

No. 765,872.

PATENTED JULY 26, 1904.

E. A. ANDERSON.
OIL STOVE.

APPLICATION FILED FEB. 24, 1904.

NO MODEL.

Fig. 1.

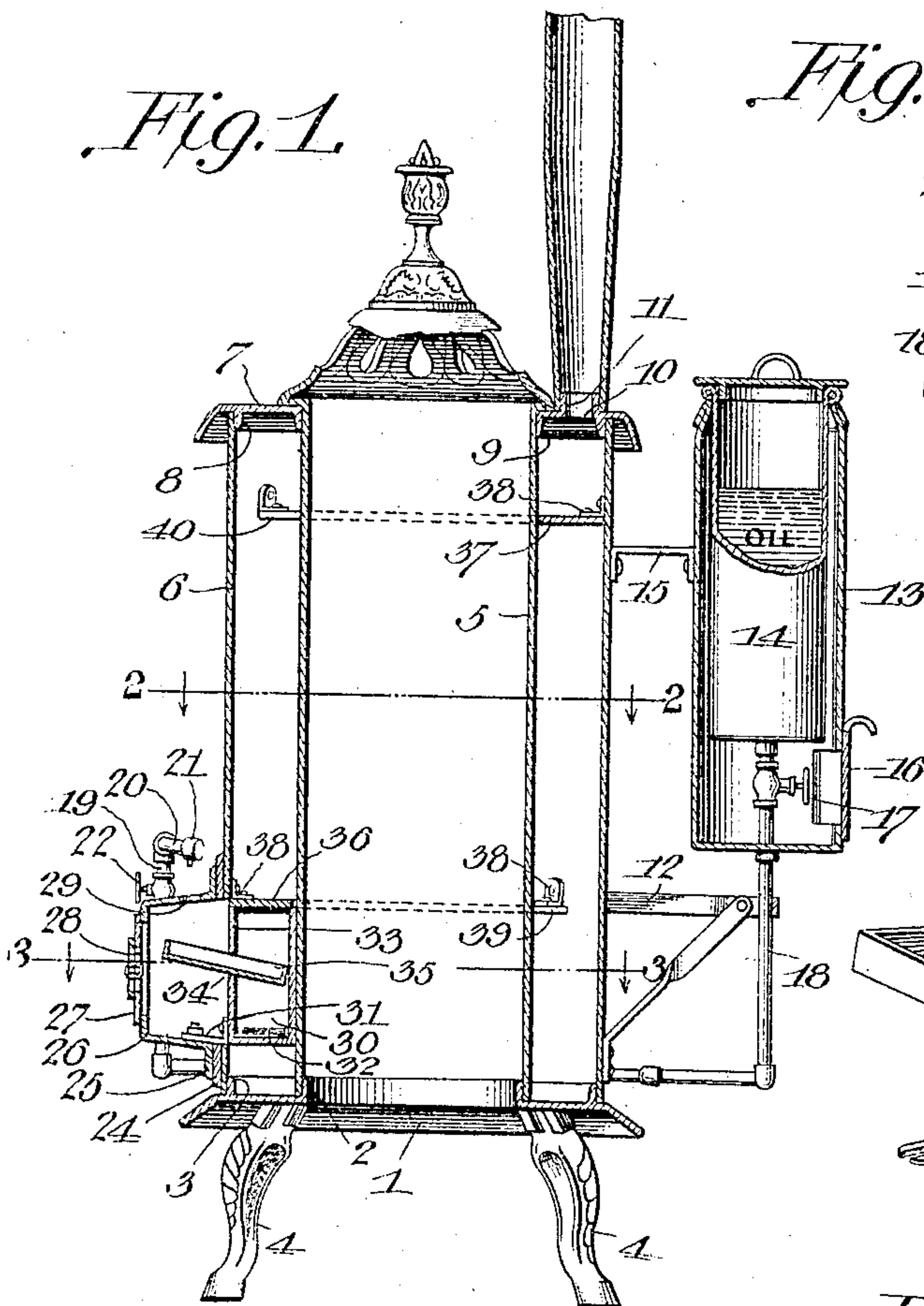


Fig. 4.

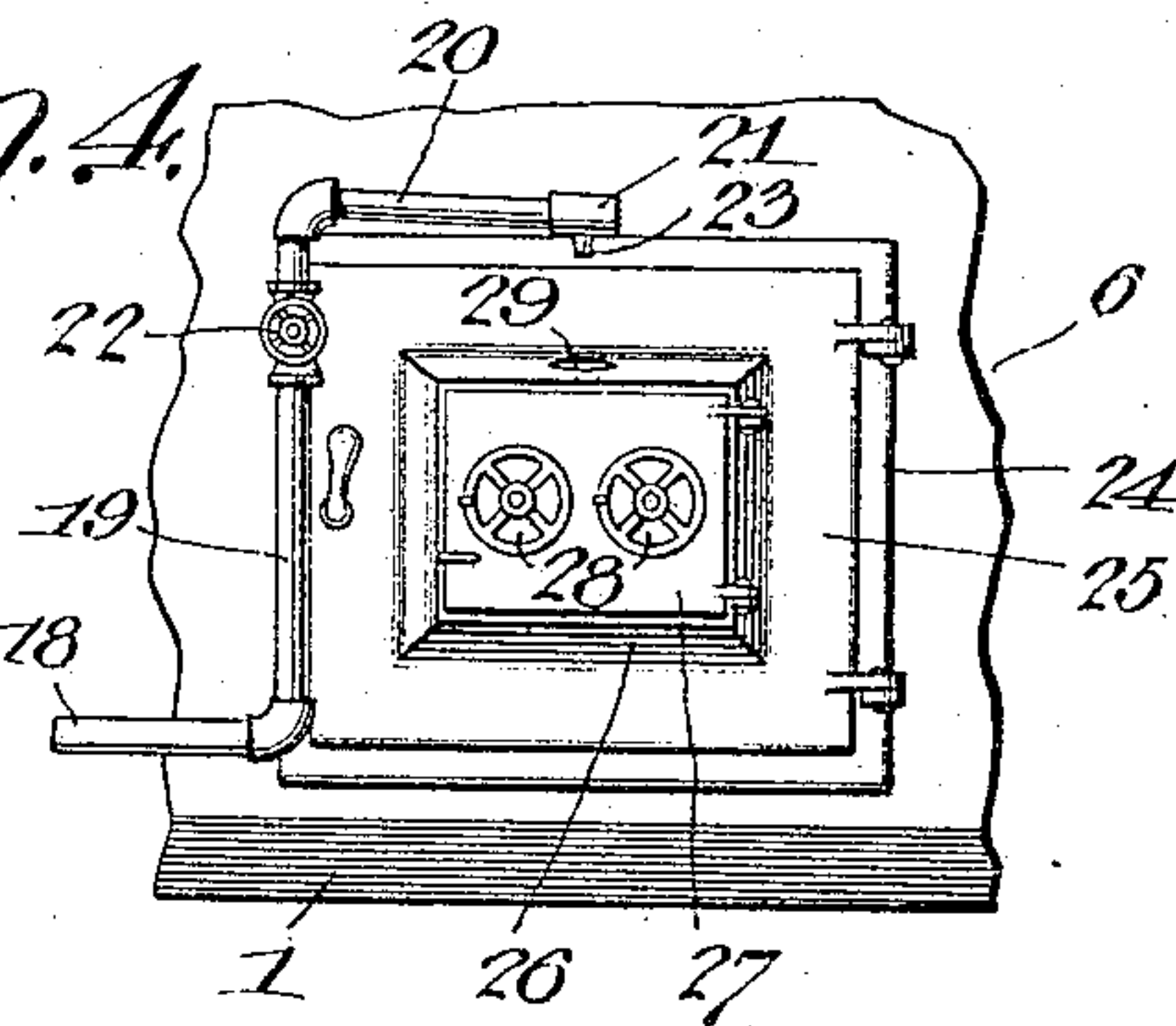


Fig. 5.

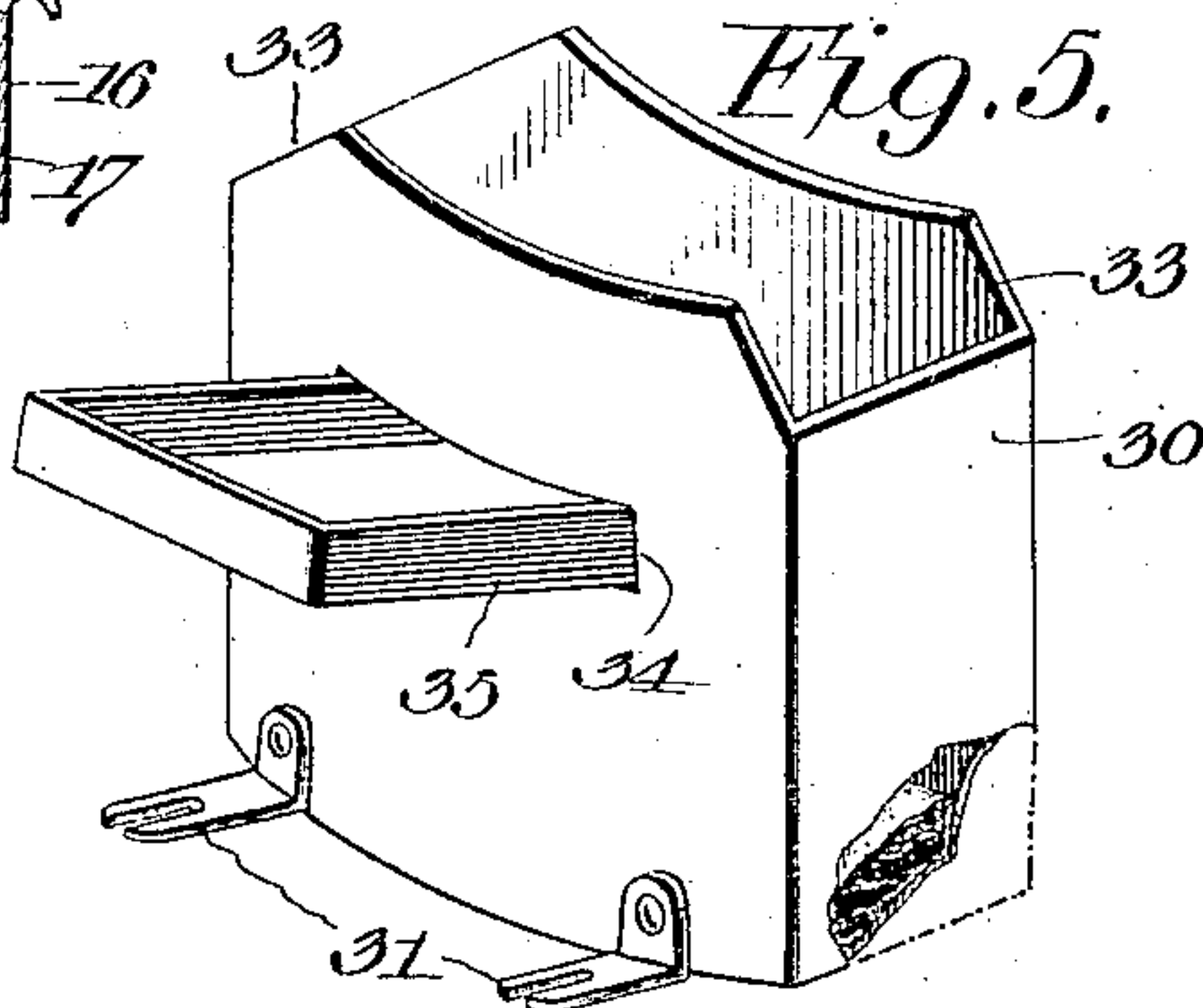


Fig. 3.

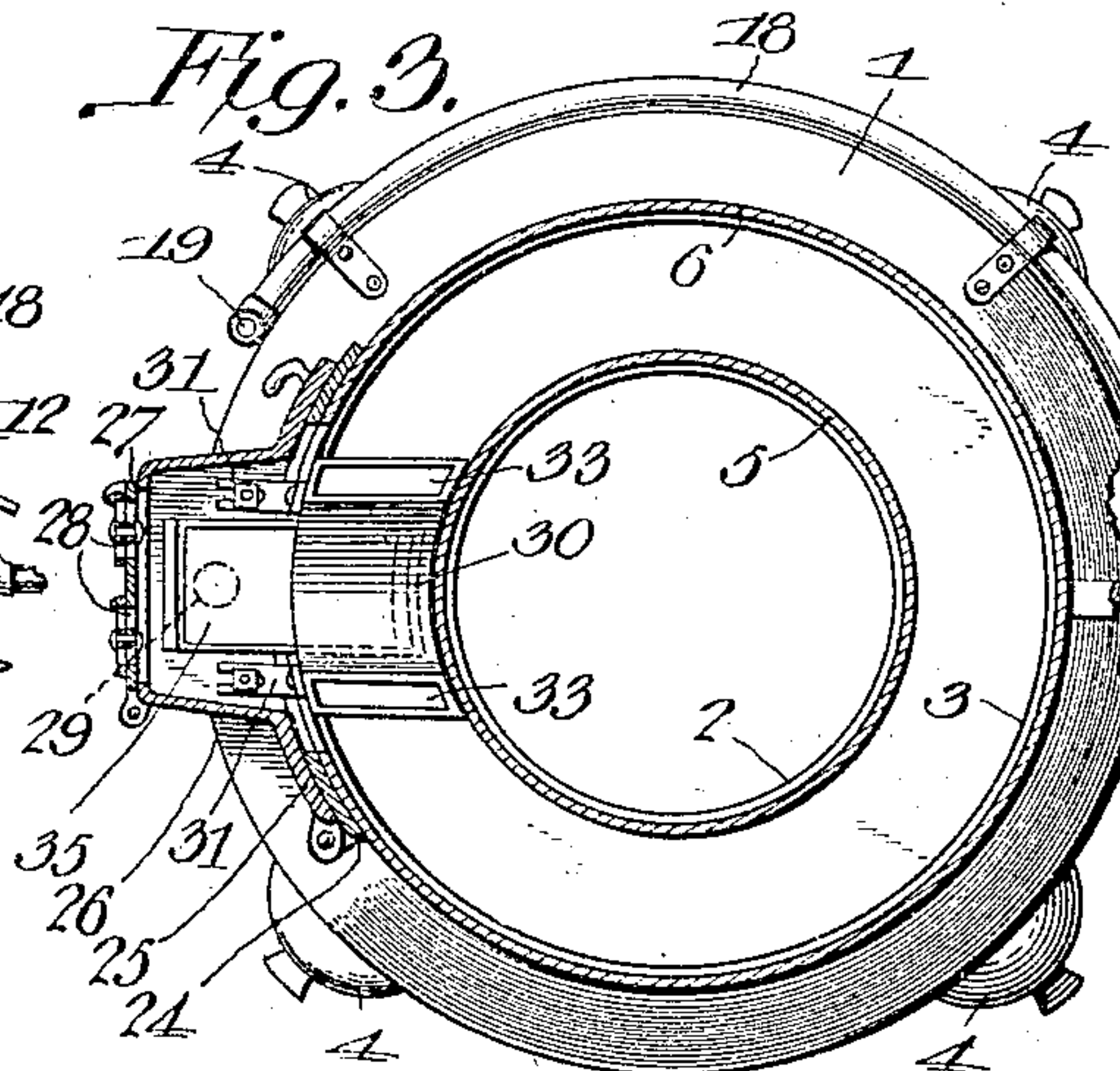
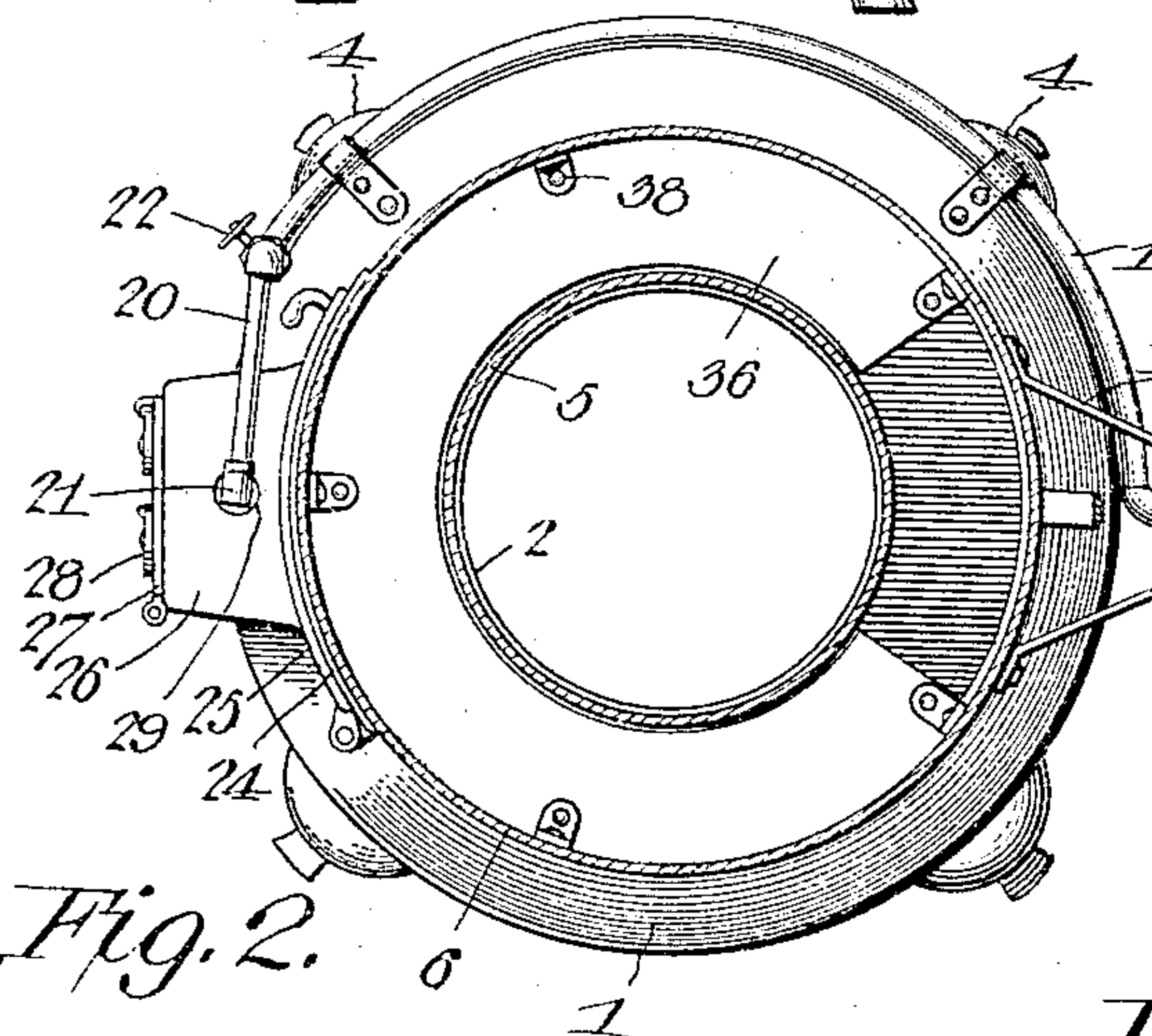


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 765,872, dated July 26, 1904.

Application filed February 24, 1904. Serial No. 195,068. (No model.)

To all whom it may concern:

Be it known that I, ERIC A. ANDERSON, a citizen of the United States, residing at Greenville, in the county of Bond and State of Illinois, have invented a new and useful Oil-Stove, of which the following is a specification.

This invention relates to oil-stoves, and it is an improvement on the oil-stove for which Letters Patent of the United States No. 737,993 were granted to myself on the 1st day of September, 1903.

My present invention has for its object to simplify and improve the general construction of a stove of this class; and with these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will hereinafter be fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view. Fig. 2 is a horizontal sectional view taken on the line 2 2 in Fig. 1. Fig. 3 is a horizontal sectional view taken on the line 3 3 in Fig. 1. Fig. 4 is a front elevation of the lower part of the stove. Fig. 5 is a perspective detail view of the fire-box.

Corresponding parts in the several figures are indicated by similar numerals of reference.

The base 1 of my improved stove consists of an annular casting provided at its inner edge with an upstanding flange 2 and provided intermediate its inner and outer edges with an upstanding flange 3. The base is supported upon legs 4.

The body of the stove is composed of an inner drum 5 and an outer drum 6. The latter is bolted or otherwise suitably secured to the annular flange 3 of the base, and it supports at its upper end an annular cap 7, made, preferably, of cast-iron and having a flange 8, to which the drum 6 is bolted or otherwise secured. The cap 7 is provided at its inner edge with a depending flange 9, and the inner drum 5 is supported at its lower end upon the base 1 interiorly of the flange 2, while the upper end of said drum extends through the

opening in the cap 7 and abuts exteriorly upon the flange 9, with which it forms a tight joint. The cap 7 is provided with an opening 10, surrounded by a collar 11 for the attachment of a stovepipe, whereby the products of combustion may be conveyed to the chimney.

The back of the stove is provided with a bracket 12, supporting a casing 13, which contains a tank 14 for the liquid hydrocarbon which is to be consumed in the stove. The casing 13 is preferably connected with the stove-body by means of a brace 15, and it has near its lower end a door 16, through which access may be had to a valve 17 in the pipe 18, which leads from the bottom of the tank to the burner. Said pipe 18 after passing through the bottom of the casing 13 is bent around the body of the stove, being supported by means of suitable brackets at a distance of several inches from the latter, to the front end of the stove, where it is extended upwardly, as shown at 19, and thence laterally, as at 20, terminating in a cap 21. The upright portion 19 of the pipe is equipped with a valve 22 for the purpose of regulating the flow of oil through an opening 23 in the cap 21.

The front side of the outer stove-drum 6 is provided at its lower end with an opening surrounded by a cast-iron frame 24, with which a door 25 is hingedly connected. The door 25 has an outwardly-extending pouch 26, equipped with a separate door 27, having draft-openings 28. The upper side of the pouch has an opening 29, which is disposed directly below the oil-escape opening 22 in the cap 21 of the oil-pipe.

The stove-door 25, in conjunction with the pouch 26, formed upon the latter, supports a fire-box 30, which is connected therewith by clips or clamping devices 31, so as to be swung outward with the stove-door 25 when the latter is opened. The fire-box, which is composed preferably of cast-iron, has a bottom lining 32, of asbestos or other absorbent refractory material, and is provided at the ends thereof with obliquely-cut-off corners 33, which when the door is closed and the fire-box is in its operative position between the door 25 and the inner drum 5 communicate

with the annular space between the inner and outer drums constituting the body of the stove. The fire-box, which may be of any suitable dimensions, is preferably curved to the contour of said annular space. The front side of the fire-box is provided with an opening 34, in which is fitted an inclined pan 35, the outer end of which is extended below the opening 29 in the pouch 26, so as to receive the discharge from the oil-pipe.

In the annular space between the drums 5 and 6 are disposed two retarding-plates 36 and 37, each of which is provided with lugs 38 for the passage of bolts whereby it is connected with the outer drum. The inner edges of the said retarding-plates abut loosely upon the inner drum. These retarding-plates extend almost entirely around the annular space, the lower plate 36 being provided with an opening 39 at the rear portion thereof, while the upper plate 37 has a slight opening 40 at the front end thereof. The products of combustion issuing from the fire-box will thus be compelled by the lower retarding-plate to pass in the direction of the rear part of the stove, thence upwardly through the opening 39, being thence deflected by the retarding-plate 37 to the front part of the stove, thence upwardly through the opening 40 and to the rear part part of the stove, where they escape through the opening 10 to the exit-flue.

The operation of this device will be readily understood. The valve 17, which controls the escape of the fluid from the tank or container 14, is normally open except when the stove is not intended to be used for a considerable period of time, when it may be closed in order to positively prevent leakage. The valve 22 controls the flow of the oil through the opening 23 in the cap 21, whence it drips through the opening 29 and into the generator-pan 35, which latter being placed in an inclined or tilted position, as shown, causes the oil to overflow into the fire-box 30, where it is ignited. The generator-pan 35 soon becomes intensely heated and the oil dropping thereon will instantly become converted into vapor, which commingling with the air entering through the draft-openings will form a highly-combustible gas, which being ignited will burn with an intense degree of heat. The supply of fuel will be readily regulated by the valve 22, and means may be provided to regulate the air-supply when desired. By opening the door 27 access may be had to the generator-pan, and by opening the door 25 the fire-box will be swung outwardly and may be readily detached in order to clean the same or for other purposes.

Having thus described my invention, I claim—

1. In an oil-stove, a pair of drums connected to form an annular space, a door connected with the outer drum and having an outward-extending pouch, a fire-box supported detachably

upon the latter and extending into the space between the drums, and an auxiliary door for the outer end of the pouch.

2. In an oil-stove, a body comprising an inner and an outer drum, a base and a cap-piece connecting said drum to form an annular space, a door connected with the outer drum, and a fire-box connected detachably with said door and extending into the space between the drums, said fire-box being provided with flame-exits at the ends thereof.

3. In an oil-stove, a casing composed of an inner and an outer drum connected to form an annular space, a door upon the front side of the outer drum near its lower end, a fire-box connected with said door and extending into the annular space between the drums, said fire-box having flame-exits at the ends thereof, a retarding-plate disposed in the annular space above the fire-box and having an opening at the rear portion thereof, a retarding-plate near the upper end of the annular space having an opening at the front part thereof, and a cap-plate constituting the connecting means for the upper ends of the drums and having an escape-opening at the rear part thereof.

4. In an oil-stove, a casing composed of drums connected to form an annular space, a door for the outer drum, a fire-box supported by said door, a pouch extending from said door and having an auxiliary door and provided with an opening in its upper side, a generator-pan disposed in an inclined position below said opening and extending into the fire-box through an opening in the wall of the latter, and means for supplying liquid hydrocarbon to said generator-pan through the opening in the pouch.

5. In an oil-stove, a casing having an annular combustion-chamber, a door for said combustion-chamber, a fire-box supported by said door and having an opening in the wall thereof, a generator-pan supported in an inclined position in said opening, means for supplying liquid hydrocarbon to said opening, and retarding-plates suitably disposed in the annular combustion-chamber.

6. In an oil-stove, a casing, an annular combustion-chamber, comprising an outer drum, an inner drum, a base and a cap-piece provided with flanges, means for connecting the outer drum with the outer flanges of said base and cap-piece, and retarding-plates connected with said outer drum, said inner drum being supported upon the base interiorly of the inner flange and abutting exteriorly upon the inner flange of the cap-piece.

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

ERIC A. ANDERSON.

Witnesses:

LAURA TRINDLE,
RUC HAYDEN.