

No. 725,486.

PATENTED APR. 14, 1903.

O. M. SACKETT.
GRIP FOR CABLES OR THE LIKE.

APPLICATION FILED MAY 23, 1902.

NO MODEL.

Fig. 1.

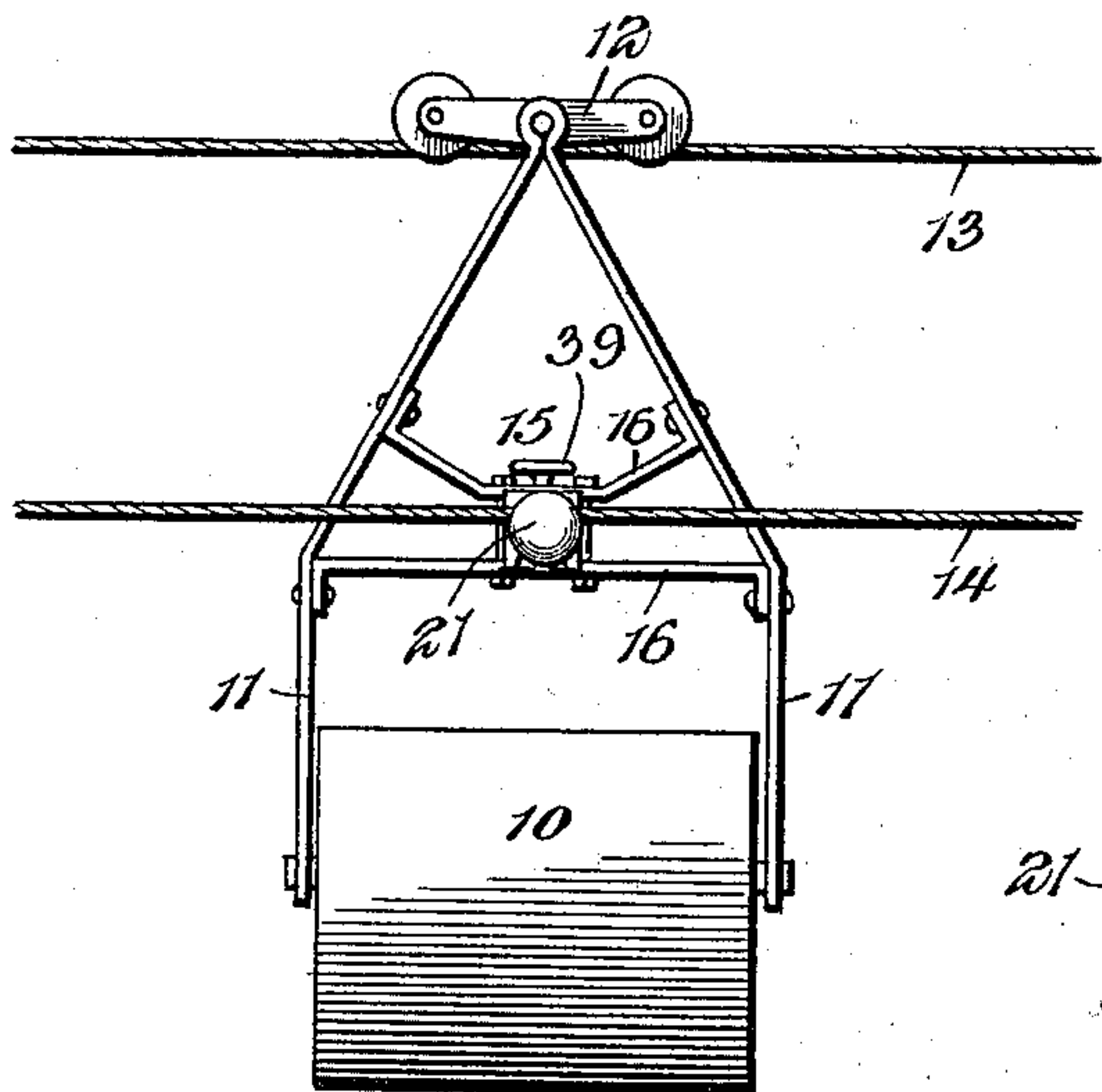


Fig. 2.

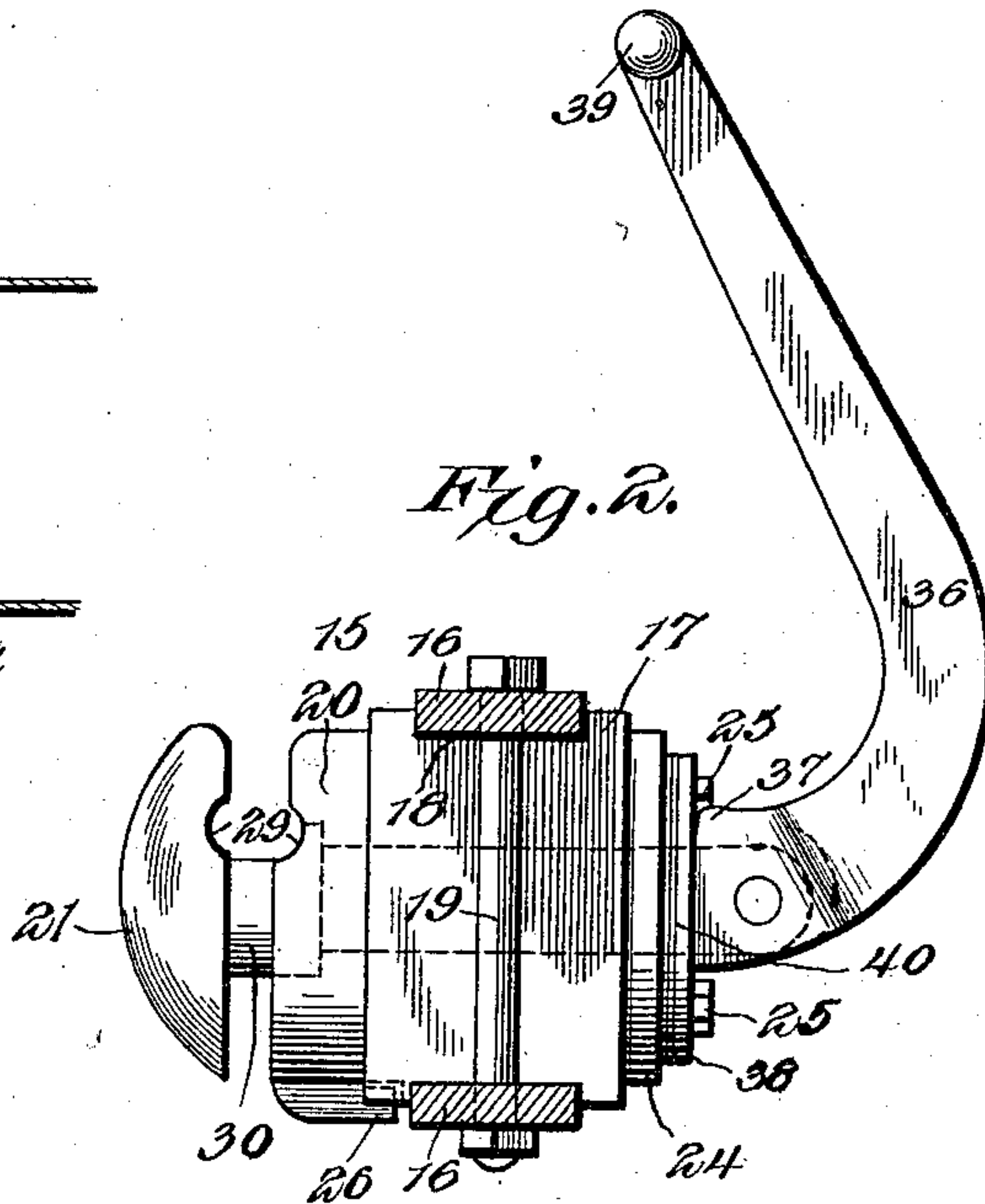


Fig. 3.

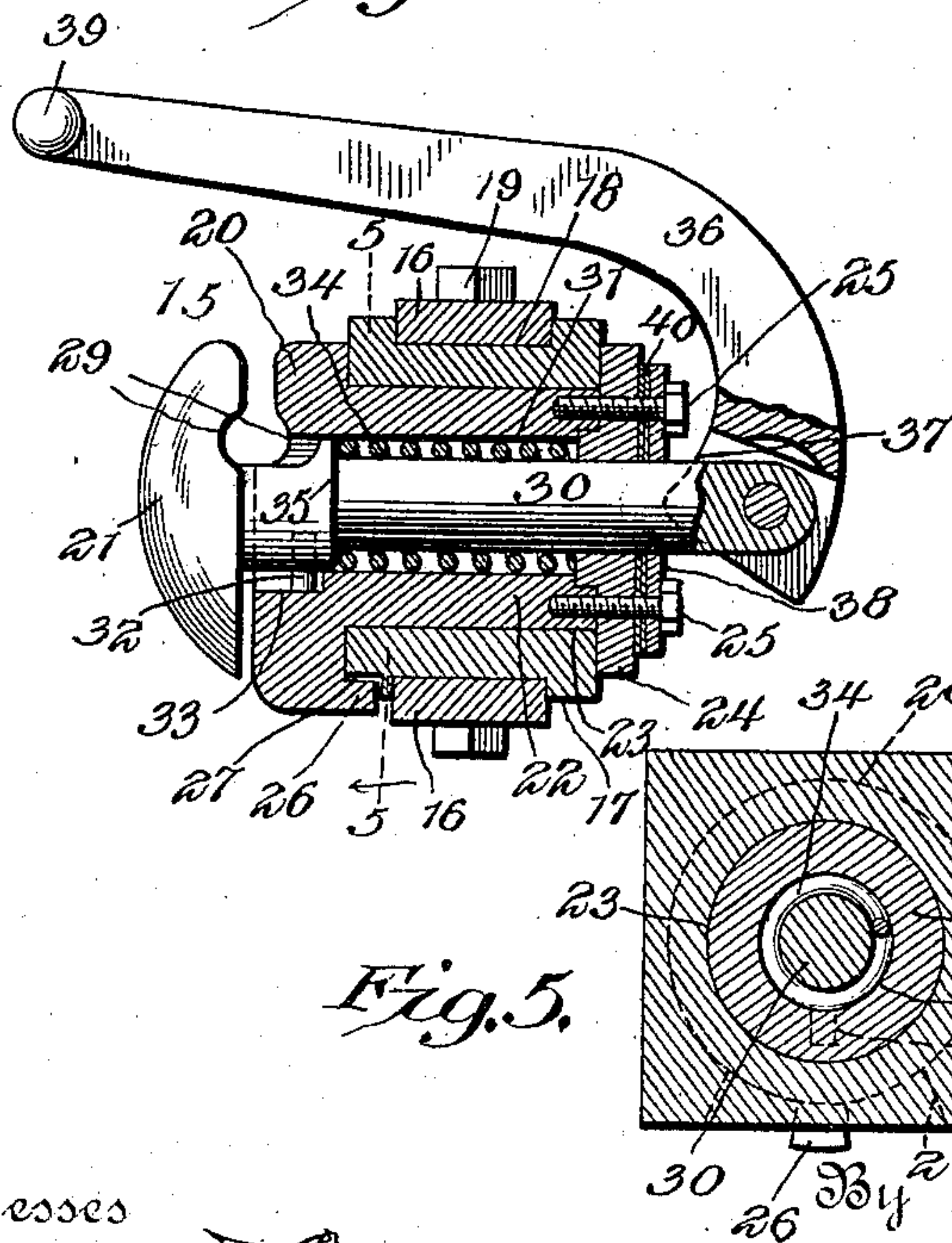


Fig. 4.

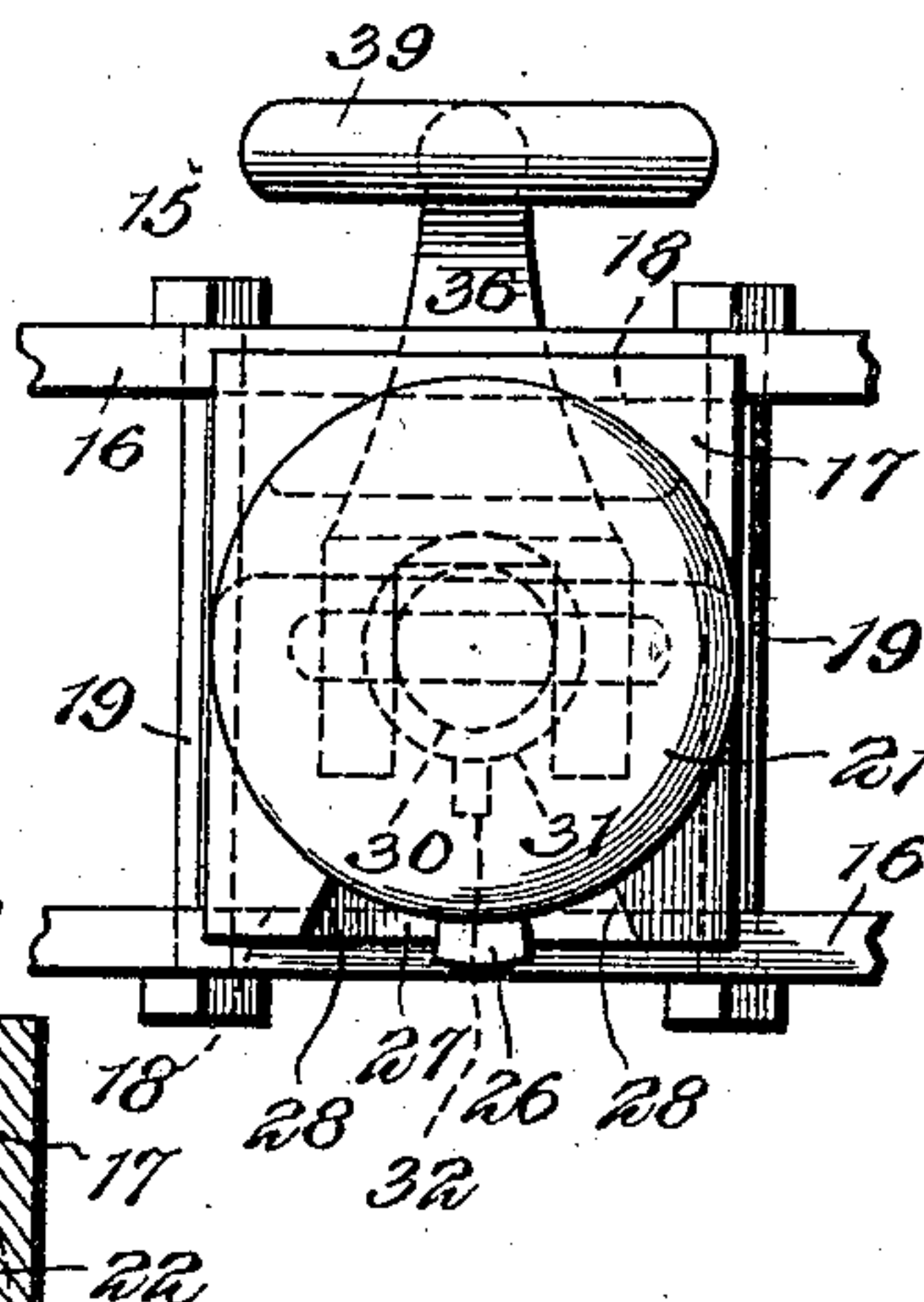
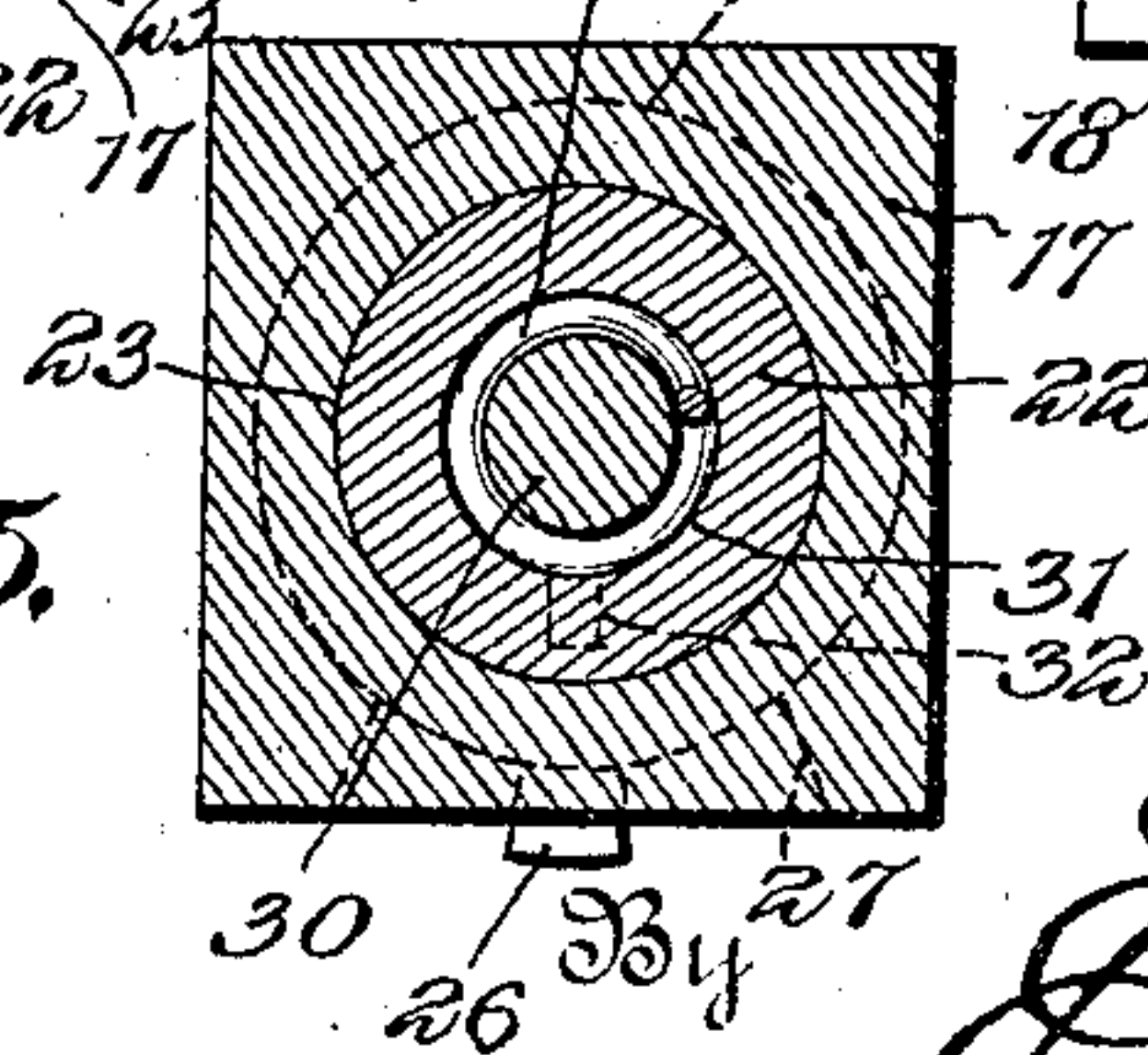


Fig. 5.



Witnesses

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GRIP FOR CABLES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 725,486, dated April 14, 1903.

Application filed May 23, 1902. Serial No. 108,683. (No model.)

To all whom it may concern:

Be it known that I, ORRIN MILTON SACKETT, a citizen of the United States, residing at Telluride, in the county of San Miguel and State of Colorado, have invented a new and useful Grip for Cables or the Like, of which the following is a specification.

This invention relates to grips for connecting cars, buckets, and the like to cables or similar driving elements.

One of the objects of the invention is to provide a structure of the above character which is extremely simple and comparatively inexpensive to manufacture, while at the same time having a powerful gripping action and also having the necessary freedom of movement to allow for the sag and displacement of the cable, this movement, however, being limited.

Another object is to provide means for adjusting the relative relation of the jaws to permit the grip being used in connection with cables of various sizes.

The preferred embodiment of the invention is illustrated in the accompanying drawings and described in the following specification; but it will be evident upon an inspection of the claims that the construction shown and described is open to various modifications and changes without departing from the spirit of the invention.

In the drawings, Figure 1 is a view in elevation showing the position of the grip when applied to a tramway-bucket. Fig. 2 is a side elevation of the grip. Fig. 3 is a longitudinal sectional view through the same. Fig. 4 is an end elevation, and Fig. 5 is a vertical transverse sectional view.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

While it is to be understood, as already stated, that the invention may be used in connection with cars or other carriers, it is particularly intended for use upon tramway-buckets. One of these buckets is illustrated in Fig. 1 of the drawings and is designated by the reference-numeral 10. It is provided with a bail 11, comprising side arms pivotally attached at their lower ends to the bucket and having a connection at their upper ends

with a wheeled frame 12, that runs upon a stationary supporting-cable 13. Beneath this cable is arranged the movable driving-cable 14. The grip is designated as a whole by the reference-numeral 15 and is arranged between the side arms of the bail, being supported by cross-bars 16, which are attached to said side arms and are arranged upon opposite sides of the grip.

As shown in the accompanying drawings, the grip comprises a body 17, which is preferably rectangular in form and has transversely-disposed slots 18, in which are seated the cross-bars 16, the body being held against displacement by tie-bolts, as 19, connecting the cross-bars on opposite sides of the body. Mounted upon this body is a pair of relatively movable jaws 20 and 21, one of which, as 20, may be termed the "stationary" jaw, the other, 21, being the "movable" jaw. It will be evident that these are relative terms employed for the purpose of more easily describing them.

The stationary jaw 20 comprises a head having a trunnion 22, journaled in an opening in the body, and having a cap-plate 24, secured upon its rear end by means of bolts 25, said cap-plate extending over the rear face of the body to hold the jaw in place. It will therefore be evident that the stationary jaw has a revoluble movement upon the body; but this movement is limited by a stop 26, carried by the head and movably engaging in a seat 27 in the forward end of the body, the end walls 28 of this seat constituting stop-shoulders against which the stop 26 abuts. The movable jaw 21 also has a head that coacts with the head of the stationary jaw, said heads having recesses 29 in their opposing inner faces, through which recesses the driving-cable 14 operates. The movable jaw 21, furthermore, has a shank 30, that slidably passes through an opening 31 made in the trunnion and projects through the cap-plate 24. This shank carries a projection in the form of a guide-lug 32, that is slidably mounted in a slot 33 in the head of the stationary jaw, thereby preventing the rotation of the movable jaw upon the stationary jaw. A coiled spring 34 is arranged about the shank and bears at one end against the inner face of the cap-plate 24, the other end bearing against a

shoulder 35, formed on the shank, said spring thereby urging the movable jaw to open position or away from the stationary jaw.

Pivotally mounted upon the projecting or free end of the shank 30 is an actuating lever-arm 36, that is provided contiguous to its pivoted end with a cam projection 37. This rests against a bearing-plate 38, attached to and over the cap-plate by means of the fastening devices 25. The arm 36 is curved and preferably extends to a point over the jaws, being formed with a cross-head, as 39. The bearing-plate 38 is adjustable, and to this end a plurality of spacing-disks 40 are arranged to be inserted between said plate and the cap-plate 24, as will be readily understood.

The manner of using the device will be apparent. When the lever-arm 36 is thrown to an upright position, as shown in Fig. 2, the cam projection 37 will be disengaged from the bearing-plate, thereby permitting the spring to force the movable jaw away from the stationary jaw, and the cable will be released. When it is desired to grip the cable, it is only necessary to throw the lever-arm to the position shown in Fig. 3, whereupon the movable jaw will be drawn toward the stationary jaw against the tension of the spring. This movement will be sufficient to clamp the jaws upon the cable and they will be positively held in said clamping engagement because of the peculiar arrangement of the cam projection. Should the grip be employed upon a short tramway in which a comparatively light driving-cable is employed, by inserting more disks between the wear-plate and the cap-plate it will be evident that the movable jaw may be drawn much closer to the stationary jaw, and thus the grip may be used on different sizes of cables. This is an extremely important point of the invention, as but one size of grip is necessary for various conditions of work to be done and a great saving in the cost of patterns and the like is thereby effected. Then the manner of actuating the movable jaw is very simple as compared to those now commonly employed, and the various parts may be readily disassociated for the purpose of renewal or repair. The actuating-arm is in a very convenient position to be operated and at the same time is so arranged that an automatic trip may be employed for throwing it and disengaging the jaws from the cable. Another advantage to be noted is the revolvable arrangement of the jaws. These jaws are both freely rotatable to a certain degree, so as to allow for the sag or other displacement of the cable. At the same time the movement is limited by the coacting stops, so that the jaws will always remain in their proper upright relation with respect to the cable and cannot become entirely disengaged from the same when released.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art with-

out further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a grip of the class described, the combination with a body, of gripping mechanism rotatably mounted upon the body, and means for limiting the rotary movement of the gripping mechanism.

2. In a grip of the class described, the combination with a body, of a trunnion journaled in the body, coacting stops carried by the body and trunnion to limit the rotary movement of the latter, and coacting gripping-jaws mounted upon the trunnion.

3. In a grip of the class described, the combination with a body having a socket and a seat located at one side of the socket, of a trunnion journaled in the socket, a stop-lug carried by the trunnion and movable in the seat of the body, and gripping-jaws mounted upon and movable with the trunnion.

4. In a grip of the class described, the combination with a body, of gripping mechanism journaled upon the body, said mechanism including a movable jaw located at one side of the body, and actuating means for said jaw connected thereto and arranged upon another side of the body.

5. In a grip of the class described, the combination with a body, of a stationary jaw carried by the body, a movable jaw coacting with the stationary jaw, and means for moving the movable jaw, said means including a lever pivoted at the side of the body opposite the jaws and bent about said body so that its free end is located contiguous to the jaws.

6. In a grip of the class described, the combination with a body, of a stationary jaw carried by the body, a movable jaw slidably mounted on the body and having a shank projecting through the same, and a lever pivoted to the rear end of the shank and having a cam engagement with the rear of the body, said lever being curved over the body and having its free end located over the jaws.

7. In a grip of the class described, the combination with a body, of a stationary jaw attached to the body and located at one side of the same, a movable jaw coacting with the stationary jaw and having a shank extending through the body, an actuating-arm pivoted to the shank on the side of the body opposite the jaw, and means separate from the arm for moving the jaw in one direction.

8. In a grip of the class described, the combination with a body, of a stationary jaw attached to the body and located at one side of the same, a movable jaw coacting with the stationary jaw and having a shank extending through the body, an actuating-arm pivoted to the free end of the shank and having a ful-

crum projection contiguous to its pivoted end, and a spring for moving the jaw in one direction.

9. In a grip of the class described, the combination with a body, of a stationary jaw attached to the body, a movable jaw coacting with the stationary jaw and having a shank movably mounted upon the body, a spring surrounding and bearing against the shank, and means for actuating the jaw against the tension of the spring.

10. In a grip of the class described, the combination with a body, of a stationary jaw attached to the body, a movable jaw coacting with the stationary jaw and having a shank extending through the body, actuating mechanism for the jaw attached to the free end of the shank, and a release-spring surrounding said shank.

11. In a grip of the class described, the combination with a body having a jaw, of a movable jaw coacting with the jaw of the body and having a shank projecting through said body, a wear-plate detachably fastened at the rear of the body, and an actuating-lever pivoted to the shank and bearing against the wear-plate.

12. In a grip of the class described, the combination with a body, of a stationary jaw attached to the body, a movable jaw coacting with the stationary jaw, means for actuating the movable jaw, said means including a bearing-plate, and a cam-lever pivotally connected to the movable jaw and bearing against the plate, and adjusting-disks arranged to be placed beneath the plate to vary the position of the same.

13. In a grip of the class described, the combination with a body, of a stationary jaw journaled upon the body, a movable jaw slidably mounted upon the stationary jaw and coacting therewith, and means for actuating the movable jaw.

14. In a grip of the class described, the combination with a body, of a stationary jaw journaled upon the body, a movable jaw slidably mounted upon the stationary jaw and coacting therewith, and means for actuating the movable jaw, said means including a cam-lever pivoted to one of the jaws and bearing against the other.

15. In a grip of the class described, the combination with a body, of a stationary jaw journaled upon the body, a movable jaw having a shank slidably mounted upon the stationary jaw and coacting therewith, and means for actuating the movable jaw.

16. In a grip of the class described, the combination with a body, of a stationary jaw journaled upon the body, a movable jaw having a shank slidably mounted upon the stationary

jaw and coacting therewith, means for actuating the movable jaw including a cam-lever pivoted to the shank and bearing against the stationary jaw.

17. In a grip of the class described, the combination with a body, of a stationary jaw journaled upon the body, a movable jaw having a shank slidably mounted upon the stationary jaw, a coiled spring surrounding the shank to move the movable jaw away from the stationary jaw, and a cam-lever pivoted to the shank and bearing against the stationary jaw.

18. In a grip of the class described, the combination with a body, of a stationary jaw having a hollow trunnion journaled in the body, a movable jaw having a shank slidably mounted in the trunnion, and a lever connected to the shank for moving the jaw.

19. In a grip of the class described, the combination with a body, of a stationary jaw having a hollow trunnion journaled in the body, a movable jaw having a shank slidably mounted in the trunnion, a coiled spring surrounding the shank and housed within the trunnion, and a lever connected to the shank for moving the jaw.

20. In a grip of the class described, the combination with a body, of a stationary jaw having a hollow open-ended trunnion journaled in the body, a movable jaw having a shank slidably mounted in the trunnion, a bearing-plate attached to one end of the trunnion, and a lever pivoted to the free end of the shank and bearing against said plate.

21. In a grip of the class described, the combination with a body, of a stationary jaw having a hollow open-ended trunnion journaled in the body, a movable jaw having a shank slidably mounted in the trunnion, a bearing-plate adjustably attached to one end of the trunnion, and a lever pivoted to the free end of the shank and bearing against said plate.

22. In a grip of the class described, the combination with a body, of a stationary jaw having a hollow open-ended trunnion journaled in the body, a movable jaw having a shank slidably mounted in the trunnion, a cap secured to one end of the trunnion and engaging the body to hold said trunnion against longitudinal displacement, a bearing-plate attached to the cap, a plurality of spacing-disks insertible beneath the bearing-plate, and a lever pivoted to the free end of the shank and bearing against said plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ORRIN MILTON SACKETT.

Witnesses:

CHAS. F. PAINTER,
O. C. THOMAS.