

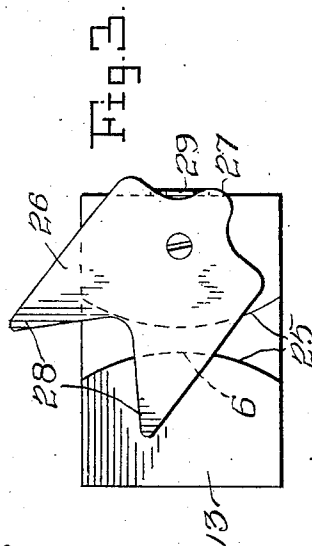
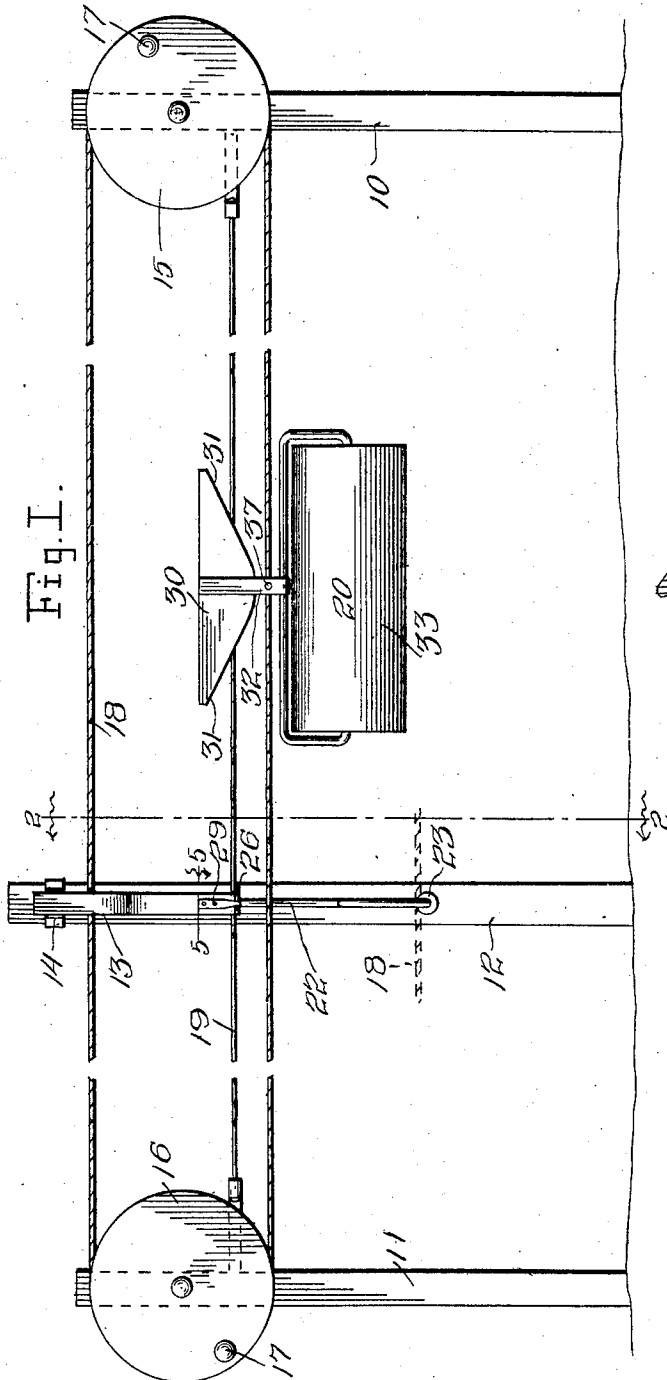
No. 846,313.

PATENTED MAR. 5, 1907.

O. O. JOHNSON.
MAIL TRANSPORTATION SYSTEM.

APPLICATION FILED JUNE 27, 1906.

2 SHEETS—SHEET 1.



Witnesses
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No. 846,813.

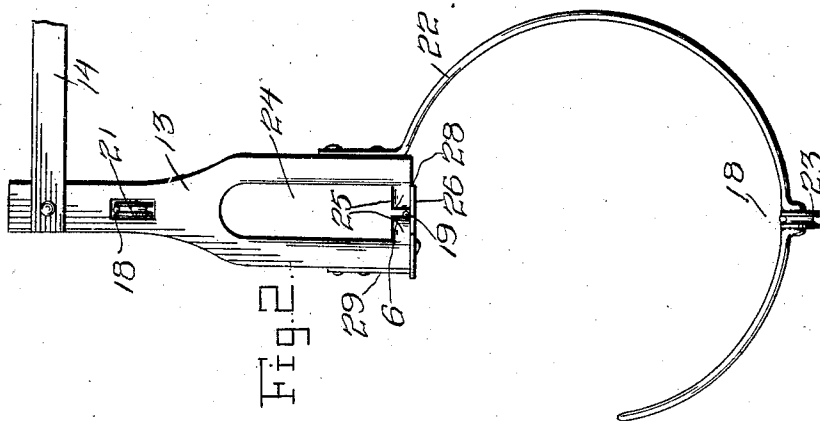
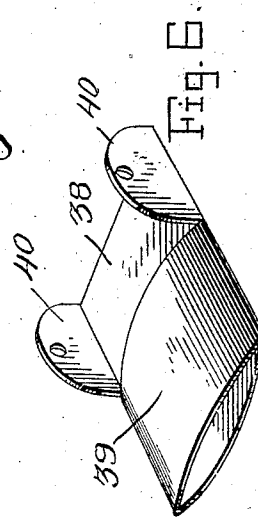
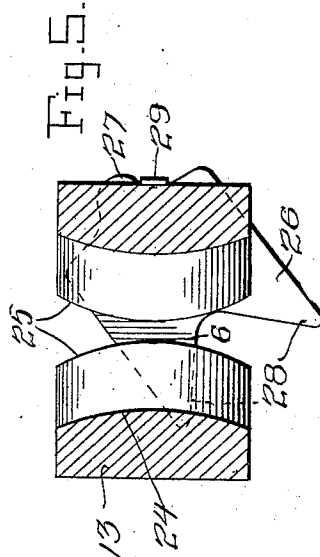
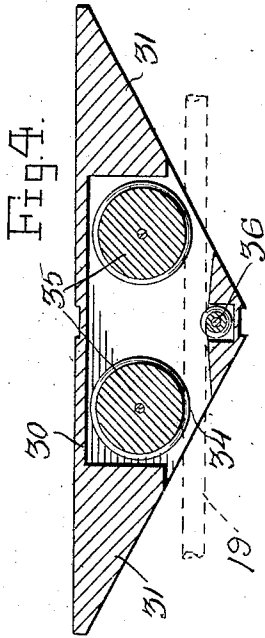
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

OLIVER O. JOHNSON, OF WINDOM, MINNESOTA.

MAIL-TRANSPORTATION SYSTEM.

No. 846,313.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed June 27, 1906. Serial No. 323,664.

To all whom it may concern:

Be it known that I, OLIVER O. JOHNSON, a citizen of the United States, residing at Windom, in the county of Cottonwood, State of Minnesota, have invented certain new and useful Improvements in Mail-Transportation Systems; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to elevated carriers for transporting mail-matter and is designed especially for the use of persons living along the route of mail-carriers in rural districts.

The particular improvements consist in the construction of the hanger for supporting the cable-wires and the trackway and of the carrier itself, which passes through the hanger.

With these and other objects in view the invention consists in the construction, combination, and arrangement of parts, all as hereinafter fully described, pointed out in the claims, and illustrated in the accompanying drawings, it being understood that slight modifications and changes may be made in the size, shape, and material of the several parts and in other minor details within the scope of the claims and without departing from the spirit of the invention.

In the drawings, Figure 1 is a side elevation of a mail-transporting device constructed in accordance with this invention. Fig. 2 is a vertical sectional view on the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a bottom plan view of the hanger. Fig. 4 is a longitudinal vertical section through the carrier. Fig. 5 is a vertical central section through the hanger, taken approximately on the line 5 5 of Fig. 1. Fig. 6 is a side elevation of a modified form of the bottom plate for the hanger.

Like parts are designated by similar numerals in the several views.

Referring to the drawings, 10 designates the terminal post at the delivery or post-office end of the line, and 11 designates the post at the house end of the line, the latter being located adjacent the door of the house of the party using the line. Between the posts 10 and 11 is shown an intermediate post 12, carrying a hanger 13 for supporting the cable-wires and trackway, as hereinafter referred to. In practice a plurality of inter-

mediate posts and hangers may be used, but as all are identical in construction the description of a single one will apply equally to the others. The hanger is fastened to its post by means of a metal strap 14, bolted thereto, as shown.

The delivery-post carries at its upper end a grooved pulley 15, while the house-post 11 carries a similar pulley 16, each of which is provided with a crank-handle 17, a rope or cable 18 passing around said pulleys and having its ends connected to the mail-carrier, as hereinafter described.

Attached to the terminal posts 10 and 11, between the upper and lower stretches of the cable, is an elevated trackway 19, likewise formed of rope or cable, and upon which the carrier 20 travels.

The hanger 13 is provided with a roller 21, journaled in an opening provided for that purpose in its upper portion, and has attached to its under face a bent rod 22, curved, as shown in Fig. 2, and provided with a grooved roller 23, upon which the lower stretch of the cable 18 runs, the upper stretch thereof in like manner being carried upon the grooved roller 21. The lower portion of the hanger is enlarged, as shown, and is provided with an opening 24 of sufficient extent to permit the carrier 20 to freely pass therethrough. The lower end of the hanger is provided with oppositely-facing shoulders 25, rounded, as shown, there being a space between the shoulders, (designated 6,) in which the trackway 19 fits, being retained in place therein by means of a plate 26, pivoted thereto and movable on the under face of the hanger. The outer end of said plate is provided with a curved shoulder 27, while the inner end is formed with a pair of projecting fingers 28. Attached to the outer side of the hanger, as shown in Fig. 1, is a leaf-spring 29, the lower end of which extends below the hanger, engaging with one side or the other of the shoulder 27 of the supporting-plate 26 to hold the same in one position or the other.

The carrier 20 consists of a body portion 30, having the upwardly and oppositely inclined ends 31, a shank 32 connected to said body portion, and a receptacle 33, carried by the shank and in which the mail-matter is received. The body portion is formed with an opening 34, through which the trackway 19 passes, there being a pair of grooved wheels 35 carried in the interior of the body portion within the opening 34 and running upon said

trackway. Owing to the size of the opening 34 through which the trackway passes, there will obviously be some play of said trackway when the carrier passes through the opening 24 of the hanger, due to the raising of the carrier as its inclined end 31 passes over the shoulders 25 of the hanger, which are curved in cross-section to afford easy passage thereover. To retain the trackway in place against the periphery of the rollers 35 during this elevation of the carrier, there is provided a third interior wheel 36 in the body portion of the carrier, which will serve to lift the trackway during the passage of the carrier through the hanger-opening, and thus force the trackway against the grooves in the wheels 35, retaining the trackway in place therein and preventing any slipping thereof during the elevation of the carrier.

The width of the body portion of the carrier is such that the plank 32 is directly in line with the opening 8 between the shoulders 25 on the lower end of the hanger, so that when the shank moves through said opening on the passage of the carrier through the hanger the plate 26 will lie directly in the path of the shank, with one of its fingers 28 extending across the opening 6, as shown in Fig. 3. The shank will therefore contact with the adjacent finger, swinging the plate slightly to one side to permit its passage through the opening, when the spring 29 will again lock the plate in position with the other finger across the opening 6. On the return trip of the carrier the same actions will be made by the shank and plate, as the plate is freely movable in both directions, owing to its pivotal fastening, and may thus be said to reciprocate across the under face of the hanger.

The ends of the cable 18 are attached to a roller 37, carried by the carrier-shank 32, intermediate its ends, and upon rotation of the cable in either direction the carrier will be given a corresponding movement on its trackway.

In Fig. 5 is shown a slightly-modified construction of bottom plate for the hanger. This plate 38 is made of cast-iron and is provided with the curved upper portion 39 and ears 40. In use the formation of the shoulders 25 will be obviated, as the opening 24 of the hanger will extend completely through the lower end thereof. Two plates therefore will be used, one upon each leg of the hanger, attached thereto by bolts passing through the ears 40, with the curved portions 39 opposite each other, there being a slight space between the two plates corresponding to the opening 6 between the shoulders 25. The plate 26 will be attached to the under face of one of the plates 38 and will operate in the above-described manner.

The construction and operation of the invention will be readily understood from the

foregoing description, taken in connection with the accompanying drawings, and a more extended explanation is thought unnecessary.

What is claimed is—

1. In a device of the character described, the combination of an elevated trackway; a carrier mounted for travel thereon; a cable for moving said carrier; means for operating said cable; and a hanger for supporting said trackway and cable, said hanger being provided with an opening adjacent its lower end to permit the passage of the carrier therethrough; means adjacent said opening for supporting said trackway; a rod connected to the under face of said hanger and provided with a pulley for supporting the lower stretch of said cable and a pulley connected with the upper portion of said hanger for supporting the upper stretch of said cable.

2. In a device of the character described, the combination of an elevated trackway; a carrier mounted for travel thereon; a cable for moving said carrier; means for operating said cable; and a hanger for supporting said trackway and cable; said hanger being provided with an opening adjacent its lower end to permit the passage of the carrier therethrough; means movable upon the under face of said hanger adjacent said opening for supporting said trackway; means connected with the carrier for moving said supporting means out of the path of said carrier; a rod connected to the under face of said hanger and provided with a pulley for supporting the lower stretch of said cable and a pulley connected with the upper portion of said hanger for supporting the upper stretch of said cable.

3. In a device of the character described, the combination of an elevated trackway; a carrier mounted for travel thereon; a cable for moving said carrier; means for operating said cable; and a hanger for supporting said trackway and cable; said hanger being provided with an opening adjacent its lower end to permit the passage of the carrier therethrough; a plate attached to the under face of said hanger adjacent said opening and movable thereacross for supporting said trackway; means connected with said carrier for moving said plate out of the path of said carrier during its passage through said opening and pulleys connected to the upper and lower portions of said hanger to support the upper and lower stretches respectively of said cable.

4. In a device of the character described, the combination of an elevated trackway; a carrier mounted for travel thereon; a cable for moving said carrier; means for operating said cable; said hanger being provided with an opening adjacent its lower end to permit the passage of the carrier therethrough; a plate attached to the under face of said

hanger adjacent said opening and movable thereacross for supporting said trackway; means connected to said carrier for moving said plate out of the path of said carrier during its passage through said opening; means attached to said hanger for limiting the movement of said plate in both directions and pulleys connected to the upper and lower portions of said hanger for supporting the upper and lower stretches respectively of said cable.

5. In a device of the character described, the combination of an elevated trackway; a carrier mounted for travel thereupon; a cable for moving said carrier; means for operating said cable; a hanger for supporting said trackway and cable; said hanger being provided with an opening at its lower end to permit the passage of the carrier therethrough; a plate attached to the underface of said hanger adjacent said opening and movable thereacross for supporting said trackway; means connected with said carrier for moving said plate out of the path of said carrier on its passage through said opening; a catch mounted on said hanger for limiting the movement of said plate in both directions; and pulleys connected with the upper and lower portions of said hanger to support the upper and lower portions of said hanger to support the upper and lower stretches respectively of said cable.

6. In a device of the character described, in combination; a flexible elevated trackway; a carrier mounted for travel thereon; a cable for moving said carrier; means for operating said cable; a hanger for supporting said trackway and cable, and provided with an opening through which said carrier passes and means on said carrier for elevating said trackway during its passage through said opening.

7. In a device of the character described, a flexible elevated trackway; a carrier mounted for travel thereon and provided with oppositely-inclined ends; a cable for moving said carrier; means for operating said cable; a hanger for supporting said trackway and cable, and provided with an opening adjacent its lower end through which said carrier passes; and a roller attached to said carrier to elevate said trackway during the passage of said carrier through the hanger-opening.

8. In a device of the character described, an elevated trackway; a carrier movable upon said trackway; a cable for moving said carrier; a cable-wheel for operating said cable;

and a hanger for supporting said cable and trackway, and provided with an opening at the lower end thereof to permit the passage of said carrier thereto; a shank connected to said carrier; a receptacle attached to said shank and a roller mounted on said carrier for elevating said trackway during the passage of said carrier through said hanger-opening.

9. In a device of the character described, an elevated trackway and an operating-cable; a carrier mounted to travel on said trackway and comprising a body portion having oppositely-inclined ends; a shank connected to said body portion and a receptacle attached to said shank, said body portion being provided with an opening to permit the passage therethrough of said trackway; rollers mounted in the interior of said body portion and adapted to travel on said trackway; a hanger for supporting said trackway and cable; and provided with an opening to permit the passage of said carrier therethrough and means connected with said carrier for elevating said trackway during the passage of said carrier through said hanger-opening.

10. In a device of the character described, in combination; a flexible elevated trackway; a carrier mounted to travel thereon and comprising a body portion having oppositely-inclined ends, a shank connected to said body portion, and a receptacle attached to said shank; a cable for moving said carrier and a cable-wheel for operating said cable; a hanger for supporting said cable and trackway; and provided with an opening at its lower end to permit the passage of said carrier therethrough a plate mounted on the under face of said hanger adjacent said opening and movable across the path of said carrier-shank, the body portion of said carrier being provided with an opening to permit the passage of said trackway therethrough and rolls mounted in the interior of said body portion, and adapted for travel on said trackway; and means connected with said carrier for elevating said trackway during the passage of said carrier through said hanger-opening.

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

OLIVER O. JOHNSON.

Witnesses:

S. L. ROGERS,
JNO. J. RUPP.