

(No Model.)

5 Sheets—Sheet 1.

L. G. BOSTEDO.
CASH AND PARCEL CARRIER.

No. 559,095.

Patented Apr. 28, 1896.

Fig. 1.

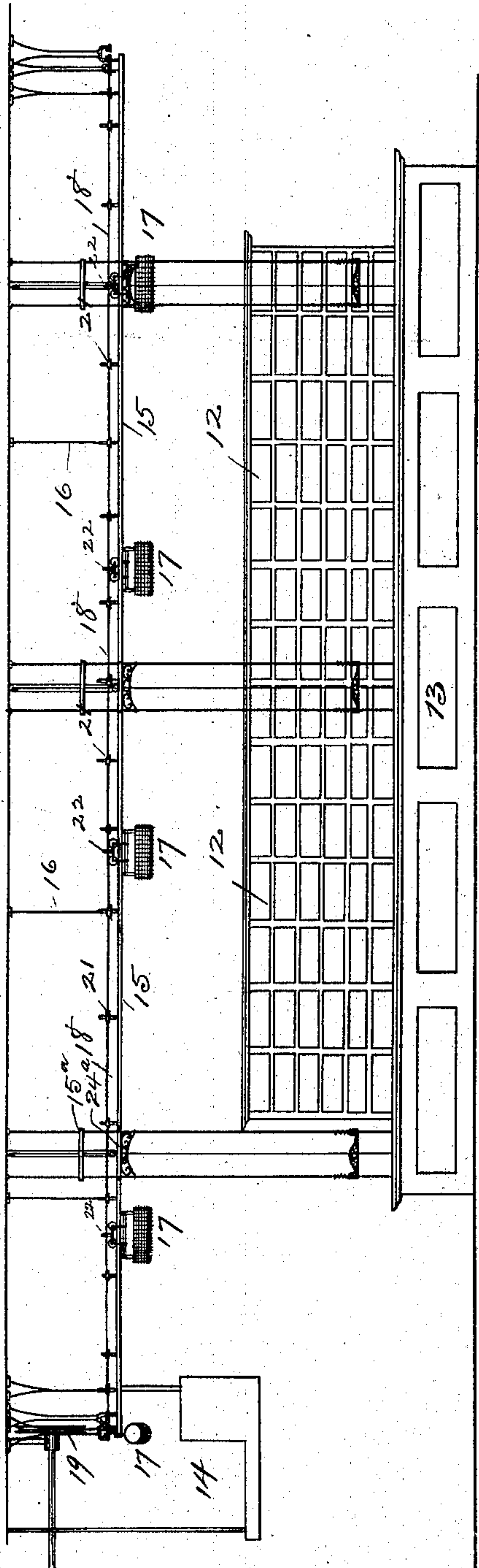
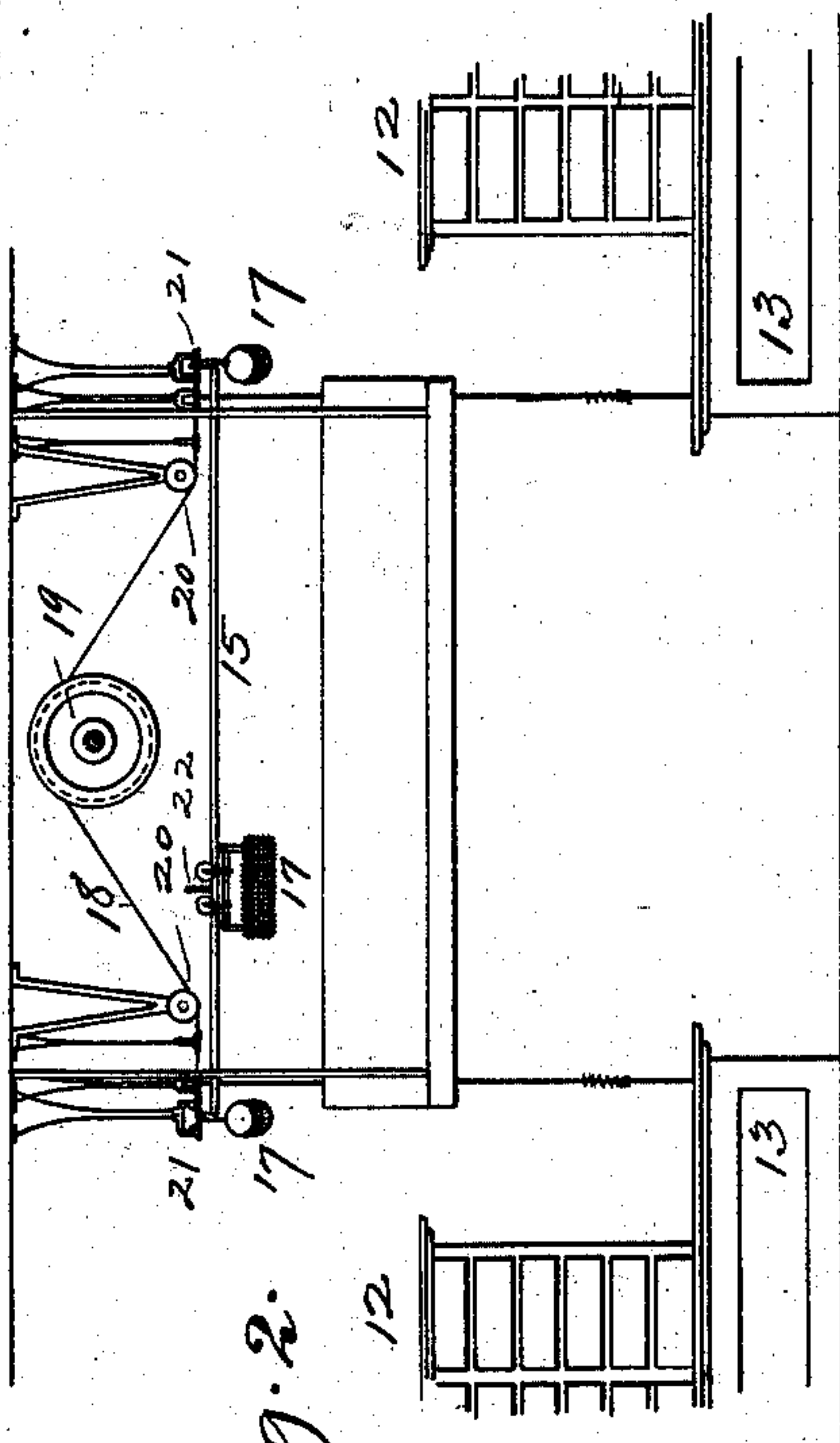


Fig. 2.



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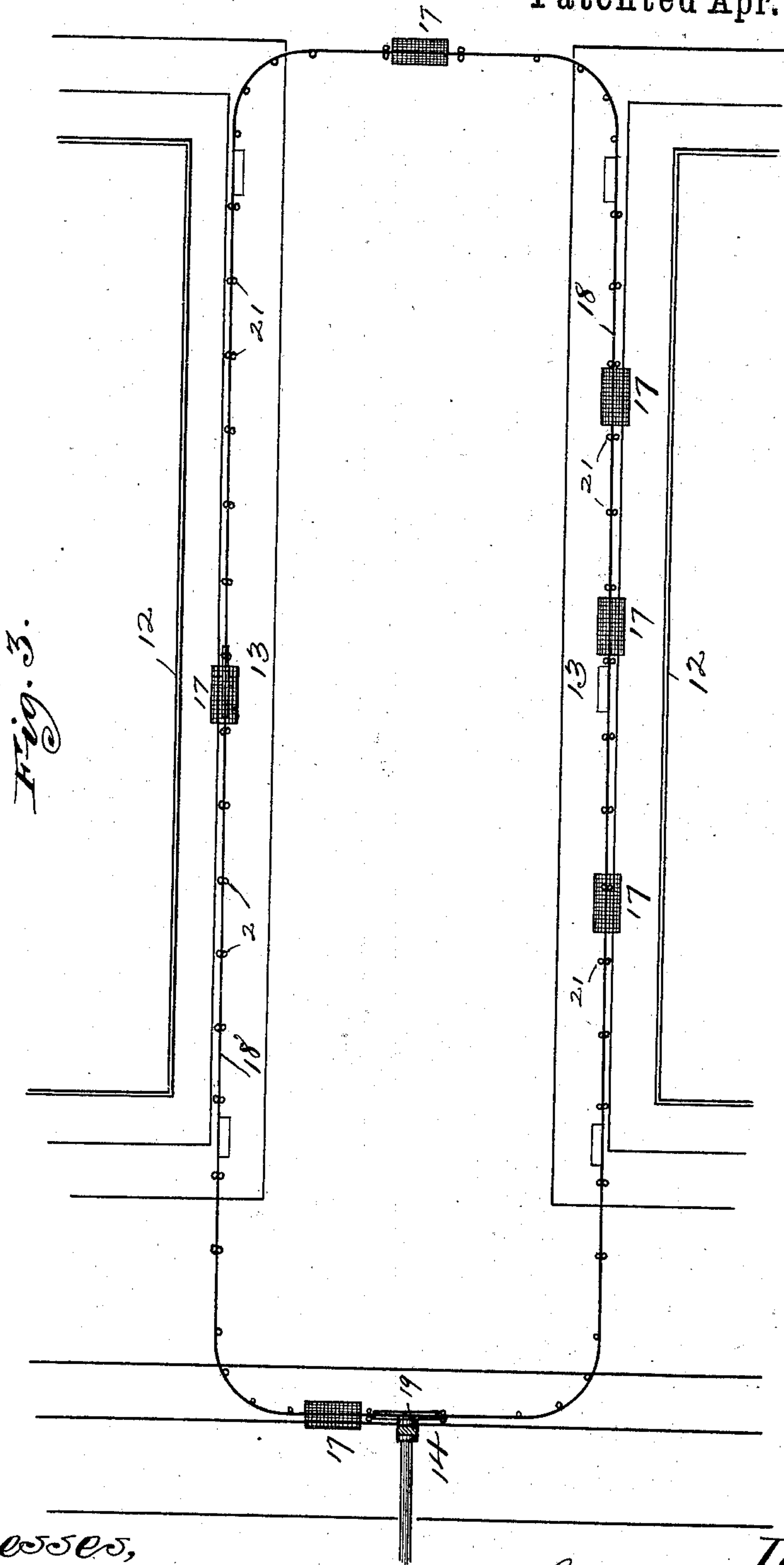
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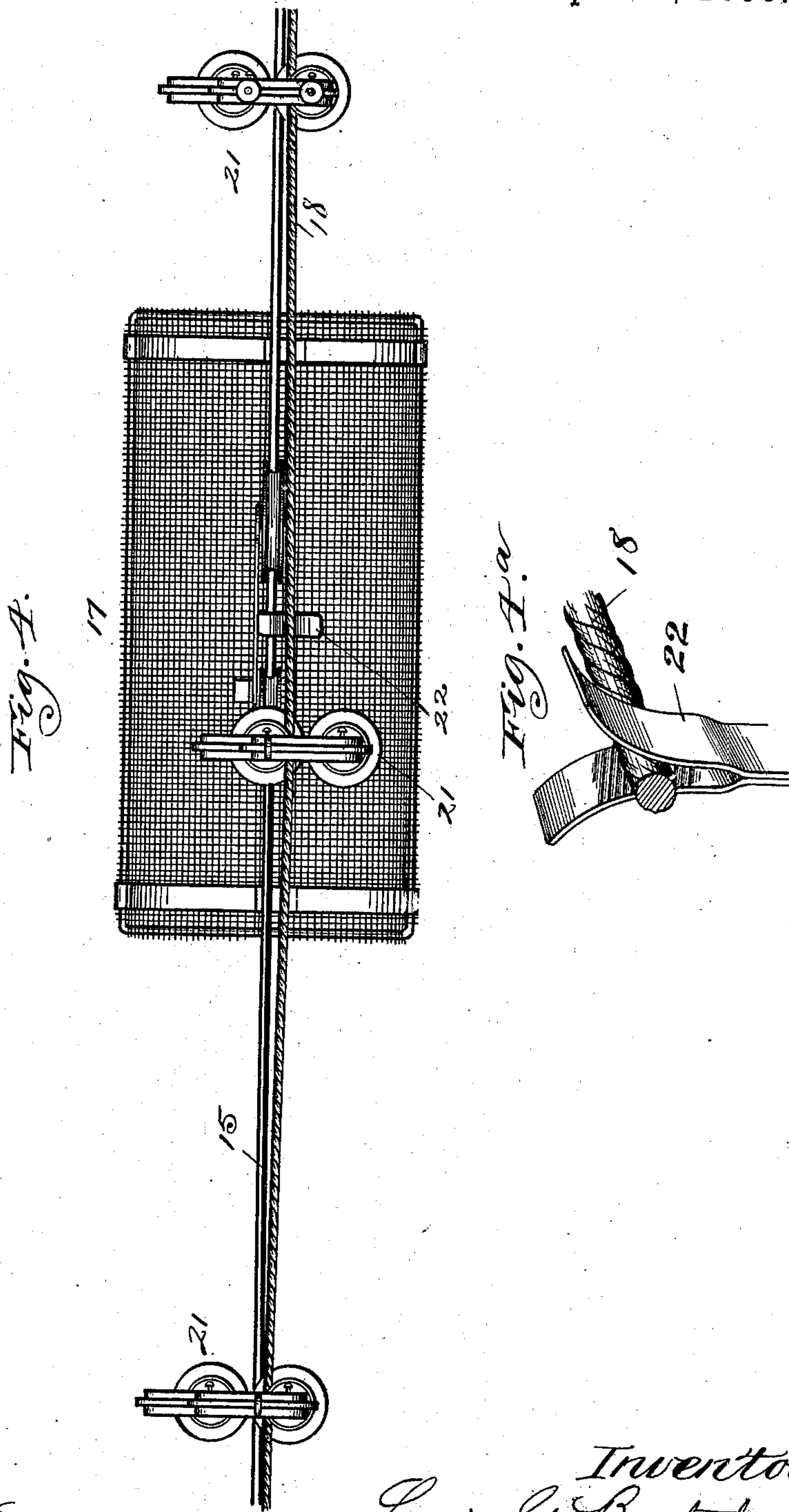
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Fig. 5.

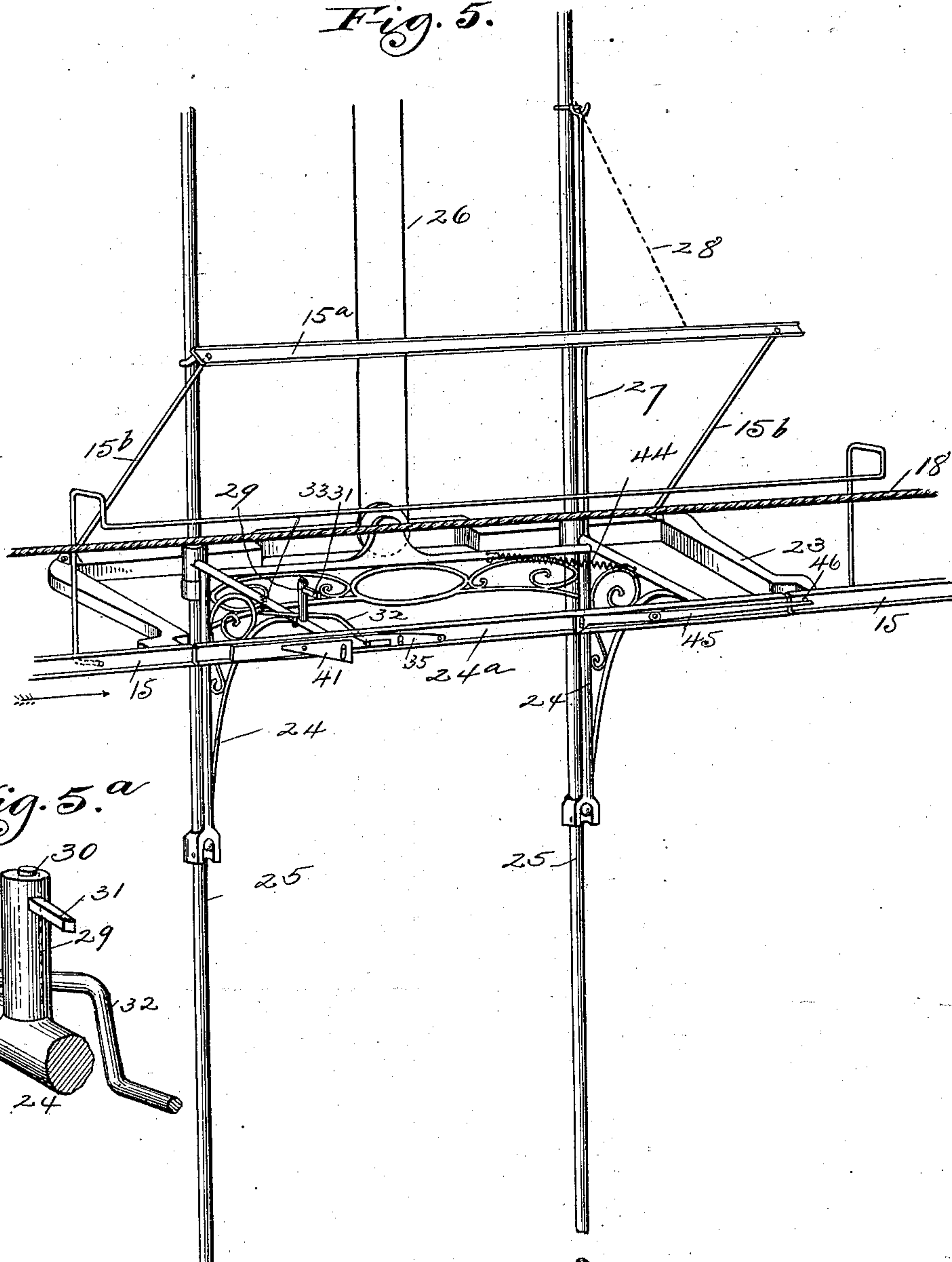
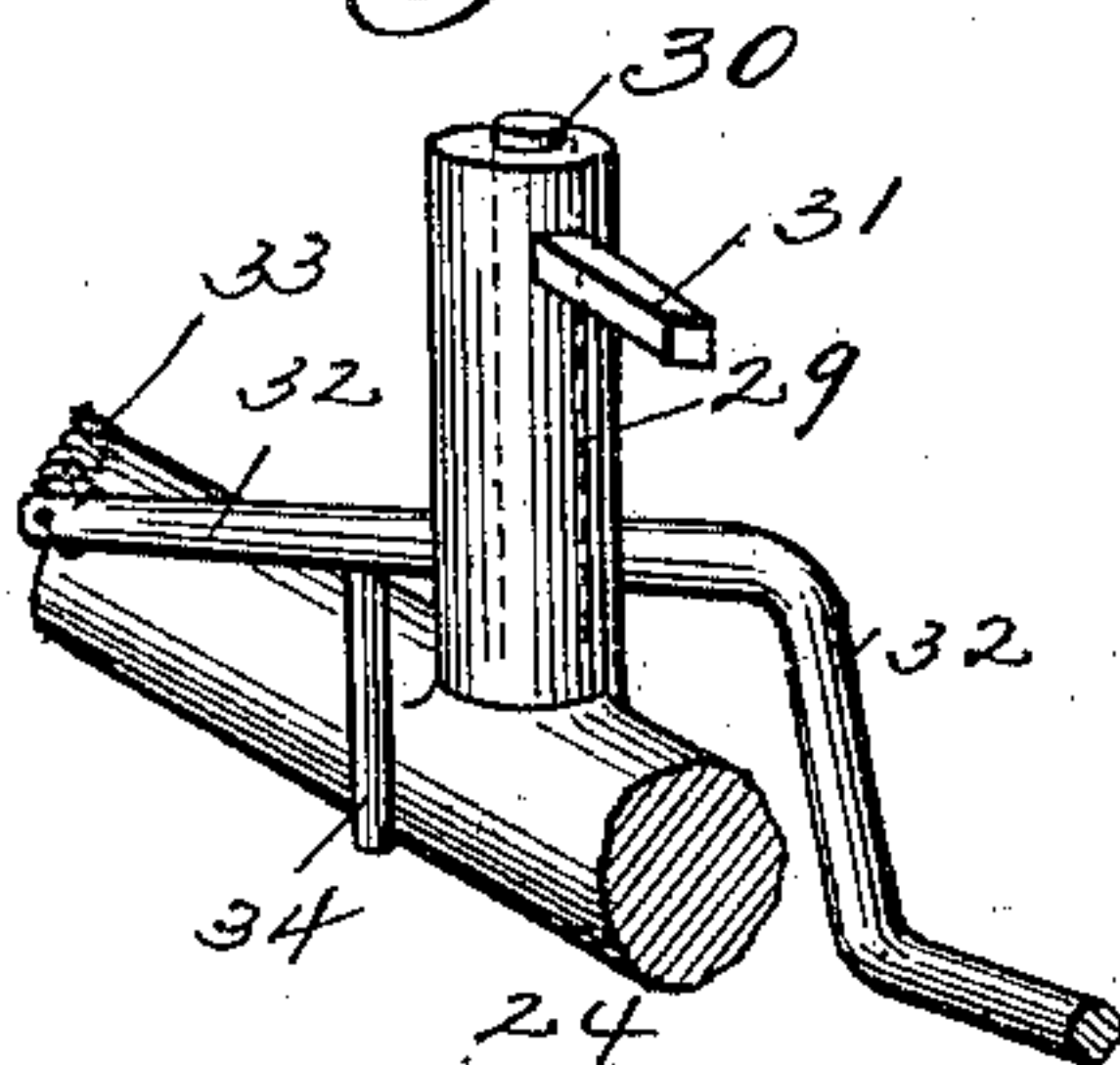


Fig. 5.^a



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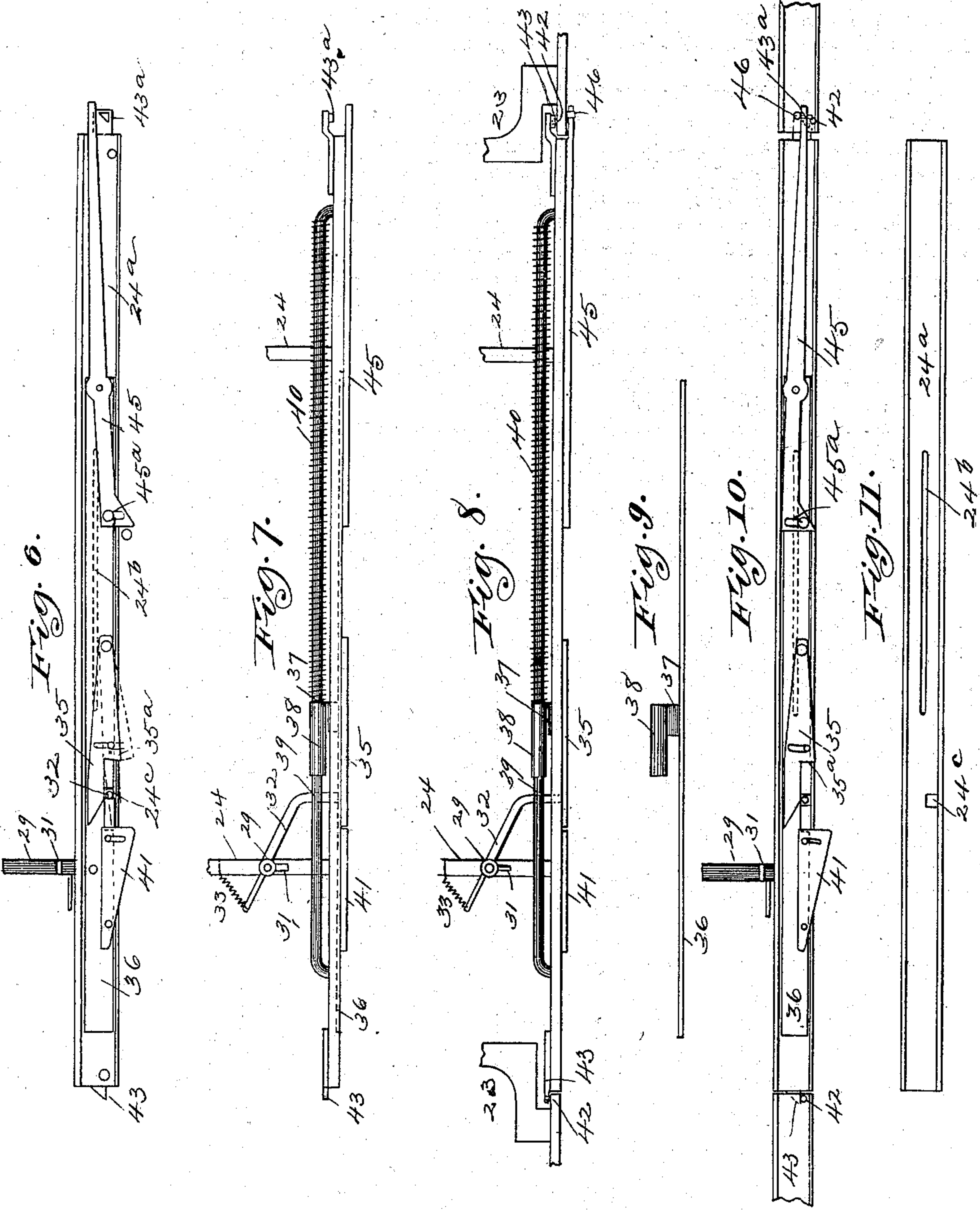
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UNITED STATES PATENT OFFICE.

LOUIS G. BOSTEDO, OF CHICAGO, ILLINOIS.

CASH AND PARCEL CARRIER.

SPECIFICATION forming part of Letters Patent No. 559,095, dated April 28, 1896.

Application filed August 22, 1891. Serial No. 403,390. (No model.)

To all whom it may concern:

Be it known that I, LOUIS G. BOSTEDO, of Chicago, Illinois, have invented certain new and useful Improvements in Cash and Parcel Carriers, of which the following is a specification.

It is the object of my invention to provide a cash and parcel carrier apparatus which shall be simple and economical in construction, as well as certain and rapid in operation. To attain this object I employ an elevated track or way and carriers adapted to move upon said way, an elevator for lifting the carriers to and lowering them from said way, and a constantly moving propelling-cable supported adjacent to the way and adapted by suitable friction devices, preferably affixed to the carriers, to be operatively connected with the carriers, whereby the latter may be moved upon the way and caused to pass a wrapping-station or cashier's desk and from thence returned to the salesman's station from whence such carrier was despatched, and suitable selective devices whereby the carriers are arrested at their respective stations and automatically disconnected from the cable and lowered. I preferably employ wheeled carriers having baskets or goods-receptacles and a metal track-rail with stations along the track at the several counters and an elevator at each station. I also employ at each of the elevators a movable track-section, which is lifted out by the elevator as it passes up with the carrier and is replaced as the elevator descends. The carriers are thus lifted directly from below up through the opening in the track and in such position that the friction-grips with which they are provided engage the cable. There is also preferably employed in the apparatus a suitable selective device at each station, whereby the carrier will be locked upon the elevator and the latter unlocked from the track and thus permitted to drop with the carrier vertically away from the cable, releasing the latter from its grasp. The frictional engagement of the cable with the jaws caused by the strain of the former and the converging of the latter is sufficient to operatively connect the two together without the employment of projections or catches upon the cable, which would interfere with its successful operation, as such projections would tend to

throw the cable off of the sheaves around which it passes.

In the accompanying drawings, Figure 1 is a view in side elevation of my improved apparatus as applied to use, a counter and shelving, as well as a wrapping-station, being shown. Fig. 2 is an end view, and Fig. 3 is a plan view, of the same. Fig. 4 is a plan view of one of the carriers and showing a section of the propelling-cable with three pairs of supporting-sheaves. Fig. 4^a is a detail in perspective of the gripping-jaws. Fig. 5 is a perspective view of the track at one of the stations and showing a section of the track-rail removed and the elevator with its track-rail section bridging the gap. Fig. 5^a is a detail in perspective of the selective device. Figs. 6 to 11, inclusive, are views of devices employed for locking and releasing the elevator and carrier.

In the drawings, 12 represents shelving for goods, and 13 the sales-counters.

14 represents a wrapping-station and cashier's desk.

15 represents an elevated trackway, which may be suspended by hangers 16 from the ceiling. Said track is, preferably, a metal rail and will be adapted for the movement of wheeled carriers, as 17, or modified to adapt it to any other form of carrier which may be used.

18 represents an endless propelling-cable, which will be driven in any convenient way—as, for example, by passing it over the driving pulley or drum 19, it being suitably guided by the sheaves 20. This cable will be maintained at all times parallel to and preferably above the track-rail, and it is supported in the present instance by means of the grooved sheaves 21, which are arranged in pairs and with their faces in horizontal planes and at opposite sides of the path of the cable. These sheaves are best shown in Fig. 4 of the drawings, and it will be seen that where the cable runs straight, as in said figure, the sheaves are so arranged that the cable bears upon one sheave of each pair, and that the pairs are so arranged that the cable is supported by the lower flange of the sheave with which it is in contact, and that the sheave thus in contact is the inner one of one pair and the outer one of the next pair. This furnishes a very sim-

ple and convenient means for supporting the cable and one which operates with little friction. On curves these sheaves need not be employed in pairs.

5 The means for connecting the carriers to the cable comprise, in the preferred construction, a pair of jaws 22, which are flat pieces of bar-iron secured at their lower ends to the frame of the carrier and diverging at their
10 upper ends, so as to cause them to embrace the cable readily and certainly. The cable is so placed that when the carrier is upon the track the cable rests within the grasp of the jaws, and the latter will be separated only
15 sufficiently to enable the cable to enter, and the strain of the cable will cause it to draw down into the grasp of the jaws.

At convenient places along the sales-counter stations will be placed, each of said stations being provided with an elevator, such
20 as shown in Fig. 5, or of any other approved form. In the form shown in said figure, 23 represents a frame which surrounds the elevator well or shaft, and the ends of said frame
25 carry the ends of the track-rail 15. The elevator 24 is fitted to and slides upon the upright rods 25 and is raised by means of the cable 26. The track 15 has a movable section 15^a, which is pivotally supported on the
30 frame 23 by means of the rods 15^b. The elevator also carries a section of track-rail 24^a, which is adapted to bridge the gap left by the removal of the track-section 15^a, which occurs whenever the elevator is raised in order
35 to despatch a carrier, and is effected by means of the rod 27 and chain 28, the former being secured to and moved by the elevator.

There is provided at each station a selective device which is adapted to engage the
40 particular carrier belonging to that station, and I have adapted this selective device to unlock the elevator after the carrier has passed upon it. The selective device which I employ comprises a sleeve 29, which
45 turns freely upon a stud 30, carried by the frame of the elevator, and a tripping-pin 31, carried by the sleeve, is adapted to engage with a projection of the carrier, which will cause the sleeve to turn. Secured with this
50 sleeve is the bent arm 32, one end of which is yieldingly confined by the spring 33, the movement being limited by the stop-pin 34.

The rail-section 24^a carried by the elevator is longitudinally slotted, as seen at 24^b, and
55 apertured, as seen at 24^c. One end of bent arm 32 projects normally through the aperture 24^c, and in this position supports the free end of a pivoted latch 35, having a shoulder 35^a. This latch is pivoted to a sliding bar
60 36, Fig. 9, said bar having a lug 37, which slides freely in the slot 24^b and bears a sleeve 38, which slides on rod 39, carried by the track-rail 24^a. A spring 40 maintains the bar 36 at the forward limit of its movement until
65 the proper carrier, moving in the direction indicated by the arrow, Fig. 5, strikes the pin of the selective device, whereupon the end

of bent arm 32 is withdrawn from beneath latch 35, and the latter drops down, its shoulder 35^a engaging the carrier, and the impact
70 causes the bar 36 to slide back, compressing the spring. The latch 41 drops down behind the carrier, and the latter is thus prevented from running off the elevator in the direction from
75 which it entered. In this construction I utilize the impact or jar caused by arresting the carrier to unlock the elevator.

The elevator-frame, it will be seen, has sleeves sliding upon the rods 25, and this permits a slight torsional movement of the elevator with relation to said rods. The track-rail 15 has the pins 42, and the rail 24^a has the beveled lugs 43 43^a, which project from its respective ends. As the elevator ascends, these
85 beveled lugs strike upon the under sides of the pins 42, and when they pass above the plane of said pins they are drawn back, so as to rest upon them by the spring 44, extending diagonally between the frame members of the
90 elevator and exerting a normal tendency to return said frame to its normal position—that is, with its rail-section in line with the main track. Now when the carrier runs upon
95 the elevator and strikes the latch 35 it moves or shifts the elevator forwardly and in a direction parallel to the track-rail, thus freeing the beveled lugs 43 43^a from their supporting-pins and permitting the elevator to drop. The carrier will recoil by reason of the resiliency of the spring 40, and as it does so will permit the
100 bar 36 to return, during which the beveled end of latch 35 will ride up on the end of the bent arm 32 protruded through aperture 24, and thus said latch is held in its raised position, so as to permit the carrier to pass off
105 the elevator. Now it is essential in order to prevent the carrier from passing off the elevator prematurely to interpose a dog or stop at the discharge end of the elevator. I provide the pivoted locking-dog 45, which is pivoted to the sliding bar 36, its inner end being
110 heaviest and being slotted and working over a pin 45^a. Its opposite end projects beyond the end of the rail-section 24^a and is adapted to engage a pin 46 on the main track-rail 15
115 when the elevator is raised, so that its rail-section is in line with the main track-rail. This pin rocks the locking-dog upon its pivot and lifts its inner end so as to permit the carrier to pass; but when the elevator is released
120 and commences to descend the inner end of the lever drops down, so as to dog the carrier and bar its leaving the track during the lowering and raising of the elevator. This elevator, then, is adapted by means of the mechanisms above described to receive carriers
125 from one end, to confine them while the elevator is being lowered and again raised, and then to discharge them from the opposite end of the elevator.

In operation the salesman places the goods and cash in the carrier and then raises the elevator until its track-rail section registers with the track-rail 15, the free section 15^a be-

ing lifted out of the way as the elevator ascends, as before described. The jaws embrace the cable, and the strain on the latter causes it to be drawn down tightly into the grasp of the jaws, which thus connect the carrier and cable, and the former starts upon its journey. As the cable moves constantly and in the same direction the several carriers are carried successively around the track, and each arrives in due time at the wrapping-station. At this point they will be arrested and the goods and cash removed, the change and parcel returned to the carrier, and the latter placed so that its jaws again engage the cable, by which it will be carried to its proper station. Arrived there the selective device will cause the carrier to be locked upon the elevator and the latter to be unlocked, whereupon the elevator and carrier will descend by gravity, the carrier-jaws dropping away from and releasing the cable. The attachment and release of the carrier to and from the cable are automatic, and thus this apparatus, while simple in construction, can be used where gravity apparatus or those having initial starting devices cannot be used—as, for example, on long circuitous lines—and its track can be carried at various levels and may incline at various angles without impairing the certainty, ease, or rapidity of working.

I claim—

1. An elevated carrier apparatus, comprising in combination, a track or way having a removable track-section, an endless propelling-cable, carriers adapted to move on said way and having jaws to engage the cable, and a sliding carrier-elevator having a track-section to bridge the gap of the way, the carrier being adapted to be automatically released when the elevated track-section is in line with the main track, substantially as described.

2. An elevated carrier apparatus, comprising in combination, a track or way having a removable track-section, an endless propelling-cable, carriers adapted to move on said way and having jaws to engage the cable, and a sliding carrier-elevator having a track-section to bridge the gap left by the removal of the main track-section, and means for locking the elevator in the gap and for releasing it whereby it may be lowered with the carrier, substantially as described.

3. In an elevated carrier, the combination with an endless track or way having a removable track-section, a propelling-cable arranged in or about the vertical plane of the track, carriers adapted to move around said way and provided with jaws to engage the cable, and an elevator having a track-section adapted to bridge the gap in the main track left by the removal of its free section, said elevator being adapted to receive the carriers at one end thereof and to discharge them from

its opposite end with their jaws in position to engage the cable, substantially as described.

4. In an elevated carrier apparatus the combination with a way and carriers moving upon said way, of an endless cable for propelling said carriers, means for driving and means for supporting the cable, the support comprising sheaves arranged, in the straight portions of the track, in pairs with their grooved faces opposite each other, and the alternate pairs being arranged with their axes of rotation on opposite sides of a vertical plane coincident with the moving cable, substantially as and for the purpose described.

5. In an elevated carrier apparatus the combination of a track or way having a removable track-section, carriers adapted to move on said way, an elevator having a track-section adapted to bridge the gap in the main track left by the removal of its track-section and a selective device comprising a sleeve rotatably mounted on the elevator, a stop-pin on said sleeve to engage the carrier, an arm carried by said sleeve, and a latch normally supported by said arm and adapted when the support is withdrawn to arrest the carrier, substantially as described.

6. In an elevated carrier apparatus the combination with the track-rail having a free track-section, an elevator having also a section of track-rail, a buffer-bar having a sliding connection with the elevator track-section, a selective device, a latch carried by the buffer-bar, and normally supported by the selective device and a second or gravity latch adapted upon the release of the elevator from the track to drop into position to hold the carrier on the elevator while the first-named latch is returned to its normal position during the recoil of the buffer-bar and carrier, substantially as described.

7. In an elevated carrier apparatus the combination of the track-rail having a free track-section, an elevator having also a section of track-rail, a buffer-bar having a sliding connection with the elevator track-section, a selective device, a latch carried by the buffer-bar and normally supported by the selective device and a second or gravity latch adapted upon the release of the elevator from the track to drop into position to hold the carrier on the elevator, while the first-named latch is returned to its normal position during the recoil of the buffer-bar and carrier, and a projection on the track to engage and raise the gravity-latch when the elevator is raised, whereby the carrier may be received upon the elevator at one end and discharged from its opposite end, substantially as described.

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