

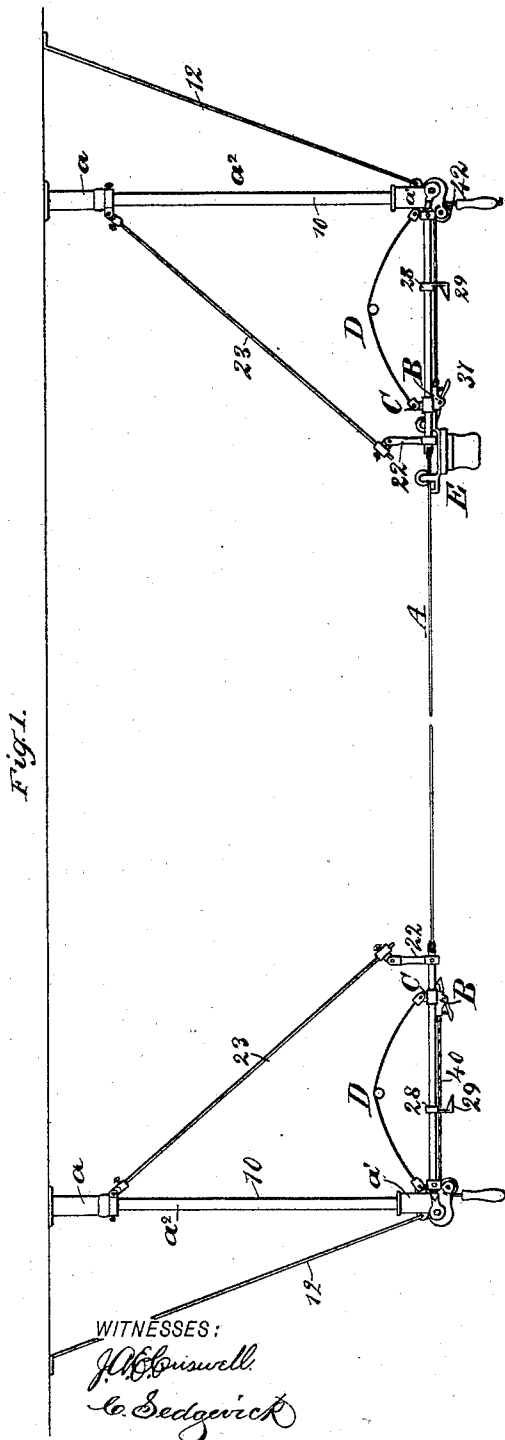
(No Model.)

2 Sheets—Sheet 1.

J. STARR.
CASH CARRIER APPARATUS.

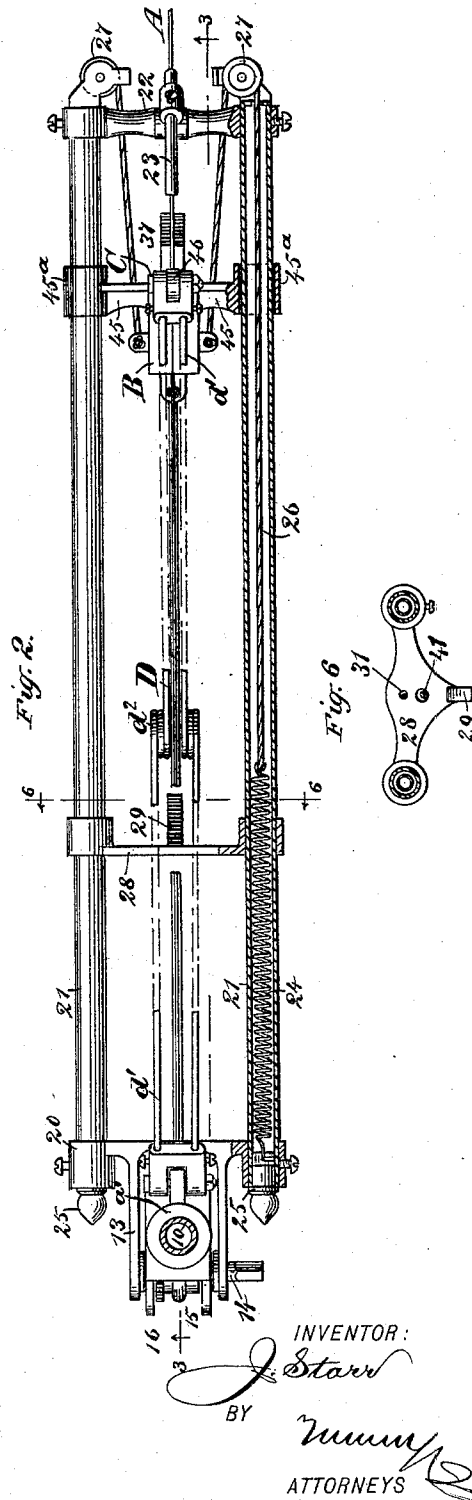
No. 469,282.

Patented Feb. 23, 1892.



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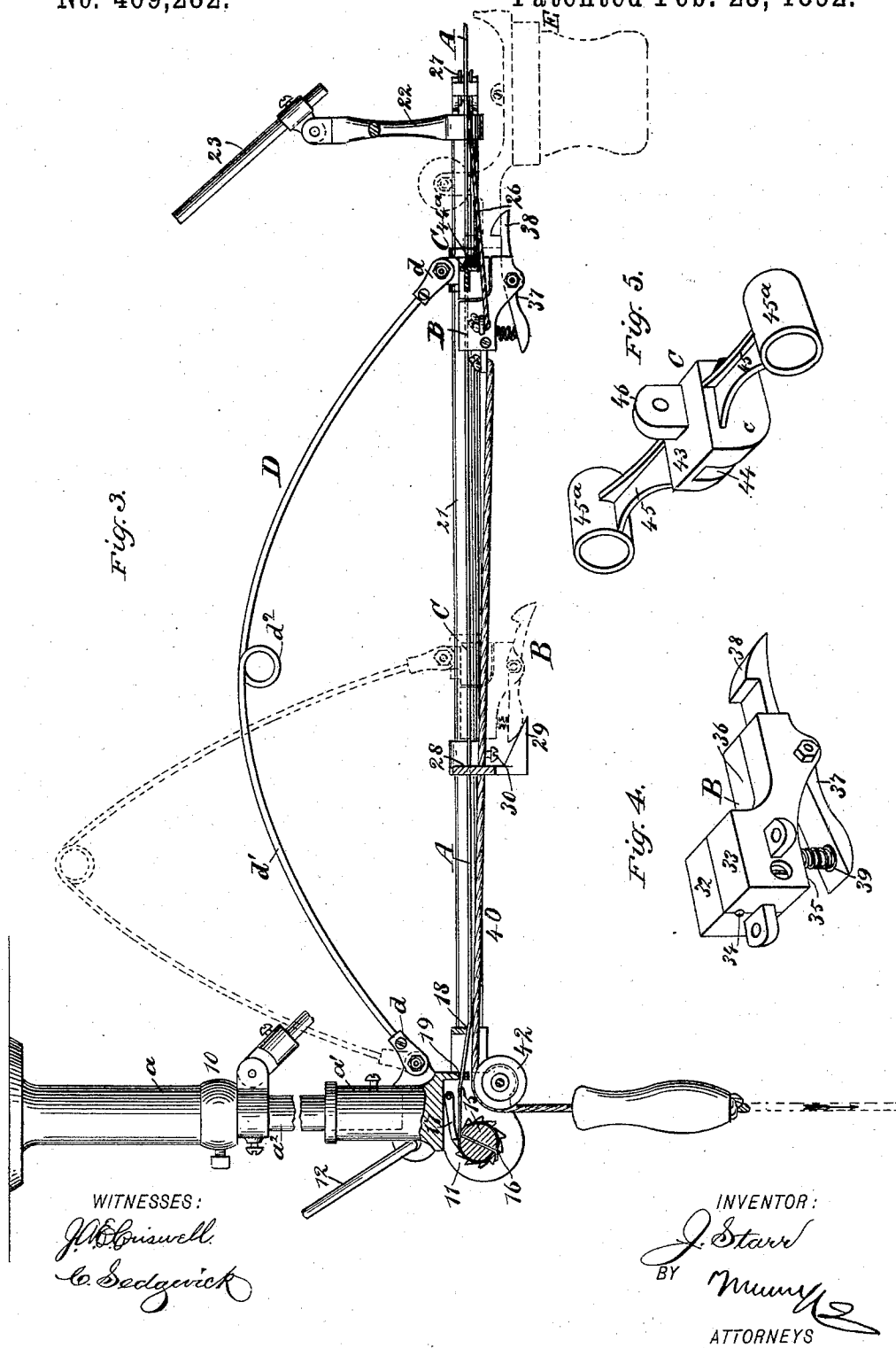
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JOSEPH STARR, OF NEW LONDON, CONNECTICUT.

CASH-CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 469,282, dated February 23, 1892.

Application filed April 3, 1891. Serial No. 387,523. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH STARR, of New London, in the county of New London and State of Connecticut, have invented a new and Improved Propelling Mechanism for Cash and Parcel Carriers, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the propelling mechanism for cash and parcel carriers, and has for its object to provide simple, durable, and economic devices whereby cash or parcel carriers may be propelled to any desired point along the line of their track, and also to provide a means whereby any slack that may occur in the track may be conveniently and expeditiously taken up.

Another object of the invention is to provide an exceedingly simple carrier and latch adapted to operate upon the car and an adjustable trip mechanism which will uniformly and positively release the car at proper time, and to so arrange the factors in the propelling mechanism that the moment the trip mechanism acts to release the car the latter will have adequate movement imparted thereto.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the track and a cash-carrier represented as in position for use. Fig. 2 is a longitudinal section through one of the supports and a plan view of the propelling mechanism and device for imparting tension to the track. Fig. 3 is a section taken practically on the line 3 3 of Fig. 2. Fig. 4 is a detail perspective view of the latch. Fig. 5 is a detail perspective view of the carrier-block, and Fig. 6 is a transverse section taken practically on the line 6 6 of Fig. 2.

The track A is supported at each end by mechanism of like construction. This supporting mechanism consists of a hanger 10, adapted for attachment to the ceiling or other overhead support. The lower end of the hanger 10 is enlarged and provided with a chamber 11, which chamber is formed by pro-

ducing in what may be termed the "foot" of the pillar a longitudinal recess cut in the outer face and extending nearly through to the inner face, the said recess being also made to extend through the bottom, as is best illustrated in Fig. 3. The pillar is ordinarily braced by a rod 12, which is attached at one extremity near the lower end of the post or pillar and at its other end to the overhead support.

The post or pillar may be of any approved construction. In the drawings it is represented as made in three sections, an upper and a lower sleeve section *a* and *a'*, the chamber 11 being in the lower section, while the sections are connected by a rod *a*². A horizontal yoke 13 is pivoted to the lower end of the pillar by passing through the chambered portion of the pillar and through the members of the yoke a shaft 14, one end of which shaft is preferably made to project beyond one face of the yoke, and the said end is polygonal in cross-section, as best shown in Fig. 2.

Upon the shaft 14, within the chamber 11, a drum 15 is secured in any suitable or approved manner, provided with an attached ratchet-wheel 16, engaged by a suitable pawl 17, as shown in Fig. 3, whereby the drum is capable of being turned in one direction only when the pawl is in engagement therewith.

The track A consists of a wire of suitable length, the ends whereof are secured to the drums 15 of the frame-supports, and the track is kept constantly under proper tension by manipulating the drums to take up the slack, which is ordinarily accomplished by turning the shafts 14 with proper keys or cranks.

I desire it to be distinctly understood that instead of providing a drum at each end of the track but one drum may be employed. The track A passes through an opening 18 in the yoke and through a second opening 19 in the front wall of the chamber 11.

The horizontal yoke 13 is provided at its inner end at each side with an attached or integral fixed sleeve 20, and in each of said sleeves one end of a horizontal shell 21 is secured, the said shells being parallel, and the opposite or inner ends of the shells are supported in eyes formed at the extremities of the members of the vertical yoke 22. The vertical yoke is connected with the upper por-

tion of the pillar 10 by means of a rod 23, which is preferably both adjustable and removable. The rod 23 not only serves as a brace for the vertical yoke 22, but also supports it, so that the shells 21 are maintained in a fixed horizontal position.

In each shell 21 a spring 24 is located, preferably a coil or spiral spring, and one end of each spring is preferably attached to a cap 25, closing the outer ends of the shells, as is best shown in Fig. 2. The opposite or inner ends of the springs have attached thereto cords 26, which pass out through the inner ends of the shells over friction-rollers 27, located at that point, as is likewise best shown in Fig. 2.

A bar 28 is held to slide upon the shells 21, being to that end provided at its extremities with eyes, through which the shells pass, and at or near the center of the bar, integral with or attached to its lower edge, a horizontal arm 29 is located, which arm extends in the direction of the inner ends of the shells, and its upper face is beveled, forming an inclined plane, as shown in Fig. 3. This bar and its arm constitute the trip mechanism for the propelling mechanism, to be hereinafter described, and the bar 28 may be carried to any desired point upon the shells and held in a fixed position by means of a set-screw 30 or the equivalent thereof. The track A passes through an opening 31 in the bar 28, as shown in Fig. 6.

A latch-block B is held to travel upon the track A, being loosely mounted thereon. The latch-block is illustrated in detail in Fig. 4 and is preferably made of two sections 32 and 33, bolted together or otherwise connected, which sections are provided at or near their central upper portion with an opening 34, adapted to receive the track A, and the block is made in sections to facilitate its location upon the track. The lower face of the block, at its outer end, is provided with a recess 35, preferably semicircular, and the upper face of the block, at its inner end, is provided with a similar yet preferably more decided recess 36. Between suitable lugs formed upon the lower face of the block a latch 37 is fulcrumed, the end of the latch containing the head 38 being carried beyond the inner end of the block, and the opposite end of the latch extends below the lower recessed face 35 of the block and is pressed by a spring 39, having a bearing, against the upper wall of the recess, as is likewise shown in Fig. 4. The cords 26, attached to the springs 24, after being passed over the guide-pulleys 27, are attached one to each side of the latch-block, preferably through the medium of ears secured to the latter, as illustrated in Fig. 2, and a single cord 40 is secured to the outer end of the latch-block and is passed through an opening 41, formed in the bar 28 of the trip mechanism, through the horizontal yoke 13, and downward over a friction-pulley 42, journaled in the chamber 11 of the pillar, as is illustrated in Fig. 3, the lower end of the cord having

preferably secured thereto a handle of any approved pattern.

A carrier-block C is held to slide upon the horizontal shells 21 in front of the latch-block B, and the shape of the carrier-block, which is illustrated in detail in Fig. 5, corresponds in its body portion 43 to the shape of the upper recess 36 in the latch-block, and the said body portion of the carrier-block is adapted to normally fit snugly in said recess. The body of the block is provided with a through recess 44 in its bottom surface to receive the track A, and a buffer or buffers 44^a is or are usually secured to the face of the block, adapted to engage with the car. A web 45 is projected horizontally from each side of the block-body, and each web has formed integral therewith or attached thereto a sleeve 45^a, said sleeves being adapted to slide upon the shells 21. Thus the block is guided in its movements, and it is not in any manner dependent for a support upon the track.

A lug 46 or its equivalent is located upon the upper face of the body of the block, to which one end of a spring D is pivotally secured, the opposite end of the spring being attached in like manner to the inner face of the lower portion of the pillar 10; but if in practice it is found desirable the inner end of the spring may be pivoted upon the yoke 13. The spring D and the block C constitute the propelling mechanism of the device. The spring may be of any approved construction, but is preferably made in the shape of a bow with the convexed surface upward, and in constructing the spring two end blocks *d* are ordinarily employed, which are connected by two bow-shaped spring-wire rods *d'*, spaced some distance and located side by side, the said rods being provided at or near their centers with coils *d''*.

The car E (shown in dotted lines in Fig. 3) may be of any approved pattern and is adapted to travel in any suitable manner upon the track A. The upper portion of the car at the end opposite the carrier-block C is provided in its under face with a recess adapted to neatly receive the head 38 of the latch 37, carried by the block B.

In the operation of the device the car is propelled by being drawn in the direction of one of the pillars 10, together with the block C, which causes the spring D to flex, as shown in dotted lines, Fig. 3, and when the car is released the block C is released also, and the spring in restoring itself to its normal position propels the car in the direction of the opposite pillar. The force imparted to the car is regulated by the extent to which the spring D is compressed, and the compression of the spring is regulated by the location of the trip mechanism. The nearer the said mechanism is placed to the pillar the farther the car will be propelled, and vice versa. When the car has been propelled from one end of the track, it engages with the latch of the block B and remains in this position until it

is to be used. The operator when desiring to use a car places the parcel or cash therein without disengaging it from the latch-block.

By grasping the handle and drawing downward the cord 40 the latch-block is drawn in the direction of the pillar, and as the carrier-block C is loosely held between the latch-block and the car the carrier-block is forced to travel with the latch-block and the spring D is thereby flexed. As soon as the outer end of the latch 37 engages with the inclined plane of the trip mechanism and travels a sufficient distance up said incline the head of the latch is depressed and the car is released and likewise the carrier-block, the said block being propelled rapidly and violently forward by reason of the spring D seeking its normal position, and the block engaging with the car imparts to the latter a rapid movement, propelling it in the direction of the opposite pillar.

It will be observed that the device is exceedingly simple and durable and capable of application in almost any structure.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a track, a car held to travel thereon, a block also held to travel upon the track, provided with a spring-pressed latch adapted for engagement with the car, and a recess in its upper face, of an adjustable trip mechanism adapted for engagement with the latch to release it from the car, a bow-spring pivoted to the fixed support at one end, a carrier-block pivoted to the opposite end of the spring, adapted to travel upon the track and fit in the recess of the latch-block, and a spring-controlled mechanism for operating the latch-block and flexing the spring, as and for the purpose specified.

2. In a cash-carrier apparatus, the combination, with a track and tubular guides arranged parallel with the track at opposite ends thereof, of a latch-block fitted to slide on the track, springs in the said guides and connected with the latch-block, a carrier-block fitted to slide on the guides in front of the latch-block, a spring having one end secured to a fixed support and its other end secured to the carrier-

block, a latch-tripping device secured to the guides, and a rope secured to the latch-block for operating it, substantially as herein shown and described.

3. In a cash-carrier apparatus, the combination, with a track and parallel guides arranged at opposite ends of the track, of a latch-block apertured to receive the track and provided with a recess in its upper face, a carrier-block recessed centrally to receive the track and provided with arms having sleeves to receive the guides and with a lug on its upper face, a spring having one end secured to the lug of the carrier and the other end secured to a fixed support, and means for operating the latch-block, substantially as herein shown and described.

4. In a cash-carrier apparatus, the combination, with a track, parallel tubular rods at the sides of the track, and guide-pulleys on the ends of the rods, of a latch-block fitted to slide on the track, springs secured in the rods, and cords secured to the springs, passed over the guide, and connected to the latch-block, substantially as described.

5. In a cash-carrier apparatus, the combination, with a track, tubular rods at the sides of the track, and pulleys on the ends of the rods, of a latch-block fitted to slide on the track, springs in the rods, cords secured to the springs, passed over the guide-pulleys, and connected to the latch-block, and a spring-actuated carrier-block fitted to slide on the rods in front of the latch-block, substantially as described.

6. In a cash-carrier apparatus, the combination, with a track, tubular rods at the sides of the track, and guide-pulleys at the ends of the rods, of a latch-block on the track, springs in the rods, cords connected to the springs, passed over the guide-pulleys, and secured to the latch-block, a spring-actuated carrier-block fitted to slide on the rods, a latch-releasing device adjustably secured on the rods, and an operating-cord attached to the latch-block, substantially as herein shown and described.

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Witnesses:

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