

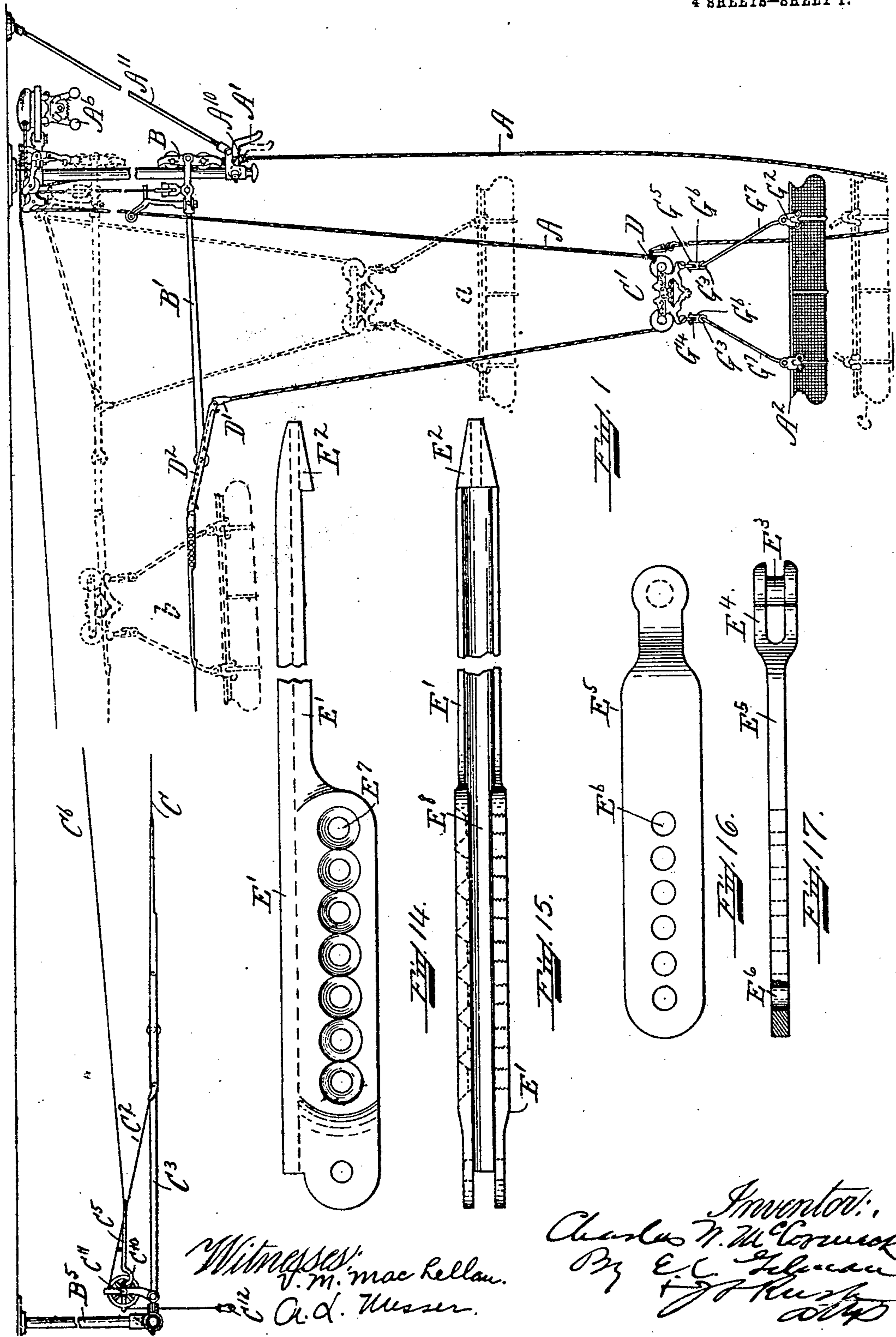
No. 800,665.

PATENTED OCT. 3, 1905.

C. W. McCORMICK.
STORE SERVICE APPARATUS.

APPLICATION FILED NOV. 18, 1901. RENEWED FEB. 12, 1904.

4 SHEETS—SHEET 1.



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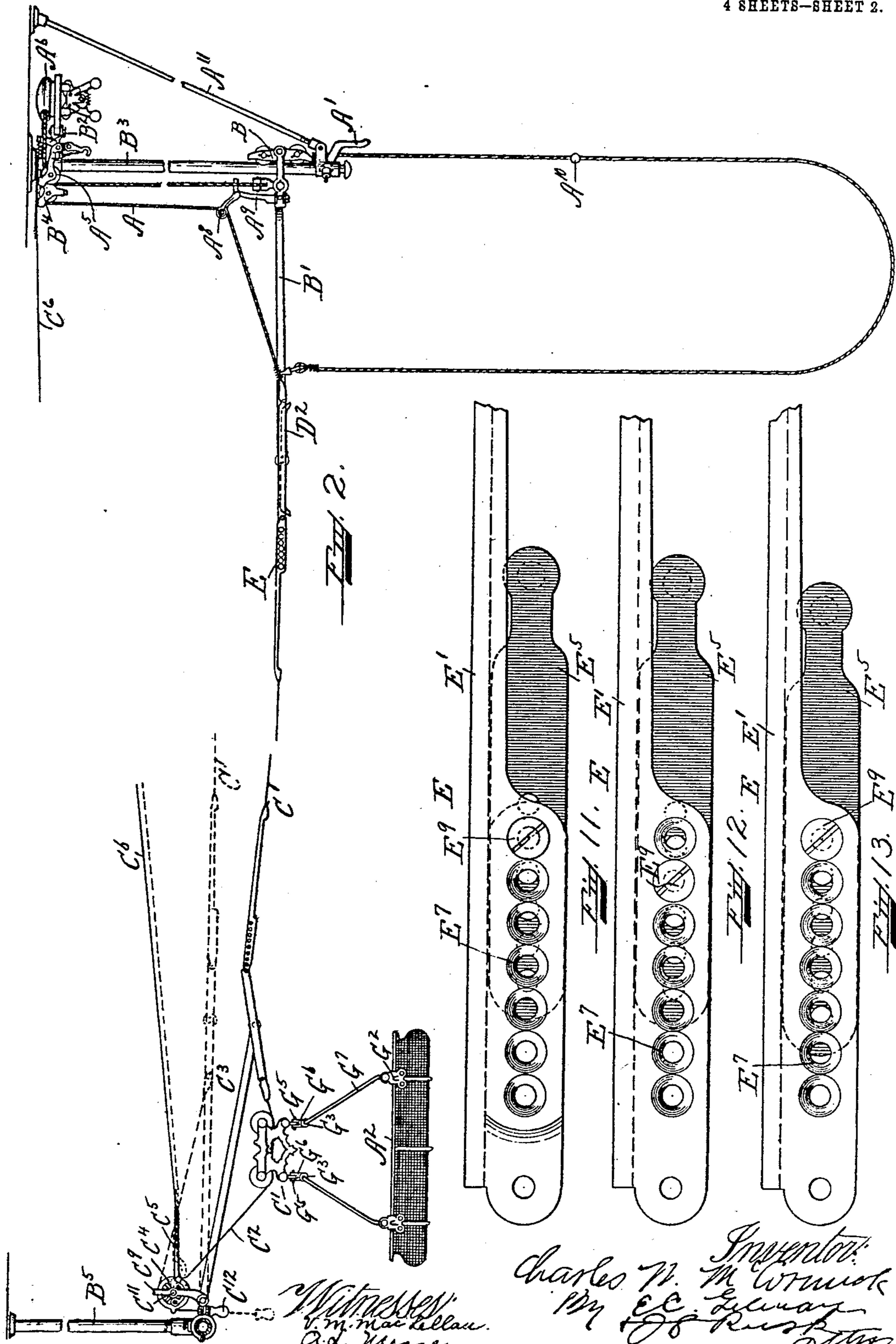
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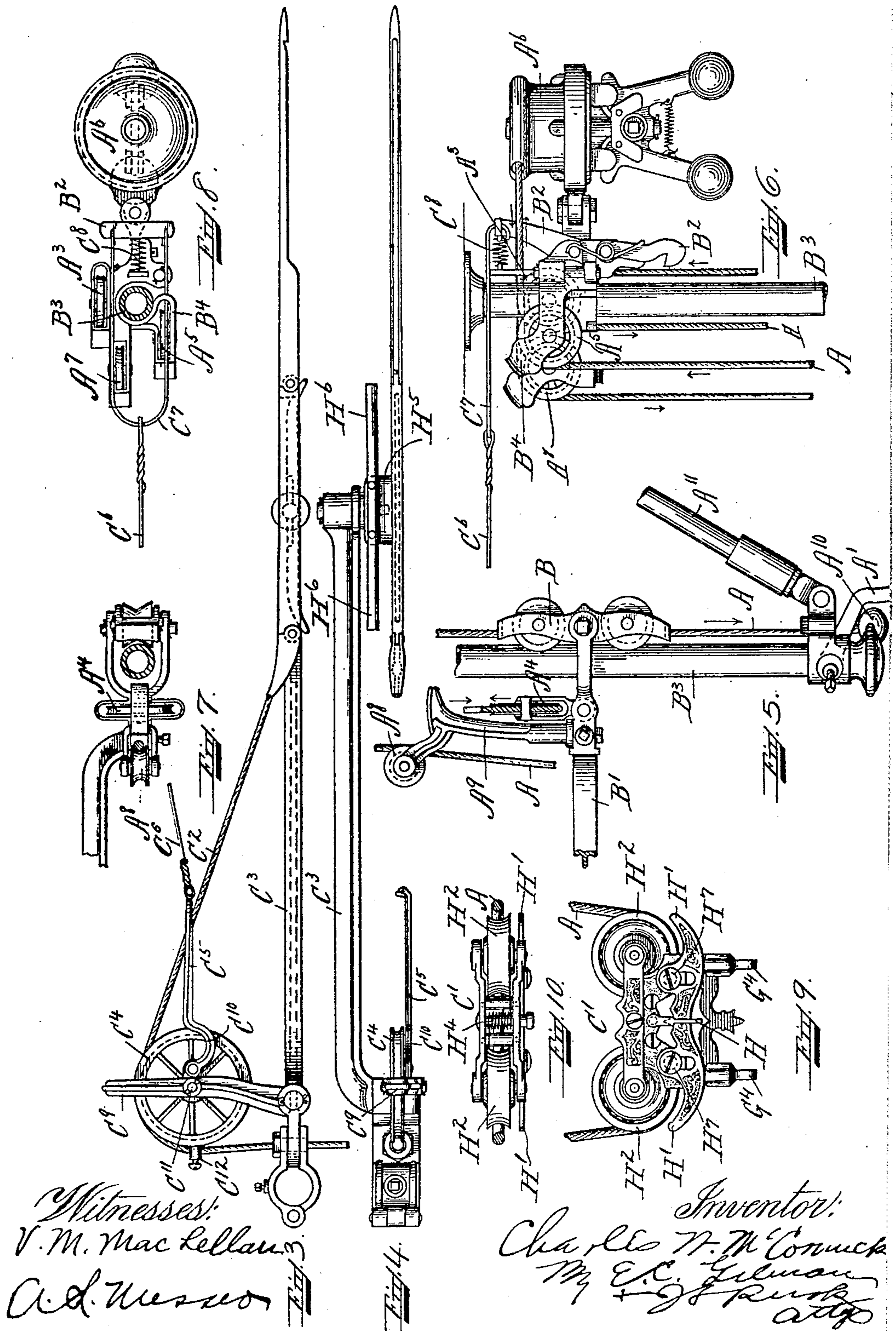


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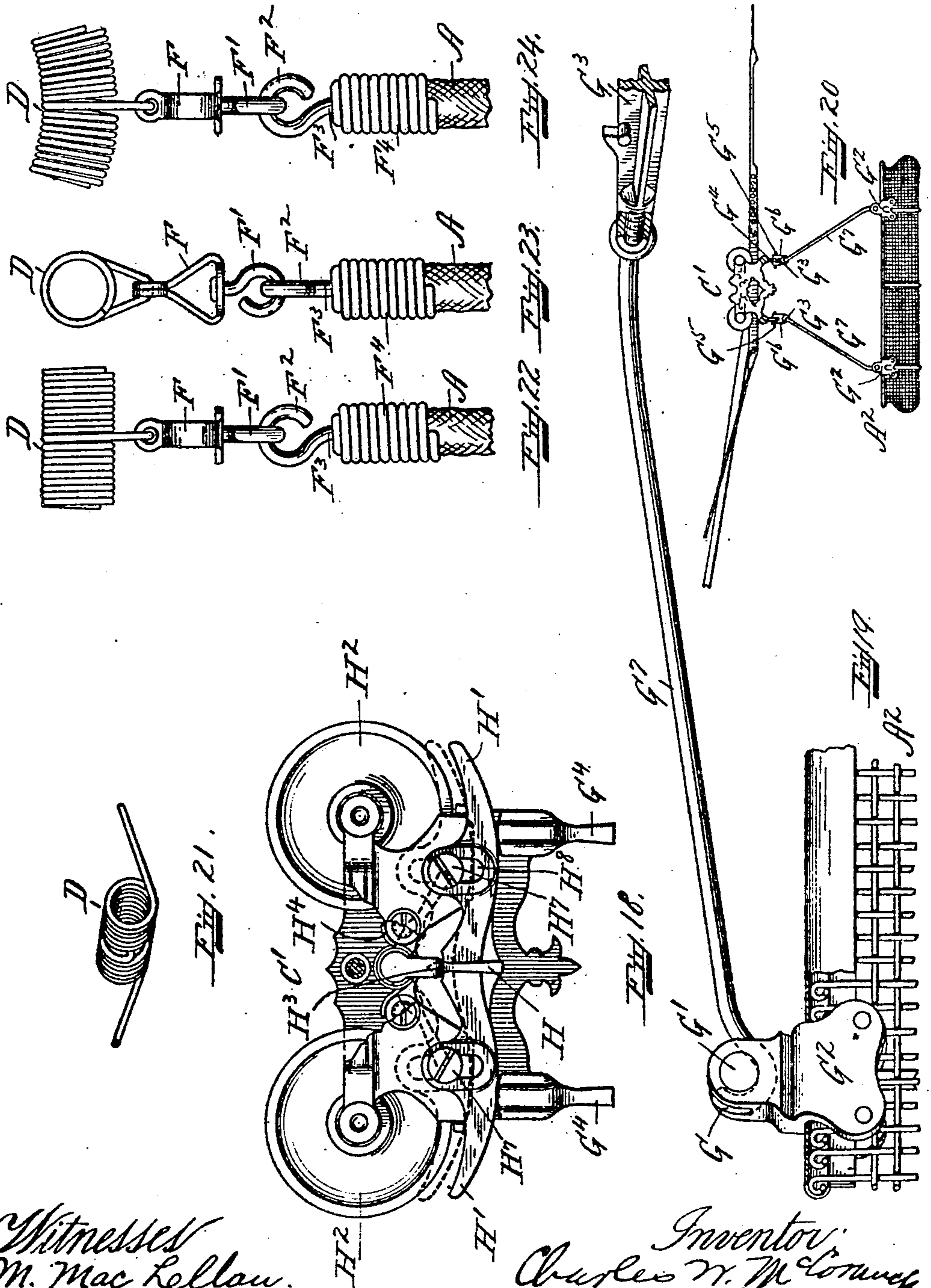
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Witnesses
V. M. Mac Kellau.
A. L. Wessner.

Inventor
Charles W. McCormick
By E. C. Selman
J. S. Rush
attys

UNITED STATES PATENT OFFICE.

CHARLES W. McCORMICK, OF EMPORIA, KANSAS, ASSIGNOR TO LAMSON CONSOLIDATED STORE SERVICE COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

STORE-SERVICE APPARATUS.

No. 800,665.

Specification of Letters Patent.

Patented Oct. 3, 1905.

Application filed November 18, 1901. Renewed February 12, 1904. Serial No. 193,342.

To all whom it may concern:

Be it known that I, CHARLES W. McCORMICK, of Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Store-Service Apparatus, of which the following is a specification.

My invention relates to new and useful improvements in cash and parcel carrier apparatus; and its object is to facilitate the despatch of articles between stations.

My invention consists of certain novel features hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, which illustrate a construction embodying my invention, Figure 1 is a side view of my improved apparatus, showing in full lines the normal position of the basket previous to the beginning of the despatching operation and in dotted lines the positions taken by the basket on its upward movement and on its despatch along the track. Fig. 2 is a side view illustrating the position taken by the basket when received at the inspector's station, where the goods are inspected before being wrapped up. Fig. 3 is an enlarged detail elevation of the inspector's station. Fig. 4 is a plan view of the same. Fig. 5 is a detail view of a portion of the hanger and of the vertically-movable carriage at the salesman's end. Fig. 6 is a detail view illustrating the arrangement of pulleys and ropes for raising and lowering the vertically-movable carriage at the salesman's end, together with the governor which regulates the lowering of the carrier with its load. Fig. 7 is a plan view of the vertically-movable carriage and part of the trap. Fig. 8 is a plan view of the regulating device for lowering the basket at the salesman's end and a portion of the tripping mechanism and the casting with pulleys. Fig. 9 is a detail side view of the carrier. Fig. 10 is a plan view of the same. Fig. 11 is a side elevation of the device for taking up the slack in the wire. Fig. 12 is a similar view after the device has been moved one-sixteenth of an inch to take up the slack. Fig. 13 is a similar view after the take-up device has been further moved to take up the slack. Fig. 14 is a side view of one part of the wire-tightener. Fig. 15 is an under plan view of one part of the wire-tightener. Figs. 16 and 17 are respectively side and plan

views of the other part of the wire-tightener. Fig. 18 is an enlarged detail side view of the carrier. Fig. 19 is a detail side view of a portion of the carrier-basket and one of the connecting-bails. Fig. 20 is a detail side view showing the carrier on its travel from the inspector's station back to the salesman's station. Fig. 21 is a perspective view of the swivel connection adapted to slide on the elevating-rope. Figs. 22 and 23 are respectively side and end elevations of the swivel connection and the connection between the swivel and the end of the elevating-rope. Fig. 24 is a side view of the connection between the swivel and the end of the elevating-rope and showing the swivel curved to conform to the bending of the rope.

Like letters of reference refer to like parts throughout the several views.

With the parts in the position shown in full lines, Fig. 1, it being desired to send a bundle from the salesman's station to the inspector's station, the salesman takes hold of the rope A and throws it to the rear to release the button A¹⁰ from the spring rope-stop A', (through which it passes upwardly,) thus allowing the basket A² to drop to the position shown at c in dotted lines, Fig. 1. The operator then pulls the rope A in a downward direction, which causes the vertically-movable carriage B and the trap B' to move into the position shown in dotted lines, Fig. 1, in which position the carriage B engages the latch B² and is held in its upper position, as shown in dotted lines, Fig. 1. During this upward movement of the carriage B and trap B' the basket has only moved a like distance, as shown in dotted lines at a, Fig. 1. The pull being continued on the rope A, the carrier, with its basket, is lifted and takes its departure from the incline of the rope shown in dotted lines and travels onto the track-wire C, as indicated at b, dotted lines, toward the inspector's end. The track-wire C having been raised to give it sufficient incline, the carrier C', with its basket A², continues its travel until it reaches the position shown in full lines, Fig. 2, where it is detained on the detent formed by the rope C² on the trap C³.

In explaining the arrangement of the ropes and vertically-movable carriage at the salesman's end reference is made to Figs. 5, 6, 7, and 8. The pulley-rope A passes behind the

carriage B and around the pulley A³, then down and around the pulley A⁴ of the trap B', then up around the pulley A⁵, then through the governor A⁶, and then around the pulley A⁷ and down to and around the pulley A⁸ on the pulley-standard A⁹, secured to the trap B', and then the rope extends through the idler D and the end is connected at D' to the link D² of the trap B'. The pulleys A³, A⁵, and A⁷ are carried by the casting B⁴, which is secured firmly in place on the upper end of the hanger B³, and the governor A⁶, of the usual construction, is secured on one end of said casting and held in the position shown in Fig. 6. By the arrangement above described the carriage B is caused to lock at the upper end of the hanger B³ at the time the carriage reaches the dotted position *a*, Fig. 1, so that the carrier, with its basket, does not start upon its travel until the rope reaches the inclined position, as shown in dotted lines at the upper part of Fig. 1, and, further, the carriage, being locked before the carrier starts, there is no liability of the trap B' dropping before the carrier, with its basket, reaches the inspector's end, and consequently the incline of the wire is maintained to cause the carrier, with its basket, to travel from the salesman's end to the inspector's end of the line. When the carrier, with its basket, approaches the inspector's end, it depresses the rope C² of the trap C³ (shown in Fig. 2) and causes the wheel C⁴, provided with the arm C⁵, (mounted eccentrically,) to revolve one-half a revolution, as shown in Fig. 2, from the dotted to the full position, as the rope is fixed on the wheel C⁴ by the screw C¹², which motion causes a pull on the trip-wire C⁶, which is attached to the fork C⁷, secured to the upper end of the latch B², and moves the upper end of said latch B² inwardly against the spring C⁸, and the lower end of the latch B² outwardly, so as to release the vertically-movable carriage B and allow it to return to its normal position. (Shown in full lines, Fig. 1.) In the construction of the arm C⁵, mounted eccentrically on the wheel C⁴, journaled in the arm C⁹, carried by the trap C³ at the inspector's end, it will be seen that said arm has a downward bend C¹⁰ near the point where it is pivoted to the wheel C⁴, so as to admit of the centers passing or being set in direct line with the strain without the pivot C¹¹ of the wheel coming into contact with said arm. After the inspector has returned the bundle to the basket he pulls down on the handle C¹² and moves it to the position shown in dotted lines, which lifts the carrier out of the detent formed by the rope C² of the trap C³, which causes the carrier to take its departure and return to the salesman's end, as the trap-wire is sufficiently inclined to cause the travel of the carrier, with its basket, by gravity, and the carrier approaching the salesman's end runs over the wire-tightener E, link D², onto the inclined portion of the rope (shown in

Fig. 2) and descends by gravity, this descent being automatically regulated by the governor A⁶, and drops until it reaches the position shown in full lines, Fig. 1, where it is arrested by the button A¹⁰ coming in contact with the rope-stop A', thereby preventing the carrier, with its basket, from being lowered onto the heads of the clerks and customers and being in position for the next operation. This pull on the handle C¹² returns the arm C¹⁰ to its normal position, (shown in full lines, Fig. 3,) and the slack of the trip-wire C⁶ is taken up by the spring C⁸, which moves the lower end of the latch B² to move inwardly in position to engage the carriage B upon its next rise.

The coiled-spring idler D has advantages in that it conforms to the shape of the wheels of the carrier, and in case the rope is pulled it does not bring the pull at the extreme ends. This swivel-idler does not chafe the rope and wear it away, as it conforms to any loop the rope may take.

Referring to Figs. 22, 23, and 24, it is desirable to have a swivel connection between the end of the rope and the idler, because in damp weather the rope contracts and in dry weather it expands, and having been adjusted to a certain position in wet weather will twist upon itself and become entangled when the weather is dry, and vice versa; but with an idler employing a swivel connection, as shown, this difficulty of the twisting of the rope is avoided. This arrangement is provided by connecting to the idler D the frame F, in the bottom of which is supported to move freely the swivel F', the hook of which engages the hook F² of an ordinary screw-eye F³, which is secured firmly up into the rope, which has been previously compressed and formed into a compact substance by screwing onto the end thereof the swivel coiled-wire spring-ferrule, whereby the rope is held securely in place and a swivel connection is provided between the idler and the end of the rope. This ferrule F⁴ has a tapering form leaving only a small aperture sufficient to admit the screw-eye F³, thus preventing any fray at the end of the rope.

In the manufacture of the carrier it is desirable to have a detachable bail in order that the baskets when shipped in quantities may be nested together without the bails, thus saving room in packing.

When it is desired to connect the carriers and the basket by the bails G⁷, the hook G is passed around the pin G' in the casting G², four of which are secured to the sides of the basket, (two on each side,) after which the cross-bar G³ is screwed on the upper ends of two opposite bails sufficiently to bring them into proper position, and then the two cross-bars are secured by the forks G⁶ to the depending lugs G⁴ of the carrier by suitable pins G⁵.

It is desirable at times to adjust the tension of the track-wire C, and the device E, which I have designed, is compact and sufficiently thin so that the carrier can pass over it on its travel from end to end. Further, it will not turn or yield to the strain of the twists in the wire, which is always present and which is inherent in its manufacture, and my device maintains the wire in any desired position, whereas the usual device with a screw for this purpose was objectionable, owing to the fact that the screw is constantly becoming loosened, causing the derangement of the adjustment. This device E may be located at either or both ends of the track-wire C and consists of an upper piece or arm E', through the end E² of which the wire passes, and is secured on the stud E³ of the fork E⁴ of the strip E⁵, provided with a series of holes E⁶, one of which at least is adapted at one time to aline with one of the holes E⁷ of the upper piece E' as the strip E⁵ is adjusted from time to time in the slot E⁸ of the upper piece E'. Assuming the take-up device E to be in the position shown in Fig. 11 and it is desired to tighten up the wire, the screw E⁹ is removed and the strip E⁵ moved rearwardly to the position shown in Fig. 12, and the screw E⁹ is then passed through the second of the holes E⁷ of the upper piece E' and through one of the holes in the strip E⁵, and being tightened up holds the wire in a taut position. If the wire should become loose, the screw E⁹ is removed from its position shown in Fig. 12 and the strip E⁵ moved inwardly and the screw E⁹ then inserted, as shown in Fig. 13, and screwed up to hold the track-wire in taut position.

The carrier C' is removable and can be replaced on the line by lifting the spring-lock H and raising the latch H' to allow the rope A or C³, as the case may be, to come under the wheels H² of the carrier. The lock H is held by the spring H⁴ in a vertical position with the central portion H³ extending inwardly over the center of the latch to hold the latch in its downward position, as shown, to prevent the carrier from jumping off from any cause whatever, and as the carrier approaches the inspector's end it passes over the cross-piece H⁵ of the trap C³, which construction is also found in the trap B', and in order to pass over this cross-piece H⁵, assuming it to be coming in at the inspector's end, the finger H⁶ strikes the latch H and moves it upwardly, and the lower end of the latch moves along the upper part of the finger H⁶ until it has passed by said finger, when the spring H⁴ causes the lock H to spring backwardly and move the latch downward into the position shown in Fig. 18, the said latch having been raised as it passes over the cross-piece H⁵ of the trap H³. When the carrier is returned from the inspector's end, the same

operation takes place at the trap C³ and trap B'. 65 The latch H' is guided in its upward and downward movements by the fixed stud H⁷, moving in the slots H⁸ of the latch H'. Briefly, the lock H holds the latch H' in the locked position, as shown in Fig. 18, excepting when 70 passing in either direction over the cross-piece H⁵ of the trap H³ and also when passing over a similar cross-piece on the trap B'. The upper position of the latch H' is shown in dotted lines, Fig. 18, which position is as- 75 sumed as the carrier C' passes over the cross-piece H⁵ of the trap C³ or the similar cross-piece of the trap B'.

Having thus described the nature of my invention and set forth a construction embody- 80 ing the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an apparatus of the character described, a track fixed at one end and movable 85 at the other, a carrier adapted to travel on said track, mechanism for varying the inclination of said track, a catch for holding the movable end of the track in its upper position, means operated by the carrier for releasing said catch 90 to allow the movable end of the track to return to its lower position, said means consisting of a trip-wire connected to an arm mounted eccentrically on a wheel whereby the movement of the wheel caused by the carrier pulls 95 the trip-wire and releases the catch.

2. In an apparatus of the character described, a track, a carrier adapted to travel on said track, a latch for retaining the carrier on the track, and a lock for holding said latch 100 to prevent the carrier leaving the track and adapted to allow the movement of the latch as the carrier passes into the stations.

3. In an apparatus of the character described, a track, a wire-tightener device for 105 taking up the slack of the track-wire and consisting of an arm having a slot in its under side, a strip adapted to be adjusted in said slot, and means for securing said strip to said arm after being adjusted. 110

4. In an apparatus of the character described, a track, a wire-tightener device for taking up the slack of the track-wire and consisting of an arm having a slot in its under 115 side, a strip adapted to be longitudinally adjusted in said slot, and means for securing said strip to said arm after being adjusted.

5. In an apparatus of the character described, a track-wire fixed at one end and movable at the other, a trap to which the movable 120 end is connected, a rope for raising the trap to vary the inclination of the track and pivotally connected at one end to a link journaled on said trap and at its other end movably connected to itself by a coiled-wire idler, a swivel 125 connection between the idler and the end of the rope, a coiled-wire ferrule secured on the end of the rope, and a screw-hook adapted to

be screwed into the rope within the ferrule and connected at its opposite end to the swivel connection.

6. In an apparatus of the character described, a track fixed at one end and movable at the other, a carrier adapted to travel on said track; an elevating-rope on which said carrier is raised and lowered, a trap at the movable end forming part of the track, a vertically-movable carriage secured to said trap, a catch for holding said carriage in its upper position, and devices coöperating with said elevating-rope and adapted to cause the engage-

ment of said carriage with its catch to hold it in its upper position before the carrier is raised into position for transmission to the opposite end of the line.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 1st day of August, A. D. 1901.

CHARLES W. McCORMICK.

Witnesses:

A. L. MESSER,
C. A. STEWART.