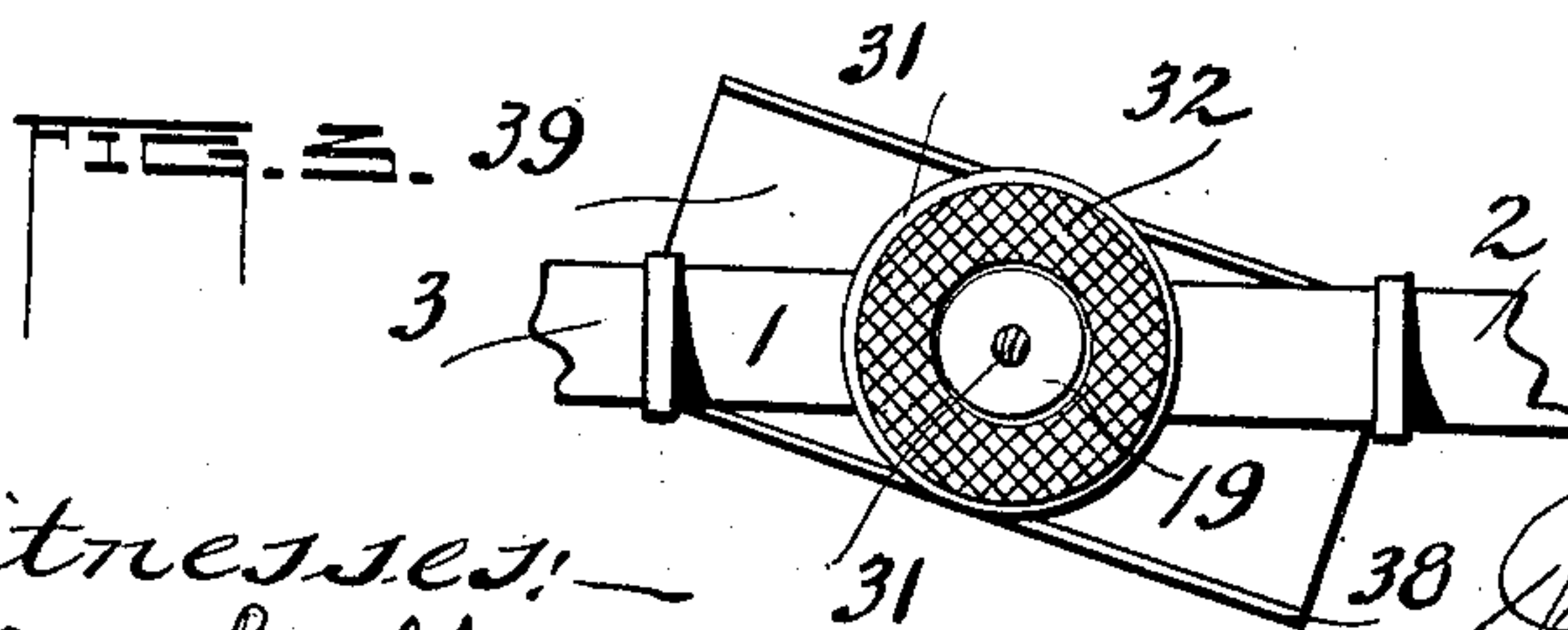
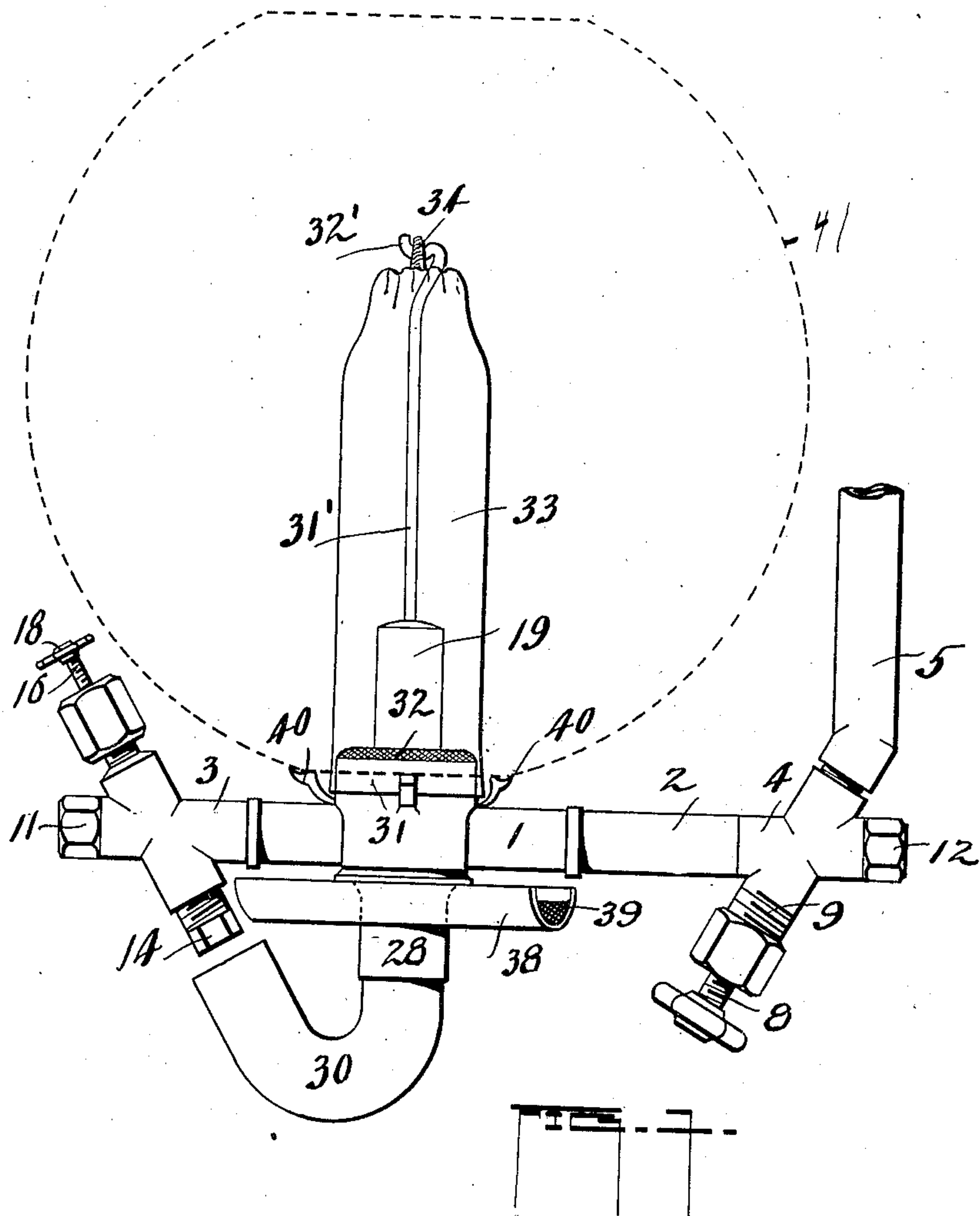


No. 828,034.

PATENTED AUG. 7, 1906.

J. LANDSIEDEL.  
HYDROCARBON APPARATUS.  
APPLICATION FILED MAR. 17, 1902.

2 SHEETS—SHEET 1



Witnesses:  
H. B. Schuchly.  
Julia C. Berg.

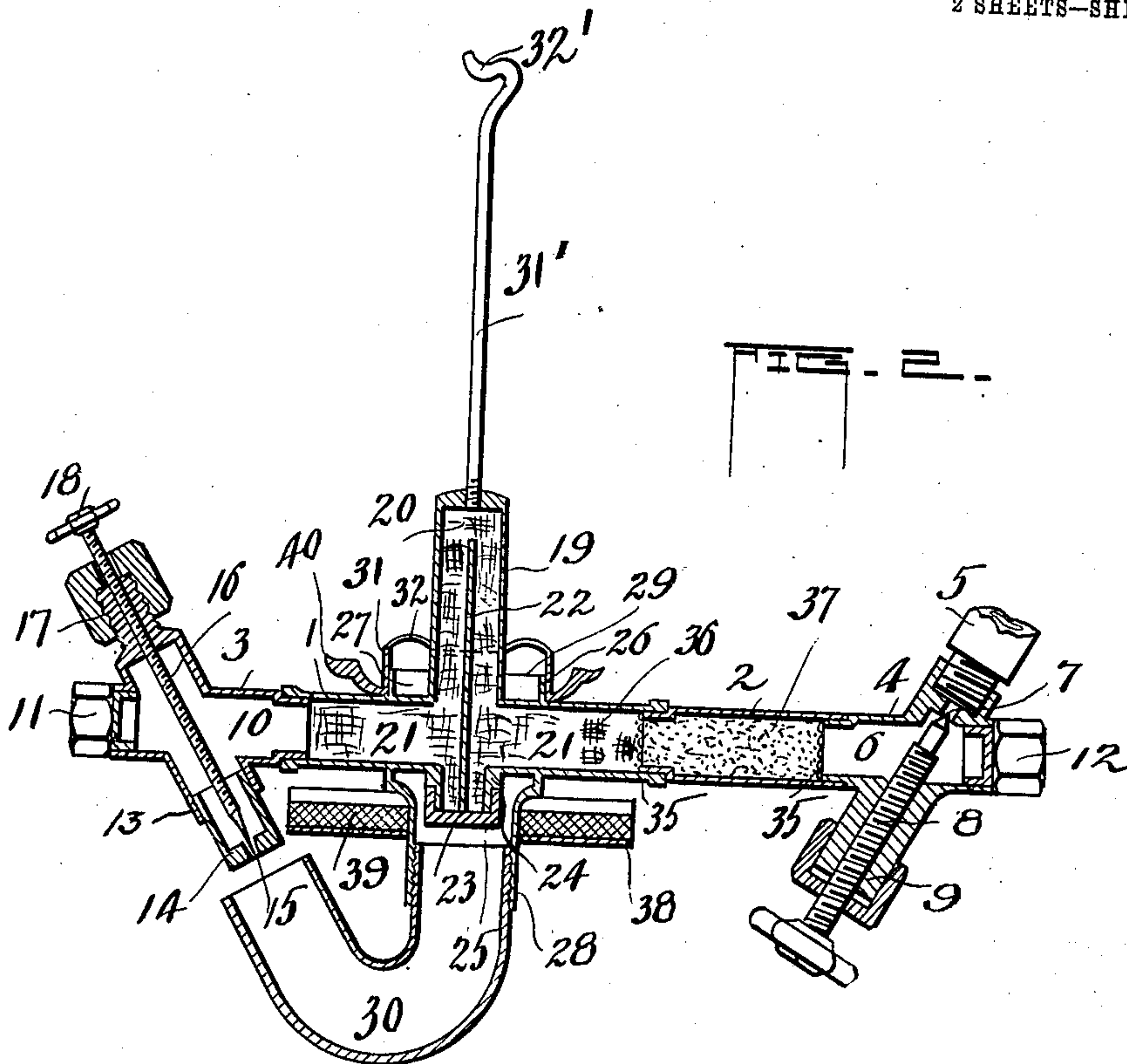
Inventor,  
John Landsiedel  
By Chas. H. LaPorte  
Atty.

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2 SHEETS—SHEET 2.



Witnesses:  
L. B. Schnieby  
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# UNITED STATES PATENT OFFICE.

JOHN LANDSIEDEL, OF PEORIA, ILLINOIS.

## HYDROCARBON APPARATUS.

No. 828,034.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed March 17, 1902. Serial No. 98,696.

*To all whom it may concern:*

Be it known that I, JOHN LANDSIEDEL, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Hydrocarbon Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a hydrocarbon apparatus or fixture, and has particular reference to an undergenerating gas-lamp in said class.

The object which I have in view is combining in the burner of a hydrocarbon-lamp a generator which forms a part thereof.

A further object of the invention is to avoid the use of a chimney in lamps of this character by providing an extension or offset of the generator-burner, which supports a mantle and extends up a part way into said mantle.

The invention consists, further, in a novel means for preliminarily heating the generator-burner for vaporizing the hydrocarbon and in the addition of supply-pipe and valve for controlling the ingress of hydrocarbon to the generator and a needle-point valve for controlling the egress of the hydrocarbon vapor to be mixed with air and admitted to the burner.

In the drawings, Figure 1 is an elevation of so much of a hydrocarbon-fixture as to illustrate my invention. Fig. 2 is a vertical section thereof. Fig. 3 is a plan illustrating certain details.

In the drawings the fixture is shown having a generator, comprising one or more sections (designated as 1, 2, 3, and 4) which may be supported by a part of the fixture designated as 5, which is termed a "supply-pipe" and is connected with a suitable supply. The section 4 represents a suitable coupling, to which the lower end of the supply-pipe 5 is connected, and the same is provided with the chamber 6, opening out at both ends of the coupling, and with the inlet-opening 7, which is engaged by a needle-point valve 8, having screw connection with an extension 9 of the coupling. With this provision it will be seen that the supply may be regulated as desired.

The section 4 is connected in a suitable manner with the section 2, and the section 2 is coupled in a suitable manner with section

1, and section 1 upon its opposite side has connected therewith the section 3. I have provided a multiplicity of sections, as shown, for convenience in assembling and packing the same, which will be further described. The section 3 is a coupling similar to that shown at 4 and has a chamber portion 10, opening out at both ends of the section with the outer end closed by the tap 11, and 12 is a similar tap for closing the outer end of the section 4. 13 is an extension of the section 3, to which is connected a tubular member 14, which has a minute discharge-opening 16, and 16 refers to a threaded stem having screw connection with an extension 17 of the section 3, and the said stem is provided with a needle-point for the purpose of engaging and closing the opening 15. The said stem at its opposite end is provided with the hand-wheel 18 for regulating said stem.

Referring to the section 1, which forms my generator and burner, the same is provided with the extension 19, having a chamber 20, which communicates with what will be termed "duplicate" chambers 21 in the body of the section 1, the said chamber being partially divided by a partition 22, which engages the walls of the extension 19 and extends to a point slightly removed from the top of the section and down through the said extension and terminating at a point 23, which is the base of an offset 24 of the section 1, which is inclosed by a cap 25, as shown in Fig. 2. 26 is a collar which forms a part of the section 1 and in its arrangement provides a chamber 27, which encircles a portion of the section 1 and the extension 19 and has the depending body portion 28 and the upper extended portion 29. To the extension 28 is designed to be attached a gas-conduit 30, which has its free open end located approximately a short distance from the discharge-opening 15 of the member 14, and it is at this point that the vapor from the generator is mixed with air to produce gas, which is admitted into the conduit 30 and carried from thence to the burner. 31 is a collar which is carried over the aforesaid hood 26, with portions extending over the section 1, and the same has the screen 32, which forms the top of the hood and surrounds the extension 19 in the manner and for the purpose shown, the collar 26, portion 28 thereof, and hood 31 constituting the burner of the device.

One of the objects of this invention is to do away with the chimney ordinarily used,



which in most if not all devices of this character is necessary for the purpose of generating and retaining the heat in the mantle, and to avoid this use and extra expense I have provided the extension of the generator and burner shown at 19, and it is from this extension that I support the mantle. The support comprises a rod 31', screwed or otherwise secured in the upper end of the extension 19, the rod having the looped portion 32'. 33 designates the ordinary mantle, having a string 34, which is for the purpose of supporting the mantle over the extension, so as to inclose it and a part of the burner, in which position the rod 31 will pass up through the mantle and support the same by the string 34, engaging the loop 32' of the rod.

A further object of the invention is to have the hydrocarbon as it passes from the supply into the generator pass up in the extension 19 on one side of the partition 22 and over and down upon the other side thereof in the extension 19 and from thence to the discharge opening in the coupling 3. During such movement or advancement of the hydrocarbon it is understood that it will be vaporized. In the generator proper and in the extension 19 is packed asbestos 36 or other desirable material, through which the hydrocarbon and vapor will pass, and in the section 2 is packed gravel 37 or other suitable material, which is retained in its proper position by the screens 35, as shown. Its use is apparent and will regulate the supply and provide for the expansion of the vapor.

38 is an elongated U-shaped trough, which is suitably attached to the extension 28 of the burner, and the same is arranged with suit-

able filling 39, which may be saturated with alcohol and lighted for preliminarily heating the generator-burner.

On the hood 31 is provided a series of supporting-arms 40, which are arranged for supporting a globe 41. (Shown in dotted lines in Fig. 1.)

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In a hydrocarbon-fixture, the combination with a generator having vertical extensions above and below the central or body portion of said generator, and horizontal extensions which project from each side of the generator, of a partition composed of a plane plate which divides the generator into two parts nearly to the top thereof, a cap which closes the lower extension of the generator, a mantle-support mounted upon the upper extension of the generator, a burner surrounding the generator, a fuel-supply pipe connected to one of the horizontal extensions of the generator and adapted to supply fuel to one side of the divided generator, a pipe connected to the other horizontal extension of the generator and adapted to receive a vaporized fuel-supply from the other side of the divided generator, a needle-valve controlling the discharge of fuel through the latter pipe and a conduit leading to the burner into which said needle-valve discharges.

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

JOHN LANDSIEDEL.

Witnesses:

CHAS. W. LA PORTE,  
ROBERT N. McCORMICK.