No. 652,381. Patented June 26, 1900.

H. D. B. WILLIAMS & D. LIPPY.

STORE SERVICE APPARATUS.

(Application filed Sept. 5, 1899.)

(No Model.) 2 Sheets—Sheet 1.

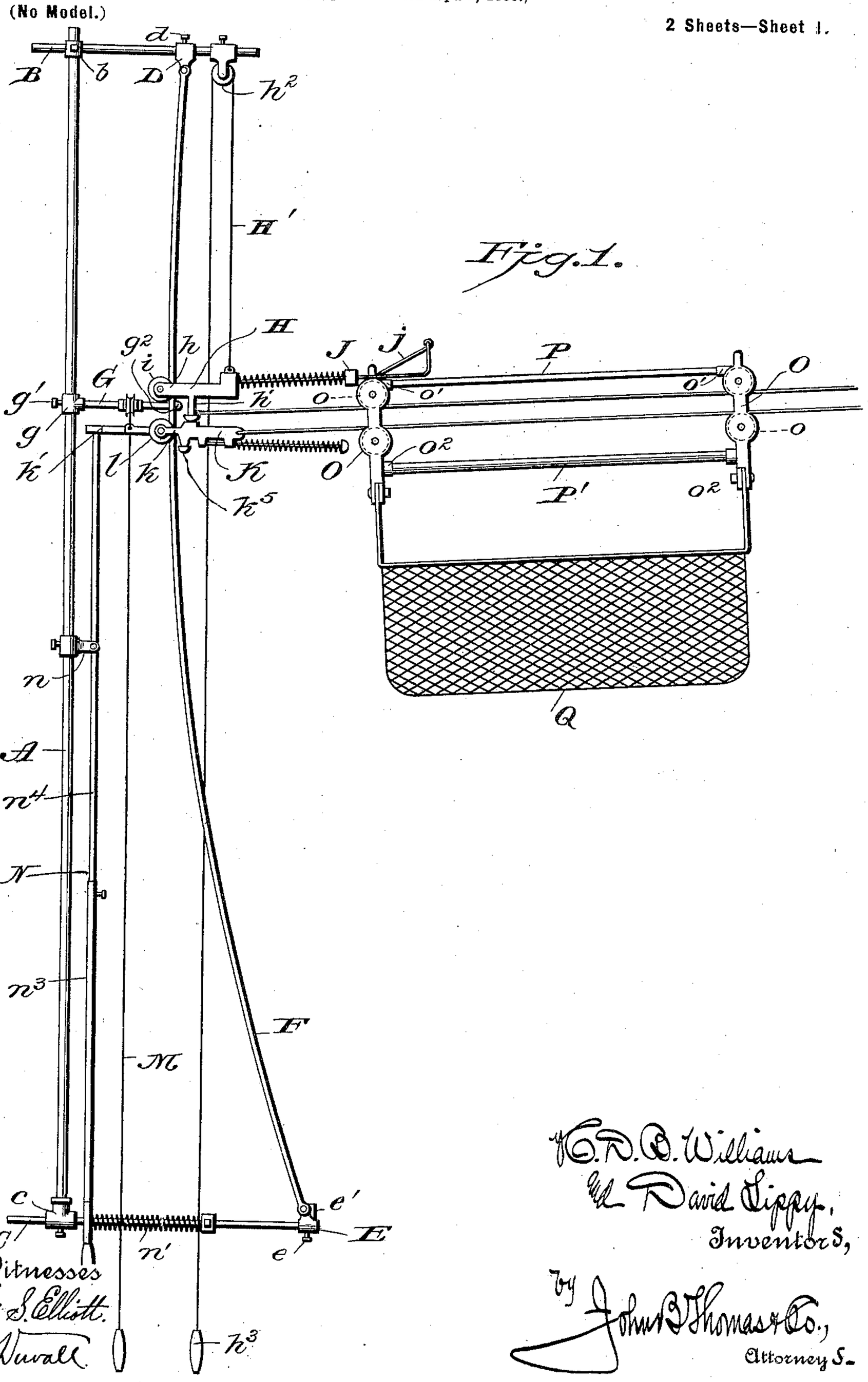

Fig. 1.

Witnesses
G. S. Elliott.
W. Duvall.

Inventors,
H. D. B. Williams
and David Lippy.
by John B. Thomas & Co.,
Attorneys.

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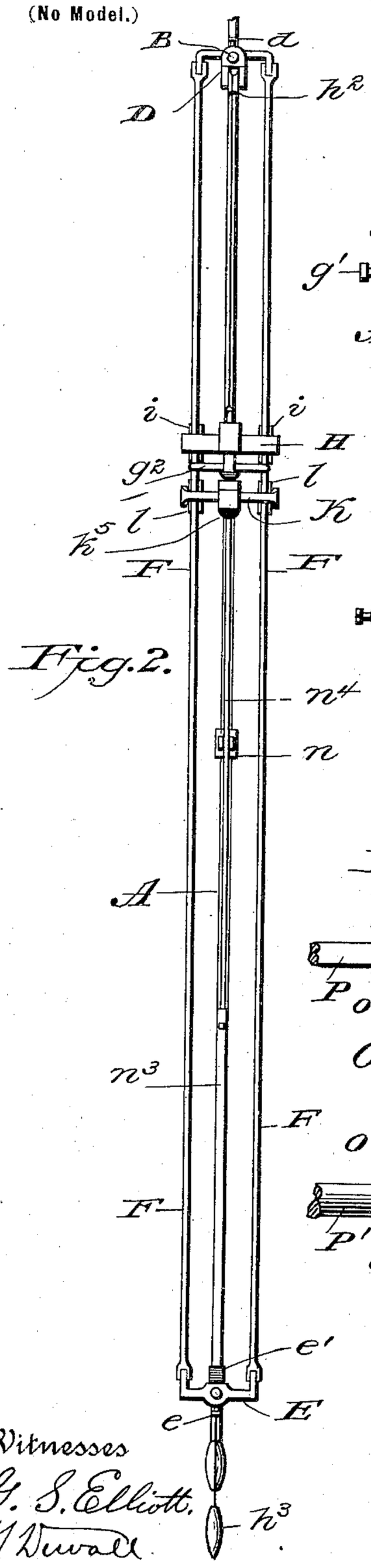


Fig. 2.

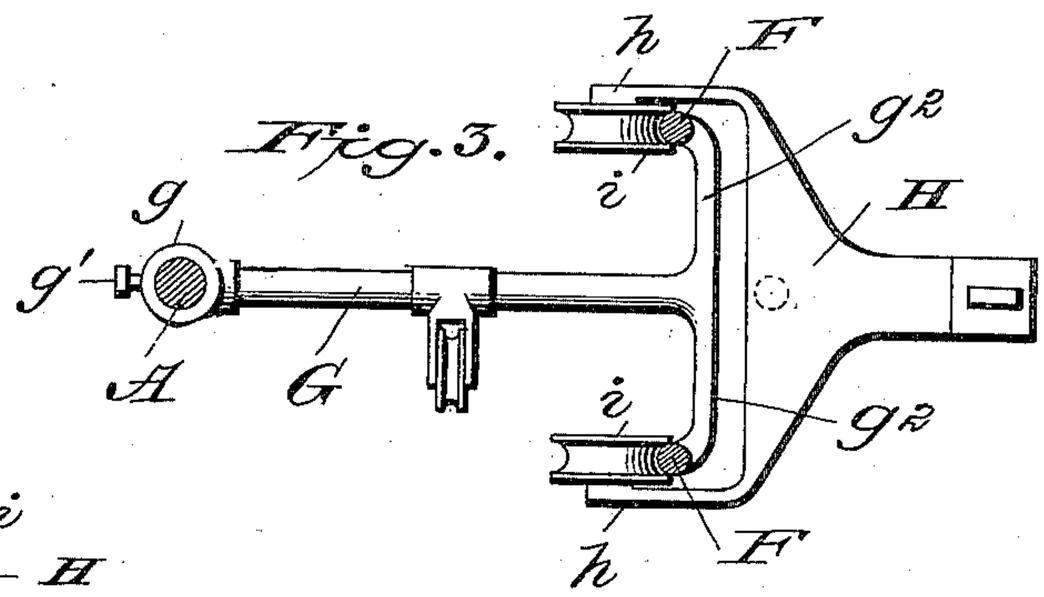


Fig. 3.

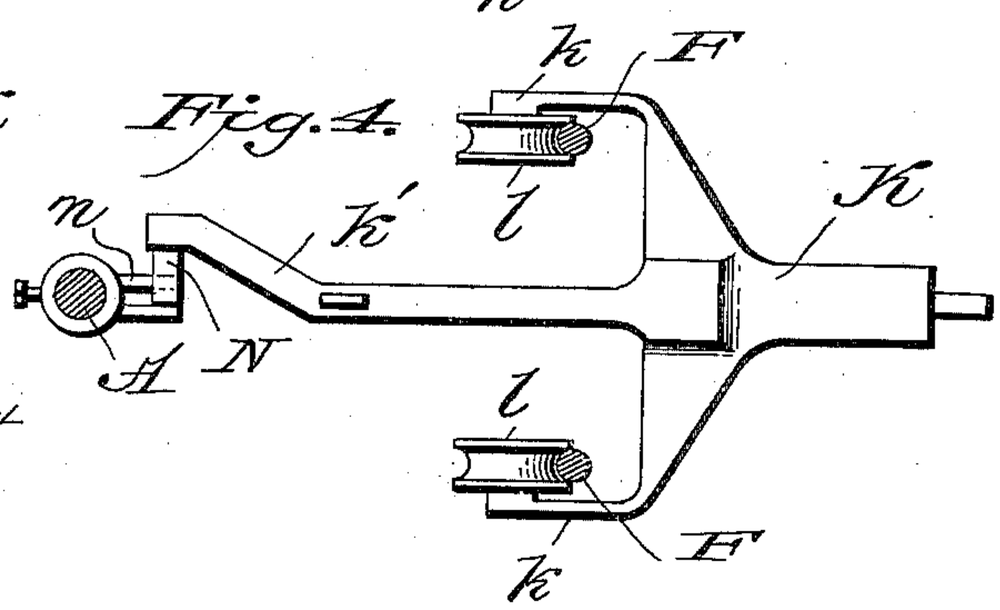


Fig. 4.

Fig. 5.

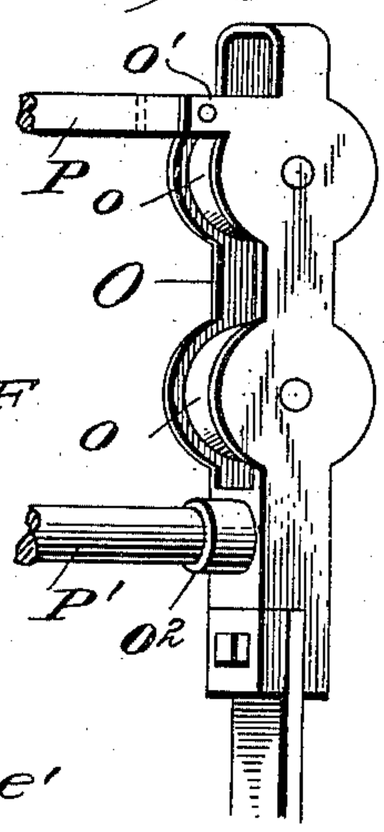
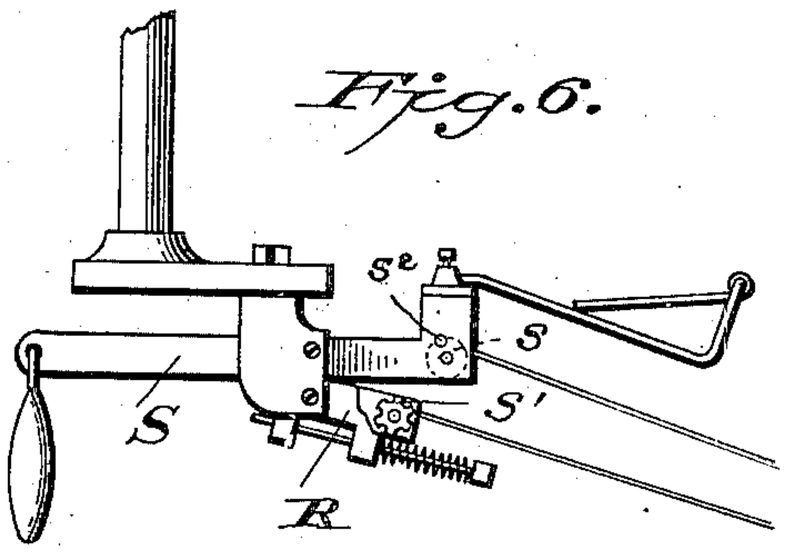


Fig. 6.



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UNITED STATES PATENT OFFICE.

HUBBARD D. B. WILLIAMS AND DAVID LIPPY, OF MANSFIELD, OHIO.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 652,381, dated June 26, 1900.

Application filed September 5, 1899. Serial No. 729,509. (No model.)

To all whom it may concern:

Be it known that we, HUBBARD D. B. WILLIAMS and DAVID LIPPY, citizens of the United States, and residents of Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a full and exact description.

Our invention is an improvement in store-service apparatus, and relates more especially to that class in which double line-wires are employed as a track for the carriage and provision made for separating said line-wires at one end of the track to thereby impel the carriage from one station to another.

The primary object of the invention is to provide an apparatus of this general character which can be readily and conveniently adjusted and arranged to accommodate the particular service relative to the length and disposition of track with respect to the stations.

A further object of the invention is to provide for lowering the outer end of the track to bring the basket within easy reach of the operator and also provide locking devices which automatically engage the track-supports when they are elevated to a position for despatching the carriage.

The invention also contemplates novel features in the details of construction by which to produce a store-service apparatus that will be very effective in use, requiring but little effort in its manipulation, and insuring an easy and positive operation of the parts with the least noise possible.

In the following specification we have entered into a detailed description of our invention, reference being had to the accompanying drawings and to letters thereon which designate the different parts, and what we consider to be novel and desire to fully protect by Letters Patent is more specifically set forth in the appended claims.

In the drawings, Figure 1 is a side elevation of the apparatus located at the outer station of the service, said apparatus being constructed in accordance with our invention, showing the parts in the position they assume just prior to the operation of despatching the carriage. Fig. 2 is a front elevation of the apparatus illustrated in Fig. 1, the carriage and its basket being omitted. Fig. 3 is a detail plan view, enlarged, of the support for the upper track-wire. Fig. 4 is a similar view of the lower track-wire support. Fig. 5 is a detail view of one of the castings or end pieces of the carriage. Fig. 6 is a side elevation of the device located at the home station of the service.

Referring to said drawings, A designates the supporting post or standard, which is held firmly in a vertical position by any suitable means, the said post or standard forming the support for the mechanism constituting the apparatus located at the outer station of the service. Projecting horizontally from this post or standard are upper and lower arms B and C, respectively, the upper arm B being connected to the post by a socketed collar *b*, while the lower arm C is connected to said post by a T-coupling *c*, though the latter connection may be similar to the former, it being desirable, however, that at least one of the arms be adjustable vertically upon the post for the purpose hereinafter explained. Slidably mounted upon the horizontal arms B and C are brackets or castings D and E, which are held thereon by set-screws *d* and *e*, respectively, the said brackets presenting lateral members, to the ends of which are attached rods F F, forming a double track or way upon which travel the line-wire supports hereinafter described. The rods extend parallel with each other, and at an intermediate point they are connected to the post by means of a brace G, which provides for curving said rods in the arc of a circle having the home station as the center, the disposition of the arc with respect to the supporting-post being governed by the location of the home station or direction of the same from said supporting-post, while the curve of the arc is governed by the length of the line-wires or distance of the home station. Provision is therefore made to readily and conveniently adjust the rods to accommodate the particular service for which the apparatus is intended. To this end the disposition of the curved rods is changed by sliding the brackets D and E upon the arms to the desired extent and moving the brace G accordingly, one of the sup-

porting-arms B C being also moved vertically as the curve of the arc is increased or diminished.

It will be noted that the intermediate brace G is secured in a socketed collar g, and said collar is held upon the supporting-post by means of a set-screw g', and the outer end of said brace has diverging members g^2 g^2, to which the rods are attached, the said members being so shaped with respect to the upper line-wire support hereinafter described as to permit said support to pass the same.

H designates the support for the upper line-wire of the carriage-track, said support having rearwardly-projecting arms h h, which carry rollers i i, that travel on the rods F F, said support also having a depending portion h', forming a bumper-head which contacts with the other line-wire support. Projecting forwardly from the support H is a spring-bumper J of ordinary construction and having a gravity-catch j at its outer end. The upper line-wire of the carriage-track is connected directly to the support H, as shown, and as this line-wire is raised in impelling the carriage forward the said support is provided with an operating-cord H', attached thereto, passing therefrom upward and over a pulley h^2, supported by the upper arm B, and depending therefrom has a handle h^3 at its end. This line-wire support H is free to travel upon the curved rods or double track and is supported by contact with the lower support.

K designates the lower line-wire support, which is provided with rearwardly-projecting arms k k, carrying grooved rollers l l, which travel upon the curved rods F F, the said arms being joined together to present a rearwardly-projecting member k', by which said support is itself supported in the manner hereinafter described. The lower line-wire of the carriage-track is attached directly to the support K, and as the latter is adapted to be lowered it is provided with a cord M for lifting the same to its normal position, in which position it is held by a vertical rod N. The rod N is pivoted to a bracket n, attached to the supporting-post, and the upper end is bent to engage the rear portion k' of the support K, (see Fig. 4,) the rod being moved out of such engagement by moving the lower end against the action of a helical spring n', encircling the lower arm C. As the raised position of the support K depends upon the location of the brace C and said brace is adjusted to change the arc of the track-rods F, the length of the rod N can also be changed, and for this purpose said rod is composed of telescopic sections, the lower section n^3 being a tube, while the upper section n^4 is a rod. The support K for the lower line-wire is also provided with a bumper k^5, adapted to engage a stop e' on the bracket E, and it will be here noted that when said support is lowered by first disengaging the rod N and letting up on the cord M the upper support H will follow the same, being supported thereby, and when lowered the outer end of the line-wires or carriage-track, with the carriage and basket, will be lowered to the lower end of the apparatus, resting upon the bracket E.

The carriage proper consists of the end pieces or castings O O, inclosing the grooved wheels o and connected together by bars P and P'. The castings or end pieces are provided with lugs o', to which the bar P is riveted, while the lower bar P' fits at its ends in sockets o^2, formed on said castings. The basket Q, which may be of any shape desired, is clamped to the lower ends of the end pieces of the carriage, as shown. It is obvious, however, that instead of a basket any approved style of cash-carrier may be attached to the carriage and also that some other style of car or carriage could be employed.

The home station shown in the drawings is of the usual pattern, comprising a support R and lever S, to which the ends of the line-wires are attached, the said parts carrying bumpers and a catch device. The support and lever, respectively, are provided with drums S and S', to which the ends of the line-wires are attached, and one of the heads of each drum has a series of holes adapted to register with a hole in the support and lever. By this arrangement the drums may be turned by a wrench to tighten the line-wires, and when the proper tension has been secured pins S^2 are placed through the registering holes in the drum-heads and fixtures. This provides a very simple and convenient means for tightening the line-wires whenever they become loose.

From the foregoing description, in connection with the accompanying drawings, it will be apparent that the operation of despatching a carriage by our improved apparatus is very similar to that of similar apparatuses which impel the carriage by raising the end of the upper line-wire, for, supposing the parts to be in the position shown in full lines, Fig. 1, of the drawings, the cord H' is pulled upon, which will raise the upper support H and, separating said line-wire from the other, will impel the carriage forward. It will also be noted that our improvements provide for lowering the carriage and basket after they have been received at the outer station of the service, and this operation is accomplished by disengaging the rod N from the lower support and gradually lowering said support by means of the cord M, which will bring the basket within easy reach of the operator. After the goods or articles have been placed in the basket the parts are brought into proper position for despatching the carriage by pulling upon the cord M, which will elevate both line-wire supports, so that they will be supported by rod N, after which the cord H' is pulled upon to despatch the carriage forward, as hereinbefore described. When the upper line-wire support is lifted to despatch the carriage, an upward movement of the lower line-