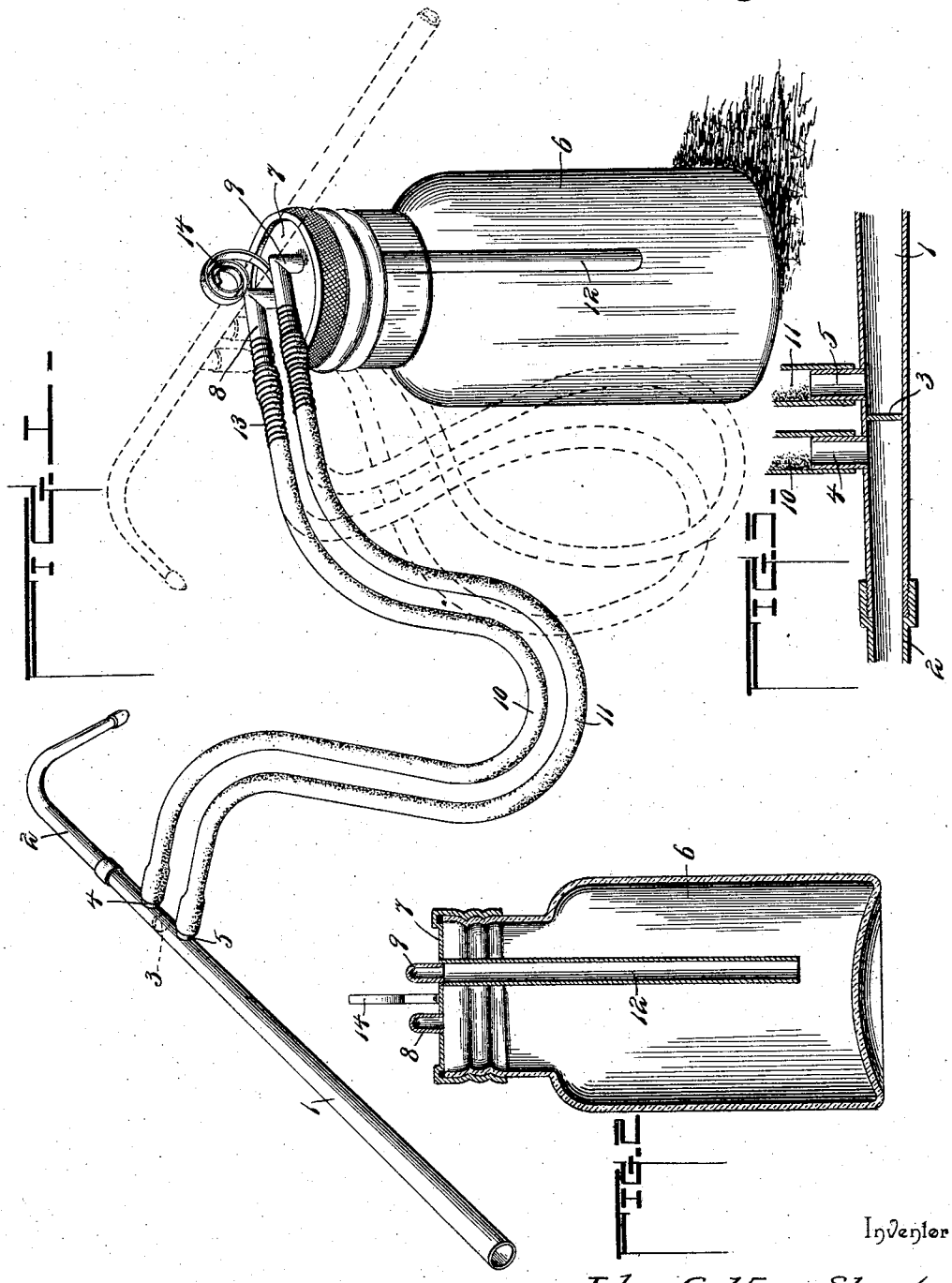
(No Model.)

# J. C. VAN SLYKE.

## BLOWPIPE.

No. 588,200. Patented Aug. 17, 1897.




Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN C. VAN SLYKE, OF CUMBERLAND, IOWA.

## BLOWPIPE.

SPECIFICATION forming part of Letters Patent No. 588,200, dated August 17, 1897.

Application filed December 31, 1896. Serial No. 617,637. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. VAN SLYKE, a citizen of the United States, residing at Cumberland, in the county of Cass and State of Iowa, have invented a new and useful Blowpipe, of which the following is a specification.

This invention relates to blowpipes for jewelers and others for brazing, soldering, or other purposes for which a device of this character is generally provided.

The primary object is to secure an intense heat and to economize in the use of alcohol in the spirit-lamp, and to this end the air or blast directed through the blowpipe is compelled to pass through gasolene, naphtha, or other volatile hydrocarbon and become enriched, thereby intensifying the effective flame or jet of the spirit-lamp, whereby the required work can be performed in a comparatively shorter time than is possible where a blast of air simply is used for directing the flame onto the part to be worked.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of the improved blowpipe. Fig. 2 is a vertical section of the receptacle containing the volatile hydrocarbon. Fig. 3 is a sectional detail of the blowpipe.

Corresponding and like parts are referred to in the following description, and indicated in the several views of the drawings by the same reference-characters.

The blowpipe 1 in general appearance is of ordinary construction, and is provided with a detachable tip 2, a partition 3, and nipples 4 and 5, projecting laterally and communicating with the blowpipe upon opposite sides of the partition 3. By having the tip 2 detachable it can be replaced by others of different size, according to the nature of the work and the size of jet required.

A bottle, can, or receptacle 6 of suitable size is provided to receive the gasolene, naphtha, or other volatile hydrocarbon and is closed by means of a cap 7, to which couplings 8 and 9 are fitted, whereby the rubber or flexible tubes 10 and 11 leading from the blowpipe make connection therewith. The coupling 8 communicates with the upper portion of the receptacle 6, so as to carry off the enriched air, and the coupling 9 communicates with a pipe 12, extending to within a short distance of the bottom of the receptacle, so as to deliver the air into the body of the hydrocarbon, whereby it will be enriched on its passage therethrough to the coupling 8 and back to the blowpipe. The flexible tube 10 is connected at one end with the nipple 4 and at its opposite end with the coupling 8, and the tube 11 is fitted to the nipple 5 at one end and to the coupling 9 at its opposite end. Spiral springs or coils 13 reinforce the inner ends of the tubes 10 and 11 and prevent the same from breaking or cracking when the device is in use.

The operation of the blowpipe is as follows: The receptacle 6 is supplied with gasolene or other volatile hydrocarbon to within a short distance of its upper end, and upon blowing or directing a blast of air through the blowpipe it will pass through the tube 11 and pipe 12 into the body of the hydrocarbon, through the latter, and back to the blowpipe through the tube 10 and become ignited at the tip and supplement and intensify the heat of the flame or spirit-lamp. The partition 3 in the blowpipe checks the advance of the blast therethrough and compels it to pass out through the nipple 5 into the tube 11, and the pipe 12 delivers the air into the body of the hydrocarbon, when by passing through the same it takes up a certain percentage of the hydrocarbon in the form of vapor and produces a gaseous mixture which will burn and intensify the flame of an ordinary spirit-lamp.

When the blowpipe is not required for immediate use, it is engaged with a holder 14, the latter consisting of a spring strip or tape fastened at one end to the cap 7 and having

its opposite end formed into a spiral, and this holder is located opposite the space between the couplings 8 and 9 and acts jointly with the latter to retain the blowpipe in place, as indicated by the dotted lines in Fig. 1.

Having thus described the invention, what is claimed as new is—

1. In combination, a receptacle containing a volatile hydrocarbon, a pipe extending into the receptacle for delivering the air into the body of the hydrocarbon, a blowpipe independent of the receptacle and having a partition, a flexible tube connecting the blowpipe on one side of the partition with the pipe in the receptacle, and a second flexible tube connecting the upper portion of the receptacle with the blowpipe on the opposite side of the partition, substantially as and for the purpose set forth.

2. In combination, a receptacle containing a volatile hydrocarbon, couplings applied thereto, a pipe extending from one of the couplings to within a short distance of the bottom of the receptacle, a spring-holder located opposite the couplings to act jointly therewith to secure the blowpipe, a partitioned blowpipe adapted when not in use to be engaged with the said holder, and flexible tubes connecting the blowpipe upon opposite sides of the partition with the aforesaid couplings, substantially as set forth.

3. In combination, a receptacle, couplings applied thereto, a pipe connected with one of the couplings and extending into the receptacle to within a short distance of its bottom, a blowpipe having a partition and nipples upon opposite sides of the partition, and flexible tubes making connection at their ends with the said nipples and couplings, substantially as shown for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN C. VAN SLYKE.

Witnesses:
ISAIAH GORDINIER,
WILLIAM WADDELL.