R. C. HANSON.

MAIL CASE FOR MOUNTED CARRIERS.

APPLICATION FILED JAN. 25, 1915.

1,185,793.

Patented June 6, 1916.

2 SHEETS—SHEET 1.

Fig. 1

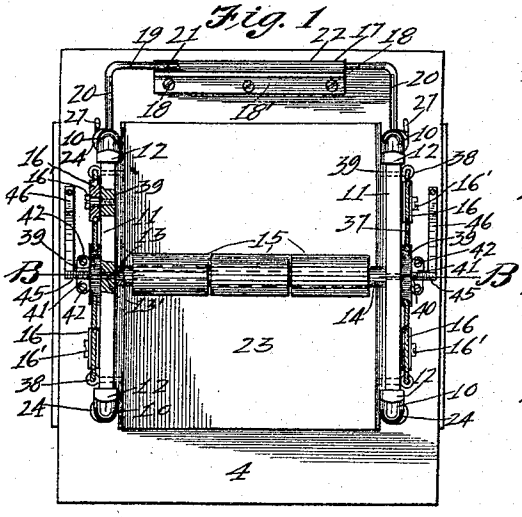


Fig. 2

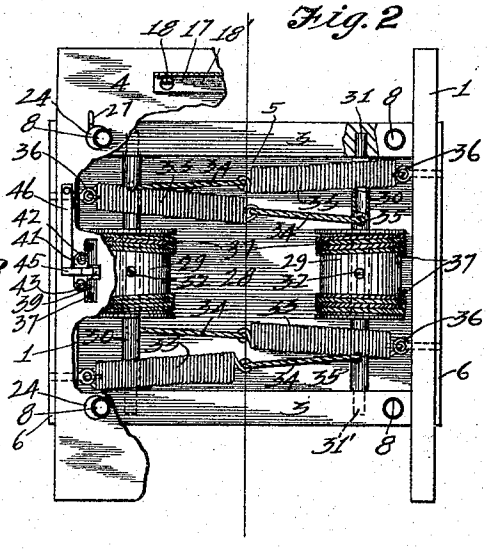


Fig. 3

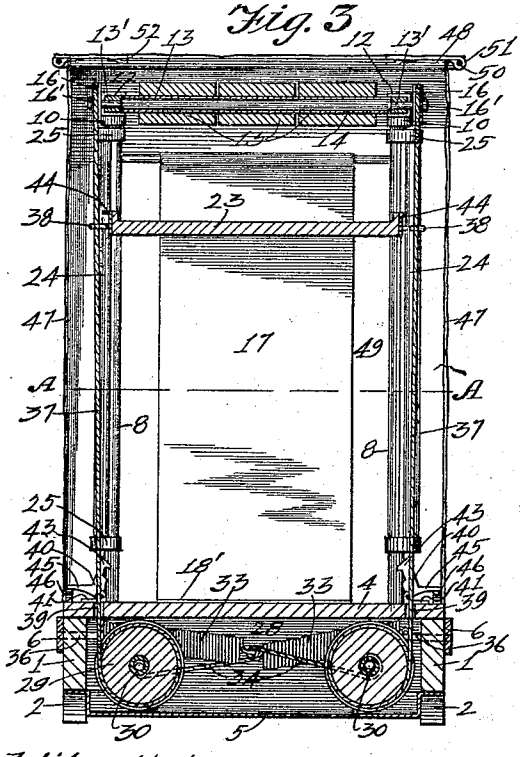
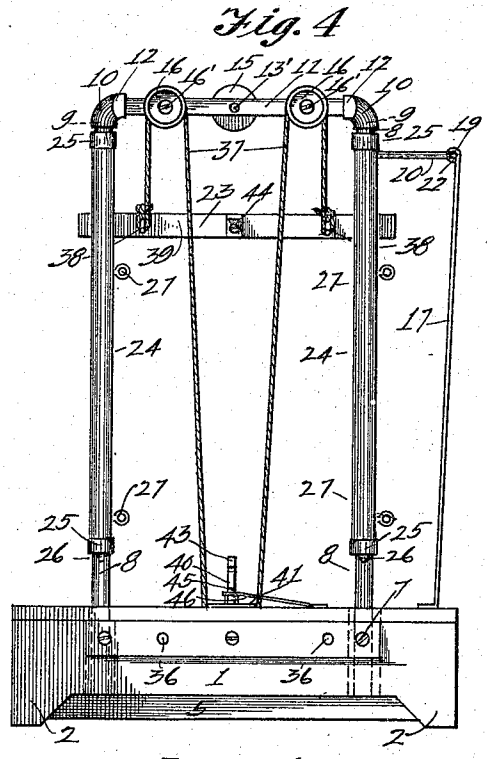


Fig. 4



Witnesses,
J. D. Haskin
Charles H. Hild

Inventor,
Reuben C. Hanson
By Lothrop & Reed
Attorney.

R. C. HANSON.

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2 SHEETS—SHEET 2.

Fig. 6

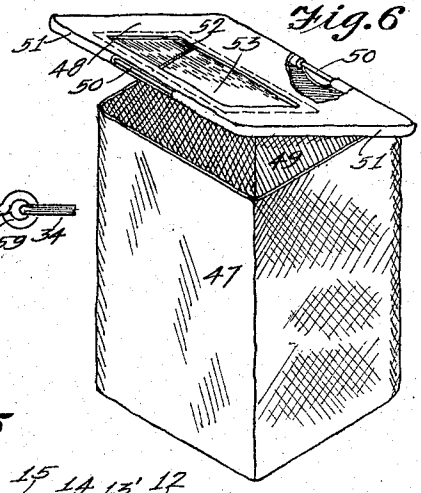


Fig. 7

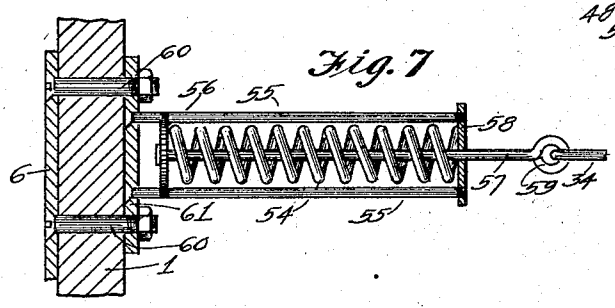


Fig. 5

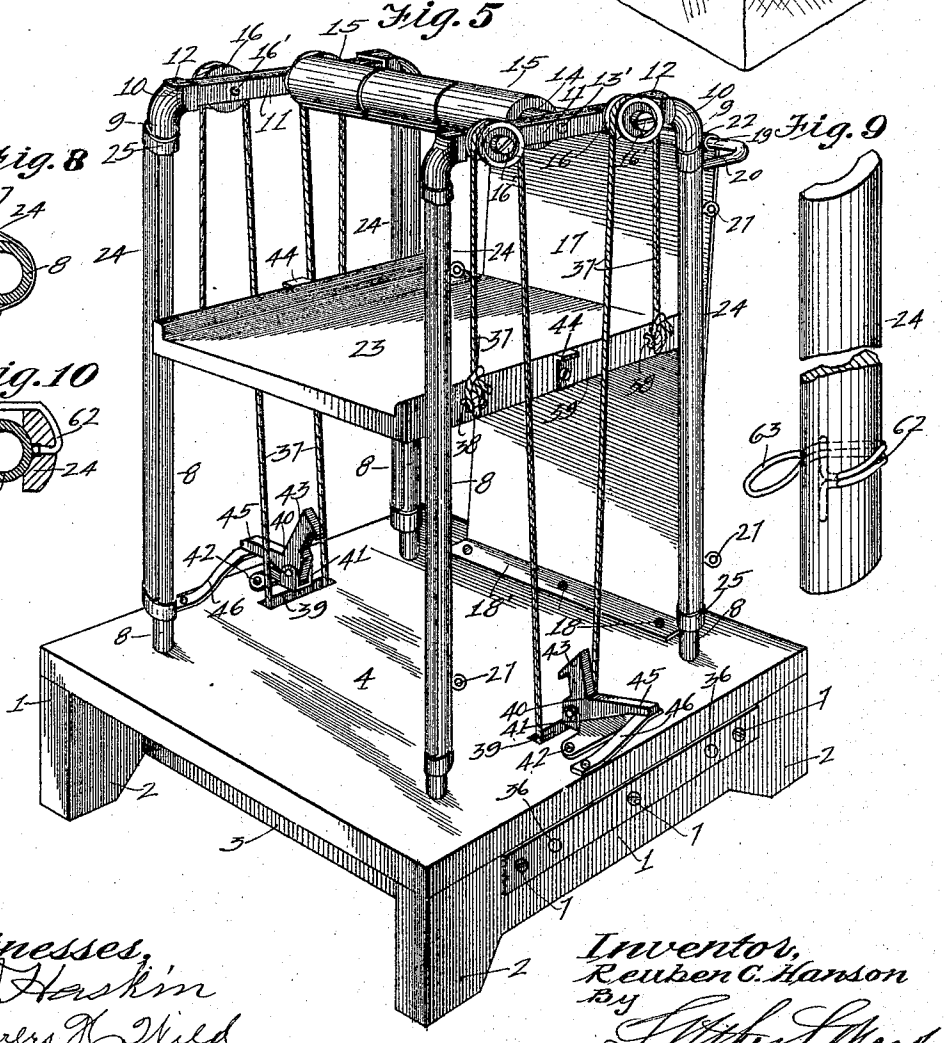


Fig. 8

Fig. 9

Fig. 10

Witnesses,
J. D. Haskin
Charles K. Wild

Inventor,
Reuben C. Hanson
By
Fitzgerald & Mack
Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

REUBEN C. HANSON, OF LONG BEACH, CALIFORNIA.

MAIL-CASE FOR MOUNTED CARRIERS.

1,185,793. Specification of Letters Patent. Patented June 6, 1916.

Application filed January 25, 1915. Serial No. 5,335.

To all whom it may concern:

Be it known that I, REUBEN C. HANSON, a citizen of the United States, residing at Long Beach, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Mail-Cases for Mounted Carriers, of which the following is a specification.

My invention relates to mail cases for rural mail carriers particularly, but adapted to use principally by carriers having vehicles for transporting the mails on long rural routes, and by means of which the distribution and delivery of the mails may be greatly facilitated.

The primary object of my invention is to provide a carrying case of convenient size and form, thoroughly practical in every particular, economical in structure, and designed to meet every requirement of the service.

A further object is to provide a carrier capable of receiving and firmly holding several stacks of mail matter on a common receptacle in such a manner that pieces of the mail matter from any one of the several stacks may be removed independently of and without disturbing the pieces of matter in any of the other stacks.

A further object is to provide a carrier which will hold a large or small stack of mail matter with equal firmness and which is capable of accommodating itself to the constant diminishing of the size of the stacks of matter thereon as the mail is delivered.

A further object is to provide an easy method of removing the mail matter from the stacks on the carrier.

A further object is to provide means for insuring the free and uninterrupted movement of the carrier when it is wholly or partially loaded with mail.

A further object is to provide means for preventing the removal of pieces of mail matter from a stack and the disturbance of the remainder of the stack during the removal therefrom of selected pieces of said matter.

Still further objects may be hereinafter disclosed in the description of my invention.

Referring to the drawings, similar characters of reference indicate the same parts throughout the several figures as well as in the specification, and Figure 1 is a top plan of my assembled case; Fig. 2 is a plan partly in section on the line A—A, Fig. 3 and with the floor partially broken away to show the interior of the base; Fig. 3 is a sectional elevation of Fig. 1 on the line B—B showing the hood in position thereon; Fig. 4 is a side elevation of Fig. 1; Fig. 5 is a perspective view of the case; Fig. 6 is a perspective view of the hood; Fig. 7 is a view of a modified form of carrier spring; Fig. 8 is a transverse section of one of the standards showing a fender in position thereon; Fig. 9 is a perspective view of a modified form of a fender and Fig. 10 is a transverse section of one of the standards with the modified form of fender thereon.

Broadly considered, my device comprises a base with a plurality of rigidly mounted standards thereon, a vertically movable carrier for holding quantities of mail matter between the standards, operating means for the carrier within the base and a removable hood for covering the entire case when it is raining, the hood being open so as to afford access to the case for the distribution of the mail, but so arranged that the mail matter is protected from the weather.

The base is composed of a pair of parallel side members 1 with feet 2 formed at each end, a pair of parallel end members 3 secured at right angles to the members 1, a top or floor 4 secured to the upper edges of both the end and side members 1 and 3, and a removable metallic bottom 5 secured to the lower edges of the members 1 and 3, there being metal plates 6 secured to the outside of the members 1 about flush with the upper edges thereof and held rigidly thereon by means of the screws 7.

Standards 8, of tubing or solid round rods, are secured rigidly in vertical bores in the end members 3 and extend upwardly through and for a convenient distance above the floor 4 where they terminate in and are secured to the lower sockets 9 of the elbows 10. These standards are arranged in pairs on opposite sides of the base and about far enough apart as to pairs, that three separate stacks of ordinary letters may be placed between them. The longitudinally opposite standards of each pair are connected at the top by means of square bars 11 secured at their ends in the square sockets 12 of the elbows 10 and each of the bars 11 has a suitable bearing, located midway of the two opposite sockets 12, in which the reduced ends 13′ of the transverse shaft 13 are journaled,

the shoulders formed at the junctions of the ends 13′ with the central portion of the shaft resting against the bars 11 and serving to prevent a longitudinal movement of the shaft.

A tube 14 is placed rotatably on the shaft 13 between the bars 11 and a plurality of large rollers 15, three being shown, are placed rotatably on the tubing 14, and thus a positive rotation of the rollers 15 is insured for the purpose hereinafter described. On the outside of each of the bars 11 a pair of grooved pulleys 16 are revolubly mounted on the studs 16′, the pulleys in each of the pairs being equally spaced from and on opposite sides of the axis of the shaft 13.

At one end of the case, as seen at the rear of Fig. 5, I provide a wide fender plate 17 which is secured to the floor 4 of the base by means of screws 18 through the outwardly bent foot or flange 18′, and the top of this fender is inclined outwardly from the bottom and curled or bent over a rod 19 which is secured at the ends 20 to the rear standards 8 and the central portion 21 of which passes through the curl 22 in the upper end of the fender.

Fenders 24 are provided for each of the standards 8, as shown in Figs. 1 to 5 inclusive and a modification of this form is shown in Figs. 9 and 10. These fenders are preferably of a crescent cross section and are pivotally held on the standards by means of bands 25 of some suitable metal which extend entirely around the standards and are secured in a suitable manner to the fenders which are preferably of wood or some light metal. The fenders are held upwardly from the floor 4 of the base by means of rivets or plugs 26 secured in the standards below the lower bands, and they may be turned on the standards so that they will occupy positions on the inside of the case between the standards, eye screws 27 being secured to the fenders for the purpose of turning them to such positions.

A removable form of fender may be desirable in some cases, such a form being shown in Fig. 9 in perspective and in Fig. 10 in position on the standards. This modification has one or more spring wire hooks 62 secured at the ends to the body of the fenders and the outer loops 63 are bent around in such a manner that they will fit the periphery of and firmly grip the standards 8 when forced into position thereon. Either form of fender may be used as may be found convenient and they serve the purpose of holding the stacks of mail matter out of contact with the standards 8 when the matter is being placed on the carrier 23 and after the carrier is loaded the fenders 24 may be removed from the path of the carrier by turning them on the standards, thus providing a clearance between the matter on the carrier and the standards and insuring a free upward movement of the carrier.

In the compartment 28 formed in the base between the members thereof, I provide a pair of oppositely mounted drums 29 on parallel hollow shafts 30 which extend longitudinally of the base and are journaled at the reduced ends 31 in the end members 3 of the base, the ends of the bearings being inclosed and the shoulder formed at the junctions of the ends 31 of the shafts serving to prevent a longitudinal movement thereof. The drums 29 are secured by means of the set screws 32 to the shafts 30 and each of these shafts is connected to the inner ends of the springs 33 by means of short cords or wires 34, the inner ends of the wire 34 being suitably secured in perforations 35 and adapted to wind around the shafts when the springs 33 are placed in tension. The outer ends of the springs 33 are secured to eye bolts 36 secured in the side members 1 and the plates 6 of the base, the springs for each of the shafts being secured at opposite ends of the drums 29 and extending diagonally therefrom toward the end members 3 of the base.

Cables 37 are suitably secured to each side 39 of the carrier 23 by means of eye screws 38, or otherwise, from which they extend upwardly over the pulleys 16 on the respective sides of the bars 11, and thence pass downwardly through longitudinal slots 39 in the floor 4 of the base, into the compartment 28 where the lower ends are wound around the drums 29 and secured thereto. The cables 37 on opposite sides of the case should be of about equal length and secured to the carrier 23 in such a manner that the carrier will be balanced evenly between the standards and as nearly horizontal as possible, and the tension of the springs 33 serve to hold the carrier normally upward when it is empty and to impart an upward tendency thereto when it is filled with mail matter.

Latches 40 are oppositely mounted on the floor 4 of the base centrally between the standards and near the outer sides. The latches are pivoted in bases 41 secured to the floor 4 by means of the screws 42 and have arms 43 projecting inwardly in the path of and adapted to be engaged and held by lugs 44 secured to the sides 39 of the carrier 23. A common and well known type of latch is shown in the drawings which has an arm 45 in engagement with a spring 46 secured to the floor 4 of the base and serves to hold the latch in the path of the lug 44, so that when the carrier is forced downward against the tension of the springs 33 to the level of the floor 4 the latches will engage the lugs thereon and hold the carrier down until it has been released by the operator.

A hood or cover 47, made of canvas, oil cloth or other waterproof material is provided for use with my case in wet weather. The hood is open at the bottom and top and is provided with an overhanging hinged top 48 either sewed to the rear wall 49 or hinged on the rod 50 which extends around the entire periphery of the top in a seam 51. An opening 52 in the top of the hood is covered with a shield of celluloid or mica 53, or other transparent substance, and is positioned slightly forward of the center of the top so that when the hood is in position on the case, the opening will be above the address ends of the mail matter, and the addresses may be easily read through the opening. The hinged side of the hood and top, when the former is in the proper position on the case, is at the rear of the fender 17, the mail matter being placed in the case from the front or open side but removed therefrom at the rear.

A form of compression spring to be used in lieu of the springs 33 is shown in Fig. 7, the spring 54 being mounted in a cage 55 between a movable plate 56 secured to the end of the central rod 57 and the stationary end plate 58 of the cage, and the rod 57 being connected with the shafts 30 by means of the cords 34 secured in the eye 59. The cage 55 is held firmly on the side members 1 of the base by means of bolts 60 through the inner plates 61 of the cage and the plates 6 of the base and when the cables 37 are unwound from the drums 29 the springs will be placed in tension.

When it is desired to load the carrier with mail, the carrier is forced downward until it rests upon the floor 4 of the base and the latches engage the lugs on the sides 39 thereof, where it will remain until it is released. The fenders 24 are turned inwardly in the direction of the sides 39 of the carrier, and the mail matter is placed in one or more stacks on the floor of the carrier in the order of the route to be covered, the last address on the route being at the bottom of the stack and the first address at the top. When all of the mail is in position on the carrier, or its capacity has been reached, the latches may be released from the lugs 44 and the carrier 23 permitted to adjust itself easily to its uppermost position as determined by the quantity of mail thereon, the top pieces of matter on the stacks being held by the tension of the springs 33 under the rollers 15 and the stacks tightly compressed between these rollers and the floor of the carrier. The distance between the standards transversely of the base being about equal to the widths of three ordinary letters, and the width of the carrier 23 being substantially the same, it is possible to place three separate stacks of letters upon the carrier, and for this reason three separate rollers 15 are provided, or one for each stack, in order that a letter may be removed from any one of the stacks independently from and without in any way disturbing the mail in the other stacks.

The wide rear fender 17 extends upwardly to a point just below the bottom of the rollers 15 and serves to prevent the letters below the top piece of matter from being removed from the stacks when the top piece is removed, and the incline insures a free upward movement of the carrier when it is filled with mail inasmuch as the surface of the fender diverges from the stack of mail and prevents undue friction on the carrier. When used with or without the protecting hood or cover, the top letter in either of the stacks on the carrier may be removed for delivery by pulling the letter outwardly from the stack, over the upper edge of the fender 17 and from under the rollers 15, the movement of the letter causing the roller to revolve and rendering the letters easily removable from the carrier. It is obvious that the removal of a single letter will not affect the letters in any of the other stacks as the rollers are independent, and as the mail is removed, the carrier gradually moves upward to accommodate itself to the constant diminishing of the stacks of mail, until the carrier is entirely empty when the tension of the springs 33 will have been minimized. When the hood is used, it is of course necessary to raise the top of the hood for the removal of a letter from the case, but the address may be observed through the transparent screen in the top for the purpose of directing the course of the carrier on the route without opening the hood.

I do not desire to limit myself to the exact form of device shown inasmuch as I conceive it to be entirely within the scope of my invention to materially change the form of the principal parts without departing from the spirit thereof.

Having thus described my invention, what I claim as new and desire Letters Patent for, is:

1. In a device of the character described, the combination of a base with standards extending upwardly therefrom and rigidly braced at the tops, revolubly mounted parallel drums within the base, a carrier movably disposed between the standards and supported on cables attached to said drums, means for holding said cables in tension and imparting a normal upward tendency to said carrier, and fenders arranged on said standards and capable of pivotal movement for providing clearance for the matter on said carrier between said standards during the upward movement thereof.

2. In a device of the character described, the combination with the movable carrier for

holding a quantity of mail matter and supporting means therefor, of means for locking said carrier in the lowermost position for loading the mail matter thereon, and means arranged at the sides of said carrier for restricting the mail matter to the limits of the carrier when loading and movable away from the carrier thereafter for providing clearance for said matter in its upward movement.

REUBEN C. HANSON.

Witnesses:
FRED. W. MCCULLAH,
JOHN S. CHAFFEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."