

J. ROCHE.
MASTER KEY TUMBLER LOCK.
APPLICATION FILED MAY 24, 1909.

950,795.

Patented Mar. 1, 1910.

Fig 1.

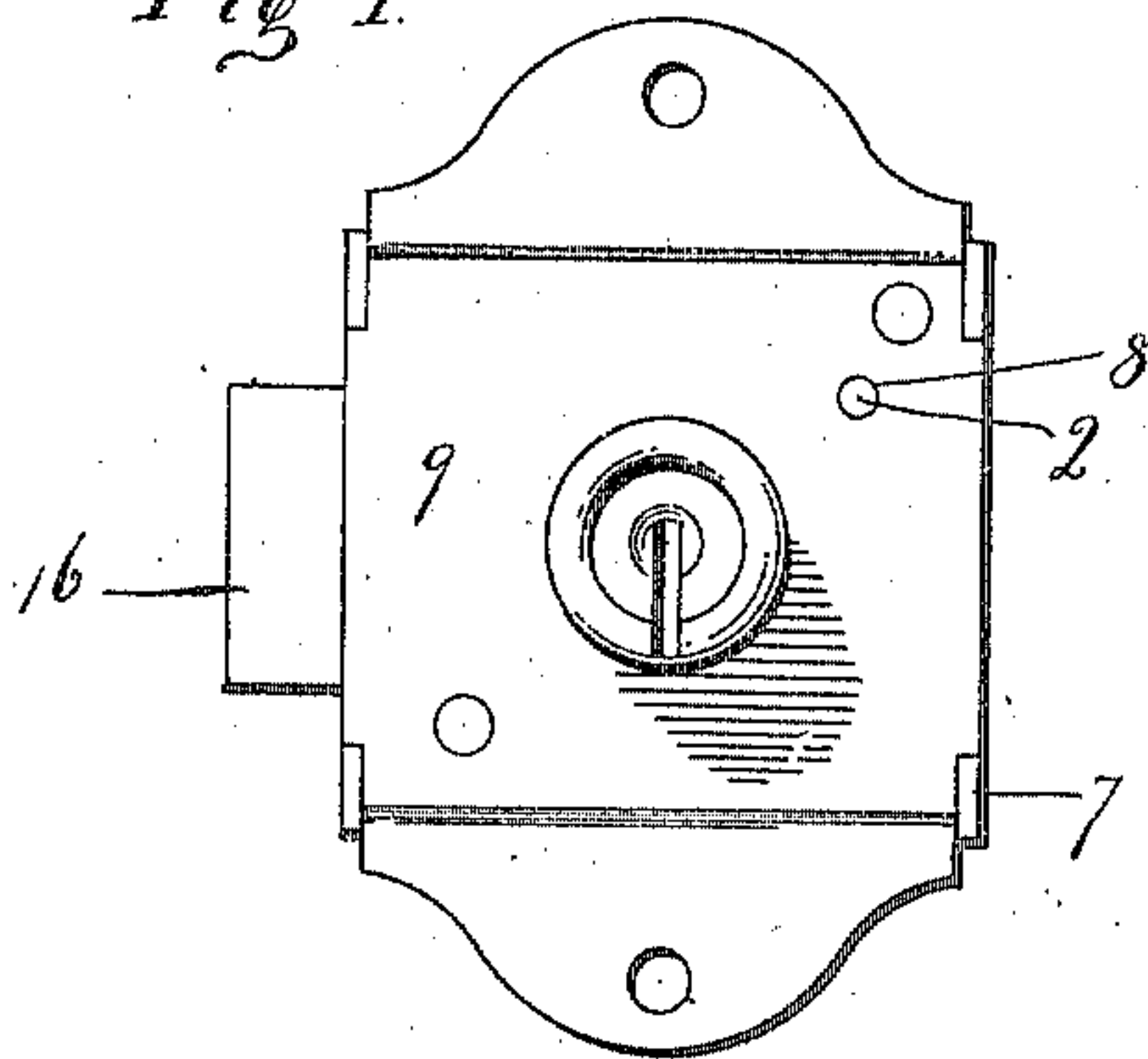


Fig 2.

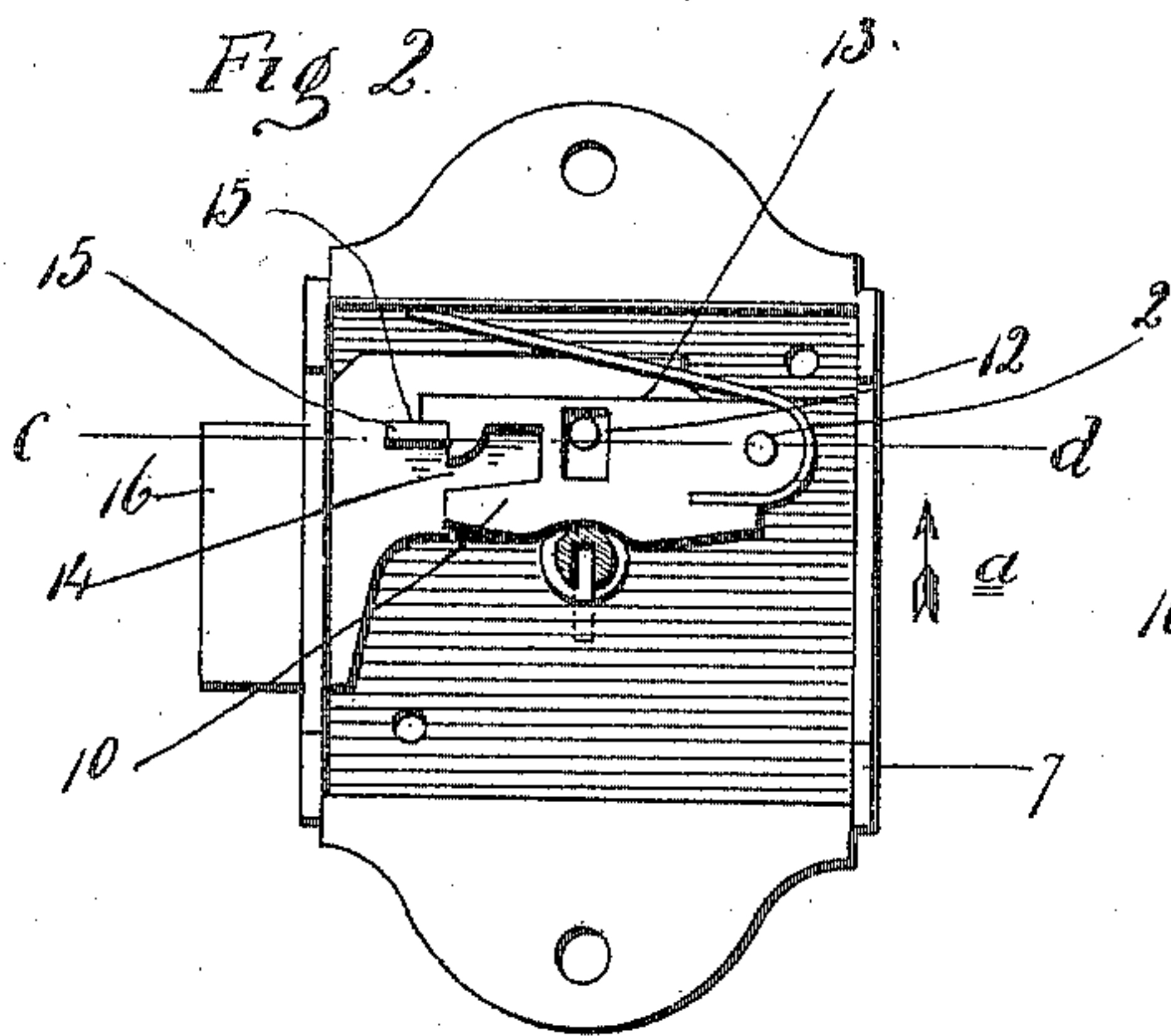


Fig 3.

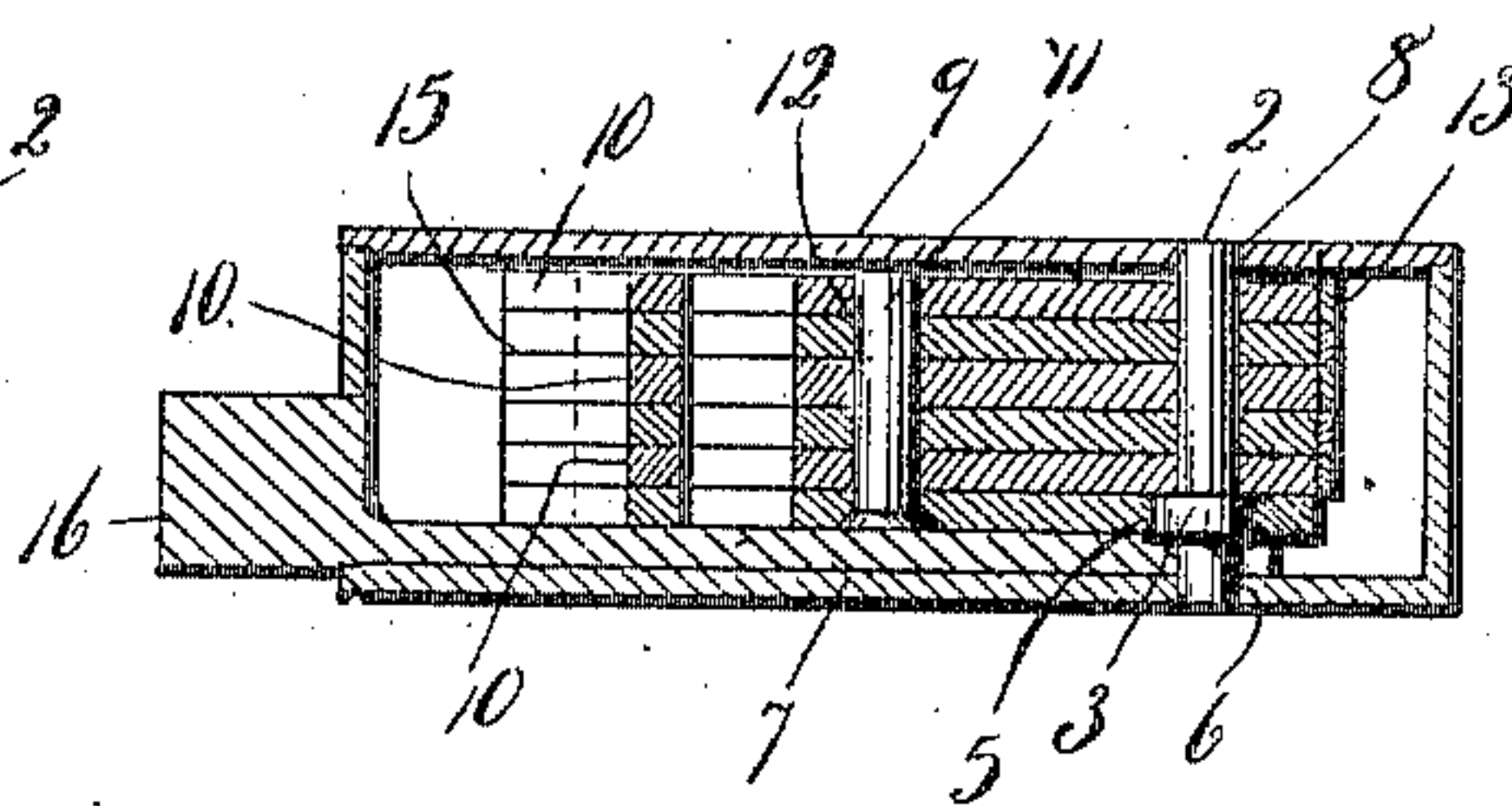


Fig 4.

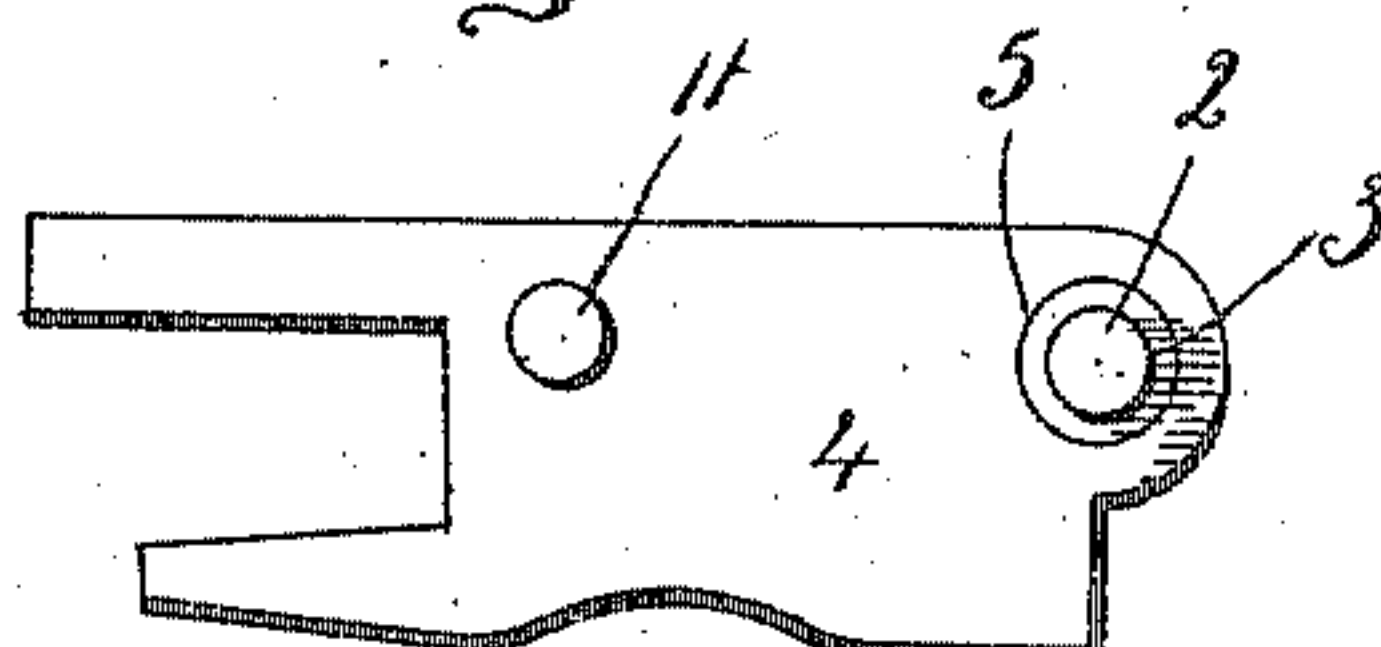


Fig 5.

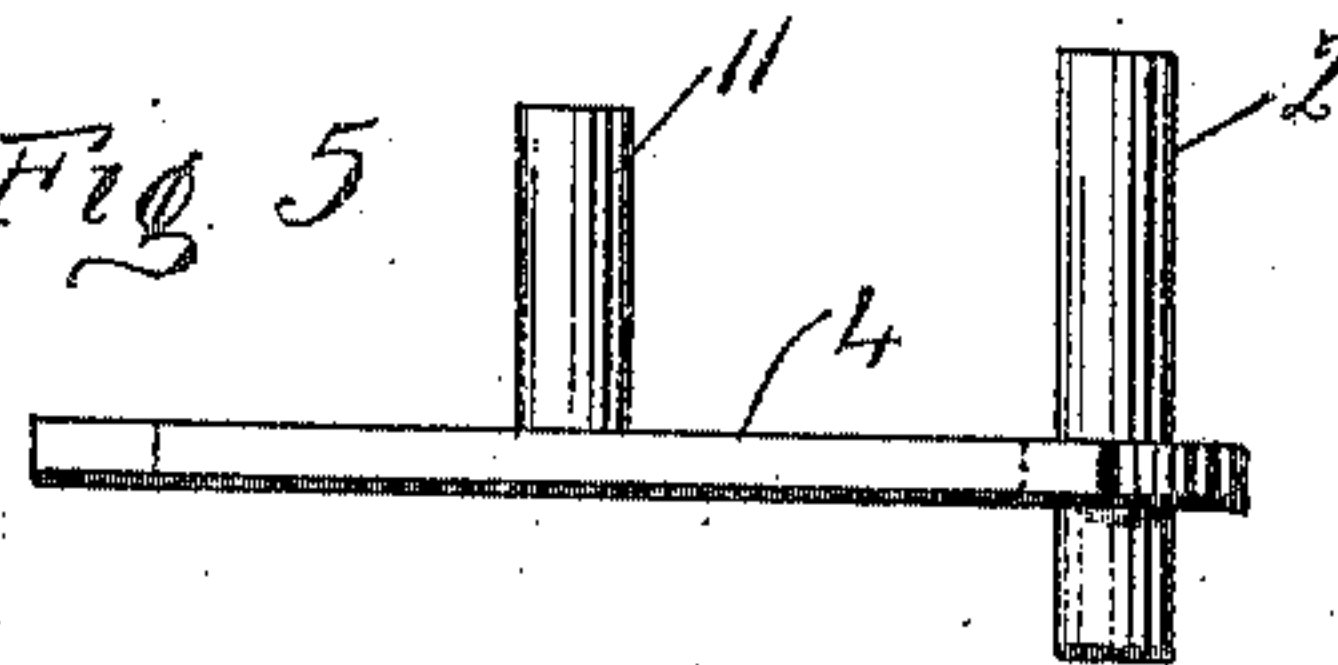
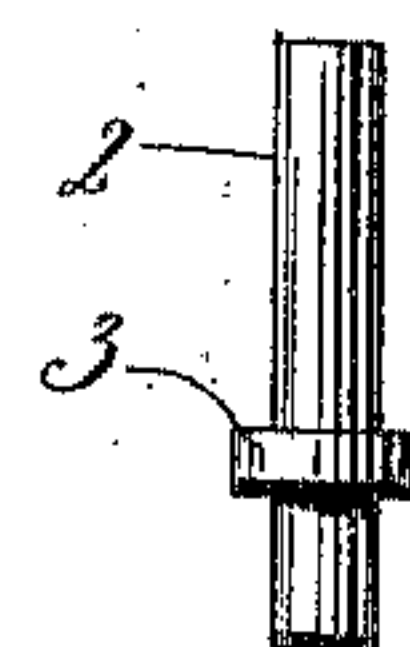


Fig 6.



Witnesses
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UNITED STATES PATENT OFFICE.

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MASTER-KEY TUMBLER-LOCK.

950,795.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed May 24, 1909. Serial No. 498,066.

To all whom it may concern:

Be it known that I, JAMES ROCHE, a citizen of the United States, residing at Terryville, in the county of Litchfield and State of Connecticut, have invented a new and useful Improvement in Master-Key Tumbler-Locks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in elevation of one form which a master-key tumbler-lock constructed in accordance with my invention may assume. Fig. 2 a view thereof with the cover removed. Fig. 3 a view thereof in transverse section on the line *c—d* of Fig. 2 and looking in the direction of the arrow *a*. Fig. 4 a detached plan view of the master-tumbler. Fig. 5 a view thereof in side elevation. Fig. 6 a detached view of the master-tumbler post.

My invention relates to an improvement in master-key tumbler locks, the object being to provide simple, reliable and effective means for preventing the lifting-post mounted in the master-tumbler from being tilted by the tension of the springs of the change-key tumblers, and therefore displaced with reference to the said change-key tumblers which will not then be lifted by the said post so as to bring their stump-slots into registration with the bolt-stump.

With these ends in view my invention consists in a master-key tumbler lock having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claim.

In carrying out my invention as herein shown, I employ a staff 2 provided with an integral collar 3 for the permanent attachment to it by swaging or otherwise of the master-tumbler 4 which is formed with a circular opening 5 just large enough to receive the said collar 3 which is by preference swaged in the said opening. The lower end of the staff 2 enters and turns in a bearing-opening 6 in the case-body 7, while its upper end enters and turns in a corresponding opening 8 in the case-cover 9. Under this construction the staff 2 and master-tumbler 4 swing together as one piece when the master-tumbler is in use. At all

other times, the staff 2 remains at rest and forms an axis for the change-key tumblers 10 which are mounted upon it. The said master-tumbler 4 is provided in the usual manner with a stud-like lifting post 11 which passes through slots 12 in the change-key tumblers 10 which it lifts against the tension of their springs 13, when the master-tumbler is operated, so as to bring the stump-slots 14 of the change-key tumblers 10 into registration with the bolt-stump 15 carried by the bolt 16.

It is apparent that should the master-tumbler 4 be tilted out of its normal plane, the lifting-post 11 will be correspondingly tilted and therefore displaced with reference to the upper end walls of the slots 12 in the change-key tumblers 10, this displacement growing greater from the inner end of the post 11 outward. With the post 11 tilted in this manner, it is clear that the change-key tumblers will not be lifted by it according to the design of the lock, and that the stump-slots 14 will not therefore, be brought into registration with the stump 15 of the bolt 16. Under my invention, however, the staff 2 upon which the master-tumbler 4 is rigidly mounted, is held against tilting by the case-body 7 and case-cover 9 of the lock. The master-tumbler 4 being thus held against tilting, the lifting-post 11 is held against tilting, and hence the difficulty just above mentioned is wholly avoided.

Ordinarily as I may remark in this connection, the staff 2 is riveted at one end in the case-body and the master-tumbler swiveled upon it. For the operation of the master-tumbler under such a construction, there must be little play between the tumbler and the staff, and this play has been found just enough to permit the master-tumbler to be tilted, and hence the post 11 to be tilted by the pressure exerted upon the post 11 by the springs 13 of the change-tumblers, with the effect of displacing the said post to such an extent as to prevent it from properly lifting the change-key tumblers.

Under my invention the master-tumbler and hence the lifting-post are prevented from tilting as clearly explained.

I claim:—

In a master-key tumbler lock, the combination with the case-body and case-cover thereof, of a staff journaled at its respective ends directly in the said case-body and case-

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cover and formed with an integral collar
located between its said ends, a master-tum-
bler rigidly secured to the said collar,
change-key tumblers pivotally mounted upon
5 the said staff on either side of the said mas-
ter-tumbler or on both sides of it, and a lift-
ing-post mounted in the master-tumbler and
coacting with all the change-key tumblers.

In testimony whereof, I have signed this
specification in the presence of two subscrib- 10
ing witnesses.

JAMES ROCHE.

Witnesses:

OTIS B. HOUGH,
HARRY C. CLOW.