

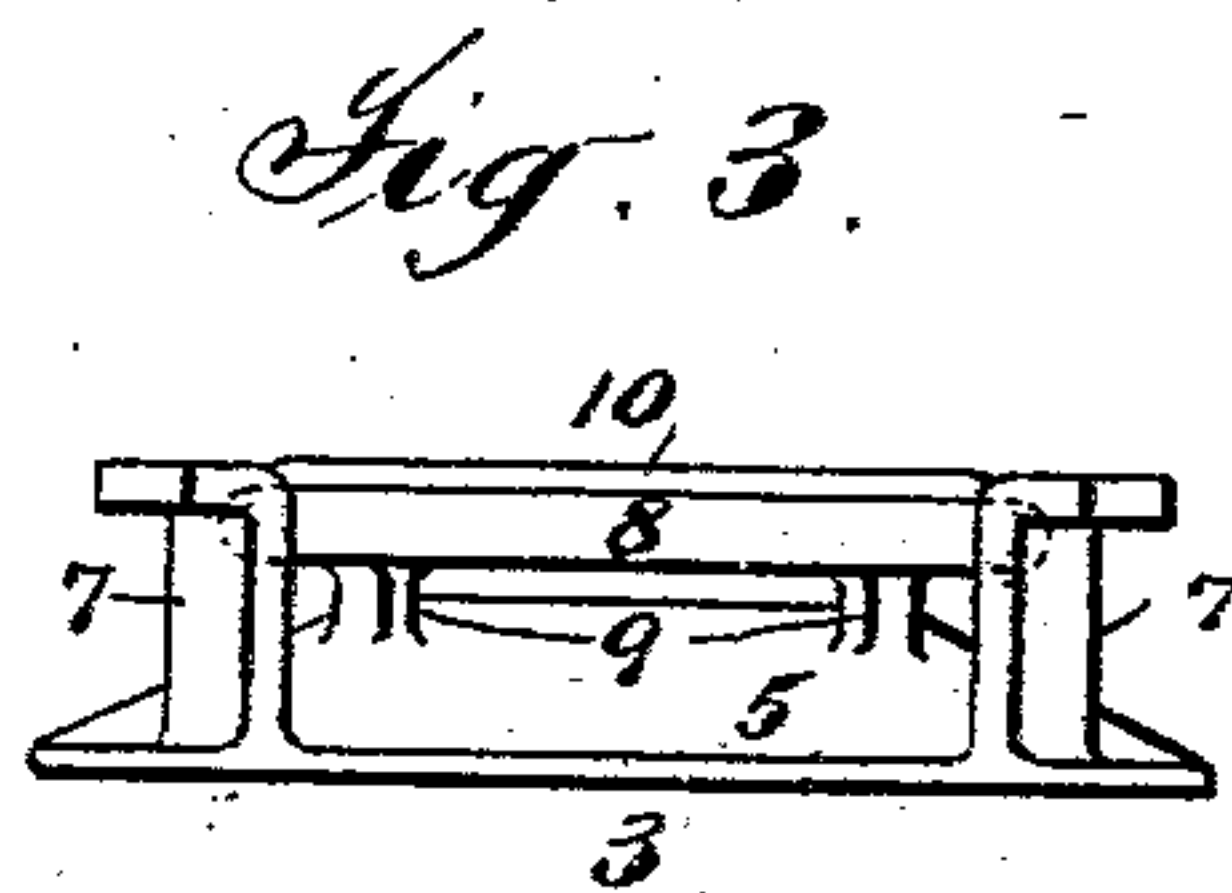
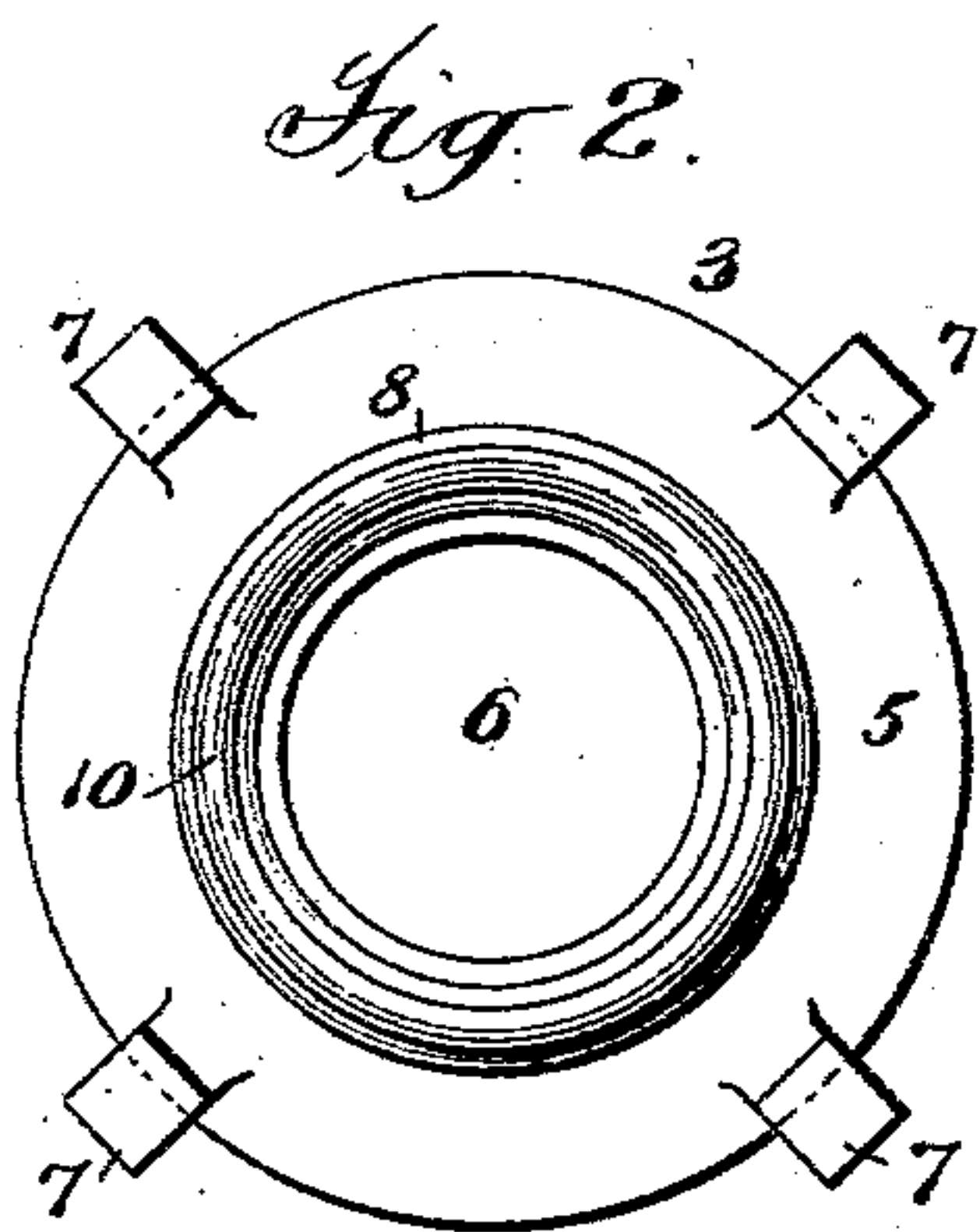
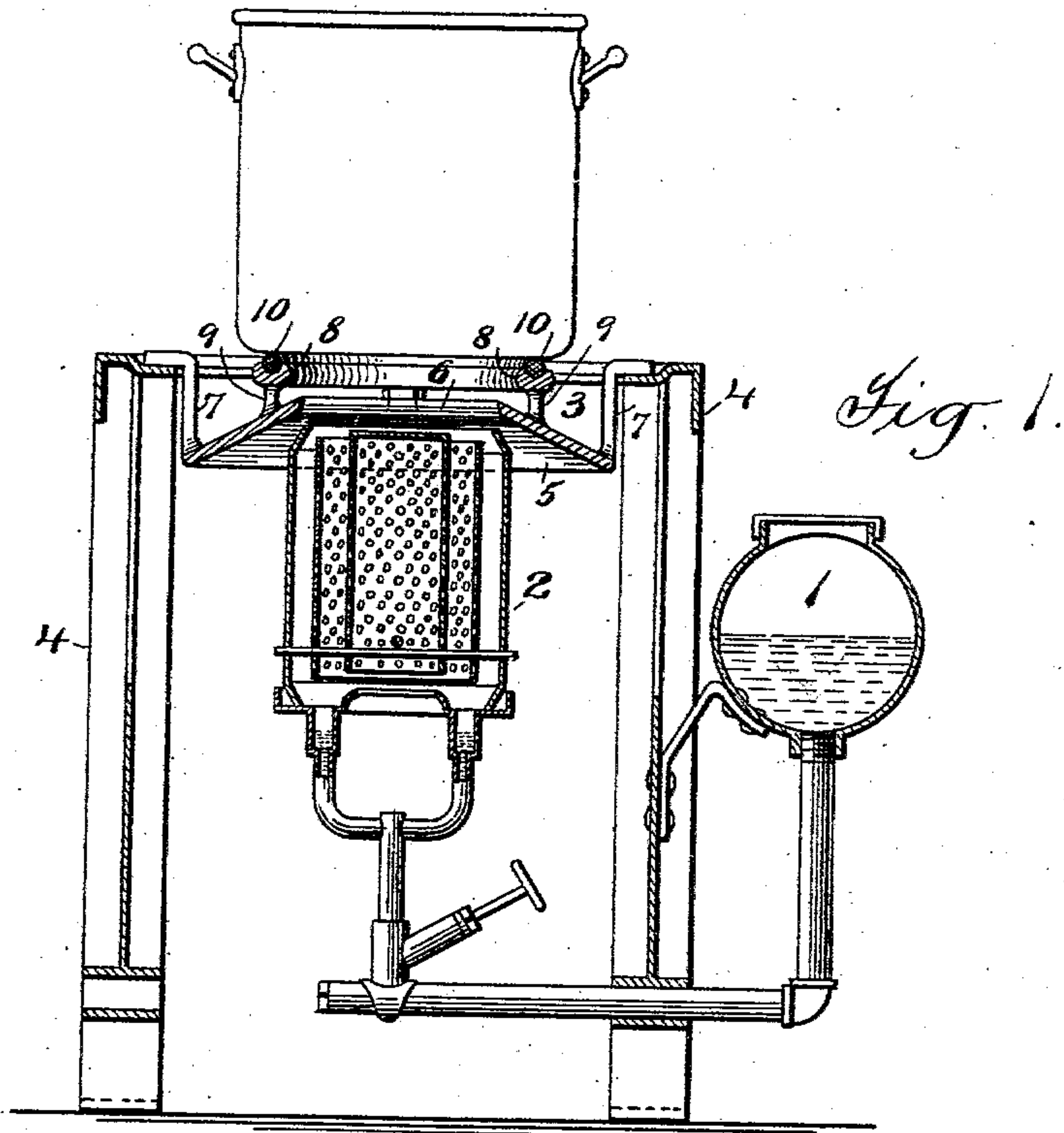
No. 715,283.

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C. A. NEFF.  
STOVE GRATE.

Application filed Apr. 10, 1902.

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## STOVE-GRATE.

SPECIFICATION forming part of Letters Patent No. 715,283, dated December 9, 1902.

Application filed April 10, 1902. Serial No. 102,212. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. NEFF, a citizen of the United States, residing at New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Stove-Grates, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to improvements in receptacle-supporting stove-grates and to cooking or other stoves provided with such grates.

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 present invention are also applicable to stoves in which wood or coal is used as the fuel.

As receptacle-supporting stove-grates are now constructed they are open to the objection that when the liquid boils over or is spilled upon the sides of the receptacle it runs down the sides of the vessel and for a certain distance along its bottom until it reaches the lowest point in the latter, when it drops into the receptacle 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 to make the flame flare up with more or less sputtering, which is alarming to the user of the stove, and if inflammable articles be in proximity to the flame is furthermore dangerous, as 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 the sides of the cooking-receptacle or as may boil over will be arrested in its movement along the bottom of the receptacle and prevented from falling therefrom onto the flame.

In the accompanying drawings, Figure 1 is a sectional elevation of an oil-stove embodying the present improvements. Fig. 2 is a plan view of the receptacle-supporting grate, and Fig. 3 is a side elevation of such grate.

Referring to said drawings, 1 represents the oil-reservoir; 2, the vaporizer and burner, while 3 represents the grate, which is 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 it forms no part of the present invention.

The grate 3 consists of a ring 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 receptacle-support 8, extending around and outside the flame-opening 6 of the ring 5. The annular support 8 is preferably formed integrally with the ring 5, being supported therefrom by legs 9. On its upper edge the support 8 is provided with an annular groove for receiving a washer 10, of asbestos or other suitable yielding material, the function of which is to engage the under side of the cooking-receptacle and to arrest the movement along the bottom thereof of such liquid as may be spilled upon or may boil over the sides of the receptacle. The washer 10 is preferably of such thickness as to extend slightly above the frame 4 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, or if two or more receptacles be placed upon it, with their bottoms also resting upon the frame 4, it will engage the bottoms of such receptacles and support them in a level position. When a cooking-receptacle is placed upon the ring 10, 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 washer 10 and prevented from traveling inward along the bottom of the receptacle and dropping thence into the burner 2, the liquid thus arrested dropping from the washer onto the floor or other support upon which the stove is placed. Should two cooking-receptacles be placed upon the washer 10,



with the bottoms thereof also resting upon the upper edges of the frame 4, any liquid spilled upon or boiling over the sides of such receptacles will be arrested by the washer 10 in the manner just described, except that the liquid passing down the sides of the receptacle which are outside the washer will be arrested by the outer side of the washer, while that portion of the liquid which passes down the sides of the receptacles which are inside the washer will travel outwardly along the bottom of the receptacles and be arrested by the innerside of the washer. To prevent the liquid arrested by the washer 10 as it travels along the bottom of the receptacle, particularly where two receptacles are placed upon the washer and a portion of such liquid travels outwardly along the bottom of the receptacle and is arrested by the inner side of the washer, from dropping into the flame, the ring 5 is made in the form of a shelf projecting inwardly beyond the inner side of the washer 10 and also outwardly beyond the outer side thereof, so that no matter on which side of the washer the liquid is arrested as it travels along the bottom of the receptacle it will fall upon the ring 5, which thus acts as a catcher for the liquid arrested by and dropping from such washer. The shelf also is inclined downwardly and outwardly from the flame-opening 6, so that the liquid which drops thereon from the washer 10 travels downwardly and outwardly along the shelf and drops therefrom at a distance from the burner 2.

35 What is claimed is—

1. A receptacle-supporting stove-grate provided, outside its flame-opening, with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, substantially as described.

2. A receptacle-supporting stove-grate provided, outside its flame-opening with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, and, beneath said washer, with a catcher for liquid dropping from the washer, substantially as described.

3. A receptacle-supporting stove-grate provided, outside its flame-opening with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, and, beneath said washer, with a downwardly and outwardly inclined shelf for catching the liquid dropping from the washer, substantially as described.

4. A stove provided with a burner and

above said burner with a receptacle-supporting stove-grate provided, outside its flame-opening, with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, substantially as described.

5. A stove provided with a burner and above said burner with a receptacle-supporting stove-grate provided, outside its flame-opening, with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, and, beneath said washer, with a catcher for liquid dropping from the washer, substantially as described.

6. A stove provided with a burner and above said burner with a receptacle-supporting stove-grate provided, outside its flame-opening, with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, and, beneath said washer, with a downwardly and outwardly inclined shelf for catching the liquid dropping from the washer, substantially as described.

7. A receptacle-supporting stove-grate for stoves employing burners, comprising shelf 5 and support 8 provided with yielding non-combustible washer 10, said shelf and support being provided with means for supporting them in the frame of the stove above the burner, substantially as described.

8. A receptacle-supporting stove-grate for stoves employing burners, comprising shelf 5 and support 8 provided with yielding non-combustible washer 10, said shelf and support being integral and provided with means for supporting them in the frame of the stove above the burner, substantially as described.

9. A receptacle-supporting stove-grate for stoves employing burners, comprising shelf 5 and support 8 provided with yielding non-combustible washer 10, said shelf and support being integral and provided with lugs 7 for suspending them from the frame of the stove above the burner, substantially as described.

10. A stove provided, outside its flame-opening, with a yielding, non-combustible washer, for arresting the movement along the bottom of the receptacle of liquid from the side thereof, substantially as described.

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

CHARLES A. NEFF.

Witnesses:

W. H. KENNEDY,  
A. WHITE.