

(No Model.)

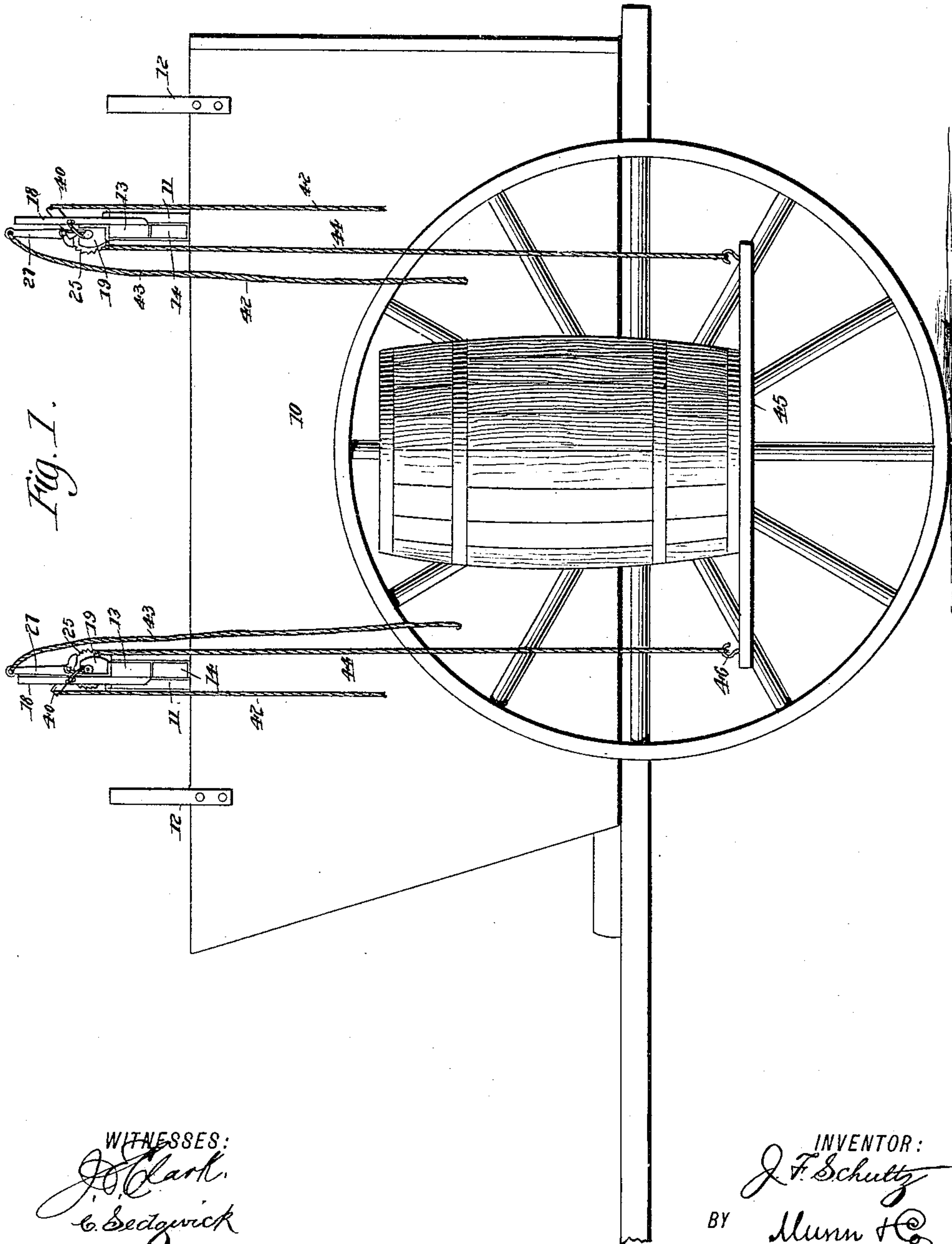
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J. F. SCHULTZ.

HOISTING ATTACHMENT FOR ASH AND GARBAGE CARTS.

No. 403,617.

Patented May 21, 1889.



WITNESSES:

J. F. Clark.
C. Sedgwick

INVENTOR:

J. F. Schultz

BY

Munn & Co.

ATTORNEYS.

(No Model.)

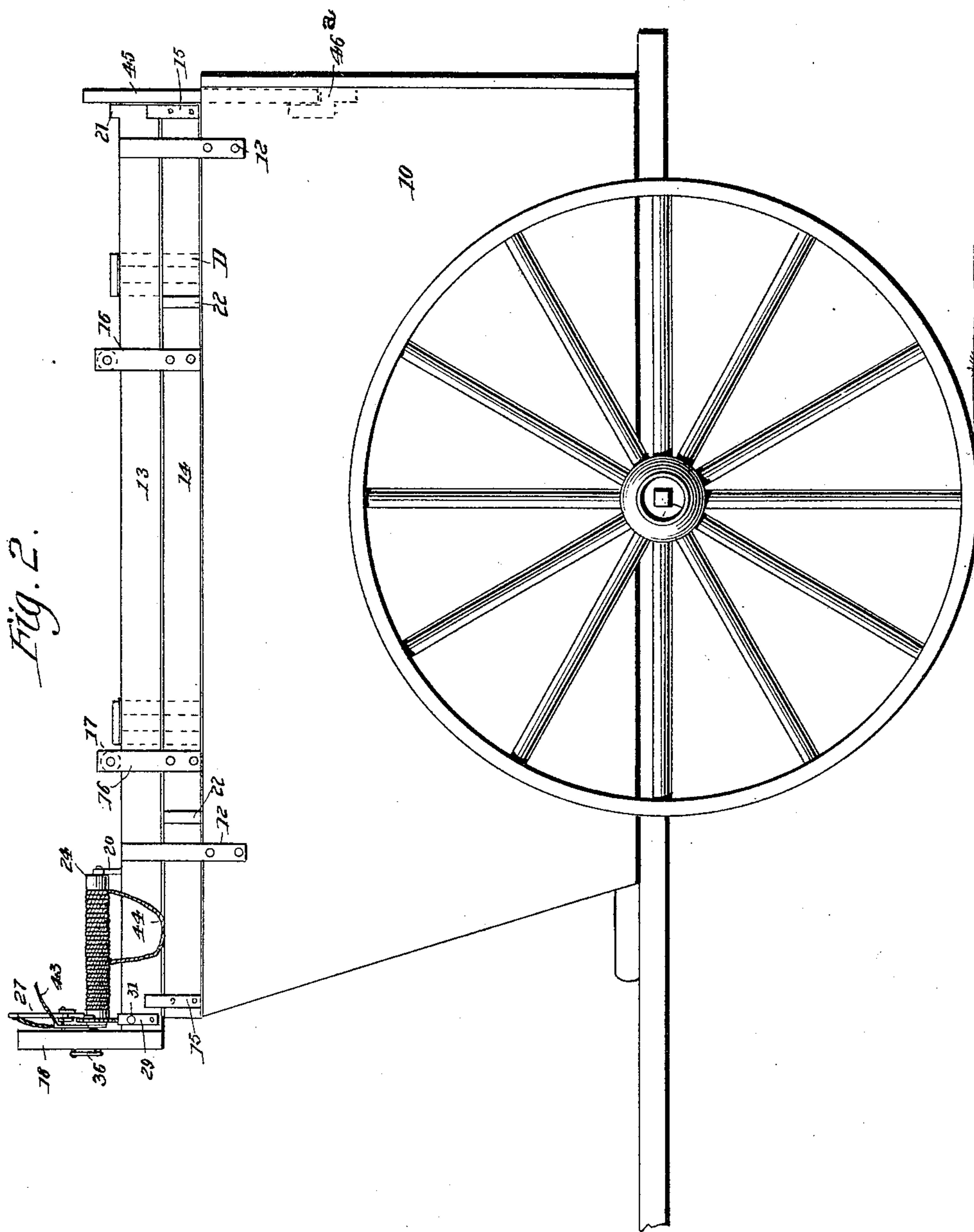
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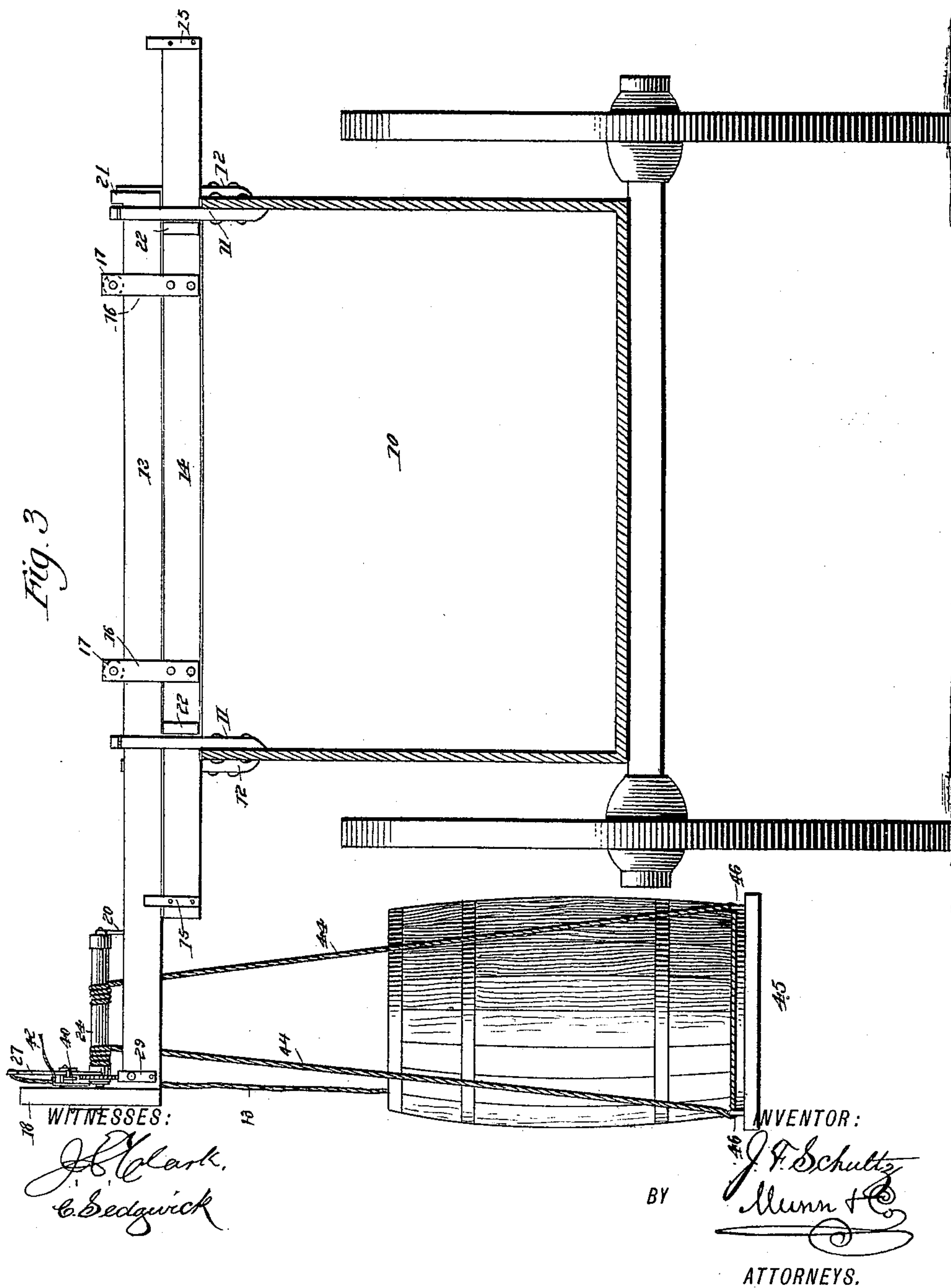
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Fig. 5.

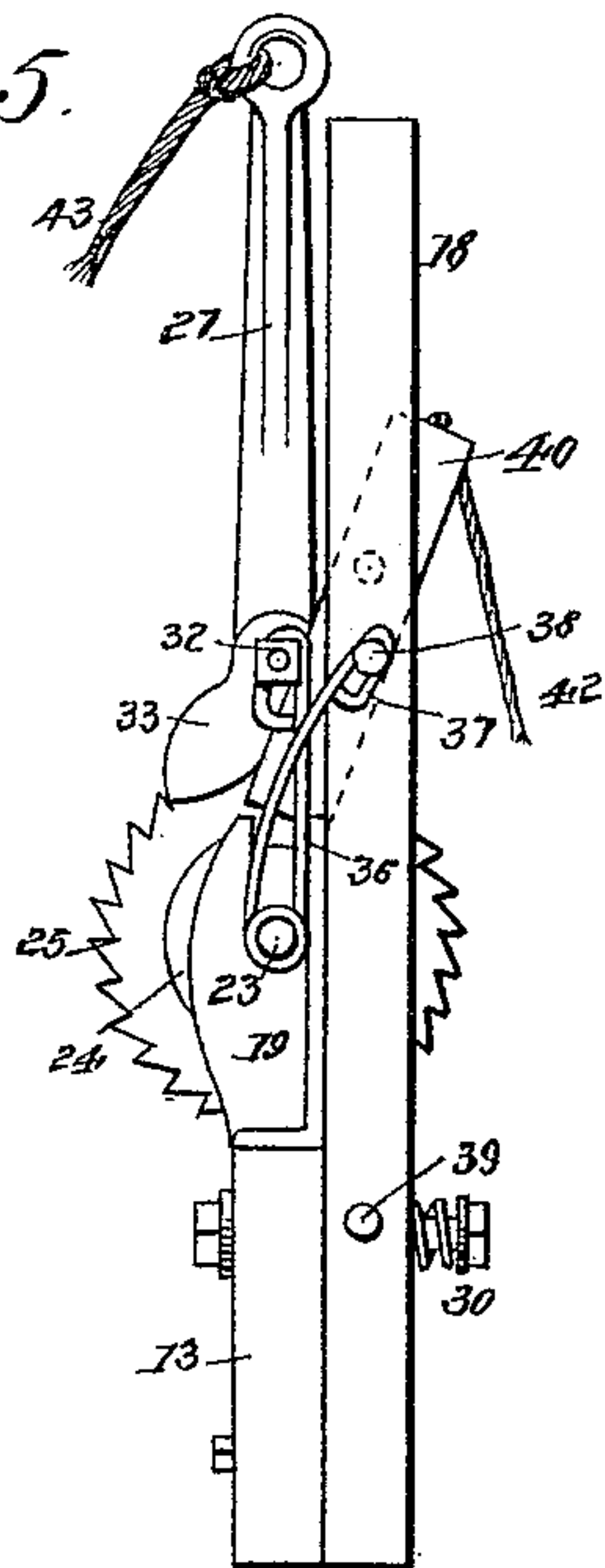


Fig. 6.

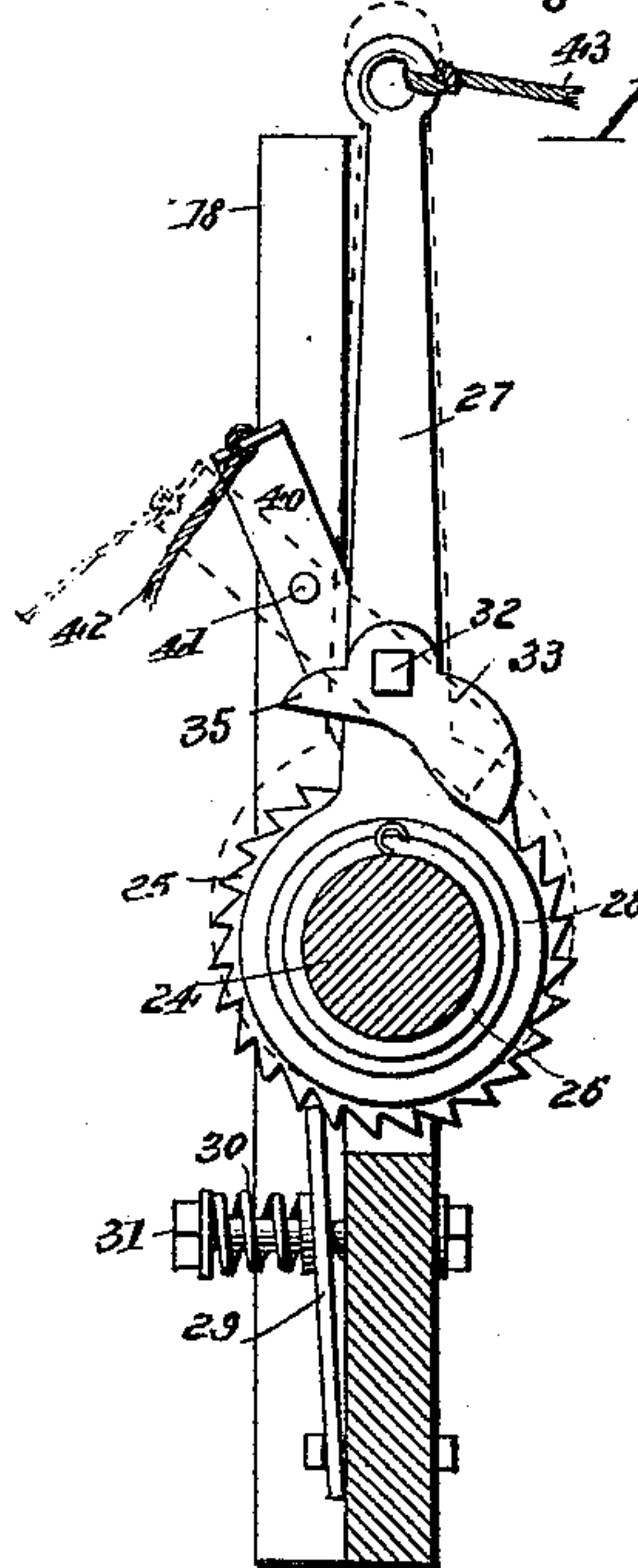
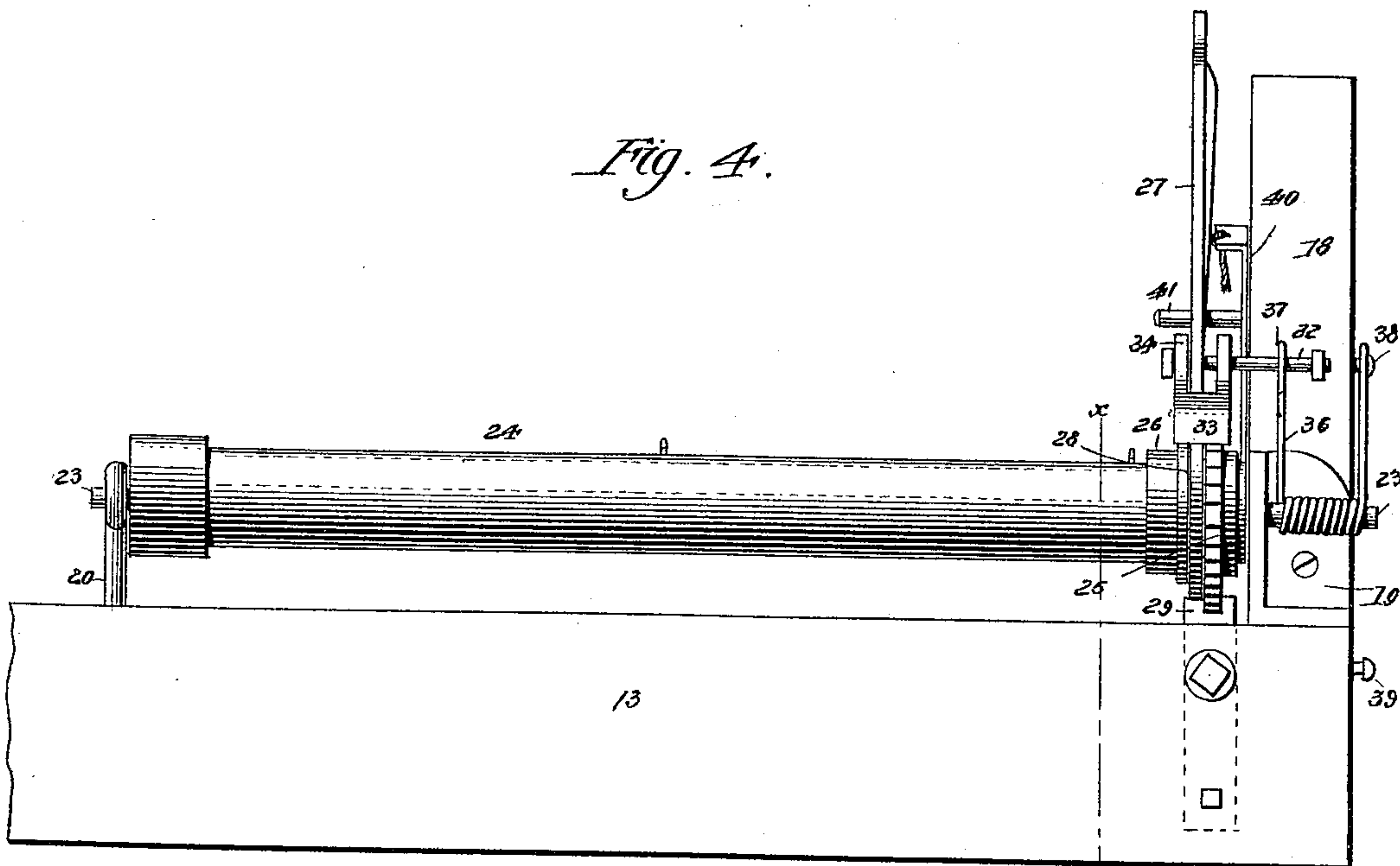


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN F. SCHULTZ, OF NEW YORK, N. Y.

HOISTING ATTACHMENT FOR ASH AND GARBAGE CARTS.

SPECIFICATION forming part of Letters Patent No. 403,617, dated May 21, 1889.

Application filed February 5, 1889. Serial No. 298,712. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SCHULTZ, of the city, county, and State of New York, have invented a new and useful Hoisting Attachment for Ash and Garbage Carts, of which the following is a full, clear, and exact description.

My invention relates to an apparatus for loading barrels or large boxes full of ashes or garbage—such as are usually set upon the sidewalks of cities—into ash or garbage collecting vehicles, and also for loading street-sweepings in like manner.

The object of the invention is to provide an elevator attachment for ordinary ash carts or wagons of simple and durable construction, and capable of being transformed into side-boards and an extra tail-board, when not in use as a hoisting device, to form an extension of the vehicle-body when said vehicle is loaded, and thereby prevent the ashes or garbage from falling off.

A further object of the invention is to provide an elevator attachment whereby one man may with ease hoist the heaviest barrel or box of ashes, &c., up to the top of the usually high ash-cart body, which in the absence of such device would be exceedingly difficult work for two or three men. When an elevator or hoisting attachment is not used, extra help is usually provided to load the vehicles, unless—as, for instance, in large cities—ash-carts are sent out in pairs, so that the drivers may assist each other in loading heavy barrels. With a hoisting attachment, however, provided for each cart the driver is independent and never need lose time waiting for his fellow-cartman to assist him, nor need he go to his fellow-cartman to perform a similar duty, leaving his own vehicle to stand idle meanwhile. When the hoisting attachment is used in connection with such vehicles, the body may be made higher than is now practical, whereby the carrying of the garbage or ashes may be greatly facilitated, inasmuch as the contents of the vehicle will be prevented from falling off when the vehicle is driven over rough pavements or roads. The hoisting device is also adapted for convenient use in connection with the carts or vehicles employed in collecting street-sweepings. This is usually effected by having the sweepings swept

into heaps and loaded from said heaps by the driver in a barrel, box, or equivalent receptacle provided for that purpose, which receptacle may be hoisted by him without assistance to the top of the highest cart-body and dumped therein. In pursuing this method of collecting sweepings, the said sweepings are prevented in a great degree from being blown away or scattered over the streets upon a windy day, which is frequently the case in the present mode of loading ashes, street-sweepings, or garbage—namely, taking it by shovelfuls and tossing the contents of the shovel over the upper edge of the cart-body.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter more 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 of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a vehicle, illustrating my attachment applied thereto, the said attachment being in position to elevate a load. Fig. 2 is a side elevation of a cart, illustrating the attachment as forming an extension of the sides and tail-board. Fig. 3 is a central transverse section through the cart-body, as illustrated in Fig. 1. Fig. 4 is an enlarged side elevation of the hoisting-drum. Fig. 5 is an end view of the same and one of the bearings in which the drum is journaled, and Fig. 6 is a transverse section on line *x x* of Fig. 4.

In carrying out the invention the vehicle 10, which is intended to represent the deep-bodied or ordinary ash or garbage cart, is provided with, preferably, two standards, 11, attached at each side, adapted to extend above the upper edge, which standards are provided with a longitudinal slot in the projecting end. The standards may be secured either to the outer or to the inner face of the vehicle-body—one at each side of the center—and upon the side of the vehicle-body opposite to that carrying the slotted standards two or more solid standards, 12, are secured, preferably so arranged that one will be in advance of the front slotted standard and the other at the rear of the rear standard 11, as best shown in Figs. 1 and 2. The standards 11 and 12

extend, preferably, the same distance above the vehicle-body.

The hoisting attachment consists, primarily, of two parallel bars, 13 and 14, arranged to slide one upon the other, the lower bar, 14, being to that end provided with upwardly-extending guide-plates 15 at or near each extremity, and intermediate sets of vertical parallel guide-bars, 16, having journaled between their upper ends a friction-roller, 17, purposed to bear against the upper edge of the upper sliding bar, 13. The upper sliding bar, 13, is provided at one end with a perpendicular post, 18, secured thereto, to which post a slotted bracket, 19, is fastened, and to the rear of the post 18 a screw-eye, 20, or equivalent bearing, is attached to the upper edge of the said upper sliding bar, and at or near the extreme rear end of the bar a vertical lug, 21, is formed or a detachable pin inserted, the said pin or lug being adapted to limit the outward movement of the upper bar by coming in engagement with the rear friction-roller.

In the operation of loading a vehicle the several bars 13 and 14, which, for convenience, I denominate the "frame" of the attachment, are placed transversely of the vehicle-body, as shown in Fig. 3, and inserted in the slots of the opposed standards 11. In order that the lower bar of the frame may be rigidly held in place, two lugs, 22, are secured upon one side, the said lugs being adapted to bear, respectively, against the inner face of the slotted standards 11, as is also best illustrated in Fig. 3. The upper bar, 13, of the frame may be slid outward beyond the lower bar until stopped by the pin or projection 21; or the said bar may be entirely removed from connection with the lower bar by disconnecting the pin or projection.

In the bearing 20, attached to the upper sliding bar of the frame, and likewise in the bracket 19, the trunnions 23 of the drum 24 are journaled, as shown in Fig. 4, which drum, at the outer end, has securely affixed thereto a ratchet-wheel, 25, preferably provided with an inwardly-extending integral hub or collar, 26, upon which hub or collar one end of a lever, 27, is held to freely slide. This is ordinarily accomplished by the enlargement of the lower end of the lever and boring the same in order that it may be readily slid over the hub or collar 26 and loosely turn thereon. The lever is held, essentially, in contact with the inner face of the ratchet-wheel by a washer, 28, of any approved construction. The teeth of the ratchet-wheel 25 are engaged by a spring-pawl, 29, secured at one end to the outer face of the upper sliding bar of the frame, as best shown in Figs. 2 and 6. The pawl 29 is held normally in engagement with the ratchet-teeth by means of a spring, 30, bearing against the outer face, which spring is coiled around a pin or bolt, 31, passing transversely through the pawl and through the upper sliding bar of the frame. The pin or bolt 31 is provided with a head

upon the outer face to constitute a bearing for one end of the spring 30 and is attached to the sliding bar 13 in any approved manner.

Above the ratchet-wheel 25 a rod or bar, 32, is passed transversely through the lever 27, adapted to project outward therefrom in front of the post 18. A dog, 33, is pivoted upon the rod or bar 32, in which dog a slot, 34, is produced to permit the upward passage of the lever 27. The end of the dog adapted for engagement with the ratchet-wheel 25 is weighted to automatically and normally lie in engagement therewith, as best illustrated in Fig. 6, and the said dog 33 is provided with an integral lip, 35, extending rearwardly from the pivot-point over the ratchet-wheel.

The lever 27 is spring-actuated, the spring 36 controlling the same being secured at one end to the projecting end of the rod or bar 32 and coiled around one of the trunnions of the drum 24. The other end of the said spring is carried upward and preferably inward and made to terminate in a loop, 37, for engagement with a stud, 38, secured in the outer edge of the post 18, as best illustrated in Figs. 4 and 5. In the event that the spring 36 should become weak a second stud or pin, 39, is secured in the outer edge of the post below the pin or stud 38, so that the outer end of the spring may be disengaged from the upper stud and carried downward to a contact with the lower stud, 39.

A trip-lever, 40, is pivoted to the inner edge of the post 18, secured to the upper sliding bar, 13, of the frame, the fulcrum of which lever is a stud, 41, projecting outward from the post over the lip 35 of the dog 33. The forward end of the trip-lever 40 is made to engage with the under surface of the rod or bar 32, attached to the drum-lever 27, and to the rear end of the said trip-lever 40 a rope, cord, or chain, 42, is fastened, adapted to lead downward below the body of the cart. A rope, chain, or cord, 43, is likewise attached to the upper end of the drum-lever, as shown in Figs. 5 and 6.

Upon each drum 24 employed upon the vehicle two ropes, 44, are secured in such manner that when the drum is rotated in a proper direction they will wind upon or unwind therefrom in parallel vertical lines, the lower ends of which ropes are detachably attached to the corners of a suitable platform, 45, whereby the platform is suspended at the side of the cart away from the wheel and in a horizontal position, as shown in Figs. 1 and 3.

If in practice it is found desirable, instead of two ropes being secured to each drum one rope may be employed, the ends whereof may be secured to the frame at different points in its length, and the loop end of the rope may be passed under hooks 46, attached to the upper face of the platform, as illustrated.

In operation, when it is desired to lower the platform, the frame of the device being in proper position upon the vehicle and the

sliding bar 13 carried outward the necessary distance, the ropes 42 are pulled upon by the operator, whereupon the trip-lever 40 raises the outer end of the drum to such an extent
 5 that the ratchet-wheel is carried out of engagement with the pawl 29 and the stud 41 is brought to bear upon the lip 35 of the dog 33, depressing said lip and thereby raising the
 10 weighted end of the dog out of contact with the ratchet-wheel. By this means both of the drums are free to revolve and the weight of the platform is sufficient to carry it down upon the ground. The platform being upon the ground or sufficiently lowered, the barrel,
 15 box, or other receptacle containing the ashes or other garbage is placed upon the platform. The rope 42 is then released, whereupon the drum is restored to its normal position, dropping downward in the bracket 19. The operator then grasps the ropes 43 and pulls thereon, drawing the drum-lever 27 outward and causing the weighted end of the dog 33, which is in engagement with the teeth of the ratchet-wheel, to revolve the said wheel and
 25 thereby turn the drum, winding the ropes 44 thereon and elevating the platform. The ropes 43 of both of the drum-levers 27 may be pulled downward at the same time by the operator; or the levers of each drum may
 30 be worked alternately. When the barrel is raised upward to the upper edge of the vehicle-body, it may be thrown downward upon bars placed transversely of the vehicle between the slotted standards 11 and turned
 35 bottom upward thereon, thereby dumping its contents into the vehicle-body. If it is necessary to work upon the right side of the vehicle and the drum is located upon the left side, the lower bar, 14, of the frame need not
 40 be removed from its place in the standards 11. By simply removing the pin or projection 21 from the end of the sliding bar 13 of the frame the said bars may be turned outward free from the lower bar and carried around to
 45 the right-hand side and inserted in the slots of the standards 11 located upon that side.

When the device is not in use as a hoisting-attachment, it may be used to form extensions to the sides of the vehicle. When so used,
 50 the upper bar is slid upon the lower bar to be of even length therewith, and the two bars are introduced between the standards 11 and 12 to a contact with the upper edges of the side-boards of the body, as shown in Fig. 2. The platform is made to engage with the inner face of the tail-board of the vehicle, and held in engagement therewith by a bracket or cleat, 46^a, as shown in Fig. 2, or any other equivalent device, and in such manner that one end of
 55 the platform will extend upward beyond the tail-board of the vehicle and preferably slightly beyond the attachment-frame.

When the vehicle is not in use, the drums 24 may be removed from the frame by simply
 60 disconnecting the spring 36 from the post 18, whereupon the said drum may be lifted up-

ward out of the bracket 19 and withdrawn from the bearing 20.

Having thus described my invention, I claim as new and desire to secure by Letters Patent— 70

1. In a hoisting attachment for vehicles, a frame consisting of a stationary bar and a parallel bar sliding thereon, a drum mounted upon the sliding bar of the frame, a platform, a rope connecting the drum and platform, and
 75 means, substantially as shown and described, for manipulating the drum, as and for the purpose specified.

2. In a hoisting attachment for vehicles, a frame consisting of a stationary bar and a
 80 parallel bar sliding thereon, a drum detachably mounted upon the sliding bar of the frame, a platform, a rope connecting the platform and drum, a ratchet-wheel secured to the drum, and a lever carrying a dog capable
 85 of actuating the drum, substantially as specified.

3. In a hoisting attachment for vehicles, the combination, with a frame consisting of a stationary bar and a parallel bar sliding thereon, 90 of a drum detachably mounted upon the sliding bar of the frame, a ratchet-wheel secured to the drum, a lever carrying a weighted dog capable of actuating the drum, and a trip-lever capable of elevating the drum and trip-
 95 ping the dog, substantially as shown and described.

4. In a hoisting attachment for vehicles, the combination, with a frame consisting of a stationary bar and a parallel bar sliding thereon, 100 of a drum detachably mounted upon the sliding bar of the frame, a ratchet-wheel secured to the drum, a lever carrying a weighted dog capable of actuating the drum, a trip-lever capable of elevating the drum and tripping 105 the dog, a rope secured to the drum, and a platform detachably attached to the said rope, all combined for operation substantially as shown and described.

5. In a hoisting attachment for vehicles, 110 the combination, with a frame consisting of a stationary bar and a parallel bar sliding thereon, of a drum detachably mounted upon the sliding bar of the frame, a ratchet-wheel secured to the drum, a spring-actuated lever 115 carrying a weighted dog capable of normal contact with the ratchet-wheel, a pawl engaging with the said ratchet-wheel, a trip-lever capable of elevating the drum and dog, a rope secured to the drum, and a platform attached 120 to said rope, all combined for operation substantially as specified.

6. In a hoisting attachment for vehicles, the combination, with the body of a vehicle provided with slotted vertical standards upon 125 one face of the sides and solid vertical standards upon the opposite face of said sides, of a frame capable of being fitted in the slotted standards and between the slotted and solid standards, consisting of a stationary lower 130 bar, an upper parallel bar held to slide thereon, and a hoisting mechanism attached to one

outer end of the upper sliding bar, substantially as and for the purpose specified.

7. In a hoisting attachment for vehicles, the combination, with the body of a vehicle
5 provided with slotted vertical standards upon one face of the sides and solid vertical standards upon the opposite face of the said sides, of a frame capable of being fitted in the slot-
10 ted standards and between the slotted and solid standards, consisting of a stationary lower bar provided with guides at the ends, stops intermediate of the ends, and vertical
15 guide-standards arranged in pairs carrying friction-rollers, and an upper bar held to slide upon the lower bar below the friction-rollers, provided at one end with a stop and at the
opposite end with a hoisting mechanism, all combined for operation substantially as shown and described.

8. A hoisting mechanism for vehicles, con- 20
sisting of a revoluble drum provided with an attached ratchet-wheel, a spring-actuated lever held to turn upon the said drum, a pin
secured transversely of the lever, a dog piv- 25
oted upon the said pin, having one weighted end capable of engagement with the ratchet-
wheel, and a lip projected from the opposite
end, a trip-lever adapted for contact with
the pin on the drum-lever and capable of
elevating the drum and dog, and a rope at- 30
tached to the outer end of the drum-lever and the trip-lever, substantially as shown and de-
scribed.

JOHN F. SCHULTZ.

Witnesses:

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EDGAR TATE.