

No. 775,746.

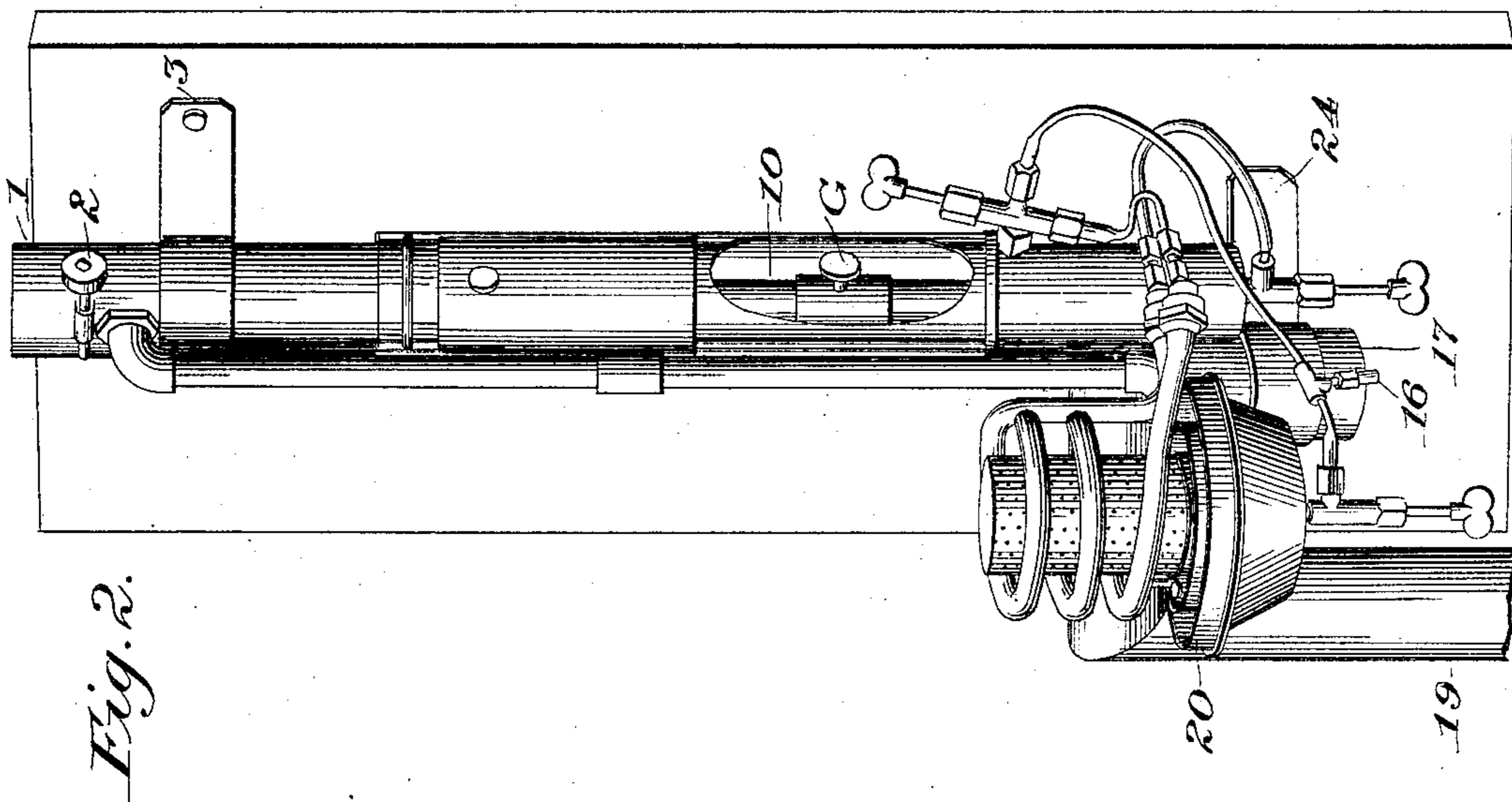
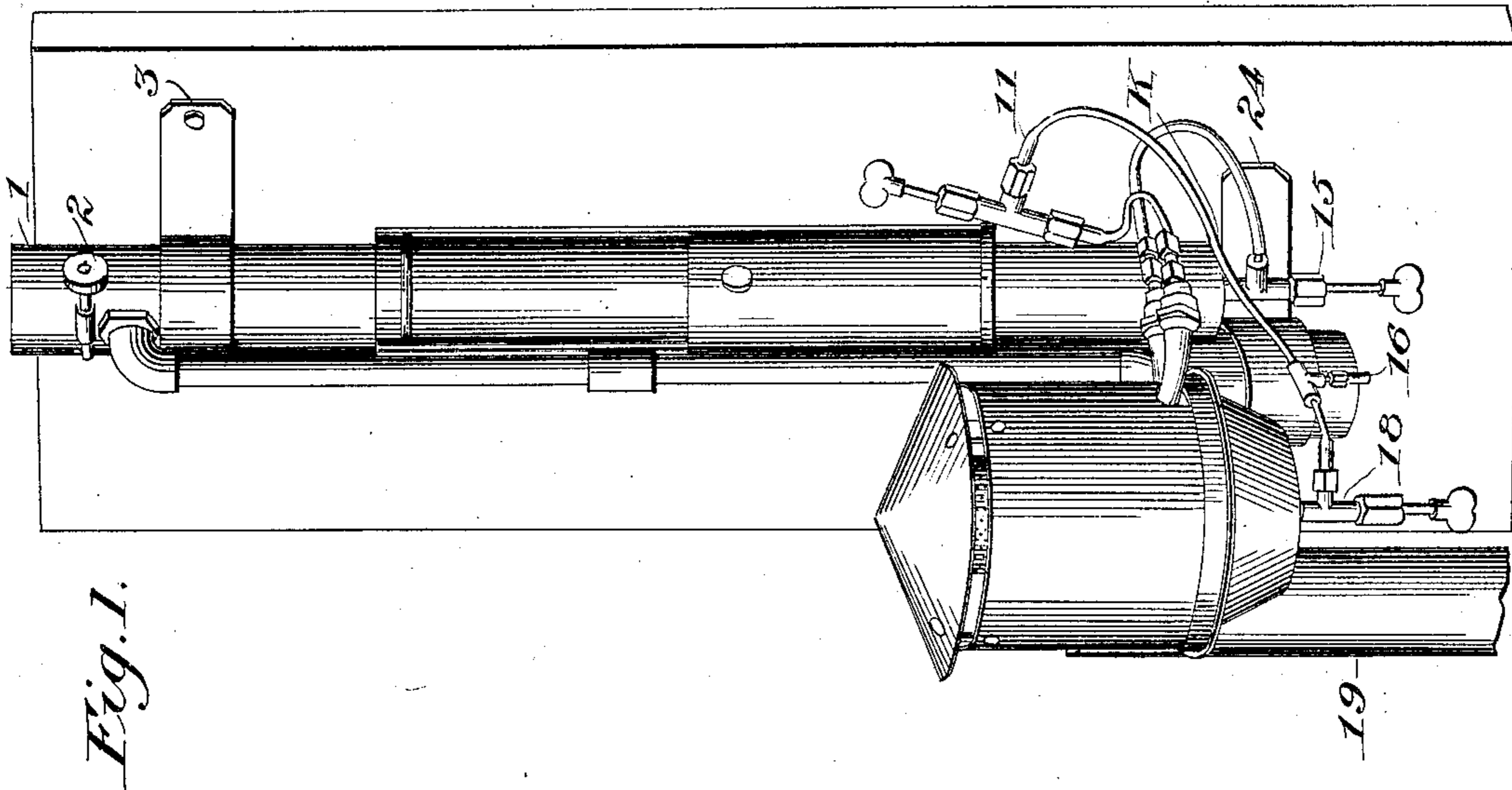
PATENTED NOV. 22, 1904.

T. A. DAVIS.
GASOLINE LIGHT GENERATING MACHINE.

APPLICATION FILED AUG. 8, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

William Berlin Wallace
Otis Edwards Stumpf

Inventor:

Thomas Albert Davis

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2 SHEETS—SHEET 2.

Fig. 4.

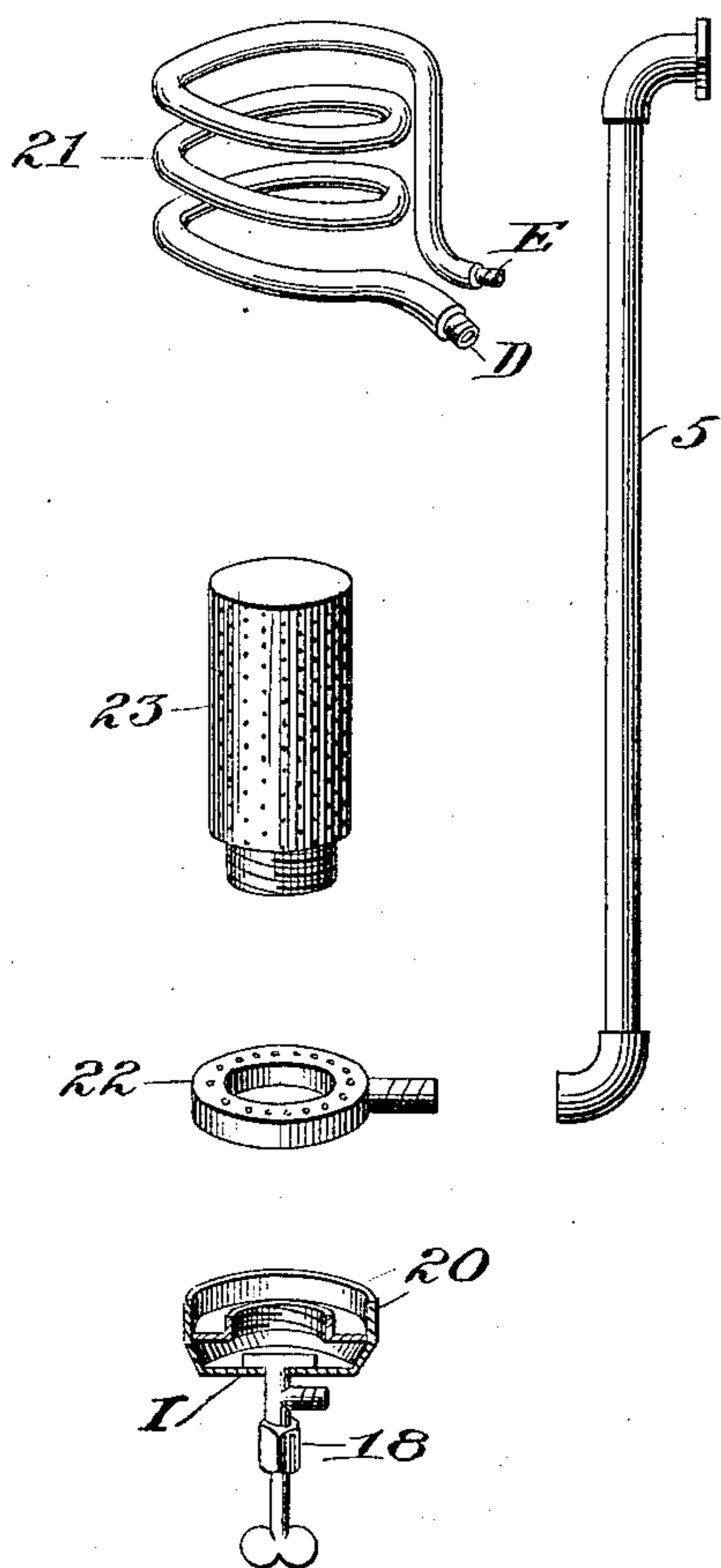
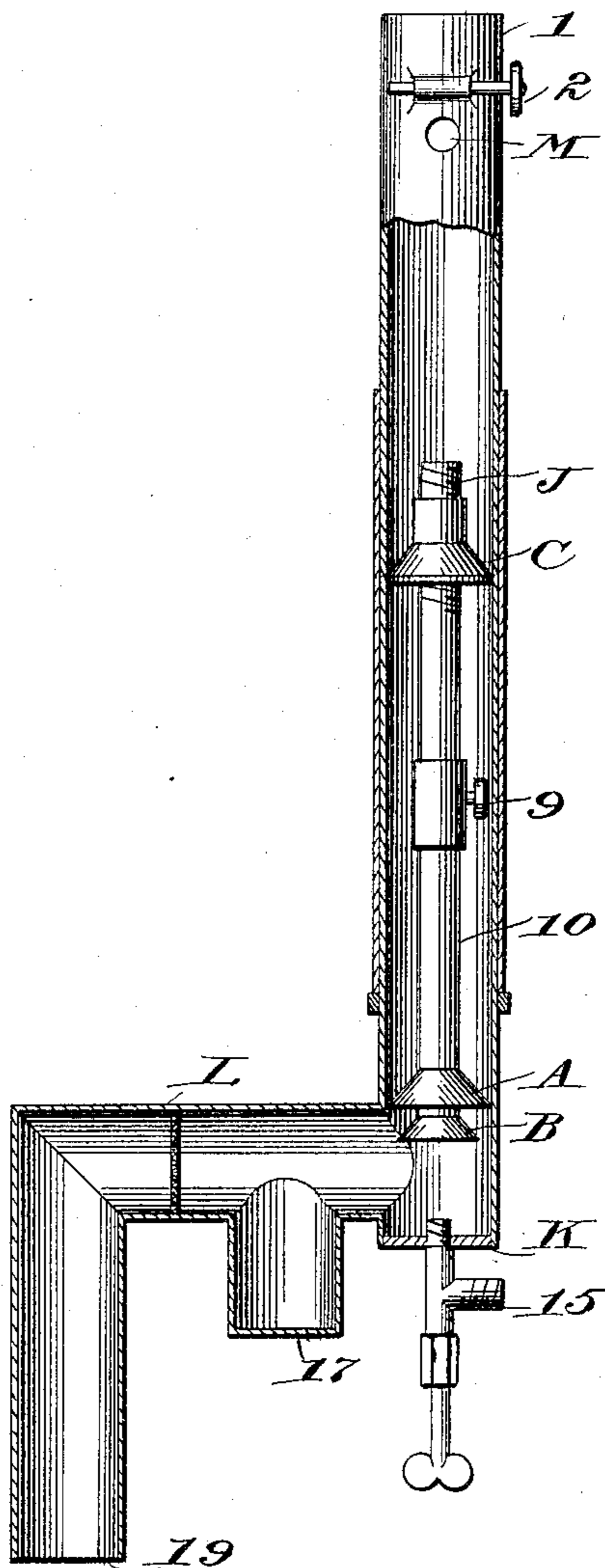


Fig. 3.



Witnesses:
William Berlin Wallace
Otis Edward Stumpf.

Inventor:
Thomas Albert Davis

UNITED STATES PATENT OFFICE.

THOMAS ALBERT DAVIS, OF FINDLAY, ILLINOIS.

GASOLENE-LIGHT-GENERATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 775,746, dated November 22, 1904.

Application filed August 8, 1904. Serial No. 220,034. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ALBERT DAVIS, a citizen of the United States, residing at Findlay, in the county of Shelby and State of Illinois, have invented a new and useful Gasolene-Light-Generating Machine, of which the following is a specification.

My invention relates to improvements in gasolene-light-generating machines in which gas is generated from gasolene for general lighting purposes; and the objects of my invention are, first, to provide a gasolene-light-generating machine simple in its construction and with few complications to get out of order; second, to eliminate all danger of fire from the overflow of gasolene from the generator when the same is admitted before the generator is sufficiently heated; third, to increase the gas-generating capacity; fourth, to provide means whereby the supply of gas used in the subflame may be regulated. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents the entire machine set up ready for the attachment of the gas-delivery pipe. Fig. 2 shows the same view of the machine with cap removed from generator and sliding door of jacket-pipe open; Fig. 3, a vertical section of the jacket-pipe, showing mixing-tube in position, safety-cup, and air-intake pipe; Fig. 4, parts of the subburner detached, subburner, and subburner supply-pipe.

Similar letters and figures refer to similar parts throughout the several views.

The brackets 3 and 24 provide the means of attaching the machine to its support.

The machine may be operated in connection with any pressure gasolene-tank, and the connection from such tank to the machine is made by means of a flexible hollow wire at the T connection 16, from which there is a flexible hollow wire leading to valve 18 and to valve 11. By closing valve 11 and opening valve 18 the gasolene is permitted to flow from the gasolene pressure-tank through valve 18 into the generating-cup 20 at the opening I until a sufficient amount is admitted to fill said cup, when valve 18 is closed and the gasolene in said cup is lighted to heat the generating-coil 21. However, the

generating-cup 20 is provided with an asbestos pad, and alcohol may be used for the purpose of heating said generating-coil in case it is preferable. After said generating-coil is sufficiently heated valve 11 is opened, and the gasolene from the pressure-tank is permitted to pass through the flexible hollow wire leading from valve 11 into the larger end D of the said generating-coil and by coming in contact with the heated inner surface is converted into gas and passes out of smaller end of said generating-coil E and from there is conducted by another flexible hollow wire of larger size than those previously mentioned to valve 15, which on being opened allows the gas to pass into the funnel B of the mixing-tube 10 and through said tube out of the opening J into the jacket-pipe, where a portion of it strikes the spoon-shaped damper 2 and is thereby forced through the opening M into and through the subburner supply-pipe 5 into the subburner, which consists of a single coil of perforated hollow tubing 22 with the threaded connection and the closed-top perforated cylinder 23. As the gas escapes from the perforations in said tubing 22 it immediately ignites and continues to burn, the flame being supplied with oxygen through the perforations in said cylinder 23, thereby keeping up the heat necessary in generating-coil 21. The closed-top perforated cylinder aforesaid is made with a threaded base, so as to pass through the orifice in the said perforated ring and articulate with threads in the opening in the generating-cup 20, thereby holding parts in position.

The spoon-shaped damper 2, that I have previously mentioned, is made adjustable, so that it can be caused to dip over into the jacket-pipe to a more or less degree, and the most perfect regulation of the supply of gas used in the subburner can be effected by the manipulation of this damper. However, should valve 11 and valve 15 be opened before the generating-coil 21 is sufficiently heated to immediately volatilize all the gasolene that is admitted it is provided that the gasolene that is carried around through said coil and forced up into the mixing-tube 10 will drop back on plate K and run off into the safety-cup 17, and

as soon as said generating-coil becomes sufficiently heated by the subflame the excess of gasolene in the safety-cup will be vaporized and mixed with the air passing over it from the air-intake pipe 19 and be used with the other gas generated. The said air-intake pipe has the screen L to prevent the entrance of dust or foreign bodies, and said pipe is also detachable at the screen L.

10 The washer-shaped nut C and the funnel-shaped washer A are made fast and thoroughly gas-tight on the inside of the jacket-pipe, and the mixing-tube 10 is held in position at the bottom by passing through the orifice in the funnel-shaped washer A and is suspended from the top by means of finely-cut threads, which articulate with threads in the washer-shaped nut C. This mixing-tube can be readily adjusted by the manipulation of the thumb-screw 9.

20 The generating-coil that I have previously mentioned is constructed larger at the end D, where the gasolene enters, and slightly tapering toward the end E, so that the same may be readily cleaned of all deposits by removing the nuts from the ends D and E and attaching the foot-pump to the smaller end E.

25 The end of the jacket-pipe 1 is where the gas-delivery pipe is attached.

30 All the valves of this machine that I have

mentioned are needle-pointed, with a packing-nut at the bottom to prevent the escape of the gas and also a finely-threaded connection at the side, and in addition to this valve 11 has a threaded lug on the side which screws into the jacket-pipe.

I am aware that prior to my invention gasolene-light-generating machines have been invented with needle-pointed valves with the packing-nuts mentioned, and I do not desire to claim such as my invention; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The herein-described gasolene-light-generating machine consisting of the generating-coil 21, the generating-cup 20, the subburner which is made up of the perforated hollow ring 22 and the closed-top perforated cylinder 23, the mixing-tube 10 with its attachments to the jacket-pipe, the subburner supply-pipe 5, the safety-cup 17, the air-intake pipe 19 and the jacket-pipe all substantially as described and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS ALBERT DAVIS.

Witnesses:

C. F. SPICER,
L. C. HENRY.