

No. 610,150.

Patented Aug. 30, 1898.

M. STRAKOSCH.

APPARATUS FOR GENERATING ACETYLENE GAS.

(Application filed Apr. 7, 1898.)

(No Model.)

Fig. 1.

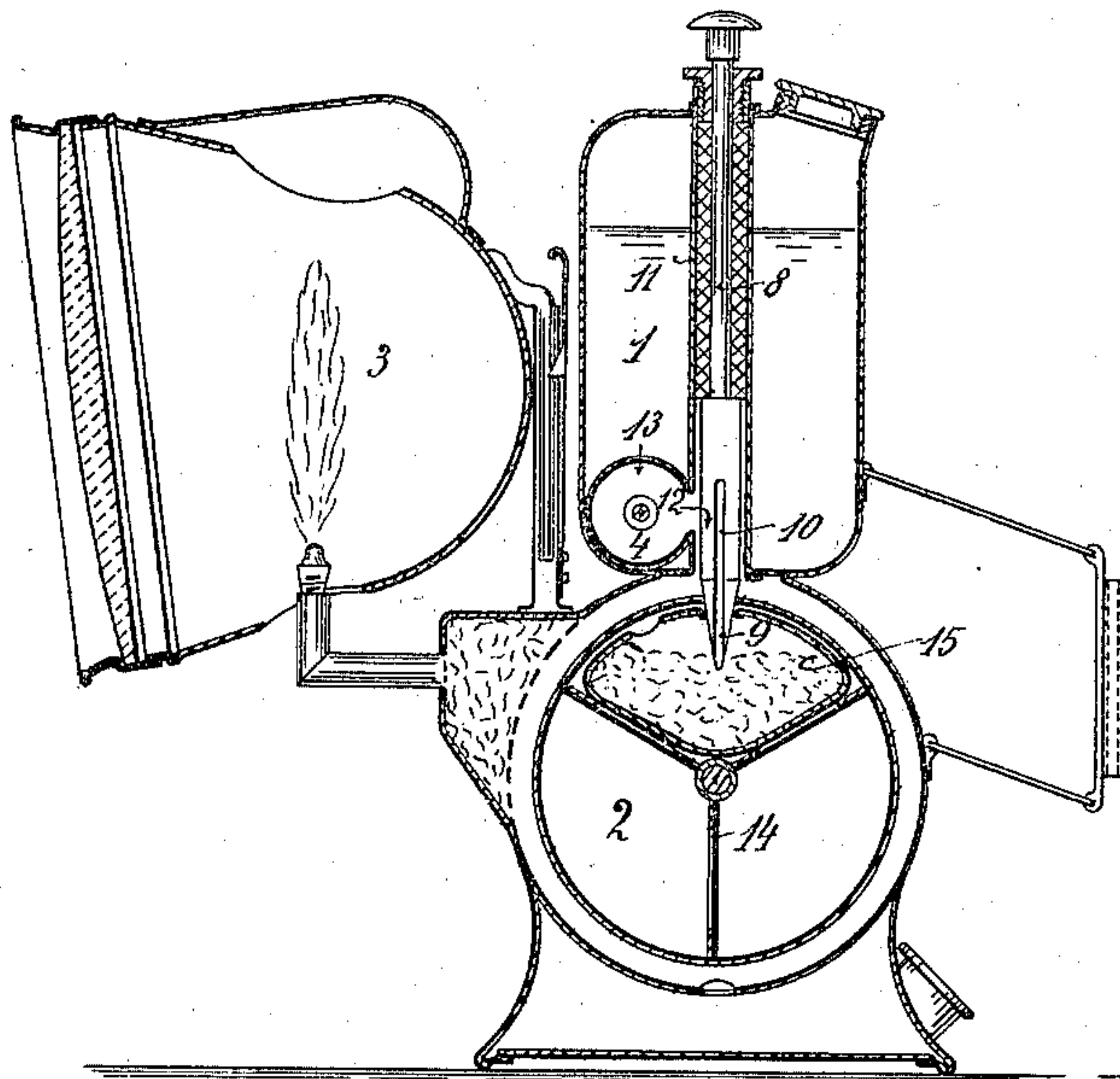


Fig. 2.

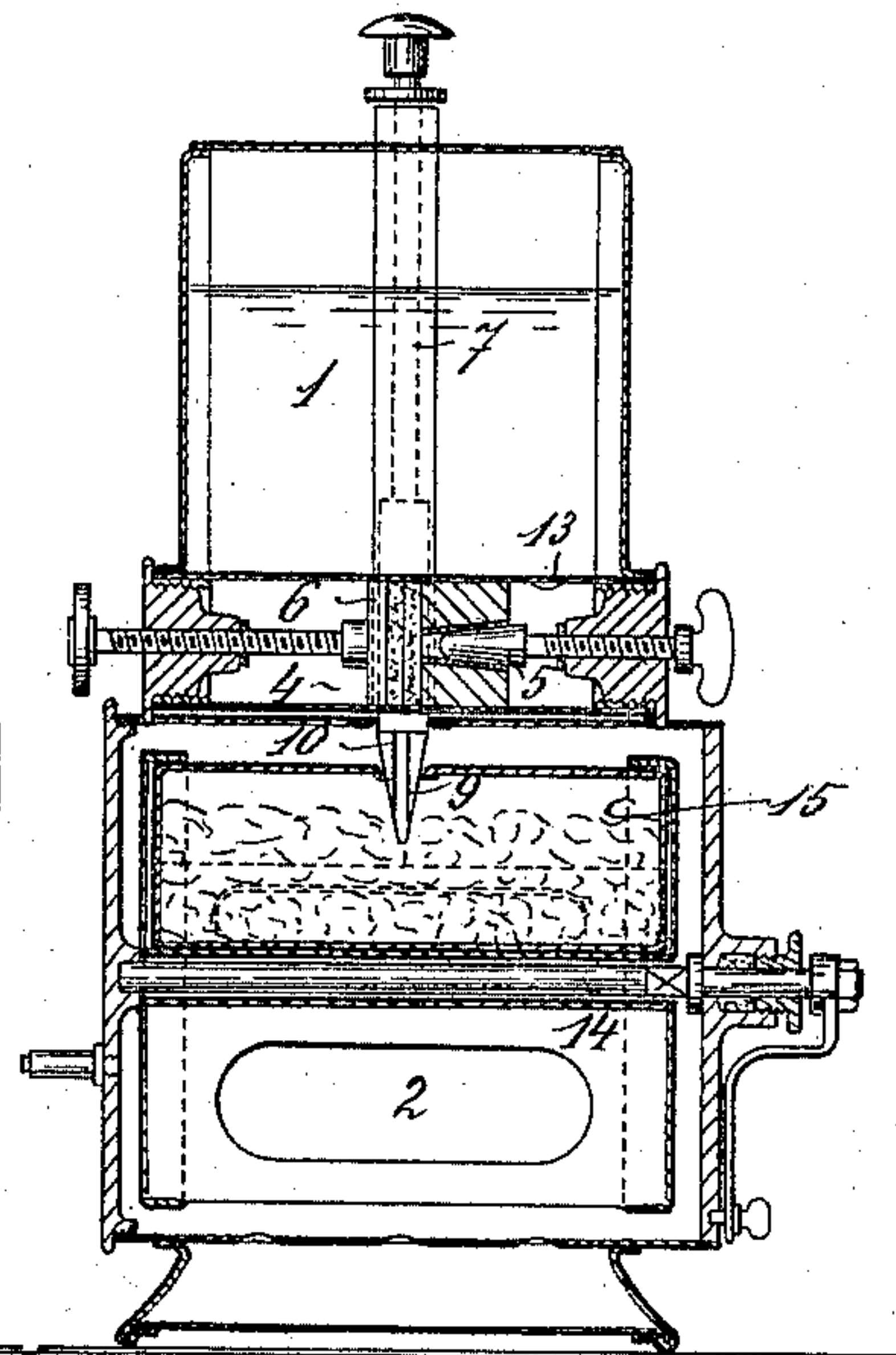


Fig. 3.

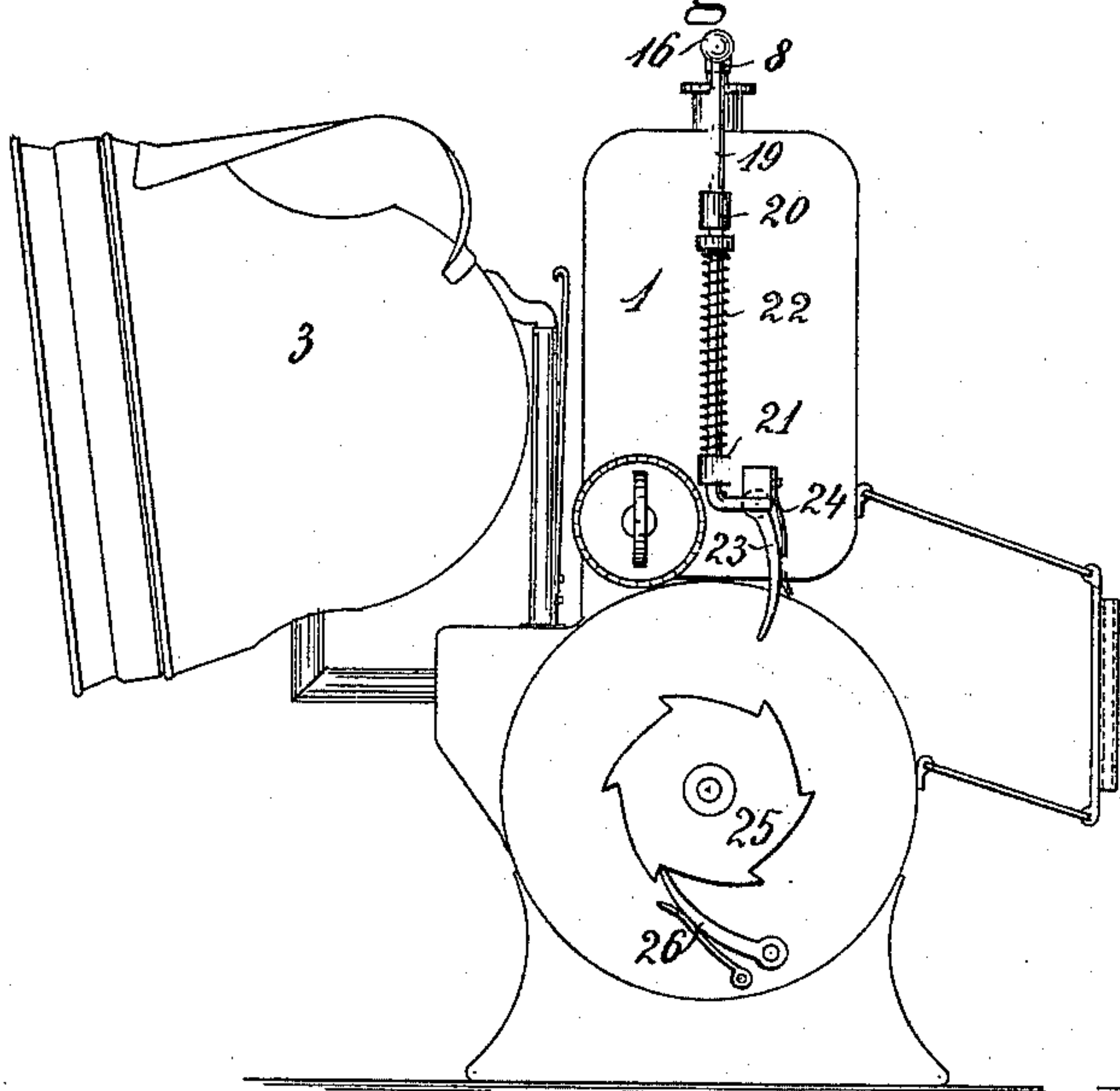
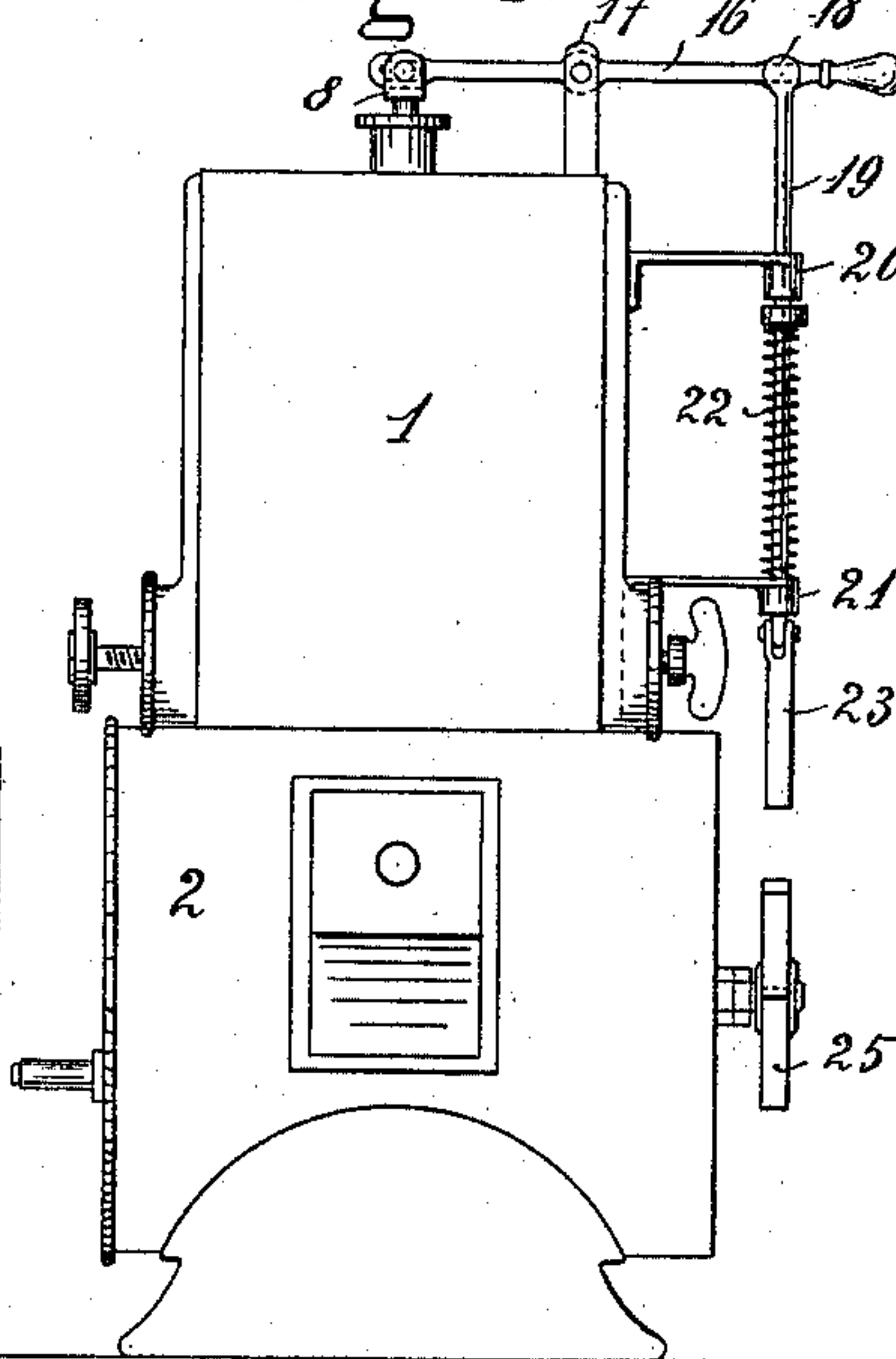


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

MAX STRAKOSCH, OF VIENNA, AUSTRIA-HUNGARY.

APPARATUS FOR GENERATING ACETYLENE GAS.

SPECIFICATION forming part of Letters Patent No. 610,150, dated August 30, 1898.

Application filed April 7, 1898. Serial No. 676,768. (No model.)

To all whom it may concern:

Be it known that I, MAX STRAKOSCH, a subject of the Emperor of Austria, residing at Vienna, Austria-Hungary, have invented new and useful Improvements in Devices for Generating Acetylene Gas, of which the following is a specification.

The present invention consists of improvements in devices for generating acetylene gas, as hereinafter set forth, and particularly pointed out in the claims; and in order to render the present specification more easily intelligible reference is had to the accompanying drawings, in which similar numerals denote similar parts throughout the several views.

Figure 1 shows the application of the invention to a bicycle or other lantern. Fig. 2 is a vertical central cross-section through Fig. 1; Fig. 3, a modified form of embodying the invention, and Fig. 4 an end elevation of Fig. 3.

To avoid the well-known disadvantage that calcium carbide quickly spoils in damp air, it is customary to inclose the calcium carbide in special cartridges made of gas and water tight material, which are opened immediately before the calcium carbide is required to be used.

This invention relates especially to means for opening said cartridges after they are placed in the apparatus in which the gas is to be generated.

The lantern or lamp illustrated consists of the water-chamber 1, the carbide-chamber 2, and the reflector 3.

A pipe 4 is arranged in the water-chamber 1, and in this pipe are situated a water-regulating valve 5 and a layer of felt 6, which may also be regulated by being more or less compressed, the object of said felt layer being to enable a still more accurate regulation of the amount of water fed to the carbide-receptacle.

The device for perforating the carbide-cartridge is mounted in a vertical pipe 7, and consists of a rod 8, extending out of the pipe at the top and having a pointed lower end 9, having longitudinal grooves 10, and being tightly fitted in the tube or pipe 7 by means of glands and stuffing-box 11, or other suitable means, in order to prevent the escape of gas from the interior of the receptacle. The tube 7 communicates with the tube 4 by means

of an opening 12, and the tube 4 is in communication with the water-chamber by means of the orifice 13.

In the carbide-chamber a drum 14 is mounted, which may be rotated from the exterior and which serves to receive cartridges containing calcium carbide 15, said cartridges being made of pasteboard, thin sheet metal, or other suitable substance.

The lamp is manipulated in the following manner: The cartridge is placed in the drum, and after the carbide-chamber has been closed two holes are made in the cartridge-casing, the drum being turned by hand. One hole enables the circulation of the air and the other is for the reception of the water, which runs down the grooves of the pointed end of the rod 8.

In the device shown in Figs. 3 and 4 the movements of the rod 8 and the drum containing the cartridges are effected simultaneously. The rod 8 is pivotally connected to a hand-lever 16, pivotally mounted at 17 and connected at 18 with a rod 19, mounted to slide vertically in guides 20 and 21. A spring 22 serves to retain the rod 19 in the position shown in the figures, in which the point of the rod 8 is inserted in the cartridge. A pawl 23 is pivoted at the lower end of the rod 19, said pawl having a spring 24, tending to retain it in the position shown at Fig. 3. A ratchet-wheel 25 is mounted on the drum-shaft and retained in position by means of a pawl 26, said ratchet-wheel having advantageously twice as many teeth as the number of cartridges in the drum, (in the present instance three.) This number of teeth is chosen because each cartridge has to be perforated twice, the said perforations being effected at a distance apart equal to one-sixth of the circumference of the drum. The ratchet-wheel may, however, be provided with any number of smaller teeth, if desired.

When a new cartridge is required, the lever 16 is depressed, the pawl 23 being inoperative during the first part of the stroke in order to allow the point 9 of the rod 8 to be raised out of the cartridge. As soon as this has been accomplished the pawl operates to turn the drum a sixth of a revolution, thus turning the cartridge past the point of the rod to the extent of a quarter of its circumferential

area. The lever 16 is now released and returns to its initial position under the influence of the spring 22, the point 9 entering the cartridge-casing and perforating the same, thus
 5 producing the air-hole. This operation is now repeated and a second hole (the water-inlet) perforated a quarter of the circumferential area of the cartridge farther on, the drum
 10 having been again turned a sixth of a revolution.

I claim as my invention—

1. The combination of a gas-generating apparatus, having a water-chamber, a calcium-carbid chamber having therein a series of car-
 15 bid-cartridges, means for regulating the water-supply from the water to the carbid chamber, a vertically-movable rod mounted in the water-chamber and extending into the carbid-chamber and having lower pointed end to per-
 20 forate the carbid-cartridges, successively when the said rod is depressed and means for successively bringing the said carbid-cartridges under said rod end substantially as described.

2. The combination of a water-chamber having a vertical tube mounted therein, a rod adapted to slide in said tube and having a pointed end, a carbid-chamber below said wa-
 25 ter-chamber having water-inlet and gas-outlet, a drum revolubly mounted in said carbid-chamber and means for partially rotating said drum, means for allowing a regulated quan-
 30 tity of water to pass to said carbid-chamber and means for periodically depressing said rod to cause its end to enter the carbid-cartridges in the carbid-chamber substantially as de-
 35 scribed.

3. The combination of a water-chamber having a cylindrical carbid-chamber arranged
 40 thereunder, a tube in the lower part of said

water-chamber having an opening communi-
 cating with the said water-chamber, a verti-
 cal tube extending through the water-cham-
 ber and a rod vertically movable therein, a
 45 pointed lower end to said rod having longitu-
 dinal grooves therein and an opening leading
 from the tube in the water-chamber to the rod-
 tube, a drum mounted in the carbid-chamber
 and means for rotating the same, a series of
 50 carbid-cartridges in said drum and means for
 operating the rod to perforate the cartridges
 in succession, substantially as described.

4. The combination of a water-chamber and
 a carbid-chamber thereunder, means for regu-
 lating the water-supply from the former to the
 55 latter, a vertical tube mounted in the former
 and a vertically-movable rod therein having
 lower pointed end extending into the said car-
 bid-chamber, a drum in the carbid-chamber
 having a ratchet-wheel mounted on its axis
 60 exteriorly of said chamber and a retaining-
 ratchet to said wheel, a hand-lever mounted
 pivotally at the top of said water-chamber
 and pin-and-slot connection between one end
 65 of the same and the vertically-movable
 pointed rod, a spring-pressed rod pivoted to
 the opposite end of said hand-lever and hav-
 ing a spring-pressed pawl mounted at its
 lower end, to engage and rotate said drum
 70 ratchet-wheel when the said hand-lever is de-
 pressed, substantially as described, a series
 of carbid-cartridges being mounted in the
 said drum as specified.

In witness whereof I have hereunto set my
 hand in presence of two witnesses.

MAX STRAKOSCH.

Witnesses:

HENRY C. CARPENTER,
 CHAS. E. CARPENTER.