

V. M. BEARER.
HAND TORCH.
APPLICATION FILED FEB. 2, 1917.

Patented Aug. 21, 1917.

1,237,995.

Fig. 1.

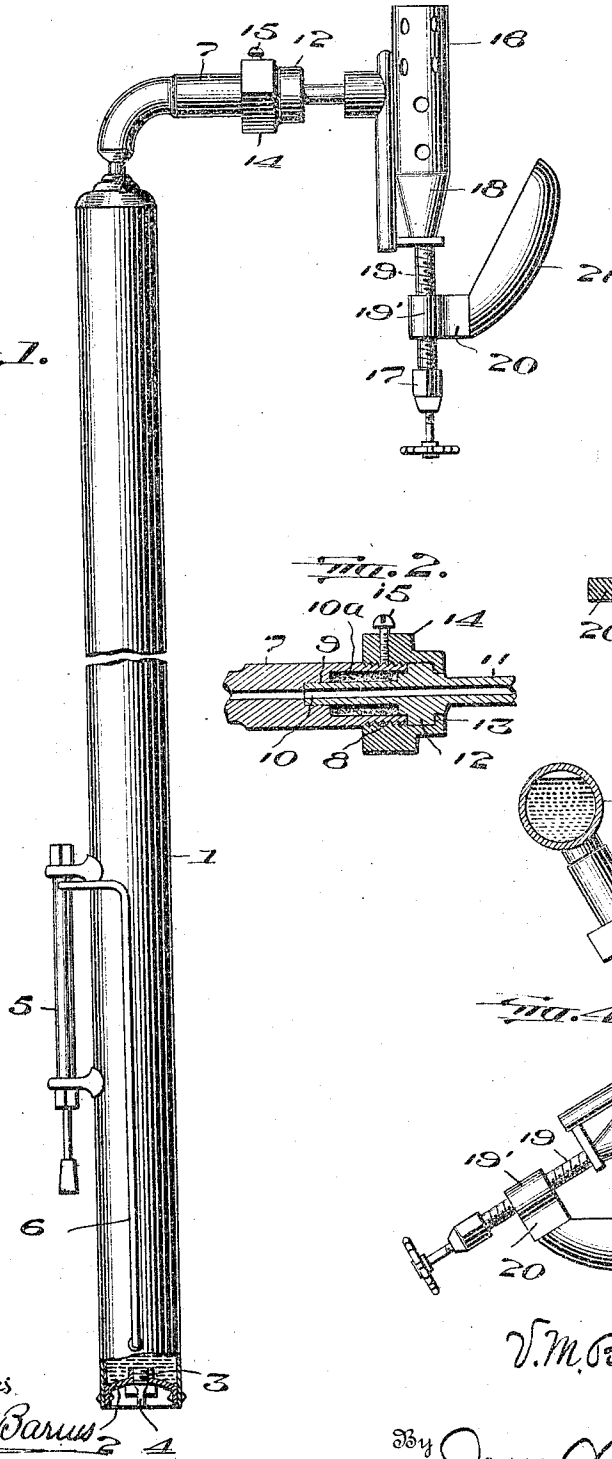


Fig. 2.

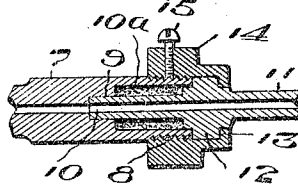


Fig. 3.

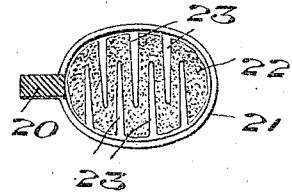
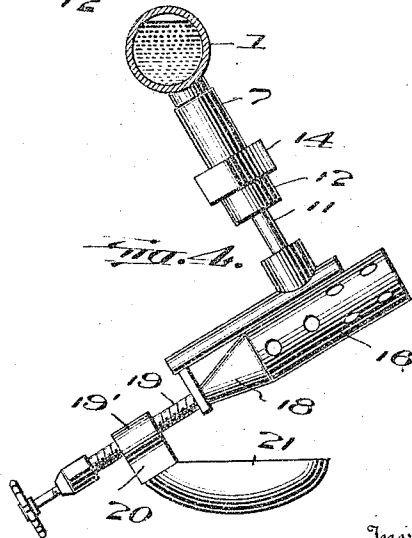


Fig. 4.



Inventor

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UNITED STATES PATENT OFFICE.

VALENTINE M. BEARER, OF LIGONIER, PENNSYLVANIA.

HAND-TORCH.

1,237,995.

Specification of Letters Patent.

Patented Aug. 21, 1917.

Application filed February 2, 1917. Serial No. 146,300.

To all whom it may concern:

Be it known that I, VALENTINE M. BEARER, a citizen of the United States, residing at Ligonier, in the county of Westmoreland and State of Pennsylvania, have invented new and useful Improvements in Hand-Torches for Back-Firing in Fighting Forest-Fires, of which the following is a specification.

My present invention pertains to gasolene blow torches of the hand type, and has for its general object to provide a gasolene hand torch in which the elements are so constructed and relatively arranged that the torch is adapted for use to advantage in the so-called "back-firing" against forest fires; the intense heat of the torch being calculated to light leaves etc. quickly so that fire can be scattered along in a continuous stream where there is inflammable material as well as inflammable material that is somewhat damp, thereby decreasing the possibility of the back fire "jumping" or crossing the fire lane, as is desirable, and this without subjecting the operator to the necessity of frequently assuming an extreme stooping posture.

The invention will be fully understood from the following description and claims when the same are read in connection with the accompanying drawings, in which:

Figure 1 is a broken elevation of the torch constituting the preferred embodiment of my invention.

Fig. 2 is a longitudinal central section, taken through the swivel connection.

Fig. 3 is a section showing the drip cup and appurtenances in plan together with the filler in said cup.

Fig. 4 is a detail view showing the position in which the parts are placed when it is desired to charge the drip cup with gasolene for pre-heating purposes.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

Among other elements my novel torch comprises a long and slender tank 1, adapted to serve as a convenient handle in manipulating the torch and to prevent excessive stooping. In the preferred embodiment of my invention the said tank 1 is three feet long by one and three quarters inches in diameter, and is provided at its rear with a funnel end 2 in which is a filling aperture 3, normally closed by a plug 4.

On its side at an intermediate point in its length the tank 1 is equipped with a longitudinally-disposed air pump 5, arranged close to the tank and having its eduction orifice connected through a conduit 6 with the rear portion of the interior of the tank. Obviously the conduit 6 may be arranged exteriorly of the tank 1 or may be disposed in the tank, without affecting my invention.

Fixed with respect to and extending forwardly from the forward end of the tank 1 and then laterally is a pipe 7 on the outer end portion of which is a thread 8. In the said outer end portion of the said pipe 7 is a socket 9, of circular form in cross-section, and ground to fit snugly in said socket is the stem 10 of a pipe section 11 on which is a shoulder 12. The said shoulder 12 is engaged by the flange 13 of a coupling member 14 which is threaded on the pipe 7 and is adjustably fixed thereto by a set screw 15 so as to assure a tight fit of the stem in its socket. The pipe 7 is provided with a chamber as shown and said chamber is occupied by packing 10^a. By turning the member 14 and crowding the shoulder 12 against the said packing, the packing is caused to make a close fitting joint, and by the same manipulation wear may be taken up. In the manner described the pipe section 11 is connected in a swiveled manner with the pipe 7, and hence said section 11 is free to be turned about its axis. It will also be noted that the swivel connection is such that there is no liability of leakage of gasolene or commingled gasolene and air even when the mixture is under considerable pressure. For this reason I prefer to employ the swivel connection constructed in the manner described.

On its outer end the pipe section 11 carries a foraminous burner 16 which is provided with a valve 17 and is otherwise in general of the ordinary well-known construction common to blow torches. A rearwardly-extending portion 18 of the burner surrounds the stem of the valve and is exteriorly threaded as indicated by 19 for the engagement of an interiorly threaded collar 19'. This collar is provided with a lateral arm 20 which is sufficiently long to permit the drip cup to be turned about the burner freely, and on said arm is the drip cup numbered 21; the said drip cup being disposed at an angle of about 35 degrees to the burner as illustrated. The said cup is designed to hold a

mass of asbestos or equivalent absorbent material 22, and is provided on the inner sides of its opposite side walls with inwardly-extending prongs 23 which are preferably
 5 arranged in staggered relation as illustrated and are designed to rest in the absorbent material 22 with a view to holding the same against casual displacement incidental to the handling of the torch. In the practical use
 10 of my novel torch it will be manifest that it is unnecessary for the operator to frequently assume or remain in an extreme stooping position; also, that the capacity of the torch to burn in inverted position con-
 15 tributes materially to its efficiency when used for back-firing purposes, and that by reason of the absorbent material or sponge in the drip cup the burner can be heated while the torch is being carried and roughly ma-
 20 nipulated. I would also have it understood that the burner burning as fuel commingled gasoline and air is adapted to fire material more rapidly and in a continuous stream.

When the torch is to be lighted, the burner
 25 is first turned on the swivel to an elevation of approximately 45 degrees and then the rear end of the torch is slightly elevated. The said elevation of the rear end of the torch or tank thereof, as stated, leaves the
 30 burner elevated about 35 degrees, and when the drip cup is turned until it rests under the burner, said cup will be in an approximately horizontal position and can be charged with gasoline from the tank.

35 I would have it understood that without departure from my invention or from the scope of my appended claims, the dimensions of the tank may vary from one and one half feet to four feet in length, and
 40 from one inch to three inches in diameter.

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

1. A drip cup for torches and other uses,
 45 comprising a cup having inwardly extending spaced prongs on opposite walls, the prongs on one wall being arranged with their inner portions in lapped relation to the prongs on the other wall, and absorbent ma-
 50 terial arranged in said cup and receiving and held by the prongs.

2. A hand torch comprising a combined tank and handle; a burner connected there-
 55 with; a drip cup also connected with the combined tank and handle and arranged at the opposite side of the burner, with reference to the combined tank and handle, and also arranged to receive drippings from the burner and having means for securing
 60 absorbent material within its wall, and absorbent material disposed in said cup and engaged and held by said means whereby displacement of the absorbent material in-

cidental to hand manipulation of the torch is prevented.

3. A hand torch of gasoline blow-torch type, comprising a long and slender combined tank and handle, a pipe connected with the interior of said combined tank and handle and extending laterally rela-
 70 tive to the forward end thereof, and a burner carried on the laterally-extending portion of said pipe and disposed in a plane parallel to that of the combined tank and handle and connected with and arranged
 75 to be supplied with gasoline through said pipe.

4. A hand torch comprising a long and slender combined handle and tank, a pipe connected with the interior of said tank and
 80 handle and extending at right angles relative to the forward end thereof, a burner capable of being swung on said pipe and disposed in a plane parallel to that of the combined handle and tank and having a
 85 rearwardly extending portion, and a drip cup adapted to hold absorbent material and disposed at an angle to the burner and mounted to be turned about the rearwardly extended portion thereof.

5. A hand torch of gasoline blow-torch type, comprising a long and slender combined tank and handle, a pipe connected with the interior of said combined tank and handle and extending laterally relative to
 95 the forward end thereof, a burner carried on the laterally-extending portion of said pipe and disposed in a plane parallel to that of the combined tank and handle and connected with and arranged to be supplied
 100 with gasoline through said pipe, and a drip cup connected with the rear portion of the burner and disposed laterally to said rear portion.

6. A hand torch comprising a long and
 105 slender combined handle and tank, a pipe connected with the interior of said combined tank and handle and extending laterally relative to the forward end thereof, a burner arranged to be supplied with fuel
 110 through said pipe and mounted on the laterally extending portion thereof in position to swing in a plane parallel to that of the combined tank and handle, and a drip cup connected with and extending laterally
 115 from the rear portion of the burner and arranged at an angle to the longitudinal-center of the burner.

In testimony whereof I have hereunto set my hand in presence of two subscribing
 120 witnesses.

VALENTINE M. BEARER.

Witnesses:

A. P. MUSICK,
 E. C. RAMSEY.