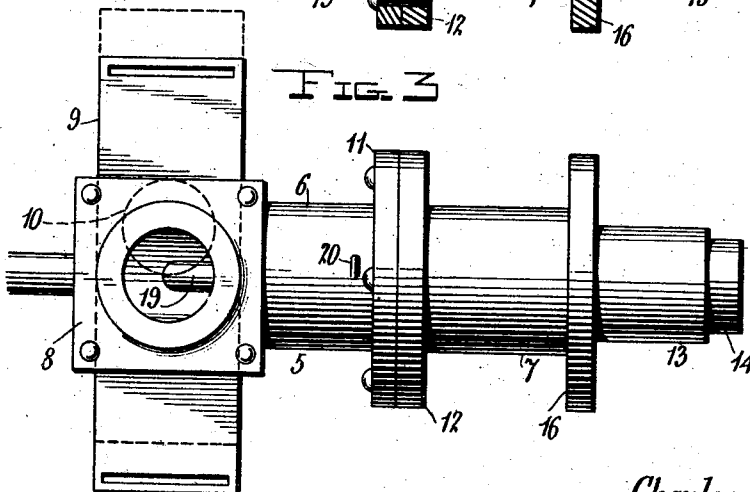
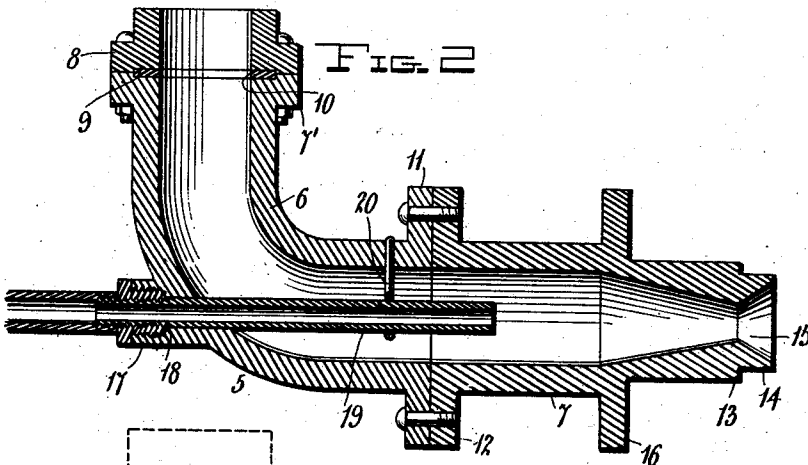
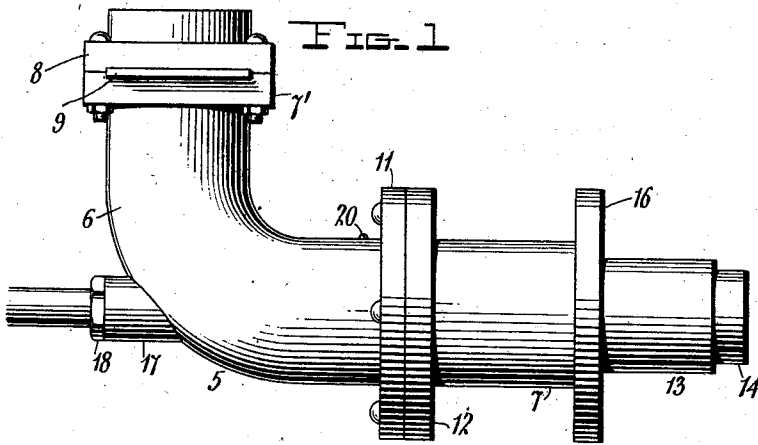


C. N. SCOTT.
 SPRAY BURNER.
 APPLICATION FILED JAN. 22, 1910.

992,606.

Patented May 16, 1911.



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UNITED STATES PATENT OFFICE.

CHARLES N. SCOTT, OF MARION, INDIANA.

SPRAY-BURNER.

992,606.

Specification of Letters Patent.

Patented May 16, 1911.

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To all whom it may concern:

Be it known that I, CHARLES N. SCOTT, a citizen of the United States, residing at Marion, in the county of Grant, State of Indiana, have invented certain new and useful Improvements in Spray-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to burners and more particularly to the class of burners for use in blast or other furnaces.

The primary object of the invention is the provision of a burner in which the oil supply pipe is suitably held therein so that it may be readily and easily adjusted relative to the air supply nozzle, and which latter is constructed of separable sections whereby it may be assembled and disassembled in a convenient manner for the purpose of cleaning or repairing the same.

Another object of the invention is the provision of a burner in which the air supply is readily controlled or regulated so that either heavy or light oil may be properly mixed with the air supply, thereby making the same adaptable to various types of furnaces and also increasing the efficiency of the burner when in use.

A further object of the invention is the provision of a burner which is simple in construction, thoroughly reliable and efficient in operation and inexpensive in the manufacture.

With these and other objects in view, the invention consists of the construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings, which disclose the preferred form of embodiment of the invention, and as pointed out in the claim hereunto appended.

In the drawings:—Figure 1 is a side elevation of a burner constructed in accordance with the invention. Fig. 2 is a vertical longitudinal sectional elevation. Fig. 3 is a top plan of the burner.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings by numerals 5 designates generally a burner, comprising an outer shell or casing formed of separable sections 6 and 7, the shell or casing being in

the shape of an elbow, at one end of which is formed a head block 7', the latter being of squared formation and is suitably bolted or otherwise secured to a block 8, correspondingly shaped to the formation of the head block 7', and these blocks 7' and 8 are suitably spaced from each other to provide a guide way receiving a regulating slide 9, the latter being provided with an orifice adapted to be brought into register with the bore in the elbow to establish communication between it and an air supply pipe, not shown, which is connected to the block 8 in any suitable manner. Integral with the opposite free end of the section 6 of the casing is a circular flange 11, which latter is adapted to abut against a circular flange 12 formed at one end of the section 7 the said flanges 11 and 12 being suitably connected together to unite the section 7 with the section 6 and also to assist in joining the sections 6 and 7 of said casing. This section 7 gradually tapers toward one end to form a nozzle 13, and also is provided with a reduced step by step external diameter to form a contracted discharge end 14, provided with a beveled walled opening 15, through which is expelled a mixture of oil and air in a manner as will be hereinafter described. This nozzle 13 is formed with a circular flange 16, the latter being contiguous to the flange 12 whereby the burner 5 may be suitably mounted in a furnace wall.

The section 6 of the casing is provided with a boss 17, the same being suitably cut away to form an aperture, and the inner face of this boss is threaded to detachably receive an internally and externally threaded collar 18, which latter surrounds an oil supply pipe 19 protruding a distance through the casing into the nozzle 13, and this protruded end of the pipe 19 is engaged by a hanger 20 depending within the casing and adjustably fixed thereto. This pipe 19 is adjustable by means of the collar 18 threaded onto the same so that upon longitudinal adjustment of the collar on the pipe 19 its inner free end will be moved toward or away from the discharge opening 15 in the end 14 of the nozzle when the occasion requires. It is apparent that by the cut off slide 9 the air supply may be regulated whereby a proper mixture of air with the oil delivered from the pipe 19 may be had.

From the foregoing the construction and operation of the invention will be clearly

apparent without necessitating a more extended explanation.

What is claimed is:—

5 A spray burner comprising an elbow section having a boss projecting therefrom, a hanger extending inwardly of the elbow section, a spray tube extending through the boss and supported on its inner end by the hanger, said inner end projecting beyond the
10 adjacent end of the elbow section, each end of the elbow section being formed with a flange circumscribing the same, a discharge section having a circumscribing flange bolted to one flange of the elbow section and formed
15 on its outer end with a concentrically reduced terminal having a conical outlet portion and further formed between its ends with a circumscribing flange, a sleeve nut threaded on the outer end of the spray tube

and threaded to the boss, an oil pipe threaded on the outer end of the spray tube, the circumscribing flange on the remaining end of the elbow section being formed with a recess, an intake section having a circumscribing flange bolted to the said circumscribing flange of the elbow section and formed with a recess registering with the recess of said elbow flange, and a slide valve having an opening therein disposed in the registering recesses last mentioned for trans-
20
25
30
verse movement.

In testimony whereof, I affix my signature, in presence of two witnesses.

CHARLES N. SCOTT.

Witnesses:

FRANK EBNER,
FRANK J. SCHWAIGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
