

25 Sheets. Sheet 2.

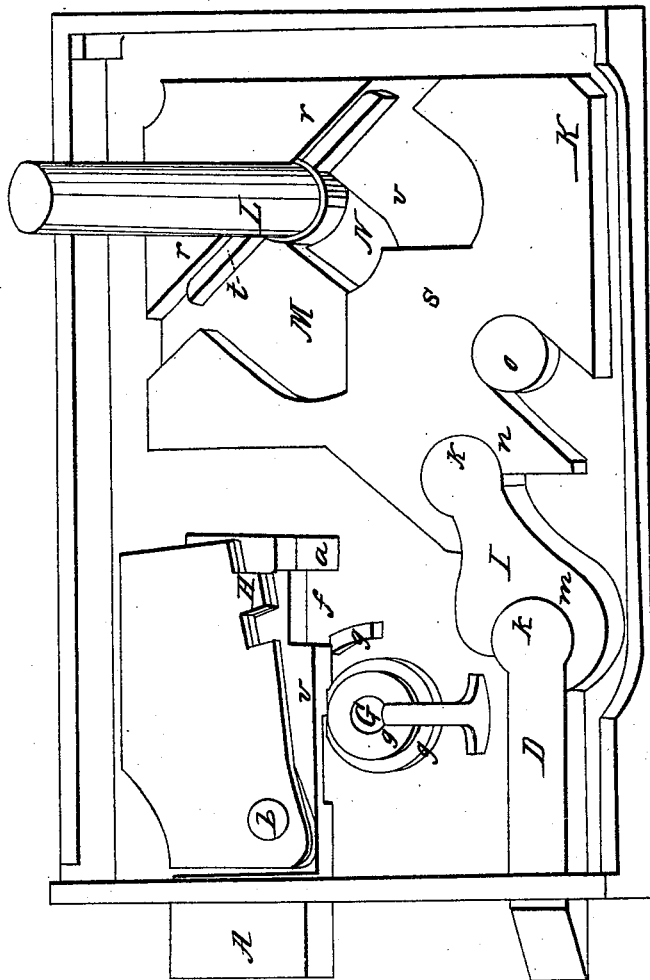
J. P. Sherwood,

Latch.

N^o 2,082.

Patented May 6, 1841.

Fig. 3.



UNITED STATES PATENT OFFICE.

JOHN P. SHERWOOD, OF SANDY HILL, NEW YORK.

LATCH OF DOOR-LOCKS.

Specification of Letters Patent No. 2,082, dated May 6, 1841.

To all whom it may concern:

Be it known that I, JOHN P. SHERWOOD, of Sandy Hill, in the county of Washington and State of New York, have invented certain Improvements in Door-Locks; and I do hereby declare that the following is a full and exact description thereof.

The box of my lock is generally to be made of cast iron in a single piece, although it may be formed in any of the ordinary ways. The bolts also, and most of the other parts of my lock I usually make of cast iron, in such a manner that they may be taken from the mold, and immediately put together and act without further finishing and thus forming a lock which while it is not liable to get out of order, can be sold at a lower price than ordinary locks to which it is much superior in action. This lock will be made without a spring of any kind, the spring bolt being thrown out of the lock by the action of a car passing down an inclined plane.

Figure 1 in the accompanying drawing exhibits the lock complete with the exception of the top plate which is removed to show the interior. A is the key bolt kept in its place by the studs *a a* cast with the box. One of these studs acts, besides this as a support to the top plate, and a catch to the sliding plates. A pin cast with the bolt is marked *b* to which the two sliding plate catches are attached and which are marked C, C. These plates consequently move with the key bolt as it slides out and into the lock and lay in a cavity which comes about three fourths of the whole top of the bolt. The depth of this cavity is about one quarter of an inch and is exhibited by *d*, in Fig. 2. The sliding plate catches may be one, two, three or more in number as security demands.

In Fig. 2, shown at E is a small cavity on the under side of the keybolt and cast with it to receive one flange or tongue of the key. This is not seen in Fig. 1 but its place is denoted by dotted lines C C C *c c c*. There are as exhibited in Figs. 1 and 2 at *f, f*, two other cavities in the sides of the keybolt in which the studs heretofore mentioned stand as the bolt moves by the action of the key backward and forward.

In Fig. 1, at *g, g, g*, are seen three guards with the box around which the key passes in its action upon the bolt. The key hole at G of Fig. 1 is similar to those in ordinary locks, being shaped to the form of the key,

which is shown in Fig. 2 at F. One of the two flanges of the key shown at *h* passes in locking and unlocking into the cavity before mentioned on the under side of the bolt, and striking the side of the cavity drives forward the bolt, while the cavity in the key represented in the same figure at J receives a tongue *v*, Fig. 2, of the bolt above the heretofore mentioned cavity in the bolt and at the same time, the other flange *h*, with its arm *i* passing over the tongue lifts the two sliding plate catches as seen at H H to pass the stud *a*. This form of the bolt catches and key and their combined action, it will be observed makes the possibility of picking the lock without the true key very problematical and difficult. The number and thickness of the plates and of course the form of the key admitting of great variation. What is usually called the spring bolt is in my lock forced out by a car propelled down an inclined plane by its own weight.

In Figs. 1 and 2 at D is seen the bolt with its socket head at *k* within a socket *m*. At I is a guiding bar with a socket and socket head attached to it and connecting the bolt with the propelling car. K in the same figure is the car passing upward and downward in the direction of the dotted lines Fig. 1.

The track or way upon which the car moves obliquely is formed by a square or round post at O and the circular handle of the knob at L. There is a cavity marked M in the form of the letter W occupying about one third of the upper surface of the car and one fourth of an inch in depth, within which the arms of the knob handle work in raising the car. Another cavity at N with its sides inclining at the same angle with the dotted line S is made in the car extending through it and being about an inch and a quarter in length. The knob handle passes through this cavity, and forms as heretofore observed, a part of the inclined plane. The knob handle at L may be with its arms *t t* of cast iron and generally of one piece or the arms only of brass or other metal and the handle of cast iron. I drill two or three more small holes in the handle at different distances to receive a pin passing also through the knob itself to be adapted to any thickness of doors. This is an improvement upon the mode of making handles now practiced.

In Fig. 1 at P is shown a friction plate

for the heel of the guiding bar I to slide upon. *r* in the same figure is another friction plate attached to the car, and between the car and post *o*. *r r* are two other friction plates also attached to the car, against which the arms of the handle will work. *u, u*, show the position of two other friction plates on the sides of the cavity N in the car. These plates may or may not be used.

10 The top plate to the lock I usually make of cast iron in the common form with key guards similar to those marked *g g* on the inside of the box of the lock. The post *o*, the stud *a*, and two others at the sides of the

15 box form the supports of the top plate. I may also attach two friction rings around the opening for the handle in the top plate and box.

It is perceived that the car, and its mode

of connection with the bolt can be varied in form and material while the same characteristics are retained.

I do not claim the employment of a weight to work the latch bolt as a substitute for a spring, this having been previously done, but

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

The method of working the bolt by means of the sliding inclined car, as herein described and also the mode of connecting the latch bolt with the sliding car by means of the link I for the purpose and in the manner described.

JOHN P. SHERWOOD.

Witnesses:

CHARLES HUGHES,
AUSTIN W. HOLDEN.