No. 824,724. PATENTED JULY 3, 1906.

R. H. KEAYS.

CABLE GRIP.

APPLICATION FILED OCT. 28, 1905.

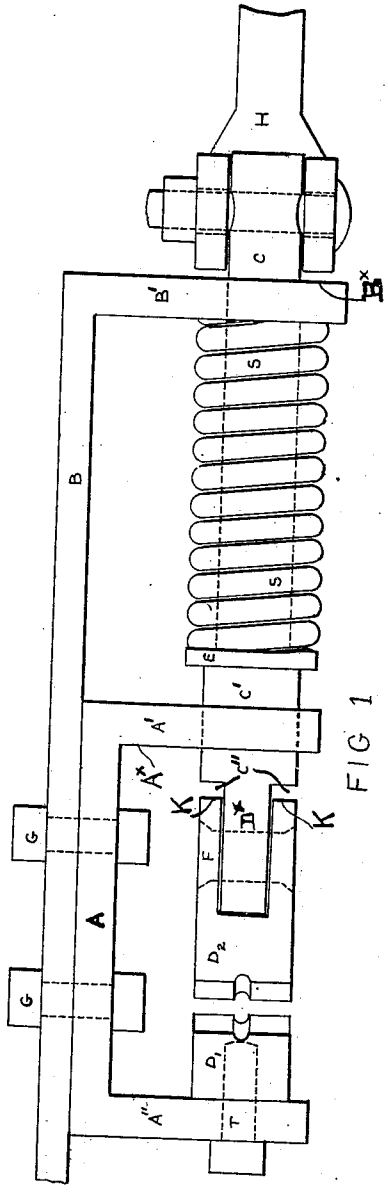

FIG 1

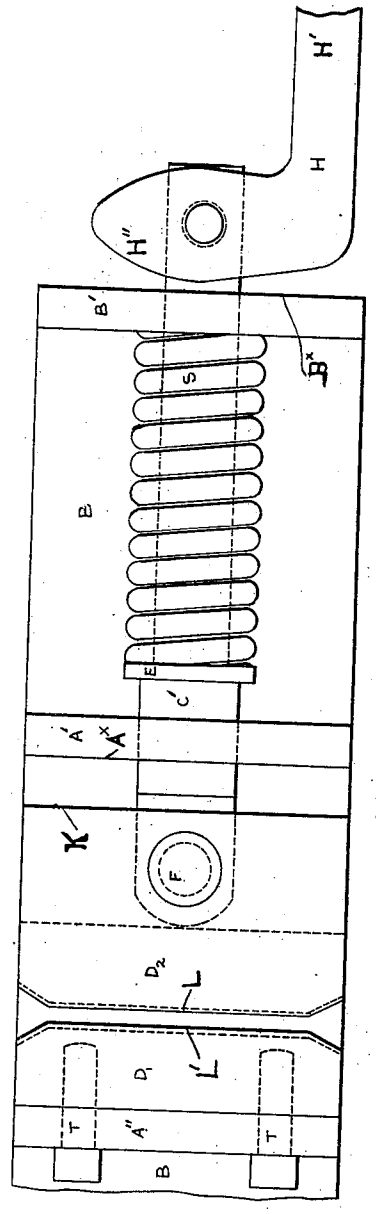

FIG 2

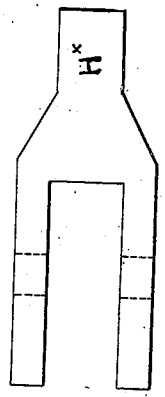

FIG 4

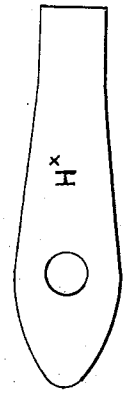

FIG 3

WITNESSES:

M. Hamilton

Richard Thorp

Reginald Keays INVENTOR

BY

James Hamilton

ATTORNEY

UNITED STATES PATENT OFFICE.

REGINALD HORTON KEAYS, OF NEW YORK, N. Y.

CABLE-GRIP.

No. 824,724. Specification of Letters Patent. Patented July 3, 1906.

Application filed October 28, 1905. Serial No. 284,826.

To all whom it may concern:

Be it known that I, REGINALD HORTON KEAYS, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Cable-Grips, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in cable-grips, and one object of my invention is to provide a cable-grip in which the application of the power to the gripping mechanism shall be made without the intervention of levers or other rotary parts.

Another object of my invention is to provide a cable-grip in which the power is applied directly to the gripping mechanism by spring action.

A third object of my invention is to provide means whereby the opening between the gripping-jaws shall upon release be made uniform throughout its length.

Other features of my invention will be brought out hereinafter.

In the drawings illustrating the principle of my invention and the best mode now known to me of applying that principle, Figure 1 is an elevation, and Fig. 2 is a bottom plan view, of my new gripping mechanism as applied to a mine-car; and Figs. 3 and 4 show a modified form of the releasing-lever.

To the bottom of the car (not shown) is suitably secured the longer leg of an L-shaped plate B, to which is secured by bolts G G a U-shaped plate A, the legs A′ A″ of which project downwardly parallel to the shorter or vertical leg B′ of the plate B. Slidably mounted in the vertical leg B′ of the plate B and the inner leg A′ of plate A is a spindle the front end or head C′ of which is squared and passes through a square hole in the leg A′, while the body portion C is cylindrical and passes through a round hole in the leg B′. Between the square head C′ and the cylindrical part C of the spindle is formed a collar E, between which and the vertical leg B′ of the plate B is mounted a spiral spring S.

By cutting away the metal at the extremity of the squared portion C′ of the spindle to form recesses C″ upon its upper and lower faces there is formed a lug $D^{\times}$, upon which is pivotally secured by the pin F the movable jaw D^2. The rear face K of the jaw D^2 is plane and parallel to the gripping-face L thereof, so that when the spindle C is pulled to the right in Figs. 1 and 2 to release the gripping mechanism the rear face K coincides throughout its extent with the opposed face $A^{\times}$ of the leg A′. Thus the gripping-face L in releasing position is made parallel to the face $A^{\times}$, and since the gripping-face L′ of the stationary jaw D′ is parallel at all times to the face $A^{\times}$ the opening between the jaws when the grip is released will be uniform throughout its extent, the advantage of which will be obvious to all skilled in this art.

The stationary jaw D′ is secured to the leg A″ by tap-bolts T, which permit its removal in case of need.

Upon the outer end of the spindle C is mounted the releasing-lever H, the outer end H′ of which is bent at right angles to form a "knock-off" and the inner end H″ of which is formed with a cam-surface which coacts with the face $B^{\times}$. When the arm H′ is thrown parallel to the face $B^{\times}$, the cam H″ coacts with the face $B^{\times}$ to draw the spindle C to the right against the tension of the spring S, thereby releasing the grip. When the arm H′ is thrown into the position shown in the figures, the spring S forces the spindle to the left, thereby causing the jaws to close upon the cable.

The sides of the jaws D′ D^2 are beveled to facilitate the jamming of rags, bagging, and the like to prevent slipping of the cable in case of excessive loads. The rags are wound around the cable behind the grip and are carried by the cable into the notch formed by the beveled faces. As shown in the drawings, the gripping-faces are grooved near the middle for the reception of the cable.

To provide for wear of the jaws, the collar E is so positioned that a space is left between it and the leg A′ when the grip is closed.

In Figs. 3 and 4 is shown a form of releasing-lever $H^{\times}$, in which the outer end is straight instead of being bent, as in case of the lever H shown in Figs. 1 and 2, Fig. 3 being a plan view and Fig. 4 an elevation.

What I claim is—

1. In a cable-grip, the combination of a pair of coöperating gripping-jaws; a slidable spindle to which one of the jaws is connected; a spring mounted upon said spindle; and means for supporting said spindle and jaws.

2. In a cable-grip, the combination of a pair of coöperating gripping-jaws; a slidable spindle to which one of said jaws is pivotally connected; a spiral spring wound around said spindle and acting to move said spindle and

thereby force said jaws together; and means for supporting said spindle and jaws.

3. In a cable-grip, the combination of a stationary jaw; a movable jaw; means for moving said movable jaw from said stationary jaw to release the cable; and a plate against which the rear face of said movable jaw is made to abut in releasing position, thereby bringing the gripping-faces of said jaws into substantial parallelism and making the opening for the cable of uniform width throughout its length.

4. In a cable-grip, the combination of a stationary jaw; a movable jaw; a spindle in one end of which said movable jaw is pivotally mounted; a plate in which said spindle is mounted slidably; and means for moving said spindle to bring said movable jaw against said plate to release the cable and throw the gripping-faces of said jaw into substantial parallelism.

5. In a cable-grip, the combination with supporting means of gripping-jaws, one of which is pivotally mounted, the ends of the gripping-faces of said jaws being beveled to form notches in the closed position of the jaws, said notches being adapted to catch non-slippable material carried by the cable.

6. In a cable-grip, the combination of a support; a pair of coöperating gripping-jaws; a slidable spindle upon which one of said jaws is mounted; a spring which is mounted upon said spindle and which forces said jaws together; and releasing means mounted upon said spindle.

7. In a cable-grip, the combination with a support of a pair of coöperating gripping-jaws; a slidable spindle upon which one of said jaws is mounted; a spring which is mounted upon said spindle and which forces said jaws together; and cam-controlled releasing means mounted upon said spindle.

8. In a cable-grip, the combination with a plurality of parallel plates of a pair of coöperating gripping-jaws, one of which is mounted on one of said plates and the other of which is mounted upon a slidable member supported by the others of said plates; said slidable member; and a spring mounted upon said slidable member and adapted thereby to force said jaws together.

In testimony whereof I hereunto set my hand, in the presence of two witnesses, this 26th day of October, A. D. 1905.

REGINALD HORTON KEAYS.

Witnesses:

JANET H. KEAYS,

JESSIE H. WILLARD.