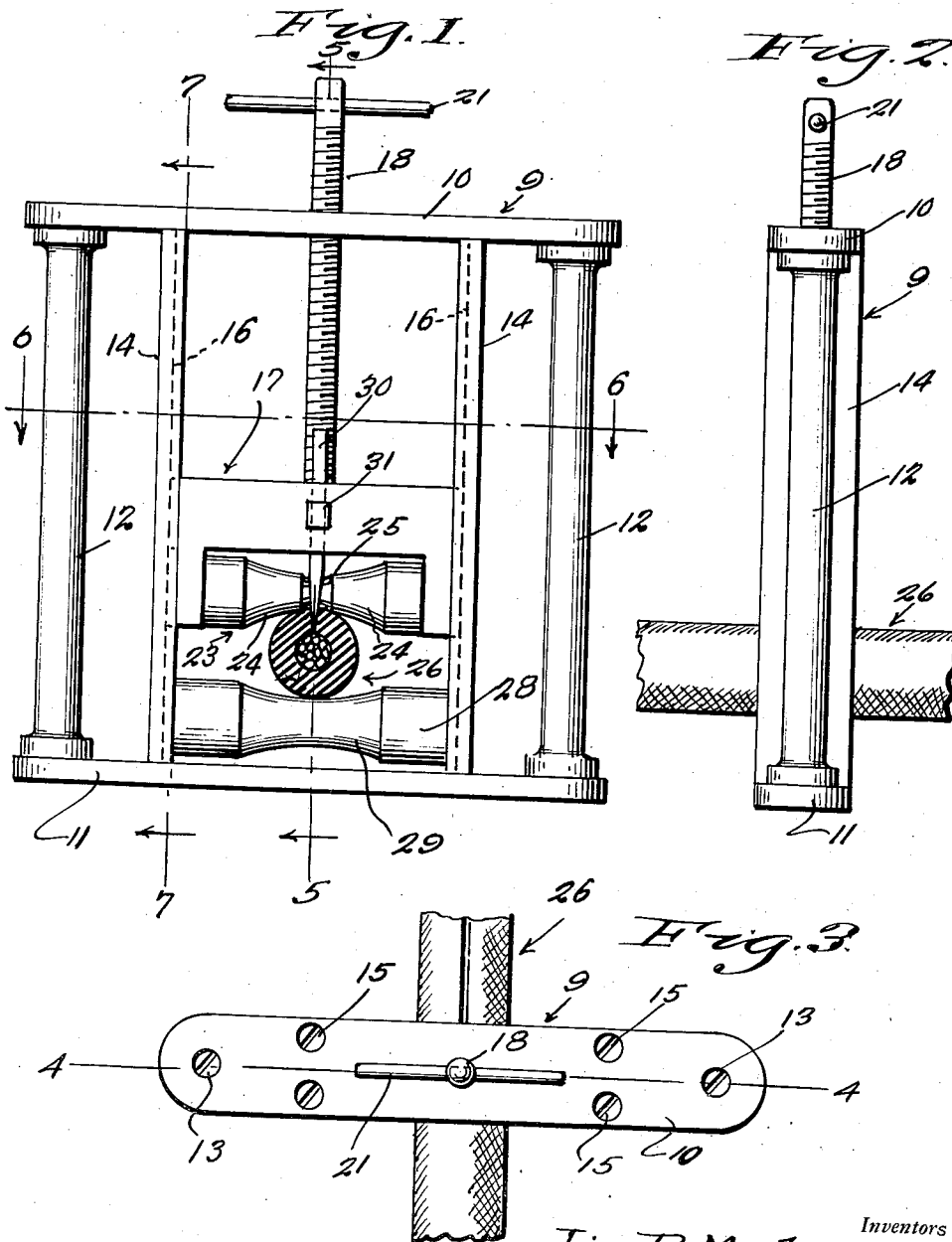


April 11, 1944.

J. R. MARTIN ET AL
CABLE INSULATION SPLITTER
Filed May 12, 1943

2,346,227

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 4

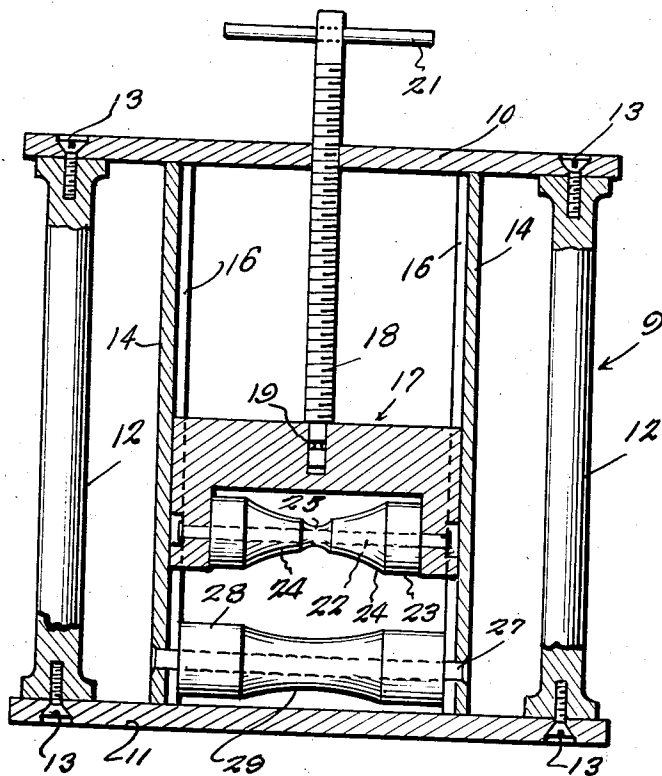


Fig. 5

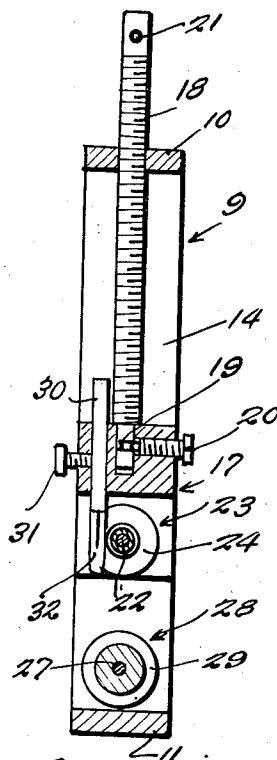


Fig. 6

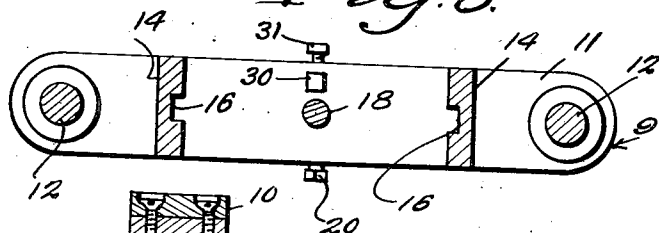


Fig. 7

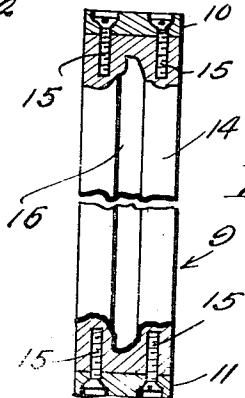
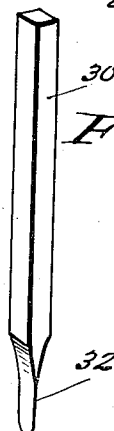


Fig. 8



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UNITED STATES PATENT OFFICE

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CABLE INSULATION SPLITTER

Jim R. Martin and Joe T. Martin,
La Porte, Tex.

Application May 12, 1943, Serial No. 486,706

4 Claims. (Cl. 30—91)

This invention relates to a handy portable device which is expressly constructed and particularly designed to longitudinally split insulation, such as rubber, lead or the like, in such a manner as to permit said insulation to be peeled open and off to expose the core.

Our primary aim is to generally improve upon known patented and marketed implements and devices such as have been used to accomplish the same general purpose, this being attained through the adoption and use of a fairly simple and economical structure characterized by a handle equipped frame and guiding and slitting means for the cable insulation.

More specifically, we achieve essential aims through the instrumentality of the aforementioned handle equipped frame and relatively movable and fixed rollers between which the cable is adjustably held, there being a relatively adjustable and removable cutter knife and all parts being structurally coordinated to make for simplicity and expediency in use and operation.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is an elevational view of a so-called cable or insulation splitter constructed in accordance with the structural and functional principles of the instant invention in which the method of use is fairly well shown.

Figure 2 is an end view, that is, a view observing Figure 1 in a direction from either left or right, the two views being at right angles to each other.

Figure 3 is a top plan view of either Figure 1 or 2.

Figure 4 is a central vertical section, with parts in elevation, said view being on the plane of the line 4—4 of Figure 3.

Figure 5 is a view at right angles to Figure 4, this being on the line 5—5 of Figure 1, looking in the direction of the arrows.

Figure 6 is a horizontal section on the line 6—6 of Figure 1.

Figure 7 is a contracted sectional view, this being on the plane of the line 7—7 of Figure 1, also looking in the direction of the arrows.

Figure 8 is a perspective view of the cutter element.

Referring now to the drawings by distinguishing reference numerals the frame, as a unit, is

denoted by numeral 9. It comprises parallel top and bottom bars 10 and 11 of appropriate shape and material. Interposed between these are handles 12, these handles being secured by fastenings 13 to the outer ends of said top and bottom bars 10 and 11. Also located between the bars 10 and 11 and at right angles to said bars but parallel to the handles 12 are guide members 14 secured in place by fastenings 15 as shown in Figure 7. These have guideways or grooves 16 in spaced parallelism to accommodate the U-shaped slide 17. This slide is adjusted through the medium of a feed screw 18 which has a reduced end 19 extending into a socket in the guide block and held therein by set screw 20 as shown in Figure 5. This provides a suitable swivel connection between the feed screw and block. The feed screw is in turn threaded through the central portion of the top bar 10 and provided with a handle rod 21. It will be noticed that the limb or arm portions of the U-shaped slide block carry an axle or pin 22 which serves to accommodate a roller 23. The roller has reduced conical portions 24 and a restricted central annular groove 25 which features conform to the general cylindrical exterior configuration of the insulation on the cable 26. A similar axle pin 27 is mounted between the lower end portions of the grooved guide members 14 just above the bottom bar 11. This also serves to accommodate a complementary roller 28 which is the relatively fixed roller and whose central portion is provided with a relatively wide surrounding groove 29 whose width corresponds to the combined distances between the outer ends of the conical adapter surfaces 24 on the relatively movable roller. The cutter comprises a rectangular bar or shank 30 adjustable through a socket in the movable guide block 17 and held in position by a set screw 31. The lower end of this is fashioned into a feather-edged cutting blade 32 which serves to rive or split the insulation on the cable.

In practice it is obvious that the feed screw 18 serves to bodily slide the block 17 toward and from the fixed roller 28. This also bodily adjusts the roller 23 in relation to the roller 28 whereby it permits said rollers to coordinate in firmly clamping the cable therebetween. The surface shaping of the central portions of the respective rollers is such as to insure effective tracking action. The cutter is adjustable independently according to the diameter of the cable or the thickness of the insulation. The handles 12 may be conveniently grasped and drawn along the cable as a carpenter's skiver would be used.

In actual practice the over-all dimension of the frame construction 9 is approximately 6 inches, that is 6 inches in height and width, which renders it adaptable to handling the ordinary range of insulated cables. The knife or cutter is made of square tool steel sharpened down to provide the desired cutting edge. Obviously, after the insulation is slit, it can be easily peeled from the core.

The device herein shown and described is for heavy-duty use in ship yards, and the like. It is especially adapted for use in connection with marine armor and steel basket weave cable constructions. That is to say, it is designed for effective cutting or splitting steel armor or heavy insulation such as lead. The tool steel bladed cutter is centrally arranged with respect to the U-shaped slide and at right angles to the guide rollers. It is adjustable on the slidable U-shaped part and the knife-edge blade lends itself admirably well for cutting in a direction longitudinally or, if desired, circumferentially. In ship yards, present-day conditions show the need for a suitably made heavy-duty device which will strip well known "DeGaussing" cables which are three inches or more in diameter and are used for submarine detection work. The device has been actually constructed and used, and aptly fulfills the requirements for which it is expressly intended.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size, and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

We claim:

1. In a cable splitter of the class described, a frame, a pair of parallel grooved guide members, a roller mounted between said guide members, said roller being centrally grooved, a U-shaped slide mounted between said guide members, a second grooved roller mounted between the limbs of said slide and opposed to the first named roller, a feed screw connected with said guide and frame, and a bladed shank relatively fixed cutter tool adjustably mounted on said guide in the manner and for the purposes described.

2. In a cable splitter of the class described, a

frame, a pair of parallel grooved guide members, a roller mounted between said guide members, said roller being centrally grooved, a U-shaped slide mounted between said guide members, a second grooved roller mounted between the limbs of said slide and opposed to the first named roller, a feed screw connected with said guide and frame, and a bladed tool including a shank mounted on said guide in the manner and for the purposes described, together with handles, said handles being in spaced parallel relation to each other.

3. In a heavy-duty cable splitter for use in connection with marine armor and steel basket weave cable constructions, a frame, a pair of parallel longitudinally-grooved guide members rigidly mounted in said frame, a horizontal shaft mounted between said guide members, a roller mounted on said shaft, said roller being centrally and circumferentially grooved, a U-shaped slide shiftably mounted between said guide members, a second grooved roller mounted between the limbs of said slide and opposed in parallelism to said first-named roller, a feed screw connected with said guide and adjustably mounted in said frame, a single shank bladed steel tool vertically disposed and adjustably mounted on the central portion of said slide, and a pair of companion parallel handles mounted in said frame and disposed outwardly of said guide members.

4. In a heavy-duty cable covering splitter, a pair of parallel vertically spaced top and bottom frame bars, a pair of complementary handles mounted parallel to each other and at right angles to the bars and secured between the outer ends of said bars, a pair of fixedly mounted grooved guide members mounted between the top and bottom bars and parallel to each other and spaced inwardly of and parallel in relation to said handles, a circumferentially grooved roller mounted horizontally between the lower ends of the guide members, a U-shaped slide mounted in the grooves of said guide members, a roller mounted between the limbs of said slide and opposed to said first-named roller, a bladed shank cutting tool adjustably mounted in the bight portion of said slide, an adjusting feed screw swivelly connected with said bight portion and adjustably connected with the intermediate portion of the said top frame member.

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