

No. 619,213.

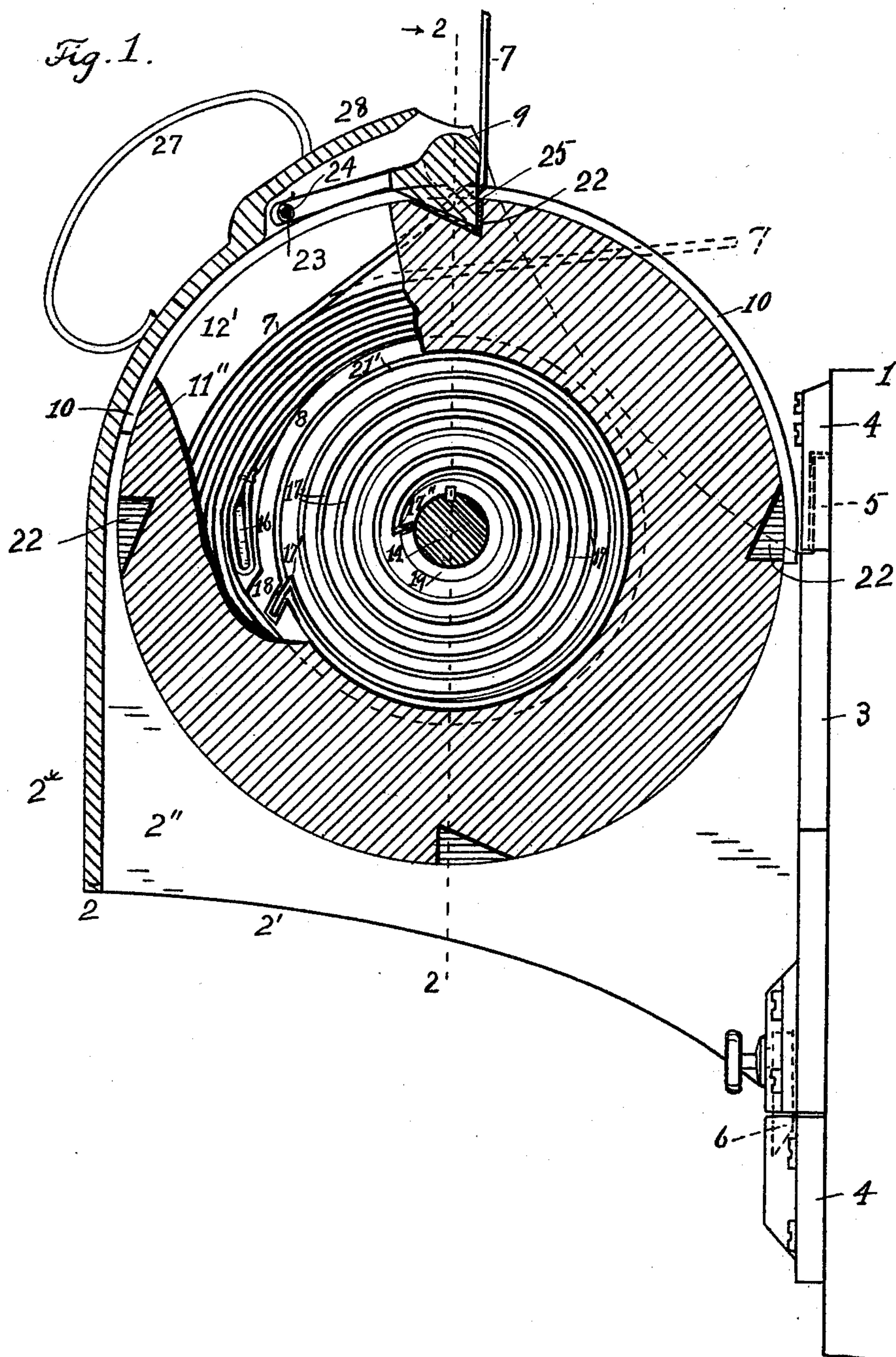
Patented Feb. 7, 1899.

C. H. OCUMPAUGH.
TROLLEY CATCHER.

(Application filed Nov. 26, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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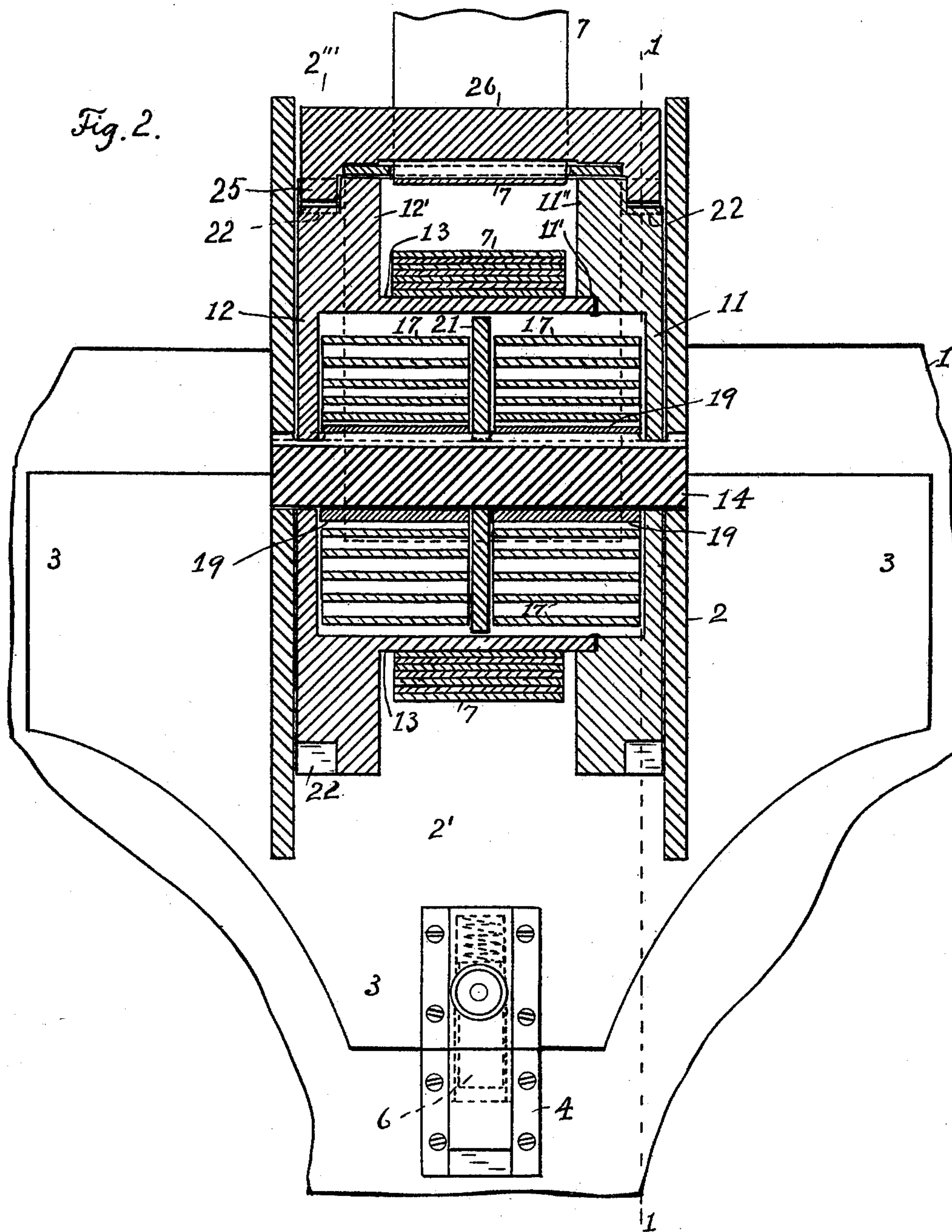
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UNITED STATES PATENT OFFICE.

CHARLES HERBERT OCUMPAUGH, OF ROCHESTER, NEW YORK.

TROLLEY-CATCHER.

SPECIFICATION forming part of Letters Patent No. 619,213, dated February 7, 1899.

Application filed November 26, 1897. Serial No. 659,758. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HERBERT OCUMPAUGH, a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Trolley-Catchers; 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 pertains to make and use the same.

The invention relates to trolley catchers or controllers, and has for its object to improve the construction of the spring-drum, drum-case, and connected parts.

The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a section on line 1 1 of Fig. 2. Fig. 2 is a section on line 2 2 of Fig. 1.

Numerals 1 indicates the dasher of a car, and 2 is a spring-drum frame, hood, or case, having bracket-flanges 3. 4 denotes keepers fixed to the dasher or end of the car to receive the lug 5 and spring-catch 6, respectively, of the drum-frame. By these devices the frame is detachably held against the dasher or like part of a car.

The drum case or frame 2 is cast with an open bottom 2' and with straight sides 2'' to facilitate its withdrawal from the sand molds in course of manufacture. It has an opening at 2''' to provide for the manipulation of a strap 7 for rotating a spring-drum 8 and also for releasing a dog 9, as will be explained.

This opening may be covered with a slide 10, though this is not essential. The frame-securing flanges or brackets 3 are disposed in a plane parallel with the opposite side 2^x and in such relation thereto and to the other sides as to permit their ready withdrawal from sand molds in course of manufacture. They extend below the frame in one direction and in the opposite direction reach about to the level of the axis of the spring-drum, as shown in Fig. 2. They can be connected to the dasher or other part near its top and so as to leave the opening 2''' unobstructed, and their wide bearing on the vertical wall to which they may be connected aids in securely supporting the drum-frame. Heretofore brackets or frame-securing flanges have been

connected to the frame adjacent its lower opening and in such plane as to preclude the frame being drawn from sand in one piece after casting. It is characteristic of the improved bracket that it is situated at the side of the frame adjacent the strap-opening, but below it, so as to hold the frame above the wall to which it is secured and not interfere with the uses of said opening. The opening is made oblong in vertical direction to provide ample space for manipulating the strap without affecting the spring-drum-holding dog.

11 and 12 denote two plates connected by a cylindrical flange 13, formed, preferably, on one of them. These plates so connected constitute a spring-drum.

14 denotes the drum-spindle fixed in the drum inclosing frame.

As indicated in Fig. 2, the plate 11 is recessed at 11' to receive the circular flange 13, fixed to the part 12 of the drum. The joint between these two plates is made water-tight, as by soldering, it being one of the objects of the improvement to exclude water and dust to prevent the rusting and clogging of the spring, which has been found to be a serious detriment in devices of the same general character. It is not essential that the joint between the two plates 11 and 12 be situated in or near the plate 11 or that it be of the rectangular form shown. It is only necessary to connect the plates 11 and 12 by a part 13 or the like in a tight manner, said part 13 being adapted to receive the strap, as indicated. Though a strap is shown, the use of a cord, rope, chain, or wire is not excluded. The inner end of the strap is fixed to the exterior of the flange or part 13, substantially as shown in Fig. 1, where 16 indicates a stud for the purpose. This stud is conveniently formed or cast on a thickened part of the flange and may extend to and be soldered or otherwise secured to the plate 11. The strap-securing stud is provided on the exterior of the drum to avoid the use of slots, such as heretofore cut through the drum-wall and found liable to admit rain and dust.

17 indicates two springs, each secured to the interior of the drum by means of a concealed slot 18, adapted to receive the suit-

ably-shaped end 17' of a spring. The opposite ends are secured in like manner. By this construction the spring can be readily either fixed in position or detached without the use of any separate or movable fastening device. The strap 7 can be used to rotate the drum and wind the springs and when released will be retracted by the springs as it unwinds.

21 denotes a washer which may be loose on the spindle. It serves as a partition between the springs and prevents their interference.

22 indicates notches of any desired number situated in the periphery of plates 11 and 12 and adapted to receive the two teeth of dog 9, pivoted at 23 and urged to its work by a spring 24. This dog is preferably pivoted at one side the vertical plane passing through the center of the drum and frame, and its head, which carries two rack-engaging teeth, is extended a short distance to the other side of the plane and is made large and heavy to fall promptly by gravity and has two teeth 25, connected by a rod 26, each tooth being arranged to engage a notch 22 in the contiguous end plate of the drum. Said notches or ratchet-teeth are situated in the thickened periphery 11' and 12' of the spring-drum and adjacent their outer surface.

The peripheral parts of plates 11 and 12 are made thick to provide for suitable notches and to control the space between them to suitable dimensions for the spring-strap. The plates 11 and 12 are made large also to provide ample bearing on the frame, whereby they accurately guide the drum and its connected movable devices. The rear side of the notches is sloped backwardly to permit the forward movement of the drum when rotated by the strap, as when the latter is pulled in the direction indicated by the dotted line in Fig. 1. When the strap is pulled vertically or in the direction indicated by full lines, the dog is lifted and the drum released. It is characteristic of this part of the improvement that the dog and strap have no connection and that the strap, though always on one side of and in situation to lift the dog 9 if the trolley-pole jumps its wire, is yet in situation to control the spring, either to wind it or to release the dog and allow the spring to unwind at the will of the operator.

27 denotes a handle fixed to the frame or case, and 28 is an offset in the case-wall to provide space for the dog. The offset 28 terminates back of the outer end of the dog, so that while the strap is free to bear directly on the dog between its two teeth it is fended off from the frame, so as not to be cut or worn thereby. That part of the dog situated between its teeth is rounded and has greater thickness than the frame edge and is not liable to cut or fray the strap or rope. The strap-slot in the frame is extended back into the offset and in the other direction extends to about the level of the drum-axis and

through about one-fourth of a circle, whereby great freedom in manipulating the strap is provided for.

It may be noted that the drum-retaining dog is normally held in engagement with the drum periphery by gravity and by a spring, if desired, and that the strap can be manipulated either to wind the spring-coil without the strap raising the dog or to raise it and permit the coil to unwind and thereby wind the strap. If the trolley "jumps" the wire, the strap is drawn tight and lifts the dog. This permits the drum-springs to unwind and draw down the strap and pole below the wire and its guy-ropes. By this means, in connection with the usual trolley-pole-connecting rope, the trolley-pole can be brought below the line-wire and suitably held below to permit engagement of the trolley-wheel with said wire. The strap may be connected to a rope or the like fixed to or near the upper end of the pole, or the strap or cord 7 may be made long enough without a separate intermediate connection.

Though two drum-springs are preferred, one may be used with good effect.

Having described my invention, what I claim is—

1. A trolley-controller comprising an inclosing frame having an offset 28, a spring-containing drum provided with a rack, a dog independently supported in the offset, a spring, and a strap adapted to directly lift the dog, said offset being situated at the top of the frame at the opposite side thereof with respect to the strap and out of its path and adapted to stop the dog when the latter is lifted, substantially as described.

2. A trolley-controller comprising an inclosing frame having an offset 28, a spring-containing drum provided with a rack, a dog independently supported in the offset, a spring, and a strap adapted to directly lift the dog, said offset being situated at the top of the frame at the opposite side thereof with respect to the strap and out of its path and adapted to stop the dog when the latter is lifted, and a sliding shield 10, substantially as described.

3. A trolley-controller comprising a spring-containing drum having end plates joined by a flange integral with one of said ends, two springs situated around an arbor within the flange and each connected to the drum and frame and a partition loosely held in the drum between the springs, substantially as described.

4. A trolley-controller consisting of a frame carrying a spring-containing drum, two springs situated around an arbor within the drum and each connected to the drum and frame and a dividing-partition between them, said partition being loosely connected to the spring-arbor, substantially as described.

5. In a trolley-controller, a spring-containing-drum frame having parallel sides and an

open bottom for the free discharge of extra-
neous matter and having integral brackets
arranged edgewise toward the open bottom in
planes lengthwise the plates whereby it is
5 adapted when cast to be drawn from the sand-
mold, substantially as described.

In testimony whereof I have signed this

specification in the presence of two subscrib-
ing witnesses.

CHARLES HERBERT OCUMPAUGH.

Witnesses:

E. C. HEMPEL,

C. HERBERT CLARK.