

**No. 688,725.**

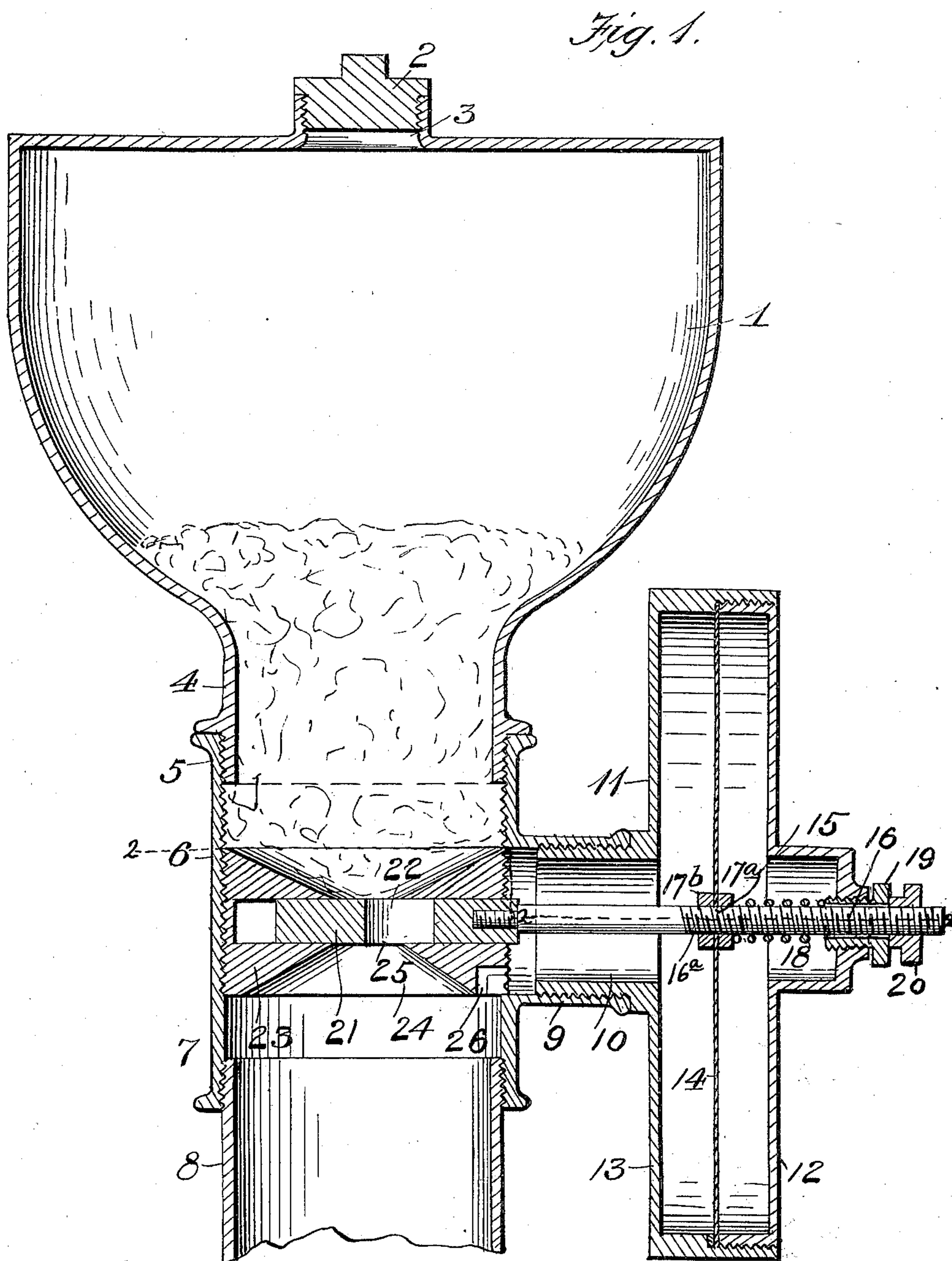
Patented Dec. 10, 1901.

L. S. FLATAU.  
ACETYLENE GAS GENERATOR.

(Application filed May 2, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:  
H. L. Curran

Frank G. Radelfinger

by

Inventor:  
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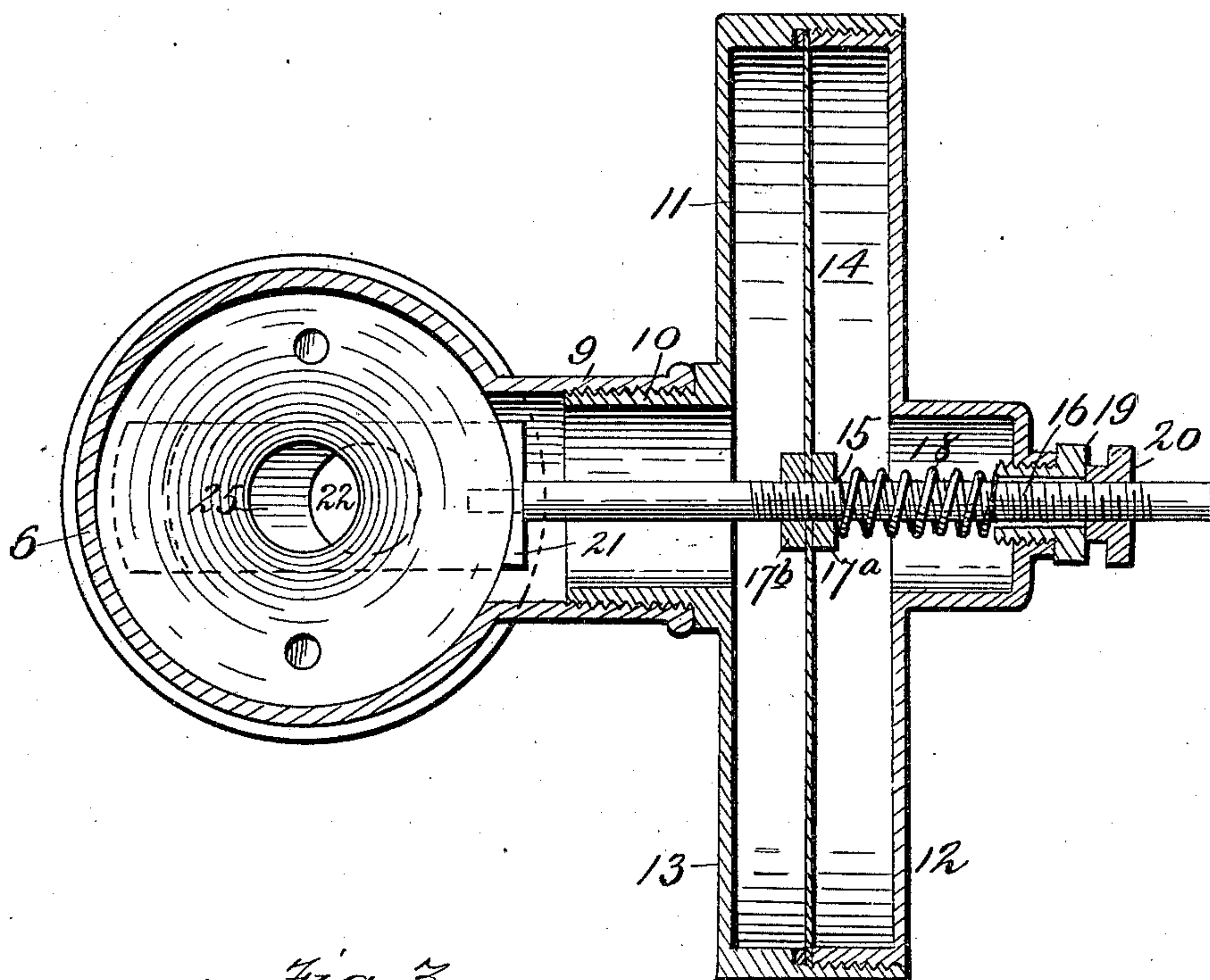
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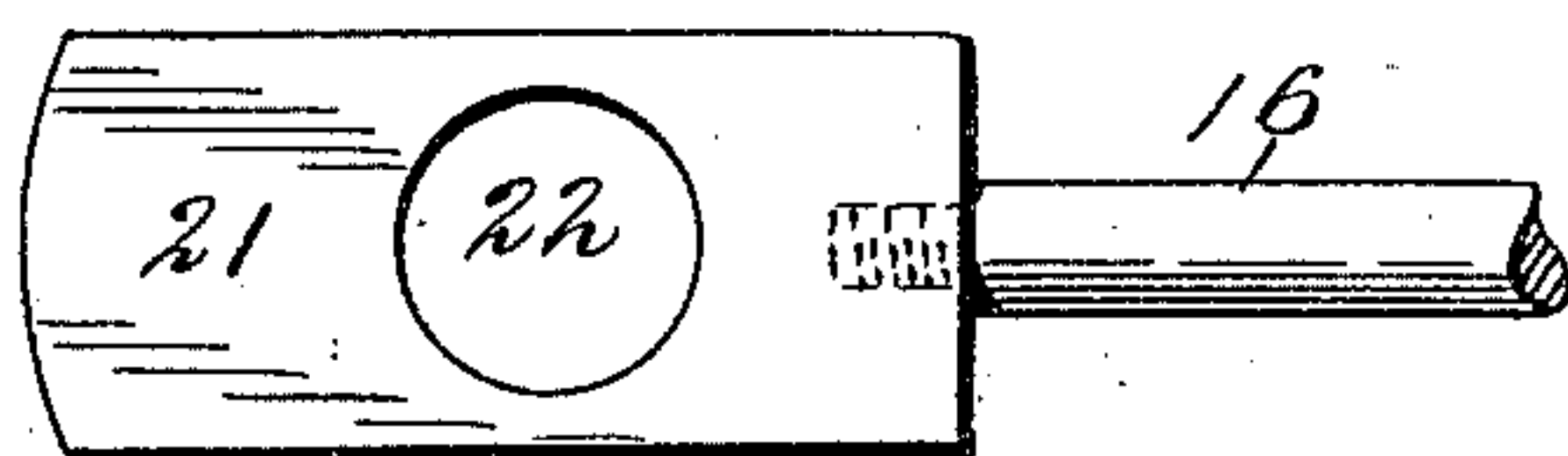
(No Model.)

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*Fig. 2.*



*Fig. 3.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

LOUIS S. FLATAU, OF ST. LOUIS, MISSOURI, ASSIGNOR TO FLATAU-GREEN ACETYLENE HOUSE & CAR LIGHTING COMPANY, OF ST. LOUIS, MISSOURI.

## ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 688,725, dated December 10, 1901.

Application filed May 2, 1901. Serial No. 58,490. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS S. FLATAU, a citizen of the United States, residing at St. Louis, State of Missouri, have invented new and useful Improvements in Carbid-Feed Mechanism for Acetylene-Gas Generators, of which the following is a specification.

My invention relates to a carbid-feed mechanism for acetylene-gas generators; and the object of the same is to provide a device of this character which will be automatic, not exposed to the corrosive action of the carbid, and be simple and efficient in operation.

With this object in view I have designed the simple and novel construction described in this specification and claimed, and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a vertical longitudinal section of my device, together with a carbid-chamber. Fig. 2 is a horizontal section of the same on the line 2 2, Fig. 1. Fig. 3 is a detail of the slide-valve.

Like numerals of reference designate like parts in the different views of the drawings.

The numeral 1 designates a carbid receptacle or urn closed at the top and provided with a screw-plug 2, fitting an opening 3 for the admission of carbid into the receptacle 1. The receptacle 1 has a threaded neck 4, which serves as an outlet for the carbid and to connect it to the upper branch 5 of a T-coupling 6. The lower branch 7 of the T is joined to a pipe 8, connected to the generator, (not shown,) thereby establishing communication between the generator and the receptacle 1. The horizontal or side branch 9 of the T 6 is connected with a coupling 10, integral with the casing of a diaphragm-chamber 11. The casing of the chamber 11 is cylindrical and consists of two parts, an inner and an outer one, (designated by the numerals 12 and 13,) respectively. The inner part 12 is exteriorly threaded and fits within the outer portion 13, and firmly clamped between them is a circular diaphragm 14. This diaphragm 14 is pierced centrally by an aperture 15, which accommodates a stem 16, to which the diaphragm 14 is firmly secured by two nuts 17<sup>a</sup> and 17<sup>b</sup>, fitted on a threaded portion 16<sup>a</sup> of

the stem. A spring 18 surrounds the outer end of the stem 16, bears against the nut 17<sup>a</sup>, and is held confined by an apertured screw-plug 19, mounted in an aperture in the casing 12 and surrounding the stem 16. A nut 20 is screwed on the end of the stem 16. This arrangement permits adjustment of the stress of the spring 18.

The diaphragm 14 is designed to regulate the feed of the carbid, and with that end in view the inner end of the stem 16 is connected to a slide 21, apertured at 22 and mounted between guides 23. The guides 23 are formed by an apertured disk 24, tightly fitted into the T 6 in line with the horizontal branch 9. The disk 24 is pierced by an aperture 25, coned out on both sides. A small passage 26 is formed in the disk 24, which establishes communication between the pipe 8, leading to the generator, and the diaphragm-chamber 11. The passage 26 enables the gas in the generator to gain access to the inner side of the diaphragm 14 and operate it. The aperture 22 is so located as to be brought wholly or partially into register with the aperture 25 by the action of the diaphragm 14. The feed of carbid is regulated by setting the nut 20 on the stem 16, thereby regulating the throw of the valve.

In operation the diaphragm 14 is set to correspond to the working pressure of the generator and the receptacle 1 filled with carbid, which will pass down into the generator by way of the apertures 22 and 25. Generation of gas will start immediately, and the pressure will rise in the generator and be transmitted to the diaphragm via the passage 26. When the pressure reaches the tension of the diaphragm and spring, it will actuate the slide 21 and cut off the supply of carbid.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the spirit of my invention.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent, is—

In a device of the class described, the combination with a carbid-urn provided with a neck, a T-coupling connected to said neck, 100

an apertured guide-disk mounted in said T  
and in alinement with the side branch there-  
of, an apertured slide mounted in said guide-  
disk, a diaphragm mounted in a chamber in  
5 communication with the generator, and a rod  
connecting said diaphragm and said slide, sub-  
stantially as described.

In testimony whereof I have hereunto set  
my hand in presence of two subscribing wit-  
nesses.

LOUIS S. FLATAU.

Witnesses:

C. A. COUR,  
H. M. JENKS.