No. 790,828. PATENTED MAY 23, 1905.

W. O. GUNCKEL.

GRIP FOR CABLE RAILROADS.

APPLICATION FILED OCT. 11, 1904.

FIG. 1.

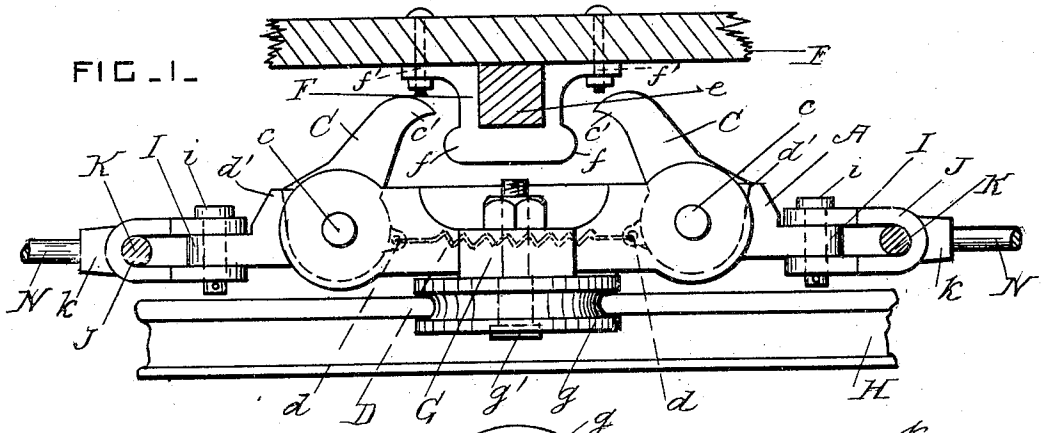


FIG. 2.

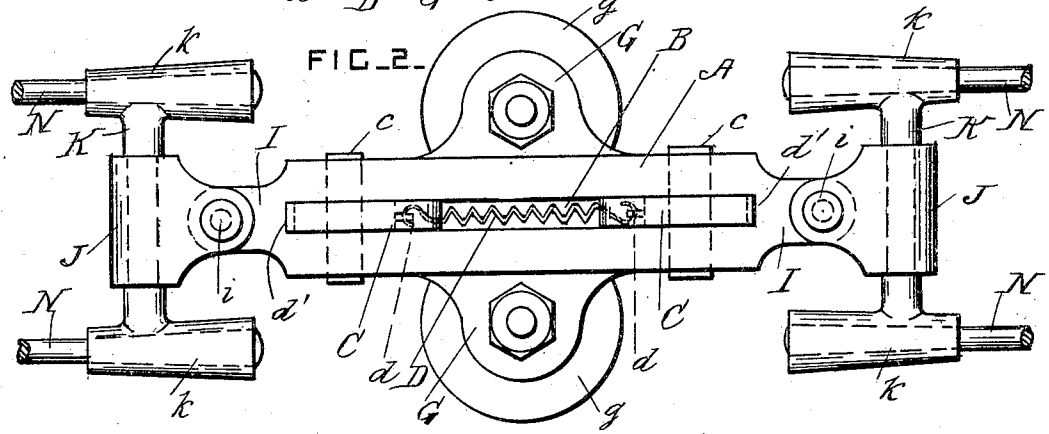
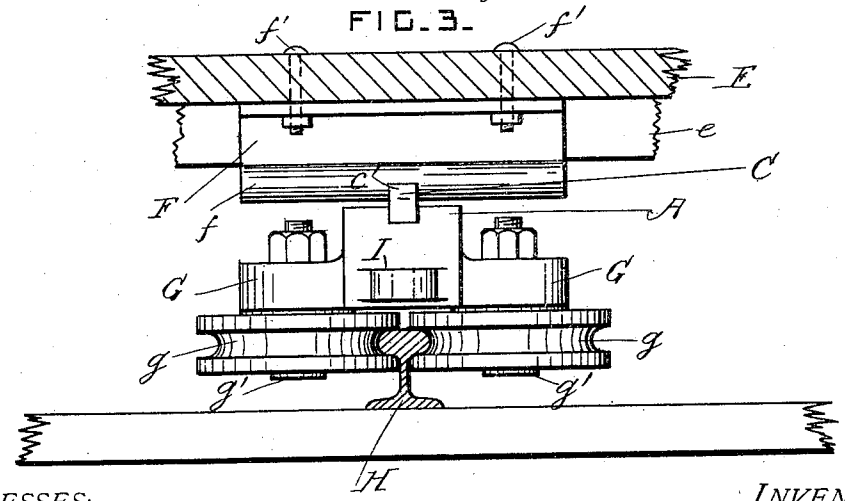


FIG. 3.



WITNESSES:

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No. 790,828. Patented May 23, 1905.

UNITED STATES PATENT OFFICE.

WINFIELD O. GUNCKEL, OF VAUGHAN, WEST VIRGINIA.

GRIP FOR CABLE-RAILROADS.

SPECIFICATION forming part of Letters Patent No. 790,828, dated May 23, 1905.

Application filed October 11, 1904. Serial No. 228,037.

To all whom it may concern:

Be it known that I, WINFIELD O. GUNCKEL, a citizen of the United States, residing at Vaughan, in the county of Nicholas and State of West Virginia, have invented certain new and useful Improvements in Grips for Cable-Railroads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the gripping mechanism used on cable-railroads in mines and other places; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of the grip, partly in section. Fig. 2 is a plan view of the grip. Fig. 3 is an end view of the grip.

A is a frame provided with a longitudinal slot or opening B at its middle part.

C represents two grip-fingers pivoted in the slot of the frame upon pins *c* and provided with curved and pointed ends *c'*.

D is a spring arranged between lugs *d* on the lower parts of the grip-fingers and normally holding them in their raised positions and resting against stops *d'* on the frame.

The grip-fingers are arranged in inclined positions with their curved and pointed ends facing toward each other.

E is a portion of the bottom of a car which runs upon car-rails in the ordinary manner, and *e* is a portion of one of the car-axles.

F is a bracket which straddles the car-axle and which is provided with two projecting catches *f* at its lower end for engaging with the curved and pointed ends of the grip-fingers. Bolts *f'* are provided for securing the bracket to the bottom of the car. The bracket is arranged to straddle the car-axle, because the car-axle is always at a fixed distance above the car-rails, and the catches are therefore secured in the proper position for engaging with the grip-fingers to the best advantage.

G represents lugs which project laterally from the middle part of the frame A, and *g* represents guide-sheaves which are journaled on pins *g'*, carried by the said lugs and arranged vertically. The guide-sheaves engage with a central guide-rail H, which is secured between the ordinary car-rails and which keeps the grip mechanism in the most desirable position.

I represents lugs at the ends of the frame A, and J represents clevises pivoted to the said lugs by vertical pins *i*. K represents bars which are journaled in the said clevises in a horizontal position and provided with sockets *k* at their ends.

N represents the cables by means of which the cars are drawn along. These cables are arranged in pairs and are connected to the sockets *k* in any approved manner. Wire cables are preferably used; but the cables may be of any other flexible material, such as rope, or chains may be used. The pins *i* permit the grip mechanism to pass around curves and bends, and the pivotal connection of the bars permits the grip mechanism to adapt itself to changes in the grade.

The car is engaged automatically by pressing down one of the grip-fingers. The rear grip-finger in the direction of motion draws the car along level rails and up inclines, and the front grip-finger regulates the descent of the car upon down grades.

What I claim is—

1. The combination, with a cable-grip frame, and a pair of grip-fingers pivoted to the frame and provided with curved and pointed ends; of a car provided with an axle, and a bracket which straddles the said axle and which is provided with catches for engaging with the said grip-fingers.

2. The combination, with a cable-grip frame, and a grip-finger pivoted to the frame and provided with a curved and pointed end, said grip-finger being normally held in an inclined position; of a car provided with an axle, and a bracket which straddles the said axle and which is provided with a catch for engaging with the said grip-finger.

3. The combination, with a cable-grip frame provided with a longitudinal slot, of a pair of grip-fingers arranged in the said slot and pivoted to the said frame, a single spring arranged between the lower parts of the said grip-fingers, and a car provided with a bracket hav-

ing catches for engaging with the said grip-fingers.

4. The combination, with a grip-frame provided with a grip-finger, of a clevis pivoted to the end portion of the said frame by a vertical pin, a pair of sockets provided with a coupling-bar which is journaled horizontally in the said clevis, and a pair of cables connected to the said sockets.

5. The combination, with a grip-frame provided with grip mechanism for engaging a car, of a pair of guide-sheaves journaled at the middle part of the said frame, a stationary guide arranged under the said frame and engaging with the said sheaves, clevises pivoted by vertical pins to the end portions of the said frame, pairs of sockets provided with coupling-bars which are journaled horizontally in the said clevises, and pairs of cables connected to the said sockets.

In testimony whereof I have affixed my signature in the presence of two witnesses.

WINFIELD O. GUNCKEL.

Witnesses:

LEONIDAS BROWN,

E. M. BROWN.