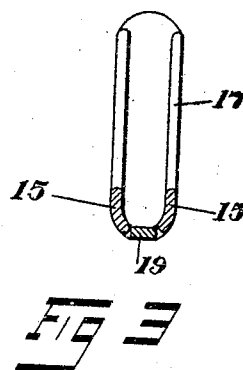
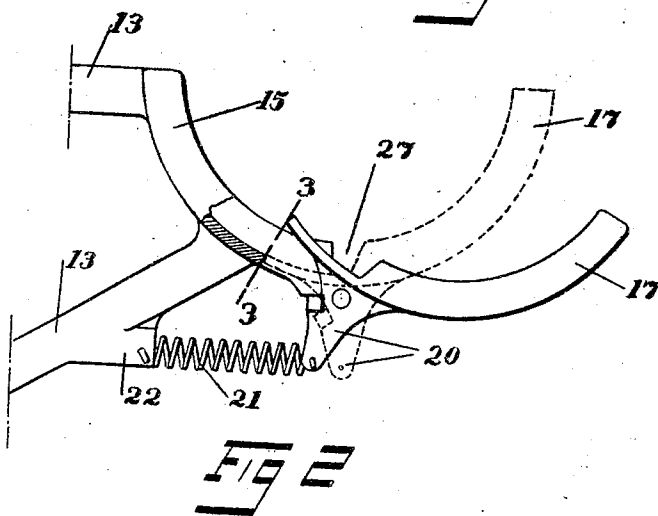
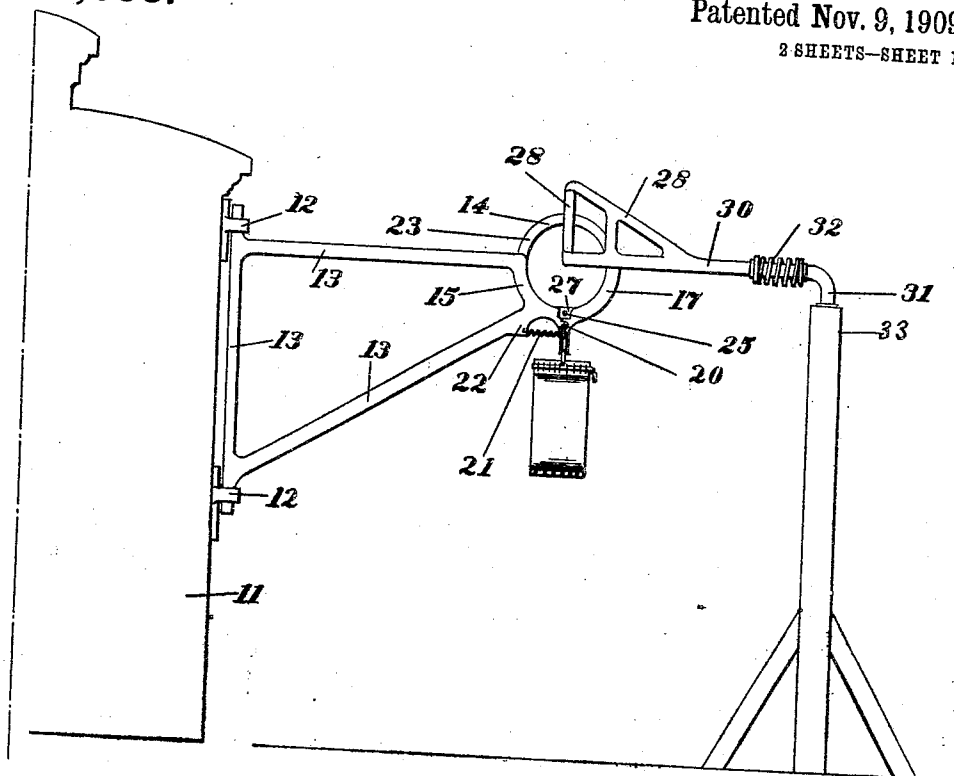


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2 SHEETS--SHEET 1.



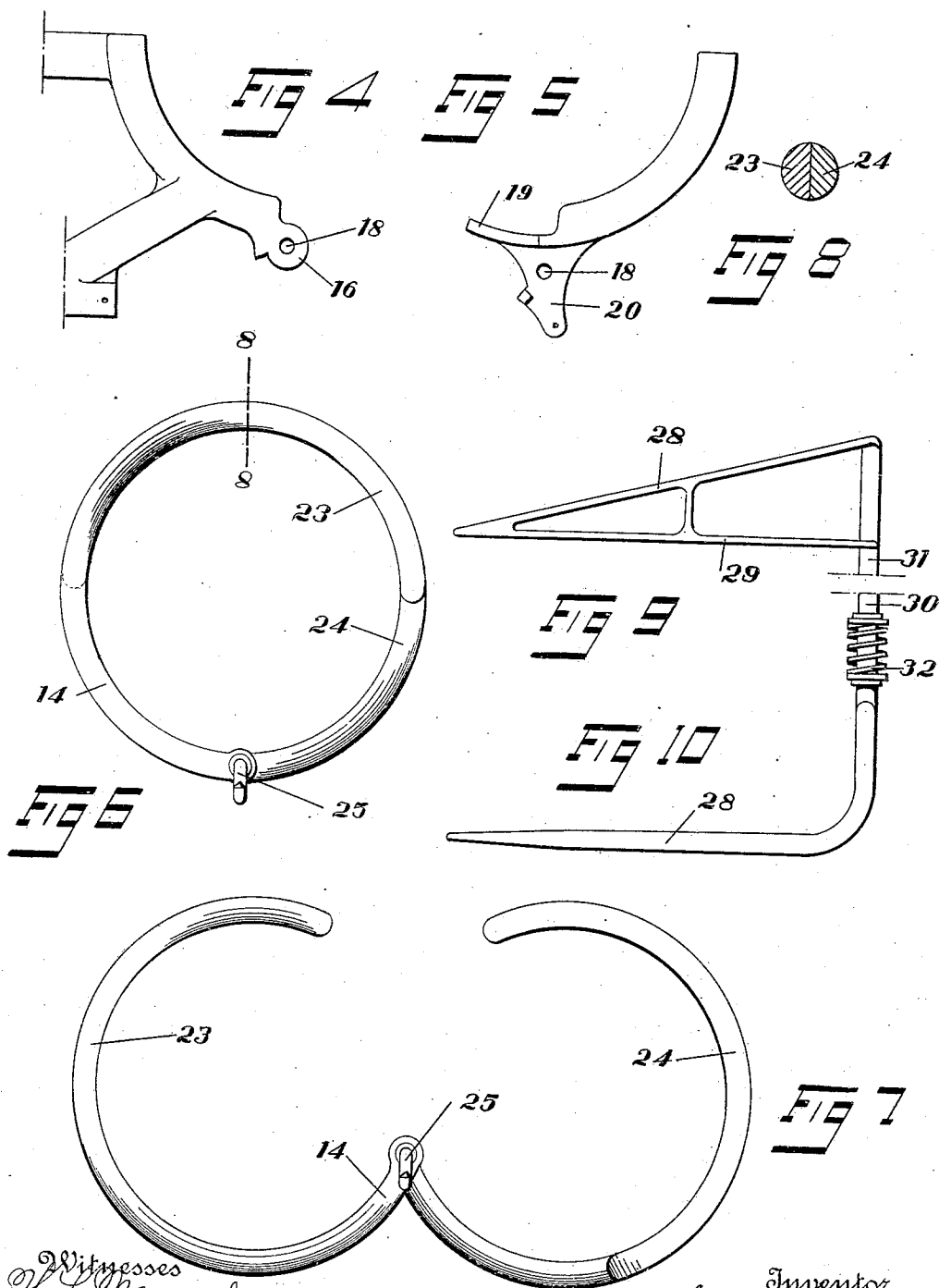
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MAIL DELIVERING APPLIANCE FOR RAILWAY TRAINS.
APPLICATION FILED JULY 12, 1909.

939,688.

Patented Nov. 9, 1909.
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HENRY J. HILL, OF JERSEY CITY, NEW JERSEY.

MAIL-DELIVERING APPLIANCE FOR RAILWAY-TRAINS.

939,688.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed July 12, 1909. Serial No. 507,214.

To all whom it may concern:

Be it known that I, HENRY J. HILL, a citizen of the United States, and resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Mail-Delivering Appliances for Railway-Trains, of which the following is a specification.

This invention relates to improvements in mail delivering appliances for railway trains.

The objects which the present invention has in view are:—to provide mechanism whereby the mail pouch is suspended from the side of the mail car and held safely in position until delivered therefrom by an attachment mounted at the station; to provide a mechanism for easily taking the mail pouch from its hold without shock to the mechanism; to provide a mechanism for accomplishing the delivery of the pouch with ease and certainty; and to provide a mechanism that is simple in operation and durable in construction.

The present invention is embodied in the appliance shown in the accompanying drawings, wherein—

Figure 1 is an end view of a portion of a mail car having the delivering arm extended with the mail pouch held therein and a collecting post with its apparatus in operative position. Fig. 2 is an enlarged detail view showing the supporting ring and carrying arm in its normal position. Fig. 3 is a cross section of the same taken on the line —3— —3— in Fig. 2. In this figure the section is taken when the ring is in the position shown by dotted lines in Fig. 2. Fig. 4 is an enlarged detail view of the one half of the ring shown in Fig. 2. Fig. 5 is a detail view in side elevation of the ring shown in Fig. 2, Figs. 4 and 5 being separated but shown in their operative position. Fig. 6 is a side view of the pouch ring when in closed position. Fig. 7 is a side elevation of the pouch ring shown in open position. Fig. 8 is a cross section taken on the line —8— —8— in Fig. 6, of the pouch ring. Fig. 9 is a side view of the hook-like collecting arm by means of which the mail pouch is detached from the moving train. Fig. 10 is a plan view of the hook-like collecting arm shown in Fig. 9.

Where in the accompanying drawings there is seen the figure —11—, it is used to indicate the car body upon which are mounted suitable sockets —12— —12— to receive the pivot bearings of the extension arm —13—. The arm —13— is formed in the shape shown to strengthen the construction. At the outer end the arm —13— is provided with a supporting ring to hold the pouch ring —14—. The supporting ring is channeled in cross section, the opening of the channel extending inwardly. This ring is composed of two sections —15— and —17—. The section —15— is rigidly formed on the arm —13— and forms the outer end thereof. It carries the hinge extensions or wings —16— —16—, between which the ring section —17— fits and in which it has a bearing. The section —17— has the bearing perforation —18— to aline with the bearing perforations —18— in the said hinge wings. When alined there is introduced a pivot pin of any suitable form and construction. The section —17— is provided with two extensions —19— and —20—. The extension —19— is adapted to aline with the bottom of the sections —15— and —17—, when the same are in operative position. The object of this extension is to receive the weight of the mail pouch and by it hold the outward end of the section —17— raised to its operative or holding position against the weight of the said section and the pull of the spring —21—. The extension —20— is vertically extended from the section —17— when in holding position, and is provided at the lower end with suitable connecting devices to engage a pulling spring —21—. The other end of the spring —21— is suitably secured to an offset —22— extended from the arm —21— to receive the said spring. When not in operation, that is, when not carrying the mail pouch, the weight of the section —17—, together with the pull of the spring —21— throws the section —17— away from the section —15— to open the circle.

The mail pouch is carried by a ring composed of two half sections —23— and —24—, which are suitably hinged as shown at —25—. The sections —23— —24— are formed to the half of the round section of the complete ring. When folded together,

the two sections lap to form a complete ring of full rounded cross section. The hinge pin —25— of each section is extended to form a hook on which is hung the mail pouch.

5 The mail pouch for delivery is hooked to one of the said rings, which ring is then raised into position between the sections —15— and —17— of the arm —13—, which
10 arm has been rotated on its hinge connections into the car or brought to the opening of the side door thereof. The ring —23—
—24—, together with the weight of the mail pouch sets upon the extension —19— and by
15 the weight of the said pouch depresses the said extension closing the section —17— hard against the inclosed ring —23— —24—. Unless the ring —23— —24— be raised off
20 of the extension —19—, it is difficult, if not impossible, to jar the ring —23— —24— out of engagement with the supporting ring —15— —17—. Therefore, the arm —13—
may be thrown outward and held against the rush of the surrounding air or the vibration and rocking of a fast moving train
25 without danger of the said ring or mail pouch becoming loosened or disengaged from the said supporting ring or arm.

30 The hook on the hinge pin —25— extends downward through the recess —27— formed by the cut away portions of the sides of the channel formed by the sections —15— —17— above the pivotal connection thereof.

35 To receive the mail pouch from the arm —13— and supporting ring —15— —17—, there is provided an elongated hook —28—, formed substantially as shown in the drawings, having an inclined upper surface, the
40 elevation of which is at the highest point slightly less than the interior diameter of the ring —23— —24— so that the said ring may pass over the highest point. This construction may, however, be changed so that the
45 bottom rail —29— would also be inclined from the horizontal to produce an increased elevation of the upper rail —28— from the point of insertion and engagement with the ring —23— —24—. The hook —28— is
50 normally extended parallel with the railway bed and has a short section extended at right angles thereto. The highest elevation of the track —28— is preferably at the bend. It is intended that the point of highest elevation
55 shall be such that the ring in riding to the top will have been retarded sufficiently to have lost its momentum, having only enough to carry over the said point when it will slide down the incline of the angular
60 extension of the hook. The hook is carried upon the arm —30—, which is set out from the perpendicular rod —31—. Interposed between the rearward extension of the hook and the rod —31— is a spring buffer —32—
65 formed of any suitable construction that will

serve to receive the impact of the ring —23— —24— when the pouch passes over the incline at a speed sufficient to make this impact a matter of serious moment. The rod —31— is mounted in a casing —33—. There may
70 be provided buffer springs to permit the rod —31— to rotate on its own axis to a limited extent. It is not the intention, under any circumstances, that the rotation of the rod —31— should permit the end of the hook
75 —28— —29— to approach dangerously near the car body —11—.

With an appliance such as described mounted on the car and on the platform of the station, the operation of delivering the
80 mail is as follows:—The operator in the car places the mail pouch on the hook —25— of the ring —23— —24—, closing the said sections —23— —24— and placing them, together with the mail pouch, between the sections —15— —17— over the extension —19—
85 thereof. As before stated, the weight of the pouch and the ring —23— —24— upon the said extension —19— closes the sections hard together. In this position the arm
90 —13— is rotated outward upon its pivots to its operative position where it hangs when approaching the station.

The ring —23— —24— is not limited in size except by convenience for handling,
95 therefore, the size is such that it provides for all ordinary vibration, or rocking, on the part of the train, so that the end of the hook —28— —29— will enter within the ring in any position of the same due to the said vibration
100 or rocking. Being in position, the pointed end turned toward the oncoming train and in the path of the ring —23— —24—, the point enters within said ring which strikes upon the inclined rail —28—,
105 and is caused to travel upward over the same toward the bend in the same.

As the ring —23— —24— is raised, the weight of the pouch and ring is lifted from the extension —19— of the section —17—,
110 thereby permitting the weight of the said section and the pull of the spring —21— to throw the section —17— away from the section —15— and thereby open to its fullest extent the supporting ring —15— —17—. By this means any disposition on the part of
115 the supporting ring to retain its grasp upon the ring —23— —24— is avoided, for by the time the said ring —23— —24— begins to follow the track of the incline of the hook —28— and to fall behind the travel of the car, the supporting ring —15— —17— is
120 thrown open as described. The mail car passes on leaving the pouch with its ring —23— —24— caught between the rearward decline of the hook —28— and the buffer —32—. The station agent now takes the pouch from its position on the arm —30—
125 by opening the sections —23— —24—, and rotating them about their hinge —25— until
130

the two sections are thrown open as shown in Fig. 7 of drawing.

In the operation of a system equipped with the appliances herein described, the rings —23— —24— would be returned to the issuing station as are the mail pouches by the present system.

Having thus described this invention, what is claimed is:—

1. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a supporting device consisting in hinged sections to be closed by the weight of the mail pouch; a pouch carrying device adapted to hold said pouch and to be carried by said supporting device; and means embodying an inclined extension adapted to raise the said pouch carrying device out of engagement with said supporting device.

2. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a ring-like supporting device at the outer end, said device consisting in two quarter segments of a channeled ring suitably hinged together; a ring to carry the mail pouch adapted to rest within and maintain in closed relation the said quarter segments; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said quarter segments.

3. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car, and having at the outer end two channeled segments of a ring suitably hinged together, one of said segments having an extension forming part of the channel of the other segment; a ring to carry the mail pouch adapted to rest within and to maintain in closed relation the said segments by resting upon the said extension of the one segment; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said extension of the segment.

4. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a ring-like supporting device at the outer end, said device consisting in two quarter segments of a channeled ring suitably hinged together; a ring having a diameter greater than the rocking movement of the mail car to carry the mail pouch and adapted to rest within and maintain in closed relation the said quarter segments; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said quarter segments.

5. A mail delivering appliance compris-

ing a hinged extension arm carried by the mail car adapted to swing outward from said mail car, and having at the outer end two channeled segments of a ring suitably hinged together, one of said segments having an extension forming part of the channel of the other segment; a ring having a diameter greater than the rocking movement of the mail car to carry the mail pouch and adapted to rest within and to maintain in closed relation the said segments by resting upon the said extension of the one segment; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said extension of the segment.

6. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a ring-like supporting device at the outer end, said device consisting in two quarter segments of a channeled ring suitably hinged together; a ring to carry the mail pouch adapted to rest within and maintain in closed relation the said quarter segments; means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said quarter segments; and a receiving appliance having a wedge-shaped hook-like extension mounted on the station parallel to the railway and in the path of the said ring and inclined to above the path of the same.

7. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car, and having at the outer end two channeled segments of a ring suitably hinged together, one of said segments having an extension forming part of the channel of the other segment; a ring to carry the mail pouch adapted to rest within and to maintain in closed relation the said segments by resting upon the said extension of the one segment; means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said extension of the segment; and a receiving appliance having a wedge-shaped hook-like extension mounted on the station parallel to the railway and in the path of the said ring and inclined to above the path of the same.

8. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a ring-like supporting device at the outer end, said device consisting in two quarter segments of a channeled ring suitably hinged together; a ring having a diameter greater than the rocking movement of the mail car to carry the mail pouch and adapted to rest within and maintain in closed relation the said quarter segments; means embodying an in-

clined extension adapted to enter the said ring to raise the same out of engagement with the said quarter segments; and a receiving appliance having a wedge-shaped hook-like extension mounted on the station parallel to the railway and in the path of the said ring and inclined to above the path of the same.

9. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car, and having at the outer end two channeled segments of a ring suitably hinged together, one of said segments having an extension forming part of the channel of the other segment; a ring having a diameter greater than the rocking movement of the mail car to carry the mail pouch and adapted to rest within and to maintain in closed relation the said segments by resting upon the said extension of the one segment; means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said extension of the segment; and a receiving appliance having a wedge-shaped hook-like extension mounted on the station parallel to the railway and in the path of the said ring and inclined to above the path of the same.

10. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a channeled ring-like supporting device at the outer end; a ring to carry the mail pouch adapted to rest within the said supporting device, said ring consisting in two hinged and folding sections adapted to pass each other to form a closed ring; and means embodying an inclined extension adapted to enter the said

ring and to raise the same out of engagement with the said supporting device.

11. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car and having a ring-like supporting device at the outer end, said device consisting in two quarter segments of a channeled ring suitably hinged together; a ring to carry the mail pouch adapted to rest within the said segments, said ring consisting in two hinged and folding sections adapted to pass each other to form a closed ring; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said quarter segments.

12. A mail delivering appliance comprising a hinged extension arm carried by the mail car adapted to swing outward from said mail car, and having at the outer end two channeled segments of a ring suitably hinged together, one of said segments having an extension forming part of the channel of the other segment; a ring to carry the mail pouch adapted to rest within the said segments, said ring consisting in two hinged and folding sections adapted to pass each other to form a closed ring; and means embodying an inclined extension adapted to enter the said ring to raise the same out of engagement with the said extension of the segment.

Signed at New York in the county of New York and State of New York this 5th day of June A. D. 1909.

HENRY J. HILL.

Witnesses:

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M. S. MILLER.