Feb. 12, 1946. O. FORTIS 2,394,677

SELF-LEVELING OIL BURNER

Filed June 22, 1944 2 Sheets-Sheet 1

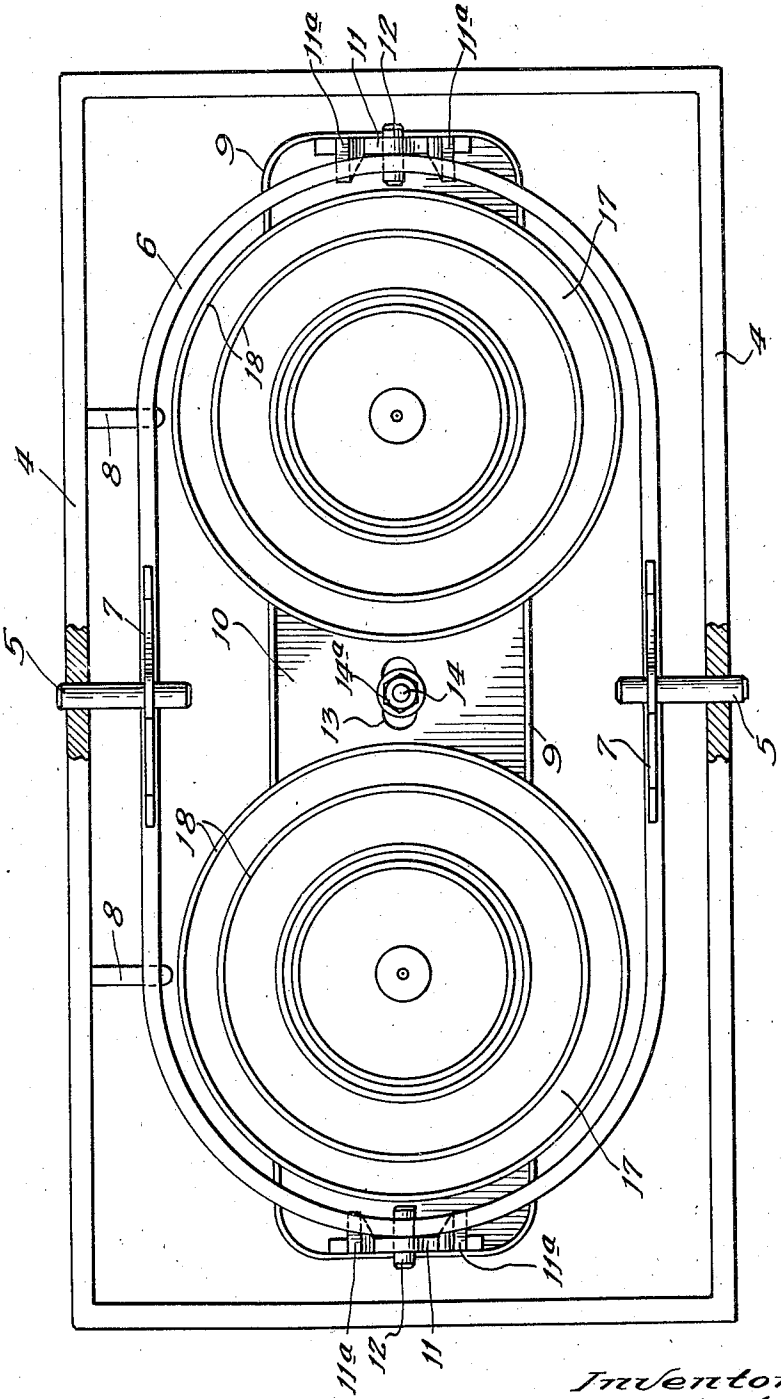


Fig. 1.

Inventor:
Oscar Fortis
By: Chritton, Wiles, Schroder & Merriam
Attorneys

Feb. 12, 1946. O. FORTIS 2,394,677

SELF-LEVELING OIL BURNER

Filed June 22, 1944 2 Sheets-Sheet 2

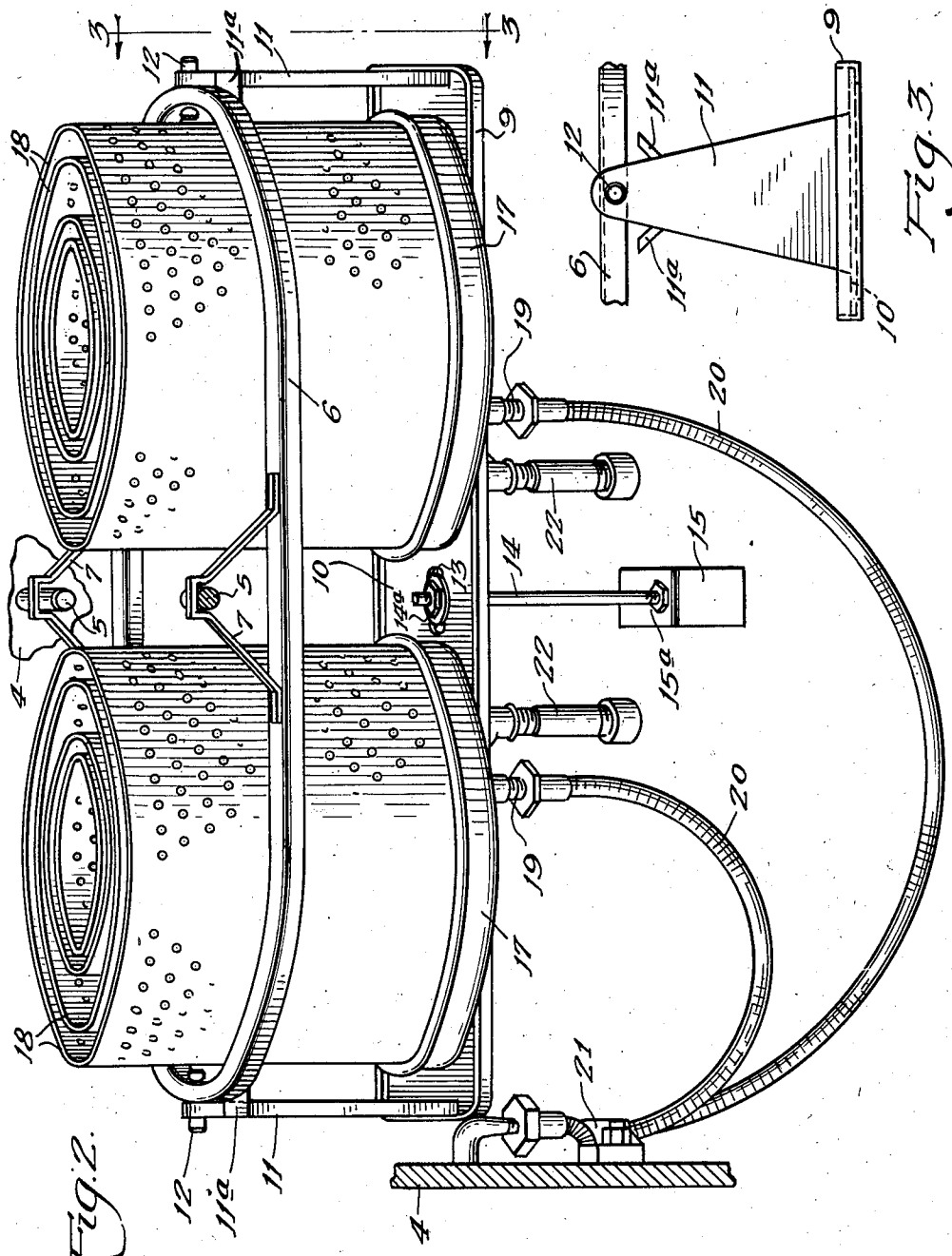


Fig. 2.

Fig. 3.

Inventor:
Oscar Fortis
By:
Shutton, Wilbe, Schroeder & Merriam
Attorneys

Patented Feb. 12, 1946 2,394,677

UNITED STATES PATENT OFFICE

2,394,677

SELF-LEVELING OIL BURNER

Oscar Fortis, Chicago, Ill., assignor to Automatic Burner Corporation, a corporation of Illinois

Application June 22, 1944, Serial No. 541,587

2 Claims. (Cl. 126—24)

This invention relates to burners for liquid fuel such as oil, and more particularly to an improved support for automatically leveling the oil pan at the bottom of the burner, so that the oil will not spill out of the burner and the fuel will be uniformly distributed beneath the burner.

The primary object of the present invention is to provide an improved double pivoted support which will automatically level the burner, and will accommodate itself to ordinary irregularities of the floor on which a stove containing the burner may be placed.

A further object of the invention is to provide a weight which is adjustably but rigidly secured to the burner's supporting frame, to lower the center of gravity and provide an eccentric mounting for the weight, to compensate for the weight of flexible oil supply tubes, or the like, which tend to unbalance the suspension.

The invention is illustrated in a preferred embodiment in the accompanying drawings in which—

Figure 1 is a plan view, partly broken, showing the invention applied to a pair of oil burners; Fig. 2, a perspective view of the same; and Fig. 3, a fragmentary end elevational view taken as indicated at line 3—3 of Fig. 2.

It will be understood that the improved suspension may be used to carry one or more burners. In the embodiment illustrated, two burners are shown. The assembly is designed to fit into the fire box of a stove constituting a stationary frame, indicated generally as 4, and provided with a pair of oppositely disposed fixed pivots 5.

An oval shaped tilting frame 6 may be formed of channel iron, and is shown equipped with a pair of upwardly extending brackets 7 to engage the fixed pivots 5. Preferably, a pair of fixed stops 8 are mounted in the box 4, to limit the swing of the tilting frame 6 about the pivots 5.

A supporting frame 9 is shown formed from an angle bar bent into the form of a rectangle and carrying a horizontal plate 10. The ends of the supporting frame are provided with upwardly extending standards 11, which are pivotally connected with the tilting frame 6 by means of pivots 12, the pivotal mounting of the supporting frame on the tilting frame, and the pivotal mounting of the tilting frame on the stationary frame constituting a gimbal mounting. The standards are shown provided with stops 11a, to limit tilting about the pivots 12. The plate 10 is provided near its central portion with a slot 13, which receives a depending rod 14 rigidly secured in an adjusted position in the slot 13 by means of lock nuts 14a. The lower end of the rod is threaded, and extends into a tapped hole provided in a heavy weight 15. Preferably, the tapped hole is eccentrically disposed so that after loosening a lock nut 15a, the weight may be turned to a position where it will balance fuel tubing or other unsymmetrically disposed parts of the structure.

The burners are of known construction and have the usual fuel pans 17, and upwardly extending perforated ring members 18. Each of the burners is shown provided with a downwardly extending nipple 19, to which the flexible oil carrying tubes 20 are connected so as to conduct oil from the manifold 21. In accordance with the usual practice, each of the pans may be provided with sludge sumps or dirt catchers 22.

With the improved construction, it will be understood that the oil burners may be set up in the factory, the tubes 20 filled with oil, and the weight 15 turned and adjusted with respect to the plate 10, so that the oil pans 17 will be level. The burner may then be dismantled and when installed by the user will not require any additional adjustments to keep the oil pan level at all times. It will be understood that knife-blade types of pivots may be used, if desired, but round pivot members are preferred, because a slight amount of friction prevents the suspended unit from swinging too freely.

The foregoing detailed description is given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, for some modifications will be obvious to those skilled in the art.

I claim:

1. A self-leveling oil burner comprising: a stationary frame, a supporting frame having a gimbal mounting connection with said stationary frame, said supporting frame having a horizontal slot, a depending rod adjustably mounted in said slot for rigid connection with the supporting frame, a weight rigidly and eccentrically secured to the lower end of said rod, an oil burner mounted on said supporting frame, and means for conducting oil to said burner.

2. A self-levelling oil burner comprising: a stationary frame having a pair of oppositely disposed pivot members; a tilting frame pivotally mounted on said pivot members; a supporting frame pivotally mounted on said tilting frame, the pivotal axis of the supporting frame with relation to the tilting frame being substantially at right angles to the axis of the tilting frame with relation to the stationary frame, said supporting frame having a horizontal slot; a depending rod adjustably mounted in said slot for rigid connection with the supporting frame; a weight rigidly and eccentrically secured to the lower end of said rod; an oil burner mounted on said supporting frame; and means for conducting oil to said burner.

OSCAR FORTIS.