

(No Model.)

G. OULTON.
SOLDERING IRON.

No. 327,896.

Patented Oct. 6, 1885

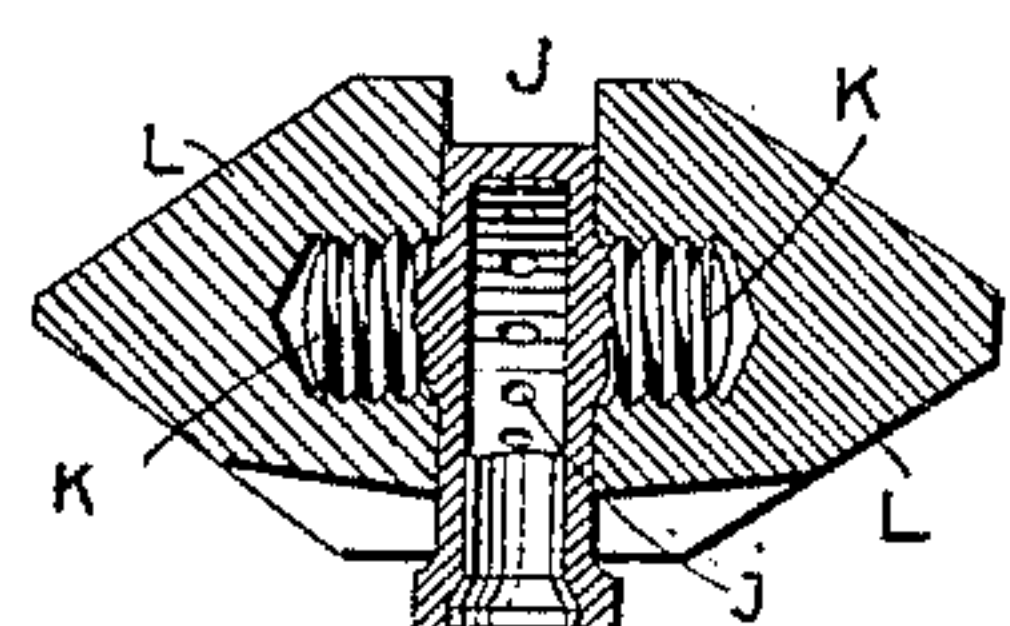


Fig 1

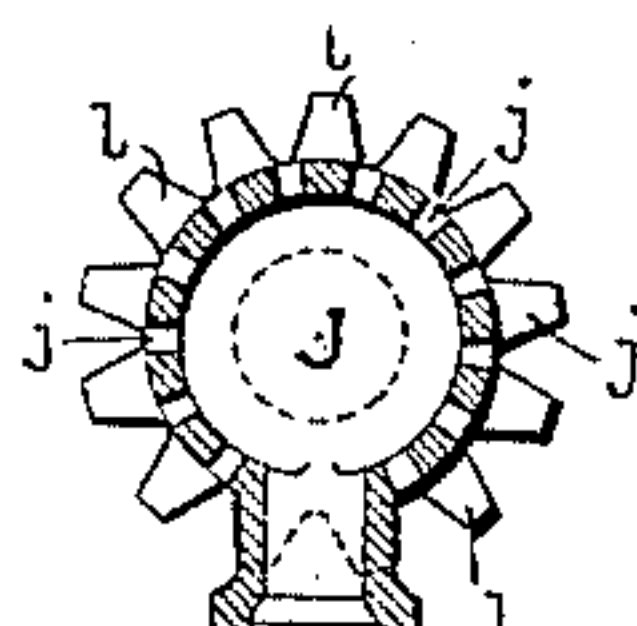


Fig 2

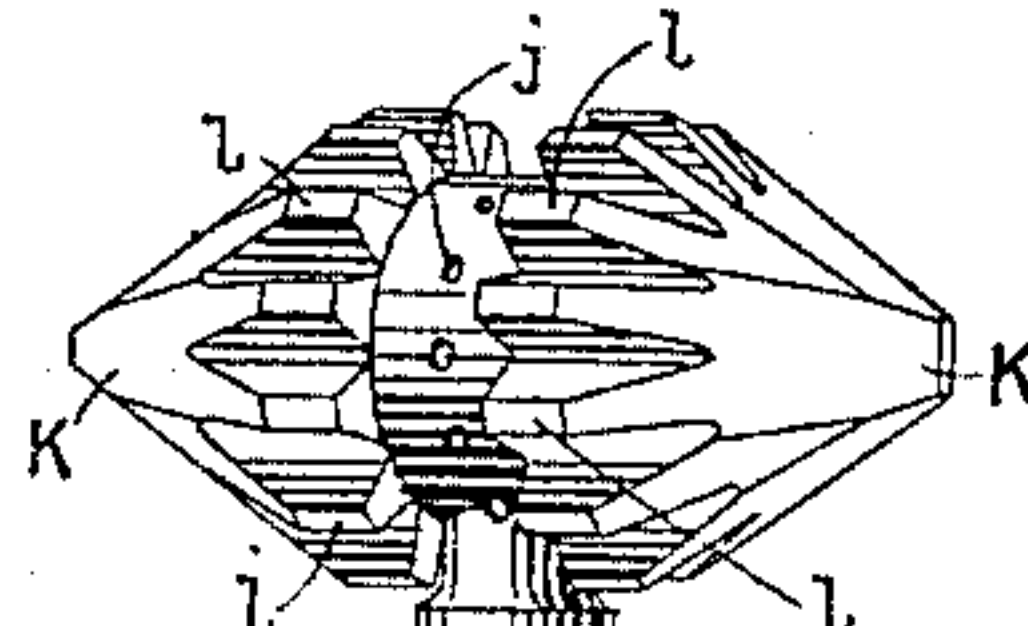


Fig 3



Fig 4

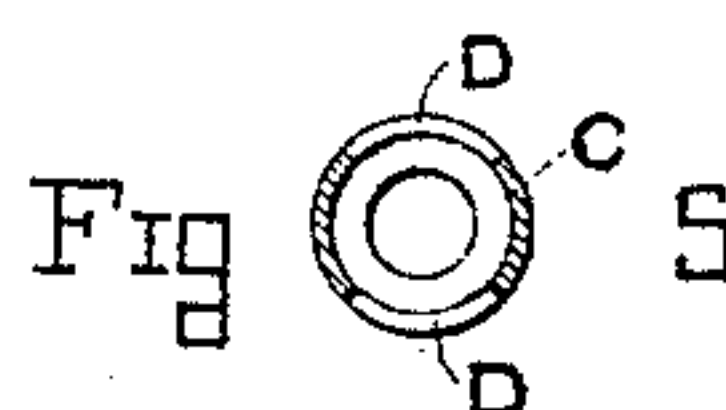


Fig 5

Witnesses:

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Walter S. Dodge.

Inventor:

George Oulton,
by Rodgeron,
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UNITED STATES PATENT OFFICE.

GEORGE OULTON, OF LIVERPOOL, COUNTY OF LANCASTER, ENGLAND.

SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 327,896, dated October 6, 1885.

Application filed March 16, 1885. Serial No. 159,027. (No model.) Patented in England February 20, 1885, No. 2,323.

To all whom it may concern:

Be it known that I, GEORGE OULTON, a subject of the Queen of Great Britain, residing at Liverpool, in the county of Lancaster, in the Kingdom of England, have invented certain new and useful Improvements in Soldering-Irons, of which the following is a specification.

Soldering-irons are more commonly made with a solid copper bit attached by rivets to a metal holder, and are heated by being thrust between the live coals of a fire. Some are, however, provided with a jet or flame of gas which, when the tool is held in a particular position, heats the copper bit. It has always been found necessary when using such soldering-irons for the workman to wait while the irons are being reheated, or to use two or more irons, with the result often that the one out of use would become overheated and burn before the one in use was cool, and also delay and waste of time occurred. It is to this second or latter class of soldering-iron that my invention refers; and it consists in so arranging the bits or head of the iron that one is being heated by the gas-flame while the other is in use, no loss of time or inconvenience being experienced in changing from the one to the other. It is best described by aid of the accompanying drawings, in which—

Figure 1 is a sectional elevation of a soldering-iron constructed according to my invention; Fig. 2, a sectional elevation through the gas-burner; Fig. 3, a perspective view of the head and bits; Fig. 4, a detailed elevation of pipe C; Fig. 5, a sectional plan on line *x x*.

A is a pipe forming the stem or handle of the implement. Mounted on this is a handle-piece, B, of wood or other non-conducting material. Attached to the pipe A is a short length of piping, C, of larger diameter, provided with holes or openings D for the ingress of air. The lower end of this pipe C, as shown in Figs. 1 and 5, is provided with a central hole or perforation, through which loosely passes the screw-threaded stem or neck E, connecting the gas-supply pipe F or its stop-cock G with the pipe H. The lower end of the pipe C is in this manner embraced between the lower end of pipe H and the upper end of cock G, as clearly shown in Fig. 1, and the pipe C is thereby allowed to be turned upon the stem

or neck E, but not allowed to move longitudinally thereof.

H is a pipe forming a continuation of the gas-supply pipe F, carrying a burner or outlet tip, I, at the end. The pipe H projects for some distance into the pipe C and beyond the air-holes D, the two forming together a burner on the well-known Bunsen principle. The mingled volume of gas and air passes up the pipe A until it reaches the burner J at the other end of the pipe. The burner J is attached preferably by screwing to the upper end of the pipe A, and is provided with a series of holes, *j*, round it, through which the mixed gases issue. The burner is provided with a projecting lug, K, at each side, forming a connecting-piece of T shape, to which the copper bits L are attached, preferably as shown, by an externally-threaded screw on the lug K entering an internally-threaded screw on the bit L.

The construction here shown might, if desired, be altered by making a projection on the bit L fit or screw into the side of the burner J. The copper bits may be made of plane surface; but I prefer to make them fluted at the upper ends, with a series of flutes, *l*, as thereby a greater surface is secured upon which the flame will play. Instead of having the connecting-piece or burner J as wide as shown, it might be made narrower and the two copper bits recessed at the sides which approach each other until the end of the flutings on one touched or almost touched the other, the flame being made to issue out between the flutings.

When in operation, the implement is held with the pipe A horizontal, and with the bits L approximating to the perpendicular, the gases issuing from the holes *j* in the burner being ignited. The flame rising envelops whichever of the bits is uppermost. This when heated may be used in the operation of soldering, and while in use the other bit as it is turned up, being enveloped in the rising flame, becomes hot and ready for use as soon as the other one becomes cool, and so on. One bit is continually being heated while the other is in use and becoming cool. Thus, in the operation of soldering neither heat nor time are lost.

I prefer to make the implement with two

bits, forming with the handle a T; but more than two may be used if thought desirable, and be made to project forward or otherwise placed, so that the rising flame will envelop one or more while one is in use.

I claim as my invention—

1. In a soldering-iron heated by gas, the combination of a supply-pipe, a hollow handle, a perforated chamber at the upper end thereof, and the bits arranged on opposite sides of said chamber, as and for the purpose set forth.

2. In a soldering-iron heated with a gas-jet, the combination, with the burner, of a copper bit having a number of channels at its broader end which provide greater surface of metal upon or around which the flame may impinge or play.

3. In a soldering apparatus, the combination, with two or more bits, of a chamber between their bases supplied with gas through the handle and having a series of orifices for gas-jets round the bases of the bits, by which means, when a bit is held vertically upward while another is in use, the former will be surrounded by and clothed with the flames of the burning gas.

4. The combination of the burner or connecting-piece J with the two copper bits L, forming a soldering-iron of T shape to be heated by a gas-flame, substantially as described.

5. In a soldering-iron, the combination, with the pipe or handle A, through which the gases are supplied, of the burner J and the copper bits L, substantially as and for the purposes described.

6. In a soldering-iron heated by gas, the combination of the hollow handle, the bits secured thereto, a supply-pipe, and a connection, substantially such as shown, between the handle and supply-pipe, whereby the iron may be rotated upon the supply-pipe, but not moved longitudinally thereof.

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

GEORGE OULTON.

Witnesses:

W. P. THOMPSON,
I. O. O'BRIEN.