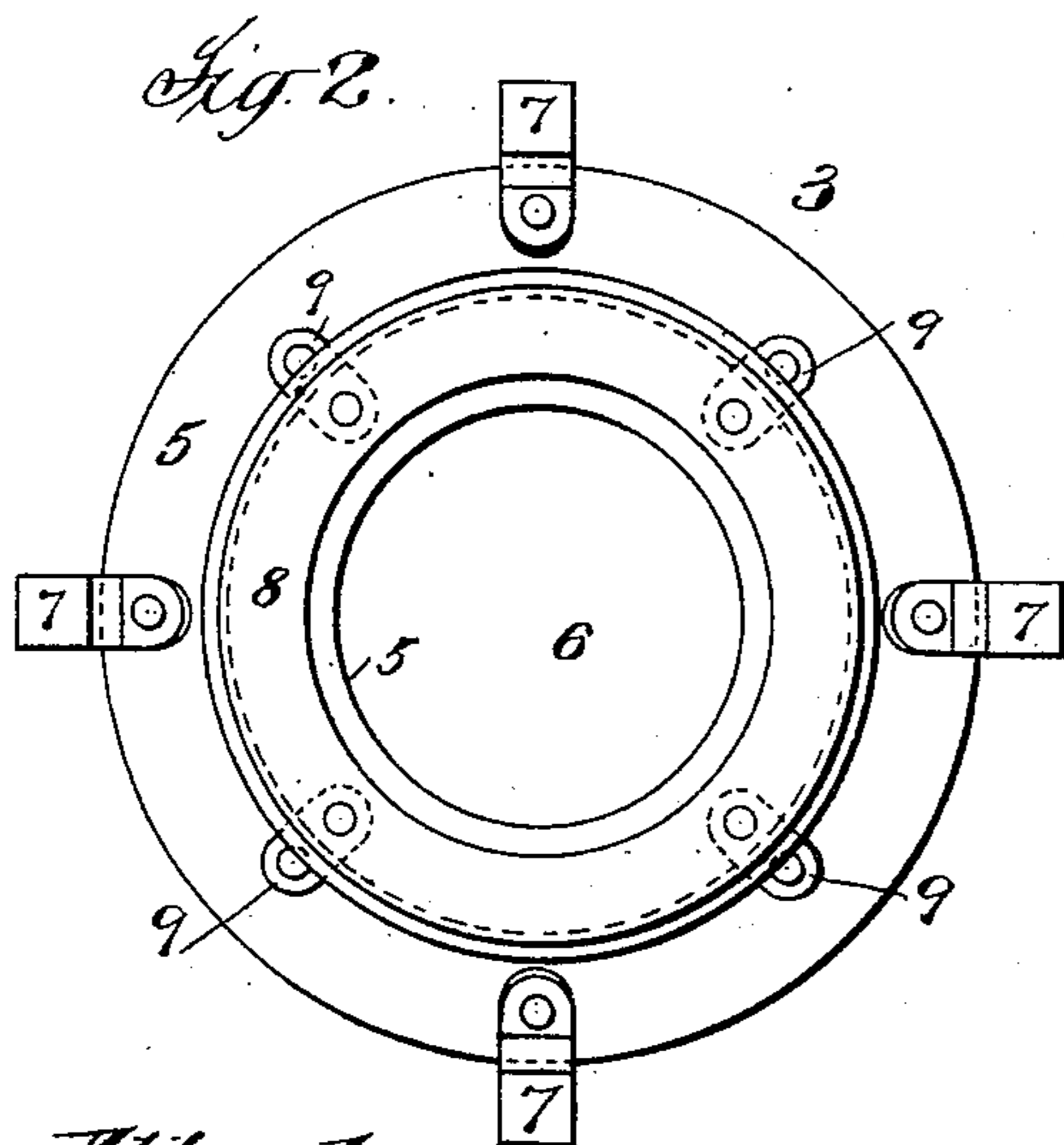
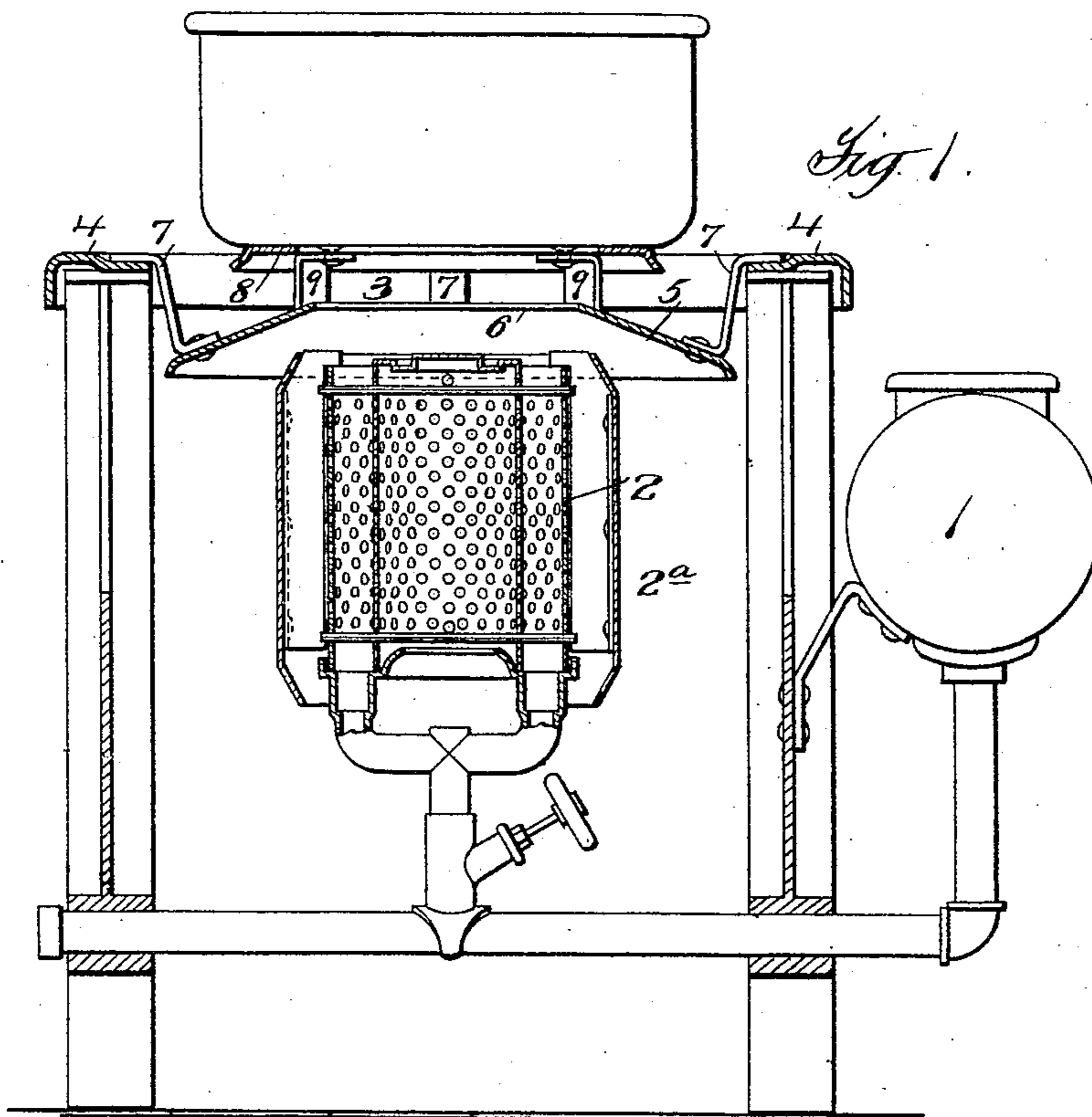


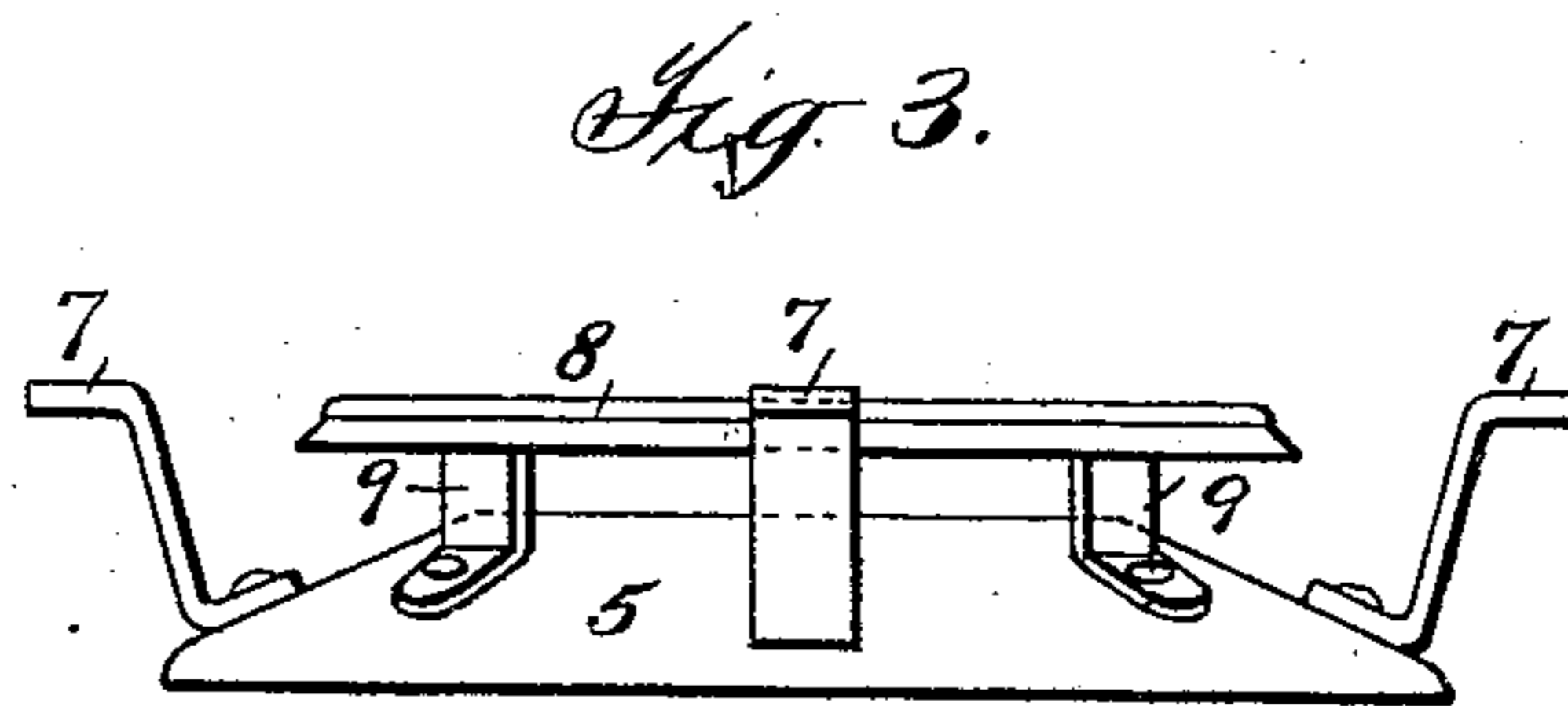
No. 860,841.

PATENTED JULY 23, 1907.

W. G. S. SYMMONS.
STOVE AND GRATE THEREFOR.
APPLICATION FILED SEPT. 30, 1902.



Attest:
Wm. Borsh
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by Philip James Rice Kennedy

Atty:

UNITED STATES PATENT OFFICE.

WILLIAM GEORGE SAUNDERS SYMMONS, OF LONDON, ENGLAND, ASSIGNOR TO STANDARD OIL COMPANY OF NEW YORK, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

STOVE AND GRATE THEREFOR.

No. 860,841.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed September 30, 1902. Serial No. 125,415.

To all whom it may concern:

Be it known that I, WILLIAM GEORGE SAUNDERS SYMMONS, a subject of the King of Great Britain, and a resident of 42 Westbere road, West Hampstead, London, England, manager of department, have invented certain new and useful Improvements in Stoves and Grates Therefor, of which the following is a specification.

This invention relates to improvements in cooking stoves and grates therefor.

The improvements of the present invention have reference particularly to stoves of the class commonly known as oil and gas stoves, and they will for that reason and for convenience be hereinafter described in detail in connection with stoves of this class, although, as will hereinafter appear, certain features of the invention are applicable to stoves in which wood or coal is used as the fuel.

As cooking stoves, and particularly oil and gas stoves, are now commonly constructed, they are open to the objection that when liquid boils over or is spilled upon the sides of the cooking receptacle, it runs down the sides of the receptacle and then for a certain distance along its bottom until it reaches the lowest point on the latter, when it drops into the receptacle beneath forming the seat of combustion. In the case of stoves using wood or coal as fuel, this may result in a very unpleasant odor, while, in the case of oil and gas stoves, the effect is, additionally, to make the flame flare with more or less sputtering which is alarming to the user of the stove and, if inflammable articles be in proximity thereto, the flame may ignite such articles. In addition to this, if the quantity of liquid falling be considerable it may even extinguish the flame.

It is the object of the present invention to overcome these objections and to provide a structure in which such liquid as may be spilled upon or boil over the sides of the cooking receptacle will be prevented from falling into the flame.

In the accompanying drawings—Figure 1 is a sectional elevation of an oil stove equipped with the present improvements. Fig. 2 is a detail, in plan view, of the grate; and Fig. 3 is a side elevation of such grate.

Referring to said drawing, 1 represents the oil reservoir, 2 the vaporizer and burner, and 2^a the burner casing, while 3 represents the grate or cooking receptacle support which is removably supported in the frame 4 of the stove above the burner 2.

So far as the particular form of stove shown is concerned, independently of the grate or cooking receptacle support, it forms no part of the present invention.

The grate 3 consists of an annular plate or shelf 5 provided with a central flame opening 6 and at its outer edges with lugs 7 by which it is suspended from the upper edges of the frame 4 above the burner 2, and

an annular plate or receptacle support 8 above and extending around and outside the flame opening 6 of the annular liquid-deflecting plate or shelf 5, from which it is supported by legs 9.

As indicated above, and as shown in Fig. 1, the annular plate 8 is designed to contact with the under side or bottom of the receptacle so as to arrest the movement along the under side of the receptacle of such liquid as may be spilled upon or boil over the sides of the receptacle.

The annular receptacle supporting plate 8 is preferably arranged so as to extend slightly above the frame of the stove so that, if a receptacle be placed upon it which is of such width as to extend over the upper edges of the frame 4, it will properly engage the bottom of such receptacle and support it in a level position. It is of such diameter that the flame from the combustion chamber may pass around it into contact with the cooking receptacle, and it is also open at its center for the passage of the flame through it to the bottom of the receptacle.

When a cooking receptacle is placed upon the annular plate 8, as shown in Fig. 1, should any liquid of such receptacle be spilled upon or boil over the sides thereof, it will be arrested by the plate 8 and prevented from traveling inwardly along the bottom of the receptacle and dropping thence into the burner 2; the liquid thus arrested dropping from the plate 8 onto the floor or other support upon which the stove is placed or upon the annular plate or ring 5 beneath and in line with it, which is made of such width and so arranged relatively to the receptacle supporting plate 8 as to extend inwardly beyond the inner edge of said plate and also outwardly beyond the outer edge thereof, so that, any liquid falling from the plate 8 will fall upon the liquid-deflecting plate or shelf 5. The plate or shelf 5 also extends outwardly beyond the burner casing 2^a and is inclined downwardly and outwardly from its flame opening 6, so that the liquid which drops thereon from the annular plate 8 will travel downwardly and outwardly along the plate or shelf 5 and drop therefrom at a distance from the burner casing 2^a so as to clear the latter.

What is claimed is:—

1. A cooking stove provided above its seat of combustion with means for shielding the latter from liquid on the outside of cooking receptacles, comprising an outwardly and downwardly inclined liquid-deflector having a flame opening and a member above the same for delivering such liquid thereto, said member being adapted for the passage of the flame from the seat of combustion past it and into contact with the receptacle, and said liquid-deflector being in line with said member so as to catch liquid dropping therefrom and also projecting beyond the combustion chamber so as to deliver said liquid outside of the latter, substantially as described.

2. A cooking stove provided above its seat of combustion

with means for shielding the latter from liquid on the outside of cooking receptacles, comprising an outwardly and downwardly inclined liquid-deflector having a flame opening and a member above the same for delivering such liquid thereto, said member being adapted to engage the cooking receptacle to arrest such liquid and also adapted for the passage of the flame from the seat of combustion past it and into contact with the receptacle, and said liquid deflector being in line with said member so as to catch liquid dropping therefrom and also projecting beyond the combustion chamber so as to deliver said liquid outside the latter, substantially as described.

3. A grate for a cooking stove, provided with means for shielding the seat of combustion of the stove from liquid on the outside of cooking receptacles, such means comprising an outwardly and downwardly inclined liquid-deflector having a flame opening and a member above the same for delivering such liquid thereto, said member being adapted for the passage past it of the flame from the seat of combustion, and said deflector being in line with said member so as to catch liquid dropping therefrom and also

projecting beyond the seat of combustion so as to deliver said liquid outside of the latter, substantially as described.

4. A grate for a cooking stove, provided with means for shielding the seat of combustion of the stove from liquid on the outside of cooking receptacles, such means comprising an outwardly and downwardly inclined liquid-deflector having a flame opening and a member above the same for delivering such liquid thereto, said member being adapted to engage the cooking receptacle to arrest such liquid and also adapted for the passage past it of the flame from the seat of combustion, and said deflector being in line with said member so as to catch liquid dropping therefrom and also projecting beyond the seat of combustion so as to deliver said liquid outside of the latter, substantially as described.

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

WILLIAM GEORGE SAUNDERS SYMMONS.

Witnesses:

H. E. NEWTON,
A. COSTA.