

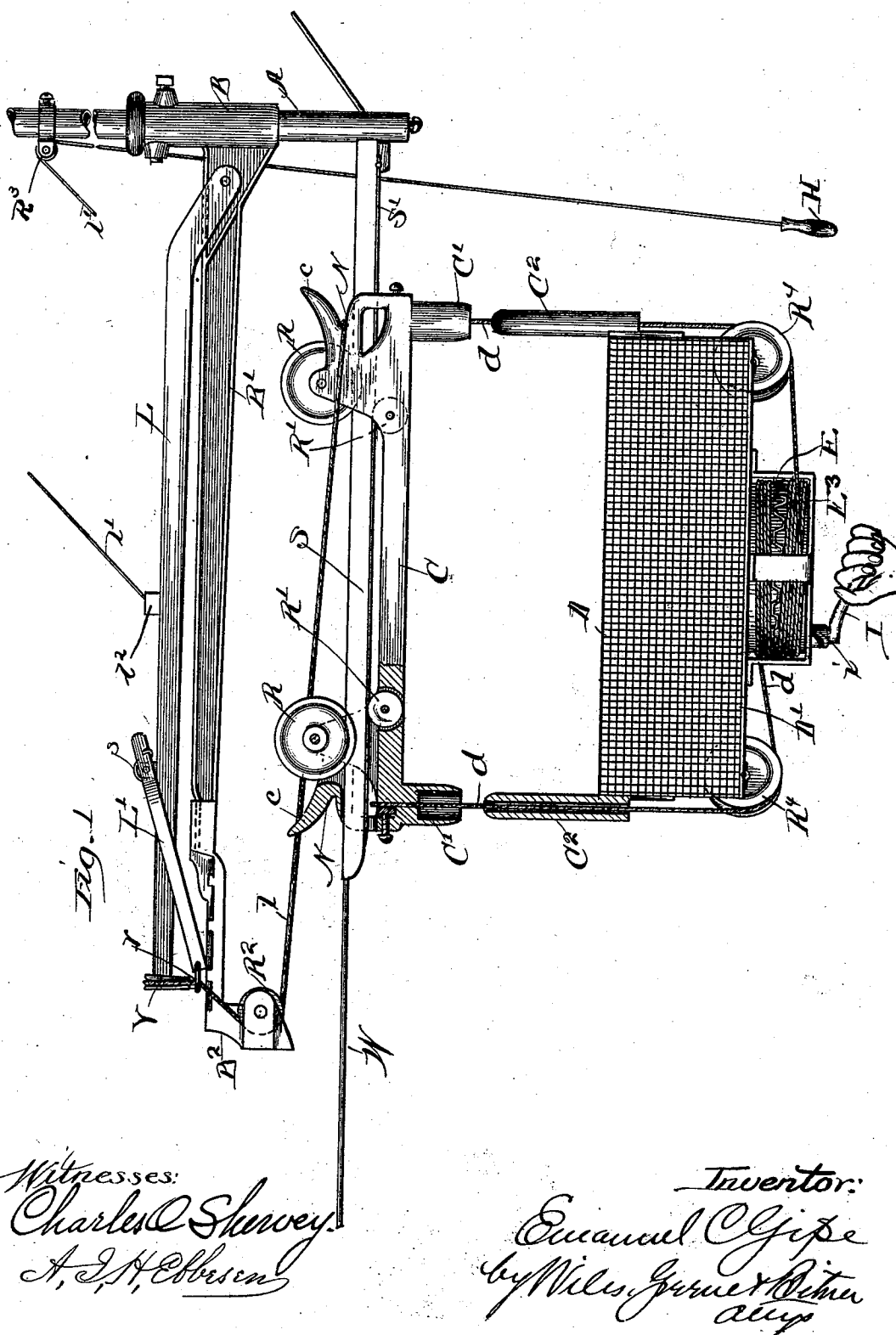
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4 Sheets—Sheet 1.

E. C. GIPE.
CASH AND PACKAGE CARRIER.

No. 510,505.

Patented Dec. 12, 1893.



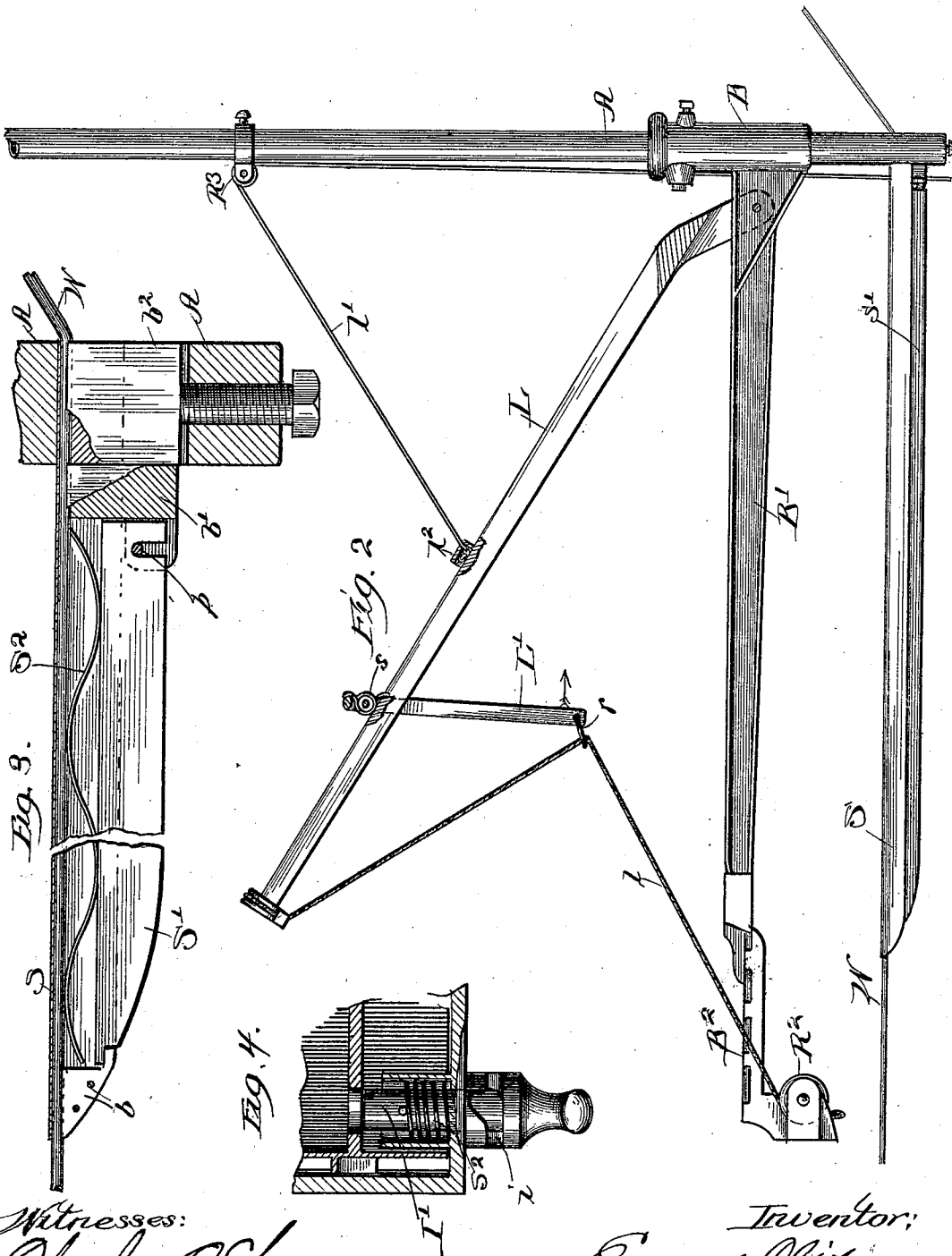
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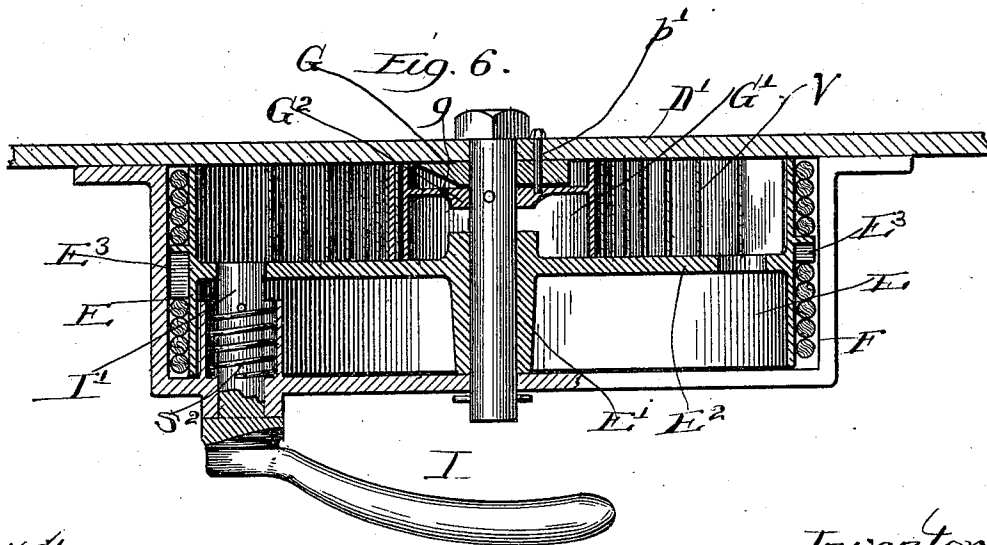
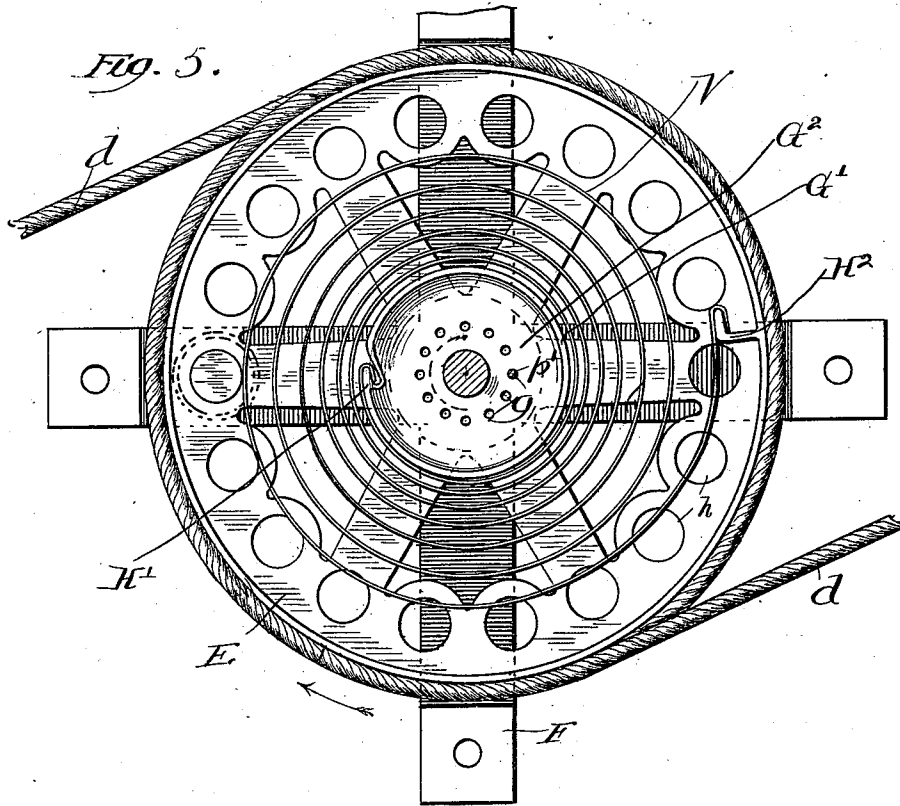
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4 Sheets—Sheet 3.

E. C. GIPE.
CASH AND PACKAGE CARRIER.

No. 510,505.

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(No Model.)

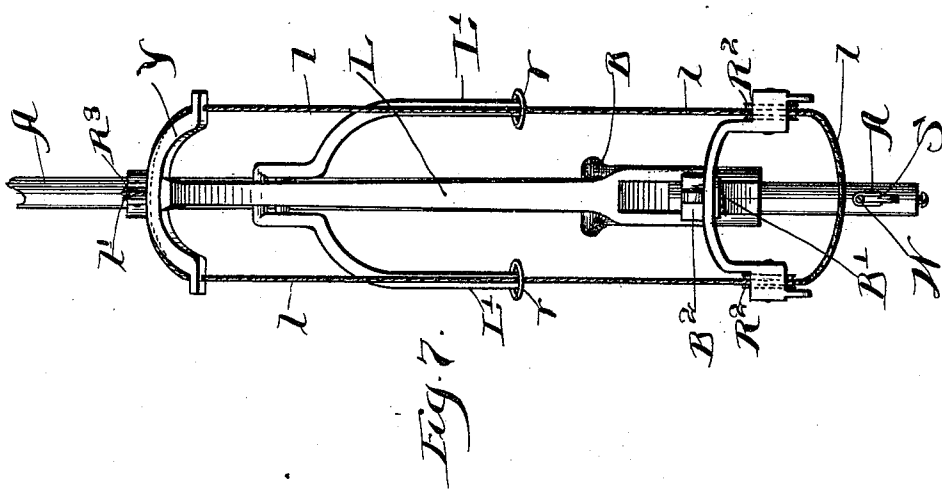
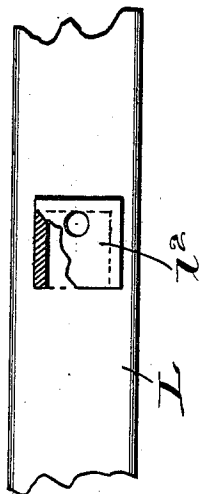
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Fig. 8.



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UNITED STATES PATENT OFFICE.

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CASH AND PACKAGE CARRIER.

SPECIFICATION forming part of Letters Patent No. 510,505, dated December 12, 1893.

Application filed October 22, 1892. Serial No. 449,620. (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 Cash and Package Carriers, of which the following is a specification.

My invention relates to improvements in cash and package carriers adapted for use in stores and other places of business and intended for carrying parcels and change between the salesmen's stations and the cashier's desk.

The invention is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a carrier embodying my invention, the parcel-carrying car being shown in operative connection with the stop at one end of the track-wire. Fig. 2 is a similar view of the track-wire support and a stop mounted thereon together with the operating lever and the parts connected therewith. Fig. 3 is an enlarged view of the stop shown partly in side elevation and partly in vertical section. Fig. 4 is a vertical section illustrating one of the details of construction of the device for raising and lowering the basket of the parcel carrier. Fig. 5 is a top plan of said raising and lowering device. Fig. 6 is a central vertical section thereof. Fig. 7 is an outer end elevation of the carrier supporting and propelling parts; and Fig. 8 is a top plan of a portion of the lever, L, showing the lug, l^2 .

In the views, A is an approximately vertical standard fastened to the ceiling of a room in any desired manner, and B is a sleeve mounted on the standard and provided with an approximately horizontal arm, B', terminating in an attachment, B², provided with bearings for pulleys hereinafter mentioned and described. Directly beneath the arm, B', is a track-wire, W, passing through the standard, A, and stretched taut between said standard and a suitable support at the opposite end of the line. Upon the track, W, rest the wheels, R, R, of a carrier frame, C, the wheels being mounted between suitable bearings on the upper edge of the frame, and below the wheels

R, R, two rollers, R', R', are mounted in the frame, the wheels and rollers being adapted to receive between them a spring stop made up of two parts S, S', placed at the end of the wire and adapted to arrest the motion of the carrier. In this stop, which is fully illustrated in Figs. 1, 2, 3, S is a shield in the form of an inverted trough resting on the wire and extending into an opening in the standard, A, and S' is a bar lying within the lower edge of the shield and held in place by the devices illustrated in Fig. 3, in which b is a block riveted in the end of the shield and supporting one end of the bar S', and b' is a second block secured in the opposite end of the shield and provided with a transverse pin, p , lying in a vertical notch in the corresponding end of the bar. A spring, S², interposed between the upper edge of the bar and the wire which lies in the upper part of the shield, tends to press the bar downward to the position shown in Fig. 3. A third block, b^2 , set in the opening in the standard, A, lies partly in the end of the shield, S, and impinges upon the wire which lies along its upper edge. A set screw placed in the bottom of the standard presses the block, b^2 , upward and clamps the wire and the end of the shield, S, firmly in place. As the carrier frame, C, approaches the standard, the tapered end of the stop, S, S', enters the space between the rollers, R', R', and the wheels, R, R, the bar, S', being pressed upward against the resistance of the spring, S², which creates sufficient friction to stop the carrier.

To the end of the arm, B', nearest the casting, B, is pivoted a vertically oscillating lever, L, lying above the arm and provided at its free end with a yoke, Y, to which are secured the ends of a looped cord or line, l , whose folds pass over pulleys, R², journaled in the attachment, B², of the arm, B', already mentioned. The central loop of the line, l , lies beneath the end of the projection, B², and is adapted to be received in a notch, N, formed in the end of the carrier frame at a point above the wire and immediately beneath a horn or projection, c , on the frame. As the carrier frame approaches the standard, the loop of the line, l , is caught in the notch, N, and carried toward the standard until it

reaches the position shown in Fig. 1. A cord, l' , fastened to the lever, L , at a point near its center and passing over a pulley, R^3 , mounted on the standard, is provided with a handle, H , by means of which it may be drawn downward for the purpose of raising the lever, L , the weight of the lever being sufficient to drop it again to the position shown in Fig. 1, as soon as the handle is released. The end of the cord may be fastened to the lever in any desired manner, but I prefer the construction shown in Figs. 2 and 8, in which l^2 is a recessed and perforated lug formed upon the lever, the perforation being adapted to permit the passage of the cord and the recess being intended to receive and conceal a knot at the end of the cord. It is evident that as the handle H , is drawn downward and the lever, L , raised, the central loop of the cord, l , must be drawn away from the standard, A , and, that, if the carrier frame, C , be in the position shown in Fig. 1, before the lever is raised, the raising of the lever must propel the carrier away from the standard.

After the lever has been fully raised, and the central loop of the cord, l , drawn forward to a point near the pulleys, R^3 , as shown in Fig. 2, the dropping of the lever slackens the cord, and in all previous devices of this general class, the slackened cord has been permitted to drop down upon or at the sides of the track-wire and has frequently caused inconvenience by becoming twisted or tangled, and thus interfering with the movement of the carrier on its return. To remove this difficulty I have pivoted to the lever, L , near its free end a bifurcated lever, L' , Figs. 1 and 2, provided at its ends with rings, r , or other suitable devices through which are passed the folds of the cord, l . The lever, L' , is provided at its pivot with a light spring, s , adapted to swing the lever in the direction indicated by the arrow at its free end in Fig. 2, and thus to take up the slack of the cord, l , as the lever, L , descends from its highest position. It will thus be seen that when the cord l , is stretched taut, either by the impulse of the carrier frame, C , as it approaches the standard, A , or by the lifting of the lever, L , to move the carrier, the lever, L' , remains in the relation to the lever, L , illustrated in Fig. 1, but as soon as the cord, l , begins to slacken, the lever, L' , yields to the force of the spring, s , and takes up the slack of the cord, thus entirely obviating the difficulty above referred to.

On the lower edge of the carrier frame, C , are two downwardly projecting hollow bosses, C' , C' , which are adapted to receive two corresponding tubular fingers, C^2 , C^2 , attached to the ends of a basket, D , suspended beneath the carrier frame, the basket being supported by means of two cords, d , d , each of which is fastened at its upper end in the corresponding boss, C' , and passes downward through the corresponding finger, C^2 , and over a roller, R^4 , journaled in the bottom and at the corresponding end of the basket, the

ends of both the cords being fastened to a spring-actuated drum, E , which is fully illustrated in Figs. 1, 4, 5, and 6. This drum, which is in the form of a pulley having a marginal flange, a central hub, E' , and a central web, E^2 , is mounted on a shaft, or bolt, supported at its upper end in the bottom, D' , of the basket, and at its lower end in a frame, F , made up of straps of metal fastened to the bottom of the basket. Immediately beneath the bottom, D' , and fastened to it is a plate, G , encircling the bolt, and immediately beneath this plate is a web, G^2 , formed integrally with a small drum, G' , and provided with a series of perforations, g , which are adapted to register successively with a single opening in the bottom, D' , and plate, G , this opening being provided with a pin, p' , which serves as a means for fastening the drum, G' , in any desired position. The drum G' , is formed with an external hook, H' , and the wall of the drum, E , is formed with an internal hook, H^2 , these hooks being designed to receive the ends of a volute spring, V , Figs. 4 and 5, whose force tends to rotate the drum, E , in the direction indicated by the arrow at its margin in Fig. 5. The cords, d , d , are so arranged upon the drum that the rotation of the drum by the spring, V , tends to wind the cords equally about the drum and thus to raise the basket and bring the fingers, C^2 , C^2 , into the sockets, C' , C' . It is evident, therefore, that if the basket be drawn down and then released, the tendency of the spring-actuated drum is to take up the cords, d , d , and lift the basket into contact with the carrier frame. As a convenient means of drawing the basket downward, it is provided with a handle, I , having a shaft, I' , journaled in a suitable bearing on the frame, F , already mentioned. This shaft serves as a means for locking the drum E , against rotation, the central web of the drum being formed with a series of holes h arranged in a circle, and each adapted to receive the end of the shaft, and the shaft itself being provided with a spring, s^2 , Fig. 6, adapted to press it upward and thus to effect its entrance to the holes. It is frequently desirable to draw the basket down and release it immediately, the spring-actuated drum being left free to raise it at once to the carrier frame. When this is desired, it is objectionable to have the shaft, I' , in such a position as to engage the holes in the web, E^2 , of the drum, E . In order to prevent this, the shaft is provided with a lug, i , Figs. 1, 4, adapted to enter a corresponding notch in the bearing in which the shaft is journaled. When the handle, H , is in such a position as to permit the lug, i , to enter the notch, the shaft is free to rise sufficiently to enter the corresponding hole in the web of the drum. If, however, the handle be turned until the lug no longer registers with the notch, the shaft, I' , can no longer rise and can not therefore lock the drum against rotation. The handle, therefore, not only serves as a means for drawing

the basket downward, but may also serve as an automatic lock for preventing or permitting rotation of the drum and thus preventing or permitting the ascent of the basket. As the two cords d, d , are fastened to the drum, E, at points on substantially the same level, I have found it necessary to form on the marginal flange of the drum, E, an external guide, E^3 , Figs. 1, 6, adapted to direct the cord in its first wrap about the drum and thus to prevent overlapping or other interference of the two cords as the drum rotates.

The operation of the carrier thus described, while, perhaps, sufficiently evident from the description, may be briefly recapitulated. The carrier moving from one end of the track-wire to the other is arrested, as it approaches the standard at the end of the wire, by the stop, S, S', which enters the space between the rollers, R, R, R', R', and is so compressed as to offer any desired degree of frictional resistance to the further movement of the carrier. Just before the carrier reaches the stop, the notch, N, in the end nearest the stop, receives the loop of the cord, l , and draws it toward the standard, the position of the cord and of all the operating parts when the carrier stops, being that illustrated in Fig. 1. When it is desired to move the carrier in the opposite direction, the cord, l' , is drawn downward, the lever, L, is thereby raised, the loop of the cord, l , is drawn away from the standard and a carrier is propelled quickly away from the standard and along the wire. When it is desired to draw the basket down for the purpose of placing packages in it or removing them from it, the handle, I, is grasped by the hand of the operator and drawn downward, thus disengaging its shaft, I', from the openings in the web, E^2 , of the drum, E, and permitting the drum to rotate. The downward movement of the basket rotates the drum in the direction adapted to increase the tension of the spring, V, and as soon as the handle, I, is released, the force of the spring rotates the drum in the opposite direction and raises the basket, unless the handle, I, is in such a position as to permit engagement of the shaft, I', with one of the openings in the web of the drum. The position of the handle determines the possibility or impossibility of engagement of the shaft with the web of the drum, and it is therefore only necessary to turn the handle into one position or another in order to lock the basket against ascent or to permit it to be drawn upward. The tension of the spring, V, in the drum, E, may be regulated at will by turning the head of the bolt, p' . The bolt being fastened to the web G^2 , of the internal drum G' , this drum is turned by the rotation of the bolt and may be locked in any desired position by means of the pin, p' , which is adapted to enter any of the holes, g , in the web, G^2 .

Having now described and explained my in-

vention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cash carrier system, the combination, with a suitably supported track-wire and a carrier moving thereon, of an inverted trough-shaped shield resting upon and embracing the wire, a bar lying between the lower edges of the shield and susceptible of limited vertical movement, and a spring lying between the bar and the wire and tending to hold the bar at its lowest limit of movement; substantially as shown and described.

2. The combination with the suitably supported track-wire, W, of the inverted trough-shaped shield, S, resting upon and embracing the wire, the blocks, b, b' , fastened in the ends of said shield, respectively, the bar, S', lying within the open lower edge of the shield and supported at its ends by the blocks, b, b' , but free to move upward from said blocks, and the spring, S², interposed between the bar, S', and wire, W, and tending to press them apart; substantially as shown and described.

3. The combination with the standard, A, and track wire, W, passing through an opening in the standard, of the inverted trough-shaped shield, S, embracing and resting upon the wire and having one of its ends within the opening in the standard, the bar, S', supported within the open lower edge of the shield and having limited upward movement therein, the spring, S², lying between the bar, S', and the wire and tending to press the bar downward, the block, b^2 , lying in the opening in the standard and within the end of the shield, S, and a set screw pressing the block, b^2 , upward against the wire and clamping the wire and the end of the shield against the upper face of the opening in the standard.

4. The combination with the standard, A, the arm, B', and pulleys, R², R², of the operating lever, L, the cord, l , fastened to the end of the lever and passing over the pulleys, R², a secondary lever pivoted at one end to the operating lever and having its free end connected with the cord, l , and a spring adapted to swing the free end of the secondary lever away from the free end of the operating lever and thus to take up the slack of the cord, as the operating lever moves toward the arm, B'.

5. The combination with the standard, A, the arm, B', the pulleys, R², the lever, L, and the cord, l , fastened to the end of the lever and passing over the pulleys R², of the bifurcated lever, L', pivoted to the lever, L, and having the free ends of its members connected loosely with the folds of the cord, l , and the spring, s, interposed between the levers, L, L', and tending to separate the free ends of said levers and thereby to take up the slack of the cord, l .

6. The combination with the wire, W, carrier frame, C, and basket, D, of the drum, E, mounted on the bottom of the basket, the spring, V, coiled within the drum and tend-

ing to rotate it in one direction, the handle, I, having a shaft I', adapted to lock the drum against rotation, and the cords *d, d*, connecting the drum and the carrier frame, C, substantially as shown and described.

7. The combination with the track-wire, the carrier frame and the basket, of the frame, F, fastened to the bottom of the basket, the drum, E, mounted within the frame, the internal drum, G', the spring, V, having one of its ends fastened to the drum, E, and its opposite end fastened to the drum, G', means for adjusting the drum, G', to vary the tension of the spring and cords, *d, d*, connecting the drum with the frame, C; substantially as shown and described.

8. The combination with the track-wire, the carrier frame and the basket of the frame, F, fastened to the bottom of the basket, the spring-actuated drum, E, mounted within the frame and having a web, E², formed with a series of perforations, the shaft, I', adapted to enter said perforations, the spring, s², actuating the shaft and tending to bring it into engagement with the perforations, and the

handle, I, formed on the shaft, I', and provided with a lug, *i*, adapted when in one position to permit the engagement of the shaft, I', with the perforations in the web, E², and when in another position to prevent such engagement; substantially as shown and described.

9. The combination with the track-wire the carrier frame and the basket, of the spring-actuated drum, E, mounted on the bottom of the basket and provided with the cord-guide, E³, and the cords, *d, d*, having their upper ends fastened to the carrier frame, C, and their lower ends fastened to the drum at points above and below the cord-guide respectively, the cord-guide being adapted to regulate the position of the first wrap of each of the cords about the drums and thus to prevent overlapping or interference of the two cords; substantially as shown and described.

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