March 23, 1948. J. P. DALTON 2,438,314

SIGNAL STAFF HOLDING FINGER

Filed Sept. 20, 1945 2 Sheets-Sheet 1

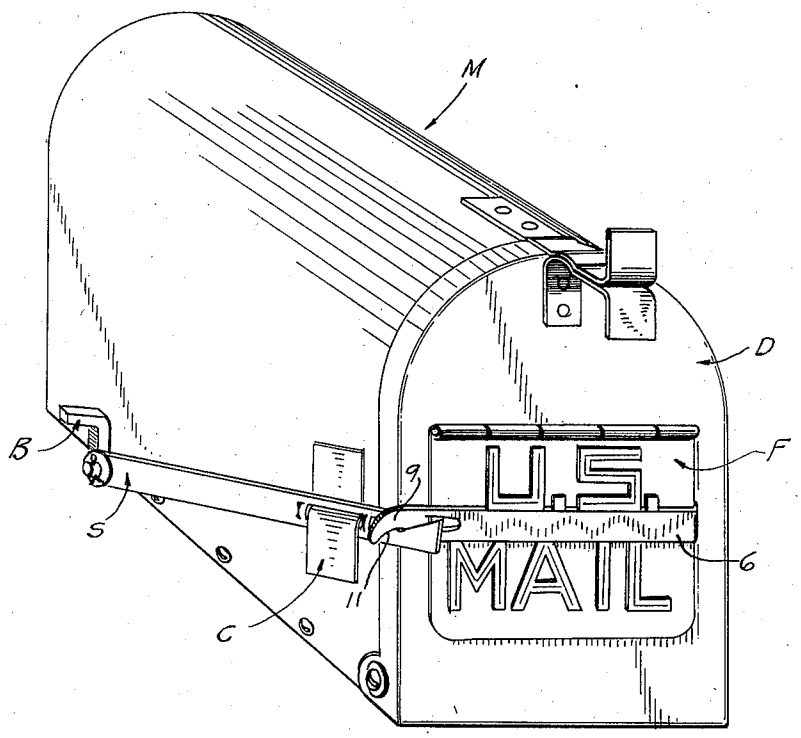


FIG. 1

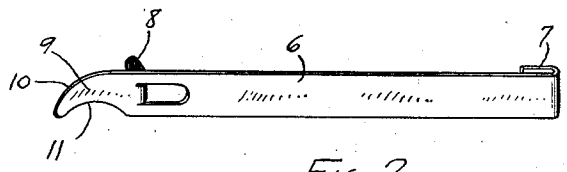


FIG. 2

INVENTOR.
JOSEPH P. DALTON
BY Joshua R. H. Potts
HIS ATTORNEY.

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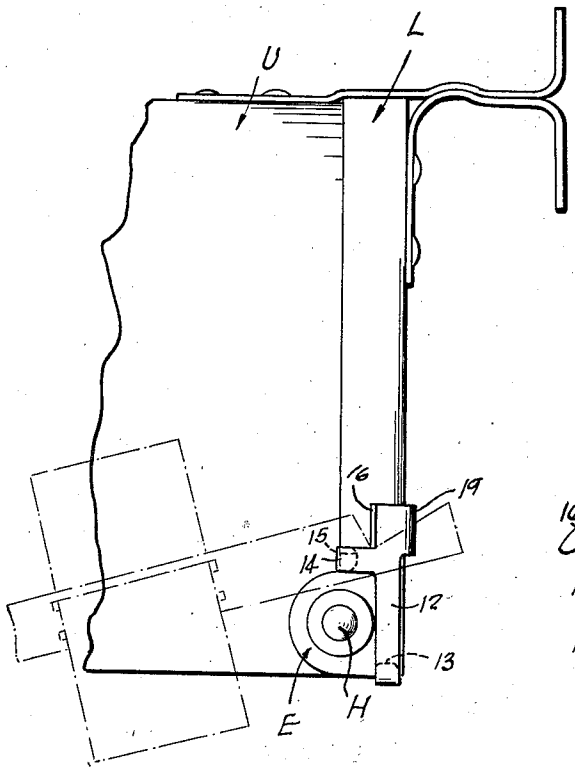


FIG. 3

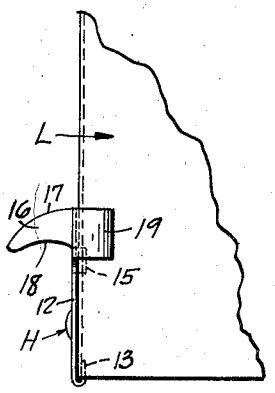


FIG. 4

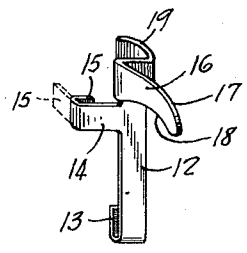


FIG. 5

INVENTOR.
JOSEPH P. DALTON
BY Joshua R. H. Potts
HIS ATTORNEY.

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UNITED STATES PATENT OFFICE

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SIGNAL STAFF HOLDING FINGER

Joseph P. Dalton, Berlin, N. J.

Application September 20, 1945, Serial No. 617,569

8 Claims. (Cl. 232—35)

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This invention relates to a signal staff holding finger adapted to be mounted upon a door member of a container such as a mail box to cooperate with a signal staff in holding the signal staff in position for release upon the opening of the container. Such a signal staff is shown in my application for patent entitled Indicating device for mail box, filed on August 1, 1945, and given Serial Number 608,180.

A broad object of my invention is the provision of a signal staff holding finger which may be attached to the door of a mail box very simply without the use of any tools other than those which are commonly found in the usual household tool box.

A further object of the invention is the provision of a holding finger which may be attached to the door of the mail box without defacing, damaging or changing in any way the dimensions, contour or character of the mail box door.

Another object of my invention is the provision of a holding finger which will be economical to manufacture and attach and yet will be efficient in continuing to perform its intended functions with an appropriate signal staff.

Other objects will appear hereinafter as this invention proceeds in connection with the accompanying drawings in which

Figure 1 is a perspective view of a conventional mail box with my signal staff and holding finger secured thereto in operative position.

Figure 2 is a view, substantially in elevation, of my holding finger.

Figure 3 is a side elevational view of a modified form of finger attached to a mail box.

Figure 4 is a front elevational view of the modified form shown in Figure 3.

Figure 5 is a perspective view of the modified form of holding finger shown in Figures 3 and 4.

Referring now to Figure 1, the mail box M is provided with a mail door flap F which is hingedly connected to mail box door D. A signal carrying staff S is pivotally connected to a bracket B which is secured to the platform upon which the mail box is mounted and upon release for upward spring-actuated movement, the staff S will carry the signal C into position to indicate that the mail box door has been opened for the reception of incoming mail.

Referring now to Figure 2, my signal staff holding finger comprises a supporting bar 6 of sufficiently great longitudinal dimension to span the width of the pivoted mail flap F and carries an attaching tab 7 adjacent one end. This tab 7 is formed integrally with the supporting bar 6

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and lies in a plane parallel thereto so as to define a U-shaped hook with a holding groove between the inner face of tab 7 and the inner face of bar 6.

Adjacent the opposite end of bar 6, a holding tab 8 is cut from the plane of supporting bar 6 and bent from the plane in the same direction in which tab 7 extends. However, tab 8 is bent to define an angle of substantially 90° with the supporting bar 6 and in Figure 1 it can be seen that after the tab 7 is passed beneath the flap F, the holding tab 8 is bent inwardly toward the bar 6 and tab 7 to hold the bar 6 firmly attached to the flap F and between the two rows of embossed letters "U. S." and "Mail," respectively.

Adjacent the end of supporting bar 6, opposite the end which carries tab 7 a holding finger 9, having a downwardly inclined cam surface 10 on its upper edge and an upwardly inclined cam surface 11 on its lower edge, is provided. The cam surface 11 is of such shape as to define a notch for a purpose later to be described.

As seen in Figure 1, the outer or free end of staff S is pressed downwardly from elevated position until its lower edge strikes the cam surface 10 and directs the staff outwardly to the left as shown in this figure. Further downward pressure permits the natural resiliency of the staff S to restore the staff to close proximity to the mail box and a release thereof permits the spring tension upon the staff to force it upwardly against the cam surface 11. Due to the shape of cam surface 11, the upward spring pressure upon staff S will cause the staff to be brought into even closer proximity to the mail box and the staff will be held securely in place. When the lower edge of flap F is raised, the finger 10 will be moved outwardly along the upper edge of staff S until it clears the end thereof to permit the signal to be elevated.

Referring now to Figure 5, a modified form of signal staff holding finger is formed from a piece of flat metal and comprises a supporting bar 12 which carries adjacent its lower end a holding tab 13 which is integrally connected to the supporting bar 12 and lies substantially parallel to the plane of supporting bar 12. The tab 13 and bar 12 define a U-shaped hook providing a retaining groove between them.

Adjacent the end of the supporting bar 12, opposite the tab 13, is an arm 14 protruding in substantially the plane of bar 12. This arm 14 carries an attaching tab 15 which lies in a plane substantially transverse to the plane of arm 14 so as to provide a U-shaped hook with a retaining

groove between the tab 15 and bar 14 when the tab 15 is bent toward the arm 14 as will be later described.

A holding finger 16 is formed from the stock from which bar 12 is made and lies in a plane transverse to the plane of supporting bar 12. The upper edge of the finger 16 is provided with a downwardly inclined cam surface 17 while its lower edge is provided with an upwardly inclined cam surface 18 which defines a retaining notch.

Adjacent the end of bar 12 opposite the tab 13 is a curved retaining tab 19 which extends substantially transversely to the plane of bar 12.

As can be seen from the view shown in Figure 3, the mail box U is provided with a door L having oppositely disposed and rearwardly extending pivot ears E by which the door L is hingedly connected as at H.

When it is desired to attach the modified form of holding finger shown in Figure 5 to the box of the type shown in Figure 3, the door L is swung outwardly upon its hinged connection, the holding tab 13 is passed under the lower edge of the door, the curved tab 19 is pressed against the curved front edge of the door and the tab 15 is bent around the rear edge of the door toward the bar 14 to fasten the supporting bar 12 and connected parts to the door. Due to the fact that the lower edge of the arm 14 rests upon the ear E, the supporting bar and finger cannot slide downwardly from correct position. The operation of a signal carrying staff, in connection with the finger 16, is similar to the operation described above in connection with the staff and finger 9.

While I have shown and described my preferred form of construction, I do not wish to be limited to the precise details shown and described herein but wish to avail myself of all variations coming properly within the scope and spirit of the appended claims.

What is claimed is:

1. A device of the character described and for use on mail box doors and the like, comprising a supporting bar, spaced attaching tabs carried by said supporting bar and arranged to define oppositely opening retention grooves, said supporting bar having a holding finger provided with a downwardly inclined cam surface on its upper edge, and an upwardly inclined cam surface on its lower edge.

2. A device of the character described and for use on mail box doors and the like, comprising a supporting bar, spaced attaching tabs carried by said supporting bar and arranged to define oppositely opening retention grooves, and a holding finger carried by said supporting bar said holding finger being provided with a downwardly inclined cam surface on its upper edge and an upwardly inclined cam surface on its lower edge and defining a retaining notch.

3. A lock bolt for hinged door flaps and the like comprising a bar with one end bent to form a U-shaped clip and with the upper and lower edges of the other end formed to define cam surfaces, and a projection extending from said bar, said projection being spaced a predetermined distance from and adapted to co-operate with the clip at the end of the bar to secure the bar on the hinged flap of the door.

4. A lock bolt for use on mail box doors and the like, said bolt comprising a flat bar with the edge of one end curved to form a tongue, and the opposite edge of the tongue curved inward to form a recess in the opposite side of the tongue,

the opposite end of said bar bent to form a clip, and another clip positioned intermediate of the ends of the bar adapted to co-operate with the clip at the end of the bar to provide mounting means for the bar.

5. A lock bolt for use as an attachment to mail box doors and the like, said doors being hinged to mail boxes having signal-bearing means associated therewith comprising a bar having at one end thereof a clamping element, a finger extending from the other end of the bar and having upper and lower cam surfaces formed thereon, said cam surfaces being coactable with cam surfaces on the signal-bearing means and a second clamping element formed on the bar, said clamping elements being coactable to embrace a portion of a mail box door therebetween.

6. As an article of manufacture, a lock bolt for use as an attachment to mail box doors and the like, said doors being hinged to mail boxes having signal-bearing means associated therewith comprising a bar having at one end thereof a clamping element, an arcuately shaped finger extending from the other end of the bar and having upper and lower cam surfaces, said cam surfaces being coactable with cam surfaces on the signal-bearing means and a second and bendable clamping element formed on the bar and adjacent to the finger, said clamping elements being coactable to embrace a portion of a mail box door therebetween.

7. As an article of manufacture, a lock bolt for use as an attachment to mail box doors and the like, said doors being hinged to mail boxes having signal-bearing means associated therewith comprising a bar having at one end thereof a clamping element, a tab formed on and adjacent to the other end of the bar, a finger formed on the bar and projecting perpendicularly to the longitudinal axis of the said bar, said finger being coactable with said signal-bearing means an arm protruding from the bar, and a clamping element formed on said arm, said clamping elements and said tab coacting to embrace a portion of a mail box door therebetween.

8. As an article of manufacture, a lock bolt for use as an attachment to mail box doors and the like, said doors being hinged to mail boxes having signal-bearing means associated therewith comprising a bar having a clamping element integrally formed thereon, a finger extending from an end of the bar, said finger having upper and lower edges configured to provide cam surfaces, said cam surfaces being coactable with cam surfaces on the signal-bearing means a bendable clamping tab formed on the bar and transversely to the longitudinal axis thereof, said tab being coactable with the clamping element to clampingly engage a portion of a mail box door therebetween.

JOSEPH P. DALTON.

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