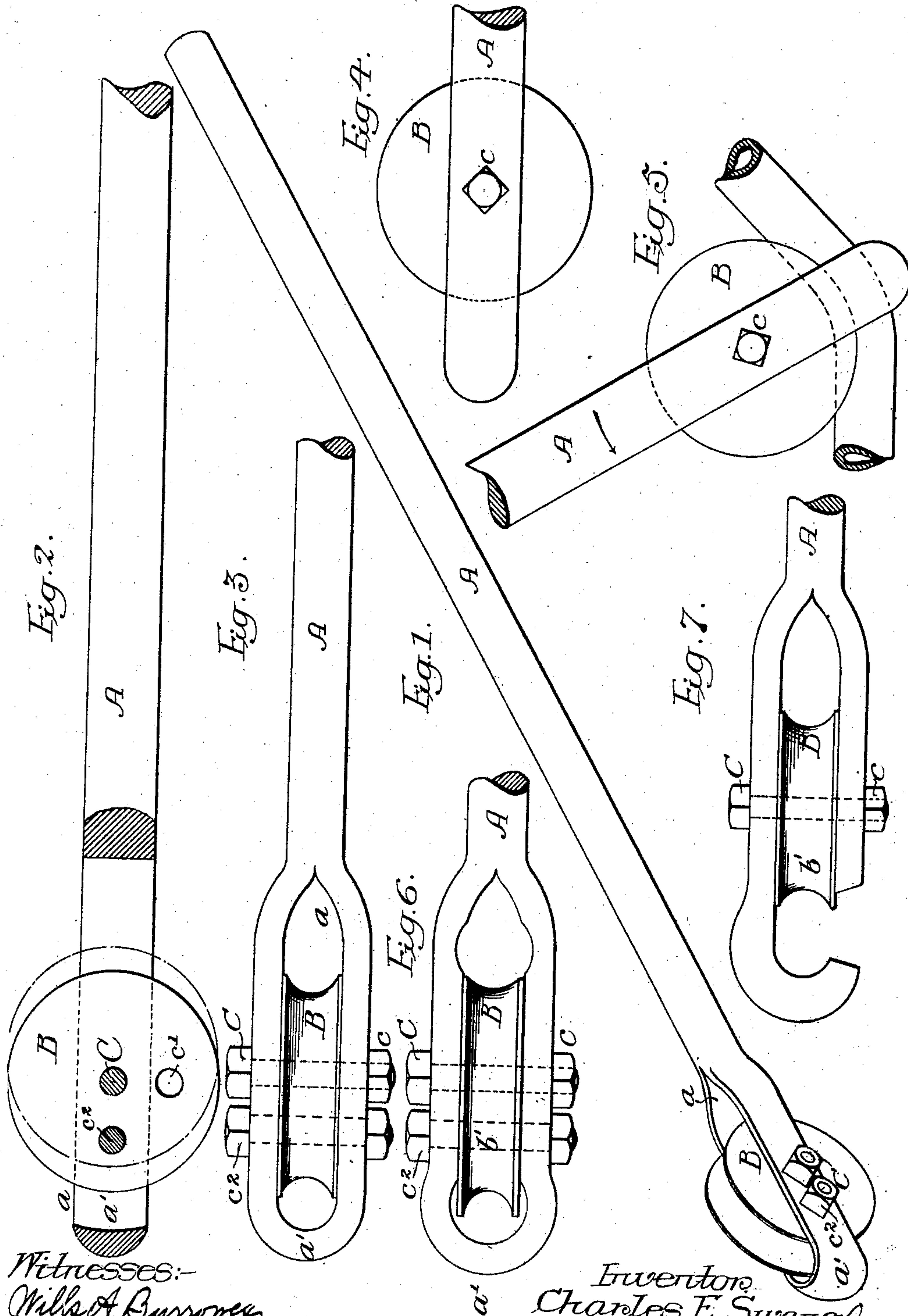


No. 859,706.

PATENTED JULY 9, 1907.

C. E. SWANEY.  
PIPE BENDING TOOL.

APPLICATION FILED APR. 23, 1907.



Witnesses:-  
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# UNITED STATES PATENT OFFICE.

CHARLES E. SWANEY, OF PHILADELPHIA, PENNSYLVANIA.

## PIPE-BENDING TOOL.

No. 859,706.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed April 23, 1907. Serial No. 369,772.

To all whom it may concern:

Be it known that I, CHARLES E. SWANEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in  
5 Pipe-Bending Tools, of which the following is a specification.

One object of my invention is to provide a cheap and portable pipe bending device in which the bending form can be adjusted to present new wearing surfaces  
10 and which can also be adjusted to receive and fit different sizes of pipe.

These objects I attain as hereinafter set forth, reference being had to the accompanying drawings, in which:

15 Figure 1, is a perspective view of my improved pipe bending tool; Fig. 2, is a vertical sectional view of a portion of the tool; Fig. 3, is a plan view; Fig. 4, is a view showing a concentrically pivoted form; Fig. 5, is a view showing the application of the tool to a pipe,  
20 and Figs. 6 and 7, are views of modifications of my invention.

In the above drawings, A is the handle of the pipe bending tool provided with a loop *a* at one end in which is mounted a circular bending form B secured  
25 in position by means of a headed bolt C having a nut *c*. By backing off this nut the bending form is released so that it may be freely turned on the bolt for purposes of adjustment. Said bending form B is grooved, as shown, and the end *a'* of the loop is rounded and curved,  
30 as shown in Figs. 2 and 3.

The opening for the reception of the bolt C in the bending form is preferably eccentric to its groove so that when it is rotated on the pivot C it will be moved  
35 towards or from the end *a'* of the loop, as illustrated by dotted lines in Fig. 2, thereby increasing or diminishing the space between said loop and the bending form to accommodate pipes of different sizes. In some instances however, the pivot opening in the bending form may be concentric with the periphery, as shown  
40 in Fig. 4 as it is an advantage to provide for the adjusting of said form in order to present new surfaces for engagement with a pipe in the event of the accidental breakage of a portion of the surface.

As shown in Fig. 3, the groove *b'* in the bending form  
45 is of the same outline or contour throughout the circumference of the bending form, but it may be arranged to have a different outline, as shown in Fig. 6, in which the groove is shallow on one side of the bending form and gradually deepens to the opposite side. With  
50 this construction, when the bending form is turned to accommodate different sized pipes, the groove in the form will fit the pipe corresponding to the size of opening between the end of the loop and the form. In some instances the tool may be open at one side, as  
55 shown in Fig. 7, so that it can be applied to a pipe in

positions where it is impossible to slip it over the end of such pipe.

My invention is particularly adapted for use in bending electric conductor pipes which are placed in buildings for the reception of current supply wires. The  
60 present method of bending such pipes now in common use is to employ a bench pipe bending machine, the workmen being compelled to make all the bends at the bench and afterward carry the pipe to the point where it is set. With such a device great care is nec-  
65 essary in making the bends and considerable time is consumed in going to and from the bench to the point where the pipe is to be located. With my improved device however, I am enabled to provide a portable  
bender which can be used at the point where the work  
70 is being done; in fact, in some instances, the pipe can be bent as it is being placed in position, making the operation much quicker and more satisfactory.

The pipe can be readily bent by first adjusting the bending form so that the tool will accommodate a given  
75 sized pipe. It is then slipped over the end of the pipe, as shown in Fig. 5, and by turning it in the direction of the arrow, a bend is made by the looped portion of the handle gripping the outer portion of the pipe and the inner portion of the pipe conforming to the shape of  
80 the bending form. After this bend is made, the pipe bender is moved forward to new positions and the operation is repeated until the pipe is bent to the desired curve.

It will be understood that when I use the word  
85 "looped" I mean any form of handle which extends beyond the edge of the bending form so as to provide a bearing for the pipe, whether it is a full loop or only a portion of a loop.

While in some instances the bolt C is sufficient to  
90 hold the form in any adjusted position without revolution, it may be desirable to positively lock it in place in which case I provide one or more holes *c'* in the form B and employ a second bolt *c''* in the loop so placed with reference to the bolt C as to be capable of enter-  
95 ing any of said holes. This extra bolt may be used with both the eccentric and concentric bending forms, though as above noted it is conceivable that the single bolt C could be made to hold said forms in place.

I claim:—

1. The combination in a pipe bending tool, of a handle having an integral looped portion forming a closed eye, and an annular bending form mounted in said eye so as to co-operate with the looped portion in bending a pipe, substantially as described.

2. The combination of a handle having a looped portion at one end, and a grooved bending form pivoted in the looped portion of the handle, the pivot opening in the bending form being eccentric to the groove thereof, substantially as described.

3. The combination of a handle having a looped portion with an annular bending form provided with a groove

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gradually deepening from one side to the other and mounted in the looped portion of the handle, said form being adjustable at will to bring different parts of its groove opposite to the end of the looped portion and being placed to  
5 co-operate with the said end of the loop in bending a pipe, substantially as described.

4. The combination of a handle having a looped portion at one end and a grooved annular bending form secured to the loop of the handle so as to be axially adjustable, with  
10 means for positively holding the form in any adjustable position to cause it to directly co-act with one end of the looped portion in bending pipe, substantially as described.

5. The combination of a handle having a looped portion at one end, and a grooved annular bending form adjustably secured to the loop of the handle, said form having a plurality of holes, with a bolt in the handle fitting any of  
15 said holes to positively retain the form in any adjusted position, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.  
20 CHARLES E. SWANEY.

Witnesses:

ROBERT KAISER,  
JOS. H. KLEIN.