

No. 684,073.

Patented Oct. 8, 1901.

A. A. LOW.
HYDROCARBON BURNER.

(Application filed Nov. 26, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

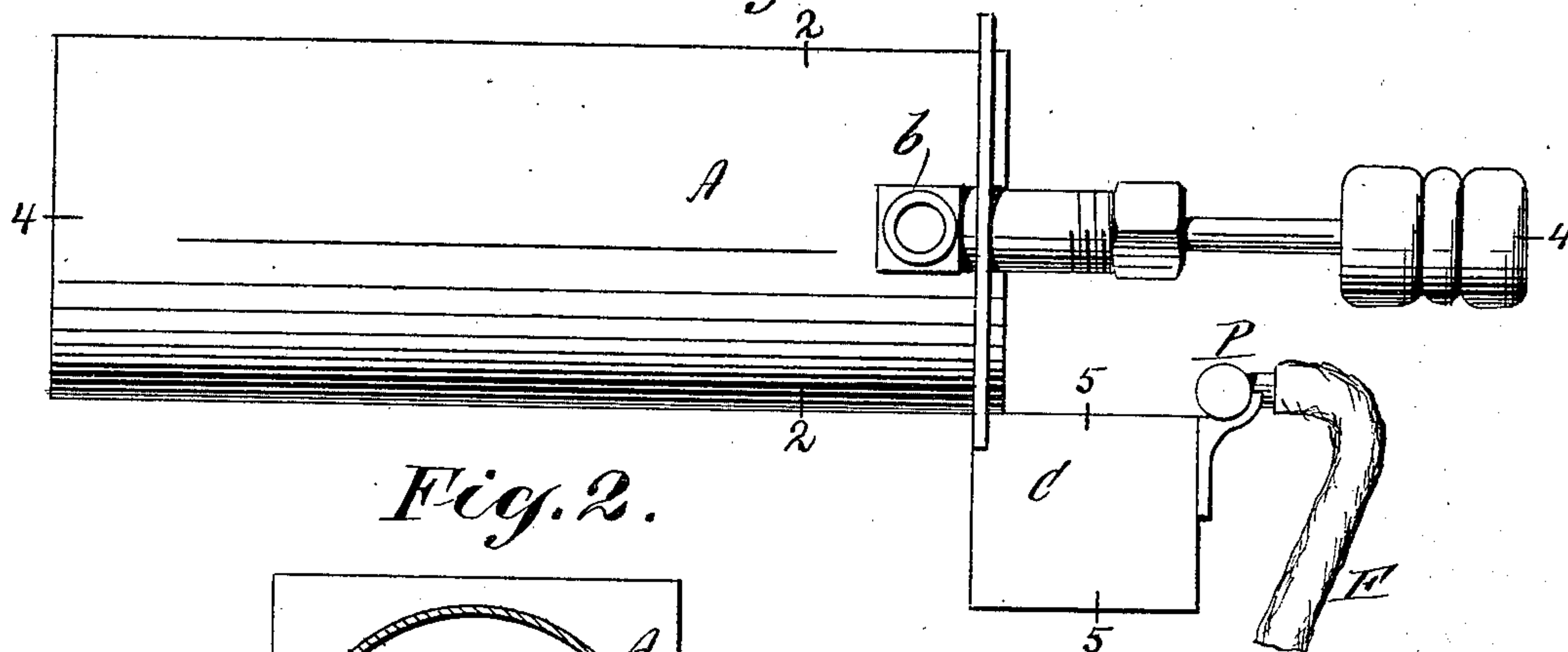


Fig. 2.

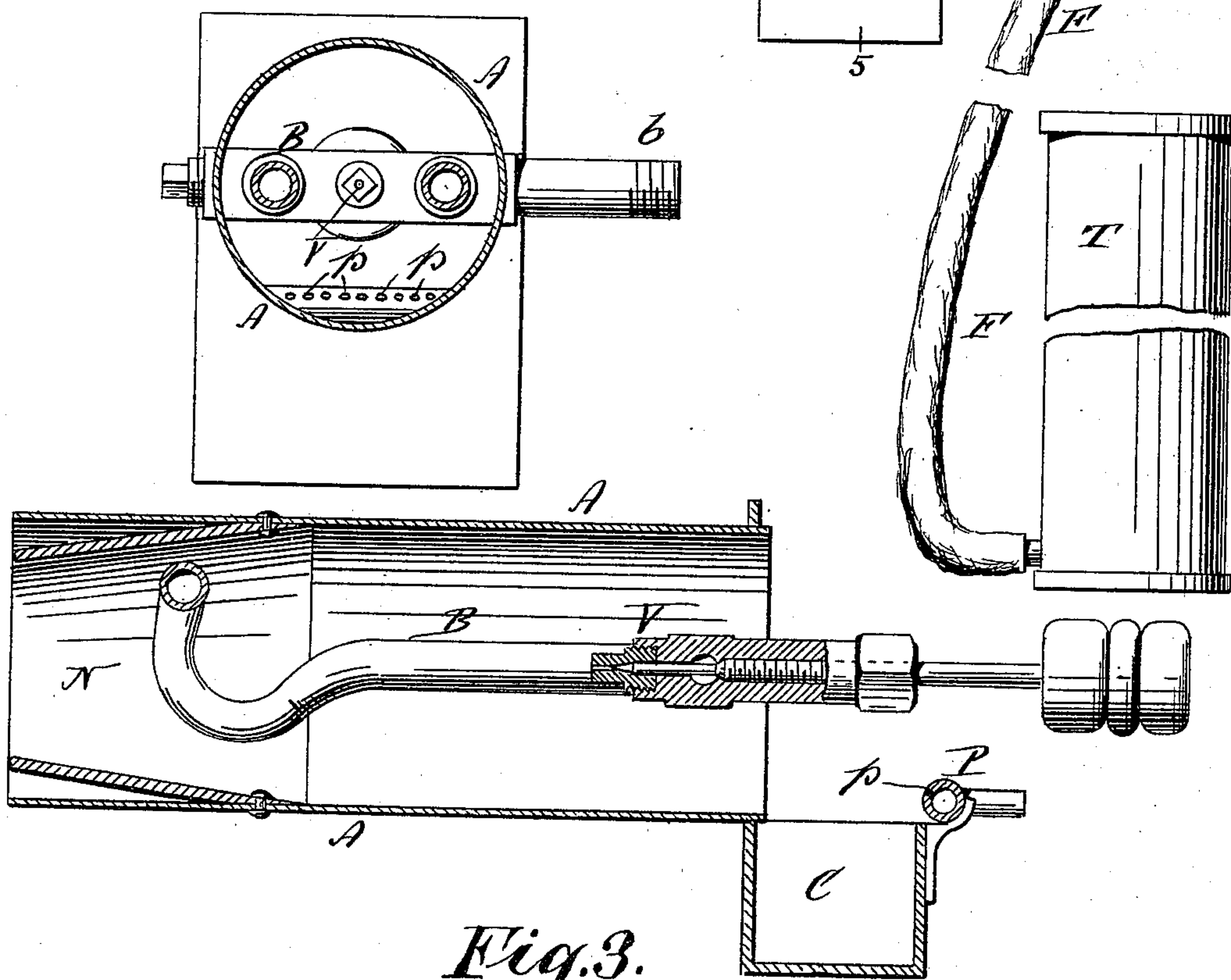


Fig. 3.

Witnesses:

D. W. Gardner
L. Rowley

Inventor:

Abbot Augustus Low
By his Attorney
Geo. W. Malt

No. 684,073.

Patented Oct. 8, 1901.

A. A. LOW.
HYDROCARBON BURNER.
(Application filed Nov. 26, 1900.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 4.

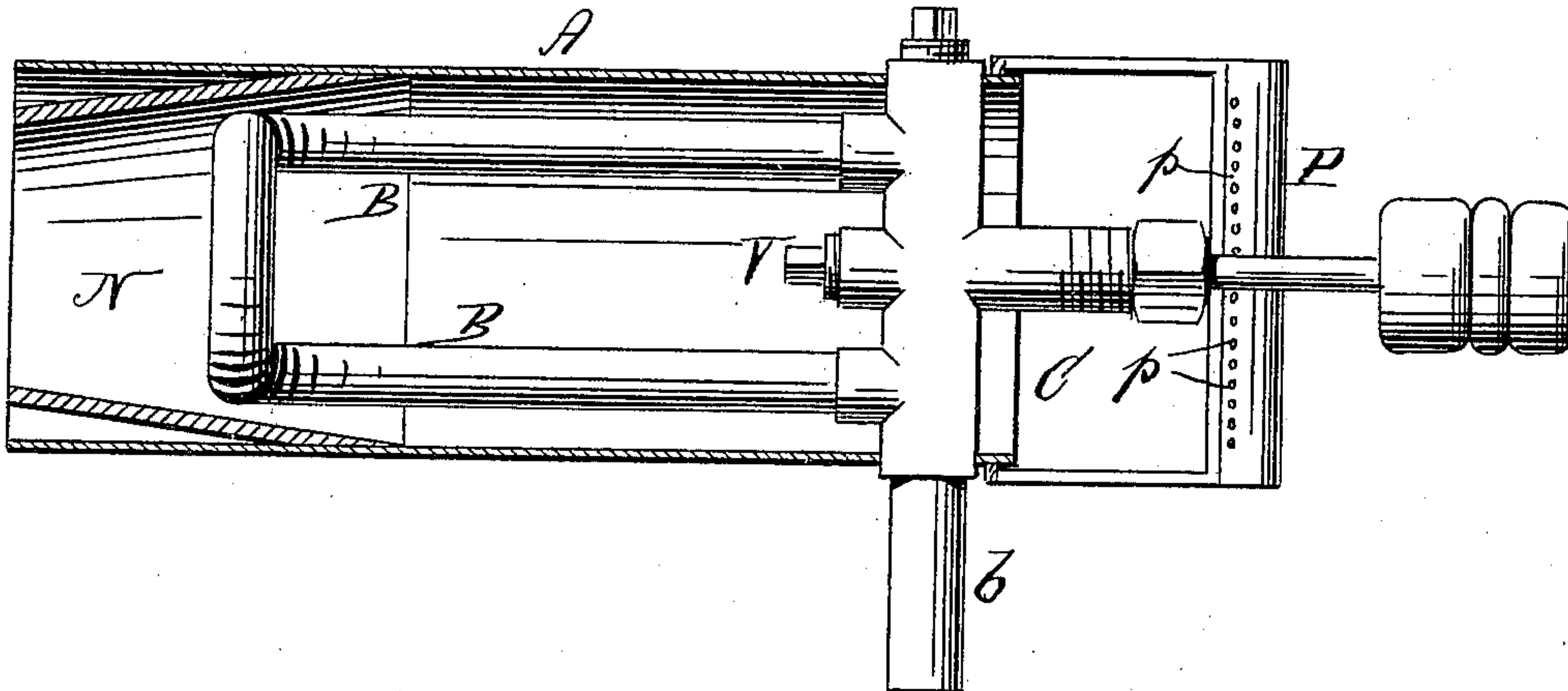
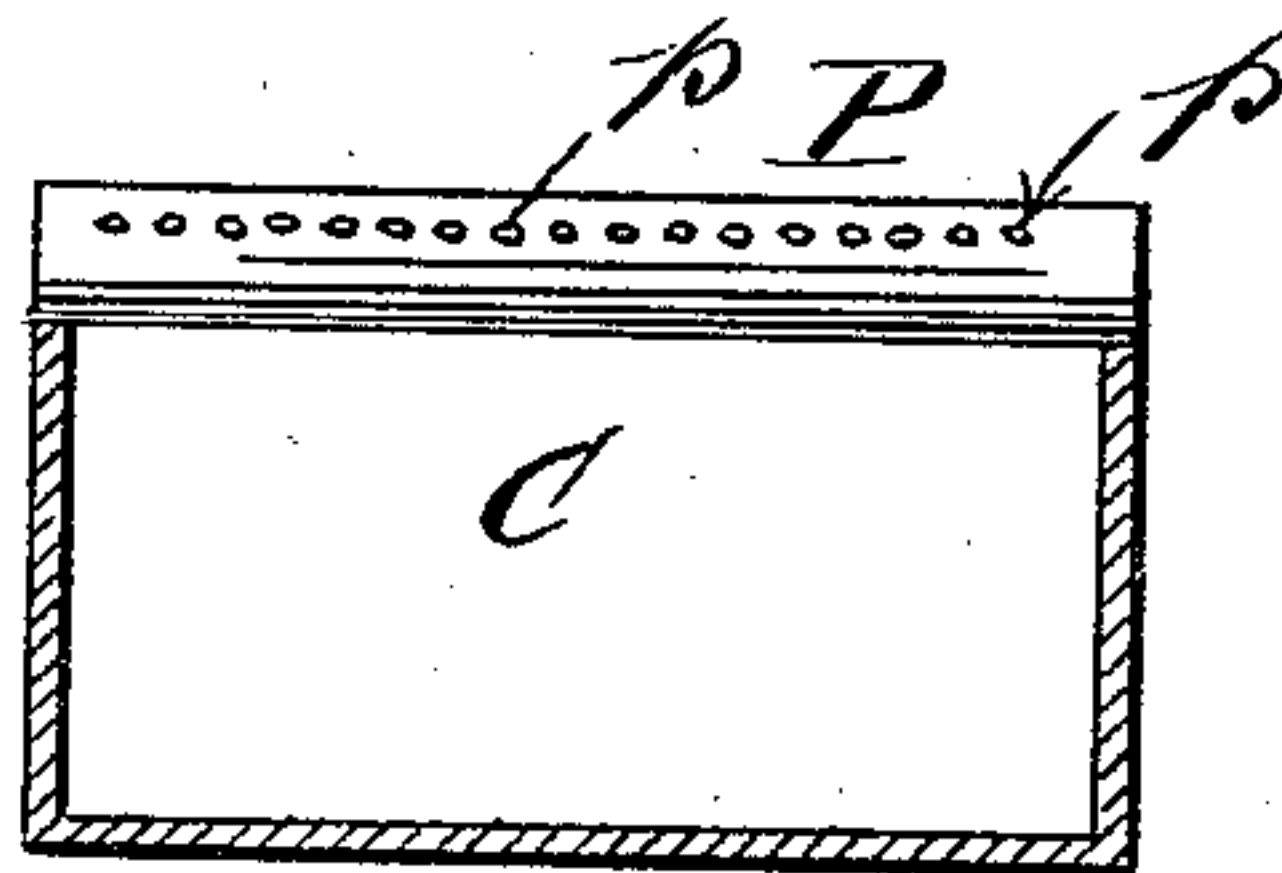


Fig. 5.



Witnesses:

Rowley
L. Rowley

Inventor:

Albot Augustus Low
By his Attorney
Geo. W. Miall

UNITED STATES PATENT OFFICE.

ABBOT AUGUSTUS LOW, OF BROOKLYN, NEW YORK.

HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 684,073, dated October 8, 1901.

Application filed November 26, 1900. Serial No. 37,709. (No model.)

To all whom it may concern:

Be it known that I, ABBOT AUGUSTUS LOW, a citizen of the United States, residing in the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Hydrocarbon-Heaters, of which the following is a specification sufficient to enable others skilled in the art to which the invention
10 appertains to make and use the same.

My improvements relate to what are known as "hydrocarbon heaters or torches," used for effecting a preliminary heating of the ignition-chamber of gas-motors and for similar
15 purposes where heat is to be applied temporarily and superficially.

My invention consists in the special construction and arrangement of parts herein described and claimed specifically.

20 In the accompanying drawings, Figure 1 is an elevation of a hydrocarbon-heater of a form ordinarily used for the purpose designated with my improved attachment applied thereto. Fig. 2 is a section upon plane of
25 line 2 2, Fig. 1. Fig. 3 is a central longitudinal section. Fig. 4 is a horizontal section, partly in elevation, on plane of line 4 4, Fig. 1. Fig. 5 is a section upon plane of line 5 5, Fig. 1.

30 A is the cylindrical shell in which the ordinary vaporizing-tube B is situated, said tube being fed through the supply-tube *b*, in which is interposed the usual needle-valve V, through which the vaporized hydrocarbon
35 escapes under pressure sufficient to drive the flame through the nozzle N in the end of the cylinder A.

C is a receptacle for holding an asbestos wick or equivalent and for containing the alcohol to be used in the preliminary heating
40 of the vaporizing-tube B. Attached to or combined with this lamp-chamber C is a pipe P for supplying compressed air to the alcohol flame arising from the chamber C. This
45 air-pressure pipe P is provided with perfora-

tions or nozzles *p*, inclined in such relation to the chamber C and to the vaporizing-tube B as to cause the flame from the chamber C to impinge forcibly against the tube B, the compressed air at the same time intensifying the
50 heat of the flame. The compressed air supplied to the pipe P or its equivalent may be derived from any convenient source, as from a tank T, indicated symbolically in the drawings and connected with the pipe P by means
55 of flexible tubing F. In this connection it is obvious that a compression-pump or other source of supply may be substituted for the tank T with like result.

In the use of gas-motors having ignition-
60 chambers which require to be heated externally before the motor can be made to run continuously the element of time is of special importance under all conditions of use,
65 and for this reason by rendering the hydrocarbon heater or torch instantly available I effect a material and substantial advantage, while adding to the safety and convenience of the users of gas-motors of this class.

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

The combination of the cylindrical shell A, formed with the contracting-nozzle N, the supply-pipe *b*, the vaporizing-tube B, the needle-valve V, controlling the delivery of hydrocarbon from the supply-pipe *b*, to the vaporizing-tube B, the lamp-wick chamber C, secured to the lower rear edge of the shell A, and the air-pressure pipe P, formed with the series of perforations *p*, inclined toward the
75 vaporizing-tube B, and arranged to direct the flame from chamber C, against the vaporizing-tube, the whole arranged and operating substantially in the manner and for the purpose
80 set forth.

ABBOT AUGUSTUS LOW.

Witnesses:

D. W. GARDNER,
GEO. WM. MIATT.