May 15, 1928.

O. J. GROEHN

1,670,112

TORCH

Filed April 13, 1925

2 Sheets-Sheet 1

Fig. 1.

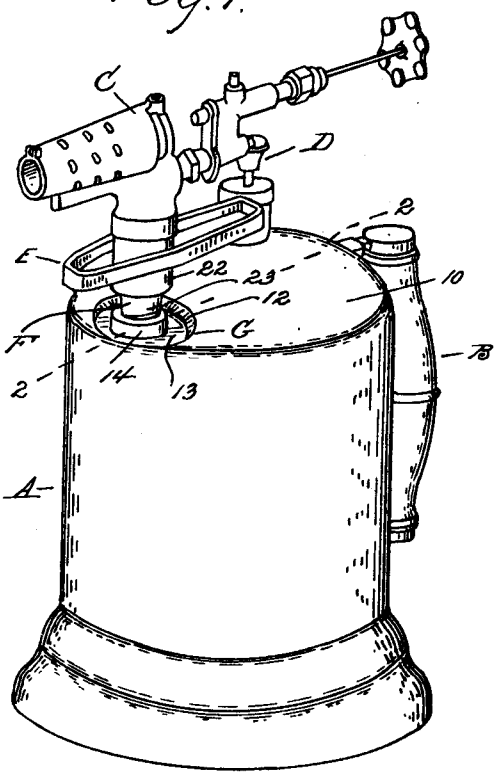


Fig. 4.

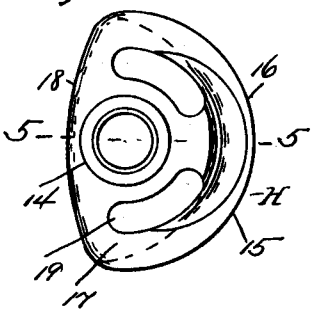
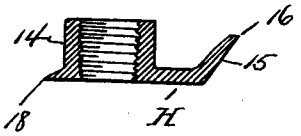


Fig. 5.



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Fig. 3.

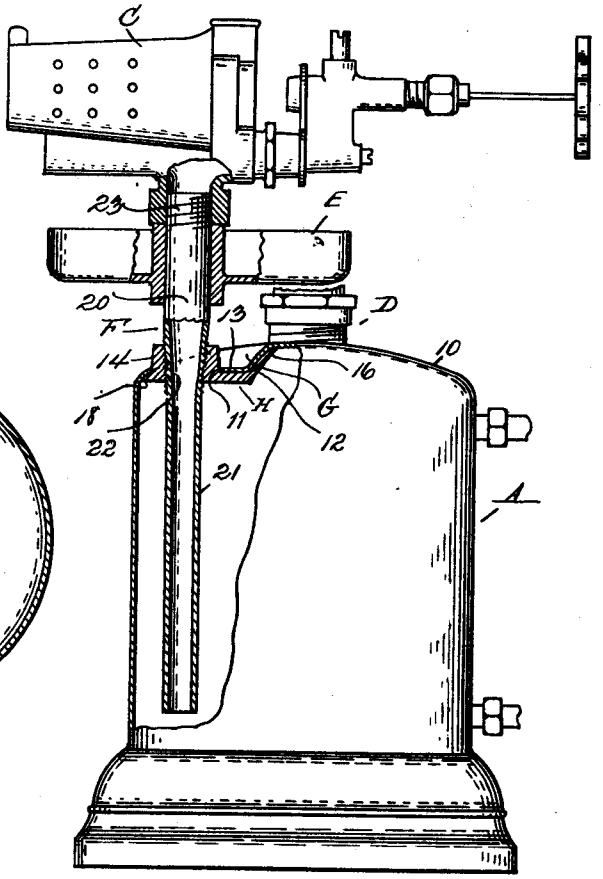
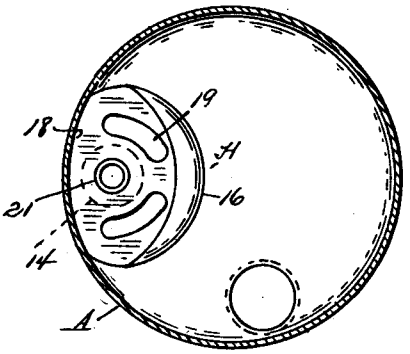


Fig. 2.



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UNITED STATES PATENT OFFICE.

OTTO J. GROEHN, OF DETROIT, MICHIGAN, ASSIGNOR TO CLAYTON & LAMBERT MANUFACTURING COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

TORCH.

Application filed April 13, 1925. Serial No. 22,864.

This invention relates to furnaces or burner devices and refers more particularly to oil burners or the like, such as are used in connection with blow torches, fire pots, and the like for plumbers' use or for use whereever a device of the character described is desired. It is one of the objects of the invention to provide an improved construction whereby the parts may be cheaply manufactured, readily assembled, and will more effectively resist wear and damage when in use. A further object is to provide a simply constructed reinforced connection between the burner or feed pipe and the supporting standard fuel tank. A further novel feattre resides in an improved method of forming and attaching the feed pipe to the fuel tank; also in an improved feed pipe.

With these and other objects in view, the invention resides in the novel features of construction and combination and arrangements of parts as more fully hereinafter described and claimed.

Referring to the drawings:—

Figure 1 illustrates my invention applied to a blow torch, the torch being shown in perspective,

Figure 2 is a fragmentary view looking inside the fuel tank toward the tank top showing the fitting reinforcement,

Figure 3 is a side elevation, partly in section, the section being taken along 2—2 of Figure 1,

Figure 4 is a top plan view of the reinforcing member, and

Figure 5 is a sectional view thereof along 5—5 of Figure 4.

In the drawings, reference character A designates the tank of the torch provided with the usual handle B, burner C, pump D, and drip cup E, all of which parts may be of any preferred construction. F indicates the burner supporting standard or feed pipe for supplying fuel from the tank to the burner. It has been found in constructions heretofore that the connection between the standard F and the top 10 of the tank A became distorted, giving rise to leakage and damage of the parts in general. The comparatively heavy burner structure carried by the standard and the contact of the burner with objects causes severe stresses to be set up at the connection of the standard with the torch tank leading to bending of the tank and leakage of the connection. My invention provides means for reinforcing this connection whereby a rigid construction is provided resisting such tendencies to damage the fire pot. In carrying out my invention I form the top 10, which is preferably curved downwardly and outwardly as shown, with an inward depression G preferably arcuate and adjacent the periphery of the top 10. The depression G is provided with an opening 11 adapted to receive the burner standard and preferably bounded by the upwardly bent peripheral flange 12. The depression G preferably is so shaped to provide an arcuate web portion 13 which may taper off toward the edge of the top 10. For additionally reinforcing the connection I have shown a reinforcing member H formed with an internally threaded nipple 14 extending upwardly through opening 11 for receiving the burner standard, and an arcuate flange portion 15 which may incline downwardly from the comparatively thin central portion 16 oppositely to the comparatively thick portions 17 bordering on the edge 18 which is preferably curved to conform with the curvature of the periphery of the top 10. Openings 19 may be provided for introducing solder between the top and the member H to form a soldered joint. With the member H in position the flange portion 15 surrounds and lies adjacent to the web portion 13 reinforcing the same, the bottom of the fitting H lying adjacent the under face of top 10 with the nipple 14 extending upwardly through the opening 11 for receiving the burner supporting standard F. The edge 18 is preferably soldered at the intersection of the top 10 and the side wall of the tank A.

Should the burner standard strike an object or otherwise tend to move out of its normal position, the web portion 13 formed by the impression G will effectively resist distortion of the metal of the tank and maintain a tight fitting between the standard and the tank. The top is thus effectively braced against bending. The reinforcing member H shaped to conform with the depression and soldered beneath the top 10

further braces the fitting and assists in maintaining the rigidity of the web 13 by reason of the flange 15 adjacent thereto.

In constructions embodying standards of the character described, it has been customary to form such standards in two sections threadedly engageable with each other in telescoping fashion, one of which sections is of a comparatively small bore and diameter as compared with the other and extends downwardly through the fuel tank to supply fuel to the burner through the two sections. An object of my invention is to provide a standard formed of only one section but proportioned as before and adapted to the same fittings. Thus the standard F is formed of a single section of tubing initially of a diameter equal to the upper portion 20. 21 indicates the lower portion of the standard which is of less diameter and bore than the upper portion and is so formed by drawing the tubing to the desired diameter, the slightly tapered portion 22 between the upper and lower portions being threaded for engagement with the nipple 14. The upper portion 20 may be threaded at 23 for engagement with the burner C. Thus I have avoided the necessity of forming the standard of two coupled or telescoped sections, only one section being provided by my invention.

While I have shown my invention applied in connection with the top portion of a torch tank and a burner standard it is obvious that my invention is applicable to other types of fittings which lend themselves to the invention as shown and described.

While it is believed that from the foregoing description, the nature and advantage of my invention will be readily understood, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of the claims.

What I claim as my invention is:—

1. In combination with a receptacle, a standard, said receptacle having a portion of one wall offset from the remaining portion adjacent thereto, forming crescent shaped web portion and a flange portion connecting the said offset web portion with the said remaining portion, and means for supporting said standard from said offset portion whereby the flange portion serves as a brace.

2. In combination with a receptacle, a standard, said receptacle having a portion depressed from the remaining portion adjacent thereto, forming an arcuate flange portion connecting the said depressed portion with the said remaining portion, and means for supporting said standard from said depressed portion whereby the flange portion serves as a brace.

3. In combination with a receptacle, a standard, said receptacle having a portion of one wall offset from the remaining portion adjacent thereto, forming a flange portion connecting the said offset portion with the said remaining portion, and means for supporting said standard from said offset portion whereby the flange portion serves as a brace, said supporting means including a reinforcing member formed with a flange of varying cross section adapted to lie adjacent said flange portion.

4. In combination with a receptacle, a standard, said receptacle having a portion of one wall offset from the remaining portion adjacent thereto, forming a flange portion connecting the said offset portion with the said remaining portion, and means for supporting said standard from said offset portion whereby the flange portion serves as a brace, said offset portion having an opening, said supporting means including a reinforcing member formed with a nipple engageable in said opening and provided with an arcuate flange adapted to lie adjacent said flange portion.

5. In combination with a tank, provided with a top curved downwardly and outwardly toward the side wall of the tank, said top having a portion adjacent the side wall depressed below the top surface forming therewith a depending flange portion and a crescent shaped web portion provided with an opening and a standard engageable in said opening and supported by said depressed portion whereby the depending flange portion serves as a brace.

6. In combination with a tank provided with a top curved downwardly and outwardly toward the side wall of the tank, said top having a portion adjacent the side wall depressed below the top surface and forming therewith a web portion, said depressed portion provided with an opening, a reinforcing member engageable with the under surface of the top and formed with a flange adapted to lie adjacent said web portion, and provided with a nipple engageable in said opening, a standard engageable with said nipple and supported by the said depressed portion whereby the web portion serves as a brace.

7. In combination with a tank provided with a top curved downwardly and outwardly toward the side wall of the tank, said top having a portion adjacent the side wall depressed below the top surface and forming therewith a web portion, said depressed portion provided with an opening, a reinforcing member engageable with the under surface of the top and formed with a flange adapted to lie adjacent said web portion, and a standard engageable in said opening and supported by said depressed portion whereby said web serves as a brace, said reinforcing

member having an opening adapted to permit the application of solder between the reinforcing member and the top.

8. In combination with a tank provided with a top curved downwardly and outwardly toward the side wall of the tank, said top having a portion adjacent the side wall depressed below the top surface and forming therewith an arcuate flange portion, said depressed portion provided with an opening, a reinforcing member engageable with the under surface of the top and formed with an arcuate flange adapted to lie adjacent said arcuate flange portion, and a standard engageable in said opening and supported by said depressed portion, whereby said arcuate flange serves as a brace.

9. In a blow torch tank, having a top engageable by a burner standard, said top being provided with a crescent shaped web portion adjacent the burner standard, said portion being depressed below the top surface to provide a reinforcing flange integrally connecting the top and the said depressed portion and a reinforcing member surrounding said burner standard and embracing said reinforcing flange.

10. In combination with a receptacle having a portion of one wall offset from the remaining portion adjacent thereto, a standard projecting through the said offset portion, and a reinforcing member having a nipple and a flange tapered from its center toward its ends arranged on opposite sides of the said offset portion.

11. The combination with a tank having a top engageable by a burner standard, of an arcuate web portion depressed below the surface of the top adjacent the said standard, and a reinforcing member arranged below the said top and having upwardly projecting portions embracing the said arcuate web portion.

In testimony whereof I affix my signature.

OTTO J. GROEHN.