No. 754,686. PATENTED MAR. 15, 1904.

G. B. OKEY.

MAIL BOX CARRIER.

APPLICATION FILED NOV. 23, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

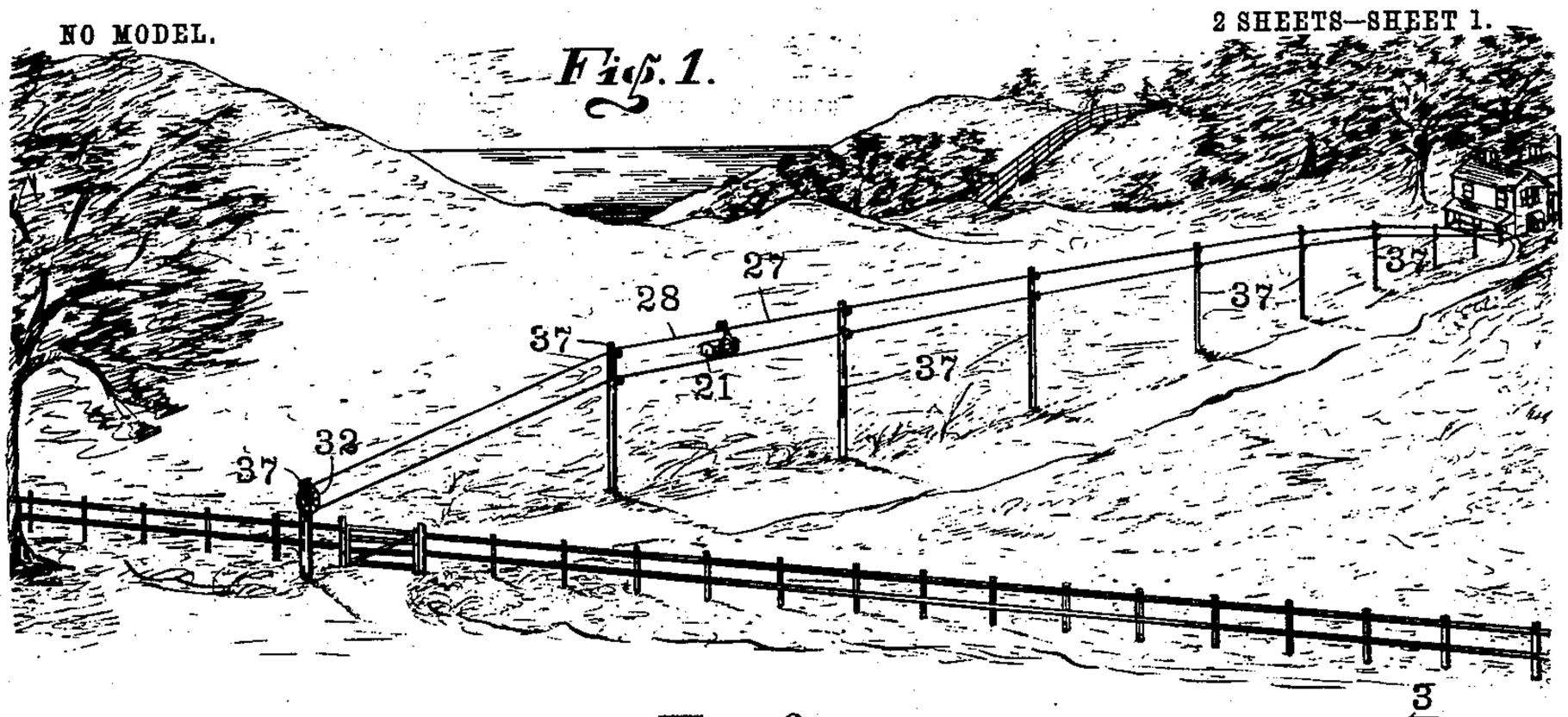


Fig. 2.

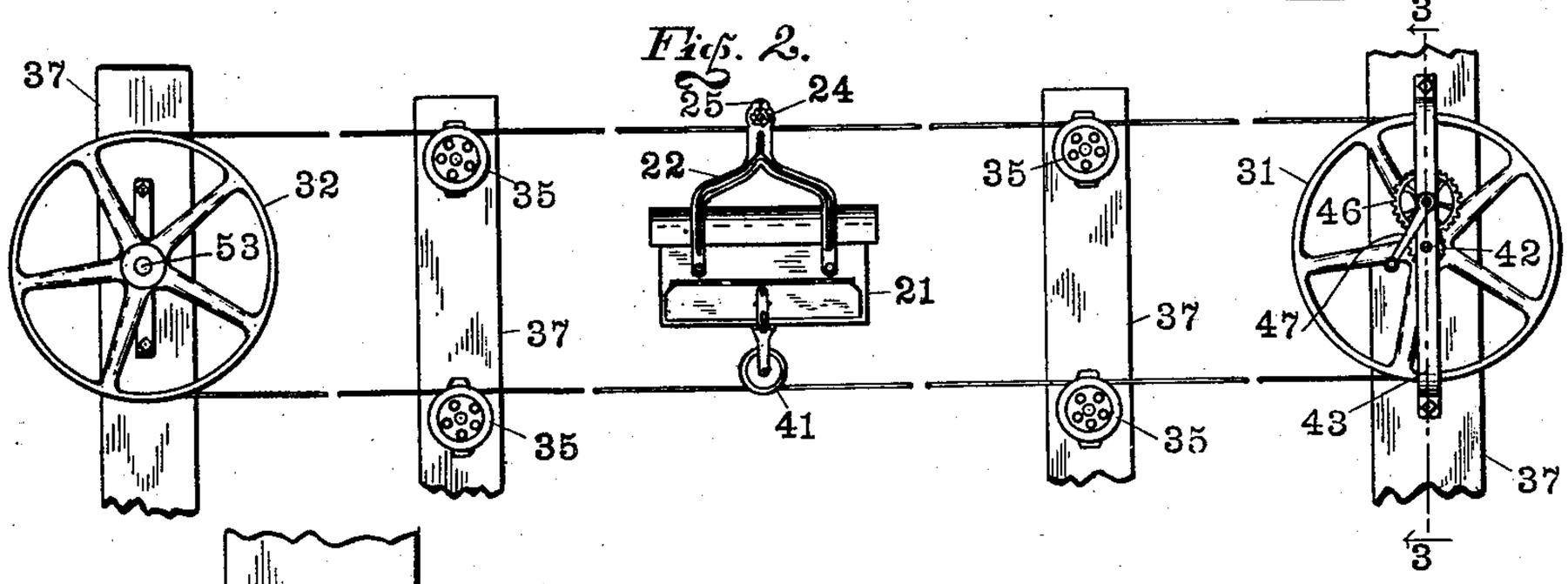


Fig. 3.

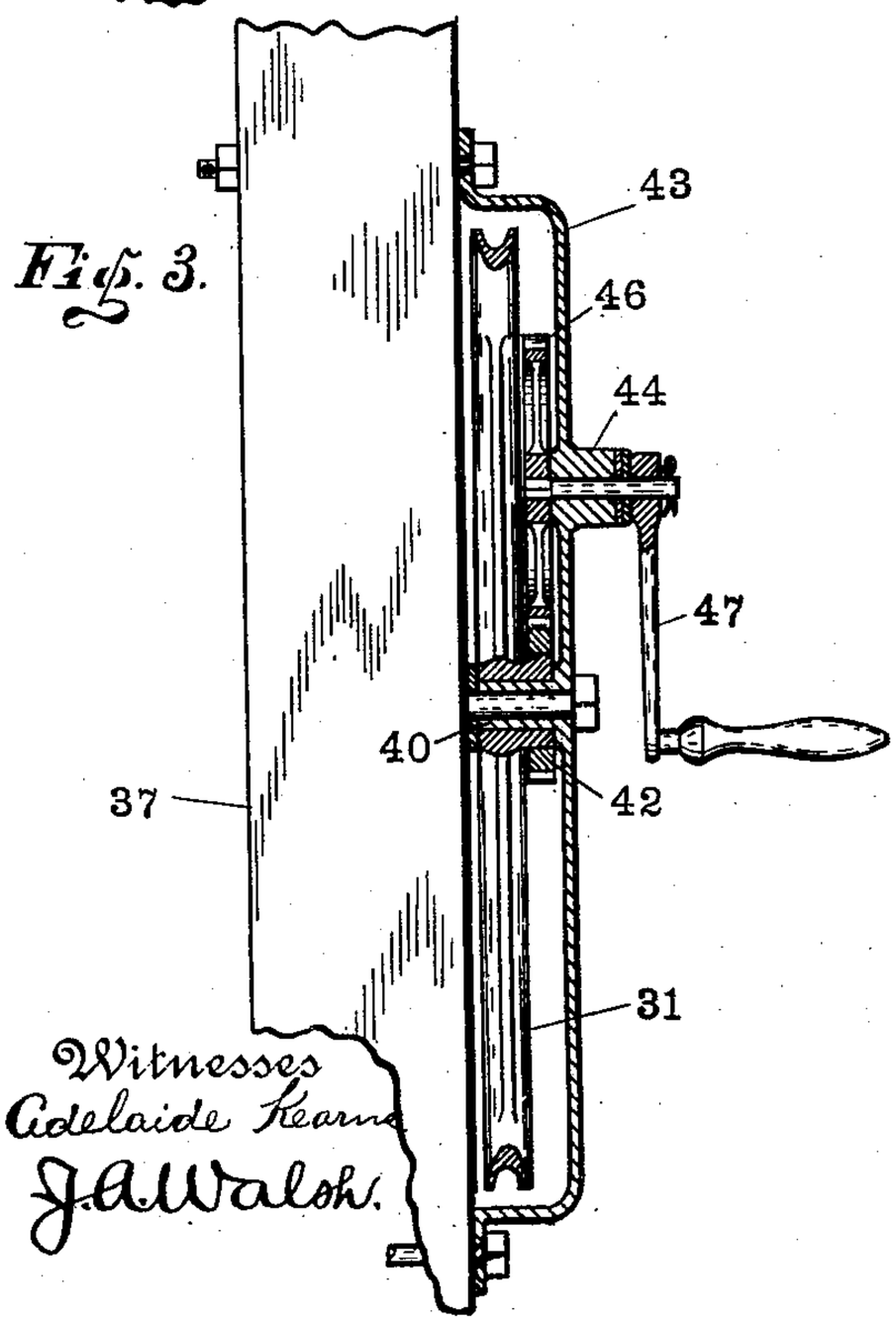
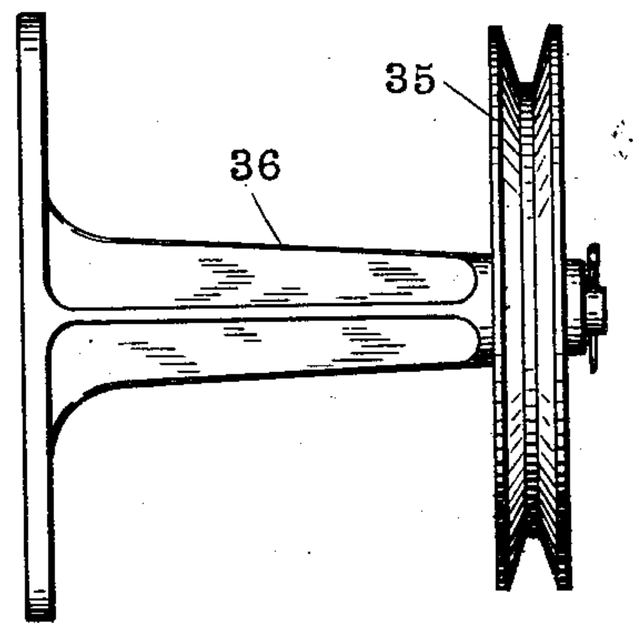


Fig. 4.



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MAIL BOX CARRIER.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 5.

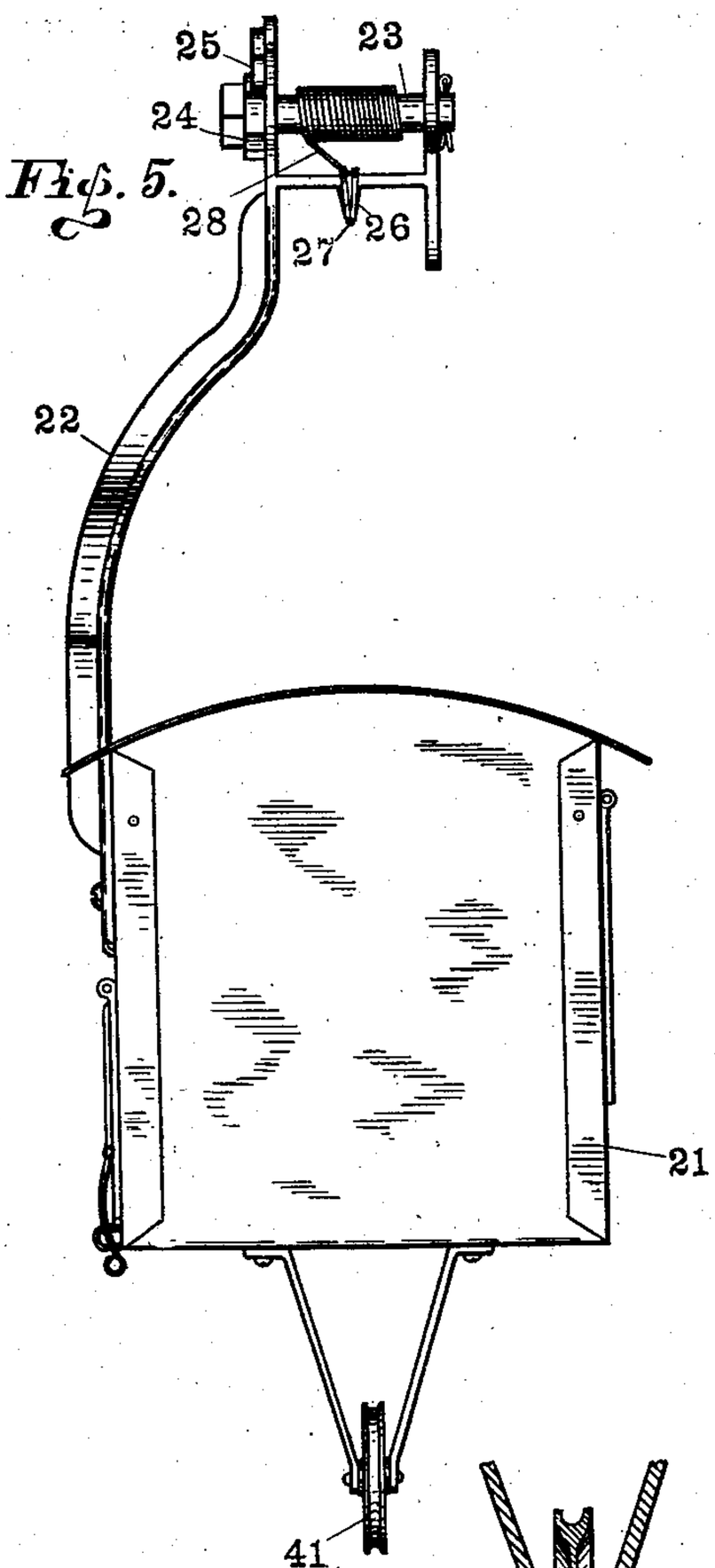


Fig. 6.

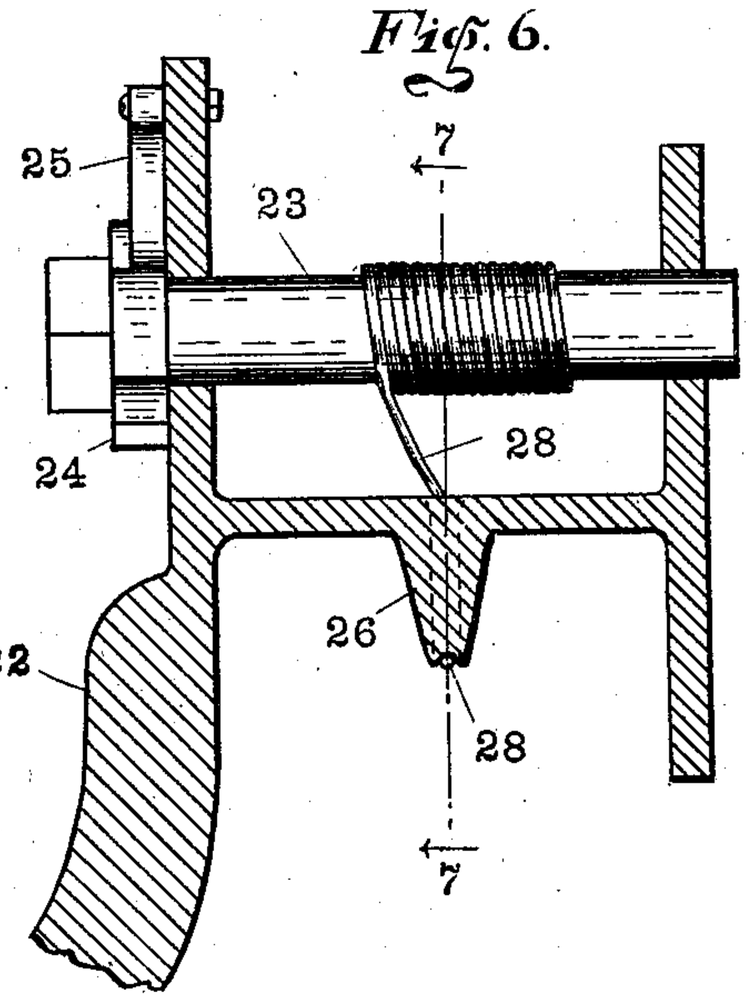


Fig. 7.

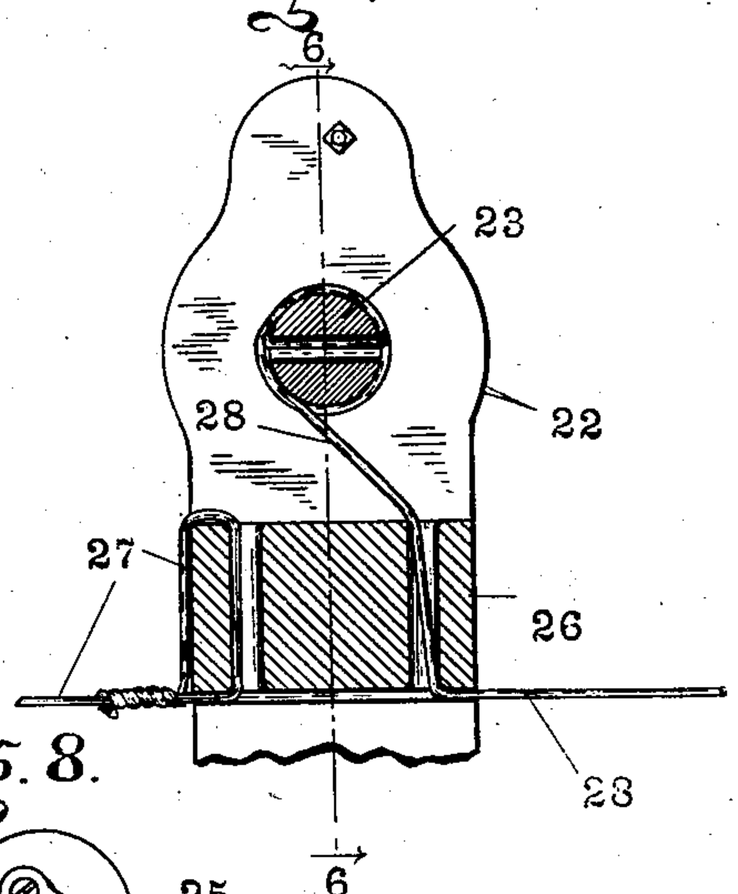


Fig. 9.

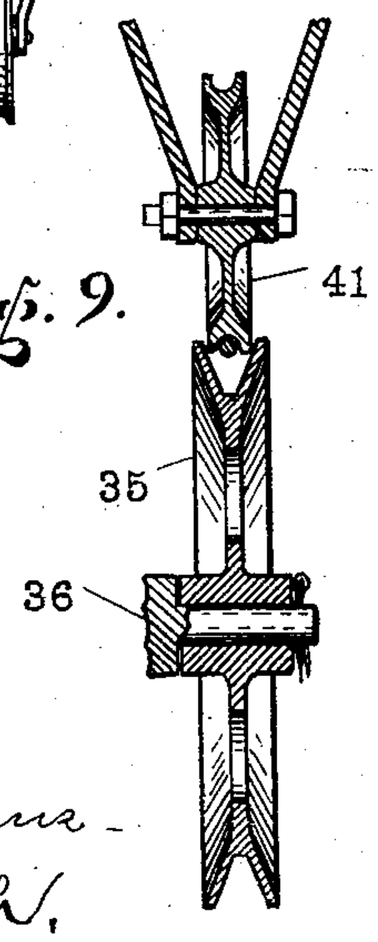
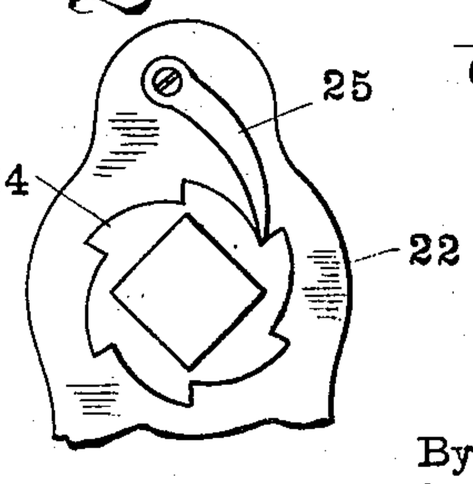


Fig. 8.



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No. 754,686. Patented March 15, 1904.

UNITED STATES PATENT OFFICE.

GEORGE B. OKEY, OF INDIANAPOLIS, INDIANA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO OKEY RURAL MAIL BOX COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF INDIANA.

MAIL-BOX CARRIER.

SPECIFICATION forming part of Letters Patent No. 754,686, dated March 15, 1904.

Application filed November 23, 1903. Serial No. 182,221. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. OKEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Mail-Box Carriers, of which the following is a specification.

The object of my said invention is to provide means for use in the rural mail-delivery service whereby the private mail-boxes used by the patrons of such service may be quickly and conveniently transported from alongside the highway, where the mail-carrier has convenient access thereto, to the dwelling of such patron.

This invention is especially desirable in cases where the dwellings of the patrons are a considerable distance back from the highway.

Said invention consists in an endless carrier upon which the mail-box is mounted, suitable means for supporting and impelling such carrier, together with the mail-box, and means for adjusting the tension of the carrier, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a perspective view illustrating the service which my invention is designed to perform; Fig. 2, an elevation, on an enlarged scale, showing the carrier, its supporting and driving-wheels, and the mail-box in substantially the relation to each other which they occupy in use, all but small fragments of the carrier, however, being broken away to enable the apparatus to be illustrated on a suitable scale; Fig. 3, a detail sectional view, on a still further enlarged scale, through the driving transmission-wheel and its support and driving-gear at the point indicated by the dotted line 3 3 in Fig. 2; Fig. 4, a detail elevation of one of the intermediate carrier-supports; Fig. 5, an end elevation of the box and immediately adjacent parts; Fig. 6, a detail sectional view through the hanger carrying the mail-box at the point indicated by the dotted line 6 6 in Fig. 7; Fig. 7, a detail sectional view of the same parts shown in Fig. 6 at the point indicated by the dotted line 7 7 in said Fig. 6; Fig. 8, a detail elevation of the spool-controlling ratchet, and Fig. 9 a detail sectional view showing the relation of the guide-wheel on the mail-box and the carrier-supporting wheel over which it passes at the time when said two wheels are in contact.

In apparatus of this character the carrier is usually a wire or wire rope, and the distance between the points is frequently considerable, so that such wire or wire rope is quite long. It is therefore subject to so much contraction and expansion under variation of weather that it needs adjusting. It naturally, also, stretches somewhat in use, and this likewise requires adjusting. Unless the carrier is adjusted to a substantially proper tension it will sag between supports and allow the mail-box to deflect too much from its proper course. I have therefore provided means (which in my improved construction are located upon the mail-box hanger) for taking up the slack as it occurs by reason of such stretch or expansion and also for relieving the tension in case the carrier becomes too tight by reason of contraction. I also do this in a manner which maintains the continuity of the surface running over the supporting sheaves or wheels. This is best illustrated in Figs. 6 and 7.

The mail-box 21 has a hanger 22, and in the upper portion of this hanger is the carrier-tightener. Said tightener is composed of a spool 23, having a ratchet 24 upon one end, with which a pawl 25, carried by the hanger-frame, will engage. Revolving this spool will tighten or loosen the carrier by pulling upon or slackening the wire or rope attached thereto of which the carrier is composed and which is attached at one end to said spool, as will be readily understood, and the pawl will hold it to its adjusted position. The hanger-frame has a portion 26, which projects downward below the level of the main frame part, which carries the winding-spool, said projection being thin enough to pass within the groove of the sheaves over which the carrier runs. There are two vertical perforations

through this projection near the ends thereof, through which the ends 27 and 28 of the wire or rope forming the carrier are passed. One of these ends is secured firmly, and its position is not disturbed by any manipulation of the apparatus. The other end passes through its perforation and thence to and onto the winding-spool. The result is that the operative portions of the carrier which run over the wheels and the lower side of the projection 26 are in line, so that said projection will pass over the wheels the same as the carrier will. At the same time the tension of the wire is enabled to be adjusted quickly and easily and without disturbing this arrangement, as stated.

The carrier after it leaves the projection 26 passes over the main or driving transmission-wheel 31, which is situated at one end of the route, thence to the idle transmission-wheel 32 at the other end of the route, and back to the mail-box hanger 22, where it is secured, as already described. I locate the carrier-supporting wheels 35 at suitable intermediate points. The number of the supporting-wheels of course depends upon the distance between the ends of the route over which the carrier with the box thereof passes. Each of these carrier-supporting wheels is mounted upon a stud-shaft 36, which, like the bearings for the transmission-wheels, are suitably secured to a post, as 37, or other supporting structure.

As will now be apparent, the mail-box, which is fastened to the carrier, travels (with said carrier) over the various transmission and supporting sheaves, which are arranged throughout its route. Said box is also preferably provided with a guide-sheave 41, suitably secured to its under side and which engages with the lower member of the endless carrier. The effect of this is to prevent the box from swaying about during its journeys. This guide-sheave is thin enough so that its edge will pass through the groove of each of the carrier-supporting sheaves with which it comes in contact, as is best shown in Fig. 9 of the drawings.

The main transmission-wheel 31 is mounted on a stud-shaft 40, upon which it is adapted to revolve. Mounted upon its hollow hub is a pinion 42. The stud-shaft 40 is also hollow and is carried by a bracket 43. This bracket also has a bearing 44, within which a short shaft 45 is mounted, carrying another gear-wheel 46, which meshes with the pinion 42. Upon this shaft 46 is a crank 47, by means of which it may be turned. By means of this crank and these gears the transmission-wheel may be given a comparatively high speed and the mail-box thus propelled from end to end of the route very quickly. The other transmission-wheel 32 is similar to the wheel 31, except that it is not provided with driving-gearing and is mounted on a stud-shaft 53. As the bracket 43 and stud-shaft 53 are subject to a heavy strain, they are strongly secured to stout posts or other structures having sufficient strength to withstand it.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a flexible carrier, a mail-box secured to said carrier, transmission-wheels at the ends of the route over which the carrier passes, one of said transmission-wheels having a hollow hub with a pinion rigidly secured thereto, a bracket bearing a stud-shaft upon which said transmission-wheel is mounted and also having a bearing for a second shaft, said second shaft, a gear-wheel thereon engaging with said pinion, and a crank for driving said shaft and said gear-wheel, substantially as shown and described.

2. The combination of a flexible carrier, suitable wheels on which the carrier is mounted, a box connected to said carrier where the ends come together, and a hanger on said box for the purpose of making said attachment, said hanger being provided with a winding-spool, and also having a projection extending below the surface of the frame in which the spool is mounted containing perforations through which the carrier passes, whereby the carrier is enabled to pass through the grooves of the supporting-wheels and also whereby the tension of the carrier may be adjusted.

3. The combination of a mail-box having a hanger which extends from one side up over the top of said box, means for attaching the carrier to said hanger at a point above the box including a winding-spool for adjusting the tension of the carrier, said carrier, vertically-positioned wheels situated at suitable points along the route and at the ends thereof for supporting said carrier, whereby the mail-box is enabled to hang supported in upright position from end to end of the route provided, substantially as set forth.

4. The combination of a flexible carrier, transmission and supporting wheels therefor, and a mail-box secured to said carrier by means of an overhanging hanger with which it is provided and which is also provided with a guide-wheel on the under side adapted to engage with the lower member of the carrier whereby swaying is prevented, said guide-wheel being thinner than the supporting-wheels thus enabling it to pass over said supporting-wheels, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 20th day of November, A. D. 1903.

GEORGE B. OKEY. [L. s.]

Witnesses:

CHESTER BRADFORD,

JAMES A. WALSH.