

W. H. NULL.

STOVE.

(Application filed Sept. 4, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

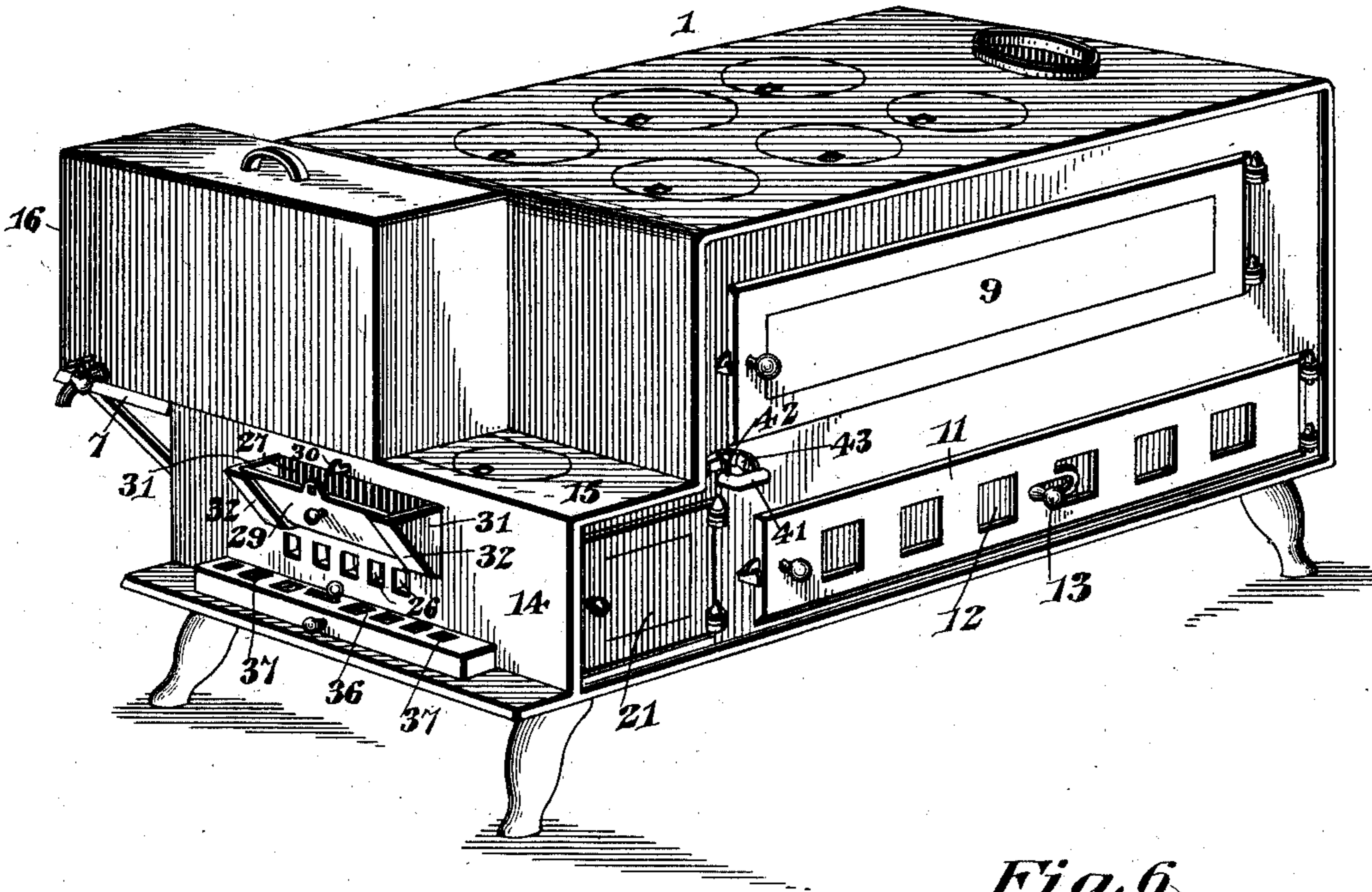


Fig. 6.



Fig. 4.

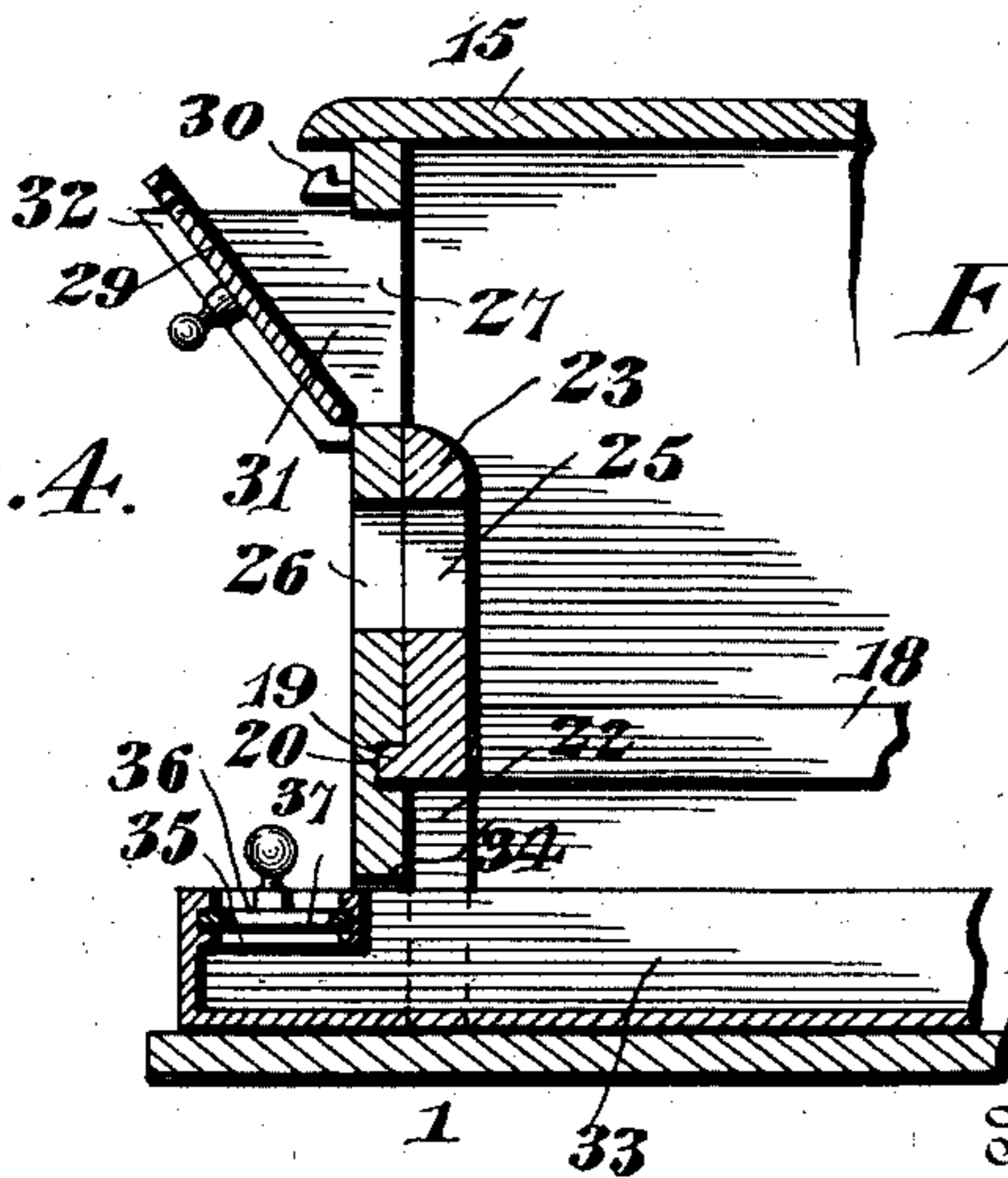
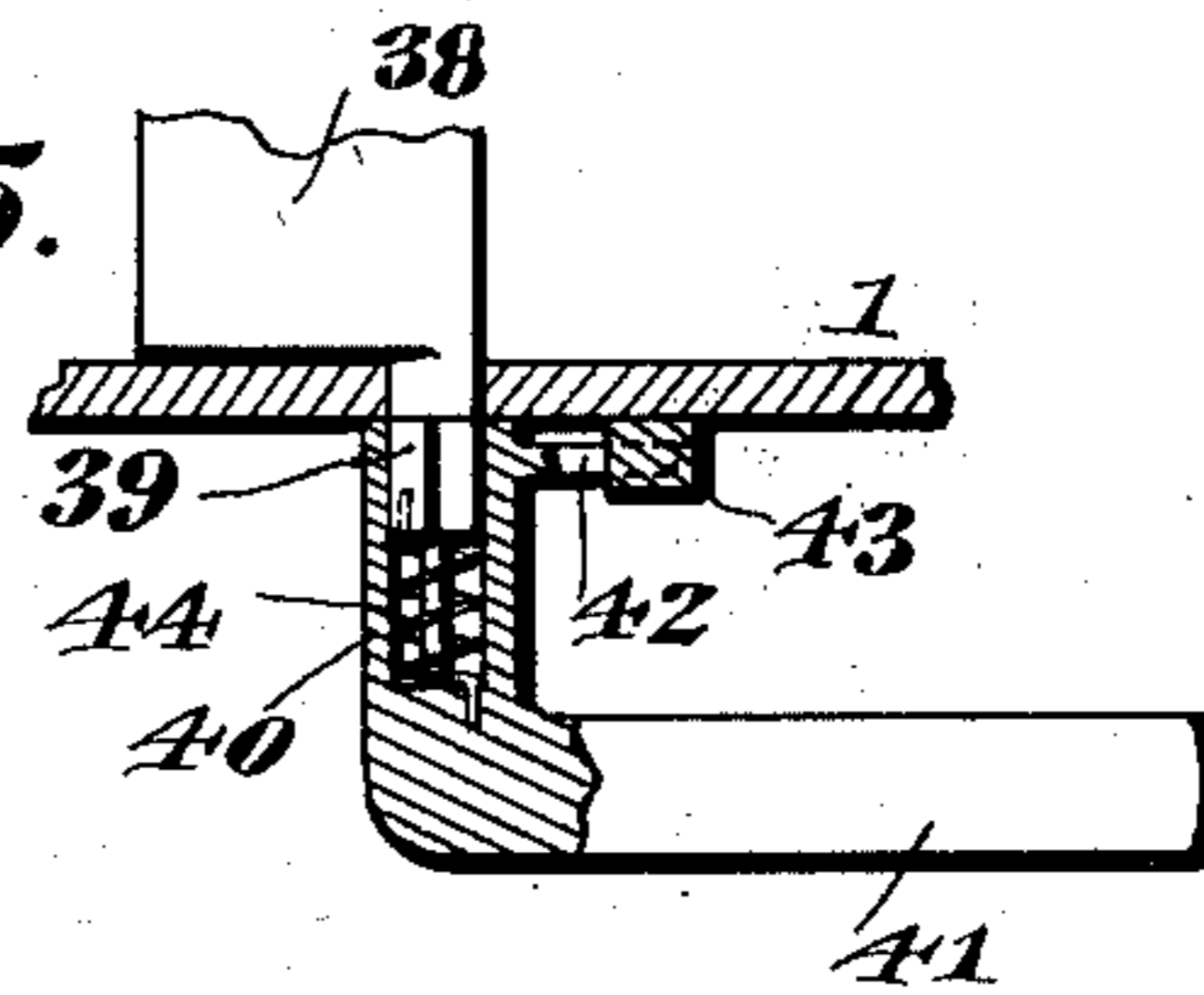


Fig. 5.



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2 Sheets—Sheet 2.

Fig. 2.

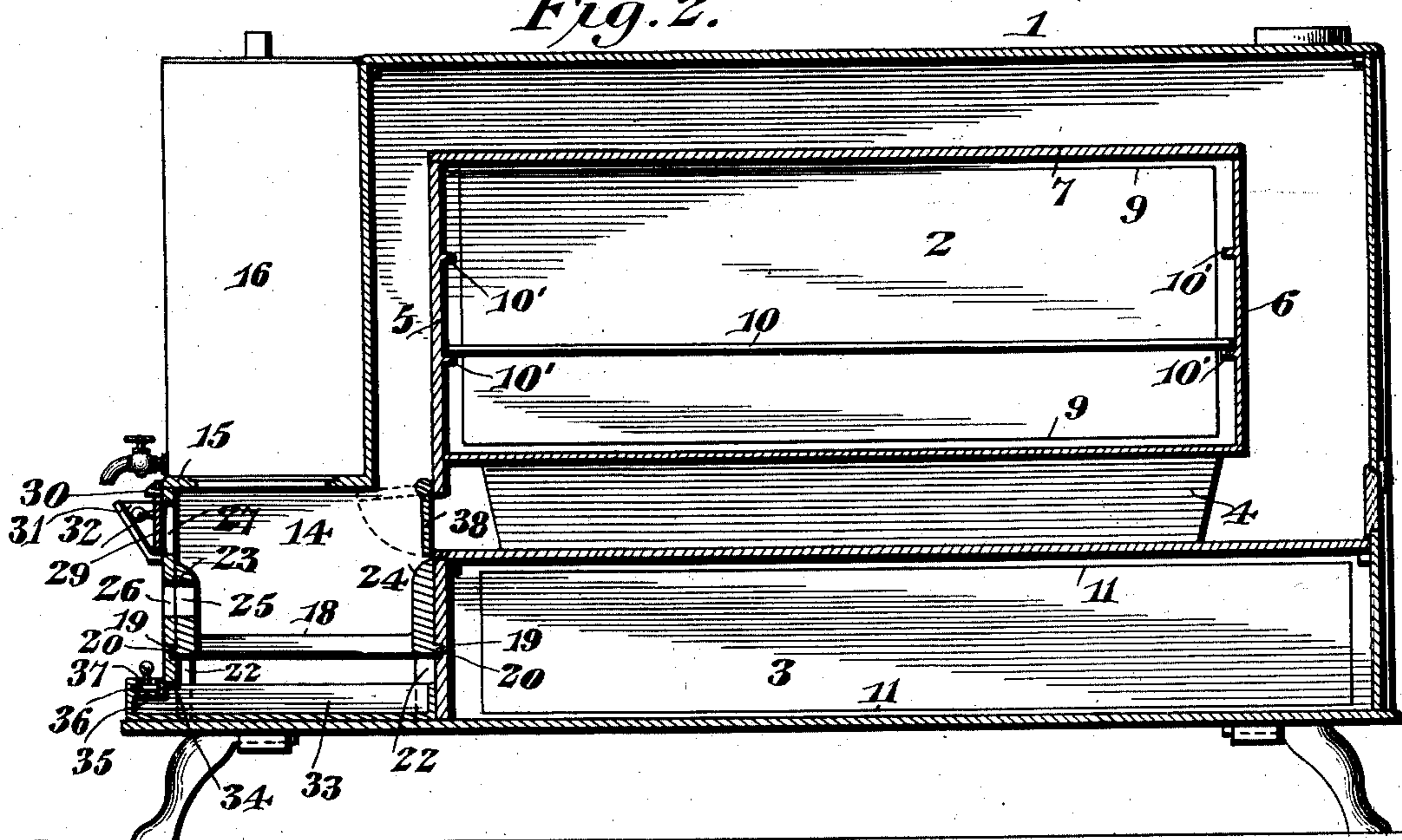
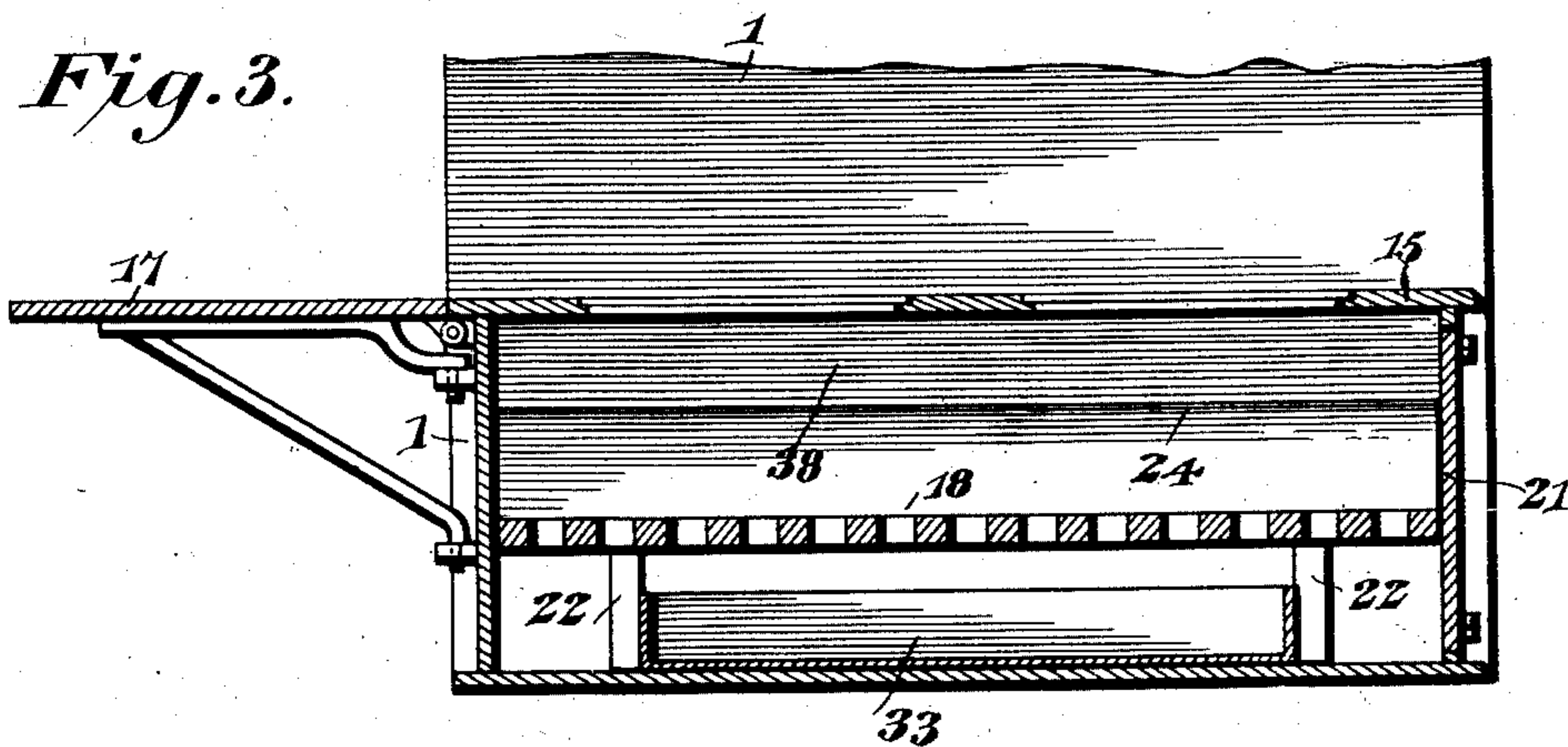


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. NULL, OF PHILOAH, WEST VIRGINIA.

STOVE.

SPECIFICATION forming part of Letters Patent No. 706,589, dated August 12, 1902.

Application filed September 4, 1901. Serial No. 74,300. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. NULL, a citizen of the United States, residing at Philoah, in the county of Putnam and State of West Virginia, have invented a new and useful Stove, of which the following is a specification.

This invention relates to stoves, and is particularly designed to provide an improved cooking-stove, wherein the fire-box is located so as to effectually heat both the cooking-oven and the warming-oven and also disposed so as to form a convenient support for a water-tank, and thereby to leave the top of the stove unobstructed for cooking vessels and the like. It is furthermore designed to employ a single damper for controlling the supply of heat for the two ovens and to have said damper located in position for convenient adjustment.

Another object is to provide for conveniently supplying fuel to the fire-box without removing the water-tank therefrom and also to provide an improved grate and ash-pan arrangement whereby the grate may be conveniently removed whenever desired and is normally held against displacement by the ash-pan.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a stove constructed and arranged in accordance with the present invention. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a detail sectional view taken longitudinally through the fire-box. Fig. 4 is an enlarged detail sectional view taken transversely through the front of the fire-box. Fig. 5 is an enlarged detail sectional view taken through the damper-operating mechanism. Fig. 6 is a detail elevation of the means for locking the damper.

Like characters of reference designate cor-

responding parts in all the figures of the drawings.

In carrying out the present invention there is provided a substantially rectangular stove-body 1, which has an upper cooking-oven 2 and a lower warming-oven 3, said ovens being separated by a space or flue formed between the bottom and top of the ovens, there being a plurality of longitudinal ribs 4 located within said space or flue to stiffen and strengthen the bottom and top plates. The warming-oven extends from the back to the front of the stove, while the cooking-oven is terminated short of said front and rear ends by means of the front and rear plates 5 and 6, respectively, and the top of the oven is formed by means of a top plate 7, located slightly below the top of the stove-top, whereby a flue or heat-passage is provided that extends entirely around the cooking-oven and also between the two ovens. The cooking-oven is provided with the opposite hinged doors 9 and also with a removable rack 10, that may be held on either of the corresponding pair of flanges 10', formed in the front and rear walls of the oven. The warming-oven is also provided with doors 11, one of which has a plurality of draft-openings which are controlled by means of a damper-slide 12, mounted upon the inner side of the door and having a handle 13 projected outwardly through a longitudinal slot formed in the door.

The fire-box 14 is supported upon a front extension of the bottom or base of the stove and has its top 15 located substantially in line with the bottom of the cooking-oven, and is also provided with the usual stove-holes. It will here be noted that the fire-box is projected in front of the stove and forms a support or seat for a water-tank 16, whereby the top of the stove is unobstructed and the water-tank receives the full benefit of the fire. A suitable hinged shelf 17 is provided at one end of the top of the fire-box, so that the water-tank may be moved outwardly and partly supported by this shelf should it be desired to expose a greater portion of the top of the fire-box. Ordinarily the water-tank will be somewhat shorter than the fire-box in order that a portion of the top thereof may always be exposed for the support of

such cooking utensils as may require an intense heat.

Within the fire-box there is provided a grate which consists of a slotted bottom 18, 5 having opposite outwardly-directed longitudinal flanges or ribs 19, that are slidably received within corresponding grooves 20, formed in the front and back of the fire-box, the grate being insertible through a doorway 10 provided at one end of the fire-box and normally closed by a suitable door 21. The bottom of the grate is also provided at its four corners with supporting-feet 22, which rest upon the bottom of the fire-box. The 15 grate also has the front and rear longitudinal walls or sides 23 and 24, respectively, of which the front side is provided with a plurality of openings 25, which register with corresponding openings 26, formed in the 20 front of the fire-box, so as to supply air to the fire. The opposite ends of the grate are open and are normally closed by means of the opposite ends of the fire-box. The grate may be readily shaken by opening the door 25 21 and applying a hooked poker through the adjacent slat in the bottom of the grate, and is also designed to remove the grate in an endwise direction through the door.

In order that fuel may be supplied to the 30 grate without removing the water-tank from the top of the fire-box, an opening 27 is formed in the front of the fire-box and is closed by means of a door 29, which is located upon the outer side of the fire-box and hinged at its 35 lower edge, there being a suitable latch or fastening 30, located at the upper edge of the door, so as to normally lock the latter. At opposite sides of the fuel-opening there is provided the upright plates 31, which are suitably 40 secured or formed integrally with the front of the fire-box and having their outer edges inclined upwardly and outwardly and provided with inwardly-directed longitudinal ribs or flanges 32. The door 29 fits between 45 these plates and is limited in its outward movement by means of the flanges 32, so that when the door is opened it coöperates with the opposite plates 31 to form a chute or hopper for convenience in introducing the fuel to the 50 fire-box.

Beneath the grate there is located an ash-pan 33, which has its outer end projected through an opening 34, formed in the front of the fire-box, the outer edge of the pan being 55 provided with a plurality of notches or recesses 35, which communicate with the interior of the pan. The notched front edge of the ash-pan is normally projected beyond the front of the fire-box, and upon this edge there 60 is mounted an endwise-slidable damper-plate 36, which is provided at its inner edge with a plurality of notches 37 to register with the notches in the pan to provide passages for conveying air into the fire-box and beneath 65 the grate. When the ash-pan is in place, it fits snugly between the legs of the grate, and

thereby prevents accidental endwise movement of the latter.

By reference to Fig. 2 of the drawings it will be seen that the upper rear edge of the 70 fire-box is provided with an opening or passage that communicates with the flues or heat-space around the cooking-oven, and this opening is controlled by means of a damper 38, which is mounted to swing vertically, so as to 75 close either the horizontal passage between the two ovens or the vertical passage at the front of the cooking-oven. By adjusting this damper to an intermediate position between the horizontal and upright flues the products 80 of combustion may pass entirely around the cooking-oven, and by adjusting the damper to close the upright flue all of the heat and products of combustion may be directed be- 85 tween the two ovens, so as to apply more heat to the warming-oven, and by closing the horizontal flue all of the heat and products of combustion will pass upwardly and over the top of the cooking-oven and finally out through the smoke-pipe of the stove without having 90 any effect upon the warming-oven.

To provide for the convenient adjustment of the damper, one of the journals thereof is projected beyond one side of the stove, as indicated at 39, and upon this projected jour- 95 nal portion a slidable sleeve 40 is mounted, said sleeve being provided at its outer end with a crank-handle 41 and at its inner end with a lateral ratchet finger or projection 42 for coöperation with an arcuate rack 43, ap- 100 plied to the adjacent side of the stove. Within the sleeve there is provided a suitable spring 44, which bears in opposite directions against the sleeve and the journal, so as to yieldably hold the sleeve at its inward limit 105 with the finger or projection 42 in yieldable engagement with the rack, so that by manipulation of the crank-handle the damper may be readily adjusted and the ratchet-finger will work over the rack and finally lock 110 the damper at the completion of the adjustment thereof; also, the damper may thereby be held at a plurality of adjustable positions, so as to vary the size of the opening between the fire-box and the two flues. 115

What I claim is—

1. In a cooking-stove, the combination of a lower heating-oven, a cooking-oven located above the same and having a flue surrounding 120 the top, bottom and opposite ends of the cooking-oven, the top of the heating-oven and the bottom of the cooking-oven forming the walls of the flue portion between the two ovens, and the bottom of the lower oven being formed by the bottom of the stove, a fire-box projected in 125 front of the heating-oven and having its top located below the main top of the stove and above the top of the lower oven to form a seat or support for a water-tank, the back of the fire-box being terminated substantially at the 130 top of the lower oven, whereby a direct communication is had between the fire-box and

the flue or space between the two ovens, and a vertically-swinging damper pivoted substantially at the intersection of the inner edges of the front and bottom flue portions and capable of swinging vertically toward the fire-box to open and close the lower end of the vertical flue and the front end of the horizontal flue, whereby either of these flues may be wholly closed.

2. In a stove, the combination with a fire-box, of an endwise-removable grate having legs, and an ash-pan inserted through an opening in the front of the fire-box and lying snugly between the legs to prevent accidental displacement of the grate.

3. In a stove, the combination with a fire-box having draft-openings formed in the front

thereof, and a door at one end, of a grate insertible through the door and having draft-openings corresponding to the similar openings in the fire-box, and an ash-pan removably inserted through an opening in the front of the fire-box and having its outer end normally projected externally of the fire-box, and a slidable damper mounted upon the projected portion of the ash-pan.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. NULL.

Witnesses:

JAMES W. JOHNSON,
JAMES A. MARTIN.