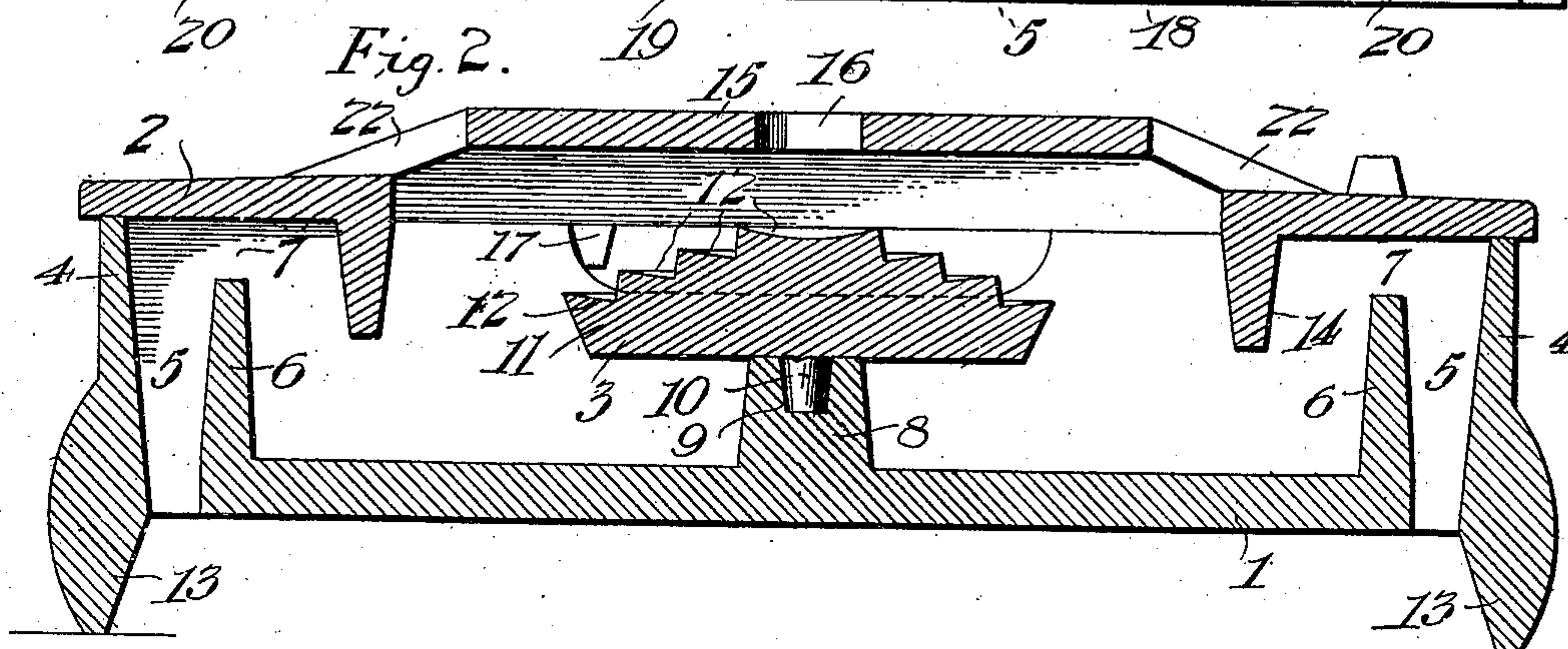
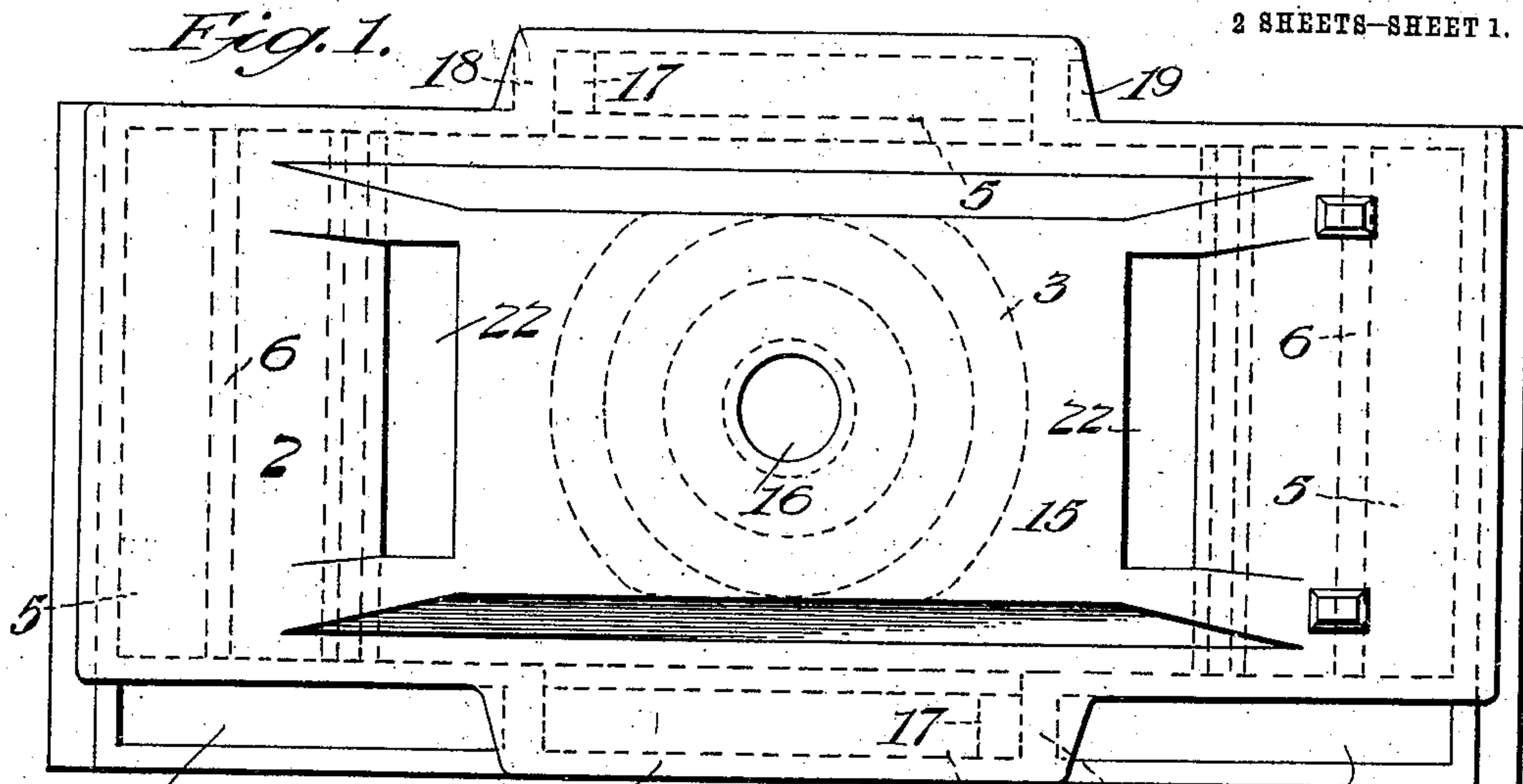


J. R. PRING.  
OIL BURNER.  
APPLICATION FILED MAR. 28, 1910.

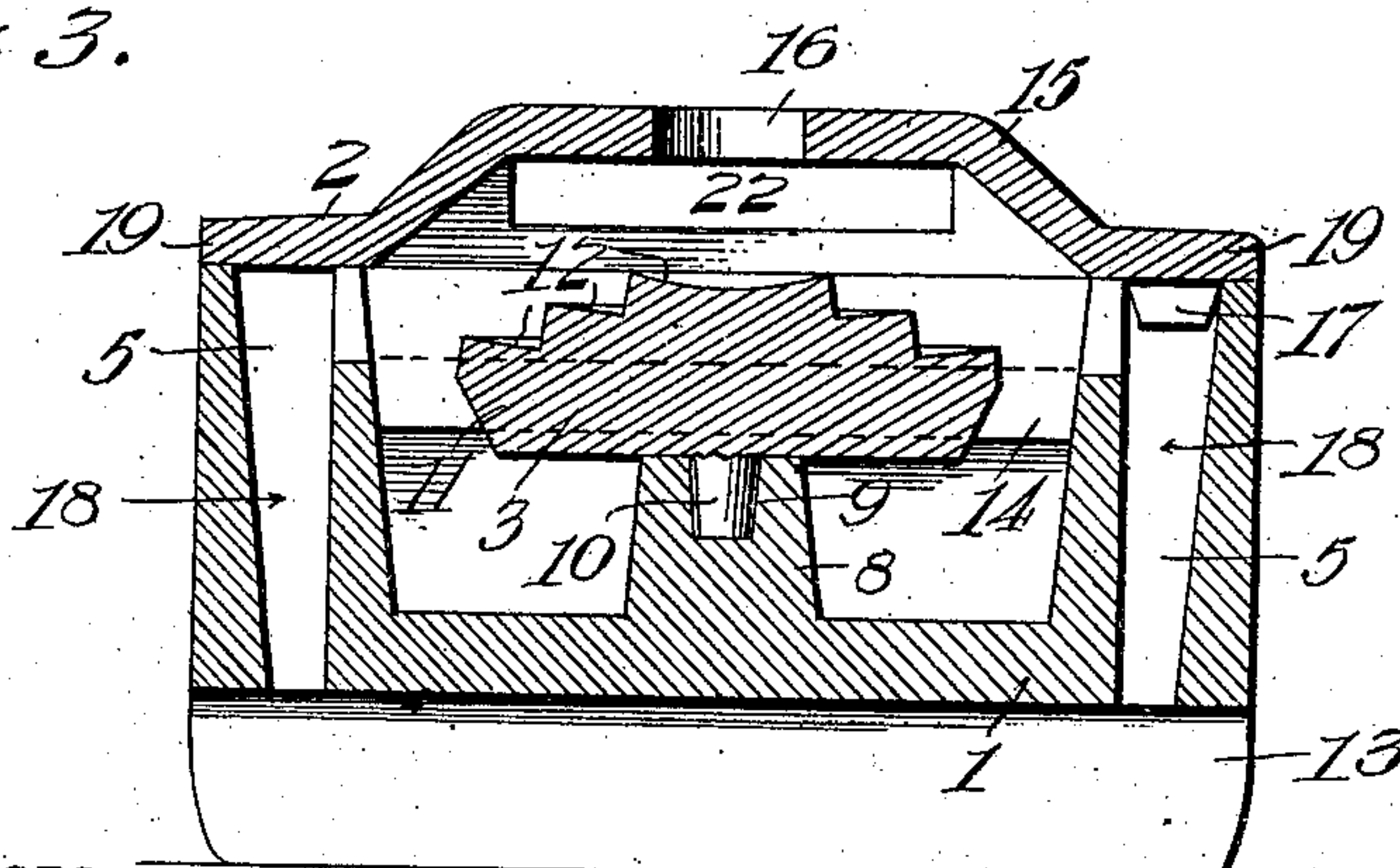
978,780.

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2 SHEETS—SHEET 1.



*Fig. 3.*



WITNESSES

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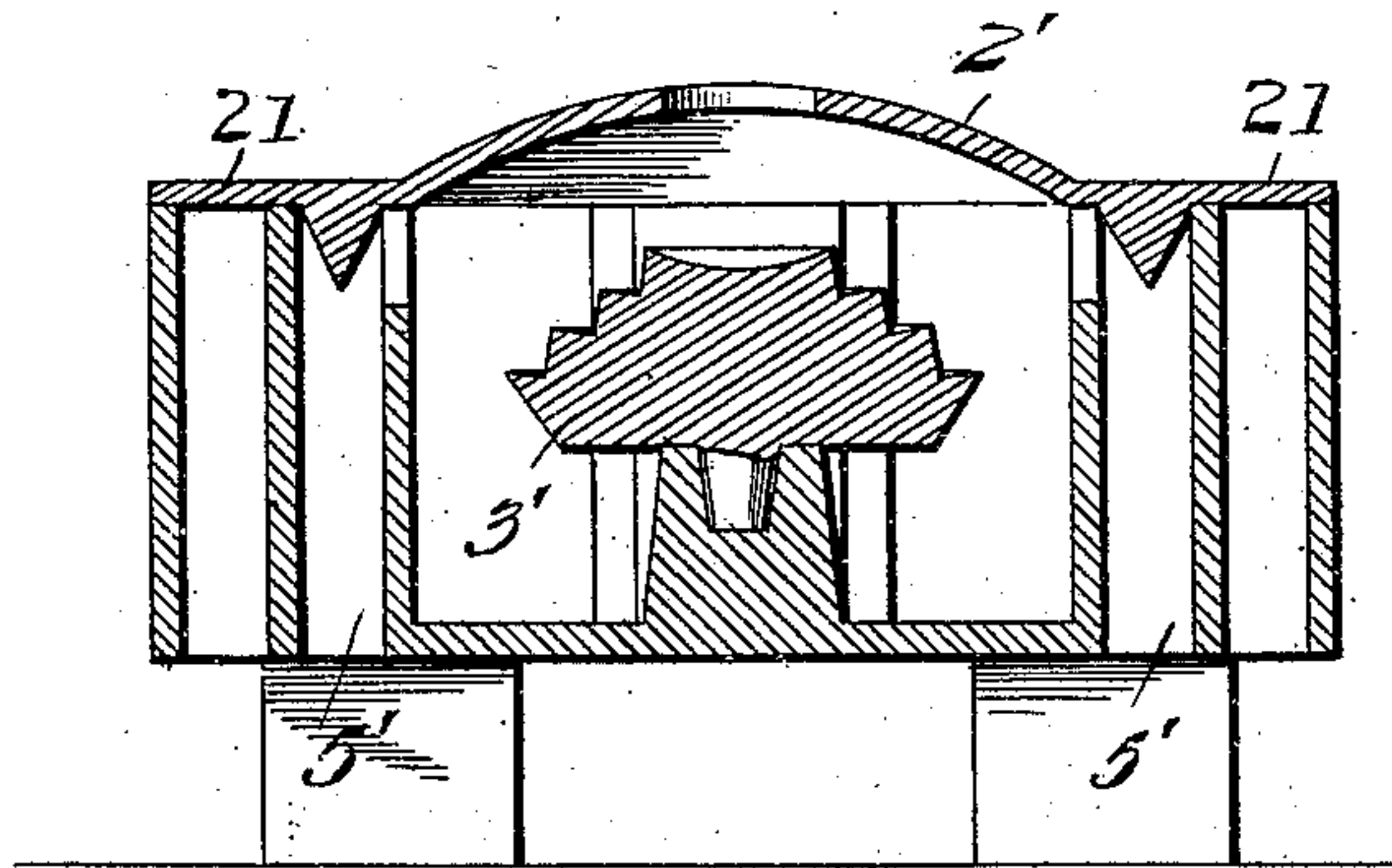
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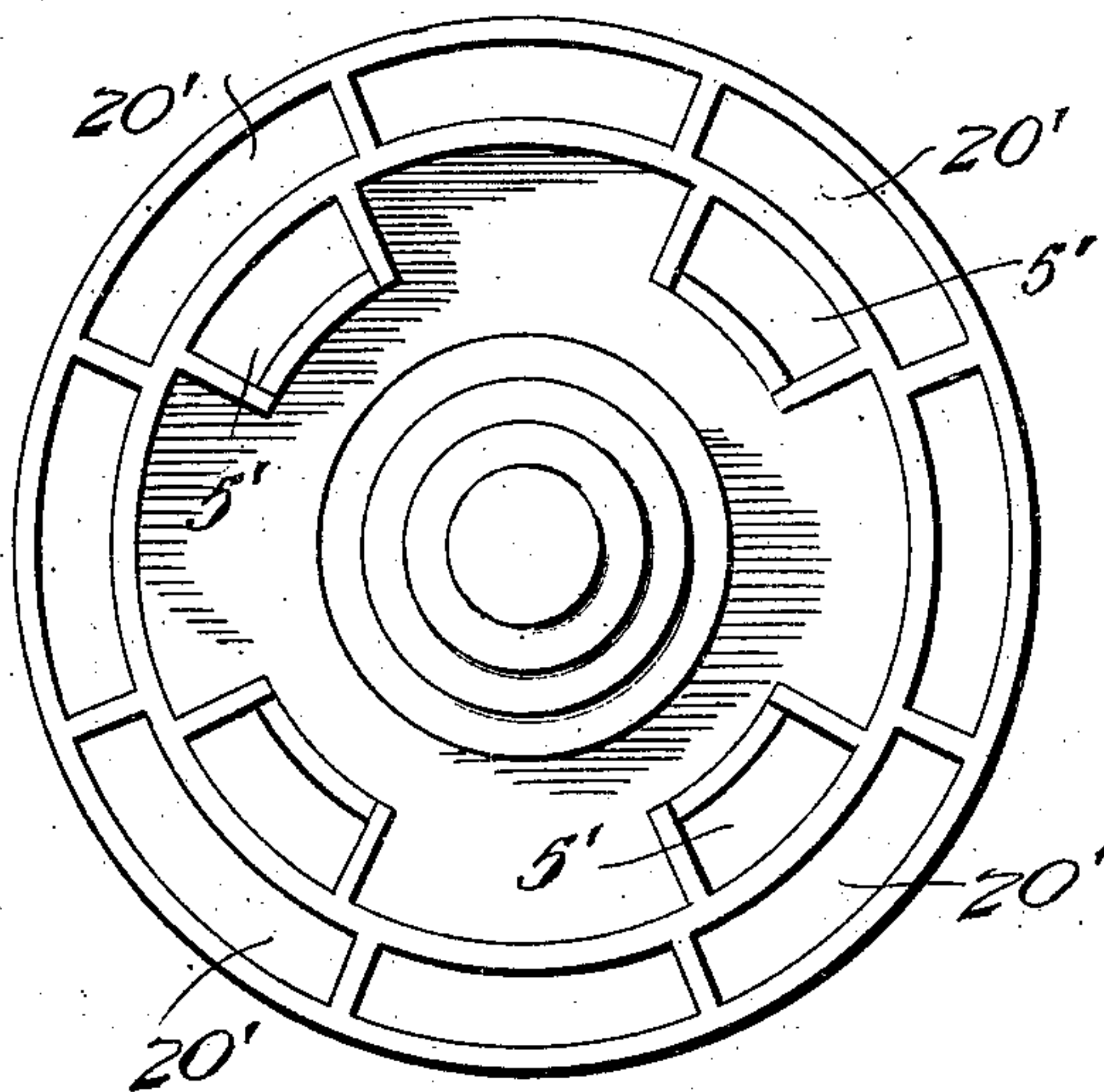
Patented Dec. 13, 1910.

2 SHEETS—SHEET 2.

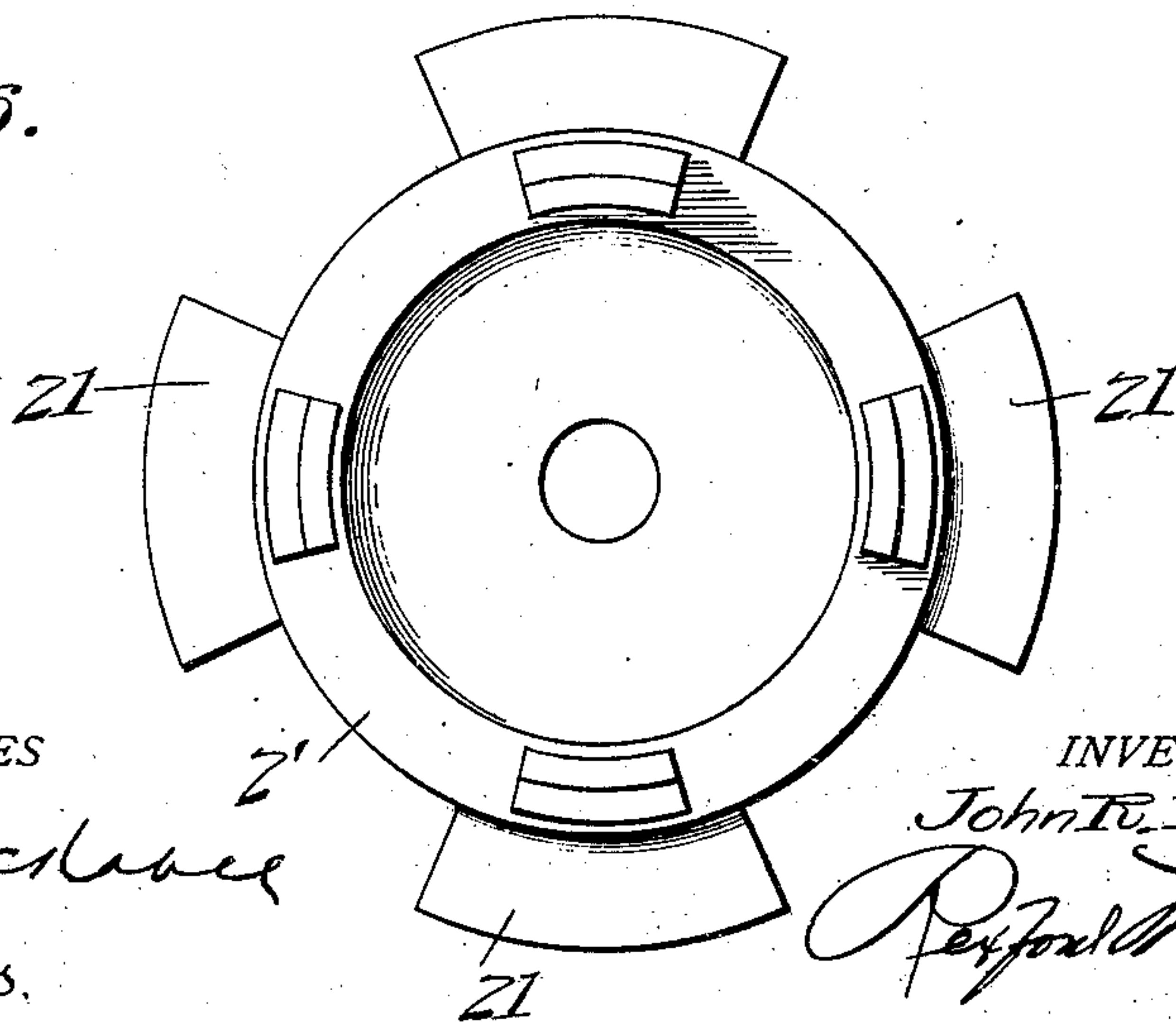
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

JOHN R. PRING, OF SHAWNEE, OKLAHOMA.

OIL-BURNER.

978,780.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed March 28, 1910. Serial No. 551,360.

*To all whom it may concern:*

Be it known that I, JOHN R. PRING, a citizen of the United States, residing at Shawnee, State of Oklahoma, have invented a certain new and useful Oil-Burner, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to oil burners adapted to be used either in connection with heating or cooking stoves and designed to consume crude oil, obtaining an even and uniform heat and adapted to be positioned in a heating or cooking stove as will readily appear.

A further object of the invention is to provide a series of covered and uncovered air flues which will confine the heat within certain limits and promote combustion of the oil as it is fed to the burner.

A further object of the invention is to provide in connection with the burner a novel form of generator and distributor whereby the oil as it is fed to the burner is thoroughly distributed or spread out in shallow concentric channels whereby it is readily converted into a gaseous vapor preparatory to its ignition. By means of the construction hereinafter described, the soot, carbon and other refuse matter is consumed and the amount of oil required is proportionately economized.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a plan view of a crude oil burner embodying the present invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a central vertical section taken at right angles to Fig. 2. Fig. 4 is a similar section taken through a modified form of burner involving, however, the same principles. Fig. 5 is a plan view of the bottom or pan section of the burner member shown in Fig. 4. Fig. 6 is a plan view of the cover or top section of the burner of Fig. 4.

The burner of this invention, in the preferred embodiment thereof, comprises three sections, a bottom or pan section 1, a top or cover section 2, and a combined generator and oil distributor 3 which is arranged within the hollow body of the burner as a

whole within the pan and under the hood portion of the cover.

The pan or bottom member may be of any size in accordance with the use to which the burner is to be put and comprises a bottom to which the numeral 1 is applied and a surrounding marginal upstanding flange 4 within which are located vertically extending covered air flues 5 open at the bottom as shown and closed at the top by means of the cover 2. In the preferred arrangement, four of these covered air flues are employed as best illustrated in Fig. 1, wherein the burner is shown of a general rectangular shape. The inner walls 6 of the flues 5 at the opposite ends of the burner terminate short of or below the cover 2 so as to leave lateral ports 7 by which the air is admitted into the hollow body of the burner.

Centrally the bottom or pan member is provided with an upstanding generator support 8 having a socket 9 to receive a stud or pintle 10 on the lower side of the disk shaped generator 11. This generator has a stepped upper surface being provided with a series of concentric oil containing channels 12, the bottoms of which incline toward the center of the generator so that as the oil overflows the outer edges of the steps, it runs in a thin film to the next outer step and when the generator is in a highly heated condition, the oil is thus spread out and is distributed in a series of films and quickly vaporized and rendered highly inflammable. The bottom section is supported at a suitable elevation in the fire box of the heating or cooking stove by means of supporting legs or flanges 13.

The top or cover section 2 is supported upon the flange 4 and is also provided on its under side with depending flanges 14 which are spaced at a suitable distance inside of the inner walls 6 of the flues 5 to form baffles which direct the current of air downward toward and against the bottom of the pan where it comes in contact with any oil on the bottom of the pan that has overflowed from the generator. The central portion of the cover is deflected upward to form an elevated deflector hood 15 which overlies the generator and is provided with a central oil feed aperture 16 directly above the generator 11 through which the oil may be fed to and dropped upon the center of the generator upon which it drops and is thereafter spread out by



reason of a particular configuration and shape of the generator. 17 represents lugs on the under side of the cover which serve to position the cover on the body of the heater, said lugs fitting between the outer and inner walls of the covered air flues and abutting against cross webs 18 extending between said inner and outer walls as indicated in Figs. 1 and 2. The cover section is preferably formed with laterally extending flue cover flanges 19 to project over and inclose the upper ends of the side air flues 5 as shown in Figs. 1 and 3.

In addition to the covered air flues 5, uncovered air flues 20 are provided at one side of the burner, the burner being so placed in the heating stove that the uncovered air flues will be arranged at the front of the stove. These flues 20 conduct the cold air in the front part of the fire box of the stove, said air coming in contact with the heat as it escapes from the burner through the fire ports 22. The hot air always rushes to take the place of the cold air and by this process the hot air is retarded in the front part of the stove instead of rushing up and outward through the stove pipe. Furthermore, by this arrangement of passages or flues, the soot and carbon are consumed and less oil is required thus making the burner economical.

The burner above described is particularly designed for use in cooking stoves. For use in heating stoves, the shape of the burner may be modified as illustrated in Figs. 4, 5 and 6, the principles involved being exactly the same, the only difference residing in the particular shape of the burner and the arrangement of the covered and uncovered air flues. Under the arrangement shown in Figs. 4, 5 and 6 and by special reference to Fig. 5, it will be observed that the air flues 5' and 20' are arranged in circular series while the cover 2' illustrated in Fig. 6 is provided with radial extensions 21 which cover the outer flues 20' and cause the air to be diverted and deflected into the open center body of the burner as a whole so that it will act in the desired way on the vaporiz-

ing oil on the generator 3' which is centrally positioned in the body of the burner.

What I claim is:—

1. An oil burner embodying a pan, air flues located adjacent to and within the flange of the pan, a combined hood and cover supported on the pan covering said flues and centrally offset upwardly forming a deflector hood, an oil-distributing generator arranged within the pan and under the hood, and baffles interposed between said air flues and the generator.

2. An oil burner embodying a pan, air flues located adjacent to and within the flange of the pan, a combined hood and cover supported on the pan covering said flues and centrally offset upwardly forming a deflector hood, and an oil-distributing generator arranged within the pan and under the hood, the hood being provided with an oil feed aperture located above the generator.

3. An oil burner embodying a pan, air flues located adjacent to and within the flange of the pan, a combined hood and cover supported on the pan covering said flues and centrally offset upwardly forming a deflector hood, an oil-distributing generator arranged within the pan and under the hood, and uncovered air flues located at one side of the burner body.

4. An oil burner embodying a pan, air flues located adjacent to and within the flange of the pan, a combined hood and cover supported on the pan covering said flues and centrally offset upwardly forming a deflector hood, an oil-distributing generator arranged within the pan and under the hood, and baffles interposed between said air flues and the generator, the hood being provided with fire escape ports adjacent to the baffles.

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

JOHN R. PRING.

Witnesses:

J. L. RIESER,  
JOSEPH HAMILTON.