

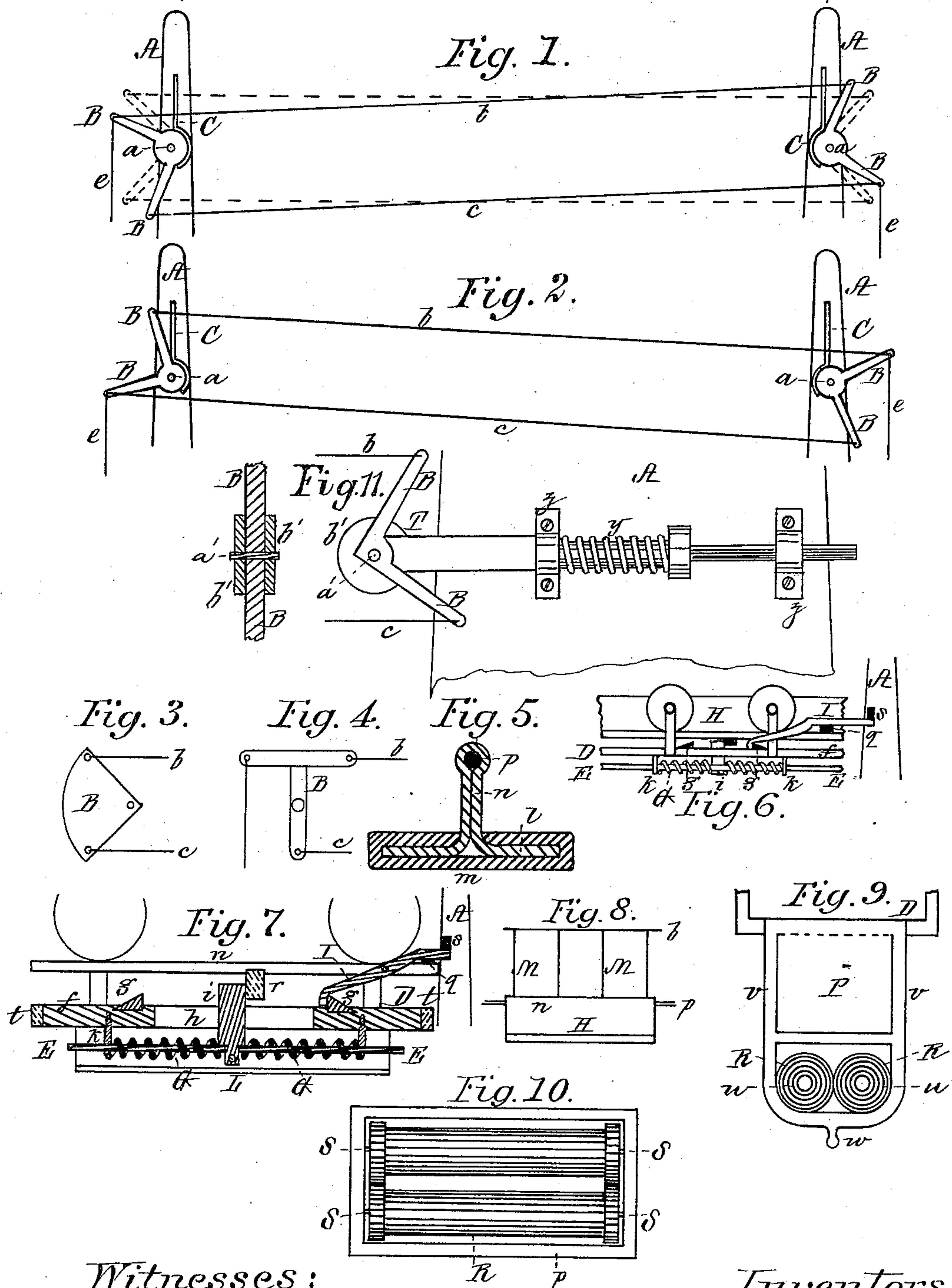
(No Model.)

C. GRANT, Jr. & D. LAWRENCE.

CASH AND PARCEL CARRIER.

No. 291,895.

Patented Jan. 15, 1884.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES GRANT, JR., AND DAVID LAWRENCE, OF BOSTON, MASSACHUSETTS,
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CASH AND PARCEL CARRIER.

SPECIFICATION forming part of Letters Patent No. 291,895, dated January 15, 1884.

Application filed December 3, 1883. (No model.)

To all whom it may concern:

Be it known that we, CHARLES GRANT, Jr., and DAVID LAWRENCE, both of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Cash, Parcel, and Passenger Carriers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of a wire track, with a means of inclining the same, constructed in accordance with our invention. Fig. 2 represents the same with the track inclined in the opposite direction. Figs. 3 and 4 represent our track-inclining devices of different forms than that shown in Figs. 1 and 2. Fig. 5 is a transverse section of a new form of track suspended by a wire or cord extending longitudinally from end to end thereof. Fig. 6 is an elevation of one end of the track represented in Fig. 5, together with our mechanism for arresting, locking, and starting the carrier; Fig. 7, an enlarged representation of said mechanism; Fig. 8, our new form of track having wire supports located intermediate between the ends; Figs. 9 and 10, our improved cash or parcel receptacle. Fig. 11 represents a modification of the spring devices for retaining the levers when adjusted.

The leading feature of our invention is particularly applicable to wire, tubular, or cord tracks, or to a new form of track supported by a wire, tube, or cord extending longitudinally from end to end thereof; and the object of this portion of our invention is to afford a simple, reliable, and ready means of inclining such tracks, located at each end or opposite ends of the same; and this invention consists in a pair of pivoted levers or segments, to the lower ends of which are secured the opposite ends of the wire, tubular, or cord track, or the wire, tube, or cord supporting the track, a separate wire, tube, or cord being employed for connecting the upper ends of said levers or segments, the operation of inclining the track being performed by simply vibrating the said devices on their pivots.

Our invention also consists in a new description of track, in which a wire, tube, or cord, extending longitudinally and centrally from

end to end thereof, is employed, a track of this construction being also adapted to be inclined by means of the aforesaid pivoted levers or segments.

Our invention also consists in a pair of spiral springs surrounding a rod, for relieving the force of the blow and preventing the recoil of the carrier when it arrives at the bottom of the track in either direction, in combination with a weighted or spring-actuated lever for retaining the carrier and for preserving the accumulated force of one of the springs to be employed in starting the carrier on its return to the other end of the track.

Our invention also consists in a track of the class described, provided with supports extending down from the upper wire or connection and intermediate between its ends.

In the said drawings, A A represent two posts, to each of which at *a* is pivoted a bent lever, B, Figs. 1 and 2, having their lower ends connected by a wire, *b*, which serves as a track, and their upper ends connected by a wire, *c*, this construction admitting of the levers being vibrated on their pivots (from either end) by pulling on a cord, *d*, connected with either one of them, as shown, whereby the track is given the required inclination in either direction.

C C are bent springs, the upper end of each of which is secured to one of the posts in such manner that the lower end of the spring will press against a projection, *e*, on the inside of the lever located at or nearly opposite its fulcrum, the object of these springs being to exert sufficient pressure to retain the levers in their adjusted positions, and thereby preserve the required inclination of the track. When the track is to be inclined from the position shown in Fig. 1 to that shown in Fig. 2, it is simply necessary to vibrate the levers by pulling down on the cord *d* of one of them the connecting-wire *c*, insuring their simultaneous movement and symmetrical position.

Instead of a pair of levers similar to those shown in Figs. 1 and 2, a pair of segments, Fig. 3, or a pair of levers, Fig. 4, may be substituted therefor.

D is a carrier, the frame *f* of which is provided with a pair of inclined stops, *g g*, and with a central longitudinal slot or aperture, *h*,

through and above which projects a plate, *i*, secured to a longitudinal rod, *E*, resting in guides *k* on the bottom of the carrier-frame. Surrounding this rod, on each side of the plate *i*, and interposed between it and the guides, are located two separate and independent spiral springs, *G*.

H is a track composed of two strips, *l m*, of metal, strip *l* being of inverted T shape, and so bent as to form a central rib, *n*, the upper portion of which constitutes a longitudinal tube for the passage of a rod, tube, or wire, *p*, by which the track is supported. The other strip, *m*, extends under the strip *l*, and is bent up over its horizontal portions to form the treads of the track and to give it the necessary strength and rigidity. At one side of the rib is pivoted a hooked lever, *I*, which in its normal position is tipped by a spring, *q*, so as to bring its hooked end into the path of and catch over one of the inclined stops *g* when the carrier has arrived at the lower end of the track, the plate *i*, during the descent of the carrier, coming into contact with a yielding stop, *r*, located on the under side of the track, which causes the plate to move backward in its slot, and thereby compress the spring surrounding the rear end of the rod sufficiently to allow the inclined stop *g*, at the forward end of the carrier, to pass under and beyond the hooked end of the locking-lever, which thus holds the carrier with its compressed spring till this end of the track is elevated to incline it in the opposite direction, when the outer end of the locking-lever is brought up against the under side of a stop, *s*, secured to the post *A*, which causes the inner hooked end to be disengaged from the inclined stop *g* and liberates the compressed spring, its accumulated power serving to start the carrier in the opposite direction.

L is a tubular shield or cover for preventing dirt or other matter from coming into contact with and deranging the springs. At the center of each end of the frame of the carrier is an elastic buffer, *t*, to relieve the concussion, which might otherwise damage or break the parts.

It is evident that our arresting, locking, and starting mechanism may be applied to other forms of tracks than that mentioned. When the wire-supported track *H* is of considerable length, we intend providing additional supports therefor by extending wire-connections *M* between its rib and the upper wire, *c*, which thus precludes the liability of sagging. A female nut in the form of a link may be employed for tightening the upper wire, *c*, which thus insures the lower wire or track, *b*, being properly distended. A small tube may be used instead of a wire track, or instead of a wire for supporting a track, if desired, and a carrier having one or more wheels may be employed in connection therewith. A means of unlocking, elevating, and locking the ends of a track—such as are described in Patent No. 287,278, granted to Charles Grant,

Jr.—may be used in connection with the track *H*, supported by a longitudinal wire or tube.

P is the cash or parcel receptacle, at the bottom of which are located two hollow rollers, *R*, having helical springs *u*, located therein. On the ends of the rollers are mounted two pairs of disks, *S*, preferably of elastic material. To the outside of each roller is secured the lower end of a band or cord, *v*, having its upper end attached to the carrier. The bottom of the receptacle is provided with a knob or cord, *w*, by pulling on which the receptacle is lowered, the retraction of the springs elevating it under the carrier, the object of the elastic disks being to insure the smooth and regular ascent and descent of the receptacle. If desired, the two opposite ends of the treads of the track *H* may also be secured to the lower ends of the levers *B* by any suitable connections.

To render the wheels of the carrier noiseless we provide them with rubber treads.

Instead of pivoting each lever *B* to its post, it may be pivoted at *a'*, Fig. 11, between the circular bifurcations *b'* of the inner end of a horizontal rod, *T*, sliding in guides *z z*, secured to said post, the expansion of a spiral spring, *y*, being employed for retaining the lever in its adjusted position, and insuring the necessary tension of the wires *b c*.

We claim—

1. As a means of alternately inclining tracks of the class described, a pair of pivoted levers or segments, *B*, in combination with a means of vibrating them and a means of holding them when adjusted, substantially as set forth.

2. The pivoted devices *B*, the wire track, or track supported by wire, &c., extending between the lower ends of said devices, a wire or similar connection, *c*, extending between their upper ends, a means of vibrating the devices *B*, and a means of retaining them when adjusted, combined to operate as and for the purpose described.

3. The track *H*, composed of two strips, *l m*, bent and united together, in combination with a wire tube or cord extending longitudinally from end to end of the same, as specified.

4. A pair of spiral springs, *G*, for arresting the downward motion of the carrier *D* in either direction, and a pair of inclined stops, *g g*, in combination with a weighted or spring-actuated hooked lever, *I*, adapted to retain and release the carrier, as set forth.

5. The carrier *D*, with its springs *G*, rod *E*, guides *k*, slot *h*, plate *i*, and inclined stops *g*, in combination with a track having a hooked lever, *I*, pivoted thereto, a spring, *q*, under the outer end of said lever, and a stop, *r*, under the end of the track, and a stop, *s*, located on the post *A*, for tripping the lever and releasing the carrier, all arranged to operate as described.

6. In combination with the carrier *D* and a track for it to travel thereon, the cash and parcel receptacle *P*, having at its bottom a

pair of tubular rollers, R, each provided at its extremities with elastic frictional disks S, a helical spring, *u*, inclosed within each roller, and the operating cords or bands *v*, as and for
5 the purpose set forth.

7. A track, H, supported by a wire, cord, or tube, *p*, extending from end to end thereof, in combination with a wire or other connection, *c*, above the same, and one or more vertical
10 wires, M, extending down from the wire *c* to the track H, as set forth.

8. The levers or segments B, in combination with the sliding rods T, to the inner ends of which they are pivoted, substantially as set forth.

Witness our hands this 21st day of November, 1883. 15

CHARLES GRANT, JR.
DAVID LAWRENCE.

In presence of—

N. W. STEARNS,
JAS. W. CHAPMAN.