March 8, 1949. H. H. SNYDER 2,464,002

PIPE BENDING TOOL

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Fig. 1.

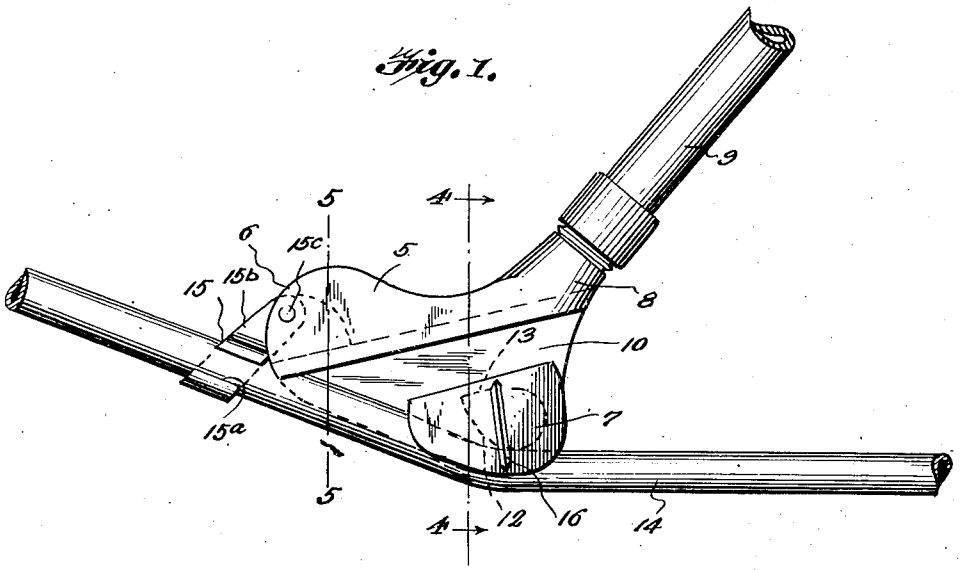

Fig. 2.

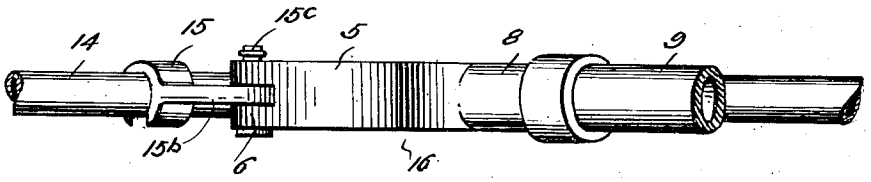

Fig. 4.

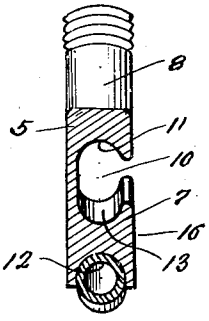

Fig. 3.

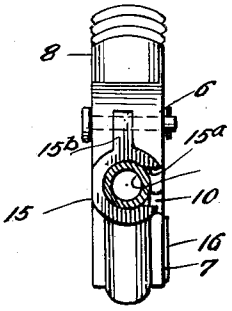

Fig. 5.

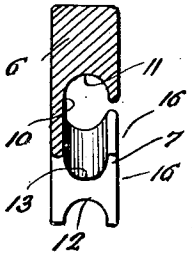

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Fig. 6.

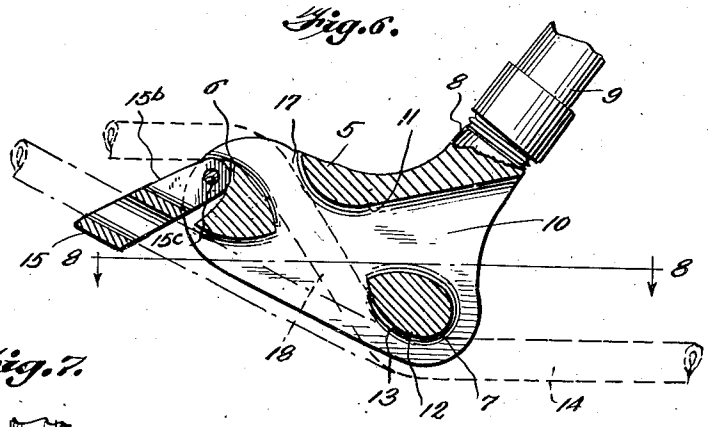


Fig. 7.

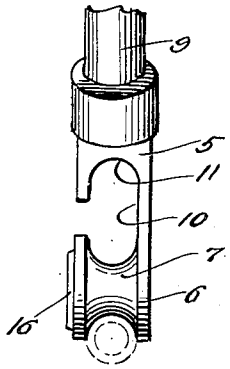


Fig. 9.

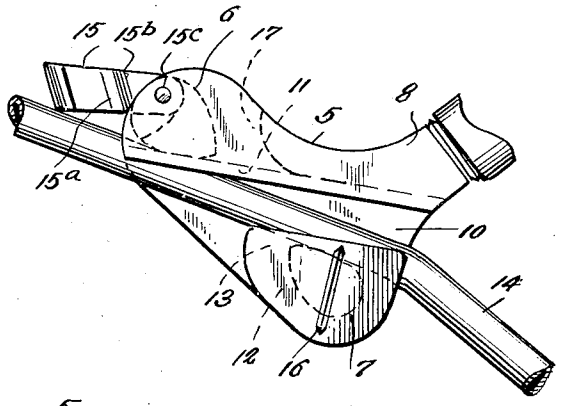
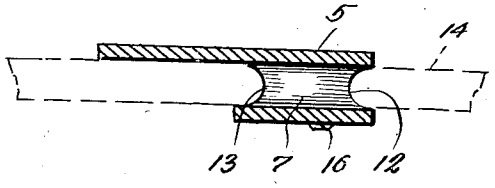


Fig. 8.



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2,464,002

UNITED STATES PATENT OFFICE

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PIPE-BENDING TOOL

Harold H. Snyder, Great Falls, Mont.

Application March 30, 1945, Serial No. 585,614

1 Claim. (Cl. 81—15)

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The present invention relates to new and useful improvements in tools designed to bend offsets in thin-walled electrical conduits and has for its primary object to provide a tool of this character adapted for bending the pipe upwardly or downwardly without necessitating removal of the tool therefrom.

A further object of the invention is to provide a tool of this character for bending electric conduits without injury so that the wires may be readily pulled through the same without injury to the insulation of the wires.

A still further object of the invention is to provide a tool of this character of simple and practical construction, which is strong and durable, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Further objects and advantages 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:

Figure 1 is a side elevational view showing the tool in use for providing an upward bend in the pipe;

Figure 2 is a top plan view;

Figure 3 is a front elevational view;

Figures 4 and 5 are transverse sectional views taken respectively on the lines 4—4 and 5—5 of Figure 1;

Figure 6 is a modified form of the tool, partly in section;

Figure 7 is a rear elevational view;

Figure 8 is a sectional view taken substantially on a line 8—8 of Figure 6; and

Figure 9 is a side elevational view showing the tool used for bending the pipe downwardly.

Referring now to the drawings in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a substantially foot-shaped member having flat sides and including a toe portion 6, a heel portion 7 and a shank portion 8 rising upwardly at the heel portion of the member and externally threaded for attaching a handle 9 thereto.

One side of the member 5 is formed with a groove 10 extending from a point above the heel portion 7 forwardly to a point at the bottom of the member below the toe portion 6 thereof as will be apparent from an inspection of Figure 1 of the drawings.

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The upper edge of the groove 10 is formed with a channel 11 and the heel portion 7 is formed with a channel 12 which extends around the rear and bottom edges of the heel portion and communicates with a channel 13 at the lower edge of the groove 10.

The channel 12 in the bottom of the heel portion 7 communicates with the front end of the groove 10 so that a pipe 14 may be positioned longitudinally at the lower edge of the member 5 and received in the front end of the groove 10 as well as in the channel 12 and with the front end of the channel 11 and the rear end of the channel 12 forming fulcrums.

A ring member 15 having an open side 15a for receiving the pipe and formed with a shank 15b is pivoted at the toe portion 6 of the member 5 on a transverse pin 15c and extends downwardly at the toe portion of the member 5 for engaging the pipe 14 to retain the same in position at the bottom of the member.

Accordingly by moving the handle 9 rearwardly the toe portion 6 of the member 5 will be tilted upwardly and using the rear end of the channel 12 as a fulcrum the pipe 14 will be bent upwardly as indicated in Figure 1 of the drawings.

As shown in modified construction in Figures 6 to 9 inclusive, the toe portion 6 is also formed with a flared opening 17 extending upwardly and forwardly from the channel 11 and through which the pipe may be inserted to extend downwardly under the heel 7 as shown by the upper dotted lines in Figure 6. Accordingly, with the two ends of the pipe 14 held so as to prevent swinging movement thereof but to permit a sliding movement thereof, the handle is swung clockwise to the position of the tool, as seen in Figure 6, so that an offset will be bent in the pipe as indicated at 18.

When it is desired to bend the pipe 14 downwardly, the pipe is positioned in the groove 10 as indicated in Figure 9 of the drawings so that the front end of the channel 11 and the rear end of the channel 13 will then form the fulcrum when the handle 9 is tilted counter-clockwise or forwardly. Assuming the right-hand end of pipe 14 (Figure 9) is retained against swinging movement, the pipe will be bent as illustrated in Figure 9, when tool 5 is swung counterclockwise.

The outer surface of the heel portion 7 is formed with a rib 16 which constitutes a guide to indicate a predetermined angle of the bend in the pipe when the member 5 is tilted so as to position the rib vertically.

In view of the foregoing description taken in

conjunction with the accompanying drawings it is believed the details of construction, operation and advantages of the device will be readily understood by those skilled in the art. A more detailed description thereof is accordingly deemed unnecessary.

It is to be understood however that even though I have herein shown and described the preferred embodiments of my invention that the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described, and the scope of the appended claim.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having thus described my invention, what I claim as new is:

A pipe bending tool comprising a generally foot-shaped member having a heel portion provided with a recessed side, said member having an integral lateral projection disposed in the recessed side of the heel portion including an enlarged outer portion disposed substantially parallel to the opposite side of the heel and a restricted shank extending between the enlarged outer portion and said opposite side of the heel,

and a hook-like hanger pivoted to and depending from the underside of the toe portion of the foot-shaped member and adapted to detachably engage a portion of a pipe to be bent, said restricted shank being adapted to engage another portion of the pipe, the unrecessed side of the heel and the enlarged portion of the projection defining flanges for retaining the pipe in engagement with said shank portion, whereby, when the foot-shaped member is rocked to swing the heel portion toward the pipe, the pipe will be bent only at two spaced points to form an offset therein when the ends of the pipe are slidably and nonswingably held.

HAROLD H. SNYDER.

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