Examiner.

No. 871,462. PATENTED NOV. 19, 1907.

W. H. VAN MARTER.

OIL BURNER.

APPLICATION FILED FEB. 8, 1907.

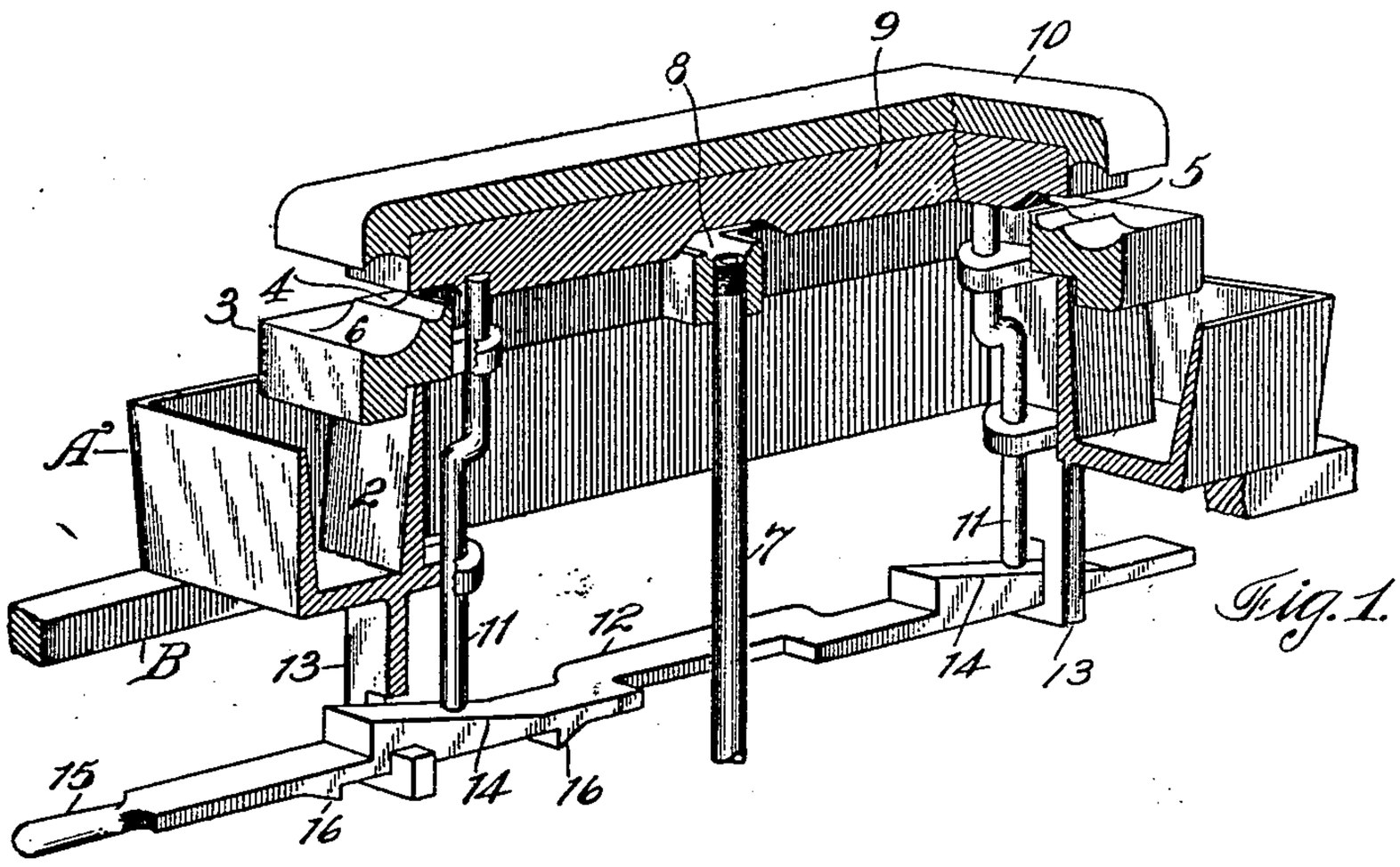

Fig. 1.

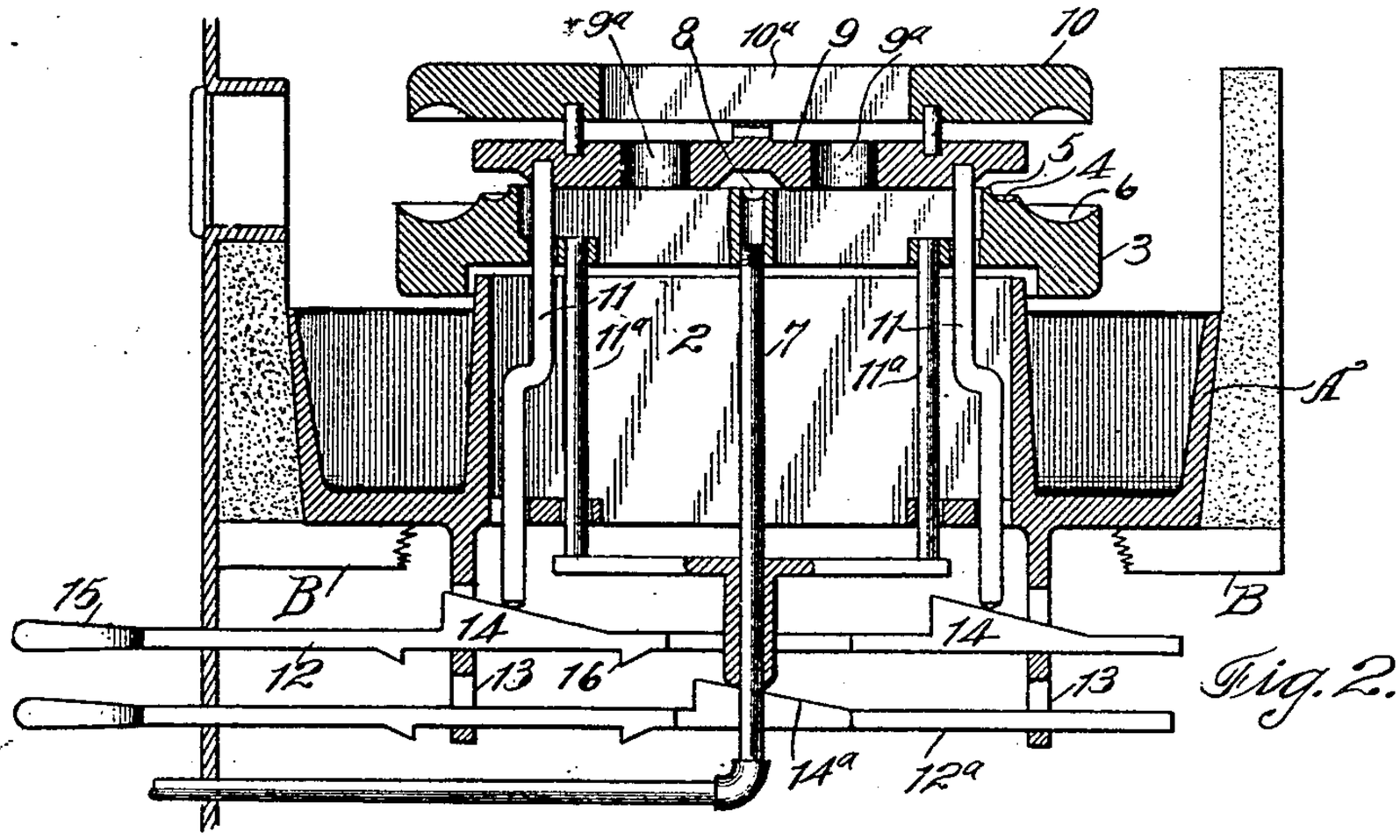

Fig. 2.

WITNESSES:

F. E. Maynard.
J. D. Lowe

INVENTOR:

William H. Van Marter;

BY

Geo. H. Strong.

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. VAN MARTER, OF PETALUMA, CALIFORNIA.

OIL-BURNER.

No. 871,462. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed February 8, 1907. Serial No. 356,366.

To all whom it may concern:

Be it known that I, WILLIAM H. VAN MARTER, citizen of United States, residing at Petaluma, in the county of Sonoma and State of California, have invented new and useful Improvements in Oil-Burners, of which the following is a specification.

My invention relates to an apparatus for burning oil.

It consists in a combination of parts, and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the device. Fig. 2 is a vertical longitudinal section.

It is the object of my invention to provide a means for properly distributing and burning oil as a fuel.

I have in the present description and drawings shown it as especially constructed for use in a stove or like furnace or fireplace.

A is a base, here shown in the form of a box-like structure having a central opening, and inner and outer sides extending upward so as to form a box around the channel. This portion A is so constructed in shape and size as to rest upon the grate bars B of an ordinary fireplace or furnace, and it may be sealed around the outer sides so that air is only admitted through the central portion.

Upon the upturned flanges 2 of the central portion of the part A, is a trough-like structure 3 which also has a central opening through it, and around this central opening a trough or channel 4 with an interior lip 5. This part may, if desired, have another trough or channel 6 exterior to the channel 4 and somewhat lower so that oil being delivered into the first channel 4 may overflow and be delivered over the edges of this channel into the trough 6, and be ultimately delivered over the exterior lip of 6.

The supply of oil is designed to be so regulated that it will all be ignited and burned at its point of delivery into the channel or channels; but should there be any overflow over the outer lip more than can be consumed, it would fall into the annular receptacle A.

Oil is delivered into the channel 4 by means of a conducting pipe 7. This pipe may enter from below as shown or it may enter in any other well known and appropriate manner. When entering from below, its upper end is connected with a trough 8 which extends transversely from side to side of the part 3, its ends opening into the channel 4 so that the oil may be delivered into this channel and fill it. A plurality of these troughs or channels 8 of sufficient number to keep the trough evenly supplied is desirable.

In order to supply air for the combustion of the oil, any suitable connection may be made with the central opening of the parts heretofore described.

Above the trough 4 is a deflector which may consist of one of more parts as at 9 and 10. These parts are preferably separable. The part 9 has the central portion arched above the troughs 8 to allow a free flow of the oil into the channel 4, and it projects or overhangs the channel 4 on all sides in such a manner as to deflect the air when the latter is allowed to pass between the part 9 and the lip 5 of the channeled structure 3.

The upper deflector 10 projects outward beyond the deflector 9, and has its overhanging portion arched or formed so as to confine and deflect the products of combustion as they are delivered outwardly from the channeled structure 3.

In order to supply a necessary amount of air I have shown the deflectors mounted upon guide rods or stems 11 movable vertically so that when they are raised, the deflectors will be also raised, and a channel of greater or less width will be exposed above the lip 5. Thus when the parts are heated, the oil is delivered through the supply pipes into the channel or channels in the part 3, and the deflectors being raised to the proper degree, air will be admitted to mingle with the vapors arising from the heated oil, thus producing the combustible gas which is thrown outward through the space between the part 3 and the superposed deflector or deflectors.

In order to operate the draft-controlling apparatus I have shown a suitably formed bar 12 slidable in slotted hangers 13, and having wedge or equivalent shaped lifters 14 so disposed that they slide beneath the lower ends of the rods 11.

A handle 15 is conveniently arranged exterior to the stove or structure so that by pushing upon this handle the bar 12 will be moved and the stems 11 and parts carried thereby will be raised in proportion to the amount of movement of the slide.

16 are stops by which the movement of the sliding lifters is limited in either direction.

It may sometimes be found desirable to

admit air between the bottom of the part 3 and the upper edge of the interior lip 2 to further assist in the combustion of the oil. For this purpose I have shown guided slidable rods 11ª attached to and carrying the part 3 in a manner similar to that shown in connection with the rods 11, and a similarly constructed slide 12ª with a wedge 14ª operated in a similar manner acts to lift the portion 3 independently of the deflectors. Thus the channel portion 3 may be raised by manipulation of the lifting rods 11ª, and the deflectors may be independently raised by means of the lifters 11, and the proportion of the air inlets thus exposed may be varied to suit the requirements of the apparatus.

For a still further supply and distribution of air if required, the deflector sections 9 and 10 may be separated as shown in Fig. 2, and suitable openings or passages 9ª and 10ª may be adapted to convey a portion of the air to the space above the structure.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In an oil burning apparatus, the combination of a base having a central opening and suitable walls forming a surrounding channel, a structure superposed upon the base and having a central opening, said structure having oil grooves or channels formed around it with an intervening edge over which the oil flows from one channel to the other, an oil pipe connecting with one of said channels, superposed deflectors movable towards and from said structure each of said deflectors having a part which overhangs one of said channels, and means whereby the deflectors raise and lower in unison to allow air to pass between their overhanging portions and the oil channel.

2. In an oil burning apparatus, a trough-shaped base having an open center, a superposed part having channels upon its upper surface, one of said channels being bounded by an inner lip, and a central opening substantially registering with the opening of the base, means for delivering oil into said channels, a deflector closable upon the inner lip of the oil channel, guided rods extending downwardly from the deflector through the opening in the base, and means whereby said rods and the deflectors may be raised or depressed to regulate the discharge of air over the oil channels.

3. In an apparatus for burning oil, a base having a peripheral trough and a central air opening, a part having oil-receiving grooves or channels upon its upper surface, and an air-opening registering with that of the base, one or more deflectors located above the channeled portion and closable thereon, independently guided rods supporting respectively the deflectors and the channeled portion, means by which said rods and the attached parts may be independently raised to provide air passages between said parts.

4. In an oil burning apparatus, the combination of a base having an open-center and double walls forming an annular trough, a part disposed over the open-center of the base, said part having an opening in its center and having its upper surface formed with inner and outer oil channels connecting by an edge over which the oil flows from one channel to the other, parallel deflectors disposed over said part, one of said deflectors having an edge which overhangs one of said channels and the other deflector having an edge which overhangs the other channel, said part having a lip bounding the inner edge of the innermost channel and upon which lip one of said deflectors is adapted to close, and means for supplying oil and air to said channels.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM H. VAN MARTER.

Witnesses:
FRANK K. LIPPITT,
CHARLES F. FURY.