(No Model.)

# G. HEIDEL.

## GASOLINE TORCH.

No. 486,039. Patented Nov. 8, 1892.

Fig. I.

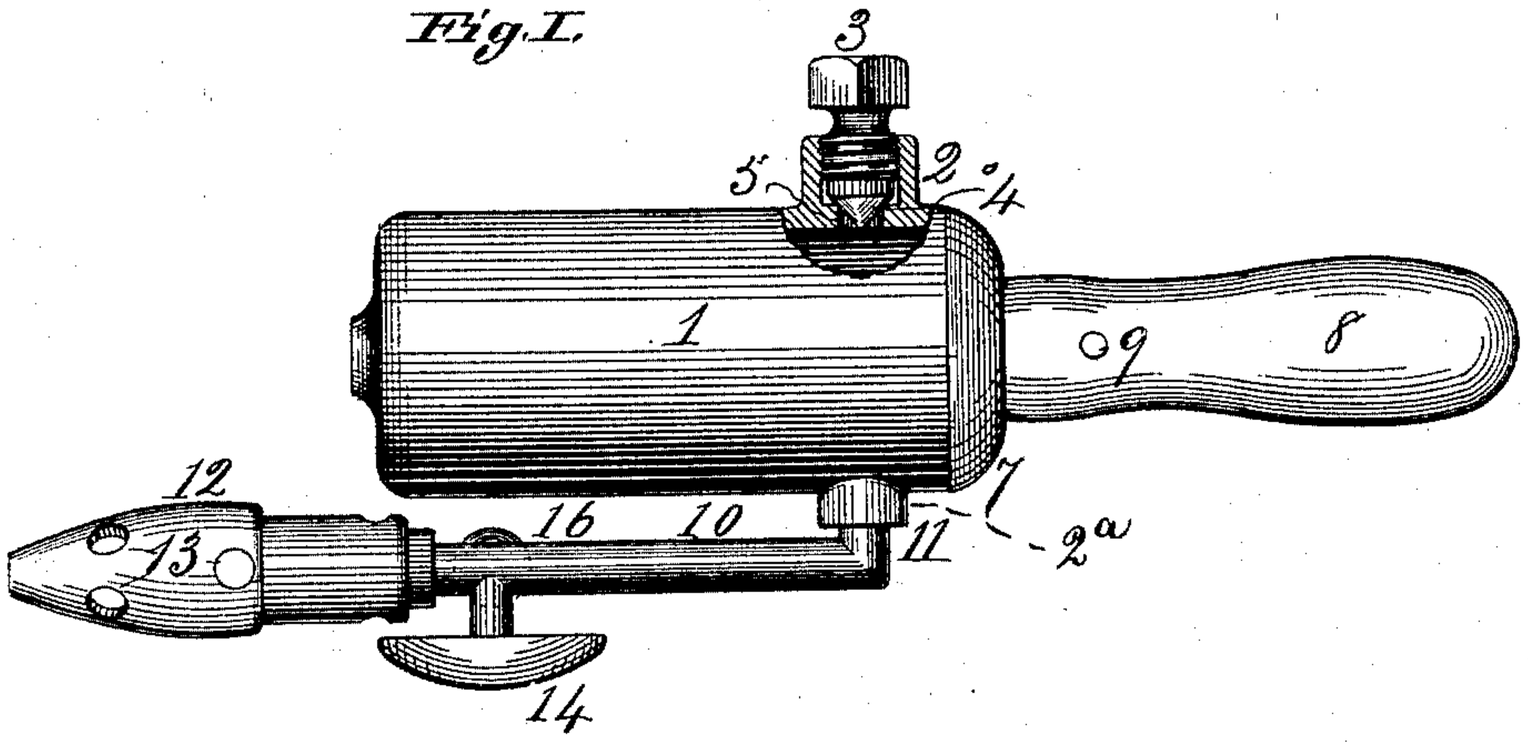
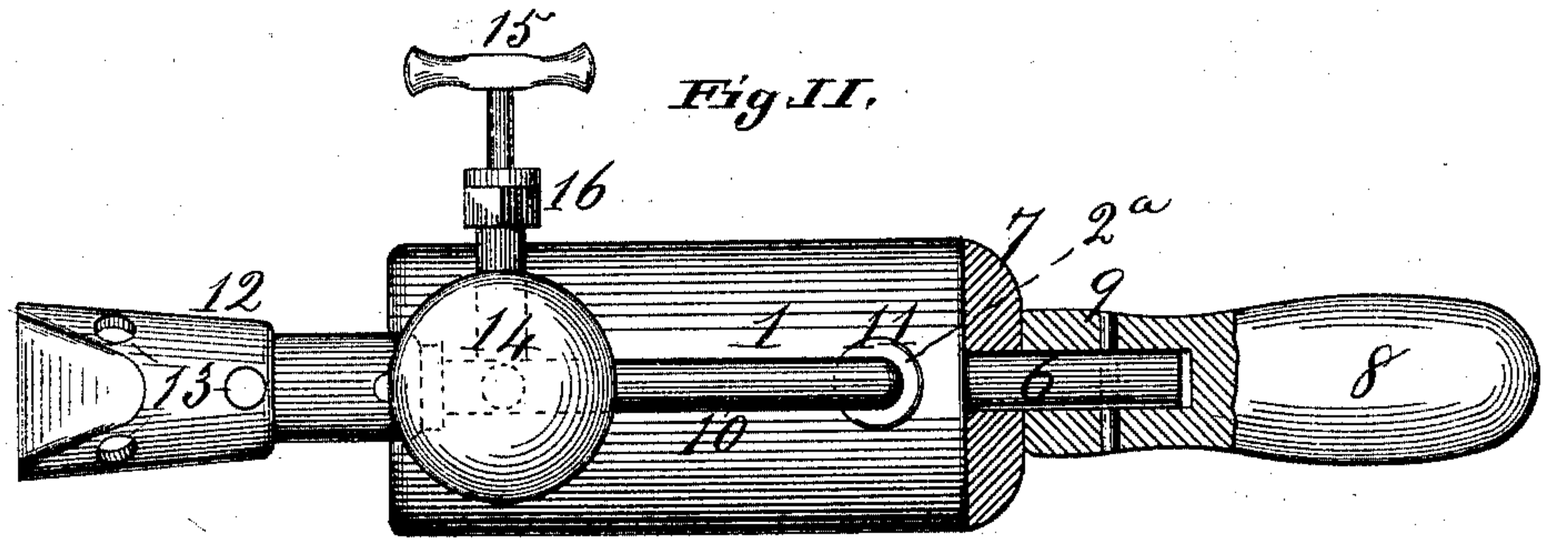



Fig II.

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# UNITED STATES PATENT OFFICE.

GUSTAVOS HEIDEL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO LOUIS KRIECKHAUS AND RICHARD MERKLE, OF SAME PLACE.

## GASOLINE-TORCH.

SPECIFICATION forming part of Letters Patent No. 486,039, dated November 8, 1892.

Application filed August 20, 1891. Serial No. 403,246. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVOS HEIDEL, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Gasoline-Torches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This torch is intended for the application of a flame against an object or surface to be heated; and it consists in the peculiar construction and arrangement of the handle and of the pipe leading from the reservoir to the burner with its appended cap, the novel features being set forth in the claims.

Figure I is a side view with the supply-opening in section. Fig. II is a bottom view with the handle partly in section, the valve being placed on the opposite side of the pipe to that shown in Fig. I.

1 is the horizontally-arranged reservoir having a general cylindrical form. (The form, however, is non-essential.)

2 is the filling neck or opening through which gasoline is poured into the reservoir near its rear end. The neck or opening is stopped by a screw-plug 3, whose inner end 4 fits a valve-seat 5, and acts as a valve. The reservoir has a handle-shank 6, projecting centrally from its rear end in line with the reservoir. On the shank is first placed a wooden or other non-conducting shield or disk 7, covering the rear end of the reservoir.

8 is the horizontally-arranged handle, of wood or other non-conducting material, bored at its inner end to receive the shank 6 and extending in line with the reservoir and shank. The shank is secured in the handle by a diametric pin 9, the handle being of wood and having a wooden shield.

10 is the horizontally-arranged burner-pipe, whose end 11 is turned at right angles thereto, screwed into a neck or socket 2 on the under side of the reservoir near the rear end of the reservoir. The body of the pipe is parallel with the reservoir.

12 is the burner in line with the pipe, supplied with gasoline through a small jet-hole, as usual. This hole is not shown, as it forms no part of the invention. It is, however, in line with the pipe and burner. The burner has the usual orifice at the end for the issue of the flame and the side orifices 13 for the entrance of air into the interior or combustion chamber of the burner.

14 is a cup secured to the pipe beneath the reservoir at the rear end of the burner to receive gasoline for the heating of the burner when the torch is to be used. For this purpose the gasoline in the cup is set on fire.

15 is an ordinary valve located in the side of the pipe over the cup by which the flow of gasoline may be regulated or stopped.

16 is a stuffing-box through which the valve-stem passes.

The effect of the flame from the gasoline in the cup, and also from the burner, will be to heat the contents of the reservoir to some degree and by expansion of the gaseous part thereof to force the liquid contents out through the burner jet.

The location of the burner below the level of the reservoir, and close to it, has two beneficial results: First, the force of gravity will carry the contents of the reservoir to the burner, and, second, the heat of the burner and flame will heat the reservoir, and by causing the expansion of the gaseous part of its contents press the gasoline to the burner.

In many or most cases the burner is inclined upward in use, and it is obvious that the pipe 10 must be in connection with the lower part of the reservoir, so that the supply of gasoline will not be cut off. This end is accomplished by making the connection 11 near the handle. It is obvious that the burner must project beyond the front end of the reservoir to allow the instrument to be used in all positions and places. Hence the pipe 10 extends from near the hand end to near the front end of the reservoir.

I claim as my invention—

The combination of the horizontally-arranged reservoir 1, having a handle 8 extending in line therewith, a shield 7, of non-conducting material, located between the handles and the reservoir, a shank 6 and diametric pin 9, by which the handle is secured to the reservoir, and a supply-pipe connected with the reservoir provided with a valve and burner, substantially as described.

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Witnesses:

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ALBERT M. EBERSOLE.