

(No Model.)

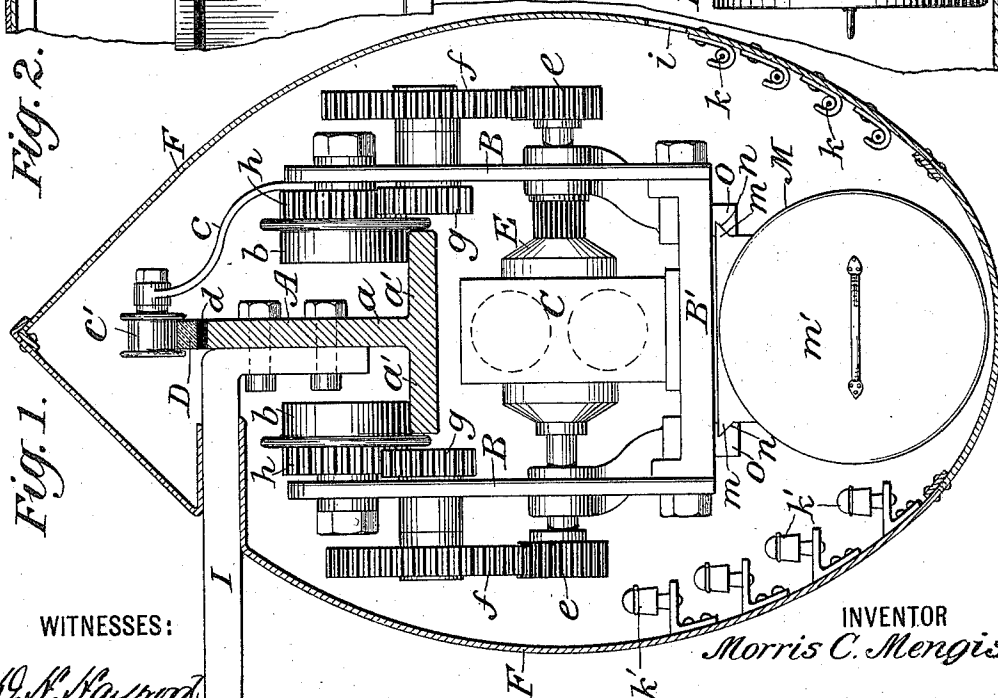
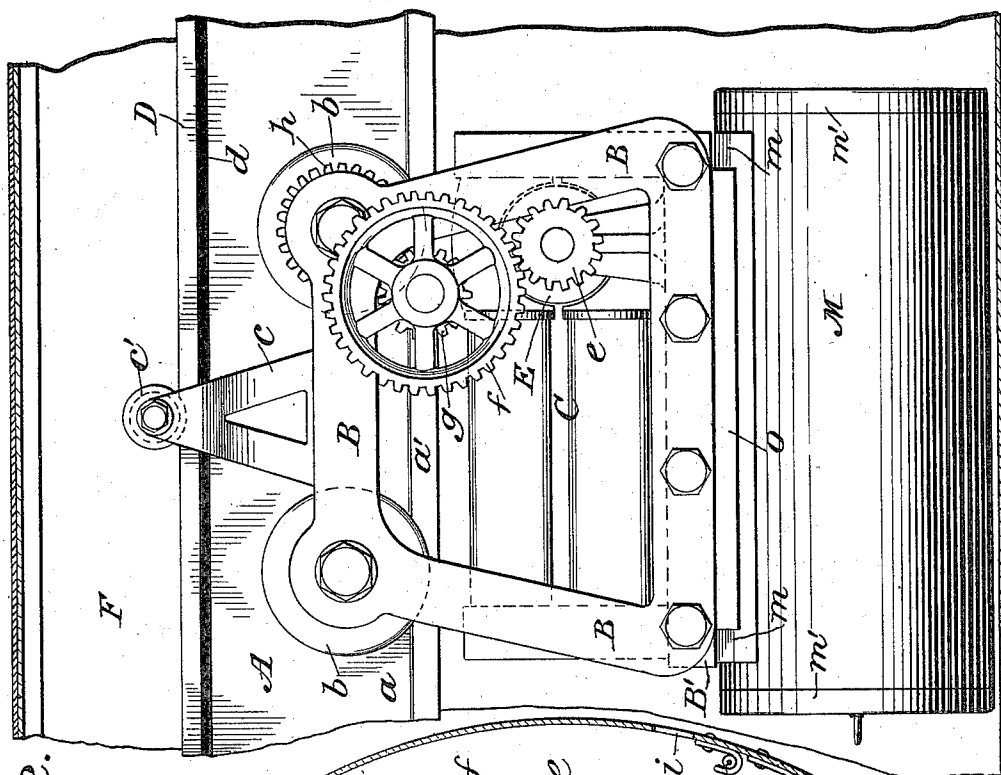
3 Sheets—Sheet 1.

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MEANS FOR TRANSPORTING ARTICLES OF MERCHANDISE.

No. 579,158.

Patented Mar. 23, 1897.



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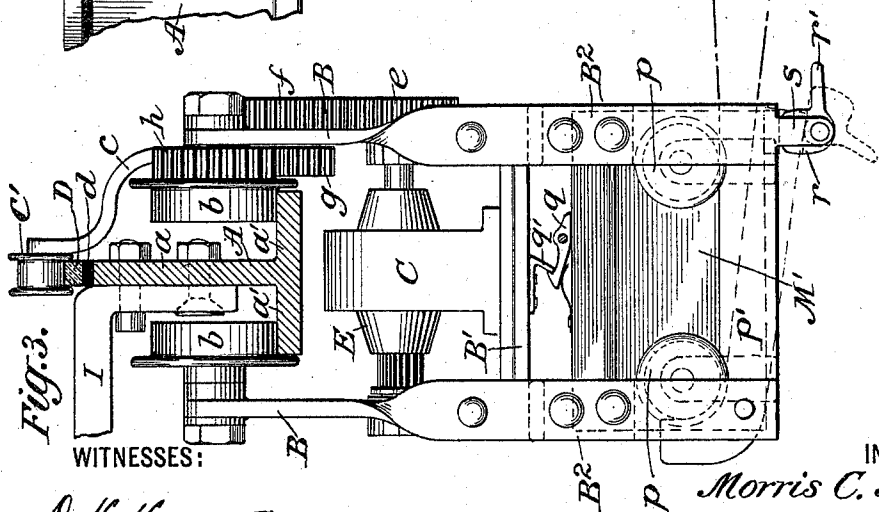
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3 Sheets—Sheet 2.

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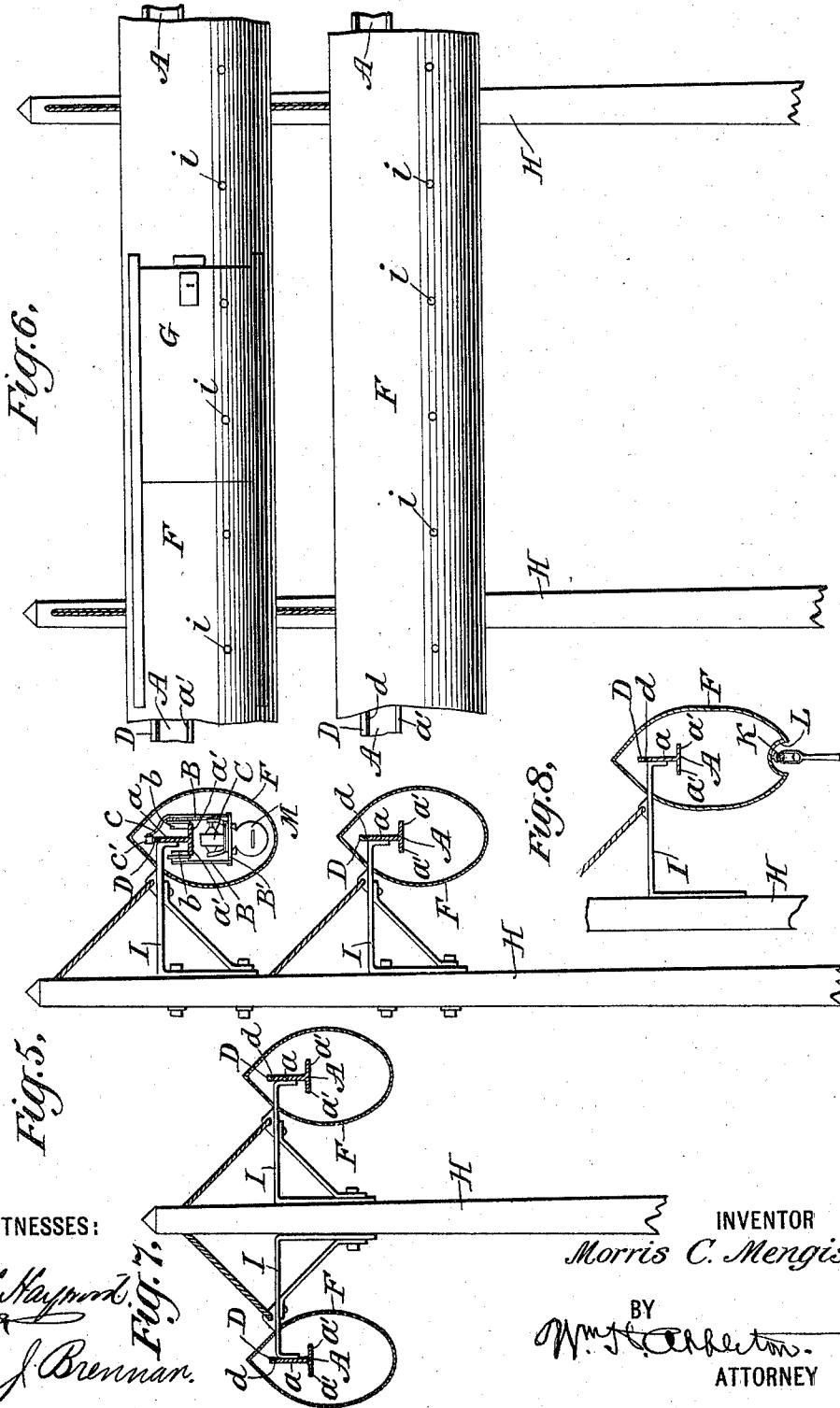
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MEANS FOR TRANSPORTING ARTICLES OF MERCHANDISE.

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MEANS FOR TRANSPORTING ARTICLES OF MERCHANDISE.

SPECIFICATION forming part of Letters Patent No. 579,158, dated March 23, 1897.

Application filed April 10, 1896. Serial No. 586,957. (No model.)

To all whom it may concern:

Be it known that I, MORRIS C. MENGIS, a citizen of the United States, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Means for Transporting Articles of Merchandise, of which the following is a specification.

My invention, while primarily designed for the transportation of mail-matter and other small packages, is not necessarily restricted thereto, but may be made of the proper dimensions and serve for the transportation of merchandise generally, its object being to provide means for these purposes which, while supporting and locking the receptacle that receives and carries the articles to be transferred within the carrier, shall at the same time afford a complete protection to such carrier and receptacle from the weather and the intermeddling of unauthorized persons when in transit.

To this end the invention consists in certain peculiarities of construction and combinations of parts whereby these results are accomplished, all as will be hereinafter more particularly described, and pointed out in the subjoined claims.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a transverse section of a supporting-rail and the surrounding casing with a carrier suspended from the supporting-rail within the casing; Fig. 2, a side elevation of the parts shown in Fig. 1 with one side of the casing removed; Figs. 3 and 4, views corresponding to Figs. 1 and 2, showing a slightly-modified form of the carrier with the surrounding casing removed; Fig. 5, a transverse section of two of the supporting-rails and their surrounding casings, with means for suspending them in the air so as to bring one of the rails with its casings above the other; Fig. 6, a side elevation thereof; Fig. 7, a transverse section of two supporting-rails and their surrounding casings, with means for supporting the respective rails and casings on opposite sides of their supporting-poles; and Fig. 8, a transverse section of a supporting-rail and a surrounding casing of a slightly-modified construction, showing also a portion of a trolley-arm and a portion of the means

employed for suspending the rail and casing in the air.

In all the figures like letters of reference are employed to designate corresponding parts.

A indicates a rail which in my preferred form of construction is of the T form and disposed in an inverted position, the same being constructed with a vertical web *a* and with the horizontal flanges or treads *a'*.

Suspended from the rail A by the wheels *b b*, which run upon the upper surface of the horizontal treads *a' a'* thereof, is the carrier which supports and carries the article to be transported. This carrier is preferably constructed of the side pieces or hangers B B, which are suitably tied together at their lower ends by the girth or cross-piece B' and have secured in their upper ends the studs or journals upon which the flanged wheels *b b* are free to turn. As thus constructed and arranged, the carrier is free to travel along the rail A in one or the other direction, as may be required, and for supporting the article or articles to be transported any convenient receptacle attached thereto may be employed.

For propelling the carrier along the rail A various means may be employed. I prefer, however, to employ electricity for this purpose, and to that end make use of the electric motor C, which is preferably supported upon the girth or cross-piece B' and receives the necessary current from a conductor D through the trolley *c*, which is provided at its upper end with the usual trolley-roller *c'*.

The conductor D may consist of the ordinary wire which is usually employed for the transmission of current and be supported in any appropriate way. I prefer, however, to make this conductor in the form of a rod or bar that is rectangular in cross-section and to support it upon the vertical web *a* of the rail A, from which it is insulated by a strip of rubber or other insulating material *d*, interposed between them. The electric motor C being thus connected with the conductor D may transmit the rotary motion of its armature E to the wheels *b* through any appropriate connection. I prefer, however, to make use of the train of gears *e f g h*, which may be duplicated at each end of the armature-shaft E, if desired, and in which the gear *f* meshes with the gear *e* on the armature-shaft

and the gears *h* with the gear *g* on the rolls *b*. By this construction provision is made for propelling the carrier along the rail by the current passing along the conductor *D*, which is taken therefrom by the motor *C* through the trolley *c* and roller *c'* as the carrier travels along its supporting-rail. The rail and carrier being constructed and arranged as thus described are protected from the weather or the intermeddling of unauthorized persons by a tubular casing *F*, which may be made of any appropriate material, but preferably of sheet metal, and extends throughout the portions of the rail that are exposed or throughout the portions thereof that may be required. In some cases this casing may be constructed imperforate throughout. I prefer, however, to provide it with perforations *i* at suitable distances apart, whereby to permit of the necessary passage of the air therethrough as the carrier travels along the same, and also with doors or manholes *G* along its side, whereby access to its interior can be had when desired. As thus constructed, the casing, with its contained rail and other coöperating parts, may be sunken in the ground, and in that case the casing *F* then becomes a conduit and its walls will be constructed imperforate throughout and the doors or manholes disposed along the top thereof. I prefer, however, to suspend the casing, with its contained parts, in the air, and for this purpose make use of poles *H*, from which they are suspended by the brackets *I*, which, secured to the poles by suitable bolts or otherwise, extend outward therefrom and are connected at their outer ends with the rail *A* and the casing *F*, as shown. In some cases I find it convenient to support one of these casings, with its contained parts, above the other, as shown, for instance, in Figs. 5 and 6. In other cases I find it desirable to support them on opposite sides of their supporting-poles, as shown in Fig. 7, and either of these arrangements may be adopted, as preferred or as the exigencies of their use may demand. In addition to thus serving as a means for protecting the rail and carrier and the parts coöperating therewith this casing may also serve as a means for containing telephone and electric-light cables and telegraph-wires, as shown at *k* and *k'*, respectively, whereby to render protection thereto. Moreover, this casing may also serve as a means for supporting the conducting-wires of surface trolley-lines *K*, in which case the casing will be provided with a longitudinal groove *L* in its under side, in which such wire will be supported, as in Fig. 8.

When the carrier is designed for the carrying of small articles or parcels, the receptacle for receiving and holding them during their transit will preferably consist of a drawer *M*, which is provided on its upper side with laterally-extending flanges *m m*, that engage with correspondingly-shaped grooves *n n*, formed in the lugs *o o*, depending from the under side of the girth or cross-piece *B'*, as

shown in Figs. 1 and 2, the drawer when thus used being constructed either with an open top or with a detachable end or cap *m'*, that is secured in place by a screw-thread or otherwise, as preferred. When, on the other hand, the carrier is designed for the carrying of larger and heavier articles, then the receptacle for receiving and containing them is preferably made in the form of a box *M'*, which is provided on its sides with the flanged wheels *p p*, that are adapted to rest upon suitable tracks *p' p'*, secured to the extensions *B² B²* of the side pieces or hangers *B B*, the receptacle being held in place in the carrier, when placed therein, by a spring-catch *q*, which, secured thereto, engages with a lug *q'*, secured to the under side of the girth or cross-piece *B'*. In some cases these tracks are fixedly secured to the extensions *B² B²*, and in that case the removal of the receptacle *M'* from the carrier will be effected by hand. I prefer, however, to render this removal automatic, and for this purpose the tracks *p' p'*, instead of being fixedly secured to the extensions *B² B²*, are pivoted thereto at one end and are supported at the other end by a cam *r*. This cam is pivoted in a stand or hanger *s*, depending from one of the extensions *B²*, and is provided with an arm or extension *r'*, that is adapted to be struck by a stationary cam (not shown) located at the point where the removal of the receptacle from the carrier is required. As thus constructed and arranged, when the receptacle is inserted in the carrier and is undergoing transit therein, the cam *r* is turned into the position shown in full lines in Figs. 3 and 4, and the free ends of the tracks *p' p'* are thereby raised until their upper surfaces are slightly above a horizontal plane, as indicated by the letter *x* in the first of these figures, and in this position the receptacle is held in the carrier and the spring-catch *q* may be dispensed with; but when the carrier arrives opposite the point where the receptacle is to be discharged, then the stationary cam, acting against the arm *r'* as the latter is carried by it, trips such cam into the position shown by dotted lines in said Figs. 3 and 4, which thereby allows the free ends of the tracks to fall and the upper surfaces of such tracks to assume the inclined position indicated by the letter *x'* in the first of such figures, when the receptacle *M'* will run down these inclined surfaces by the action of gravity and be thereby automatically discharged from the carrier.

In the practical operation of my invention it is my intention to employ a number of carriers, and to employ one of the rails *A* of the pairs for the travel of the carriers in one direction and the other of these rails for the travel of such carriers in the other, the electric current on both rails being taken up by the trolley *c* and trolley-roller *c'* and returned or grounded through the wheels *b* and rail *A*.

From the above it will be seen that I provide simple and convenient means whereby

the transportation of mail or other light or heavy articles may be accomplished with expedition and efficiency and the articles thus transported protected from the weather and the intermeddling of unauthorized persons.

5 Although in the foregoing I have described the best means contemplated by me for carrying my invention into practice I wish it distinctly understood that I do not limit myself strictly thereto, but reserve to myself 10 the right to modify the same in various ways without departing from the spirit thereof.

Having now described my invention and specified certain of the ways in which it is or 15 may be carried into effect, I claim—

1. The combination, with the carrier, and the receptacle for receiving and containing the articles to be transported provided with wheels, of the tracks upon which the wheels 20 of the receptacle rest, of devices through which the receptacle is locked in the carrier, substantially as described.

2. The combination, with the carrier, and the receptacle for receiving and containing 25 the articles to be transported, provided with wheels, of the tracks upon which the wheels of the receptacle rest, pivoted at one of their

ends to said carrier, and a cam whereby the free ends of such tracks may be raised or allowed to fall, as and for the purposes set forth. 30

3. The combination, with a carrier, a receptacle for receiving and carrying the articles to be transported provided with wheels, a track upon which the wheels of the receptacle rest and devices through which the receptacle is locked in the carrier, of a rail from 35 which the carrier is suspended, an electric motor for propelling the carrier along such rail, a conductor and trolley, for supplying an electric current to said motor, and a casing 40 for surrounding and inclosing the said parts, whereby the removal and replacement of the receptacle for the article to be transported may be readily effected, and the carrier and such receptacle protected from the weather 45 and the intermeddling of unauthorized persons when in transit, substantially as described.

In testimony whereof I have hereunto set my hand this 6th day of April, 1896.

MORRIS C. MENGIS.

Witnesses:

RICHARD SMITH,
GEO. J. BRENNAN.