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1,590,882

H. E. BROWN ET AL

GAS TORCH

Filed Jan. 14, 1925

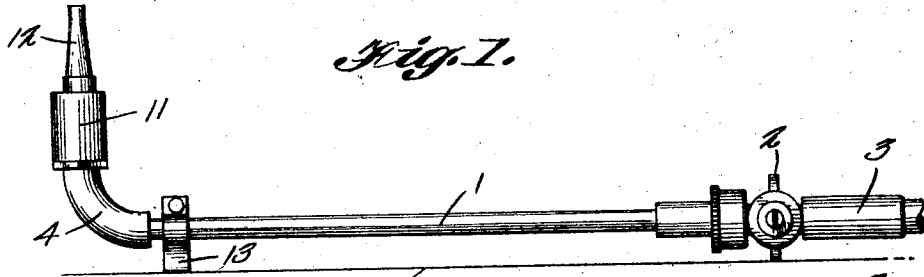


Fig. 1.

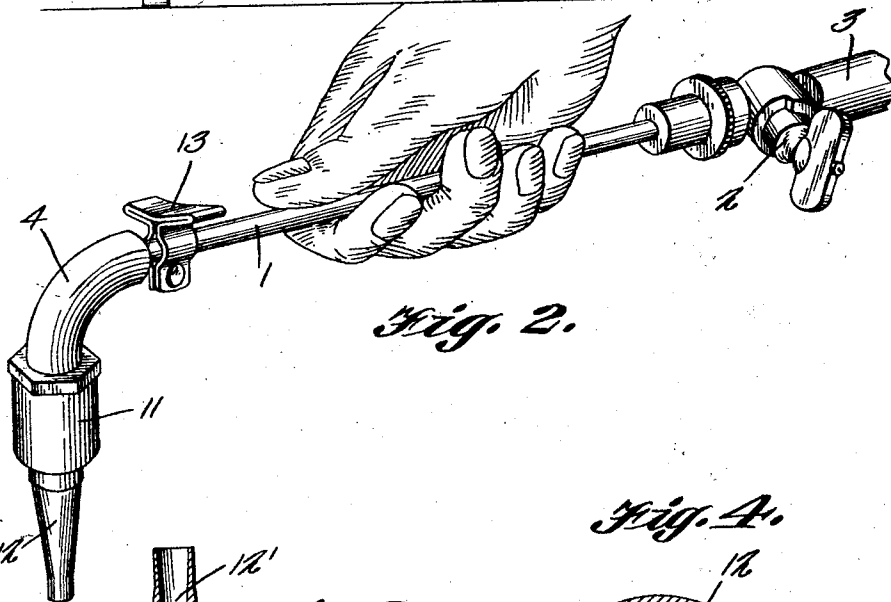


Fig. 2.

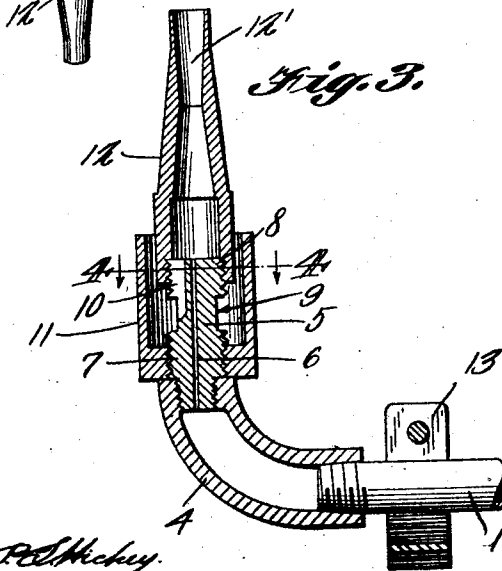


Fig. 3.

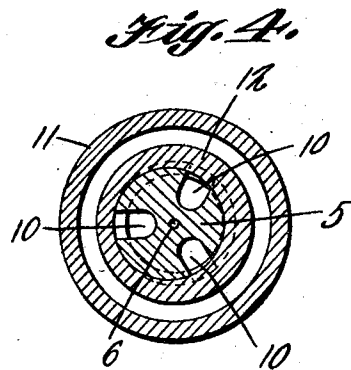


Fig. 4.

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UNITED STATES PATENT OFFICE.

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GAS TORCH.

Application filed January 14, 1925. Serial No. 2,362.

This invention relates to a torch used for melting purposes and the like, the general object of the invention being to provide a torch which will use gas as fuel and which is so formed as to produce a flame of intense heat with the minimum amount of fuel.

Another object of the invention is to so form the parts that the device can be manufactured to sell at low cost, will be simple in operation and can be easily handled in all situations where a supply of gas can be secured.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation of the device.

Figure 2 is a perspective view showing how the device can be handled.

Figure 3 is an enlarged sectional detail view through the nozzle parts.

Figure 4 is a section on line 4—4 of Figure 3.

In these views, 1 indicates a pipe which forms the handle of the device and which has a cock 2 at its rear end to which the supply pipe 3 is connected, this pipe 3 being adapted to be connected to a gas supply. An elbow 4 is secured to the other end of the pipe 1 and a tip 5 is threaded in said elbow. The bore 6 of said tip is very small and said tip is provided with enlarged threaded parts 7 and 8 which are spaced apart to form an annular recess 9. The enlargement 8 is provided with a number of longitudinally extending notches 10 which extend into the bottom wall of the recess 9, these notches forming air passages. A cup-shaped member 11 has a threaded hole in its bottom which engages the threaded part 7 and a nozzle 12 is threaded on the enlargement 8, the base of the nozzle being surrounded by and spaced from the outer end of the cup-shaped member so that air can pass between the two members into the cup-shaped member and this air will then pass through the

notches 10 into the nozzle 12 where it will mix with the gas flowing through the bore of the tip and thus produce an inflammable mixture which will burn at the end of the nozzle. The nozzle is made with a Venturi passage 12'. This arrangement of parts will produce a flame of intense heat which will melt copper and other substances very quickly and with the minimum amount of gas. A clip 13 is fastened to the pipe 1 to form a support for the device when the same is not in use, this support holding the nozzle in an upright position, as shown in Figure 1.

This device can be manufactured to sell at low cost and it can be attached to a gas supply of a dwelling or other building. It is very light so that it can be easily handled and by attaching a long flexible tube to the torch it can be carried about without difficulty.

The device is especially useful in soldering the iridium on gold pen points though it will of course be understood that it can be used for other purposes.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

We desire it to be understood that we may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What we claim is:—

A device of the class described including a pipe forming a handle and an elbow connected with one end of the pipe, a tip threaded into the outer end of the elbow, said tip being formed with enlarged threaded parts spaced to provide an annular recess, said tip having one of its enlarged threaded parts formed with longitudinal extending notches, which extend into the bottom wall of the annular recess to provide air-passages, a cup shaped member threaded on to one of the enlarged portions adjacent the elbow, said tip being formed with a longitudinal portion and a nozzle threaded on to the enlarged part at the outer end of the tip and formed with a Venturi passage.

In testimony whereof we affix our signatures.

HARRY E. BROWN.
JOHN HREBENYAR.