

No. 779,523.

PATENTED JAN. 10, 1905.

E. T. BURGESS.
BURNER FOR SOLDERING FURNACES.
APPLICATION FILED JUNE 27, 1904.

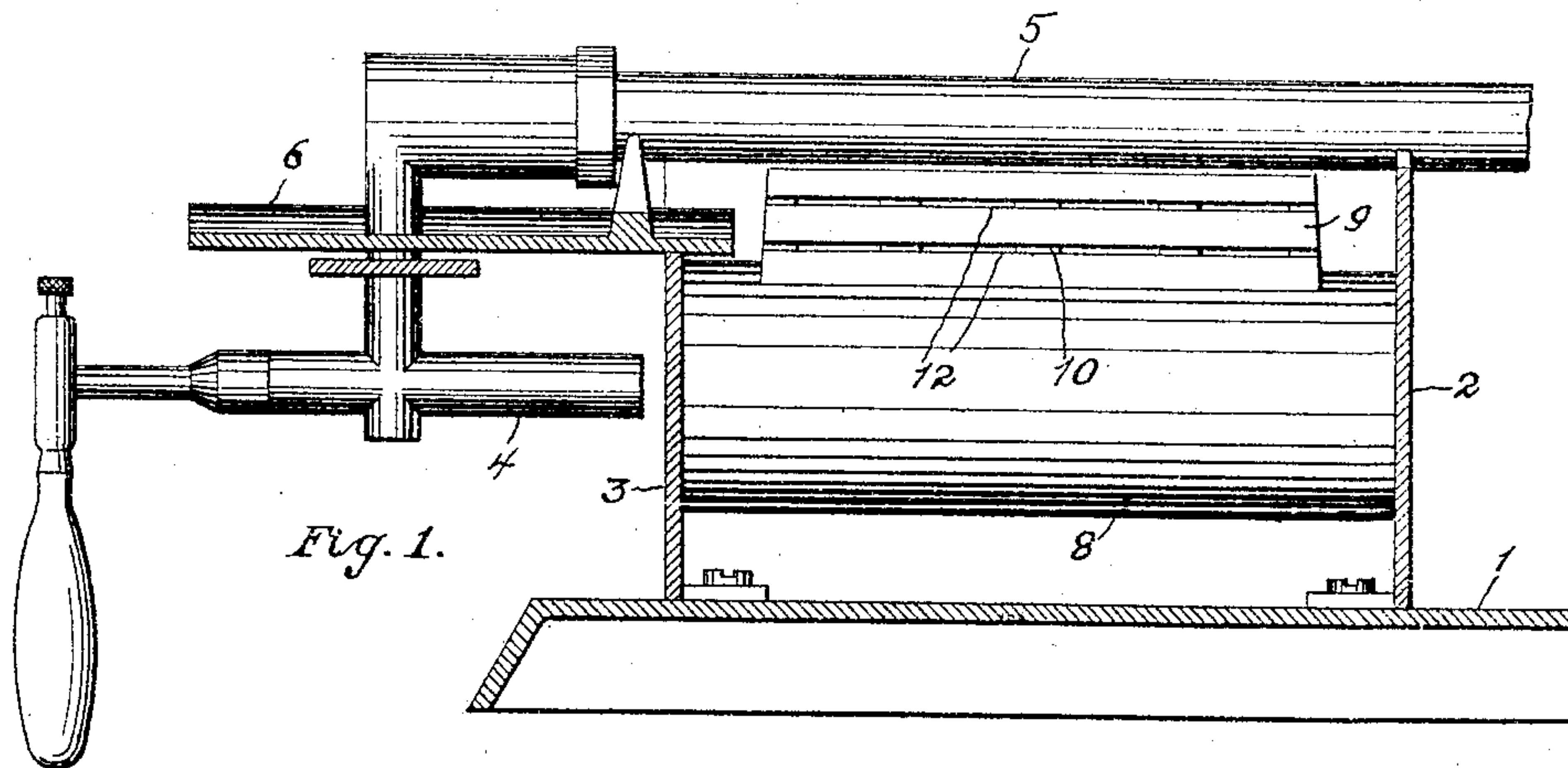


Fig. 1.

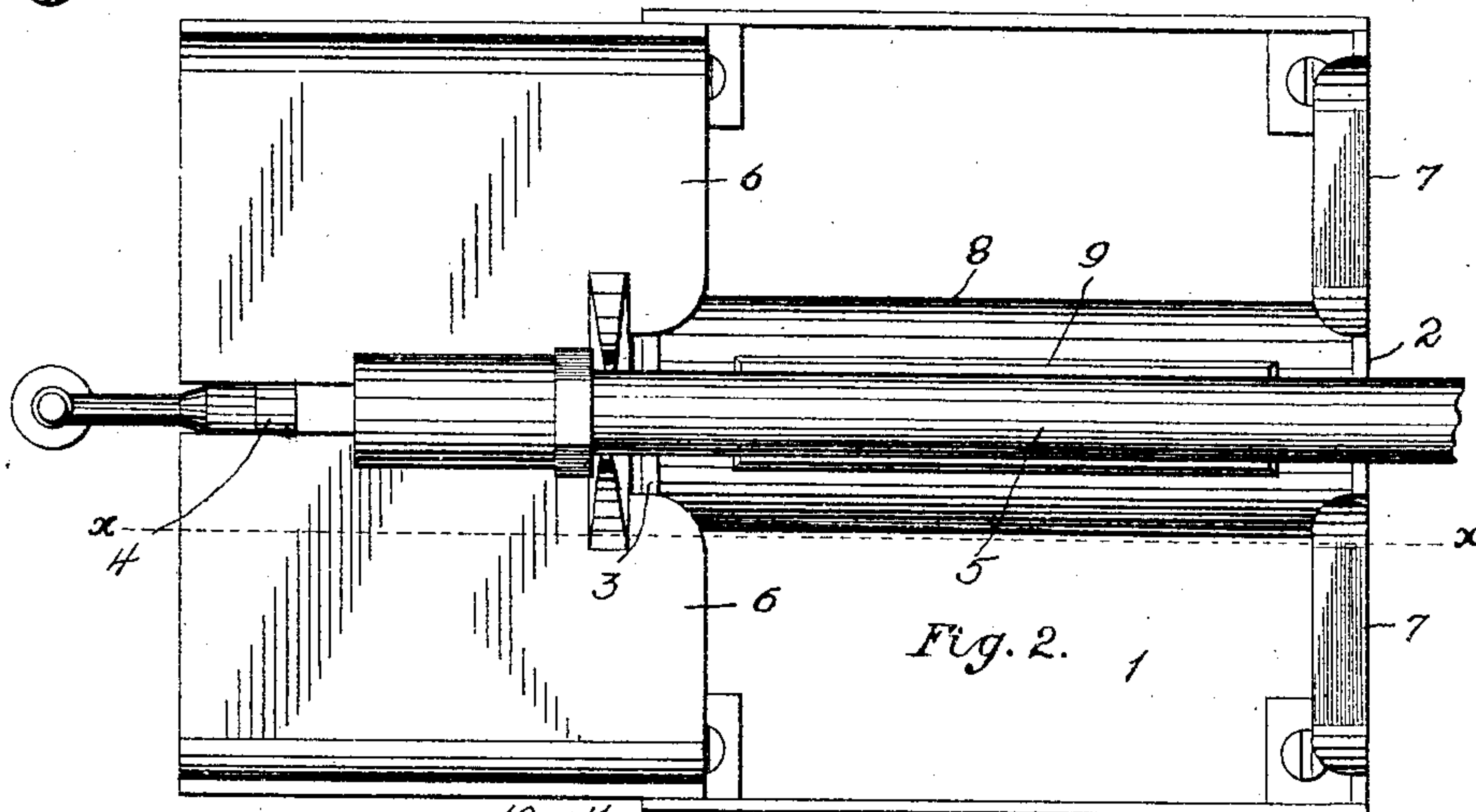


Fig. 2.

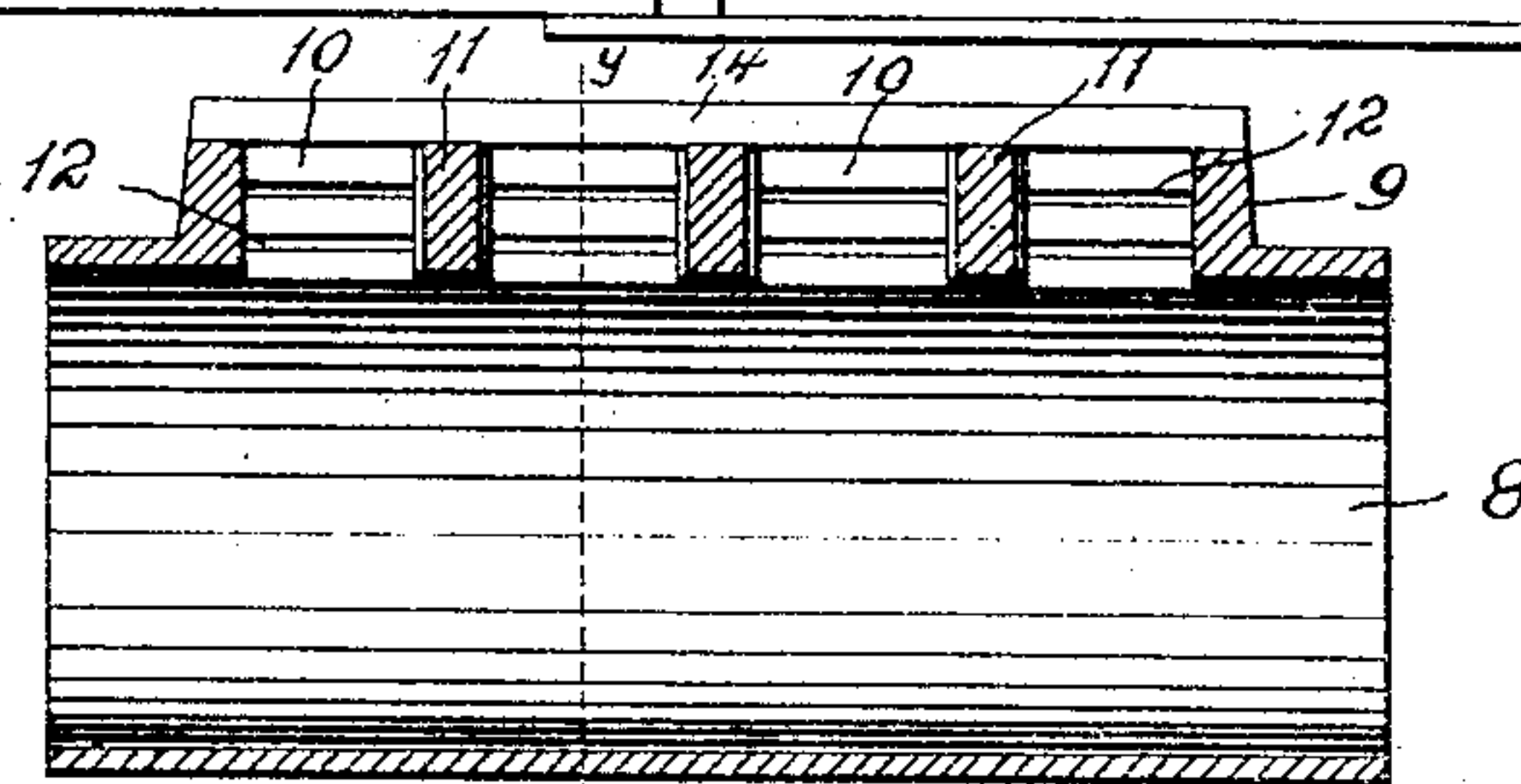
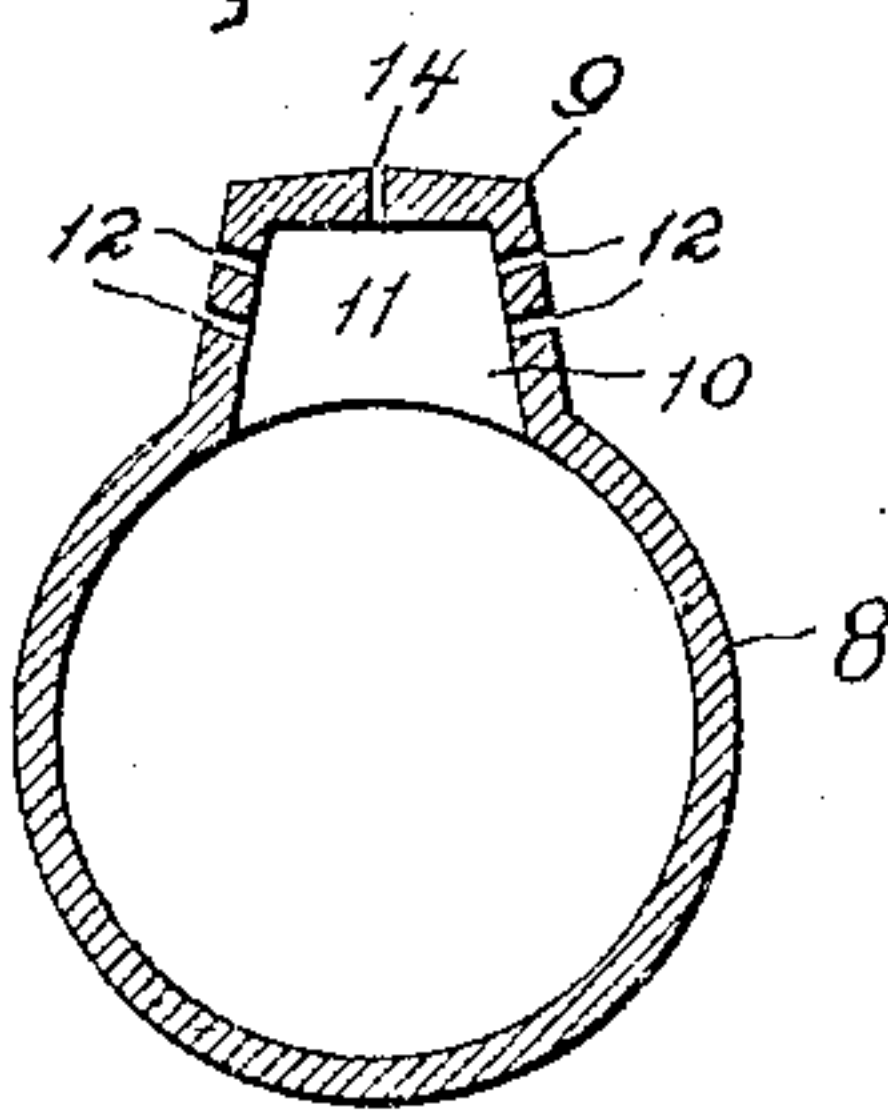


Fig. 3.



INVENTOR
Edward T. Burgess
BY
Shepherd & Parker
ATTORNEYS.

WITNESSES:

B. D. Troughton.
M. B. Eddy.

UNITED STATES PATENT OFFICE.

EDWARD T. BURGESS, OF COLUMBUS, OHIO.

BURNER FOR SOLDERING-FURNACES.

SPECIFICATION forming part of Letters Patent No. 779,523, dated January 10, 1905.

Application filed June 27, 1904. Serial No. 214,282.

To all whom it may concern:

Be it known that I, EDWARD T. BURGESS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Burners for Soldering-Furnaces, of which the following is a specification.

My invention relates to a new and useful improvement in burners for soldering-furnaces.

The object of the invention is to construct a burner, preferably of cast metal, in such a manner as to prevent the filling of the flame-openings by the solder which drips from the iron.

Another feature resides in so forming and disposing the flame-openings that the heating effect of the same will be concentrated directly on the parts desired to be heated.

Finally, the object of the invention is to provide a device of the character set forth that will be strong, durable, and efficient and comparatively inexpensive and simple to make.

With the above and other objects in view the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the drawings, wherein—

Figure 1 is a longitudinal sectional view of a soldering-furnace, taken on the line *xx* of Fig. 2 and equipped with one of my improved burners, which is illustrated in elevation. Fig. 2 is a top plan view of the furnace and burner. Fig. 3 is a longitudinal sectional view of my burner; and Fig. 4 is a transverse vertical sectional view of the burner, taken on the line *yy* of Fig. 3.

In the drawings I have shown an ordinary furnace which comprises the base 1, the front and back plates 2 and 3, the injector 4, the vaporizing-pipe 5, and the soldering-iron rests 6 and 7.

The parts above described form no part of my invention and are shown merely for the purpose of clearly presenting the invention.

The essence of my invention resides in the tubular burner 8, which I preferably form of cast metal, with the enlarged burner-head 9. The head 9 is recessed, as shown, and is divided into a plurality of combustion-chambers 10 by means of transverse integral partitions 11. In the top and sides of the head 9 I provide longitudinal saw-kerfs 14 and 12, respectively, which extend entirely through the walls of the said head, so as to communicate with the chambers thereof. The saw-kerf 14 is disposed centrally of the top of the head, so as to lie directly under the vaporizing-pipe 5, while the kerfs 12 are cut in the sides of the head at an angle so as to direct the flame upon the soldering-irons, which are supported on each side of the furnace in the rests 6 and 7. It will be readily understood that the oil passing along the pipe 5 will be vaporized by the flame from the kerf 14, which vapor is injected, together with a suitable air mixture from the injector 4, into the tubular portion of the burner, from which it will rise into the compartments 10 and after being ignited will burn in sheet-like flames extending from the sides and top of the burner-head 9. It is apparent that the concentrated energy of the flames will be directed on the vaporizing-pipe and the irons, thereby delivering to the same the greater portion of the heat generated by the flames. It is also obvious that the liability of "solder-drippings" filling the flame openings or kerfs 12 and 14 is reduced to a minimum and a much more effective and serviceable burner is produced. The partitions 11 greatly strengthen the burner, and therefore the same may be cast with comparatively thin walls, which allows the same to heat and cool quickly, thus obviating cracking, which is common where heavy castings are employed, owing to the heat-retaining qualities thereof.

I do not wish to limit myself to the exact details of construction herein set forth, as I may make various changes in the same without departing from the spirit of my invention.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

5 In a burner, an integral upwardly-projecting burner-head, and transverse partitions dividing the burner-head into a plurality of combustion-chambers, the burner-head being provided with radiating-openings extending

from the combustion-chambers, in combination with a hollow body portion in communication with all the chambers. 10

EDWARD T. BURGESS.

In presence of—

M. B. SCHLEY,

W. L. MORROW.