

UNITED STATES PATENT OFFICE.

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CABLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 492,648, dated February 28, 1893.

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To all whom it may concern:

Be it known that I, GUSTAVE P. WERN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Cable-Support, of which the following is a full, clear, and exact description.

The invention relates to supports for cables such for instance, as are used for propelling cars of carrying devices employed for moving coal to furnaces of gas houses, or for other purposes.

The object of the invention is to provide a new and improved cable support, which is simple and durable in construction, very effective in operation, and arranged to swing out of position when struck by the car going in either direction, and to return automatically to its normal cable supporting position as soon as the car has passed.

The invention consists of an arm for supporting the cable and mounted to swing on a fixed pivot, the arm being provided with a hub having inclined surfaces adapted to travel on like surfaces formed on a sleeve mounted to turn with the said arm in one direction, and adapted to be held in a fixed position when the arm moves in an opposite direction by a collar secured on the said pivot.

The invention also consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement as applied, parts of the track being shown in section. Fig. 2 is an inverted plan view of the improvement; and Fig. 3 is a side elevation of a modified form of part of the improvement.

The carrying or transporting device of any approved construction is provided with the usual rails A between which pass the cables B adapted to move the cars traveling on the rails A. Each of the cables B is adapted to rest on a grooved pulley C journaled on a pin D secured in the head E formed on one end of an arm F, mounted to turn horizontally on a pivot G arranged vertically and secured on the bottom flange of one of the rails A. The

head E is provided with a projecting lug E' adapted to rest on a keeper A' secured to the base flange of one of the rails A, as plainly shown in Fig. 1, so that the arm F is supported on the cable supporting end, to prevent undue strain on the pivot G by the weight of the cables resting on the pulleys C. The arm F is provided on its under side with a hub F' set on the upper end of a sleeve H mounted to turn loosely in one direction on the pivot G, the said sleeve being prevented from turning in an opposite direction by a collar I held on the square lower end G' of the pivot G. The lower edge of the hub F' is formed with two inclined surfaces F² and F³ mounted to travel on correspondingly-shaped surfaces H' and H² formed on the top edge of the sleeve H. The straight vertical back F⁴ of the hub is adapted to abut against a corresponding straight edge H³ formed on the sleeve H so that the arm F can swing in one direction on the upper edge of the sleeve H without moving the latter as the back F⁴ thus moves away from the edge H³, the said arm F then rising on the pivot G by the incline F² traveling up the incline H'. When the arm F swings in the opposite direction and the straight edges F⁴ and H³ are in contact with each other, then the sleeve H turns with the hub F'. The lower edge of the hub H is formed with the inclines H⁴ and H⁵ mounted to travel on corresponding inclines I' and I² formed on the top edge of the collar I. The incline H⁴ is located directly opposite the incline H' and curves in an opposite direction, as plainly shown in Fig. 1, the other incline H⁵ being located opposite the incline H² and also extending in an opposite direction. A straight edge H⁶ connects the ends of the inclines H⁴ and H⁵ with each other and this straight edge is adapted to abut against a corresponding straight edge I³ formed on the collar I at the ends of the inclines I' and I².

Now, it will be seen that when the arm F swings in the direction of the arrows a', then the incline F² travels up the incline H' so that the arm F rises on its pivot G and the sleeve H is held stationary on account of the straight edge H⁶ abutting against the straight edge I³ of the fixed collar I. When the arm F swings in the inverse direction of the arrow a', then the abutting edges F⁴ and H³

cause a turning of the sleeve H so that the straight edge H⁰ moves away from the straight edge I³; at the same time the sleeve H rises owing to the inclines H⁴ and H⁵ traveling up the inclines I¹ and I². The rising of the sleeve H causes a like rising of the hub F' and arm F.

Now, it will be seen that when the device is in use and a car travels in the direction of the arrow b' and finally strikes the head E, then a swinging motion is given to the arm F in the direction of the arrow a', as above described so that the arm F' with its head E nearly makes a quarter turn and thus moves out of the path of the car to permit the latter to pass. As soon as the car has passed the arm F returns automatically to its normal position, as the inclines F² and F³ travel downward on the inclines H' and H² on the sleeve H now held in a fixed position as above described. When the car travels in the inverse direction of the arrow b', then it strikes the head on the other side and causes the arm F to swing in the inverse direction of the arrow a' until the arm permits the car to pass, the arm nearly making one quarter turn. When the arm travels in this direction, the sleeve H turns with the hub F' as above described and when the car has passed, the sleeve H and the arm F return to their normal position, as the inclines H⁴ and H⁵ travel down the inclines I¹ and I² respectively.

In order to counterbalance the weight of the head E and the pulley C, I provide the outer end of the arm F with a counterbalancing weight J or with a second head E² similar in construction to the head E and also carrying a set of pulleys C'. Now, when the pulleys C in the head E have become worn the other head E² with its pulleys C' may be brought into use under the track rails A to support the cables B, it being understood that the head E is then the outer part of the arm instead of the inner part, as above described and shown in the drawings. In order to make this change, the position of the collar I is changed on the square end G' of the pivot G by giving the said collar a half-turn before inserting it on the lower end of the pivot G.

It will be seen that by this device the cables are supported during the time the car

moves away from the device, and the latter is free to swing out of position when the car strikes it, and automatically returns as soon as the car has passed.

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

1. A cable support comprising an arm mounted to turn and adapted to support the cable, a hub held on the said arm and formed with inclines, a sleeve mounted to turn and adapted to be engaged by the inclines on the said hub, and a fixed collar adapted to be engaged by the said sleeve to hold the latter in position when the arm swings in one direction and to permit the sleeve to turn when the arm swings in an opposite direction, substantially as shown and described.

2. A cable support comprising a fixed pivot, an arm mounted to turn on the said pivot and adapted to support the cable, a hub formed on the said arm concentric to the said pivot and provided with inclines and a straight edge, a sleeve mounted to turn on the said pivot and formed at its upper end with inclines adapted to be engaged by the hub inclines, and also provided with a straight edge adapted to be engaged by the straight edge of the hub, substantially as shown and described.

3. A cable support comprising a fixed pivot, an arm mounted to turn on the said pivot and adapted to support the cable, a hub formed on the said arm concentric to the said pivot and provided with inclines and a straight edge, a sleeve mounted to turn on the said pivot and formed at its upper end with inclines adapted to be engaged by the hub inclines, and also provided with a straight edge adapted to be engaged by the straight edge of the hub, and a collar fixed on the lower end of the said pivot and provided with inclines adapted to be engaged by inclines on the lower end of the said sleeve and also provided with a straight edge adapted to be engaged by a like edge on the lower end of the sleeve, substantially as shown and described.

GUSTAVE P. WERN.

Witnesses:

THEO. G. HOSTER,
EDGAR TATE.