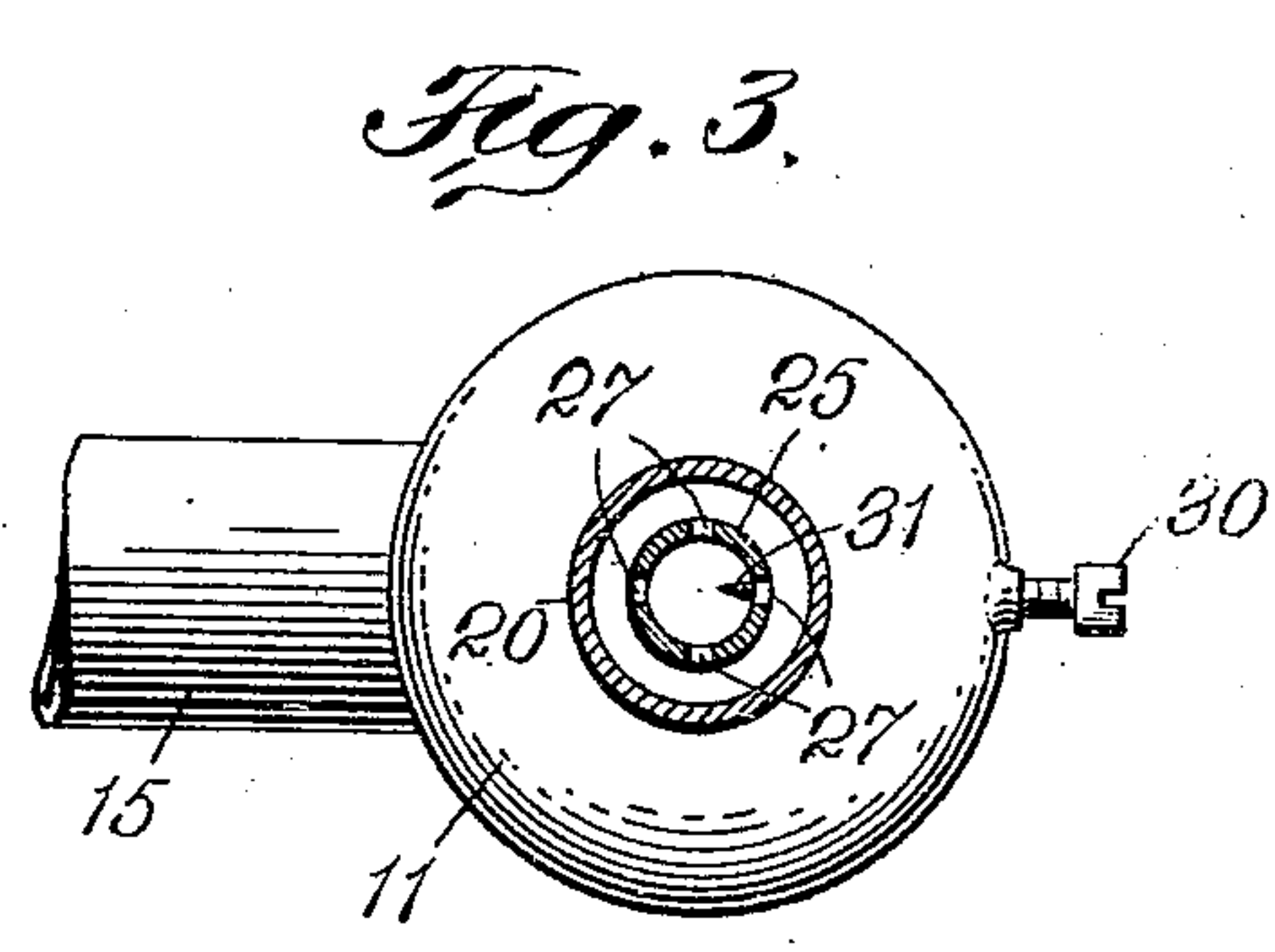
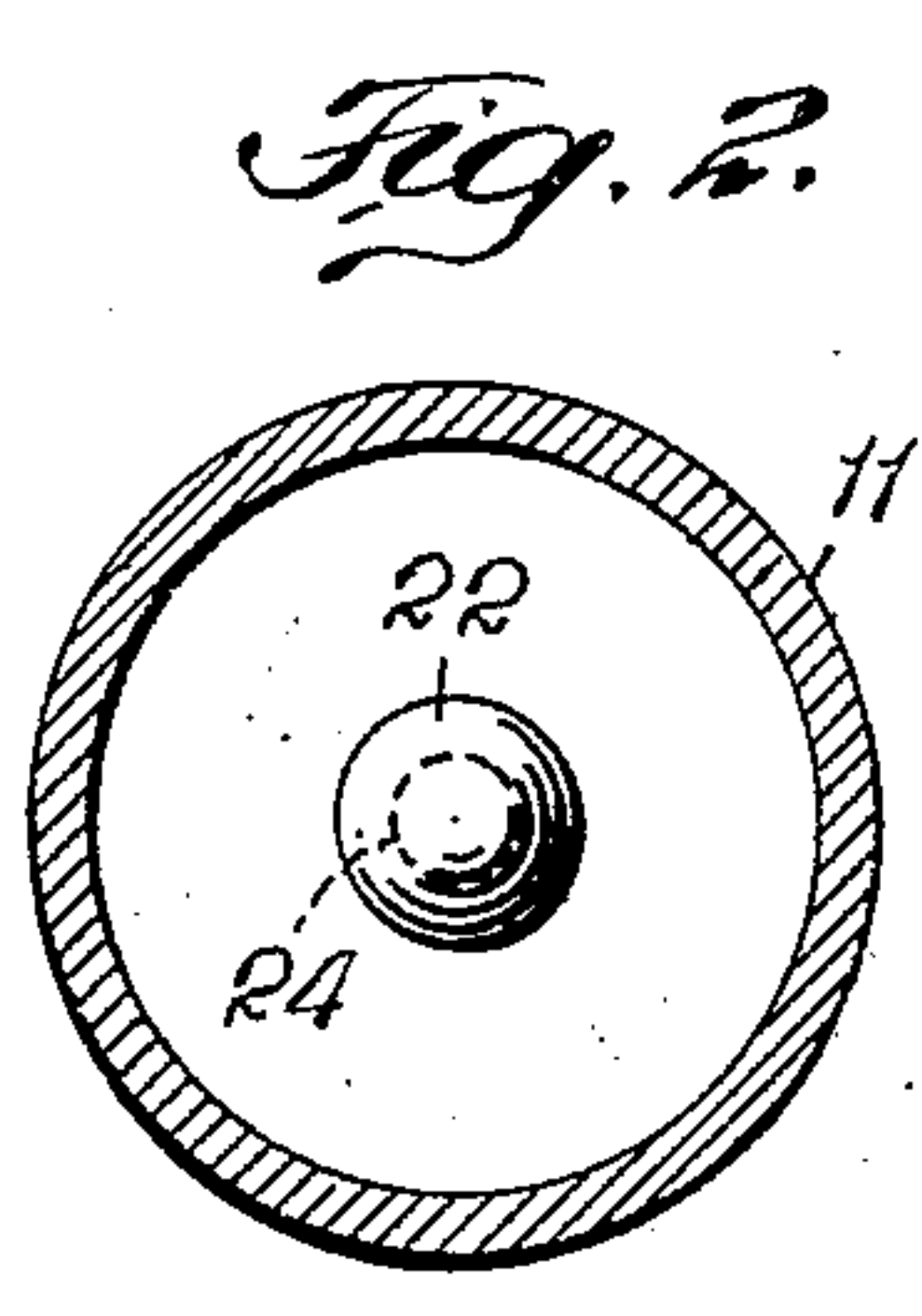
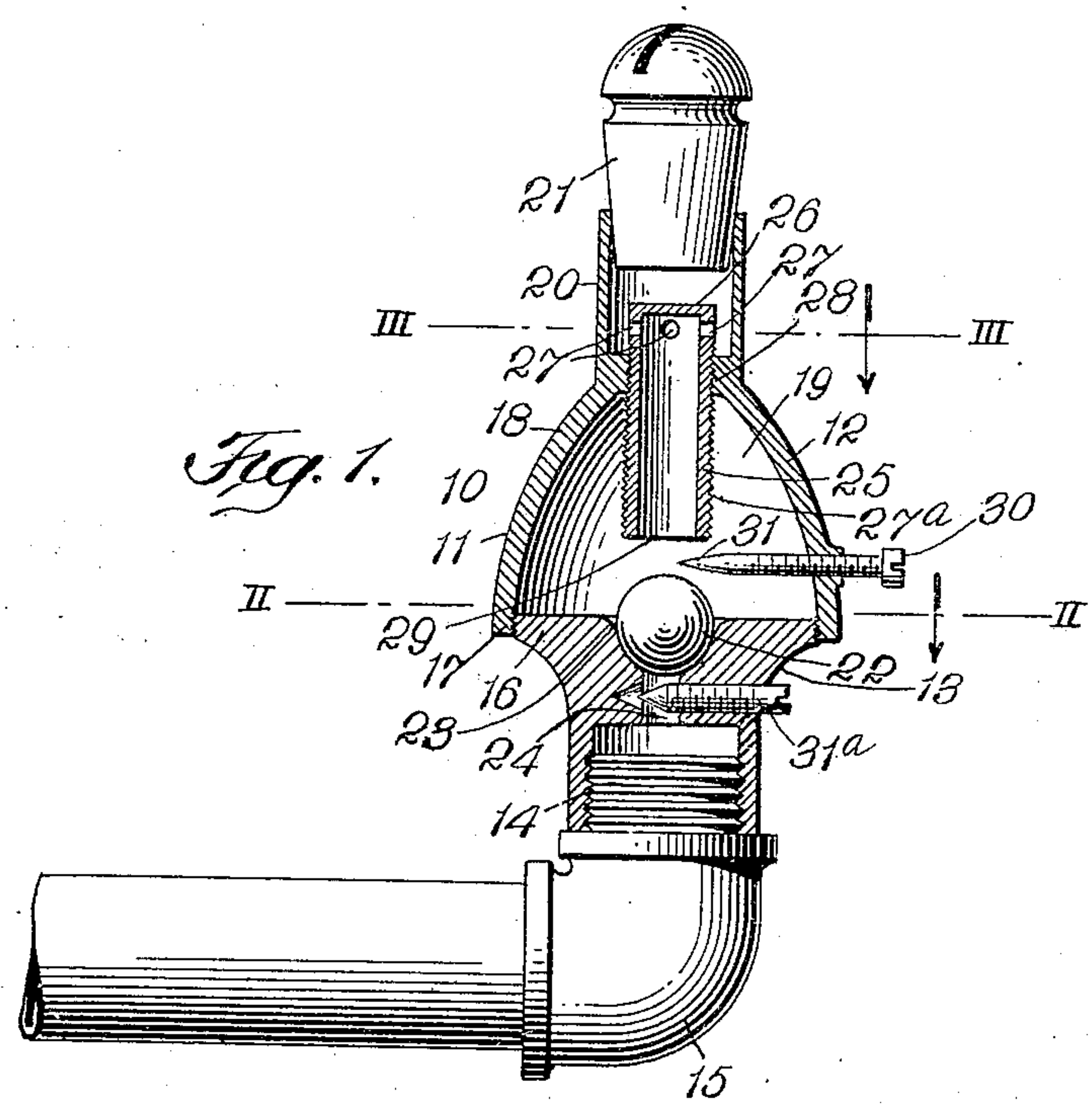


D. O. ROSE.
 BURNER.
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 954,702. Patented Apr. 12, 1910.



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BURNER.

954,702.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DANIEL O. ROSE, a citizen of the United States, and a resident of New York, borough of Bronx, county 5 and State of New York, have invented certain new and useful Improvements in Burners, of which the following is a full, clear, and exact description.

This invention relates more particularly 10 to a self-governing gas burner.

The primary object of the invention is to provide a simple and efficient device which may be attached to the ordinary gas fixture and in which the pressure of the gas to the 15 tip may be automatically controlled so that the supply of gas will be uniform no matter what the pressure or flow of the gas may be, thus materially economizing in the amount of gas consumed, and at the same 20 time permitting a sufficient and proper amount of gas to be supplied to the burner tip for lighting purposes.

Another object of the invention is to provide a device which may be easily and 25 cheaply made and assembled so that the same will cost very little more than that of the ordinary gas burner.

A further object of the invention is to provide simple and efficient means which will 30 prevent the gas from being entirely shut off in case of unusual pressure from any cause.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accom- 35 panying drawings which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is a vertical 40 section of one form of device embodying my invention. Fig. 2 is a sectional plan view taken on the line II—II of Fig. 1; and Fig. 3 is a sectional plan view taken on the line III—III of Fig. 1.

45 The device or burner 10 has a casing 11 which may comprise two members 12 and 13. The supply member 13 may have the usual threaded part 14 adapted to be detachably held to the usual gas fixture 15, and said 50 member 13 has an enlarged part or flange 16 which may be threaded so as to engage

the threads 17 in the end of the burner member 12. This member 12 has an enlarged part 18 forming a chamber 19 within the same, and a reduced part 20 in which 55 is adapted to fit the burner tip 21.

To control the gas or other medium and regulate the supply of the same to the burner tip and to partly or wholly cut off the supply in case of excessive pressure, I 60 arrange within the casing a valve 22. This valve may be in the form of a ball, and is adapted to fit into a recess 23 forming a seat for the valve. The valve seat 23 is located within the chamber 19 of the casing, and in 65 the member 13 is an opening 24 which is adapted to communicate with the fixture 15 or source of supply, and which is controlled by the valve 22, and above the valve 22 in the path of movement of the same 70 is a device or member 25. This member 25 is in the form of a tube, and has one end provided with a cap 26, and with lateral openings 27 for the escape of the gas, and said member 25 may be threaded, as at 27^a, 75 to engage a threaded opening in a flange 28 extending transversely of the casing 11 of the member 12 above the enlarged chamber 19. The member 25 may be adjustable in the member 12 relatively to the valve seat 80 23, and the lower end thereof is adapted to form a seat for the valve so that the gas may be entirely shut off under excessive pressure or partly shut off according to whether or not the valve is resting against 85 the seat 23 or the seat 29 of the member 25.

It will be understood that the valve 22 is of such a size and weight that it will be raised from the seat 23 under the normal pressure of the gas so that the proper 90 amount of gas or other medium may pass through the member 25, but in case of excessive pressure, the said valve will be forced against the seat 29 of the member 25 to entirely shut off the gas or only a part 95 thereof according to the pressure. By this means the supply of gas to the burner tip may be automatically controlled no matter what the pressure may be, and said device will economize in the use of gas, as much 100 waste often occurs where a number of burners are connected to a single fixture and only

a part of the same lighted, for in this case the entire pressure will pass to one or more of the lighted burners, and this excess of gas is in the nature of waste.

5 It is best not to permit the valve 22 under any conditions to entirely shut off the gas by engaging the seat 29 of the device or member 25, and for this purpose a screw or device 30 has its threaded part passed
10 through a threaded opening in the member 12, and may have its inner end pointed, as at 31, and interposed between the member 25 and the valve 22. As will be seen, by adjusting the screw 30, the movement of the
15 valve 22 may be limited so that the passage way through the member 25 will not be entirely cut off, and the extent of this regulation may be varied by the distance the end 31 extends inward over the valve 22. This
20 will prevent the gas from being cut off in case of undue pressure and thereby put out the light, and after the pressure is reduced allow the gas to escape which might result in accidents.

25 A screw 31^a forming a valve is located in the member 13 and is adapted to partly or wholly close the passage or opening 24 for the gas under the valve 22. This prevents crowding of the valve to one side by excessive pressure as a part or all of the gas
30 may be cut off by adjusting the screw 31^a.

From the foregoing it will be seen that a simple and efficient governing burner for gas is provided which will automatically
35 regulate the flow of gas to the burner tip; that simple means is provided for controlling the gas or other medium, and that said device may be readily made and assembled so that the cost will not exceed to any great
40 extent that of the ordinary form of burner.

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

1. A burner comprising a casing having a
45 burner member and a supply member for attachment to a fixture, said supply member being provided with a seat and a passage for the gas, a valve normally engaging the seat, an adjustable member located above
50 the valve and having an opening adapted to be controlled by the valve, and means extending inwardly from said supply member above said valve and between the valve and the adjustable member for preventing the
55 complete closing of the opening in said adjustable member by said valve.

2. A burner comprising a casing having a burner member and a supply member for attachment to a fixture, said supply member
60 being provided with a seat and a passage for the gas, a valve normally engaging the seat, said burner member having an opening adapted to be controlled by the valve, and

means extending inwardly from said supply member above said valve and between
65 the valve and the opening in the burner member for preventing the complete closing of the opening in said burner member by said valve.

3. A burner comprising a casing, a burner
70 member and a supply member for attachment to a fixture forming an enlarged chamber between them, said supply member being provided with a seat and a passage for the gas, a valve adapted to engage the seat,
75 a member located above the valve and having an opening adapted to be controlled by the valve, and a screw extending inwardly from said supply member and having a pointed end interposed between said member
80 and the valve to control the movement of the latter.

4. In a burner, the combination with a member having an enlarged cup-shaped portion forming a chamber within the same
85 and a reduced part for the burner tip, of a tubular member having one end closed and provided with lateral openings for the gas and having its inner end projecting within the chamber, a supply member having an
90 enlarged head connected to the enlarged part of the other member and provided with an opening for the gas and with a valve seat, a valve in the chamber below the tubular member and adapted to normally rest on
95 said seat, and a screw extending inwardly and having a pointed end adapted to regulate the movement of said valve.

5. In a burner, the combination with a member having an enlarged cup-shaped portion forming a chamber within the same and a reduced part for the burner tip, of a supply member having an enlarged head connected to the enlarged part of the other member, a valve adapted normally to be
100 seated in the supply member, and a screw extending inwardly and adapted to regulate the movement of said valve.

6. A burner comprising a casing having a burner member and a supply member for
110 attachment to a fixture, said supply member being provided with a seat and a passage for the gas, a valve normally engaging the seat, an adjustable member located above the valve and having an opening adapted to
115 be controlled by the valve, and adjustable means extending inwardly from said supply member above said valve and between the valve and the adjustable member for limiting the movement of the valve and
120 preventing the complete closing of the opening in said adjustable member by said valve.

7. A burner comprising a casing having a burner member and a supply member for attachment to a fixture, said supply mem-
125 ber being provided with a seat and a passage

for the gas, a valve normally engaging the
seat, said burner member having an opening
adapted to be controlled by the valve, and
adjustable means extending inwardly from
5 said supply member above said valve and
between the valve and the opening in the
burner member for limiting the movement
of the valve and preventing the complete

closing of the opening in said burner mem-
ber by said valve.

10

This specification signed and witnessed
this 19th day of March A. D. 1909.

DANIEL O. ROSE.

Witnesses:

LESTER C. TAYLOR,
M. DINNHAUPT.