April 22, 1924. 1,491,022

P. ARBON

CABLE CUTTER

Filed Nov. 13, 1922

Fig. 1.

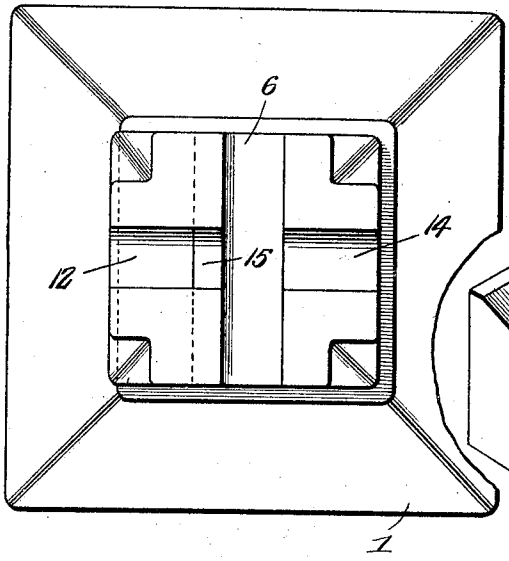


Fig. 4.

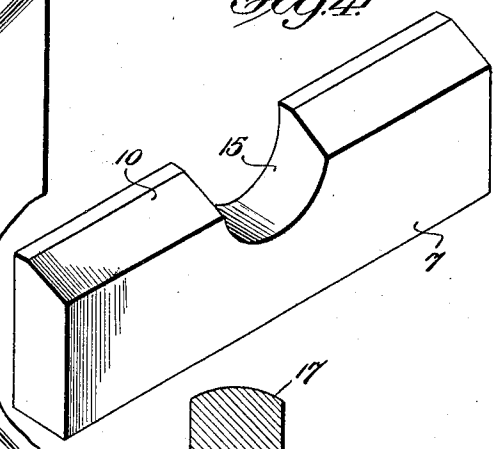


Fig. 2.

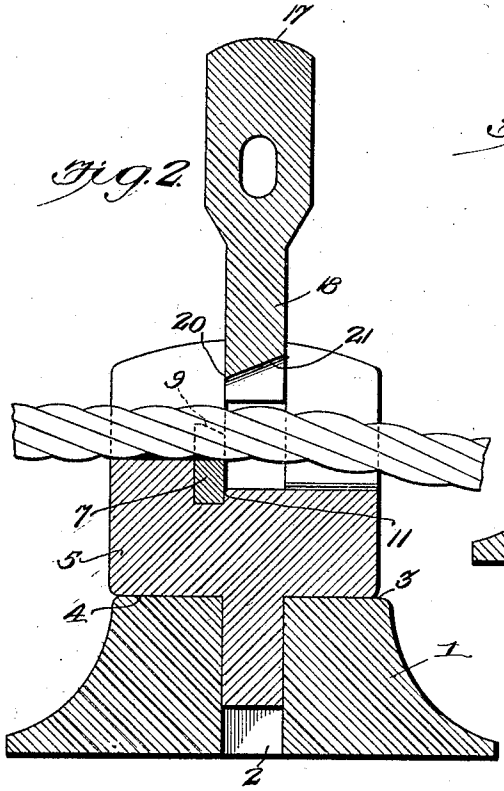
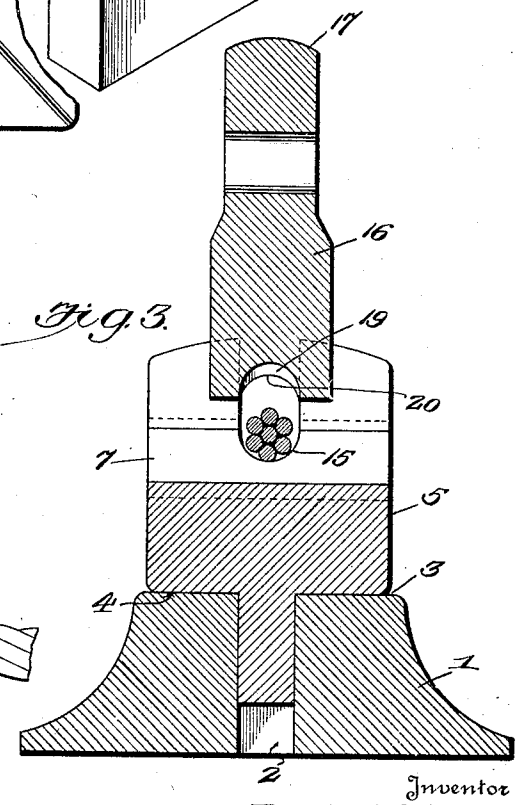


Fig. 3.



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UNITED STATES PATENT OFFICE.

PAUL ARBON, OF TULSA, OKLAHOMA.

CABLE CUTTER.

Application filed November 13, 1922. Serial No. 600,613.

To all whom it may concern:

Be it known that PAUL ARBON, a subject of the King of Great Britain, residing at Tulsa, in the county of Tulsa and State of Oklahoma, has invented certain new and useful Improvements in Cable Cutters, of which the following is a specification.

The object of the present invention is to improve on that type of device known as a wire cable cutter and contemplates changes in details of construction and arrangement of parts whereby the tendency to spread or separate the strands of a cable is eliminated and a clean, quick severance is secured at each operation.

In addition to the foregoing, a further object resides in the provision of a removable stationary cutter and the arrangement of such a cutter so that the possibility of undesirable movement during a cutting operation is prevented, longitudinal movement being prevented by the cable when in position and lateral movement being eliminated by the abutting shoulders of the cable slot.

Reference will be had to the accompanying drawings forming a part of this specification and wherein like numerals of reference designate corresponding parts throughout the several views, in which—

Fig. 1 is a top plan showing the block.

Fig. 2 is a vertical section through the cable.

Fig. 3 is a vertical sectional view through the cutter slot, and

Fig. 4 is a perspective of the cutter removed.

The present device contemplates the use of a base block or anvil 1 of any suitable shape with a central vertical opening 2 shown in the present instance as extending entirely through the body, and the upper flat surface 3 upon which seats the under face 4 of the cutter block 5. It will be noted by an examination of Fig. 2 that the cutter block 5 which includes a shank adapted to extend in the passage 2 has formed in the upper face intersecting grooves or slots, one of which, indicated by reference character 6, is provided for the passage of the reciprocating knife, and includes an off-set recess for the cutter blade 7, and the other being adapted to receive and seat the cable to be severed as will more clearly hereinafter appear.

Referring now to the slot 6, attention is directed to the fact that its longitudinal axis is to one side of the center of the block which avoids weakening of the body structure due to the off-set recess in which the cutter 7 is seated. This recess is arranged on one side of the slot 6 and extends below same and above the cable passage, the dimensions being similar to those of the cutter to be used whereby a snug seating of the latter may be obtained. It will be noted that the upper wall 9 forming the off-set passage is inclined downwardly the greater portion of its width and until it merges into the adjacent wall of the slot 6. By extending this passage below the slot 6 and by the provision of the inclined upper wall 9, any lateral movement of the cutter 7 is impossible, the beveled face 10 of the cutter engaging the wall 9 and the lower portion of the cutter engaging the short wall 11.

With reference now to the intersecting cable slot, it will be obvious that due to the downward movement of a cable section during the severing operation a portion of the slot must be elevated. This elevated cable slot section is indicated by reference 12 and is located to the left of the cutter recess and cutter 7 when the latter is in position. The balance of the cable slot 14 which includes that portion extending through the slot 6 is of similar depth as the latter slot, as will be seen from the examination of Fig. 2.

The cutting element shown in Fig. 4 is as previously indicated similar in cross section to the recess in which it seats, being of suitable length to have its ends flush with the outer faces of the block 5. The center upper face of the cutter is formed with the curved depression 15 which registers with and corresponds to the curved face of the elevated slot portion 12 and at this point the cutting action takes place.

The reciprocating cutter 16 may be of any desired construction. In the present instance this cutter 16 includes the enlarged contact end 17 and the flattened cutting end 18, the latter being notched at 19 to conform to the contour of the cable and having cutting edge 20, formed by the receding curved wall 21. A handle socket may also be provided as shown to facilitate in the manipulation of the cutter during the severing operation.

From the foregoing, it will be obvious that a removable cutter blade for a cable cutter has been provided of such construction and arranged in such a manner that all of the

features of a fixed cutter are present and at the same time all of the conveniences of a removable cutter are obtained. The seating of the cable locking the cutter against longitudinal movement and the inclined wall and short front wall preventing lateral movement.

I claim—

1. A wire cutter including a cutter block having a groove in its upper face formed with an off-set recess, a movable knife arranged in said groove, a stationary cutter seated in said recess, said block having a relatively deep narrow second groove intersecting the first mentioned groove and formed with an elevated portion, the bottom of the supporting surface of the elevated portion of the second groove being in substantially the same plane as the cutting face of said cutter, and the bottom surface of the other portion of said second groove lying in a plane below said elevated bottom surface to permit a portion of the cable to move downwardly with the knife as the cable is sheared by said knife.

2. A cable cutter having a cutter block provided with a relatively deep narrow groove and adapted to support the cable to be cut, a groove in said block intersecting the cable groove, a movable cutter arranged in the intersecting groove, the bottom surface of the portion of the cable groove lying at one side of the intersecting groove being elevated above the bottom portion of the cable groove at the opposite side of the intersecting groove, and a stationary cutter having its cutting face aligned with the bottom surface of the elevated portion of the cable groove, the bottom surface of the intersecting groove being in substantially the same plane as the bottom surface of the lower portion of the cable groove, whereby the cable being severed may rest on the stationary cutter and on the elevated bottom surface of the cable groove and may move downwardly with the movable cutter in the cutting operation to engage the bottom surface of the lower portion of the cable groove.

3. A cable cutter including a cutter block having relatively deep narrow intersecting grooves, one of the grooves being adapted to receive the cable to be severed and the other being adapted to receive a movable cutter, the bottom surface of the cable groove at one side of the cutter groove being elevated and arranged in parallel relation to the bottom surface of the remaining portion of the cable groove on the other side of the cutter groove, and a stationary cutter having a cutting face aligned with the bottom surface of the elevated portion of the cable groove and forming a portion of one wall of the cutter groove.

4. A cable cutter including a cutter block having vertically disposed intersecting grooves in its upper end, each of said grooves being relatively deep and narrow, and one groove being adapted to receive the cable to be cut and the other groove being adapted to receive a movable cutter, said block being provided with an off-set recess communicating with the cutter groove, said cable groove having an elevated horizontal bottom surface arranged at one side of the cutter groove and having a parallel lower bottom surface arranged at the opposite side of the cutter groove, and a stationary cutter having its cutting face aligned with the bottom surface of the elevated portion of the groove, arranged in said recess and forming a portion of one side wall of the cutter groove.

5. A cable cutter including a cutter block having relatively deep narrow intersecting grooves extending downwardly from its upper surface, said block having an off-set recess communicating with one of said grooves, one groove being adapted to receive the cable to be cut and said groove having an elevated horizontal bottom surface adapted to support a portion of the cable during the cutting operation, the remaining portion of the cable groove having a horizontal bottom surface arranged in a plane below the elevated bottom surface to permit a portion of the cable to move downwardly into the groove during the cutting operation, a horizontally disposed stationary cutter arranged in said recess, having its cutting surface in alignment with the bottom surface of the elevated portion of the groove and having one of its side surfaces forming a portion of the side surface of one of said grooves, and a movable cutter arranged in one of the grooves and having a curved cutting edge, the bottom surface of the cutter groove being arranged in substantially the same plane as the bottom surface of the lower portion of the cable groove.

In testimony whereof I affix my signature.

PAUL ARBON.