

C. J. KIENZLE.
CABLE ATTACHMENT.
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1,315,969.

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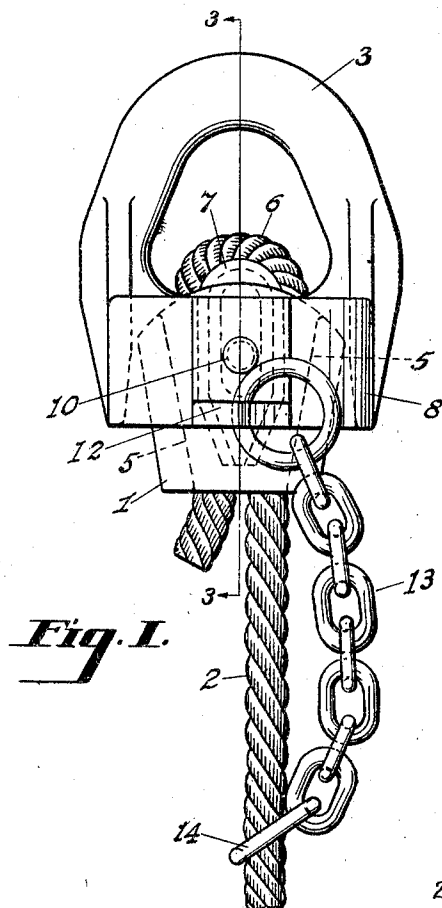


Fig. 1.

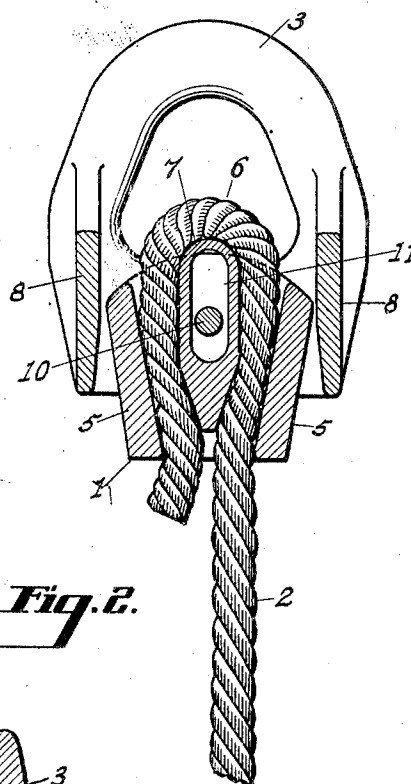


Fig. 2.

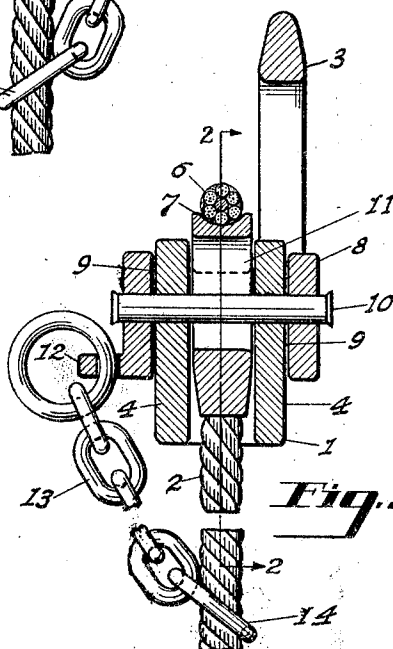


Fig. 3.

WITNESSES:

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CABLE ATTACHMENT.

1,315,969.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES J. KIENZLE, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Cable Attachments, of which the following is a specification, reference being had therein to the accompanying drawing.

My present invention relates to certain new and useful improvements in cable attachments, such as eyes, hooks, or the like, adapted to be secured to a rope or cable to afford convenient means of attachment therewith.

In the mining of coal it is a common practice to feed the coal cutting devices to their work by the winding of a steel cable attached to a suitable anchor outside of the machine. Various devices have been proposed for conveniently connecting such feed cables with the anchoring devices, but all of such devices heretofore proposed, with which I am familiar, possess certain inherent defects which it is the object of the present invention to overcome.

The principal object of this invention is to provide a cable attachment of the class described, adapted to be conveniently attached to the draft cable of a mining machine or similar device, and which will be automatically released therefrom without injury to the cable when the strain thereon exceeds a predetermined limit.

A further object is to provide means to prevent the recoil of the end of the cable when suddenly released from the abutment.

The devices by which I attain this object are fully set forth in the drawings of which—

Figure 1 is a front elevation of my improved cable eye.

Fig. 2 is a sectional view taken along the line 2—2 of Fig. 3.

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 1.

Like numerals refer to similar parts in the several figures.

For the purpose of illustration I have shown in the drawings a cable attachment comprising a terminal socket 1 adapted to be conveniently attached to a cable 2, and a cable eye 3 arranged to be connected with said terminal socket in a manner hereinafter set forth. It should be borne in mind, how-

ever, that the cable eye here illustrated may be given any other preferred form, such as a hook, swivel, or the like, without departure from the spirit of my invention. The terminal socket 1 is formed with parallel side walls 4, 4 and inclined edge walls 5, 5, and is adapted to receive a loop 6 of the cable 2. A wedge block 7 positioned within the loop 6 serves to laterally expand said loop and, by being drawn by the tension of the cable with it into the socket, to securely lock said cable into said socket. Formed integral with the cable eye 3 is a yoke 8 having parallel side walls 9, 9, between which the terminal socket 1 may be positioned, and to which it may be connected by a transverse coupling pin 10 extending through suitable apertures in the walls 4 of the socket and 9 of the yoke. The wedge block 7 is provided with an elongated aperture 11 through which the coupling pin 10 extends, and the proportions of said aperture are such as to allow sufficient freedom of movement of the wedge block longitudinally of the terminal socket to insure the locking of the cable between the inclined walls 5 and to permit the insertion of the cable when attaching it to the socket. The diameter of the coupling pin 10 and the material of which it is composed are selected to afford such strength that a predetermined tension upon the cable, well within the limit of its endurance, will cause the rupture of the coupling pin and automatically release the terminal socket from the attachment yoke. Connected with a lug 12 formed on the attachment yoke 8, is a short chain 13 having a terminal link 14 adapted to slip over the cable 2 but of too small diameter to pass over the terminal socket 1. By this chain the separation of the terminal socket 1 from the cable eye 3 is so limited as to prevent the end of the cable flying when suddenly released from the attachment eye.

As coal mining machinery is commonly operated in the dark and restricted chambers of the mine, it frequently happens that parts are subjected to excessive strain without attracting the attention of the operator until some part is broken. When the mining machine encounters an obstruction which prevents its movement in response to the tension upon the feeding cable such cable is frequently broken subjecting the operator to the danger of injury from the recoil of the

suddenly released cable. By the use of my improved cable attachment the rupture of the coupling pin 10 automatically disconnects the feed cable from the attachment eye thereby preventing injury to parts of the apparatus which are more expensive and difficult of renewal, and the limitation of the separation of the terminal socket and cable eye protects the operator from the dangerous recoil of the highly tensioned cable when suddenly released.

What I claim is

1. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment connectible to said socket, and means releasable by a predetermined strain upon the cable to secure said attachment to said socket.

2. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment connectible to said socket, means releasable by a predetermined strain upon the cable to secure said attachment to said socket, and means to limit the movement of said socket relative to said attachment.

3. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment connectible to said socket, automatically releasable means to secure said attachment to said socket, and means to limit the movement of the attachment relative to the socket.

4. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment having a yoke adapted to receive said socket, and a member adapted to be ruptured by a predetermined strain to connect said socket and attachment.

5. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment having a yoke adapted to receive said socket, a member adapted to be ruptured by a predetermined strain to connect said yoke and socket, and means to limit the movement of the socket relative to the yoke.

6. In a cable attachment, the combination of a terminal socket having a longitudinally

tapering aperture adapted to receive a loop of a cable, a wedge block adapted to be engaged by said loop and drawn thereby into the socket to secure said cable therein, an attachment having a yoke adapted to receive said socket, alining apertures in said yoke, socket and wedge to receive a transverse coupling pin, the aperture in said wedge block being elongated to permit limited movement of the wedge block relative to the coupling pin.

7. In a cable attachment, the combination of a terminal socket having a longitudinally tapering aperture adapted to receive a cable, an attachment having a yoke adapted to receive said terminal socket, transverse alining apertures in said yoke and sockets to receive a coupling pin, and means adjustable while the coupling pin is in coupling position to retain the cable in the socket.

8. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment having a yoke adapted to receive said socket, automatically releasable means to secure said socket in said yoke, and means operable while said socket is secured in said yoke to secure said cable to said socket.

9. In a cable attachment, the combination of a terminal socket adapted to be secured to a cable, an attachment separably connected to said socket, and a flexible member attached to said attachment and adapted to engage said terminal socket to limit the movement of the socket relative to the attachment.

10. In a cable attachment, the combination of a terminal socket having a longitudinally tapering aperture adapted to receive a cable, a wedge block adapted to be engaged by the cable and drawn into the aperture of the socket to lock the cable therein, and means to limit movement of the wedge block relative to the socket.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES J. KIENZLE.

Witnesses:

HARRY C. DEAN,
ANNA M. FENLON.