

[54] **WIRE STRIPPING TOOL**  
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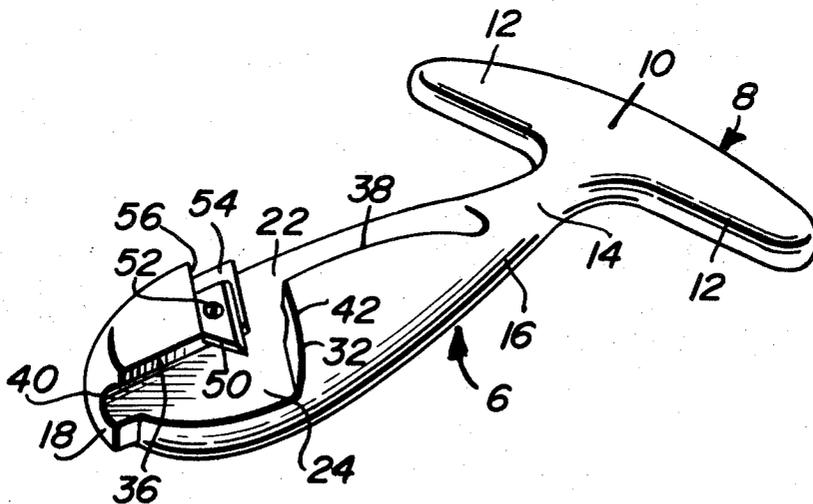
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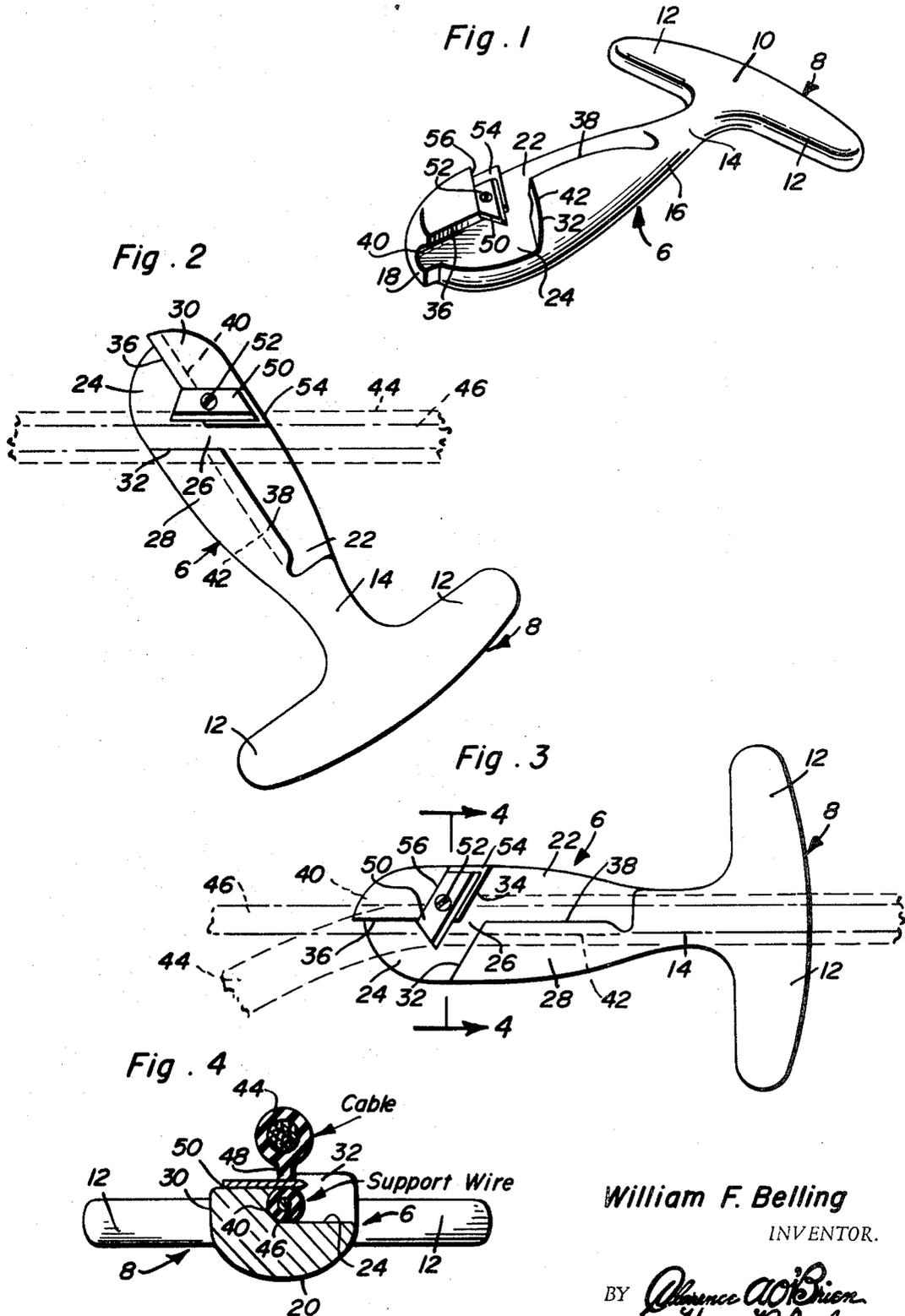
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[57] **ABSTRACT**

A readily attachable and detachable handtool for use in the telephone industry. It enables a user to cleave and strip off the usual web attached support wire of a plastic-covered cable. An elongated body or head has a surface provided at a rearward end with a T-shaped handle. Appropriately grooved abutments and oriented recesses define a guideway for the readily insertable and removable support wire. An appropriately mounted cleaving blade has a reversible cutting edge bridging the guideway and which comes into play as the tool is manually pulled along the web-attached support wire.

**5 Claims, 4 Drawing Figures**





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## WIRE STRIPPING TOOL

This application is a substitute of application Ser. No. 10,784, filed Feb. 12, 1970, now abandoned.

This invention relates to a special purpose handtool which is expressly designed and appropriately adapted for use in the telephone industry in that it enables a user to cleave and detach the customary web attached support wire which constitutes an integral part of a telephone cable, for example, a plastic covered cable wherein a complemental plastic covered support wire is joined to the cable proper by a severable web.

The tool herein disclosed lends itself to acceptable use and serviceability when the user is called upon to cope with the often difficult task of severing and detaching the web-attached support wire from the complemental cable. The cable herein disclosed is a type which is extensively and currently used in the telephone industry and which is characterized by a relatively small support wire which is commensurate in length with and spaced from the peripheral surface of the plastic covered cable and which is joined to the cable by an attaching but severable web. As is known, it is necessary to remove the support wire so that the cable can be installed in buildings where numerous sharp bends and turns have to be made. It is difficult, sometimes virtually impossible, to run this type of a cable, pull to a building and then into and through a conduit with the support wire still attached to the plastic jacket of the cable. Prior to the advent of the instant invention it has been common practice to use a knife of one type or another in a manner to sever and disconnect the support wire. However, it is often objectionable to employ a cutting knife for the reason that the blade of the knife cuts into the telephone cable and damages the same. The disclosed tool makes it practical and feasible to remove the support wire with no damage to the cable.

Briefly, the disclosed tool is preferably made of aluminum and embodies a rigid elongated body or head which is generally of the shape shown in the drawing and which has a face which is of an area that the median lengthwise portion is adapted to be firmly attached to and progressively pulled and slid along the web-attached portion of the support wire. As herein described this head has a forward end and a rearward end. The rearward end has a rigid handle joined thereto. The head, that is one face thereof, is provided with abutments and groove means and coacting recesses which constitute a guideway in which the support wire is inserted and retentively keyed. A web cleaving blade is oriented with the support wire and web and has a cutting edge which bridges the grooved guideway.

More specifically the guideway is characterized by forward and rearward abutments with adjacent ends spaced apart and which are provided with aligned confronting grooves. The grooved abutments are associated with forward and rearward recesses which are communicatively joined with each other and which are so arranged that it is possible to readily attach the head to the over-all cable. The handle is T-shaped in plan and embodies a relatively stout shank which is joined at its forward end to the rearward end of the body or head and has a crosshead joined to the rearward end of the shank and providing a pair of outstanding finger-grips. The handle may be slightly offset and is balanced

and so arranged that it enables the user to handle the tool with efficiency and reliability.

Repeated experience and use of the disclosed tool has shown that it is simple, practical and durable in construction and functions with positive certainty to cleave and separate the supporting wire from the communications cable. It is easy to use and will function repeatedly and with requisite safety, is virtually indestructible and accordingly well serves the purposes for which it has been devised and perfected.

Experimental use of this tool has shown that it is so designed and balanced that the handle enables the user to readily attach and then slide the tool evenly along the support wire with the assurance that the support wire can be stripped from the cable with virtually no damage to the cable itself. The coordinating grooves in the forward and rearward abutments function to line up the overall cable so that separation of the support wire from the cable is neat. Hence, it is feasible to expeditiously take care of the separating and stripping job outside of a building, much to the advantage of all persons concerned.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective showing the unique tool and how it is constructed to achieve the readily attachable and detachable steps which are necessary for cleaving the support wire and separating it from the cable proper.

FIG. 2 is a top plan view of the tool showing the support wire and cable in phantom lines and showing, what is more significant, how one goes about attaching the tool to the overall cable before swinging it into its slide-along operating position.

FIG. 3 is a plan view similar to FIG. 2 and showing the tool swung approximately 45° from left to right and assuming its ready-to-use position.

And FIG. 4 is a cross-section taken approximately on the plane of the section line 4—4 of FIG. 3 looking in the direction of the indicating arrows.

With reference now to the views of the drawing, the improved handtool is of one piece construction and is characterized, generally stated, by an elongated body or head 6 and a complemental integral handle 8. The handle 8 is T-shaped and embodies a crosshead 10 defining suitable fingertips 12 and including a stout balanced shank 14 which is joined for convenient use to the adjacent rearward end portion 16 of the body or head 6. The forward end portion of the head is denoted at 18. The smooth bottom side of the head (FIG. 4) is rounded or appropriately convex in shape as shown at 20. The upper surface of the head is specially designed to provide the aforementioned lengthwise centralized guideway and the component parts of said surface. One of the aforementioned recesses, which may be called a rearward recess, is denoted at 22 and the complemental recess along the forward portion is denoted at 24 and is differentiated as the forward recess. These recesses are of suitable contour and of corresponding depth, the degree of which is brought out, as is evident in FIG. 4. The adjacent end portions of the two recesses 22 and 24 are communicatively joined by a third or companion

recess 26. This recess is diagonal with respect to the lengthwise dimension of the overall head as is evident in FIGS. 1 to 3 in particular. By thus recessing the surface the remaining portions provide a rearward abutment 28 and a forward abutment 30. These abutments are cooperable with their respective recesses 22 and 24. They are also located to coincide with the lengthwise marginal portions as is shown. The oblique angled forward transverse end of the abutment 28, denoted at 32 is substantially parallel to and spaced from the correspondingly oblique angled rearward transverse edge 34 of the forward abutment 30. These two edges coincide with the recesses and more particularly with the connecting recess 26 to permit one to attach the recessed and abutment-equipped head to the cable means as shown in FIG. 2 and then bodily swing and move the tool from the attached angle in FIG. 2 to the ready-to-use angle shown in FIG. 4. It is important to be able to attach a stripping tool of this type to the cable at whatever point desired, as is evident. The respective lengthwise inboard edges 36 and 38 are provided with coacting grooves. The forward groove is denoted at 40 and the rearward groove at 42. These two grooves in conjunction with the recess means 22, 24 and 26 functions to provide not only the attaching and detaching means for the tool but the aforementioned guideway for the cable. Digressing for the moment the cable proper is denoted by the numeral 44 (FIG. 4) and the support wire, which is relatively smaller, by the numeral 46. The severable web which connects the paralleling peripheral surfaces of the cable and support wire is denoted by the numeral 48.

The blade is denoted by the numeral 50 and is a single-edged blade but is reversible. This blade is secured by a screw-threaded headed fastener 52 on an oblique-angled ledge 54 and is supported securely against an appropriately angled shoulder 56. With the blade fastened on the ledge and abutting the shoulder one corner portion projects across the guideway, that is the grooved means 36 and 38, and is then in a position to achieve the cutting and severing step shown in FIG. 4.

It follows that the tool itself is clearly shown in FIG. 1 and is readied to be attached to the overall cable means in the manner shown in FIG. 2. To accomplish this it is necessary only to seat the support wire in the recesses 22, 24 and 26 with the tool assuming the offset or oblique angle shown in FIG. 2. With the tool thus related relative to the cable the user then moves the tool from the attached position of FIG. 2 and swings it approximately 45° to assume the position shown in FIG. 3. The cable is then lined up with the guideway, more particularly, is seated in the grooves 36 and 38. With the tool thus attached it is evident that by catching hold of the handle the tool can be slid along the support wire in a manner that the web 48 will be severed and the support wire detached. FIG. 4 shows the cable and support wire and web in position in the tool and also the blade means ready to function. By thus considering FIG. 2, then FIG. 3 and further assuming that the tool has been slid partially along it will be evident that the cable proper 44 assumes the position shown in phantom lines in FIG. 3. It follows that the construction and manner of use of the tool is believed to be evident from the description and the illustrative views of the drawing.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous

modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A handtool for cleaving and stripping off the severable support wire of a plastic covered telephone cable comprising a rigid elongated head having top and bottom surfaces, said top surface being adapted to be oriented with and progressively slid along the cable, said head having forward and rearward ends and said rearward end having a rigid integrally attached handle, said head having a guideway adapted to have the support wire cooperatively but retentively and releasably keyed therein, and a cleaving blade carried by said head and coordinated with said top surface and having a cutting edge bridging and coacting with said guideway, said guideway embodying recess means and associated groove means, said recess means permitting the tool to be bodily attached and detached at whatever point desired along the length of the overall cable, said groove means constituting the principal components of the guideway and embodying forward and rearward grooves for operable slidable reception and retention of the support wire, said guideway being characterized by forward and rearward abutments rising to a plane above said top surface, said abutments having spaced inboard lengthwise edge portions, said edge portions having said open-ended grooves, said grooves being adapted to receive and retentively hold said support wire in a web severing position.

2. The tool defined in and according to claim 1 and wherein one abutment is provided with an oblique-angled ledge, said ledge provided with a shoulder, said blade being accessibly and removably seated on said ledge and being reversible and having a cutting edge bridging said guideway.

3. A handtool for cleaving and stripping off the severable support wire of a plastic covered telephone cable comprising a rigid elongated head having top and bottom surfaces, said top surface being adapted to be oriented with and progressively slid along the cable, said head having forward and rearward ends and said rearward end having a rigid integrally attached handle, said head having a guideway adapted to have the support wire cooperatively but retentively and releasably keyed therein, and a cleaving blade carried by said head and coordinated with said top surface and having a cutting edge bridging and coacting with said guideway, said guideway embodying recess means and associated groove means, said recess means permitting the tool to be bodily attached and detached at whatever point desired along the length of the overall cable, said groove means constituting the principal components of the guideway and embodying forward and rearward grooves for operable slidable reception and retention of the support wire, said guideway embodying forward and rearward elevated abutments, said abutments having straight lengthwise inboard longitudinal edges in substantial alignment with the longitudinal axis of said head and said edges having confronting surfaces and said surfaces having said open-ended grooves, one groove to the left and the other groove to the right of the lengthwise axis, said grooves having a cross-sectional dimension to receive half portions of the sup-

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port wire in a manner to hold the support wire in a given web cutting position, the rearward end of the forward abutment having an oblique-angled ledge and said ledge being provided with a blade positioning shoulder, said blade being removably mounted on said ledge and fastened in contact with the shoulder, said blade being reversible and having a cutting edge bridging said guideway.

4. The tool defined in and according to claim 3 and wherein said handle is T-shaped in plan and embodies a relatively short stout shank joined at its forward end to the rearward end of said head and also embodying a crosshead which is joined to the rearward end of said shank, said crosshead providing a pair of outstanding fingergrrips, whereby to facilitate handling and steadily pulling the overall tool along and in contact with said support wire and the web which is joined to a peripheral surface of said support wire.

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5. The tool defined in and according to claim 4 and wherein the aforementioned top surface is provided with a rearward recess opposed to the grooved edge of said rearward abutment, a second recess adjacent and opposed to the grooved surface of said forward abutment, the rearward end of the forward abutment and forward end of the rearward abutment having oblique-angled surfaces disposed in spaced apart parallelism, and the adjacent ends of said recesses being oriented with each other and joined in communicating relation by way of said recess means, said recess means being parallel to the oblique ends of the abutments and the several recesses serving to facilitate attaching the tool to the overall cable at any selected point in a manner that the tool can be bodily turned through an angle of approximately 45° toward the cable so as to facilitate attaching and detaching the tool.

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