

No. 807,401.

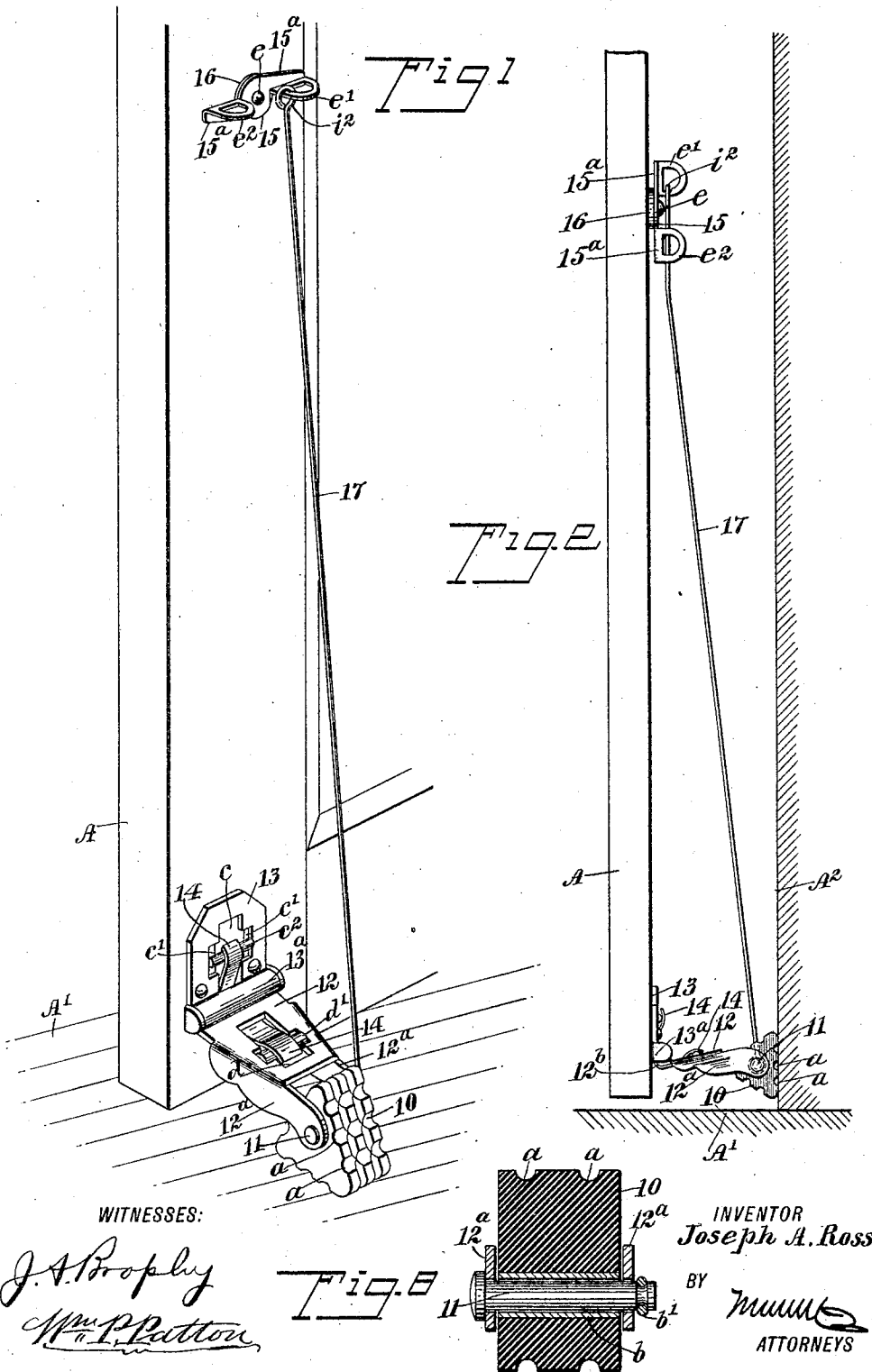
PATENTED DEC. 12, 1905.

J. A. ROSS.

COMBINED DOOR HOLDER AND BUFFER.

APPLICATION FILED APR. 26, 1905.

2 SHEETS—SHEET 1.



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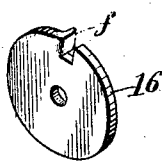
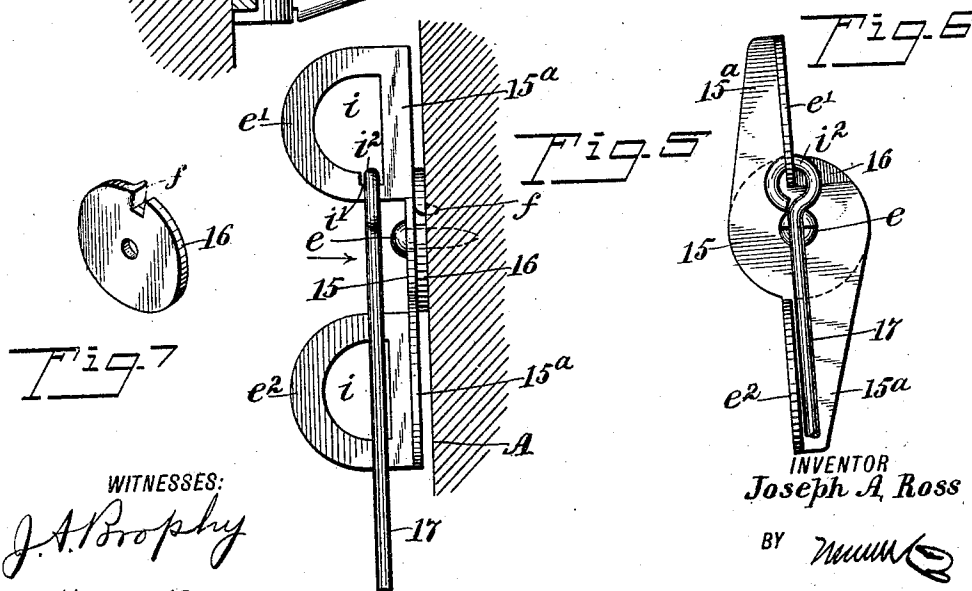
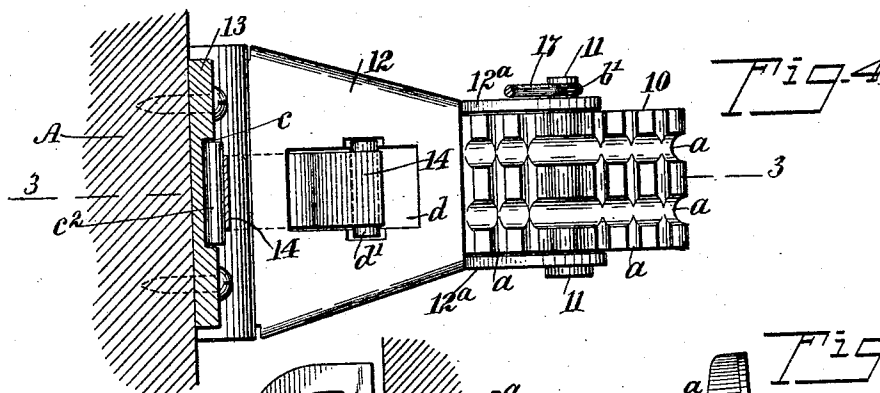
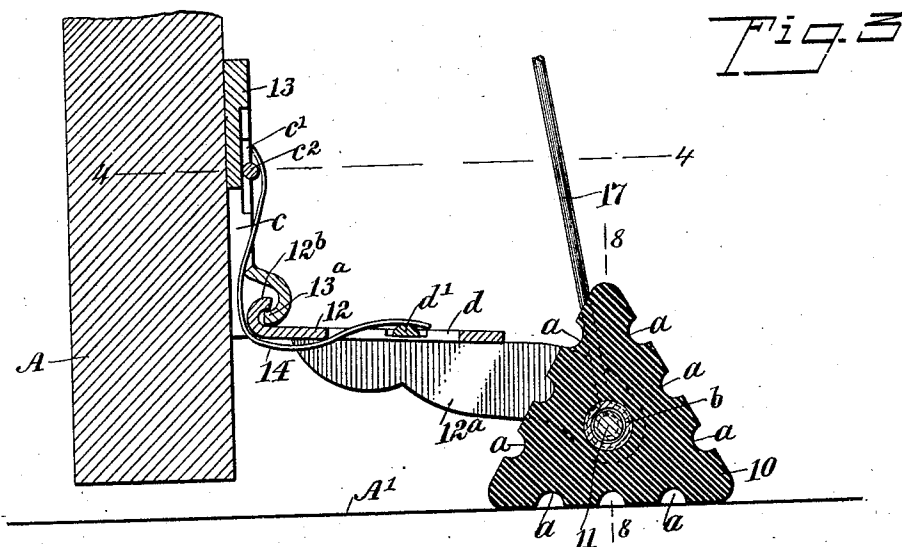
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2 SHEETS—SHEET 2.



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JOSEPH A. ROSS, OF ELGIN, UTAH.

COMBINED DOOR HOLDER AND BUFFER.

No. 807,401.

Specification of Letters Patent.

Patented Dec. 12, 1905.

Application filed April 26, 1905. Serial No. 257,444.

To all whom it may concern:

Be it known that I, JOSEPH A. ROSS, a citizen of the United States, and a resident of Elgin, in the county of Grand and State of Utah, have invented a new and Improved Combined Door Holder and Buffer, of which the following is a full, clear, and exact description.

The object of this invention is to provide a novel simple door-holding device which may be instantly converted into a buffer adapted for contact with a wall when the door is swung open, and thus prevent injury to the door and wall.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view showing the device applied upon a door and adjusted for holding the door in a partly-opened position by enforced contact with the floor. Fig. 2 is an edge view of a door in part, a portion of a wall toward which the door is held to swing, and the improvement carried by the door having the working parts thereof adjusted to serve as a buffer, shown in contact with the wall. Fig. 3 is an enlarged transverse sectional view, in part, of the improvement and of the lower portion of a door, the device being shown adjusted to hold the door by its pressure on the floor, the section being substantially on the line 3-3 of Fig. 4. Fig. 4 is a partly-sectional plan view of the parts shown in Fig. 3, substantially on the line 4-4 in said figure. Fig. 5 is an enlarged side view of a rockable lifting-arm and a sectional side view of a fragmentary portion of a door whereon said lifting-arm is pivoted. Fig. 6 is a front view of the lifting-arm, seen in direction of the arrow in Fig. 5. Fig. 7 is a perspective view of a washer-plate employed, and Fig. 8 is a vertical transverse sectional view substantially on the line 8-8 in Fig. 3.

A principal feature of the improvement consists of a pressure-block 10, of elastic material, such as vulcanized gum, preferably triangular in contour and having a plurality of spaced transverse channels *a* formed in each side of the angular periphery. Centrally in the pressure-block 10 a transverse perforation is formed, wherein a lining-sleeve *b* is closely fitted, affording a bearing for the block

to turn on. In the sleeve *b* is loosely fitted a pivot-shaft 11, which projects at each end therefrom.

A bracket-arm 12 is provided, having side arms 12^a thereon, which project in advance of the flat body of the arm, said projecting ends having each a perforation, these opposite perforations engaging loosely respective ends of the pivot-shaft 11, that is furnished with a head on one end, and in the opposite end, that projects through an arm 12^a, a circumferential groove is formed, the use of which will hereinafter appear.

A bracket-plate 13 is adapted for rockably holding the bracket-arm 12 on the lower portion of a door and comprises a flat plate having a transverse hook member 13^a formed on its normally lower end. A slot-opening *c* is formed centrally in the bracket-plate 13 above the hook formation 13^a, and screw-holes are formed therein each side of the slot to enable the screwed attachment of the bracket-plate upon a door *A* near its free side edge and lower edge thereof, as shown in Fig. 1.

Upon the end of the bracket-arm 12 opposite from the side arms 12^a an upturned hook member 12^b is formed, which loosely engages with the hook formation 13^a, as is clearly shown in Fig. 3. On the side edges of the slot *c* in the bracket-plate 13 similar guides *c'* are formed by rabbeting said edges, and on these guides ends of a roller *c''* may be seated for a rolling engagement therewith. A slot *d* is longitudinally formed in the bracket-arm 12 at its transverse center, and about at the center of length of said slot a cross-bar *d'* is formed or secured above the slot.

An essentially U-shaped plate-spring 14 is passed at its respective ends through the slots *c* and *d*, the bowed portion of the spring bearing against the hook member 12^b and the slightly-curved ends of the spring respectively bearing upon the roller *c''* and the cross-bar *d'*, which adapts the tension of the spring to press the block 10 toward the floor *A'* of a room into which the door *A* swings.

The faces of the sides of the block 10 may be further roughened by grooving them longitudinally or at right angles to the grooves *a*, thus adapting each side of the block that may be lowermost to frictionally engage the floor or a covering thereon and hold the door stationary at any desired point of opened adjustment.

At a suitable distance above the lower edge

of the door A, on the stile thereof which forms the free edge portion, a lifting-arm is pivoted, said arm being mainly flat in the body, having a limb 15^a projected in opposite directions from a nearly circular-edged central portion 15, that is centrally perforated for the reception of a pivot-screw *e*.

Upon one side edge of one limb 15^a a wing *e'* is turned at a right angle thereto and normally projects outward from the door, and said wing is disposed radially opposite the central perforation in the portion 15 of the lifting-arm. A similar wing *e''* is formed on a corresponding edge of the limb 15^a, that is opposite therefrom, but is slightly at one side of the center of the perforation that receives the pivot-screw *e*, so that the wing *e''* does not aline with the wing *e'*, but is disposed in a plane parallel therewith, as is clearly shown in Fig. 6.

In order to afford necessary clearance from the surface of the door A, a washer-plate 16 is employed, and, as is clearly shown in Figs. 5 and 7, the washer-plate is mainly flat and circular on the edge, with the exception that a locking-toe *f* is cut free on the edge of the washer and near it, thus permitting the toe to be bent at a right angle from one side of the same, as appears in Fig. 7.

At a selected point on the door-stile the washer-plate 16 is positioned by embedment of the toe *f* in the stile, as appears by dotted lines in Fig. 5, and the pivot-screw *e* is screwed through alined perforations in the lifting-arm portion 15 and the washer-plate, which will permit the free turning movement of the lifting-arm. Each wing *e'* *e''* may be convexed on its edge and have an opening *i* therein.

A lifting-rod 17 is furnished for connecting the lifting-arm with the bracket-arm 12. To this end a ring-eye *b'* is formed on one end of the lifting-rod, which is loosely engaged within the groove in one end of the pivot-shaft 11, the normally upper end of the lifting-arm having a similar ring-eye *b''* thereon, which is loosely engaged with a journal *b'*, that is formed in the edge portion of the wing *e'*, as is shown in Figs. 5 and 6.

It will be seen in Figs. 5 and 6 that the distance between the pivot-screw *e* and the point of journaled connection *b'* between the lifting-rod and the lifting-arm provides a crank which when turned upwardly raises the rod 17 a distance equal to the throw of said crank and of course correspondingly raises the block 10 from the floor A'.

In use it will be seen that upon turning the lifting-arm member *e'* uppermost the bracket-arm 12 will be rocked upward at its outer end and the pressure-block 10 correspondingly elevated from the floor against stress of the spring 14, and as the wing *e''* is at one side of the direct line of draft had by the lifting-rod 17 the upper end of the latter will be carried slightly to one side of said line of draft, resting

against the wing *e''*, that is lowermost, and this will temporarily lock the rod and lifting-arm in the position shown in Figs. 2, 5, and 6.

When the device is adjusted so as to release the pressure-block 10 from the floor A', the door may be freely swung toward the upright wall A² and the block 10 have contact therewith, the block turning so that one side of the same will rest as a buffer against the wall and hold the door A so removed as to prevent injurious contact, this appearing clearly in Fig. 2.

From the foregoing description and by inspection of the drawings it will be obvious that the improvement when applied upon a door may at any time after the door is opened be set to hold the door at any point of swinging adjustment by a slight turning movement of the lifting-arm, so as to permit the stress of the spring 14 to throw the block 10 downward and into contact with the floor A', the lifting-arm then being disposed, as shown in Fig. 1, with the limbs thereon nearly horizontal. Furthermore, for releasing the block 10 from the floor a slight lifting movement applied upon the wing *e'* will rock it into an upright position and through the rod 17 raise the bracket-arm 12 and block 10, as is hereinbefore fully explained.

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

1. In a door holder and buffer, the combination with a spring-pressed arm held rockably on a door near its lower edge, and a pressure-block on the outer end of said arm, of a lifting-rod loosely connected by one end with the spring-pressed arm, and releasable means for holding the rod raised and the arm rocked upward.

2. In a door holder and buffer, the combination with a spring-pressed arm held rockably on a door near its lower edge, and a pressure-block on the outer end of said arm, of a lifting-rod loosely connected with the spring-pressed arm, and a lifting-arm pivoted upon the door above said spring-pressed arm, the upper end of the rod having loose engagement with the lifting-arm a distance from its pivot.

3. In a door holder and buffer, the combination with a spring-pressed arm held rockably on a door near its lower edge, and an elastic angular block pivoted upon the outer end of the rockable spring-pressed arm, of a lifting-rod loosely connected with said arm, and a lifting-arm pivoted upon the door above the spring-pressed arm, the upper end of the lifting-rod having a loose engagement with the lifting-arm a distance from its pivot.

4. In a door holder and buffer, the combination with a bracket-plate secured on a door near its lower edge, a spring-pressed arm hinged upon the lower end of the bracket-plate, and an angular elastic block pivoted upon the outer end of the spring-pressed arm,

of a lifting-rod loosely secured on an end of the pivot for the elastic block, a lifting-arm centrally pivoted upon the door and having a loose engagement with the upper end of the lifting-rod a distance from the pivot of said arm.

5. In a door holder and buffer, the combination with a bracket-plate having an opening therein, and a transverse hook on the lower edge below the opening, said plate being secured upon a door near its free edge and lower edge, a bracket-arm also having an opening, and a hook on the rear end that hingedly engages the hook on the bracket-plate, and a plate-spring having a substantially U shape and passing at its ends respectively through the opening in the bracket-plate and the bracket-arm, said spring normally pressing the arm downward, of a block on the outer end of the bracket-arm, and means for raising and releasably holding the block raised from the floor to serve as a buffer at a side wall.

6. In a door holder and buffer, the combi-

nation with a bracket-plate having an opening therein and a transverse hook on the lower edge, said opening having guides formed on its side edges by rabbeting said edges, and a roller the ends of which may seat and roll on the guides, of a bracket-arm having a hook engaging the hook on the bracket-plate and also having an opening and a cross-bar over the opening, a bent plate-spring passing at its ends through the openings in the bracket plate and arm, said ends respectively seating upon the roller and cross-bar, thus adapting the spring for the depression of the bracket-arm, and an angular block pivoted on the outer end of the bracket-arm.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH A. ROSS.

Witnesses:

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H. T. YOKEY.