W. S. MACQUEEN.

SOLDERING-TOOL.

No. 169,820. Patented Nov. 9, 1875.

Fig. 1.

Fig. 2.

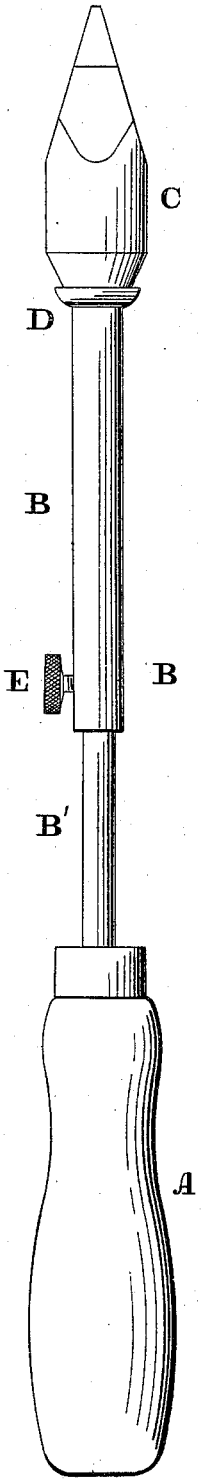
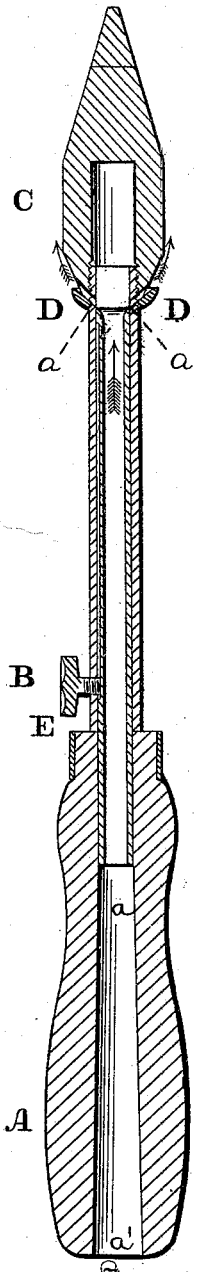


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM S. MACQUEEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SOLDERING-TOOLS.

Specification forming part of Letters Patent No. **169,820**, dated November 9, 1875; application filed January 23, 1875.

To all whom it may concern:

Be it known that I, WILLIAM S. MACQUEEN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Soldering-Tools; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figures 1 and 2 are side elevations of the device embodying my invention. Fig. 3 is a central longitudinal section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a handle with a gas-conveying passage, a tube connected to said handle, and another tube secured to the bit or point, and a holding-screw, said tubes fitting each other telescopically, and communicating with the passage of the handle and outlets of the bit or point.

Referring to the drawings, A represents the handle, B the stem, and C the point of a soldering-tool, said handle and stem being hollow and communicating with each other. In the end of the stem, near the point of junction with the tool-point, are formed openings *a*, and surrounding said openings is a deflector, D, which consists of a collar secured to the stem, and having its inner face somewhat conical, a space being left between said inner face of the deflector and the adjacent portion of the outer face of the tool-point. The hollow of the handle B is adapted to receive the burner or jet of a gas-fixture, and thus to be supported on said burner. The gas, being turned on, passes through the hollow *a'* of the handle and stem, and escapes through the openings *a*. When the gas is ignited the action of the deflector D directs the gas forward or in the longitudinal direction of the tool-point, and on the outside thereof, so that the flame envelops said point and fully heats the same. The stem B is made in sections B B^1, which fit each other telescopically, so that the stem may be lengthened. This feature is important. It is evident that a long stem is objectionable, for when the tool is fitted on the burner or jet, it will sway or hang over and strain the joints of the burner, or other joints of the gas-fixture; hence, a short stem is employed by me; but in many cases the tool will have to be used where gas is not convenient, and is to be heated in a fire-pot, stove, or otherwise. The stem is then lengthened to avoid burning of the handle and hands of the operator, and the extended sections B B′ will be held by a set-screw, E.

This tool is most especially designed for use in families wherein a blast apparatus is inconvenient and not requisite, and where either gas or stove may be used to heat the tool-point.

I am aware that a soldering apparatus or machine has been constructed with an adjustable tube, so that soldering-bits of various lengths may be applied thereto; but this differs from my invention in that my device is a hand-tool, and the stem thereof is adjustable, so that the tool may be heated either by gas, or fire of a stove, pot, or furnace.

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

The handle A, with gas-conveying passage *a'*, the tube B′, fitted to the handle, the sliding tube B, secured to the point C, and the set-screw E, the tubes B B′ fitting each other telescopically and communicating with the passage *a'* of the handle and the outlets *a* of the bit or point C, all constructed and combined as set forth, and forming a hand-tool adapted to be heated either by gas or in the fire, as stated.

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Witnesses:
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