

No. 765,244.

PATENTED JULY 19, 1904.

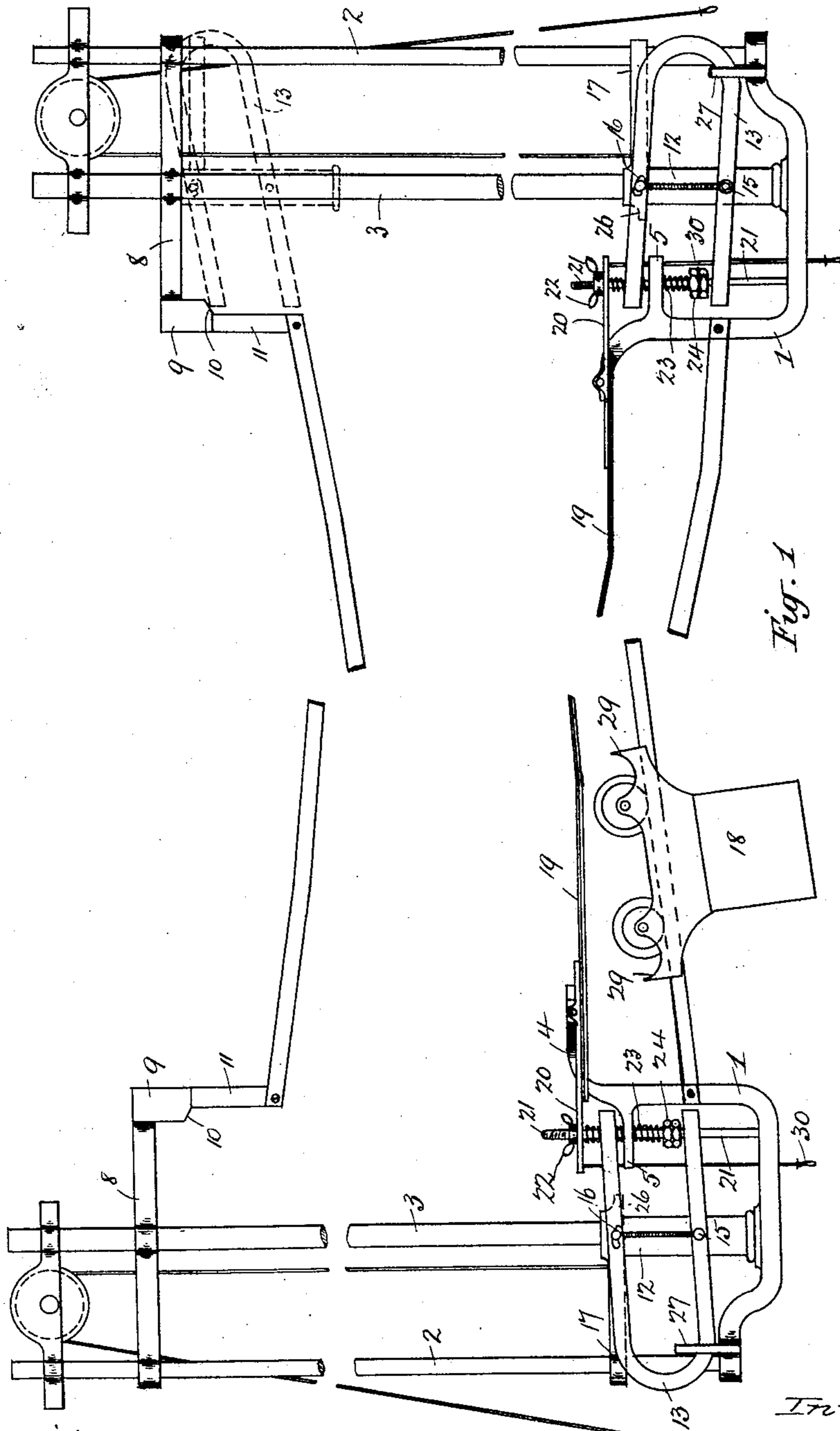
H. LOUGH.

APPARATUS FOR TRANSMITTING CASH, &c., IN STORES OR LIKE PLACES.

APPLICATION FILED NOV. 17, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

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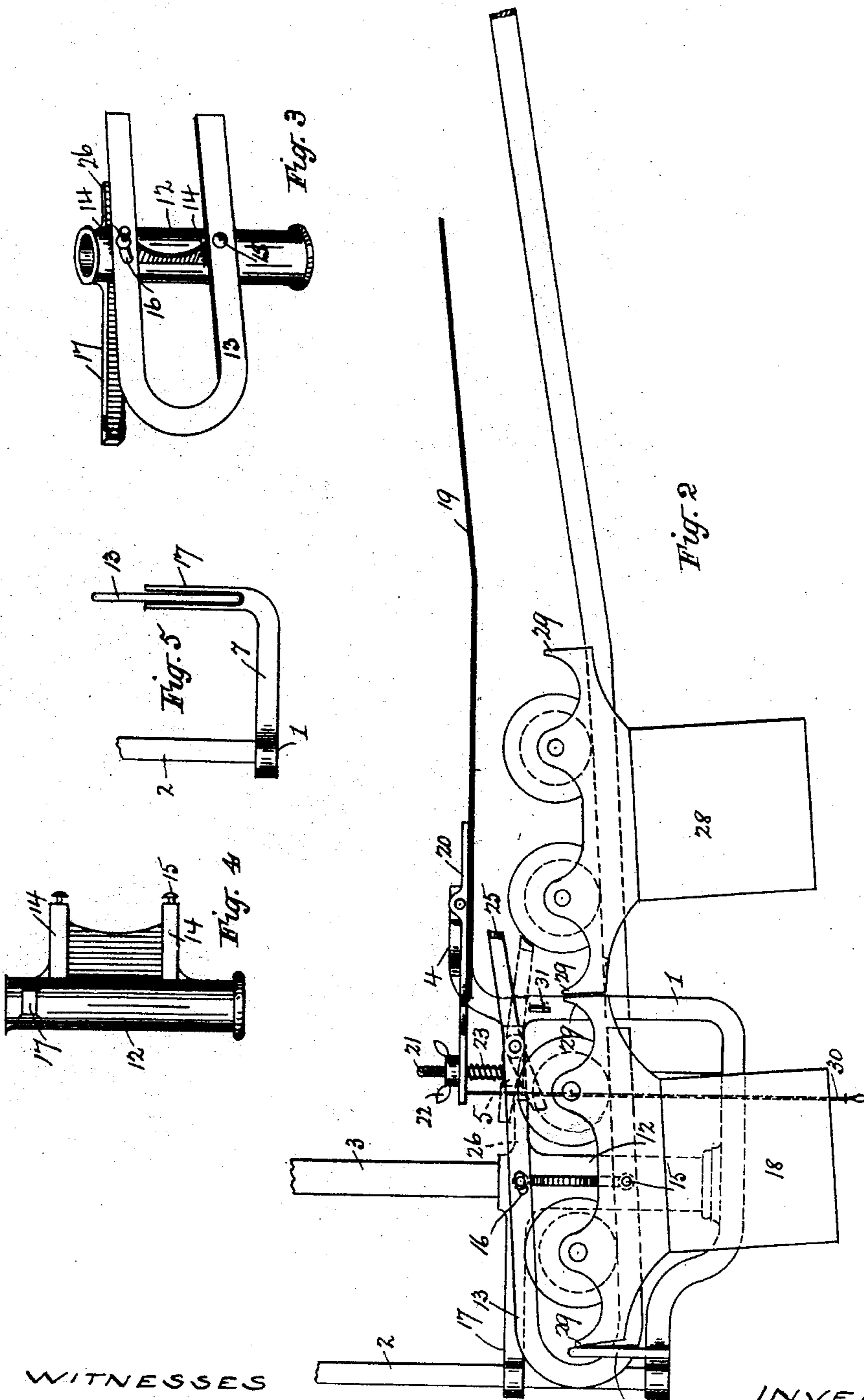
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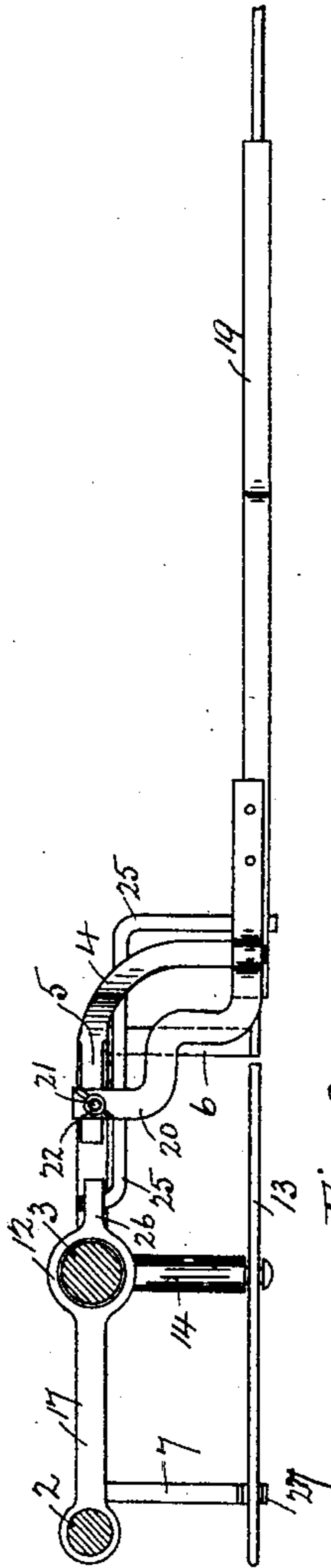


Fig. 6

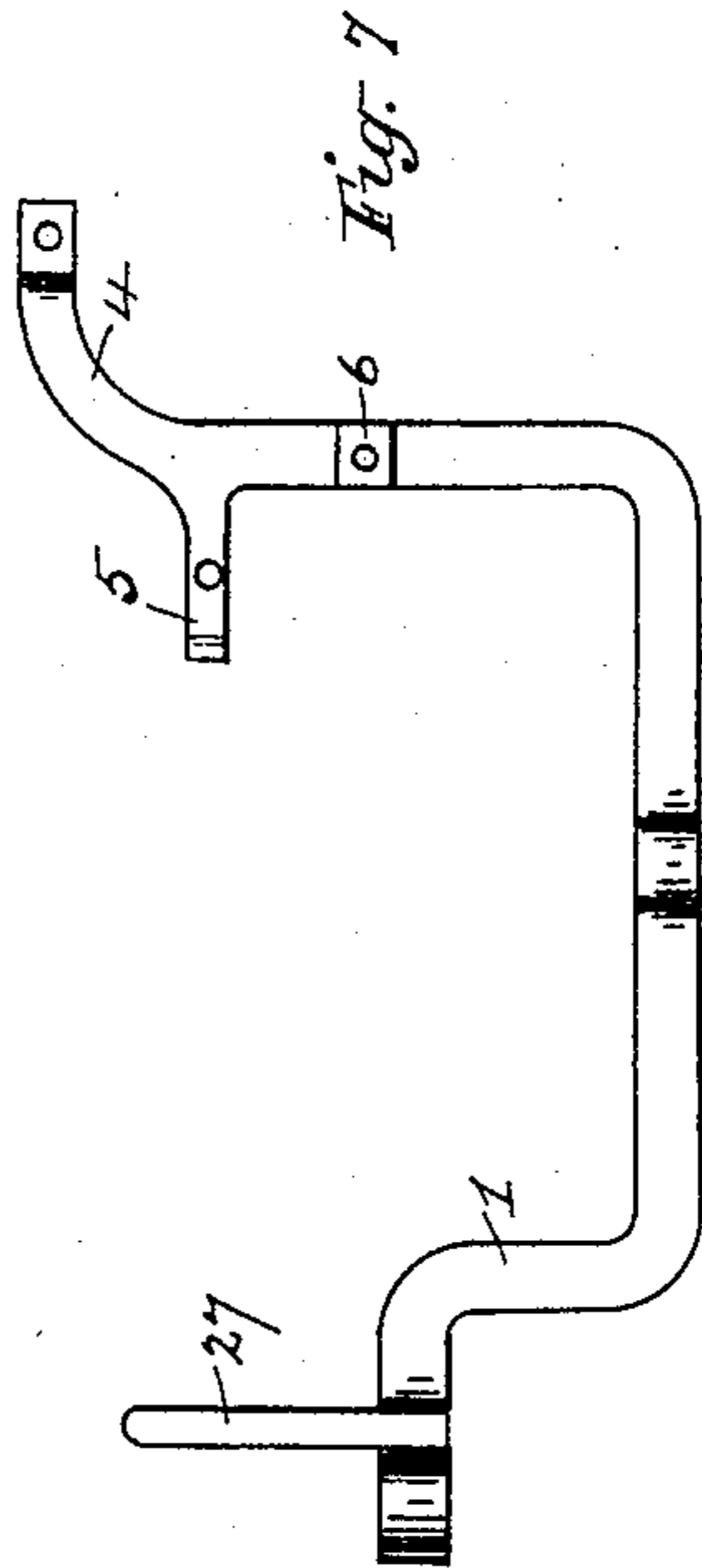


Fig. 7

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY LOUGH, OF CHRISTCHURCH, NEW ZEALAND.

APPARATUS FOR TRANSMITTING CASH, &c., IN STORES OR LIKE PLACES.

SPECIFICATION forming part of Letters Patent No. 765,244, dated July 19, 1904.

Application filed November 17, 1903. Serial No. 181,552. (No model.)

To all whom it may concern:

Be it known that I, HENRY LOUGH, a subject of the King of Great Britain and Ireland, residing at Christchurch, in the Colony of New Zealand, have invented new and useful Improvements in Apparatus for Transmitting Cash or Parcels in Stores or other Like Places; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention has for its object to transmit cash or parcels to and fro along a railway in stores and like places. The apparatus is such that the article to be transmitted may be despatched by a person standing upon the floor of the store in such a way that the carrier when set in motion shall move well above the heads of any passers-by. Similarly the inclination of the railway that returns a carrier to the starting-point is so disposed that the carrier will gravitate into its place without interfering with any one passing beneath.

One part of my invention refers to means for elevating the cash or parcel carrier and for launching it upon the uppermost of a pair of rails that incline in opposite directions to each other.

A further part of the invention provides means for reducing the speed of and for stopping the motion of a carrier as it nears the end of its journey, and means are also at hand for regulating the brake mechanism.

A further part of the invention consists of means whereby a second carrier may be kept back until the first carrier has been discharged.

My invention will be found illustrated in the accompanying sheets of drawings, in which—

Figure 1 is a general view of the main features of my apparatus arranged at the starting and terminal points. Fig. 2 is a view of the lower part of the elevator. Fig. 3 is a perspective view of the lift mechanism. Fig. 4 is a detail of same. Fig. 5 is a rear end elevation showing a portion of the means that I employ to keep a second carrier from interfering with the lift while a carrier is in place therein. Fig. 6 is a plan of the lower portion of the elevator and sleeve, and Fig. 7 is the framework of the same.

A framework 1 is provided, of some suitable

stout material, wherein are supported elevator guide-rods 2 and 3. The said framework is furnished with various members, the functions of which will be hereinafter explained—namely, a gooseneck 4, a longitudinal bracket 5, a bracket 6, protruding at right angles from the frame, and a second bracket 7.

An upper frame to the elevator consists of a cross-piece 8, that is capable of vertical adjustment upon the elevator-rods. Said cross-piece has a forwardly-projecting member 9, the lower edge of which is beveled at 10. A piece 11 depends from 9, upon which the end of a rail is fastened.

A sleeve 12, that is adapted to move upon the rod 3, is provided with means for mounting a D-shaped member 13, hereinafter called the "lift." Said means consist of forwardly-projecting arms 14, upon the extremities of which the lift is pivoted. The arms are for the purpose of holding the lift clear of the other parts, so that the sleeve and the lift may be freely elevated when desired. Said lift is pivoted to the lower sleeve-arm at 15, and in the upper arm of the lift is a curved slot 16, that takes in a pin upon the extremity of the upper arm of the sleeve. The object of this arrangement is to allow of a rocking movement of the lift, as hereinafter explained. An arm 17 upon the sleeve embraces the rod 2 and slides thereon when the sleeve is elevated, thereby steadying the same. Any suitable means are provided for raising the sleeve 12, that shown consisting of a pulley and cord. The D-shaped lift 13 is lightly constructed, preferably of band-steel, and it is so arranged in the frame as to normally lie in the same line as the railway. The lift will thus be in position to receive an incoming carrier which will gravitate thereinto.

The carrier 18 may be of any approved construction hung in a suitable bracket adapted to run upon flat-sided rails.

In order to reduce the speed of a carrier as it approaches the terminal point of its journey, a flat spring 19 is attached to a plate 20, that is pivotally mounted upon a boss on the extremity of the gooseneck 4. The rear end of the plate 20 is drilled to receive a threaded bolt 21, upon which is a thumb-nut 22. Sur-

rounding said bolt below the plate 20 and impinging against said plate is a spring 23, that seats upon a nut 24. This arrangement will provide for the vertical adjustment of the flat spring 19, which is effected by operating-nut 22. Should the spiral spring 23 require considerable compression, this may be done by screwing the nut 24 upon the bolt. It will only then be necessary to release nut 22 slightly to enable spring 23, acting against plate 20, to depress the flat spring 19. The bolt 21 is supported in the bracket 5 and frame 1.

Also held in said bracket 5 is a lever 25, shown Z-shaped in the drawings. The rear end of said lever is engaged by a projection 26 upon the sleeve 12, which depresses that part of the lever when the sleeve is in the lower end of the elevator or what is its normal position. The natural position, however, of the lever is the reverse of this, and its outer end is intended to incline downward, so as to act as a stop against which a carrier may come.

The outwardly-projecting bracket 6 is for the purpose of supporting the railway end in connection with the elevator-frame, and the second protruding bracket 7 has for its object to support a vertical slotted piece 27, in which the end of the lift 13 may come.

In Fig. 2 the carrier 18 is shown in the lift 13 ready to be raised and a second carrier 28 has arrived containing matter to be attended to. In order to prevent carrier 28 from getting in the way of the lift as the latter is elevated, the carrier-frames are provided with buffers 29, and the contained carrier 18 will not be permitted to run into the inner end of the lift 13 by the slotted piece 27. When the sleeve 12 and lift 13 are hauled up, this forward position of the carrier 18 will be maintained until it moves clear of the top of 27, by which time projecting piece 26 will have moved away from lever 25, which will have fallen into the position shown in dotted lines, Fig. 2. The buffers 29 upon the carrier-frames are made deep enough to insure that carrier 28 will be held in contact with carrier 18, as the latter is elevated, long enough for lever 25 to be released by projection 26 and drop down to receive carrier 28 as it disengages carrier 18. The carrier 28 will thus be held by lever 25 until the lift, after launching carrier 18 from the top of the frame, returns to its usual position. Its coming to rest will have brought projection 26 to again contact with and depress lever 25, which action will permit the carrier 28 to gravitate into the now empty lift.

It will be noted that lift 13 is pivoted in such a way that it will hang on the sleeve with a cant backward, so as to be in a line with the incline of the railway. When the lift is elevated to the top of the frame, its forward part will engage the beveled cross-piece 8 at 10, which will have the effect of canting the lift

forward, as shown in dotted lines, Fig. 1. The carrier that has been elevated with the lift will thus be permitted to gravitate therefrom onto the downwardly-inclined railway, the end of which is attached to depending piece 11.

The sleeve ends, carrier-buffers, and other contacting parts may be covered with sound-deadening material, and from the inner end of the plate 20 a cord 30 may hang, which will be used to slightly raise spring 19 should an incoming carrier become jammed. Said spring is faced with leather or other substance for deadening the sound as it contacts with the carrier-wheels.

In order to prevent the forward portion of the lever 25 falling too far when not acting upon a carrier, a small boss or projection 31, Fig. 2, is provided on the elevator-frame 1. The gradient of the railway end that is attached to the lower part of the elevator is much reduced near to the frame, so that incoming carrier will be well above people's heads until it has almost reached its terminal point. The lower end of the elevator will be situated some five feet above the floor, so that an attendant can easily deal with the contents of the carriers. The railway on the lower part of the elevator will incline upward sufficiently, as shown in the drawings, to enable persons to pass underneath without interfering with passing carriers.

I wish it to be distinctly understood that the D-shaped lift 13 is pivoted on the sleeve in such a way that the bent portion thereof shall greatly outweigh the open part. Thus a carrier coming into the lift will not effect its poise, which should always be in the same straight line as the railway.

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

1. In store-service apparatus, in combination, an elevator, a D-shaped lift that is mounted in the elevator in such a way as to have a backward inclination and to be in line with a railway inclining toward said lift, means for keeping the lift in position longitudinally with said railway, a second railway inclining from the upper part of the elevator, a carrier upon the lower railway adapted to gravitate into the lift, means for raising the latter and a projection engaging with the lift for forwardly inclining the lift as it approaches the top of the elevator for the purpose of discharging the contained carrier upon the upper railway, as specified.

2. In store-service apparatus, in combination, an elevator, a D-shaped lift, and a sleeve for supporting it, a frame and elevator-rods in and upon which the sleeve is elevated, a pair of arms upon the sleeve upon the lower one of which the lift is pivoted, a slot in the upper arm of the lift that takes into the extremity of the upper arm of the sleeve, a rail-

way inclining toward said lift and in line therewith, an upward bend in said railway for the purpose of clearing the heads of passers-by, a second railway inclining from the upper part of the elevator, a carrier upon the lower railway that is adapted to come into the lift, means for raising the latter, and a forwardly-projecting member that is beveled upon the upper part of the elevator against which the outer end of the lift will come as it is drawn up therein, as and for the purposes explained.

3. In store-service apparatus, in combination, an elevator, a D-shaped lift and a sleeve for supporting it adapted to move in the elevator, a railway inclining toward said lift, a second railway inclining from the upper part of the elevator, a carrier upon the lower railway adapted to gravitate into the lift, means for reducing the speed of the carrier as it approaches the end of its journey, and means for holding a carrier back from entering the lift until the latter is in position to receive it, as specified.

4. In store-service apparatus, in combination, an elevator, a D-shaped lift and a sleeve for supporting it adapted to move in the elevator, a railway inclining toward said lift, a second railway inclined from the upper part of the elevator, a carrier upon the lower railway adapted to gravitate into the lift, a plate pivoted upon an arm of the elevator-frame and a forwardly-projecting flat spring upon the plate adapted to bear upon the carrier-wheels as the latter approach the frame, as specified.

5. In store-service apparatus, means for adjusting the forwardly-projecting brake-spring, comprising, in combination, a plate upon which the spring is mounted, means for pivoting the plate to the elevator-frame, so as to bring the spring in line with and immediately over the railway, a vertical bolt pass-

ing through said plate and held in the elevator-frame, a thumb-nut, and a spiral spring upon the bolt below said plate seating upon a nut and impinging against the plate, as described and operating as explained.

6. In store-service apparatus, in combination, an elevator, a D-shaped lift and a sleeve for supporting it adapted to move in the elevator, a guiding-arm as 17 upon the sleeve, a projection as 26 likewise upon the sleeve, and a lever pivotally mounted upon the elevator-frame that is engaged by the projection on the sleeve and means for preventing the lever from falling out of position as described and for the purposes set forth.

7. In store-service apparatus, in combination, an elevator, a D-shaped lift and a sleeve for supporting it adapted to move in the elevator, a projection upon the sleeve, a railway inclining toward said lift, a carrier or carriers upon the railway, means for reducing the speed of the carriers, a lever pivotally mounted in the elevator-frame that is engaged by the projection aforesaid, a vertical slotted piece as 27 supported in an extension of the elevator-frame that receives the end of the lift and against which the carrier that is contained in the lift will rest until lifted clear thereof, buffers upon the carrier-frames that are made sufficiently deep for those of the carrier reposing in the lift to engage those on a second carrier long enough to permit of said lever being released as the sleeve is raised, substantially as described and explained.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HENRY LOUGH.

Witnesses:

P. M. NEWTON,
M. E. EYER.