

R. VOLLSCHWITZ.
Lock.

No. 227,327.

Patented May 4, 1880.

Fig. 1.

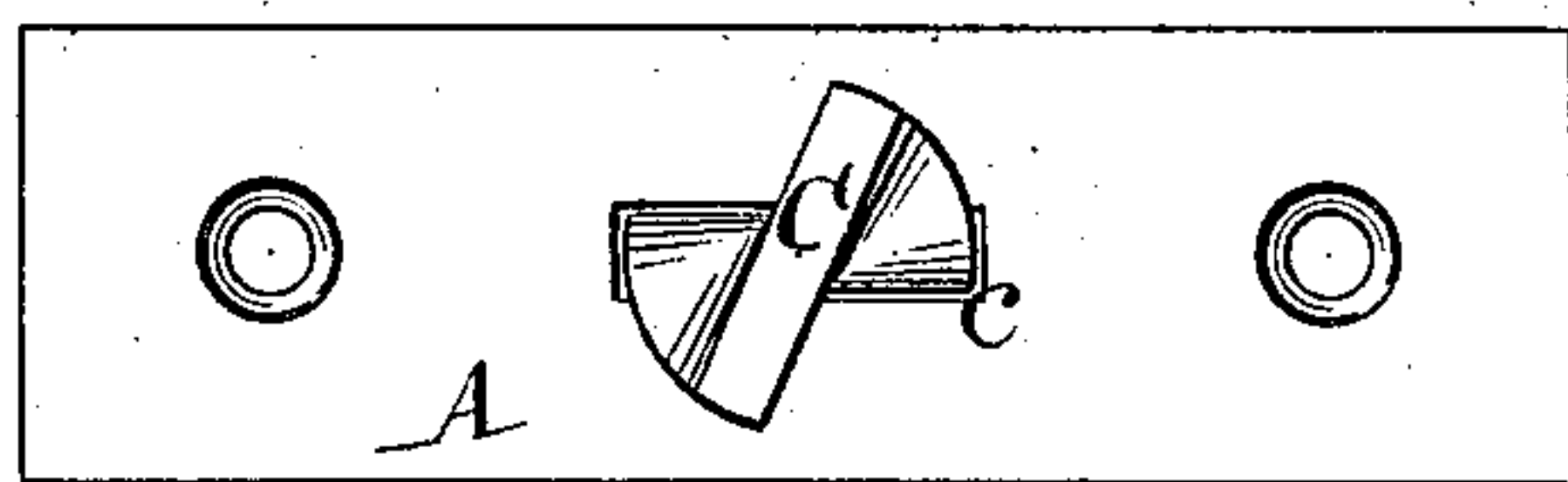


Fig. 2.

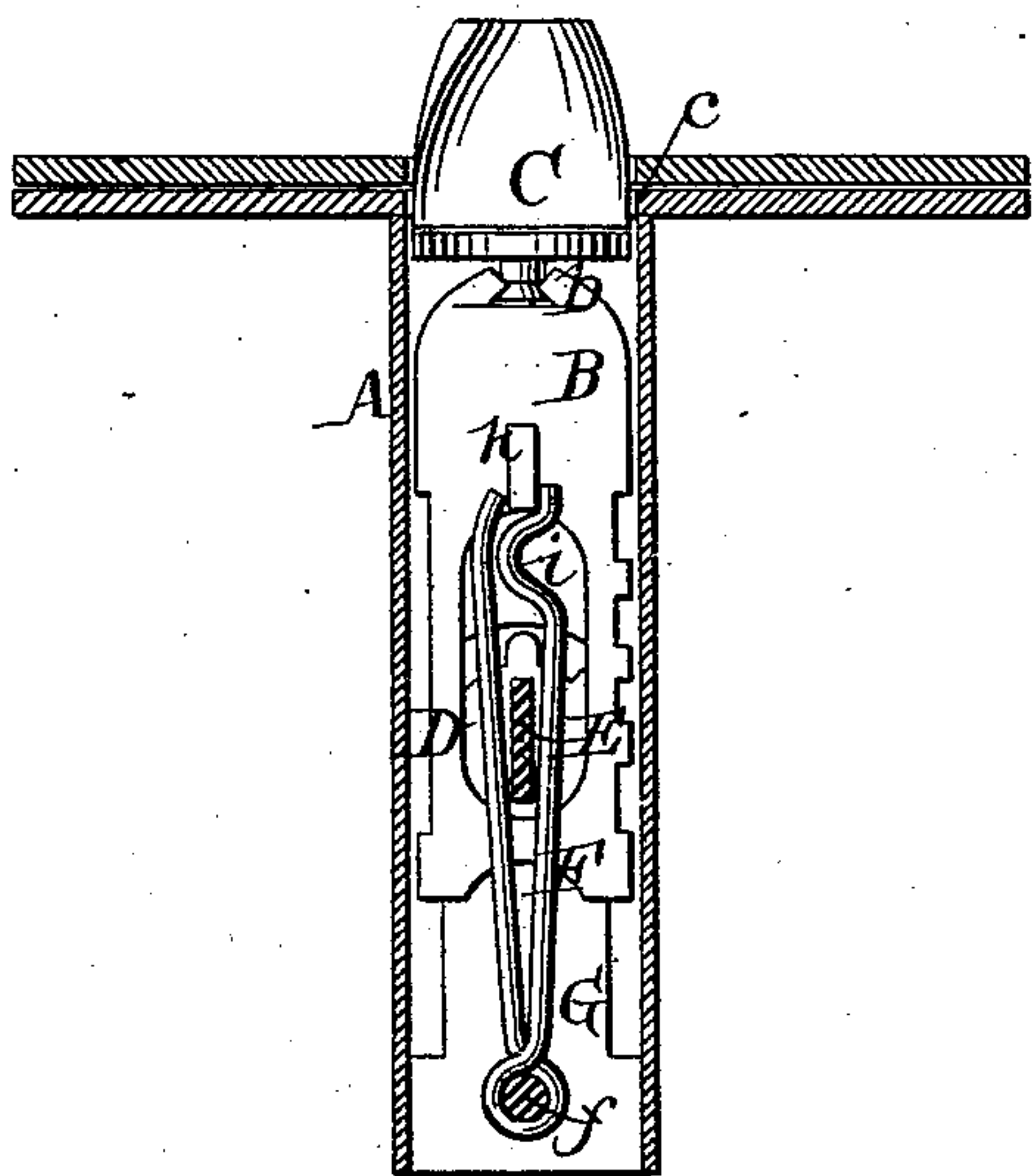


Fig. 3.

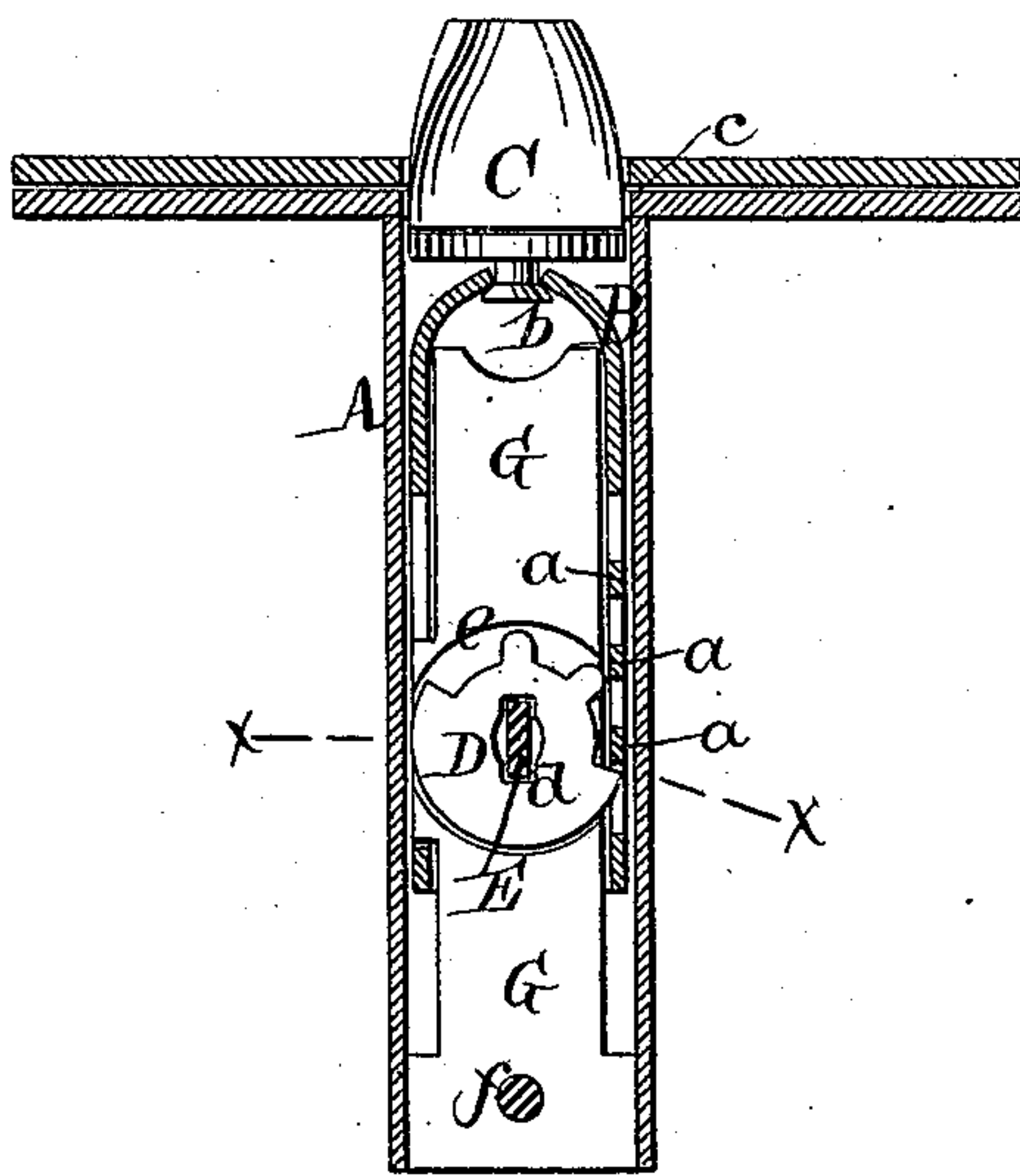
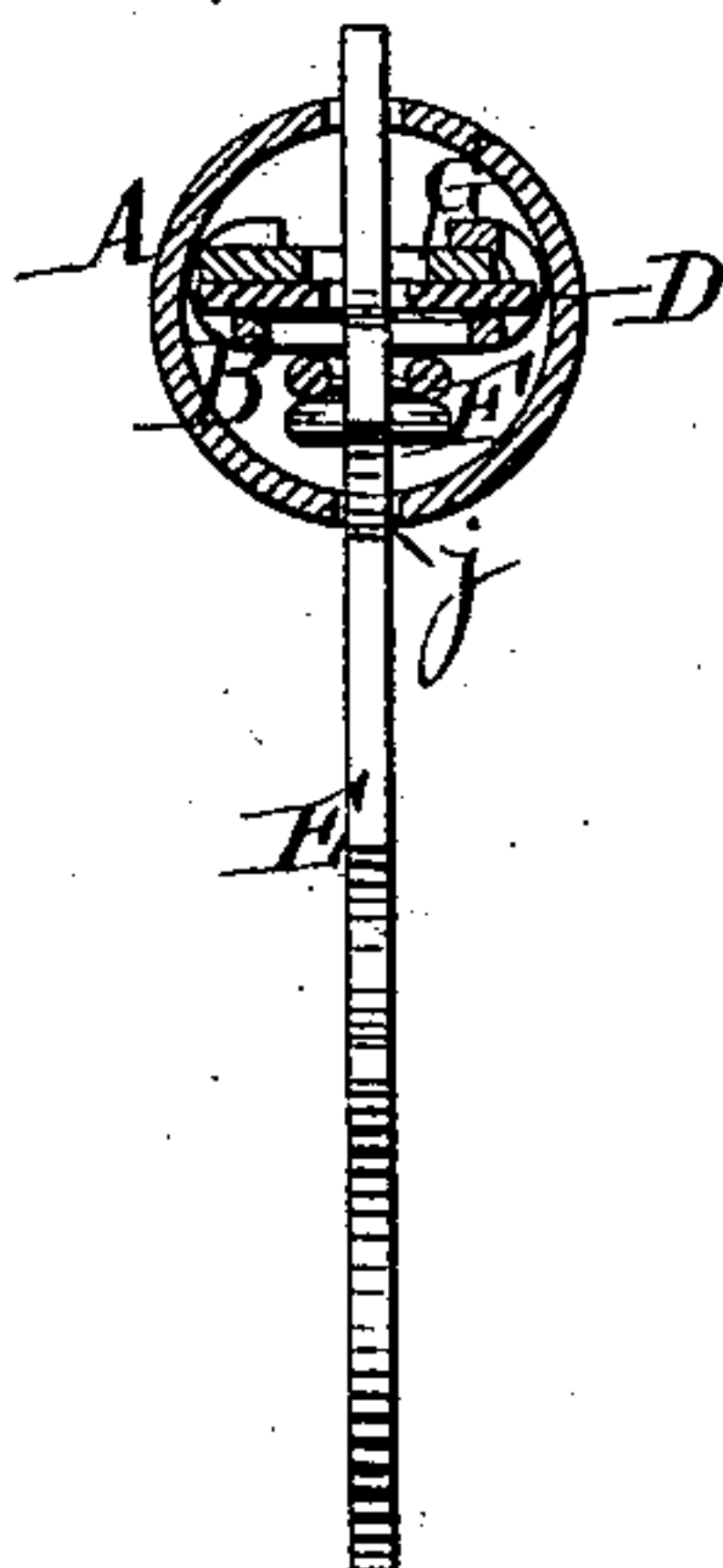


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

RUDOLPH VOLLSCHWITZ, OF ELIZABETH, NEW JERSEY.

LOCK.

SPECIFICATION forming part of Letters Patent No. 227,327, dated May 4, 1880.

Application filed September 8, 1879.

To all whom it may concern:

Be it known that I, RUDOLPH VOLLSCHWITZ, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Locks, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a top view of my lock. Fig. 2 is a longitudinal section thereof, showing the tumbler. Fig. 3 is a similar section, showing the bolt-operating device. Fig. 4 is a cross-section in the plane of the line *x x*, Fig. 3.

Similar letters indicate corresponding parts.

My invention is especially adapted to locks for pianos, sewing-machine cases, &c.; and it consists in the combination of a toothed bolt constructed to embrace and slide upon a flat guide-plate, a spiral head which is swiveled on the outer end of the bolt and fitted into a slot in the lock-case, so that when the bolt is shot or retracted the spiral head turns, and thus is adapted to engage and disengage a slotted plate affixed to the article to be locked, a toothed disk arranged in a recess in the before-mentioned flat guide-plate, which disk meshes with the teeth of the bolt and is adapted to receive the key for rotating the same, and a spring-tumbler acting on the bolt, so that when the key is inserted in the lock and turned the tumbler is displaced, thereby releasing the bolt, and the latter is shot or retracted by the action of the toothed disk turning with the key, all of which will be fully hereinafter described in detail.

In the drawings, the letter A designates the lock-case, consisting of a cylindrical body and a face-plate at one end of such body. B is the bolt, having teeth *a*; C, a spiral head swiveled on the outer end of the bolt, as at *b*, and fitted into a slot, *c*, in the face-plate of the lock-case. D is the toothed disk, having a central slot, *d*, to receive a key, marked E. F is the tumbler acting on the bolt, and G the bolt-guide. This bolt-guide G is substantially flat, and the bolt B is fitted thereon as shown in Fig. 4.

The teeth *a* of the bolt are formed by per-

forating the same at an appropriate point, the part between each perforation constituting a tooth.

In the bolt-guide G is a recess, *e*, in which the toothed disk D is fitted, and this disk is of such a diameter that the same meshes with the teeth of the bolt from an inner direction, as shown in Fig. 3.

The tumbler F consists of a wire spring, which is coiled on a pin, *f*, whereby the bolt-guide G is secured in the lock-case, and one arm of which engages a stump, *h*, projecting from the bolt, the other arm thereof being also allowed to bear on this stump.

To adapt the spring-tumbler F to engage the stump *h* of the bolt, the tumbler is provided with an offset, *i*, catching over or under the stump, as the case may be; but this can also be accomplished in other ways, as by piercing the stump and bending the tumbler so as to enter the hole.

As the bolt B is shot or retracted the spiral head C is caused to turn on its axis by its contact with the edge of the slot *c*, and hence this head is adapted to engage and disengage a slotted plate, substantially similar to the face-plate of the lock-case, affixed to the part or article to be locked.

For the purpose of impelling the bolt B the key E is inserted through a hole, *j*, in the lock-case, when the key passes between the two arms of the tumbler F into the slot of the toothed disk D. The key is then turned, when the tumbler F is displaced, so as to release the bolt B, and after this is accomplished the bolt is moved in or out, as the case may be, by the action of the toothed disk D, which partakes of the motion of the key.

It will be seen that by the peculiar arrangement of the bolt B and the toothed disk D the lock is brought within a very small compass.

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

The combination of the lock-case, the flat bolt-guide G, having a recess, *e*, and the toothed disk D, arranged in said recess and having an opening for the passage of a key, with the bolt B, embracing the guide-plate

and adapted to slide thereon, and provided
with a series of teeth, *a*, and a projection or
stump, *h*, the spiral head C, swiveled on the
end of the bolt and fitted in a slot in the lock-
5 case, and the spring-tumbler F, composed of
two arms, which bear upon the projection or
stump on the bolt, all substantially as and for
the purposes set forth.

In testimony that I claim the foregoing I
have hereunto set my hand and seal this 23d 10
day of August, 1879.

RUDOLPH VOLLSCHWITZ. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.