(No Model.)

M. E. HAWKINS.

DEVICE FOR UPSETTING THE ENDS OF METAL PIPES.

No. 333,410. Patented Dec. 29, 1885.

Fig. 1.

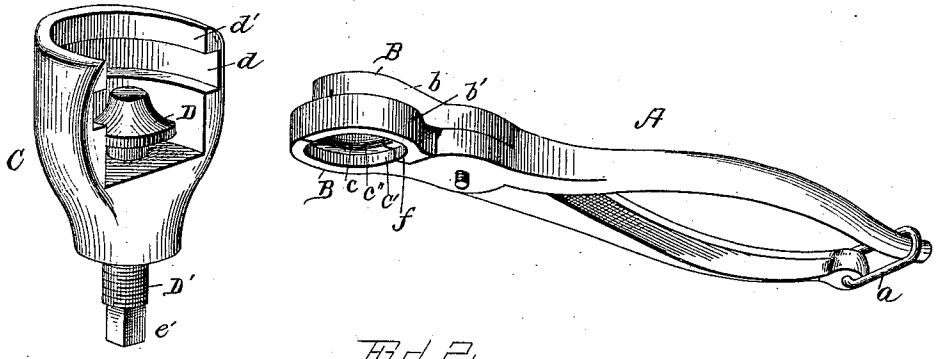


Fig. 2.

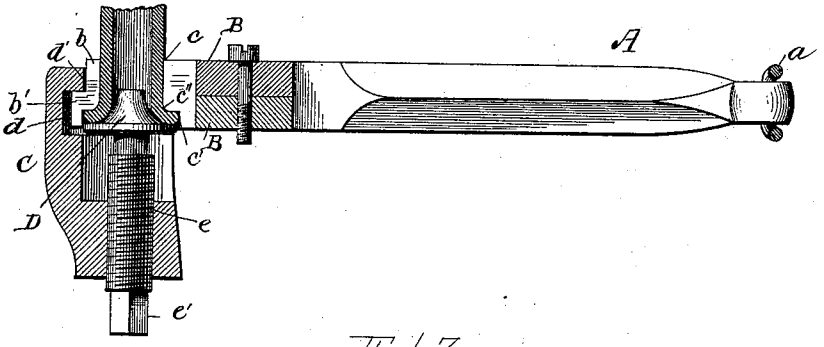


Fig. 3.

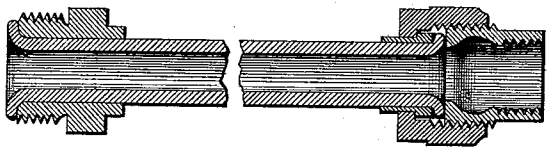
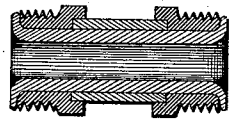


Fig. 4.



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UNITED STATES PATENT OFFICE.

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DEVICE FOR UPSETTING THE ENDS OF METAL PIPES.

SPECIFICATION forming part of Letters Patent No. 333,410, dated December 29, 1885.

Application filed May 14, 1885. Serial No. 165,471. (No model.)

To all whom it may concern:

Be it known that I, MARCUS E. HAWKINS, a citizen of the United States of America, residing at Lansingburg, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Devices for Upsetting the Ends of Metal Pipes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in implements for upsetting the ends of metal pipes so that they can be attached to couplings; and to this end my invention consists in the construction of pliers which are adapted to be used in connection with a block having a follower with a conical head.

My invention also consists in the specific construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a perspective view showing the parts of my improvement detached from each other. Fig. 2 is a sectional view. Fig. 3 is a sectional view of one form of coupling, and Fig. 4 is a sectional view of another form.

A represents a pair of pliers, the handle portion of one of the members of said pliers being perforated for the reception of a bail, *a*, which engages with the end of the opposite member so as to hold the jaws together. The jaws B B are constructed so as to be counterparts of each other. The jaws are provided on one side with raised portions *b*, adjacent to which are the raised portions *b'*. The internal configuration of the jaws is such as to present an internal contracted portion, *c*, at one side, while the lower edge has an offset, *c'*, with a rounded edge, *c''*.

C represents a block, the upper portion of which is semicircular in cross-section and is provided with a recess, *d*, which extends around the same, said recess being adapted to receive the enlarged portion *b'* of the pliers, while the portions *b* will lie against the upper rim, *d'*. The portion of the block C under the recess D is cut away for the reception of a cone-shaped follower, D, which follower is formed integral with a screw-threaded stem, D', which passes through a female threaded opening, *e*, in the lower portion of the block. The outer end of the stem B' is rectangular in cross-section, as shown at *e'*, for the reception of a wrench or hand-wheel or other suitable means for turning this stem, to which the follower is attached.

When it is desired to upset the end of a metal pipe, said pipe is grasped between the inner sides of the reduced portion of the pliers, the end being about flush with the edge *f*. The bail *a* is then passed over the end of the handle, which will hold the pipe securely in position. The end of the pliers is then inserted in the block, as shown in Fig. 2 of the accompanying drawings. The follower is then turned and the conical portion thereof coming in contact with the end of the pipe will expand and turn the same upwardly so as to form a circumferential shoulder upon the same. After this shoulder has been formed, the follower is turned in an opposite direction, which causes the same to retract so that the pliers can be removed from the block.

In Fig. 3 I have shown one form of attaching a coupling to the upset end of the pipe. Said couplings are placed over the pipe before the ends are upset.

In Fig. 4 of the drawings I have shown a manner of upsetting the ends of a pipe over a union-coupling, the connecting-pipe and the end couplings being entirely covered on their inner sides by the soft-metal pipe.

The tool hereinbefore described is comparatively cheap in construction, portable, and there are no parts to get out of order or break, and the jaws of the pliers are thoroughly reenforced by the block when in use.

I claim—

1. The combination of a pair of pliers, the block C, engaged thereby and adapted to receive the end of the pipe or tube, and a follower, D, substantially as set forth.

2. In combination with the pliers having a pipe-holding portion and a seat or offset adjacent thereto, the block C, provided with a recess, *d*, and a follower with the conical-

shaped head, substantially as shown, and for the purpose set forth.

3. In a device for upsetting the ends of soft metal pipes, the pliers provided with a pipe-clamping portion, beneath which opening is an offset which is provided with a curved edge and an external enlarged portion, *b'*, in combination with a block having an opening adapted for the reception of the head of said pliers, and a follower having a screw-threaded stem, substantially as shown, and for the purpose set forth.

4. In a device for upsetting the ends of soft-metal pipes, a pair of pliers provided with means for holding the end of said pipe, and a recessed portion against which the end of the pipe when upset is forced, in combination with a block having a semicircular opening and a recess for the reception of the head of the pliers, said block having a conical follower which is attached to a screw-threaded stem which passes through the block, and means for turning the stem, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARCUS EDWARD HAWKINS.

Witnesses:

F. F. HAWKINS,

H. E. HAWKINS.