

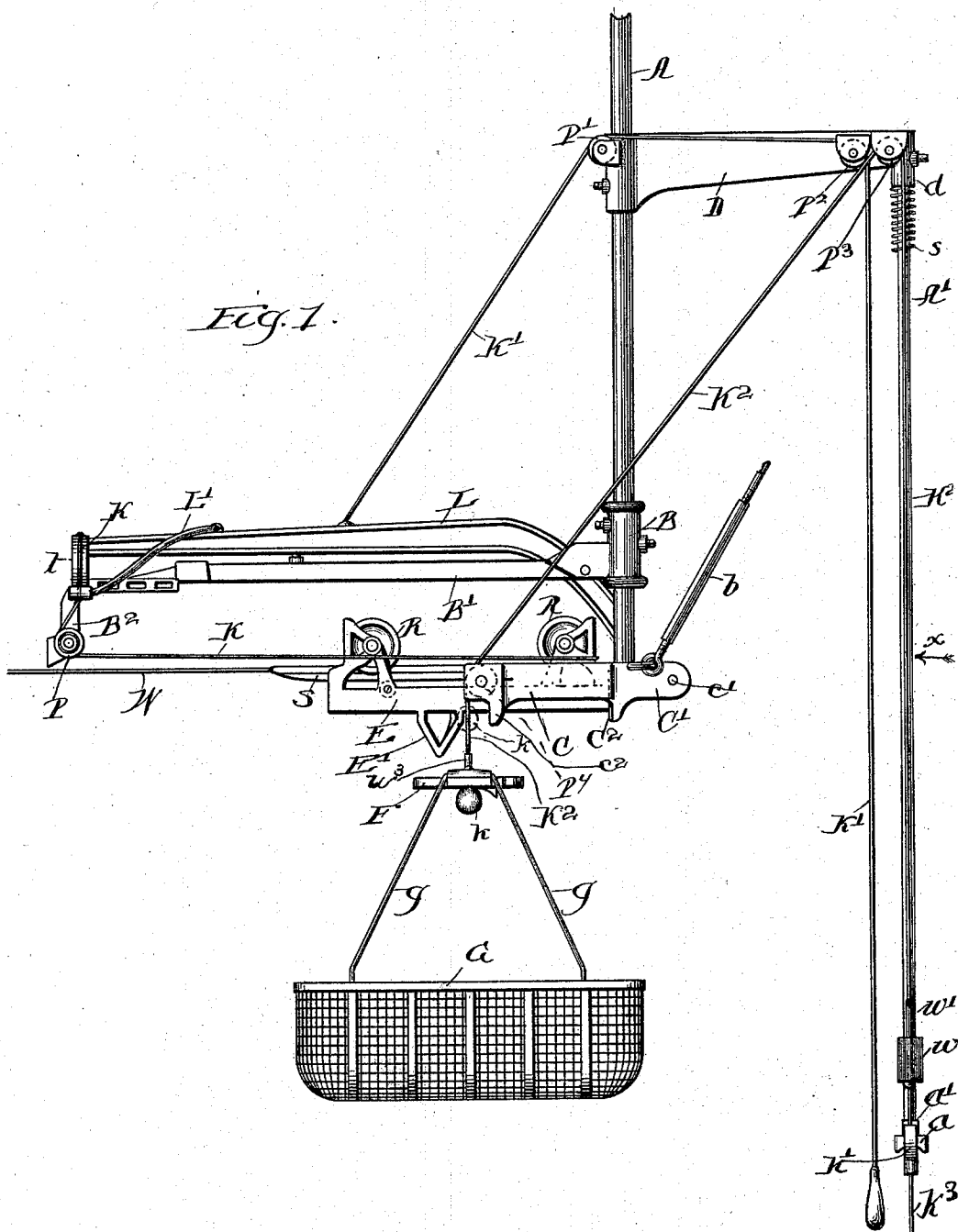
(No Model.)

3 Sheets—Sheet 1.

E. C. GIPE.
PACKAGE CARRIER.

No. 528,203.

Patented Oct. 30, 1894.



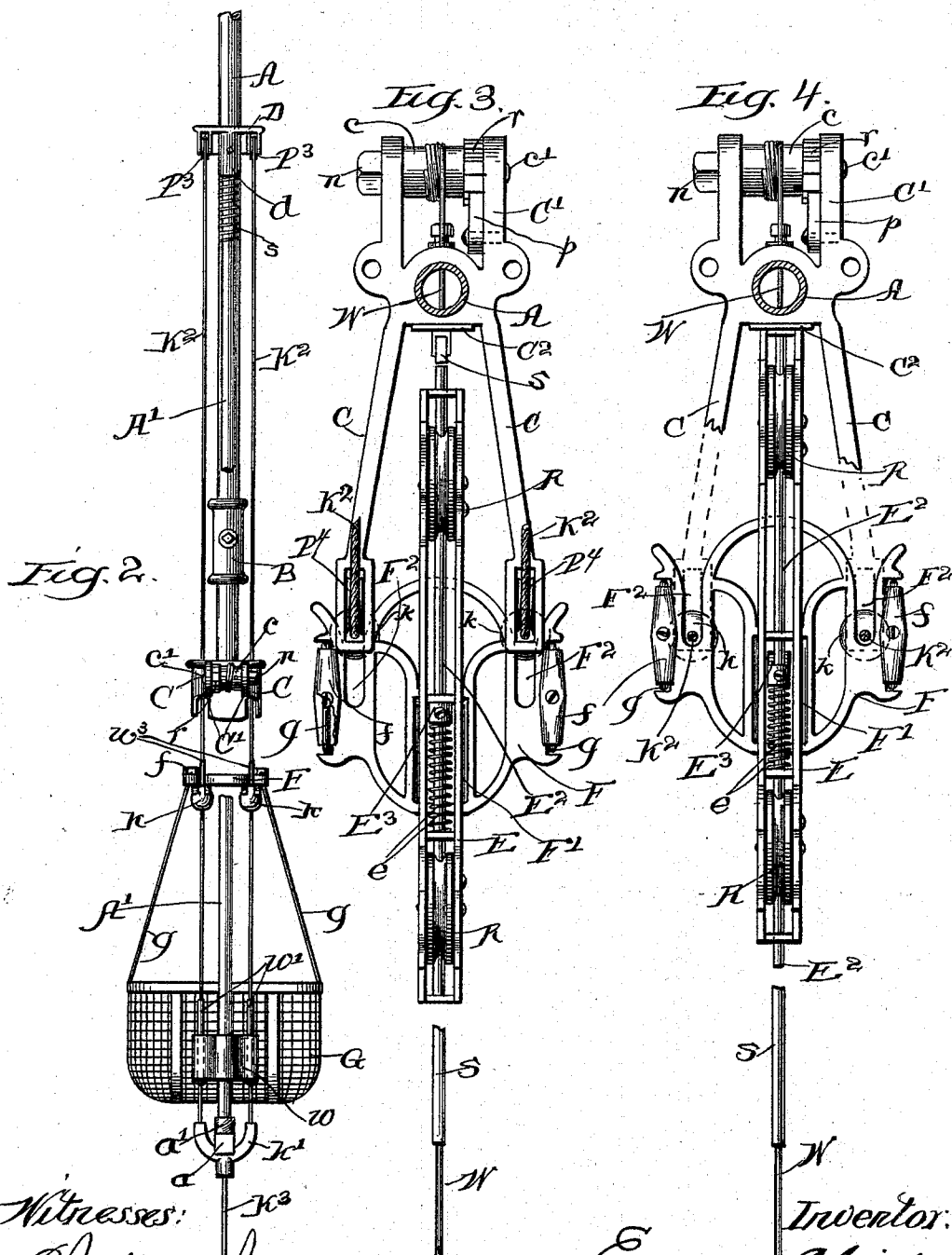
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E. C. GIPE.
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Patented Oct. 30, 1894.



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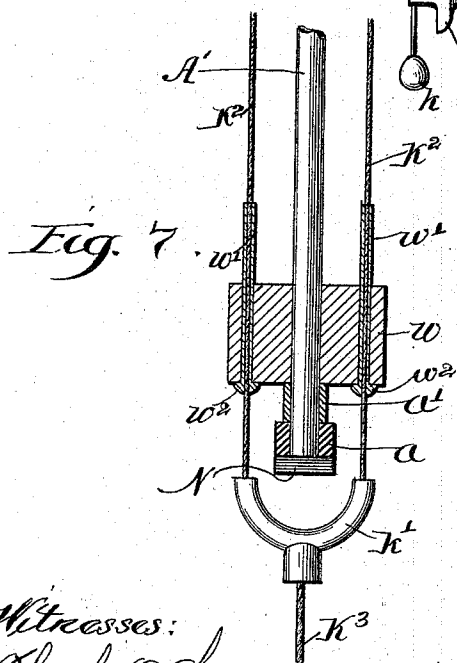
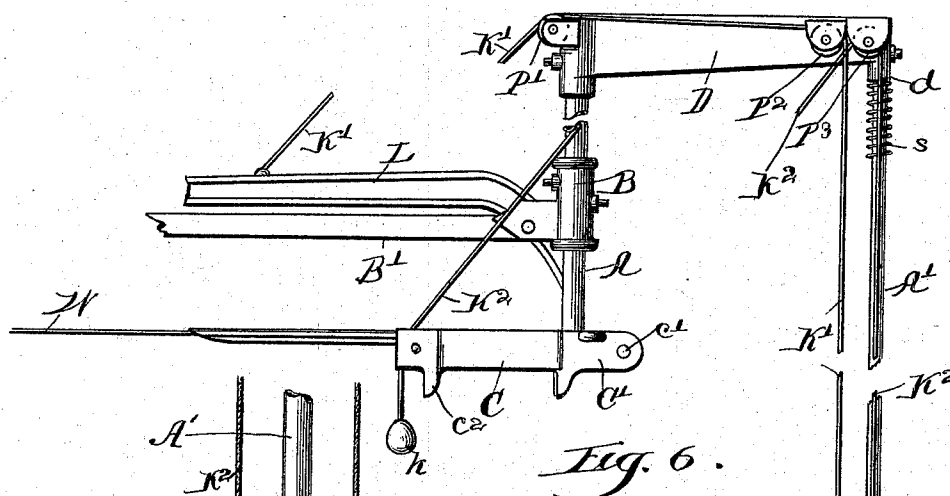
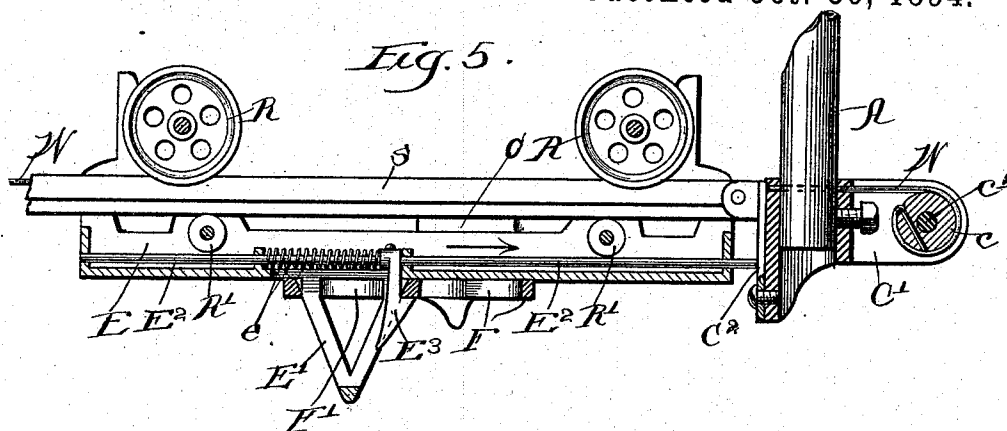
(No Model.)

3 Sheets—Sheet 3.

E. C. GIPE.
PACKAGE CARRIER.

No. 528,203.

Patented Oct. 30, 1894.



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UNITED STATES PATENT OFFICE.

EMANUEL C. GIPE, OF FREEPORT, ILLINOIS, ASSIGNOR TO THE STANDARD STORE SERVICE COMPANY, OF SAME PLACE.

PACKAGE-CARRIER.

SPECIFICATION forming part of Letters Patent No. 528,203, dated October 30, 1894.

Application filed May 13, 1893. Serial No. 474,100. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL C. GIPE, a citizen of the United States of America, residing at Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Package-Carriers, of which the following is a specification.

My invention relates to improvements in package carriers adapted for use in stores, the nature and objects of the invention being fully described and explained in this specification and illustrated in the accompanying drawings, in which—

Figure 1, is a side elevation of a package carrier embodying my improvements, the carriage proper being supported by the usual track-wire, and the basket being shown supported immediately below the carriage from which it has just been released. Fig. 2 is an end elevation of the carrier, the view being in the direction indicated by the arrow, *a*, Fig. 1. Fig. 3 is a top plan of the carrier in one operative position upon the track wire. Fig. 4 is a similar view showing the carrier in another operative position. Fig. 5 is a view partly in side elevation and partly in vertical section illustrating the construction of the carrier. Fig. 6 is a side elevation showing the mechanism for raising and lowering the basket, the parts of the mechanism being in the normal position, which they assume when not supporting the basket. Fig. 7 is a view partly in elevation and partly in vertical section, showing certain parts of the mechanism for raising and lowering the basket.

In the views, A is a vertical standard fastened at its upper end to a ceiling or other support and provided with braces, *b*, holding it rigidly in place.

Near the lower end of the standard a tubular casting, B, is rigidly fastened upon it and supports a horizontal arm, B', provided at its free end with downwardly extending fingers, B², on which are mounted pulleys, P, P, whose use is hereinafter set forth.

On the lower end of the standard, A, is rigidly fastened a casting made up of two forwardly extending arms, C, C, Fig. 3, and two rearwardly extending arms, C', C', the arms of each pair being separated by a consider-

able space. An approximately horizontal track-wire, W, passes through the lower end of the standard, A, and is fastened to a drum, *c*, pivoted on a transverse pin, *c'*, the pin being journaled in the arms, C', C', and the drum being between the arms. The drum is provided with a ratchet, *r*, which engages a pivoted pawl, *p*, mounted on the inner face of one of the arms, C', and a square head or nut, *n*, mounted on the pin, *c'*, serves as a means for rotating the drum and winding up the wire, the reverse rotation of the drum being prevented by the pawl, *p*, and ratchet wheel *r*.

Between the arms, C, C, is a plate, C², fastened to the front face of the casting and to this plate is pivoted a forwardly extending stop, S, hung upon the wire and made up of two members pressed apart by a suitable spring in the manner shown and described in my former application, Serial No. 449,620.

On the track-wire, W, rests and moves a carriage having a body, E, and provided with rollers, R, R, adapted to rest upon the track-wire and rollers, R', R', lying below the track-wire. The relation of these rollers is such that as the carrier in its motion toward the standard, A, reaches the stop, S, the upper and lower rollers embrace the stop and press its parts together, so that they offer a frictional resistance to its progress.

To the arm, B', near its junction with the casting, B, is pivoted a vertically oscillating lever, L, having at its free front end an arch, *l*, over which is looped a cord, K, which passes about the pulleys, P, P, already mentioned, the central portion of the cord being adapted to lie across and above the track-wire and to be caught by the end of the carriage, E, and drawn to the position shown in Fig. 1, as the carriage approaches the standard.

A lever, L', is pivoted to the lever, L, at a point near its free end, the free ends of the lever, L', being in engagement with the cord, K, and this lever being adapted to take up the slack in the cord in the manner fully explained in my said application, Serial No. 449,620.

On the standard, A, at a point considerably above the casting, B, is a casting, D, extending backward from the standard and in this casting are mounted two pulleys, P', P², the

pulley, P', being near the standard and the pulley, P², near the rear end of the casting, and both the pulleys being in the same vertical plane. A cord, K', fastened at one end to the lever, L, passes over the pulleys, P', P², and is provided at its opposite end with a handle, by means of which the cord may be operated, and the lever, L, lifted for the purpose of propelling the carriage, E, away from the standard.

On the rear end of the casting, D, are mounted two horizontal pulleys, P³, P³, Figs. 1 and 2, in the front ends of the arms, C, C, are mounted two other pulleys, P⁴, P⁴, Figs. 1 and 3, and these pulleys support cords, K², K², each provided at one end with a ball, k, hanging just below the corresponding pulley, P⁴, the opposite ends of the two cords being connected by a yoke, k'.

On the rear end of the standard, D, is formed a tube, d, in which is secured the upper end of a vertical rod, A', extending downward between the cords, K², K², to a point a short distance above the yoke, k'.

On the lower end of the rod, A', is rigidly fastened a block, a, having in its lower face a notch, N, lying above and in the same plane with the yoke, k'. Above the block, a, is a rubber cushion, a', encircling the rod, A', and on this cushion rests normally a weight, w, encircling and sliding upon the rod, A'. In the weight w, are seated two tubes, w', which encircle and are rigidly fastened to the cords, K², K². The tubes, w', are provided at their lower ends with heads, w², which rest against the lower face of the weight, w, when all the parts are in the position illustrated in Fig. 6, the weight, w, being supported by the cushion, a', which forms a stop limiting its downward movement and the balls, k, k, being at a distance below the pulleys, P⁴, determined by the length of the cords, K², K². A spring, s, encircles the rod, A', immediately below the tube, d, in which the upper end of the rod is set, this spring being adapted to serve as a cushion for the weight, w, when it is drawn upward in the manner and for the purpose hereinafter explained.

The frame, E, of the carriage resting upon the track-wire is formed with an integral downwardly extending triangular guide, E', and is provided with a longitudinally sliding rod, E², on which is mounted a downwardly extending hook or catch, E³, the catch and rod being pressed in the direction indicated by the arrow in Fig. 5, by means of a spring, e, encircling the rod and exerting its force against the catch. The guide, E', and catch, E³, serve as a means for detachably securing to the carriage a plate, F, which is connected by means of rods, g, g, with a basket, G, adapted to contain packages to be transported by the carrier. The plate, F, is formed with a longitudinal slot, F', Figs. 3, 4, and 5, this slot being adapted to embrace the upper end or base of the guide, E', and the catch, E³, being adapted to engage the end wall of the slot, which is near the center of the plate.

When the plate is in engagement with the catch, E³, as shown in Fig. 5, it can only be removed by pressing the rod, E², and catch, E³, in a direction opposite to that indicated by the arrow in the figure, when the catch will release the plate and allow it to be dropped downward; and when the plate is free from the carriage it can be again attached to it by pushing it upward in such a way that the slot in the plate may encircle the guide, E', and the end wall of the slot may push the catch, E³, out of its normal position and pass under its overhanging edge.

The parts being in the position shown in Fig. 5, a movement of the carriage toward the standard pushes the rod, E², and catch, E³, backward and releases the plate, F. The plate, F, is further formed with two parallel longitudinal notches, F², opening toward the standard, A, and so placed as to embrace the ends of the cords, K², at points immediately above the balls, k, k. The cords enter the notches in the plate and reach the position indicated in Fig. 4, at the instant when the rod, E², has been pressed backward by the plate, C², on the casting, C, and this backward movement of the rod releases the plate, F, and basket, G, from the carriage and brings their weight upon the balls, k, k. The weight of the basket is sufficient to draw the balls, k, k, downward and draw the weight, w, upward, and the weight would move upward to the spring, s, at the upper end of the rod, A', if the yoke, k', were not so placed as to strike the notch, N, in the lower face of the block, a, and arrest the upward movement of the weight, and the downward movement of the basket. When the downward movement of the basket is thus stopped it is in the position shown in Fig. 1, which I call the "half drop" position.

When it is desired to lower the basket, so as to bring it within the reach of the operator, it is only necessary to swing the yoke, k', in the direction indicated by the arrow thereon in Fig. 6, sufficiently to carry it from under the block, a. As soon as this is done, the basket is free to descend, carrying the weight, w, and yoke, k', upward, until the weight strikes the spring, s, at the upper end of the rod, A', the spring being merely a cushion to prevent any shock from the rapid ascent of the weight. The weight is controlled in its upward movement and may be drawn down when desired by means of a cord, K³, fastened to the yoke and having a suitable handle at its lower end. The tubes, w', which pass through the weight, w, are fastened to the cords, K², slide freely up and down in the openings in the weight in which they are placed and prevent wear of the cords in the weight. These tubes are of such length and the balls, k, k, are so placed on the cords, K², that when the parts are in the position shown in Figs. 6 and 7, the drawing downward of the yoke, k', brings the balls, k, against the lower faces of the arms,

C, C, before the tubes escape from the weight, *w*. In every other possible position of the parts, the weight rests upon the heads, *w*², of the tubes, *w*¹, so that the tubes are always within the weight and guard the cords. I prefer also to provide the cords, *K*², *K*³, with similar tubes, *w*³, Fig. 1, adapted to guard the cords against wear from the plate, *F*, as it comes into and out of engagement with the cords.

The plate, *F*, may be fastened to the rods, *g*, *g*, in any suitable manner, but I prefer that illustrated in Figs. 1, 3, and 4, in which the ends of each rod *g*, are in the same horizontal line and rest in a longitudinal groove in the upper face of the plate and near its side edge. A small clamping plate, *f*, rests upon the plate, *F*, and covers the ends of the rod, this clamping plate being held in place by a screw passing through it and into the plate, *F*, and lying between the ends of the rod which are slightly separated for that purpose. This makes a very strong, light and simple fastening, easily put together and not liable to derangement or disconnection.

When it is desired to again connect the basket and its plate, *F*, with the carriage, *E*, the cords, *K*³, *K*², and weight, *w*, are drawn down, until the slot, *F'*, of the plate embraces the guide, *E'*, and its end wall engages the catch, *E*³. Before this engagement takes place, the weight *w*, strikes the cushion, *a'*, and is held thereby, while the yoke, *k*³, still moves downward a short distance sufficient to carry the balls, *k*, from the position shown in full lines in Fig. 1, to that shown in dotted lines, the engagement of the plate and carriage being then accomplished. The balls then drop back to the position shown in full lines in Fig. 1.

It may sometimes happen that the balls, *k*, *k*, will be drawn upward to the lower faces of the ends of the arms, *C*, *C*, and will remain in such raised position, in which case the cords, *K*², *K*³, would not be in position to enter the notches, *F*², in the plate, *F*. When this happens, it is important that as the carriage approaches the standard it shall be arrested before the rod, *E*², strikes the plate, *C*², and disconnects the basket from the carriage. For the purpose of so stopping the carriage, I have provided each of the arms, *C*, with a downwardly extending lug, *c*², Fig. 1, so placed as to form a backing for the corresponding ball, *k*, when raised to its highest limit of movement, and the balls then serve as stops against which the plate, *F*, strikes before the rod, *E*², reaches the plate, *C*². This arrangement prevents accidental disconnection of the plate, *F*, from the carriage, when the cords, *K*², *K*³, are not in place to receive it.

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

1. In a package-carrying system, the combination with a suitably supported standard,

a track-wire fastened thereto, and a carriage moving thereon, of a movable catch mounted on the carriage, a plate adapted to engage said catch and a basket supported by the plate, suitably supported pulleys, cords passing over said pulleys and adapted to receive and engage said plate when the carriage reaches a given position in its movement along the wire and means for detaching the plate from the carriage after such engagement is completed, whereby the weight of the plate and basket may be transferred from the carriage to the cords; substantially as shown and described.

2. The combination with the suitably supported track wire, *W*, the carriage, *E*, moving thereon, and provided with a movable catch, the plate, *F*, adapted to engage said catch and formed with the notches, *F*², *F*³, of the cords, *K*², *K*³, passing over suitably arranged pulleys and having ends provided with the balls, *k*, *k*, and located in the line of movement of the notches, *F*², *F*³, and means substantially as shown and described for operating the catch on the carriage and disconnecting the plate therefrom when the notches in the plate have come into engagement with the cords, whereby the weight of the plate may be transferred from the carriage to the balls, *k*, *k*, and cords, *K*², *K*³.

3. In a package-carrying system, the combination with a suitably supported track-wire, and a carriage adapted to move thereon, of a plate detachably connected with the carriage and supporting a basket, cords passing over suitable pulleys and having ends provided with balls and hanging in the path of motion of the plate and adapted to enter notches therein, a weight attached to the ends of said cords opposite said balls and counterbalancing the same, a stop limiting the downward movement of the weight and holding said balls normally in the plane below the level of the plate, and means for disconnecting the plate from the carriage after it comes into engagement with the ends of said cords, whereby, when the plate is disengaged from the carriage, it may drop upon said balls and bring its weight upon said cords.

4. The combination with the track-wire, *W*, and carriage, *E*, moving thereon, of the plate, *F*, detachably fastened to the lower face of the carriage and supporting a suitable basket, the pulleys, *P*³, *P*⁴, the cords, *K*², *K*³, passing over said pulleys and provided at one end with the balls, *k*, *k*, and at the opposite end with the weight, *w*, adapted to overbalance the weight of the balls, the suitably supported block, *a*, adapted to limit the upward and downward movement of the weight and thereby to limit the movement of the balls, *k*, *k*, and means for detaching the plate from the carriage, the ends of the cords, *K*², *K*³, on which the balls are placed being in the path of movement of notches formed in the plate, *F*, whereby, as the carriage moves along the

track, said notches may embrace said cords, and the plate may rest upon said balls when detached from the carriage.

5 5. The combination with the standard, A, and track-wire, W, of the castings, C, D, fastened to the standard, the pulleys, P³, P⁴, supported by said castings, the cords, K², K², passing over said pulleys and provided at one end with balls, *k*, *k*, and at the opposite
10 end with the weight, *w*, and yoke, *k'*, the vertical rod, A', and the block, *a*, attached to the lower end of said rod, and forming a stop to limit the downward movement of the weight, *w*, and the upward movement of the
15 yoke, *k'*, the carriage adapted to move upon the track-wire and provided with a dependent catch, the plate, F, supporting a basket and adapted to engage the catch on the carriage, and means substantially as shown and
20 described for disengaging the catch from the plate after the notches in the plate embrace the cords, K², K², the yoke, *k'*, when lying beneath the block, *a*, being adapted to hold the plate, F, in a position slightly below the
25 bottom of the carriage; substantially as shown and described.

6. The combination with the standard, A, and track-wire, W, of the carriage moving on the wire, the rod, E², mounted in the carriage and sliding longitudinally therein, the
30 dependent catch, E³, mounted rigidly on the rod and moving therewith, a spring adapted

to press the catch and rod toward the standard and the detachable plate, F, adapted to engage the catch and be supported by it in
35 proximity to the carriage, the movement of the rod, E², against the force of said spring being adapted to release the plate, F, and disengage it wholly from the carriage; substantially as shown and described.

7. The combination with the carriage, E, having the dependent guide, E', of the movable dependent catch, E³, and the plate, F, formed with a slot, F', adapted to embrace
40 the guide and catch and to be engaged and held in place by the catch when in its normal position; substantially as shown and described.

8. The combination with the standard, A, track-wire, W, castings, C, D, and rod, A', of
50 the pulleys, P³, P⁴, mounted in the castings, the cords, K², K², passing over said pulleys, the tubes, *w'*, *w'*, fastened on the cords and having heads, *w*², *w*², at their lower ends, the weight, *w*, sliding on the rod, A', and tubes, *w'*, *w'*, and the block, *a*, mounted on the rod, A', and limiting the downward movement of
55 the weight; substantially as shown and described.

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Witnesses:

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