(No Model.)

C. W. DEAN.

BLOW PIPE.

No. 263,869. Patented Sept. 5, 1882.

Fig. 1.

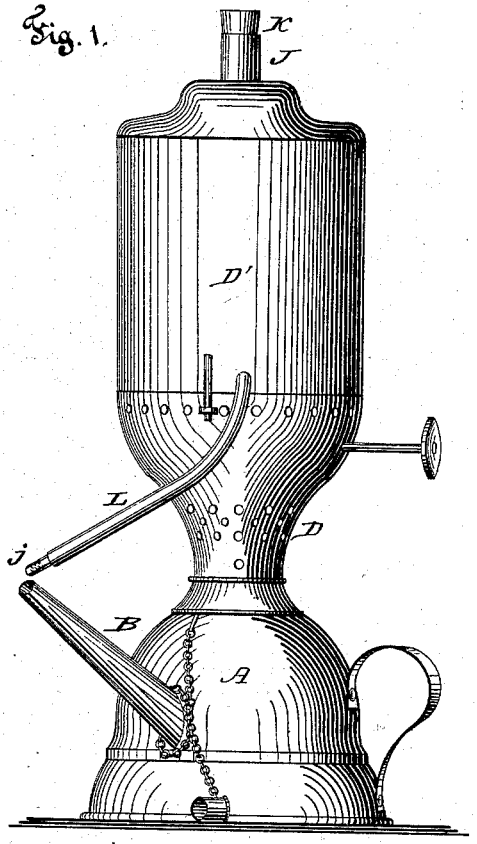


Fig. 2.

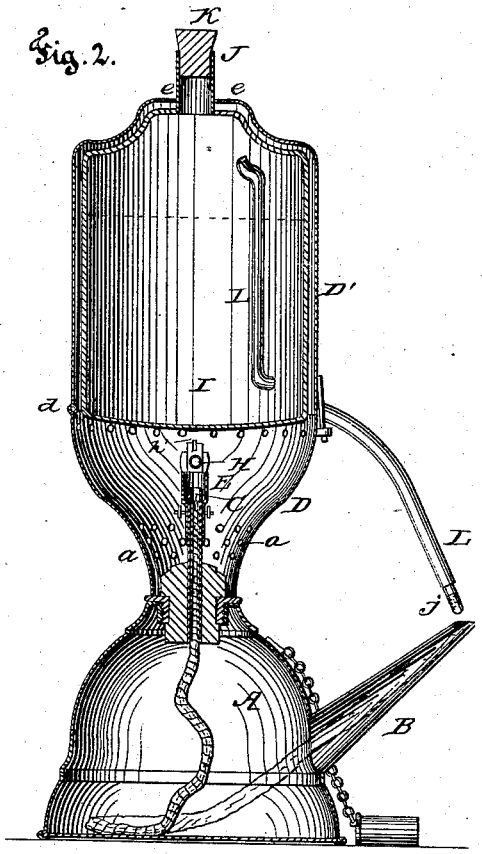
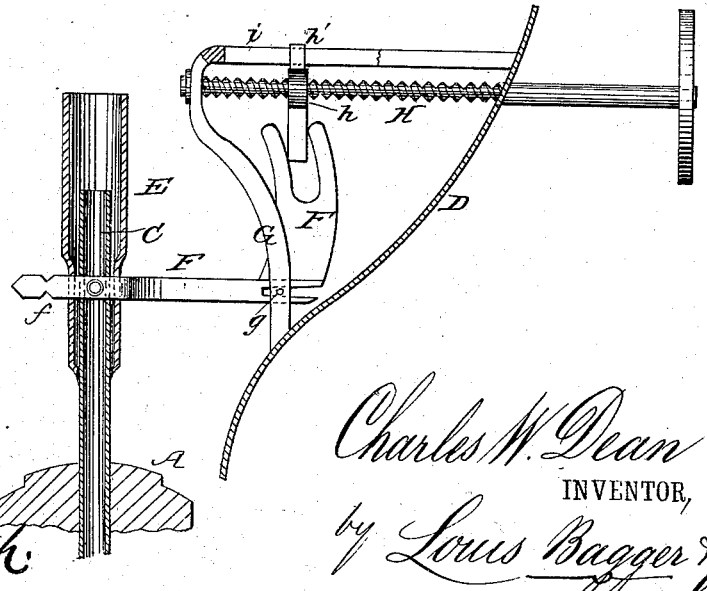


Fig. 3.



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CHARLES W. DEAN, OF AUBURNDALE, WISCONSIN.

BLOW-PIPE.

SPECIFICATION forming part of Letters Patent No. 263,869, dated September 5, 1882.

Application filed June 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. DEAN, of Auburndale, in the county of Wood and State of Wisconsin, have invented certain new and useful Improvements in Blow-Pipes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my apparatus. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a detail view of the flame-regulating device.

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

My invention has relation to blow-pipes which are particularly adapted to the use of jewelers, silver-smiths, and workers in metals, such as gold, silver, brass, and copper; and it consists in the construction and arrangement of the apparatus hereinafter more fully described and claimed.

In the accompanying drawings, the letter A represents the reservoir of a lamp adapted to burn alcohol. This lamp has two wick-tubes, (shown at B and C,) one or both of which may be covered with a cap, when the lamp is not in use, to prevent vaporization of the alcohol.

Upon the top part of the lamp A, around the central wick-tube, C, is swiveled the lower part, D, of a jacket, which consists of two parts or sections, D and D′, hinged at *d*. The lower part, D, has two or more rows or series of air-holes, *a a*, to feed the flame inside, which may be regulated by means of the regulating attachment. (Illustrated more clearly in Fig. 3 of the drawings.) This attachment consists of a sleeve, E, the lower end of which is hinged in the bifurcated end *f* of a bent lever, F, which has its fulcrum at *g* in the bracket G. H is a screw, the inner end of which works through a screw-threaded eye, *h*, in the upper arm of lever F. This eye is made with a stud or projection, *h′*, which slides in a guide-slot, *i*, in the upper part of the bracket G. It follows that by turning the screw H the bent lever or bell-crank F will be tilted on its fulcrum, so as to raise or lower the sleeve E, according to the direction in which the screw is turned. To increase the blaze the sleeve is lowered, so as to expose a larger portion of the wick, while it is raised when it is desired to lower the flame and decrease the heat.

I is a boiler, made of copper or other suitable material, which is placed within the upper hinged part, D′, of the jacket, which has apertures *e e* in its top for the escape of the heat. A tube, J, for filling or emptying the boiler, passes up through the jacket D′, and is closed by a suitable plug or cork, K. If the steam-pressure becomes too great, this plug will blow out, tube J thus acting as a safety-valve.

L is the blow-pipe proper, which enters the boiler near its bottom, but passes up on the inside to near its top part, which forms the steam-dome. The projecting exterior end of this pipe is curved and provided with a fine nozzle, *l*, for the escape of the steam-jet. Pipe L is curved in such a manner that by turning the swiveled jacket D D′, with its boiler, the nozzle *l* will be directly opposite to the flame which is emitted at the mouth of the wick-tube B, as shown in Fig. 1 of the drawings. By turning the jacket to one side or to the other the nozzle may be removed from the flame to stop the jet.

In operation the boiler should be about two-thirds full of water, so as not to reach the inside top of tube L, through which the steam escapes to form the blow-jet when nozzle *l* is in contact with or juxtaposition to the flame. The parts D and D′ should have a suitable device for fastening them together opposite to the hinge *d*.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The described blow-pipe apparatus, consisting of the lamp A, having the outside wick-tube, B, and inside wick-tube, C, provided with a suitable regulating device, swiveled steam-jacket consisting of the hinged and perforated parts D and D′, boiler I, having tube J, provided with the detachable stopper K, and bent pipe L, having the nozzle *l*, all constructed and combined substantially in the manner and for the purpose herein shown and set forth.

2. In a blow-pipe apparatus, the combination, with the lamp A, having the wick-tube B, of the regulating device consisting of the sleeve E, bifurcated bell-crank F, having screw-threaded eye *h*, provided with the stud *h'*, slotted bracket G, and screw H, all constructed and combined substantially as and for the purpose herein shown and specified.

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

CHARLES W. DEAN.

Witnesses:
A. GOETSCHIMS,
ARTHUR E. DEMING.