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Patented Dec. 9, 1902.

G. W. ARPER.

ASPHALTUM COLLECTOR FOR OIL BURNERS.

(Application filed Apr. 3, 1902.)

(No Model.)

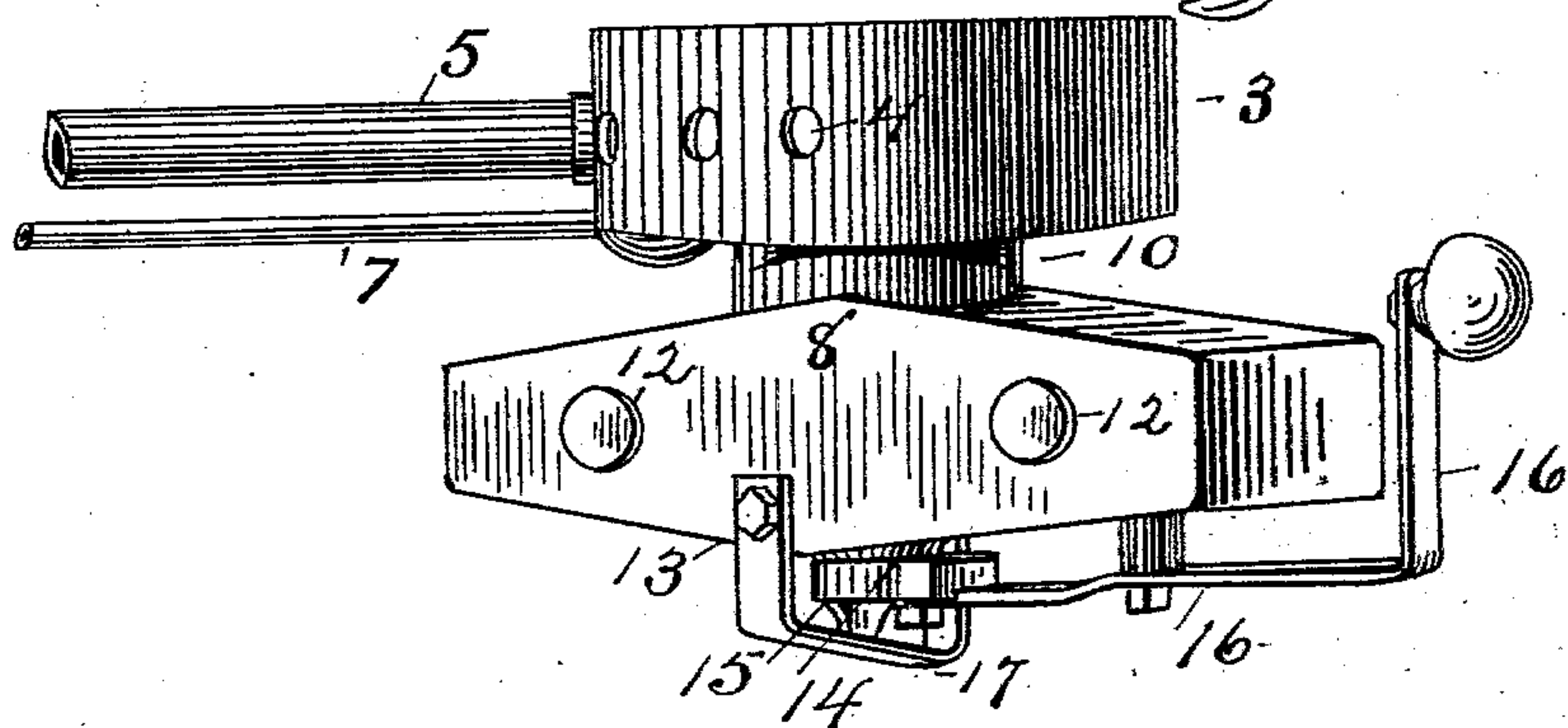
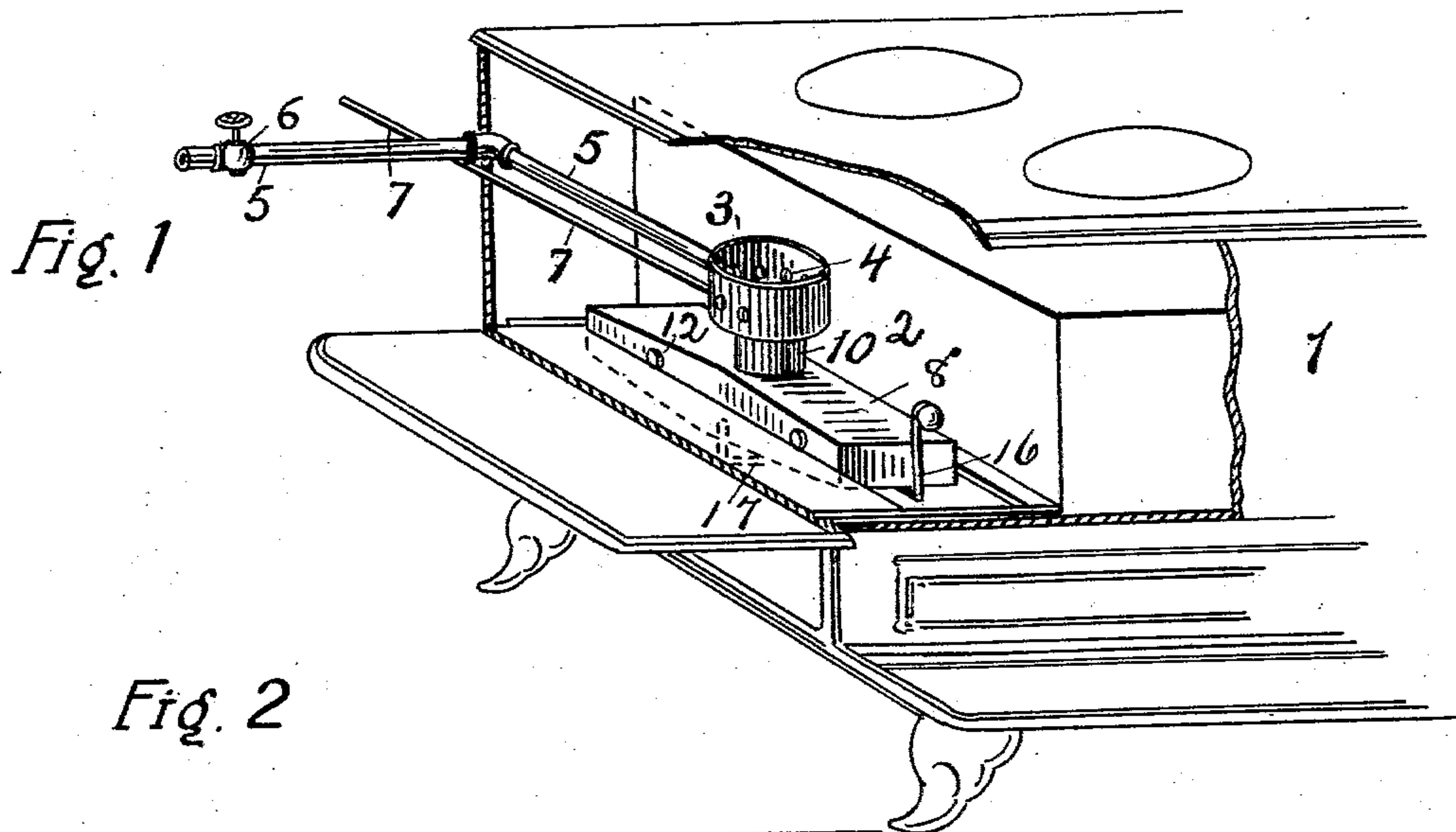
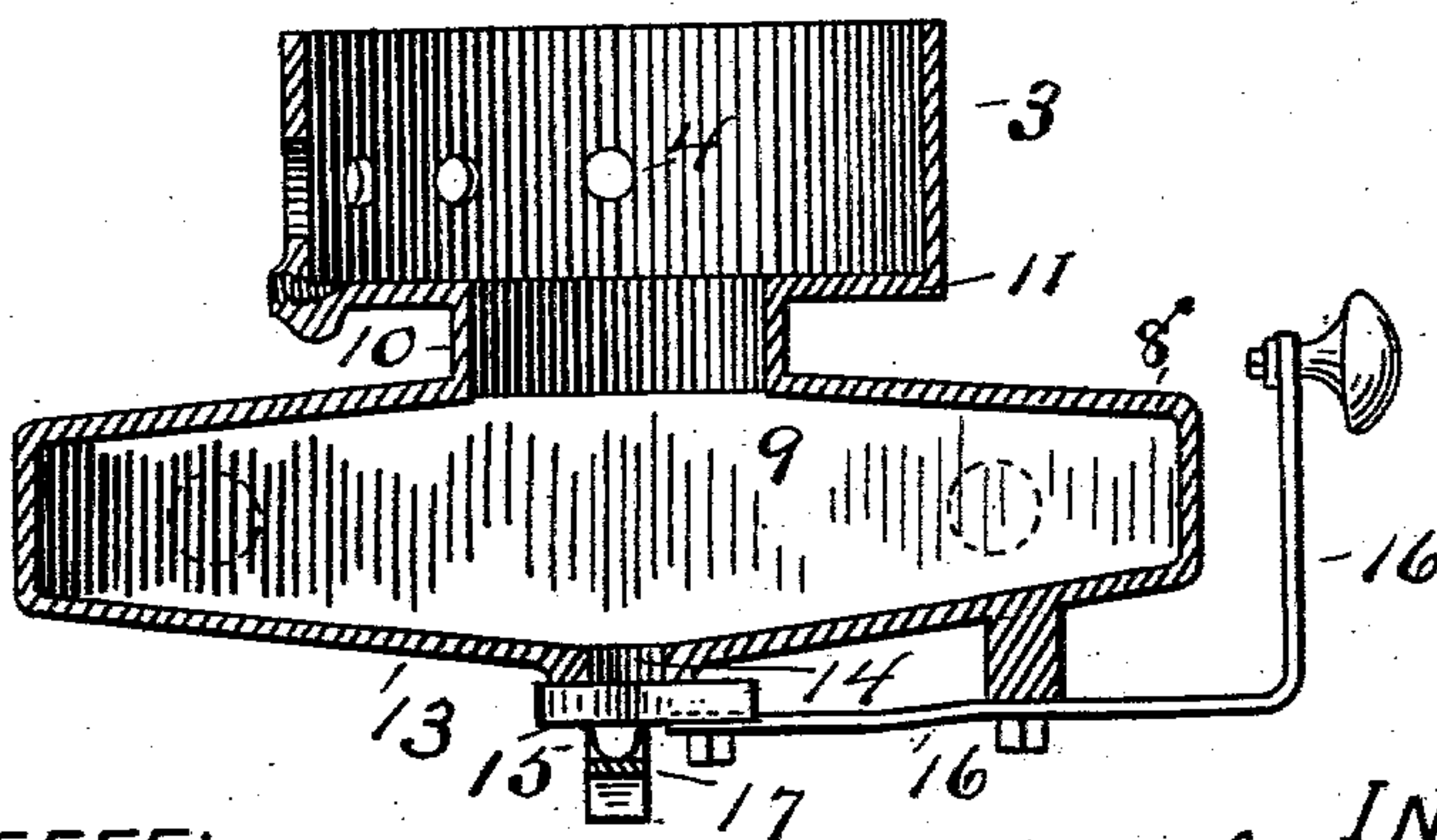


Fig. 3



WITNESSES:

Leon Boillot  
Walter D. Lane.

INVENTOR:

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by W. A. Lacker  
his atty



# UNITED STATES PATENT OFFICE.

GEORGE W. ARPER, OF OAKLAND, CALIFORNIA.

## ASPHALTUM-COLLECTOR FOR OIL-BURNERS.

SPECIFICATION forming part of Letters Patent No. 715,234, dated December 9, 1902.

Application filed April 3, 1902. Serial No. 101,187. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. ARPER, a citizen of the United States, residing at Oakland, county of Alameda, State of California, have invented certain new and useful Improvements in Asphaltum-Collectors for Oil-Burners; and I do hereby declare the following to be a full, clear, and exact description of the same.

With the oil-burners in use at the present time for the utilization of crude or bituminous oil as a fuel in connection with stoves, ranges, furnaces, &c., no means are provided for collecting or saving the base or asphaltum of such oil. Consequently the base or heavy residue is permitted to carbonize and go to waste. The residuum of the crude oil incident to the State of California forms an excellent quality of pure asphaltum having a high commercial value.

The object of the present invention is to provide an oil-burner for crude oil with means for collecting the asphaltum contained therein.

To comprehend the invention, reference should be had to the accompanying sheet of drawings, wherein—

Figure 1 is a vertical sectional view of a stove with the oil-burner and asphaltum-collector arranged therein. Fig. 2 is a detail view of the burner and collector removed from the stove, and Fig. 3 is a longitudinal sectional view on line *x x* of the burner and collector illustrated in Fig. 2 of the drawings.

In the drawings the numeral 1 is used to indicate an ordinary cooking-stove, and 2 the fire-box thereof, within which is arranged the oil-burner. The oil-burner comprises the fire-pot 3, provided with the air-inlets 4. Into this pot oil is admitted through the oil-feed pipe 5, which leads from the outside of the stove. The feed of oil is regulated or controlled by means of the valve 6. To obtain proper combustion within the fire-pot, a jet of steam is admitted to the oil flame from the steam-pipe 7.

Below the fire-pot 3 is located a collecting-receptacle 8, the chamber 9 of which communicates with the fire-pot 3. In fact, in the present case connection between the fire-pot and the collecting-receptacle is made by means of the circular web or neck 10, depending from and which may be said to constitute a downward extension or continuation of the bottom 11 of the fire-pot.

When arranged within the fire-box of a stove, the collecting-receptacle is suspended below the grate-line, it being preferably supported by means of projections 12.

The collecting-receptacle is provided with a double inclined bottom 13, the inclination being toward the center thereof, wherein is formed an outlet 14. This outlet is closed by a slide-gate 15, which gate is attached to the inner end of fulcrumed lever 16. The outer end of this lever extends a slight distance beyond the collecting-receptacle. The gate 15 is held against downward movement, due to the pressure of the material within the chamber 9, by means of the supporting-stirrup 17. This stirrup is arranged at a slight inclination, so that the gate is forced firmly to its seat, as thrown inward.

In operation the chamber 9 is first filled with crude oil, which is ignited. Oil is then admitted to the fire-pot through oil-feed pipe 5 in order to supply the oil consumed in the collecting-chamber. As the lighter properties of the oil are consumed the heavier particles or asphaltum settle within the chamber 9. After a firing of about forty-eight hours the chamber 9 will be filled with asphaltum, which may be drawn off by opening the gate 15 and permitting same to escape into a suitable receptacle inserted within the ash-pit of the stove to receive the discharge from outlet 14.

Having thus described the invention, what is claimed as new, and desired to be protected by Letters Patent, is—

In combination with a stove having a fire-box provided with suitable supporting portions, a removable burner of the character described adapted to be inserted into said fire-box and comprising a fire-pot, a fuel-inlet thereto, a collecting-chamber located therebeneath and connected thereto by a hollow web or neck, a valved outlet from said chamber, and lateral projections on said chamber adapted to rest upon the supporting portions of the fire-box, substantially as described.

In witness whereof I have hereunto set my hand.

GEORGE W. ARPER.

Witnesses:

N. A. ACKER,  
D. B. RICHARDS.