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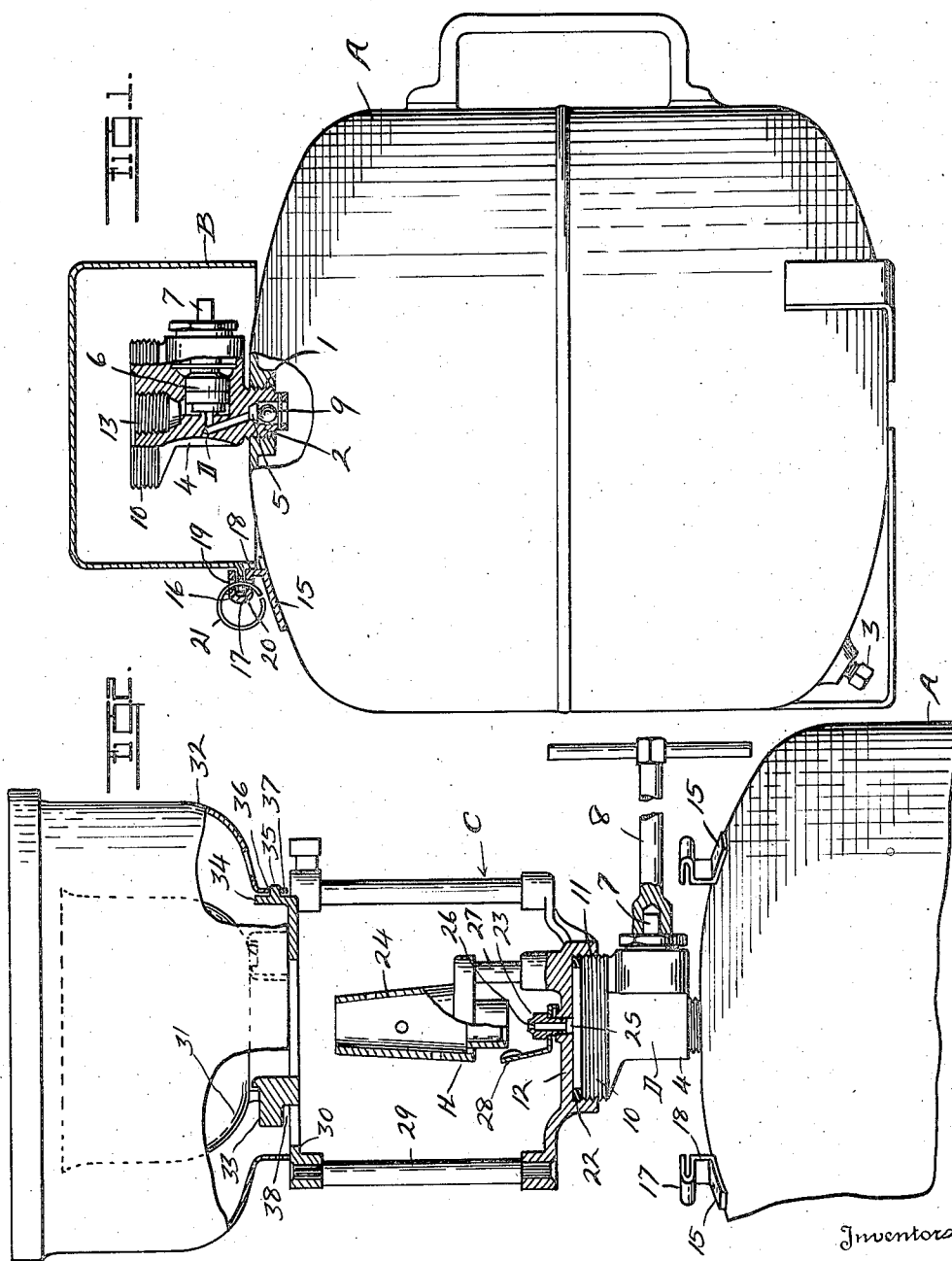
E. GREENFIELD ET AL

2,064,535

FIRE POT CONSTRUCTION

Filed Feb. 6, 1933

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

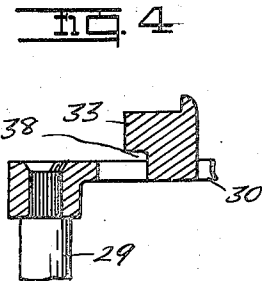
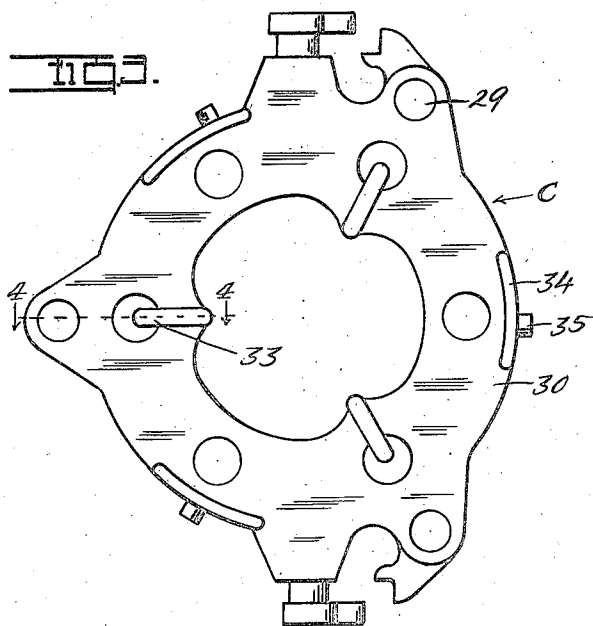
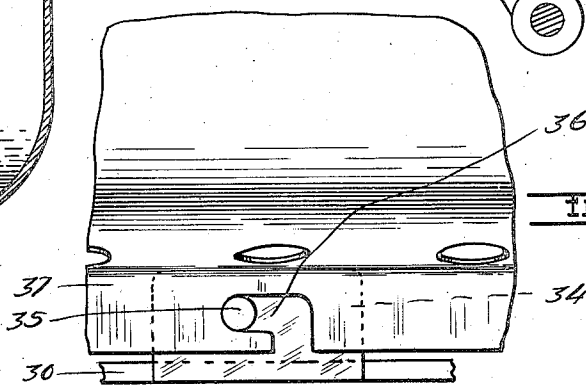
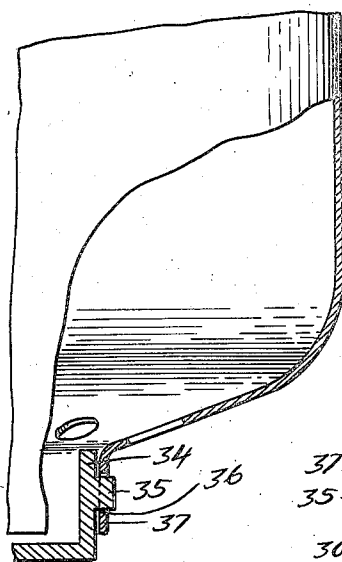
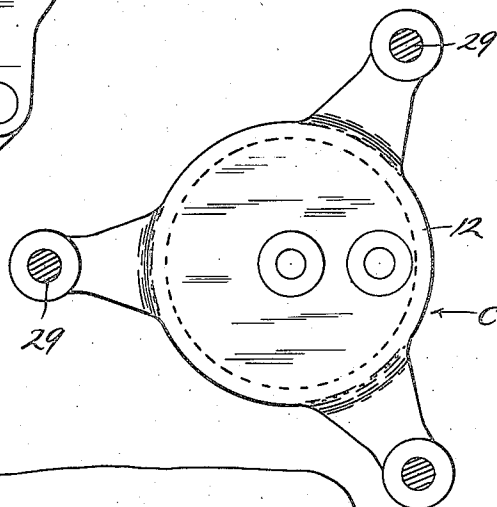


FIG. 5.



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UNITED STATES PATENT OFFICE

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FIRE POT CONSTRUCTION

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12 Claims. (Cl. 126—240)

This invention relates generally to fire pot constructions and refers more particularly to an improved construction in which liquefied petroleum gas, commonly known in the trade as propane, may be used as the fuel.

One of the essential objects of the invention is to provide a construction of this type wherein a tank or cylinder containing the propane is provided with a valve to which either the stand of a fire pot or the hose of a hand torch may be attached and through which the passage of the propane may be controlled both manually and automatically.

Another object is to provide a construction wherein the valve just mentioned is provided with a guard which may be attached to the cylinder independently of the valve when neither the stand nor hose aforesaid are attached to protect the valve against injury.

Another object is to provide a construction wherein the attaching means for the guard is provided with means that serve as seats or cushions for the edges of the guard when attached and effectively prevent the guard when struck from injuring or damaging the cylinder.

Another object is to provide a construction wherein the stand of the fire pot is readily attachable to or detachable from the valve on the cylinder and carries a burner having a nozzle or fuel jet that is adapted to receive fuel directly from said valve.

Another object is to provide a construction wherein a portion of the stand forms a seat for a melting pot and attaching means for a guard for said pot.

Another object is to provide a construction wherein the portion just mentioned of the stand is formed in such a way that a guard may be attached thereto and a melting pot may rest thereon without the pot contacting with or in any way being supported by the guard.

Other objects, advantages and novel features of construction of this invention will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein:

Figure 1 is a side elevation of the fuel tank or cylinder and valve unit thereon and showing the valve guard and attaching means therefor in section;

Figure 2 is a fragmentary side elevation of the fuel tank or cylinder, valve unit and fire pot stand with parts broken away and in section;

Figure 3 is a top plan view of the top plate of the fire pot stand;

Figure 4 is a sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a top plan view of the base of the stand;

Figure 6 is a fragmentary vertical sectional view through the melting pot guard;

Figure 7 is a fragmentary elevation of the melting pot guard.

Referring now to the drawings, A is the tank or cylinder containing the propane; B is the valve guard, and C is the stand of a fire pot construction embodying our invention. As shown, the cylinder A is provided at its upper end with an interiorly threaded opening 1 receiving the exteriorly threaded portion 2 of a valve unit D and is provided at its lower end with a suitable plug 3. Extending upwardly through the exteriorly threaded portion 2 and body portion 4 of the valve unit is a passage 5 for the propane that is adapted to be manually controlled by a transversely extending valve 6 having a stem 7 operable at one side of the body by a wrench 8, and automatically controlled by a ball valve 9 within the passage 5 in the exteriorly threaded portion 2.

In order that the stand C or the hose of a hand torch (not shown) may be alternately attached to the valve unit D, the body portion 4 of the valve unit is provided at its upper end with an enlarged exteriorly threaded portion 10 for engagement by an interiorly threaded portion 11 of the stand base 12, and is provided in the top of the body 4 at the upper end of the passage 5 with an upwardly opening interiorly threaded socket 13 for the reception of a hose nipple or connector (not shown).

When neither the stand C nor the hose are attached the valve unit D is adapted to be covered and protected by the inverted cup-shaped guard or shield B which is adapted to rest upon clips 15 welded to the cylinder A and is provided at spaced points adjacent its lower edges with laterally projecting lugs or ears 16 that are detachably engageable with open return bent portions 17 of upstanding lugs 18 on the clips. Openings 19 and 20, respectively, are provided in the return bent portions 17 and lugs 16 and are adapted to be in registration when the parts are assembled for the reception of rings 21 of wire or other suitable latch means. Thus it will be noted that the guard B is attached to the cylinder A independently of the valve unit D and that the attaching means therefor serve as seats for the edges of the guard and effectively prevent them from injuring or

damaging the cylinder while the guard or cylinder are handled or when the guard is struck or given a blow.

Preferably the interiorly threaded portion 11 of the stand base C contains a suitable gasket 22 for engagement with the top of the valve unit D when the parts are assembled and constitutes the sole means of attachment and support for the stand C. Thus the stand may be easily and quickly attached to or detached from the valve unit D upon the cylinder. In the present instance, the burner H is carried by the base 12 of the stand and comprises a nozzle 23 and a tubular mixing chamber 24. As shown, the nozzle 23 threadedly engages an opening 25 in the base 12 and is adapted to receive the fuel directly from the socket 13 in the valve unit when the stand is mounted thereon. Preferably this nozzle 23 has a restricted outlet or orifice 26 and extends upwardly in vertical alignment with the mixing chamber 24. A pin 27 extending upwardly from the base 12 constitutes the support for the mixing chamber 24, and a deflector 28 sleeved on the nozzle 23 serves as a wind guard or shield for the fuel between the orifice 26 and the lower end of the mixing chamber 24. Pins 29 extend upwardly from the base above the upper end of the mixing chamber 24 and carry a top plate 30 which forms a seat for a melting pot such as 32 for said pot. Preferably the top plate 30 is provided at its inner edges with radially extending lugs 33 upon which the legs of the melting pot 31 are adapted to rest and is provided at its outer edges with arcuate upstanding lugs 34 having pins 35 projecting laterally outwardly therefrom for engagement with bayonet slots 36 in the angular lower portion 37 of the guard. Thus by simply placing the guard upon the top plate 30 so that the vertical portions of the slots 36 will receive the pins 35 and then turning the guard relative to the top plate so that the pins 35 will be received in the horizontal portions of the slots 36 the guard may be easily and quickly attached to the top plate. Moreover, it will be noted that the construction and arrangement of the guard 32 and top plate is such that the guard may be attached to the top plate and a melting pot such as 31 may be placed on the lugs 33 without the pot contacting with or in any way being supported by the guard, as heretofore. Referring to Figure 4 it will be noted that the lugs 33 have notches 38 therein, hence guards of conventional design may be mounted on the top plate and interlock with the lugs 33 in the usual way should it be desired for any reason to use them instead of the guard 32.

In use, the guard B is fastened to the cylinder A to protect the valve unit D when neither the stand C nor the hose is attached to the valve unit. When either the stand C or hose is attached the fuel may be supplied thereto by turning the valve stem 7 by the wrench 8. Preferably the orifice 26 in the spud 23 and a similar orifice (not shown) in the torch are of such a size that they are capable of retarding the flow of the fuel from the valve unit. Thus the fuel between such orifices and the ball valve 9 will have a predetermined pressure. If the hose should be cut or the connections between the base 12 and valve unit or between the spud 23 and base should become loose or for any other reason a leak should occur beyond the socket 13 so that the resistance offered by either of the orifices should be lessened or made nil, then the ball

valve 9 will be automatically operated immediately by the fuel pressure beneath the valve to seat and substantially shut off the passage of the fuel to the socket 13. The valve stem 7 may then be turned by the wrench 8 to close the valve. In this connection it will be noted that the valve unit D serves as the common point of attachment for both the stand C and torch hose and that such parts may be alternately used very readily.

What we claim as our invention is:

1. In a fire pot construction, a fuel tank, a fuel valve housing connected to the tank, a valve in said housing, a melting pot stand having a base carried by said housing in spaced relation to said tank and having an opening for receiving fuel from the valve, a nozzle projecting from said opening and having a discharge orifice, a pin projecting from the base, and a mixing chamber carried by the pin in alignment with the orifice in the nozzle.

2. In a fire pot construction, a fuel tank, a valve housing connected to said tank, a fire pot stand having a base mounted upon said valve housing, pins projecting from the base, and a top plate carried by said pins, said top plate having means for supporting a melting pot and other means for supporting a guard for said melting pot.

3. In a fire pot construction, a fuel tank, a valve housing connected to said tank and having an outlet for fuel, and a melting pot stand having a base enveloping said outlet and cooperating with the housing to form a fuel chamber, said base forming the top of said chamber and having a fuel jet for receiving fuel from the outlet in said valve housing.

4. In a fire pot construction, a fuel tank, a valve housing connected to said tank and having a fuel outlet, a fire pot stand having a base secured to said housing and enveloping the outlet, said base having an opening in communication with the outlet, a nozzle projecting from the opening and having a discharge orifice, a mixing chamber in alignment with the orifice and carried by said base, and a deflector having a portion carried by the nozzle adjacent the base and having another portion forming a wind guard between the orifice and chamber.

5. In a fire pot construction, a fuel tank, a valve housing threadedly engaging said tank, a fire pot stand having a base threadedly engaging the valve housing and provided above the base with a top plate, and a burner projecting from the base of the fire pot stand in spaced relation to the top plate, said valve housing and fire pot stand base having communicating passages for conducting fuel from the tank to the burner.

6. In a fire pot construction, a fuel tank, a valve housing mounted on said tank, a fire pot stand having a base mounted on said valve housing and having a top plate for supporting a fire pot, and a burner projecting from the base of the fire pot stand toward the top plate, said valve housing and fire pot stand base having communicating passages for conducting fuel from the tank to the burner.

7. In a fire pot construction, a fuel tank, a valve housing threadedly engaging said tank and having a fuel outlet, an upright stand having a base threadedly engaging the valve housing about said fuel outlet and having a top plate spaced above the base for supporting a fire pot, said base having a fuel passage therein in communication with said fuel outlet, and a fuel nozzle

anchored in said fuel passage and projecting toward said top plate.

5 8. In a fire pot construction, a fuel tank, a valve housing mounted on said tank and having a fuel outlet, an upright stand having a base mounted on the valve housing and cooperating therewith to form a fuel chamber in communication with the fuel outlet, said stand having a top plate spaced above the base for supporting a fire
10 pot, said base having a fuel passage therein in communication with said chamber, and a fuel nozzle in communication with the fuel passage, connected to the base and projecting toward the top plate.

15 9. In a fire pot construction, a fuel tank, a valve housing secured to said tank, a fire pot stand having a base secured to the valve housing and provided with a top plate, and a burner projecting from the base of the fire pot stand in spaced relation to the top plate, said valve
20 housing and fire pot stand base having communicating passages for conducting fuel from the tank to the burner.

25 10. In a fire pot construction, a fuel tank, a valve housing secured to said tank and having a fuel outlet, an upright stand having a base

secured to the valve housing about said fuel outlet and having a top plate for supporting a fire pot, said base having a fuel passage therein in communication with said fuel outlet, and a fuel nozzle projecting from said fuel passage
5 toward said top plate.

11. In a fire pot construction, a fuel tank, a valve housing connected to said tank and having a fuel outlet, a fire pot stand having a base secured to said housing and enveloping the outlet,
10 said base having an opening in communication with the outlet, a nozzle projecting from the opening and having a discharge orifice, a mixing chamber in alignment with the orifice and carried by said base, and a wind guard between the
15 orifice and chamber.

12. In a fire pot construction, a fuel tank, a valve housing connected to said tank, a fire pot stand having a base mounted upon said valve housing, upright means projecting from the base,
20 and a top plate carried by said upright means, said top plate having means for supporting a melting pot and other means for supporting a guard for said melting pot.

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