

Sweeney & Parks,

Sheet-Metal-Working Machine.

N^o 32,799.

Patented July 9, 1861.

Fig. 1.

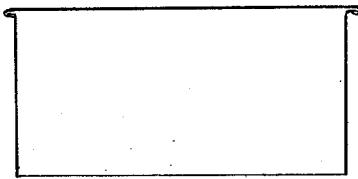


Fig. 2.

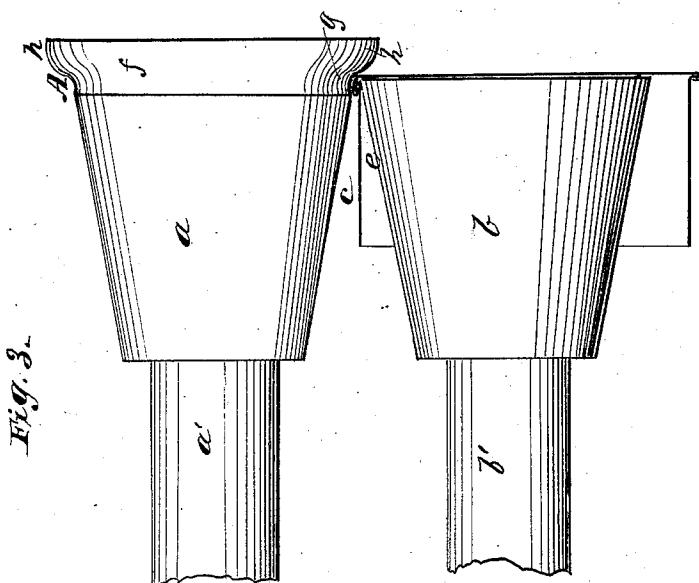
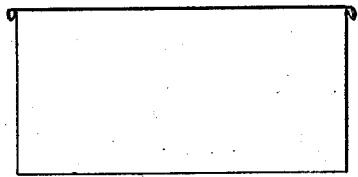


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

S. SWEENEY AND S. PARKS, OF ROME, NEW YORK.

IMPROVEMENT IN DOUBLE-SEAMING SHEET METAL.

Specification forming part of Letters Patent No. 32,799, dated July 9, 1861.

To all whom it may concern:

Be it known that we, STEPHEN SWEENEY and STEPHEN PARKS, of the city of Rome, Oneida county, in the State of New York, have jointly and together invented certain new and useful Improvements in Machinery for Double-Seaming Sheet Metal; and we do hereby declare that the following is a full and correct description thereof, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference thereon.

Our improvements are especially designed for double-seaming plates of tin or other sheet metal at right angles, or nearly so, either in straight or curved seams. Machines now used for this purpose—such as the Olmstead machine, patented January 17, 1860—are expensive and complicated, and require a machine made expressly for the purpose, which prevents general adoption of them by the trade, besides none of the machinery known to us performs the operation of bending over and swaging the seam at one operation.

The annexed drawings illustrate our invention.

Figure No. 1 represents a sectional view of the body and bottom of a circular vessel prepared for the operation of double-seaming; Fig. No. 2, a section of the same when the operation of double-seaming is completed. Letters *a* and *b*, Fig. No. 3, are heads or formers, which may be fitted to the mandrels *a'* *b'* of an ordinary stove-pipe-swaging machine, such as are in common use in tin-shops.

The red lines, letter *C*, represents a vessel in the act of being double-seamed, the double seam being formed at *d*.

Our said invention consists in the relative arrangement and combination of the bending and swaging surfaces *e* and *f* of the heads or formers *a* and *b*. The surface *e* of the former

that acts on the inside of the seam is at an acute angle with a line drawn transversely to the axis of the mandrel. It therefore presses the metal outward and enlarges it at the point of making the seam, which would not be the case if the surface were parallel with the axis. The surface *f* is peculiar in respect of combining the swaging and bending surface—to wit, a groove, *g*, and an inclined or curved flange, *h*, merged into each other. The inclined surface of the flange bends over the double seam and the groove swages it. A seam formed in this manner may be made much tighter than in the usual mode of forming such seams, the inclination of the surfaces of the heads or formers permitting a cross-seam to pass between the heads freely, and therefore to be pinched down tightly at the point of intersection with the seam that is being formed.

The shape of the groove and flange surface admits of some modification for the purpose of varying the form of the seam, and also of concaving the bottom by changing the angle at which the seam is formed slightly from a right angle. These modifications are not necessary to be described here, being evident to mechanics accustomed to make or use machines for seaming sheet metal.

What we claim as our invention and improvement in machines for double-seaming sheet metal is—

The groove *g* on the roller *a* when the said groove terminates on its outer edge in the elevated portion or inclined flange *h*, in combination with the conical roller *b*, as and for the purpose above set forth.

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