April 21, 1953 L. PETERS 2,635,304

SAFETY GARMENT RETAINER

Filed April 15, 1949 2 SHEETS--SHEET 1

Fig. 1

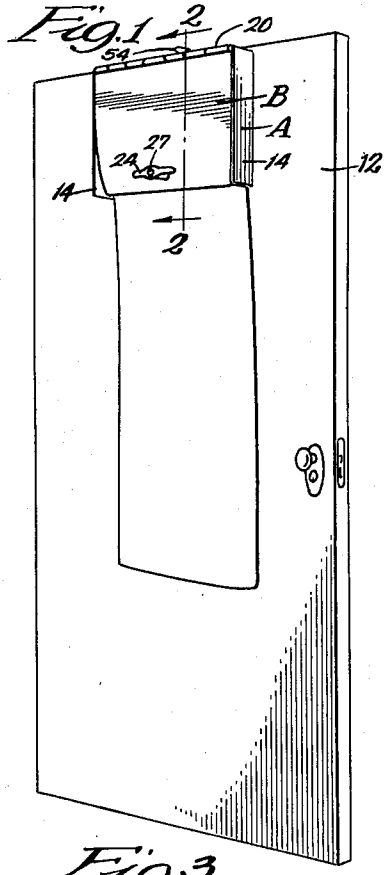


Fig. 2

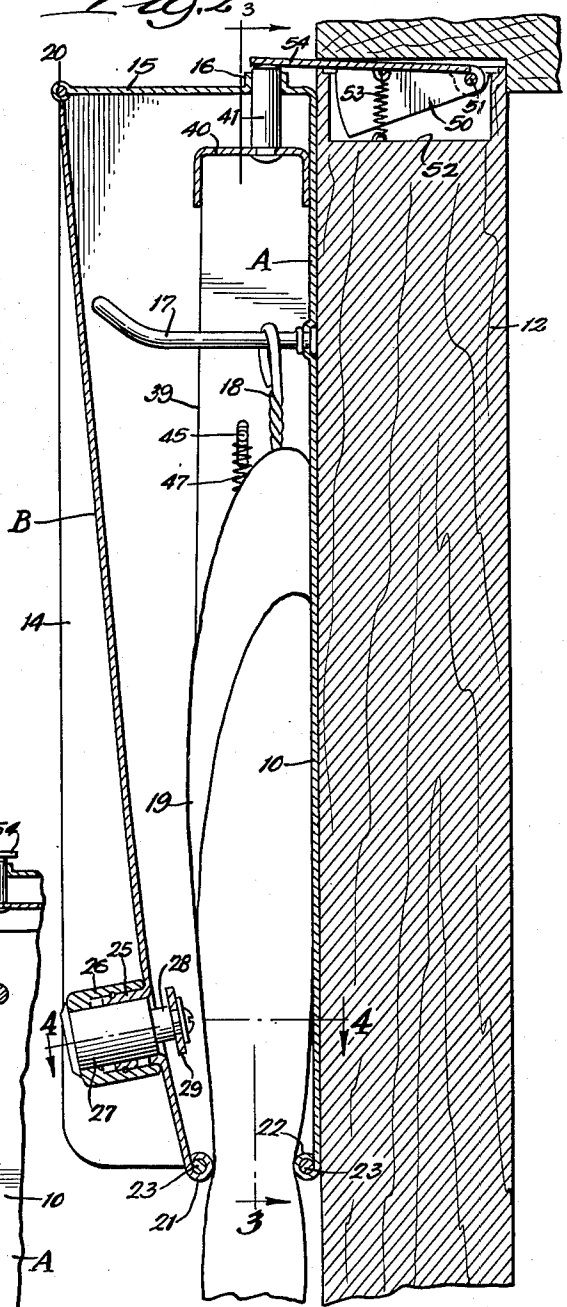
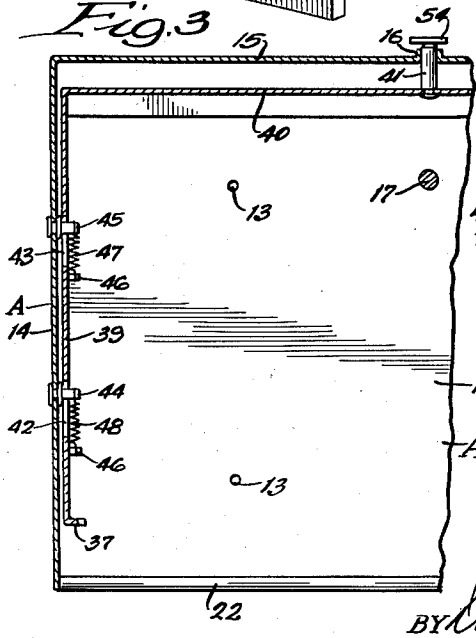


Fig. 3



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Fig. 4

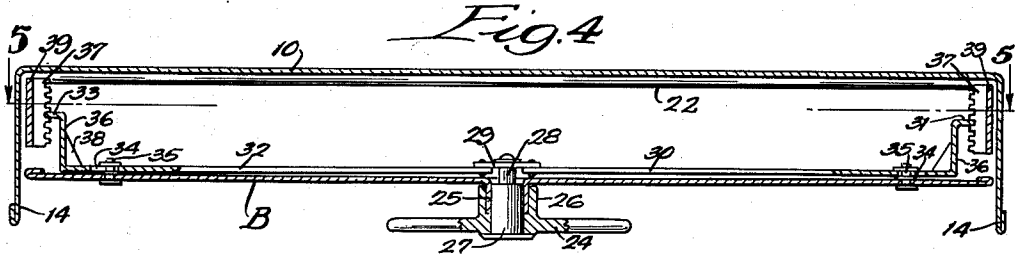


Fig. 5

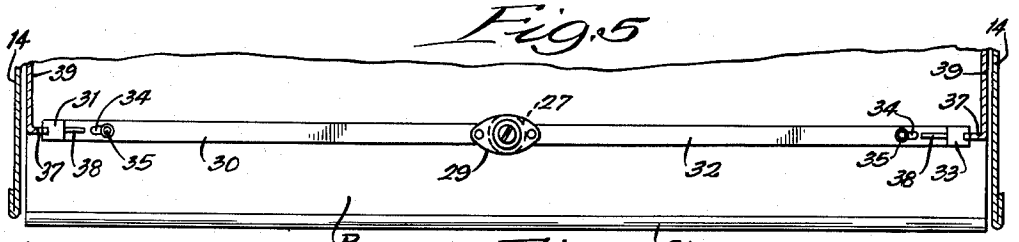


Fig. 6

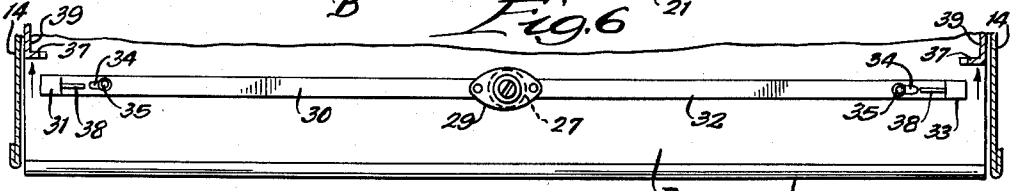


Fig. 7

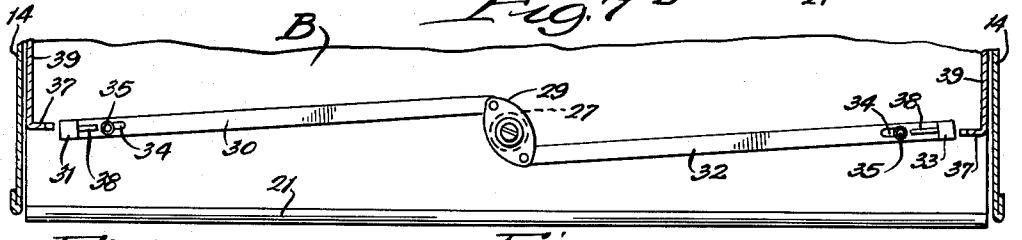


Fig. 8

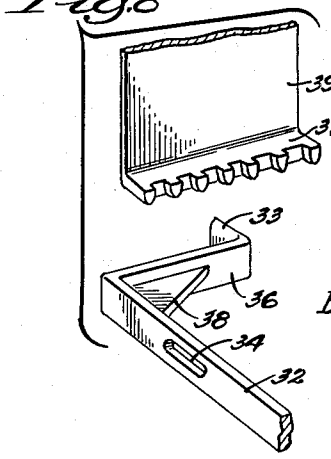


Fig. 9

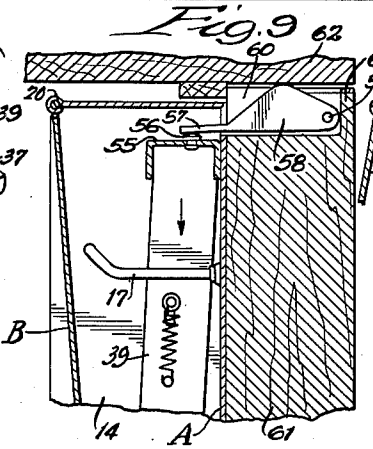
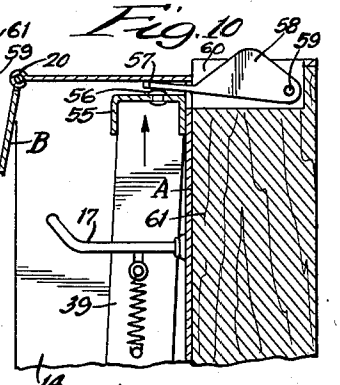


Fig. 10



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SAFETY GARMENT RETAINER

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11 Claims. (Cl. 20—16)

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This invention relates to a safety garment retainer and is particularly useful when the retainer is secured to the outer side of a door.

The picking up of garments for dry cleaning and the like and the delivery of the same presents a problem because of the requirement that the housewife be present when the garments are picked up and delivered. Often the truck driver is required to make several stops at a home before the garments can be picked up, and on delivery the garments are often left with neighbors and thus constitute a nuisance and an undesirable situation.

In the construction of a garment retainer which will safely hold the garments for release to an authorized pick-up man, and which will safely retain the clean garments for the return of the housewife, it is an important consideration that the structure involve as little change or alteration in the building or door which is utilized for supporting the retainer structure as possible, and further that such structure be one which may be operated automatically as far as possible.

An object of the present invention is to provide a garment retainer structure of simplified construction and which utilizes the operation of the door as a means for automatically locking the garment retainer in garment-retaining position. Yet another object is to provide a garment clamp device adapted to be secured to the exterior of a door and which is effective for retaining garments upon the closing of the door, the garment clamp being released by the opening of the door. A still further object is to provide a garment clamp adapted to be secured to the exterior of a door and which is moved to operative retaining position by the closing of the door and released by the opening of the door, the locking means being provided for enabling the delivery or pick-up man to release the clamp independently of the opening or closing of the door. A further object is to provide the above mechanism which may be operated by the swinging of the door inwardly or outwardly, with respect to the door frame. Other specific objects and advantages will appear as the specification proceeds.

The invention is illustrated, in preferred embodiments, by the accompanying drawings, in which—

Figure 1 is a perspective view of a garment retainer structure employing my invention; Fig. 2, a broken vertical sectional view on enlarged scale, the section being taken as indicated at line 2—2 of Fig. 1; Fig. 3, a detailed sectional view, the section being taken as indicated at line 3—3

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of Fig. 2, the garment bag and clothing being removed; Fig. 4, a transverse sectional view, the section being taken as indicated at line 4—4 of Fig. 2; Fig. 5, a detailed sectional view, the section being taken as indicated at line 5—5 of Fig. 4; Fig. 6, a view similar to Fig. 5 but showing the toothed plate or rack in raised position for the unlocking of the closure clamp; Fig. 7, a view similar to Fig. 5 but showing the key barrel rotated for the withdrawal of the locking arms from engagement with the toothed plate or rack; Fig. 8, a broken perspective view of the toothed plate or rack and a latching arm, the two parts being shown in separated relation; Fig. 9, a broken vertical sectional view of a modified form of the invention for actuating the clamp locking device irrespective of the direction of the swing movement of the door; and Fig. 10, a view similar to Fig. 9 but showing the door swung to a position away from the door frame.

In the illustration given in Figs. 1 to 8 inclusive, A designates a case for the reception of the upper ends of garments, and B designates the closure member or clamp.

The case A may be of any suitable shape or construction. In the illustration given, the case is provided with a rear wall 10 which may be secured to the door 12 by screws or other means (not shown) and which may extend through the openings 13. Integrally formed with the rear wall 10 are the side walls 14 and the top wall 15. The top wall 15 is preferably apertured and provided with an upwardly-extending guide sleeve 16, the purpose of which will be later described.

Fixed to the rear wall 10 of case A is a garment hook or support 17 and upon which is shown a garment hanger 18 carrying a garment or garments covered by the bag 19.

The clamp B may be of any suitable shape or construction. In the illustration given, the clamp is hinged at 20 to the forward edge of the upper wall 15 and is provided at its lower end with a reinforced rolled edge 21. The rear wall 10 of case A may similarly be provided with a rolled edge 22 and each of the rolled edges may be reinforced, if desired, with a rod 23.

The closure clamp B may be provided with a handle 24 which may be fixed to the clamp by any suitable means. In the specific structure shown and as set out more clearly in Fig. 4, the clamp wall B is provided centrally with an outwardly struck sleeve portion 25 which is received within a tubular portion 26 of the handle member 24.

The handle 24 is preferably apertured centrally to receive a key controlled lock 27, the

barrel of which is equipped with an inner extension 28 to which is clamped a cross bar 29. The cross bar 29 is pivotally connected at one end to an outwardly-extending latch arm or link 30 having a toothed end 31. The other end of the bar 29 is pivotally connected to a latch arm 32 having a toothed end 33 and having a slot 34 receiving a guide pin 35 fixed to the wall of the clamp B. A similar pin 35 is provided for guiding the arm 30. As shown more clearly in Fig. 4, the end portions of each of the arms 30 and 32 are turned rearwardly at 36 and adapted to be brought into contact with toothed plate or rack 37, which will be later described. A brace 38 may be provided between the angular portions of arms 31 and 32, as illustrated in Fig. 8.

The rack or toothed plate 37 is supported upon the side walls 39 of the latch case 40. The latch case 40 has a top wall connecting the side walls 39 and has secured thereto a plunger 41 which extends upwardly through the tubular guide 16 provided by the top wall 15 of the case A, as shown more clearly in Figs. 2 and 3. The side walls 39 of the latch case 40 are preferably guided for movement along the side walls 14 of case A by any suitable means. In the illustration given, the side walls 39 are provided with slots 42 and 43. A pin 44 fixed to the wall 14 extends through slot 42 and a pin 45 extends through slot 43. Each of the side walls 39 is provided with a lug or pin 46 below the pins 44 and 45, and a spring 47 connects pin 46 and pin 45 while a spring 48 connects pin 44 and pin 46. The tension springs 47 and 48 tend to draw the latch case 40 upwardly and thus to unlatched position.

When the latch case 40 is in lowered position, as illustrated in Fig. 5, the toothed plate or rack 37 is engaged by the teeth 33 and 31 of the arms 32 and 30 respectively, and by this means the clamp B is locked in clamping position. When the latch case is allowed to move upwardly under the force of springs 47 and 48, the latch bar 37 is moved to release position, as shown in Fig. 6.

In the illustration given in Figs. 1 to 8 inclusive, I illustrate specific means which automatically moves the latch case 40 to lowered or latched position upon the closing of the door. The means which may be used for this purpose may be varied in structure and form. In the specific illustration given, I provide a member 50 mounted upon pivot 51 and swingable within a recess 52 in the top of the door 12. A spring 53 normally urges the member 50 in an upward direction. The member 50 is provided with a plate 54 which extends beyond the door and engages the top of the plunger 41. When the door is moved to closed position, the plate 54 is pressed downwardly to cause plunger 41 and the latch case 40 to move downwardly. When the door is swung outwardly, the spring 53 urges the plate 54 upwardly so as to release plunger 41 and latch case 40 and the case moves upwardly under the action of springs 47 and 48.

Operation

In the operation of the structure shown in Figs. 1 to 8 inclusive, the garments to be secured within the case are suspended upon a clothes hanger 18 which in turn is carried by hook 17. The clamp B may then be pressed inwardly in clamping or protecting position about the garment bag 19 and the door is closed. The closure of door 12 causes the plate 54 to be pressed downwardly so that plunger 41 and latch case 40 are depressed. This brings the toothed plate or rack

37 of the latch case 40 downwardly so that the recesses between the teeth of the plate 37 receive the teeth 31 and 33 of latch arms 30 and 32, as shown more clearly in Figs. 4 and 5. The clamp B is thus held against release.

If the clothes are to be picked up for dry cleaning, the pick-up man may insert a key within the lock 27 and rotate the key so as to withdraw arms 30 and 32, as illustrated best in Fig. 7, and the closure clamp B may then be raised to permit removal of the garments.

Upon the return of the cleaned garments, the delivery man may raise the clamp B and insert the hanger over hook 17, pressing the closure B to closed position. Upon rotating the key-controlled barrel, the latch arms 30 and 32 may be then moved to locking position, as illustrated in Fig. 5.

The housewife obtains access to the delivered garments by simply opening the door. The opening of the door permits the plate 54 to swing upwardly and plunger 41 permits the latch case 40 to move upwardly. Thus the toothed plate 37 is released from the bars 30 and 32, as illustrated best in Fig. 6. Clamp B may then be swung upwardly and the cleaned garments may be removed by the housewife.

In the modification shown in Figs. 9 and 10, the structure is so arranged that the door may be swung in either direction with respect to the door frame while at the same time operating the latch case. In this structure, the case A and the clamp B are the same as already described. The latch case 55 is equipped at its top with a button 56, and the button is engaged by a lip 57 of the cam member 58. The cam member 58 is pivoted at 59 in the recess 60 in the top of the door 61 and is provided with a pair of cam surfaces at its top. Thus whether the door be swung to the right or to the left with respect to the door frame 62, the operation of latching or unlatching is the same. In Fig. 10, the door 61 is swung to a position away from the frame, and the lip 57 of member 58 permits the latch case 55 to swing upwardly under the force of its springs to release position, in accordance with the operation already described for Figs. 1 to 8 inclusive.

While I have shown the latch frame movable in a vertical position and actuated at the top by the plunger 41, it will be understood that instead of using the top of the door in the manner described, a side wall of the door at a lower point may be used for effecting the latching of the clamp structure.

While in the foregoing specification, I have set forth specific structures in considerable detail for the purpose of illustrating specific embodiments of the invention, it will be understood that such details of structure may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. In a garment retainer adapted to be secured to a door mounted for swinging movement in a door frame, a clamp mounted upon the outer surface of said door, a support secured to said door for guiding said clamp for movement into garment-engaging and garment-releasing positions, a movably-mounted plate upon said door actuated by engagement with said door frame upon the closing of the door, and a latch bar mounted upon said door and movable into position for latching said clamp in garment-engaging position, said latch bar being released and releasing said clamp when said plate ceases

to engage said door frame as said door is swung to open position.

2. In a garment retainer adapted to be secured to a door mounted for swinging movement in a door frame, a clamp mounted upon the outer surface of said door, a support secured to said door for guiding said clamp for movement into garment-engaging and garment-releasing positions, a movably-mounted plate upon said door actuated by engagement with said door frame upon the closing of the door, a latch bar mounted upon said door and movable into position for latching said clamp in garment-engaging position, said latch bar being released and releasing said clamp when said plate ceases to engage said door frame as said door is swung to open position, and a handle member for independently moving said latch bar from clamp-engaging position to effect release of said clamp from said garment-engaging position.

3. In a garment retainer adapted to be secured to a door mounted for swinging movement in a door frame, a clamp mounted upon the outer surface of said door, a support secured to said door for guiding said clamp for movement into garment-engaging and garment-releasing positions, a movably-mounted plate upon said door actuated by engagement with said door frame upon the closing of the door, a latch bar mounted upon said door and movable into position for latching said clamp in garment-engaging position, said latch bar being released and releasing said clamp when said plate ceases to engage said door frame as said door is swung to open position, a handle member for independently moving said latch bar from clamp-engaging position to effect release of said clamp from said garment-engaging position, and a lock controlling the operation of said handle.

4. A garment retaining device adapted to be secured upon a door for engagement with the door frame, said device comprising a clamp mounted upon the outer side of the door for movement into garment-engaging and garment-releasing positions, a pivotally-mounted plate mounted upon said door and engagable with said door frame upon the closing of the door, and a latch bar movably mounted on said door and depressed by said plate upon the closing of said door and engaging said clamp to lock the same in garment-engaging position.

5. A garment retaining device adapted to be secured upon a door for engagement with the door frame, said device comprising a clamp mounted upon the outer side of the door for movement into garment-engaging and garment-releasing positions, a pivotally-mounted plate mounted upon said door and engagable with said door frame upon the closing of the door, a latch bar movably mounted upon said door and depressed by said plate upon the closing of said door and engaging said clamp to lock the same in garment-engaging position, and a spring carried by said frame and engaging said latch bar and urging the same upwardly to effect release of said clamp from garment-engaging position when said door is opened.

6. A garment retaining device adapted to be secured upon the outer surface of a door and for engagement with the door frame, comprising a case member open at its front side, a closure clamp mounted therein for movement into closed and open positions, means in the case for supporting a garment hanger, a pivotally-mounted plate supported upon the door, a spring secured to said case and urging the pivotally-mounted plate outwardly when the door is moved away from said frame, said plate being movable inwardly against the force of said spring in the closing of said door, and means actuated by the inward movement of said pivotally-mounted plate for moving said closure clamp to open position.

7. A garment retaining device adapted to be secured upon the outer surface of a door and for engagement with the door frame, comprising a case member open at its front side, a closure clamp mounted therein for movement into closed and open positions, means in the case for supporting a garment hanger, a pivotally-mounted plate supported upon the door, a spring on said door and secured to said case and urging the pivotally-mounted plate outwardly when the door is moved away from said frame, said plate being movable inwardly against the force of said spring in the closing of said door, means actuated by the outward movement of said pivotally-mounted plate for releasing said closure clamp for movement to open position, and a spring on said clamp urging said last-mentioned means outwardly when said door is opened to release said closure clamp.

8. A garment retainer of the character set forth, comprising a case adapted to be secured to the outside of a door and having an open front side, a closure clamp pivotally mounted for movement into garment-engaging and garment-releasing positions within said case, a plate pivotally mounted upon an upper portion of said door, a spring on said door secured to said case and urging the outer end of said pivotally-mounted plate upwardly when the door is opened, said pivotally-mounted plate being pressed downwardly by engagement with the door frame when the door is closed, and a latch bar slidably mounted on said case and actuated by downward movement of said pivotally-mounted plate in the closing of the door for latching said closure clamp in garment-engaging position, said closure clamp being released upon the opening of said door.

9. A garment retainer of the character set forth, comprising a case adapted to be secured to the outside of a door and having an open front side, a closure clamp pivotally mounted for movement into garment-engaging and garment-releasing positions within said case, a plate pivotally mounted upon an upper portion of said door, a spring on said door secured to said case and urging the outer end of said pivotally-mounted plate upwardly when the door is opened, said pivotally-mounted plate being pressed downwardly by engagement with the door frame when the door is closed, a latch bar on said clamp actuated by downward movement of said pivotally-mounted plate in the closing of the door for latching said closure clamp in garment-engaging position, and a spring secured to said case and to said latch bar and urging said latch bar to release position upon the opening of the door.

10. In a clothes retainer of the character set forth adapted for use upon a door swingable in either direction away from the door frame, a clamp mounted upon the outer surface of a door for movement into garment-engaging or garment-releasing positions, a cam plate pivotally mounted on the door having a pair of intersecting cam surfaces and engageable with the door frame when said door is swung in either direction to cause a downward movement of the pivotally-mounted member when the frame is engaged,

a latch bar actuated by the downwardly-moving pivotally-mounted cam plate for securing said clamping member in garment-engaging position, and a spring secured to said case and to said latch bar and urging said pivotally-mounted cam plate to raised position when said door is moved away from said frame for effecting release of said clamping member.

11. In a garment retainer structure of the character set forth, a clamp mounted upon the outer surface of a door for movement into garment-engaging and garment-releasing positions, a pivotally-mounted plate at the top of said door and engageable with the door frame, a spring secured to said door and urging the free end of said pivotally-mounted plate upwardly whereby said pivotally-mounted member is elevated

when said door is moved away from said frame and depressed when said door is moved into contact with said frame in the closing of the door, and a latch bar actuated by said pivotally-mounted plate for securing said clamp in garment-engaging and garment-releasing positions.

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