W. T. QUINLIN.

CABLE CUTTING DEVICE.

APPLICATION FILED FEB. 20, 1913.

1,075,439.

Patented Oct. 14, 1913.

2 SHEETS—SHEET 1.

FIG. 1

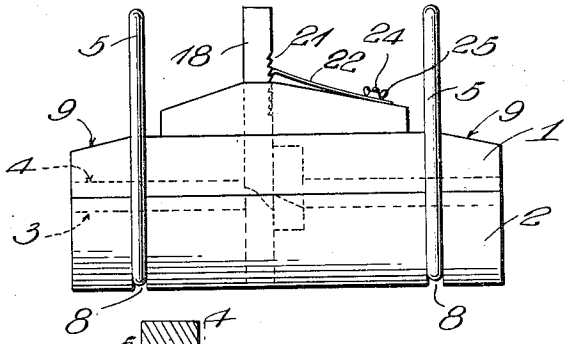


FIG. 2

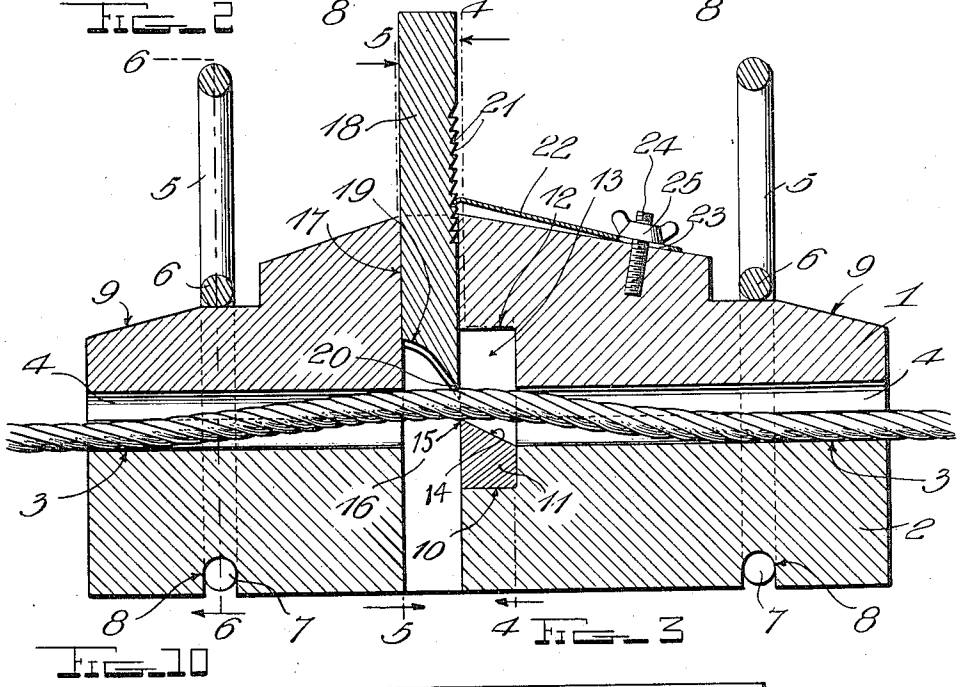
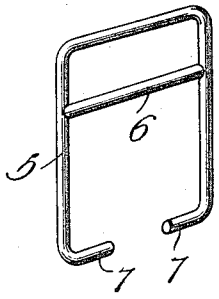
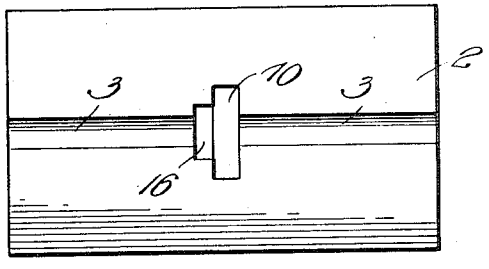


FIG. 3

FIG. 10





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Witnesses

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2 SHEETS—SHEET 2.

FIG. 4

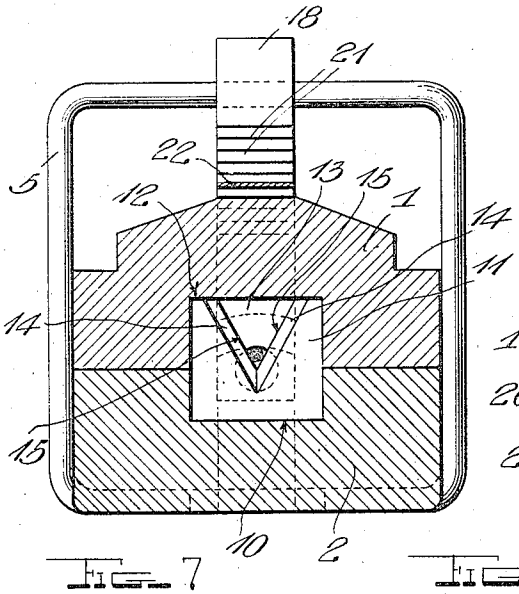


FIG. 5

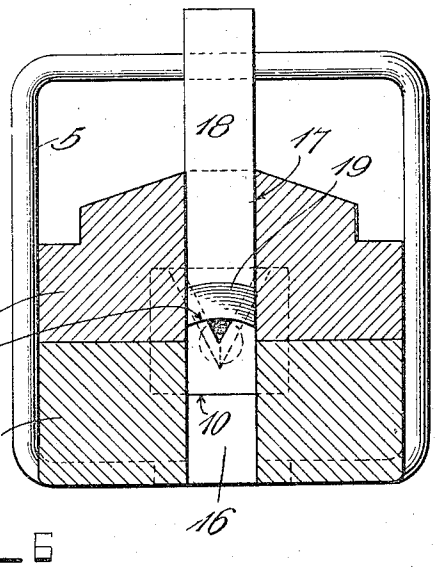


FIG. 7

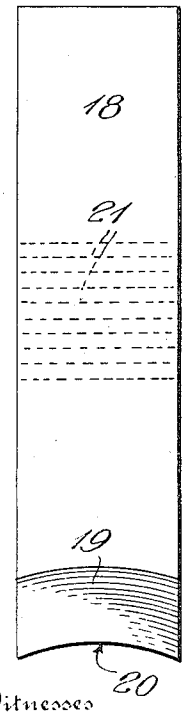


FIG. 6

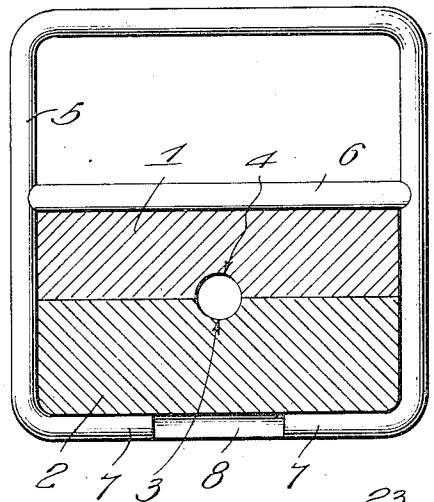


FIG. 8

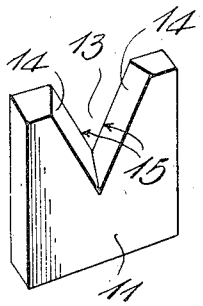
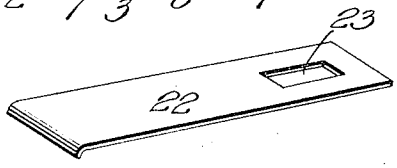


FIG. 9



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM T. QUINLIN, OF COALINGA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO HARRY W. BEDFORD, OF COALINGA, CALIFORNIA.

CABLE-CUTTING DEVICE.

1,075,439. Specification of Letters Patent. Patented Oct. 14, 1913.

Application filed February 20, 1913. Serial No. 749,719.

To all whom it may concern:

Be it known that I, WILLIAM T. QUINLIN, a citizen of the United States, residing at Coalinga, in the county of Fresno and State of California, have invented certain new and useful Improvements in Cable-Cutting Devices; and I do 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 improvements in devices for cutting wire cables.

One object of the invention is to provide a device of this character which is particularly adapted for cutting wire cables containing a number of strands and which is designed to hold the ends of the strands or wires in close compact form when cut and to prevent any pieces of the wire from flying out and injuring the operator.

Another object is to provide a cable cutting device which may be applied to a cable at any point between the ends thereof thus obviating the necessity of inserting the end of the cable through the device and which will make a clean cut through the cable at one place only.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a side view of my improved cable cutting device; Fig. 2 is an enlarged central vertical longitudinal section thereof; Fig. 3 is a top plan view of the lower section or member of the device; Fig. 4 is a vertical cross section thereof taken on the line 4—4 of Fig. 2; Fig. 5 is a similar view taken on the line 5—5 of Fig. 2; Fig. 6 is a similar view taken on the line 6—6 of Fig. 2; Fig. 7 is a detail side view of the movable cutting bit of the device; Fig. 8 is a perspective view of the stationary cutting bit of the device; Fig. 9 is a similar view of the spring for preventing the rebounding of the movable cutting bit when operated to cut the cable; Fig. 10 is a similar view of one of the combined clamping devices and handles of the device.

My improved cable cutting device comprises a body portion consisting of upper and lower members 1 and 2 in the form of substantially oblong metal blocks. In the upper side of the lower member 2 of the block is formed a semi-circular groove 3 while in the lower side of the upper member is a similarly disposed semi-circular groove 4. When the upper and lower members or blocks 1 and 2 of the device are brought together in operative position the grooves 3 and 4 therein register and form a central longitudinally disposed passage with which the cable is engaged at the point where the latter is to be cut as clearly indicated in Fig. 2 of the drawings. By constructing the body of the device in separable sections as herein shown and described it will be seen that the same may be applied to a cable at any point in the length thereof thus obviating the necessity of inserting and drawing the cable through the device in order to reach the point where the cable is to be severed.

When the members or blocks 1 and 2 of the device are engaged with the cable in the manner described, said blocks are clamped together and securely fastened in operative engagement by combined clamping members and handles 5 comprising rectangular frames having therein suitably located cross bars 6 and having their lower sides formed by the inwardly turned lower ends 7 of the vertical sides of the frame, said inwardly turned ends terminating a short distance from the sides of the frames and forming gripping lugs as clearly shown in Figs. 6 and 10 of the drawings. In the lower side of the lower member or block 2 of the device at the point where the clamping members are engaged therewith are formed transverse grooves 8 with which the ends of the lugs 7 of the clamping members 5 are engaged and by which said lugs are held in position.

The upper sides of the ends of the upper member 1 of the device are beveled or inclined outwardly and downwardly as shown at 9 to facilitate the engagement of the cross bars 6 of the clamping members after the lugs 7 have been engaged with the grooves 8 and the members swung upwardly over the ends of the device. In swinging the clamping members inwardly over the beveled ends 9 of the device the forcible engagement of the cross bars with said beveled ends of the upper block 1 will draw and clamp the upper and lower blocks into tight

engagement as will be readily understood. By leaving the lower sides of the clamping members 5 open or constructing said lower sides in the form of the lugs 7 it will be seen that the open space left between the lugs will permit the clamps to be let down over the cable at the ends of the blocks 1 and 2 so that said members may be readily engaged with the ends of the device wherever the same is placed on the cable.

In the upper side of the lower member or block 2 of the device is formed a centrally disposed recess 10 adapted to receive the lower stationary cutting bit 11 of the device, said bit comprising a block of hardened steel the lower portion of which is adapted to closely fit the recess 10 and the upper portion of which projects above the upper side of the lower block 2 and engages a recess 12 formed in the lower side of the upper block 1 as clearly shown in Figs. 2 and 4 of the drawing. In the projecting upper portion of the bit 11 is formed a V-shaped notch 13 the walls of which are beveled or inclined from the inner toward the outer side of the bit as shown at 14 thereby forming at the inner side of the block a sharp cutting edge 15. Also formed in the upper side of the lower block 2 adjacent to and communicating with the recess 10 is a passage 16 which is of less width than the recess 12 and is adapted to receive the lower end of the movable cutting bit hereinafter described. The passage 16 preferably extends entirely through the lower block, as shown.

In the upper block or member 1 adjacent to and communicating at its lower end with the recess 12 is a vertically disposed rectangular passage 17 which extends entirely through the upper block 1 as shown. Slidably engaged with the passage 17 is a movable cutting bit 18 comprising a hardened steel bar having a cross sectional shape corresponding to the shape of the passage 17 and having a length greater than the thickness of the upper member 1 of the device. The lower end of the bit 18 is curved and beveled as at 19 to form a cutting edge 20 which is adapted to co-act with the cutting edges formed by the V-shaped notch in the lower stationary bit 11.

In one side of the bit 18 are formed a series of ratchet teeth 21 with which are engaged the downwardly turned outer end of a spring pawl 22 which is preferably in the form of a flat spring metal plate having therein near its outer end a rectangular slot 23 with which is engaged a bolt 24 the inner end of which is secured in the upper side of the upper member 1 of the device and with the upper end of which is engaged a clamping nut 25 which when screwed down on the bolt securely clamps the slotted end of the pawl to the upper member 1 in such position that the free end of the pawl engages the ratchet teeth 21 on the bit 18 and prevents the latter from rebounding after being operated to cut the cable as will be hereinafter more fully described. By providing the slot 23 in the end of the pawl the latter may be slipped back when the clamping nut is released thereby disengaging the outer end of the pawl from the ratchet teeth on the bit 18 to permit the latter to be retracted.

In the operation of my improved cutting device the upper and lower members thereof are engaged with the cables at the point where the same is to be cut and when so engaged the cable will lie in the V-shaped notch of the lower or stationary bit 11 as clearly shown in Figs. 2, 4 and 5 of the drawings. After the device has thus been applied to the cable and the clamping members 5 adjusted to fasten the blocks 1 and 2 together around the cable in the manner described, the movable cutting bit 18 is brought down into forcible engagement with the cable by a blow from a hammer or other instrument. When thus forced downwardly the co-action of the cutting edge on the lower end of the bit 18 with the cutting edges of the stationary bit 11 will sever and make a clean cut through the cable. The engagement of the spring pawl with the ratchet teeth 21 on the bit 18 will positively prevent the bit from rebounding after being struck and will thus cause the bits to cut the cable at one point only, or in other words will prevent the blades from gashing or making a ragged cut, should it be necessary to impart a second blow to the bit. The ends of the cable or the strands thereof when cut in the manner described will be confined and prevented from falling apart by the walls of the passage formed by the grooves in the engaging sides of the upper and lower members of the device and will thus obviate any danger of injury to the operator by the flying strands or particles of metal which frequently occurs in cutting woven or twisted wire cable in the usual manner.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as shown.

Having thus described my invention, what I claim is:

1. In a cable cutting device, a lower member having a longitudinal groove in its upper face, a transverse recess in said face across said groove, and an upright passage

through its body alongside said recess and opening into the groove, an upper member having a longitudinal groove in its lower face, a transverse recess in said face registering with that in the lower member, and an upright passage through its body registering with the passage in said lower member, and means for clamping said members together; combined with a stationary bit lying in the lowermost recess with its upper end projecting into the uppermost recess and notched in its upper edge in line with said grooves, its notched portion being beveled to provide cutting edges, and a movable bit slidably mounted in said uppermost passage and having a cutting edge adapted to be moved across that of the stationary bit.

2. In a cable cutting device, the combination with a body having a longitudinal passage for the cable, a recess for the fixed bit, and a passage for the movable bit; of a spring pawl secured at one end to said body and with its yielding extremity projecting over said passage, and the movable bit mounted in such passage and provided with ratchet teeth engaging the movable end of said pawl, for the purpose set forth.

3. In a device for cutting wire cables, a body comprising separable sections having therein grooves adapted to register when said sections are brought together in operative engagement and to form a cable receiving passage, combined clamping devices and handles comprising frames having inwardly turned lugs forming the open lower sides of the frames and adapted to be engaged with one of the members of the device, cross bars arranged in said frames and adapted to be engaged with the opposing member of the device whereby said members are clamped together in operative engagement, a stationary cutting bit carried by one of said members, a movable cutting bit having a sliding engagement with the other member and adapted to co-act with said stationary member for severing the cable confined between the members of the device, and means to prevent the rebounding of the movable cutting bit.

4. In a cable cutting device a body comprising upper and lower blocks having in their engaging sides longitudinal grooves adapted to register when said blocks are brought together and to thereby form a cable receiving passage, said lower block having in its lower side transverse grooves and in its upper side a bit receiving recess and a passage, said upper block having in its lower side a recess adapted to register with the bit receiving recess of the lower block and having therein a bit receiving passage adapted to register with the passage in said lower block, clamping members adapted to be engaged with the ends of said blocks and with the grooves in the lower side of the lower block, a stationary cutting bit engaged with the registering recesses in said upper and lower blocks, said bit having therein a V-shaped notch the walls of which are beveled to form cutting edges, a movable cutting bit slidably engaged with the passage in said upper block and having its lower end curved and beveled to form a cutting edge which co-acts with the cutting edge of the stationary bit, and means to prevent the rebounding of the movable cutting bit.

5. In a device for cutting wire cables, a body comprising separable members having therein grooves, which when the members are brought together, register and form a cable receiving passage, means to clamp said sections in operative engagement around the cable, a stationary bit carried by one of said members, a movable cutting bit carried by the other member and adapted to co-act with said stationary bit to sever the cable confined between said members, ratchet teeth formed on said movable cutting bit, and a spring pawl adjustably secured to an adjacent part of the device whereby the free end of the pawl will be engaged with said teeth thereby preventing the rebounding of the bit when forced inwardly to sever the cable.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM T. QUINLIN. [L. S.]

Witnesses:
R. E. ANDERSON,
M. L. GIFFORD.