W. J. NELSON.

DOOR LOCK.

APPLICATION FILED JUNE 12, 1915.

1,167,011.

Patented Jan. 4, 1916.

Fig. 1

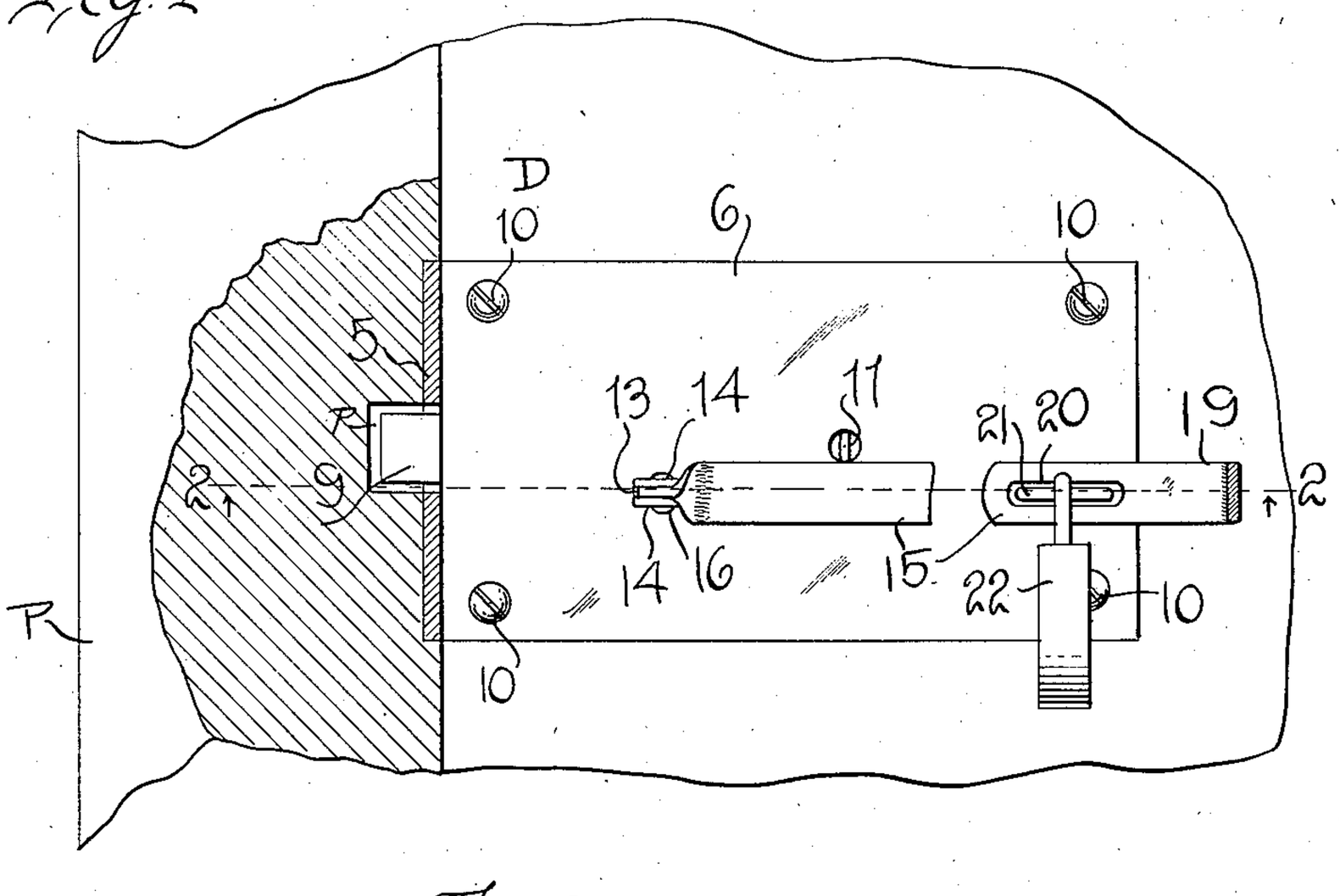


Fig. 2

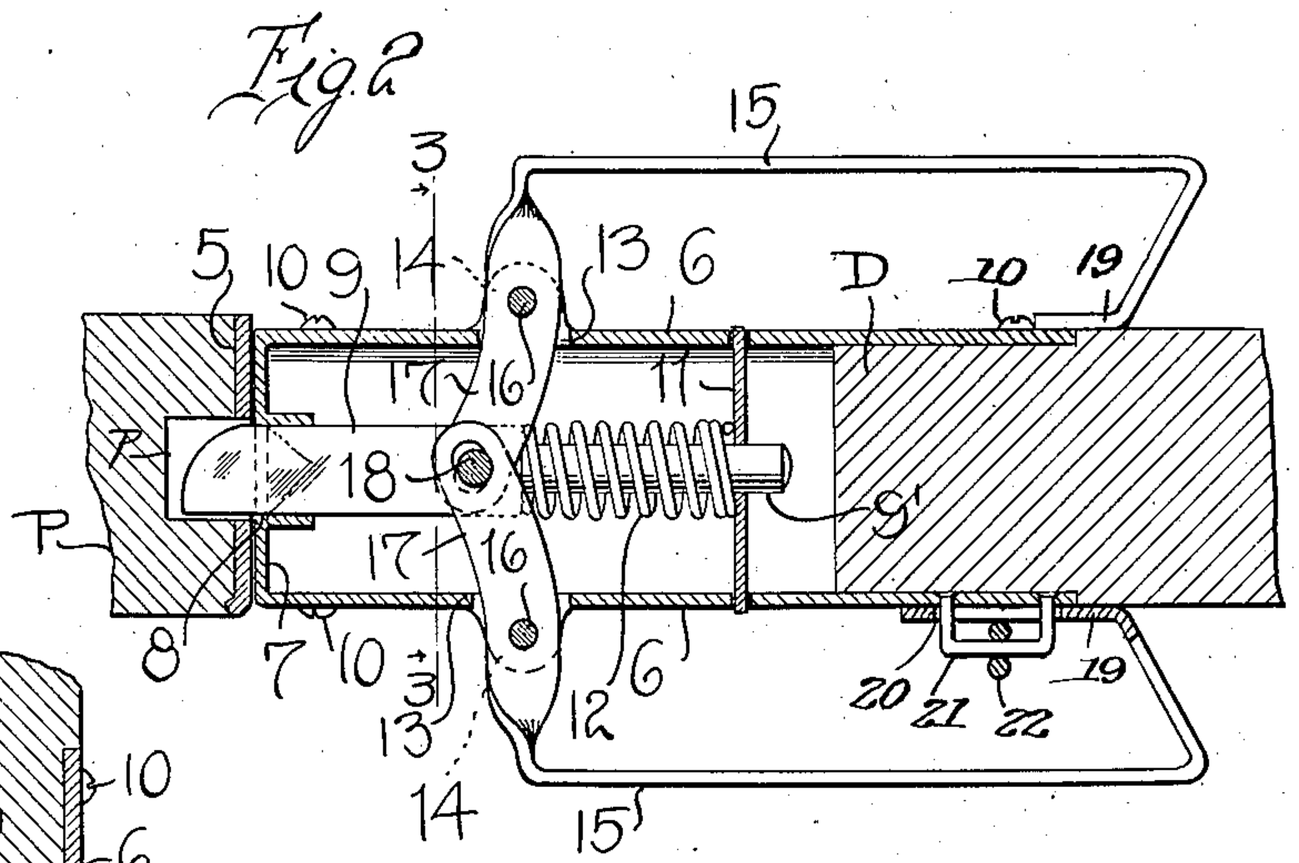
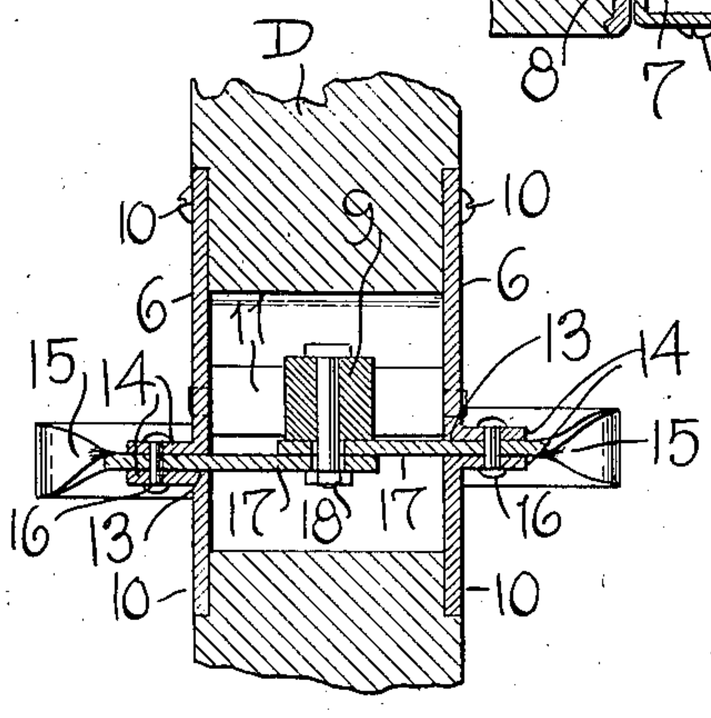


Fig. 3



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UNITED STATES PATENT OFFICE.

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DOOR-LOCK.

1,167,011. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed June 12, 1915. Serial No. 33,774.

To all whom it may concern:

Be it known that I, WILLIAM J. NELSON, a citizen of the United States, residing at Brandon, in the county of Minnehaha and State of South Dakota, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved door lock and more particularly to a lock for barn doors, the invention having for its primary object to produce a device of this character which is exceedingly simple in its construction, highly reliable and serviceable in practical use and which may be manufactured at relatively small cost.

The invention has for one of its more particular objects to provide a latch or lock for barn doors provided with means whereby the latch bolt may be readily retracted from either the inner or outer side of the door and the door opened.

It is another and more specific object of the invention to provide a lock of the above character embodying a spring pressed latch bolt mounted in suitable guides provided in the body plate, handle members pivotally mounted adjacent one of their ends on opposite sides of the body plate and having inwardly projecting end portions pivotally connected to the bolt intermediate of its ends, whereby the latch bolt will be retracted when either of the handle members is pulled in one direction.

With the above and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which,

Figure 1 is a side elevation showing my improved lock applied to a barn door, the door post being in section; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Referring in detail to the drawing, D indicates a barn door and P the vertical post at one side of the door opening. This post is provided with a suitable bolt receiving socket, indicated at *p*, and to the face of the post surrounding the socket, the keeper plate, indicated at 5, is suitably secured.

My improved lock includes a body plate of elongated U-shaped form in plan having the substantially parallel side portions 6 and the intermediate connecting portion 7, the latter being provided with a rectangular opening 8 in which the outer end of the lock bolt 9 is movably engaged. It will be understood that the edge of the door D is suitably mortised and the parallel portions 6 of the body plate are countersunk in the opposite side faces of the door and secured thereto by means of screws or analogous fastening elements 10. A transversely disposed plate 11 is arranged between the side portions 6 of the body plate and has reduced lugs on its ends engaging over the opening in said body plate. This transverse plate 11 is also centrally provided with a circular opening to receive the cylindrical end portion 9′ of the locking bolt. Upon said bolt, between the plate 11 and the end of the rectangular body portion of the bolt, the spring 12 is engaged, said spring normally acting to force the bolt outwardly.

The side portion 6 of the body plate is provided with short longitudinal openings, indicated at 13, and spaced ears 14 project outwardly from the body plate above and below said openings. A pair of elongated loop-shaped handle members 15 are provided, said members being arranged upon opposite sides of the body plate of the lock and being pivotally mounted at one of their ends upon the pins 16 which connect the respective pairs of spaced ears 14. Upon the pivoted end of each handle member, an angularly disposed extension 17 is formed, and these handle extensions project inwardly from the opposed sides of the body plate of the lock and are connected by means of the pivot pin 18 to the lock bolt 9 at a point intermediate of its ends. The other end of each handle member is angularly bent, as at 19, and adapted to engage the side of the body plate and limit the movement of said handle member in one direction. This end portion 19 of the handle member on the outer side of the door is formed with a slot 20 to receive a staple 21 fixed to the body plate of the lock. This staple is adapted to be engaged by the hasp of a padlock, indicated at 22, whereby movement of the handle member is prevented and the bolt 9 retained in its effective locking position when the door is closed.

From the foregoing description, taken in connection with the accompanying drawing, the construction and manner of operation of the device will be readily understood.

When it is desired to retract the locking bolt from either the inner or outer side of the door, one of the handles 15 is simply pulled outwardly so that the angular extension 17 is moved to force the bolt inwardly against the action of the spring 12, thus removing the outer end of said bolt from engagement with the keeper plate 5. The door may then be readily swung to its open position. When the door is forced to its closed position in the door opening, the outer curved end of the locking bolt rides over the face of the keeper plate 5 and into the opening thereof and the socket formed in the door post P. When it is desired to prevent the locking bolt from being retracted, the padlock is engaged with the staple 21 in the manner above stated, to prevent movement of the handle member. It will thus be seen that I have produced a combined latch and lock for barn doors which is exceedingly simple in its construction and highly convenient and serviceable in practical use.

While I have shown and described the preferred construction and arrangement of the several elements employed, it is manifest that the device is susceptible of considerable modification therein and I, therefore, reserve the privilege of resorting to all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus fully described my invention, what I desire to claim and secure by Letters Patent is:—

A lock of the character described including an elongated U-shaped body plate adapted to inclose a mortise in a door, the parallel side portions of the plate being secured to the opposite faces of the door, a transversely disposed bearing plate having its extremities engaged in the parallel portions of the body plate and constituting a brace between said parallel portions of the plate, a spring pressed bolt having a cylindrical end portion slidably engaged in the bearing plate and a rectangular end portion slidably engaged in the intermediate portion of said body plate, handle members having portions normally disposed in parallel relation to the ends of the body plate and spaced therefrom, each of the handle members also having an angular end portion extending through the body plate and pivotally mounted therein, the extremities of the angular portions of the handle members being operatively connected to said bolt.

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

WILLIAM J. NELSON.

Witnesses:
O. T. Frislie,
L. D. Kepple.