J. HANSEN.

Griper for Wire-Rope Railways.

No. 207,118. Patented Aug. 20, 1878.

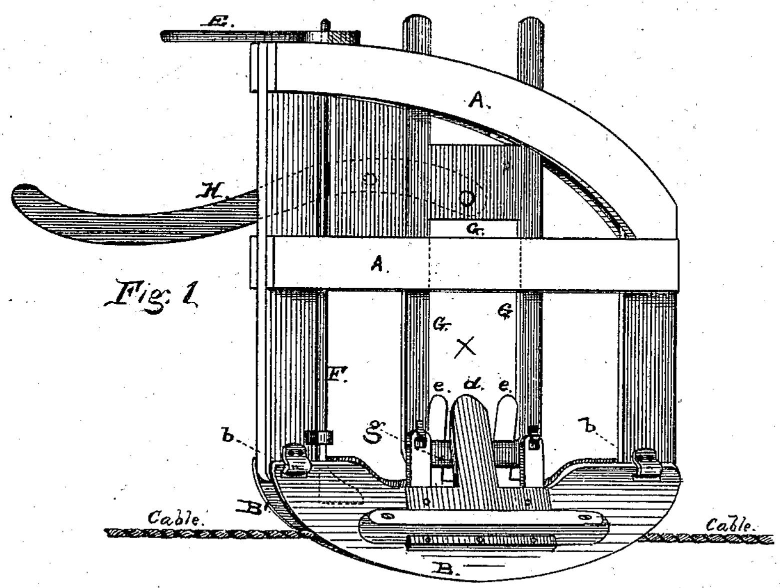


Fig. 1.

Fig. 2.

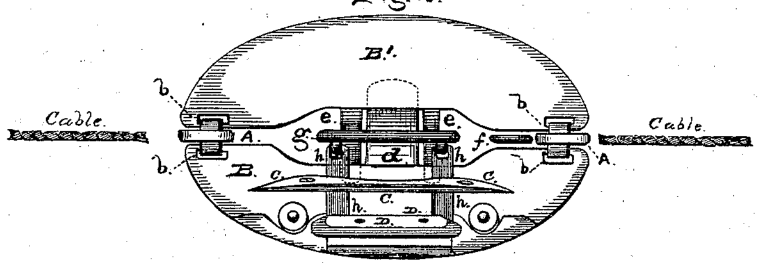


Fig. 3.

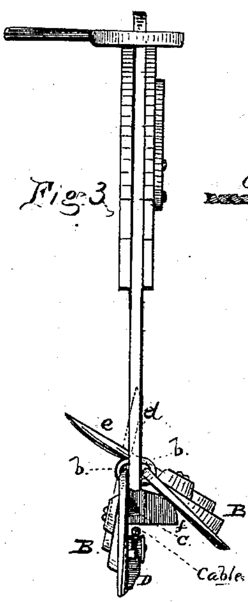
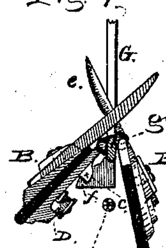


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHAN HANSEN, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN GRIPERS FOR WIRE-ROPE RAILWAYS.

Specification forming part of Letters Patent No. **207,118**, dated August 20, 1878; application filed April 29, 1878.

To all whom it may concern:

Be it known that I, JOHAN HANSEN, of the city and county of San Francisco, State of California, have invented a certain new and useful Improved Griping Device for Wire-Rope Railways, which invention is fully set forth and described in the following specification and accompanying drawings.

My invention has for its object to construct an improved griping device for endless-rope traction-railways, in which the cable can be dropped and picked up again at any point, whereby the car or dummy is allowed to cross an intersecting cable-road, having its cable laid over the first one.

To this end my invention consists in the construction and combination, with the gripe-frame, of two hinged plates or wings, carrying griping dies or jaws attached to the bottom of the frame, and having a movement upon their hinges away from each other and clear of the rope, and a contrary movement against each other to bring the griping dies or jaws into position and action above and below the cable.

Referring to the accompanying drawings for a better understanding of my invention, Figure 1 is a perspective view of my improved gripe and gripe-frame. Fig. 2 is a plan view of the hinged jaws or wings thrown open clear of the rope. Fig. 3 is an end view of Fig. 1, but with the rope released from the dies and running upon the friction-rollers. Fig. 4 is a vertical section through *x y*, Fig. 1, showing the position of the hinged plates or wings when dropping or about to pick up the rope.

The frame A A of the gripe carries at its lower end the two wings B B′, held by means of hinges *b b*, and having a movement in the arc of a circle toward and away from each other. One of the wings, B, has upon its inside face a fixed die, C, and a movable die or jaw, D; but the other wing has a smooth face, and only serves to hold the rope in place between the dies as they are operated in starting and stopping.

In line with the lower die are the two friction-rollers, to receive the cable when the dies or jaws are opened, and prevent any wearing of the lower die while the gripe remains stationary and the cable is running through it.

The rod F, that operates the wings B B′, is held in bearings against the side post of the frame, and a foot, *f*, between the two wings, projecting at a right angle, is thrown out in either direction by means of a lever, E, at the top of the frame, so that either wing B can be thereby thrown out clear of the cable at any time by turning the rod.

The back and front ends of the wings B and the inside face of their edges are rounded and beveled, to facilitate the passing over the intersecting cable of another road.

The movement of the two wings B B′ against each other to close upon the cable is effected by means of the bar G, carrying the wedge-shaped plate *g* at its lower end, which, by being drawn up by the lever H, causes the cam-surfaced fingers *d e e* on the top of the wings to be pressed apart, and the leverage thus given by them closes the two wings tightly together and holds the cable in line between the two dies.

The upper die is fixed, but the lower one is moved up to and away from it to clamp or release the cable, and this upward movement of the clamping-die is produced by the same bar G and lever H. This die is fixed to the end of two arms, *h h*, that move in slots in the inner face of the hinged plate B; and as these arms are secured to the bottom of the wedge-plate of the bar G, the die is by them drawn up toward the upper die as the lever H is pressed down.

The bar G slides up and down in bearings in the gripe-frame, and a wide slot or opening is left at the bottom part, to allow the cam-fingers *h h* to cross each other above the wedge-plate and work freely therein.

In the operation of my invention, by pressing down the lever H the two hinged wings that embrace the cable are closed over it to bring the two dies in line above and below it, and the continued movement of the lever brings the lower die up, and holds the cable with a firm gripe against the upper fixed die.

The slight upward movement of the lever H to move the die, whenever the cable is to be released or griped in stopping or starting the car, does not act upon the hinged wings sufficiently to permit them to separate and drop.

the cable; and only by raising the lever H to throw the wedge-plate clear of the fingers can the lever E and rod F be brought into play to open the hinged wings B B′.

Thus, when it is desired to drop the cable at any point to allow the gripe to pass over another cross-cable, the wings and dies are released by raising the lever H, and the wing or plate B is thrown outward away from the cable by turning the lever of the rod F; and therefore when the curved ends of the hinged plates strike the cable or other obstruction, they will readily spread out and pass over it, and afterward drop down upon each side of the cable and permit the lower die to come into ine beneath the cable.

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

1. In combination with the frame A, the hinged wings or plates B B′, with rounded and beveled ends and edges, one of which carries a fixed die, C, and a movable die, D, and both of which are operated substantially as herein described, for the purpose set forth.

2. In combination with the hinged wings or plates B B′, one of which carries the fixed die C and the movable die D, the herein-described means of closing them together and operating the griping-die from the same lever H, consisting of the bar G, having the wedge *g* at its lower end, the cam-fingers *d e e*, projecting from the top of the plates, and the arms *h h* of the die-plate moving in slots in one of the wings and connected with the sliding bar G, constructed and arranged to operate substantially as described and set forth.

3. In combination with the hinged wings B B′, one of which carries the fixed and movable dies C D, operated substantially as herein described, the means for opening the said wings, consisting of the rod F, its foot *f*, and the lever E, constructed and arranged to operate substantially as described and set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 16th day of April, 1878.

JOHAN HANSEN. [L. S.]

Witnesses:
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