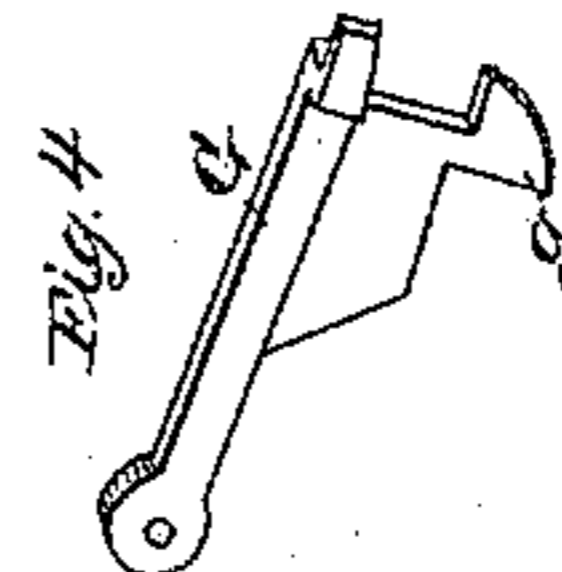
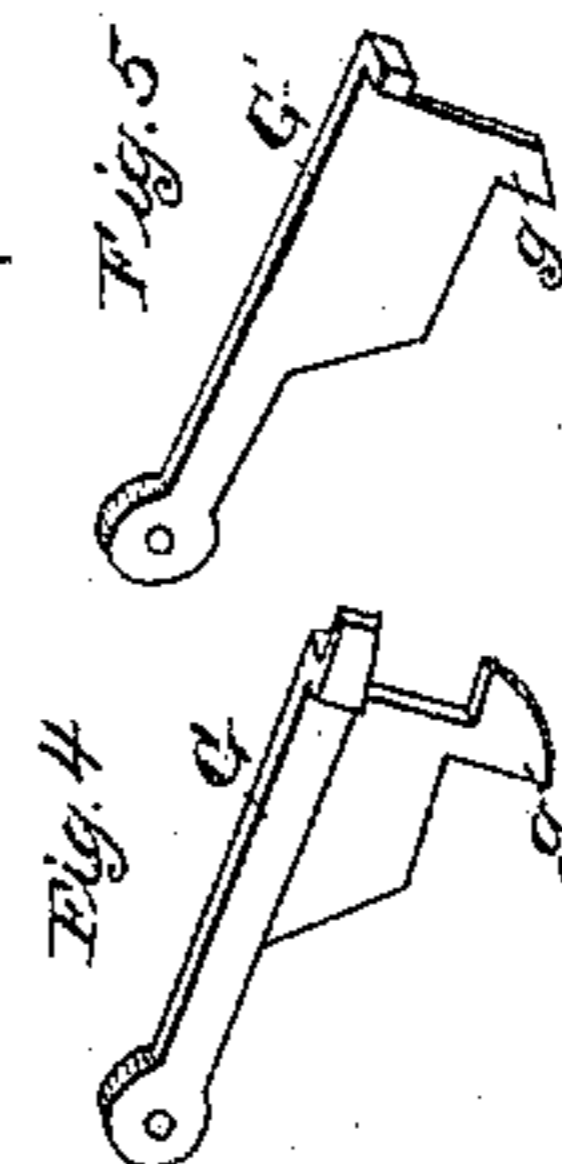
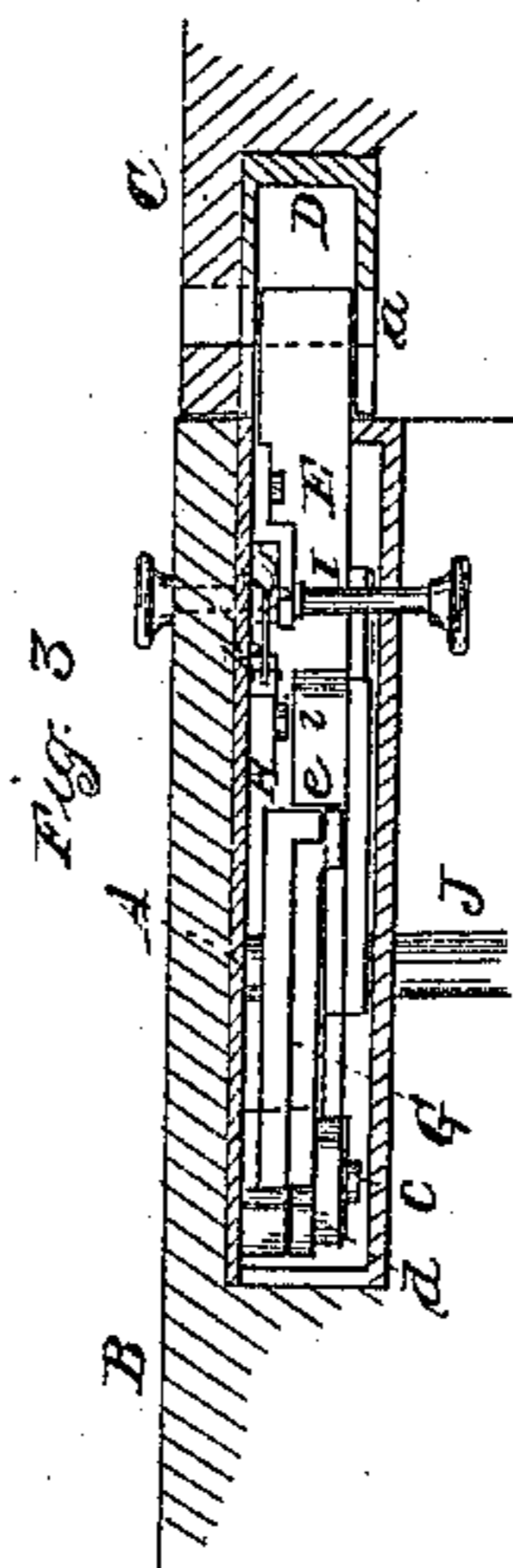
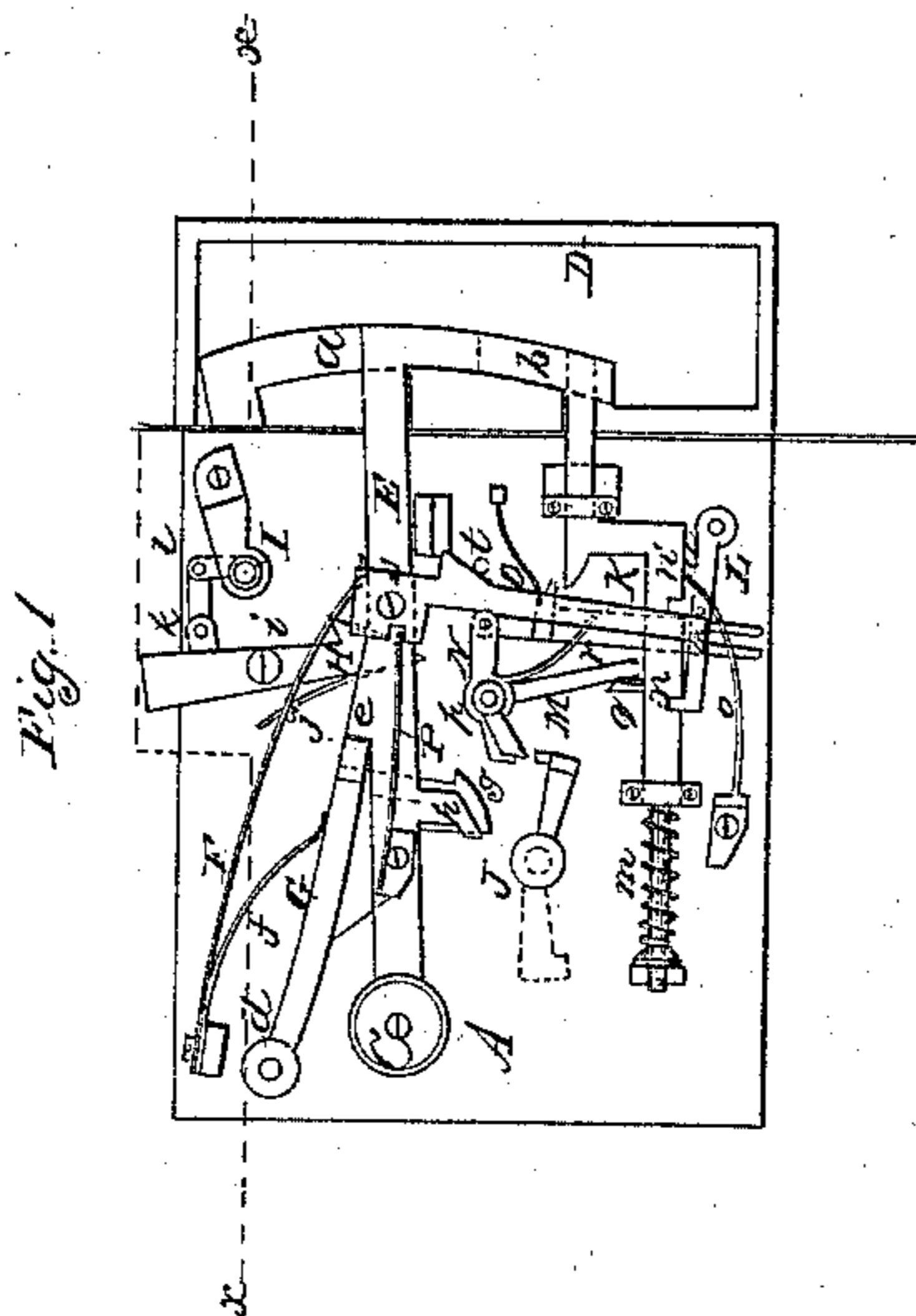
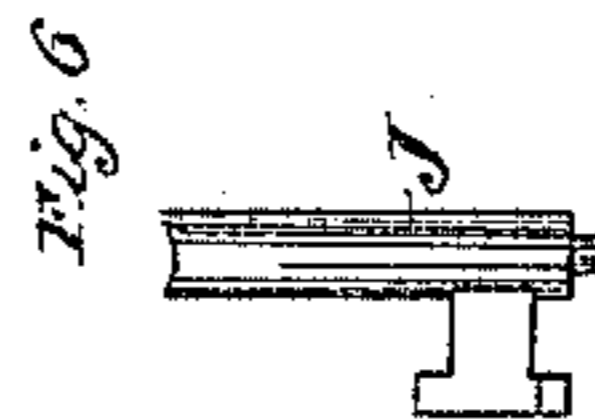
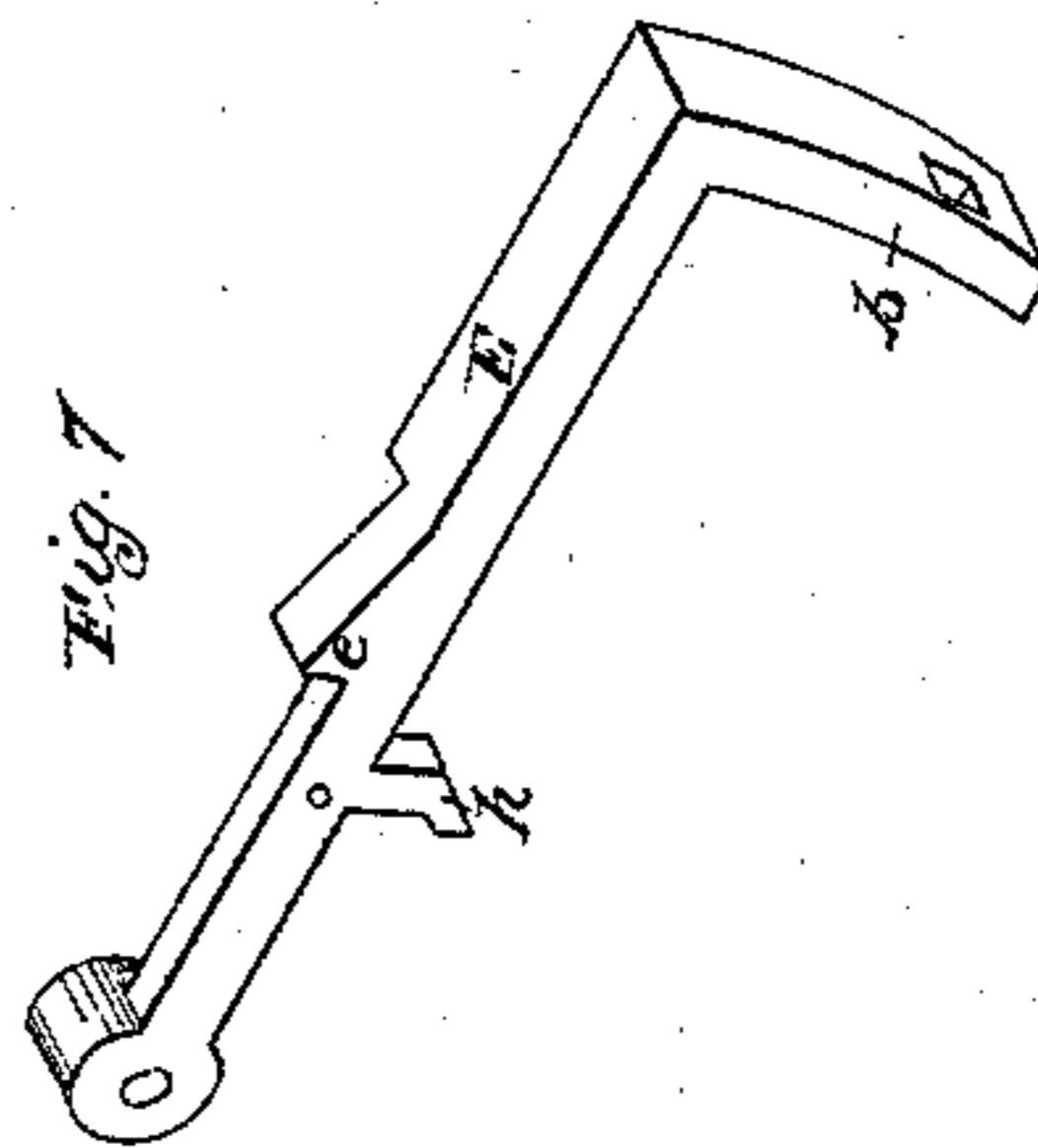
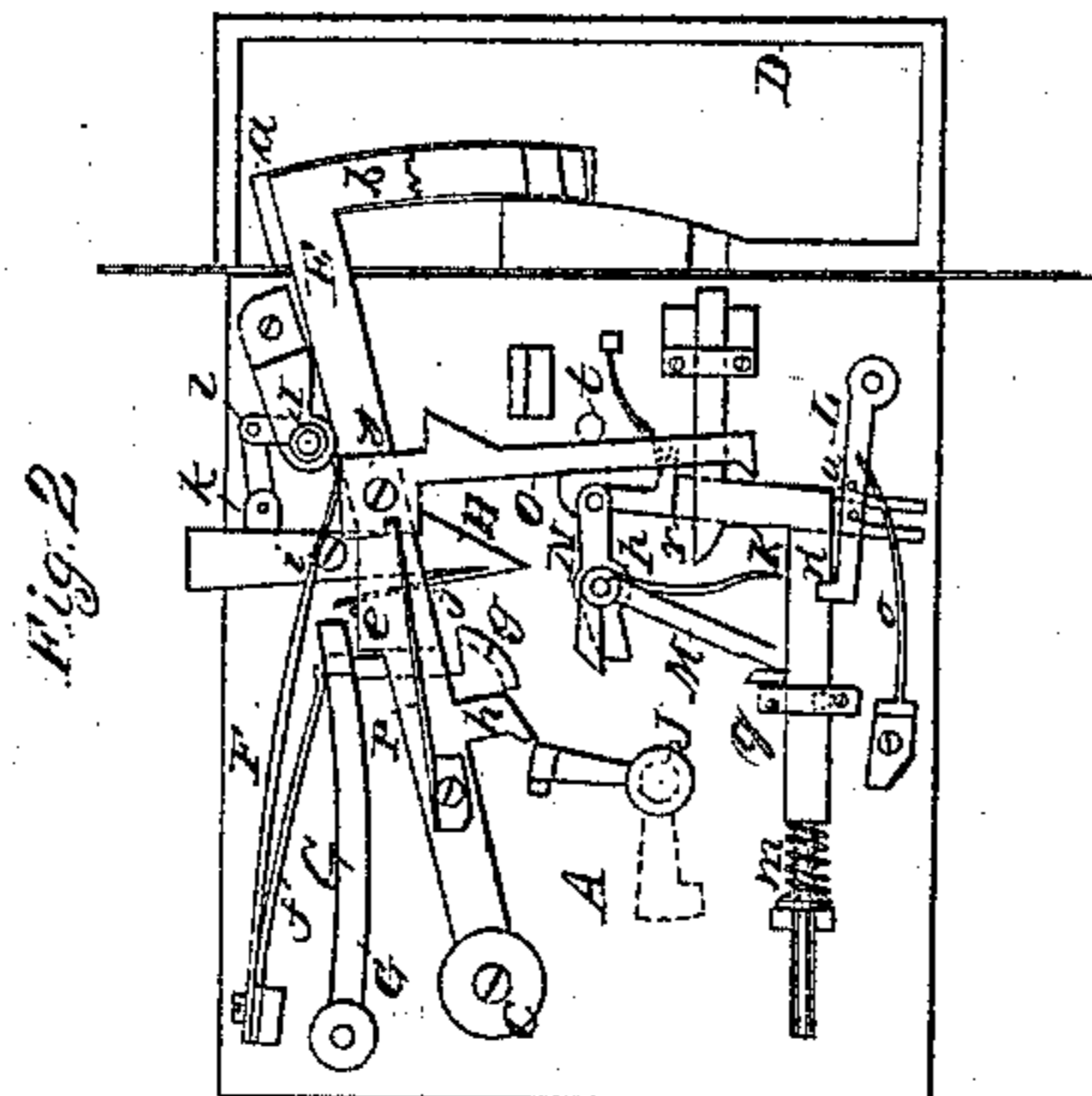


J. J. Hirschbuhl,

Lock.

N^o 32,289.

Patented May 14, 1861.



Witnesses
J. H. Coombs
R. S. Spencer

Inventor
J. J. Hirschbuhl
per *Munn & Co*
attorneys

UNITED STATES PATENT OFFICE.

J. J. HIRSCHBÜHL, OF LOUISVILLE, KENTUCKY.

LOCK.

Specification of Letters Patent No. 32,289, dated May 14, 1861.

To all whom it may concern:

Be it known that I, J. J. HIRSCHBÜHL, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Lock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figures 1 and 2, are internal views of my invention; Fig. 3, a horizontal section of the same, taken in the line *x, x*, Fig. 1. Figs. 4, 5, 6, and 7, detached views of parts pertaining to the same.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a lock that will be burglar proof or unpickable, and still be simple in arrangement and economical to construct.

The invention consists in the employment or use of a latch bolt arranged with tumblers and a catch, and used in connection with a nosing of peculiar-construction and a supplemental slide bolt or guard, all arranged substantially as hereinafter described whereby the desired result is obtained.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A. represents the back plate of the case of the lock, said plate being firmly secured to the door B.

C. is the stile or jamb of the door frame to which the nosing D. is secured. This nosing is a rectangular metal box having a curved slot *a*, in its outer plate, as shown clearly in Figs. 1 and 2.

E. is a latch-bolt which is of hook-form as shown in Figs. 1 and 2. The hook-portion *b*, of the latch-bolt is at its outer end, the opposite end being attached by a bolt or screw *c*, to plate A.

F. is a spring which bears on the upper surface of the latch-bolt E. and has a tendency to keep the same depressed or forced down so that the end *b*, will extend below the slot *a*, and the lock be in a locked state as shown in Fig. 1.

G. G'. are two tumblers which are secured at one end to the plate A. by a pin or bolt *d*, the opposite ends of the tumblers bearing against a shoulder *e*, on the latch-bolt E. and retaining the latter in a closed or depressed state. The tumblers G. G'. have springs *f*, bearing on them by which the former when

not otherwise acted upon are kept in contact with the latch-bolt or the shoulder *e*, thereof.

The tumblers G. G'. have each a pendant *g*, attached, and the latch-bolt E. is also provided with a pendant *h*, which extends down by the side of the pendants *g*, the latter being a trifle longer than the former.

H. is a catch which is secured by a pin or pivot *i*, to the upper part of plate A. This catch has a spring *j*, attached to its lower part and its upper part is connected by a link *k*, to the bit *l*, of a knob-arbor I. which passes through the lock case.

In order to avoid confusion I will describe the operation of the above named parts as they constitute the main feature of the lock and may be used separately. When the latch-bolt E. is down as shown in Fig. 1, the hook *b*, of the latter extends below the slot *a*, in the nosing D. and the lock is in a locked state. In order to raise the latch-bolt and unlock the lock, a key J. is inserted and turned from left to right; the bit of the key first striking the pendants *g*, *g*, of the tumblers G. G'. and raising the latter free from the shoulder *e*, of the latch-bolt. The bit of the key then strikes the pendant *h*, of the latch-bolt, and the latter is raised until caught by the catch H. the latter holding the latch-bolt in an elevated position, and the hooked end *b*, above the lower edge of the slot *a*, in the nosing. The door B. therefore may be opened as the lock is unlocked. In order to release the latch-bolt E. and to lock the door, the knob-arbor I. is turned and the catch H. actuated so as to release the bolt E. and the latter is forced down by the spring F.

K. is a slide bolt which is fitted in the lock case and has a spring *m*, acting against its back end. The front end of the slide bolt passes through the side of the nosing D. and through the lower part of the end *b*, of the latch-bolt E. when the lock is in a locked state, as shown clearly in Fig. 1. The bolt K. is retained in this latter position by a dog L. the end of which fits in a notch *n*, in the under side of the bolt K. as shown in Fig. 1; and in order to throw back the bolt K. the dog L. must be freed from the bolt, as will be fully understood by referring to Fig. 1. The dog L. has a spring *o*, bearing against it.

M. N. are two tumblers, which are fitted on the same pivot *p*. These tumblers have their

upper parts extending within the path of the movement of the bits of the key J. The lower part of the tumbler M. acts upon a pin *q*, on the bolt K. and to the tumbler N. there is attached a rod *r*, which extends down and is connected to the dog L.

O. is a rod the upper end of which is attached by a pivot or pin *s*, to the latch-bolt E. This rod has a spring P. bearing on its upper part, said spring having a tendency to keep the rod O. bearing against a pin *t*. The dog L. has a pin *u*, projecting from it, against which the rod O. acts when the latch-bolt descends.

The bolt K. it will be seen serves as a check or guard for the latch-bolt E., and said bolt must first be thrown back before the latch-bolt E. can be raised. This is effected as follows: When the key J. is inserted into the lock and turned from left to right the bits of the key first act on the upper parts of the tumblers M. N., the tumbler M. throws back the bolt K. while the tumbler N. and rod *r*, throw down the dog L., so that the bolt K. may be thrown back, and when the bolt K. reaches the termination of its backward movement the dog L. catches in a notch *n'*, retaining the bolt K. back from the nosing D. as shown in Fig. 2.

When the latch-bolt E. is released by actuating the catch H. and the bolt E. descends, the rod O. strikes the pin *u*, and throws down the dog L. out of notch *n'*, so that the spring *m*, may throw the outer end of bolt K. into the hole in the lower part of the end *b*, of said bolt.

Thus it will be seen that a very simple and efficient burglar-proof lock is obtained. There are no parts liable to get out of repair nor become deranged by use.

Any number of tumblers may be used as may be required.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is,

1. The employment or use of the latch-bolt E. when combined with tumblers G. G.' one or more, a catch H. and a nosing D. provided with a slot *a*, arranged as and for the purpose set forth.

2. The slide-bolt K. when used in connection with the latch-bolt E. tumblers M. N. dog L. and the rod O. on the latch-bolt E. as and for the purpose specified.

J. J. HIRSCHBÜHL.

Witnesses:

HENRY W. KEISKIR,
S. DOLFINGER.