# L. CUTTING.

## SOLDERING-TOOLS.

No. 192,743. Patented July 3, 1877.

Fig. 1.

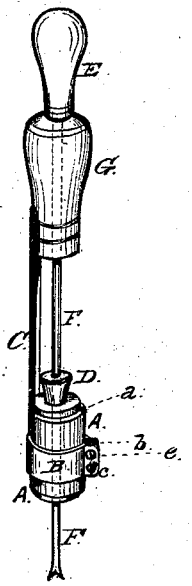



Fig. 2.


Fig. 3.

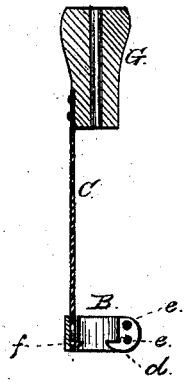



Fig. 5.


Fig. 4.

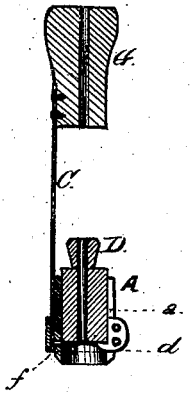
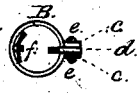



Fig. 6.




Witnesses.
William H. Osborn.
Edward A. Adams

Inventor.
Lewis Cutting
by C. M. M. Smith
his Attorney

# UNITED STATES PATENT OFFICE.

LEWIS CUTTING, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN SOLDERING-TOOLS.

Specification forming part of Letters Patent No. **192,743**, dated July 3, 1877; application filed April 28, 1877.

*To all whom it may concern:*

Be it known that I, LEWIS CUTTING, of the city and county of San Francisco, in the State of California, have invented a new and useful Improvement in Soldering-Tools, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a perspective view of my improved soldering-tool. Fig. 2 is the heater detached or removed from the tool. Fig. 3 is a longitudinal sectional view through that portion of the tool forming the holder. Fig. 4 is a sectional view of the holder, the soldering-cylinder, and the heater. Fig. 5 is a plan and elevation of the cylinder that forms the soldering end of the tool; and Fig. 6 is a plan of the ferrule within which the cylinder is placed and adjusted.

The object of my invention is to produce a soldering-tool which shall be kept in a properly-heated state by means of a removable heating-iron, instead of being introduced into the fire or other heating medium, whereby the tool is kept heated more evenly and for a greater length of time than has been heretofore possible, and the tool is further made more endurable and lasting by reason of the parts not being submitted to the burning action of the fire. It consists of a holder, in which the soldering-cylinder is held and adjusted, a heating-iron capable of being introduced into the cylinder when hot and of being taken out when cold, and a central turning-rod and handle.

The cylinder A, which forms the soldering end of the tool, is made preferably of copper, with a beveled edge and a longitudinal slit, *a*. This cylinder is held within the clamping-ring or ferrule B, which is secured to the end of the bar C, and is made with a slit, *b*, and projecting lips *c c*, which hold between them the gage pin or stop *d*, the screws *e e* serving the double purpose of binding the ring around the cylinder and of holding the gage-pin in place.

The slit in the cylinder A is made to permit the end of the gage-pin *d* to project within the cylinder, where it serves as a stop to hold the heater D at proper distance above the beveled end of the cylinder.

The clamping-ring B is provided with a pin or stud, *f*, upon its inner side, which engages with one of the holes in the cylinder, and acts to hold it in place. Several of these holes are made in the cylinder to allow it to be set down as the beveled edge becomes worn; and thus the cylinder can be used for a much longer time than heretofore, and until it is all worn down.

The heating-iron D fits within the cylinder A, and is held therein by the gage pin or stop *d*. Several of these heaters can be used, and a cold one replaced by a hot one as often as required; and thus the tool can be kept continuously in a heated state and at work without interruption.

The barbed or pointed rod F passes through a hole in the handle G and through a hole made in the heater for the purpose, and it acts as a center upon which to turn the tool, in the same manner as in the tool patented to me in the Letters Patent No. 136,367, March 4, 1873.

My tool is designed more especially for sealing cans in which fruit and other canned goods are preserved; and it operates in a rapid and efficient manner to seal the covers. It is produced, likewise, at a small expense, and with less liability to get out of order than those now in general use.

The manner of heating my improved tool enables it to retain the heat much longer, to be more evenly and regularly heated, and to be free from scale, and at all times clean and ready for use.

When the cylinder A becomes entirely worn down it is readily removed and a new one substituted in place of it by loosening the screws *e e*.

If the pin *f* of the clamping-ring be made long enough to project within the cylinder A, it can be used as a stop for the heater D in place of the gage-pin *d*, and the latter can be dispensed with. In such case the cylinder A need not be slitted or divided.

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

1. A soldering-tool composed of the following parts or elements, viz: The handle G, with its bar C and clamping-ring B, the soldering edge or cylinder A, and the heater D, adapted to be inserted within, and removed from, the

end of the soldering-cylinder, and held therein at proper distance from the lower end by any suitable means, the whole constructed and arranged together substantially in the manner herein set forth.

2. The clamping-ring B upon the end of the holder C, adjustable by means of the screws *e e*, with its pin or stop *f*, for holding the cylinder A within it, when constructed and arranged to operate substantially as and for the purpose herein described.

3. A soldering-tool in which the soldering end is formed of a hollow ring or cylinder, with a beveled edge and a detachable and removable heater, adapted to be inserted within and removed from the cylinder, and supported therein by a pin or stop, substantially as herein described and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 17th day of April, 1877.

LEWIS CUTTING. [L. S.]

Witnesses:
C. W. M. SMITH,
PHILIP MAHLER.