

(No Model.)

2 Sheets—Sheet 1.

J. A. GIESE.
LATCH AND LOCK.

No. 492,494.

Patented Feb. 28, 1893.

Fig 2.

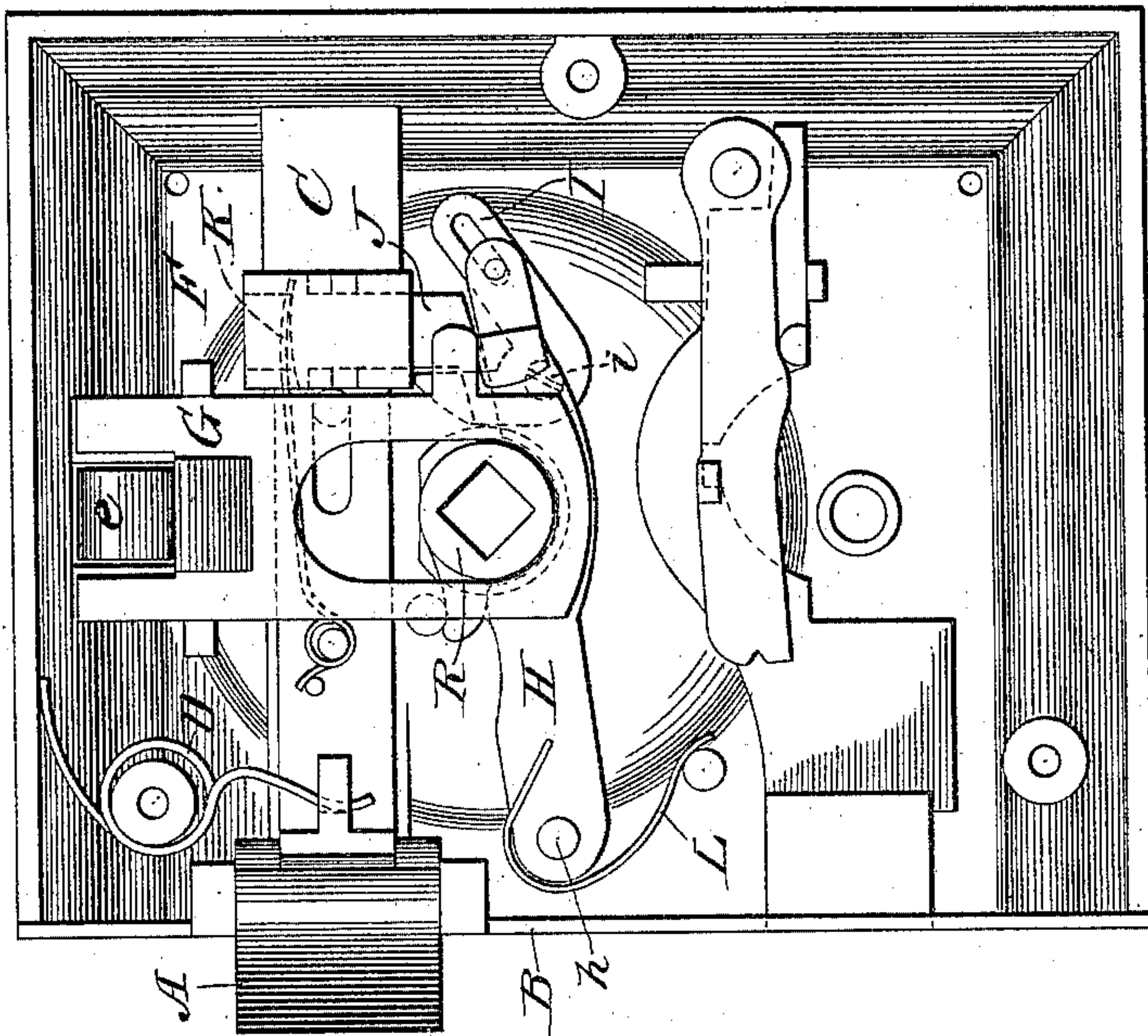
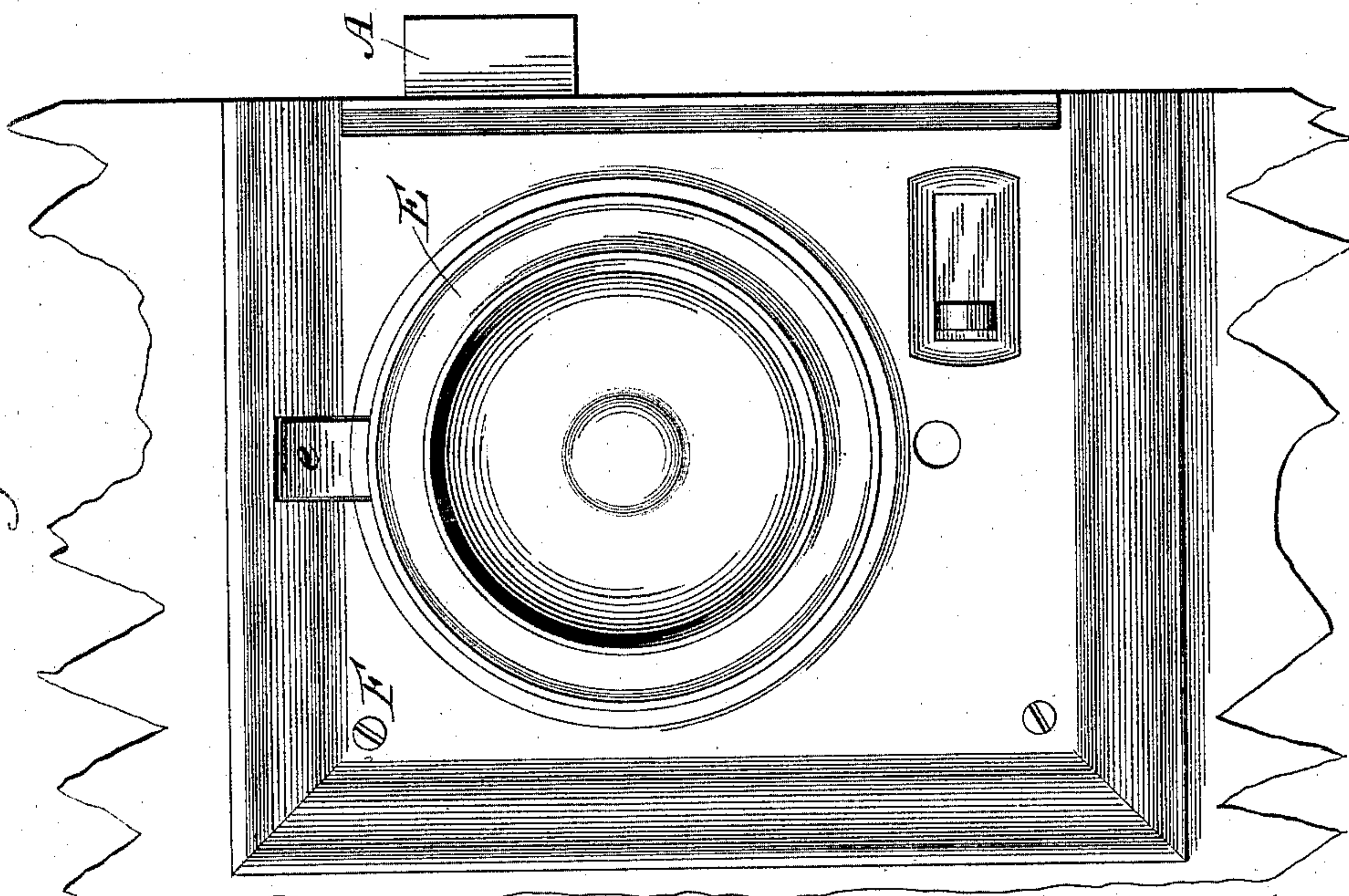


Fig 1



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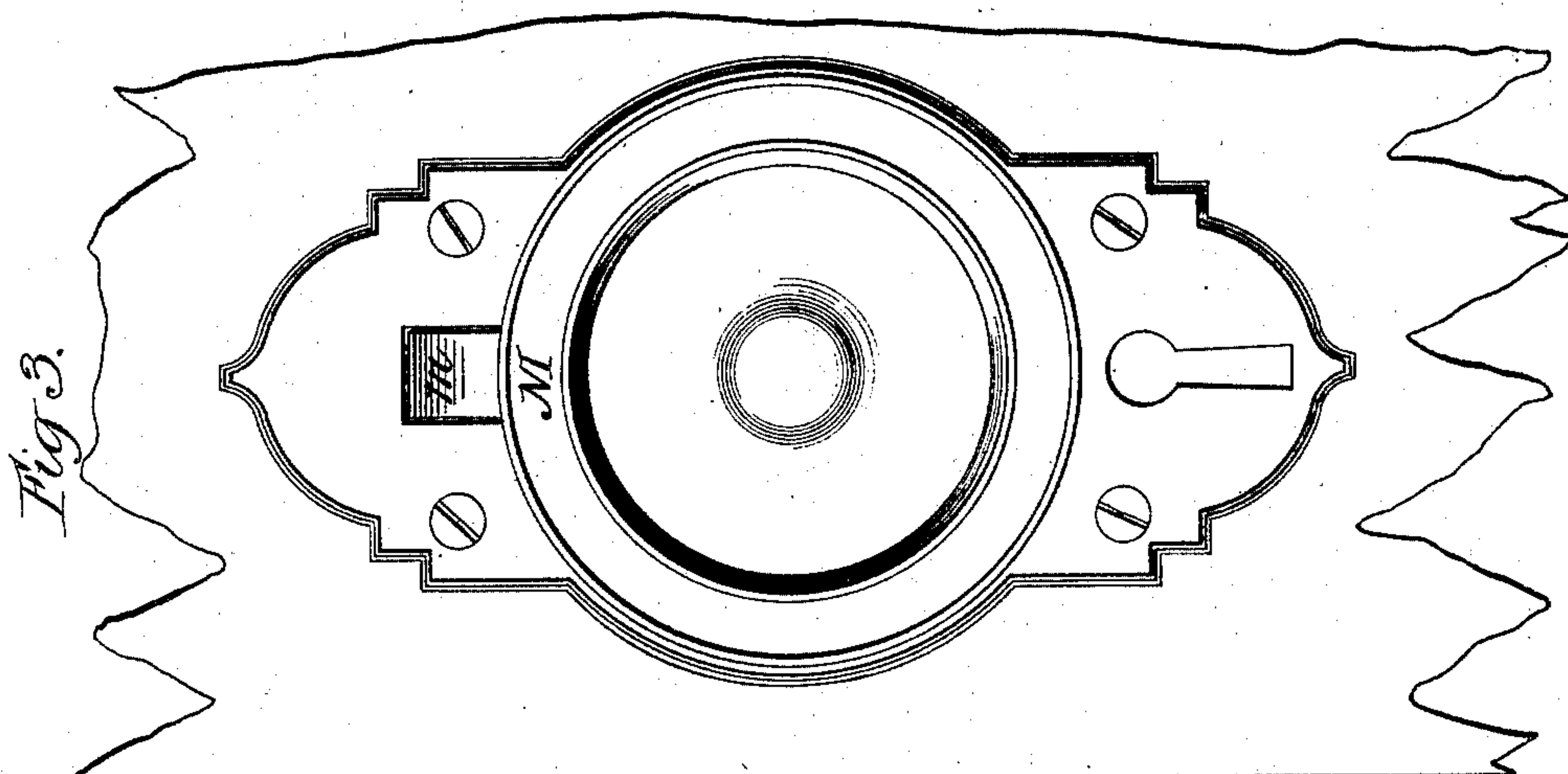
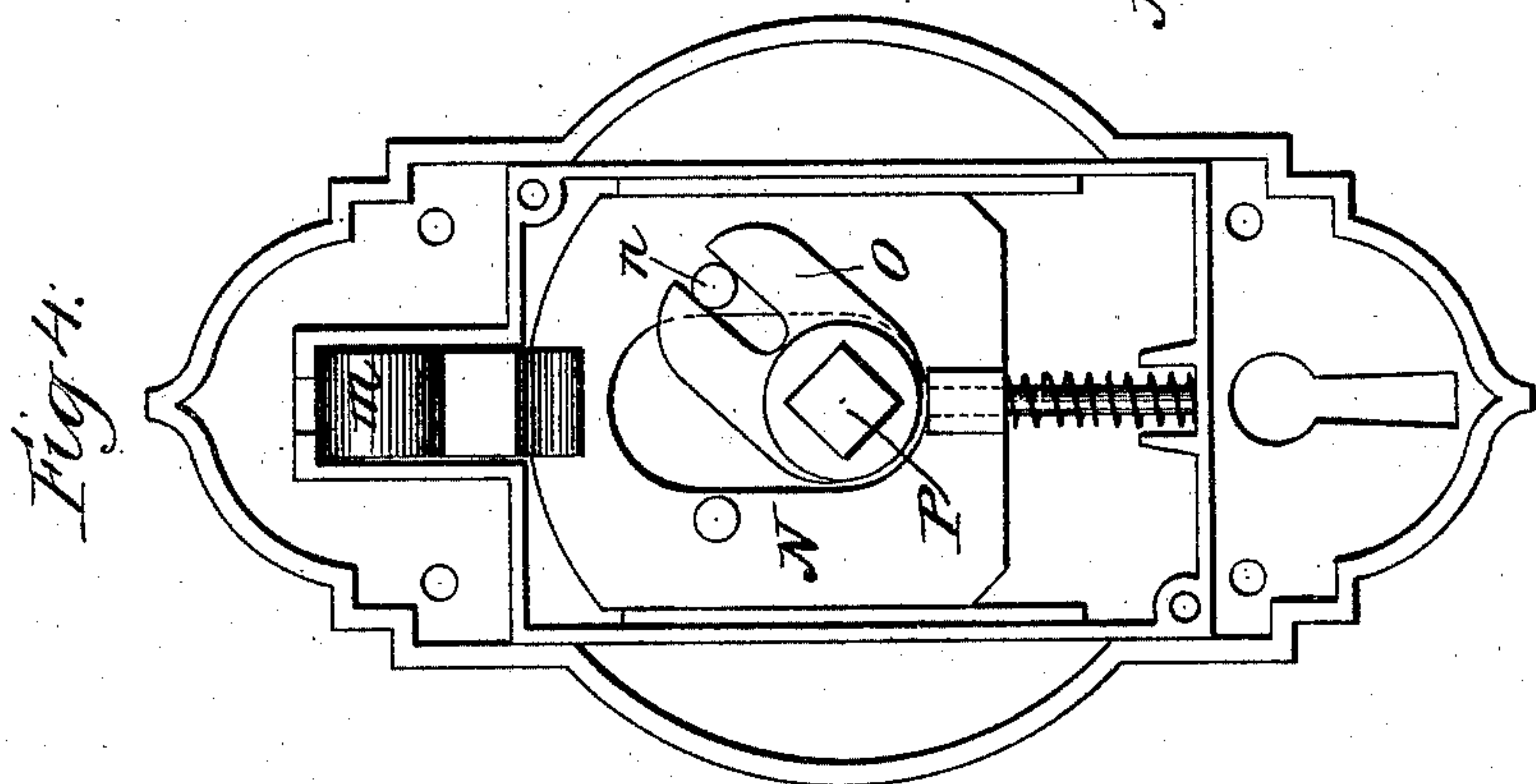
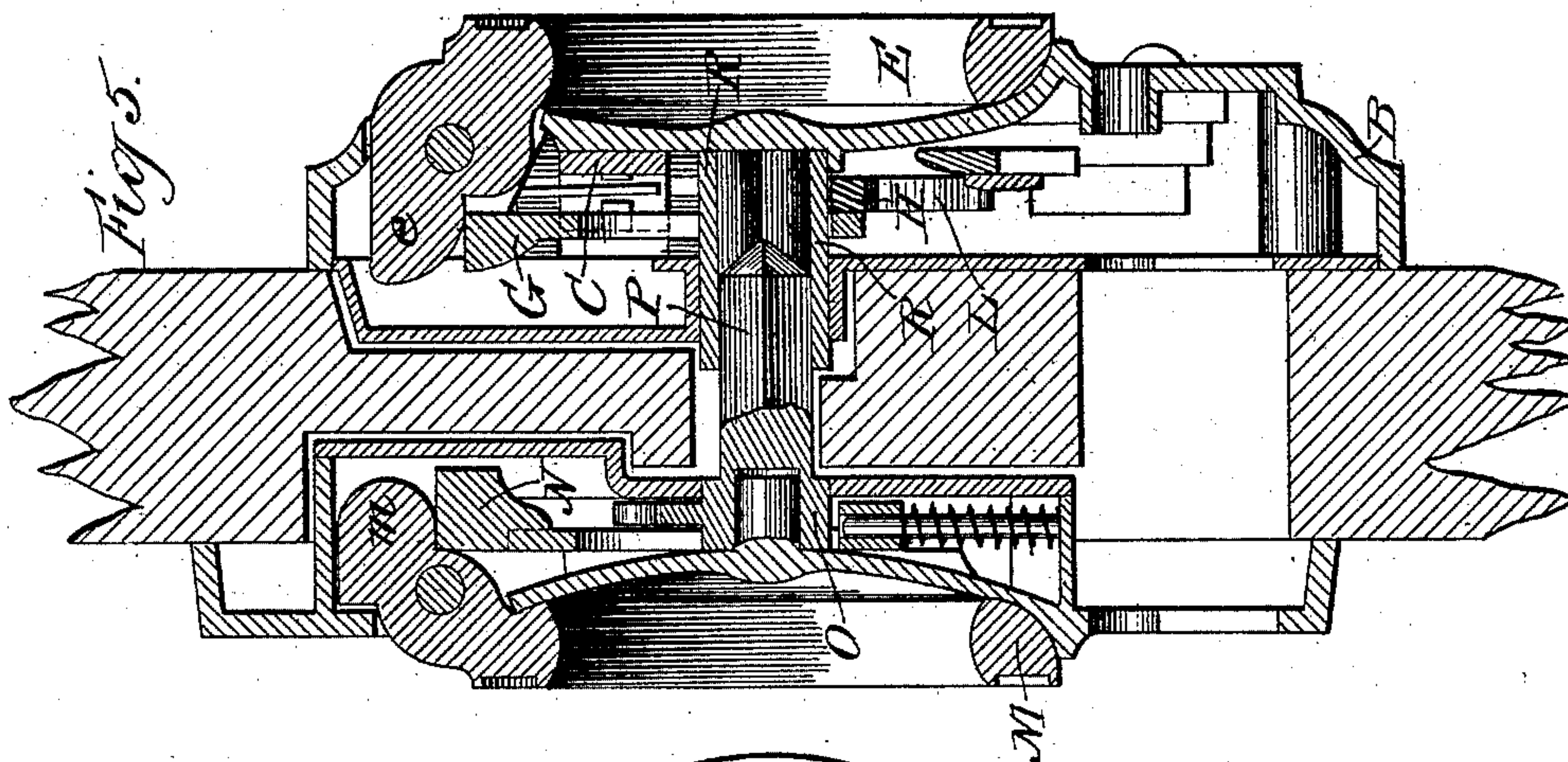
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2 Sheets—Sheet 2.

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LATCH AND LOCK.

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Witnesses
Wm. J. Henning
Todd Mason



Inventor
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UNITED STATES PATENT OFFICE.

JAMES A. GIESE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ADAMS & WESTLAKE COMPANY, OF SAME PLACE.

LATCH AND LOCK.

SPECIFICATION forming part of Letters Patent No. 492,494, dated February 28, 1893.

Application filed November 17, 1892. Serial No. 452,253. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. GIESE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Latches, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide a latch without projecting handles so that passers by are not liable to be caught. The latch is operated by the mere lifting of the handles.

Another purpose of my invention is to provide for the release of the latch when the handle is fully raised, so that it will be in a position to catch, when the door is closed, without the necessity of letting go of the handle.

In the accompanying drawings: Figure 1 is a side elevation of my improved latch, the portion of the door to which it is attached being also shown. Fig. 2 shows the interior of the latch as seen from the side next the door, the covering plate being removed. Fig. 3 is a side elevation of the handle and escutcheon on the opposite side of the door from the latch. Fig. 4 is an interior view of the same as seen from the side next the door. Fig. 5 is a cross section of the latch in position upon the door.

A (Fig. 2) is the latch proper, which is pivoted to the case B, and is connected to the slide C, by which it is operated. It is projected by means of the spring D acting upon the slide C in the usual manner.

E is the handle which is provided with a lug *e* by which it is pivoted to the case F (see also Figs. 1 and 5). The lug *e* projects into the case F and bears upon the upper end of a slide G within. The slide G is connected to an arm H pivoted at *h* to the case, and connected to its free end to a bell-crank lever I, which is pivoted at *i*. The other end of the bell-crank lever I bears against a tripping piece J fitted in a transverse slot of the slide C. A spring K bears against the tripping piece J and keeps it projected. A spring L attached to the arm H holds it and the connected slide G in a raised position.

The operation of the devices just described is as follows; When the handle E is raised

from its ordinary position in which it lies close to the case F, the inner end of the lug *e* is depressed and forces down the slide G. This in turn moves the arm H and its connected lever I. The lever I acting on the tripping piece J draws back the slide C and the latch A is thus retracted. When the latch A is drawn back sufficiently, the door opens under the influence of the pull exerted on the handle E, before the latter has quite reached its highest position. When the highest position of the handle E is attained, the lever I has been moved sufficiently to cause it to slip past the end of the tripping piece J. The latch A is thus allowed to project itself as soon as the door clears the jamb. The latch is then in a position to hold the door when it is again closed, without the necessity of dropping the handle E. When the handle E is finally released, however, the tripping piece J will be forced inward by the bell-crank lever I so that the original position of the parts can be resumed. In order to open the door from the opposite side, I employ the devices shown in Figs. 3 and 4. The handle M is substantially a duplicate of the handle E. Its inwardly projecting lug *m* bears upon a slide N within the casing formed by the escutcheon. Upon the face of the slide N is a pin *n* which fits in a slot in the forked piece O. The piece O is fitted to a spindle P which is connected to the follower R within the latch-case. The follower R (see Figs. 2 and 5) actuates the arm H. It is obvious that if the slide N be depressed by a pull upon the handle M, the forked piece O will be rotated by the pin *n* and the spindle P will thus be turned. The arm H is actuated by this means and the latch is operated in the same manner as heretofore described.

While I prefer to employ the tripping piece J, it is evident that a practically operative latch can be constructed in which a fixed projection is employed instead; the difference in operation being, that the handles E and M must be depressed at least partially upon the closure of the door in order to permit the latch to act.

I have not described in detail the locking bolt seen in the lower part of Figs. 1 and 2, as it is of the ordinary construction and its

presence or absence makes no difference with the operation of the device which is the subject of the present application.

I claim—

- 5 1. The combination, in a door latch, of a handle pivoted to the latch casing and normally depressed so as to lie in proximity to said casing; a latch-operating slide, as C, within the casing; and connections between said
10 slide and handle, whereby the raising of the handle retracts the slide, substantially as described.
2. The combination, in a door latch, of a handle pivoted to the casing thereof and hav-
15 ing an inwardly projecting lug; a slide as G operated by said lug when the handle is raised; a latch operating slide as C; and connections between said two slides, consisting of an arm H and a bell-crank lever I connected together;
20 and a projection upon said slide C with which said bell-crank lever I engages, substantially as described.
3. The combination, in a door latch, of a handle pivoted to the casing thereof and hav-
25 ing an inwardly projecting lug; a slide as G operated by said lug when the handle is raised; a latch-operating slide, as C; and connections between said two slides consisting of an arm H and a bell-crank lever I connected together;
30 a tripping piece as J upon said slide C with which said lever I engages, and over which the end of said lever I may pass, substantially as set forth.
4. The combination, in a door latch, of a
35 latch operating slide, as C; a tripping piece J fitted to a transverse slot therein; a bell-crank lever I engaging said tripping piece; and means for operating said bell-crank lever; the position and arrangement of said tripping

piece and bell-crank lever being such that 40 the tripping piece releases itself from the lever when the limit of movement of the latter is approached, substantially as described.

5. The combination, in a door latch, of a latch-operating slide C; a bell-crank lever I 45 engaging a projection thereon; an arm H connected to and operating said bell crank lever; a handle pivoted on the opposite side of the door from said latch and having an inwardly projecting lug; a slide operated by said lug 50 and having a stud engaging with a forked piece; a spindle upon which said forked piece may rotate and a follower operated by said spindle and engaging with said arm H, all combined substantially as and for the pur- 55 pose described.

6. The combination, in a door latch, of a latch operating slide C; a bell-crank lever I engaging a projection thereon; an arm H connected to and operating said bell-crank lever; 60 a handle pivoted on the opposite side of the door from said latch and having an inwardly projecting lug; a slide operated by said lug and having a stud engaging with a forked piece; a spindle upon which said forked piece 65 may rotate and a follower operated by said spindle and engaging with said arm H; a handle pivoted upon the latch-casing; a slide within said casing operated by said handle and also engaging with said arm H, whereby 70 the latch can be operated by the handle on either side of the door independently of the other, substantially as described.

JAMES A. GIESE.

Witnesses:

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