

H. G. VOIGHT.
LOCK.

APPLICATION FILED FEB. 15, 1908.

908,431.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

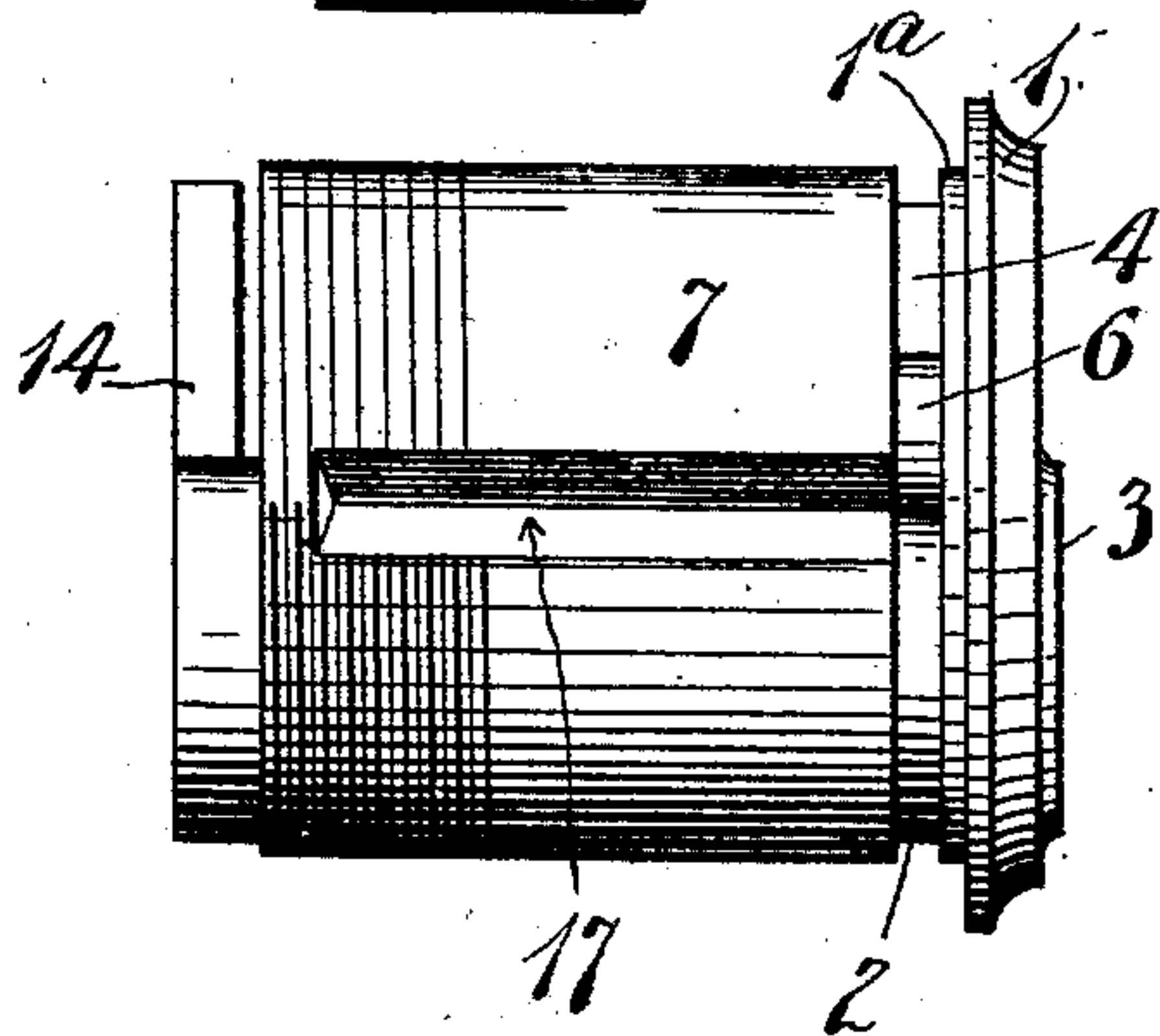


Fig. 2.

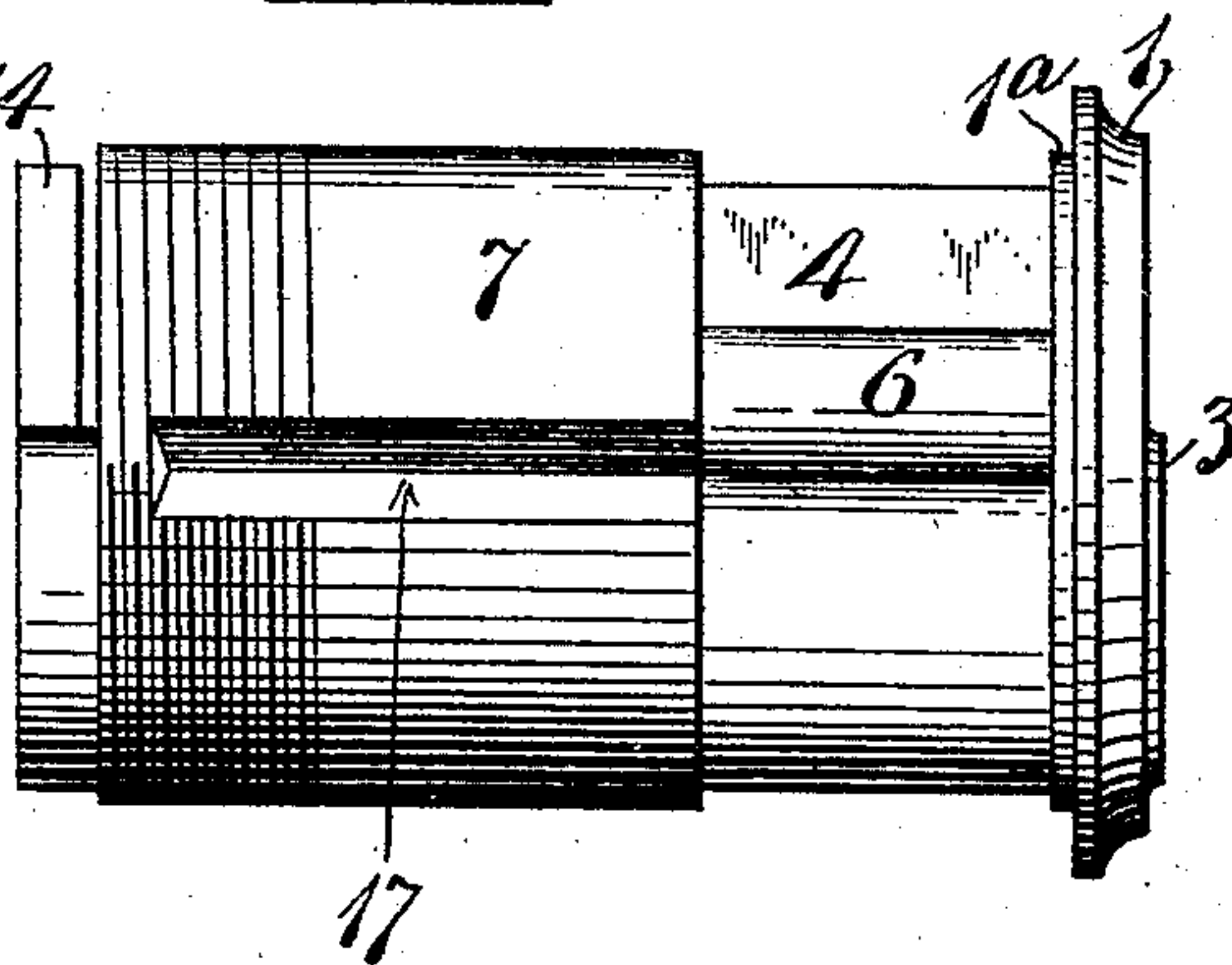


Fig. 3.

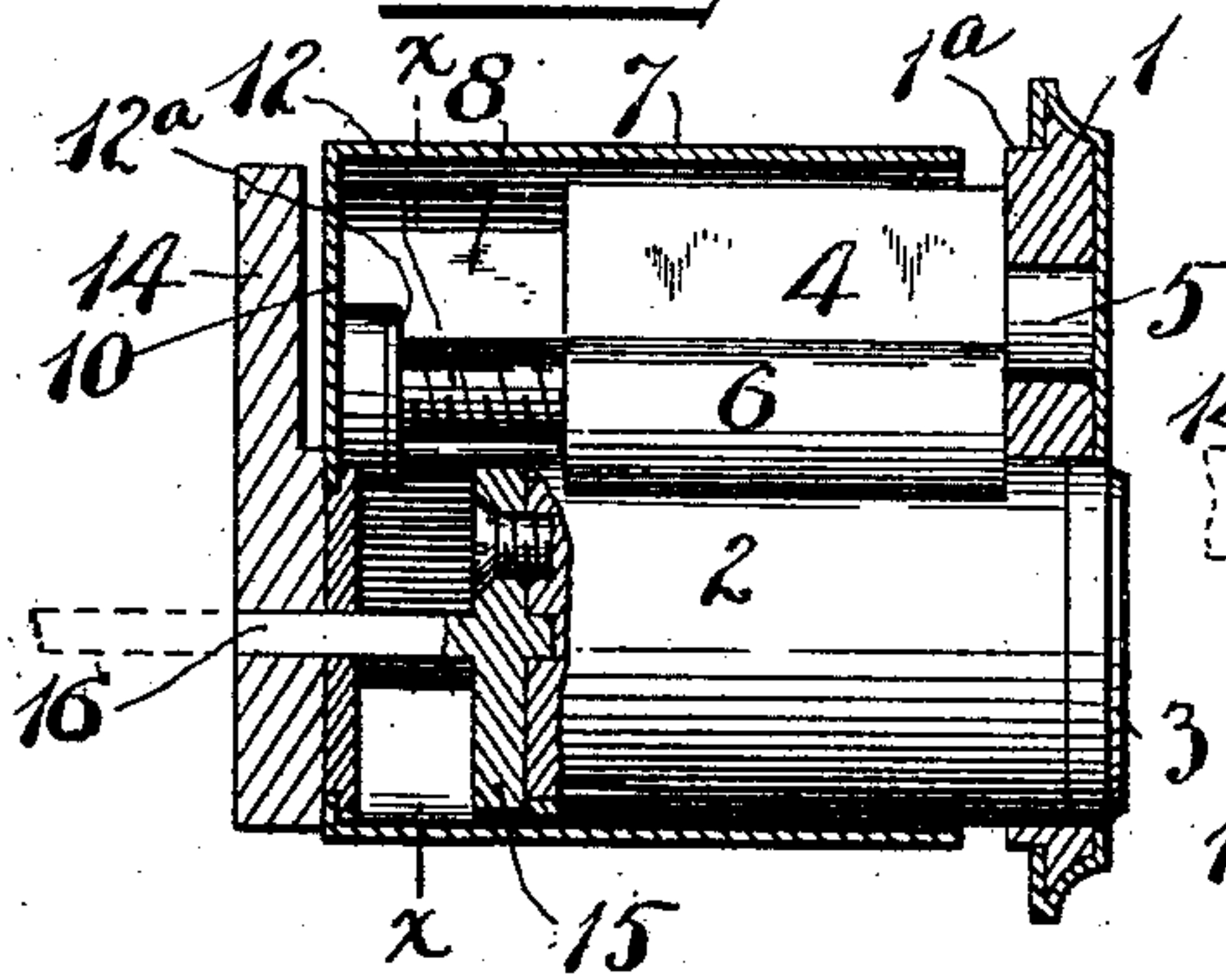
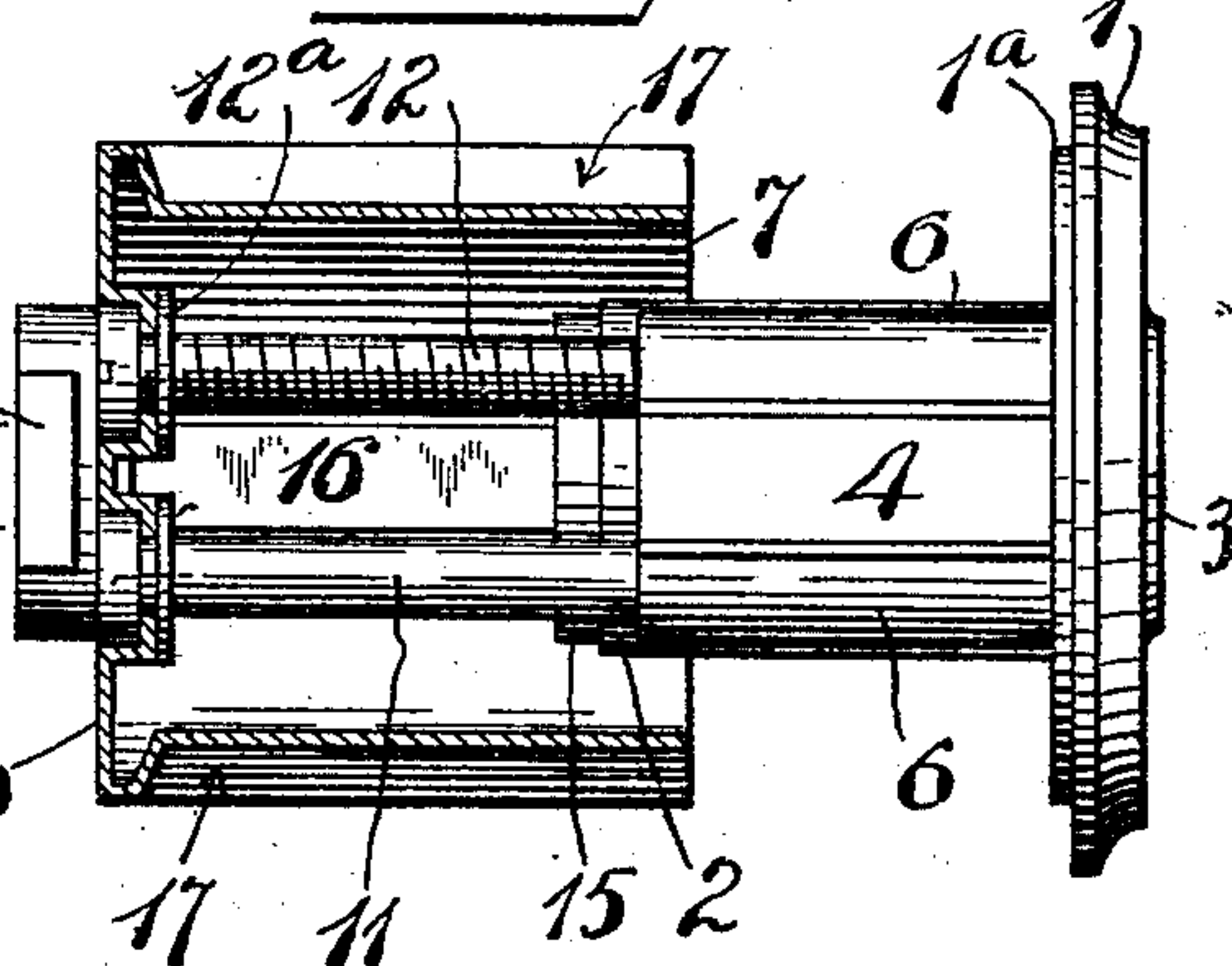


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

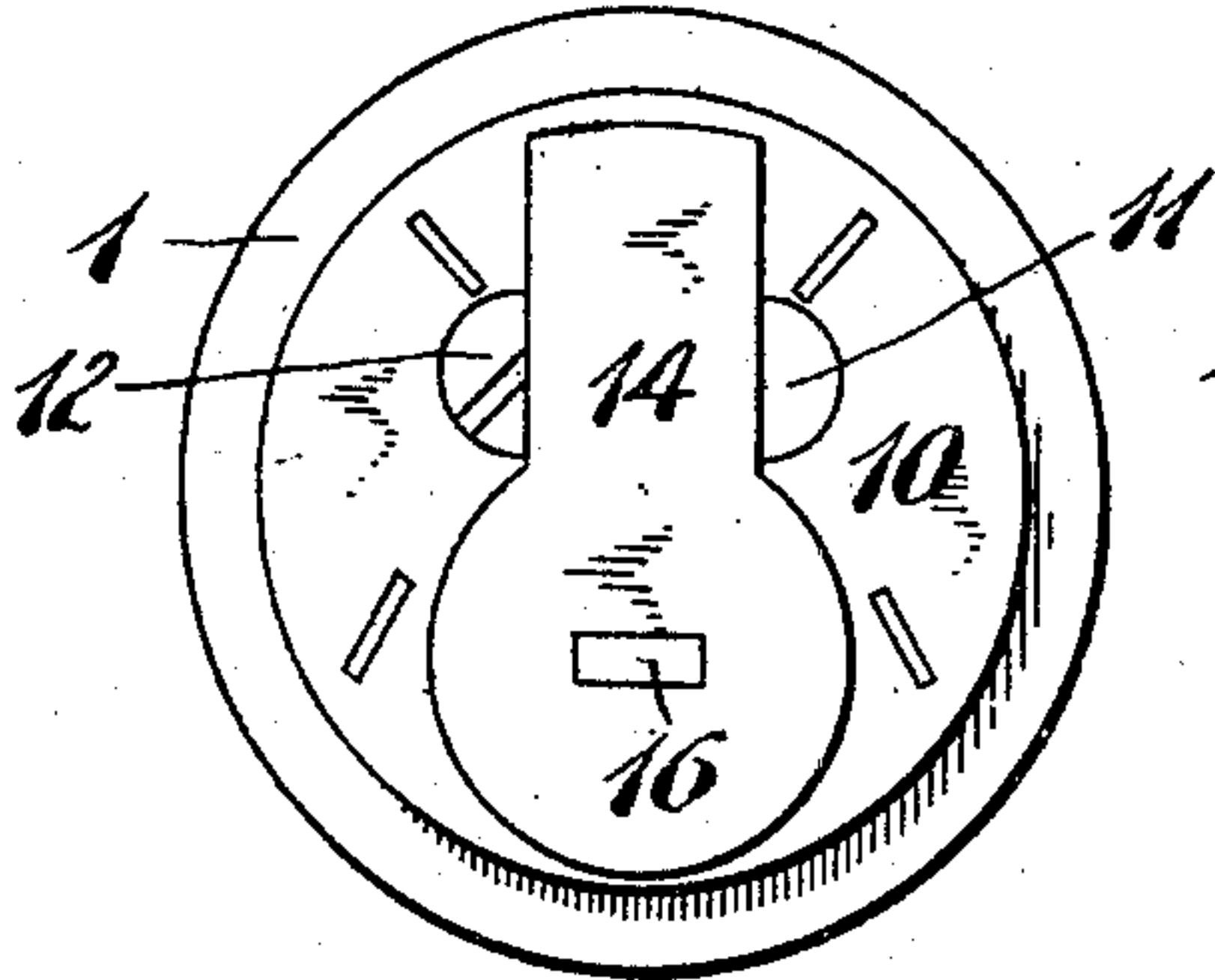


Fig. 6.

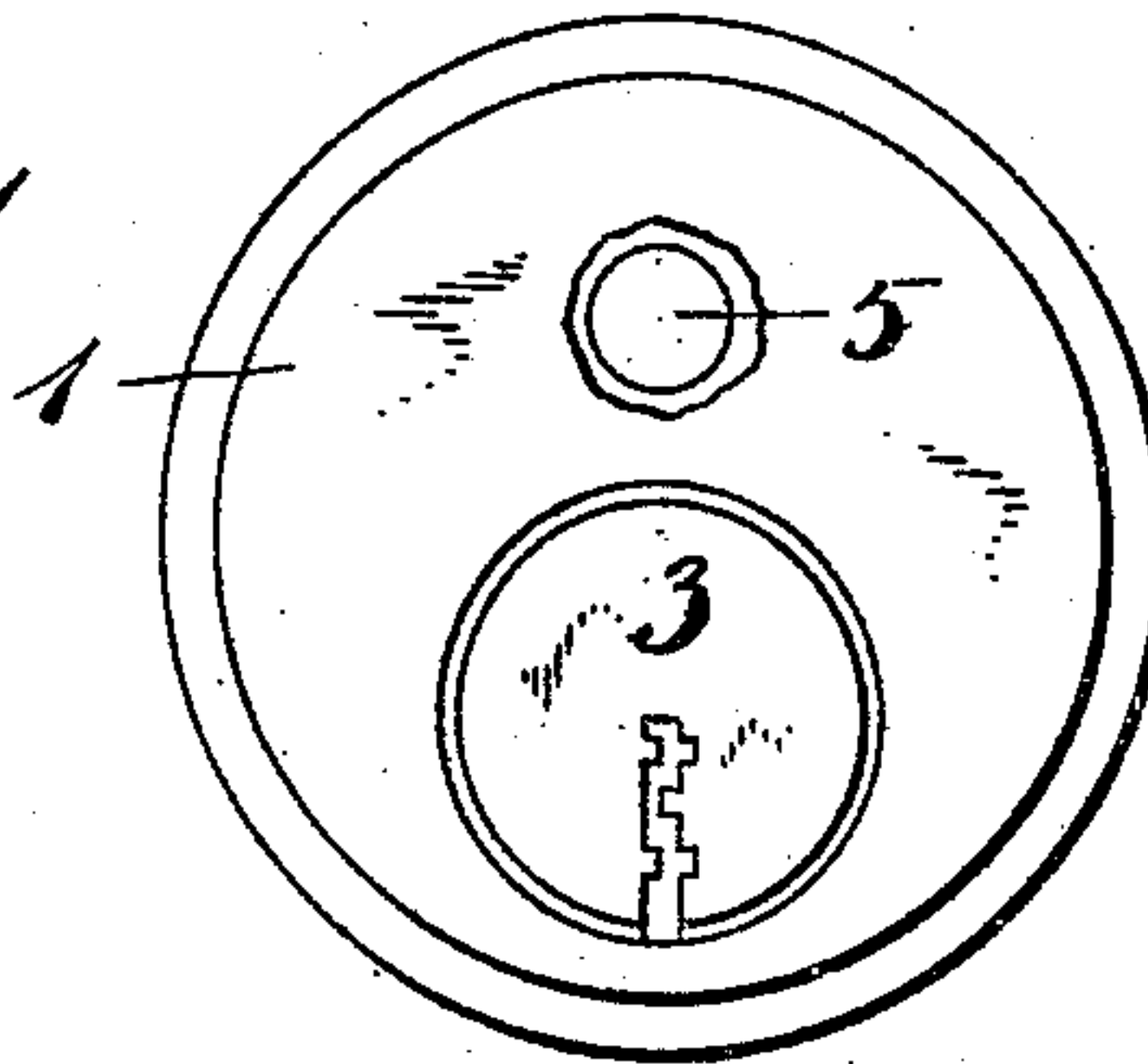


Fig. 7.

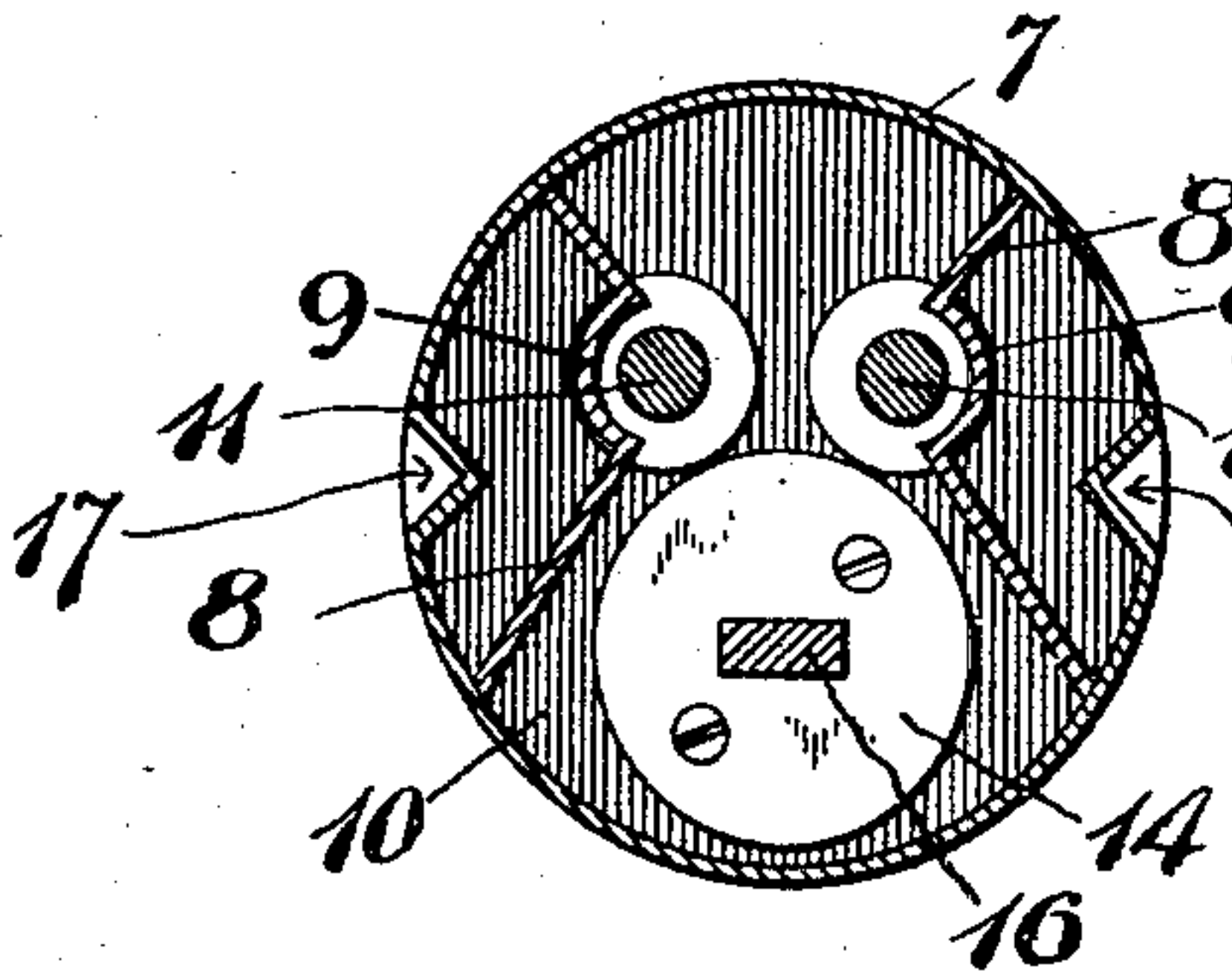


Fig. 8.

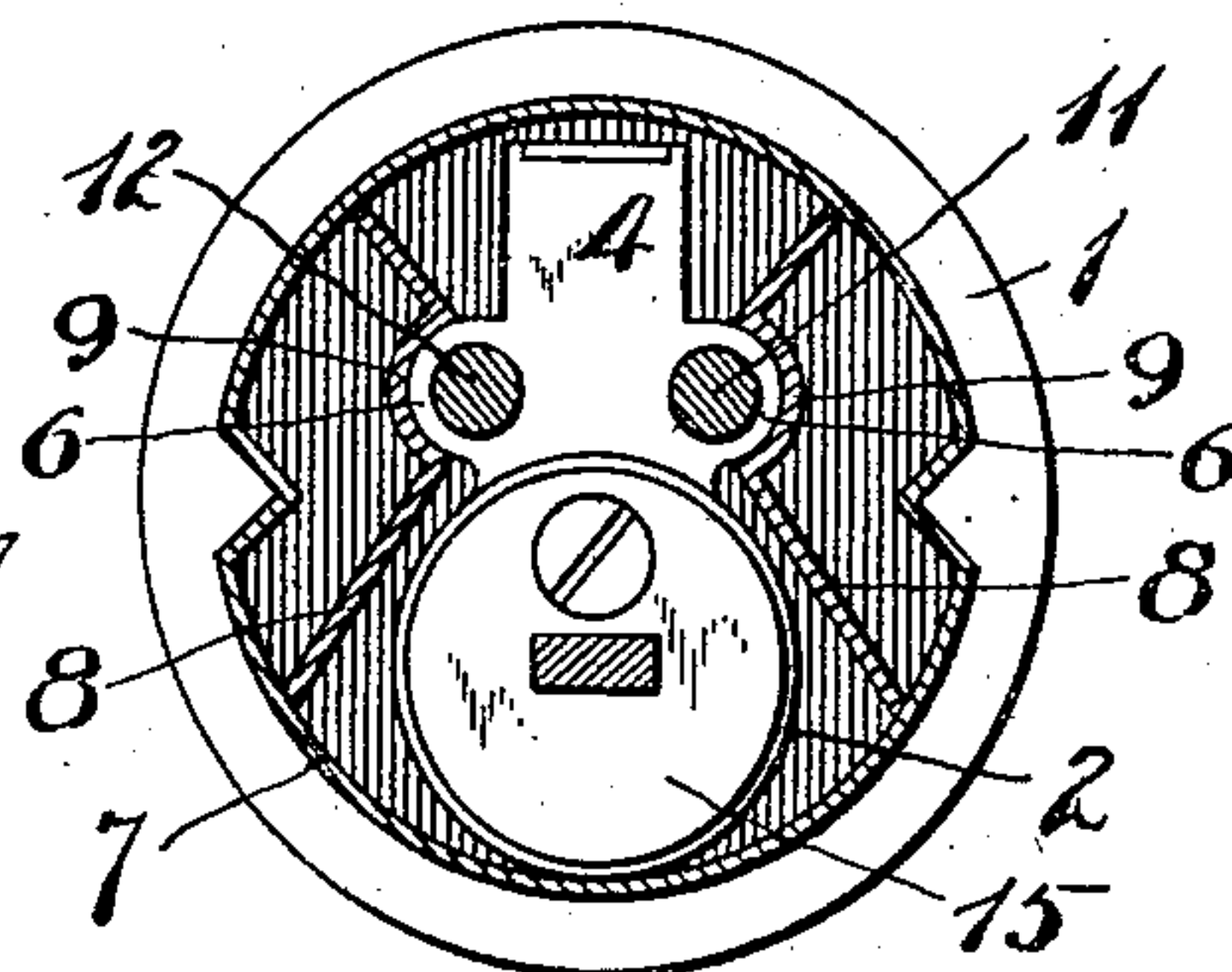


Fig. 9.

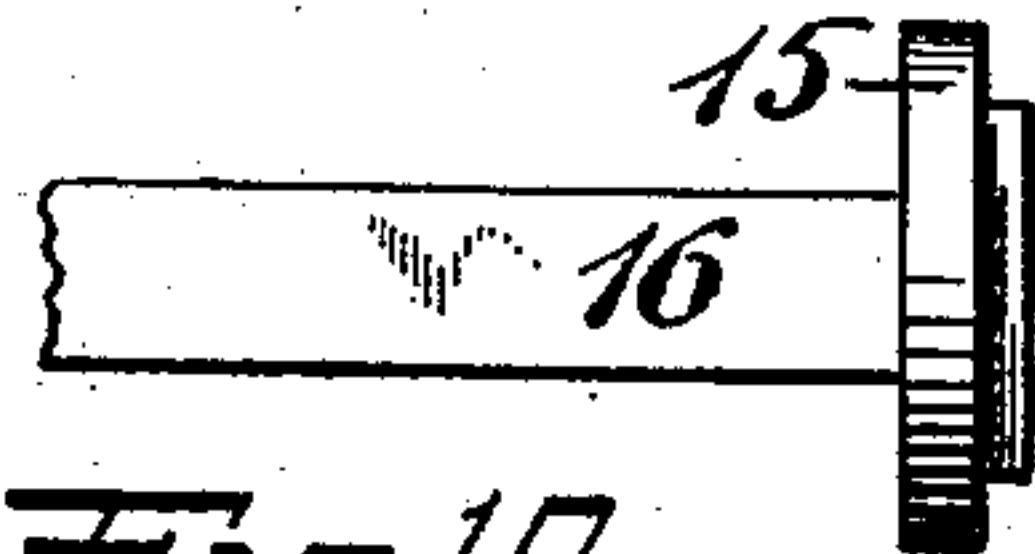


Fig. 10.

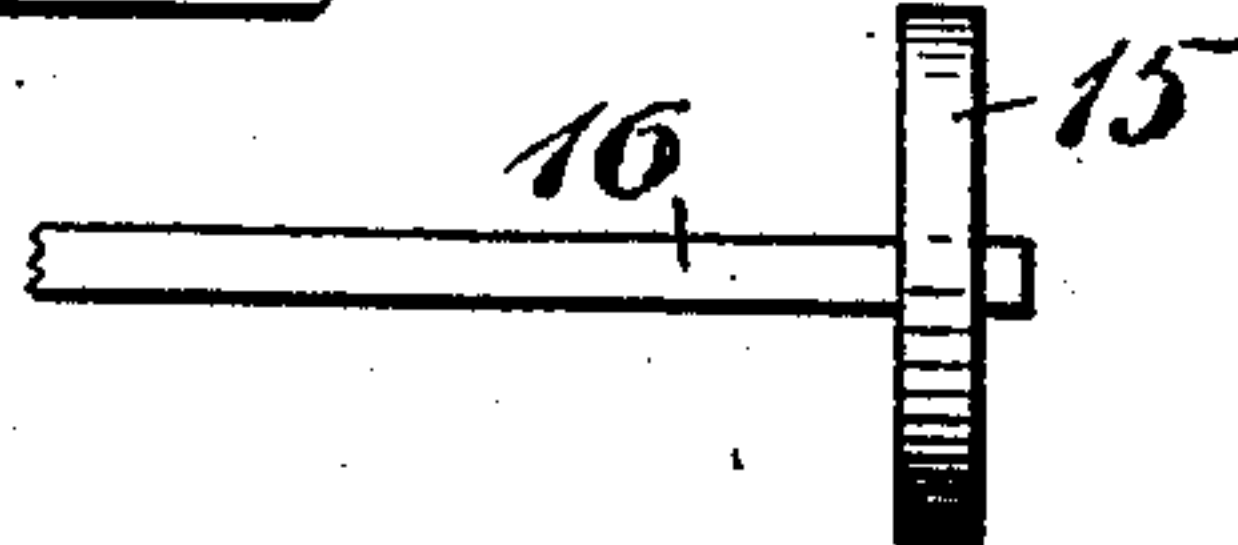
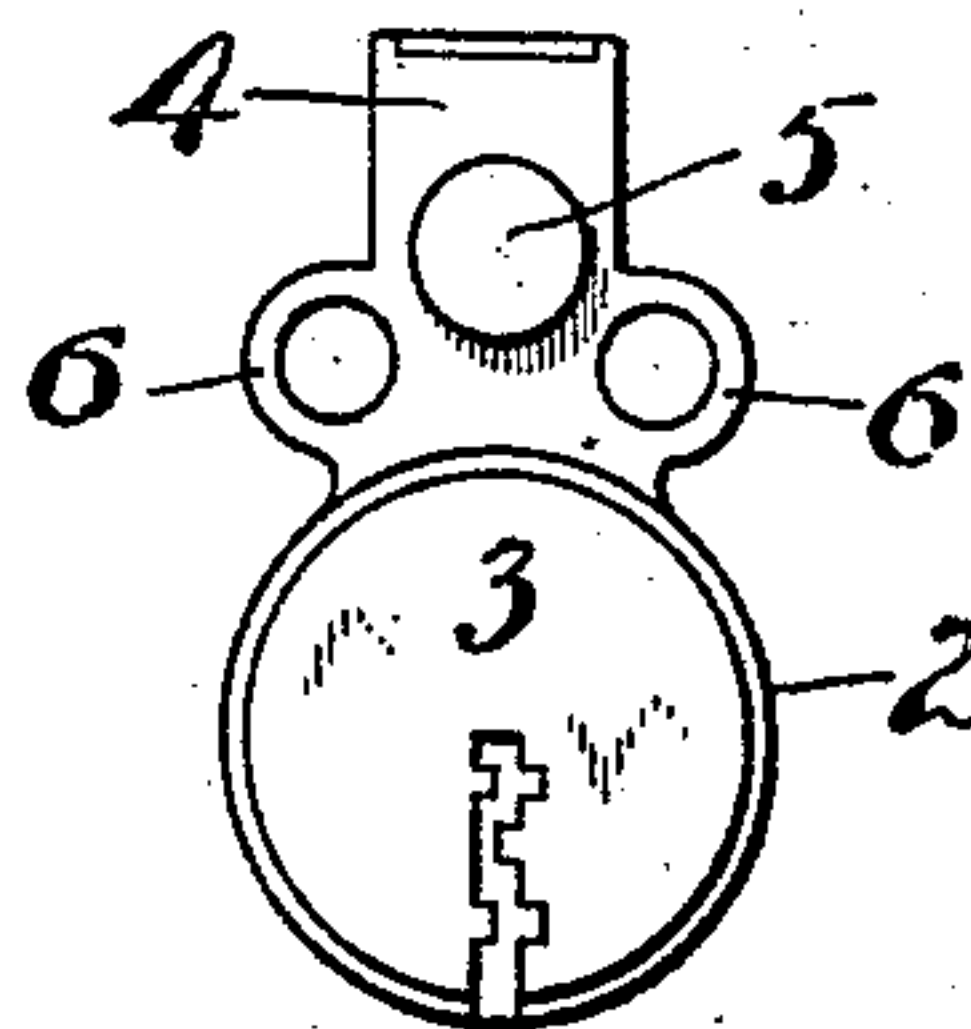


Fig. 11.



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UNITED STATES PATENT OFFICE.

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LOCK.

No. 908,431.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed February 15, 1908. Serial No. 416,037.

To all whom it may concern:

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

This invention relates to certain improvements in locks of the so-called cylinder type, the object of the invention being to simplify and cheapen the cost of production without sacrificing the quality, efficiency or durability of the same.

Another object of the invention comprises the provision of an adjustable feature whereby the cylinder may be connected to lock cases fitted to doors of different thicknesses.

In the drawings, Figure 1 is a side elevation of the complete cylinder, slightly enlarged, the parts being arranged for approximately the minimum adjustment; Fig. 2 is a similar view showing approximately the maximum adjustment; Fig. 3 is a vertical longitudinal section of Fig. 1, certain parts being shown in elevation; Fig. 4 is a horizontal sectional view of Fig. 2, certain parts being shown in elevation; Fig. 5 is a view of the inner end of the lock; Fig. 6 is a view of the outer end of the lock, partly broken away; Fig. 7 is a section on the plane of the line $x-x$ of Fig. 3, looking to the left; Fig. 8 is a section on the plane of the same line, looking to the right; Figs. 9 and 10 are different elevations of the same detail; Fig. 11 is a front end view of another detail.

1 represents the face plate of the usual disk-like outline. If desired, this face plate may have an external scalp or lining applied thereto, as indicated in section, Fig. 3.

2 is the cylinder casing, the forward end of which is mounted in the face plate 1. Within the cylinder casing is the plug 3.

4 is the tumbler casing connected with the cylinder casing 2 and carrying the usual tumblers (not shown). The tumbler casing is preferably provided with a forward projection 5, which is also connected with the face plate 1 and may be riveted, as shown, thus firmly securing together the parts 1, 2 and 4, thus constituting a frame. The tumbler casing has lateral offsets 6-6, which extend longitudinally thereof to provide bearings for the purpose hereinafter described.

7 is a hollow cylindrical shell, which is provided with internal brace plates 8-8 ex-

tending longitudinally thereof, each of which brace plates in turn is shaped to provide a grooved bearing 9 arranged to slide upon the guide offsets 6-6. The rear end of the cylinder 7 is closed by an end plate 10. The brace plates 8-8 may be secured in any desired manner within the cylindrical shell 7, and, if desired, may be riveted to the end plate 10, as shown in Fig. 5.

From the foregoing it will be seen that the hollow shell portion 7 may be slid to and fro relatively to the face plate 1. To provide a superior support and adjustment, a guide pin 11 is preferably provided, the same being carried by the end plate 10 and projecting into a longitudinal bore in one of the offsets 6. The end plate 10 also carries an adjusting screw 12, the forward end of which likewise projects into a threaded bore in the other offset 6 (see Figs. 3 and 4). While the reinforcing plates 8-8 furnish a satisfactory guide for the shell, greater strength is secured by adding the guide pin 11 and the screw 12. Furthermore, by the provision of the screw 12, any desired adjustment may be easily effected and the shell 7 may be fixed at any desired position relatively to the face plate 1. Rotatably mounted on the end plate 10 is a roll-back 14, the same being located in proper alinement with the plug 3. At the end of the plug 3 is a cap-plate 15 carrying a rearward connecting bar or coupling 16, of irregular cross-sectional outline, arranged to make a sliding connection with the roll-back 14. As originally constructed, this coupling arm 16 may be of the maximum length to which the cylinder may be adjusted. When the parts have been adjusted to their final position (depending upon the thickness of the particular door to which the cylinder lock is to be applied), any part of the coupling arm 16 that projects to the rear of the roll-back (as indicated by dotted lines Figs. 3 and 4) may be cut off.

From the foregoing it will be seen that the construction, as a whole, is extremely light and yet quite as serviceable and effective as though it were solid. By this arrangement much sheet or wrought metal may be effectively employed. By providing for the adjustment of the shell 7, the lock has a universal application, since it is possible to apply it to doors of the maximum as well as the minimum thickness.

In order to move the shell 7 in both direc-

tions by the adjusting screw 12, I preferably provide a collar 12^a just inside of that part of the shell through which the screw passes, which collar may be secured to the screw in
 5 any desired manner, sufficient freedom being provided to permit the screw to turn freely in the end plate 10. A similar collar may likewise be provided on the guide 11,
 10 although in this instance it is immaterial whether the guide pin turns. The end plate 10 is preferably countersunk, so that the heads of the guide-pin 11 and screw 12 will lie flush. In one or both sides of the shell 7,
 15 a longitudinal groove 17 may be provided to receive the set screw (not shown) carried by the lock case to which the cylinder lock is to be applied.

1^a is a centering shoulder on the rear of the face plate 1, the same being of substantially
 20 the same diameter and outline as the shell 7, the function of said centering shoulder being to steady the face plate in the opening in the bore, through which the shell is passed when the lock is applied.

It should be understood that the terms
 25 "roll-back" and "key-plug" are conventionally employed and are intended to include the substitution of equivalent devices. It should also be understood that the particular
 30 tumbler construction employed is immaterial to this invention.

What I claim is:

1. In a lock, a frame comprising a face plate, a cylinder casing and a tumbler casing,
 35 a key-plug in said cylinder casing, a shell longitudinally adjustable on the frame and screw-threaded at its forward end, a rotatable roll-back carried by said shell at its forward end, an adjusting device carried by one
 40 of said adjustable parts for shifting said shell and roll-back on said frame, and means for permanently connecting said plug and said roll-back at all positions of adjustment.

2. In a cylinder lock, the combination of
 45 a frame, a key-plug carried thereby, a shell longitudinally adjustable on said frame and screw-threaded at its forward end, a roll-back carried by said shell at its forward end, and an adjustable permanent connection
 50 between said key-plug and roll-back, and means carried by said lock for mechanically adjusting the shell on said frame.

3. In a cylinder lock, the combination of a frame, a key-plug carried thereby, a shell
 55 longitudinally adjustable to any position on said frame and screw-threaded at its forward end, a roll-back carried by said shell at its forward end, an adjustable permanent connection between said key-plug and roll-back, and a combined adjusting and locking
 60 device carried by one of said parts and engaging the other part.

4. In a cylinder lock, the combination of a frame, a key-plug carried thereby, a shell
 65 longitudinally adjustable to any position on

said frame and screw-threaded at its forward end, a roll-back carried by said shell at its forward end, an adjustable permanent connection between said key-plug and roll-back, including a combined adjusting and
 70 locking device carried by the shell element and engaging the frame element.

5. In a cylinder lock, a frame, a hollow shell member longitudinally adjustable thereon, braces within said shell member, guides
 75 on the frame member, said braces being slidable on said guides, a plug carried by the frame, a roll-back carried by the shell member, and means for adjusting the shell and roll-back longitudinally relatively to the
 80 frame, and a connection between said plug and roll-back adapted to all positions of adjustment.

6. In a cylinder lock, a frame, longitudinally arranged guides carried thereby, a hollow shell screw-threaded at its forward end
 85 and mounted externally on said guides and arranged to slide thereon, means for adjusting said shell thereon at various positions relatively to the frame, a roll-back carried by
 90 said shell section, a key-actuated device carried by the frame, and adjustable means of permanent connection between said key-actuated device and roll-back.

7. In a lock, a frame, a longitudinally arranged guide portion thereon, a hollow shell
 95 screw-threaded at its forward end and mounted on said guide portion and arranged externally thereof, a key-operated device carried by the frame, a roll-back carried by
 100 the shell, adjustable means of permanent connection between said key-operated device and roll-back, and means to adjust and hold said shell on said guide portion at various positions.
 105

8. In a lock, a frame, a guide portion, a hollow shell screw-threaded at its forward end
 110 and mounted to slide on said guide portion, a key-operated device carried by the frame, a roll-back carried by the shell, means of adjustment carried by the shell and operatively engaging said guide portion, and an adjustable permanent connection between
 115 said key-operated device and said roll-back.

9. In a lock, a frame portion, a hollow shell portion slidable thereon and screw-threaded at its forward end, a plug carried by
 120 the frame portion, a roll-back carried by the shell portion, and means for adjusting and locking the shell portion on the frame portion, said means being carried by one part and adjustably and permanently engaging the other part.

10. In a cylinder lock, a frame, a key-plug carried thereby, a hollow shell slidable on
 125 said frame and screw-threaded at its forward end, means to prevent independent rotation of said parts, a rotatable roll-back carried by the hollow shell, a combined adjusting and locking device carried by said shell,
 130

and a permanent connection between the plug and roll-back adapted to all positions of adjustment of the shell on the frame.

11. In a cylinder lock, a frame, a key-plug
5 carried thereby, a hollow shell slidable on said frame and screw-threaded at its forward end, means to prevent independent rotation of said parts, a rotatable roll-back carried by the hollow shell, a combined adjust-
10 ing and locking device carried by said shell, and a permanent connection between the plug and roll-back adapted to all positions of adjustment of the shell on the frame, said
15 connection between said plug and roll-back being carried by the plug and slidably connected with said roll back.

12. In a lock, a frame, a shell portion adjustably mounted thereon, a key-operating device carried by the frame, a roll-back car-
20 ried by the shell portion, means of connec-

tion between said plug and said roll-back adapted to the various positions of adjustment of the shell on the frame, and a centering shoulder on said frame near the forward end thereof.

13. In a cylinder lock, a frame, a key-operated device carried thereby, a shell longitudinally adjustable on said frame and screw-threaded at its forward end, means to prevent the independent rotation of said shell
25 and frame, a roll-back carried by said shell, a coupling carried by the key-operated device and adjustably and permanently engaging the roll-back, and means for adjustably
30 moving and locking the shell on said frame. 35

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