

No. 837,838.

PATENTED DEC. 4, 1906.

J. HOROWITZ.

AUTOMATIC IGNITING AND EXTINGUISHING APPLIANCE FOR GAS BURNERS.

APPLICATION FILED JULY 20, 1904.

2 SHEETS—SHEET 1.

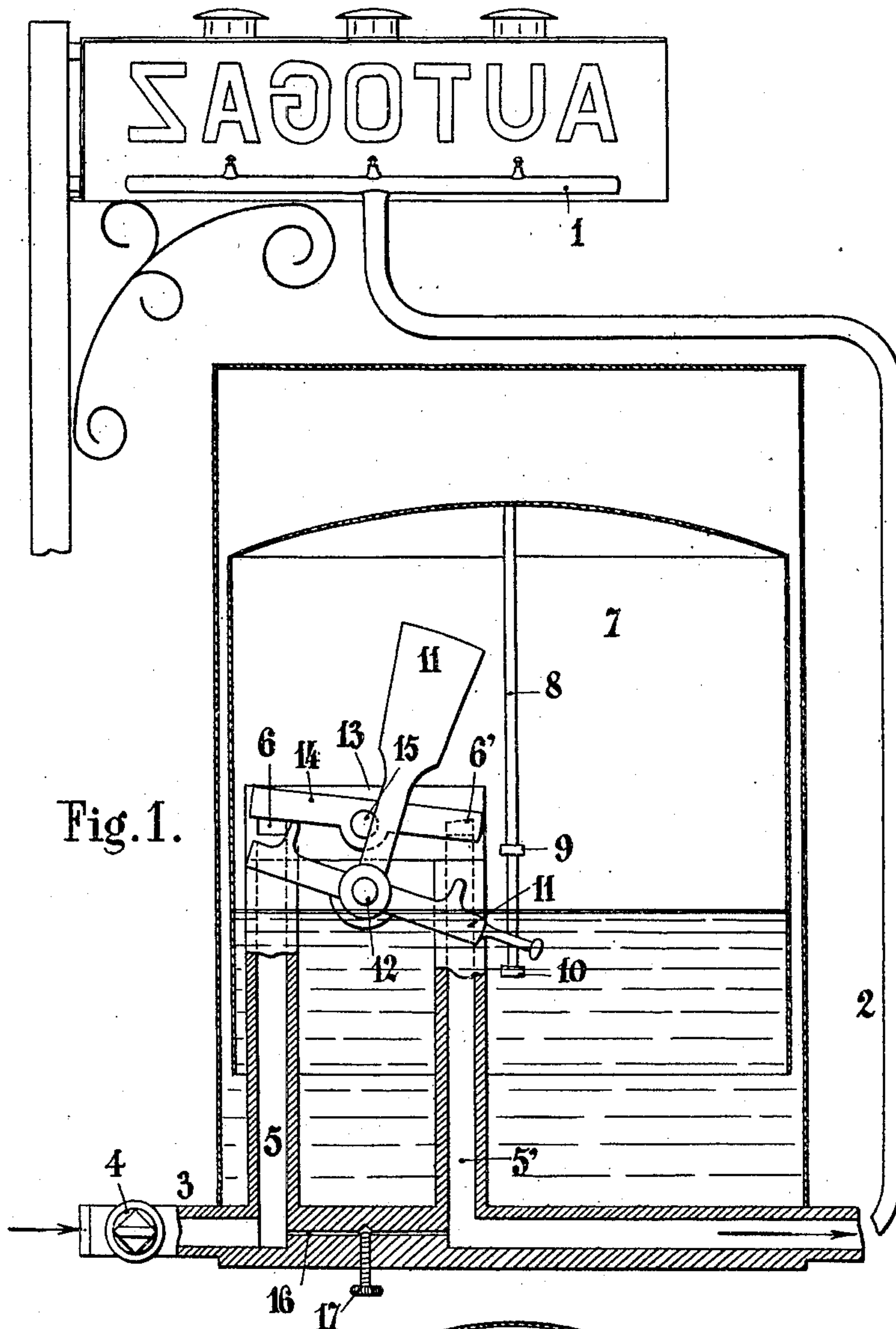
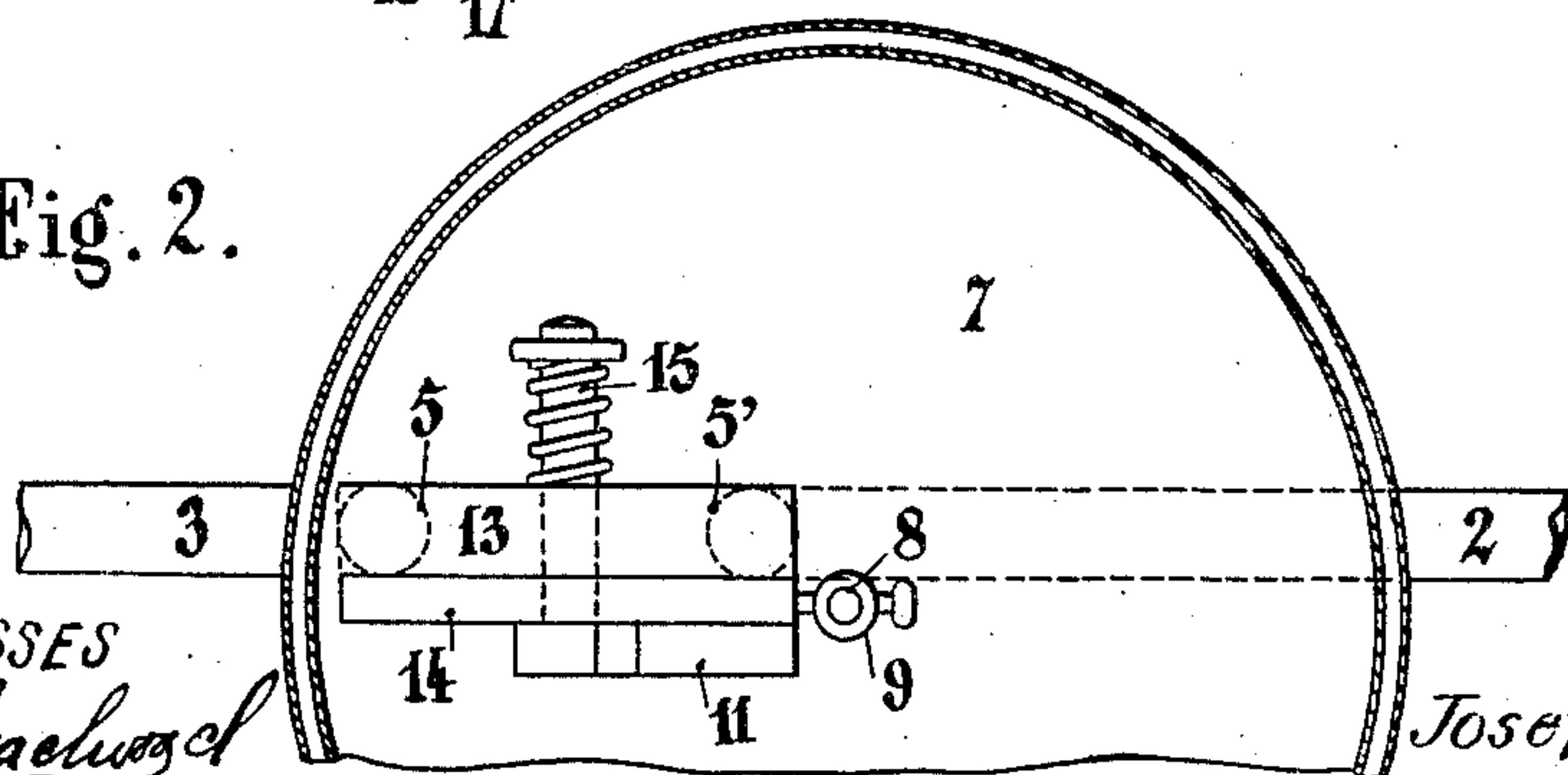


Fig. 2.



WITNESSES

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F. D. Ammer

INVENTOR

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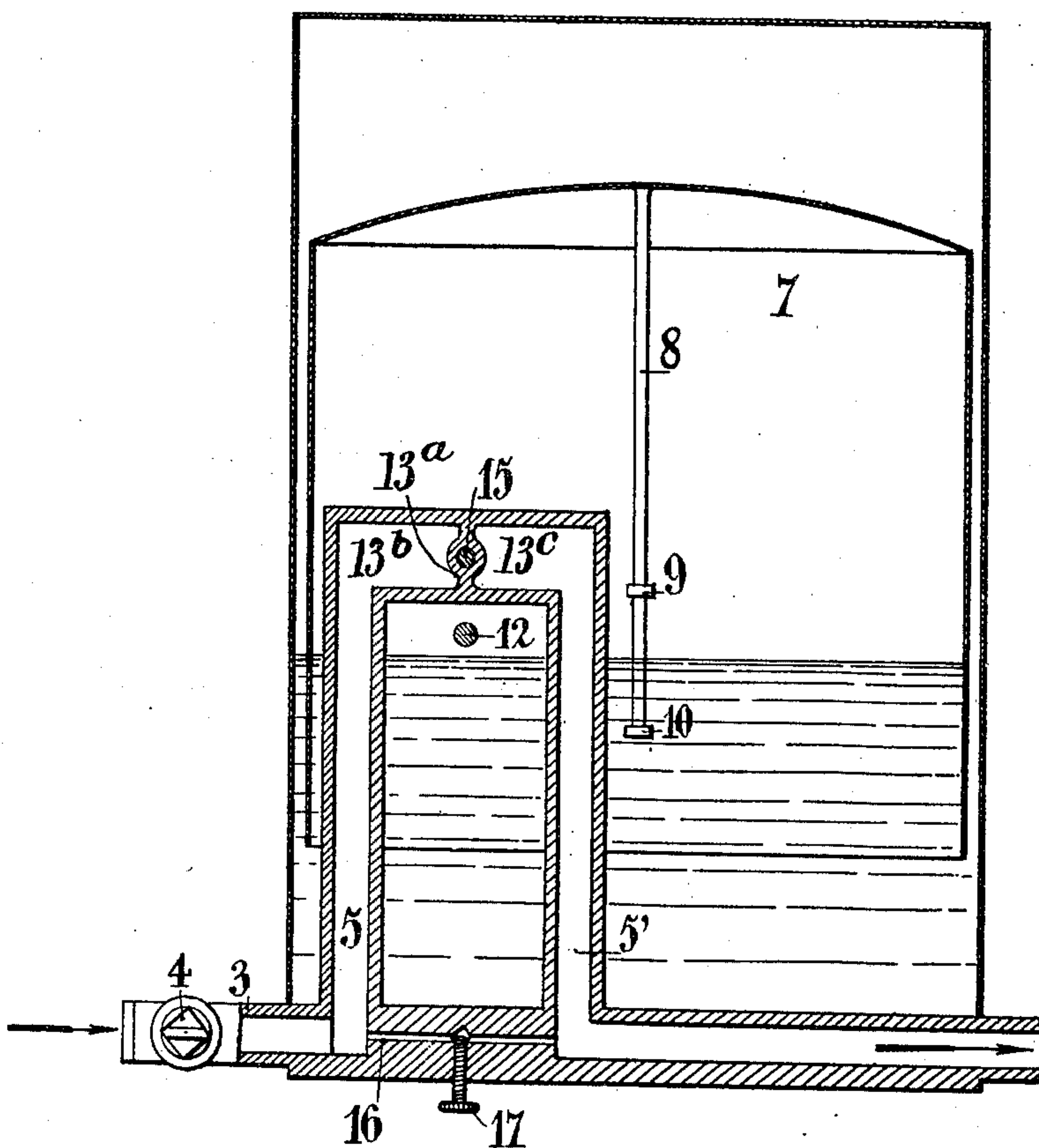
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2 SHEETS—SHEET 2.

Fig. 3.



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JOSEPH HOROWITZ, OF PARIS, FRANCE.

AUTOMATIC IGNITING AND EXTINGUISHING APPLIANCE FOR GAS-BURNERS.

No. 837,838.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed July 20, 1904. Serial No. 217,334.

To all whom it may concern:

Be it known that I, JOSEPH HOROWITZ, mechanical engineer, residing at 45 Rue Ser-
van, in the city of Paris, Republic of France,
5 have invented Improvements Relating to
Automatic Igniting and Extinguishing Ap-
pliances for Gas-Burners, of which the follow-
ing is a full, clear, and exact description.

This invention has for its object an appa-
10 ratus constructed in such a manner as to con-
trol alternately and automatically from a
point situated at a greater or less distance the
ignition and substantial extinction of any de-
sired number of gas-burners, illuminating-
15 signs, advertisements, transparencies, and,
generally speaking, signs of all kinds serving
either for advertising purposes or as lumi-
nous signals. The apparatus comprises for
this purpose a bell which can be lifted by the
20 gas under pressure and lowered when the gas-
pressure decreases. The movement of the
bell controls the flow of gas to the bell and
from the bell to the burners. It will be un-
derstood that this method is applicable not
25 only to public lighting, but also in railway-
stations, theaters, cafes, and, generally
speaking, for all establishments where it is
desired to attract the attention of the public
and produce luminous signs or advertise-
30 ments economically.

The invention is hereinafter described with
reference to the accompanying drawings,
which are given by way of example, and in
which—

35 Figure 1 is a vertical section of an appara-
tus embodying my invention, and Fig. 2 is a
partial horizontal section of the same. Fig.
3 is a vertical section through the apparatus.

As clearly shown in the drawings, upon the
40 sign represented in Fig. 1 is arranged a group
of burners, the pipe 1 of which is connected
by a pipe 2 to the distributing apparatus and
by the service-pipe 3 with the source of sup-
ply of gas. The apparatus is placed in com-
45 munication with the service-pipe by the in-
termediary of a cock 4, and the gas enters it
in passing through the passage 5 and the ori-
fice 6, passing into a receiver or box 13. It
then escapes into the bell 7, which dips in a
5 vessel containing a certain quantity of liquid.
The bell 7 rises under the influence of the gas-
pressure, carrying with it the rod 8, fixed
upon the upper part of the bell and provided
with two stops or tappets 9 and 10, acting in
5 turn upon the extremity of a beam 11, freely
articulated upon the spindle 12 laterally of

the box 13, one of the side walls of which is
provided with orifices 6 and 6'. This box is
divided by a central transverse partition 13^a
into two compartments 13^b and 13^c, with 60
which the passages 5 and 5', respectively,
communicate. Against this wall is adapted
to move a slide or valve 14, turning freely
upon the spring-shaft 15, and the displace-
ment of which serves to alternately open or 65
close the orifices 6 6'.

The controlling device serves to produce
the displacement of the slide 14 in such a
manner as to establish communication of the
gas-generator alternately with the pipe for 70
supplying the gas and with the service-pipe
to the burners. This device consists of a
counterweighted beam 11, provided with
projections acting alternately upon one or
other of the extremities of the slide 14.

At the lower part of the gas-holder is 75
formed a passage 16, adapted to be regulated
by a pin-valve or cock 17 and connecting the
passages 5 and 5' for the admission and dis-
charge of the gas for supplying the pilot- 80
lights in such a manner that they always re-
main in action during the operation of the
ignition-extinction device.

In order to start the apparatus, it is only
necessary to open the cock 4 and to kindle 85
the group of burners 1 of the sign. The gas
entering the gas-holder through the passage
5 and orifice 6 lifts the bell 7, which with its
rod 8 and the stop 10 acts upon the beam 11,
the counterweight of which causes it to 90
complete its rocking movement from right to
left. In its rotation the beam 11 encounters
one of the extremities of the slide, which then
rotates rapidly upon its axis, the orifice 6' of
the face of the receiver opens and the other, 95
6, closes. The group of burners being then
kindled will consume the volume of gas con-
tained in the bell. This latter descends in
proportion to the consumption until it
reaches with its rod 8 and stop 9 the beam 11. 100
This beam then rocks again in the opposite
direction to that of its first movement, and,
acted upon by the counterweight, causes by
means of its other extremity the rocking of
the slide 14, closing the discharge-orifice 6' 105
and again opening the admission-orifice 6,
permitting, owing to the fresh admission of
gas beneath the bell, of a new displacement of
the slide, and so on in succession. The burn-
110 ers having been lighted once for all will con-
tinue to burn the gas supplied through their
pilot-lights and in an almost invisible man-

ner during the extinction or suppression period due to the action of the distributor.

In cases in which it is desired to produce multicolored luminous signs it is only necessary to surround the burners arranged in proximity to the signs with transparent glasses of the desired colors.

I claim—

In apparatus of the class described, in combination, a vessel adapted to contain a liquid, a bell mounted in said vessel and adapted to dip in said liquid, a box presenting a wall with openings therethrough communicating with the interior of said bell, a slide pivotally attached upon the face of said wall, means for pressing said slide against said face, said slide being adapted to close one of

said openings in one position and the other of said openings in another position, a counter-weighted beam mounted adjacent to said slide adapted to engage opposite ends thereof alternately, means for actuating said beam with said bell, a gas-burner, a passage leading from one of said openings to said burner, and a second passage leading to the other of said openings from a source of gas-supply.

The foregoing specification of my improvements relating to automatic igniting and extinguishing appliances for gas-burners signed by me this 2d day of July, 1904.

JOSEPH HOROWITZ.

Witnesses:

HANSON C. COXE,
RENÉ CHIRIOT.