

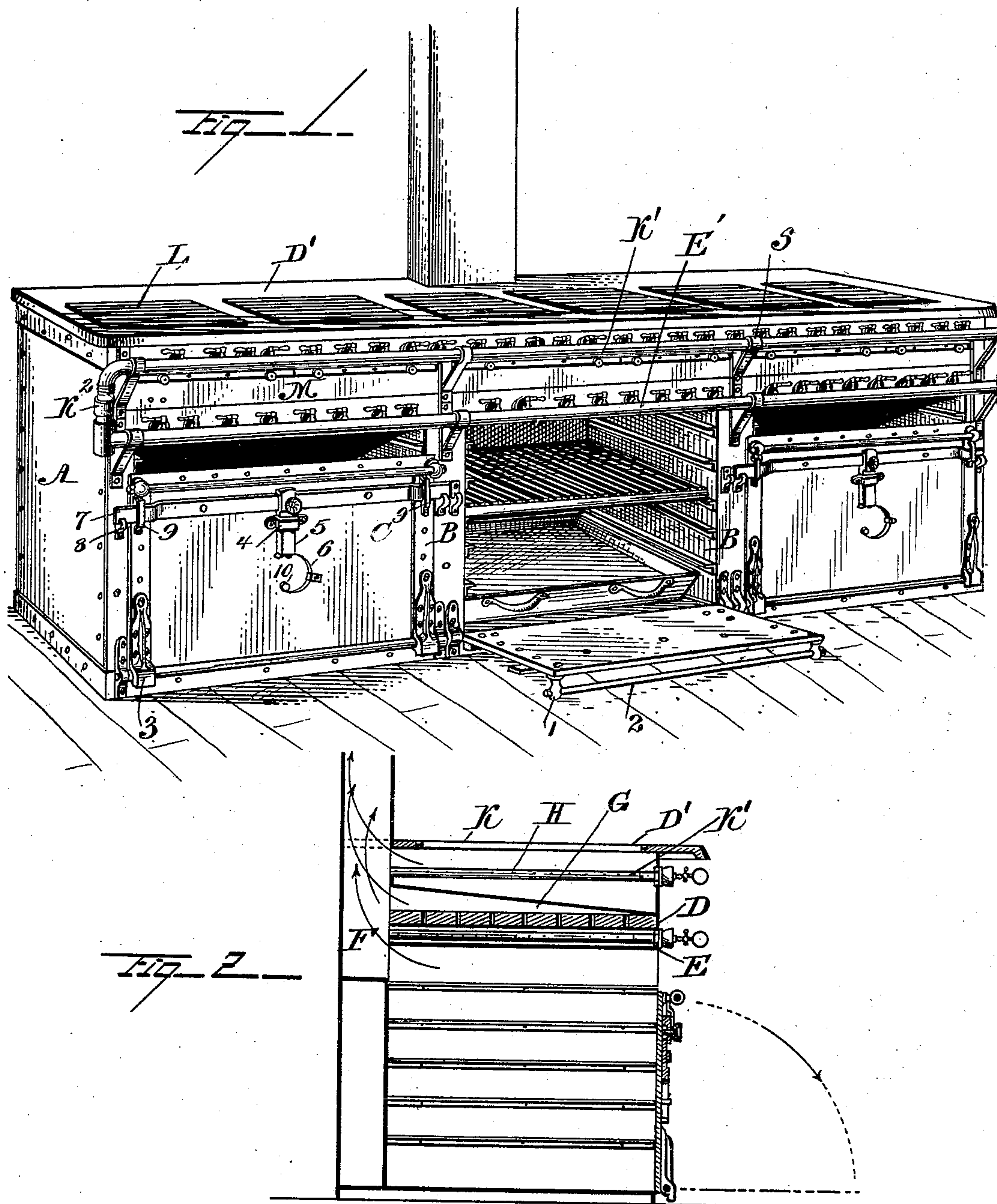
(No Model.)

2 Sheets—Sheet 1.

W. W. GOODWIN.
GAS RANGE.

No. 477,408.

Patented June 21, 1892.



Witnesses:

Blue Nolan
Chas. Beck

Inventor

William W. Goodwin
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H. H. H. H.

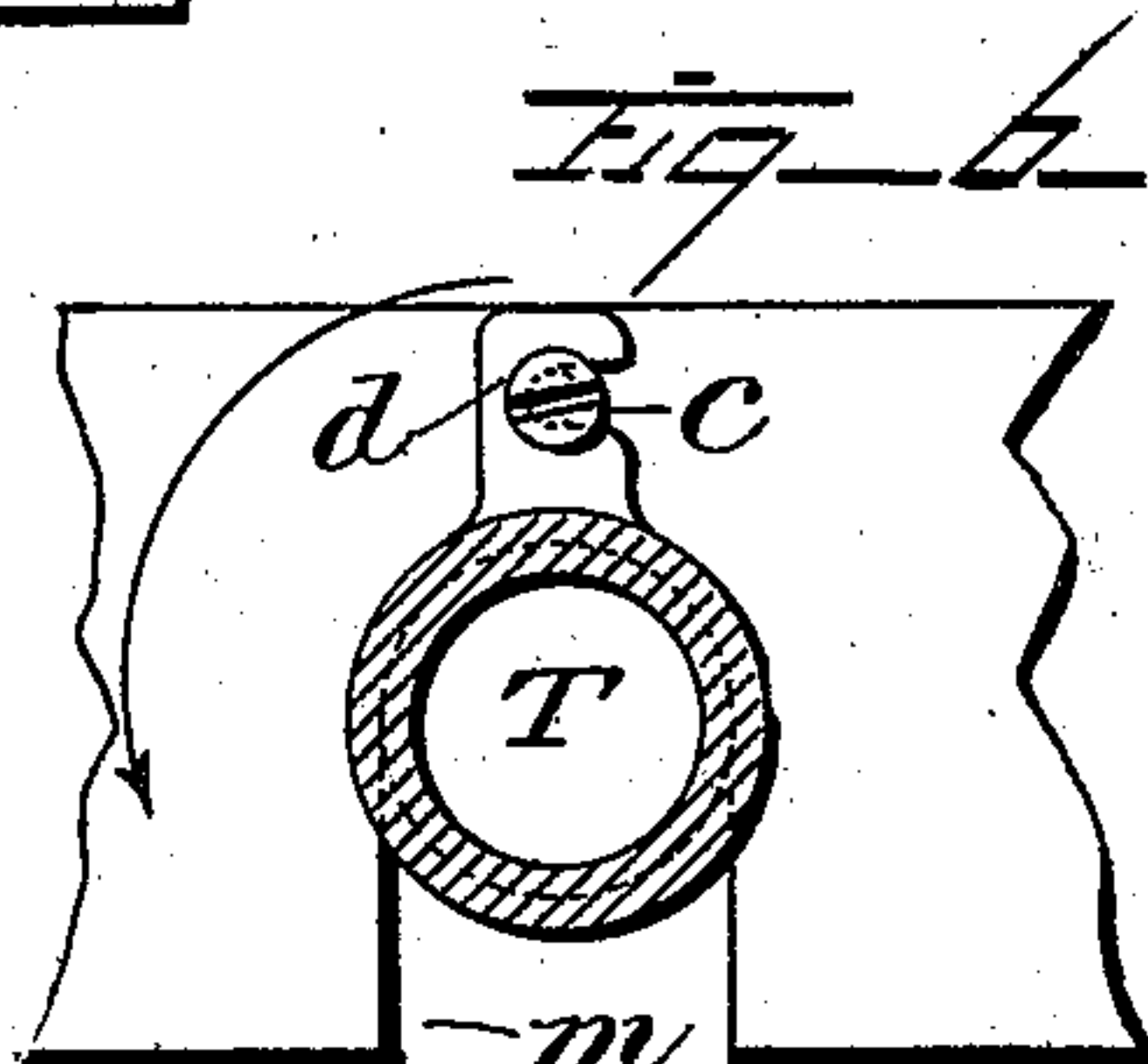
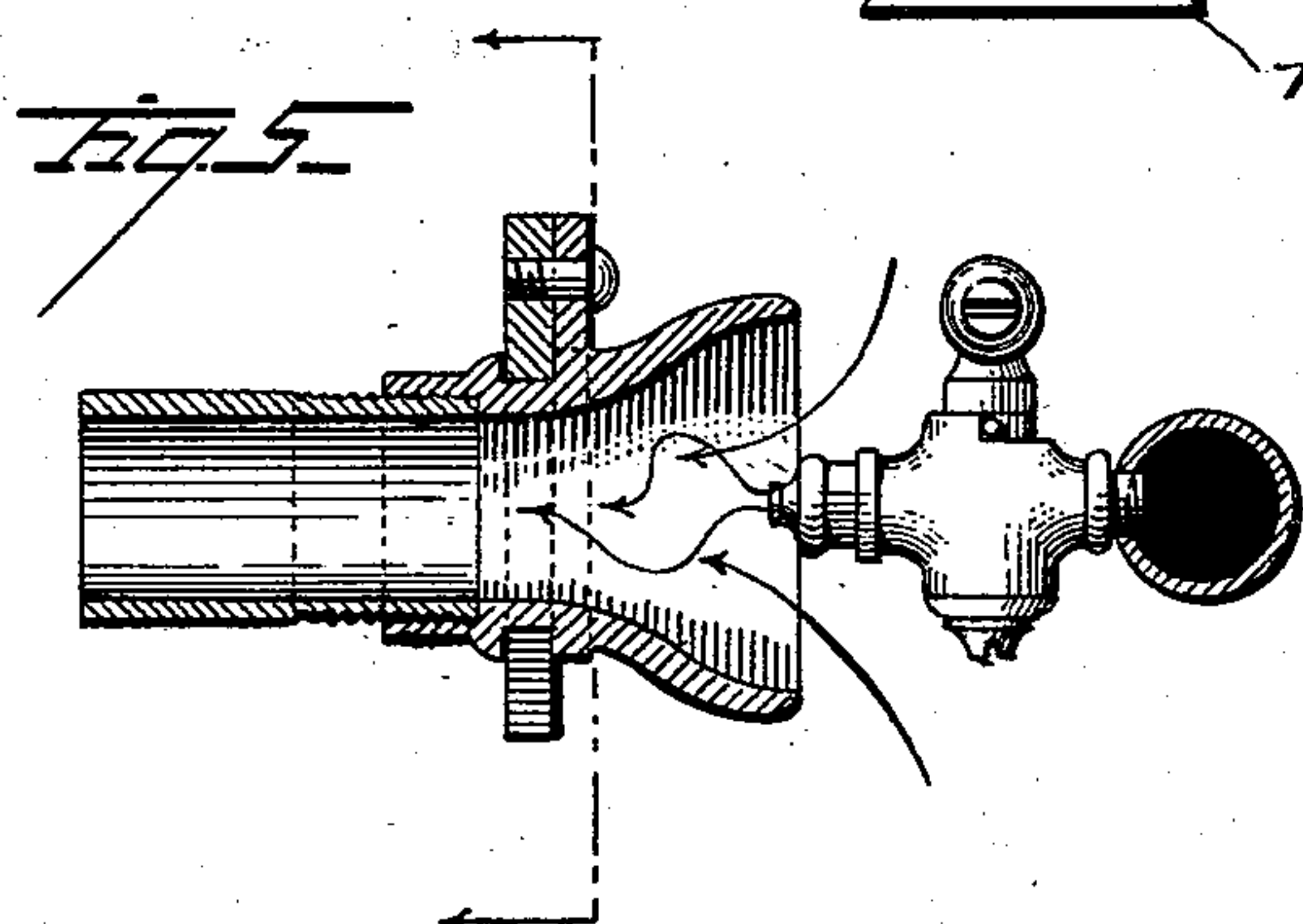
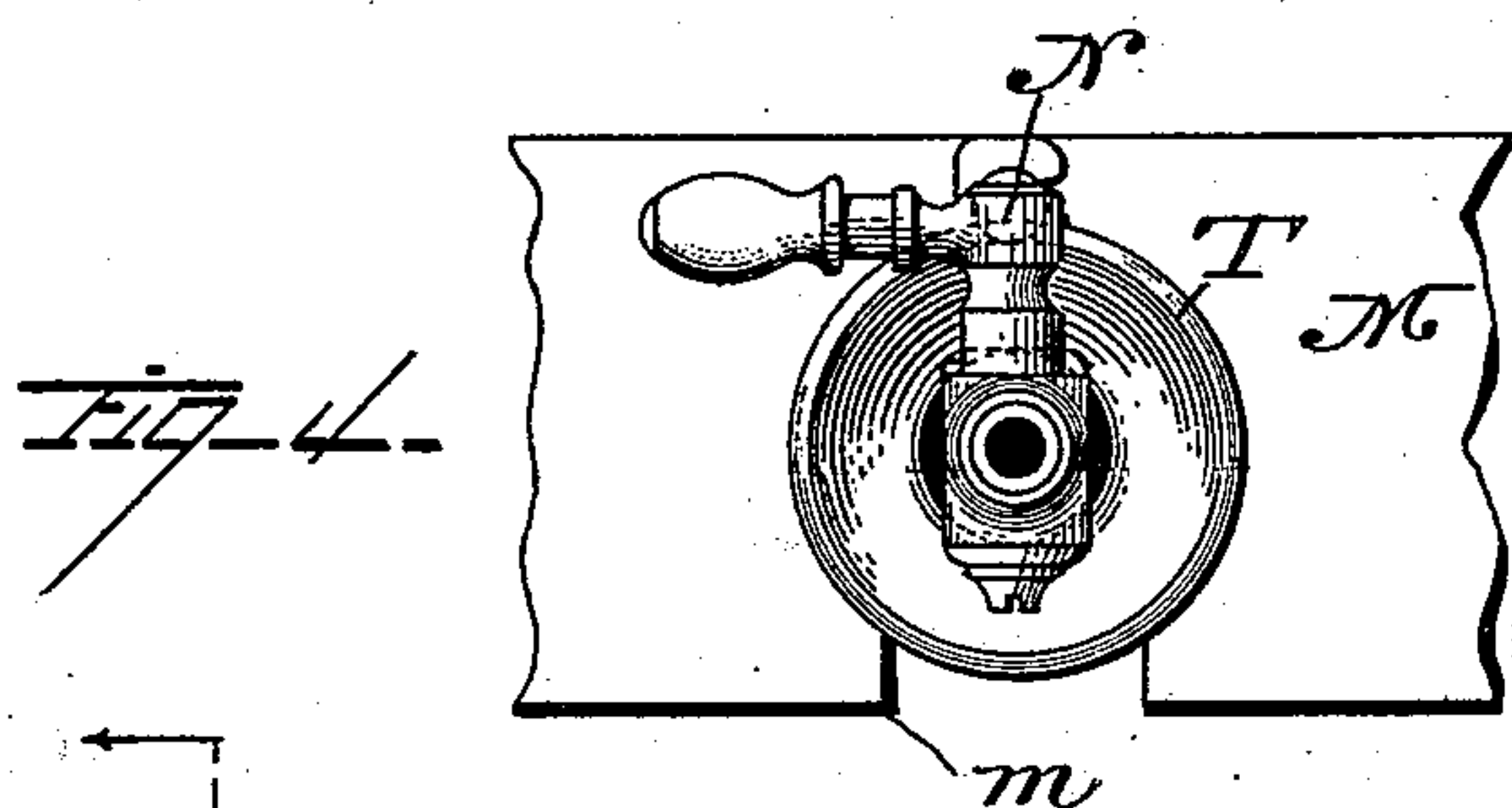
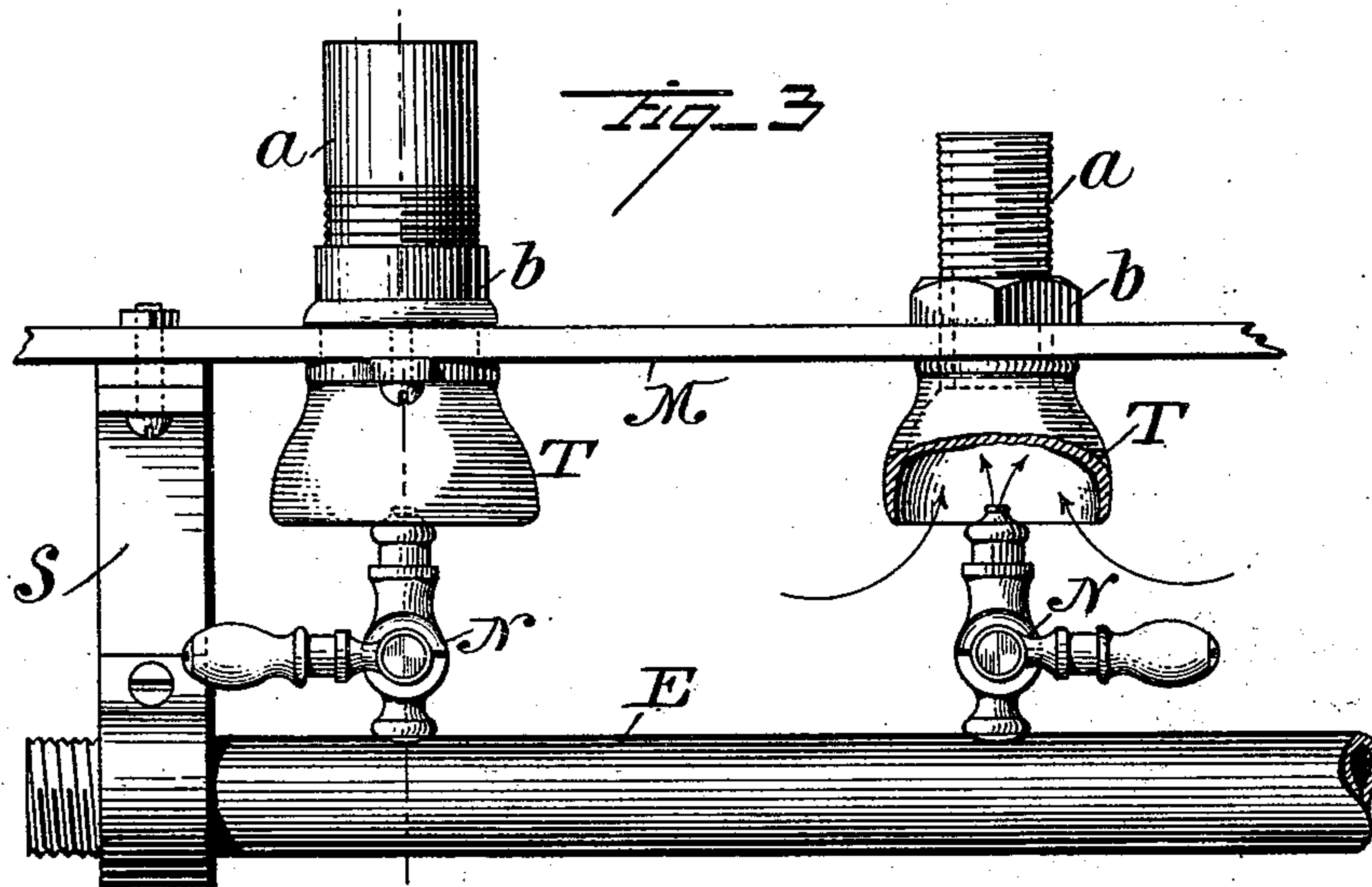
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WITNESSES:
John Nolan
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INVENTOR
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UNITED STATES PATENT OFFICE.

WILLIAM W. GOODWIN, OF BORDENTOWN, NEW JERSEY.

GAS-RANGE.

SPECIFICATION forming part of Letters Patent No. 477,408, dated June 21, 1892.

Application filed December 23, 1889. Serial No. 334,680. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. GOODWIN, a citizen of the United States, residing at Bordentown, Burlington county, State of New Jersey, have invented certain new and useful Improvements in Gas Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to gas cooking apparatus; and it consists of the combination and arrangement of two or more heating-chambers in a single apparatus of the class usually called "ranges," of the combination and arrangement thereof with mechanism to supply a gas heating-flame and with flues to carry off the products of combustion, and of the said parts in combination with a second series of gas heating devices with said flues and means for utilizing the same to impart heat to cooking utensils placed thereon, and, finally, my invention consists of the improvements in the constructions of the roasting-chamber and of the gas-supplying tubes.

Referring to the drawings, Figure 1 is a front elevation of a gas-range of three inclosed roasting-chambers constructed in accordance with my invention and involving the several details thereof. Fig. 2 is a vertical sectional view thereof, designed to show more particularly the construction and relative arrangement of the roasting-chambers, the gas-supplying devices, and the flues to carry off the products of combustion. Fig. 3 is a plan view of a detached portion of the gas-supplying devices; and Figs. 4, 5, and 6 are front and sectional views, respectively, of a special construction of that part of the gas-supplying device constituting the mixing-chamber and showing its arrangement relatively to the main gas-supply tube and the gas-jets supported thereon.

A frame or casing A of appropriate external shape is constructed to contain the several parts of the device and is separated into compartments or chambers by means of vertical partitions B B. The said chambers are preferably lined on the sides and bottom with non-heat-conducting material and provided with supports for grated shelves to support pans or other cooking utensils. The top of each chamber is closed by a non-inflammable

covering D, preferably of fire-brick perforated to allow the passage through the same of part of the products of combustion from the lower gas-burning jets to the flue-chamber, the gas-jets E being arranged within the roasting-chamber and immediately beneath the perforated fire-brick. This arrangement is shown more clearly by reference to Fig. 2, in which D is the perforated fire-brick covering, E the gas-burning apparatus supplying heat to the roasting-chamber, F the main-flue partition, and G the covering above the fire-brick constituting the flue-chamber leading to the main flue F.

H is a second or upper series of gas-burning apparatus arranged within and supplying heat to the large upper heating-chamber of the range, and from thence through the grated coverings L, which rest upon the top surface or covering D' of the range and which are adapted to supply heat to cooking utensils placed thereon or for broiling purposes. The top of the flue-chamber G is arranged at an inclination upward to the back of the range, so that grease usually accumulating at that point and stopping up the burner-jets will be more readily drained off to the front of the range by running down the inclined surface of the flue-chamber. Gas is supplied to the range through a common pipe K², connecting with two gas-supply pipes K' and E', arranged one above the other in the direction of the length of the range and supported upon brackets S to hold them a distance of some three to four inches from the front side M of the range, the object being to allow room for the application of the gas-jet N and mixing-chamber T. (Shown in detail in Fig. 3.)

The mixing-chamber, which is an open bell-mouthed tube, may be attached to the frame M, as shown on the right-hand side of Fig. 3, being secured thereto by the nut b encircling the screw-threaded end a of the tube. In order, however, to readily remove these mixing-chambers for cleaning purposes, I prefer to construct or attach them to the plate M, as shown on the left-hand side of Fig. 3 and in detail in Figs. 4, 5, and 6. The plate M is slotted at m and above the slot is provided with a projecting pin having a head c, and between the bell-mouthed end of the tube and the rear portion thereof, which extends

through the plate M, there is an upwardly-projecting hook *d*. The mixing-chamber tube T is circularly grooved between the bell-mouthed end and the rear tubular portion, so that it may be inserted within the slot *m* and the hook *d* passed over the pin *c* and thus supported in position. This mode of constructing and attaching the mixing-chamber is an important part of my invention; but a more important part in connection with the gas-supplying devices is the making of the mixing-chamber T with an open end or bell-mouth and arranging the same relatively to the gas-jet, which proceeds from the gas-tube supported from the front frame of the range and directly in front thereof, and in order that there shall be no contact between the parts of the gas-jet and the mixing-chamber; and the chief object of this arrangement is that the gas-jets will remain perfectly cool and no heat be conveyed thereto from the gas-burning apparatus connected with the mixing-chambers and other tubes.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement, in a gas-range, of a roasting-chamber with gas-jets supported therein, a perforated non-inflammable top covering to said roasting-chamber supported therein immediately above said gas-jets, and a flue-chamber over said perforated covering and communicating at the rear with an upright flue which communicates, also, with the said roasting-chamber, substantially as described.

2. The combination and arrangement, in a gas-range, of a roasting-chamber with gas-jets supported therein, a perforated non-inflammable top covering to the same supported immediately above said gas-jets, a flue-chamber over said perforated covering and leading to a flue-partition communicating with said roasting-chamber, and a second heating-chamber also communicating with said common flue-partition and having one or more openings provided with grated coverings and with a second series of gas-jets supported therein, substantially as described.

3. The combination and arrangement, in a gas-range, of a roasting-chamber with gas-jets supported therein, a perforated non-inflammable top covering to the same supported immediately above said gas-jets, and a flue-chamber over said perforated covering, constructed with a top inclined upward to the back of the chamber, a second heating-chamber over the same having openings provided with grated coverings and inclosing a series of gas-heating burners, and a flue-partition communicating with said chambers, substantially as described.

4. The combination, in a gas-range, with a supporting-frame having a front plate M, slotted at *m* and provided above the slot with a projecting pin *c*, of a gas-supply tube circularly grooved to adapt it to be inserted in said slot *m* and having a hook *d*, adapted to support the device on said pin *c*, substantially as described.

5. The combination and arrangement, with the frame M of a gas-range, having projecting open bell-mouthed mixing-chambers T supported thereon, of a gas-supply tube E', supported from the front of the frame M by brackets S and feeding a series of gas-jets, as N, located opposite the bell-mouthed openings and extending partially within the same, substantially as described.

6. The combination and arrangement, in a gas-range, of a roasting-chamber having the vertical sides and bottom thereof lined with non-heat-conducting material, with gas-jets supported therein, a perforated non-inflammable top covering to each of the same supported immediately above said gas-jets, a flue-chamber above said perforated covering, and a vertical flue-partition communicating directly with said flue-chamber and with said roasting-chamber, substantially as described.

In testimony whereof I have hereunto affixed my signature this 5th day of December, A. D. 1889.

WILLIAM W. GOODWIN.

Witnesses:

ANDREW ZANE,
H. T. FENTON.