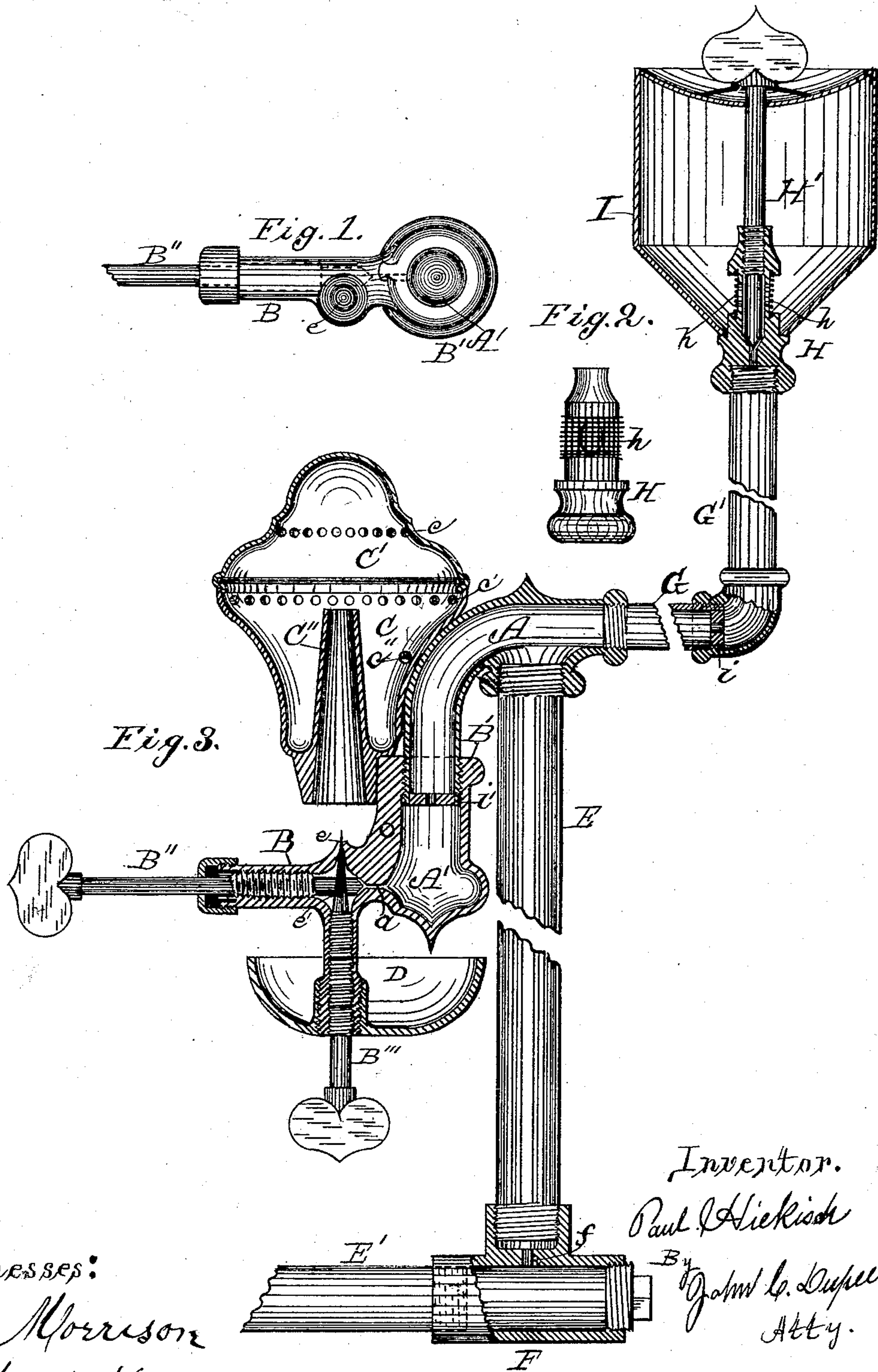


(No Model.)

P. HIEKISCH.  
GASOLINE STOVE.

No. 264,082.

Patented Sept. 12, 1882.



Witnesses:

H. T. Morrison

G. Frank Woodward

Inventor.

Paul Hickisch

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Atty.



# UNITED STATES PATENT OFFICE.

PAUL HIEKISCH, OF DECATUR, ILLINOIS.

## GASOLINE-STOVE.

SPECIFICATION forming part of Letters Patent No. 264,082, dated September 12, 1882.

Application filed March 6, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, PAUL HIEKISCH, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented a new and useful Improvement in Gasoline-Stoves, of which the following is a specification.

My invention relates to certain new and useful improvements in gasoline-stoves, the objects of which are to provide a burner that will produce the greatest possible degree of heat without smoke by a comparatively small consumption of oil, and to filter the oil and render it free from all sediment and non-vaporizing matter that would tend to clog or corrode the valves. The device consists in the construction and arrangement of the combustion-cup, generating-tube, and valves relative to the generator and cup, all arranged in combination and constructed to operate in the manner and for the purpose hereinafter fully described. I attain these objects by the device illustrated in the accompanying drawings, in which—

Figure 1 is a top view of the valves detached from the generator. Fig. 2 represents the reservoir-valves with valve-stem removed, showing the wire-gauze filter for filtering the fluid before it reaches the regulating-valve. Fig. 3 is a side elevation, partially in section.

Similar letters refer to similar parts throughout the several views.

A represents the generator, and A' the lower gas-chamber.

B represents the part within which the valve B'' is fitted, which regulates the flow of gas to the jet-orifice *e*; also, the screw B''', provided with a needle-point, *e'*, for the purpose of controlling or gaging the size of the jet-orifice, and thereby changing the size and force of the flame.

C is the burner-cup, having a central tube, C'', and an endless row of small perforations, *c'*, also two small holes, *c''*, one on each side of the generator, and being inclined downward for the purpose of heating the perpendicular portion of the part B, and thereby aiding in the generation of the gas. Upon the burner-cup C is placed a cap, C', provided with an endless row of small perforations. The burner thus formed is secured to the generator by a clamping-screw, or it may be held in various other ways.

D is a drip-cup secured to the lower end of the stem, through which the screw B''' passes, and is used to burn fluid in for the purpose of heating the generator to start the burner.

E is a stand-pipe screwed into the opening on the under side of the horizontal portion of the generator, and is used only when a number of burners are connected to form a two, four, or six burner stove. In that case the supply-pipe G' is disconnected from the end of the generator and connected to the T-pipe F at the lower end of the stand-pipe E. The horizontal pipe E' is used to connect the other burners, a T-pipe being inserted, as shown in Fig. 3. It will be seen that the T-pipe F is provided with a small orifice, *f*, to reduce the flow of fluid to the generator. The conducting-tube G' is provided with a disk, *i*, with a small orifice for the same purpose. The object of reducing the interior of the conducting-tube in this manner is to assist in retarding the backflow of the fluid caused by the expansion of the gas in the generator, which forces the fluid back of the disk and only allows so much to pass through into the generator as is required to keep up a constant and even pressure of gas. The flow may also be controlled by the screw-valve H in the tank or reservoir, the body of which is screwed on the stand-pipe, and is secured to the bottom of the tank. This valve H is provided with a wire-gauze filter, *h h*, placed on two of its sides, covering the inlets, as shown in Figs. 2 and 3.

The construction of the part B is a very essential feature in the construction of burners, as it is provided with a gas-chamber, A', separated from the generator A by the disk *i'*, which has a small central orifice, through which the gas passes. This lower chamber is heated by the action of the flames, which issue from the hole *c''* made through the cup C in a downward direction, so as to strike upon the top flange, B', of the part B, thereby assisting in the generation of gas.

It will be obvious, by reference to the drawings, that the screw B''' does not regulate or control the flow of gas to the jet-orifice *e*, within which it is fitted, but is designed to determine the size of the orifice, so that a larger or smaller flame may be made when the screw-valve is wide open. When once the size is determined the burner may be manipulated with-



out changing the screw B''', as the fluid is admitted to the jet in greater or less volume, as desired, through the orifice *a*, which forms the seat to the valve B'', the jet-orifice *e* being located or offset to one side of the screw B'' in order that the forward end or point of each screw will pass by each other at right angles, as shown, and yet not come in contact or in any way interfere with the independent working of each of the said screws.

I am aware that filtering material has been used in various positions within the conducting-tube below the valve; but this I do not claim, as my filter is placed within the tank above the valve in such a position that all fluid must pass through it before reaching the generator, as shown.

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

1. In combination with the cup and curved generating-tube, the part B, constructed, substantially as shown, with a vertical tubular projection adapted to screw onto the lower end of the curved generator A, the gas-chamber

A', formed in its lower part with an orifice, *a*, controlled by the screw-valve B'', fitted into a laterally-projecting stem, and the disk *i*', forming one end of said gas-chamber, substantially as herein shown and described.

2. In a gasoline-stove, in combination with the part B and cup C, the curved generating-tube A, provided with two inlet-orifices, one at the end of the horizontally-extended portion and one on the under side of said horizontally-extended portion, as shown, the part B having two valves, constructed and arranged substantially in the manner shown, and for the purpose specified.

3. In combination with the tank I, supply-pipe G', and valve, the main body of which unites the two—viz., the tank and supply-pipe—the wire-gauze filter *h h*, secured to the side of said valve and covering the orifice thereof, substantially as shown, and for the purpose specified.

PAUL HIEKISCH.

Witnesses:

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