

(No Model.)

2 Sheets—Sheet 1.

L. RHOADES.

LOCK.

No. 271,271.

Patented Jan. 30, 1883.

Fig. 1.

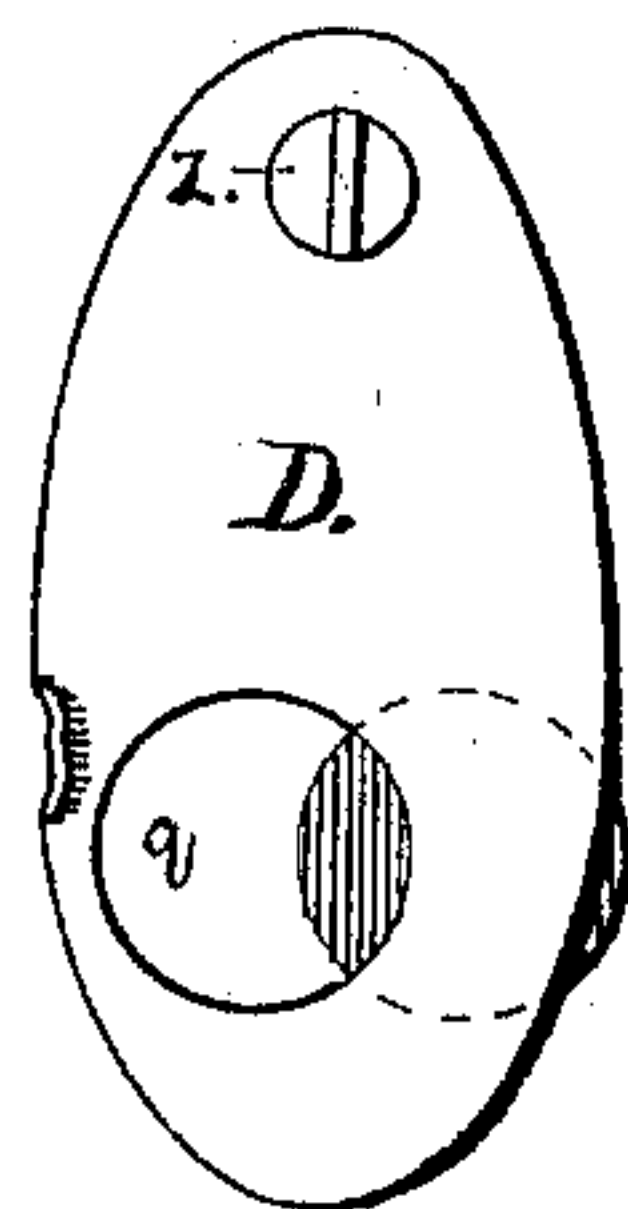
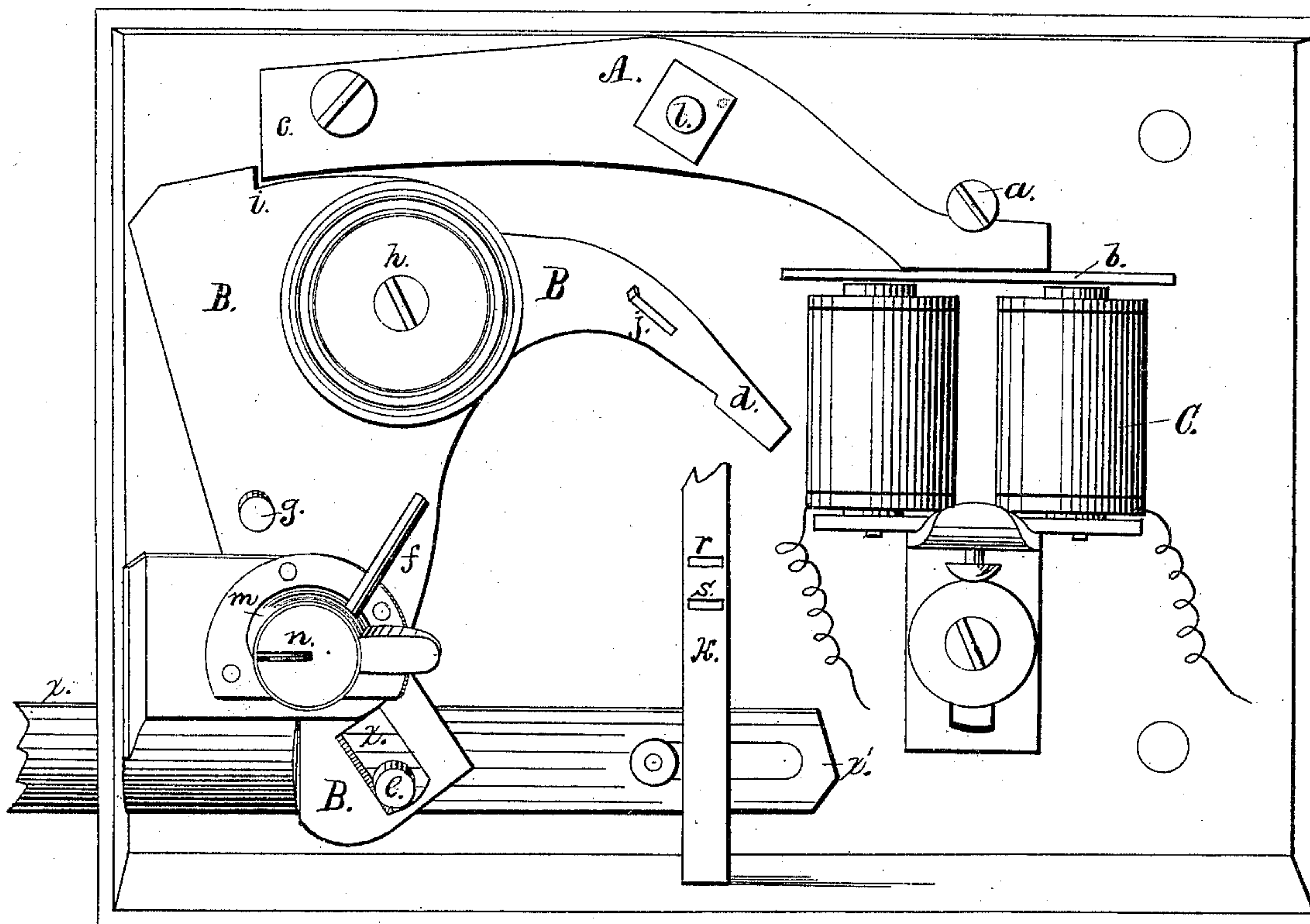


Fig. 3.

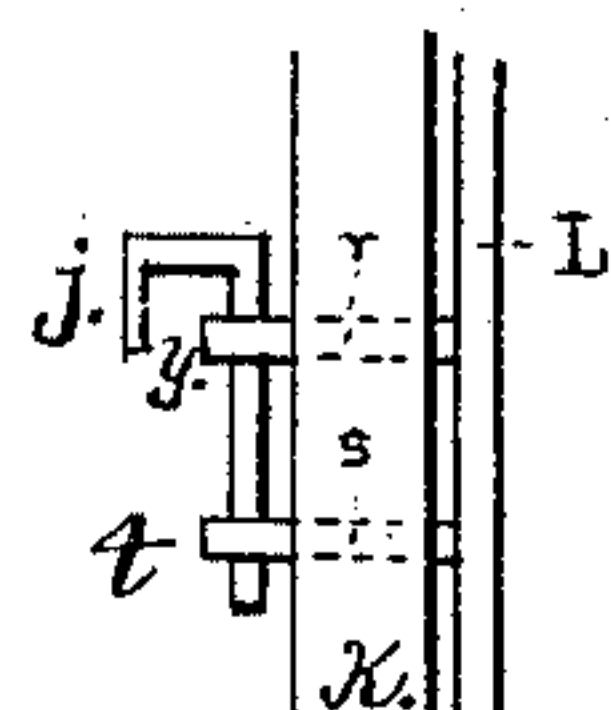


Fig. 4.

WITNESSES:

Thomas Hunt.
Joseph D. Harris

INVENTOR

Luman Rhoades

BY

H. S. Hoyt his
ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

L. RHOADES.

LOCK.

No. 271,271.

Patented Jan. 30, 1883.

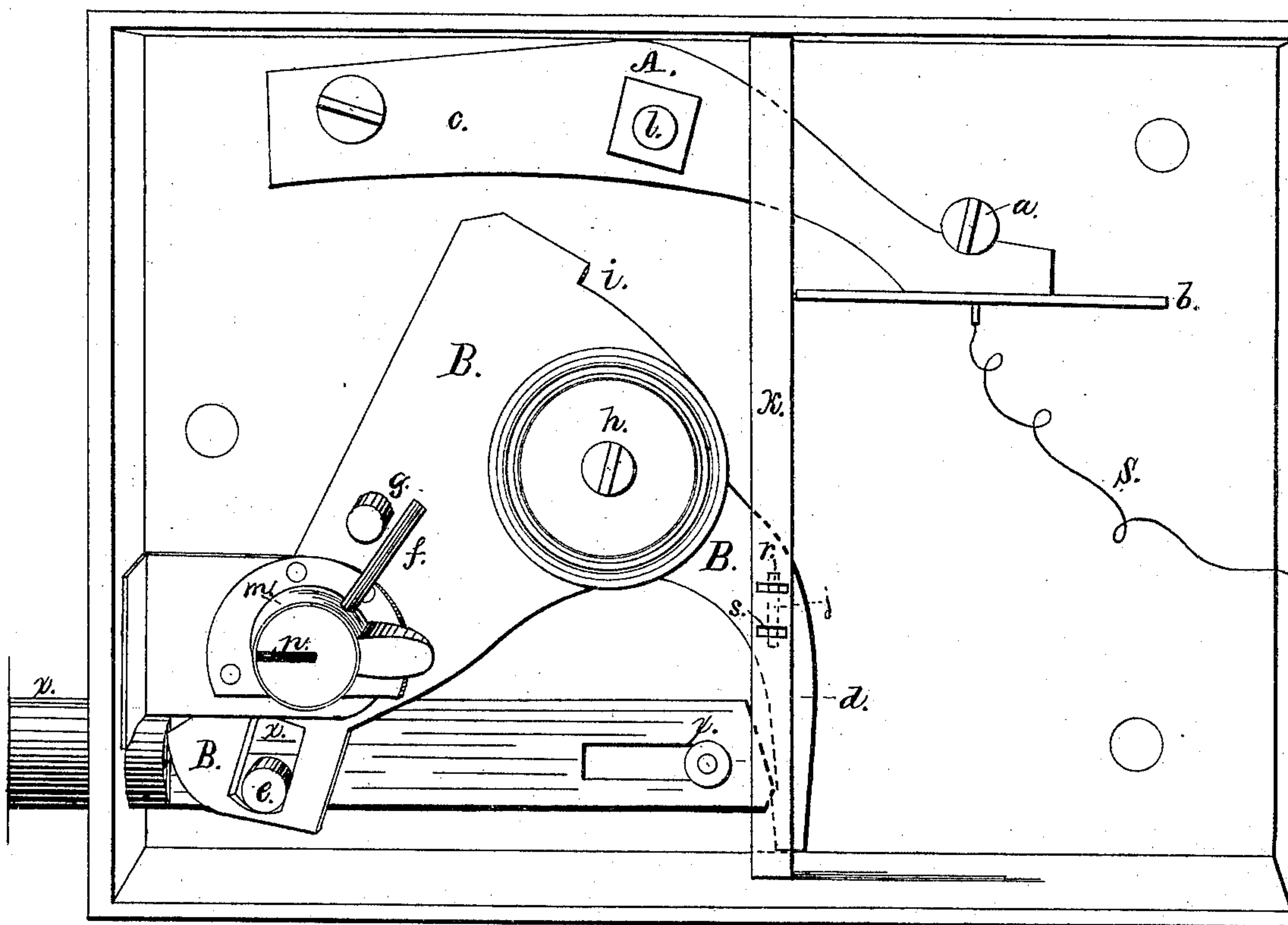


Fig. 2.

WITNESSES:

Thomas Hunt.

Joseph Marvin

INVENTOR

Lyman Rhoades

BY

H. S. Hoyt
ATTORNEY

UNITED STATES PATENT OFFICE.

LYMAN RHOADES, OF NEW YORK, N. Y.

LOCK.

SPECIFICATION forming part of Letters Patent No. 271,271, dated January 30, 1883.

Application filed August 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, LYMAN RHOADES, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Lock, of which the following is a specification.

My invention relates to an improvement in locks and bolts; and the objects of my improvements are to provide means for bolting a lock or a series of locks instantaneously from any distance by means of electricity or by pulling a wire, and also to so construct the locks that when locked, as aforesaid, the side plates of the lock will be securely fastened together upon the inside.

Figure 1 is a vertical view of the interior of the lock-case with the face removed, and showing the lock unbolted and the bolting devices connected with an electro-magnet. Fig. 2 is a similar view with the face of the lock removed, but with the lock bolted and with a string or wire attached to the locking-lever, hereinafter described, in lieu of the electro-magnet. Fig. 3 is a view of an escutcheon, which is hereinafter described and its uses set forth. Fig. 4 is a side view of the device hereinafter described for fastening together the faces of the lock-case.

Similar letters refer to similar parts throughout the several views.

A is a lever which works on a pivot, *l*. *a* is a pin which limits the motion of the lever. The end of the short arm of the lever A terminates in the armature of an electro-magnet, C, Fig. 1; or it may have a string or wire, S, Fig. 2, or its equivalent, attached to it and operated mechanically.

B is a plate, with a hook-shaped projection, *d*, turning on a pivot on the back face of the lock-case, and having a weight, *h*, attached to it, so arranged that the plate B falls when not held up by the lever A, resting in the notch *i*, as shown in Fig. 1. In the case of a very heavy bolt being used a spring may be attached to the plate B. I prefer not to use a spring, as without it very little power is necessary to free the plate B.

f and *g* are pins for raising the plate B, *f* being moved by a key entering at the key-hole *n*, and the pin *g* being on the plate B. Any

lock may be employed for throwing the bolt. The drawings represent a Yale lock.

x is the bolt of the lock. *e* is a pin attached to it and working in a slot in the lower end of the plate B, and so arranged that the bolt is moved forward and backward by means of the falling and raising of the plate B. The bolt *x* terminates at its inner end in a point, *x'*, which pushes into the notch *d* of the plate B when there is any pressure against the bolt; but when there is no pressure the bolt *x* has sufficient play for *d* to pass when raised by a key.

The device for locking together the faces or plates of the case of the lock upon the inside are as follows: When the lock-plate B falls it passes through eyes projecting from the face of the front plate; or it may pass through eyes projecting from both the front and back plates, thus securely locking them together. If the eyes project only from the front plate, I prefer to have them pass through apertures in a rigid bar, K, fastened in the body of the lock, so that the strain will come upon the bar K, instead of upon the hook-plate B, in case an attempt is made to pry off the front of the lock-case, and I prefer to have a pin, *j*, fastened to the hook-plate B to perform this operation of locking.

In the drawings, Figs. 1, 2, and 4, the eyes upon the front plate, L, are represented by *y* and *z*, and the apertures in the bar K are represented by *r* and *s*, and the hook *j* is shown in Figs. 2 and 4 passing through them.

On the outer surface of the jamb of the door when the lock is placed behind the jamb, or on the edge of the door when the lock is on the door, is an escutcheon, D, perforated for the passage of the bolt, and fastened by the pivot *z*, Fig. 3, in front of the outer end of the bolt *x*, so that when hanging free it covers the end of the bolt. When the door is open at the time that the plate B is released from the lever by electricity or by pulling the wire the hook-plate only falls a short distance, as it is held back by the bolt coming in contact with the escutcheon D; but when the door closes and pushes the escutcheon aside sufficiently to allow the bolt to pass, the plate B will then fall and the bolt be thrown forward into the

keeper. In front of the keeper may be a pin which will strike against the escutcheon when the door closes. The escutcheon is shown in Fig. 3.

5 The manner of working my invention is as follows: The arm *c* of the lever A is raised by means of an electric current attracting the armature *b*, Fig. 1, or by means of a cord or wire attached to the lever, as in Fig. 2. Thus the
10 plate B is released and falls by the force of gravity, or by a spring, and the bolt is moved forward by the pin *e*, and if the door, window, or drawer is closed the bolt is thrown completely; but if the door, window, or other opening be not closed, then the plate B, although
15 released from the lever A, falls only far enough to project the bolt against the escutcheon D, which holds it back until the door, by closing, pushes the escutcheon away from the bolt and
20 allows it to be thrown into position by the weighted plate B and pin *e*. When the lock is locked the bolt is prevented from being pushed back by the hook of the plate B, and at the same time the front of the case is fastened to the
25 body of the case by the pin *j* entering into the two eyes that project from the front of the case through the holes in the bar K. When an electro-magnet and an armature are used any number of locks connected by a wire may be
30 locked by a single circuit. When a cord or wire is used the plate B may be released by a single mechanical operation, and cords or wires from several locks may be connected to a single cord or its equivalent, so that a single operation will release all the plates.

35 I do not confine myself to the form of upright bar K (shown) with apertures for eyes to pass through, as the bar may run horizontally; or, instead of a bar, a single eye may project from the back of the case, so that it will
40 come between the two eyes on the front of the case and the pin *j* pass through the three eyes; or other similar device may be used. Nor do

I limit my invention to the lever A, as a pin or spring projecting into the notch *i* may be 45 used, the lever being used in this specification, as I believe it to be the simplest method for obtaining the necessary result.

I know that gravity-latches have been long known, and also that electricity has been used 50 for preventing the unlocking or retraction of door-bolts, particularly in time-locks, by means of a dog or bolt.

What I claim as my invention, and desire to secure by Letters Patent, is— 55

1. In a lock, the lever A, holding up the pivoted plate B when in contact with it, in combination with the said pivoted plate B, weighted to fall by its own gravity when not in contact with said lever A, and also in combination with the bolt *x*, which is thrown forward and backward by the falling and raising of the plate B, substantially as and for the purposes described. 60

2. The combination of the bolt *x*, terminating in a point, *x'*, the weighted plate B, hooked and notched at *d* to receive the point *x'*, and with the notch *i* to receive the lever A, and the lever A fitting the notch *i*, substantially as and for the purposes described. 65 70

3. The combination of the bolt *x*, weighted plate B, and the lever A, one end of which is attached to an armature, *b*, of an electro-magnet, and an electro-magnet, C, substantially as and for the purposes described. 75

4. The combination of the bolt *x* with the swinging escutcheon D, pierced at *g*, substantially as and for the purposes described.

5. The combination of the hooked plate B, the pin *j*, the bar K, pierced at *r* and *s*, with the eyes *y* and *t*, substantially as and for the purposes described. 80

LYMAN RHOADES.

Witnesses:

JOSEPH H. MARVIN,
JAMES O. N. CORSE, Jr.