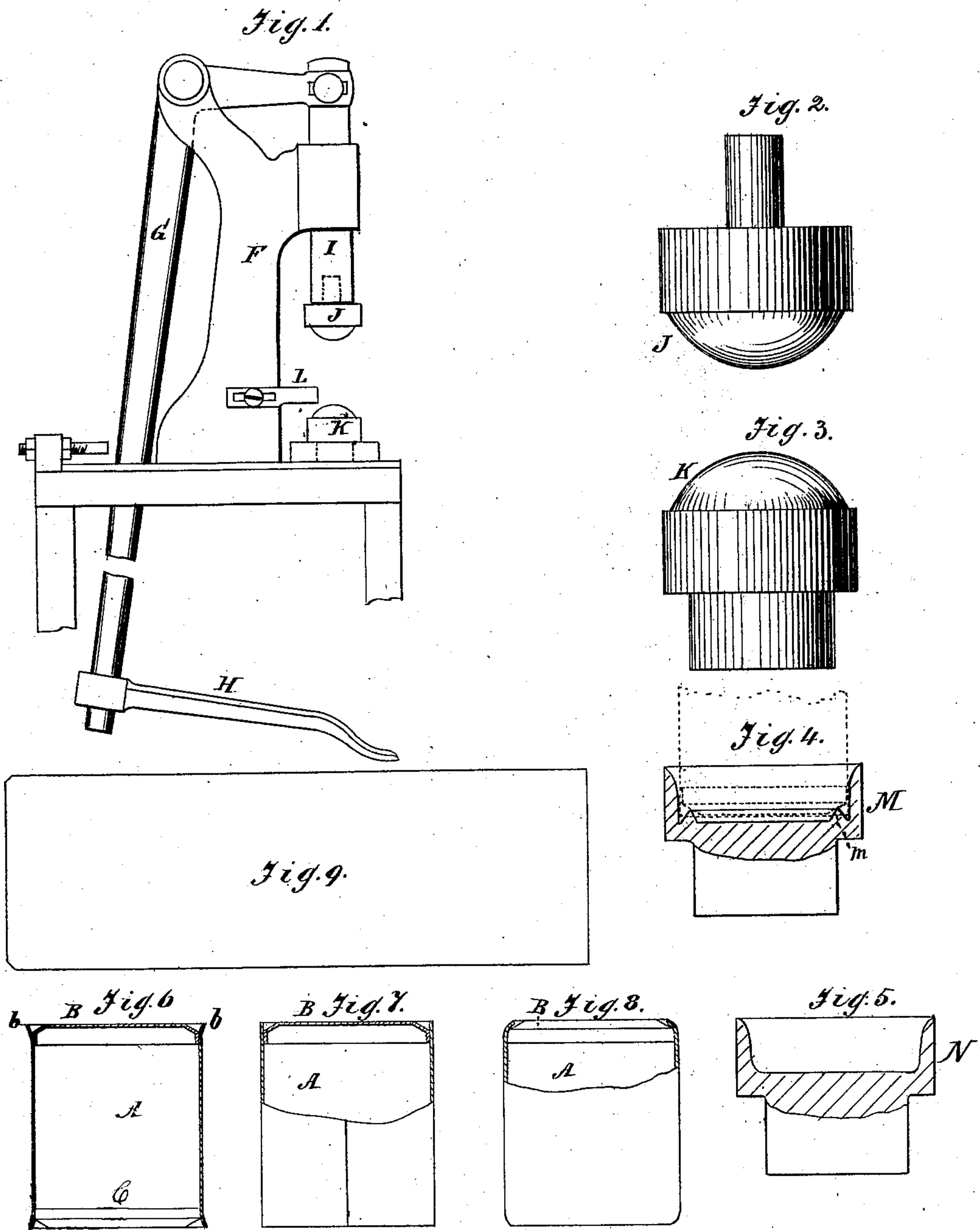


**G. D. BROOKS.**  
**Sheet-Metal Seaming-Machines.**  
 No. 140,678. Patented July 8, 1873.



**Witnesses:**  
*W. Martin*  
*Jolon & Remon*

**Inventor:**  
*George D. Brooks*  
*PER* *Wm. T. C.*  
**Attorneys.**

# UNITED STATES PATENT OFFICE.

GEORGE D. BROOKS, OF BALTIMORE, MARYLAND, ASSIGNOR TO HIMSELF  
AND MARY C. BROOKS, OF SAME PLACE.

## IMPROVEMENT IN SHEET-METAL SEAMING-MACHINES.

Specification forming part of Letters Patent No. **140,678**, dated July 8, 1873; application filed  
April 8, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE D. BROOKS, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Putting in Tops and Bottoms of Cans so as to economize solder; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification:

The invention has mainly in view to form a tight joint, at the junction of a can-body with its top and bottom, before the solder is applied; otherwise the solder finds its way through, is wasted, and does not form so strong, full, and reliable a joint. The invention consists in the method and in the particular means by which I accomplish this object, as hereinafter fully described and pointed out in the claim.

Figure 1 is a side elevation of the mechanism by which the dies are operated. Figs. 2 and 3 are a side elevation of the flaring dies. Fig. 4 is a vertical section of the die for placing the top and bottom in the body of can. Fig. 5 is a vertical section of the dies for turning the edges of the can-ends over the top and bottom. Figs. 6, 7, and 8 are detail views in vertical section to show the body, top, and bottom before the flare of the former, after the insertion of the two latter, and, finally, after the turn-over of the upper and lower edges of body.

In the drawing, A represents a can-body; B, the top; and C, the bottom. The circular edges of top and bottom are flared by the tapering dies which enter the ends of can as far as the shoulders. These dies are, of course, placed in suitable holders and one or both moved toward the can, there being a suitable limit of movement according to the intended depth of the flare of ends *b*. F is a frame, to which is attached any suitable treadle mechanism G H. To the latter is pivoted or connected, by a socket-joint, a plunger, I, to which is made fast the stem of a die, J. This die is convex, and large enough in its greatest width to receive the flare of the can-ends *b*, while it gradually diverges outward correspondingly

to the depth of flare and diameter of the top or bottom of can. K is the lower die, made in all respects like the upper one, J. L is the guide which receives the side of a can-body, while its bottom or top rests in the die K. The can being supported against the guide and on the die K, the plunger I is brought down. This causes the ends *b* of can to enter upon the dies J K, and to be flared, as shown in Fig. 6 of drawing. In order to force the top and bottom into position within the ends of body, I remove the dies J K and substitute a duplicate of that marked M in Fig. 4 of drawing. The can-body is placed in lower die M upon the annular upwardly-projecting flange *m*, so that the contact of the die with the bottom will only be on the narrow edge of flange. The body A is thus inserted so as to rest against the sides. If the die M was allowed to press upon the face of bottom or top, instead of the beveled side of B, the bottom or top would be impaired in shape, and thereby injured for the purpose intended. The top is put into the body by a corresponding top die attached to plunger, which comes down and forces the can into the groove between flange *m* and side of die. This causes both top and bottom to assume their places within the body. The next operation is to turn the edge of each end of the body over the top and bottom before they are dipped in solder, to make their joints or seams air-tight. To accomplish this turn, I remove dies M and substitute a duplicate of the die marked N in Fig. 5. This is beveled on the inside according to the degree and extent to which the turn of edges is to be made. The can-body, with its top and bottom, is placed in the lower die, while, the plunger coming down, both edges of the body are appropriately turned over, as shown in Fig. 8 of drawing. In order to make this turn of the edges more effective, and to do it with the greatest facility, I clip a triangular piece from each corner of one end, as shown in Fig. 9 of drawing; otherwise the two thicknesses of metal at the lap cause too great a resistance to the turn of the metal.

It will be observed that the dies are perforated; and this is essential, since, if the air



in the die has no escape, it will displace the head.

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

1. The combination of two tapered dies arranged in a machine having a suitable operative mechanism, as described, so that both the edges of can can be simultaneously flared.

2. A die, M, constructed with inside up-

ward flange *m*, and applied, as and for the purpose described.

3. The combination of two dies, N, flared or beveled on the inside and applied to turn over both edges of can simultaneously, the dies provided with holes therein, as and for the purpose described.

Witnesses: GEO. D. BROOKS.

JOS. G. JOHNSON,  
A. H. M. BRISCOE.