

No. 869,448.

PATENTED OCT. 29, 1907.

A. & C. W. McINTIRE.

MAIL CARRIER.

APPLICATION FILED JULY 1, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

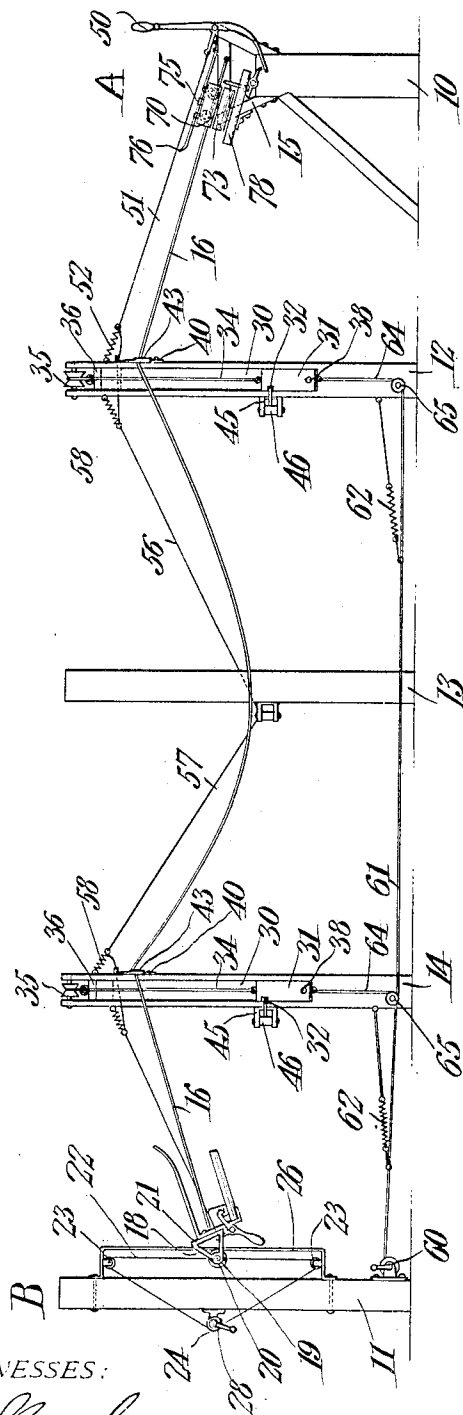
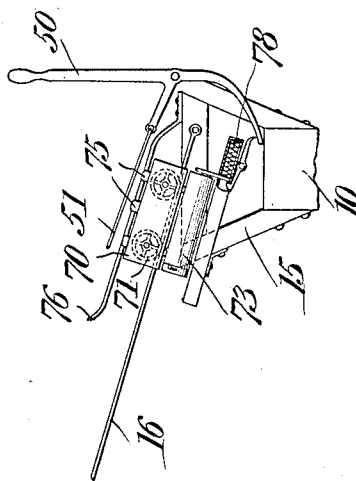


Fig. 2.



WITNESSES:

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2 SHEETS—SHEET 2.

Fig. 3.

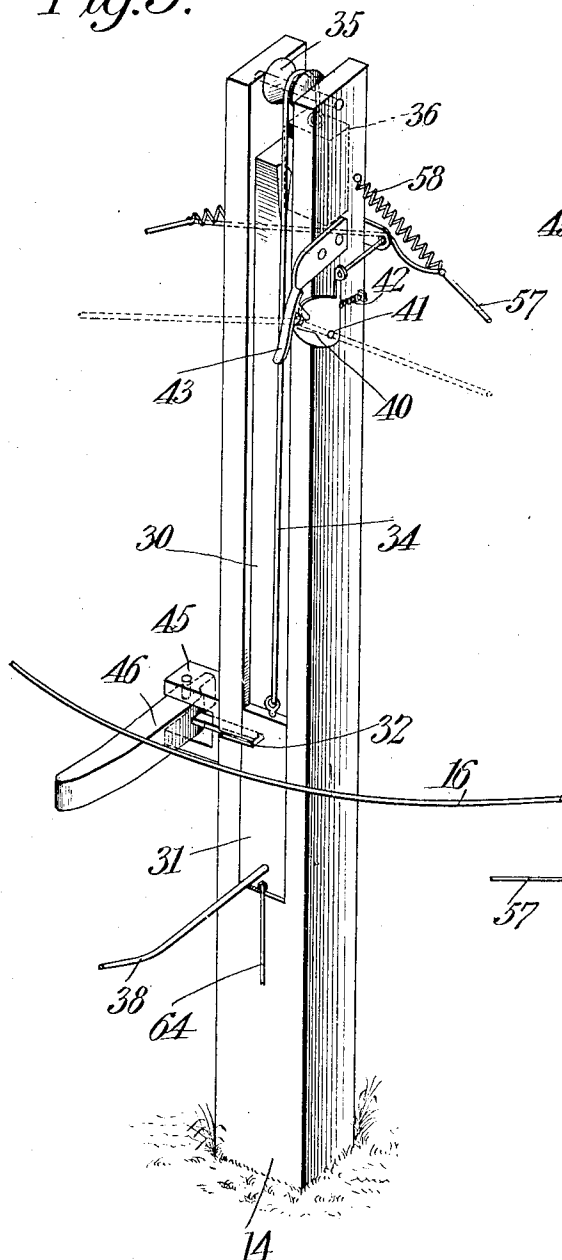


Fig. 4.

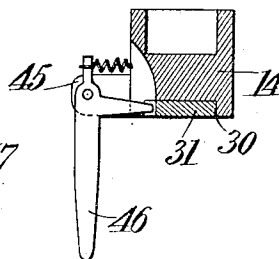
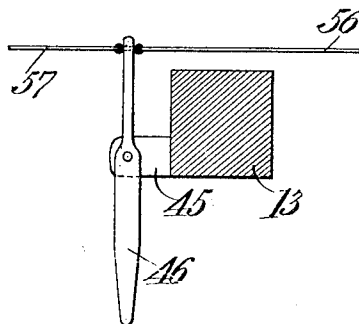


Fig. 5.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

ALEXANDER McINTIRE AND CHARLES W. McINTIRE, OF AMORITA, OKLAHOMA TERRITORY.

## MAIL-CARRIER.

No. 869,448

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed July 1, 1907. Serial No. 381,749.

*To all whom it may concern:*

Be it known that we, ALEXANDER McINTIRE and CHARLES W. McINTIRE, citizens of the United States, residing at Amorita, in the county of Woods, Oklahoma Territory, have invented a new and useful Mail-Carrier, of which the following is a specification.

This invention relates to telfer systems and has for its principal object to provide an apparatus of novel construction whereby a carrier may be conveyed between two distant points, the invention being especially applicable for mail service in the delivery of mail from a road to a house, or from centrally located postoffices to houses or other buildings.

A further object of the invention is to provide a device of this type in which a wheeled carrier is arranged to travel on a cable or track, provision being made for alternately raising and lowering the cable or track, so that the carrier shall always have the advantages of a descending plane, and will move by gravity between the two points.

A further object of the invention is to provide a track raising and lowering mechanism that is under the control of the carrier.

A still further object of the invention is to provide means whereby the track elevating and lowering mechanism may be adjusted from one end of the line.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a side elevation of a mail carrying apparatus constructed in accordance with the invention. Fig. 2 is a detail view, partly in section, of the mechanism at one of the terminal stations. Fig. 3 is a detail perspective view of one of the intermediate posts. Fig. 4 is a sectional plan view through one of the posts, illustrating the arrangement of the carrier engaged locking arm. Fig. 5 is a similar view through the central post, showing the carrier engaged arm for releasing the track supporting catches.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

In the present instance, the apparatus is so arranged that the mail carrier arriving at station A may cause the carrying box to travel to the house or other point, indicated at station B, and the box may be returned from the house to the station A after the removal of its

contents, and, if necessary, with mail matter to be collected by the carrier. These two stations, however, may represent any two points between which a carrier is to travel, and the system is not necessarily confined to the carrying of mail or other specified articles.

Arranged at station A is a post 10, at station B is a post 11, and between the stations are any desired number of posts, three of which, 12, 13 and 14 are shown in the present instance.

At the top of the post A is a frame or platform 15, to which is secured one end of a wire 16. This wire forms the track-way, and may be a single strand, or in the form of a cable. The wire extends alongside the various posts, and its opposite end is connected to a yoke 18 that is secured to the axis 19 of a vertically movable sheave block 20, the latter being carried by a frame 21, and around the block extends a cable 22, which, also, passes over blocks 23 to a winding drum 24. The block 21 is free to slide vertically on a bar 26 that is carried by the post 11, and as the drum 24 is turned, the frame may be moved vertically in either direction for the purpose of tightening the wire 16, it being understood that if the wire is not taut when occupying a horizontal plane, it may be drawn taut by raising or lowering that end attached to the frame 21. For convenience, the winding drum 24 is carried by a cranked shaft 28 that is journaled in bearings carried by the post 11.

Each of the posts 12 and 13 is provided with a vertically arranged groove 30 forming a guide for a vertically movable block 31 which, under some conditions, is held depressed by a spring catch 32 that is guided in an opening formed in a block carried by the post. To the upper end of the block is connected a flexible member 34 in the form of a cable, wire or chain, which passes over a sheave 35 at the top of the post, and at its opposite end carries a weight 36 which is held in elevated position by the engagement of a catch 32 with the block 31. Should the catch be withdrawn from engagement with the block 31, the superior weight 36 will descend and the block 31 will be elevated.

Projecting from the lower portion of each block 31 is an arm 38 that is arranged to engage under the track or wire 16, and carry the latter upward with the block. When the track is elevated it engages a holding catch 40, said catch being pivoted on a stud 41 carried by a bracket projecting from the post and normally held in engaging position by a suitable spring 42. In order to guide the wire over the catch, a cam arm 43 is secured to the post and projects over the catch, so that as the wire is raised, it will be guided between the convergent faces of the arm and catch until it moves the catch to open position and springs thereunder, whereupon the catch will close and hold the wire in its elevated position.

Projecting from one side of each of the posts is a

bracket 45 to which is pivoted an arm 46, said arm being disposed in the path of movement of the carrier and being connected to the catch 32, so that when the arm 46 is moved in either direction by the passage of the carrier from station A to station B, or vice versa, the latch will be moved to release position in order to allow the block to ascend and the weight 36 to descend.

Pivoted to the platform or frame 15 is a lever 50, one arm of which is connected to a wire 51 that extends toward the post 12 and is connected thereto by a short helical tension spring 52 which keeps the wire relatively taut and which will allow sufficient yielding in case birds alight on the wire, or in heavy wind storms. The connection between the end of the wire and the spring is preferably in the form of an eye 53 from which extends a rope or cable 54 to an arm 55 on the catch 40, so that if the lever 50 is pulled with sufficient force to overcome the stress of the spring 52, the catch may be moved to release position for the purpose of allowing the wire 16 to drop, and thus form a descending plane from the platform 15 to the post 12.

Extending from the carrier engaged arm 46 of the central post 13 are two wires 56 and 57 which are connected to the catches of the posts 12 and 14, respectively, and in each connection is interposed a spring 58, similar in construction and function to the spring 52, the object being to transmit movement from the arm 46 of the central post to the two catches for the purpose of dropping the wire when the carriage is passing this central post 13.

Arranged at either end of the apparatus is a winding mechanism 60 preferably in the form of a drum having a suitable handled crank, and on this drum is wound a wire or cable 61 which extends to the posts 12 and 14, the wire being connected to these posts by springs 62 which tend normally to keep the wire taut. Connected to the wire 61 are two ropes or cables 64 which extend over guiding sheaves 65 at the bottom of the posts and are connected to the blocks 31, so that by turning the crank and drum, the stress of the spring 62 may be overcome and the blocks 31 pulled down from elevated to depressed position, and when the blocks reach this latter position they are automatically engaged and retained by the catches 32.

The carrier is in the form of a frame 70, preferably provided with supporting wheels 71 that are grooved for the reception of the track or wire, and from this carrying frame is hung a receptacle 73 of any suitable construction, and in which mail matter or other articles may be placed. On top of the frame 70 are guide brackets 75 which are arranged to engage under an obliquely disposed brake spring 76, there being one of said brake springs disposed at each station and adapted to engage the brackets for the purpose of retarding and gradually checking the momentum of the carriage. At each station there is also arranged a starting spring 78 which may be placed under stress to the rear of the carrier, and when suddenly released will impart an initial impetus to the carrier in order that the latter may be started on its way.

If the carrier is at the station A, the starting spring 78 is first placed under stress, and then the lever 50 is pulled for the purpose of releasing the catch 40 at the post 12. This allows the track or wire 16 to drop, but the wire does not fall low enough to catch the arm 38. The

carrier moves by gravity from the platform 16 toward the first post, and in passing the same engaging the arm 46, and in so doing moves the catch 32 from engagement with the block 31, so that the weight 36 is free to descend. As the weight descends it elevates the block 31, and the latter pulls the arm 38 up into engagement with the track or wire and elevates the latter until it is caught by the catch 40 and maintained in elevated position, thus forming a new inclined plane between the posts 12 and 13, and on which the carrier is free to continue its course. By the time the carrier reaches the arm 46 of the central post 13 and engages said arm, it will have acquired sufficient momentum to carry it along at a rapid rate of speed, and when this arm is engaged movement is transmitted through the wire or cable 57 to the catch 40 of the post 14, releasing the wire 16 at this point, and allowing the same to drop to the lowest position, so that another descending plane is formed between the posts 13 and 14. Then when the carrier engages the arm 46 of the post 14 it releases the block 31 of said post 14, and the weight 36 descends, elevating the wire and forming another descending plane between the post 14 and the receiving station B. As the carrier approaches the receiving station, the brackets 75 run under the brake springs 76, and the movement of the carrier is gradually arrested and finally checked. After the transit of the carrier in one direction or the other, the drum 60 is turned for the purpose of again raising the weights 36 and restoring the parts to initial position in readiness for a subsequent operation. After the wire or cable 61 has been wound up to an extent sufficient to elevate the weights, the winding drum is allowed to move freely or turn in the opposite direction in order to afford sufficient slack to permit the descent of the weights as the carrier passes. The carrier may be sent back over the same course in the manner previously described.

#### I claim:—

1. In apparatus of the class described, a track arranged between two terminal stations, a catch serving to support the track in elevated position at a point between the stations, means for releasing the catch to allow the track to fall in advance of the approaching carrier, and means for raising the track into engagement with the catch after the passage of such carrier.

2. In apparatus of the class described, a track extending between two terminal stations, an elevated catch forming a support for the track at a point between the stations, means under the control of the carrier for releasing the catch and allowing the track to fall, and means under the control of the carrier for elevating the track into engagement with said catch after the carrier has passed beyond the track.

3. In apparatus of the class described, a track, an elevated catch for holding the track in raised position, a carrier arranged to travel on the track, means for releasing the track, an elevating arm for engaging and raising the track, a counter-weight for elevating the arm, and a normally locked carrier actuated catch for releasing said weight.

4. In apparatus of the class described, a track extending between two terminal stations, a plurality of catches for holding the track in elevated position at spaced points between the stations, means for releasing said catches to allow the track to fall, a carrier arranged to travel on the track, a pair of counter-weight actuated track elevating means, carrier release catches for holding the elevating means inoperative, and means at one of the stations for restoring said elevating means to operative position.

5. In apparatus of the class described, a track extending between stations, a plurality of spaced track elevating

means between the stations, each of said elevating means having a normally restrained locking means, a carrier for releasing the locking means, a flexible member extending to both locking means, and means at one of the stations  
5 for winding said flexible member.

6. In apparatus of the class described, a track arranged between terminal stations, a plurality of elevated supports between the stations and on which the track is held, a carrier arranged to travel on the track, and means be-  
10 tween such supports and under the control of the carrier for releasing that support toward which the carrier is

traveled, and allowing the track to fall in advance of the carrier.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of 15 two witnesses.

ALEXANDER MCINTIRE.  
CHARLES W. MCINTIRE.

Witnesses:

RICHARD D. RECTOR,  
MARCUS F. VARNUM.