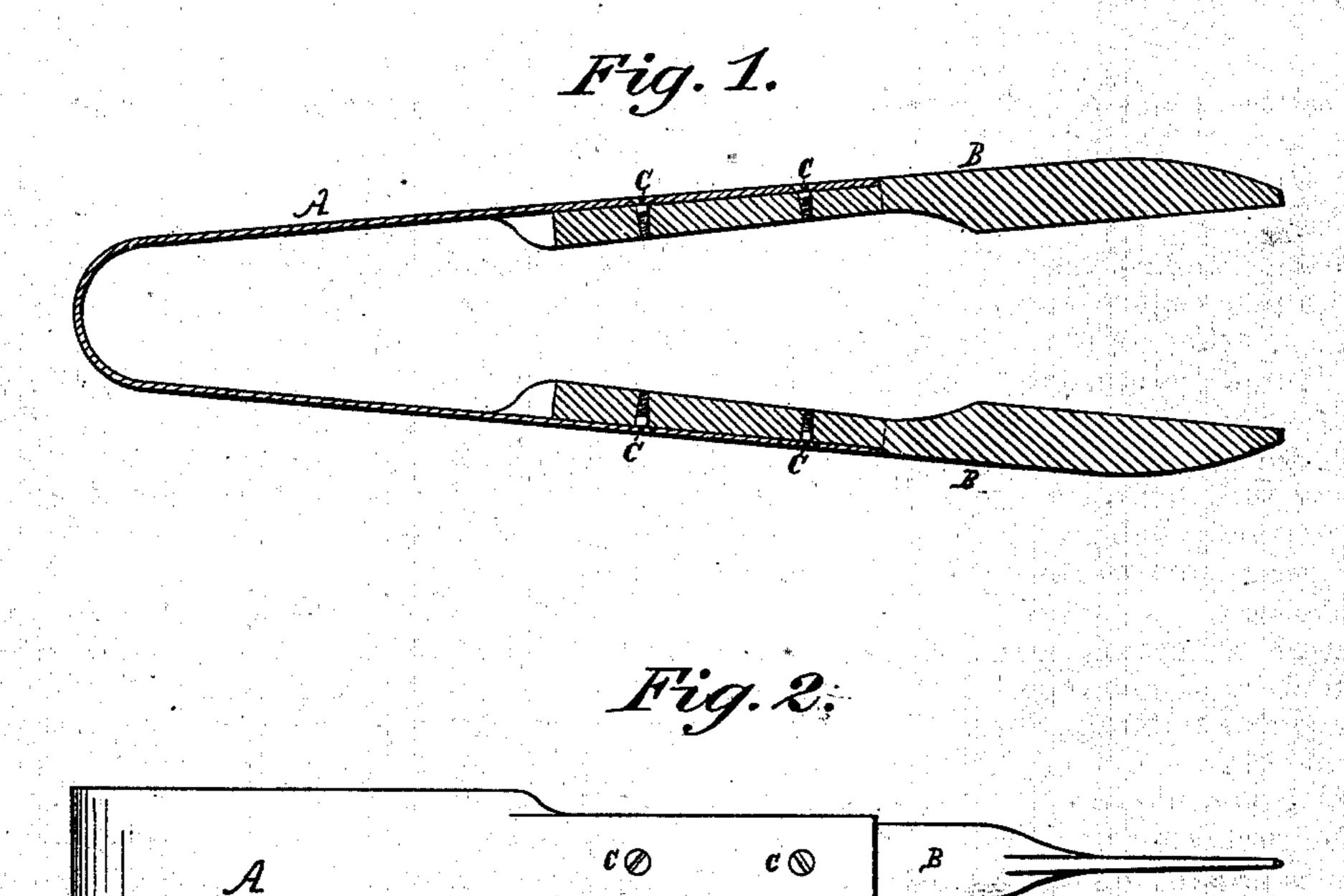
J. G. MUSTIN. Chimney-Tools for Glass-Blowers.

No. 144,628.

Patented Nov. 18, 1873.



Witnesses.

James Johnston Jan. D. Patten Inventor.
mes of Mustin
foliation & Grindley

UNITED STATES PATENT OFFICE.

JAMES G. MUSTIN, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN CHIMNEY-TOOLS FOR GLASS-BLOWERS.

Specification forming part of Letters Patent No. 144,628, dated November 18, 1873; application filed February 19, 1873.

To all whom it may concern:

Be it known that I, James G. Mustin, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tool for Glass-Blowers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in providing the forming-tool used by glass-blowers with detachable points or forming-blades.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a longitudinal section of my improvement in tools for glass-blowers. Fig. 2 is a top view or plan of the same.

The tool is constructed in the usual form, but the forming points or blades are so constructed that they may be detached from the spring A of the tool.

The ordinary mode of constructing the tool represented in the accompanying drawings is to make the spring A and blades B in one piece. The blades often become injured or broken, thereby rendering the tool useless; but by constructing the spring A and blades

B in separate parts, as hereinbefore described, the injured or broken part may be removed and a perfect part substituted.

The blades B are secured to the spring A through the medium of screws C. The spring A should be constructed of spring-steel; but the blades B may be constructed of wroughtiron, cast-iron, or of other suitable metal or alloy.

I do not claim, broadly, a tool for glass-blowers having detachable forming devices on its points, for I am aware that pivoted and detachable formers have been and are now used on tools for forming the neck of bottles, &c. In contradistinction to such tools, my improvement consists in constructing what is known among glass-blowers as the "chimney-tool" in such manner that its points or blades B may be rigidly attached to the spring A and susceptible of being removed at the will of the operator.

What I claim as of my invention is—

A new article of manufacture, viz., a chimney-tool for glass-blowers, said tool consisting of the spring A and detachable blades B, constructed substantially as herein described, and for the purpose set forth.

JAMES G. MUSTIN.

Witnesses:

A. C. Johnston, James J. Johnston.