

UNITED STATES PATENT OFFICE.

FRANK C. BINKLEY, OF SYCAMORE, ILLINOIS.

HAND-TORCH.

1,040,357.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed October 2, 1911. Serial No. 652,250.

To all whom it may concern:

Be it known that I, FRANK C. BINKLEY, a citizen of the United States, and resident of Sycamore, in the county of Dekalb and State of Illinois, have invented certain new and useful Improvements in Hand-Torches; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which said invention appertains to make and use the same.

This invention has general reference to gasoline torches; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claim.

The object of this invention is the production of a portable, gasoline-operated torch that can be used in any position, such a torch being illustrated in the drawings, in which—

Figure 1 is a vertical section of the device, parts not directly connected with this invention being shown in elevation. Fig. 2 is an elevation, partly in section, of the valves employed in this device, and illustrating a modified construction thereof.

Like parts are designated by the same characters and symbols of reference in both figures.

A, in this drawing designates the tank; B, the burner; C, the filler plug; D, the air pump; and E, the regulating valve, these parts being of any of the various styles of torches now in use, my invention not being confined to the details of construction of these parts.

In the tank A there is a supply pipe 17, the upper end of which is connected to the top 46 of the tank and in communication with the burner B through the valve E, and the bent pipe 47. This burner, as stated, may be of any desired construction, the one shown being the one for which Letters Patent of the United States were granted to myself on the 8th day of August, 1911, No. 1,000,229, and to which reference may be had as to the details of construction of the said burner. To the lower end of this supply pipe 17 there is secured a valve G, comprising a casing 48, approximately of the contour of a so-called return-bend, one branch, 49 of which connects to the lower end of the supply pipe 17, while in the other branch 49^a,

there is removably secured a valve seat 50. The bore of this branch is cylindrical, and in this bore there is located a piston 52, having in one of its faces a recess wherein is placed a disk 53, constructed to engage the valve seat 50 as will hereinafter more fully appear. The piston 52 serves as the valve proper and has a stem 51, which passes through the central bore 54, in the valve seat 50, and which carries at its outer end a weight 37, the bore 54 being large enough in diameter to afford a passage which, through the cylindrical bore, and a vein 55, connecting with the bore of the supply pipe 17, permits gasoline to enter said pipe. The upper end of the supply pipe 17 enters a fitting G', said fitting being constructed substantially the same as the valve G, it being provided with all the parts heretofore described in connection with said valve G, said parts being designated by the same reference numerals followed by a prime, (') to differentiate these parts.

It will now be observed that when the tank is in its normal erect position, the valve G is open to permit gasoline to pass from the tank to the burner, while the valve G' is closed to prevent air from entering the same. If now the tank is reversed or turned upside down, the valve G' will open and the valve G close so that the liquid fuel in the now lower part of the tank will pass to the burner through this valve G' while the valve G will prevent air from entering the supply pipe 17. By thus constructing the tank and its attached burner, whereby the same may be reversed, I attain many advantages which cannot be secured by any of the hand torches now in general use.

I desire to call attention to the fact that while in the preferred embodiment of my invention, the valves G, G', are disconnected and operating by gravity assisted by the weights, I may connect these valves by a rod 56, as shown in detail in Fig. 2, in which case I may dispense with one or even both of the weights 37, 37', for the reason that the connecting rod 56 and the valves are of themselves heavy enough to insure the proper functioning of the said valve.

Having thus fully described this invention, I claim as new and desire to secure to me by Letters Patent of the United States—
A hand torch, comprising, in combination, a tank, means for forcing air into said tank, a burner above said tank, a supply-pipe in

said tank reaching close to the bottom thereof, a stop-valve located at the outside of said tank and connecting with said supply-pipe and said burner, two casings in screw-thread-
5 ed engagement with said supply-pipe, one of which is located at the lower end of said supply-pipe, the other of said casings being located at the upper end of said supply-pipe, each of said casings having a cylindrical
10 bore located at the side of said supply-pipe, a screw-threaded plug in said bore, a valve-seat on said plug within said bore, a disk-valve in said bore, a stem to which said disk-valve is secured, said stem projecting beyond

the outer end of said plug, and a weight at 15 the outer end of said stem, the lower one of said casings being upwardly turned and the upper one being downwardly turned, as specified.

In testimony that I claim the foregoing 20 as my invention, I have hereunto set my hand in the presence of two subscribing witnesses.

FRANK C. BINKLEY.

Witnesses:

MICHAEL J. STARK,
A. G. PETERSON.