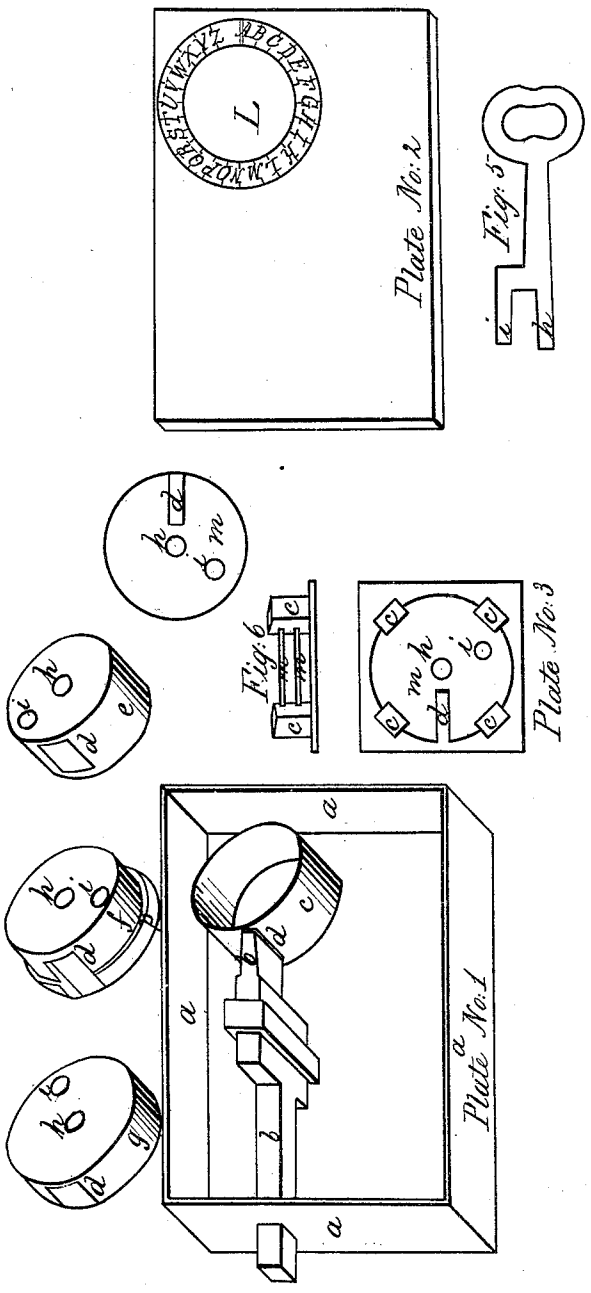
E. Finney.
Lock.

No. 1173

Patented Jun. 18. 1839.



UNITED STATES PATENT OFFICE.

ERASTUS FINNEY, OF CLEVELAND, OHIO.

DOOR-LOCK.

Specification of Letters Patent No. 1,173, dated June 18, 1839.

To all whom it may concern:

Be it known that I, ERASTUS FINNEY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful improvement in short cylinders or rollers, which I verily believe have not been known or used prior to my invention, and which I design exclusively for fastening the bolt of a door or that of a lock and of liberating the same when desired; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in placing one or more of the short cylinders or rollers (made as I shall hereafter describe) in a lock where the same cannot be unlocked without the bolt of said lock. On some machinery which is operated upon by said bolt as it passes back and forth is made to enter some hole or gain in said cylinders or rollers, which can be so turned and regulated with a key by the proper person only as to admit or reject the same, one of which might cause more than 25 attempts by the improper person to turn it right for the bolt to enter. The second would multiply 25 by the same—say to 625. The third cylinder or roller would multiply this last number by 25, and each one added multiplies in the same manner. By increasing the size of the cylinders or rollers would also increase the number of attempts, and by closing a hole which is occupied by my key and making another at a little distance from the one closed would place a person in ignorance who had previously learned the secret of this lock.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation of the short cylinders and also of the rollers and the most simple method of fastening and of liberating the bolt of a lock.

I construct a short cylinder, which is represented in the accompanying drawing by *e*, which I make from a piece of sheet brass which is about, say, three inches long and one inch wide. This I bend to a true circle and braze the two ends together, which makes a tube or short cylinder an inch long and the same in diameter. I then from the same kind of brass make a piece round of the right size, which I braze in one end of the aforesaid tube or short cylinder, which makes a short cylinder with one end solid, through which I make a keyhole in any known form, or two small holes, as seen at *h* and *i*, one of which is in the center and the other a suitable distance to suit my key, and through the periphery I make a hole, as seen at *d*, which is intended for the bolt to enter, as seen in Plate No. 1 at *b* and *d*, where *c* represents a socket, (which I shall hereafter describe,) within which this cylinder may be placed. When two of those short cylinders are made to be used within or to inclose the socket aforesaid, I construct them as to their form like the one before mentioned (see *f*,) excepting a flange which is on the hollow end of one of said cylinders, (see *p*,) which flange is made by making a ring of brass about a half inch wide and made to fit on tight to the periphery at the hollow end of said cylinder, and there brazed. This projection is what I call a flange, and the hole for the bolt in this cylinder is a half of it made through this flange, as seen at *d*, and the other cylinder is made sufficiently large to inclose the other, excepting the flange, on which it rests, as seen at *g*, with a hole for the bolt through the extreme end of the periphery, as seen at *d*. Should the smallest of these two last mentioned cylinders be placed within the other up to the flange and the holes for the bolt, as seen at *d*, are so placed as to receive the same, a slight turning of either one cylinder would close a half of this hole, which would prevent the bolt from entering. In each of those cylinders I have two holes for my key made like those in the first mentioned cylinder, as seen at *h* and *i*. Another mode in which I have contemplated this principle is that of a roller, (as seen by a face view at *m*,) which is made about the size and thickness of a dollar, with the two holes for my key, as seen at *h* and *i*, one of them in the center and the other at a suitable distance to suit my key. In this roller I cut a gain, as seen at *d*, from the edge in toward the center, which is intended for the bolt to enter. My key for turning and regulating those cylinders or rollers must be made to suit the keyholes in the same, which may be made in any of the known forms, or with two forks or branches, as seen at Figure 5, where the two branches are shown at *h* and *i*. Those cylinders or rollers when used may be placed within a hole or socket, as shown on Plate No. 1 at 6, which is at the end of the bolt when in a locking position, as seen at *d* and *b*, and one mode of

using those cylinders is as follows: This socket may be made by bending a piece of sheet brass into a true circle, and brazing the two ends together with a hole through the periphery, as seen at *d*, into which the bolt may enter, as shown at *b*. In this hole or socket may be placed the first cylinder mentioned, as seen at *b*, or two made like the two last described cylinders, as seen at *f* and *g*, where one of them is described as having a flange on one end, which may be placed within this socket, or they may be made of sufficient size to inclose the first socket, and all of which must be rightly turned before the bolt can recede when said socket is placed at the end of said bolt when forced to a locking position, as seen in Plate No. 1, where *c* shows the socket, *b* the end of the bolt, and *d* a hole for the same. For the purpose of knowing when either one of those cylinders are rightly turned for the bolt to enter I pass my key through a hole made in a plate, as seen in Plate No. 2, which hole is shown at L and is surrounded with letter. This plate I make fast to the lock or to the door as the case requires when my key will pass through the hole seen at L as it enters the two holes in the first cylinder, and should all of the said cylinders be rightly turned for the bolt to enter the same letter to which the bit of the key directs when it enters the two holes shown at *h* and *i* will at all times be the letter to which the key must be turned to place the said cylinders right, or should the key have passed through a door and a circle made around the keyhole which was lettered the letter to which the bow of said key directs when said key enters the two holes seen at *h* and *i* (should this cylinder be rightly turned for the bolt to enter) would at all times be the letter to which the key must be turned to place this cylinder right, but the hole for my key, as seen at *i*, in those cylinders is made where no two cylinders when rightly placed for the bolt, will direct the key to one and the same letter, it must therefore after entering the first cylinder with the key pointing to A be turned to some other letter, say L, when it will enter the two holes in this cylinder shown at *h* and *i* and in this manner it may enter and turn any number desired, and to place them all right again the key must be turned to the same letter again, say L, and then draw back sufficient to release it from this cylinder, and then turn to A, which places these two right again; and to place a person in ignorance who has once learned the secret of this lock I close the keyhole shown at I in one or more of the cylinders and make another hole on some other place, which will point my key to some other letter. One mode of using the rollers heretofore described as represented by a face view at M, is that of placing them in a hole or socket, as seen at Plate No. 1 at *e*, where the same can be turned and regulated by applying the key to the two holes (*h* and *i*) the same in every respect as the cylinders aforesaid, and will operate the same upon the bolt as the cylinders aforesaid but to do this the end of the bolt must be so shaped as to enter the gain seen at *d*, when said roller is rightly turned for that purpose. Another mode is that of using 4 posts as a substitute for the aforesaid socket, which are represented by a face view in Plate No. 3 by *c c* and also by a side view in Fig. 6 by C C where two rollers are represented by *m m*. In this view these 4 posts are made fast to a plate of brass or iron by means of a mortise and tenon or that of a screw on the end that passes through a hole through said plate. The 4 posts at *c c* are placed at right angles and at a proper distance to admit of the said rollers as seen at M, being placed between them, and when more than one is here placed I cut into each post, as seen at *n n* in Fig. 6, a notch for each roller to revolve in, which plate may, with the posts and rollers, be made fast at any part of said lock desired.

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

The employment of a cylinder revolving within a socket or two or more cylinders revolving one within the other having holes in their peripheries which can be made to coincide or not in the manner and for the purpose herein described.

ERASTUS FINNEY.

Attest:

A. D. SMITH,
H. G. ABBY.