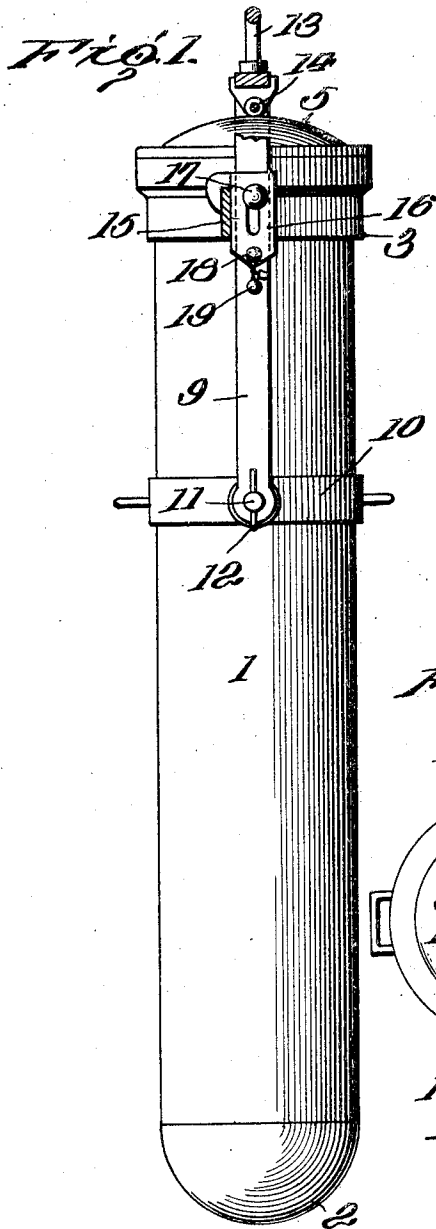
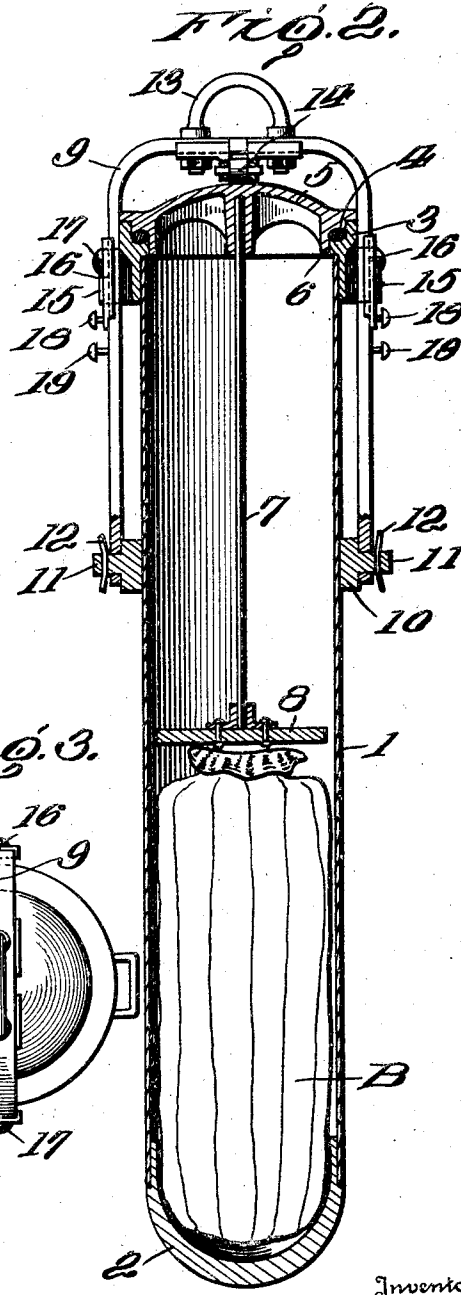
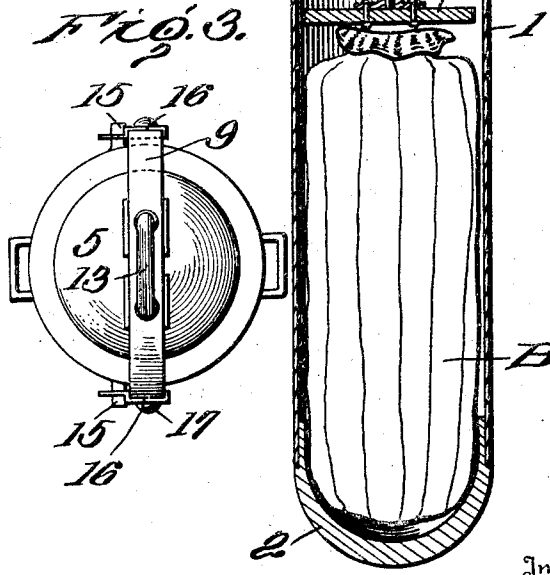


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MAIL CARRIER FOR SEA DELIVERY SERVICE.
APPLICATION FILED OCT. 22, 1919.

1,357,862.

Patented Nov. 2, 1920.



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MAIL-CARRIER FOR SEA DELIVERY SERVICE.

1,357,862.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM GRUNOW, a citizen of the United States, residing at Newark, in the county of Essex, State of New Jersey, have invented certain new and useful Improvements in Mail-Carriers for Sea Delivery Service, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in mail carriers for sea delivery service, and more particularly to a mail carrier adapted to be used in the delivering of mail from an aeroplane or other flying boat to a vessel which is proceeding at full speed at sea or vice versa.

An object of the invention is to provide a mail carrier for the above purpose which is non-sinkable, upright, floating and watertight whereby said carrier may be attached to a cast line adapted to be thrown across the deck of a vessel from an aeroplane, flying boat or the like, and the carrier then dropped into the sea and pulled in by the cast line.

A further object of the invention is to provide a carrier of the above character which is provided with means for holding the mail matter fixedly at one end thereof so that the carrier will float on end and with a considerable portion thereof projecting above the sea level so that said carrier may be readily seen and picked up if by any means the same becomes lost or detached from the cast line.

A still further object of the invention is to provide a carrier of the above type wherein the body portion thereof for the mail matter is closed by a water-tight cover held on the body portion by a swinging bail which may be locked and sealed.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings, which show by way of illustration one embodiment of the invention:—

Figure 1 is a view, partly in side elevation and partly in section, showing a mail carrier embodying my improvements;

Fig. 2 is a longitudinal sectional view through the same; and

Fig. 3 is a top plan view of the same.

The invention is directed broadly to a mail carrier which is particularly adapted

for use in connection with a system of delivering mail set forth in my copending application Serial No. 332,554, filed of even date herewith. Said system consists broadly in providing a non-sinkable, upright, floating—therefore visible—watertight mail carrier to which is attached a cast line. This mail carrier is attached to some part of the framework of an aeroplane, flying boat or the like, which is equipped with a gun for throwing the cast line. When the mail is to be delivered from the aeroplane or flying boat to a vessel proceeding at full speed, the aeroplane is guided along side of the vessel at a height substantially on a level with the upper deck of a vessel, and at the proper time the gun is fired, thus shooting or throwing the cast line straight across the deck of the vessel either forward or aft. The rope is projected in substantially a horizontal path and will, therefore, pass beneath the wireless outfit in such a manner as to not in any way injure the same or injure the passengers, as the deck may be readily cleared to receive the cast line. As soon as the cast line is thrown across the vessel, then the mail carrier is released from the aeroplane or flying boat and dropped into the sea, and said mail carrier may be hauled in by the cast line and thus the mail delivered to the vessel. On the other hand, when it is desired to deliver mail from the vessel to the aeroplane or flying boat, the cast line is in a similar manner shot across the vessel, one end of the cast line being attached to the aeroplane or flying boat. The mail carrier, which is on the vessel, is quickly attached to the cast line and thrown into the sea and can be drawn into the aeroplane.

It is essential that the mail carrier shall be capable of floating in the water, in an upright position, so as to be visible, and shall be also watertight so as to protect the mail matter, and to this end I have provided a mail carrier which consists of a cylindrical body portion which is hollow, one end of which is permanently closed while the other end is closed by a cover. The cover is provided with watertight means for engagement with the body portion so that, when the cover is placed on the body portion, the water is kept from the interior thereof and the mail matter thus protected from the water. The cover is held onto the cylindrical body portion by means of a swinging bail which is locked by gravity

catches, and these gravity catches may in turn be sealed so as to prevent the mail matter from being tampered with.

To insure that the mail carrier will float in upright position and with a portion thereof projecting well above the water level, I have provided means for holding the mail matter at the lower end of the mail carrier and the amount of mail matter provided is considerably less than the inner capacity of the mail carrier. I have also provided a closing head for the lower end of the mail carrier which is relatively heavy and weighted so as to counterbalance the cover and the parts associated therewith for holding the same in place on the body portion.

Referring more in detail to the drawings, my improved mail carrier consists of a cylindrical body portion 1 which may be made of metal or any other suitable material, the essential features being that it should be strong, durable and water-tight. The lower end of this body portion is formed with a head 2 which is preferably made of cast metal and, as clearly shown in the drawings, this cast metal is of considerable thickness so as to weight down the lower end of the carrier and counterbalance the cover and parts associated therewith.

The upper end of the carrier is provided with a head 3, which has a water-tight connection with the body portion and which is formed with a recess for a rubber gasket 4. The upper end of the carrier is closed by a cover 5. This cover has a depending flange 6 which is preferably milled so as to closely fit within the milled inner part of the head 3. Said cover also has a recess for the gasket 4. The rubber gasket is preferably cylindrical in cross section, and the recess is shaped so that, when pressure is applied to the cover, the gasket will be sufficiently distorted as to produce a water-tight seal and thus prevent water from passing into the carrier.

The mail matter is placed in a suitable bag, indicated at B in the drawings, and this bag is placed in the carrier. Said bag is of a capacity not to exceed to any extent more than half the capacity of the carrier. Secured to the cover 5 is a rod 7 which carries a disk 8 adapted to hold the mail bag B at the lower end of the carrier. This insures that the weight of the mail matter shall be well below the center of the carrier so that, when the carrier is in the water, it will float upright and a considerable portion of the carrier will project above the water level. The carrier may be painted white, red or any other suitable color to attract attention so that, if the mail carrier becomes lost or disconnected from the cast line, it may be readily observed and picked up.

The cover is held onto the body portion

of the carrier by a locking bail 9. Extending about the cylindrical body portion is a cast ring 10 which is fixed to said body portion. Said cast ring has projecting trunnions 11 to which the bail 9 is connected, and said bail is secured to the trunnions by suitable pins 12. Attached to the bail centrally thereof is a double ended I-bolt 13. Also secured to the bail centrally thereof is a roller 14. It will be noted that the outer surface of the cover is dome shaped. The bail is of such length that, when it is swung to a vertical position, the roller 14 will engage this dome shaped cover and gradually force the cover onto its seat on the body portion, pressing the gasket and forming a watertight joint.

The head 3 is provided with suitable stops 15 which limit the swinging movement of the bail when in upright position, and sliding catches or dogs 16 operate by gravity to engage said stops and hold the bail in upright position with the cover locked onto the body portion. Said gravity catches or dogs consist of suitable sleeves sliding on the bail on which the dogs proper are mounted, and each sleeve is formed with a slot 16 through which a headed bolt 17 passes. Said sleeve is also provided with a projecting bolt 18 and the bail has a bolt 19 which is disposed adjacent the bolt 18 when the catches or dogs are engaged with the stops, and a suitable wire will be placed about the bolts 18 and 19 and secured by a seal. This prevents the mail from being tampered with without breaking of the seal. The cast line is attached to the I-bolt 13.

The operation of my device will be apparent from the above disclosure. The mail matter having been placed in the bag B placed in the carrier, and the cover is then placed on the body portion of the carrier, the bail swung to locking position, locked and sealed. The carrier is then attached to the cast line, if the mail is being delivered from an aeroplane or flying boat to a vessel, and is mounted on a suitable releasing bracket carried by the frame of the aeroplane or flying boat, so that the carrier may be released when the cast line has been projected across the deck of the vessel. This carrier may be quickly attached to the cast line if the carrier is on the vessel and in either case it is then thrown into the sea and is pulled in by means of the cast line.

It is obvious that minor changes in the details of construction and the arrangement of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters-Patent is:—

1. A non-sinkable upright floating mail carrier comprising a hollow cylindrical body

closed at one end, a removable cover for closing the other end of said body, means for locking the cover watertight on said body portion, and means independent of said cover for permitting said carrier to be transported.

2. A non-sinkable upright floating mail carrier comprising a hollow cylindrical body portion, means for permanently closing one end thereof, a removable cover for closing the other end of said body portion, means for forming a watertight connection between the cover and body portion, means for locking the cover watertight on said body portion, said means including a connection whereby said carrier may be transported without disturbing the connection between the body and cover.

3. A non-sinkable upright floating mail carrier comprising a hollow cylindrical body portion permanently closed at one end, a removable cover for closing the other end of said body portion, means for forming a water-tight connection between the cover and body portion, a bail pivoted to said body portion and engageable with the cover for locking the same on said body portion, said bail including means permitting the transportation of the carrier without disturbing said connection between the cover and body portion.

4. A non-sinkable upright floating mail carrier comprising a cylindrical body portion, a weighted head secured at the lower end thereof for closing the lower end of said body portion, a cover having a watertight connection with said body portion, means for locking the cover on said head, and means carried by said cover for holding the mail matter at the lower end of said body portion.

5. A nonsinkable upright floating mail carrier comprising a cylindrical body portion, a weighted head secured at the lower end thereof for closing the lower end of said body portion, a head secured to the upper end of said body portion and having a seat for a rubber gasket, a cover having a seat for engaging said rubber gasket, a flange fitting within said head, means for locking the cover on said head, a rod secured to the inner face of said cover and extending to a point midway between the ends of said cylindrical body portion, and a disk secured to said rod and operating to hold the mail matter at the lower end of said body portion.

6. A nonsinkable upright floating mail carrier comprising a hollow cylindrical body portion, a weighted head for closing the lower end of said cylindrical body portion, a head secured to the upper end of said body

portion, a cover having a water-tight connection with said head, a swinging bail, said cover having a dome-shaped outer face adapted to be engaged by said bail whereby the cover is locked on said head, gravity dogs for locking said bail in upright position, and means whereby said gravity dogs may be sealed against movement.

7. A nonsinkable upright floating mail carrier comprising a hollow cylindrical body portion, a weighted head closing the lower end of said body portion, a cover having a water-tight connection with the upper end of said body portion, a swinging bail, a roller carried by said swinging bail, said cover having a dome-shaped outer face adapted to be engaged by said roller whereby said cover is forced in water-tight connection with said body portion, and means for locking the bail in an upright position.

8. A nonsinkable upright floating mail carrier comprising a hollow cylindrical body portion, a weighted head closing the lower end of said body portion, a cover having a water-tight connection with the upper end of said body portion, a swinging bail, a roller carried by said swinging bail, said cover having a dome-shaped outer face adapted to be engaged by said roller whereby said cover is forced in water-tight connection with said body portion, means for locking the bail in an upright position, said means including gravity dogs, and stops carried by the body portion to limit the movement of the bail and with which said locking dogs engage for holding the bail in upright position.

9. A nonsinkable upright floating mail carrier comprising a hollow cylindrical body portion, a weighted head closing the lower end of said body portion, a cover having a water-tight connection with the upper end of said body portion, a swinging bail, a roller carried by said swinging bail, said cover having a dome-shaped outer face adapted to be engaged by said roller whereby said cover is forced in water-tight connection with said body portion, means for locking the bail in an upright position, said means including gravity dogs, stops carried by the body portion to limit the movement of the bail and with which said locking dogs engage for holding the bail in upright position, a rod attached to said cover and projecting centrally downwardly to a point midway between the ends of the body portion, and a disk connected to said rod for holding the mail matter at the lower end of the carrier.

In testimony whereof I affix my signature.

WILLIAM GRUNOW.