

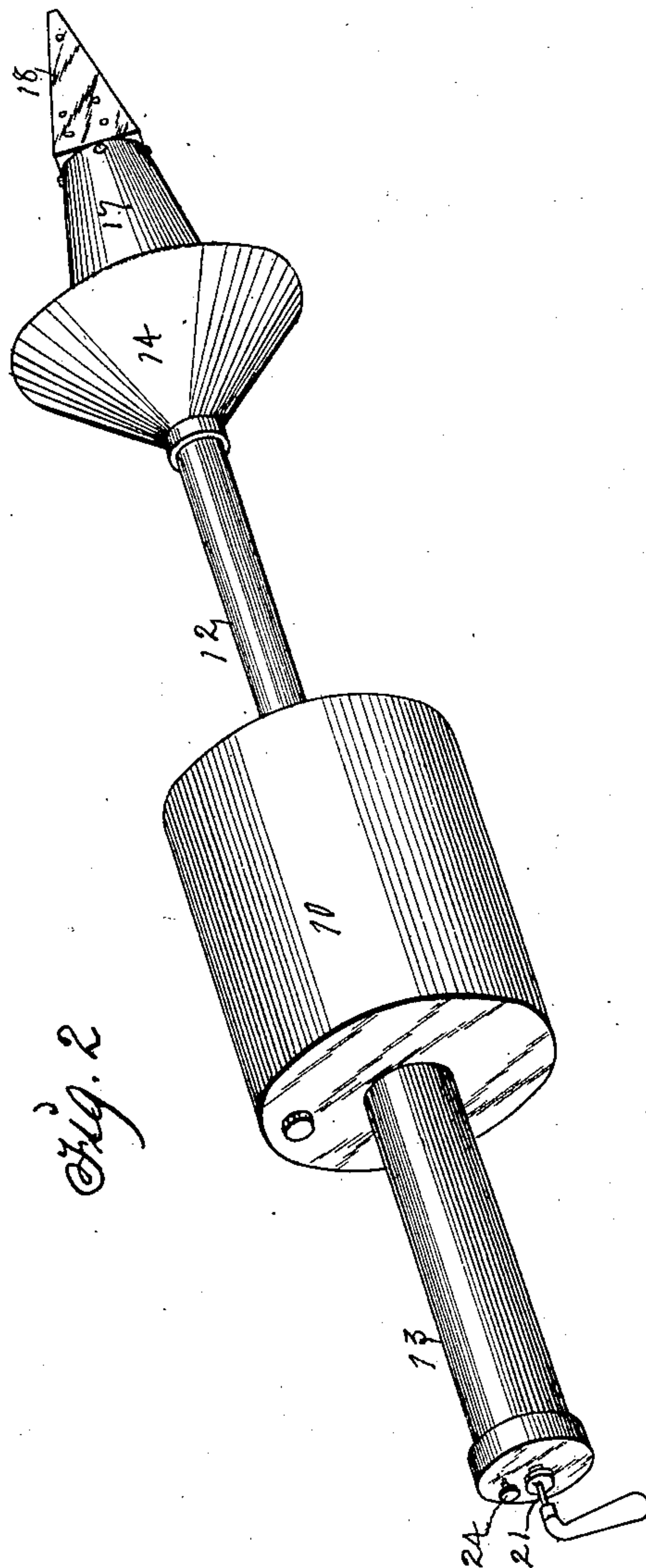
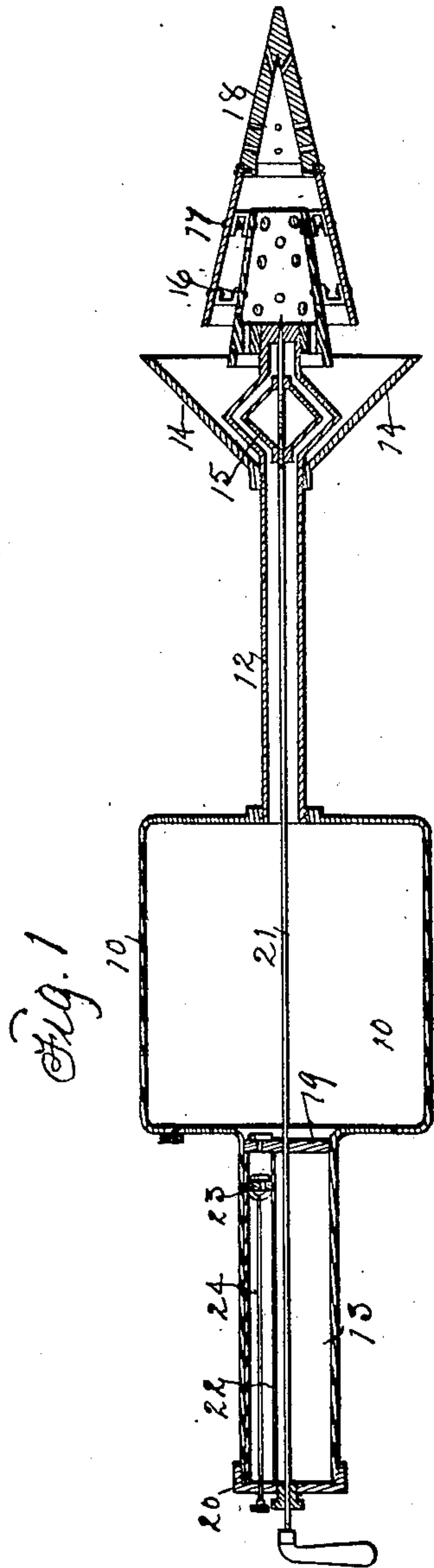
No. 763,243.

PATENTED JUNE 21, 1904.

W. P. BARTHOLOW.
SELF HEATING SOLDERING IRON.

APPLICATION FILED OCT. 26, 1903.

NO MODEL.



Witnesses:
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Inventor: William P. Bartholow,
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UNITED STATES PATENT OFFICE.

WILLIAM P. BARTHOLOW, OF WEBSTER CITY, IOWA.

SELF-HEATING SOLDERING-IRON.

SPECIFICATION forming part of Letters Patent No. 763,243 dated June 21, 1904.

Application filed October 26, 1903. Serial No. 178,665. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. BARTHOLOW, a citizen of the United States, residing at Webster City, in the county of Hamilton and State of Iowa, have invented a new and useful Self-Heating Soldering-Iron, of which the following is a specification.

My object is to provide a soldering-iron that can be heated, as required in practical use, by means of a hydrocarbon-burner combined therewith.

My invention consists in the self-heating soldering-iron hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal central sectional view that shows the construction, arrangement, and combination of all the parts of the complete invention. Fig. 2 is a perspective view of the complete hand implement adapted to be manually and advantageously operated for all the common purposes of a soldering-iron.

The numeral 10 designates a reservoir for gasoline or other suitable carbonaceous fluid. A tubular stem 12 is fixed to one end of the reservoir and a tubular handle 13 to its other end to extend in opposite directions and in alinement with each other. To the end of the stem 12 is fixed a cone-shaped deflector 14, and within the deflector and to the end of them is a double-tubed generator or retort, each of the tubes of the generator being bent to form a right angle and providing a double bearing for the needle-stem at their points of juncture.

To the mixing-tube 16 is fixed a cone-shaped open-ended cover 17, and to the small end of the cover is fixed a pointed hollow and perforated bit 18, preferably made of copper and provided with vents and adapted for melting and applying solder in a common way. The open end of the cone-shaped cover 17 admits the atmosphere and directs the heat generated in the tapering mixing-tube 16 into the open large end of the bit 18, as required to facilitate heating the bit.

The handle 13 has a fixed diaphragm 19 in its lower end and a cap 20 on its outer end, and a needle 21 is extended through coincid-

ing openings in the diaphragm and cap and through the inner part of the double-walled fluid-distributor 15 and the vent in the end of the stem.

A cylinder 22 of an air-pump is located in the handle 13 and provided with a piston 23 and a stem 24 and a valve 25 to force air into the reservoir 10 to press the fluid through the stem 12, device 15, and the vent in the end of the stem, when the needle 21 is withdrawn from the vent, as required in feeding fluid to the burner 16.

In the practical use of my invention when gasoline or other fluid is fed to and burned in the mixing-tube 16 the bit 18 will become heated, as required for melting and applying solder therewith in making seams in tinware and connecting pieces of metal by means of solder and a soldering-iron.

Having thus set forth the purpose of my invention and its construction and operation, the practical utility thereof will be readily understood by tanners and persons familiar with the art to which it pertains, and

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

1. In a self-heating soldering-iron, a reservoir for fluid, a tubular stem fixed to the reservoir and provided with a vent in its end, an open-ended tapering hydrocarbon-mixing tube fixed to the end of the stem, an open-ended tapering cover fixed to said mixing-tube, a hollow bit fixed to the small end of the cover and a double-tubed generator or retort and duplex bearer for a needle on the end portion of the stem, and a needle in the stem arranged and combined to operate in the manner set forth for the purposes stated.

2. In a self-heating soldering-iron, a reservoir for fluid, a tubular stem fixed to the reservoir and provided with a vent in its end, a double-tubed generator or retort and duplex bearer for a needle on the end portion of the stem, a needle extended through the stem, a tapering hydrocarbon-mixing tube open at its ends and fixed to the stem, an open-ended cover fixed to the mixing-tube in concentric position therewith, a pointed hollow bit fixed to the cover and a cone-shaped deflector fixed over the end portion of the stem and the mix-

ing-tube, arranged and combined to operate in the manner set forth for the purposes stated.

3. In a self-heating soldering-iron, a reservoir for fluid, a tubular stem fixed to the reservoir and provided with a vent in its end, a tapering open-ended mixing-tube fixed to the stem, a cone-shaped deflector fixed to the end portion of the stem and over the rear end of the mixing-tube, an open-ended tubular and
10 tapering cover fixed in concentric position to the mixing-tube and a pointed and perforated hollow bit fixed to the front end of the tapering cover and means for forcing fluid from the reservoir into the mixing-tube, arranged
15 and combined to operate in the manner set forth for the purposes stated.

4. A self-heating soldering-iron, comprising a reservoir for fluid, a tubular stem having a vent in its end and a bearer for a needle near

its end, a tapering open-ended mixing-tube 20 fixed to the end of the stem, an open-ended tapering cover fixed in concentric position to the mixing-tube, a pointed bit fixed to said cover, a deflector fixed to the tubular stem over the fluid-distributer and the mixing-tube, 25 a tubular handle fixed to the reservoir, a diaphragm in the bottom of the handle, a cap on top of the handle and the diaphragm and cap provided with coinciding openings for the passage of a needle through said diaphragm and 30 cap, a needle and an air-pump, arranged and combined to operate in the manner set forth for the purposes stated.

WILLIAM P. BARTHOLOW.

Witnesses:

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