

G. B. McALLISTER.
MAIL RECEPTACLE.

APPLICATION FILED JUNE 17, 1910. RENEWED MAR. 8, 1912.

1,042,458.

Patented Oct. 29, 1912.

3 SHEETS—SHEET 1.

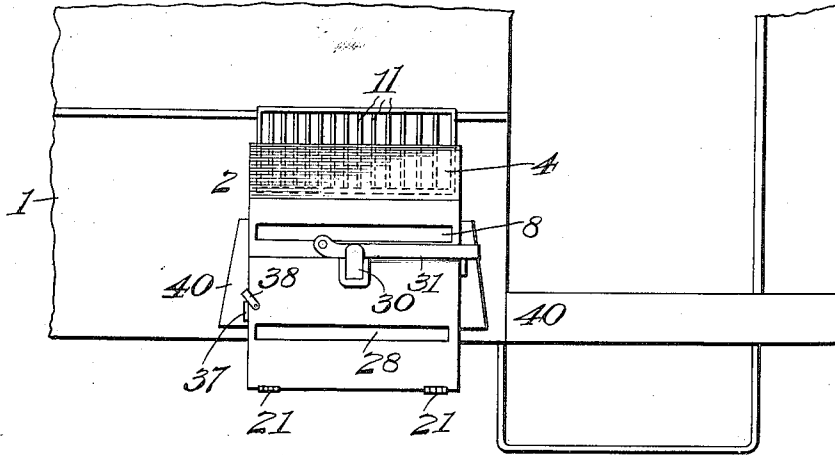


Fig. 1.

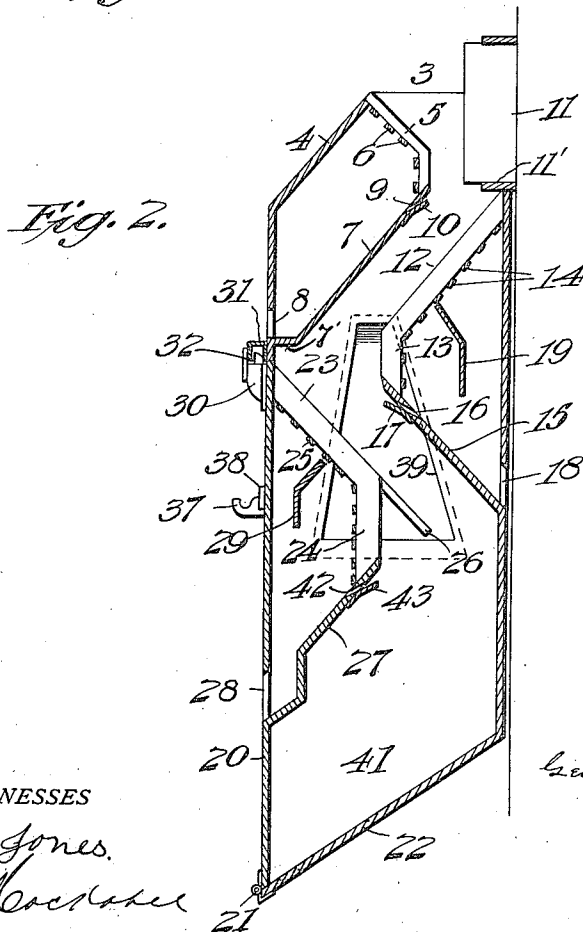


Fig. 2.

WITNESSES
R. H. Jones.
T. L. MacKee

George B. McAllister,
INVENTOR

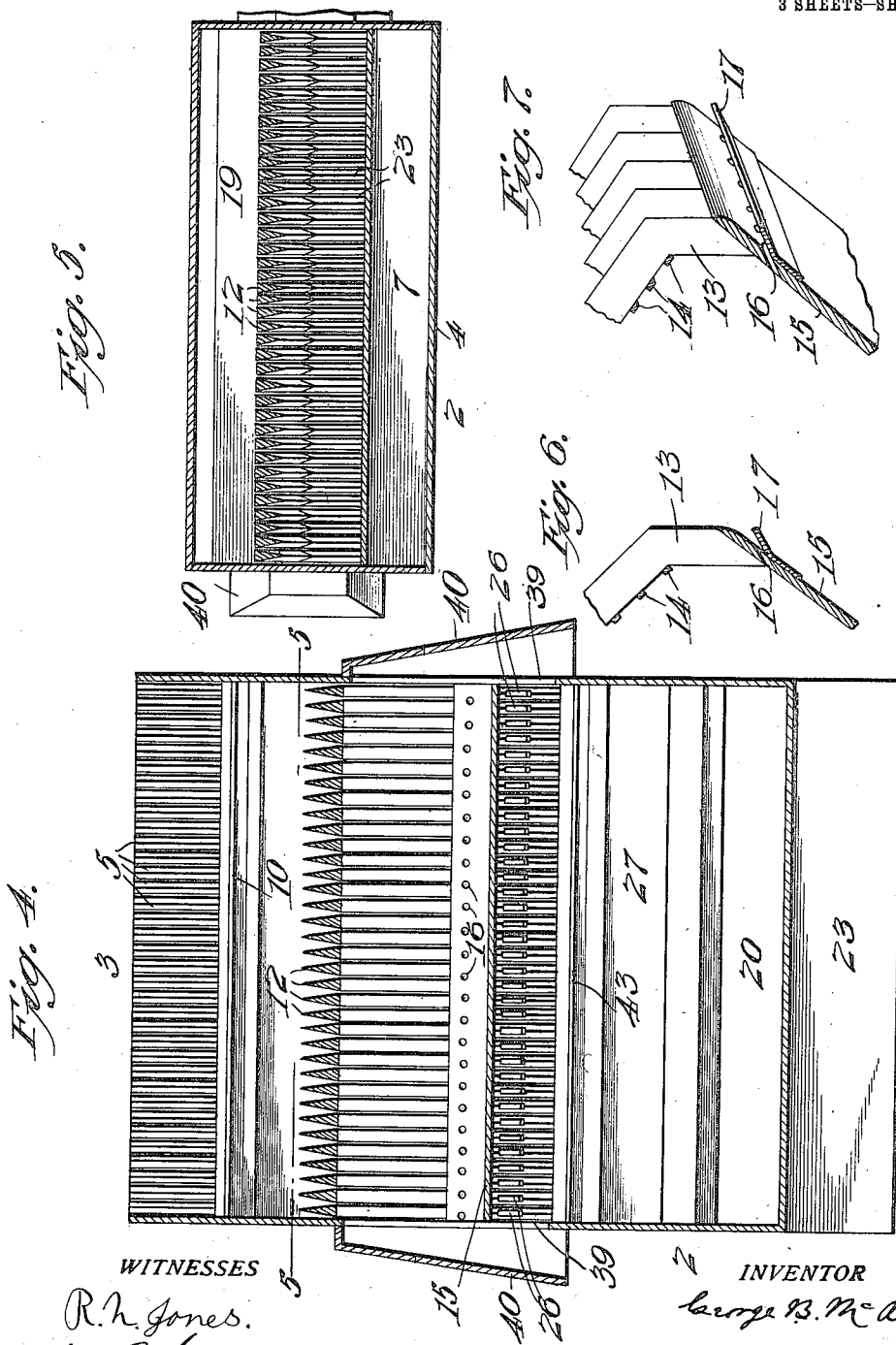
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3 SHEETS—SHEET 3.

Fig. 8.

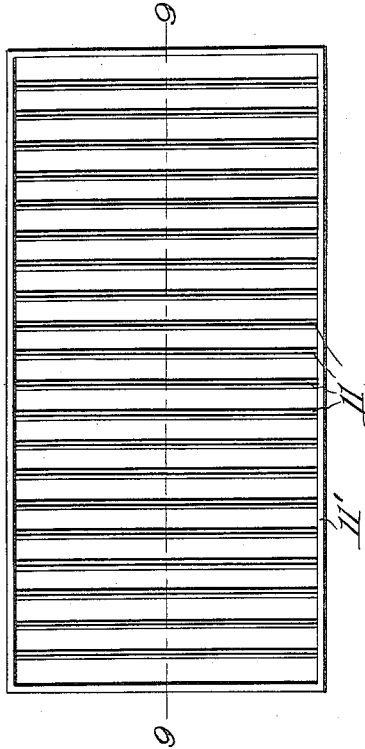


Fig. 9.



Fig. 10.

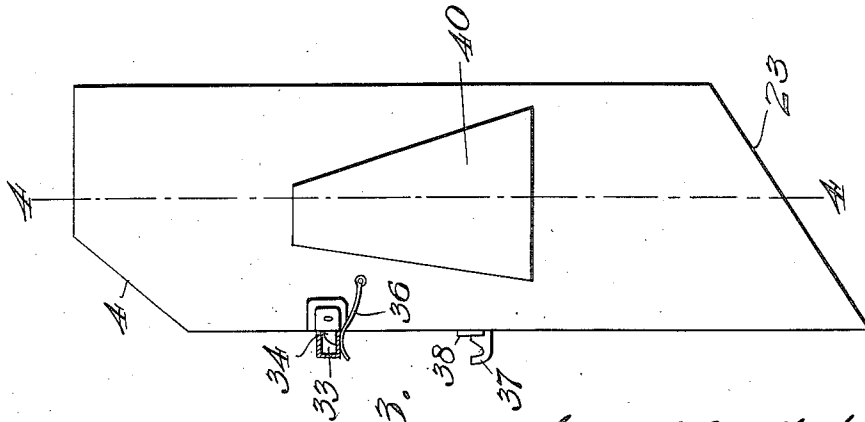
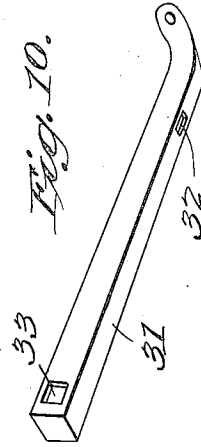


Fig. 3.

George B. McAllister,
INVENTOR

WITNESSES

R. H. Jones.
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UNITED STATES PATENT OFFICE.

GEORGE B. McALLISTER, OF BALTIMORE, MARYLAND, ASSIGNOR TO McALLISTER STREET CAR MAIL BOX COMPANY, A CORPORATION OF THE DISTRICT OF COLUMBIA.

MAIL-RECEPTACLE.

1,042,458.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed June 17, 1910, Serial No. 567,429. Renewed March 8, 1912. Serial No. 682,519.

To all whom it may concern:

Be it known that I, GEORGE B. McALLISTER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Mail-Receptacles, of which the following is a specification.

My invention relates to receptacles for letters, papers, and other mail matter usually deposited in mail boxes, and is particularly adapted for use upon street cars or other vehicles.

The main object of my invention is to provide a mail box which will thoroughly protect the mail receptacle or repository from the weather.

Another feature resides in the construction of a chute which will effectually protect the articles passing therethrough from contact with moist surfaces and in which provision is made to prevent any obstruction or clogging of the channel by the mail matter.

I have also provided for the ready removal of the contents of the box, so that, if necessary, this may be done while the vehicle to which the box is attached is in motion.

The invention will be understood from the following description in connection with the accompanying drawings, in which—

Figure 1 is a fragmentary view of a portion of a street-car showing my mail box secured thereto; Fig. 2 is a central transverse sectional view of the device; Fig. 3 is a side elevation thereof; Fig. 4 is an enlarged sectional view on the line 4—4 of Fig. 3; Fig. 5 is a horizontal sectional view of the line 5—5 of Fig. 4; Fig. 6 is a detail view of the lower portion of one of the directing plates and a portion of the partition to which it is secured, in section; Fig. 7 is a perspective view of the lower portion of the directing plates and partition; Fig. 8 is a front elevation of the frame and directing plates at the rear of the mail hopper or chute; Fig. 9 is a longitudinal sectional view on line 9—9 of Fig. 8; and Fig. 10 is a perspective view of the locking bar.

In Fig. 1, I have illustrated the manner in which the mail box may be placed upon the side of a street car and near one end thereof, so that the locking mechanism may be within reach of a mail collector when standing upon the step or platform. The

box 2 is preferably rectangular, with a bottom plate 22 downwardly inclined toward the front. The top contains an open hopper 3, constituting the mouth of a tortuous chute leading to the mail receptacle or repository 41. The inclined guides 5, 12, and 23, upon which the mail matter slides in its passage through the chute, are formed of a series of parallel beveled or wedge-shaped bars having their lower ends terminating in bent extensions which are secured to shelves or partitions 7, 15, and 27, respectively, alternately inclined upwardly in opposite directions from the front and rear walls of the box. It will be observed that the bent extensions on the ends of the bars provide for a sufficient elevation of the guides above their supports, so that it is impossible for letters to strike the edges of the partitions, which is a very important feature. This construction also provides an enlarged clearance between successive guides so that the mail matter may turn downwardly as it leaves one set of guides and before striking the next set which are oppositely inclined, thus preventing any possibility of clogging the channel at the turning point between successive guides. In order to further guard against any possibility of any mail matter being caught in the grooved channels between the inclined bars, I secure transverse bars to the under sides of the guides, as shown at 6, 14, and 25. In case a letter should project edgewise in the groove between adjacent guide-bars, the corner will strike one of these transverse bars and be prevented from passing through the guides or lodging thereon. I have found that letters are very liable to catch in any joint or aperture between the parts of a chute, and I have therefore provided offset sets or overhanging parts above the upper ends of each of the inclined guides, which will effectually protect the joints between the guide-bars and the walls of the box. I have shown a shelf or deflector 11' above the guide 12, and an offset 7' in the lower end of the partition 7 above the guide 23.

To prevent theft of mail matter, as by the insertion of cords covered with adhesive material, I provide a series of rods forming a continuation in the plane of the guide 23, which would intercept any articles that might be drawn upwardly.

In mail boxes which are provided with open slots or hoppers for the reception of mail articles, it is essential to provide means for protecting the interior of the box from the weather so that it will be impossible for moisture to reach the receptacle or mail repository. I have provided a series of chambers under the inclined guide of the chute and devices which effectually direct all moisture or moisture-laden currents of air into these chambers. It is evident that any rain, snow, sleet, etc., which falls upon the bars or slats 5 of the outwardly flaring hopper 3, will pass into the underlying chamber and fall upon the inclined partition 7 which leads to the slot 8 in the wall of the box. The drops of water which follow along the guide-bars to the extensions will be caught by the projecting lips 10 and pass into the chamber through the channels 9. In a similar manner, any rain or snow which falls upon the guides 12 and 23, will pass down upon the partitions 15 and 27 or drip onto the lips or troughs 17 and 43 and be guided through the slots 18 and 28, respectively. Inasmuch as water will flow more rapidly over a curved surface, I round the upper edges of the partitions very sharply where they meet the sharp edges of the beveled guide-bars as illustrated in Fig. 7. By reason of the sharp edges of the guide-bars which do not retain moisture, the mail matter is at all times safely conducted through the chute without danger of becoming wet. The back of the hopper is also guarded by means of a series of parallel wedge-shaped bars 11, which also serve to deflect the air-currents which strike the box obliquely. I have shown the bars 11 projecting beyond the deflecting shelf 11' for the purpose of guiding the mail matter safely into the chute.

I have found that sudden gusts of wind will carry moisture-laden air or fine particles of snow through the chute and into the mail receptacle unless devices are provided to deflect the air currents. Gusts of wind or dashing rain striking the side of the car at the back of the hopper will be deflected outwardly by the shelf 11', which will very materially protect the mouth of the chute from these entering air-currents. A large proportion of the rain will be reflected back upon the opposite slotted guide and will pass through into the chamber beneath. Air currents which enter the chute in a direction to strike the bars 12, pass through the slots therebetween and are guided by the deflector plate 16 toward the opening 18. Such air-currents as pass directly through the upper arm of the chute and strike the lower plane of the chute, will pass through the slots between the guide-bars 23 and be deflected by the plate 29 toward the opening 28. These deflector plates 19 and 29 effectually prevent

any air-currents from entering the receptacle 41. The sudden swinging of the car and the vibrations due to sudden jolts cause drops of water to be thrown from the guide bars 12 upon the under side of the plate 7, from whence they fall upon the bars 23, but in any case, it is impossible for water to reach the mail receptacle. It sometimes happens that the wind will strike the box in a downward direction, oblique to the end walls. To furnish a direct exit for such air-currents, I provide openings 39, in the side walls, which taper upwardly and are protected by hoods of corresponding outline upon the outside of the box and which flare outwardly toward their lower open mouths.

In order that the contents of the box may be quickly removed, I provide a door hinged at the bottom and extending above the lower arm of the chute, and attach the lower set of guide-bars thereto. When the door is swung outwardly the entire front of the receptacle is left unobstructed, and the upper arm of the chute is directly accessible for examination by inserting the hand. The importance of this will be appreciated by letter carriers who have had experience with boxes in which it was necessary to extend the arm from a door in the lower part of a box into the upper part to dislodge articles that had become wedged.

The locking mechanism for the door which I prefer to employ comprises a hasp 31 pivoted to the wall of the box, which is provided upon its lower face with an aperture 32 and upon its side face with an aperture 33, to be engaged respectively by the bolt 32 of a spring catch 30 upon the front of the box, and by the bolt 34 of a spring lock upon the end wall thereof. A pivoted latch 38 on the door is adapted to engage a catch 37 on the end of the box and prevent the door from falling outwardly when the hasp is released.

By placing the box adjacent one end of the car, the mail collector may release the lock 35 while standing upon the platform, thus causing the hasp 31 to be lifted by the spring 36, out of engagement with the spring catch 34, and permitting the door to move outwardly until held by the gravity latch 38. The hasp may then be swung back into locked position behind the door, leaving the latter in condition to be swung outwardly by lifting the latch 38. When the contents of the box have been discharged, the door will be automatically locked by swinging it back into closed position.

The specific locking mechanism disclosed herein will constitute the subject-matter of a separate application.

While I have described in detail the particular structure disclosed herein, it is evident that changes may be made therein

without departing from the spirit of my invention or from the scope of my claims, which are—

1. A mail-box, comprising a receptacle
5 for mail articles, a hopper to receive the articles, a tortuous channel connecting said hopper and said receptacle comprising a plurality of inclined guides, and projections
10 overhanging the upper ends of said guides, to prevent mail articles from impinging in the angle at the upper ends of said guides.

2. A mail-box, comprising a receptacle
15 for mail articles, a hopper to receive the articles, and a tortuous channel connecting said hopper and said receptacle having a plurality of angularly arranged guides, each of said guides comprising a series of
20 parallel beveled bars having their lower ends bent to provide an enlarged clearance between the successive guides, the axis of each bar being in a vertical plane.

3. A mail-box, comprising a receptacle
25 for mail articles, a hopper to receive the articles, a tortuous channel connecting said hopper and said receptacle having a plurality of angularly arranged guides, each of said guides comprising a series of parallel beveled bars having their lower ends bent
30 to provide an enlarged clearance between successive guides, and a plurality of straight transverse bars secured to the inner sides of said beveled bars.

4. A mail-box, comprising a receptacle
35 for mail articles, and a hopper to receive the articles, said hopper having an outwardly flaring mouth and the front and back walls thereof comprising a series of parallel beveled bars the axis of each bar
40 being in a vertical plane.

5. A mail-box, comprising a receptacle
45 for mail articles, and a hopper to receive the articles, said hopper having an outwardly flaring mouth and the front and back walls thereof being provided with a series of parallel beveled bars having their axes arranged in vertical planes, said bars upon
50 the front side being inclined and having their lower ends bent to provide an enlarged clearance between said front and back walls.

6. A mail-box, comprising a receptacle
55 for mail articles, a hopper to receive the articles, said hopper having an outwardly flaring mouth provided with a series of in-

clined parallel beveled bars having their
axes arranged in vertical planes, each of
55 said bars having their lower ends bent to provide an enlarged clearance between the front and rear walls of the hopper, a chamber beneath said parallel bars, and a lip projecting under said lower ends and having a
60 channel connecting with said chamber.

7. A mail-box, comprising a receptacle
for mail articles, an open hopper to receive the articles, a tortuous passage connecting
65 said hopper with said receptacle, said passage having a plurality of inclined slotted guides, chambers beneath said guides having passages leading through the exterior wall of said box, and deflecting plates within said
70 chambers adapted to direct air pressure toward said passages.

8. A mail-box, comprising a receptacle
for mail articles, an open hopper to receive the articles, a tortuous passage connecting
said hopper with said receptacle, said passage having a plurality of inclined slotted
guides, chambers beneath said guides having
85 passages leading through the exterior wall of said box, projecting lips under each of said guides having channels communicating with said chambers, and deflecting plates
90 within said chambers adapted to direct air pressure toward said passages.

9. A mail-box, comprising a receptacle
for mail articles, an open hopper to receive
85 the articles, a tortuous passage connecting said hopper with said receptacle, and downwardly directed shielded vent openings in the side walls of the box communicating
90 with said passage.

10. A mail-box, comprising a receptacle
for mail articles, an open hopper to receive
the articles, a tortuous passage connecting
said hopper with said receptacle having oppositely inclined guides, and a hinged door
95 constituting a portion of the front wall of the box, one of said guides being secured to said door to move outwardly therewith, thereby permitting access to the upper part
100 of the channel.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE B. McALLISTER.

Witnesses:

BURNETT S. JONES,
J. WM. MISTER.