H. WULBERS.

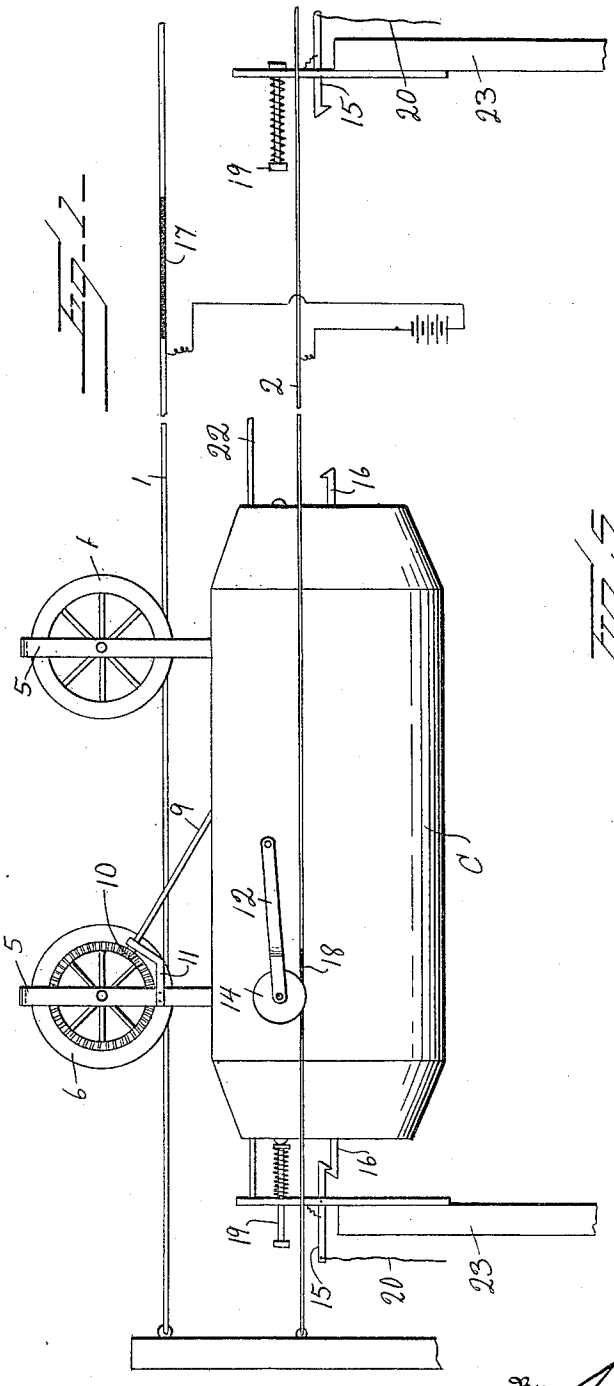
CARRIER.

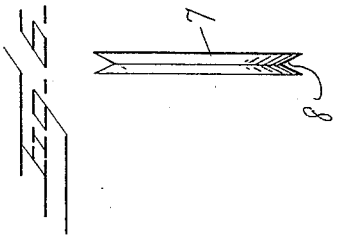
APPLICATION FILED FEB. 9, 1916.

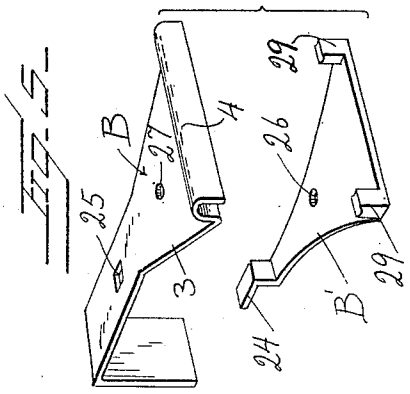
1,195,319.

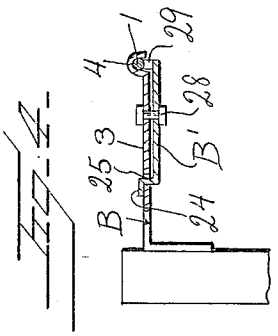
Patented Aug. 22, 1916.

2 SHEETS—SHEET 1.









Inventor

H. WULBERS

By Watson E. Coleman

Attorney

THE NORRIS PETERS CO. PHOTO-LITHO., WASHINGTON, D. C.

H. WULBERS.

CARRIER.

APPLICATION FILED FEB. 9, 1916.

1,195,319.

Patented Aug. 22, 1916.

2 SHEETS—SHEET 2.

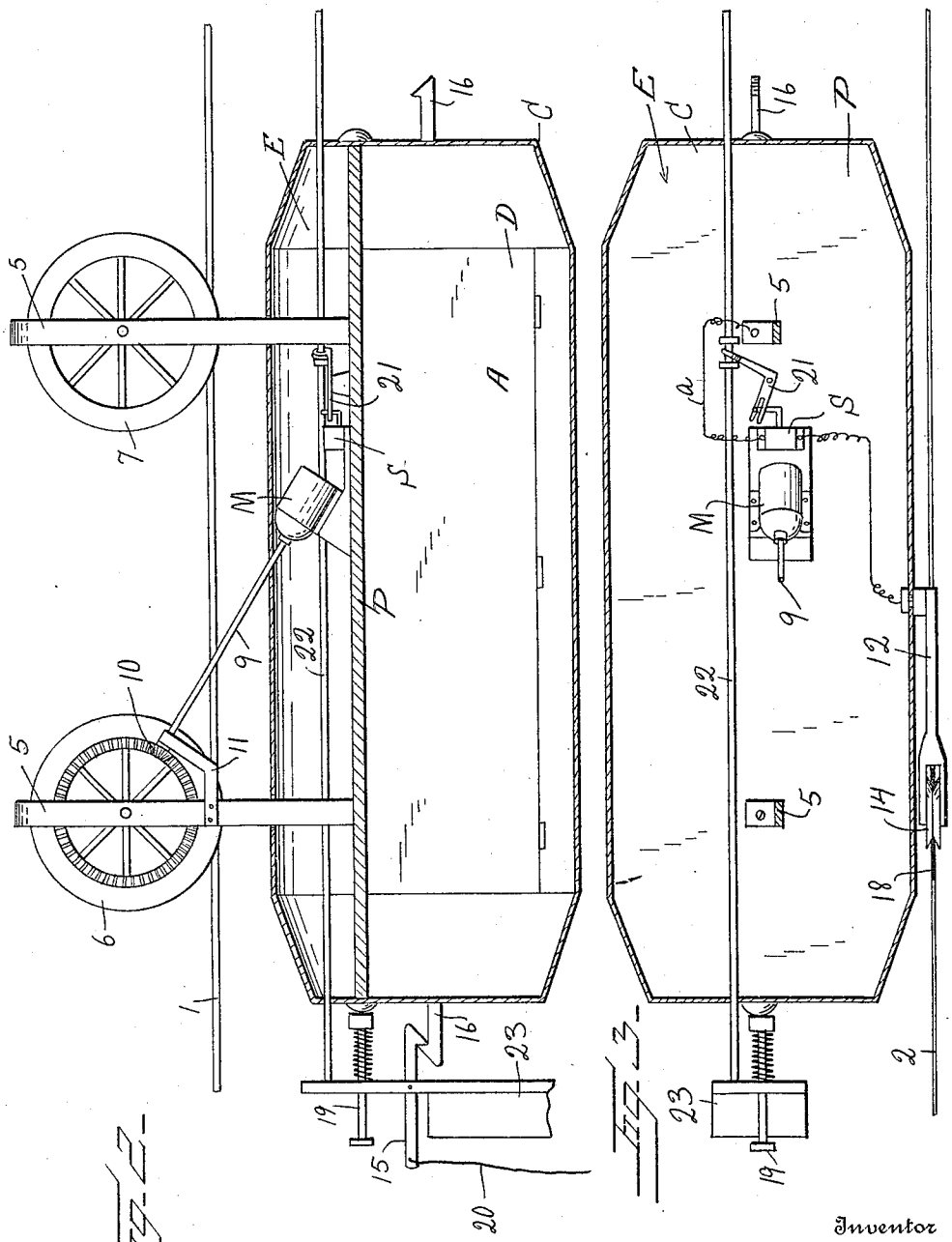


Fig. 2.

Fig. 3.

Inventor

H. WULBERS

By Watson E. Coleman

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY WULBERS, OF WHITE, SOUTH DAKOTA.

CARRIER.

1,195,319. Specification of Letters Patent. Patented Aug. 22, 1916.

Application filed February 9, 1916. Serial No. 77,353.

To all whom it may concern:

Be it known that I, HENRY WULBERS, a citizen of the United States, residing at White, in the county of Brookings and State of South Dakota, have invented certain new and useful Improvements in Carriers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in carriers and has relation more particularly to a device of this general character especially designed and adapted for use in connection with the conveying of mail from a roadside to a house, and vice versa, and it is an object of the invention to provide a novel and improved device of this general character wherein the carrier is supported upon a trackway, said trackway serving as a conductor for electrical energy to operate the motor by which the carrier is propelled.

It is also an object of the invention to provide a novel and improved device of this general character whereby the electrical circuit is automatically opened when the carrier reaches the limit of its movement in either direction, and whereby an initial impulse is automatically imparted to the carrier when released.

It is also an object of the invention to provide a device of this general character having novel and improved means whereby the carrier is automatically locked at the ends of its movements in either direction, and whereby the same is given an initial impulse when the locking or retaining means is released.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved carrier whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a view in elevation illustrating a carrier constructed in accordance with an embodiment of my invention, said figure also showing diagrammatically the trackways in communication with a suitable source of electrical energy; Fig. 2 is a longitudinal sectional view taken through the carrier as herein embodied, with certain of its concomitant parts in elevation; Fig. 3 is a view in horizontal section taken through the device as herein disclosed; Fig. 4 is a detail sectional view illustrating a supporting means for a trackway; Fig. 5 is a view in perspective of the supporting means for the trackway; and Fig. 6 is a view in end elevation of one of the supporting means for the carrier as herein set forth.

As herein embodied, 1 and 2 denote trackways preferably of wire, the uppermost trackway being of a heavier gage than the lower trackway, and adjacent ends of said trackways are in electrical connection with a suitable source of electrical energy. Any means may be employed for maintaining the trackways in their desired elevated position, but as disclosed in the accompanying drawings, I prefer to employ the brackets B which are adapted to be secured in any desired manner to a suitable supporting member and have the outer ends of their horizontal portions 3 beaded or corrugated, as at 4, to receive and clamp either of the trackways, and in practice I find it of advantage to have any necessary splice positioned within said bead or corrugation.

C denotes a carrier of predetermined dimensions and configuration and having the upwardly disposed standards 5 with which are rotatably engaged the supporting wheels 6 and 7, said wheels resting upon the upper trackway 1 and having their peripheries or tread portions substantially V-shape in cross section, as indicated at 8, so that an effective gripping engagement may be had with the trackway. Disposed longitudinally of the carrier C is the horizontally disposed partition P positioned in close proximity to the top of the carrier whereby a lower compartment A is afforded into which mail or other packages are adapted to be inserted through the medium of the door D.

M denotes an electric motor of any conventional type positioned within the upper compartment E and having its drive shaft 9 extending above the top of the carrier C and operatively engaged, as at 10, with the supporting wheel 6, the outer end of the connecting shaft being rotatably supported by the bracket 11 carried by the adjacent stand-

ard 5 with which the supporting wheel 6 is operatively engaged. The motor M has coacting therewith a conventional switch S whereby the motor may be reversed and said switch S is electrically connected through the medium of the conductor *a* with the standard 5 carrying the supporting wheel 7, and is also in electrical connection with the swinging arm 12 rotatably supported by a side wall of the compartment E and exteriorly of the carrier C and having rotatably carried thereby the conductor wheel 14 which contacts with the trackway 2, whereby it will be perceived that the necessary circuit will be closed in order to cause the proper rotation of the motor M to cause the carrier C to travel along the trackways.

At the opposite ends of the trackway, as at the roadside and house, a latch 15 is provided which is adapted to coact with the catch 16 carried by the adjacent end of the carrier C, whereby it will be perceived that the carrier C will be effectively held or maintained at the limit of its travel in either direction, and it is to be particularly noted that when the carrier C is at the limit of its movement in one direction, the trackway 1 is provided with an insulated portion 17 whereby it will be perceived that the operating circuit is broken, and that when the carrier C is at the limit of its movement in the opposite direction, the trackway 2 is provided with an insulated portion 18 with which the conductor wheel 14 contacts, whereby it will be perceived that the operating circuit will also be broken. The carrier C when at the limit of its travel in either direction also serves to place under compression the spring pressed plunger 19 whereby it will be perceived that when the latch 15 is released, through the medium of the flexible member 20 as herein disclosed, from the catch 16, the plunger 19 will impart an initial impulse to the carrier C sufficient to free the same of the insulated portion 17 or 18, whereby the circuit will be properly closed and the motor M be caused to operate. It is to be noted that the plungers 19 contact with the opposite ends of the carrier C at points in alinement with the partition P.

As herein embodied, the movable contact of the switch S is under control of the arm 21 which is suitably secured to the rod 22 disposed longitudinally of the carrier C and through the compartment E and projecting a predetermined distance beyond the opposite ends thereof, whereby it will be perceived that as the carrier C reaches the limit of its travel in either direction, the rod 22 will be so moved as to change the poles of the motor M in order to cause the carrier, when released, to travel in the desired direction. As herein disclosed, the latches 15 and the plungers 19 are carried by a post 23 with which the outer ends of the rod 22 engage.

It is to be noted that the bracket B has coacting therewith a clamping member B′ having one extremity angularly arranged, as at 24, and adapted to be disposed through an opening 25 suitably positioned in the bracket B and said clamping member B′ has an opening 26 adapted to aline with an opening 27 in the bracket B and through which a clamping member 28 is disposed, whereby the upstanding blocks 29 carried by the clamping member B′ will effectively underlie one of the trackways and maintain said trackway within the bead or corrugation 4, hereinbefore referred to.

From the foregoing description, it is thought to be obvious that a carrier constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason of the convenience and facility with which it may be assembled, and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

1. In combination with separated trackways in communication with a source of electrical energy, a carrier, a horizontally disposed partition extending longitudinally of the carrier and dividing the same into a lower compartment and an upper compartment, supporting wheels for the carrier constantly traveling on one of the trackways, an electric motor positioned within the upper compartment and operatively engaged with the wheels, a trolley rotatably supported by a side wall of the upper compartment and arranged exteriorly of the carrier and constantly traveling on the second trackway, and an electrical connection between the motor and said trolley.

2. In combination with separated trackways in communication with a source of electrical energy, a carrier, a horizontally disposed partition extending longitudinally of the carrier and dividing the same into a lower compartment and an upper compartment, supporting wheels for the carrier constantly traveling on one of the trackways, an electric motor positioned within the upper compartment and operatively connected with the wheels, a trolley constantly traveling on the second trackway, an electrical connection between the motor and said trolley, and automatic means supported independently of the carrier for imparting an initial impulse to the carrier, said means

coacting with an end of the carrier at a point in alinement with the partition therein.

3. A device of the character described comprising a track, a spaced conducting wire, a carrier adapted to be suspended from the track by the wheel elements, buffing means, and locking members to coöperate with one end of the carrier when the carrier is at either end of its travel, said track having an insulated section a predetermined distance from one of its ends, said conducting wire having an insulated section, the insulated sections being disposed at opposite ends, a source of electrical energy connected to the track and wire intermediate of the insulated sections, a trolley mounted on the carrier to convey current between the track and wire to an electrical motor, said motor driving a wheel element for propelling a carrier, said insulated sections operating to automatically cut off the electric current from the motor a predetermined distance from the ends of the carrier travel and when the locking members are disengaged, the buffing means serve to propel the carrier over the insulated section.

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

HENRY WULBERS.

Witnesses:
ARTHUR G. SCHULZ,
HENRY J. POSTERA.

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