R. N. RIBLET.

CABLE REPAIR DEVICE.

APPLICATION FILED MAY 8, 1920.

1,389,785.

Patented Sept. 6, 1921.

Fig. 1

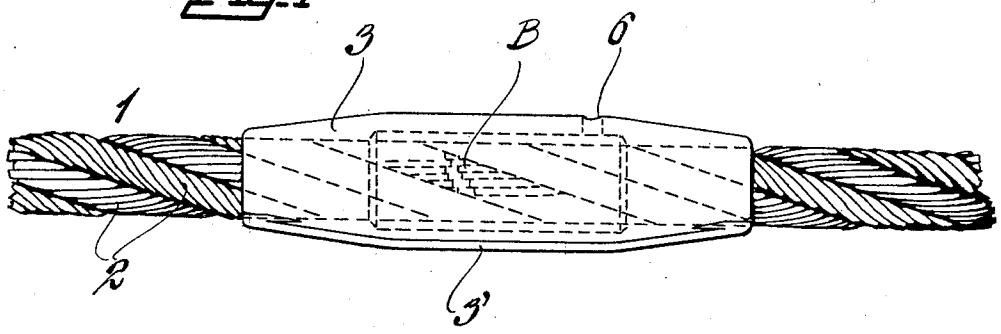
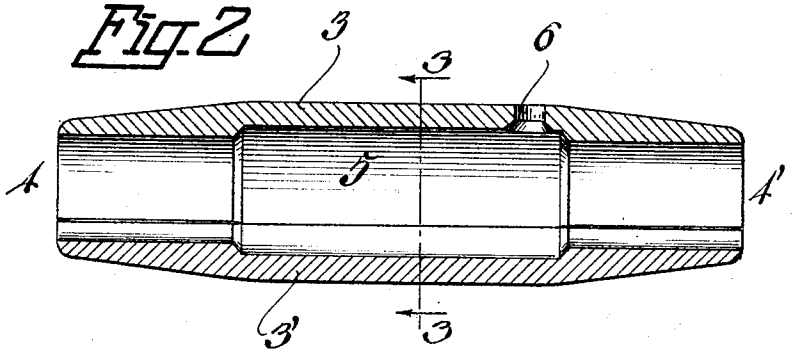


Fig. 2



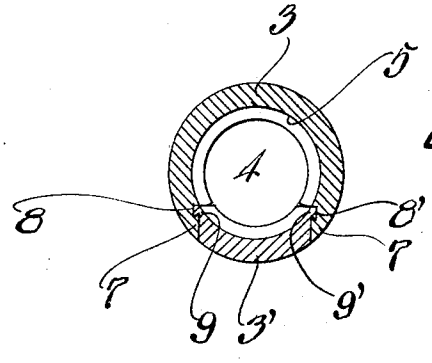


Fig 3

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UNITED STATES PATENT OFFICE.

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CABLE-REPAIR DEVICE.

1,389,785. Specification of Letters Patent. Patented Sept. 6, 1921.

Application filed May 8, 1920. Serial No. 379,827.

To all whom it may concern:

Be it known that I, ROYAL N. RIBLET, a citizen of the United States, residing at Spokane, in Spokane county and State of Washington, have invented new and useful Improvements in Cable-Repair Devices, of which the following is a specification.

My present invention relates to improvements in cable repair devices particularly designed for repairing breaks in the strands of wire cables.

In mining operations, excavation work, cable tramways and similar industries employing long stretches of wire cable passing over or under guide pulleys, a single wire, and in many instances a strand of the cable made up of a number of wires, becomes worn and broken, necessitating the removal of a section of the cable and splicing the ends, or in some cases the broken strand is removed, and repairs made, all of which require suspension of operations with loss due to delay and labor expended in repair work, and with unsatisfactory results. The object of my invention is to provide a repair device by means of which the broken wires or strands may quickly and with facility be repaired, the broken part strengthened, and the injured cable be put in condition to pass freely and smoothly over or under the guide pulleys. With the above mentioned and other objects in view the invention consists in certain novel constructions and combinations of parts hereinafter described, illustrated in the accompanying drawings and set forth in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit of my invention or sacrificing any of the advantages of the invention.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention in which the parts are combined and arranged according to the best mode I have so far devised for the practical application of the principles of my invention.

Figure 1 is a plan view of a wire cable having the repair device of my invention applied thereto, and showing in dotted lines a broken strand that has been repaired.

Fig. 2 is a longitudinal, central sectional view through the sleeve of the invention, detached.

Fig. 3 is a transverse sectional view on line 3—3 in Fig. 2 of the complete sleeve.

The cable illustrated by the drawings is designated as 1 and is of conventional type with twisted strands 2 made up of single metallic wires, and in Fig. 1, for convenience of illustration, a broken strand is indicated at B in dotted lines.

In carrying out my invention I utilize a metallic sleeve preferably of two cast pieces 3 and 3′, the completed sleeve having end bores 4 4′ to form a neat fit over the cable 1, and between the end bores an enlarged, intermediate chamber 5 is provided, sufficiently large in diameter to form an annular space around the cable into which molten metal, as Babbitt metal may be poured through the port hole 6 in the wall of the larger section 3 of the sleeve.

The two sections of the sleeve are divided longitudinally and the longitudinal opening extending the length of the larger section is of a width to permit said section to be slipped transversely over the cable at the broken strand portion, after which the smaller section of the sleeve is slid longitudinally into position in Figs. 1 and 2 of the drawings. The side walls 7 of the slotted larger section of the sleeve are grooved at 8 and 8′, these complementary grooves extending the length of the sleeve section, and the smaller section 3′ of the sleeve is fashioned with lateral tongues 9 and 9′ to fit into and slide along in the grooves in the side walls of the slotted section 3 of the sleeve.

In repairing a broken strand, the ends of the strand of the cable are brought as near together as possible and smoothed down, after which the larger section of the sleeve is slipped over the cable with the port hole 6 at the top of the sleeve. The tongues 9 9′ of the slide plate or section 3′ are then entered in the grooves of the body 3 of the sleeve, and the slide section 3′ is then forced into position, sliding along the cable until the ends of the two sections are flush with each other. The sleeve is now ready to receive the molten metal to form a bond between the broken ends of the strand, around these broken ends, and around the cable within the chamber 5. Babbitt metal, white metal, or other alloy may be used, and in

molten condition this metal is poured through the port hole 6, the molten metal filling the annular space beneath the cable and gradually filling up both sides of the cable, and finally closing over the top of the cable. The molten metal spreads and fills the interstices between the strands that are twisted to form the cable and also fills the spaces in and around the broken ends of the wire of the strand, thus firmly bonding the sleeve on the cable and forming a permanent repair for the broken cable, and at the same time strengthening the cable. The sleeve is of such length and diameter as to pass freely and smoothly around a guide pulley, and of course the permanently fixed sleeve prevents further fraying or breaking of the wire strands at the point of fracture. Other breaks may thus be repaired with facility and rapidity eliminating the loss of time, and avoiding the expense of labor and cessation of work usually required in making similar repairs.

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

1. A cable repair device comprising a longitudinally divided sectional sleeve and applied about a fractured portion of a cable with the cable closing the ends of the sleeve, and means for integrally bonding said cable within the sleeve.

2. A cable repair device comprising a longitudinally divided sectional sleeve adapted to be applied to a cable and forming an interior space about the cable with the cable closing the ends of the space, and an integral bond in said space securing the cable and sleeve.

3. The combination with a sleeve body fashioned with an open slot having grooves in the side walls thereof, of a smaller sleeve section having complementary lateral tongues, and said sleeve having an interior, intermediate, enlarged chamber with an opening thereto and closed ends.

In testimony whereof I affix my signature.

ROYAL N. RIBLET