Sept. 23, 1958 E. A. HAYS 2,853,230

MAIL BOX SIGNAL

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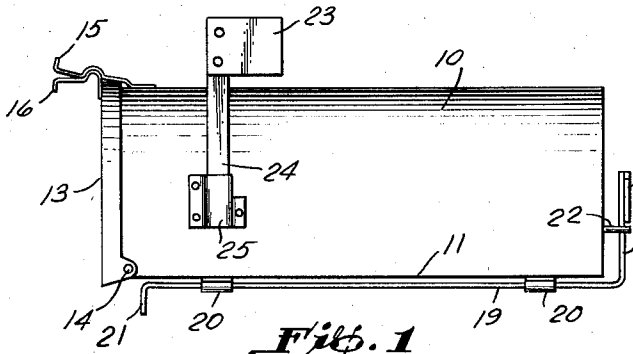


Fig. 1

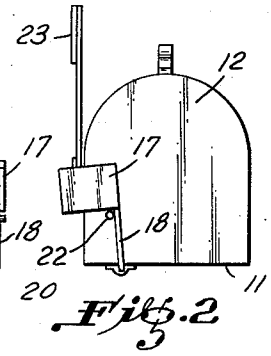


Fig. 2

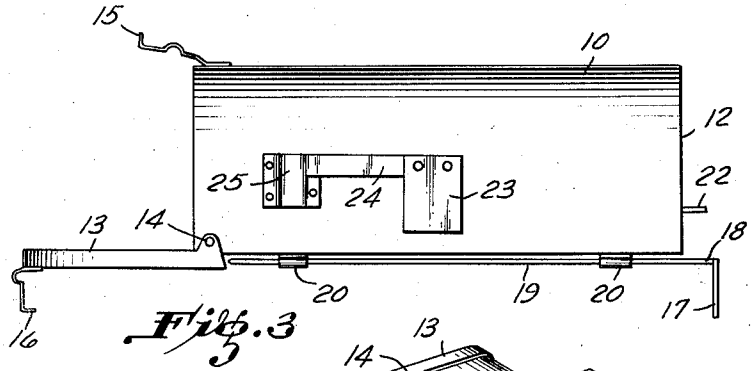


Fig. 3

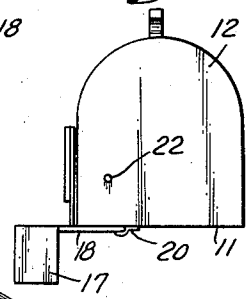


Fig. 4

Fig. 5

Fig. 6

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MAIL BOX SIGNAL

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2 Claims. (Cl. 232—35)

The present invention relates to mail box signal and has application to the conventional rural mail box mounted upon a post at the side of the road convenient for the reach of a mailman in an automobile collecting and delivering mail, such mail box being located at a considerable distance from the residence of the owner, and the primary object of the invention is to provide such mail box with a signalling device so constructed and arranged that the signal is normally inoperative but will be projected to a display position visible from the residence whenever the mailman places mail in the box.

Another object of the invention is to provide such a mail box signal in which by the act of opening the door of the box to place mail therein the signal will be tripped into a signal display position.

A further object of the invention is to provide a mail box signal of few and simple parts characterized by its simplicity and reliability in operation, which is of such nature that it may be sold independently of the box and readily and quickly attached to the box without the aid of skilled labor, which may as readily be removed from the box and attached to other mail boxes and which is economical in original cost, operation and maintenance.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views:

Figure 1 is a side elevational view of a conventional rural mail box equipped with a signalling device in accordance with the invention in which the signal is an upright or non-signalling position.

Figure 2 is a rear end elevational view of the same.

Figure 3 is a side elevational view similar to Figure 1 but with the door of box open and the signal dropped to display position.

Figure 4 is a rear end elevational view of the same.

Figure 5 is an isometric view showing the parts in the position of Figures 1 and 2.

Figure 6 is also an isometric view showing the parts in the position of Figures 3 and 4.

Referring more particularly to the drawings **10** designates the body of a conventional rural mail box, **11** the bottom and **12** the rear end wall thereof.

The box is accessible through a door **13** movable upon the pivots **14** to the closed position of Figure 1 or the open position of Figure 3. Spring catch members **15** and **16** of a complemental nature are secured respectively to the box body and to the upper free end of the door **13** for securing the latter in the closed position of Figure 1.

Pursuant to the invention a signal flag or other form of signal elements **17** is mounted to one side of a signal post **18**, the post being affixed to a rotary and slidable shaft **19** mounted in bearings **20** affixed to the box bottom. A trigger **21** stems angularly off the other end portion of the shaft **19** at a point near the front end of the box and in the path of the lower edge portion of the

door **13**. The shaft **19** may be a metal rod round in cross section and the post **18** and trigger **21** angularly bent ends thereof.

A detent **22** in the form of a pin is mounted so as to project from the rear wall **12** of the box in a manner to retain the post **18** in the upright position of Figures 2 and 5.

The box is also illustrated as equipped with the usual flag **23** mounted upon a mast **24** carried pivotally by a mounting bracket **25** on the side of the body **10**. This flag **23** may be raised to the display position of Figure 1 to notify the postman that there is mail to be collected; or such flag may be lowered manually to the position of Figure 3 in which it is out of signalling or display position.

In the use of the device, it will be understood that the parts **17–22** inclusive may be mounted upon the box at the time of its manufacture or the same may be sold as a unit package quite independently of the box and later installed upon the box by the owner thereof.

The parts are normally in the position of Figures 1, 2 and 5 in which the flag **17** is in the raised inoperative position. In this position the post **18** is substantially upright and rests against the detent pin **22** as clearly shown in Figures 2 and 5. The trigger **21** in Figure 1 extends in a downward direction substantially 180° from the angular direction of the post **18**.

Accordingly, when the postman opens the door **13** from the position of Figure 1 to that of Figure 3 the lower edge of the door will strike the depending trigger **21** and shift the shaft **19** axially in a rearward direction through the bearings **20** to an extent to move the post **18** off the support or detent **22**. It will be understood that the length of this detent **22** from the rear wall **12** to the rear free end of the detent is shorter than the degree of the slidable movement of the shaft **19** imposed thereupon by the opening movement of the door **13**. Hence, by this action the post **18** is freed from the restraint of the detent **22** and the post **18** and flag **17** may thereupon by gravity drop to the position of Figures 3 and 4 where such flag or signal element is displayed for clear visibility from the residence of the owner.

To accomplish this purpose the post **18** and signal **17** must rest in the upright position upon the detent **22** in a condition of unstable equilibrium. In other words, the post **18** and flag **17** are biased in the upper position to a suppressed rotational movement in a left hand direction as viewed from Figure 2.

This biasing action may be accomplished in a number of ways. For instance in Figure 2 it will be seen that the detent **22** is offset to the left from the axial line of the shaft **19** whereby the post **18** assumes a slightly inclined position to the vertical. Or the weight of the flag **17** extending off to the left of the post **18** will tend to over balance the post when moved off the detent **22**.

The trigger **21** also performs a double function as more particularly seen in Figure 6 in that when the flag **17** drops down and causes rotary movement of the shaft **19** in the bearings **20** it will be accompanied by the rotation of the trigger **21** to an angular position where such trigger will strike against the bottom **11** as a stop and hold the signal **17** in a pre-selected position favorable for view from the owner's residence.

The parts may be made of metal or other suitable material. When mail is removed from the mail box the owner again places the signal in the perpendicular position of Figure 1 by rotating and axially sliding shaft **19** and the bearings **20** so that the signal **17** assumes the upright original position indicated in Figures 1 and 2.

Although some attempts have been made in the prior art to provide signals for a similar purpose a device according to the present invention has many advantages

over such prior structures, some of which are as follows:

With the present invention there are no mechanical parts to get out of order, no springs to become weak, crystallize, break etc. and no parts requiring oil and grease. There are no rivets to wear out or shear off. To attach the device it is not necessary to make any additional holes in the mail box which would permit rain or the elements to enter. No parts of the device are on the inside of the box to hinder or interfere with the placing or removing of mail. There are no parts inside or outside to interfere with the putting in or taking out of mail box. The device can be removed from one box and placed on another box. There are no parts to wear out or need replacement. The signal can be seen from either side of road or street. The signal can be easily replaced to normal position from front of box when mail is removed.

Although I have disclosed herein the best form of the invention known to me at this time, I reserve the right to all such modifications and changes as may come within the scope of the following claims.

What is claimed is:

1. A mail box signal device comprising detent means adapted to be mounted on the rear wall of the box, a signal carrying post cooperatively related to the detent means and slidable and rotatable relatively thereto to assume a substantially upright attitude in engagement with the detent means and subsequently a more rearward position free of the detent means so that the signal may drop to a signalling position, slidable and rotatable operating means connected to the post, bearing means for said operating means adapted to be affixed to the bottom of the box, and a trigger on the operating means positioned in the path of opening movement of the box door.

2. A signal device as claimed in claim 1 characterized in that the signal carrying post is held by the detent means in a condition of unstable equilibrium whereupon on release the post and signal will automatically drop by gravity to a signal display position, and further in that the trigger is angularly related to the operating means to encounter the box bottom as a stop on rotary movement of the post to signal display position.

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