(No Model.)

J. F. WILLIAMS.

LOCK.

No. 515,390. Patented Feb. 27, 1894.

Fig. 1.

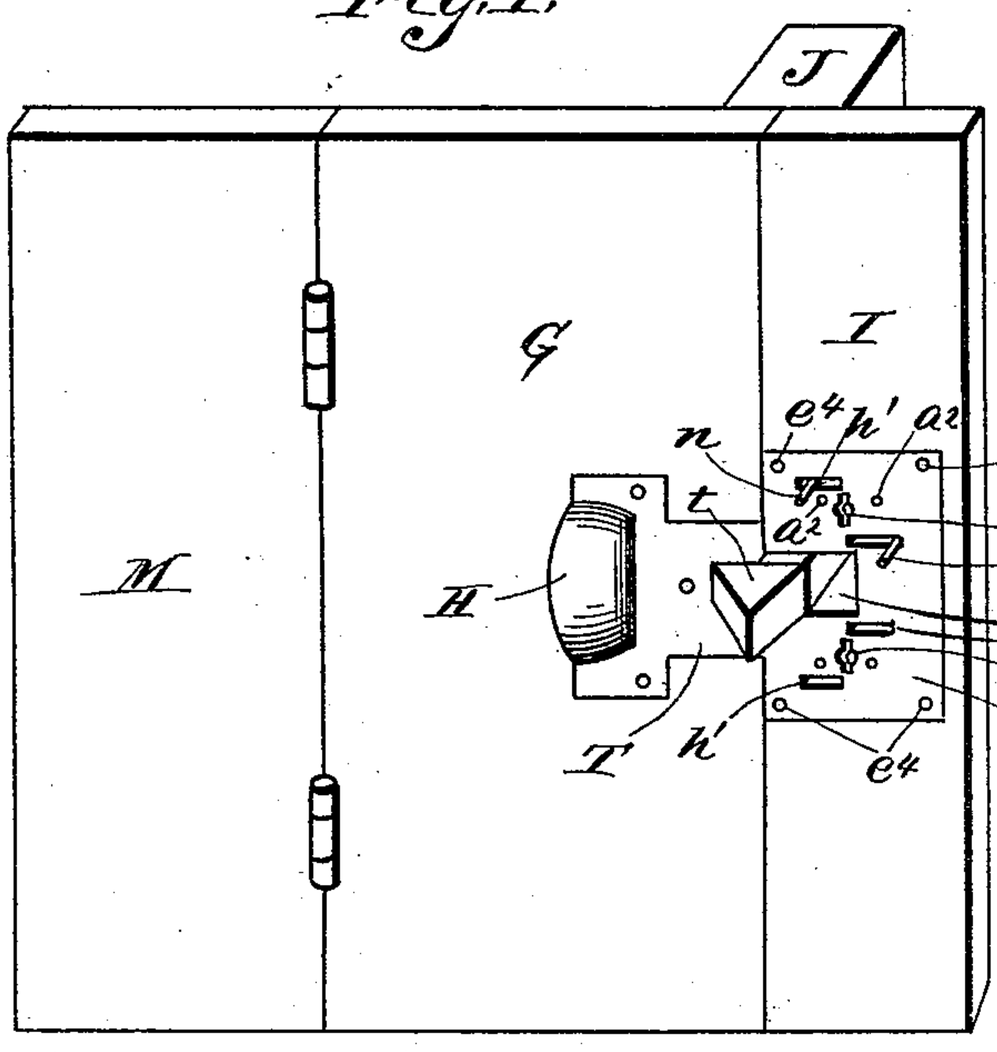


Fig. 2.

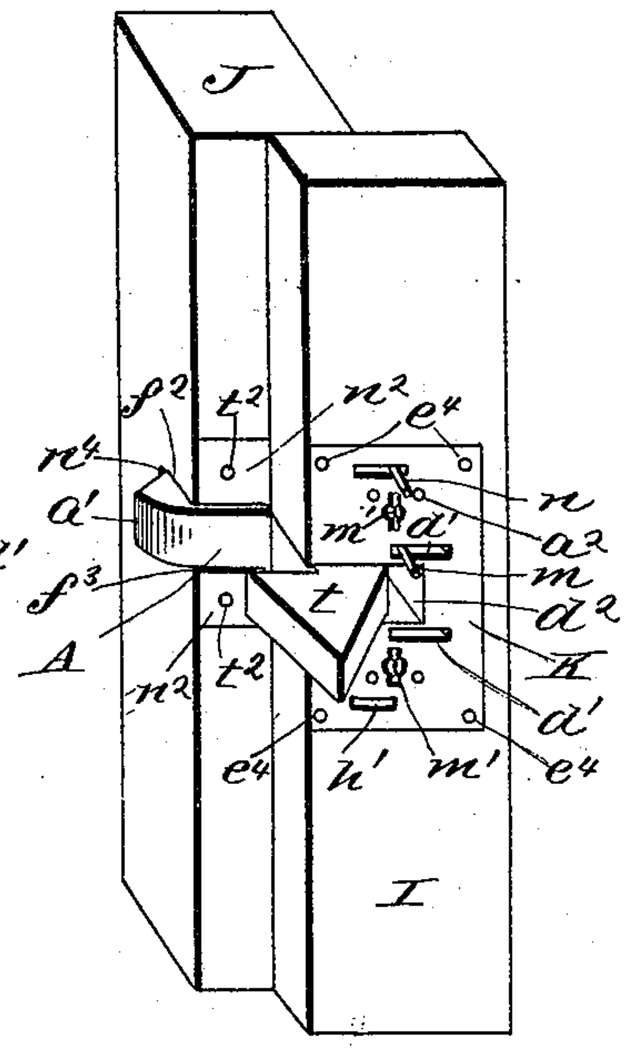


Fig. 3.

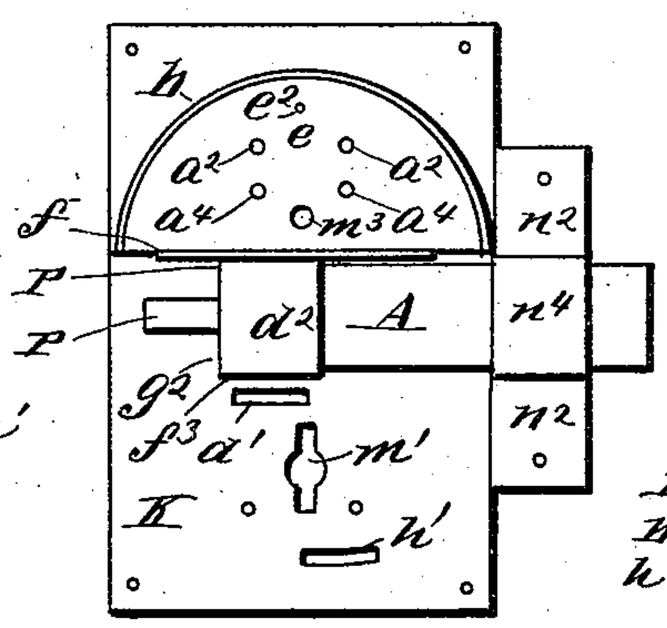


Fig. 4.

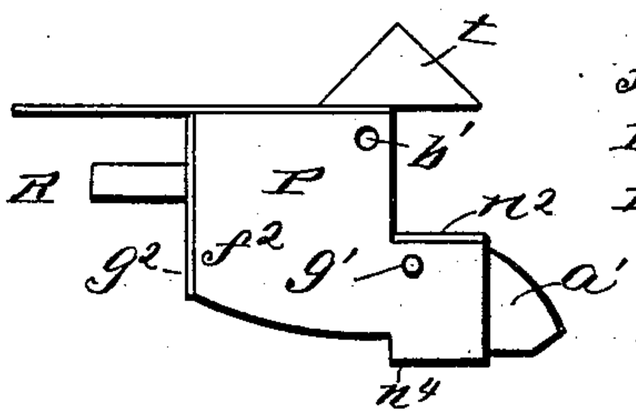


Fig. 5.

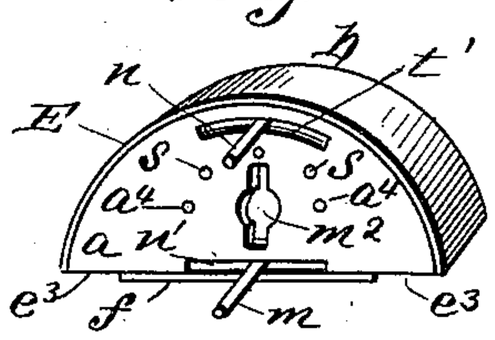


Fig. 6.

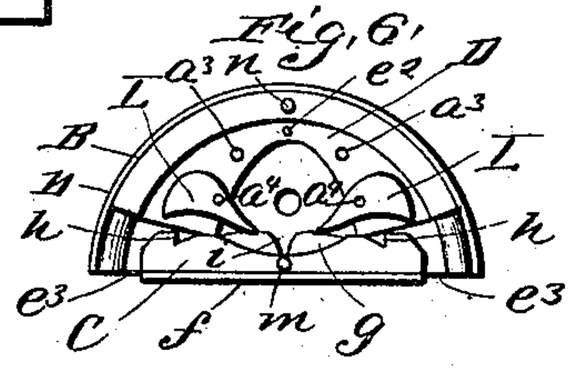


Fig. 11.

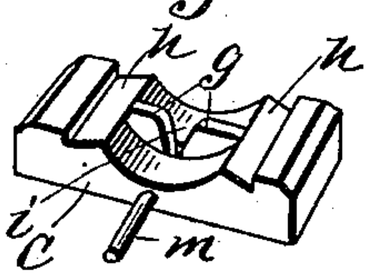


Fig. 7.

Fig. 10.

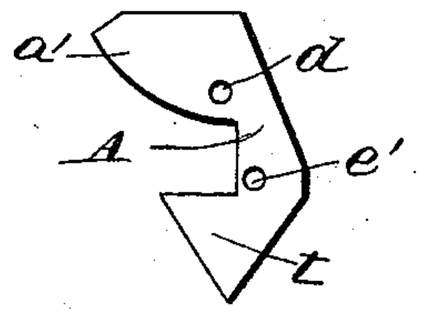


Fig. 9.

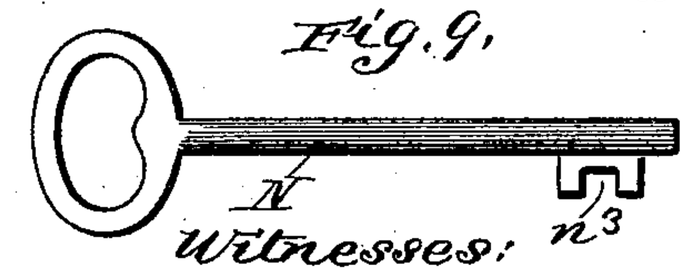
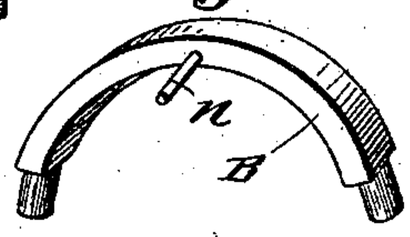


Fig. 8.



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John F. Conway

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By Thomas B. Swan
His Attorney

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN F. WILLIAMS, OF ATLANTIC, IOWA, ASSIGNOR OF ONE-HALF TO PETER E. JOHNSON, OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 515,390, dated February 27, 1894.

Application filed February 16, 1893. Serial No. 462,650. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. WILLIAMS, a citizen of the United States, residing at the city of Atlantic, in the county of Cass and State of Iowa, have invented certain new and useful Improvements in Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in locks and it consists in the peculiar construction and combination of the parts that will be more fully set forth hereinafter and particularly pointed out in the claim.

The objects of my invention are to provide a strong, durable, and springless lock particularly adapted for stables, granaries, coal-houses and other out buildings, and by means of which such buildings can be readily fastened, or locked. I attain these objects by the device illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of the lock applied to a building showing the door locked. Fig. 2 is a perspective view of the lock applied to a building having the door removed. Fig. 3 is a side elevation of the inner side of the lock. Fig. 4 is a top or plan view of the lock having the case containing the locking mechanism removed. Fig. 5 is a perspective view of the case containing the locking mechanism. Fig. 6 is a side elevation of the case containing the locking mechanism having its outer side plate removed, showing the mechanism within. Fig. 7 is a perspective view of the partition plate having the tumblers pivoted thereto. Fig. 8 is a perspective view of the circular locking bolt. Fig. 9 is side elevation of the key. Fig. 10 is a top or plan view of the door fastening. Fig. 11 is a perspective view of the sliding bar.

Similar letters refer to similar parts throughout the several views.

M, represents a portion of the side of a building having hung thereto the door G.

I, is a portion of a door casing, and J, is the door jamb.

H, is a door pull secured to the door.

T, is a metallic plate secured to the door to protect it from the wear of the fastening.

K is a plate secured to the door casing I, by means of the screws e^4, and having the notch or slit d^2, the slots h' h', and d' d', and the key ways m' m'.

P, is a casing made integral with the plate K, and which projects laterally therefrom, and incloses a portion of the door fastening A, and consists of the top plate f^2, the bottom plate f^3, of the same shape as the top plate, the side plate g^2, and the plate or bridge n^4, all of which are made integral.

n^2 n^2, are flanges which project from the casing P, and are made integral therewith, they are secured to the door jamb, by the screws t^2 t^2.

A, is the door fastening having the hook t, and arm a', and the apertures e', and d. It is pivoted to the casing P, by means of the pivot g', which passes through the aperture d.

E, is the case containing the locking mechanism, consisting of the circular top plate b, the side plates a, and e, and the bottom plate f, which is cut away at its ends forming apertures e^3 e^3, for the passage of the ends of the circular bolt B. The plate a, is provided with the slots t', and n', the threaded apertures s s, and the key way m^2, the plate e, has the aperture m^3, for the reception of the inner end of the key.

R, is a lug projecting from the plate g^2, and which enters an aperture in the door casing I, adapted to receive it. The case E, is secured to the plate K, by the screws a^2 a^2, which pass through the plate K, the apertures s s, in plate a, the apertures a^3 a^3, in partition plate D, into plate e.

B, is a circular bolt located between the partition plate D, and the circular plate b, having its ends constructed round, and of suitable size to easily enter the aperture b', in the plate f^2, and the aperture e', in the fastening A. It is provided with the pin n, which projects therefrom, and passes through the slots t', and h', and extends outward beyond

the plate K, and by means of which the bolt can be readily moved with the fingers. The bolt is located in such a position that, when the door is closed, the end of the bolt next to the fastening is situated directly over the aperture b', of the plate f^2, and the aperture e', in the fastening, so that when that end of the bolt is moved downward it enters the aperture e', and locks the fastening.

D, is the partition plate centrally located in the case E, having passing snugly through it the pin e^2, one end of which enters the plate a, and the other end the plate e. The four tumblers L, are pivoted to the opposite sides of the partition plate D, two being pivoted to each end and side of the plate by the pivots a^4 a^4.

C, is a sliding bar which rests upon the plate f, and is provided with the notches h h, and the rib g, having the notch or ward i, it has projecting therefrom the pin m, which passes through the slots n', and d', and extends outward beyond the plate K, and by means of which the bar can be slid with the fingers.

N, is the key used in connection with the lock.

The operation of my device is as follows: When the circular bolt is in the position as shown in Fig. 6, the door if closed can be readily opened by pushing the hooked end of the fastening from the edge of the door with the fingers. If the door is open it can be fastened by simply closing it, as the door glides past the hooked end of the fastening and strikes the arm a', which forces the hook over the edge of the door and fastens it. Then if it is desired to lock the door it can be done by pushing the pin n, to the end of the slot h', next to the door, which forces the end of the circular bolt next to the door into the aperture e', of the fastening and locks it, and by pushing the pin to the other end of the slot the bolt is removed from the fastening and unlocks it, but when the end of the bolt is in the aperture e', of the fastening as above explained, if it is desired to lock the fastening more securely it can be done by pushing the pin m, to that end of the slot d', the farthest from the door, which forces the end of the bar C, under that end of the circular bolt the most remote from the door, and permits the two tumblers the farthest from the door to enter the notches h, adapted to receive them and lock the bar C, with its end under the end of the bolt, which to unlock the key N, is inserted in the lock and turned half way around, which movement of the key disengages the tumblers from the notches in the bar and forces the bar from under the end of the bolt B. The notch n^3, in the key is made of suitable size to permit the rib g to enter it when the key is turned in the lock.

The lock is constructed so that it is reversible, and if it is desired to reverse it, the case E, has to be secured to the other end of the plate K.

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

The fastening A, pivoted to the door casing or jamb, the circular bolt B, supported by a suitable frame and located so that the end of the bolt can be made to engage with the fastening and lock it, the sliding bar C, resting upon a suitable support and adapted to pass under one end of the circular bolt when the other end of the bolt is engaged with the fastening, and the tumbler L, pivoted above the sliding bar and adapted to enter a notch in the bar when it is under the end of the bolt whereby the bar is locked, all combined substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. WILLIAMS.

Witnesses:
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LYDIA A. MEYERS.