

H. A. POPPENHUSEN.
CURTAIN FASTENER.
APPLICATION FILED MAY 29, 1914.

1,128,719.

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Fig. 1.

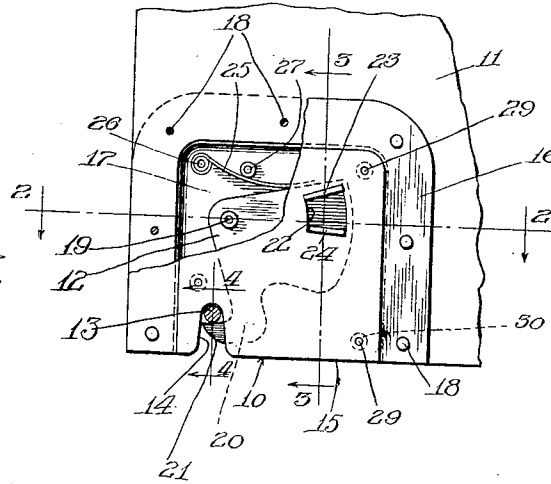


Fig. 3.

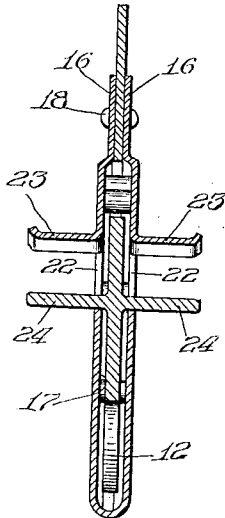


Fig. 2.

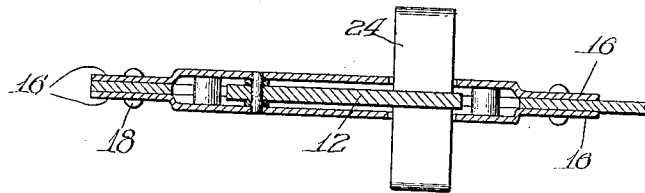


Fig. 5.

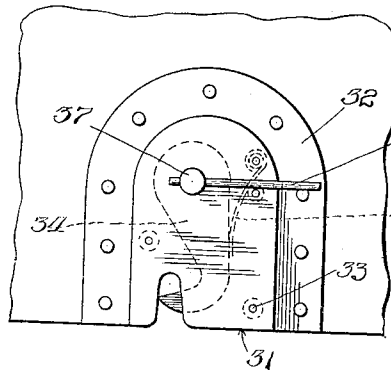
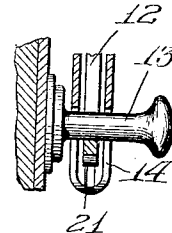


Fig. 4.



Witnesses:

Charles H. Poole,

Cyrus C. Wain

by

Inventor:
Herman A. Poppenhusen.

Pooler & Brown

Attys.

UNITED STATES PATENT OFFICE.

HERMAN A. POPPENHUSEN, OF EVANSTON, ILLINOIS.

CURTAIN-FASTENER.

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To all whom it may concern:

Be it known that I, HERMAN A. POPPENHUSEN, a citizen of the United States, and a resident of Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Fasteners; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in curtain fasteners and more particularly to devices of the character described adapted for application to detachable or removable curtains or curtains adapted to be rolled up when not in use, such as are used, for instance, upon motor or other vehicles in connection with a foldable top-covering, or similar protecting means.

To those familiar with devices of this nature it is well known that the ordinary form of removable or detachable curtain is designed to be applied to the exterior of the vehicle body and to the upright bows or supporting members of the top-covering, there being provided upon said body and bows a plurality of buttons or similar fastening devices located at suitable distances apart upon the exterior of said vehicle members, said buttons being adapted to be engaged by correspondingly arranged slits or button holes in the margins of the curtains, or by apertured fastening members provided upon the margins of the curtains. To secure the curtains in closed position, or to release the same, where this form of fastening device is used, it is necessary for the person to leave the vehicle in order to successfully manipulate the fastening devices, thus making the fastening of the curtains extremely inconvenient, particularly under conditions of muddy roads and unfavorable weather conditions.

The purpose of my invention is to provide a form of fastening device to be applied to curtains, which will enable the same to be easily attached to or detached from the vehicle, either from the interior or exterior of the vehicle, thus avoiding the necessity of the person leaving the vehicle during the operation of securing the curtains in closed position, or of detaching or opening the same.

The features of construction of my fasten-

ing device and the advantages thereof will be pointed out as I proceed with the description of my invention, in the form thereof illustrated in the accompanying drawings, in which—

Figure 1 is a view in front elevation of one form of my fastening device with a portion nearest the eye broken away to show more clearly the interior construction thereof; Fig. 2 is a view in longitudinal section, taken on line 2—2 of Fig. 1; Fig. 3 is a view in transverse section, taken on line 3—3 of Fig. 1; Fig. 4 is a detail sectional view, taken on line 4—4 of Fig. 1, showing a button with the fastening device attached thereto; and Fig. 5 is a view in front elevation of a modified form of my invention.

Referring to the drawings: A preferable form of a fastening device embodying the features of my invention, as shown in Figs. 1 to 4, comprises in general a sheet metal casing or hollow body member 10 secured to the lower margin of a curtain 11, such as used upon a motor vehicle or the like; said casing or body member having mounted therein a movable and manually operable latch or locking member 12, provided with a hooked portion adapted to engage a button 13 and to retain the same in locked relation to a notch 14 formed in the lower edge of said body member or casing 10.

To describe the device more in detail, the body member 10 is preferably rectangular in shape and formed from a sheet of thin metal, said sheet being bent or folded upon itself along a line of fold forming the lower margin 15 of the body member. The folded portions form the side walls of the body member 10, said walls being parallel with each other and spaced apart to provide a chamber 17 between them. The marginal portions of the walls thus folded to form the casing walls are bent inwardly toward each other to form flanges 16, 16, which surround three sides of the body member and are parallel with each other. The flanges are also spaced apart a distance substantially equal to the thickness of the fabric of the curtain, the margins of which are inserted between said flanges. The inwardly bent parts of the plates in effect form inclosing marginal walls for the rectangular chamber 17. The body member is secured to the curtain by means of a plurality of rivets 18 which extend through the flanges 16 and the fabric of the curtain 11, said fabric be-

ing cut away to provide a rectangular notch, corresponding with the form of the casing. At its lower portion the body member is cut away in its folded part to provide the notch 14, the same extending from the lower margin 15 upwardly at right angles to said lower margin. Said notch is preferably located adjacent to one of the lateral margins of the casing. The upper end of said notch is semicircular in shape and is adapted to engage the shank of a headed button or stud 13 (Figs. 1 and 4), which is rigidly secured to the body of the vehicle or to the bows of the vehicle top. The lateral margins of the notch are slightly inclined, or flared outwardly, to permit the button to be more easily engaged with the notch.

The movable latch member 12 has the form of a flat plate, which is pivotally mounted in the body member by means of a pivot pin 19, secured in the walls of said body member; said pivot pin being located some distance above the notch 14. The lower portion of the latch member 12 is provided with a hooked portion 20, the extremity of which is adapted to extend across the space formed by said notch 14. The upper surface or edge of the hooked portion, when the latch member is in operative position, extends substantially at right angles to the sides of the notch and at a distance below the upper end thereof substantially equal to the diameter of the shank of the button 13. The lower edge of the hooked portion 20 of the member 12 is inclined and preferably curvilinear in shape, and such margin meets the upper edge of the hooked portion to form a point; the portion 21 of such lower edge, immediately adjacent to the pointed extremity, being inclined downwardly and laterally with relation to the lateral margins of the notch, thereby providing in effect a cam surface, the purpose of which will be hereinafter pointed out.

Within the opposite walls of the casing are provided two apertures 22, said apertures being located at a distance from the pivot 19 of the latch member 12. These apertures are directly opposite each other and preferably have their upper and lower margins arranged in radial relation to the pivot pin 19 and their lateral margins curved to correspond with arcs or circles concentric with the pivot pin 19. At the upper margins of the apertures 22 are provided projecting flat lugs 23, which serve as finger pieces or handles, as will hereinafter appear. These lugs extend outwardly at right angles to the body member and are preferably made integral with the body member, and conveniently formed by bending outwardly the portions of the walls that are cut or stamped out in the formation of the apertures 22, 22.

The latch member 12 is provided with op-

positely extending finger pieces or lugs 24, 24, which are conveniently made integral with said member and extend outwardly through the apertures 22, at right angles to the latch member and parallel with the lugs 23, 23 of the body member. The finger pieces 23 and 24 are designed to be grasped by the fingers and serve to actuate the latch member by swinging the same about its pivot 19. The latch member is acted upon by a flat spring 25 mounted within the chamber 17 of the body member and at the upper portion thereof. The spring is secured at one of its ends to a pin 26, and engages at the outer end the upper marginal surface of the member 12. A pin or stop 27 engages the upper surface of the spring intermediate its ends, thereby acting to prevent the turning of the spring about the pin 26 and further to maintain the spring under proper tension in acting upon the latch member 12. Said spring constantly acts to maintain the latch member 12 at the forward limit of its swinging movement, in which position the hooked extremity 20 thereof extends across, or is in locking relation to the notch 14; the finger pieces 24, 24 of the said latch member 12 being at this time in contact with the lower edges of the apertures 22, 22 and separated from the lugs 23, 23 of the body member.

In addition to the parts already described, I prefer to provide at several points throughout the body member a plurality of studs 29, which are secured at their ends to the opposite side walls; each of said studs being provided with a sleeve or distance piece 30, the ends of which bear against the inner surfaces of the opposite walls. The purpose of these studs is to provide a more rigid construction in the casing, and prevent the side walls thereof from being pressed or bent inwardly.

In fastening a curtain, provided with my improved fastening devices, to a vehicle having suitable means (such as the buttons 13 shown herein), adapted to engage said devices, the fastener is grasped by the fingers, applied to the finger pieces 23, 24, and so manipulated as to bring the shank of the button into the notch 14 and against the inclined or cam surface of the latch member 12. A sufficient pressure upon the fastener produces a swinging movement of said latch member, by the action of the shank on the cam surface, by which the hooked portion 20 is moved laterally, so as to permit the shank to pass the same and to enter the upper end of the notch, whereupon the hooked member is moved back to its locking or holding position under the action of the spring 25. This operation may be accomplished from either the exterior or the interior of the vehicle, by pressing on one of the finger pieces 23, 23 on the casing of

the fastener in a direction to force the casing toward the button. If desired, the finger pieces 23 and 24 may be grasped and pressed together in the act of engaging the fastener with the button, the latch member in that case being held in its retracted position until the shank of the button is fully engaged with the notch, and then allowed to resume its locking or holding position by releasing the finger pieces.

The release of the fastener from the button may be effected by pressing upwardly on one of the finger pieces 24, 24 on the latch member, or the two finger pieces 23 and 24 may be pressed together to actuate the latch member. The presence of the fixed and movable finger pieces facilitates the convenient manipulation and operation of the fastening device. The provision of two pairs of finger pieces permits the fasteners to be manipulated from either side of the curtain, thus enabling the same to be operated equally well from the exterior and interior of the vehicle. Furthermore, the construction described allows the fastener to be placed upon the curtain without regard to which side faces outwardly or inwardly, since the fastener is capable of being operated from either side.

The form of fastening device just described is shown in Fig. 1 as mounted at one corner of the curtain, that is to say, at the intersection of a horizontal and a vertical margin.

In applying curtains of this nature, it is usually the custom to arrange two adjacent curtains so that their adjacent vertical margins overlap, and such overlapping margins are secured to the same button or stud on the vehicle body. In my device, as shown in Figs. 1 to 4, provision is made for the overlapping of two curtains and the connection of two fastening devices thereon to a single button, in the following manner:—The notch 14, in the fastener shown, is located in close proximity to the vertical margin of the curtain 11, and the projecting finger pieces 23 and 24 are located at some distance inwardly from said vertical margin and at one side of the notch 14. A fastening device that is reversely arranged with respect to the position of the notch and finger pieces, when secured in a corresponding position to the corner of an adjacent curtain, may then overlap the device shown and engage the button 13, without the finger pieces 23 and 24 of either fastening device interfering with the overlapping of the two fasteners, or the operation of the finger pieces. Furthermore, the devices are made sufficiently thin to permit two of them in overlapping engagement to engage a single button, as shown in Fig. 4. Two reversely arranged fasteners may be equally well applied to the meeting corners of upper and lower curtains.

Although the form of device described may be used upon any portion of the curtain as well as at the corners and vertical margins where the overlapping of the curtains occurs, I also provide another or modified form of fastening device, more particularly adapted to be used upon the lower margins of a curtain, intermediate its corners, or upon the vertical margin where no overlapping with an adjacent curtain takes place. This modified form, as shown in Fig. 5, operates in the same manner and is constructed in substantially the same way as the preferable form described, and differs therefrom only in the shape and arrangement of the parts and in the form of operating devices employed. In this form, the casing 31 is somewhat elongated vertically and its upper margin is semicircular in shape. The casing is provided with marginal flanges 32, as before, and with a plurality of studs or distance pieces 33 in its central portion. The latch member 34 is arranged vertically with its pivot 37 nearly in vertical alinement with the notch 36, and the spring 35 is arranged in vertical position and bears laterally on the latch member. The latch operating device employed in this case is formed in part by the pivot 37, which has the form of a transverse shaft, to which the latch member is rigidly attached, and which is pivotally mounted in the opposite walls of the casing and projects outwardly beyond said walls at both sides of the body member or casing. Secured to the opposite ends of the shaft 37 are two levers 38, which are shown as extending laterally in a horizontal position. These levers serve as finger pieces for operating the latch member 34, in the same manner as do the finger pieces 24, 24 of the preferred form of device.

A fastening device constructed in accordance with both forms of my invention, illustrated, permits the curtains to be applied and removed without leaving the vehicle, and, furthermore, permits the curtains to be fastened easily and conveniently, inasmuch as the locking of the fastener with the button is practically automatic, requiring only that the notch be directed over the shank of the button as the fastener is pressed toward the same, while the release of the fastener is accomplished by merely pressing in the proper direction on the finger piece of the latch member. Moreover, the pressing of the fastener toward the button, in the act of fastening the curtain, serves to stretch the curtain to the necessary extent; the fixed finger pieces on the fastener casing affording in effect handles by which the curtain may be easily stretched and the fastener at the same time brought into engagement with the button.

Although my invention is herein described in connection with curtains for vehicles, it

may equally well be applied to curtains used for any other purpose.

Furthermore, the device constituting my invention may be variously modified in its details of construction without departing from the spirit of my invention. For these reasons I do not wish to be limited to the particular forms of the fastener herein shown and described, except in so far as specifically set forth in the appended claims.

I claim as my invention:

1. In a fastening device, the combination of a hollow casing adapted to be inserted within the marginal portion of a curtain, and provided with marginal flanges adapted to be secured to the curtain fabric and a marginal notch, and a latch member pivotally mounted within said casing and adapted to engage a fastening member inserted in said notch, said latch member being provided with latch operating members extending from opposite sides of the casing and through apertures formed in the side walls of said casing.

2. In a fastening device, the combination

of a flat hollow casing adapted to be inserted within a recess formed in the marginal portion of a curtain, said casing being provided with marginal flanges adapted to receive and secure the margins of the curtain fabric and with a notch in its outer margin adapted to engage a fastening member, and a latch member pivotally mounted and inclosed within said casing, said latch being adapted to engage said fastening member when inserted within said notch, and provided with latch operating fingers extending from opposite sides of said casing and through apertures formed in the side walls of said casing, the latter having stationary finger pieces projecting from said casing adjacent to said apertures.

In testimony, that I, claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 23rd day of May, A. D. 1914.

HERMAN A. POPPENHUSEN.

Witnesses:

CHARLES H. POOLE,
EUGENE C. WANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."