

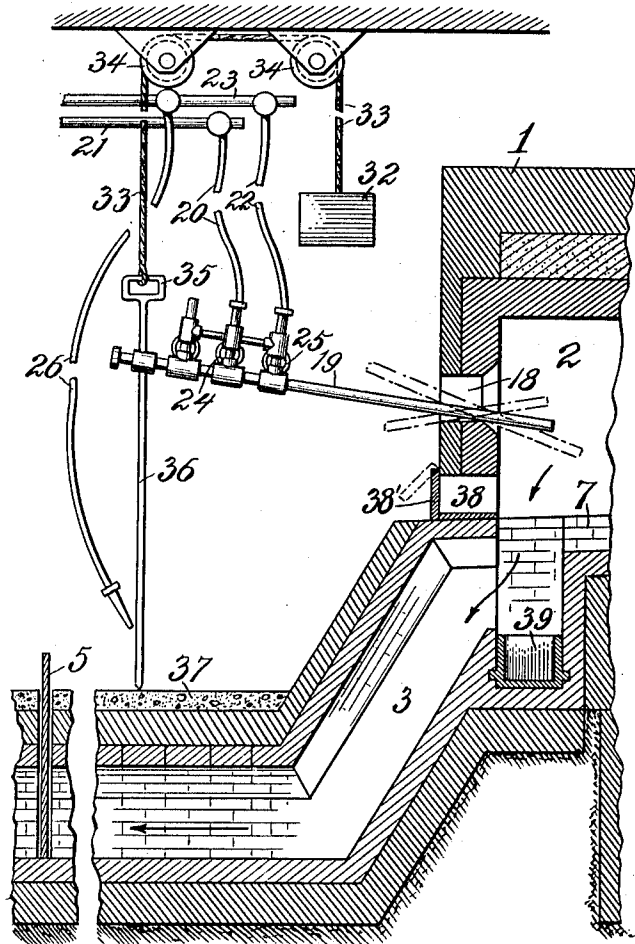
A. H. DAVIDSON & S. SUNDELIUS.

SPRAY BURNER.

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1,020,955.

Patented Mar. 19, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALEXANDER H. DAVIDSON, OF COLMA, AND SEVERUS SUNDELIUS, OF SAN FRANCISCO, CALIFORNIA.

SPRAY-BURNER.

1,020,955.

Specification of Letters Patent. Patented Mar. 19, 1912.

Original application filed April 12, 1909, Serial No. 489,529. Divided and this application filed May 15, 1911. Serial No. 627,316.

To all whom it may concern:

Be it known that we, ALEXANDER H. DAVIDSON, of Colma, and SEVERUS SUNDELIUS, of San Francisco, California, have invented certain new and useful Improvements in Spray-Burners, the same being a division of our parent application Serial No. 489,529, filed April 12, 1909, whereof the following is a specification.

10 An object of the invention is to provide a burner having thoroughly efficient and easily operated means connected therewith for directing the flame into any part of a furnace.

15 Other features of the invention will appear from the subjoined description of an embodiment of it as applied to cremation purposes, which we have illustrated in the accompanying drawings. The drawings 20 show the apparatus in its best form, but it may be varied without departing from the spirit of the invention.

In the drawings the figure represents a sectional portion of a furnace having a form of construction embodying our invention.

25 In the figure, 1 represents the body of the furnace which may be built of brick and lined with fire brick, or other suitable refractory material may be used. At one end 30 of the furnace is a fire hole 18 through which is projected the fuel supply pipe 19. The pipe 19 is supplied with fluid fuel, such as oil, by a flexible pipe 20 leading from a supply main 21. It is also supplied with 35 air or steam by another flexible pipe 22 leading from a supply main 23. These supplies are controlled by valves 24 and 25 respectively. 26 is a second air connection receiving air from 23, or other convenient 40 source, and used for blowing out the burner and oil pipe. The pipe 19 and its connections may be counterbalanced by a weight 32 connected to it by a rope 33 passing over suitable pulleys 34.

45 At 35 is a hand grasp for convenience in manipulating the blast.

36 is a rod which may be used to steady pipe 19, by resting against the floor 37, as shown.

50 By the above means the blast from the end of pipe 19 may be directed at will to different parts of the combustion chamber,

as partly indicated by the dotted lines in the figure, showing different positions of the pipe.

38 is an air hole provided with a stopper 38' as shown.

At 39 is a receptacle, which may be made to slide in and out as indicated.

It will be observed that the floor of the 60 chamber slopes toward the blast end, hence any fusible materials that may be in the furnace and melted by the heat, flow down to the receptacle 39 and may be removed. Similarly the ashes resulting from the op- 65 eration may be collected in receptacle 39 and removed.

The blast nozzle 19 may be manipulated to direct the blast to different parts of the chamber as needed. The combustion may be 70 further controlled by manipulating the damper 5, causing the draft to be greater or less as desired. When the incineration is complete the blast may be turned off by means of the valves 24 or 25, which also 75 serve for its control while in operation. The ashes may be then brushed into ash receiver 39 and thereby collected, and for this purpose the air hole or hand hole 38 may be made of use. The ash receiver 39 80 may be in the form of a drawer, as shown, for greater convenience of manipulation.

Having thus described our invention, and believing that we have made a new and valuable improvement in the art to which it per- 85 tains, what we claim and desire to secure by Letters Patent is:—

1. A burner comprising a movable blast nozzle adapted to inject flame into a furnace, flexible fuel-feeding pipes connecting 90 the nozzle with fuel supply means, a prop for supporting an end of said nozzle, said prop having a hand-grasp thereon, for manipulating the prop and thereby changing the direction of the nozzle, and flexible 95 means connected to the hand-grasp for retaining the prop normally in vertical position.

2. In a burner, a blast nozzle adapted to inject a flame into a furnace, said nozzle 100 having a liquid supply pipe and an air supply pipe connected therewith, a movable prop having a hand-grasp connected thereto whereby the outer end of the nozzle is sup-

ported and whereby the same may be manipulated for directing the flame to any part of the furnace at will of the operator.

3. In a burner, a nozzle adapted to project into a furnace and having fluid supply means connected therewith, a substantially vertical prop secured rigidly to the burner, and means for normally retaining the prop in vertical position, said prop having thereon a hand-grasp whereby the nozzle may be manually manipulated against the

action of the retaining means for directing the flame to any and all parts of the furnace at the will of the operator thereof.

In testimony of which invention we have hereto set our hands before witnesses this 30th day of July, 1910.

ALEXANDER H. DAVIDSON.
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Witnesses:

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