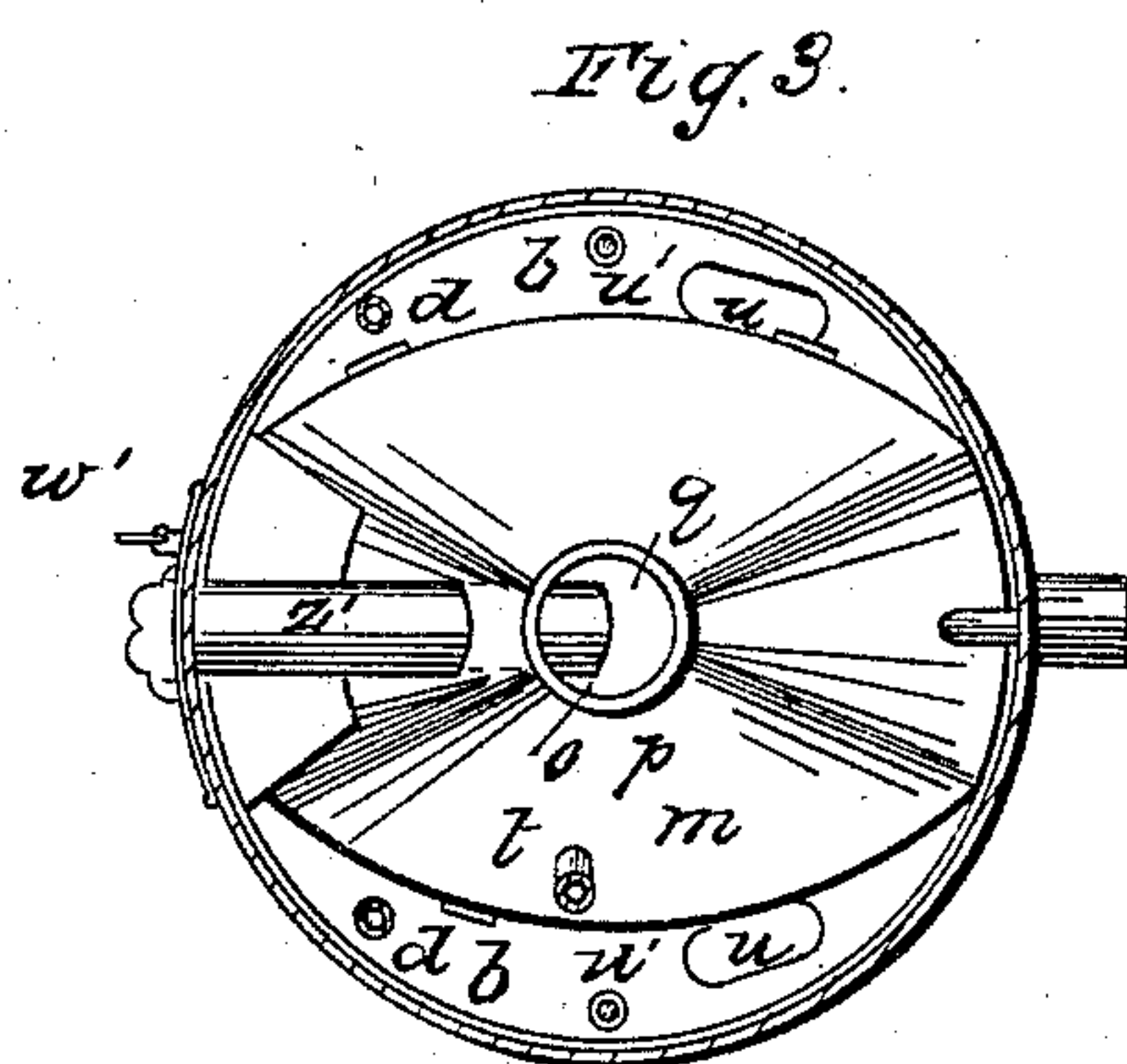
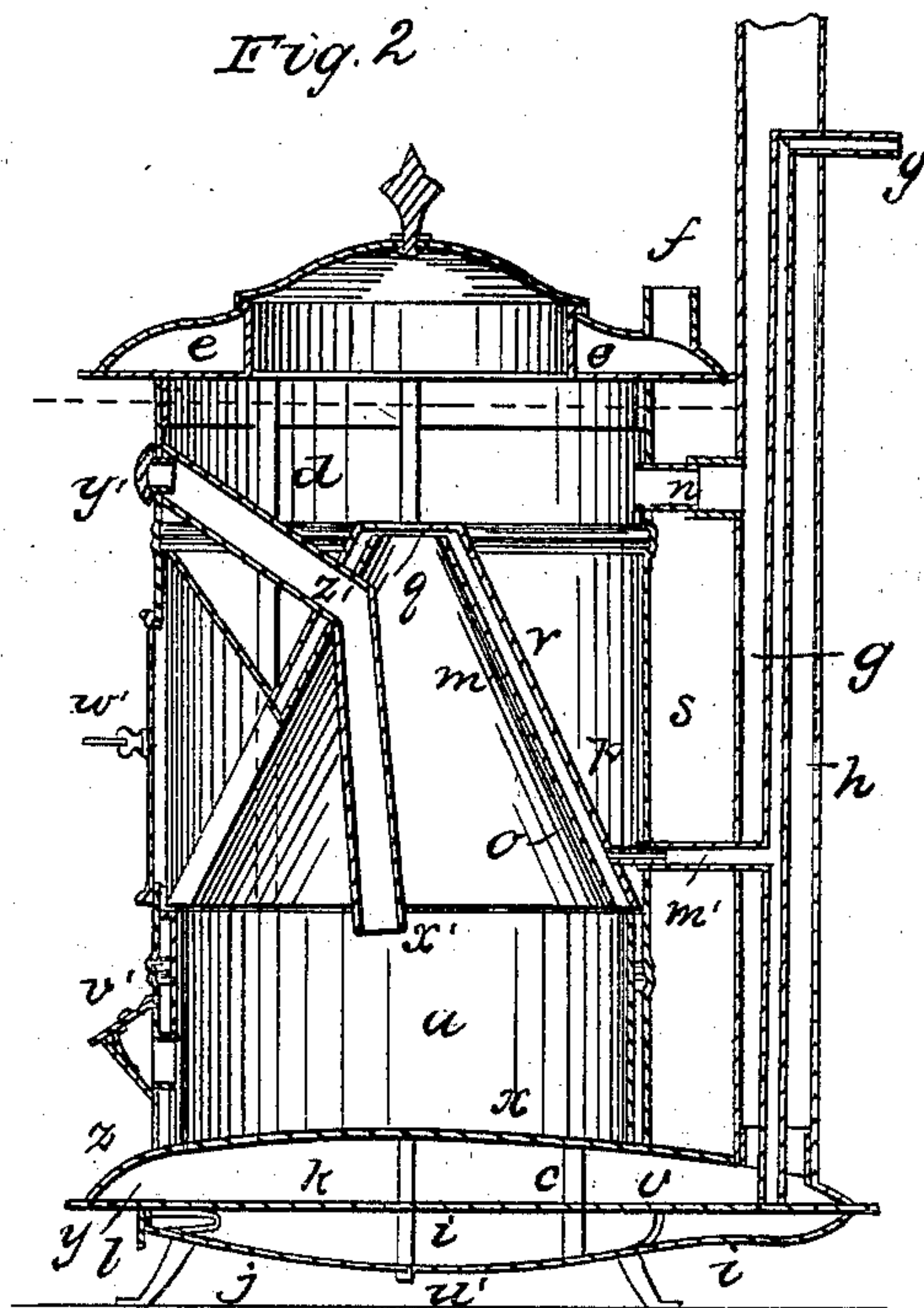
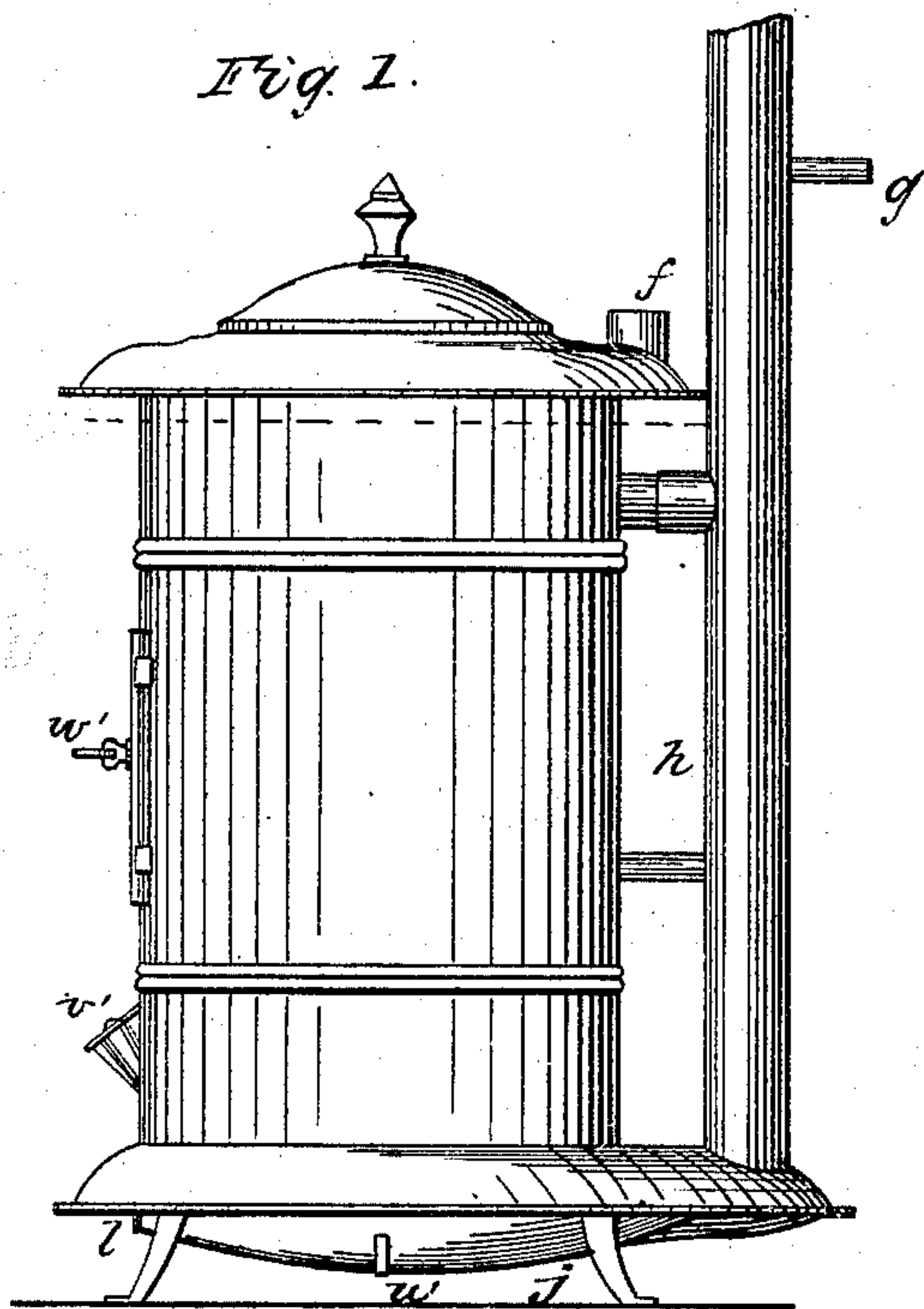


H. J. FRIZELLE.

Heating Stove.

No. 98,580.

Patented Jan. 4, 1870.



Witnesses
Robert Everett
J. Smith

Inventor
H. J. Frizelle
by Atty. Robt. P. Everett

United States Patent Office.

H. J. FRIZELLE, OF EAST SAGINAW, MICHIGAN.

Letters Patent No. 98,580, dated January 4, 1870.

COAL-STOVE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, H. J. FRIZELLE, of East Saginaw, in the State of Michigan, have invented a certain new and useful Improvements on Stoves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the marks and letters thereon, which said drawing forms part of this specification, and represents a stove constructed under my invention—

Figure 1, thereof, being a view in elevation;

Figure 2, a view by vertical section on the dotted line of fig. 1; and

Figure 3, a view by transverse section on the same line of fig. 1.

In each of these figures, where like parts are shown, like marks and letters are used to indicate the parts.

My invention relates to that class of stoves specially intended for burning soft, or what are commonly called bituminous coals, and in addition to its provisions for admitting air, for the more perfect combustion and consumption of the coal, and the gaseous products thereof, has other and ample provisions for heating air to be passed into the room or elsewhere, as also for ventilating the room or apartment.

The fire-box or fuel-cylinder *a*, of this stove, is nearly or entirely surrounded by an air-chamber, *b*, into which air is fed by the pipe *c*, and from which the heated air is conducted by a pipe, *d*, into an air-chamber, *e*, surrounding the upper part of the stove, the heated air having its exit into the room from the chamber *e*, through the pipe or outlet *f*.

The form of the chamber *e* may be as here shown, or of such other form as may be desirable, the better to adapt it to the general form of the stove.

Heated air will also be passed into the room by the pipe *g*, within the smoke-pipe *h*, the air reaching the lower end of the pipe *g* from an air-chamber, *i*, formed by and between the lower bottom plate *j* and a plate, *k*, above it, the admission of air to the chamber *i* being regulated by a damper or valve, *l*.

The lower plate *j*, in addition to its use in forming the air-chamber, serves to protect the carpet, or whatever may be underneath it, from the heat of the burning fuel in the cylinder.

From the pipe *g*, air may be passed into the conveyer or feeder *m*, by a pipe, *m'*, suitable dampers being fitted in this pipe, and in the direct-draught pipe *n*, for regulating the feeding and exit of the air and smoke.

The conveyer *m* is formed of two plates, *o* and *p*, is of conical shape, the base resting on the upper edge of the fire-box or cylinder, and its apex reaching up toward the dome of the stove, the apex being truncated or bisected, so that an opening, *q*, exists for the passage of the products of combustion

The space *r* between the exterior of the conveyer and the shell *s* of the stove, is a consuming-chamber, into which the air passing through the conveyer finds its way through the pipe *t*.

The smoke, or unconsumed products of combustion, can pass out into the smoke-pipe *h* by the direct-draught pipe *n*, or through the diving-flues *u*, down into the smoke-flue *v*, and from thence into the lower end of the smoke-pipe.

The smoke-flue *v* is formed by plates *x* and *k*.

Holes *y* and *z*, in these plates, can have pipes connected to them, passing from them to any points of the room or apartment, for the purpose of conducting air into the smoke-flue, and thus serving to ventilate the room or apartment.

This stove may be used as a base-burner, a magazine, *z'*, being a part of the stove, the upper end thereof being covered by the cap *y'*, and the lower end *x'* terminating at the top of the fuel-cylinder.

Fuel may be fed into the cylinder through the hod-door *w'*, if desirable, and air to the fuel in the fire-box or cylinder may be admitted through the direct-draught register *v'*.

u' u' indicate the rods passing from the top to the bottom plates of the stove.

It will be noticed that whatever advantages in the consumption of the products of combustion are to be derived from the admixture of heated air with such products, will be realized in this stove, as the air passing through the conveyer *m* will be exposed to the two plates *o* and *p*, forming the sides of the conveyer.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The conveyer *m*, constructed, arranged, and operated as and in the manner and for the purposes substantially as herein recited.

2. The air-chamber *b*, on either side of the fire-box or fuel-cylinder of the stove, constructed and operated substantially as set forth.

3. The chambers or flues *v* and *i*, beneath the plate *x*, or bottom plate of the fire-box or fuel-cylinder, when constructed, arranged, and operated as described and shown.

4. The arrangement of the air-pipe *g* within the smoke-pipe, and as arranged in relation to the other parts of the stove, as set forth.

5. The chamber *e*, formed by the double top of the stove, in combination with the air-chamber *b*, on either side of the fire-box, as and for the purposes described.

This specification signed this 23d day of September, 1869.

H. J. FRIZELLE.

Witnesses:

S. F. FRIZELLE,
CHAS. H. SMITH.