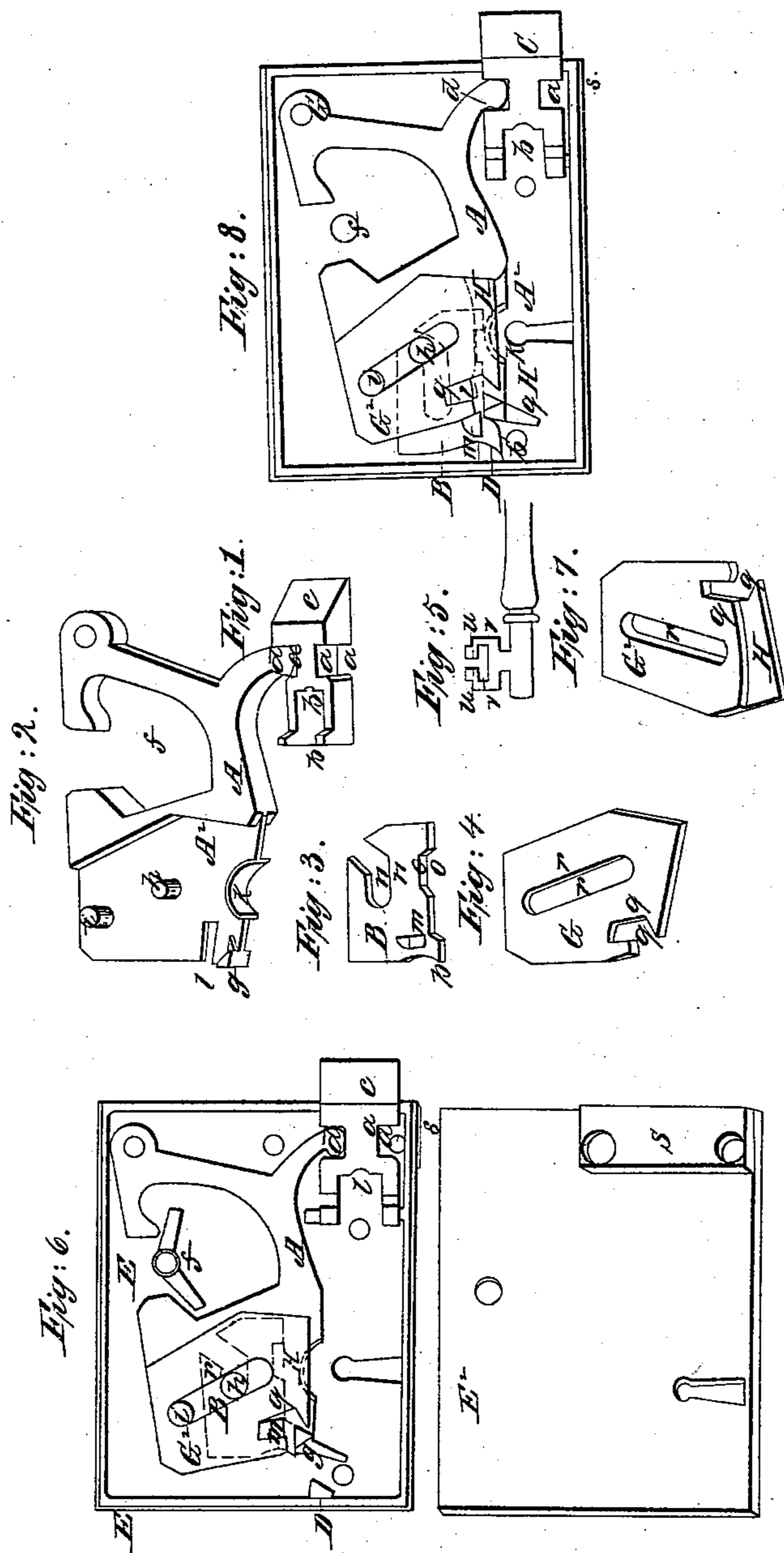


*J. P. Sherwood,*

*Reversible Latch,*

*No. 886,*

*Patented Dec. 17, 1842.*



# UNITED STATES PATENT OFFICE.

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

## DOOR-LOCK.

Specification forming part of Letters Patent No. 2,886, dated December 17, 1842; Reissued May 13, 1851, No. 201.

*To all whom it may concern:*

Be it known that I, JOHN P. SHERWOOD, of Sandy Hill, Washington county, and State of New York, have contrived and invented some new and useful Improvements Not Known or Used Before, in the Construction and Manufacturing of Door-Locks, and the following is an exact and full description thereof.

Every part of my lock may be made of cast iron, and for most parts it is the cheapest material.

My first improvement is in the case E Figure 6 which I make double faced. Each face projects over the sides and back end; the front end has no lip or projection, like ordinary iron cases, but its edges are plain and covered by the two face plates; the aperture for the bolt in the front end of said lock is as wide as said end, so that the molder may dispense with setting a core; and a stay marked S (with two screw holes through it) from  $\frac{3}{4}$  to  $1\frac{1}{2}$  inch wide and from  $1\frac{1}{2}$  to 3 inches long, rises on the lower front corner of each face protecting the bolt hole. This improvement facilitates and cheapens the casting of a case, by lowering the sides and ends and doing away with the setting of a core. It also fits every outside case for either a right or left hand door, without turning the lock upside down; and it renders the lock stronger and more durable. A glance at the drawing, shows its peculiarities and their use. The inside of the case is cast with common fixtures, such as friction plates, studs and braces to keep the bolt and other detached pieces in their respective places. My second improvement is in making the bolt with notches, one on its lower, and one exactly similar, on its upper edge, so that in connection with the vibrating or connecting bar A a horizontal motion is given to the bolt and also adapts it, by simple reversion to a right or left-hand door. Each is cut perpendicularly and extends through one third part of the bolt, reducing the bolt, in the center, between the two notches, to one third of its original size.

Fig. 1, shows the bolt, with its two similar and opposite notches, *a, a*; its back end, *b*, forked, so that it may pass a screw; and its front end, *c*, beveled to make one bolt answer for both lock and latch.

Fig. 2, exhibits the vibrating or connecting bar A, for moving the bolt which is of

very irregular shape, and nearly fills the upper half of the case. Its lower front corner *d*, projecting downward is made to fit the notch *a*, in the top of the bolt for the purpose of moving or fastening the bolt at pleasure. At its upper front corner, *e* shows a small hole for a screw on which it vibrates, and near by *f*, shows a large one for the handle. Nearly all of the back end of this bar is made quite thin, as at *A*<sup>2</sup> leaving space between it and the case, on one side for one sliding car or impelling weight, and on the other side for two sliding cars hereinafter described. On each side of this bar, are three studs, *g, h, i*, in height equal to the original thickness of the bar, and a curved key-guard, *k*, not quite as high as the studs which shield the locking car. Stud *g* is at the lower back corner; *h* near the center, and *i* above and back of *h*. Each stud on one side has a corresponding stud, similar and similarly situate on the opposite side: *h*, and *i*, form an inclined track or way, *i* being placed obliquely above *h*, toward the front end of the case, and as the corresponding studs on the opposite side of the bar form a similar track or way we have a double inclined track or way for the safety cars (hereinafter described) to pass up and down. A little above the corner stud *g*, a notch, *l*, opens from the back end of the bar, toward a point below the center stud *h*, a passage-way for the stud *m*, of the double action locking car B hereinafter described.

Fig. 3, represents the double-action locking car B, of which the exact form can only be learned from a model or drawing. It is a thin plate, with a stud *m* near one corner, on one side, and a much shorter stud directly opposite, on the other side. These studs add power to this car and connect it with safety cars G G<sup>2</sup>, hereinafter described, in a way that holds the three cars fast together when locked. The large notch *n*, gives room for the double-action-locking car B passing stud *h* of the connecting bar A. The sides of this notch *n* are in one part horizontal and in another oblique or inclined. In one part of its movement on the studs *h* and *g* of said connecting bar it is horizontal, and, in another, inclined. The studs *h* and *g* of the vibrating or connecting bar A, thus become at different periods, a horizontal and an inclined, track or way for the locking car B to move upon. The small

notch *o* admits the key Fig. 5 by which the car is moved. An acute angular projection, *p*, near stud *m*, catches under a stud *D* on the side of the case *E* when locked as seen in Fig. 8 and fastens the car. The locking is effected by a compound and backward movement of this car *B* which is new and peculiar to my lock. Another car, exactly like this with similar action, may be attached to the other side of the connecting bar, if greater security be desired.

G Figs. 4 and 7 shows the shape of the two safety cars, which are exactly alike, excepting one (*G*<sup>2</sup> Fig. 7) is twice as thick as the other, and the thicker one has a groove *H* over the key-guard, *k*, of the connecting bar *A*. A notch, *q*, in each of these cars *G* *G*<sup>2</sup> receives one of the studs *m* of the locking car, when unlocked as seen in Fig. 6 and *r* is a long opening for the studs *h* and *i*, of the connecting bar. In size one of these cars *G* is nearly twice as large as the locking-car *B*. One is on each side of the connecting bar *A*. The double-action locking car lays in a cavity of the connecting bar and under the thinnest safety car *G*<sup>2</sup>. The safety cars always move on the double inclined track or way, before described, and in a direction opposite to that of the locking car. They add strength and stability to the locking-car, and prevent the locks being picked.

In the process of locking, the key is turned back, instead of forward as in other locks; the safety-cars rise simultaneously to their utmost height; the double-action locking-car then moves horizontally, a short distance, after which it descends toward the back end of the case upon its inclined track or way formed by studs *h*, and *g*, the safety cars at the same moment descending toward the front end of the case, on the double inclined track or way formed by studs *h* and *i*,

before described, until each reaches its lowest point, and then all three combine in firmly holding both the vibrating or connecting-bar, and bolt fast, as represented in Fig. 8 which shows the bolt as locked—the projection *p* being locked under stud *D* and the safety car *G* having dropped down behind stud *m* which locks the whole together. To unlock the bolt the safety cars *G* must be first raised.

Fig. 5, represents the form of the key. In locking, the aperture *v*, *v*. of the key passes around the guard *k*, of the connecting-bar *A* and the bit *u*, raises the safety car *G*<sup>2</sup> while at the same time the bit *t*, entering the notch *o*, of the double-acting locking car *B* strikes the back side of the notch and moves the locking car *B* at first horizontally and then in a descending backward oblique, or inclined direction, until the projection *p* of the car becomes fast under and against stud *D* and holds the connecting-bar *A* and bolts *c* stationary. In unlocking, a reverse movement is necessary—first raising the safety cars as before stated.

What I claim as my invention and for which I desire to secure an exclusive right by Letters Patent, is this: viz.

I claim the peculiar construction and double action (upon an inclined and horizontal track or way) of the locking car *B* as hereinbefore described; and the combination of the locking car *B* and safety cars *G* *G*<sup>2</sup>, with one another and with the connecting or vibrating bar and bolt *A* as within described, so as to fasten the bolt *C* securely and prevent its being picked.

JOHN P. SHERWOOD.

Witnesses:

W. S. SHERWOOD,  
JOHN NEWTON.