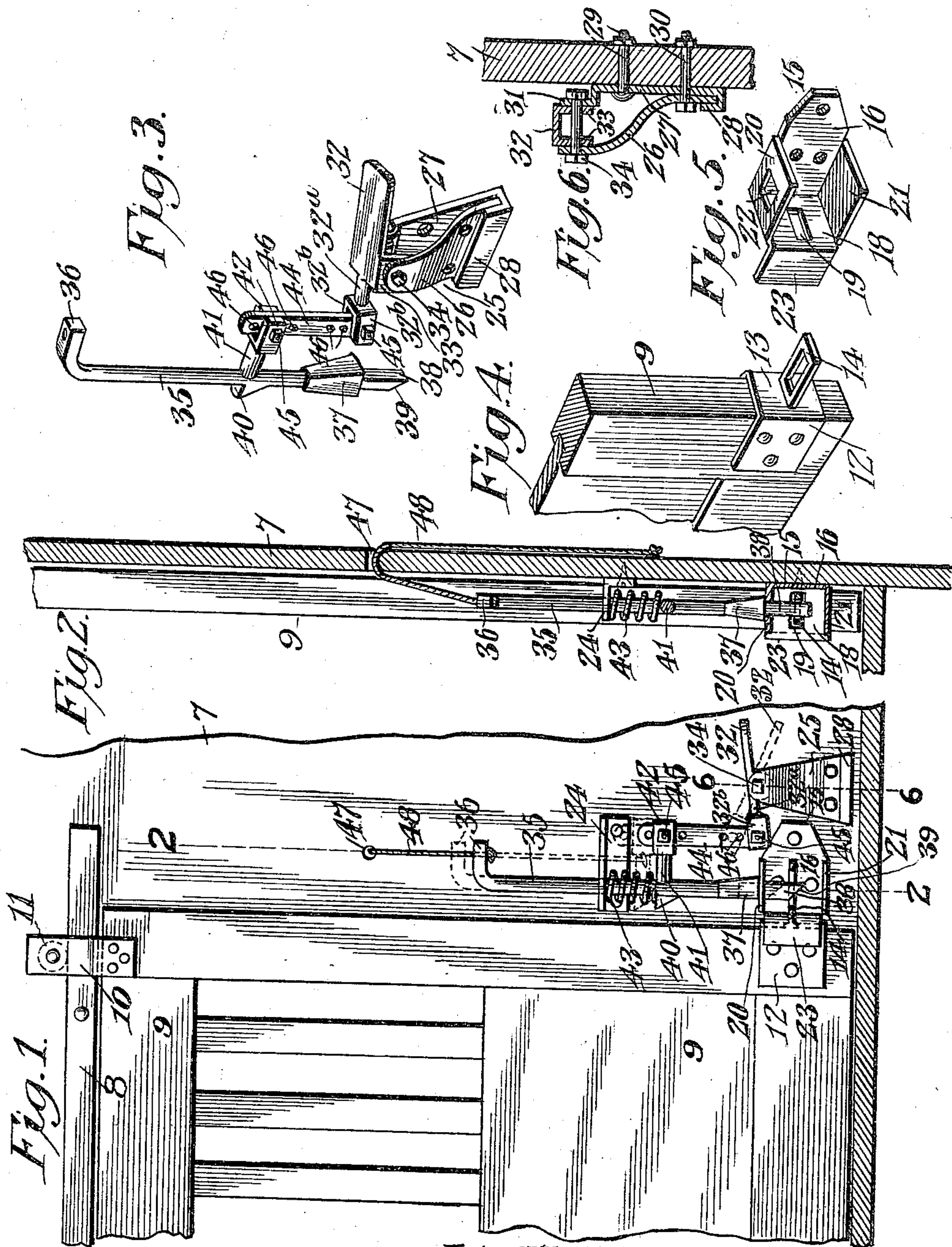


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BARN DOOR FASTENER.
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Patented Aug. 9, 1910.



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BARN-DOOR FASTENER.

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To all whom it may concern:

Be it known that I, JOHN B. WELLER HOLE, a citizen of the United States, residing at Versailles, in the county of Darke and State of Ohio, have invented a new and useful Barn-Door Fastener, of which the following is a specification.

This invention relates to an improvement in locks and operating means therefor, which is especially designed for use in connection with barn doors of the sliding type, although of course the invention is not limited thereto, as it can be employed with equal success with sliding doors in other arts.

The principal object of this invention is to provide a device of the class described, in which a foot-operating means is employed on the inside of the barn for disengaging the latch from its operative position.

Another object of the invention is to provide a means connected to the latch, and extending through to the outside of the barn, for disengaging the latch from its operative position.

A further object of this invention is to provide a keeper, which is provided with a means adapted to engage the inner side of the door adjacent to the said keeper for preventing lateral movement of the door, when closed.

A still further object of the invention is to provide a device of the class described, which is simple in construction, easy of operation, is reversible so that it can be employed on either side of a door, and is cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size, and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a detail front elevation showing my invention associated with a sliding door. Fig. 2 is a vertical transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of the foot-lever and bolt-

latch. Fig. 4 is a detail perspective view of the lower end of the door, and showing the latch seat secured thereto. Fig. 5 is a perspective view of the keeper, and Fig. 6 is a detail vertical transverse sectional view taken on the line 6—6 of Fig. 1.

Like reference numerals designate corresponding parts in all the figures of the drawing.

Referring to the drawing, the reference numeral 7 designates a wall of a building. A horizontal track 8 is secured thereto for supporting a sliding door 9, by means of brackets 10 and rollers 11, all of which is of ordinary construction and forms no part of my invention.

My invention comprises a U-shaped bracket 12 which is secured to the lower front edge of the door 9 by bolts or other suitable detachable means. Integral therewith, and extending from the connecting portion 13 of the said U-shaped bracket, is an eye 14 which is preferably rectangular in shape and forms a latch seat.

Secured to the wall 7 of the building and parallel with the bracket 12, is a keeper which is designated as a whole by the numeral 15. This keeper comprises a back 16 having a plurality of holes formed therein through which bolts or other suitable detachable fastening means may be passed for securing the said keeper to the wall of the building. Integral with and forwardly extending from the end nearest the door is a flange 18, which is centrally provided with a rectangular opening 19, through which the eye 14 is adapted to pass. Upper and lower plates 20 and 21 respectively connect the end flange 18 and the back 16, the upper plate 20 being centrally provided with a rectangular opening 22. Forwardly extending from the end flange 18, in a line parallel with the back 15, is a flange 23, which is adapted to engage the outer leg of the U-shaped bracket 12, and thereby prevent outward movement of the lower portion of the door 9 when the same is closed.

A bracket 24 is arranged in spaced relation to, and directly above the keeper 15, and is constructed of substantially L-shaped sheet metal, and is provided in its horizontal leaf with a vertical opening. The bracket is detachably secured to the wall 7 of the building by bolts or other suitable detachable fastening means.

A lever-supporting bracket 25 is secured to the wall 7 of the building in close proximity to the keeper 15. This bracket is preferably composed of spaced members 26 and 27, which are preferably formed of sheet metal, the member 27 bearing against the wall 7 and having its lower end upturned to form a flange 28, which is adapted to receive the lower end of the member 26. The upper end of the said member 26 is preferably outwardly curved. A fastening bolt 29 is passed through the member 27 of the bracket, and another bolt 30 is passed through the lower end of each member and the wall, and thereby retains the said members in their proper relation. The upper end of the member 27 is provided with an upstanding and inset flange 31. A foot-lever 32 is provided with depending ears 33—33 which are arranged between the upper ends of the members 26 and 27 of the bracket, and are fulcrumed thereon by means of a pin or bolt 34. Extending forwardly from the said foot lever 32, is a reduced shank member 32^a which has an enlarged bifurcated free end consisting of spaced ears 32^b.

The invention further comprises a bolt-latch 35, having its upper end 36 preferably bent at right-angles, and its lower end provided with an enlarged portion 37 which terminates in a reduced portion or latch 38, the said reduced portion having a chamfered end 39. Intermediate of the said enlarged portion 37 and the bent end 36, is an integral offset stop 40. Extending diametrically opposite therefrom is a short arm 41 having a bifurcated end forming spaced ears 42—42. The bolt-latch 35 is passed through the vertical opening in the L-shaped bracket 24, and the latch 38 is seated within the opening 22 of the keeper, the chamfered end 29 of the said latch being arranged toward the eye 14 of the bracket 13 which is carried by the door. A coiled spring 43 is arranged around the bolt-latch between the bracket 24 and the offset stop 40. A link 44 is pivotally connected to the spaced ears 32^b of the foot-lever, and to the spaced ears 42 of the bolt-latch, by means of bolts 45—45 or other suitable detachable fastening means. The link 44 is provided with a plurality of spaced openings 46, whereby the foot-lever can be adjusted and the vertical movement of the bolt-latch regulated at will. An opening 47 is formed in the wall 7 of the building directly above, and in spaced relation to the end 36 of the bolt-latch. A cord 48 is secured to the bent end 36 of the bolt-latch, and is passed through the said opening 47 to the outside of the building.

From the foregoing, it will be readily apparent that should a person be desirous of opening the door from the inside, he can readily press the end of the foot-lever 32 downwardly with his foot, and thereby raise

the bolt-latch against the tension of the coiled spring 43 and disengage the latch 38 from the eye 14 carried by the door. Upon the closing of the door, the eye 14 will be automatically engaged by the latch 38. Should, however, a person be on the outside of the building, it is only necessary for him to pull the cord 47, which will immediately raise the bolt-latch 35 from its engagement with the eye 14 carried by the door. It will be obvious that this construction is especially advantageous to persons who are on the inside of the building, and have their hands employed in carrying various articles. It will furthermore be noted that the elements of the latch are readily detachable and reversible, so that the same can be applied to the other side of a door, if so desired.

What I claim is:—

1. In combination with two relatively movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, a spring actuated bolt-latch associated with the keeper and adapted to engage the said eye, and separate foot and hand operating means respectively connected to the bolt-latch for disengaging the same from its operative position.

2. In combination with a fixed and a movable member, of an eye carried by the movable member, a keeper for receiving an eye carried by the fixed member and provided with a guide adapted to engage and prevent lateral movement of the movable member, a spring actuated bolt-latch associated with the keeper and adapted to engage the said eye, and separate foot and hand operating means respectively connected to the bolt-latch for disengaging the same from its operative position.

3. In combination with two relatively movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, a bracket carried by the last-mentioned member and arranged above the keeper, a bolt-latch having one end arranged within the keeper and adapted to engage the said eye, the other end extending through the said bracket, an offset stop extending from the bolt-latch and arranged intermediate of the keeper and bracket, a coiled spring arranged around the bolt-latch between the said stop and bracket, and separate hand and foot operating means for disengaging the bolt-latch from its operative position.

4. In combination with two relatively movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, the said keeper comprising a back having a forwardly extending end flange which is provided with an opening adapted to receive the said eye, a plate connecting the said flange and the back and provided with an

opening, a spring actuated bolt-latch adapted to pass through the opening of the plate and adapted to engage the said eye, and separate foot and hand operating means for
5 disengaging the bolt-latch from its operative position.

5. In combination with two relatively movable members, of an eye carried by one of the members, a keeper for receiving the
10 eye carried by the other member, a spring actuated bolt-latch associated with the keeper and adapted to engage the said eye, an outwardly extending projection integral with the bolt-latch, a bracket carried by the
15 last-mentioned member for pivotally supporting a foot-lever, and an adjustable link connecting the projection of the bolt-latch to the foot-lever.

6. In combination with two relatively
20 movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, a bracket carried by the last-mentioned member and arranged above the keeper, a bolt-latch hav-
25 ing one end arranged within the keeper and adapted to engage the said eye, the other end extending through the said bracket, an offset stop extending from the bolt-latch and arranged intermediate of the keeper
30 and bracket, a coiled spring arranged around the bolt-latch between the said stop and bracket, and foot operating means for disengaging the bolt-latch from its operative position.

35 7. In combination with two relatively movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, the said keeper comprising a back having a forwardly extending end flange which is provided with an opening adapted to receive
40 the said eye, a plate connecting the said flange and the back and provided with an opening, a spring actuated bolt-latch arranged within the opening of the plate and adapted to engage the said eye, and foot
45 operating means for disengaging the bolt-latch from its operative position.

8. In combination with two relatively
50 movable members, of an eye carried by one of the members, a keeper for receiving the eye carried by the other member, the said keeper comprising a back having a forwardly extending end flange which is provided with an opening adapted to receive
55 the said eye, a plate connecting the said flange and the back and provided with an opening, a bracket carried by the last-mentioned member arranged above the keeper
60 and provided with a vertical opening, a bolt-latch having one end arranged within the opening of the plate and adapted to

engage the said eye, the other end extending through the vertical opening of the said bracket and an offset stop extending from
65 the bolt-latch and arranged intermediate of the keeper and bracket, an outwardly extending projection integral with the bolt-latch, a coiled spring arranged around the bolt-latch between the stop and the bracket,
70 a bracket carried by the last-mentioned member for pivotally supporting a foot-lever, and an adjustable link connecting the projection of the bolt-latch to the said foot lever.
75

9. In combination with a keeper adapted to receive an eye, of a spring actuated bolt-latch associated therewith, and separate foot and hand operating means respectively
80 connected to the bolt latch for disengaging the same from its operative position.

10. In combination with a keeper adapted to receive an eye, said keeper comprising a back having a forwardly extending end flange which is provided with an opening
85 adapted to receive the said eye, a plate connecting the said flange and the back and provided with an opening, of a spring actuated bolt-latch arranged within the opening of the plate and adapted to engage the
90 said eye, and separate foot and hand operating means for disengaging the bolt-latch from its operative position.

11. In combination with a bracket adapted to be secured to the lower front edge
95 of a sliding door and having an integral eye extending from the connecting portion thereof of the said bracket, of a keeper for receiving the eye adapted to be secured to the wall of a building, said keeper comprising a back having a forwardly extending
100 end flange which is provided with an opening adapted to receive the said eye, the said end flange terminating in a forwardly extending guide adapted to engage the door
105 and prevent lateral movement thereof when the same is closed, a plate connecting the said flange and the back and provided with an opening, a spring actuated bolt-latch arranged within the opening of the plate and
110 adapted to engage the said eye, means connecting the bolt-latch for operating the same extending through the wall of the building to the other side, and a foot-lever adjustably
115 connected to the bolt-latch for disengaging the same from its operative position.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN B. WELLER HOLE.

Witnesses:

I. F. LANICH,
F. M. HOUSER.