

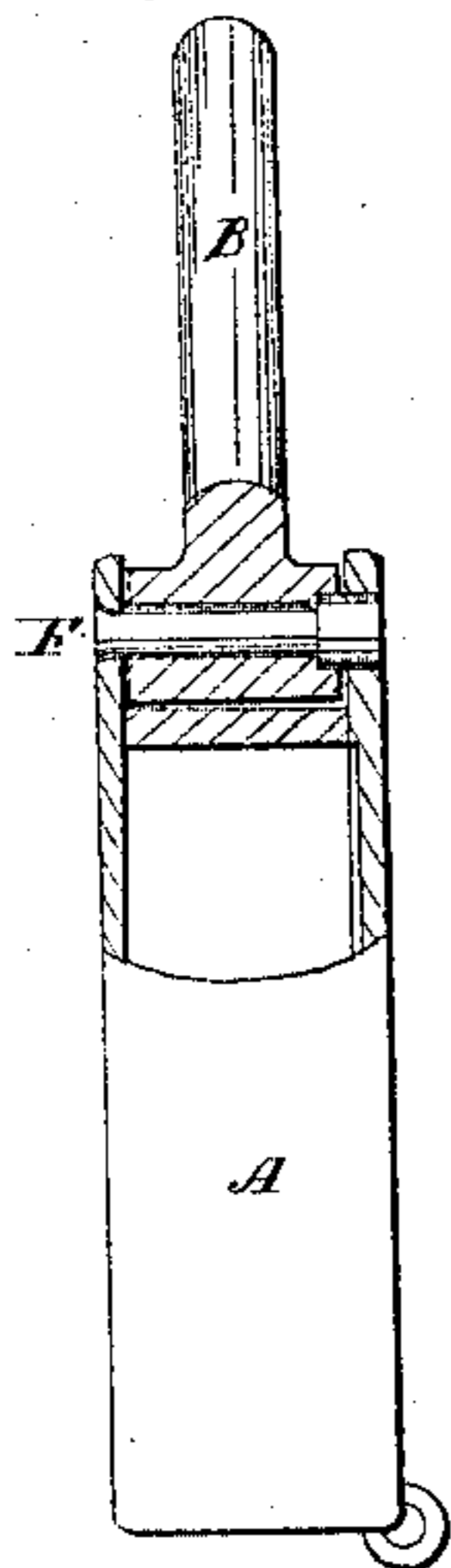
*S. A. Andrus,*

*Alarm Lock,*

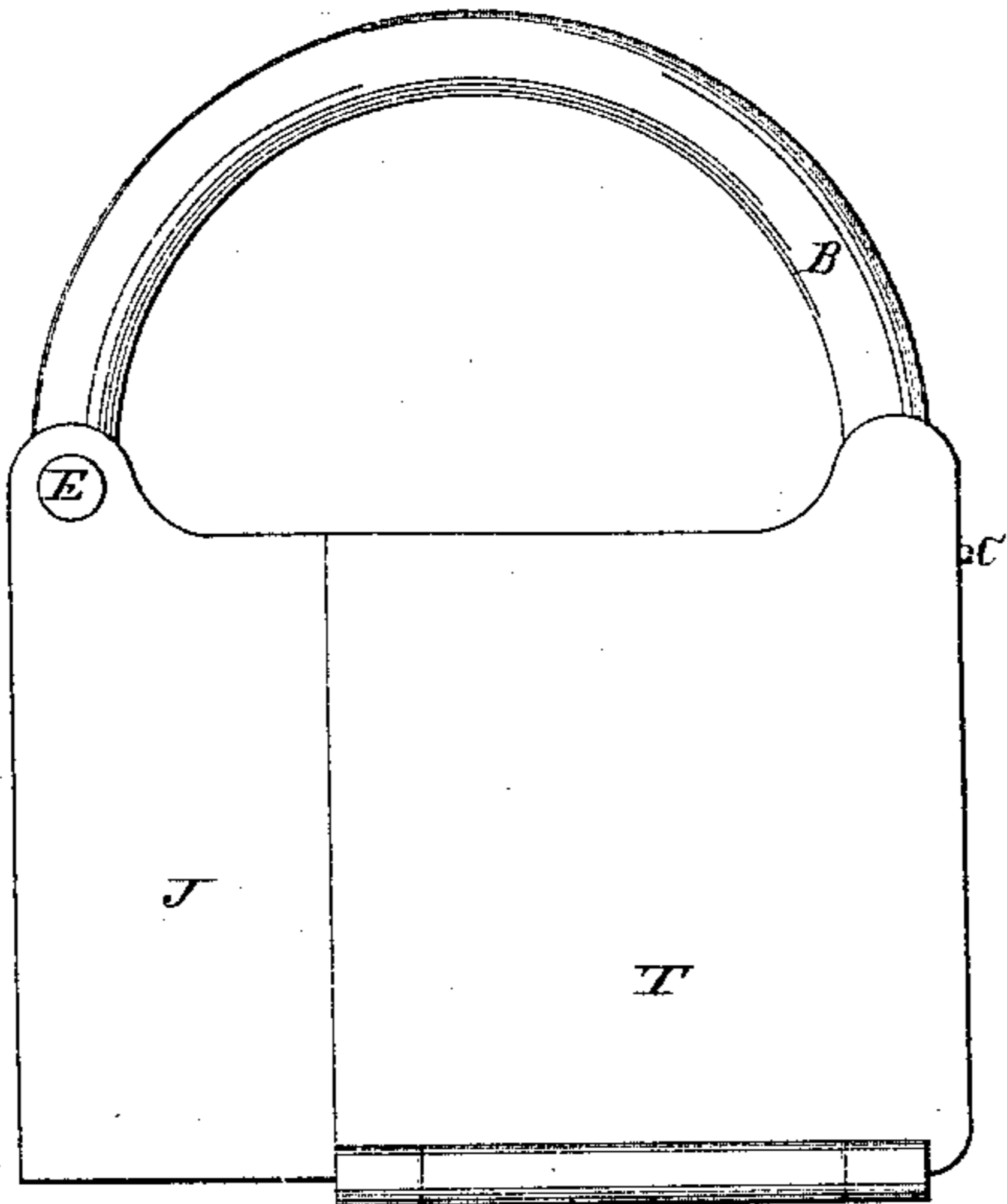
*N<sup>o</sup> 58,043,*

*Patented Sep. 18, 1866.*

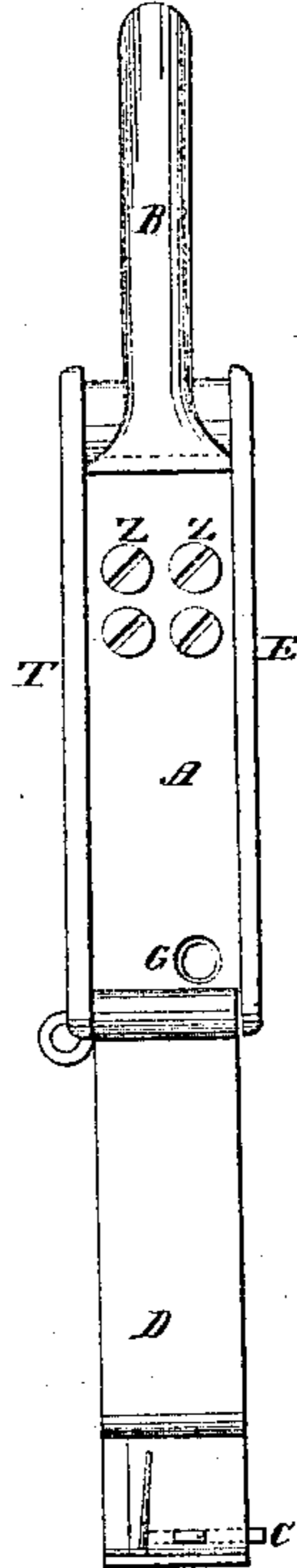
*Fig. 3.*



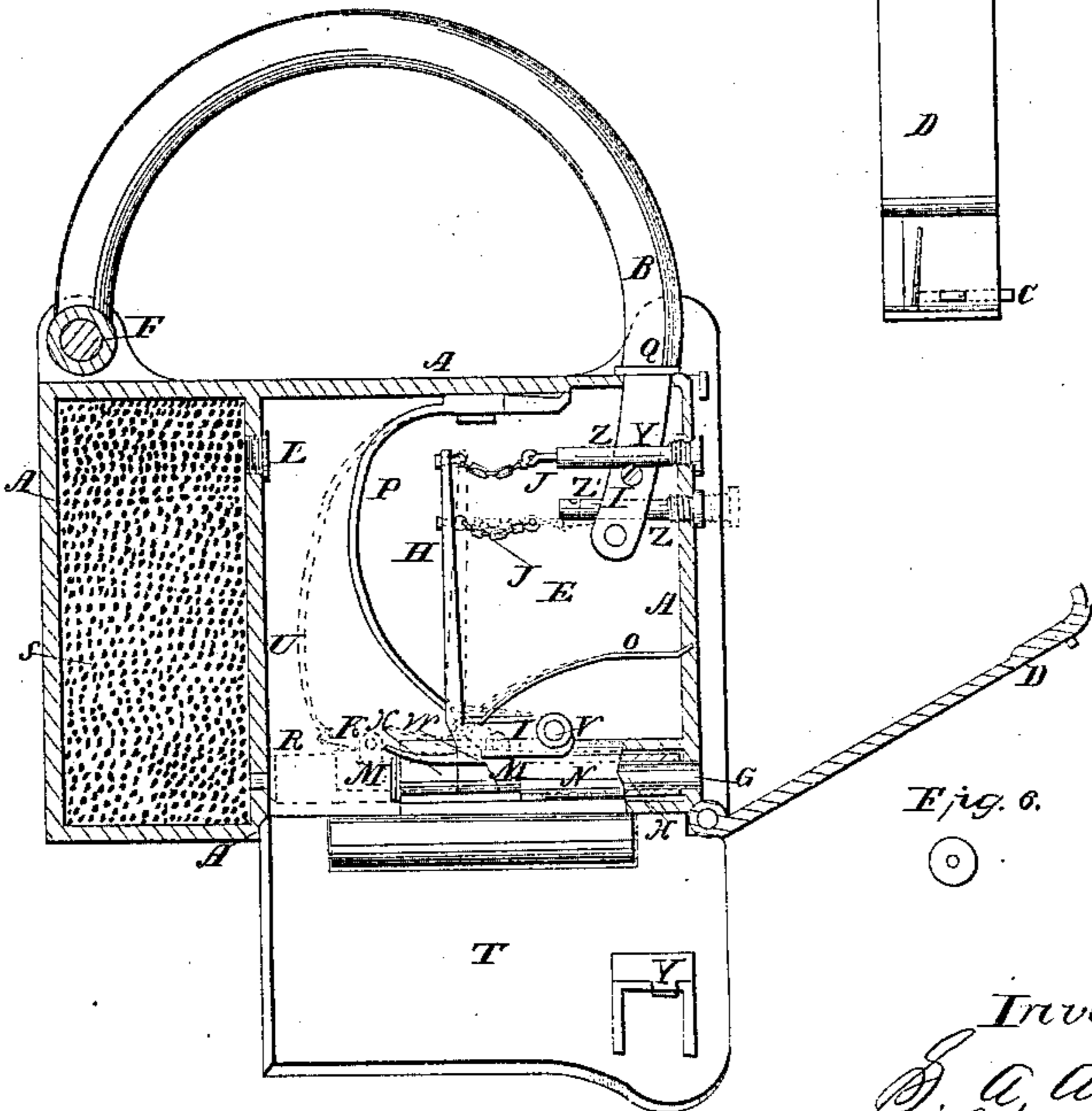
*Fig. 1.*



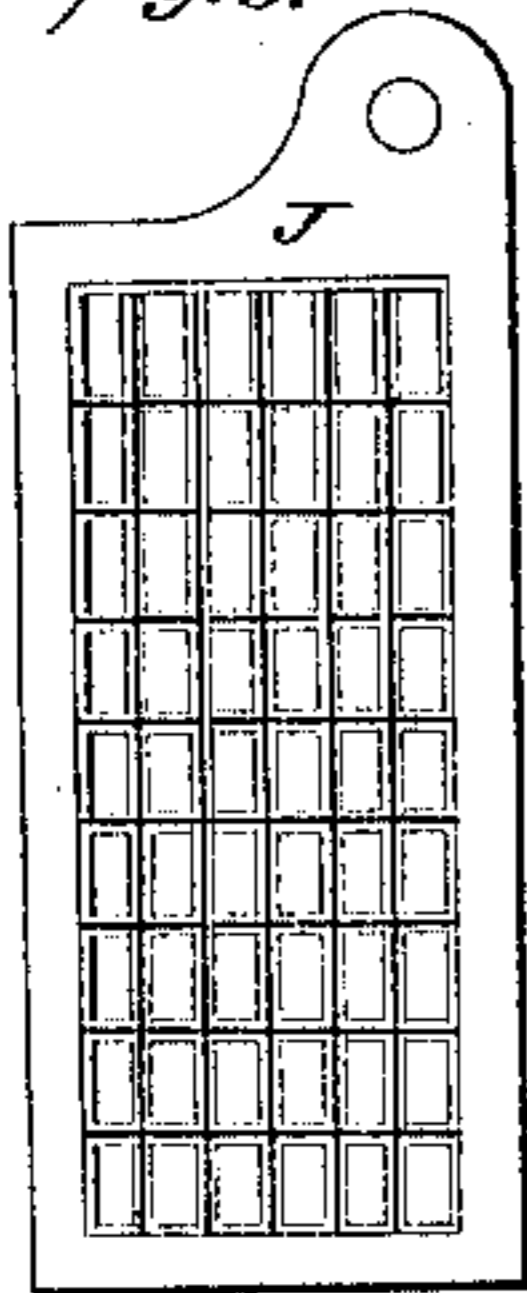
*Fig. 4.*



*Fig. 2.*



*Fig. 5.*



*Fig. 6.*



*Witnesses:*  
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*W B Farrington*

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# UNITED STATES PATENT OFFICE

SETH A. ANDRUS, OF FARMERS VALLEY, WISCONSIN.

## IMPROVEMENT IN ALARM-LOCKS.

Specification forming part of Letters Patent No. 58,043, dated September 18, 1866.

*To all whom it may concern:*

Be it known that I, SETH A. ANDRUS, of Farmers Valley, Monroe county, State of Wisconsin, have invented a new and useful Improvement in Alarm-Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the lock when closed. Fig. 2 is a side view, showing its door T thrown open. Fig. 3 is a back-end view, a portion of its rim having been broken away in order to show the hinge F. Fig. 4 is a front view, the door D being open. Fig. 5 is an under-side view of plate J. Fig. 6 is an end view of one of the cartridges.

Similar letters of reference indicate like parts.

The object of this invention is to produce a lock which cannot be burglariously opened without making an alarm by exploding a cartridge and also a magazine of powder or other explosive material, such explosion endangering the burglar both from the cartridge and the magazine.

The letter A designates the rim of the lock, and E the back part. The part A and the four-sided rim are cast in one piece. The side or part which is opposite the part E is composed of a door, T, which is hinged to the rim on the lower side of the lock, and of a plate, J, which covers the magazine S. The inner side of this plate is deeply grooved in two or more directions, in order to weaken it, so that it will be broken to pieces by the explosion of the magazine. The plate is riveted to the rim A and is loosely fitted over the enlarged end of the hinge-bolt F, on which the bow B turns, the bolt being made with a shoulder, which is received into a countersink in the hub of the bow, whereby the latter is still kept secured by the bolt, whose other end is held by the side E of the lock. The interior of the lock is divided by a stout plate, U, into two chambers, to wit: the magazine S and the chamber which contains the firing apparatus. This plate has an opening at its upper end to enable one to insert powder and other explosive material

into the magazine, which hole is closed by a screw-bolt, L'. The lower part of the plate U has an orifice, R, which is exactly opposite the barrel X of the other chamber.

The upper rim, A, has an opening at its right-hand end, observing Fig. 2, that receives the end Y of the bow B, which enters the hole and goes into the interior of the lock as far as the shoulder Q of the bow. The end Y has two holes made through it transversely at such points that they will come below the bolts Z Z', which project through the right-hand rim A when the bow is shut down into the lock. The heads of bolts Z Z' are numbered, so that they can be distinguished apart. A small bolt, L, is screwed into one or the other of these holes, according to the position of the locking-bolt which is to be used.

The bolts Z are screwed into the rim A in front of the end Y of the bow, the screw-threads being cut on them near their heads. Their ends are attached to chains, which are connected by swivel-joints to the long arm H of the trigger I, which is pivoted on a post, V, that rises from the side E of the lock. The trigger I has a shoulder, W, on its bottom, which engages with a dog, M, that projects from the upper side of the sliding barrel X when said barrel is moved toward the right. The barrel is open at both ends, and is arranged to move within a sleeve or thimble, N, fixed on the lower rim of the lock, against which it is held firmly by the post V. The right hand of this sleeve is broken away a little to show the barrel, within which it is permitted to move to the front rim, A, where its muzzle comes into coincidence with the discharge-opening G.

The letter K designates a wrist, which is pivoted to the top of the barrel near its inner or left-hand end, and it has lugs on its free end, upon which is hooked the free end of a spring, P, which is secured by a set-screw to the upper rim, A, of the lock, the right-hand end of the spring, beyond the screw, having a projection that comes against the rim and enables one to give the spring more force when the screw is driven farther in. The spring P continually draws the barrel toward the plate U, which it strikes at the place of the orifice R when the lug M is released from the catch or shoulder W of the trigger.

That part of the bow which enters the lock is so made as to close the orifice in the rim through which it passes, the outer part of the part Y having a tapering form below the shoulder Q.

The bow B and all the outer surface of the lock, excepting the magazine-plate J, are case-hardened to prevent filing or drilling into the lock. The grooved inner side of the plate J is to be covered over with phosphorus, and then with fulminating material, such as is used in making caps, so that any violent blow on the plate J will cause an explosion. The joints of the plate J should be made water-tight with bees-wax or other suitable material.

A percussion-cartridge is placed in the muzzle of the barrel through the opening G; and in order to protect it, and also the bolts Z Z', from being interfered with by children or disturbed by accident, I have provided the door D, which incloses the right-hand side of the rim A, said door being kept closed by a spring-latch C.

In order to cock the barrel one must push against the lug N, and so move the barrel forward toward the orifice G until the dog or trigger I catches over the lug and holds the barrel.

To load the barrel, first shove a blank cartridge into its muzzle through the opening G, and press it firmly in, taking care not to touch or scratch it with the nail, lest it be exploded. Next, hold the lock in the left hand, with the door D and the orifice G from one's person. Then push the barrel into the sleeve until it is engaged by the trigger. Then place a ball-cartridge in the breech of the barrel. Place as many cartridges or as much powder as is thought necessary in the magazine, and then put the screw-plug L' in its place. Next, shut the door T, pass the end Y of the bow into the lock, then make a memorandum of the number of the bolt Z which is to be employed to lock the pin L of the bow, and place that bolt in the hole which is in a line between the shoulder Q and the pin L.

The hooks of the chains should be previously attached to the other bolts before the door T is closed. One of the four bolts Z' is short, the others, Z, are long, and two of the latter are connected by the chains J with the arm H of the trigger, so that if either of these two are unscrewed and withdrawn the trigger is released from the barrel, which then is driven by spring P against plate U, exploding the cartridge, whose ball is sent out of the muzzle and through the orifice G, while the explosion of the cartridge communicates fire to the in-

terior of the magazine through the priming-hole R, the heads of the shells of the cartridges to be used being punctured at their centers to permit the explosion of the fulminate in the shells of the cartridges to reach the magazine.

The balls of the cartridges have also holes, that go clear through them to the powder in the shells. The object of such holes is to permit fire from the opening G to reach the cartridges and explode them. An explosive blank cartridge is placed in the opening G, the flange containing the fulminate being exposed on the outside of the opening, so that if a burglar tampers with such blank cartridge it will be exploded and communicate fire to the ball-cartridge.

When locking by either of the lower holes, the blank or short bolt Z' is placed in the hole of the same range toward the bow from the bolt by which it is locked—that is to say, in the hole above the locking-bolt; but when locking by either of the upper holes, the short bolt is placed in either of the lower holes.

The screw-pin L is placed in the upper or lower hole of the part Y of the bow, according to the position chosen for the locking-bolt, so as to serve as a catch against the bolt to hold the bow firmly in the lock.

When a burglar unscrews either of the chain-bolts, the chain tightens as the bolt is drawn out, the swivel turning with the bolt, while the other chain slackens till the dog or trigger I is pulled out of engagement with the lug of the barrel, when the barrel is driven, as before explained, against the division-plate U with force enough to explode the cartridge.

I claim as new and desire to secure by Letters Patent—

1. The combination of the sliding barrel X, the trigger or dog I, the lug M of the barrel, and the spring P, substantially as described.

2. The bolts Z Z', constructed substantially as described, one being a short bolt, in combination with the chains J of the trigger-arm H, substantially as described.

3. Forming a magazine, S, in the lock at one side of the barrel-chamber, substantially as described, with a priming-orifice, R, in the path of the sliding barrel, substantially as described.

4. Covering the magazine with a cover, J, weakened by grooves or their equivalents, substantially as described.

SETH A. ANDRUS.

Witnesses:

SAMUEL HOYT,  
JOHN ELLIS.