M. H. KNAPP.

Blow-Pipes.

No. 129,569. Patented July 16, 1872.

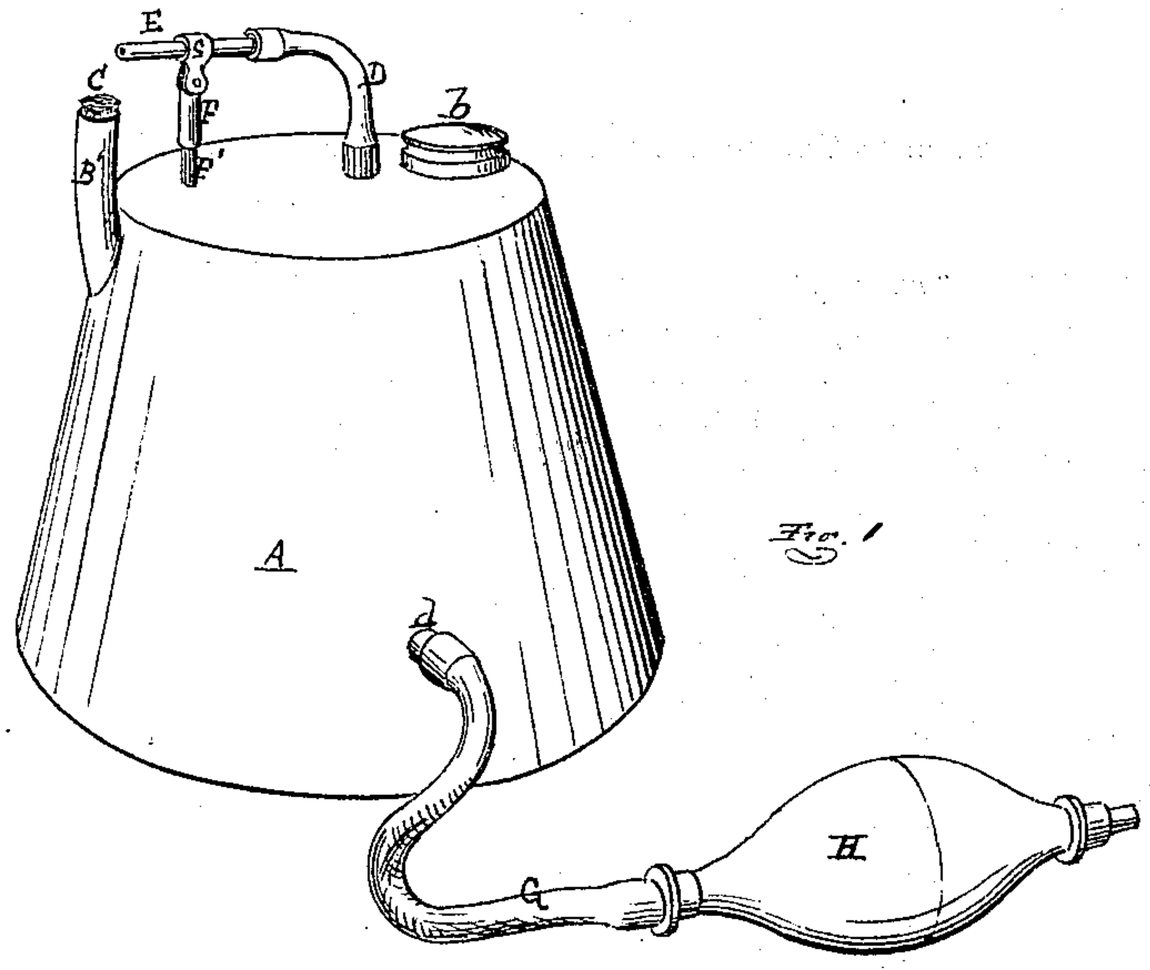

Fig. 1

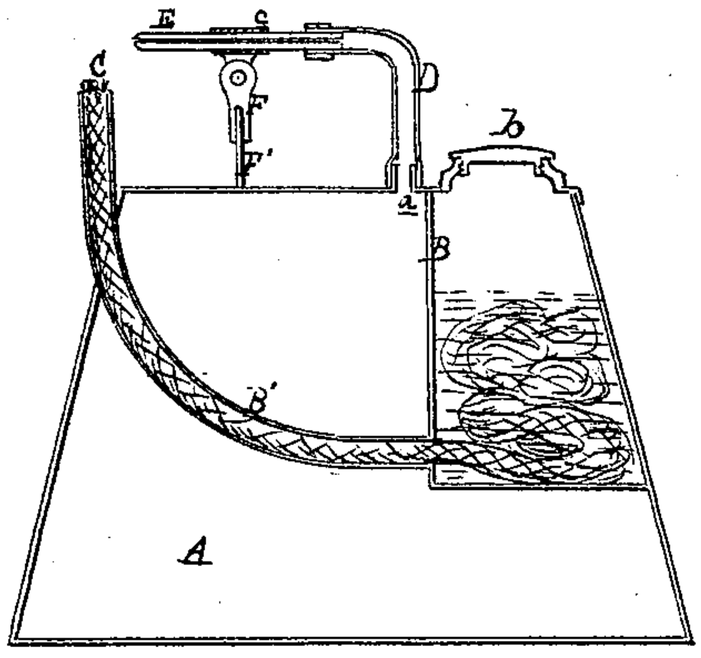

Fig. 2.

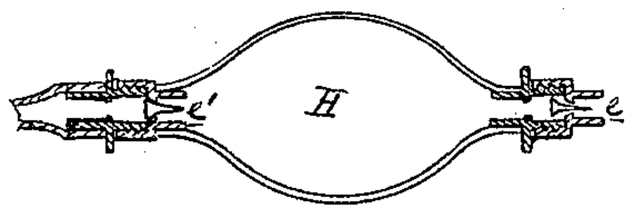

Fig. 3.

ATTEST:

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129,569

UNITED STATES PATENT OFFICE.

MYRON H. KNAPP, OF FULTON, NEW YORK.

IMPROVEMENT IN BLOW-PIPES.

Specification forming part of Letters Patent No. 129,569, dated July 16, 1872.

To whom it may concern:

Be it known that I, MYRON H. KNAPP, of Fulton, in the county of Oswego and State of New York, have invented a new and useful Improvement in Combined Pressure Blow-Pipe and Soldering-Lamp; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my device. Fig. 2 is a longitudinal vertical section on the line *x x* in Fig. 1; and Fig. 3 is a longitudinal section of the compressing-bulb.

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

The nature of this invention relates to a combined soldering-lamp and blow-pipe, the latter issuing from a chamber, which also contains the lamp, in which chamber atmospheric air is compressed by mechanical means; and it consists in the peculiar construction and arrangement of the lamp, blow-pipe, and compression-chamber, and in combination therewith the means employed for compressing the air and delivering it in a jet to the flame.

In the drawing, A represents a tight metallic vessel, of any convenient form, containing a smaller vessel, B, which forms a lamp-fount, provided with a wick-tube, B′, which projects above the top of the chamber A at one side thereof. The lamp-fount is closed at the top, where it projects through the top of the chamber A, by a screw-cap, *b*, or its equivalent, by removing which the fount may be filled with alcohol to supply the wick C. In the top of the chamber A is an opening, with an external collar, *a*, over which is slipped one end of a small elastic tube, D, the other end of said tube having inserted in it the end of a glass or metallic blast-tube, E, with a proper orifice. This blast-tube is supported in an eye, *c*, hinged to the top of a sleeve, F, whose lower end is slipped over a post, F′, rising from the top of the air-chamber. The hinged eye gives the blast-tube an adjustment as to inclination with relation to the wick-flame, while the supporting-sleeve permits the tube to be raised or lowered and adjusted laterally. In the lower part of the chamber A is another opening, provided with an external collar, *d*, to which is secured a flexible tube, G, the other end of which is secured to the check-valve collar of a hand compression-bulb, H, of which *e* is the inlet or foot valve, and *e′* the check-valve, the operation of which is well known.

The lamp-fount being supplied with alcohol and the wick lighted, the operator takes the bulb in hand and alternately compresses it and releases it at each compression of the bulb, forcing a much greater volume of air into the chamber than the orifice of the blast-tube can pass in the time intervening between the compressions; consequently the air in the chamber is soon compressed, and issues from the blast-tube with force for some minutes, giving the operator a chance to use both hands at his work for most of the time, as a few compressions of the bulb, occasionally, will keep the air-chamber supplied with compressed air. If preferred, the tube G may be of such length as to enable the operator to place the bulb on the floor and compress it with his foot.

I expressly disclaim the invention of the compression-bulb, its application alone being new in this connection.

If desired, two wick-tubes and wicks of different sizes may be employed to give flames of varying sizes, in which case the tubes should be disposed at the periphery of the chamber at any convenient angle in the radius of the blast-tube.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction and arrangement of the chamber A, fount B, wick-tube B′, wick C, tube D, and blast-tube E, adjustably supported on said chamber with relation to the wick, the said chamber being supplied with air mechanically compressed, substantially as and for the purpose set forth.

2. In combination with the chamber A, wick-tube B′, wick C, tube D, and blast-tube E, constructed substantially as shown, the tube G and compression-bulb H, provided with the valves *e e′*, as described.

MYRON H. KNAPP.

Witnesses:
S. CRAMBIE,
S. WASSON.