

G. H. PERKINS.
Sheet-Metal Seaming-Machines.

No. 149,516.

Patented April 7, 1874.

Fig. 1.

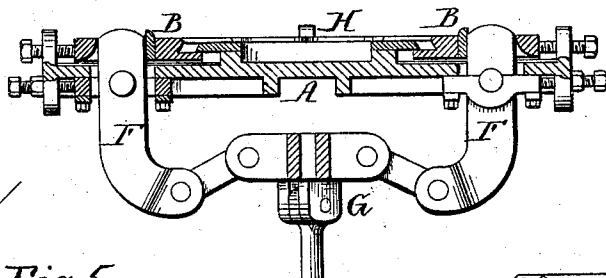


Fig. 6.

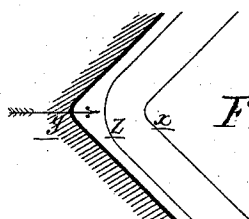
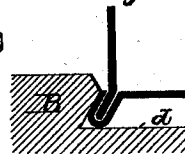


Fig. 5.

Fig. 2.

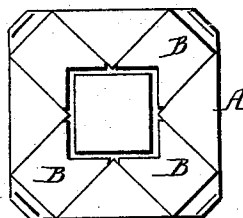
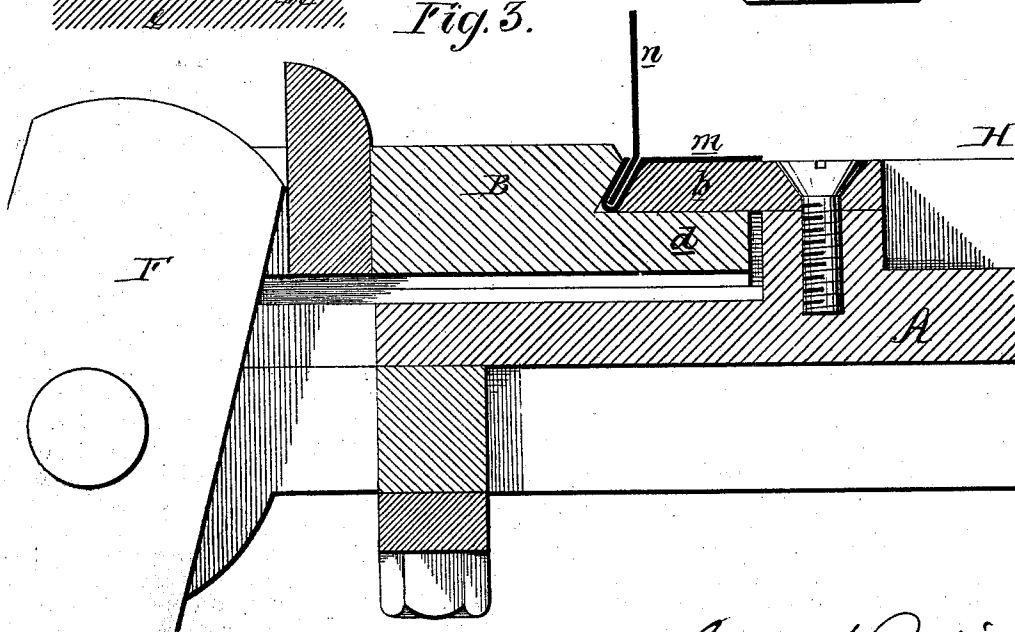


Fig. 4.



Fig. 3.



Witnesses, Hubert H. Hovson,
Harry Smith

George H. Perkins
by his Attys.
Hovson and Son.

UNITED STATES PATENT OFFICE.

GEORGE H. PERKINS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JOSEPH LE COMTE, OF NEW YORK CITY, AND ATLANTIC REFINING COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SHEET-METAL-SEAMING MACHINES.

Specification forming part of Letters Patent No. **149,516**, dated April 7, 1874; application filed December 17, 1873.

CASE D.

To all whom it may concern:

Be it known that I, GEORGE H. PERKINS, of Philadelphia, Pennsylvania, have invented a Machine for Closing the Seams of Sheet-Metal Cans, of which the following is a specification:

My invention relates to devices for closing the joints at the junction of the bottoms and tops with the bodies of the cans used for the transportation and storage of petroleum and other fluids; and the object of my invention is to insure the determinate action of the sliding dies B, so that they may perfectly close the joints of the cans by forming the said dies with continuations *d*, and by combining them with a bed, H, as shown in the enlarged sectional view, Fig. 3, of the accompanying drawing.

The machine to which my invention is applied is sufficiently illustrated in the vertical section, Figure 1, and in the diagram, Fig. 2, which shows a top view drawn to a reduced scale.

To guides on a table, A, are adapted four sliding bars, B, which are designed to act simultaneously on the joints of a can placed on the central quadrangular plate H projecting above the table, this bed being edged on all four sides with steel plates *b* beveled at their outer edges, and arranged to overhang the part of the table to which they are secured, as shown in the enlarged sectional view, Fig. 3.

The method of operating these sliding dies simultaneously, by depressing a cross-head, G, is too fully explained in a separate application for a patent to need description.

The bottom *m* of the can—a portion of which is shown in Fig. 3—is placed on the central bed, and its turned-up edge is forced by the die B against the beveled edge of the plate *b* of the bed, thereby closing the same, within which is contained the flaring lower edge of the body of the can, a portion of which is represented at *n*, Fig. 3.

Whenever sliding dies have been thus used for closing the joints of cans, each die has been constructed, as shown in the detached

view, Fig. 4, without the underlapping continuation *d*, the bed H having a continuation, *e*, which extended beneath the die. When the beveled edge of the die closed against the seam, there was always a tendency to lower or straighten out the turned-up edge of the bottom of the can at a point immediately opposite the corner of the latter, the reason of which will be rendered apparent by referring to the diagram, Fig. 5, in which the line *x* represents the outline of the corner of the can, the line *y* the outline of the die, and the line *z* the edge of the turned-up portion of the bottom of the can. It will be seen that the corner of the can is slightly rounded, although the can is practically square, and that the die is similarly rounded at the corner.

The curve of the flange *z* follows that of the corner of the can, and is described from the same center; but as the radius is longer the curve is necessarily greater, the consequence of which is that the distance between the corner of the die and the corner of the flange is greater than that between the sides of the same; hence the sides of the flange are pressed against the body of the can by the die before the latter is brought in contact with the corner of said flange, the tendency of which is to so lower this corner as to cause it in many cases to be passed beneath the die, when the latter is constructed, as shown in Fig. 4; but by forming the said die with a continuation, *d*, in accordance with my invention, as illustrated in Fig. 3, this tendency is entirely avoided, and the corner of the flange, if lowered to a slight extent, is raised to its proper position, and pressed against the body of the can by the continued movement of the die. The underlapping continuation *d*, moreover, holds the die down to its place, and prevents the straining and loosening of the same.

I prefer, in most instances, to use a bed, H, having an overhanging edge, *b*; but for round or oval cans, which are free from abrupt corners, these overhanging edges may be dispensed with, the can in such case resting upon the continuations *d* of the dies, as shown in

the detached view, Fig. 6, and the pressure being applied at opposite points simultaneously.

I claim as my invention—

1. The sliding die B, having the continuation *d*, as and for the purpose set forth.
2. The combination of the sliding die B and its continuation with the bed H and its overhanging edge *b*.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. PERKINS.

Witnesses:

WM. A. STEEL,
HARRY SMITH.