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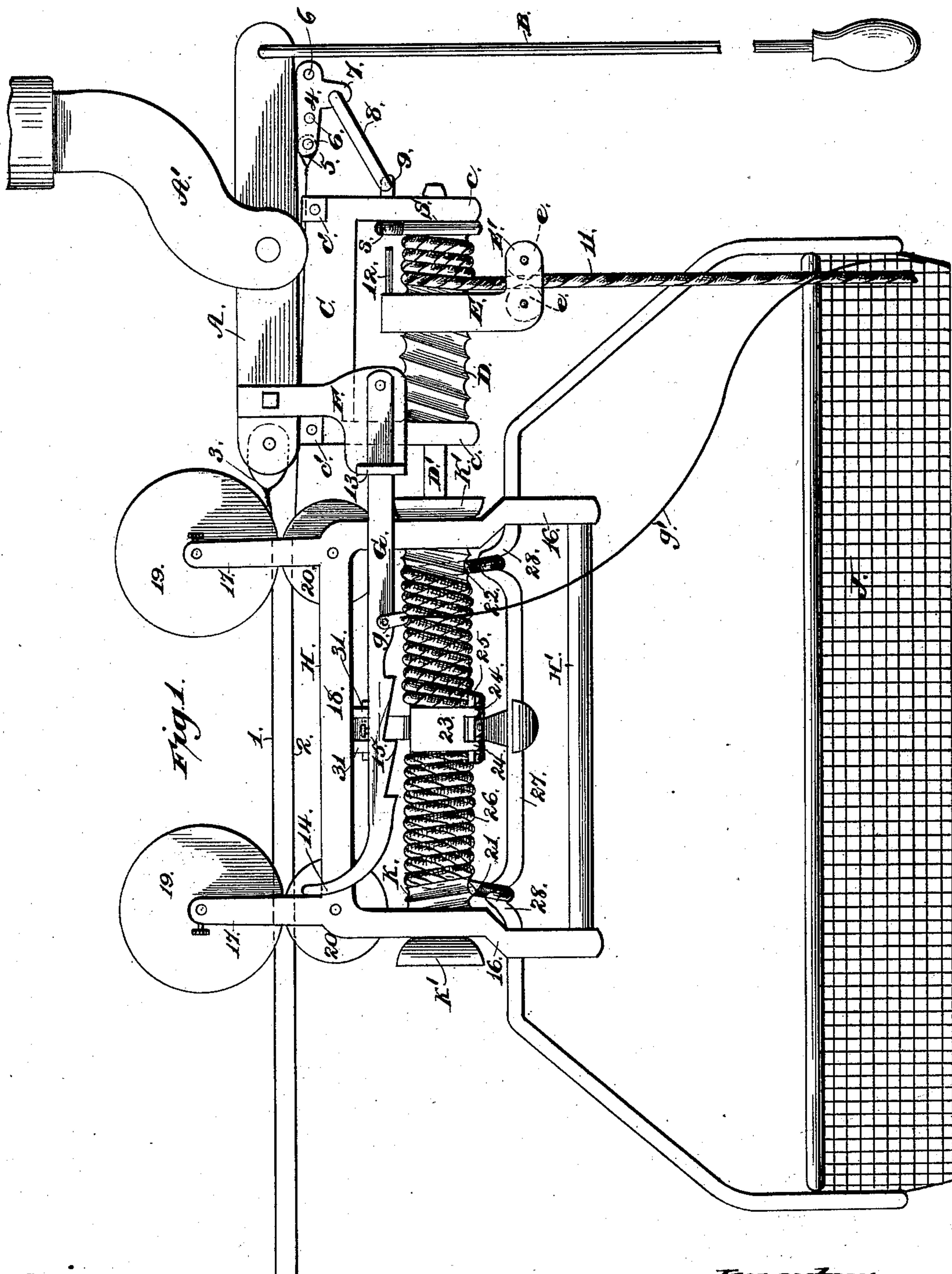
2 Sheets—Sheet 1.

S. W. BARR.

CASH AND PARCEL CARRYING APPARATUS.

No. 384,113.

Patented June 5, 1888.



Witnesses:-

Wm. R. Stewart
John R. Stewart

Inventor:-
Samuel W. Barr.
By *Amos*
Atty.

(No Model.)

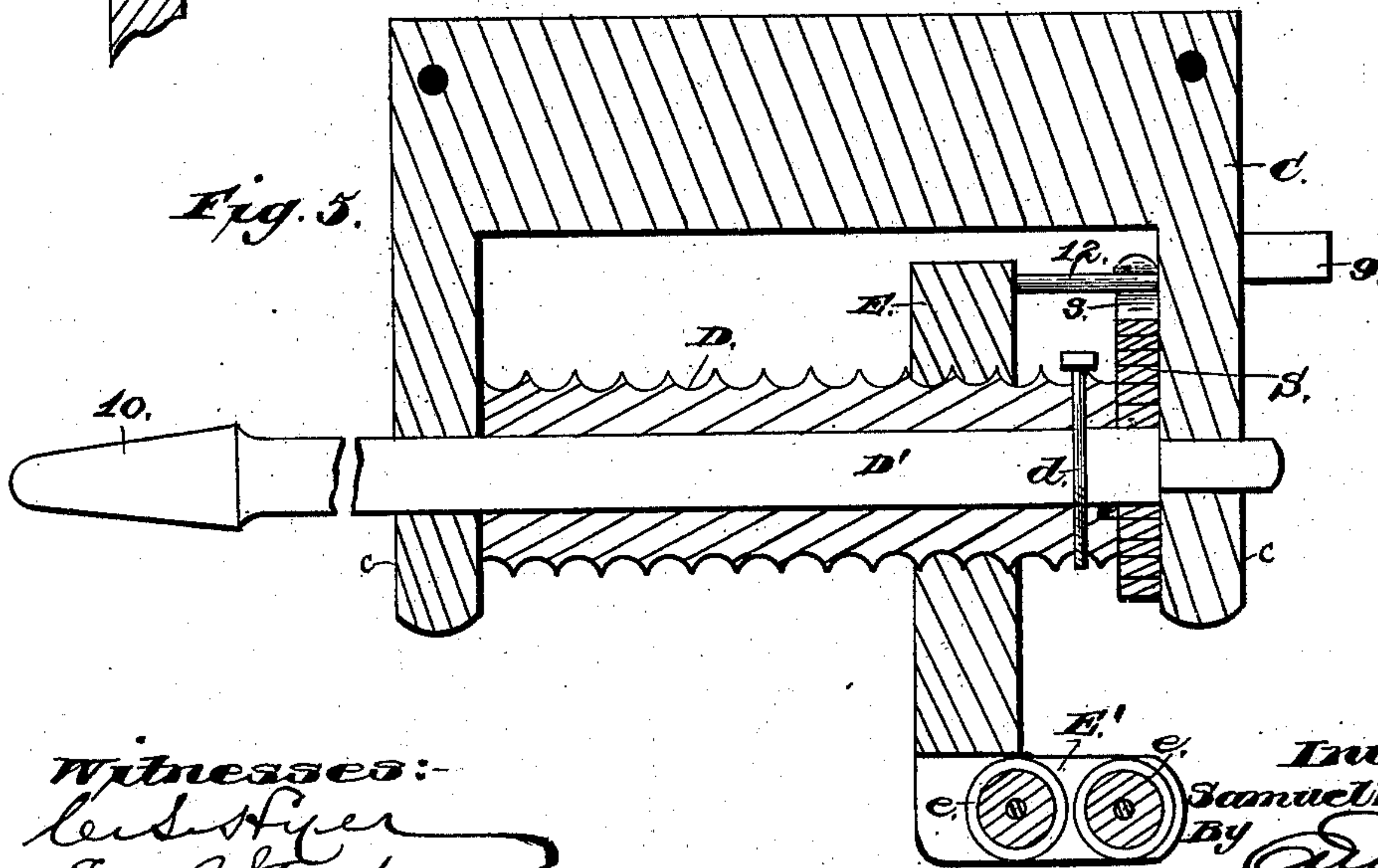
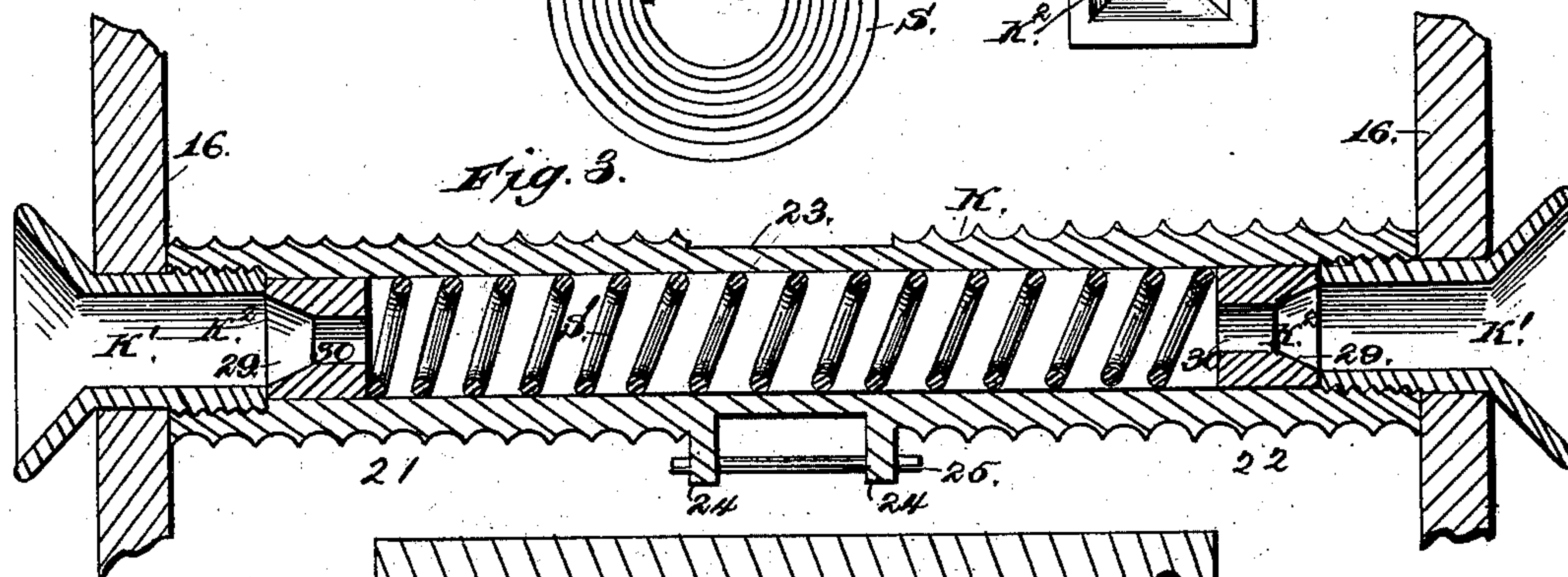
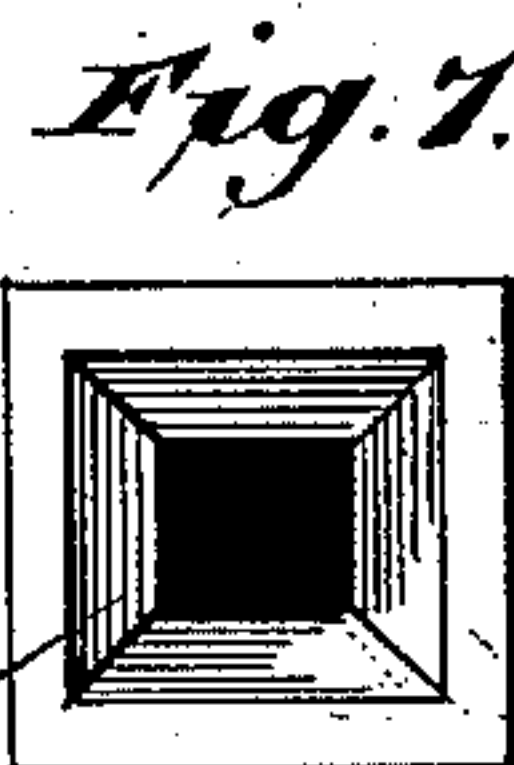
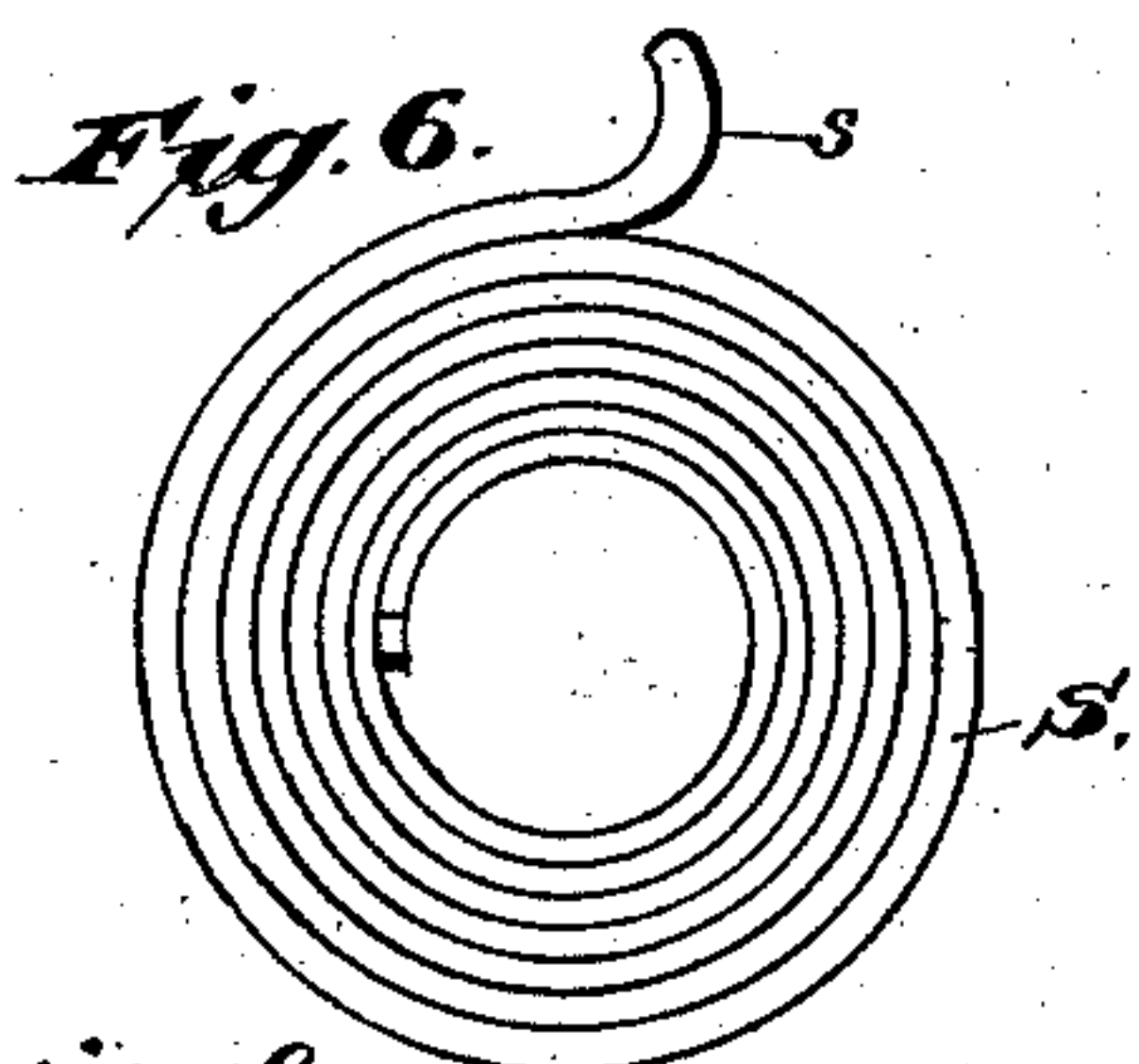
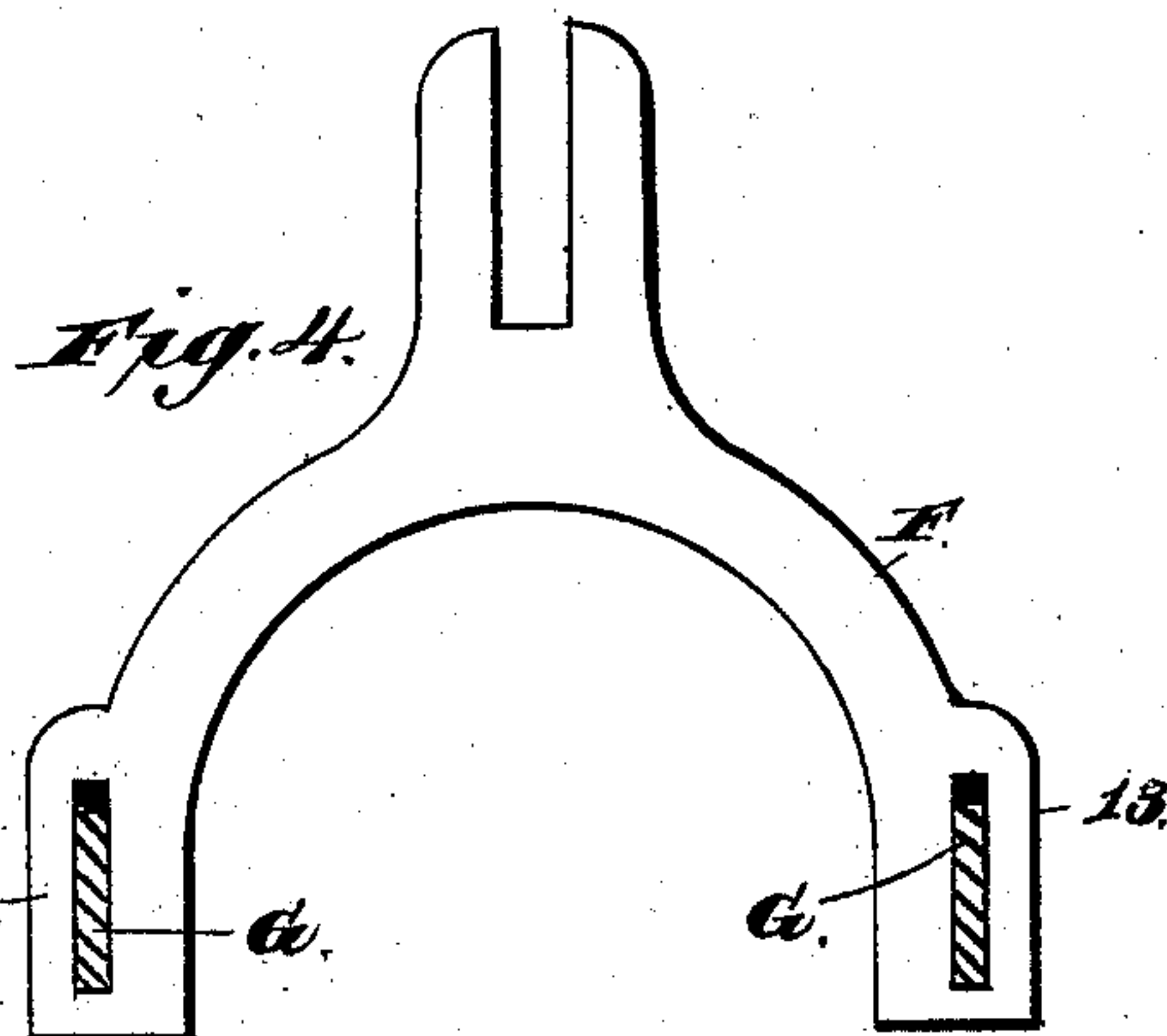
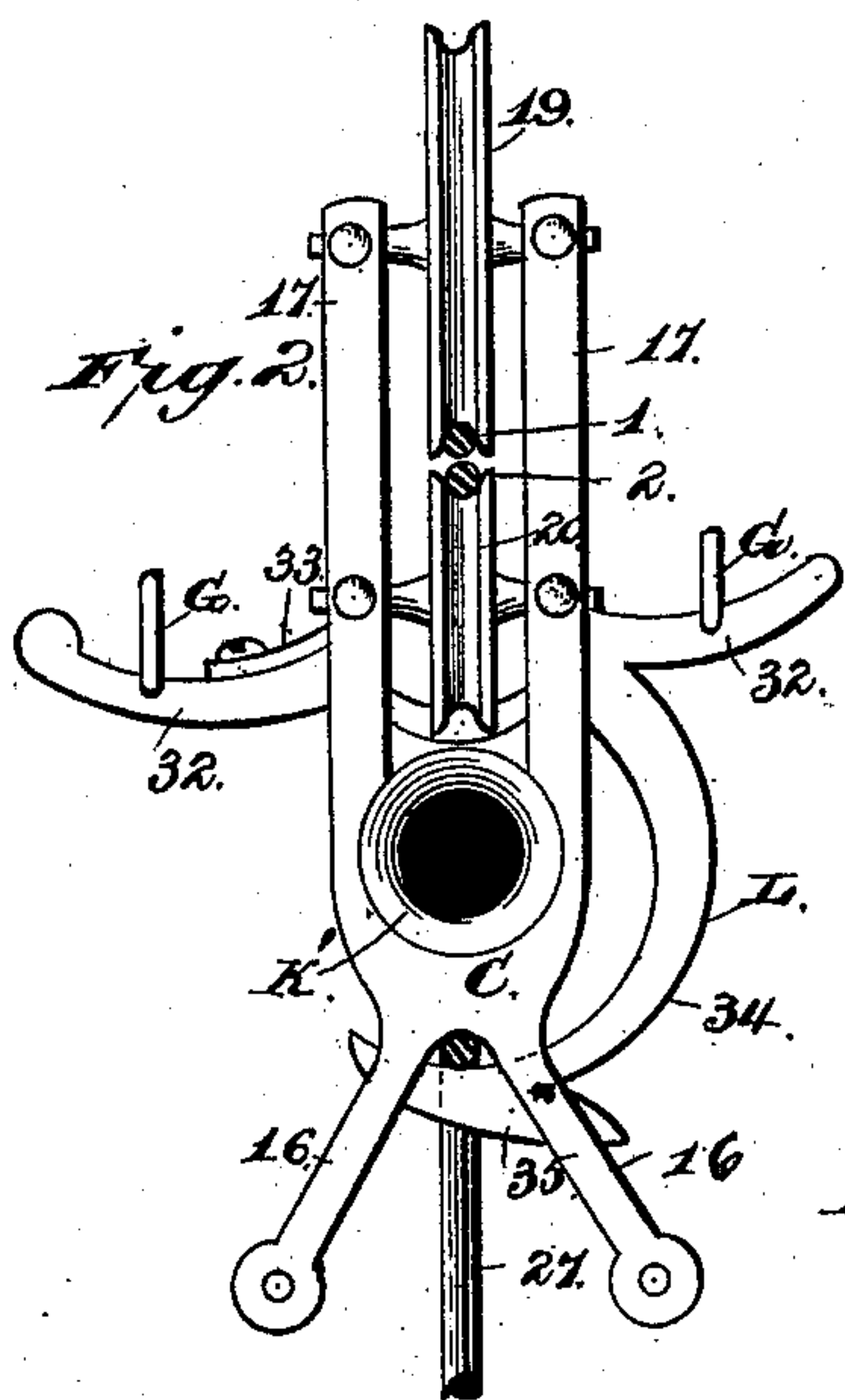
2 Sheets—Sheet 2.

S. W. BARR.

CASH AND PARCEL CARRYING APPARATUS.

No. 384,113.

Patented June 5, 1888.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL W. BARR, OF MANSFIELD, OHIO.

CASH AND PARCEL CARRYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 384,113, dated June 5, 1888.

Application filed January 21, 1887. Serial No. 224,926. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL W. BARR, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Store-Service Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to store-service apparatus; and it consists in the construction and arrangement of the parts, which will be more fully hereinafter described, and pointed out in the claims.

The object of my invention is to provide a store-service apparatus to be used in stores and other mercantile houses for the transportation of cash and parcels to and from different places, wherein a novel construction of carriage, windlass, and carriage-securing mechanisms are used and relatively mounted. I attain this object by the mechanism illustrated in the accompanying drawings, wherein like letters and figures of reference indicate similar parts in the several views, and in which—

Figure 1 is a side elevation of my improved store-service apparatus, showing the car in position at the clerk's station and ready for lowering the basket. Fig. 2 is an end elevation of the car, showing the hook for retaining the basket-bail. Fig. 3 is a longitudinal vertical section of the barrel or drum for carrying the cord of the basket, and also showing the mechanism for checking the car. Fig. 4 is a detail view in front elevation of the latch-bar stirrup or yoke. Fig. 5 is a longitudinal vertical section of the windlass-supporting frame and bumper-rod shown in position, and the coiled spring for arresting the play-out of the winding-cord. Fig. 6 is a detail view in front elevation of said coiled spring. Fig. 7 is a detail view in front elevation of one of the sliding bumper-blocks.

A indicates a lever, which is pivotally mounted in a hanger, A', suitably secured to the wall, frame-work, or ceiling of a building. To the front portion of the lever A one of the track-wires, 1, is secured to a pivoted block, 3, mounted in the end thereof.

Below and in the rear of the pivotal point of the lever A a lug, 4, is pivotally secured to

said lever, in the front end of which a block, 5, is pivotally mounted in a recess or slot formed through the lug, to which the lower track-wire, 2, is secured and adjusted by the movement of the said block 5 in the slot. The rear portion of the lever A has a pull, B, secured thereto, which depends downward to such a distance as to be convenient and accessible to the salesman or other person wishing to operate the carrier and set it in motion. Two or more apertures, 6 6, are formed in the lug 4, to provide means whereby the swivel-block 5 may be adjusted by removal from connection with one of the apertures 6 and attached to another to take up any slack in the wire which would likely occur by straining. On the lower rear part of the said lug 4 a projection, 7, is formed and provided with an aperture, in which one end of a coupling-link, 8, is secured, the other end of the said link being attached to a projection, 9, formed on the rear side of the windlass-supporting frame-work C. This windlass-frame C is provided with two legs, c c, which are formed by recessing the lower portion of the said supporting-frame C. Between said legs c c a windlass, D, is mounted and is held in revolving connection therewith by means of an elongated bumper-rod, D', which passes entirely through the front leg c and the windlass D, and is stepped into the rear leg c, as fully illustrated in Fig. 5. The front end of the rod D' projects outward some distance away from the front leg c of the frame C, and has an enlarged head, 10, preferably of square configuration, formed on its front end, for a purpose which will be more fully hereinafter described.

The windlass D is keyed to the rod D' by a screw, d, passing transversely through the windlass and the rod D', and, projecting slightly above the surface of the said windlass, is provided with a head, to which one end of the winding-cord, which is adapted to pass around said windlass, is attached. The outer surface of this windlass D has the configuration of a screw-threaded corrugated surface, preferably a left screw; and a winding-cord, 11, which surrounds the said windlass, is adapted to fall into the corrugations when coiled.

At the rear of the windlass D and adjacent to the rear leg c a coiled spring, S, is mounted,

through which the rod D' also passes, and which acts as a bearing-surface therefor. The upper end of the said spring S projects upward and is bent to form a hook, s, and the inner end thereof is secured in a recess in the end of the windlass D, as will be readily understood. The hooked end s of the spring S is adapted to be engaged by a pin, 12, mounted in the upper portion of a movable hanger, E, which is formed with an inner screw-threaded surface to engage with the outer screw-threaded surface of the windlass D, and moves backward and forward thereon as the said windlass is revolved by the pull-cord 11. The lower portion of the hanger E is formed with an angular projection, E', which is slotted; and in said slotted portion thereof two friction wheels or rollers, e e, are mounted, through and between which the winding-cord 11 passes and is given an easy motion thereby. The upper portion of the frame C is provided with clips c' c', through which the lower track-wire, 2, passes and from thence runs on to any other suitable attaching-point, which may be similar to the one illustrated and heretofore described. The frame C, embracing the parts described in connection therewith, hangs on the lower wire, 2, and is held stationary relatively to the lever A by the link 8.

To the front end of the lever A a stirrup or yoke, F, is bolted, as shown in Figs. 1 and 4 of the drawings, which extends downward on either side of the frame C, but not impinging against it at any point. This yoke F is provided with lugs 13 13, formed on the front or outer sides of the legs thereof, said lugs having apertures formed therein, through which the ends of toothed latch-bars G G pass, and are pivotally mounted in connection with each side of the said yoke. These latch-bars G extend out from the forward end of the yoke F, and are formed with upwardly-curved ends 14 and provided with teeth 15 on their lower edges. These latch-bars G remain stationary at the several stations, being automatically operated to retain the carriage at the said stations. On one of the latch-bars G a link, g, is pivoted to the side thereof, to which a small cord, g', is attached and looped around or otherwise secured to the pull-cord 11. By drawing down on the cord g' the latch-bar is caused to press down on one of the arms 32 of the bail-attaching device L and release the hook 34 from the bail, which will allow the basket to descend by gravity.

The carriage consists of a frame, H, which is constructed with lower depending arms or legs, 16, and upwardly-extending arms 17, which are formed integral with horizontal strips 18. In the upper arms, 17, the upper and lower track-wheels, 19 and 20, are axially mounted, the lower wheels, 20, being of smaller diameter than the wheels 19, so as to make the construction of the carriage entire less cumbersome and more compact. The lower arms, 16, are formed to project outward at an angle to the frame H, and have cylindrical wooden bars H'

connected to the lower portions thereof, which act to prevent wear of the cord in its ascent and descent, attached to the bail of the basket or parcel-receptacle.

Between the arms 16 a hollow cylindrical barrel or drum, K, is mounted, which is formed with right and left screw-threaded corrugated outer surfaces, as 21 and 22, which are separated by a central portion of the said cylinder 33, which is formed without screw-threads or corrugations, and provided with lugs or projecting ears 24 24, through which a pin, 25, is adapted to pass. The cord 26, which is attached to the bail 27 of the basket or parcel-carrier J, passes over the cylinder K, the coils thereof engaging with the right and left corrugations, the two ends of the said cord 26 being attached to loops 28, formed in the top portion of the bail 27. The said cord thence passes down at the central part of the cylinder K under the lugs or ears 24 back of the two ends of the pin 25, which acts to retain the cord in securement with the cylinder.

In the ends of the cylinder K flared hollow heads K' K' are secured by means of screw-threads formed on their inner ends, which engage with the screw-threaded ends of the said cylinder K and form bearings for the said cylinder in its revolution by passing through the lower portion of the frame H. Just inside of the heads K' sliding blocks K² are mounted, which are normally held against the heads K' by a spiral spring, S', mounted in the hollow portion of the cylinder K, and which bears against the inner ends of the said blocks K². The blocks K² are formed with square recesses 29 in their ends adjacent to the heads K' and register with the apertures in the said heads, and from thence the said recesses 29 taper inward toward the center of the said blocks and unite with smaller recesses, 30, (also of square form,) and which pass entirely through said blocks, and are of equal diameter throughout. The end of the bumper-rod D' is adapted to pass through the opening of either of the head-blocks K' and into the openings or recesses in the blocks K², and, acting against the spring S', cushions the carriage as it arrives at the several stations, and also as a means of uniting the cylinder K with the windlass D through the medium of the square head 10 of said rod D' and the square recesses in the sliding blocks K².

Formed with the central portions of the horizontal strips 18 are lugs 31 31, in which the bail securing device L is pivotally mounted. This device L is formed with arms 32 32, extending out on each side of the carriage-frame H, one arm having a flat spring, 33, secured thereto, the other end of which passes up under and between the lugs 31 and acts to keep the device L entire in a vertically-depending position to adapt it to readily engage with the basket-bail. A hook, 34, is formed with the arms 32 32, which depends downward, and is formed of a curved configuration and passes down under the carriage-frame H and has a

bearded hook, 35, formed on its end, which is normally situated under the drum K. The cords 11 and 26 are so attached to the windlass D and cylinder K that when the one unwinds the other winds around either one or the other of said parts, and vice versa.

Under the above construction the operation of my improved store-service apparatus is as follows: As shown in Fig. 1 of the drawings, the carriage is illustrated as retained at one of the stations. If it is desired to allow the basket J to descend to receive a parcel or cash, the operator draws down on the cord *g'*, which is looped around the cord 11 within easy reach of the said operator. By drawing down on the cord *g'* the bail of the basket is released from the hook 34, as heretofore described, and when said bail is released from the said hook and the basket descends the cord 11 is allowed to gradually slip through the hand and wind around the windlass D, the basket descending by gravity to the counter to receive a parcel or package. When the cord 26 in its descent unwinds from the drum K, the windlass D is revolved in the same direction through the medium of the bumper-rod D', as heretofore described. Owing to the construction of the windlass D, the connection between said windlass and cylinder K and the manner of winding the cords 11 and 26 thereon, the cord 26, which is unwound from the cylinder K in the descent of the basket, will, as a matter of necessity, revolve the cylinder K, which transmits motion to the windlass D, and the rope 11 will wind around the said windlass and the movable hanger E will move forward toward the front leg *c* of the frame C as the said rope or cord 11 moves ahead by winding. When the parcel or cash has been placed in the basket J, and it is desired to raise the basket to connect with the carriage for transmission to another station, the operator pulls the cord 11 and unwinds the same off of the windlass D, and by the unwinding revolves the drum of cylinder K in the same direction through the medium of the bumper-rod D' and winds the cord 26, attached to the bail of the basket around said cylinder, and brings the bail 27 under the hook of the bail-attaching device L and forces it slightly to one side until the said bail 27 passes over the end of the hook, and, passing the same, it is forced under the bail by the spring 33, mounted on the top of one of the arms 32 of the device L, and the basket retained in connection thereby with the carriage H. When the windlass D has been thus revolved in raising the basket, the hanger E moves back over the windlass D, and the several parts are so adjusted that the pin 12 will engage with the hook *s*, formed on the end of the spring S, and prevent the cord 11 from being entirely unwound from the windlass D, allowing a few coils thereof to remain thereon, which can be further unwound from the windlass D against the resilient action of the spring S in case the basket-bail has not been raised high enough to

engage with the bail-attaching device L. When the said bail 27 has become engaged by the device L, the cord 11 is recoiled on the windlass D by the action of the spring S. By means of this retained surplus of coils of the cord 11 the windlass D can thereby always be operated to set the cylinder K in motion, as will be readily understood. When the bail 27 has been secured to the bail-attaching device L, the carriage H is ready for transmission to the desired station. To propel the carriage or set it in motion, the pull B is drawn downward and throws the lever A upward, and the said lever lifts the yoke or stirrup F, which in turn raises the latch-bars G from engagement with the arms 32 32 of the bail-attaching device L, and thereby releases the carriage from connection with the stationary windlass-frame C. In raising the lever A the wires 1 and 2 are spread apart to propel the car in the desired direction to the next station, the means and manner of doing which are fully set forth in Patent No. 357,449, granted to me February 8, 1887. The carriage having arrived at the desired station is in like manner engaged by latch-bars G G, arranged in a yoke similar to F, which engages with arms 32 32 and retains the carriage at said station, when the basket may be lowered, if necessary, as heretofore described. At the cashier's desk, or central station, a device the parts of which are similar to the windlass-frame C, having a bumper-rod, D', and attaching-latches G, is arranged in a manner similar to that represented in Fig. 1 of the drawings, so that the means for receiving, retaining, and returning the carriage at said station will be substantially the same as those described for sending the carriage thereto, except the windlass D and the means for operating the same.

I make no broader claim or claims than those hereunto annexed for the construction and arrangement or combination of these several parts of my improved apparatus; but it is obvious that minor changes in the construction and arrangement of its various parts can be made and substituted for those herein disclosed without departing from the nature or principle of my invention.

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

1. In a store-service apparatus, the combination of the windlass mechanism, the carriage, revolving hollow cylinder having right and left spiral corrugations on its outer surface, the flexible support, and the receptacle, said cylinder also having inclosed spring-controlled blocks near its ends to cushion said carriage when struck by the said windlass mechanism, substantially as described.

2. In a store service apparatus, the combination of a carrier, a cylinder mounted and journaled therein and provided with right and left spiral corrugations and with spring-actuated buffers located interiorly and near its ends, a windlass provided with spiral cor-

rugations extending to the left, a stationary frame supporting said windlass, and a rotating bumper-rod connecting said cylinder and windlass, substantially as described.

3. In a store service apparatus, the combination of a carrier, a way therefor, a cylinder mounted in said carrier and provided with right and left spiral corrugations, a flexible support secured to said cylinder, a receptacle attached to said flexible support, a suspending and detaching hook pivoted in said carrier and having projecting arms, a stirrup or yoke provided with pivoted latch-bars, a windlass provided with spiral corrugations extending to the left, a stationary frame supporting said windlass, and a rotating bumper-rod connecting said cylinder and windlass, substantially as described.

4. In a store service apparatus, the combination of a way, a movable carrier mounted upon said way and comprising a frame, a revolving cylinder mounted therein, provided with right and left screw-threaded corrugations on its surface, and having inclosed spring buffers situated near its ends and resting against a spiral internal connection, a flexible support adapted to be coiled on said cylinder, a parcel-receptacle attached to said flexible support, a hook for suspending and releasing said receptacle, latch-bars secured to a tilting lever, a windlass mounted in a stationary frame, a recoiling-spring, and a hanger mounted on the windlass to control the pull-down cord, and a rod rigidly secured in the windlass by a transverse pin provided with a rectangular buffer end, connecting the said carrier and windlass, substantially as described.

5. In a store-service apparatus, a traveling carrier, a revolving cylinder mounted in said carrier and provided with right and left spiral corrugations with interior-cushioned buffers near its ends, and with a cord-retainer at or near its mid-length, in combination with the cord, the receptacle, the windlass and the bumper-rod, and devices for operating the same, substantially as described.

6. In a store-service apparatus, the combination of a lever pivotally mounted in a hanger, and having a pull connected to its rear end and the upper track-wire to its forward end, an adjusting-link secured to the under rear portion of said lever, and having the lower track-wire connected to its forward end, a windlass-frame, a coupling-link connecting said windlass-frame and the adjusting-link, and clips secured to the upper part of the said windlass-frame, through which the lower track-wire passes, substantially as described.

7. In a store-service apparatus, the combination of a windlass-frame secured to a lever pivotally mounted in a hanger, a windlass having an outer screw-threaded corrugated surface, a bumper-rod passing through the legs of the frame and the windlass, a spring mounted on said rod between the rear portion

of the windlass and the rear leg of the frame, and having a hook formed on its upper end, and a hanger constructed to move over the outer screw-threaded surface of the windlass, and having an angular projection formed on its lower end, in which friction-rollers are mounted, between which the operating-cord passes, substantially as described.

8. In a store-service apparatus, a carriage comprising a supporting-frame having two sets of upper and lower track-wheels on its upper arms, a cylinder mounted in the lower portion of said frame, having its outer surface formed with right and left screw-threaded corrugations and adapted to receive the cord of the basket-bail, and wooden friction-bars mounted in the lower arms of the said frame, substantially as described.

9. In a store-service apparatus, the combination, with a carriage having a supporting-frame, of a cylinder mounted in the lower part of the said frame, having its outer surface provided with right and left screw-threaded corrugations, which are separated by a plane surface, and projections or lugs formed with said plane surface, having a pin passing there-through, whereby the bail-cord is secured to the said drum, substantially as described.

10. In a store-service apparatus, the combination of a carriage frame-work, a hollow cylindrical drum or barrel mounted therein, hollow heads screw-threaded in the ends of said drum and forming bearings therefor, sliding blocks provided with internal square recesses adapted to be engaged by the square head of the bumper-rod, situated adjacent to and in the rear of said heads and adapted to move in the drum, and a coiled spring situated between said sliding blocks in the cylinder or drum, substantially as described.

11. In a store-service apparatus, the combination, with a lever, A, of a yoke, F, secured thereto, latch-bars G, pivotally mounted on each side of said yoke, having their forward ends, 14, upwardly curved and their lower edges provided with teeth 15, and a bar, g, mounted on one of said latch-bars, having a cord, g', secured thereto, substantially as described.

12. In a store-service apparatus, the combination, with the carriage-frame H, having a longitudinal strip, 18, provided with lugs 31, of a bail-attaching device, L, having arms 32 in its end, a hook, 35, formed on the lower end of the curved depending portion 34 thereof, and a spring, 33, secured to one of said arms and passing up under and between the lugs 31, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL W. BARR.

Witnesses:

CHARLES S. HYER,
TOM R. STUART.