

C. F. BOOTH.
SPIRIT LAMP.

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990,520.

Patented Apr. 25, 1911.

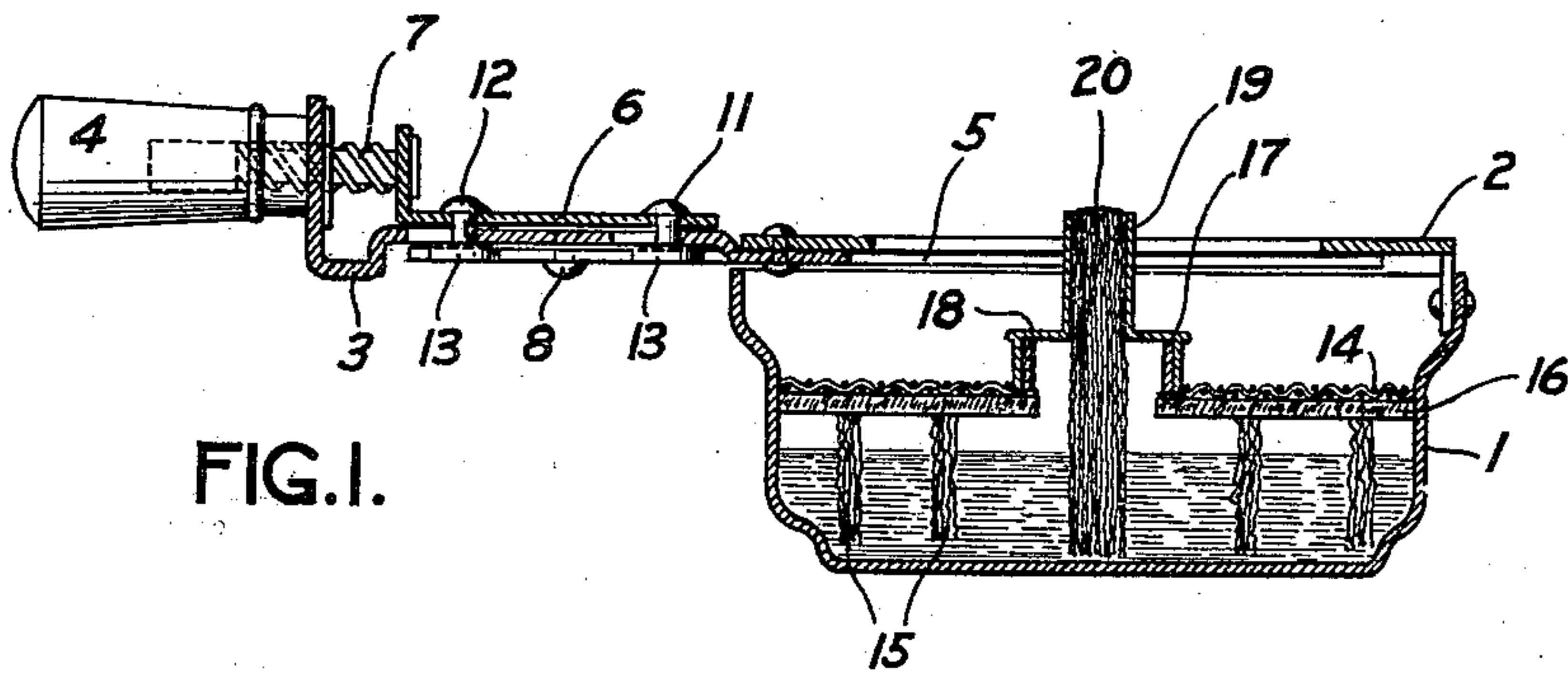


FIG. 1.

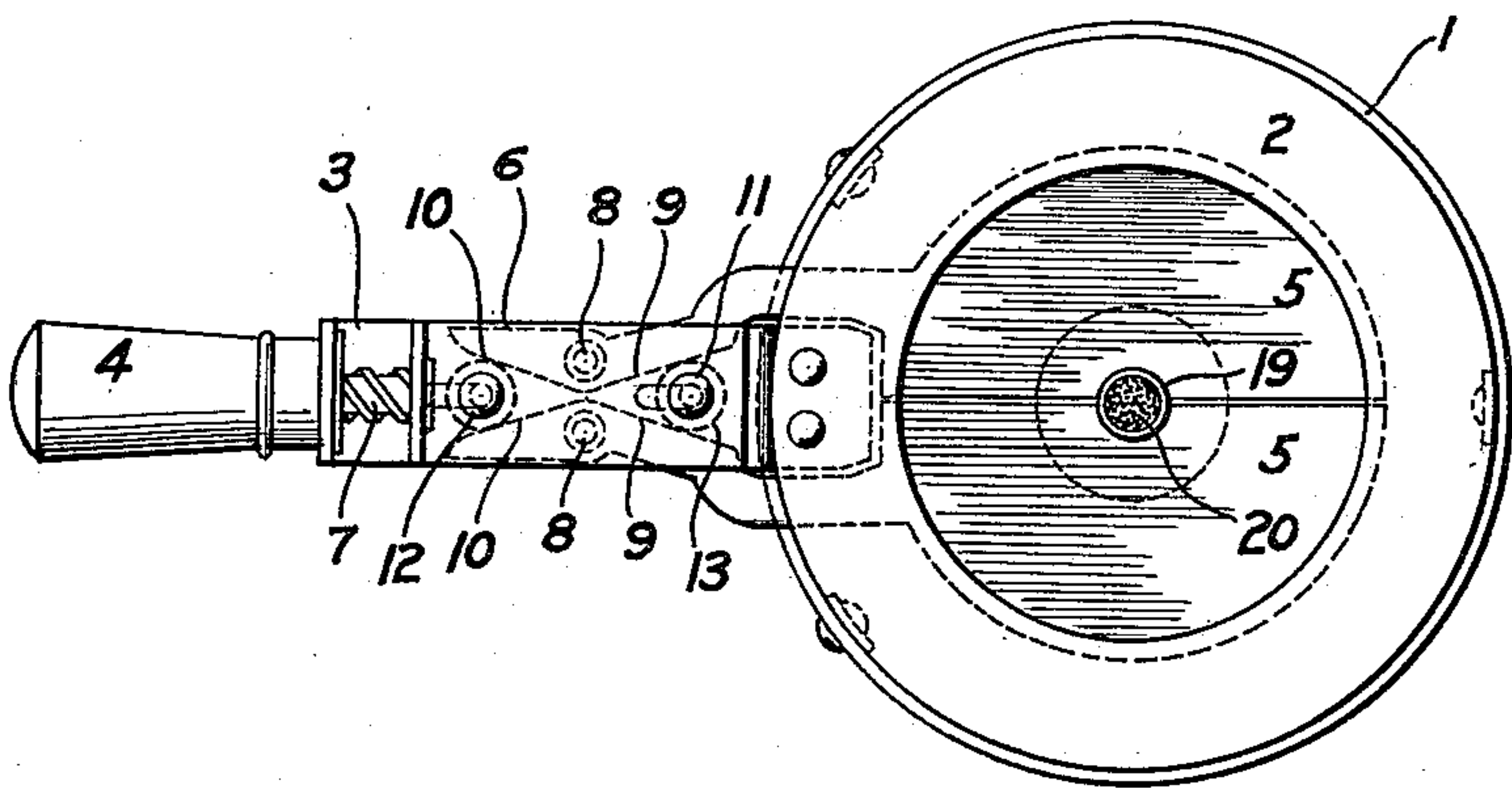


FIG. 2.

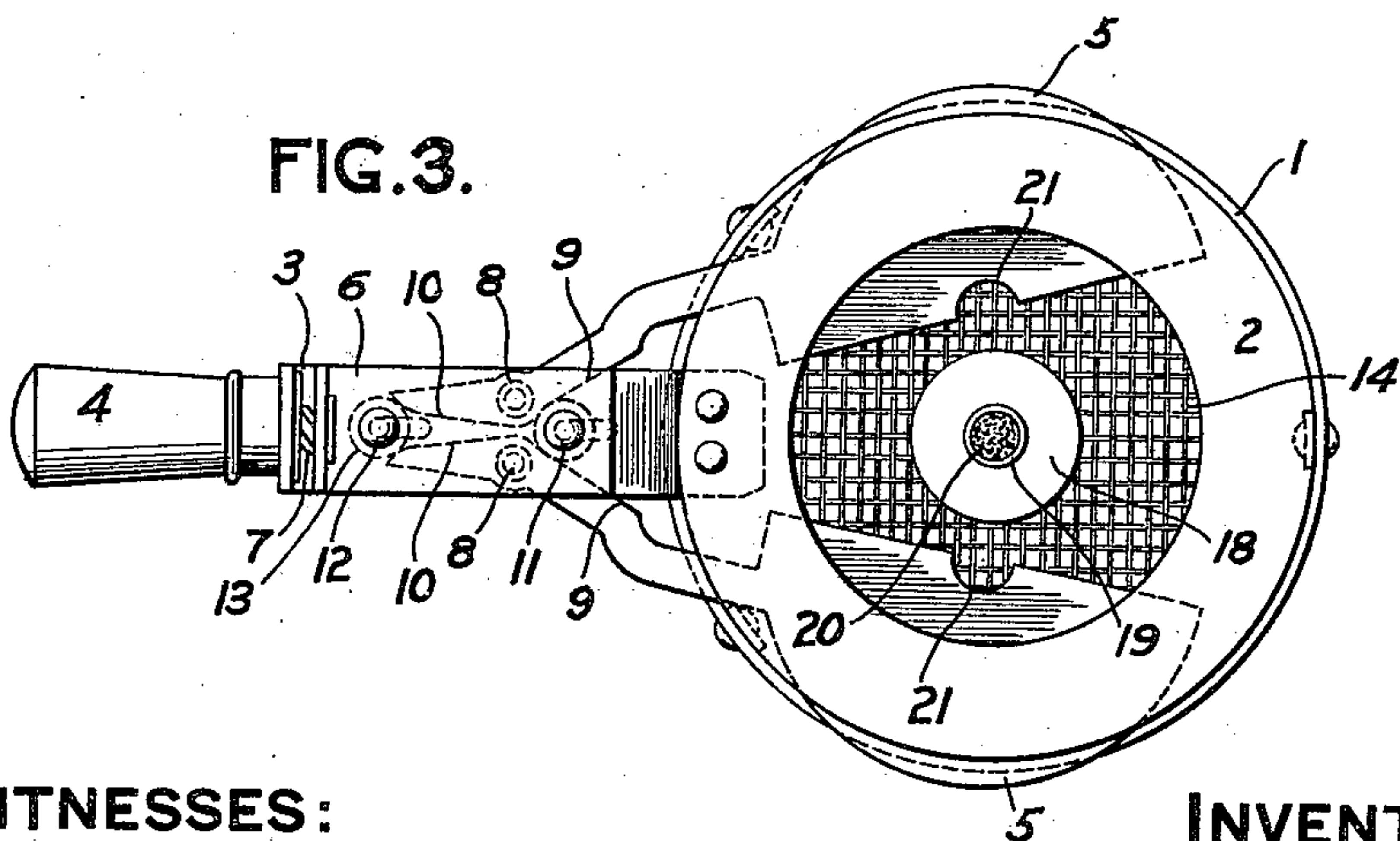


FIG. 3.

WITNESSES:

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SPIRIT-LAMP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES F. BOOTH, a citizen of the United States, and resident of Canandaigua, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Spirit-Lamps, of which the following is a specification.

This invention relates to spirit lamps, and the object is to provide means for maintaining a pilot-flame that cannot readily be extinguished, and which will light back the main flame instantly when the source of the latter is exposed.

In the drawings:—Figure 1 is a vertical, longitudinal section of the complete lamp; Fig. 2 is a plan view, with the main flame shutters closed; and Fig. 3 is a plan view, with the main flame shutters open.

The body 1 of the illustrated lamp has a flat ring 2 on its upper edge. The inside diameter of this ring is considerably less than that of the lamp body. At one point on the ring 2 is riveted a bracket 3 that constitutes a support for the handle 4, the shutters 5, 5, and the shutter-operating slide 6. The shutters 5, 5 are operated by turning the handle 4. The latter has in internal screw-thread that coöperates with a threaded spindle 7 attached to the slide 6. The handle 4 is rotatably supported in the fixed bracket 3. The shutters 5, 5 are pivoted at 8, 8 in said bracket, and have converging edges 9, 9, and 10, 10. Stud 11 and 12, carried on the slide 6, project through slots in the bracket 3, and have enlarged heads 13 that lie between the said edges 9, 9 and 10, 10, respectively.

When the handle 4 is rotated in one direction the spindle 7 is drawn into it, moving the slide 6 away from the lamp body 1. The head of the stud 11 is thus wedged in between the edges 9, 9 on the shutters 5, 5, and the latter are moved apart (Fig. 3). When the handle 4 is rotated in the opposite direction the spindle 7 carries the slide 6 toward the body of the lamp, and the head of the stud 12 wedges between the edges 10, 10, and swings the shutters 5, 5 toward each other to close them (Fig. 2).

The main flame of the lamp burns over a

perforated plate or screen 14 that is fixed in the reservoir 1. Spirit is conducted to said screen by means of feeding-wicks 15 that depend from an asbestos or fiber pad 16. In the center of the screen 14 is a collar 17 upon which is mounted a cap 18. The latter carries a tube 19 in which is a small wick 20 extending to the bottom of the lamp. The top of this tube projects above the plane of the shutters 5, 5, so that when the latter are closed, spirit may still burn on the wick 20. Notches 21 are cut in the meeting edges of the shutters, so that they may completely extinguish the main flame that burns on the screen 14.

The advantage of the construction above set forth is that care need not be taken to adjust the shutters 5, 5 in order to leave a small flame burning. In the ordinary style of lamp the narrow flame that emerges from between the nearly-closed shutters is easily blown out by a stray current of air, and the lamp must be re-lighted. In this invention the flame at the end of the wick 20 burns no matter how the shutters are operated, and is large enough to burn in a strong draft.

The main flame lights back instantly when the shutters are opened, as the heat conducted by the wick-tube 19 from the pilot-flame constantly vaporizes some spirit from the screen 14. Experience has shown that by carrying the pilot burner up through the perforated combustion plate, as shown in the drawings, a draft is created that draws the combustible vapor inwardly and concentrates it around the pilot burner, and the vapor is not dissipated, and accordingly, that spirit of inferior quality can be burned in this lamp that ordinarily could not be used.

What I claim is:

1. In a spirit lamp, the combination with a reservoir and a perforated combustion-plate, of a pilot burner, extending through said plate into the reservoir; and means for extinguishing the flame of the lamp; substantially as shown and described.

2. In a spirit lamp, the combination with a reservoir and a perforated combustion-plate, of a pilot burner, extending centrally through said plate into the reservoir; shut-

ters adapted to close over said plate and around the pilot burner; and means for operating said shutters; substantially as shown and described.

- 5 3. In a spirit lamp, the combination with a reservoir and a perforated combustion-plate, of a cap 18 centrally supported thereon, and carrying the pilot tube 19; and the

extinguishing shutters 5, 5 having notches 21, 21, adapted to close around said pilot tube 19; substantially as shown and described.

CHARLES F. BOOTH.

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."
