

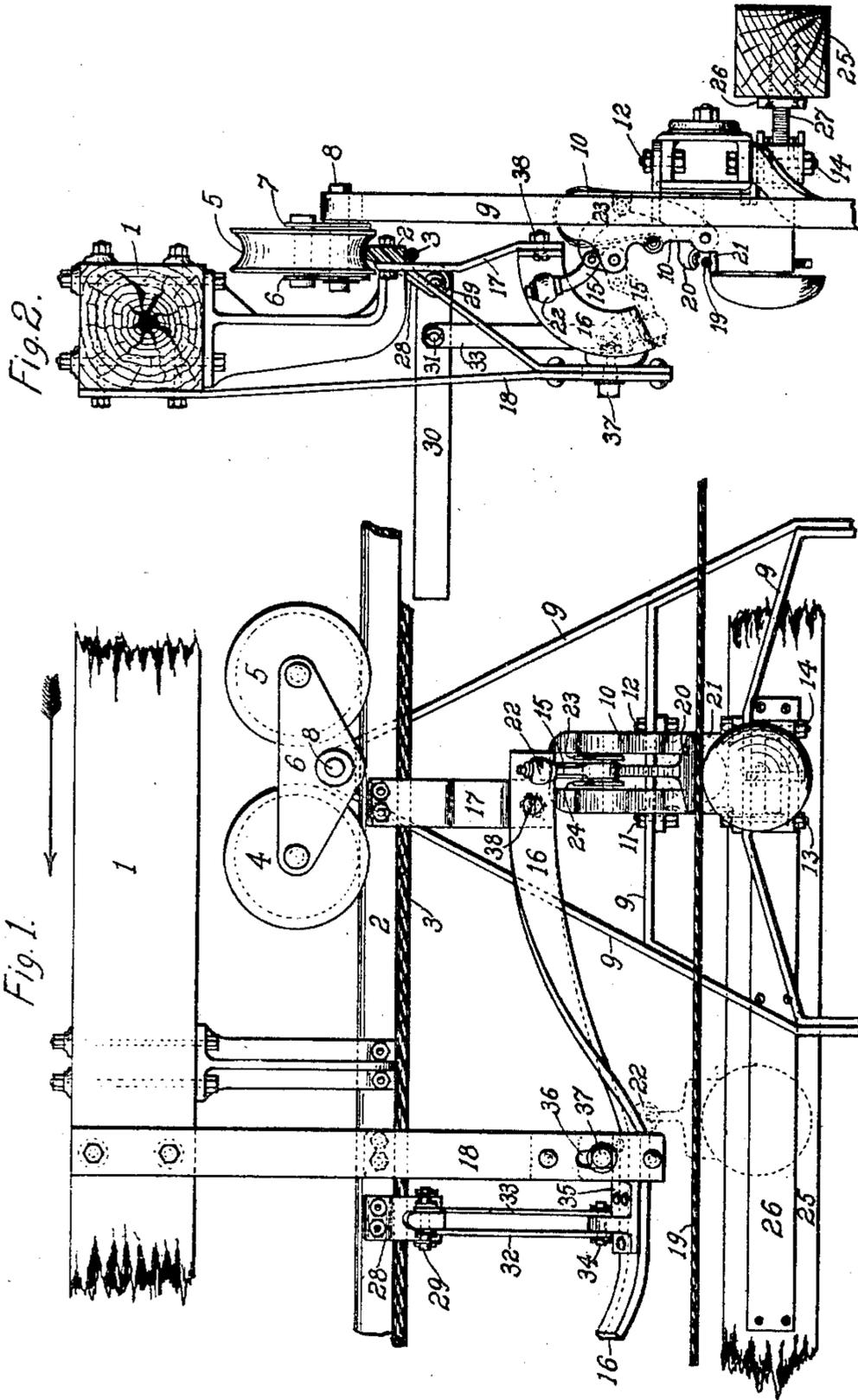
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S. S. WEBBER.
GRIP ACTUATING MECHANISM:

(Application filed Apr. 12, 1902.)

(No Model.)



WITNESSES:

Elwood W. Morry
Charles C. Haver Jr.

INVENTOR

S. S. Webber

BY

Francis B. Lutz

ATTORNEY

UNITED STATES PATENT OFFICE.

SAMUEL S. WEBBER, OF TRENTON, NEW JERSEY.

GRIP-ACTUATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 706,369, dated August 5, 1902.

Application filed April 12, 1902. Serial No. 102,503. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. WEBBER, a citizen of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Grip-Actuating Mechanisms, of which the following is a specification.

My invention relates to grip-actuating mechanisms, and especially to automatically-operable means for closing gripping mechanisms while the same are in motion relatively to the actuating mechanism; and the object of my invention is to produce a simple device which will operate to automatically close the gripping mechanism, and thus dispense with the manual operation thereof which has heretofore been requisite to its closure.

My present invention while conceivably useful in a variety of connections is especially adapted for use in closing the grips which are commonly provided for the purpose of connecting moving cables with cars, buckets, and the like running upon tramways and adapted to convey materials from one point to another.

On May 18, 1897, Letters Patent of the United States No. 582,708 were granted to me for a gripping mechanism, and in illustrating and describing my present invention I have shown it in connection with the gripping device so, as aforesaid, patented to me, the actuating-lever only of said gripping device being slightly modified to adapt it to operable contact with the actuating device which I am about to describe. It will, however, be readily understood that my present invention is adapted to use in connection with gripping mechanism of varying designs and to practical use in a variety of situations and connections.

The construction of elevated tramways or cableways which are traversed by cars, buckets, and the like, which latter are raised, run, and lowered, or dumped by means of ropes, is so well understood that I do not deem it necessary to illustrate more than that part of such structure with which my present improvement is immediately connected.

In the drawings, then, Figure 1 is a side view in elevation of my grip-actuating mechanism, showing same connected with a part

of a framework adapted to sustain it; and Fig. 2 is an end view of the same looking in the direction of the course of the arrow at the top of Fig. 1.

1 is an upper member of a framework adapted to sustain the grip-actuating mechanism, said framework being erected at a point on the line of a cableway where it is desired to start the vehicles traversing the same on their run.

2 is a short rail placed directly over the tram-cable and in line with it.

3 is the tram-cable whereon the wheels of the vehicles traversing the cableway are run.

4 and 5 are the wheels of the vehicle, which in the part of the structure shown in the drawings are mounted upon the rail 2.

6 and 7 are plates of metal, in which are journaled the axles of the wheels 4 and 5 and to which is attached the pin 8, upon which is hung the frame 9, which supports the body of the vehicle, which latter is not shown in the drawings.

10 is the gripping mechanism, which is attached to the frame 9 of the vehicle by the bolts 11, 12, 13, and 14, and 15 is the actuating-lever of the gripping device 10.

16 is a metal bar, having a twist and a longitudinal curve, which is sustained by the bar 17, suspended from the rail 2, and the bar 18, attached to the member 1 and the rail 2.

19 is the traction-rope, which when gripped between the movable jaw 20 and the stationary jaw 21 of the gripping mechanism 10 operates to move the vehicle from point to point.

When the cableway is in operation, the traction-rope 19 moves constantly in the direction of the course of the arrow at the top of Fig. 1, and the body of the vehicle or other receptacle suspended from the vehicle-frame 9 being loaded it is pushed by hand in the same direction. The small roller 22 on the outer end of the actuating-lever 15 of the gripping mechanism contacts with the curved bar 16, and as the vehicle progresses the roller 22 being in constant contact with the bar 16 the actuating-lever 15 is finally forced down until it assumes the position indicated by the dotted lines in Figs. 1 and 2, when by means of the toggle-links 23 24 the jaws 20 and 21 of the gripping mechanism are

closed tightly upon the traction-rope 19 and the vehicle is drawn along the rail to the end thereof, when the wheels 4 5 pass on to the tram-cable 3 and the vehicle continues on its course along the tramway until the gripping mechanism is released either by hand or by some stop located in its path and adapted to throw up the actuating-lever of the gripping mechanism and disengage its jaws from the traction-rope.

To facilitate the proper working of the grip-actuating device, it is necessary to prevent the gripping mechanism from swinging outwardly from the bar 16 while the roller 22 of the actuating-lever 15 is in contact therewith. To effect this end, I attach to the framework supporting the grip-actuating mechanism the horizontal member 25, which is preferably faced with a strip of metal 26, and I attach the roller 27 to the lower part of the gripping mechanism 10, which roller revolving in a horizontal plane runs upon the face of the metal strip 26 until it is passed beyond the outer end of the bar 16, and the roller 22 on the actuating-lever 15 is held to its track on the bar 16 throughout.

Inasmuch as a number of vehicles similar to that shown in the drawings are commonly used on one tramway and slight differences in the structure may exist and the gripping mechanisms become worn through use, it is necessary to provide some means for adjusting the grip-actuating device to these inequalities, as without some provision for this purpose the actuating device might occasionally fail to sufficiently close the jaws of the grip upon the traction-rope 19. For this purpose I provide means which I will now describe. To the rail 2 I attach a plate 28 by bolts, and through the lower portion of said plate I pass a pin 29. On this pin 29 is swiveled a bar 30, which is preferably made of iron of a considerable weight. On the stud 31, formed on this bar, are swiveled the links 32 33, which are swiveled at their lower ends upon a pin or stud 34, attached to the plate 35, which plate 35 is riveted or bolted to the bar 16. In the bar or support 18 is formed a slot 36, in which plays the pin 37, which is attached to the bar 16. By the means thus described the lower end of the bar 16 is permitted to rise and fall slightly as it swivels on the pin 38, which attaches it to the sup-

port 17, and while the bar 16 has a tendency to rise at its lower end as the roller 22 on the actuating-lever 15 traverses its under side such tendency is overcome by the downward pressure exerted on the bar 16 by the weight of the lever 30, which may be increased by the placing of an additional weight upon the lever, if desired.

Having thus described my invention, what I claim is—

1. In a grip-actuating mechanism, a member having a bearing-surface the plane of which bearing-surface is, at one end thereof, at an angle with its plane at the other end thereof, said bearing-surface being placed in the line of motion of an actuating member of a gripping mechanism, and adapted by contact therewith to force a closure of the jaws of said gripping mechanism, in combination with means for affording a yielding contact between said bearing-surface and said actuating member.

2. In a grip-actuating mechanism, a member having a bearing-surface the plane of which bearing-surface is, at one end thereof, at an angle with its plane at the other end thereof, said bearing-surface being placed in the line of motion of an actuating member of a gripping mechanism, and adapted by contact therewith to force a closure of the jaws of said gripping mechanism, in combination with means for affording a yielding contact between said bearing-surface and said actuating member, and auxiliary means for enforcing such contact.

3. The combination of a gripping mechanism having an actuating member, a member having a curved bearing-surface the plane of which bearing-surface is, at one end thereof, at an angle with its plane at the other end thereof, said bearing-surface being placed in the line of motion of said actuating member of said gripping mechanism, and adapted by contact therewith to force a closure of the jaws of said gripping mechanism, means for affording a yielding contact between said bearing-surface and said actuating member, and auxiliary means for enforcing such contact.

SAMUEL S. WEBBER.

Witnesses:

MARGE T. SIMPSON,
ELWOOD W. MOORE, Jr.