(No Model.)

F. STROH & M. J. McINTOSH.

BOLT.

No. 446,997. Patented Feb. 24, 1891.

Fig. 1.

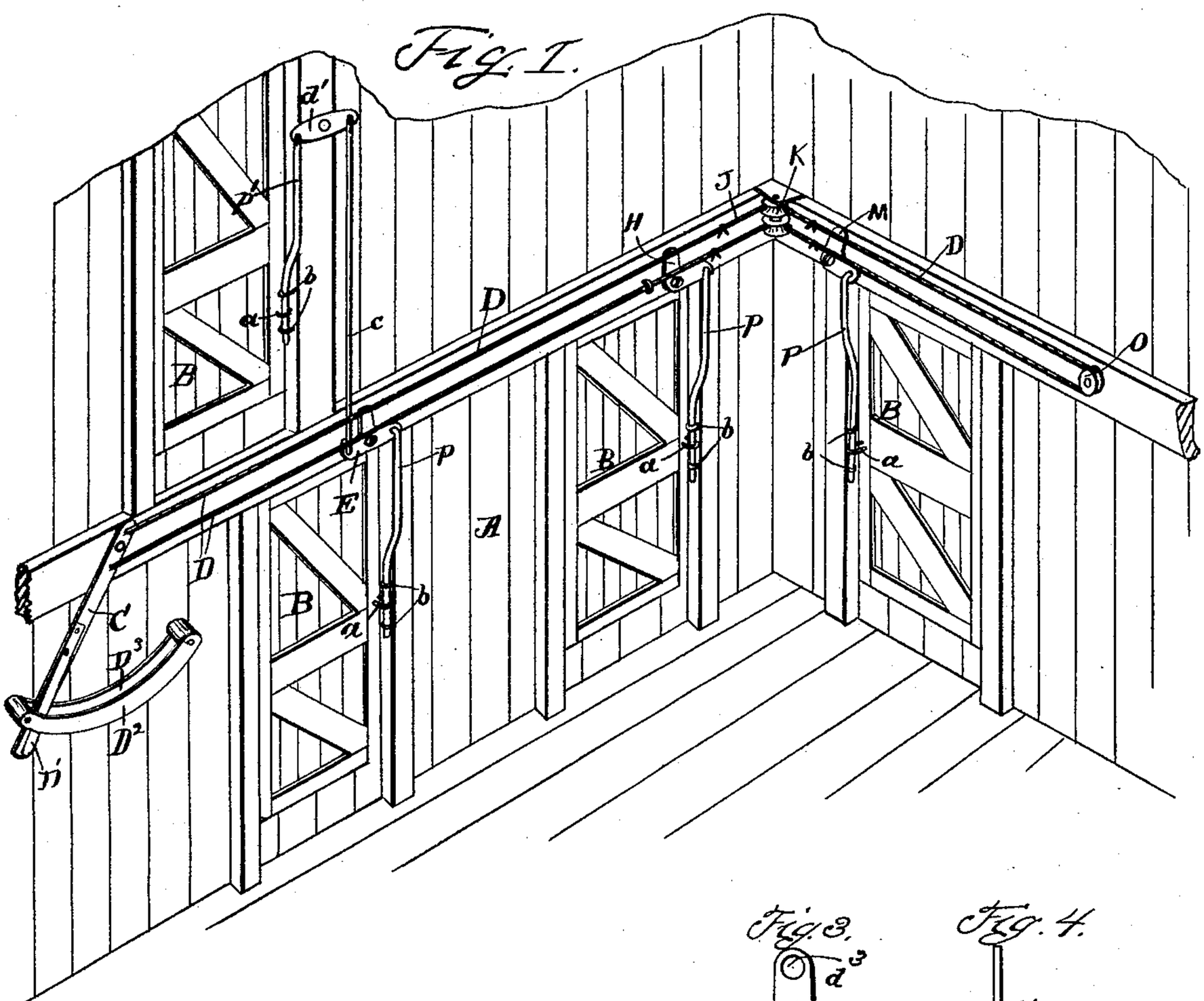


Fig. 2.

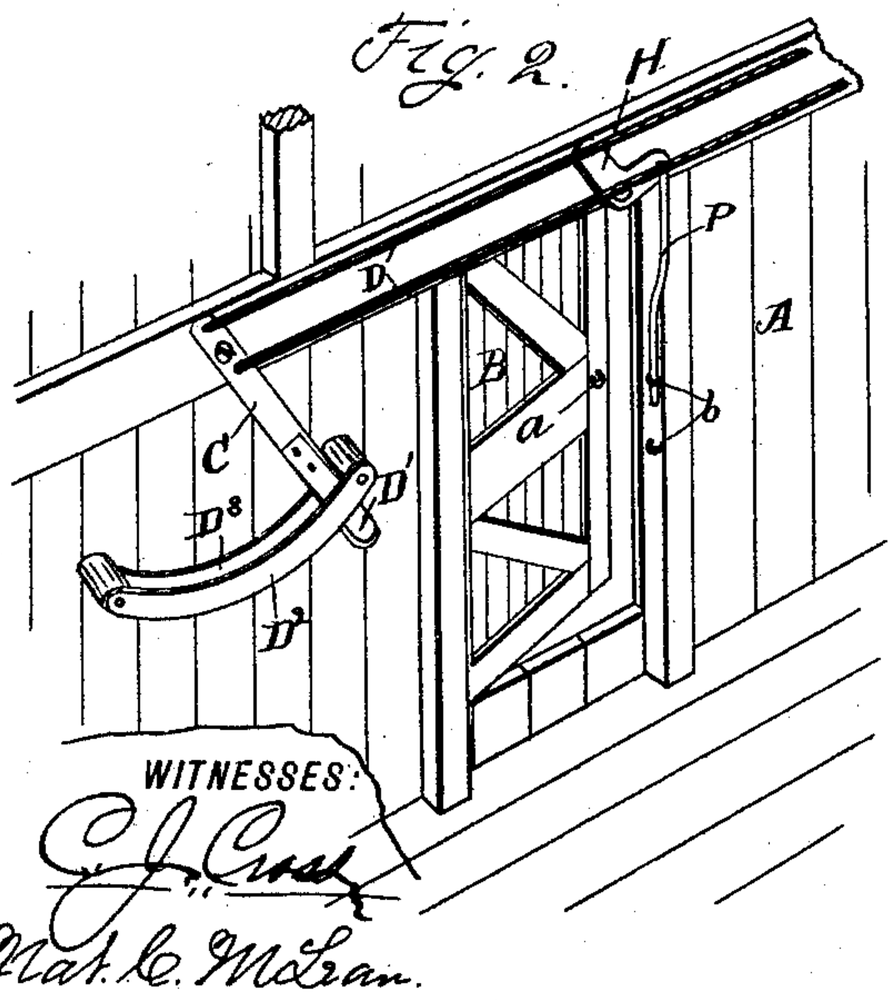


Fig. 3.

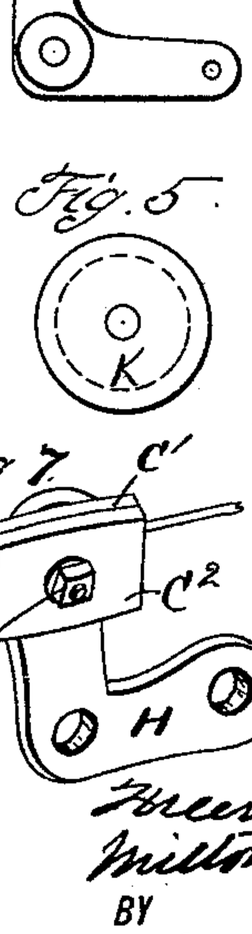


Fig. 4.

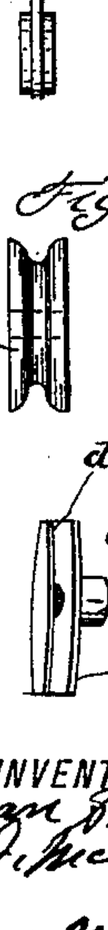


Fig. 5.

Fig. 6.

Fig. 9.

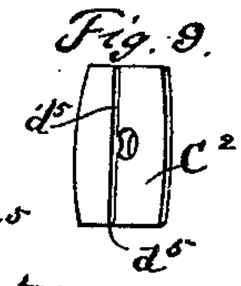
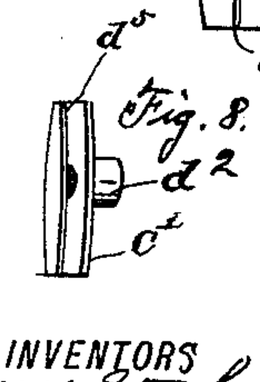


Fig. 7.

Fig. 8.



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BOLT.

SPECIFICATION forming part of Letters Patent No. 446,997, dated February 24, 1891.

Application filed November 19, 1890. Serial No. 371,955. (No model.)

To all whom it may concern:

Be it known that we, FREEMAN STROH and MILTON J. MCINTOSH, citizens of the United States, residing at Navarre, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Bolts; and we 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, and to the letters of reference marked thereon, in which—

Figure 1 is a view showing our improved lock properly applied to a building, showing the wire-clamps removed. Fig. 2 is a view showing the lock as applied to a door and showing the door unlocked. Fig. 3 is a detached view of one of the bell-cranks, showing the wire-clamp removed therefrom. Fig. 4 is an edge view of one of the bell-cranks. Figs. 5 and 6 are views of the grooved pulleys. Fig. 7 is a detached view of one of the bell-cranks, showing the wire-clamp attached thereto. Fig. 8 is a detached view of one of the wire-clamps, showing its post or thimble. Fig. 9 is a detached view of one of the wire-clamps.

The present invention has relation to multiple locks designed and calculated to be used in barns and factories; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents a portion of the building, which in this instance is that of a barn; but it will be understood that our invention can be applied to all classes of buildings having a number of doors which may all be locked at one operation. The doors B are hinged to the building in the ordinary manner, and which doors are provided with staples *a*.

In the drawings one staple is shown upon each door; but it will be understood that two or more staples may be used, if desired.

To the door-casings are attached the staples *b*, which staples are so adjusted and attached that they will come in line with the staples *a* when the doors B are properly closed.

The operating-lever C is pivoted to some part of the building proper and is attached above the lower tier of doors, substantially as illustrated in the drawings.

To the operating-lever C is pivotally attached the wires D. The wire D, which is attached to the top or upper end of the operating-lever C, is connected to the bell-cranks E, H, and M by means of the clamping-blocks C′ and C².

For the purpose of extending the wires D around or past the corner or corners of a building, the chains or cables J are provided, and the wires D connected in any convenient and well-known manner to said chains or cables J. For the purpose of holding the chains or cables J in proper position, the grooved pulleys K are provided and are located substantially as illustrated in Fig. 1. The wire D extends over and around the pulley O, and is brought or extended back to the operating-lever C, and connected to said operating-lever at a point below its pivotal point, substantially as illustrated in Fig. 1.

To the bell-cranks E, H, and M are attached the sliding bolts or bars P. It will be understood that as the operating-lever C is moved in one direction it will move the sliding bolts or bars P, and thereby engage said sliding bolts or bars with the staples *a*, which movement locks the doors B, and when the operating-lever C is moved in the opposite direction it will elevate the sliding bolts or bars P, and thereby disengage the staples *a* and unlock the doors B. It will be understood that the upper staples *b* should be so adjusted that the sliding bolts or bars will not be disengaged therefrom when said sliding bolts or bars are elevated.

When it is desired to apply our invention to doors located in the second or third story or stories of a building, the bell-cranks are formed, as illustrated, by the bell-crank E and the wire or rod *c* attached to said bell-crank, which wire or rod *c* extends upward and is attached to the rock-bar *d*′, to which rock-bar is attached the sliding bolt or bar P′.

The clamping-block C′ is provided with the post or thimble *d*², which post or thimble is received in the aperture *d*³, and the clamping-block C², together with the clamping-block C′, is pivotally connected at the top or upper

ends of the bell-cranks by means of the clamping-bolts d^4 or their equivalents. For the purpose of holding the wire D in proper position, the grooves d^5 are formed in the clamping-blocks C′ and C², said grooves being somewhat smaller than the diameter of the wire D.

In the drawings four doors are shown; but it will be understood that our invention can be applied to any desired number of doors. It will also be understood that a door should be located in the building near the operating-lever C, which door may be provided with an ordinary lock, and after the doors B have been locked the door located near the operating-lever C can be closed and locked.

For the purpose of preventing any accidental movement of the operating-lever C, the spring D′ is attached to said operating-lever C, and is so adjusted that it will press against the bar D^2, and the opposite side of the operating-lever C press against the bar D^3.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a multiple lock, the combination of a series of doors, the operating-lever C, the wires D, the bell-cranks E, H, and M, the staples *a* and *b*, and the sliding bolts or bars P, substantially as and for the purpose specified.

2. The combination of a series of doors, the operating-lever C, provided with the spring D′, the bars D^2 and D^3, the wires D, the clamping-block C′, provided with the post or thimble d^2, the clamping-block C², the clamping-bolts d^4, the sliding bolts or bars P, the staples *a* and *b*, and the bell-cranks E, H, and M, substantially as and for the purpose specified.

3. The combination of a series of doors and series of bell-cranks, the connecting-rod *c*, the rock-bar *d′*, the sliding bolt P′, the wires D, the grooved pulleys K and O, and an operating-lever C, substantially as and for the purpose specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

FREEMAN STROH.
MILTON J. McINTOSH.

Witnesses:
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F. W. BOND.