(No Model.)

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A. ADAMS.

LATCH.

No. 595,424. Patented Dec. 14, 1897.

Fig. 1.

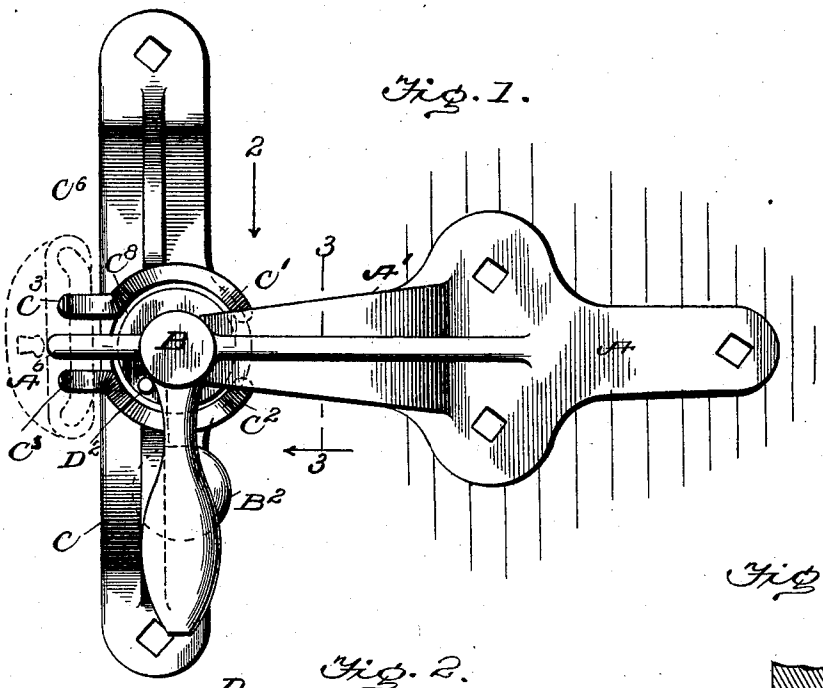
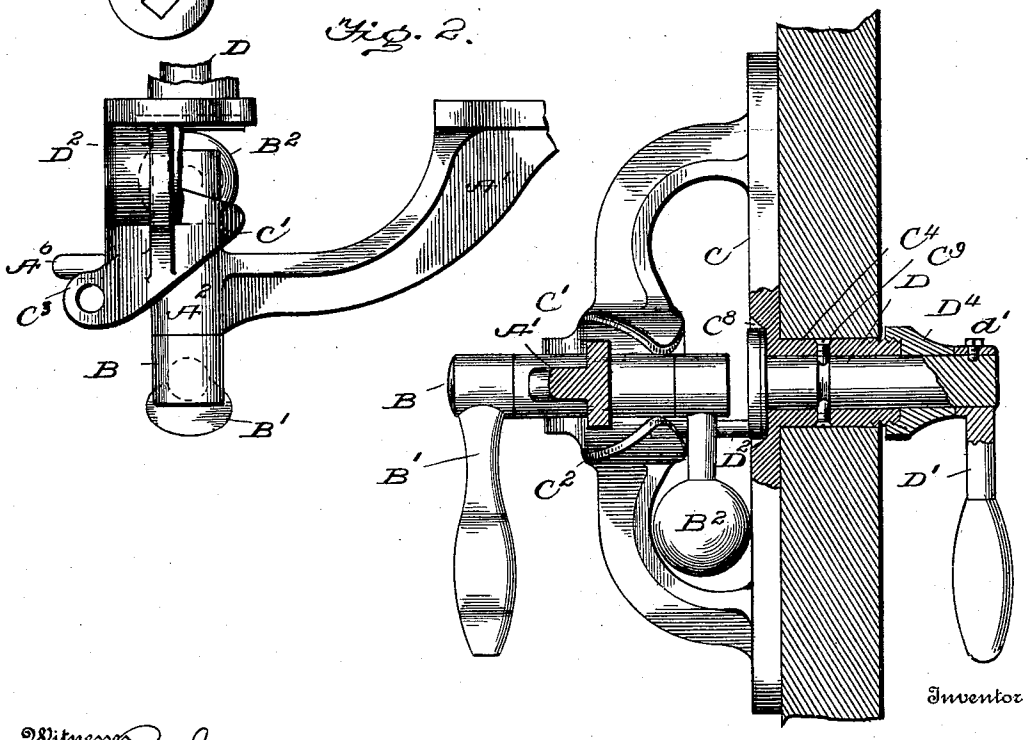


Fig. 3.

Fig. 2.



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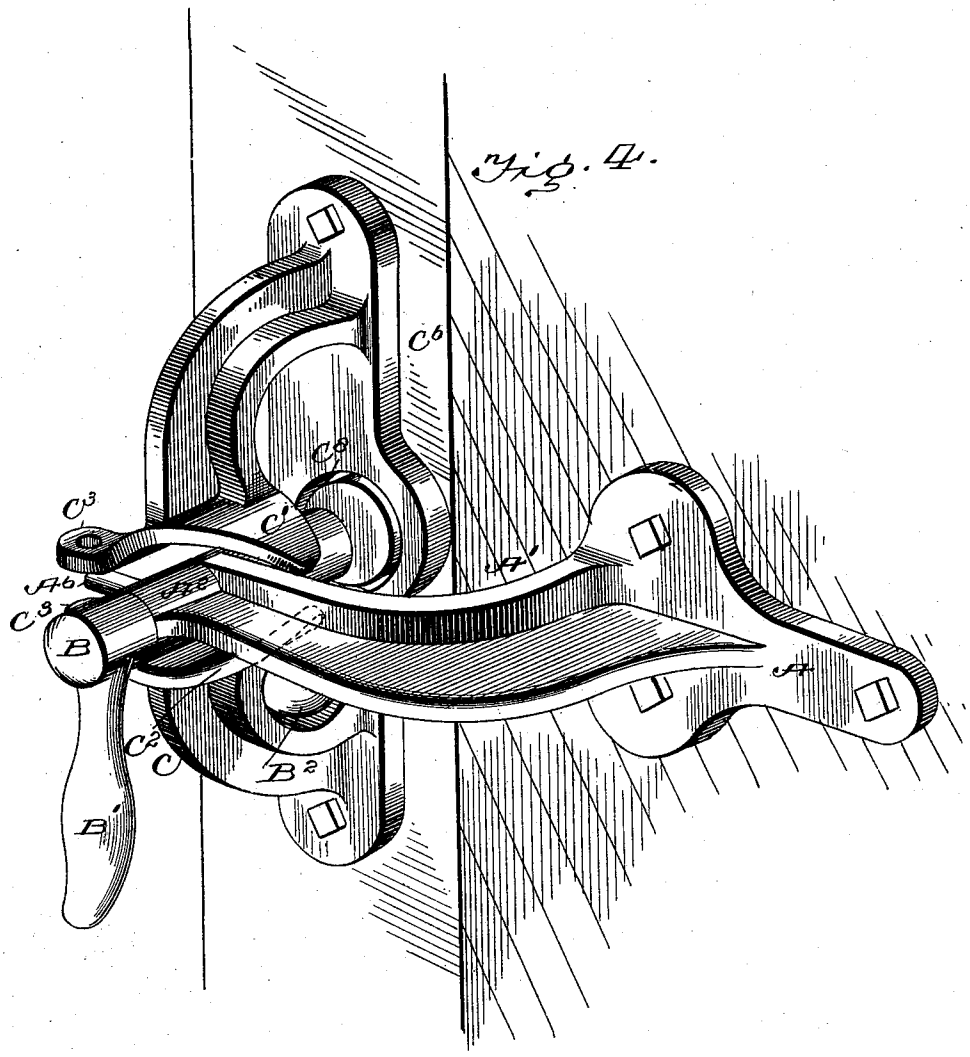
(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.



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UNITED STATES PATENT OFFICE.

AUSTIN ADAMS, OF NEW YORK, N. Y.

LATCH.

SPECIFICATION forming part of Letters Patent No. 595,424, dated December 14, 1897.

Application filed April 9, 1897. Serial No. 631,454. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN ADAMS, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented a certain new and useful Latch, of which the following is a specification.

My invention relates to appliances designed for purposes of fastening movable articles—as, for example, doors, covers, &c.—and of automatically locking the same, and also to means whereby the said movable articles may be wedged or drawn tight to their seat or closed position; and it has for its object the provision of a device simple in construction, inexpensive, and readily applied and operated and also efficient in practical use.

To attain the desired end, my invention consists in the construction and arrangement of parts hereinafter described.

In the drawings which form a part of this specification, Figure 1 represents a front elevation of a fastener constructed according to my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a view in detail, showing a side elevation, partly in section, of my fastener and releasing device, taken on the line 3 3, Fig. 1. Fig. 4 is a perspective view of the same.

Like letters of reference indicate like parts in all the views.

A represents a plate constructed and arranged to be bolted or otherwise secured to the movable article to be fastened, as a door, and provided with a forwardly-projecting arm A′, carrying at approximately a right angle to the same a horizontal tubular bearing A^2, through which passes the shaft B, which arm is enlarged on opposite sides of the same in order to abut against the said bearing. The shaft B carries at its opposite extremities an outer operating-handle B′ and an inner weighted lever B^2 and is constructed and arranged to turn freely in the tubular bearing A^2. The said arm A′ projects a distance beyond the edge of the door, &c., in order that when the same is closed the preferably weighted lever B^2 will engage a retaining device consisting of a bracket or base-plate C in vertical line with two forwardly-projecting jaws C′ C^2. I also ordinarily provide my retaining means with an additional similarly-formed base-plate C^6, also in vertical line with the said jaws. The said base-plates are constructed and arranged to be bolted or otherwise secured to the stationary part, as a door-casing, adjacent to the said movable article. The object for which I have constructed the retaining means as described is to utilize it for narrow doors or other jambs wherewith no other construction of base-plate is available for purposes of fastening the same, and the advantage of the same consists also in the fact that there is no tendency in practical use of the said retaining means working loose, as the strain is practically in line with the fastening devices of said retaining means. This plate C is provided with two forwardly-projecting jaws C′ C^2, facing the projecting arm A′, the two jaws C′ C^2 becoming narrowed toward their extremities, which approach each other. As the door is closed the weighted lever B^2 will engage the lower jaw C^2 and will ride upon the inclined edge of the same, thus gradually turning the shaft B until the lever B^2 assumes a horizontal position, whereupon the said weighted lever will pass between the jaws C′ C^2 and then fall by gravity behind the jaw C^2. The door, &c., is now locked by reason of the jaw C^2 being located between the handle B′ and the weighted lever B^2, and it will be noted that the locking of the same has been accomplished entirely automatically solely by pushing the door, &c., to a closed position.

In order to wedge or effect an air-tight fastening, I now press the depending handle B′ to the left, whereupon the weighted lever B^2 will be moved still farther along the inclined inner edge of the lower jaw C^2, whereupon the door, &c., will be drawn with great force toward and rigidly held very tightly to the casing, &c.

In cases where my fastening device is used on a door of a compartment, &c., to which application of my latch this specification is particularly related, I provide means for opening or unlocking the same from the inside by providing one of the members of my latch with unlocking means which forms a permanent part thereof, as in the present instance, by constructing the keeper member with an unlocking device, as follows: A shaft D, supported by a bearing rising from the plate C,

carries at its extremities a handle D', secured to the same by the screw d', and a crank D^2, rigidly secured to the said shaft D. After a hole has been bored in the jamb the member C is screwed to the same, the shaft D passing through the said orifice. By means of the use of the set-screw d' the handle D' may be located at any desired point along the shaft D, which is ordinarily longer than the thickness of the jamb, thus rendering my device capable of being adjusted to door-jambs of any thickness. The crank D^2 is constructed and arranged to engage with the weighted lever B^2, and by turning the handle D' the weighted lever may be caused to assume a horizontal position, whereupon the same may be pushed between the jaws C' C^2 again and the door thereby opened.

It will be observed that one of the members of my fastener (in this case the member of my latch constituting the keeper) is permanently provided with a manually-operated device, as a shaft, the end of which is located within the chamber, whereby the members may be disengaged, and the function of the said keeper is thus not only to become engaged with my ball-lever, but also consists in forming a guide and support for the unlocking device and also in providing means for determining the center both of the unlocking-shaft and also the proper center of the ball-lever latch, whereby the parts may be readily and quickly applied to the door and jamb, the shaft D and bearing therefor being fastened together by suitable means, as screws C^9.

The base-plate C is cut out, as at C^8, in order to serve as a socket or guide for the unlocking-disk supporting the pin D^2, and the arms C' C^2 are inclined, so as to form a circular mouth in order to serve as a guide for the unlocking-pin D^2, which makes its rotatory movement within the said jaws until it is advanced far enough around to clear the same. By means of the circular mouth of the keeper a center is formed for the shaft D of the unlocking-pin D^2, which center is formed by the intersection of two right angles—namely, a vertical line equidistant from the interior of the socket in the base-plate C and the extremity of the jaws C' C^2 and a horizontal line midway between the highest and lowest point of the said jaws C' C^2—and which center must coincide with the longitudinal axis of the shaft B of the ball-latch. After the keeper C, provided with the handle D', has been located and the hole for the unlocking-shaft D has been bored in the jamb J the member A may be quickly and readily placed in proper position upon the door by simply bringing the shaft B of the ball-latch in alinement with the shaft D of the keeper.

It will be observed that my unlocking-pin D^2 and base-plate C form one member and are held, as stated, in proper mutual relation by any suitable means, preferably by the plate C, which may be extended entirely across the back of the same, as shown in Figs. 1 and 2. The plate C is preferably provided with an integral cylindrical extension C^4, the bore of the same serving as a bearing for the shaft D. A cap D^4 is screwed to the same, and the shaft D, which also passes through said cap, is prevented from moving laterally by means of screws or pins C^9, which work in an annular recess within the bearing.

The configuration of the member C and the locking-pin D^2 and disk thereof are so designed as to insure a mutual harmony of parts and to allow the free action of the unlocking means with which my member C is provided, and the same dual member may be more easily and quickly applied to a door-jamb than would be the case if the keeper C and unlocking means D D' D^2 were separate and independent parts and did not constitute one and the same member. I also provide additional independent locking means whereby the fastening bar or arm and the retaining means become directly engaged and interlocked.

Upon the inner face of the bar A^2 is formed an arm or projection A^6, constructed and arranged when the parts are in a closed relation to coincide or register with the eye C^3, located on the outer face of one of the retaining-jaws.

By passing the shackle of a padlock (indicated by dotted lines in the drawings) through the eyes C^3 the parts may be securely locked together.

In case of any sagging or shrinking or looseness of the door, &c., occasioned by long use my wedge-fastener will draw the parts closely and hold the same rigidly together, and the simplicity of my fastener, the readiness with which it may be applied, together with the efficiency of the same in practical operation renders it applicable to a great variety of articles.

It will be noted that the jaws C' C^2 of my retaining means are of similar construction, the appliance thus being interchangeable, so as to be used with either a right or left hand door. In use with a left-hand door the handle B' will be turned to the right in order to wedge the same, and the weighted lever B^2 will ride upon the jaw C', which will in this case be the lower jaw, as the jaws C' C^2 will be turned around so as to face the left. If preferred, the keeper may be applied to the door and the latch fastened to the jamb.

It is evident that many slight changes in the construction and relative arrangement of parts might be resorted to without departing from the spirit and scope of my invention. I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described, but that I reserve the right to make such changes, and that

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a fastener, with a projecting bracket provided with a locking-

arm projecting therefrom and carrying a handle and a preferably weighted lever, of retaining means provided with a jaw narrowed toward its extremity, the said jaw being provided upon its outer face with a fastening device, as an eye, and also of means, as a locking-bar, whereby the said parts may be directly engaged with each other and the movement of the parts prevented.

2. The combination, in a fastener, with a projecting bracket carrying a handle and a preferably weighted lever, of a keeper consisting of a retaining-jaw and a forwardly-arched bracket and means for securing said bracket in position, said means located in vertical line with said jaw, whereby any strain upon said jaw is in line with the securing means for said bracket, as specified.

3. In a fastening device, the combination, with one member consisting of a latching device, of another member constituting a keeper, the two members being respectively secured to a door and jamb of a compartment, one of the said members being permanently provided with a secondary and independently manually-operated device, as a handle, located in a part of said member so that their relative positions may always be the same, the said secondary handle extending within the compartment.

4. In a fastening device, the combination, with one member consisting of a self-latching device, as a pivoted or swinging latch, of another member constituting a keeper, the two being respectively secured to a door and jamb of a compartment and being constructed and arranged to become automatically engaged upon the door being closed, the keeper, attached to the jamb, being permanently provided with a secondary and independent manually-operated device, as a handle, located in a part of said member, so that their relative positions may always be the same, the said secondary handle extending within the compartment, whereby the members may also be disengaged.

5. In a latching device, to be applied to a door, &c. of a wall, the combination, with a rotating or swinging latch, and with a keeper having an inclined edge or way engaged by said latch, of a rotating shaft axially disposed as regards the said keeper and passing to the opposite side of the wall, said shaft being permanently located in a part of said member so that their relative positions may always be the same and provided at its forward end with an operating-finger or projection and at its opposite end with an operating-handle, whereby the latch may be fastened or released from either side of the wall.

In testimony of the foregoing specification I do hereby sign the same, in the city of Washington, District of Columbia, this 8th day of April, A. D. 1897.

AUSTIN ADAMS.

Witnesses:
J. ODELL FOWLER, Jr.,
W. BERTRAND ACKER.