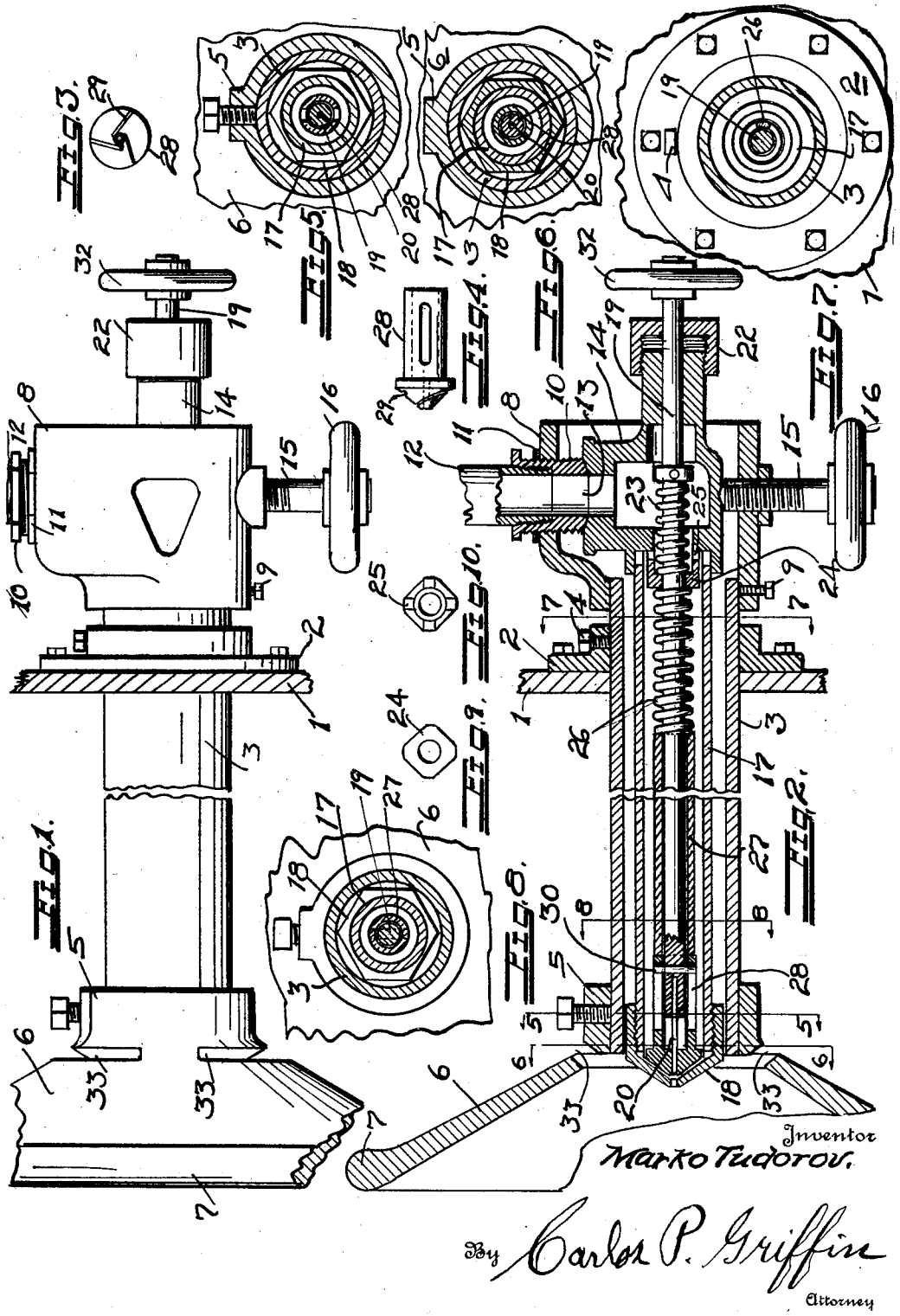
May 5, 1931. M. TUDOROV 1,803,414

OIL BURNER

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UNITED STATES PATENT OFFICE

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OIL BURNER

Application filed February 15, 1929. Serial No. 340,201.

This invention relates to an oil burner, and it has for an object to provide means whereby the burner can be readily cleaned by the movement of parts of the burner upon one another.

Another object of the invention is to provide an oil burner of such a character as to collect substantially all of the carbon at one point where it may be instantly removed by means of the rubbing part of the burner member upon other parts thereof, or by the application of a rod through slots in the fire-shield.

A further object of the invention is to provide an oil burner of such character as to allow the fuel oil used to produce the desired fire to also flush and clean the burner after the carbon adhering thereto has been broken loose.

A further object of the invention is to provide a knock-down crude oil burner of such character as to enable it to be quickly disassembled for the removal of broken parts, and to as quickly assemble it again when necessary.

Other objects of the invention will be apparent as the description proceeds.

An embodiment of the invention is shown in the accompanying drawings in which the same reference numeral is applied to the same portion throughout the several figures of the drawings and of which there may be modifications.

Figure 1 is a side elevation of the complete burner with the outer portions of the fire shield broken away for purposes of illustration,

Figure 2 is a vertical sectional view through Figure 1, the lower portion of the fire shield being broken away for purposes of illustration,

Figure 3 is an end view of the inner cleaning nozzle,

Figure 4 is a side elevation of the inner cleaning nozzle,

Figure 5 is a transverse sectional view of the burner on the line 5—5 Figure 2 looking in the direction of the arrows,

Figure 6 is a transverse sectional view on the line 6—6 Figure 2 looking in the direction of the arrows,

Figure 7 is a transverse sectional view on the line 7—7 Figure 2, looking in the direction of the arrows,

Figure 8 is a sectional view on the line 8—8 Figure 2 looking in the direction of the arrows,

Figures 9 and 10 are views of opposite sides of the spring stop used between the two sprrings which regulate the position of the cleaning rod.

The numeral 1 represents a portion of the fire door or other opening of the fire box shield through which the burner is installed, and which is secured thereto by means of the flanged ring 2.

The burner comprises an outer pipe 3 which passes through the flanged annulus 2 and is secured in place therein by means of the set screw 4. The boss 5 is held on the end of the pipe 3 within the fire box by a suitable setscrew. The funnel shaped fire shield 6 is integral with the boss 5 and has its outer edge thickened as indicated at 7 to prevent it from being quickly burned out.

The large fitting 8 is held in position on the rear end of the pipe 3 by means of the set screw 9. This fitting is provided with a threaded bushing 10 which is screwed thereinto and set in a given position by means of the lock nut 11, the oil pipe 12 also being threaded into said bushing. This bushing has its end inside of the fitting 8 coned as indicated at 13 to permit it to make a tight joint with the elbow 14 simply by the pressure upon the elbow of the screw 15 which screw has the hand wheel 16 for turning it. The elbow 14 is connected to a pipe 17 which extends through the pipe 3 and has a nozzle 18 at its end just at the narrowest portion of the fire shield 6.

A rod 19 extends through the elbow 14 and pipe 17 carrying a cleaning pin 20 at its end.

As the oil is delivered to the inside of the elbow shaped fitting 14 it is prevented from escaping therefrom by means of a packing gland 22, and it passes through an opening in which the spring 23 is installed around the

rod 19 into the space inside of the pipe 17. This spring 23 rests upon a square washer 24 which washer has a plurality of cuts 25 therein to permit the passage of the oil.

Another spring 26 surrounds the rod 19 and bears upon the opposite side of the washer 24 and upon the end of a short tubular member 27 which also bears on the slotted cleaning nozzle 28.

The slotted cleaning nozzle 28 fits the inside of the nozzle 18 and has several grooves therein as indicated at 29 to allow the escape of oil to the hole in the nozzle 18.

The nozzle 28 is held in alignment with the rod 19 and rotated therewith by means of the pin 30, which passes through the rod 19 and into the two slots in the nozzle 28.

The pin 20 is in alignment with the hole in the nozzle 18, and is carried by the end of the rod 19 so that by pushing forward on the rod 19 the pin 20 will be projected through the hole in the nozzle 18, and whenever desired, the rod 19 may be turned to rotate the nozzle 28 thereby aiding in cleaning any carbon that may form inside the burner nozzles.

In operation the handle 32 on the end of the rod 19 is turned and said rod is reciprocated from time to time thereby insuring the cleaning of the inside of the burner pipe 17 at its nozzle end. The fireman may also from time to time examine the condition of the fire by looking through the two slots 33 in the burner shield 6, and if he finds that any considerable accumulation of carbon has taken place on the end of the nozzle 18 he can knock it off by pushing a flat bar through either or both of said slots.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is as follows, but modifications may be made in carrying out the invention as shown in the drawings and in the above particularly described form thereof, within the purview of the annexed claim.

I claim:

An oil burner comprising a fixed tubular body having a conical nozzle with a central orifice, a tubular member rotatable in said tubular body and having a conical end fitting within said tip and having a central opening registering with said orifice, a rod slidably mounted in said tubular member and splined thereto, a pin mounted in the end of said rod and passing through the opening in the conical end of said tubular member, an operating handle on the end of said rod for manually advancing said pin into said orifice or rotating said tubular member, and means for delivering fuel oil to said orifice.

In testimony whereof I have hereunto set my hand this 6th day of February, A. D. 1929.

MARKO TUDOROV.