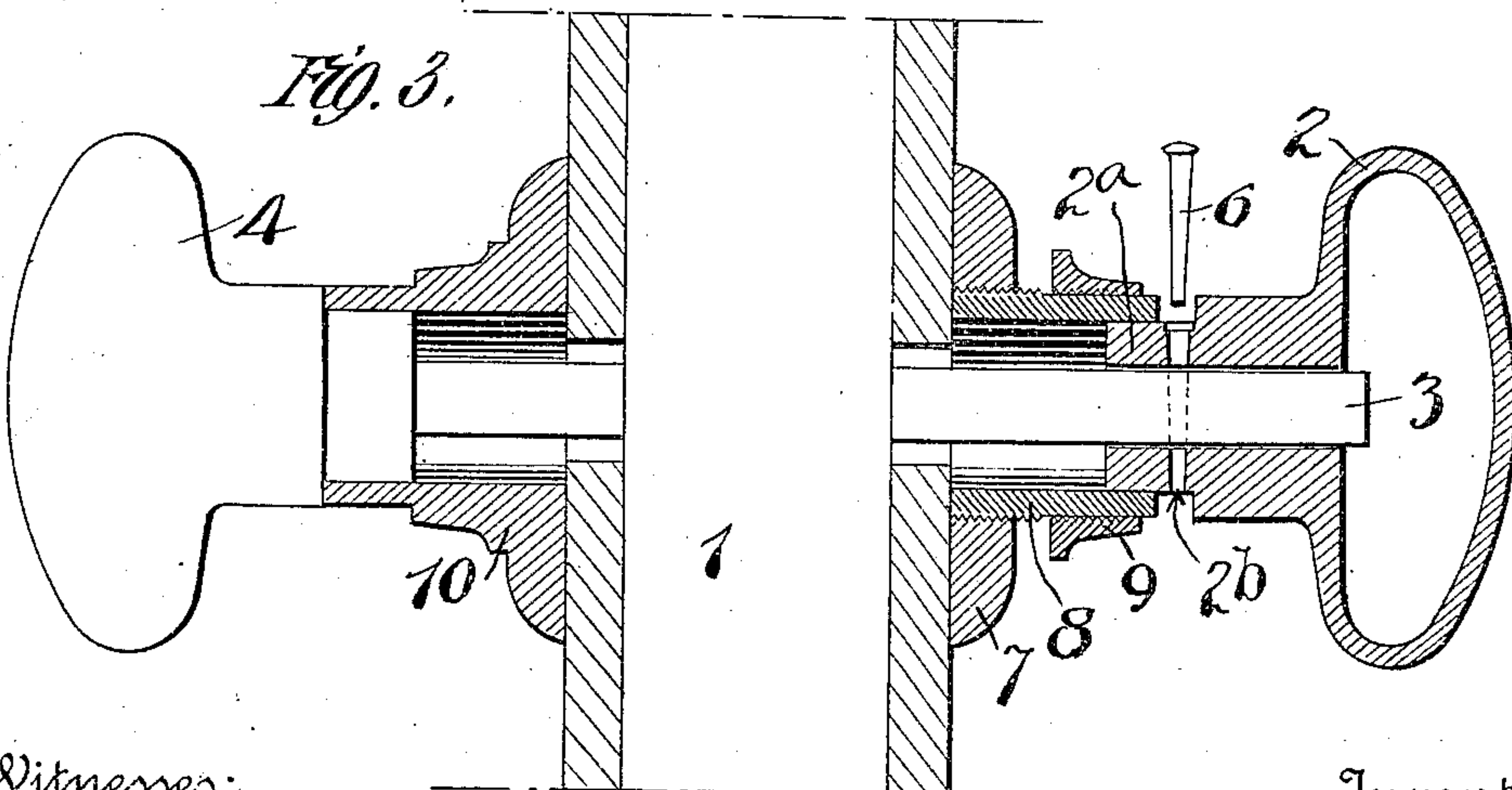


FIG. 3.



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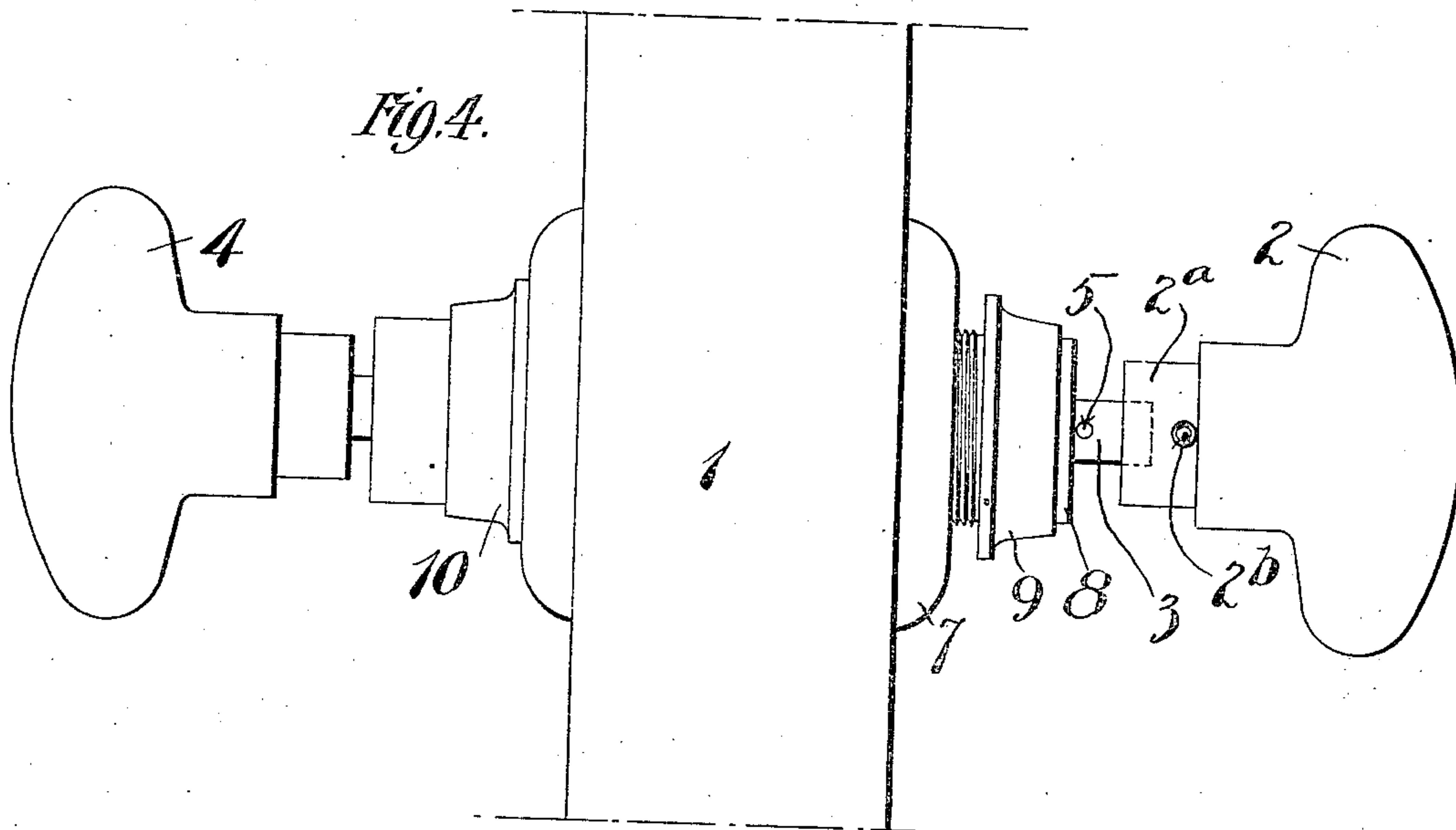


Fig. 5.

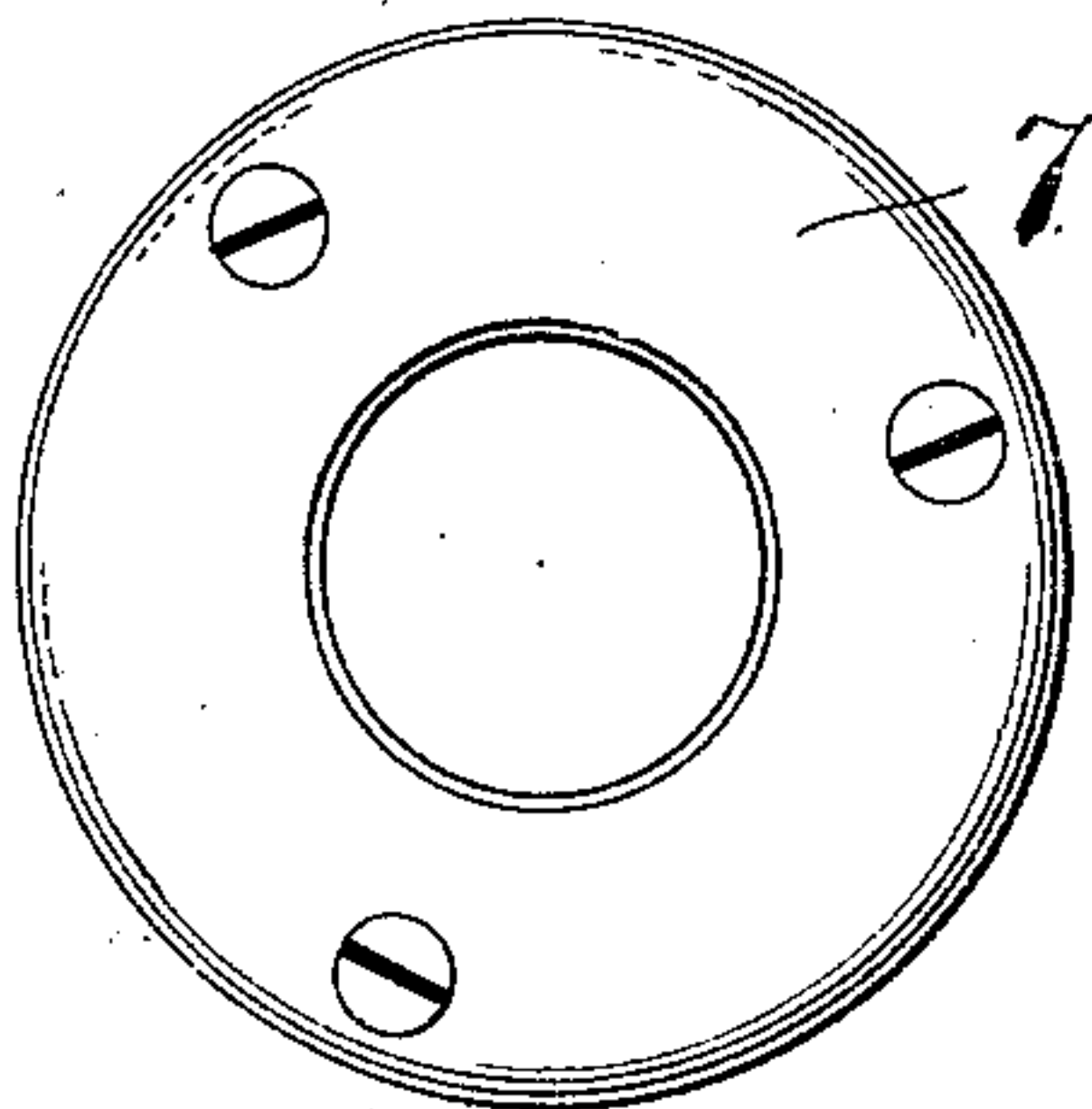
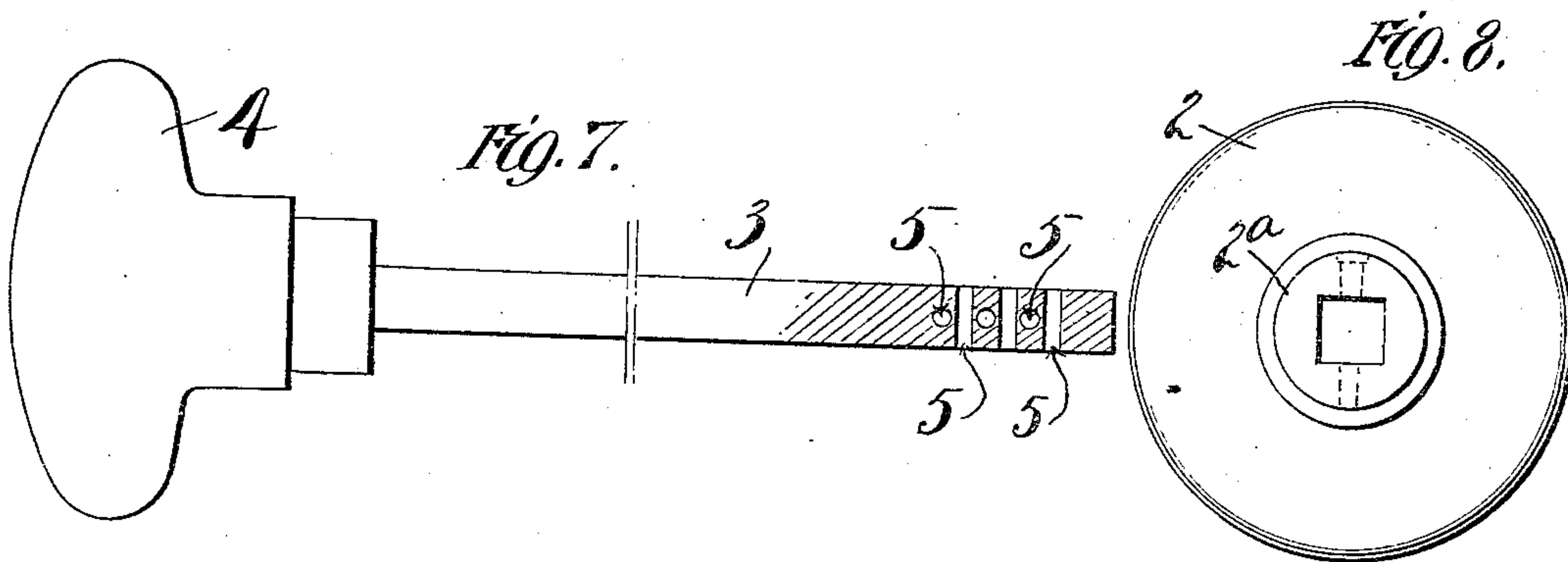
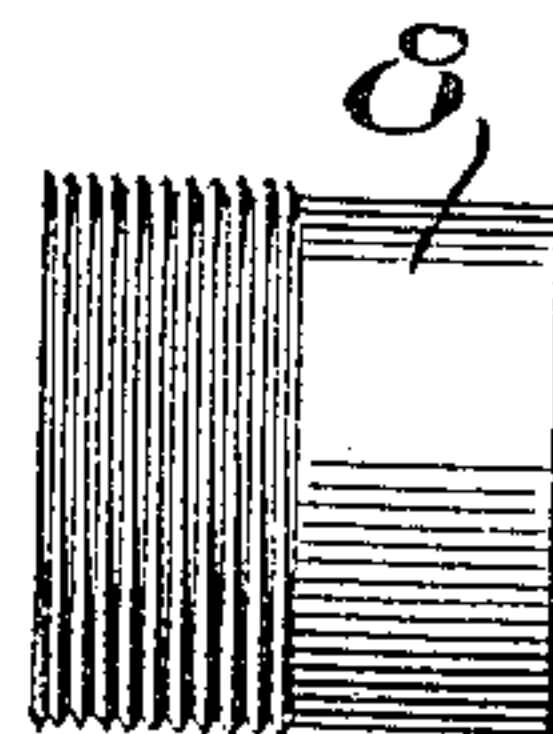


Fig. 6.



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KNOB ATTACHMENT.

943,740.

Specification of Letters Patent.

Patented Dec. 21, 1909.

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To all whom it may concern:

Be it known that I, JAMES R. FLETCHER, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Knob Attachments, of which the following is a full, clear, and exact description.

My invention relates to an improved so-called "screwless" knob, the object being to provide a simple, inexpensive and effective means for adjustably securing a knob in proper position upon a knob spindle without the use of the usual screw.

In the accompanying drawings, Figure 1 is an edge elevation of a portion of a door showing the two door knobs on opposite sides thereof, said parts being in the assembled position ready for use. Fig. 2 is a longitudinal sectional view of certain of the parts shown in Fig. 1, said parts being in the same position as indicated in Fig. 1. Fig. 3 is a view similar to Fig. 2 but showing the parts in a different position. Fig. 4 is an elevation of the various parts as the same are being separated. Figs. 5, 6, 7 and 8 are illustrative of different details.

1 represents a portion of a door to which the knob 2 is to be applied. In the particular form of my invention shown herein, I have illustrated and will describe the same as applied to an ordinary door equipped with two knobs on opposite sides, both of said knobs being connected to a single spindle by which the lock mechanism is operated. The lock mechanism need not be shown.

3 is a spindle. In this particular form the spindle 3 is of rectangular cross-section.

4 is a knob secured in any desired way to one end of the spindle 3.

The knob 2 in this instance is what I term the "screwless" knob. The spindle 3 has at its free end a series of transverse openings 5—5, so arranged as to permit of an approximate adjustment of the knob 2 thereon. The knob 2 has a shank 2^a preferably reduced in diameter, which reduced shank has a transverse counterbored pin passage 2^b.

6 is a pin adapted to the passage 2^b.

7 is an escutcheon or rose plate arranged to be secured to the door 1.

8 is a take-up sleeve, the inner end of which is externally threaded to engage in

a similar internally threaded portion of the rose 7 as best seen in Figs. 2 and 3. 9 is a lock nut internally threaded and mounted upon the threaded portion of said sleeve 8 and overstanding the smooth unthreaded portion thereof.

10 is a conventional rose-plate arranged to operate as a bearing for the knob 4.

In operation, the parts are assembled substantially as follows: The spindle 3 is passed through the door, the knob 4 taking a suitable bearing in the rose 10. The knob 2 is then slipped over the free end of the spindle to approximately the position shown in Fig. 3. The pin 6 is then inserted into the passage 2^b, said pin penetrating one of the passages 5 of the spindle 3. The sleeve 8 is then unscrewed from the position shown in Fig. 3, by which operation the outer end of said sleeve first moves outwardly and covers the pin 6. When the sleeve has been moved outwardly sufficiently far to take up loose end-play of the knobs, the lock nut 9 is screwed down on the thread of the sleeve 8 until it jams against the rose 7, locking the sleeve 8 from further rotation or displacement. The knobs are now ready for use.

To remove the knob 2, the above operation is simply reversed. The lock nut 9 is first released and screwed back. The sleeve 8 is screwed forward to uncover pin 6. The latter is then withdrawn and the knob 2 may be freely drawn off.

It will be seen that all screws are entirely eliminated as a means for holding the knob on the spindle. When the parts are assembled, the pin 6 is entirely protected and covered and cannot be tampered with or become accidentally lost. By providing a sufficient number of transverse passages 5 in the spindle 3, an approximate adjustment of the knob 6 may first be made, following which a more accurate and final adjustment is accomplished by means of the sleeve 8. The sleeve 8 constitutes a bearing for the knob, being in effect an adjustable extension from the rose or base 7.

While I have shown the part 7 in the form of a rose, so-called, it should be understood that the design of this and other parts may be modified and changed in many ways, since the broad idea, irrespective of form, is to provide a movable take-up device between the knob and rose or base whereby end play of the knob and spindle may be limited,

the knob itself being locked to the spindle by other means than said take-up means.

What I claim is:

1. In a device of the character described,
5 a spindle, a knob adapted thereto, a pin arranged to hold said knob on said spindle, a bearing arranged to be secured to a door or the like, a take-up sleeve carried by said bearing and adjustable relatively thereto, a
10 portion of said sleeve overstanding a portion of the knob and arranged to be moved in a direction to cover said pin and to take an end bearing against said knob, and means to lock said sleeve against movement rela-
15 tively to said bearing.

2. In a device of the character described, a spindle, a knob, means to secure the knob to the spindle, a bearing device for said knob comprising a non-adjustable portion and an
20 adjustable portion, and a threaded annulus carried by and mounted upon said adjustable portion and arranged to engage said non-adjustable portion to lock the former rigidly in an adjusted position relatively to said
25 knob to take up end play of the latter.

3. In a device of the character described, a spindle, a knob slidable but non-rotatable thereon, means for attaching said knob on said spindle, said means comprising a device
30 passing transversely through the shank of the knob and said spindle, a knob supporting and adjusting sleeve arranged to overstand the shank of the knob and said knob attaching device, a supporting plate for said ad-
35 justing sleeve and means for rigidly holding

said sleeve in any desired position of adjustment relatively to said plate, said means being mounted on said sleeve.

4. In a device of the character described, a spindle, a knob slidable but non-rotatable
40 thereon, a base or rose, means to secure said knob on said spindle, a sleeve located between said knob and base and adjustably mounted in an opening in the latter and operating to limit the end play of said knob
45 relatively to said base, an external annulus threaded upon said sleeve and arranged to lock the latter against movement when once adjusted.

5. In a device of the character described, 50 a spindle, a knob adjustable thereon, means for locking said knob thereon in an adjusted position, a support or bearing arranged to be secured to a door, a sleeve, a screw-thread connection between said sleeve and said bear- 55 ing and including a screw-thread on the external surface of said sleeve toward its inner end, said knob being directly supported by said sleeve, a threaded ring mounted on the threaded portion of said sleeve external of
60 said bearing, the outer end of said ring projecting outwardly on said sleeve beyond the threaded portion thereof, said ring being arranged to jam against said bearing to prevent said sleeve from rotating after the same
65 has been adjusted.

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