(No Model.)

J. F. CAMP.

STORE SERVICE APPARATUS.

No. 370,180. Patented Sept. 20, 1887.

FIG. 1.

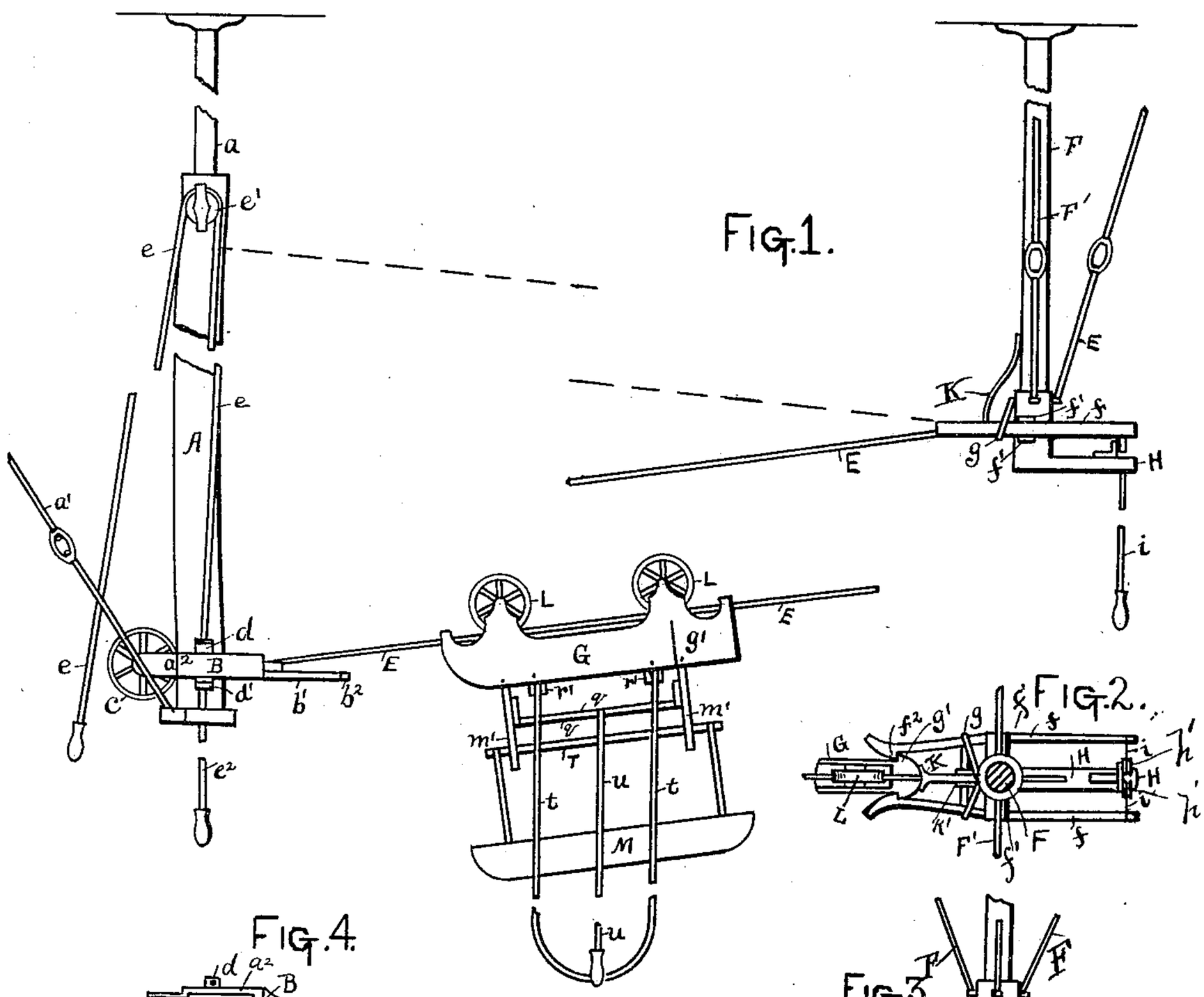


FIG. 2.

FIG. 3.

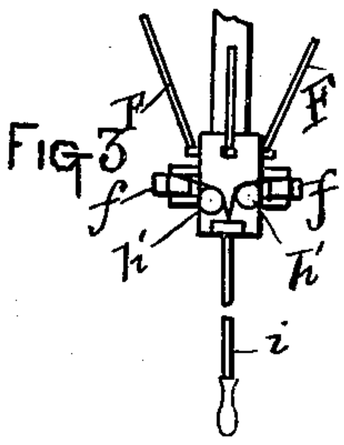


FIG. 4.

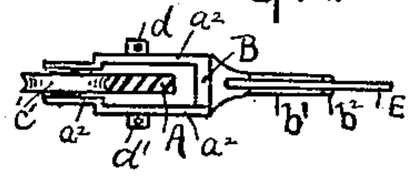
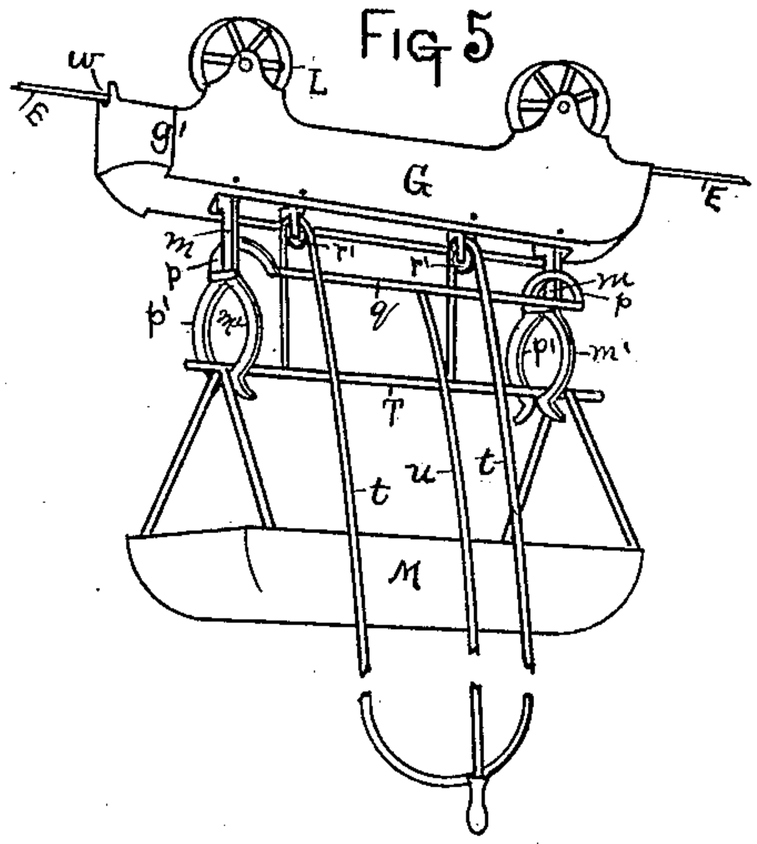


FIG. 5



WITNESSES

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STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 370,180, dated September 20, 1887.

Application filed February 4, 1887. Serial No. 226,599. (No model.)

To all whom it may concern:

Be it known that I, JULIUS F. CAMP, a citizen of the United States, residing at Columbus, county of Franklin, and State of Ohio, have invented a certain new and useful Improvement in Store-Service Apparatus, of which the following is a specification.

My invention relates to the improvement of store-service apparatus by means of which parcels, change, &c., are readily transferred from point to point in store-rooms; and the objects of my invention are, first, to provide a simple, neat, and inexpensive device of this class which will admit of the speedy and effective transportation of parcels, change, &c., from one station to another; second, to provide at one or both ends of the track or way, as hereinafter described, means for automatically catching and holding the car; third, to so suspend a parcel or change carrying basket beneath the car as to admit of its being readily and effectively lowered and again raised for convenience in reaching or placing articles therein when the car, by reason of the height of the track, is elevated inconveniently; fourth, to locate the supporting-arms and operating mechanism of my device at such a height as to prevent the same from interfering with the transaction of business and movements of employés beneath. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the operating mechanism located at each terminus of the line. Fig. 2 is a plan view of my improved car stopping and holding device. Fig. 3 is an end view of the same. Fig. 4 is a transverse section of the supporting-arm at the sending-station, showing a plan view of the track-elevating block; and Fig. 5 is a perspective view of a car and its basket, showing the means for raising and lowering the latter.

Similar letters refer to similar parts throughout the several views.

A represents a downwardly-extending metallic arm having its upper end, or an extension, *a*, thereof, rigidly secured to the ceiling of a store-room. The general form of this arm A is rectangular, but, for reasons hereinafter mentioned, has its rear narrow side slightly bowed outwardly from either end toward its central portion, and is provided at suitable points with one or more guy-wires, *a'*, the extremities of which may be secured at convenient points in the ceiling or wall of the room.

B represents a metallic traveling block having two parallel arms, a^2, projecting rearwardly from a solid front portion. Between these arms a^2 is made to pass vertically the arm A, and between the outer ends of said parallel arms is pivoted a guide-wheel, *c*, having a grooved periphery, the surface of which is preferably encircled by a rubber band.

d and *d'* represent perforated lugs made to project laterally, respectively, from near the upper and lower edges of the block B on each side thereof and near the center of its length.

Secured to each of the upper lugs, *d*, is the lower end of cords *e*, which, passing upwardly, is made to pass over an inclosed pulley-wheel, *e'*, carried on a pin projecting from the corresponding side of the arm A at a point near the upper end thereof. From the pulleys *e'* the cords *e* extend downwardly and are joined in the rear of the arm A to form a single cord, the lower end of which is at such height from the floor as to be conveniently reached. Secured to the lower lugs, *d'*, and made to hang loosely through holes formed in the flanged base of the arm A, are cords e^2.

Made to project forwardly from the front end of the block B, with which it is preferably cast, is a stop-pin, *b'*, having fixed on or in the end thereof a short projecting stop-plug, b^2, of felt or other suitable well-known material. To the front end of the block B is secured one end of a track-wire, E.

F represents a metallic rod or bar having its upper end, or an extension thereof, secured to the ceiling of a room, preferably above the parcel-wrapping counter or cashier's desk of a store, and having its lower and enlarged end extending downward to an imaginary horizontal line drawn from about the center of the length of the arm A. The track-wire E is stretched tightly between the arm A and rod F, being made to pass through a transverse hole in the lower portion of said rod to any convenient place of attachment beyond.

f f are two horizontal arms, each of which is loosely pivoted near the middle of its length between two outwardly-projecting lugs, *f'*,

formed on the corresponding side of the enlarged lower end of the rod F. The inner side of each of the arms *f*, near the front end thereof, is made to project slightly inwardly to form shoulders f^2, said projecting portion being made to curve outwardly and forwardly to the front end of the arms. A rubber band, *g*, is made to embrace the arms *f* immediately in front of the rod F, the tension of which tends to draw the arms toward each other.

Made to project rearwardly from the lower end of the rod F is an arm, H, having on its upper side, near the rear end thereof, a short upwardly-projecting lug, *h*, to which is pivoted a pair of small pulley-wheels, *h'*. Over these pulley-wheels is made to pass and hang below the same, cords *i*, the upper ends of which are secured, respectively, to the rear ends of the arms *f*.

Riveted or otherwise secured to the front side of the rod F at a point slightly above its lower enlarged end is the upper end of a downwardly-projecting and outwardly-bent spring-strip, *k*, the lower portion of which extends between the arms *f* a short distance in front of the rod F.

Made to project from the front side of the enlarged lower portion of the rod F at a point between the arms *f* is a short stop-pin, *n*, having secured in any suitable manner within or to its outer end a piece of felt or other suitable material.

G represents an oblong car, between the sides and near each end of which is pivoted a grooved wheel, L, said wheels being adapted to be made to run upon the track-wire E. From the under side of the car, by any suitable well-known means, or as hereinafter described, is suspended a parcel or change basket, M.

The operation of the above-described portion of my device is as follows: The change or parcel desired to be transmitted is placed by the clerk in the basket M, the block being near the lower end of the arm A. By pulling on the cord *e* the block B is made to ascend the arm A, its guide-wheel *c* traveling on the rear side of said arm, the bowed center of which prevents the wire from becoming slack as it reaches a horizontal position. When the track has been thus elevated to the desired incline, it will be seen that the car will be carried down the wire by its own weight until it is caught between the heads of the arms *f*, where it is held by the interlocking of shoulders *g'*, formed on the sides of the car, and the shoulders f^2 of the arms *f*. When the car has reached its destination, the block B is then drawn downward to its former position by pulling downward on the cord e^2, thus changing the incline of the track. In order to return the car, it is first necessary to disengage it from the arms *f*, which is readily accomplished by pulling on the cords *i*, thus drawing the rear ends of said arms toward each other sufficiently to cause the heads thereof to open and allow the car to escape down the incline until it comes in contact with the stop-pin *b'*. The car is assisted somewhat in starting by the pressure thereon of the spring-strip *k*. In order to hold the rod F and arm A rigidly in place, any desired number of guys or bracing-wires—such as those indicated at F' and *a'*—may be employed.

The rearwardly-bowed arm A is preferably formed in the shape of a flattened bar, as shown, so placed as to bring the strain of the wire against the side opposite its thicker and stronger portion.

By the above-described arrangement and construction it will be seen that the mechanism is so placed as to prevent the interference with the transaction of business at any of the stations.

Where, by reason of the location of the store-furnishings or from other causes, it is desired to suspend the track at such height as to bring the basket out of reach, the following means of raising and lowering the basket may be used: Rigidly secured between the sides of the car, (which is preferably mortised to decrease the weight thereof,) near each end thereof, is the upper end of a downwardly-projecting arm, *m*, terminating in an outwardly and inwardly curved finger, *m'*, the lower end of which is bent outwardly. Pivoted to each of said arms *m* is a laterally-projecting arm, *p*, which, curving outwardly and downwardly until it bears against the side of the arm *m*, is continued to form a finger, *p'*, which, conforming to the shape of the finger *m'*, is bent in an opposite direction therewith, said fingers meeting to form a clutch immediately above their lower outwardly-bent ends. The upper terminations of said arms *p* are joined by a horizontal connecting-rod, *q*. Fixed between the sides of the car at points between the arms *m* are cross-pieces *r r*, from the lower side of each of which is suspended a small pulley-wheel, *r'*. Each pair of arms *m* and *p* is encircled by a rubber band, *s*, the tension of which tends to draw the lower ends of the fingers together. T represents a horizontal basket-handle rod from which is suspended the basket M. This rod T is adapted to rest normally within the angle formed by the meeting of the fingers *m'* and *p'*, as shown in Fig. 5 of the drawings. Secured to the rod T at equidistant points from its center are the ends of a cord, *t*, which, passing upward over the pulleys *r'*, drops down a convenient distance below the basket. From the center of the length of the rod *q* is suspended a cord, *u*. The fingers may be opened to admit of lowering the basket by pulling on the cord *u*, causing the fingers *p'* to move outward. The parcel or change having been placed within the basket, the latter may be raised to its former position by pulling on the cord *t* until the rod T forces open and enters the fingers. Each end of the car G is provided with a notched projection, *w*, adapted to form a guide for the wire E and prevent any inclination of the car to leave the track.

In case it is desired, a similar device to that

above described for catching and holding the car may be used at both stations.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A store-service apparatus comprising the bowed arm A, carrying sliding block B, its guide-wheel *c*, and stop-pin *b'*, pulley *e'*, cords e^2 and *e*, with the rod F, connecting track-wire E and its car G, pivoted arms *f*, and spring-band *g*, and projecting arm H, carrying pulleys *h'* and cords *i*, substantially as and for the purpose specified.

2. A store-service apparatus comprising the bowed arm A, carrying sliding block B, its guide-wheel *c*, and stop-pin *b*, pulley *e'*, cords e^2 *e*, with the connecting track-wire E and its car G, having shoulders *g'*, pivoted arms *f*, having shoulders f^2 and spring-band *g*, spring-strip *k*, and projecting arm H, carrying pulleys *h'* and cords *i*, substantially as and for the purpose specified.

3. The combination of the car G, having wheels L and track-guides *w*, with hanging arms *m* and fingers *m'*, pivoted arms *p*, and fingers *p'*, connecting-rod *q*, basket M, and its rod T, and cords *u* and *t*, running over pulleys *r'*, secured, respectively, to said rods *q* and T, substantially as and for the purpose specified.

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Witnesses:
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