G. H. PERKINS.

Soldering-Apparatus.

No. 165,362. Patented July 6, 1875.

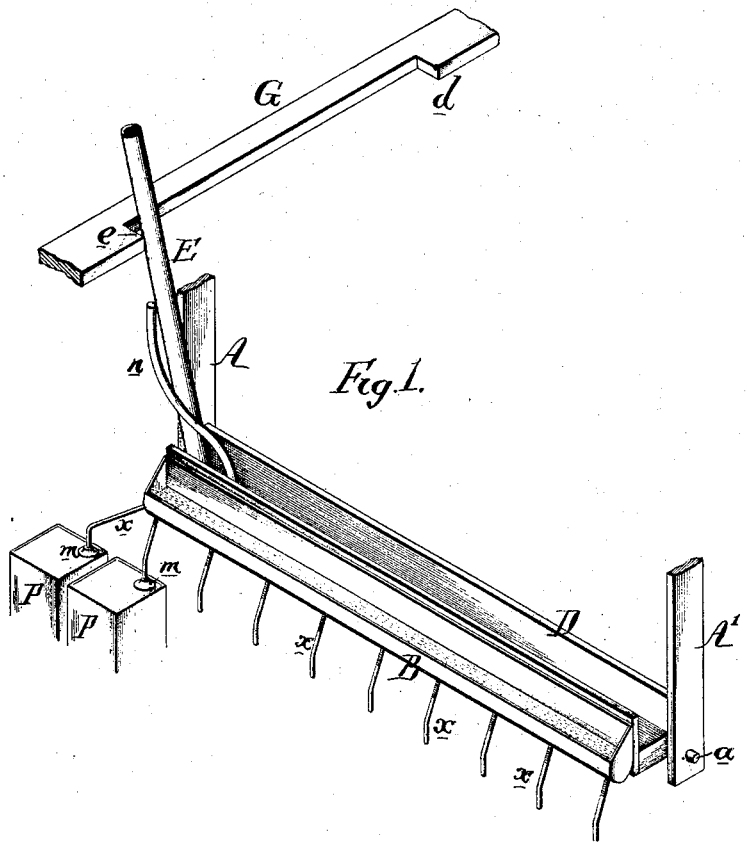

Fig. 1.

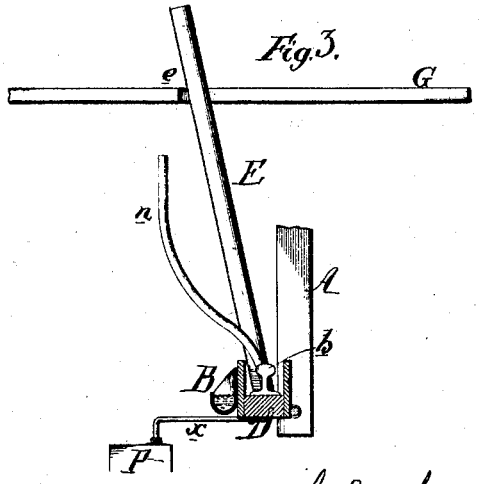

Fig. 3.

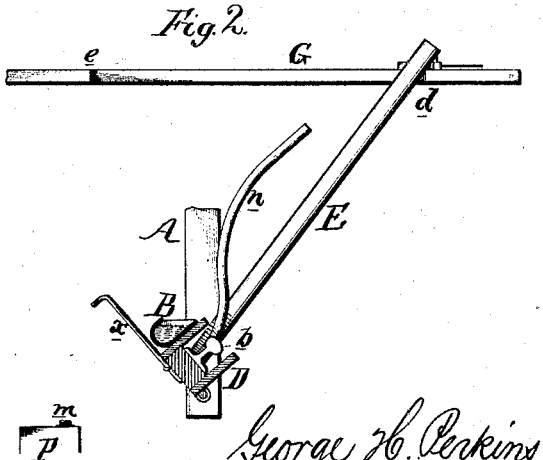

Fig. 2.

Witnesses,
E. H. Eckfeldt
Harry Smith,

George H. Perkins
by his Attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN SOLDERING APPARATUS.

Specification forming part of Letters Patent No. **165,362**, dated July 6, 1875; application filed March 24, 1875.

CASE S.

To all whom it may concern:

Be it known that I, GEORGE H. PERKINS, of Philadelphia, Pennsylvania, have invented an Apparatus for Facilitating the Soldering of the Caps of Cans, of which the following is a specification:

The object of my invention is to facilitate the operation of soldering screw-nozzles to oil-cans, and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the apparatus which I employ for the purpose, and Figs. 2 and 3 transverse sections, showing the movable parts of the apparatus in different positions.

A and A′ are two uprights or standards, forming part of a fixed frame; and to this standard is hinged, by pins *a*, a long trough, B, for containing the liquid which serves as a flux in applying the solder, this trough being attached to a long box, D, to each end of which one of the said pins *a* is attached, the box serving as a receptacle for a weight or weights, in the present instance consisting of a piece of railroad-rail, *b*, which has a tendency to depress the trough. At or near one end of the box is an arm, E, of such a weight that when in the position shown in Fig. 2 it will tend to counterbalance and retain the box, trough, and their attachments in the position shown in Fig. 2, the movement of this arm, and consequently of the trough, being restricted in one direction by a shoulder, *d*, on a fixed bar, G, and the other direction by a shoulder, *e*, on the same bar. On the under side of the box D, and projecting from the front of the same, are a number of elastic fingers, *x*, the bent end of each of which is arranged to bear on a nozzle, *m*, placed in its proper position on an oil-can, P, there being in front of the apparatus as many of these cans placed in a row as there are elastic fingers *x*.

The cans may be placed on a suitable removable platform, or, by preference, on one side of a turn-table, which it has not been deemed necessary to illustrate in the drawing, as it forms the subject of another application for a patent.

The nozzles having been adjusted in their proper positions on the cans, the fingers, which have been elevated with the trough and box during this adjustment are now depressed, so that the bent end of each finger will bear upon one nozzle with a firmness depending upon the weight in the box D.

It should be understood that the shoulder *e*, on the fixed bar G, does not interfere with the exerting of a proper pressure by the fingers on the nozzles, for it is only when the oil cans and nozzles are absent that the arm E is in contact with the said shoulder.

Heretofore it has been the practice, in soldering nozzles to oil-cans, for an operator to hold down the nozzle with one hand, while he applies the soldering iron and solder with the other, a somewhat tedious operation, for he must continue to press down the nozzle until the solder is set.

The above-described apparatus relieves the operator from the duty of holding down the nozzle, so that a strip of solder, which he holds in one hand, and which he dips from time to time into the flux in the trough, and the soldering-iron in the other, he can pass from can to can and apply the solder, there being no delay in holding down the nozzle while the solder sets, for this duty is performed by the fingers *x*.

After the nozzles have been soldered to one row of cans, the trough and its fingers are tilted upward by means of a handle, *n*, and is retained by the heavy arm E in this tilted position until the cans, with soldered nozzles, have been removed, and another row of cans is placed in a proper position for being operated on in the manner described.

The trough B may be pivoted directly to the frame, but I prefer the intervention of a box for receiving such weights as the desired pressure on the nozzles may suggest.

It is not esssential that the trough B should

form a part of the pivoted box or frame, for the flux may be contained in any other conveniently-situated vessel; but I prefer to attach it to the pivoted box for obvious reasons.

The object of making the fingers *x* elastic is to insure the application to the nozzle of each can of an independent yielding pressure.

I claim as my invention—

1. The combination of the pivoted and weighted box or frame with the elastic fingers *x*.

2. The pivoted and weighted box or frame and its elastic fingers, in combination with the weighted arm E.

3. The combination of the pivoted box or frame and its fingers, and arm E, with the stops *d* and *e*.

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

GEORGE H. PERKINS.

Witnesses:

HARRY SMITH,

HUBERT HOWSON.