

A. P. SIMS.
Burglar-Alarm.

No. 217,556.

Patented July 15, 1879.

Fig 1.

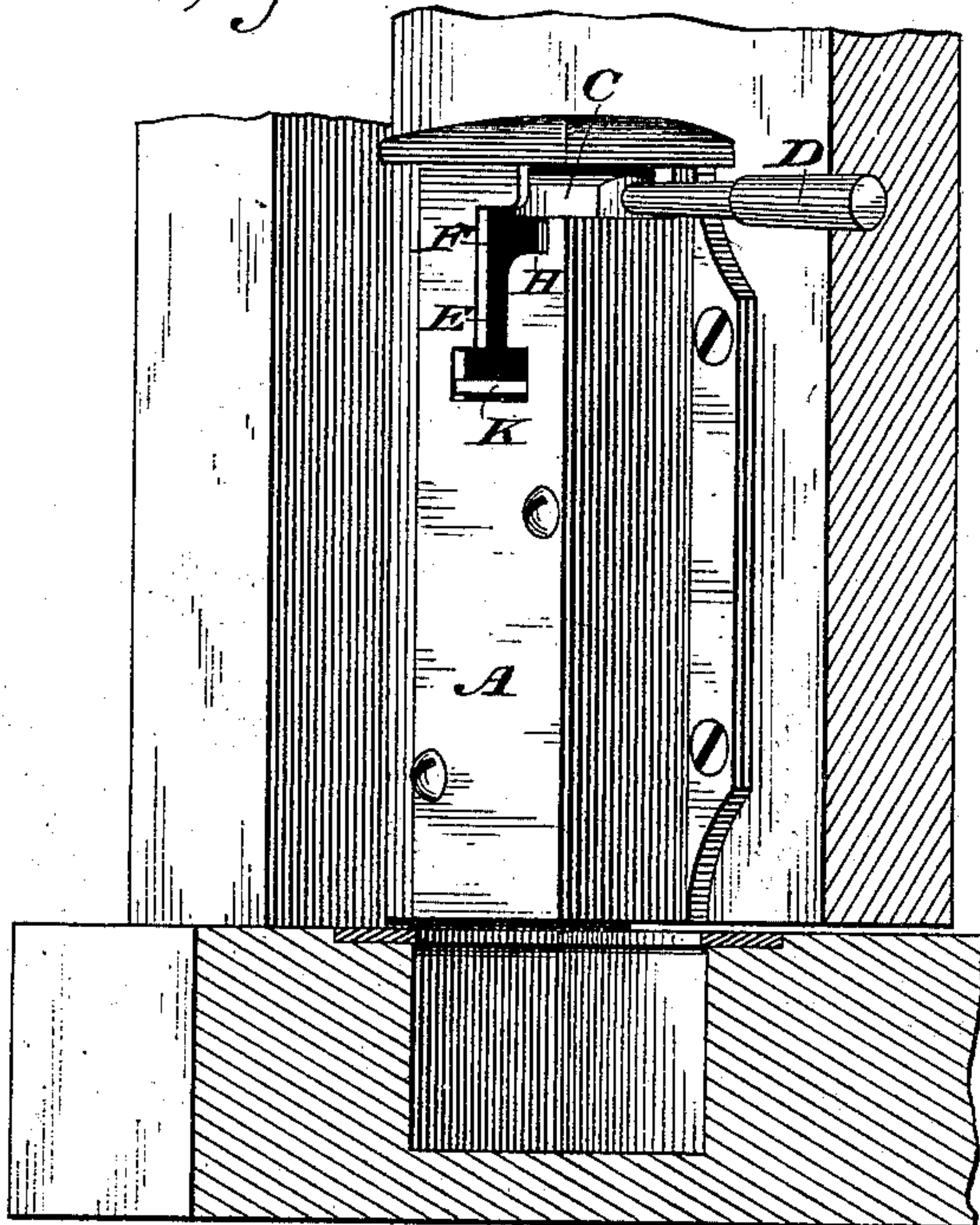


Fig 2.

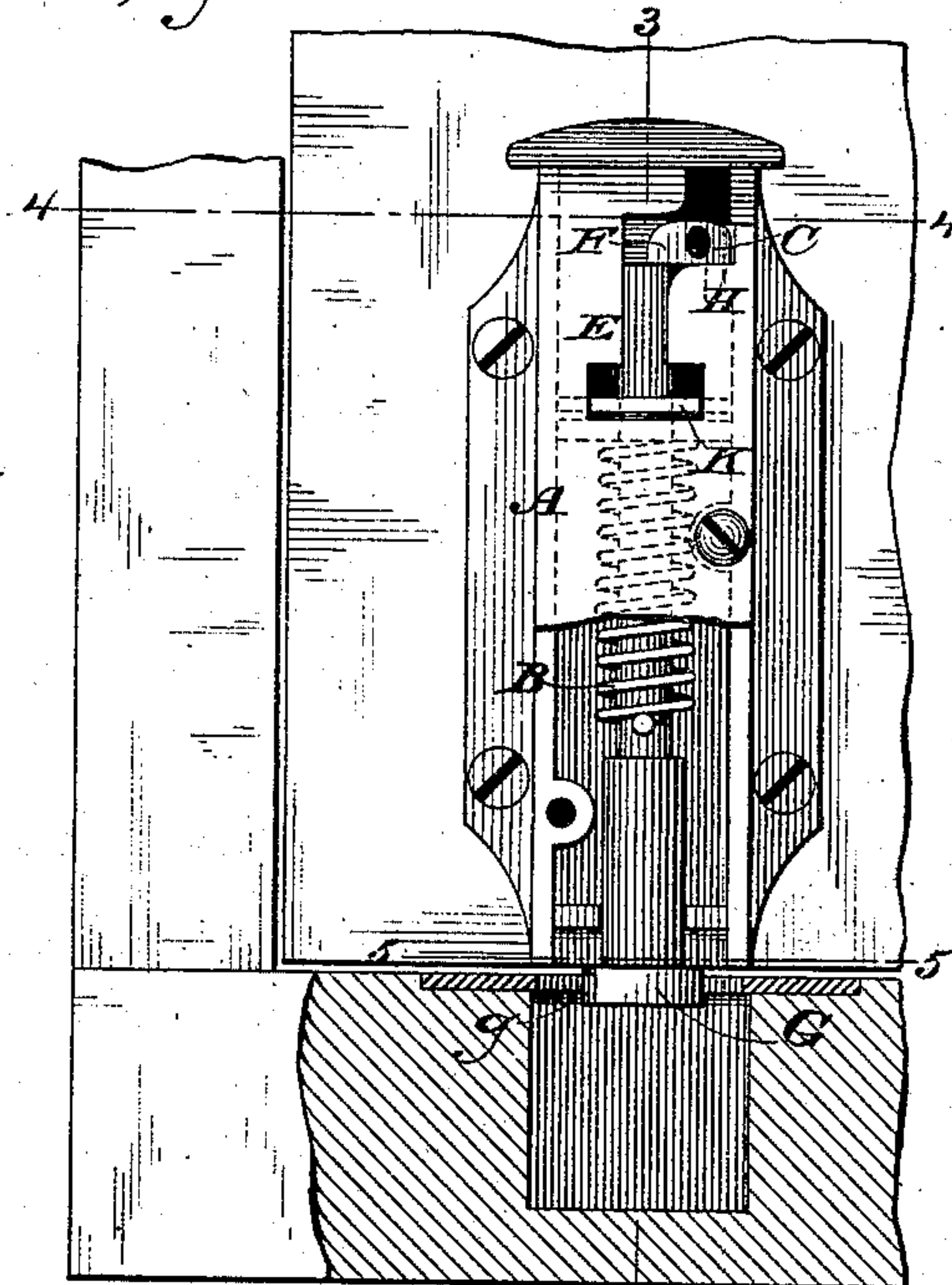


Fig 3.

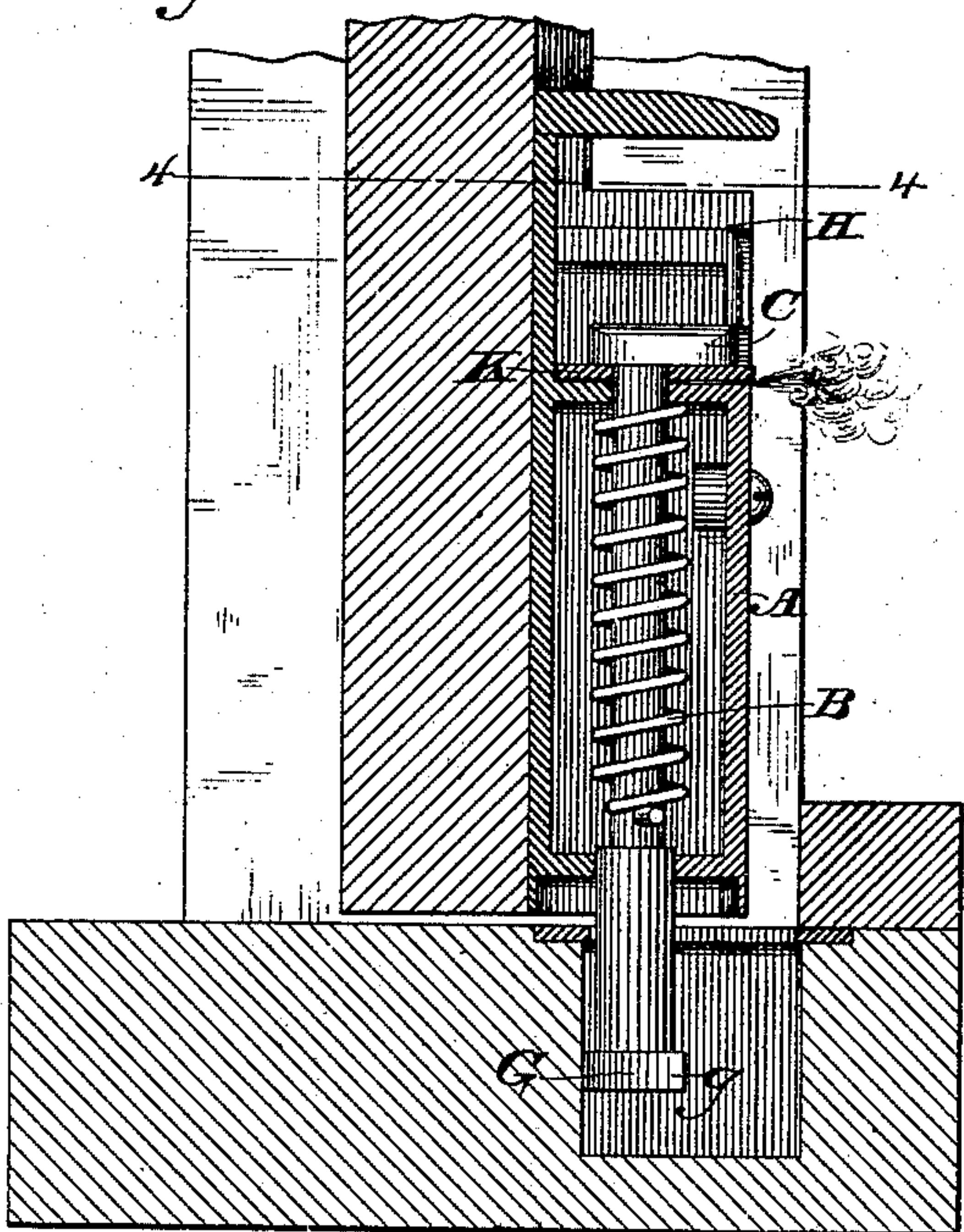
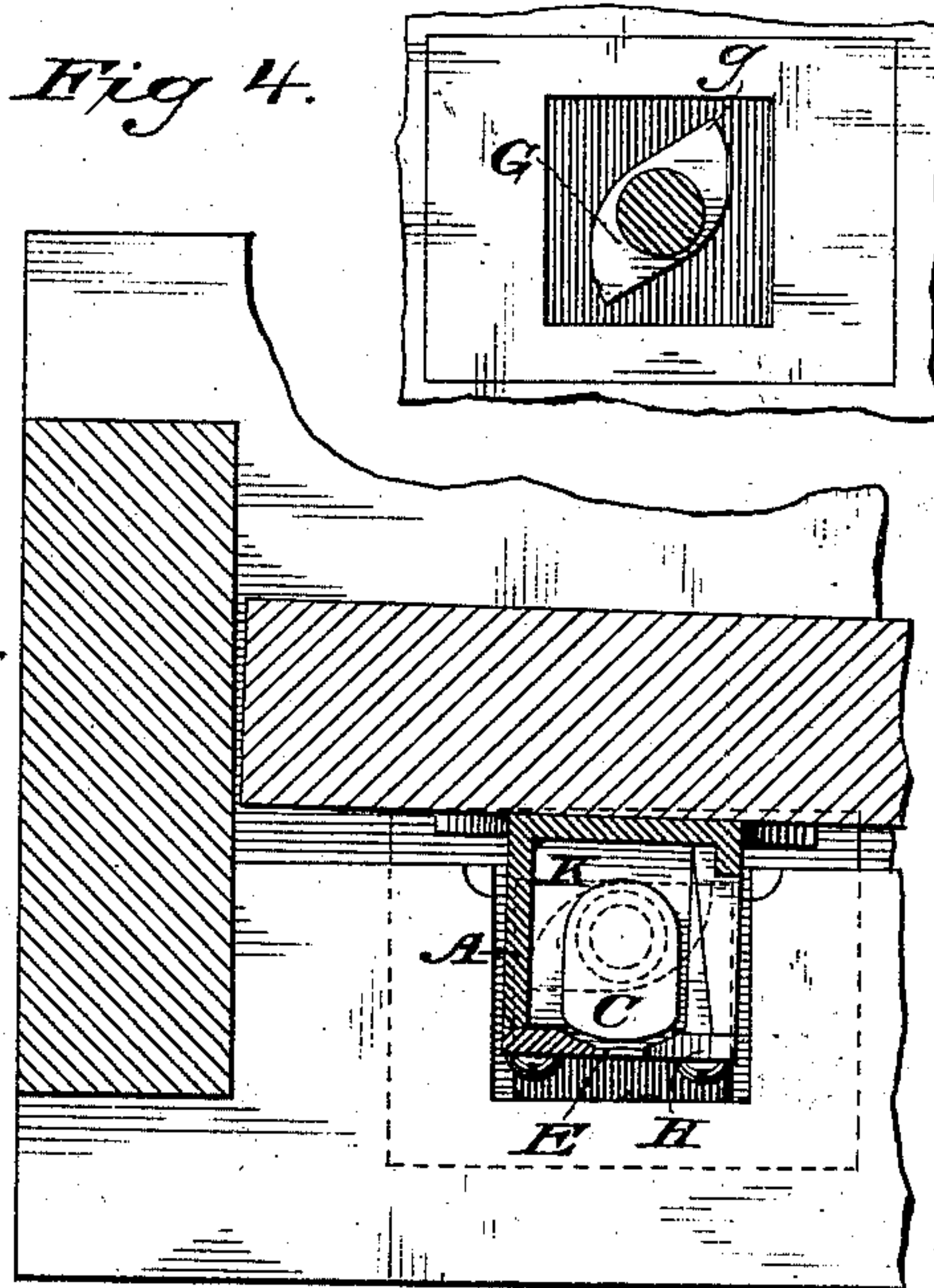


Fig 4.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

AUSTIN P. SIMS, OF NASHVILLE, TENNESSEE, ASSIGNOR OF ONE-THIRD HIS RIGHT TO WILBUR F. FOSTER, OF SAME PLACE.

IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **217,556**, dated July 15, 1879; application filed May 26, 1879.

To all whom it may concern:

Be it known that I, AUSTIN P. SIMS, of Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Burglar-Alarms, of which the following is a specification.

My improvements relate to that class of burglar-alarms in which a case attached to a window-shutter or door, or the like, contains a spring-plunger to be set so that any attempt to open the shutter will trip the plunger, which will then spring down and explode a percussion pellet or cap, and thus give alarm.

My burglar-alarm may be applied to a shutter opening either outward or inward, and my improvements enable me to set the plunger by means of a removable key, so that the shutter may be swung at will during the day, when danger is not apprehended, without liability to explode the pellet, which may remain safely in place; and they also enable me to securely bolt the shutter automatically by the act of exploding the pellet and giving alarm. In ordinary alarms of this class the projection from the plunger is not only employed to set the plunger, but it also projects from the case, so as to be struck to trip the plunger and cause alarm. Instead of this, I employ an eccentric tripper that is concealed below the plunger, which enables me to dispense with any permanent projection reaching outside of the alarm, and to use instead a short projection and the removable key merely for setting.

In the accompanying drawings, which illustrate my invention in a convenient form of embodiment which I prefer, Figure 1 is a perspective view of my burglar-alarm applied. Fig. 2 is a front elevation, partly in section. Fig. 3 is a vertical section on the line 3 of Fig. 2. Fig. 4 is a transverse section on the lines 4 4 of Figs. 2 and 3, and Fig. 5 is a section on the line 5 of Fig. 2.

A indicates the case, B the spring-plunger, and C an arm or projection on the upper end of the plunger, provided with a key-hole. This key-hole may, if desired, be of any peculiar form, requiring the small key D, which I prefer to make of steel, to be shaped accordingly, so as to prevent the easy insertion of a nail or other substitute convenient to house-breakers; or

small tumblers may guard the key-aperture, so as to require a peculiar key to enter it, as is well understood by lock-makers.

The case A is shown as rectangular, though it may be circular or of any other form, and it is provided with an angular slot, E, in front, and a transverse slot, F, on one side, both being for the insertion of the key and the setting of the plunger. The lower end of the plunger is provided with an eccentric, G, which is designed to enter an aperture in a window-sill when the plunger is set, so as to present one of its extreme ends, *g*, to be struck by the wall of the aperture if the shutter is attempted to be swung.

A ledge, H, is provided on the interior of the case, upon which the arm C rests when the plunger is set for giving alarm, to support the plunger in position to be tripped.

A loose clamp or pellet plate, K, is provided at the bottom of the slot E, under which the pellets are to be placed, so as to be clamped by the weight of the plate, as shown in Fig. 3, and prevented from getting out of place.

The operation is as follows: Referring to Fig. 3, it will be seen that the plunger is at its lowest point, its arm C having struck the pellet-plate K and exploded the pellet under it, and the lower end of the plunger having projected fully into the aperture in the window-sill and firmly bolted the shutter. Now, to raise the plunger to the position indicated in Fig. 1, the key is inserted in front and the plunger is lifted, and, when near the top of the slot E, is turned, and then raised and turned still farther, until the arm C projects into the slot F and rests there, in which position the key can be withdrawn and the shutter swung freely, the lower end of the plunger being entirely withdrawn from the aperture in the window-sill.

When it is desired to set the plunger in the position, as shown in Fig. 2, to be tripped and to explode the pellet, it is turned by the key part-way to the front, when it slips down by the force of its spring, so that the arm C rests on the ledge H and the eccentric G slightly enters the aperture in the sill. Any swinging of the blind in either direction will now cause one of the points *g* of the eccentric to impinge

against one of the sides of the sill-aperture and turn the plunger, so as to disengage the arm C from the ledge H and let it down violently upon the pellet-plate. From this position it can, of course, be raised to the position shown in Fig. 2.

The advantage of having a removable key to set the alarm is very great, because no projection is presented, as in other alarms, to be hit by accident, or to enable the burglar to take hold of it and manipulate the alarm so as to prevent its action.

Having thus described the construction and mode of operation of my improved burglar-alarm, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a burglar alarm, the combination, substantially as described, of a slotted case, and a spring-plunger having a short projection, with a key-hole and an eccentric for tripping, operating within the lateral dimensions of the case.

2. The combination of the slotted case, the

spring-plunger having a short projection, and a bottom eccentric with a removable key fitting a keyway in the top projection, all substantially as described.

3. The combination of the case having the two slots, as described, the spring-plunger having the short projection, the ledge H, and the removable key, whereby the plunger may be set to allow the shutter to swing freely, or in a position for tripping, so as to bolt the shutter.

4. A combined burglar-alarm and automatic shutter-bolt, substantially as described, consisting of the case with its slots E F, the spring-plunger with its short arm C and eccentric G, the ledge H, the percussion-pellet-holder plate K, and the removable key D.

In testimony whereof I have hereunto subscribed my name.

AUSTIN P. SIMS.

Witnesses:

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VINET DONELSON.