

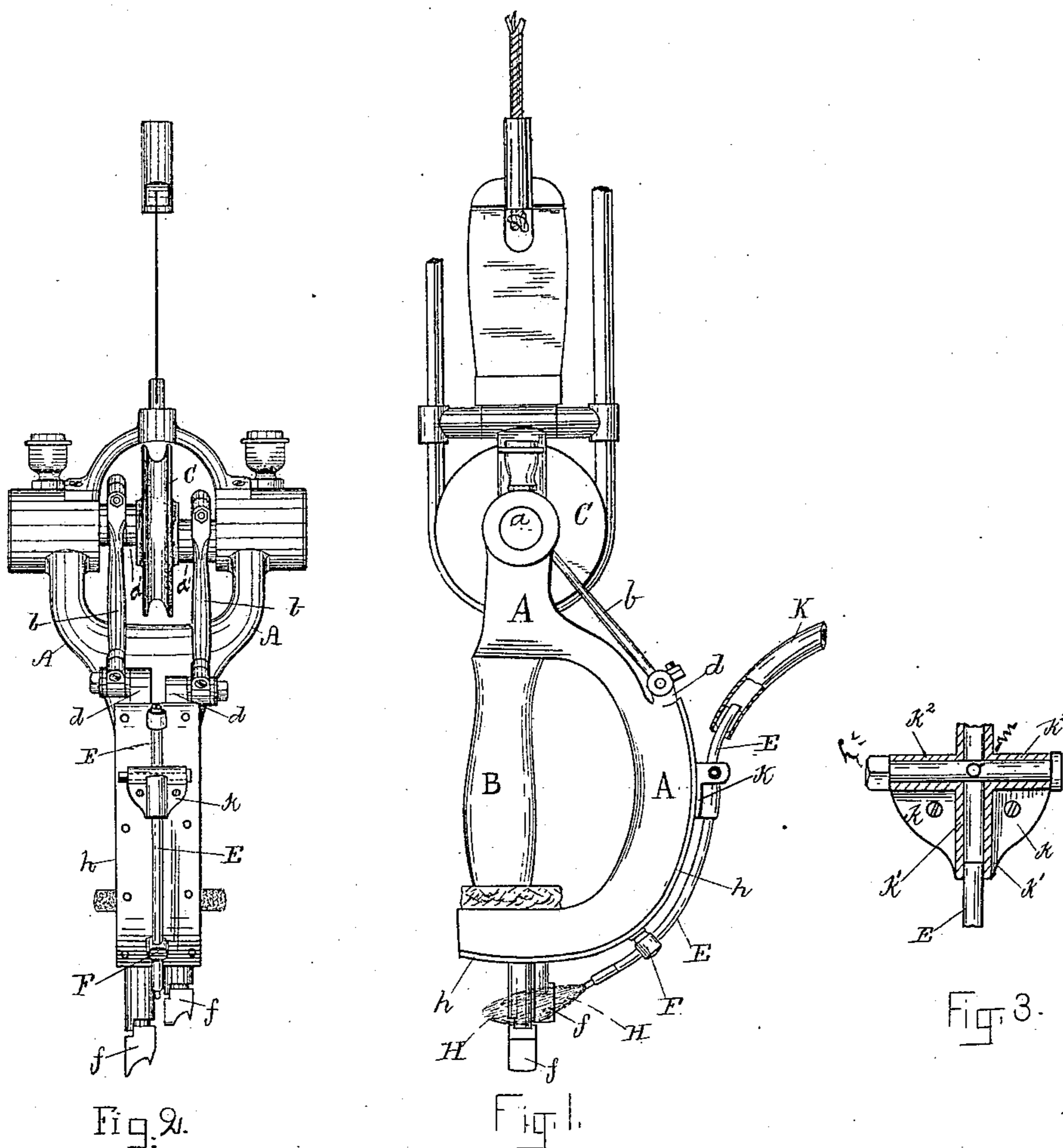
(No Model.)

J. W. DODGE.

HEATING APPARATUS FOR BURNISHING TOOLS.

No. 309,934.

Patented Dec. 30, 1884.



WITNESSES:  
Chas. S. Gouding,  
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INVENTOR:  
J. Wesley Dodge

# UNITED STATES PATENT OFFICE.

J. WESLEY DODGE, OF MALDEN, MASSACHUSETTS.

## HEATING APPARATUS FOR BURNISHING-TOOLS.

SPECIFICATION forming part of Letters Patent No. 309,934, dated December 30, 1884.

Application filed August 25, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, J. WESLEY DODGE, of Malden, county of Middlesex, State of Massachusetts, have invented a new and useful Improvement in Apparatus for Heating Burnishing-Tools, of which the following is a specification.

My invention relates more particularly to the manner of heating the operating-tools in the machine more fully shown and described in Letters Patent of the United States No. 298,671, dated May 13, 1884, granted to me.

It has been found essential, in the use of the machine shown and described in said Letters Patent above referred to, to provide some method of heating the operating-tools while the machine is in use. To this end I have devised a simple form of mechanism, hereinafter more fully described, and which is shown in the drawings accompanying and forming a part hereof, in which—

Figure 1 is a side elevation of the machine suspended and ready for use, and showing my heating apparatus attached. Fig. 2 is a rear view showing the position of the apparatus on the curved frame of the machine, and also the position of the gas-jet with relation to the tools. Fig. 3 is a detail in section showing the construction of the cock-valve by which the supply of gas is regulated.

A is the curved metallic frame, and B the handle set therein, which is grasped by the operator in using the machine. The upper part of the curved frame A is spread into a Y shape, the arms of the Y forming bearings into which is journaled the shaft *a* of the grooved pulley C. The pulley C is belted and connected by flexible connections with a driving-pulley overhead, from which power is communicated to the operating-tools *ff*.

The method of suspending and actuating machines of this kind it will be unnecessary to explain more fully, as it is well known to those skilled in the art. The shaft *a* is provided on either side of the pulley C with oppositely-set eccentrics *a'*, to which are secured, with suitable bearings, the upper ends of the connecting-rods *b*, the other ends of which are pivoted to the curved slide-bars, the end of one of which is shown at *d*, Fig. 1, and which act in the curved frame A, reciprocating simultaneously in opposite directions, and support and actuate the operating-tools *ff*, which is fully described in the Letters Patent above referred to. A curved plate, *h*, is provided and secured to the curved

part of the frame A, to close in this part of the frame and protect the contained parts. On this plate I secure a small plate, *k*, (see Fig. 3,) having fastened upon it two hollow raised portions, *k'* *k''*, which intersect each other, as shown in Fig. 3, and one of which is connected with the gas-conductor E, while the other contains a stop cock or valve, *h''*, of common construction, provided with a hole, *m*, in the line of the gas-passage, which may be turned to allow the gas to pass through, or to shut the stream off wholly or partially. At a point lower down on the frame A, I provide a support, F, (see Fig. 1,) through a hole in which the conductor E passes. The lower end of the conductor, which emits the flame H, projects past the support F to a point near the tools *ff*, the end of the jet or conductor being so situated with reference to the tools (see Fig. 1) as to direct the flame between or upon them, thus insuring their proper heating. The upper end of the conductor E is secured into the end of a flexible pipe, K, which in turn is connected with the permanent gas-pipe in the room. This flexible connection allows the free use of the tools in any position in which the operator may require them.

It will be obvious that the conductor E, with but little or no modification, may be adapted to receive a wick, and thus the heat necessary for the tools may be supplied from oil, alcohol, or other suitable liquid; or it may be necessary, in some cases, to arrange two or more conductors upon the plate *h* in order to properly distribute the heat upon the tools.

What I claim is—

1. The curved slide-bars *d*, arranged to reciprocate simultaneously in opposite directions, and provided with operating-tools *ff*, and the curved guide or frame A, in combination with the conductor E, secured to said frame A, and arranged to direct a flame upon the operating-tools, substantially as described.

2. In combination with the handle B and its reciprocating tool-carriers, the curved guide-frame A and its inclosing-plate *h*, and the conductor E, arranged to direct a flame upon the tools *ff*, substantially as described.

J. WESLEY DODGE.

Witnesses:

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