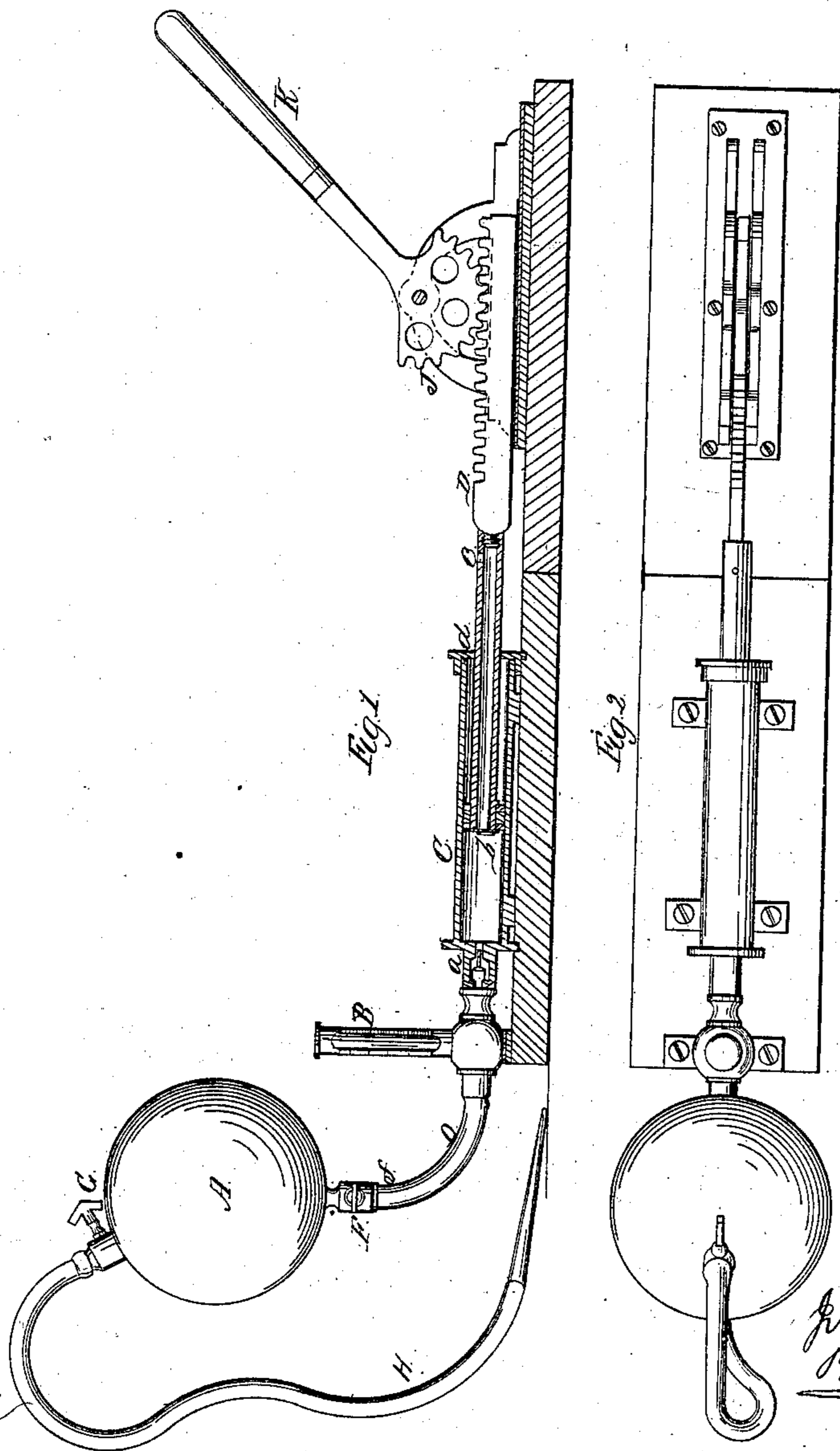


J Mc Farland Blow Pipe.

N^o 58,118.

Patented Sep. 18, 1866.



witnesses.
Wm. Brewin
Theo. Lusch

Inventor.
J Mc Farland
By Munn & Co
attys

UNITED STATES PATENT OFFICE.

JOSIAH MCFARLAND, OF CLINTON, ILLINOIS.

IMPROVED BLOW-PIPE.

Specification forming part of Letters Patent No. 58,118, dated September 18, 1866.

To all whom it may concern:

Be it known that I, JOSIAH MCFARLAND, of Clinton, in the county of De Witt and State of Illinois, have invented a new and useful Improvement in Blow-Pipes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of the apparatus made according to my invention, the pump being shown in section. Fig. 2 is a plan.

This invention consists in applying an air-chamber strong enough to resist from one hundred to five hundred atmospheres to a force-pump, and to a flexible pipe with a fine-pointed mouth-piece, in such a way that by means of the pump the chamber is filled with compressed air or gas of any character, when, by closing suitable cocks, the same can be confined and retained therein, and the air-chamber taken off and carried to the place where the blow-pipe is to be used, and by the action of the air or gas a powerful blast obtained without the labor or agency of the operator. This blow pipe is especially useful for all workers in gold, silver, platinum, and other metals, for soldering, brazing, and combining different metals that require a high heat.

A is a metallic receiver, formed like a sphere. O is a pipe which connects it to the force-pump C. In this pipe is a gage, B, which will show the amount of pressure in the receiver. H is a flexible tube mounted at its free end with a fine mouth-piece, and at the place of its attachment with the receiver is a stop-cock, G, by which the air or gas is kept from entering the tube. *a* is the eduction-valve of the

pump, placed at the junction of the pump with pipe O.

The piston of the pump is hollow, and its inner end has a valve, *b*, opening outwardly. That part of the piston-rod which is outside of the pump-cylinder is made capable of being connected to a gas-pipe by a screw-connection, if it is desired to supply the pump with gas in lieu of air, instead of being connected, as here shown, to the rack D. The air to supply the pump enters the piston at *e*.

The rack D is made to slide in proper ways made for it on the same platform that supports the pump, and it is moved by a lever, K, at whose short end is a quadrant-pinion, J.

By working the lever a few minutes I can charge the receiver with sufficient air to supply a common blow-pipe from one to two hours.

The pipe O has a stop-cock, and this pipe is also made to unscrew at *f*, so that the receiver can be detached from the pump after it has been charged. The cock G is closed when the air or gas is forced in, and when filled the cock F is closed. The discharge of air or gas through the mouth-piece will be regulated by the cock G.

The whole apparatus can be attached to a work-table or bench by screws.

I claim as new and desire to secure by Letters Patent—

In blow-pipes, a detachable air-chamber, A, in combination with the flexible tube having a suitable mouth-piece for directing the current of air or gas and a force-pump, all constructed and operated substantially as described.

JOSIAH MCFARLAND.

Witnesses:

JOHN J. MCGRAW,
WM. H. STOREY.