

No. 612,887.

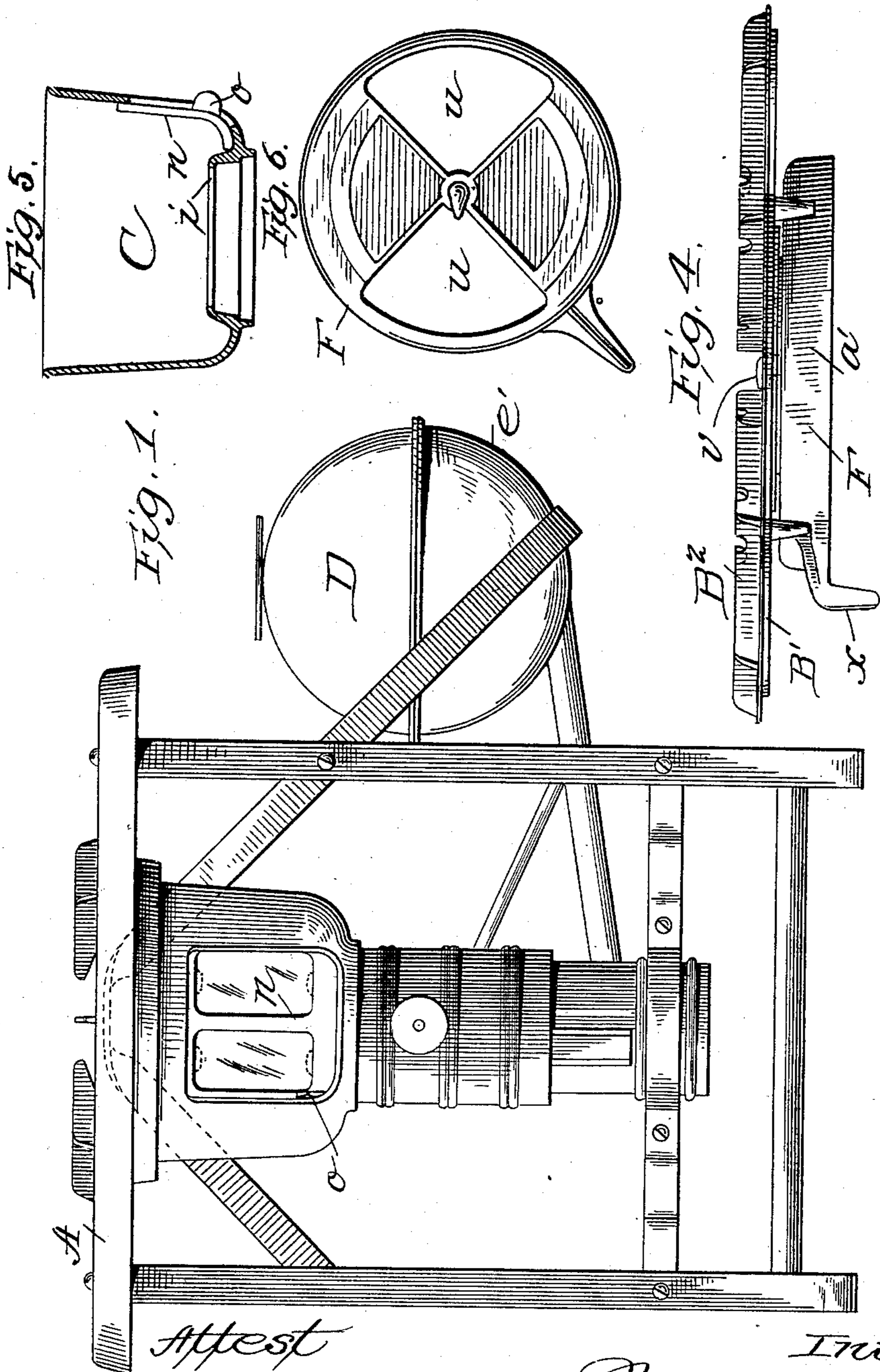
Patented Oct. 25, 1898.

W. H. WILDER.  
OIL STOVE.

(No Model.)

(Application filed July 22, 1895.)

2 Sheets—Sheet 1.



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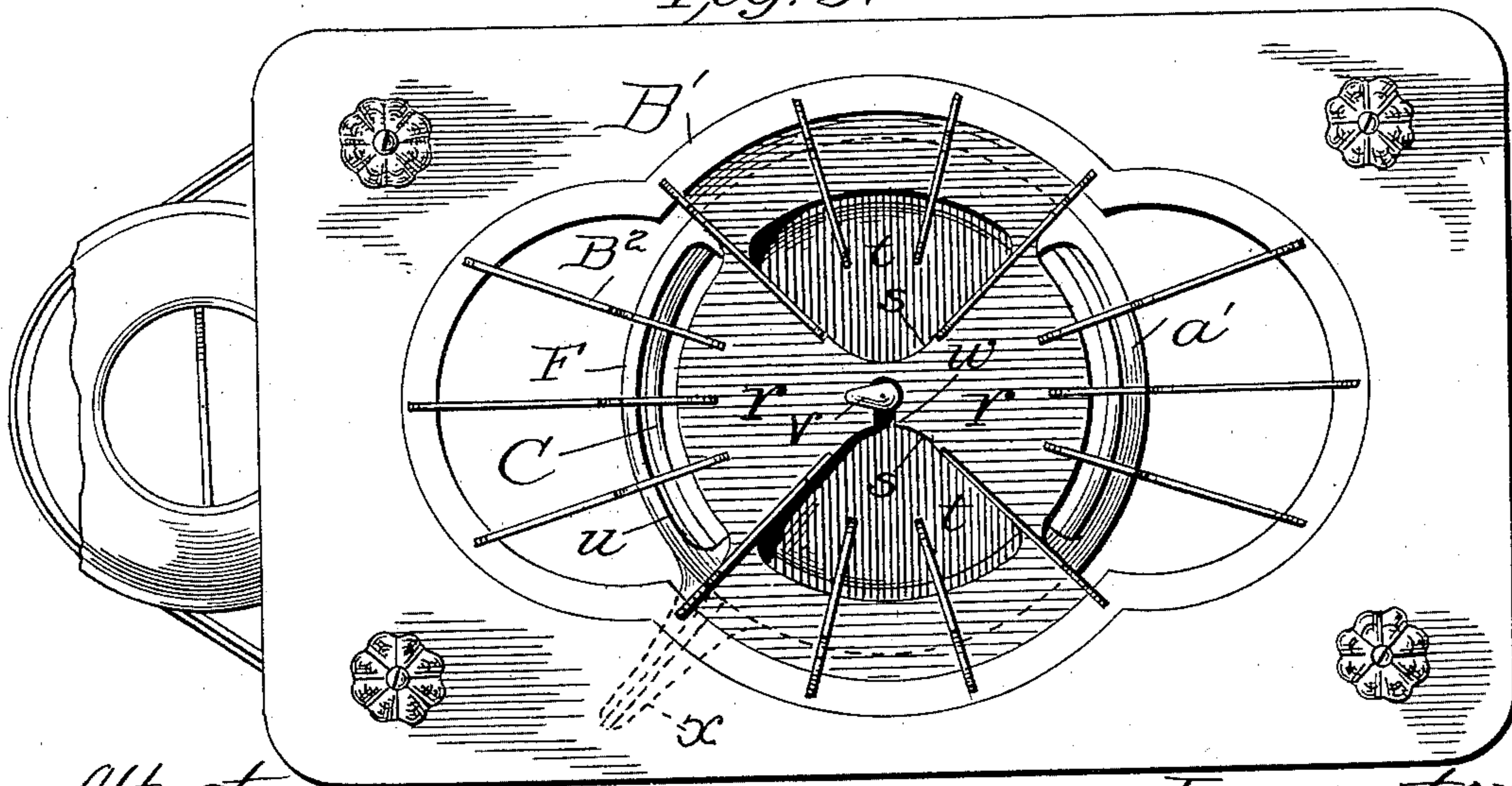
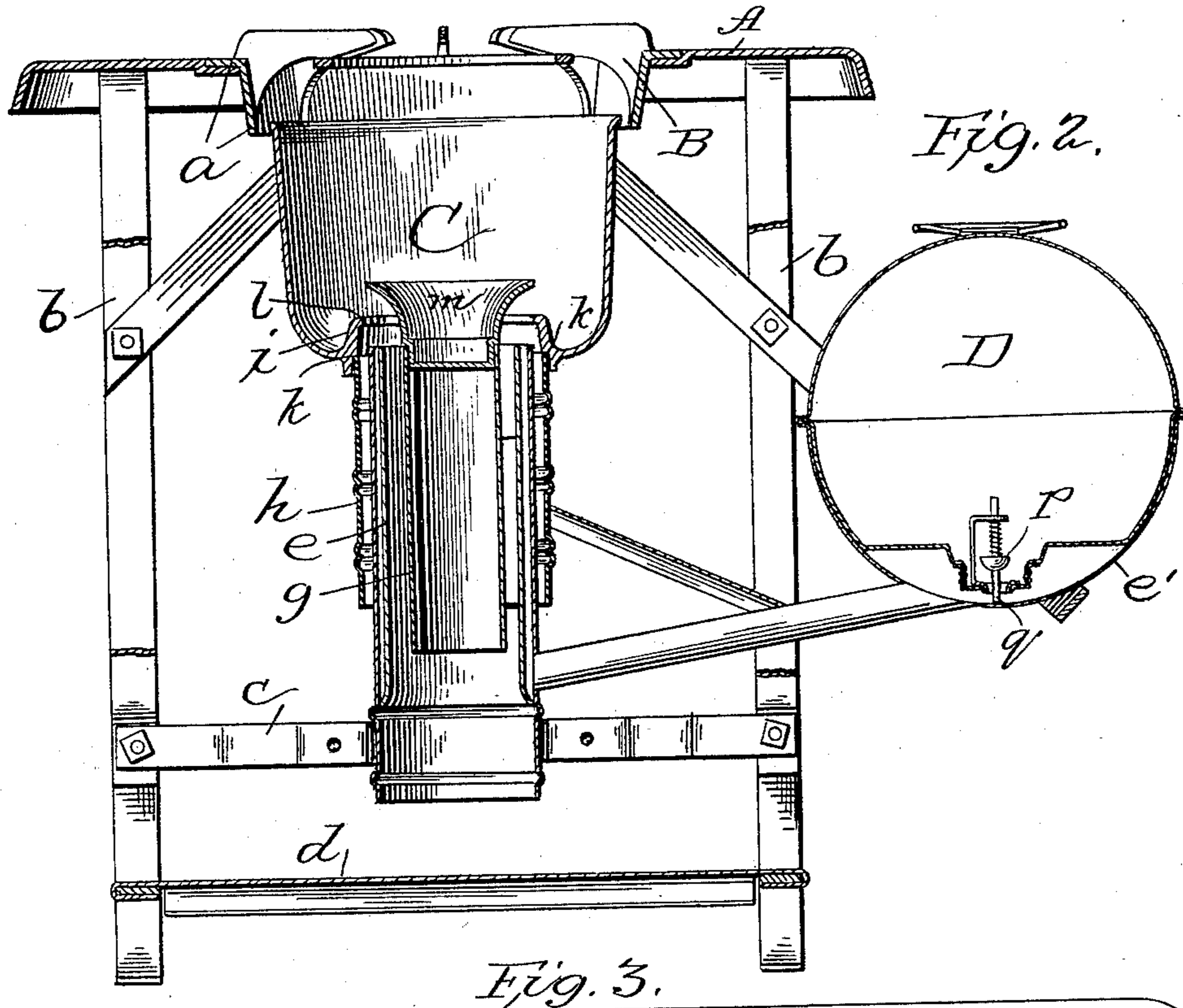
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# UNITED STATES PATENT OFFICE.

WILLIAM H. WILDER, OF NORTHAMPTON, MASSACHUSETTS.

## OIL-STOVE.

SPECIFICATION forming part of Letters Patent No. 612,887, dated October 25, 1898.

Application filed July 22, 1895. Serial No. 556,777. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. WILDER, a citizen of the United States, residing at Northampton, (Florence,) in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Oil-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to oil-stoves of the class in which a wick is used located within a wick-tube to which oil is fed from a reservoir, and in the present application I have included substantially the form of stove shown and described in an application filed by me on the 26th day of March, 1895, Serial No. 543,268; but in the present case the construction of some of the parts is modified and the details are more particularly illustrated and described and specifically claimed.

As in the application referred to the present invention includes a burner comprising a wick-tube and a combustion-chamber with a grate above the same and a reservoir located at a distance from the burner and in connection therewith through a supply-pipe, the reservoir in the present case being a freely-removable one for filling purposes and acting automatically to feed the oil to the wick.

In the accompanying drawings, Figure 1 shows a front elevation of the simplest form of stove having a single burner and with a reservoir of a spherical or globular form. Fig. 2 is a sectional view centrally through the stove and burner, showing the relative location of the various parts. Fig. 3 shows a plan view of a larger size of stove, varying as to Fig. 1 in respect to its proportions and in the construction of the grate and its attachments. Fig. 4 is a side elevation of the grate. Fig. 5 is a detail of the door. Fig. 6 is a detail view of the controller.

Referring to Fig. 1 and the form of stove illustrated thereby, the top plate is shown at A, having a central opening which receives a grate B, which has a depending circular flange *a* extending downward through the opening in the top plate. The top plate is supported by end frames *b* of flat metal straps, suitably braced together and connected at the bottom by braces *c*, which encircle the lower part of

the burner to steady and support it. A plate *d* extends across the bottom and serves to catch any dripping should there be any.

The stove is what is known as a "central-draft," and the burner is composed of a lower part which I may call the "wick-tubes," and another part which I may call the "combustion-chamber." The lower part comprises a double tube, forming the wick-tube proper and indicated at *e*, between which the wick is located. Within the tube *e* is a central tube with a passage between it and the wick-tube and a passage through the center, this tube being indicated at *g*, and secured to the wick-tube by suitable supports. A skirt or ring *h* encircles the wick-tube, and this skirt or ring is connected to the wick-tube by suitable supports and covers the wick-raising mechanism, which in this case is located upon the outside of the wick-tube. This ring or skirt serves as a support for the combustion-chamber, which, as shown at C, is a single casting, cylindrical for the greater part of its extent, but rounded at its lower end, and rising from the opening in the bottom thereof is a cone *i*, the interior of which is made of two diameters, forming a shoulder *k* a little less than midway thereof. The larger and lower part of the cone fits over the skirt or ring *h*, the upper edge of which fits snugly against the shoulder *k*. The cone *i* extends upwardly within the interior of the combustion-chamber, being provided with a slight overhanging flange or lip *l* at the upper end, and this cone serves as the outer deflector for the flame. An inner deflector is provided at *m*, having a base fitting the central tube *g*, with its upper part flaring outwardly and overhanging the wick-tube and adapted to direct the flame outwardly above the outer deflector in a horizontal direction.

The combustion-chamber C has an opening in its periphery, and this is closed by a door which is in the form of a slide, as shown at *n*, this slide being curved in cross-section corresponding to the curve of the chamber and having its lower end also curved to conform to the curved bottom of the chamber. The slide moves circumferentially, its lower end bearing against the cone *i*, and this, with its shape, keeps it in place without any other fas-

tening means. The slide is provided with openings covered by mica and has a projection *o* for moving it back and forth.

The reservoir is shown at D and is removable, having a discharge-opening in its bottom closed by a valve *p*, the stem of which *q* engages the bottom of the oil-chamber *e'*, into which the reservoir fits.

In Fig. 3 the stove illustrated only differs from that shown in Fig. 1 in the proportions, being of a larger size; but the form of grate shown in this and the succeeding figures differs quite materially, the grate proper shown at B' having laterally-extending wings B<sup>2</sup>, the grate fitting an opening in the stove-top corresponding to its outline. The center of the grate is provided with solid sections *r* and adjacent openings *s*. Detachably secured to the central portion of the grate is a controller F, which is provided with solid portions and openings *t u*, corresponding to like portions *r s* of the grate, and the controller is also provided with a depending flange *a'*, which corresponds to the flange *a* of the simple form of grate shown in Fig. 1, and in the present case this flange depends and fills in the space between the top of the stove and upper edge of the combustion-chamber. The controller is held to the grate by means of a lug *v*, having a turned-over end which fits over the edge of a central opening in the grate, which is adapted to receive the neck of the lug through a recess *w*. The connection permits the controller to be readily turned through a handle *x*, and the object of the controller is to permit the heat to ascend directly through the

openings *s* in the grate or to divert the heat to the side portions of the grate through the openings *u* in the controller by closing the openings *s* by turning the controller to bring the solid portions *t* thereof in line with the said openings.

What I claim is—

1. In an oil-stove, the combination with a burner and reservoir, of a combustion-chamber, an opening in the wall thereof and a movable mica-carrying slide closing said opening, the supporting-points of said slide being out of a vertical line with the body thereof whereby it is automatically seated by gravity, substantially as described.

2. In an oil-stove, a combustion-chamber, a platform and a controller, said platform and controller having central and side openings corresponding to each other, the openings having such relation to each other that one set is opened while the other is closed, substantially as described.

3. In an oil-stove, a grate having a central portion and lateral wings combined with a controller pivoted to the central portion, said controller and grate having corresponding openings and imperforate sections and adapted to be operated to deflect the heat to lateral wings, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. WILDER.

Witnesses:

H. M. GATES,  
E. A. THISSELL.