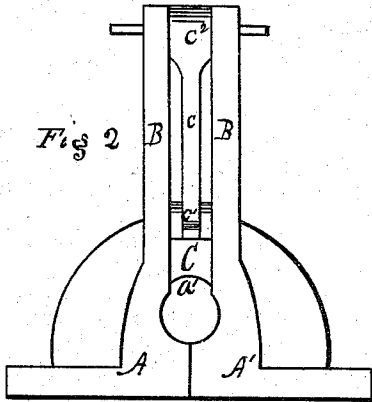
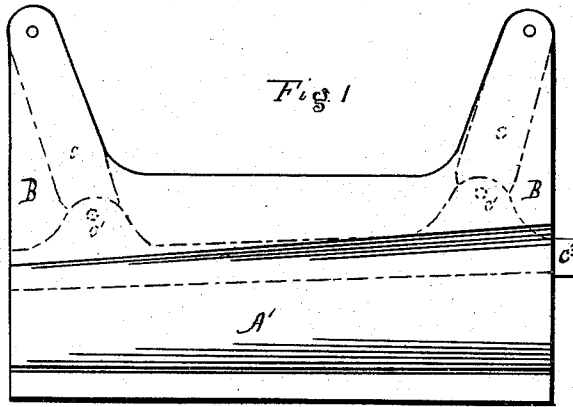


E. GORDON.
Skelping-Dies.

No. 157,682.

Patented Dec. 15, 1874.



WITNESSES
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UNITED STATES PATENT OFFICE.

EDWARD GORDON, OF McKEESPORT, PENNSYLVANIA.

IMPROVEMENT IN SKELPING-DIES.

Specification forming part of Letters Patent No. **157,682**, dated December 15, 1874; application filed October 28, 1874.

To all whom it may concern:

Be it known that I, EDWARD GORDON, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Skelping-Dies; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a side view. Fig. 2 is a front view, the closing-die swung back. Fig. 3 is a rear view; and Fig. 4 is a vertical longitudinal section of skelping-dies embodying my invention.

Like letters refer to like parts in the several figures.

My invention relates to the construction of skelping-dies used in bending lap and butt-weld tubing; and it consists in combining, with skelping-dies, made either solid or separate, a self-acting follower or closing-die, which will recede to allow of the introduction of the tongs, and advance to close the tongs' slot and complete the die, so that the die will present an equal surface, and bend the skelp in a regular and uniform manner.

Skelping-dies as heretofore constructed, have been made either in a single piece or in two or more pieces, having a conical or tapering channel through which the skelp is drawn from the heating-furnace, and which bends the skelp into the tubular shape. These dies are necessarily formed with a longitudinal slot or opening, to allow of the introduction of the tongs, for the purpose of seizing the end of the skelp and drawing it through the dies, and, as a consequence, much care is required in drawing the tubing, to avoid the tendency of the skelp to bulge above or at the interruption of the circle, which would result in an imperfect tube or pipe.

The object of the present invention is to overcome these difficulties, obtain a complete die, and at the same time preserve the slot for the introduction of the tongs.

I will now proceed to describe my invention, so that others skilled in the art may make and use the same.

In the drawing, A A' represent the two parts of a die, each grooved or recessed as at *a*, the two taken together forming the tapering cavity through which the skelp is drawn. A and A' may be bolted to a suitable bed-

plate, and meet at the base, but are open above, forming a slot, *a'*, for the introduction of the tongs. B represents standards or uprights rising from the dies A A' at points near the tongs' slot *a'*, and which serve to support the swinging closer C. C is a swinging closer, of the length of the dies, and a little less in width than the slot, so as move freely therein. This closer is suspended by hangers *c c*, pivoted to the closer at *c'*, and to the uprights at *c''*, so as to have a free swinging motion longitudinally of the slot. It is also provided with lugs or projections *c'''*, which prevent it from swinging beyond the front of the die.

Within the bending-groove *a* is the usual lip *a''*, for turning the lap, when a lap-weld pipe is to be made. The closer and slot may be at the bottom, and arranged to produce the same effect.

The operation of these devices is as follows: As the skelp comes from the furnace, one end enters the flared opening of the die, and advances until arrested by the narrow taper of the cavity. The attendant then introduces the tongs, which he is enabled to do by the yielding of the closer C or follower, and seizes the end of the pipe, drawing it forward; the closer or follower C will swing down or be drawn down by the advancing pipe, and complete the circle, so that the tube will be subjected to equal pressure at all points, and a perfect tube or pipe will be formed.

The advantages arising from the use of a closer, as described, are greater perfection and uniformity in the work, and greater rapidity of production.

With the dies as now used, an average day's work is about fourteen hundred skelps, while with my closer, as by actual experiment, twenty-five hundred skelps can be run through the same dies in the same length of time.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with skelping-dies, having a slot for the introduction of tongs, a self-acting closer, substantially as and for the purpose specified.

In testimony whereof I, the said EDWARD GORDON, have hereunto set my hand.

Witnesses: EDWARD GORDON.

F. W. RITTER, Jr.,
W. N. PAXTON,