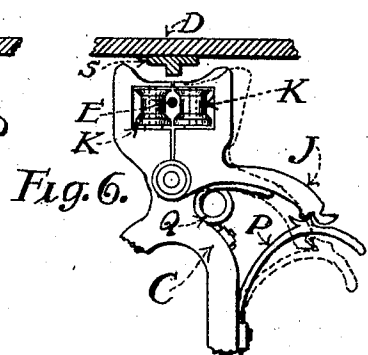
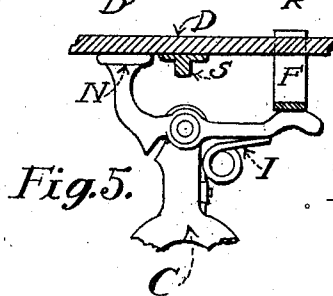
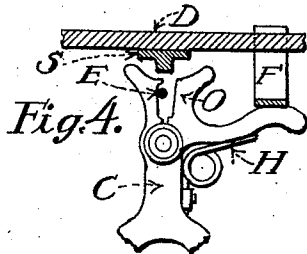
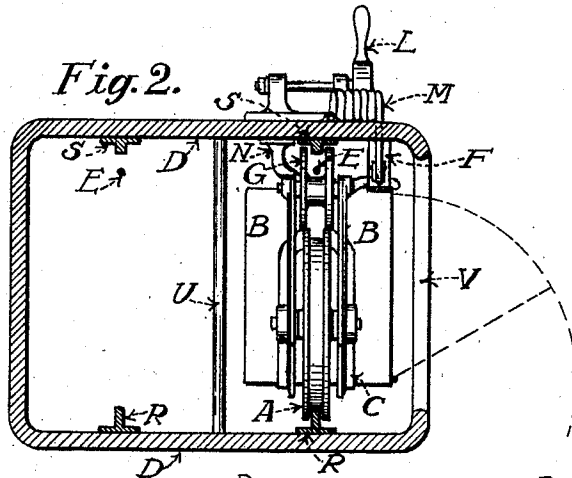
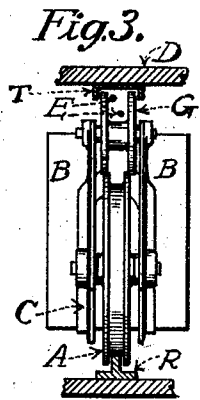
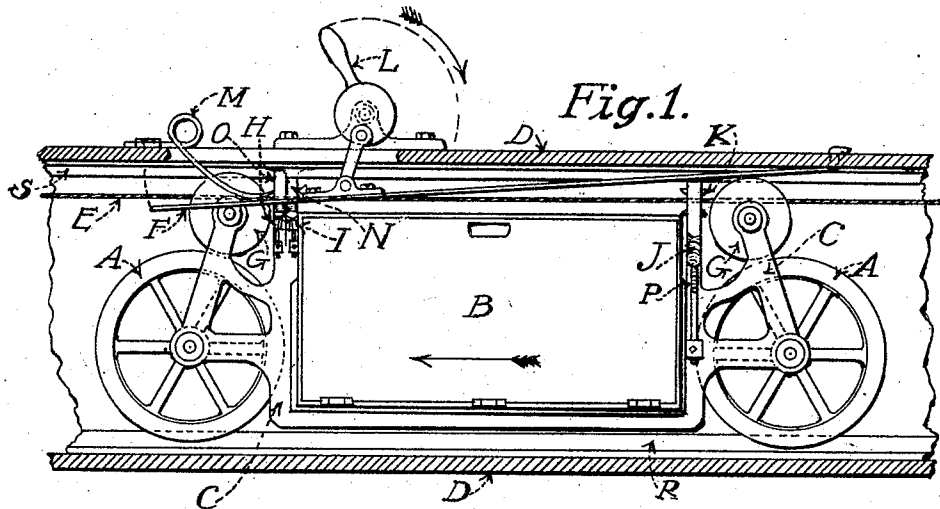


No. 824,024.

PATENTED JUNE 19, 1906.

A. F. JOHNSON.
PACKAGE OR MAIL DESPATCHING SYSTEM.
APPLICATION FILED AUG. 21, 1905.



Witnesses
Frank A. Lang
Joseph W. Morgan

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Axel F. Johnson

UNITED STATES PATENT OFFICE.

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PACKAGE OR MAIL DESPATCHING SYSTEM.

No. 824,024.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed August 21, 1905. Serial No. 275,063.

To all whom it may concern:

Be it known that I, AXEL F. JOHNSON, a citizen of the United States, residing at No. 3523 Avenue J, borough of Brooklyn, county of Kings, city and State of New York, have invented a useful Package or Mail Despatching System, of which the following is a specification.

My invention relates to the means for despatching packages, mail, or other matter between distant stations by means of a duct which is to be placed under the surface of the ground generally, but under special conditions may be installed above the ground, the carrier to move by means of a running cable, to which the carrier must be clasped when in motion, which clasp shall open, releasing the cable, and the carrier brought to a standstill automatically at stations or desired intervals and be again started in motion as soon as desired by simple movements of a person's hand in contact with a part of the mechanism arranged for that purpose.

I attain these objects by the mechanism and duct as illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of part of the duct at a station and showing an entire side view of the carrier and stopping device; Fig. 2, a transverse section through the duct and rails and showing an end view of the carrier and stopping device. The duct shown has double tracks and cables, wherein carriers can be run in opposite or same directions. Single-track ducts may be used under this system if expedient under special conditions. Fig. 3 is an end view of the carrier, part section of bottom and top of the duct, and transverse section through a channel guide-rail and two cables near the top, this channel guide-rail and two (or more) cables running in opposite or same directions to be installed at ends of lines and at switching-stations, so that either of the cables may be clasped as desired. Fig. 4 is a view of the clasp device for the cable; Fig. 5, a detail view of the brake which brings the carrier to a standstill when the clasp opens; Fig. 6, a detail view of device for guiding the cable to prevent contact or friction against the carriers' guide-sheaves or other parts of the mechanism.

Similar letters refer to similar parts throughout the several views.

The two lower sheaves or wheels A of the

carrier are to run on a single rail R, the two upper sheaves or wheels G to be guided by the single rail S, (or T in Fig. 3.)

The box or receptacle B is arranged to contain the packages or mail-matter and be either secured permanently to the framework of the carrier or arranged so as to be removable at the stations when desired. It is to be open, as indicated by dotted lines on Fig. 2, and may have wickets or mail-drops at the top.

The framework C of the carrier may be freely modified as to shape and proportions and be provided with bushings and oil-holes around axles of sheaves and generally arranged to serve its purpose, as indicated.

The shell of duct D is provided with sufficiently large openings in front of carrier at the stations, as indicated at V, Fig. 2, and small openings through the top, as required for operating the mechanism controlling the brake.

The cable E is to be held in position with no other guides than the carrier mechanism itself. The machinery for operating the cable is not a part of my invention.

The bar F is mounted under the top of the shell and is secured to the shell by means of a hinge at one end and attached, by means of a coupling, to the lever-handle L and is part of the brake mechanism for bringing the carrier to a standstill is pressed downward by coil-spring M, Fig. 1. When in that position, it forces downward on the lever of clasp O, Figs. 1 and 4, thus releasing the cable and at the same time forcing downward on the lever of brake N, Figs. 1, 2, and 5, bringing the carrier to a standstill. To start same in motion, it is only required to move the handle, Fig. 1, in the direction indicated by dotted curved line and arrow, which by means of the coupling attached to bar F raises said bar, thus releasing the brake M and closing the clasp O on the cable, which remains in continual motion. When carrier has passed, the handle L is raised to the position shown, Fig. 1, so as to bring the next arriving carrier to a standstill, unless it be desired that the carrier should pass by, in which event the handle should remain turned downward. The bar F is to be made long or short in accordance with the length or shortness of time desired for bringing the carrier to a standstill without unduly jarring the mechanism.

The coil-shaped spring H closes the clasp O on the cable when bar F is raised. (See Figs. 1 and 4.)

The coil-shaped spring I raises the lever of 5 and releases the brake N when the bar F is raised. (See Figs. 1 and 5.)

The lever-handle J is arranged for opening and closing the cable-guide, Fig. 6, which is held closed by the coil-shaped spring Q and 10 may be held open when desired by means of a hook on spring P, as indicated by dotted lines, the small cylinders K, with flanges on both ends, being mounted in the guides to revolve around axle-pins when in contact with a running cable. This mechanism, Fig. 6, is a 15 guide for the cables particularly required when the carrier is at a standstill.

Division-rods U are placed at varied intervals in the duct (see Fig. 2) and are particularly 20 required where the duct may be curved, so as to guard the cables from contact with carriers in the other side of the duct.

I am not aware prior to my invention of any system operating whereby mail, packages, or other matter is despatched or transported through ducts or conduits by means 25 of carriers clasped to moving cables in a manner heretofore set forth; and therefore

I claim as my invention and desire to secure Letters Patent on—

1. In a transportation system, the combination of a horizontal duct or conduit, the sides or shell of which is closed on all sides for distances intervening between stations, bottom and top guide-rails, moving cables within the duct, cars or carriers mounted on, or 35 guided by said rails within the duct, a mechanism mounted on the car or carrier for clasp- ing the moving cable and remaining clasped to same when it is desired that the car or carrier shall be in motion, a hand-operated mechanism for releasing the cable from the clasp and arresting the motion of the car or carrier 40 automatically at regular stations or intervals without arresting the motion of the cable; said mechanism when reversely operated being adapted to simultaneously release the carrier and allow the clasp to engage the cable, and guides mounted on the car or carrier 50 to prevent the cable from being in contact with any other part of the car or mechanism when the car or carrier is not in motion.

2. In a system of transportation, the combination of a duct or conduit, closed on all sides except at stations, placed under the surface of the ground in horizontal position; single guide-rails mounted on the inner side of the duct at bottom and top for each separate track or passage for cars or carriers, a moving cable within the duct or conduit for each track or passage mounted on or guided within the duct by mechanism forming part of the cars or carriers, cars or carriers with two wheels, one on each end of car and adapted to run on a lower guide-rail, guide-sheaves 65 mounted on upper portion of car or carrier in contact with the upper guide-rail, a device mounted on the car for clasping the moving cable so as to bring the car into motion when desired, a device for arresting or stopping the movement of the car or carrier automatically at stations or regular intervals so arranged that the car or carrier may be allowed to continue in motion and pass the station or arresting device if so desired. 75

3. In a transportation system the combination for the purpose of transporting or despatching in a duct or conduit under the surface of the ground, mail or other matters, of a car or carrier mounted on two wheels located 80 on the longitudinal axis of the car, a receptacle for mail or other matters mounted on the car, or forming a part of car, and arranged for opening or closing when desired, guide-sheaves mounted on the upper portion of the car-frame for maintaining the car or carrier in proper mounted position, a device mounted on the car securing the car or carrier to a moving cable when desired that the car or carrier shall be in motion, an arresting device 90 mounted on or near the shell of the duct and adapted to disengage the car from the cable, and an additional device adapted to be engaged by said arresting device to cause the movement of the carrier to be discontinued 95 at a station.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

AXEL F. JOHNSON.

Witnesses:

FRANK A. LANG,
JOSEPH M. MORGAN.