

No. 693,694.

Patented Feb. 18, 1902.

A. R. FARMER.
FLASH LAMP.

(Application filed June 10, 1901.)

(No Model.)

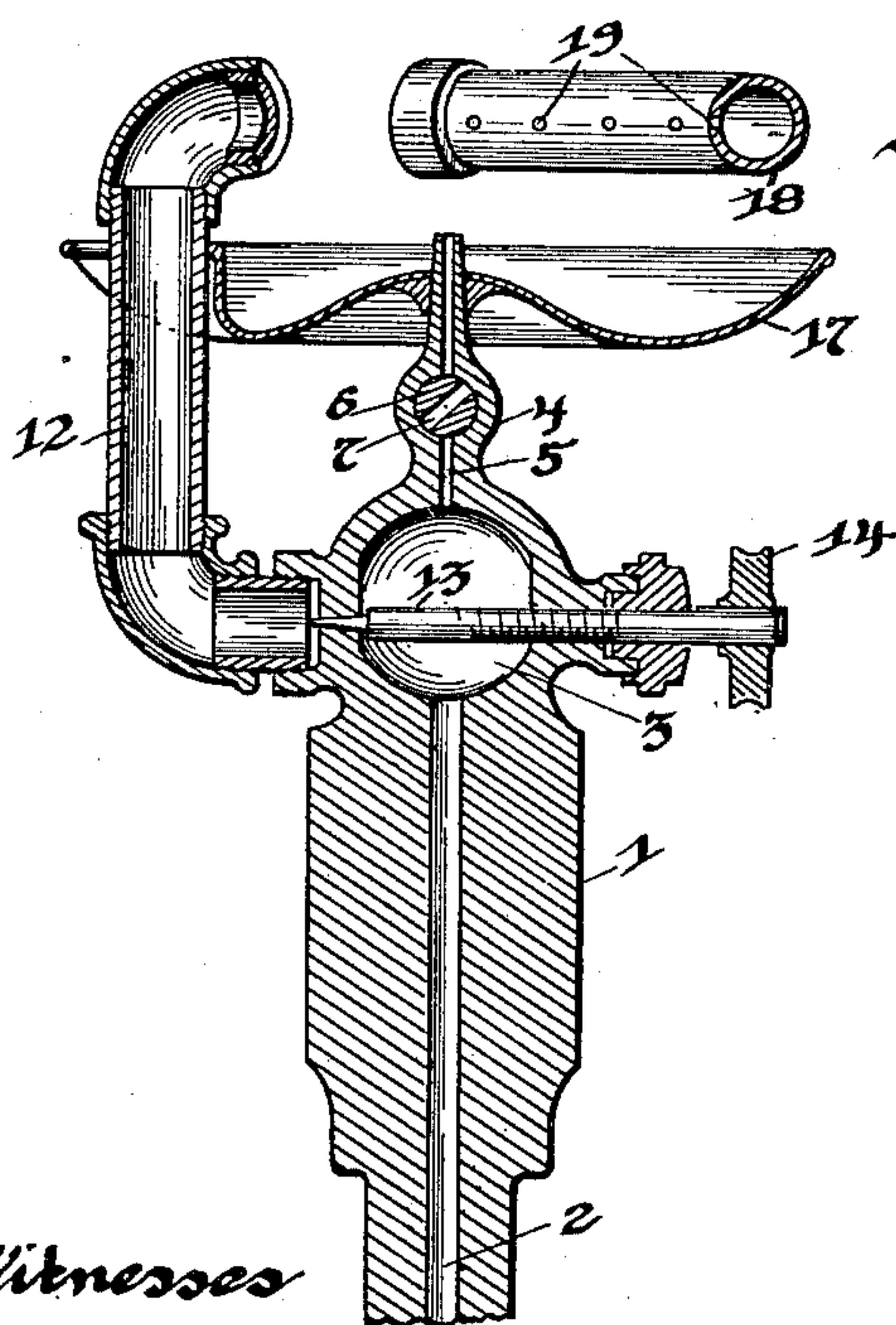
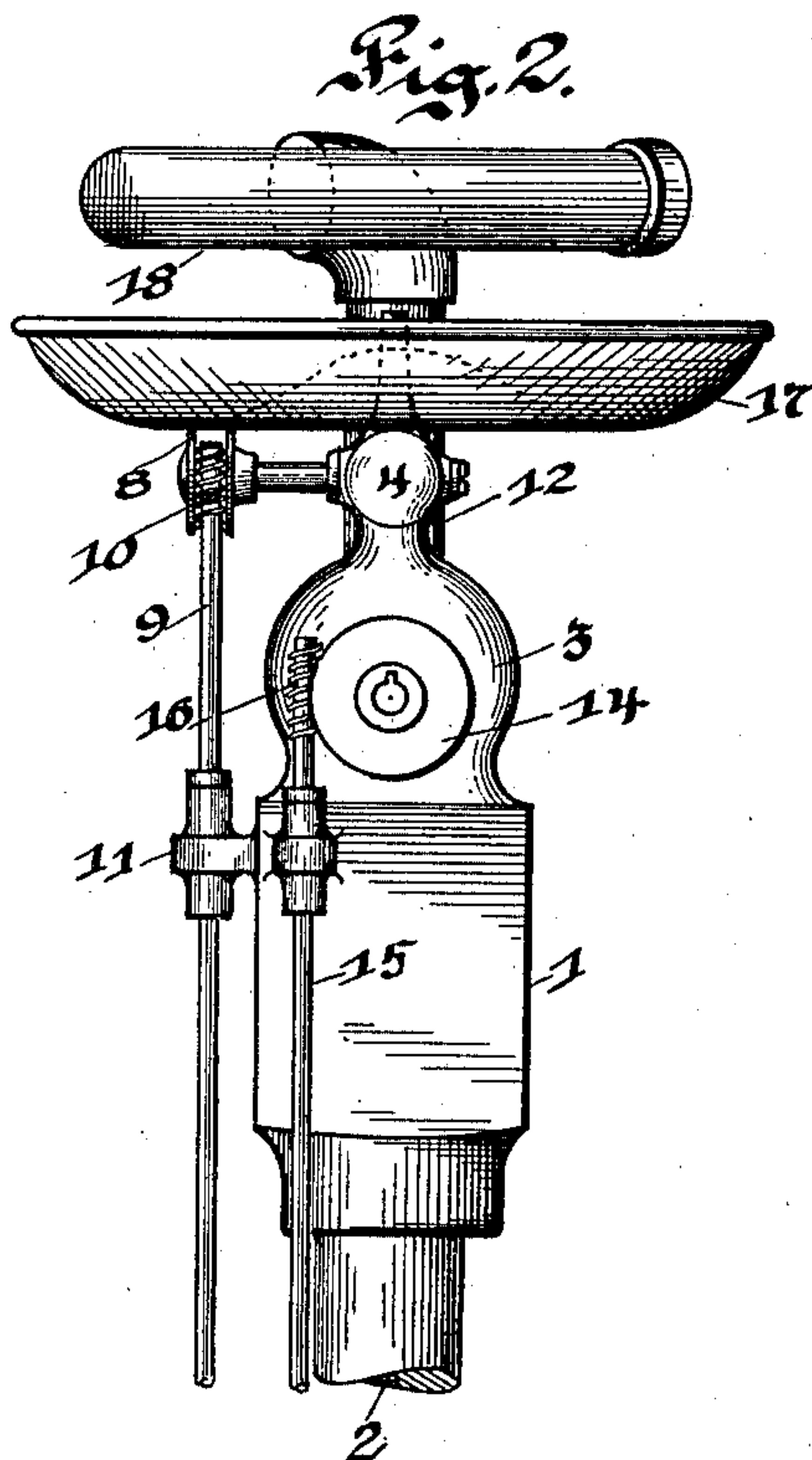
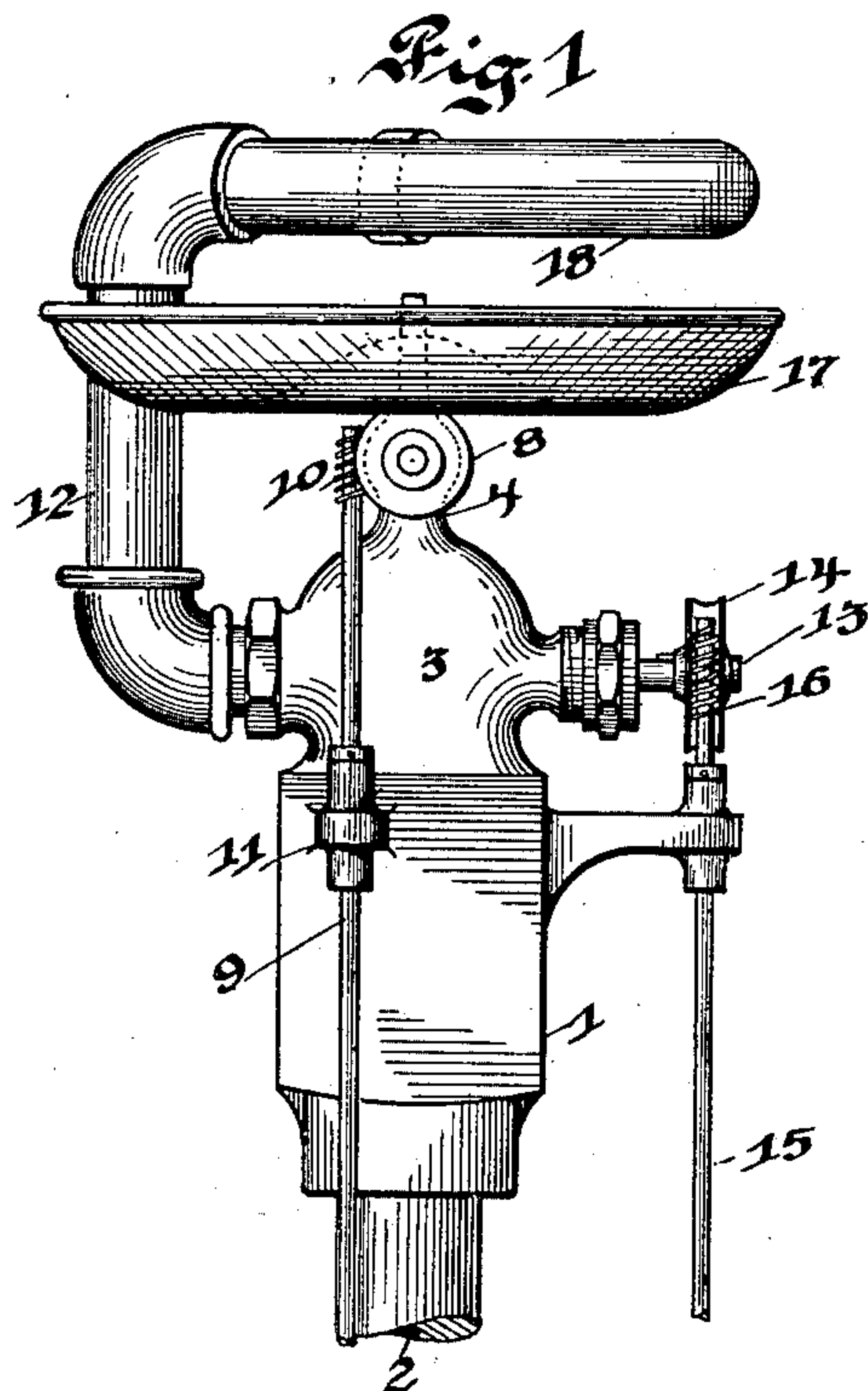
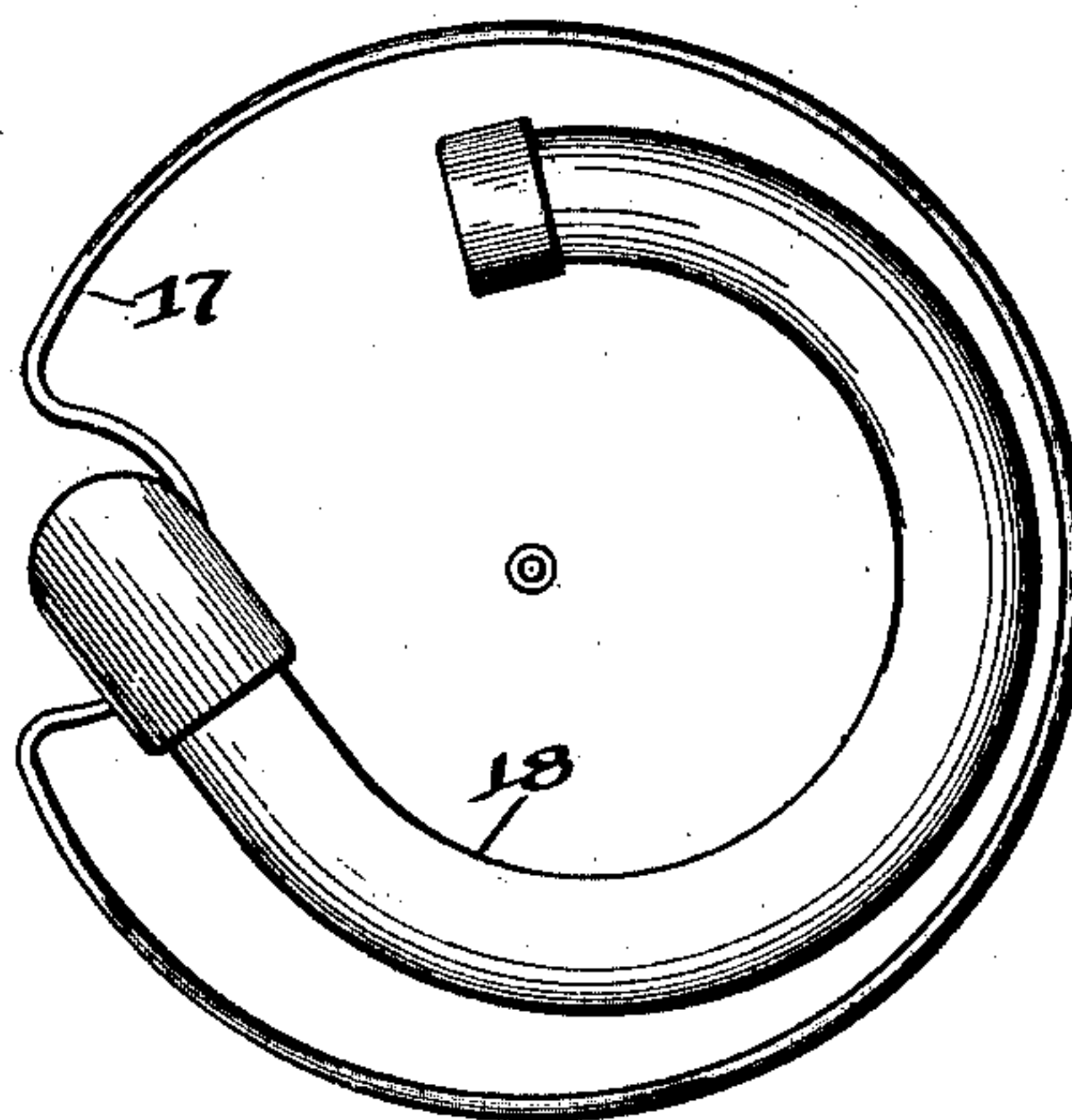


Fig. 3. Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

ARCIDAS R. FARMER, OF ST. LOUIS, MISSOURI.

FLASH-LAMP.

SPECIFICATION forming part of Letters Patent No. 693,694, dated February 18, 1902.

Application filed June 10, 1901. Serial No. 63,956. (No model.)

To all whom it may concern:

Be it known that I, ARCIDAS R. FARMER, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Flash-Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to flash-lamps; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of this invention is to provide an improved combustion-burner for the purpose of creating light by the use of chemicals, and consisting of a suitable burner-head having a passage therethrough and carrying a burner to which the chemicals are supplied and having valves for controlling the passage of the chemicals into the burner.

In the drawings, Figures 1 and 2 are side elevations showing my improved burner. Fig. 3 is a vertical section showing the passages and the valves located therein. Fig. 4 is a plan view.

1 denotes the burner-head, of any suitable shape and size, having a passage 2 formed therein and a chamber 3, into which the said passage 2 opens. Above the chamber 3 is an extension or nozzle 4, through which is a small passage 5, controlled by a rotary valve 6, having an opening 7 therethrough, which may be brought to register with the opening 5, and thereby permit the chemicals to pass to the end of the said nozzle 4. A wheel 8 is connected to the valve 6, and a rod 9, provided with a worm 10 and supported in bearings 11, meshes with the teeth on the periphery of the wheel 8, and thereby affords means for operating the valve 6 when the burner is supported out of reach.

It will of course be understood that the operating-rod 9 may be omitted, and it is to be used only when the burner is supported at such a height that the said valve cannot be operated by hand.

A pipe 12 is connected to the burner-head at the chamber 3 by means of suitable connections, and a small opening leads from the said chamber 3 into the said pipe 12. A needle-valve 13 is threaded into an opening formed in the wall of the chamber 3 and pro-

jects into the opening leading from the said chamber into the pipe 12, and thereby affords means for opening and closing the said opening. A wheel 14 is feathered on the outer end of the valve-rod 13 and may be operated by the rods 15 and the worm 16, the said rod being supported in any suitable manner by the burner-head 1. This rod may be omitted when the burner is supported where the wheel 14 can be operated by hand. A pan 17 is supported by the upper end of the nozzle 4, and a coil of pipe 18 is carried by the end of the pipe 12 above the said pan 17, and the said coil 18 has a series of openings 19 formed in its inner side to permit the chemicals to pass therethrough and be ignited. In use the chemicals or other materials such as are burned are supplied through the passage 2 and enter the chamber 3. A portion of the chemicals may be passed through the opening 5 in the nozzle 4 by operating the valve 6, and they may be ignited at the upper end of the said nozzle. The chemicals may also be permitted to pass through the opening leading from the chamber 3 into the pipe 12. The chemicals then pass from the pipe 12 into the coil 18 and through the openings 19, where they are ignited, forming a ring of flame above the pan 17. The chemicals may be ignited at the nozzle 4 or at the coil 18 or at both at the same time, as desired.

I claim—

1. A flash-burner, consisting of a burner-head having divergent passages formed therein, one of said passages forming a central burner, a burner connected to another of said passages and extending around the said central burner, and an independent valve located in each of said passages whereby the fuel can be made to flow into either or both of the said burners, substantially as specified.

2. A flash-burner, consisting of a burner-head having divergent passages formed therein, one of said passages forming a central burner, a tubular burner leading from another of said passages and being bent into circular form around the central burner, and valves located in said passages whereby the fuel can be made to flow into either or both of the said burners, substantially as specified.

3. A flash-burner, consisting of a burner-head, a nozzle leading from said burner-head and forming a burner, suitable tubular connections leading from the burner-head, a
5 burner carried by said tubular connections and extending around the said nozzle, and valves for controlling the flow of the fuel so that either or both of the burners can be used at will, substantially as specified.
- 10 4. A flash-burner, consisting of a burner-head, a burner connected thereto, a pipe leading from the burner-head, a burner connected

to said pipe and extending around the first-mentioned burner, and means for controlling the flow of fuel into said burners, so that 15 either can be used independently of the other, or both used at the same time, substantially as specified.

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

ARCIDAS R. FARMER.

Witnesses:

ALFRED A. EICKS,
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