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TUBE AND CONDUIT BENDING HAND TOOL

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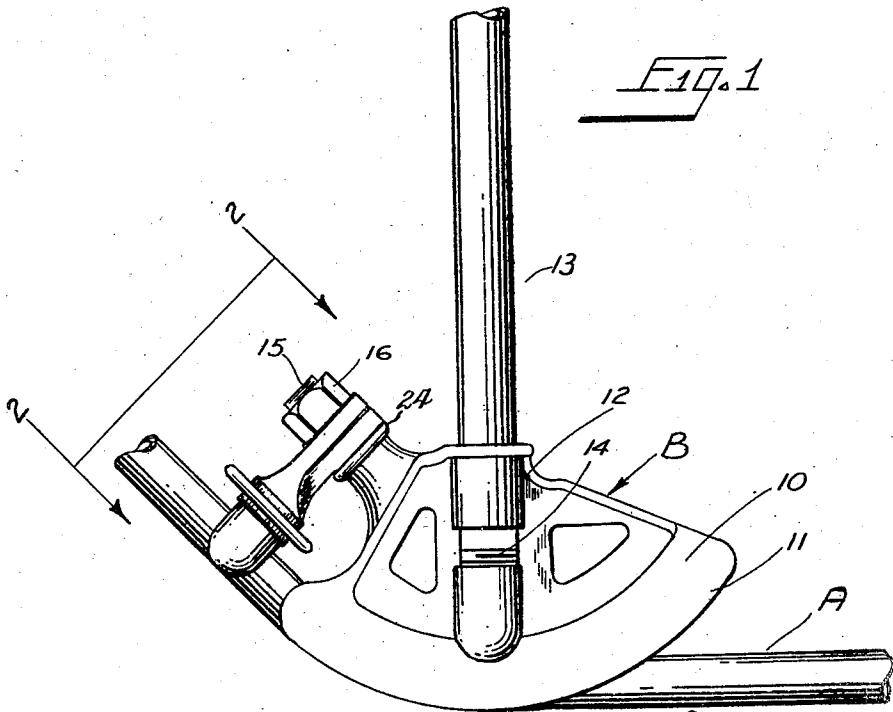


FIG. 2

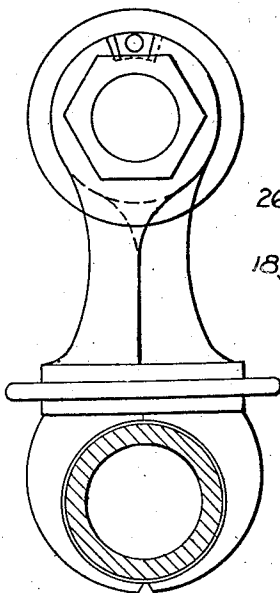
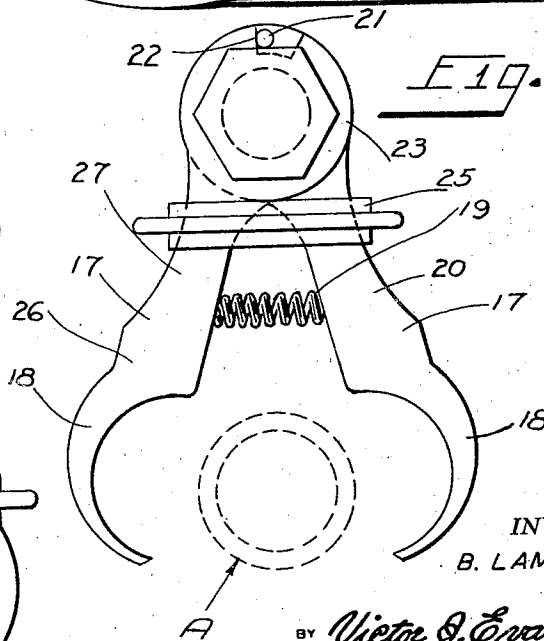


FIG. 3



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TUBE AND CONDUIT BENDING HAND TOOL

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1 Claim. (Cl. 81—15)

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The invention relates to a bending tool, and more especially to a tube or pipe bending appliance.

The primary object of the invention is the provision of a device of this character, wherein through hand actuation thereof, a tube or pipe can be uniformly bent, without kinking the same, or causing flattening thereof, the tube or pipe being securely held, and without liability of the slipping of either it or the device when in operation.

Another object of the invention is the provision of a device of this character, wherein a tube, rod or pipe, or the like, can be successfully bent without removing it from a set position, and with dispatch, the device being of novel construction, and is unique in the working thereof, so that it can be conveniently handled and applied and removed with ease.

A further object of the invention is the provision of a device of this character, wherein it carries gripping jaws, which are locked in engaging position on a piece of work and will automatically open on the release thereof.

A still further object of the invention is the provision of a device of this character, which is simple in construction, thoroughly reliable and efficient in operation, strong, durable, possessed of few parts, these being readily accessible, the jaws susceptible of self-alignment with the bending element of the device, readily and easily adjusted, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which shows the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is a side elevation of the device constructed in accordance with the invention and applied to the work.

Figure 2 is an enlarged sectional view taken approximately on the line 2—2 of Figure 1 looking in the direction of the arrows.

Figure 3 is a view similar to Figure 2 showing the jaws of the device open.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally a portion of a pipe or tube, yet it may be a solid rod, or the like, while the bending tool or device in its entirety is denoted at B, constructed in accordance with the invention.

The bending tool or device B, comprises a segmental shaped anvil or former 10, having the arcuate grooved peripheral edge 11 to the size and shape of the pipe, tube or rod A to be bent.

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At a point approximately medially of the anvil or former 10, and radially disposed is built therewith a handle socket formation 12 for detachably receiving a handle or lever 13, which is preferably engaged therein by screw threads 14.

At one end of the former or anvil 10 is a pivot lug 15 which is outwardly horned therefrom, and is fitted with a tap-nut 16 for the holding upon the said pivot lug 15 a pair of opposed swinging jaws 17 having the gripping hooks or claws 18 which on the closing of the jaws 17 about the work embrace and firmly hold the pipe, tube, rod, or the like, A. These jaws 17 are adapted to be spread apart by a coiled expansion spring 19 interposed therebetween and seated at 20 in confronting edges of such jaws, as best seen in Figure 3 of the drawing.

The jaws 17 are limited in their spreading movements by a stop pin 21 coacting with abutment shoulders 22, respectively. The shoulders 22 are on the pivot eye ends 23 of the jaws 17, while the pin 21 is fixedly projected from the annular shoulder 24 of the lug 15 in the path of such shoulders.

Loosely encircling the jaws 17 is a locking collar or ring 25 which is adapted to be brought into wedging engagement with the rim portions 26 exteriorly on the jaws next to the hooks or claws 18 thereof, so that the latter will be held in gripping engagement with the piece of work to be bent, and this ring or collar 25 is slipped from its loose position by hand from the narrower areas 27 of such jaws, as best seen in Figure 3 of the drawing to that position shown in Figure 2 thereof. The jaws 17 have free movement on the pivot lug 15 so that they in themselves will properly align with the former or anvil 10 when gripping the work, and the tool or device may be used to bend the work by inserting the latter in the jaws 17 and the grooved edge 11 as such work is upon a floor or in a set position. The grooved edge 11 of the anvil or former 10 enables the work to be supported against flattening, even though the work may leave the floor or the set position thereof.

The tool or device B is hand operated through the manipulation of the handle or lever 13, as should be clearly obvious from the disclosure in the drawing.

What is claimed is:

In a pipe bending tool, the combination of a segmental-shaped anvil having a peripheral groove adapted to receive a pipe, a radial socket on said anvil, a handle secured in said socket, a pivot lug extending from said anvil in the plane thereof, swinging jaws pivoted on said lug for movement in a plane normal to the plane of said anvil, opposed gripping claws having a curvature substantially equal to that of said peripheral groove, said claws being formed on said jaws

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opposed to each other and movable in a common plane normal to the plane of said anvil for embracing the pipe, a coiled expansion spring attached to and interposed between said jaws for moving the same away from each other, a pin-and-slot means on said jaws for limiting relative movement therebetween, means on said lug retaining thereon said swinging jaws, a locking collar slidably encircling the jaws for moving the same, and thereby the claws toward each other for frictionally locking the pipe therebetween.

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