No. 715,240. Patented Dec. 9, 1902.

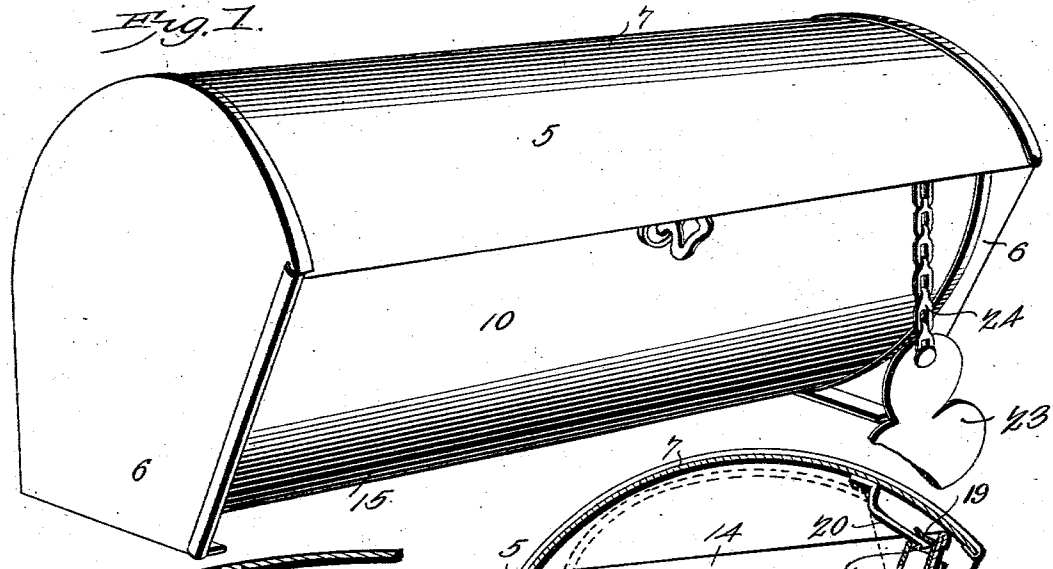
S. M. BIRELY.

MAIL BOX.

(Application filed Dec. 10, 1901.)

(No Model.)

Fig. 1.



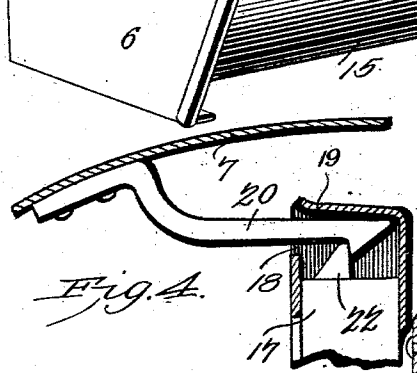


Fig. 4.

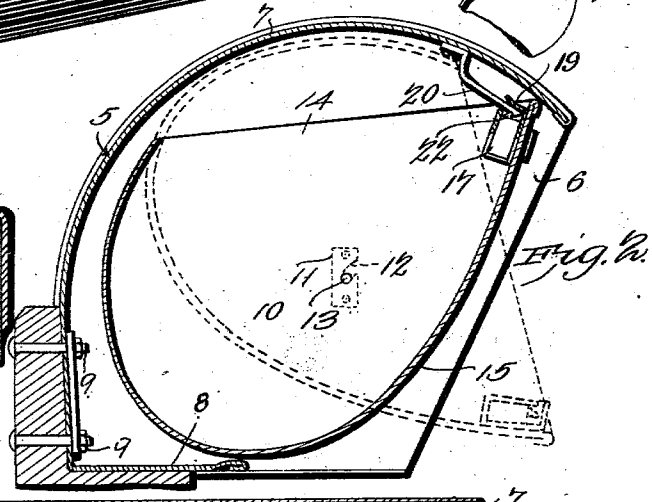


Fig. 2.

Fig. 3.

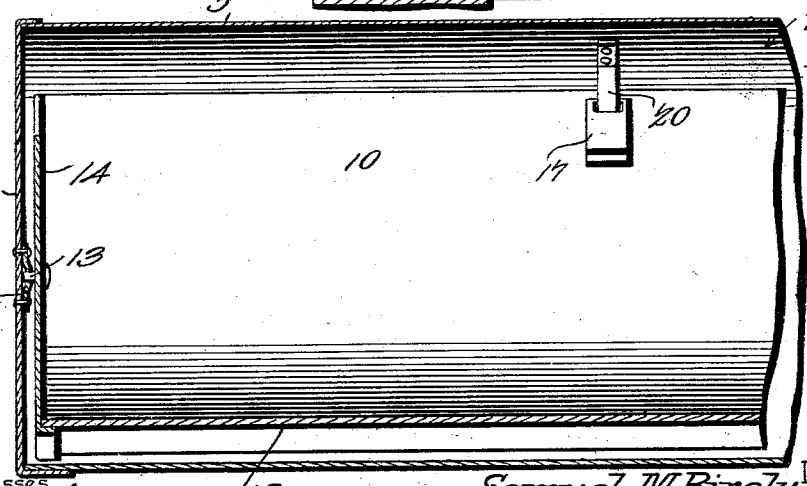


Fig. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL M. BIRELY, OF THURMONT, MARYLAND.

MAIL-BOX.

SPECIFICATION forming part of Letters Patent No. 715,240, dated December 9, 1902.

Application filed December 10, 1901. Serial No. 85,388. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. BIRELY, a citizen of the United States, residing at Thurmont, in the county of Frederick and State of Maryland, have invented a new and useful Mail-Box, of which the following is a specification.

This invention relates to certain improvements in the construction of mail-boxes, and more especially of mail-boxes used in rural districts, where both the carrier and the owner are provided with keys by which the box may be opened.

The principal object of the invention is to provide a cheap and durable box which may be quickly opened and which when released will close and lock automatically.

A further object is to provide a box which will be obsolutely waterproof and where the accumulation of snow or ice will not interfere with its opening or closing.

A still further object of the invention is to so construct and arrange the locking mechanism as to prevent the box being forced open and, further, to provide an improved form of signal which may be employed to assist in opening the box after unlocking.

With these and other objects in view the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a mail-box constructed and arranged in accordance with the invention. Fig. 2 is a transverse sectional elevation of the same. Fig. 3 is a longitudinal sectional elevation of the box. Fig. 4 is an elevation, on a somewhat larger scale, illustrating the lock. Fig. 5 is a detail view of one of the tray-bearings.

Similar numerals of reference are employed to designate corresponding parts throughout the several figures of the drawings.

As one of the principal objects of the invention is to manufacture a durable box which may be sold at small cost, I employ galvanized sheet-iron in its construction, the metal being sufficiently heavy to resist any ordinary attacks from malicious or mischievous persons and at the same time presenting a neat and attractive appearance, and as the coating the metal receives is sufficient to protect it from corrosion it is not necessary to employ paint, although of course the boxes may be painted any required color.

The hood 5 is formed from three pieces of metal, comprising two end plates 6, having flanged edges, and a curved body portion 7, which may be riveted, soldered, or otherwise secured to the end pieces to form a waterproof casing. The lower edge of the body portion is bent outwardly in a horizontal line, as shown at 8 in Fig. 2, and serves to brace the lower edges of the side pieces and at the same time forms a contracted mouth for the hood.

In the rear of the hood are formed suitable openings through which suitable securing-bolts may be passed to fasten the box to a tree, post, or other support, the nuts being placed on the threaded ends of the bolt inside of the hood, so that access cannot be had thereto without removing the letter-tray 10. The horizontally-disposed portion 8 has its outer edge in proximity to the bottom of the tray and prevents the insertion of any tool or implement for effecting the removal of the nuts.

Secured to the inner sides of the end wall 6 are bearing-pieces 11, each formed of a strip of sheet metal having its opposite ends riveted or otherwise secured to said end pieces. The central portion of each strip is slightly dished, so as to project some little distance from the surface of the end pieces, and in the said central portions are formed inclined slots 12, having their end walls rounded for the reception and support of suitable pivot-pins 13, formed by small rivets or bolts riveted or otherwise secured to the ends of the tray.

The tray is formed of three pieces of sheet metal, comprising two end sections 14, having flanged edges, and a curved body portion 15, having its ends firmly secured to said flanged end portions in such manner as to leave the interior of the tray perfectly smooth, so that letters and other objects may be readily removed therefrom. As the major diameter of the letter-tray is greater than the width of the mouth of the hood, it is impossible to remove the tray from the hood without first unlocking the box and turning the tray to a po-

sition such as indicated by dotted lines in Fig. 2, or, preferably, for a distance slightly less than that indicated, and then raising the tray until the bearing-pins 13 are removed from the bearing plates or strips 12. The construction of the tray is such that when in locked position its major diameter will be presented to the opening in the casing, and if the end wall of the casing be forced outwardly to an extent sufficient to remove the bearing-pieces from engagement with the ends of the pivot-pins the box will still remain locked, it being possible to open the tray without unlocking the same or cutting away a portion of the casing. It will be noted that from the position of the bearing-pin the center of gravity of the tray is considerably to the rear of the plane of the pivot-pins, so that it will at all times tend to remain in the closed position, as illustrated.

The upper edge portion of the front of the tray is provided with a suitable lock-casing 17, having on its rear face an opening 18 for the reception of a catch or keeper 20, secured to the inner face of the hood, and the upper plate 19 is rigidly held in place by continuing the side walls of the lock-casing up beyond the line of the opening, as indicated more clearly in Figs. 3 and 4. When the catch or keeper enters the opening 18, it will depress the spring-locking bolt 22, the keeper when fully entered being automatically engaged with and locked to the spring-bolt. The upper wall 19 of the lock-casing serves to lock the keeper vertically and prevent the separation of the parts should an attempt be made to force the box open by the introduction of an implement between the tray and the hood, it being impossible with the exertion of any ordinary degree of force to separate the parts in this manner, the movement being resisted not only by the contact of the keeper with the upper wall 19 of the lock-casing, but by the direct action of the pivot-pins with their bearing-strips and by the contact of the bottom of the tray with the forward edge of the bottom portion 8 of the hood. Any attempt to raise the bearing-pins from their bearings when the tray is locked will be resisted by the contact of the upper edge of the tray with the under surface of the hood and by the pressure of the bottom wall of the opening 18 of the lock-casing on the keeper, and should the central portion of the upper edge of the hood be elevated in an attempt to disengage the pivot-pin the ends of the tray would come into contact with the top of the hood, near the opposite ends thereof, and offer sufficient resistance to prevent any movement. In order to simplify the construction, the keeper 20 is secured to the hood in such position that its rear end will form a stop for limiting the opening movement of the tray and prevent the latter from swinging to such an angle as would cause its contents to fall to the ground.

The box is opened by turning the key and pulling down the tray, which exposes to view the whole of the interior of the tray, rendering it impossible to overlook any of the contents, and as there are no inner projections and no unevenness of the surface of the tray the mail-matter may be gathered by simply pulling and scraping it toward and over the edge of the tray. When the tray is released, it returns by gravity to the initial position, the momentum acquired on the returning movement being sufficient to effect the automatic engagement of the keeper and lock.

As a means of signaling to either the proprietor or the letter-carrier that the box contains mail I employ a tag of any suitable shape, the tag employed in the present instance being indicated by the reference-numeral 23 and secured by a short length of cord or chain 24 to the edge of the tray, so that it may be utilized in pulling the tray to the open position. When the box contains mail-matter, the signal is exposed, and when the mail has been collected the signal is replaced in the box, thus rendering it unnecessary to open empty boxes.

The box as manufactured is inexpensive in construction and is at all times waterproof, and while the construction herein described, and illustrated in the accompanying drawings, is the preferred form it is obvious that many changes in the form, proportions, size, and minor details of construction may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of my invention.

Having thus described my invention, what I claim is—

1. The combination in a mail-box, of the curved hood, a tray pivotally supported therein and having its center of gravity to the rear of its pivots, a lock carried by the tray, and a keeper carried by the hood for engagement with said lock, said keeper being so situated as to form a stop for limiting the opening movement of the tray, substantially as specified.

2. In a device of the class specified, the combination with a hood having a bottom section and provided with a mouth or opening extending from the forward edge of the bottom section to the forward edge of the curved top of the hood, a self-closing tray arranged in said hood and having supporting-pivots at its opposite ends, said tray having its center of gravity below and to the rear of its pivot and in closed position presenting its major diameter to the mouth or opening, said diameter being greater than the vertical height of the opening and preventing the removal of said tray.

3. The combination with a hood comprising end walls, a curved top and a horizontal bottom piece, of a self-closing tray pivoted in the hood and, when in closed position, being wholly within the line of the hood, the major diameter of said tray being greater than the distance between the upper and lower edges

of the opening in said hood and preventing the removal of the tray through said opening.

4. The combination with a hood having a curved top and a horizontal bottom portion and provided with bolt-receiving openings for securing it in position, of a tray pivoted within the hood and when closed being wholly within the lines of the hood, said tray having its center of gravity at a point below and to the rear of its pivots, said tray having a less and a greater diameter which respectively are less and greater than the distance across the front opening of the hood, and a lock for securing the upper portion of the tray and hood, substantially as specified.

5. The combination in a mail-box, of the hood, a self-closing letter-receiving tray, a signal comprising a tag or disk, and means connecting the tag or disk to the tray to thereby permit of the use of the tag or disk as a handle to assist in moving the tray to open position.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL M. BIRELY.

Witnesses:
HARRY C. COVER,
M. C. OSLER.