

(No Model.)

C. E. JONES.
LOCK.

No. 441,875.

Patented Dec. 2, 1890.

Fig. 1.

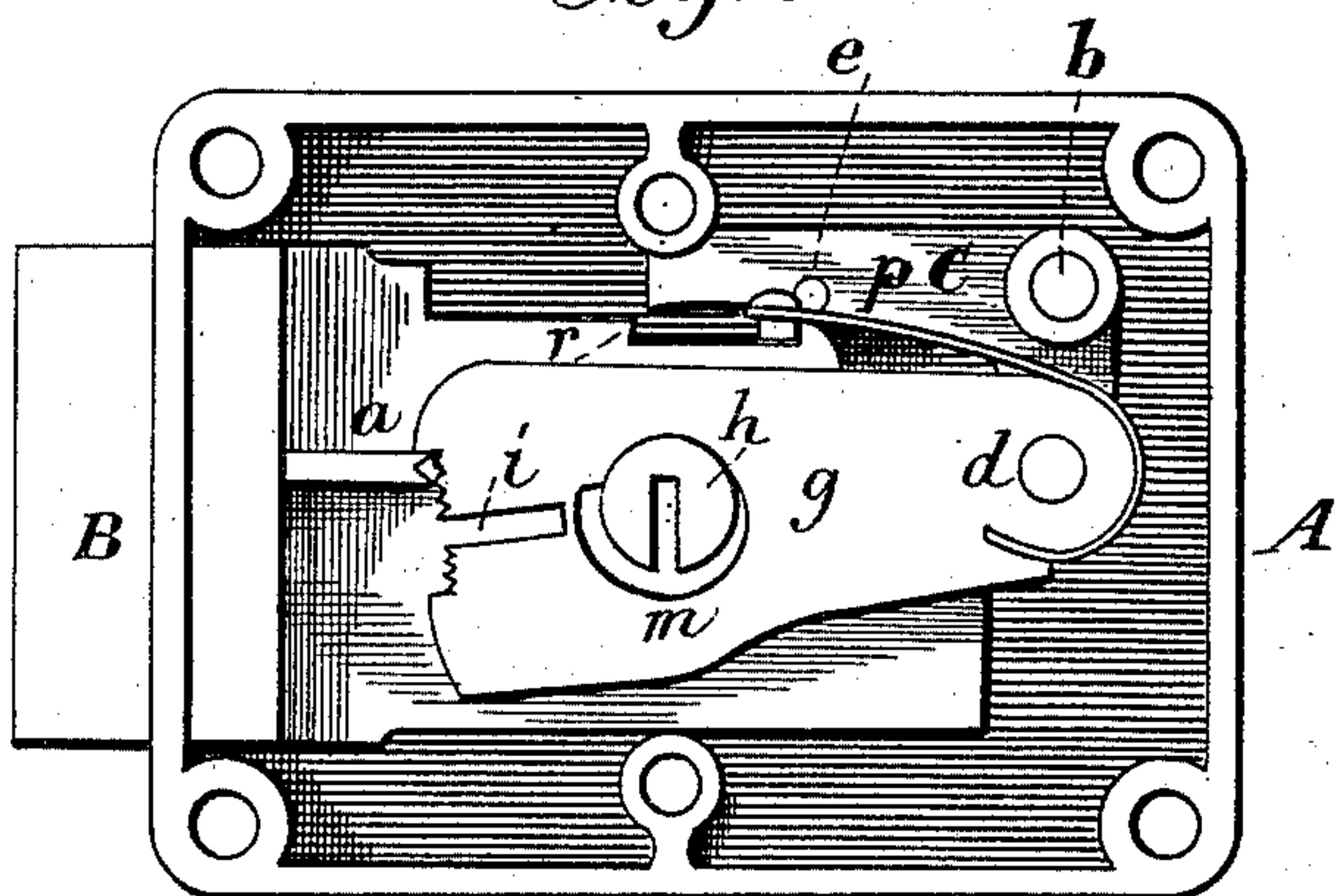
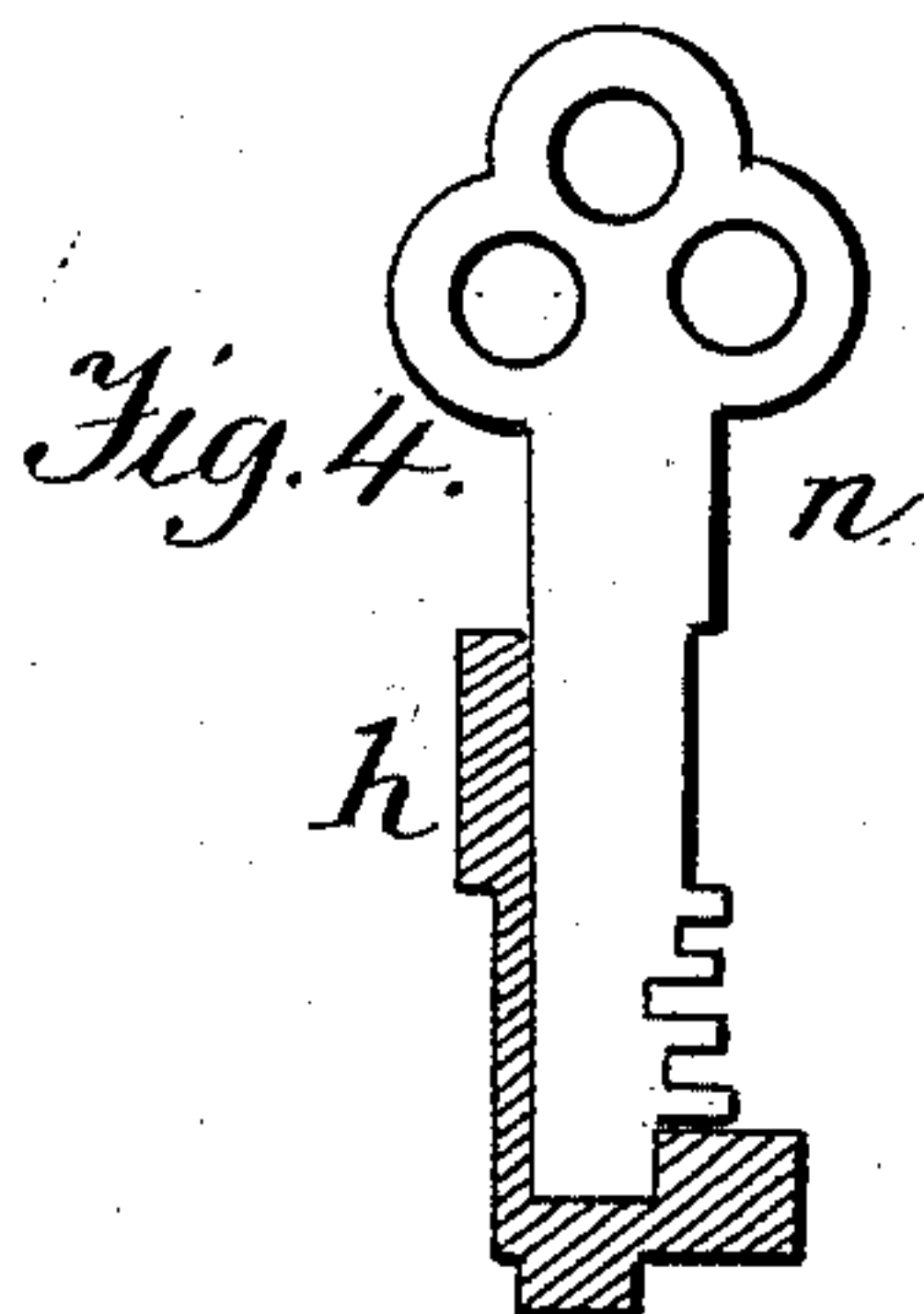
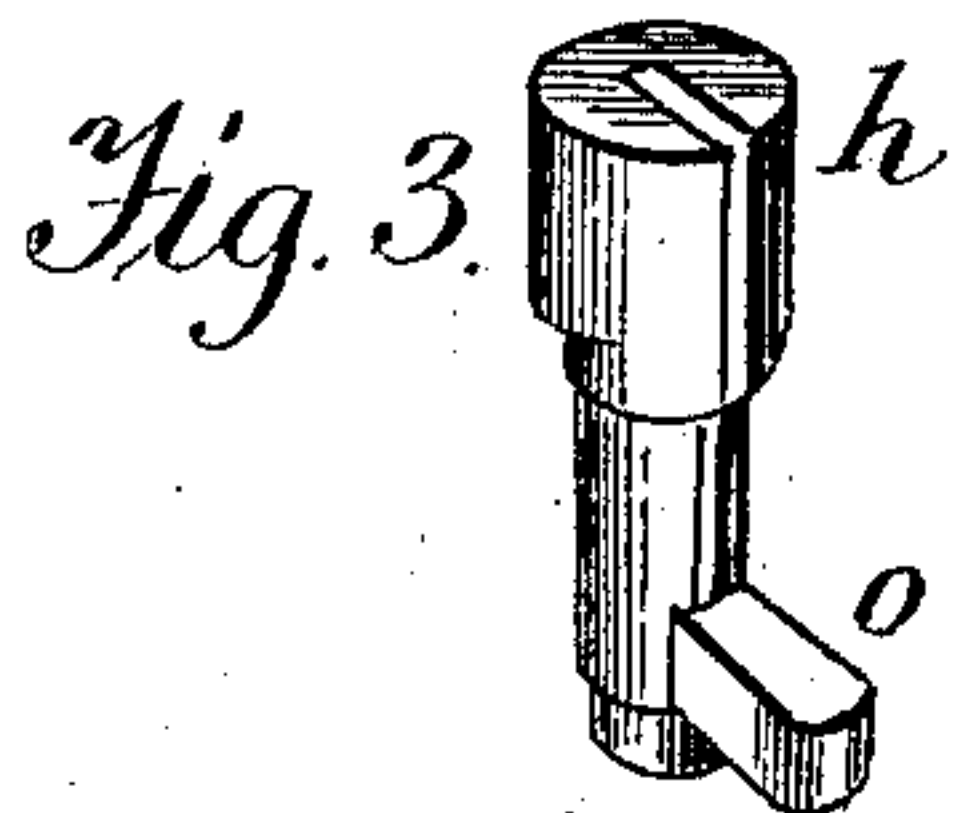
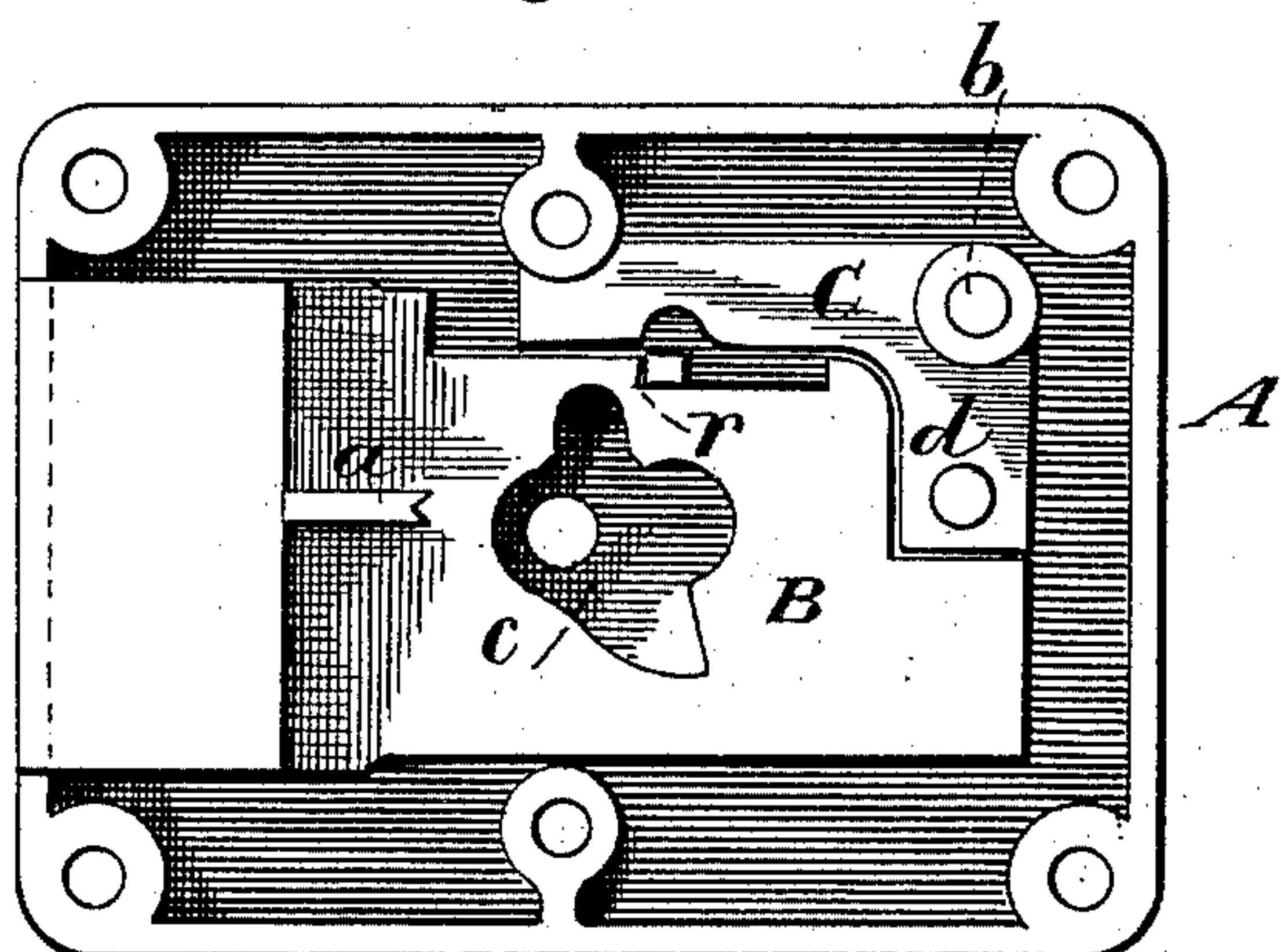


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES E. JONES, OF FLORENCE, ALABAMA, ASSIGNOR OF TWO-THIRDS TO WILLIAM J. FLANAGIN AND ROMULUS J. HOFFMAN, BOTH OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 441,875, dated December 2, 1890.

Application filed July 25, 1890. Serial No. 359,867. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. JONES, a citizen of the United States, residing at Florence, in the county of Lauderdale and State of Alabama, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of locks in which a series of pivoted tumblers are employed, a cylinder being used in connection with the key; and it consists in certain improvements in the construction of such locks, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents an interior side view of a lock provided with my improvements. Fig. 2 is a similar view of the lock, the tumblers and cylinder being removed. Fig. 3 represents the cylinder which operates in connection with the key. Fig. 4 illustrates the cylinder and key.

A designates the casing of the lock, and B the lock-bolt, the latter having its greater part reduced in thickness and being provided with a fence *a* to connect with the tumblers, as hereinafter stated. The said bolt has an aperture or opening *c*, which is formed to receive and allow the movement of a lug or bit on the cylinder when the latter is turned with the key.

C indicates a detector, which is pivotally connected by a post *b* with the lock-case. The said detector is L-shaped and extends along the upper edge and rear end of the lock-bolt, which is cut away to receive it, as shown. The vertical arm of the detector, which extends downward, is provided with a post *d* for the pivotal connection of the tumblers therewith, and the horizontal arm has a fixed pin or stud *e*, which forms a bearing-piece for the springs of the tumblers.

The tumblers *g* are pivotally connected at their rear ends with the vertical arm of the detector C, the said tumblers being perforated and placed in connection with the post *d*. At their forward extremities the tumblers are

each provided with a slot *i*, adapted to receive the fence *a* on the bolt B when the bolt is retracted. An aperture *m* is made through each of the tumblers near the center, through which extends the cylinder *h*, which is slotted lengthwise, as shown, and is provided with a bit *o* for engagement with the lock-bolt. A key *n*, used in connection with the cylinder, may be passed into the slotted cylinder to be in position to engage the several tumblers. The slots *i* in the tumblers are not on the same horizontal plane when the tumblers are at rest, and the apertures *m* and the wards of the key *n* are somewhat various in form or extent, the parts being so constructed that when the key with the cylinder is turned to retract the bolt the several tumblers are raised by the key-wards, so that the slots *i* are brought to the same plane in position to receive the fence *a*, when the bolt may be retracted by the cylinder-bit *o*. When the lock-bolt is shot, the tumblers are depressed by the action of their springs *p*, which press against the pin *e* on the detector C.

A shoulder *r* is formed on the upper edge of the bolt B in position to connect with the horizontal arm of the detector C, the said arm being depressed. If the cylinder should be turned by any means other than the proper key, the effect will be to bring the fence *a* against the tumblers and push them back. This moves back the vertical arm of the detector and brings down the front end of its long arm against the top shoulder of the bolt, thus preventing the latter from being retracted. Hence in order to retract the bolt it is absolutely necessary to first lift all the tumblers to bring their front slots in line with the fence, and this can only be done by the appropriate key.

The springs of the tumblers work in connection with the detector and return the latter to its proper position when the bolt is relieved from pressure. The cylinder being passed through the tumblers is thus surrounded by a body of metal, which thus forms a protection against the insertion of explosive material in the lock.

I claim—

In a lock, the combination, with the main

bolt, which is provided with the fence *a* and
shoulder *r*, of a pivoted L-shaped detector, a
series of tumblers which are pivotally con-
nected to the vertical arm of said detector and
5 are slotted at their forward extremities to re-
ceive said fence, and a slotted cylinder adapted
to receive a key, provided with a bit which is
adapted to connect with the main bolt, the
said tumblers being provided with apertures

through which said cylinder extends, sub- 10
stantially as and for the purpose set forth.

In testimony whereof I have affixed my sig-
nature in presence of two witnesses.

CHAS. E. JONES.

Witnesses:

C. R. LANE,
CHAS. JONES.