

No. 719,839.

PATENTED FEB. 3, 1903.

L. S. MURDOCK.
FIRE KINDLER.

APPLICATION FILED FEB. 24, 1902.

NO MODEL.

Fig. I

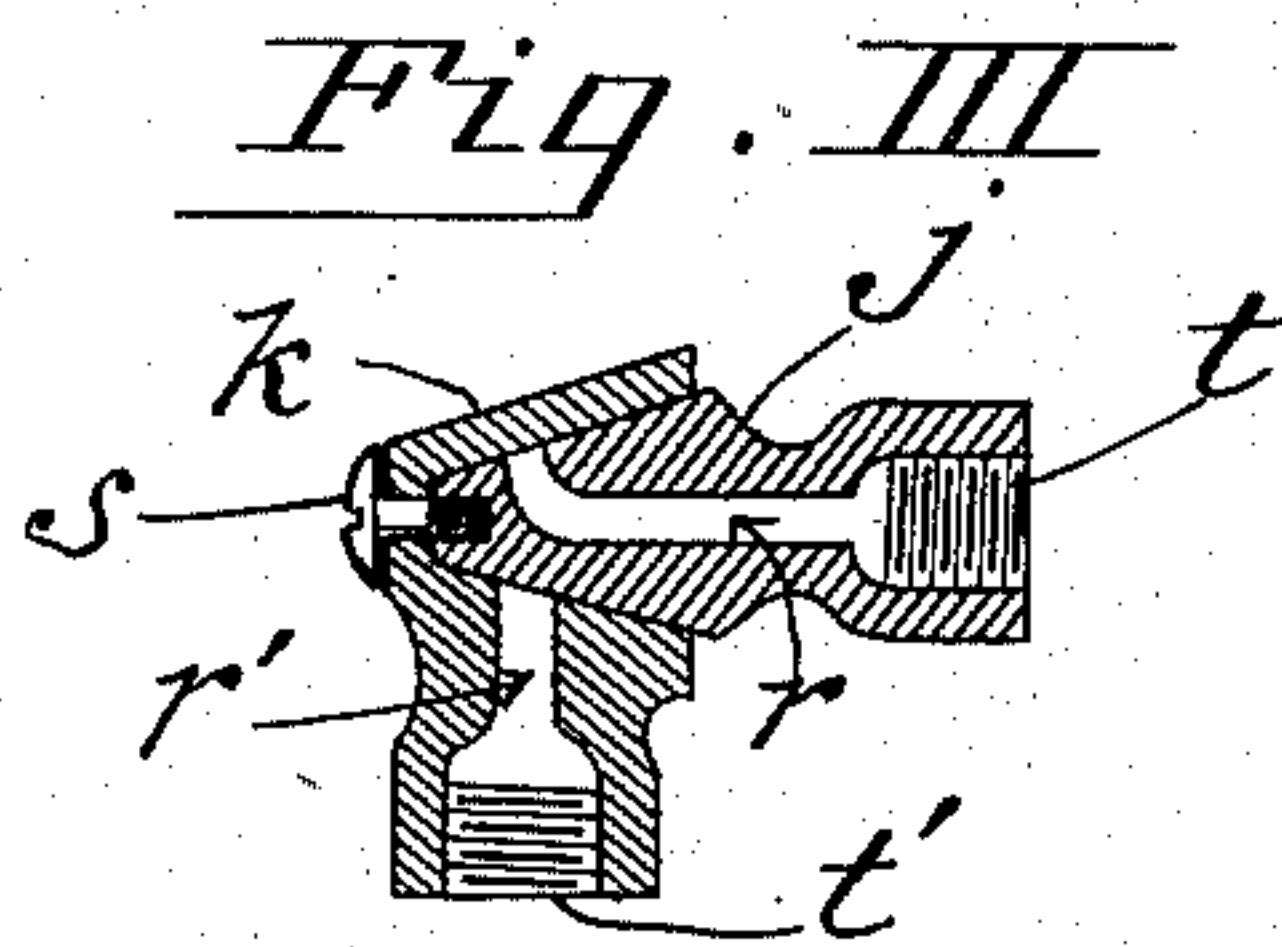
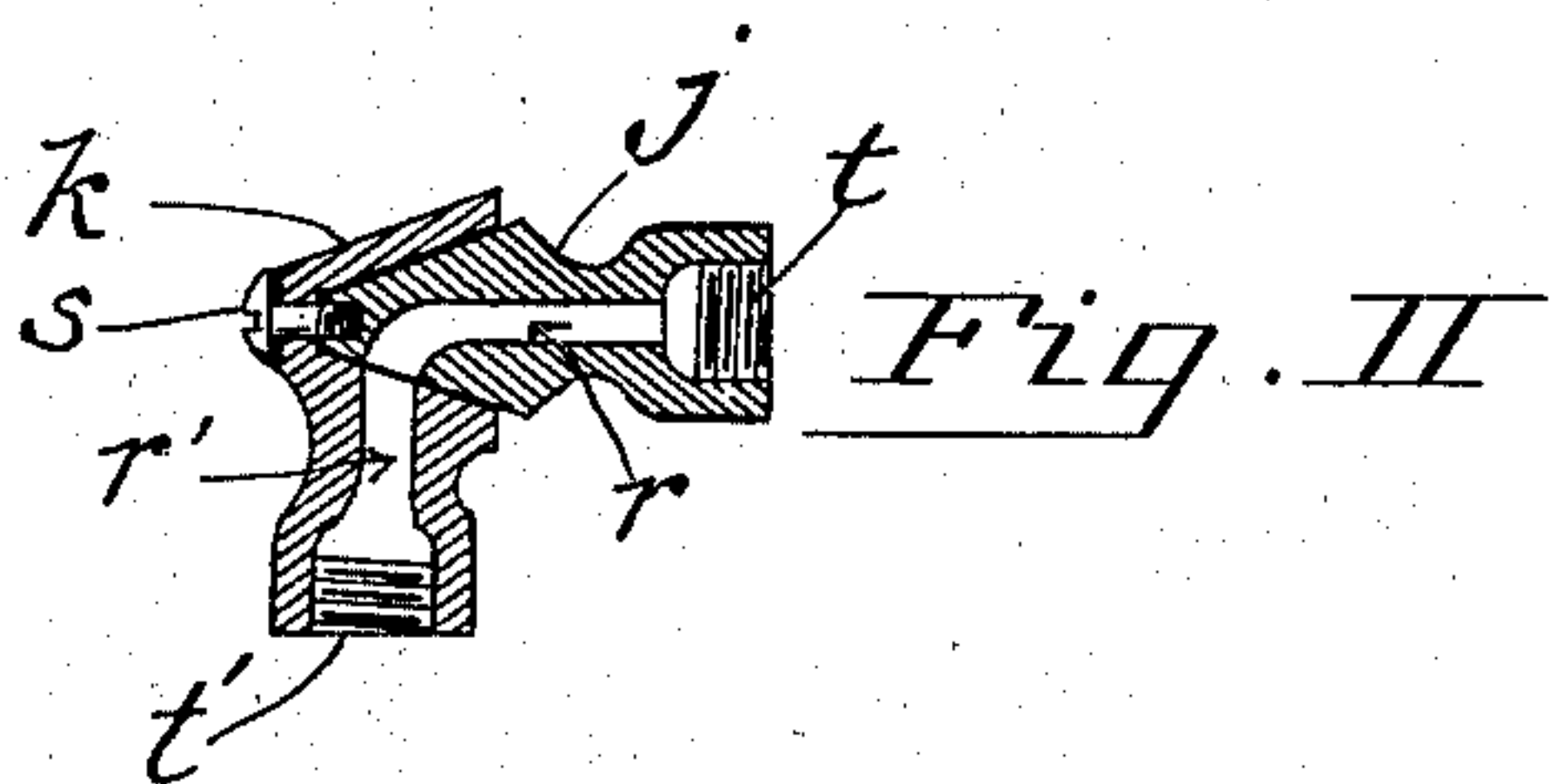
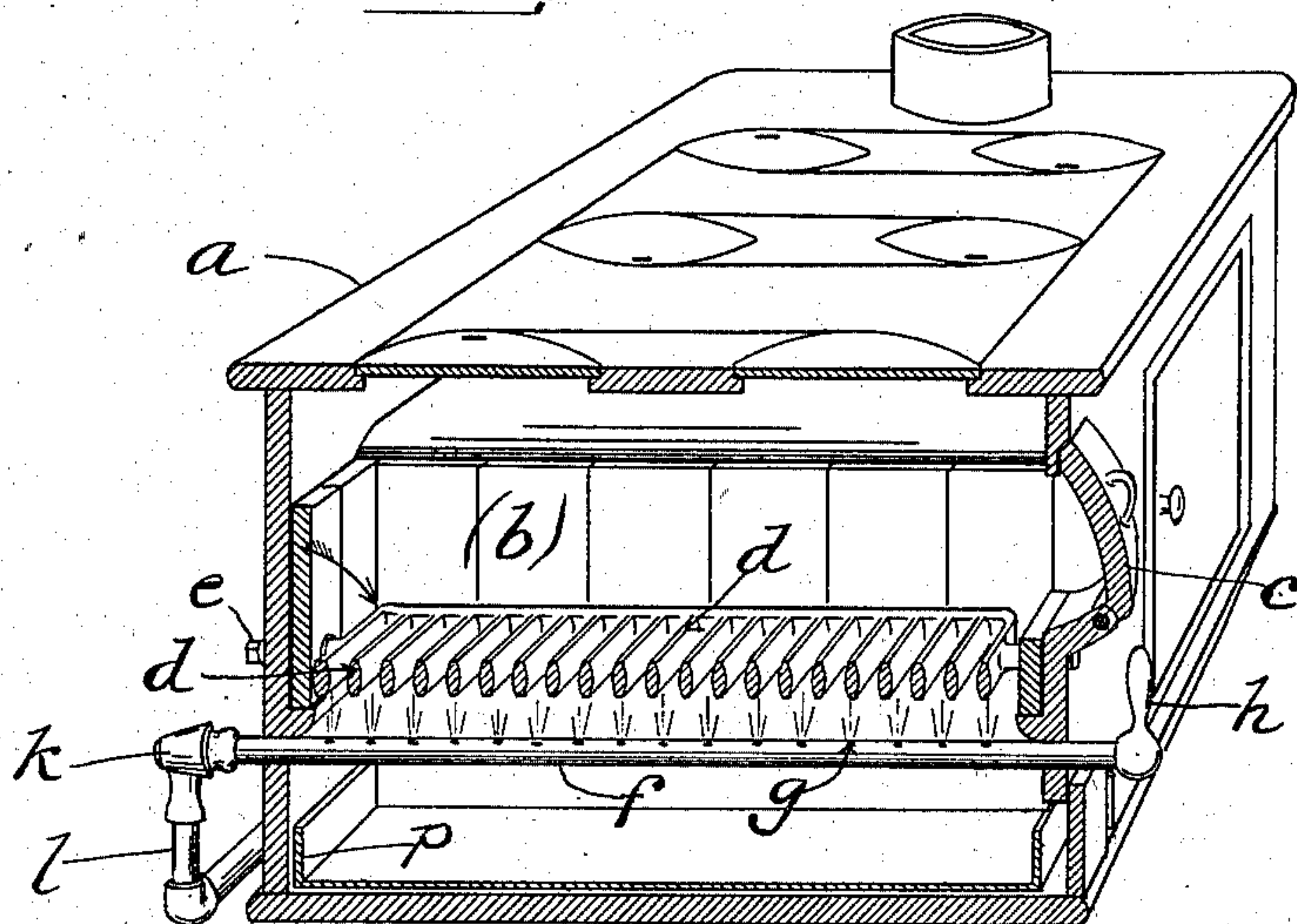
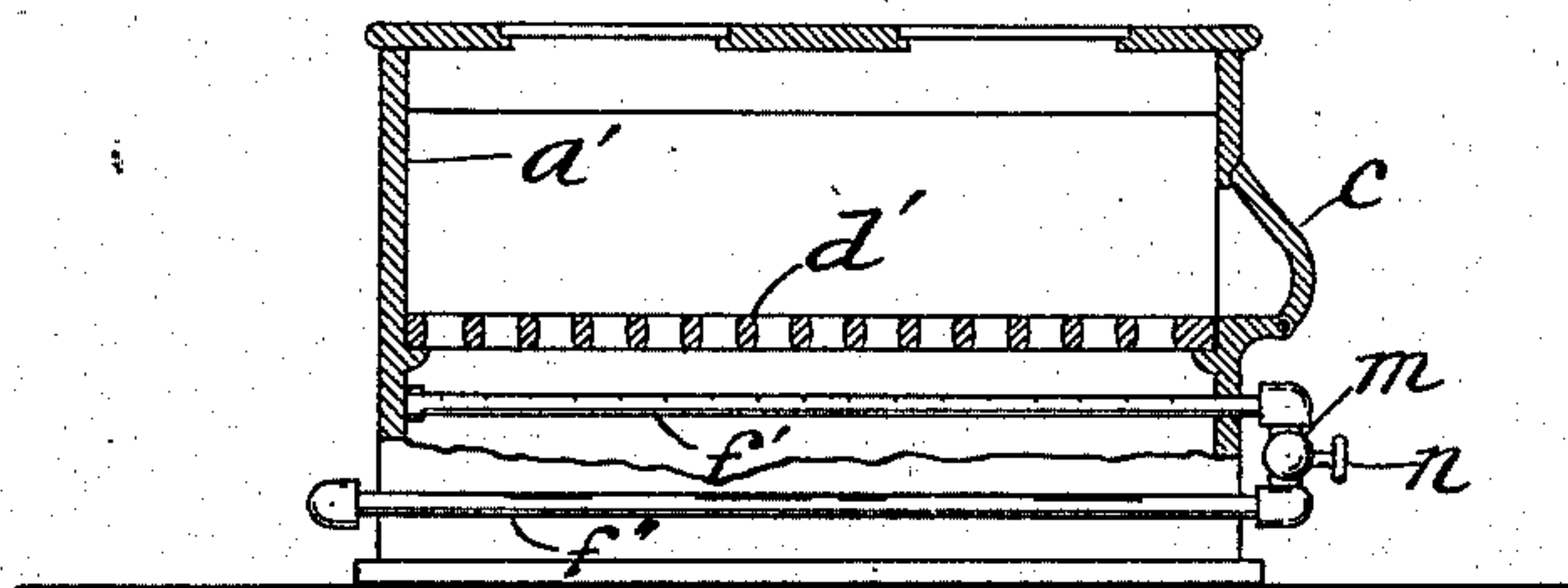


Fig. IV



Witness:

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UNITED STATES PATENT OFFICE.

LUKE S. MURDOCK, OF CINCINNATI, OHIO.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 719,839, dated February 3, 1903.

Application filed February 24, 1902. Serial No. 95,232. (No model.)

To all whom it may concern:

Be it known that I, LUKE S. MURDOCK, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Fire-Kindlers, of which the following is a specification.

My invention relates to devices for kindling coal, coke, and like fires.

10 The object of my invention is to supply a convenient, economical, and effective lighter to start coal and like fires in ranges, stoves, grates, furnaces, &c.

15 My invention consists in providing in close relation to the fire-box a gas pipe or conduit having jet orifices or openings whereby the gas may be emitted for igniting the combustible contents of the fire-box.

20 My invention also consists in the parts and combination and arrangement of parts, as more fully described and shown and as particularly pointed out in the claims.

25 In the accompanying drawings, which serve to illustrate my invention, Figure 1 shows the device as applied to a range, the same being a perspective and vertical section through the fire-box and grate. Fig. 2 is a section of the gas-cock with the passages open, as when handle *h* is in the position of Fig. 1; Fig. 3, 30 the same with the passages closed. Fig. 4 is a section of a grate and fire-box having a different arrangement of the gas-pipe.

35 I have shown my device as applied to a range or stove *a*, having a fire-box *b*, door *c*, grate-bars *d*, and pinion *e*, supporting the grate-bars. I preferably construct the gas pipe or conduit *f*, as shown in Fig. 1, with a series of jet-orifices *g* upon one side thereof, one end being connected to the gas-supply 40 pipe, as shown at *k* in Fig. 1, and the other end having a handle *h* for turning the conduit to open and close the gas-inlet, as shown in Figs. 2 and 3, for the purpose of turning on or shutting off the gas. I have shown the 45 gas-supply pipe and the gas-lighting pipe joined together by means of a gas-cock, consisting of the head *j* and sheath *k*, secured together by screw *s* and having passages *r* and *r'*, respectively, and threads *t* and *t'*, respectively. 50

I prefer to apply the lighter to the fire-box substantially as shown in Fig. 1, the same

being located beneath the grate and so arranged that the jet-orifices will be on the upper side, as shown, when the gas is burning 55 and on the lower side when the gas is shut off. This prevents the clogging up of the jet-orifices with ashes, soot, &c.

In the modification shown in Fig. 4 the gas-outlet pipe *f'* is stationary and is joined to the 60 gas-supply pipe *f''* by a coupling *m*, having a cock *n* to control the passage therethrough of the gas. In this view *a'* represents the range, *d'* the grate, and *c* the door of the fire-box.

65 My kindler, constructed as above described, is extremely simple and inexpensive and economical in the use of fuel, dispensing with the use of wood, paper, and other kindling in igniting coal, coke, and other similar combustible material. It enables the fire to 70 be made with quickness and great convenience, besides avoiding all of the hindrances, delays, dirt, &c., due to the use of paper, wood, &c., as kindling.

75 To start a fire in a range having my attachment under or adjacent the grate-bars, my practice is to remove the lids directly above the fire-box, clear the grate-bars of ashes by tilting the grate or otherwise, then 80 turn on the gas and drop a lighted match into the fire-box, which immediately ignites the gas as it issues from the conduit. I then pour in sufficient coal from a bucket, replace the lids, and see that the drafts are well 85 opened. In about three minutes I turn off the gas, and in about ten minutes more I have a very hot fire.

It will be apparent from the above description that my improved kindler is capable of 90 some modification without material departure from the scope of my invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the parts herein set forth.

I claim— 95

1. The combination of a stationary fire-grate in a stove or other heater, an axially-rotatable gas-conduit extending lengthwise 100 under the grate and having its ends journaled in the stove and provided with a series of jet-orifices in its length, means for rotating the said conduit, so that when the conduit is rotated to turn on the gas, the jets will be up in close contact with the coal, and when the

conduit is rotated to turn off the gas the jet-orifices will be down, allowing any ashes to drop out and prevent the conduit from becoming clogged by ashes.

- 5 2. The combination of a stationary fire-grate in a stove or other heater, a fixed gas-conduit extending lengthwise of the grate adjacent the coal and having its ends journaled

in the stove and provided with a series of jet-orifices in its length, means for turning on and off the gas.

LUKE S. MURDOCK.

Witnesses:

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