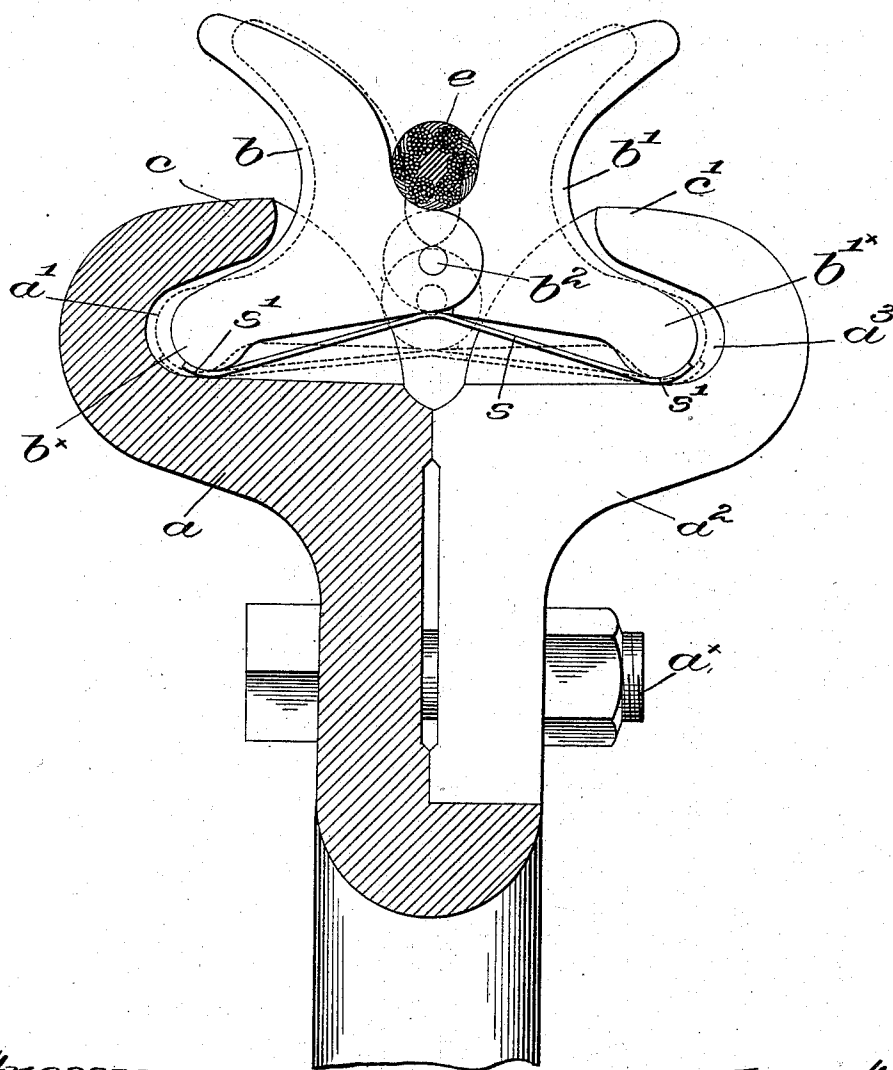


(No Model.)

A. J. B. BERGER.
GRIP WHEEL.

No. 530,383.

Patented Dec. 4, 1894.



Witnesses.

Louis M. Souell.

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UNITED STATES PATENT OFFICE.

AMBROSE J. B. BERGER, OF HINGHAM, MASSACHUSETTS, ASSIGNOR TO THE
STEEL CABLE ENGINEERING COMPANY, OF MAINE.

GRIP-WHEEL.

SPECIFICATION forming part of Letters Patent No. 530,383, dated December 4, 1894.

Application filed December 4, 1893. Serial No. 492,653. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE J. B. BERGER, of Hingham, county of Plymouth, State of Massachusetts, have invented an Improvement in Grip-Wheels, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

Wire rope is in very general use, on account of its great strength and lightness, to transmit power from one point to another, in the form of an endless cable, the wire rope being very flexible and elastic. The power thus transmitted depends largely upon the amount of adhesion between the cable and the driving pulley, an extensively used grip pulley having arranged about its rim a number of toggle-like jaws which clamp the cable firmly when they are drawn together by the strain exerted thereby, the jaws opening more or less freely by the force of gravity when the strain is removed. When such a grip wheel rotates in a vertical or nearly vertical plane the operation of the jaws is satisfactory, but when the wheel is rotated in a horizontal or an inclined plane the jaws will not separate or open quickly and fully when the strain exerted thereon by the cable is removed, and in consequence they are not properly opened to receive and again grip the cable as they are revolved, thereby decreasing the gripping power of the wheel, and reducing the amount of power transmitted.

This invention has for its object the production of a grip wheel which will be free from such objections, means being provided to positively open the jaws the instant the strain exerted by the cable is removed, and normally maintain them open.

The drawing shows in vertical section a sufficient portion of the wheel rim to be understood, with my invention applied thereto, the section of the rim being taken through one of the jaw receiving recesses.

The rim a of the wheel is provided with a series of recesses, as a' , to receive one half or grip, as b , of each jaw, and a segment a^2 , secured to the main part of the wheel by bolts a^3 , is also provided with recesses a^3 , located

opposite to the recesses a' in the rim, to receive the other grip b' of the jaw. The jaws fit in the recesses thus formed, and are retained in place by the overturned lips or flanges c and c' , while permitting them to freely operate. A pin b^2 is extended through suitable openings in and pivotally connects the grips b, b' of each jaw, the feet b^x and b'^x thereof resting upon the bottom of the recess, the upper ends of the grips flaring, as shown, in usual manner, to receive the cable, indicated at e , which, as it enters between the grips, presses upon the bottom of and causes them to close over upon it, thus securely gripping it and preventing any slipping. The cable is grasped as soon as the pressure begins to act, and is released as soon as it is removed.

In order to cause the jaws to open instantaneously and to remain open normally, after the removal of the pressure exerted by the cable, no matter what the position or inclination of the wheel, I have provided a strong spring to act upon the grips at their joint, said spring being herein shown as a flat strip of spring metal s , interposed between the bottom of the recess and the joint of the grips b, b' , the ends of said spring being herein shown as slightly concaved at s' to receive the feet of the grips to assist in maintaining the spring in proper position.

As will be evident from an inspection of the drawing the spring normally maintains the toggle-like grips of the jaw wide open.

Pressure upon the grips depresses them, tending to straighten the toggle-like joint and compress the spring, as shown by dotted lines in the drawing, removal of the pressure releasing the spring, as it were, to instantly open the jaw. It is obvious that the jaws will in consequence be always in readiness to receive the cable.

I claim—

A grip wheel having a rim provided with a series of lateral recesses, combined with jaws held in said recesses, each jaw consisting of toggle-like grips provided with laterally extended feet and adapted to receive and clamp a cable between them, and a flat spring in

the bottom of each recess to act upon the joint
of and normally maintain each pair of grips
separated, the outer ends of the spring being
concaved and receiving therein the laterally
5 extended feet of the grips, substantially as
described.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

AMBROSE J. B. BERGER.

Witnesses:

JOHN C. EDWARDS,
FREDERICK L. EMERY.