# United States Patent [19]

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[54] **MAIL BOX SIGNAL**


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[51] **Int. Cl.** ..... **G08c 5/00**

[58] **Field of Search** ..... 116/114, 132; 232/34, 35



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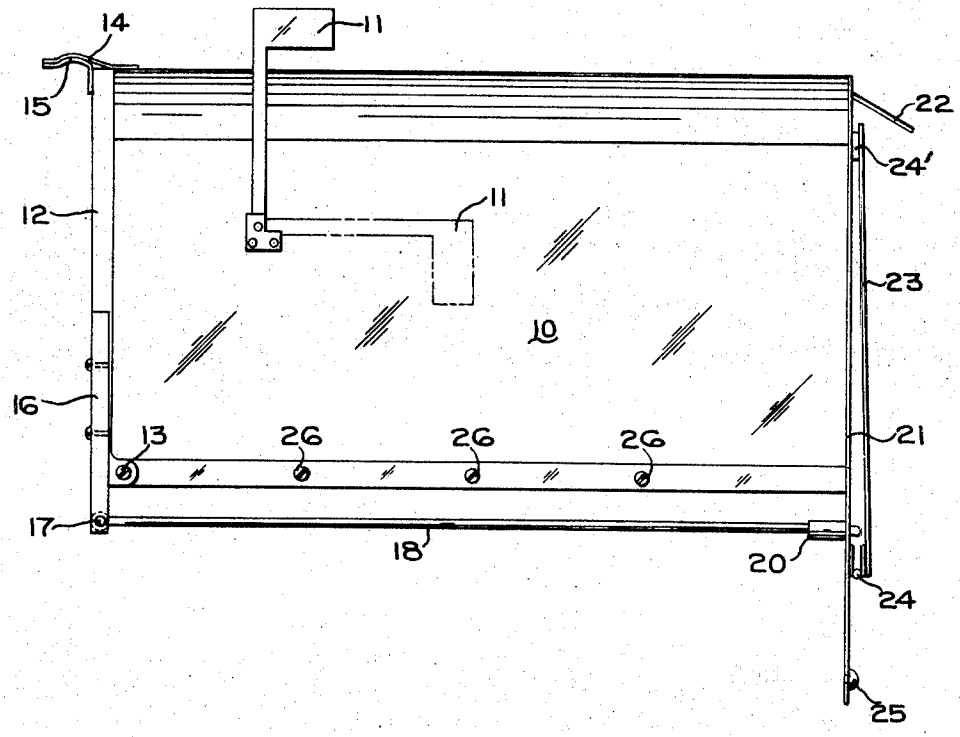
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[57] **ABSTRACT**

The present invention relates to a rural mail box having a flap held over the back by means of a magnet until released by pressure from a rod actuated by the opening of the mail box door. Depending upon whether the back or the front of the positioned box is facing the residence of the owner, the outer surface of the back and/or the inner surface of the flap, when in upright position, or only the back side of the box, are covered with a highly visable color so as to become readily visable from a distance when the door of the box is opened and the flap moved from its standby position. After removing the mail from the box the flap is manually moved to the standby position where it is held by a magnet until the box is again opened. The contact between the flap and the rear surface of the box is protected from rain, snow, or the like by an overhanging shield.

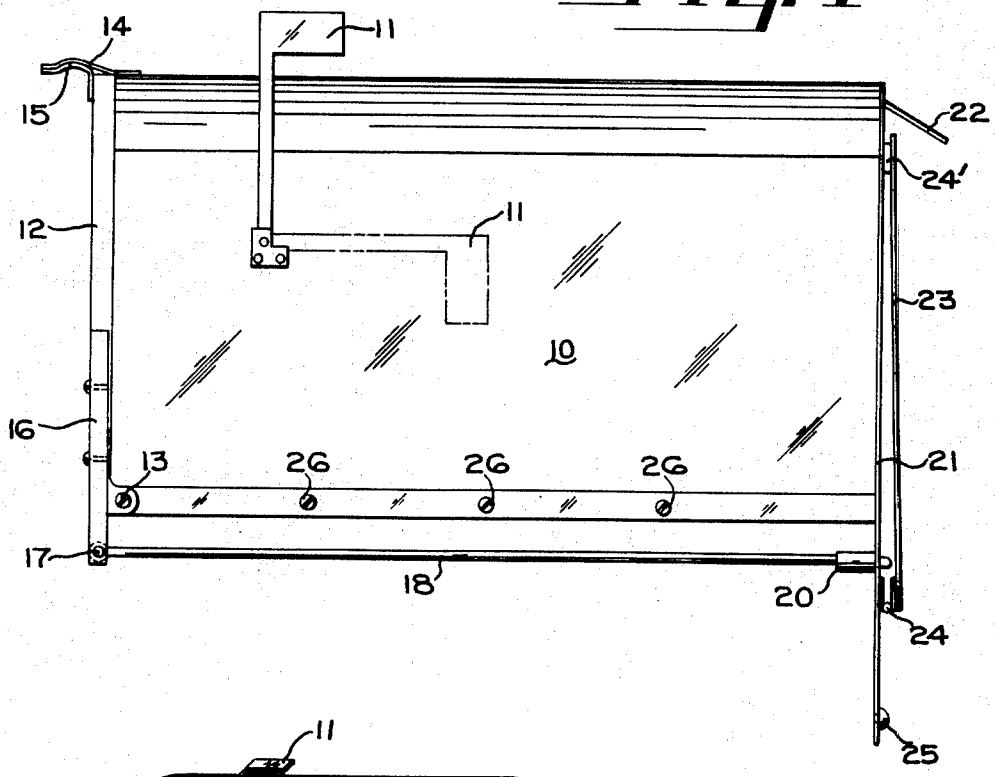

**4 Claims, 3 Drawing Figures**



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Fig. 1



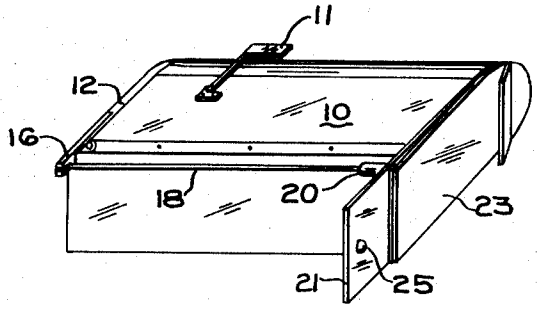




Fig. 2

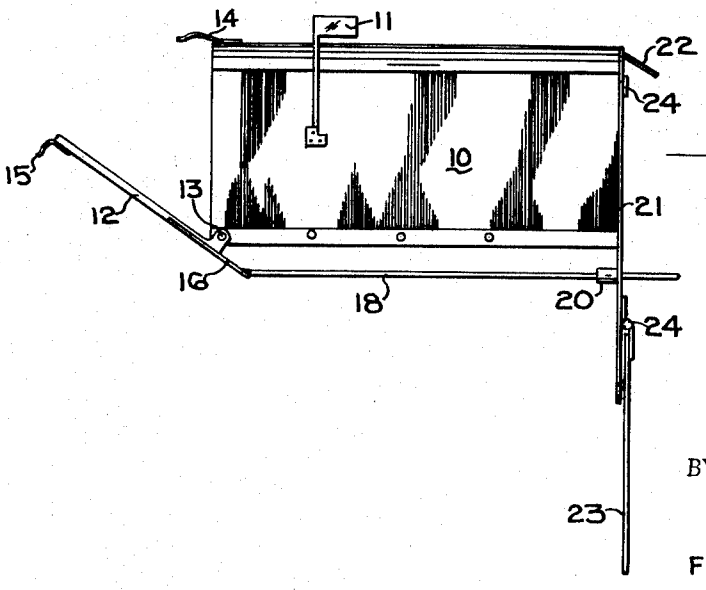



Fig. 3

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# MAIL BOX SIGNAL

The present invention relates to boxes, and particularly to rural mail boxes. More particularly, it relates to rural mail boxes provided with signals, visable from a distance, which indicate whether the box has been opened for the deposit of mail.

In rural areas where mail boxes are usually located some distance from the homes of the users and where the schedule of mail delivery is somewhat irregular the box owners frequently have to make unnecessary trips to the mail box to determine whether or not mail has been left in the box. Such visits are usually necessary even when it is known that the postman has passed. In order to obviate such numerous visits to the mail box signal devices of various kinds have been attached to the mail boxes to indicate that the box has been opened. In this manner visits to the mail box can be eliminated except when the signal indicates that the box has been opened, presumably for the deposit of mail for the box owner. These signal devices of the prior art, however, have been subject to various disadvantages which have made them unreliable, particularly during inclement weather conditions.

The mail box of the present invention is designed to overcome the various disadvantages of the prior art devices, and in particular to provide a signal less subject to failure to operate during inclement weather conditions, and which never fails to operate when the box is opened.

The attached figures, together with the accompanying description illustrate the improved mail box and signal device of the present invention.

FIG. 1 shows a side elevation view of the box and signal device, with the box in normal closed position.

FIG. 2 shows the under side of the box and the signal actuating device.

FIG. 3 is a side view showing the box in opened position.

In each of the figures and in the accompanying description the numerals used represent identical parts.

In the above figures **10** represents a conventional type mail box with conventional flag **11** which can be raised by the box owner to show that the box contains mail to be picked up by the postman. At other times the flag remains in the lowered position indicated by the dotted lines. The numeral **12** represents the conventional type door for the box, supported by conventional type hinge **13**, the door being held in the closed position by the spring catch members **14** and **15**.

To the front of the door is attached a plate **16** which extends below the bottom of the box where it is connected to the actuating rod **18**. If desired, for appearance sake, the plate **16** may be recessed into the door. It may be fastened to the door by screws or bolts, or welded thereto, whether recessed or not.

The lower end of the plate **16** is attached to the actuating rod **18** at **17** in a manner so as to permit lateral movement of the actuating rod **18** when the door **12** is opened or closed. The connection **17** may be either a hinge suitably connected both to the plate **16** and to the rod **18**, or by a bolt passing through the end of the plate and the end of the rod in a manner so as to permit lateral movement of the rod when the door is opened or closed.

The actuating rod **18** preferably passes underneath the box, preferably along one side, as shown in FIG. **2**.



The rod extends to the back of the box where it passes through a pipe sleeve **20** fastened in the extension **21** of the back of the box and to a point where it comes almost in contact with the flap **23** to be described below. The rod **18** may be of any convenient dimensions so long as it does not appreciably bend under the pressure exerted thereon by the opening of the box door. A one-fourth inch diameter iron or steel rod generally gives satisfactory results. **21** may either be a projection of the back of the box but preferably is a sheet attached to the back of the box, in which case the upper end of it can be conveniently bent to provide the slanted projecting shield **22**, which is of the order of the width of the box and extends out from the box a sufficient distance to cover the upper end of the flap **23** when in contact with the back of the box. The shield **22** is conveniently of the order of **1** inch by **6** inches but may be of different dimensions so long as it amply protects from rain, sleet, snow, and the like, the space between the sheet **21** and the flap **23** and is positioned so as to permit the complete opening of the flap **23**.

The flap **23** is fastened at its lower end by means of the hinge **24** to the sheet **21** at a point below the pipe sleeve **20**.

A permanent magnet **24'** is fastened into either the back wall of the box or into the projecting sheet **21**, fastened to the back wall by any convenient means such as bolts, at a point opposite the upper end of the flap **23** when the latter is in the upright standby position against the back of the wall or the projecting sheet **21**.

A rubber bumper **25** is conveniently attached to the lower end of the projecting sheet **21**, although this is not essential to the operation of the device.

The projecting sheet **21** may be bent to provide the overhanging shield **22** and fastened to the back of the box by welding or by means of bolts or screws.

The sides of the box are conveniently attached to the bottom thereof by means of the screws or bolts **26**.

The box may be set on a post with the back thereof facing the residence of the owner, in which position the exposed surface of the sheet **21** and the surface of the flap **23** facing the sheet **21**, when in upright position facing the sheet **21**, are painted a brilliant easily discernable color such as red, yellow, or the like. When the box is located across the highway from the user with the from facing the user it is necessary to color only the exposed surface of the flap **23** when in upright standby position as only this side will be visable to the user of the box when the flap is in the released or down position.

The improved mail box with signal device of the present invention are used as follows: When the door of the box is closed the flap **23** is in the upright position in contact with the sheet **21** where it is held in contact therewith by the magnet **24'**. When the door **12** is pulled open the projection **16** pushes the rod **18** toward the rear of the box which causes the end of the rod to come in contact with the inner surface of the flap **23** with sufficient force to break the contact between the flap **23** and the sheet **21**, maintained by the magnet **24'**. When the flap **23** is pushed past a 90° angle it falls until it comes in contact with the lower end of the sheet **21** which is preferably provided with a rubber bumper **25** to reduce the force of the contact between the flap **23** and the sheet **21**. The dropping of the flap **23** exposes

the brightly colored inner surface of the flap and colored back end of the box, when the latter faces the user's residence and thus signals the fact that the box has been opened. When the box is positioned so that the front faces the user's residence, the brightly colored outer surface of the flap **23** is readily visable extending below the box. In either case, the signal then remains in effect until the flap is manually turned back into contact with sheet **21** at the location of the magnet **24'** where the force of the magnet comes into play and holds the flap **23** until the box is again opened and the flap pushed away from the effective field of the magnet.

The protective shield **22** is particularly important in areas where freezing rain or snow would otherwise freeze the flap **23** to the sheet **21** and thus prevent operation of the signal.

What is claimed is:

**1**. A mail box comprising a receptacle provided at one end with a vertically swinging hinged door, said door having attached to the outer face thereof a plate extending below the bottom of said box where it is pivotally connected with an actuating rod extending beneath the bottom of said box through a loosely fitted sleeve fastened in a plate extending below the bottom of said box at the rear end of said box, whereby lateral movement of said rod is effected when said front door of said box is opened or closed, an iron metal flap substantially covering the back of said box and hinged to the plate extending below the bottom of the rear of said box at a point below the point at which said actuating rod passes through the flap expending below said box, the top of said flap extending to near the top of the rear end of said box and in contact therewith when in an upright position, a permanent magnet located in the rear wall of said box and of sufficient strength to hold said flap in contact with said rear wall until pushed from it by said actuating rod, an overhanging shield above the contact point between said flap and said rear wall which does not come in contact with said flap when the latter is pushed away from said rear wall by said actuating rod,

**2**. The device of claim **1** wherein a rubber bumper is positioned below said hinge connecting the flap to the extension of the rear wall below the bottom of said box.

**3**. The device of claim **1**, wherein the rear of the box and the inner surface of said flap when in upright position are both coated with a highly visible color.

**4**. The device of claim **1**, wherein the outer surface of said flap when in upright position is coated with a highly visible color.

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