

No. 651,859.

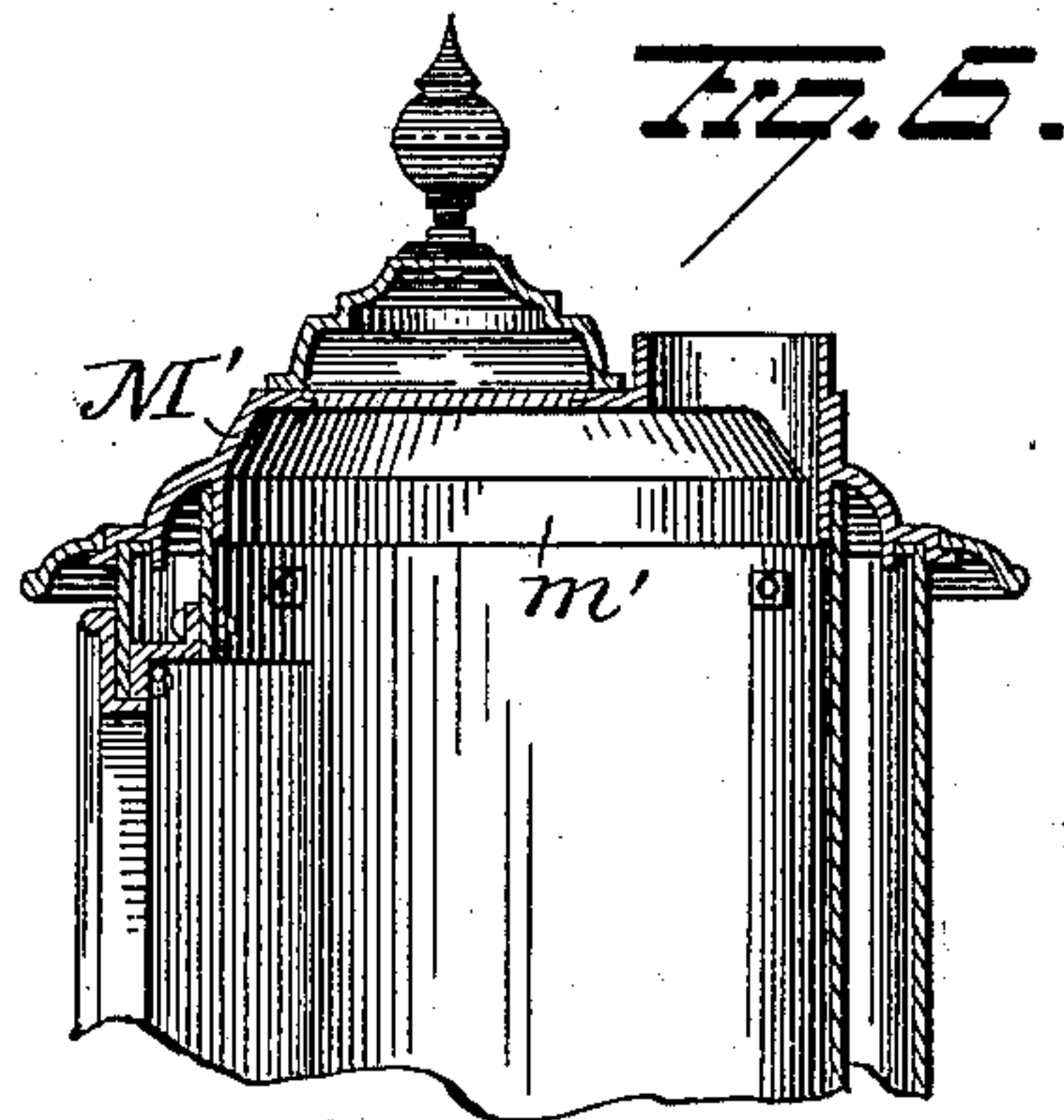
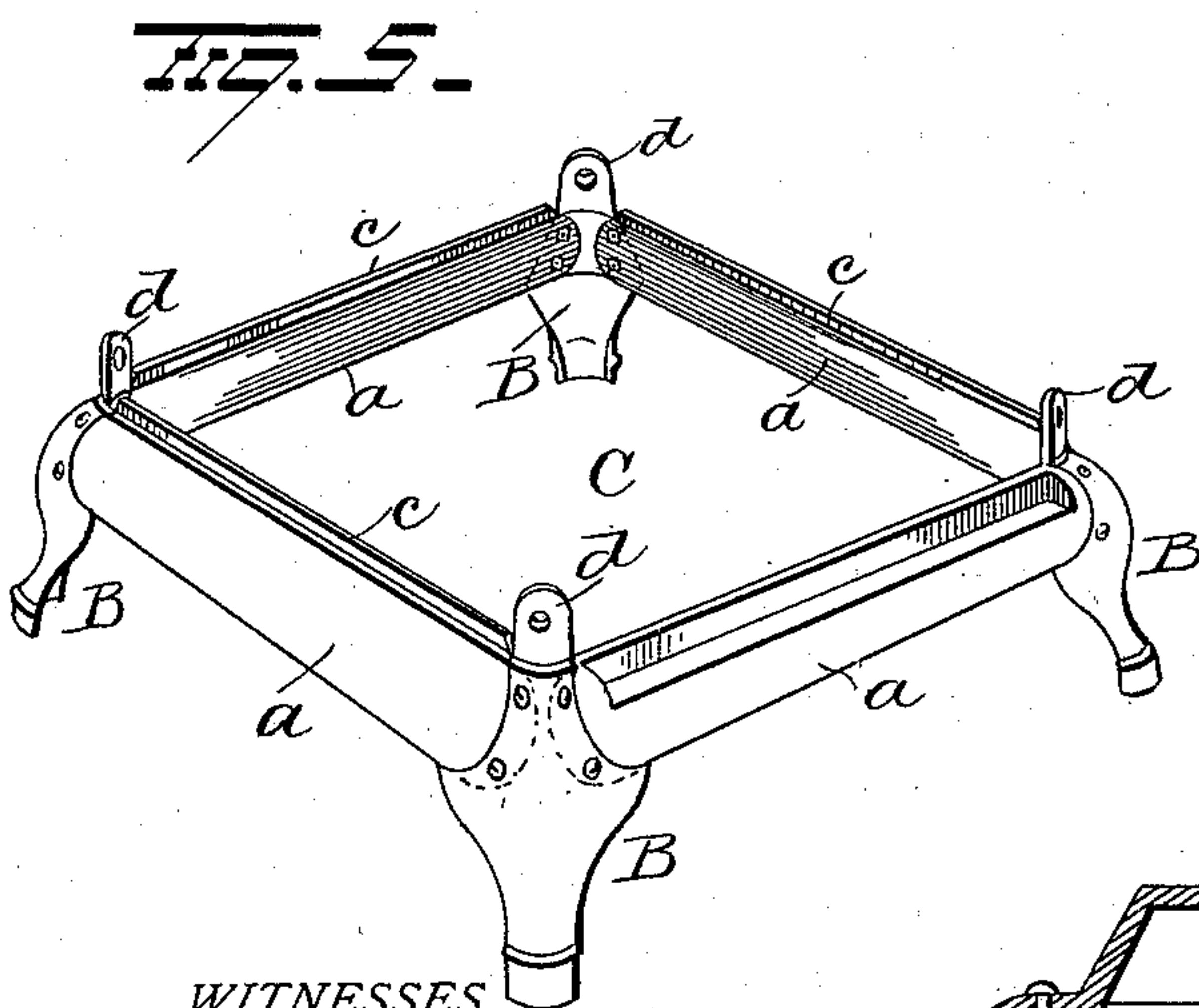
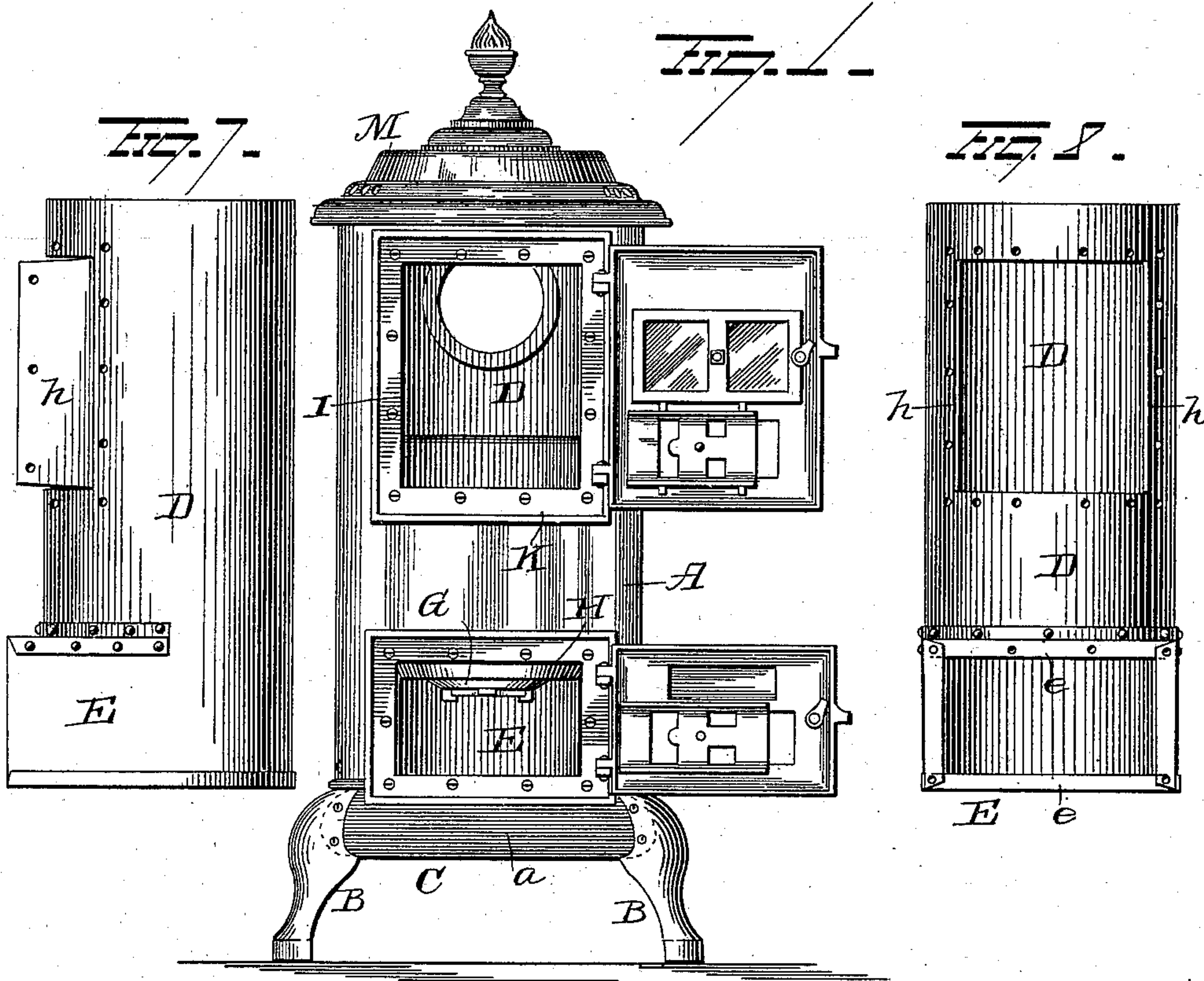
Patented June 19, 1900.

W. H. JAMES.
STOVE.

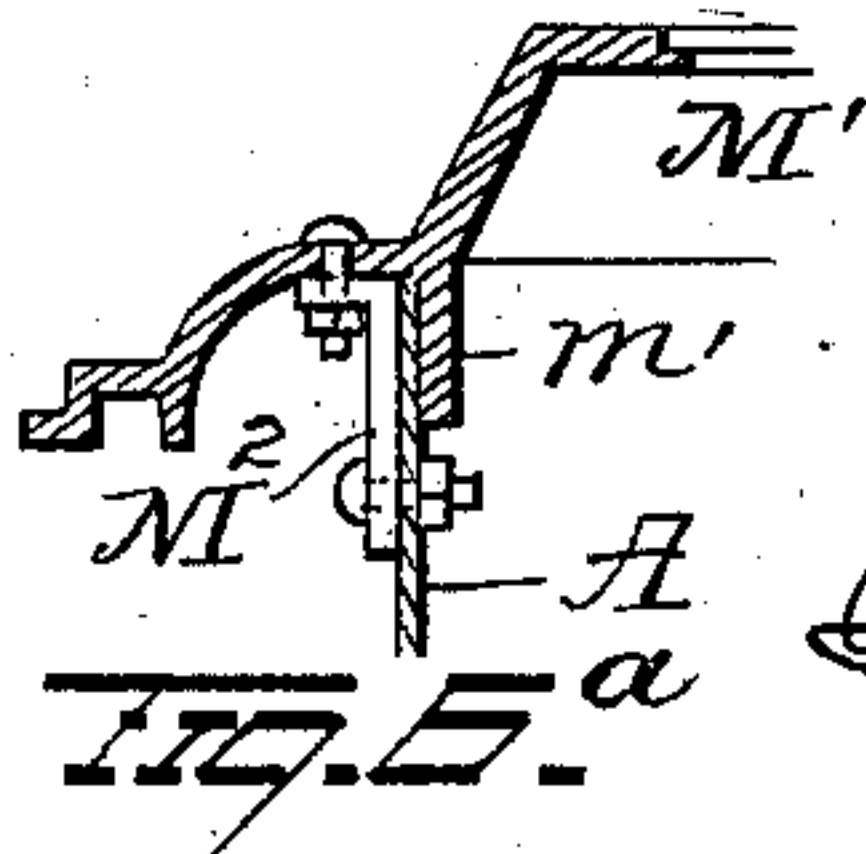
(Application filed Jan. 19, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
C. D. Nottingham
G. J. Downing



INVENTOR
W. H. James
By H. A. Seymour
Attorney

No. 651,859

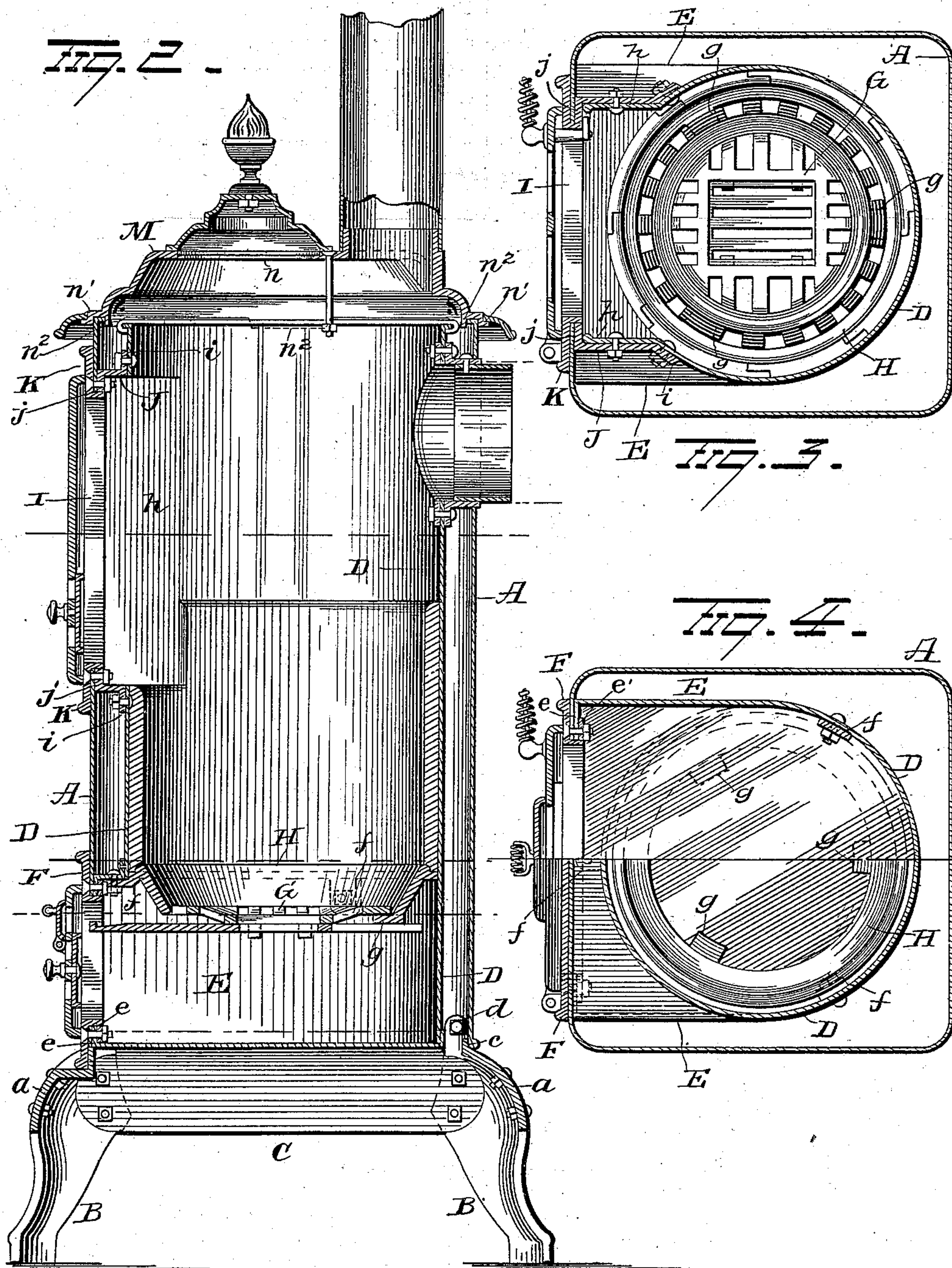
Patented June 19, 1900.

W. H. JAMES.
STOVE.

(Application filed Jan. 19, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES

E. J. Nottingham
G. F. Downing

INVENTOR

W. H. James
By A. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM HENRY JAMES, OF CINCINNATI, OHIO, ASSIGNOR TO ERNST H. HUENEFELD, OF SAME PLACE.

STOVE.

SPECIFICATION forming part of Letters Patent No. 651,859, dated June 19, 1900.

Application filed January 19, 1899. Serial No. 702,664. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY JAMES, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to an improvement in stoves, and is designed more particularly as an improvement on the stove covered by my Patent No. 600,248, granted to me March 8, 1898.

15 The patented stove above referred to was designed primarily for burning wood, and the improvements herein disclosed relate to features which especially adapt the stove for burning coal or coke.

20 My invention consists primarily in a heating-stove comprising an outer jacket, preferably angular in shape and open at the bottom, an inner drum of less diameter than the jacket, closed at its bottom and carrying a ring secured to the inner face thereof, the said ring supporting the lining and a grate, door-frames connecting the jacket and the drum, and a cover for the jacket having hot-air openings therein.

30 My invention further consists in a stove comprising a sheet-metal jacket angular in cross-section and open at its bottom, a sheet-metal drum of less diameter than the jacket, located within the latter and closed at its bottom, a box-frame connecting the jacket and drum, a sectional cast-metal frame secured to the base and supporting the legs, and a cast-metal top secured to the jacket and covering the upper end of the drum.

40 My invention further consists in certain details of construction and combinations of parts, as will be more fully described, and pointed out in the claims.

45 In the accompanying drawings, Figure 1 is a view in elevation of a stove embodying my invention. Fig. 2 is a view in longitudinal vertical section of same. Fig. 3 is a view in cross-section thereof through the fuel-door. Fig. 4 is a view in cross-section through the ash-door. Fig. 5 is a view of the base. Figs. 6 and 6^a are views in cross-section of the upper

portion of the stove, showing a modified form. Fig. 7 is a view in side elevation of the drum, and Fig. 8 is a side view thereof.

A represents an outer jacket, preferably 55 square in horizontal cross-section and rectangular longitudinally, open at its bottom and mounted on the legs B, which latter constitute a part of the sectional cast-metal base C. This base is composed of four sections *a*, secured at their adjacent ends to the legs B, 60 which latter overlap the ends of the sections *a* and are preferably ornamented so as to correspond with and form a continuation of the ornamentation of the sections *a*. The sections *a*, except the front section, have each an upwardly-projecting flange *c*, adapted to rest 65 within the lower end of the jacket A, and the legs B are each provided with an upwardly-projecting end *d*, adapted to rest against the rear face of the jacket at the four corners thereof, and each is secured to the jacket by a nut and bolt, as shown. The base thus constructed may be of any suitable shape and may be ornamented as desired and when in 75 position forms a support for the lower end of the sheet-metal jacket.

Located within the angular jacket A is the inner drum D. This drum is preferably cylindrical in shape, with a closed top and bottom; but the portion thereof forming the fire-pot proper and protected by the lining may be made tapering or funnel-shaped, if desired. In either event the lower end thereof is provided just above the bottom plate with an opening surrounded by angular frame E, 85 forming the opening for the removal of ashes. The sides and bottom of this angular frame E are integral, respectively, with the body and bottom of the drum, and the top thereof is preferably formed of sheet metal riveted to the body and to the sides of the frame. The outer end of this frame E is provided with an inwardly-turned flange *e*, which latter rests 95 against the inner face of the front of the jacket and is secured in place by screw-bolts passing through the ash-door frame F, jacket A, flange *e*, and rectangular cast-metal frame *e'*, which latter rests against the inner face of the flange *e*, the said bolts being held in place 100 by nuts. The door-frame F carries a door which is provided with a damper for admit-

ting air. This door closes the ash-chamber, which latter is formed by the frame E and the portion of the drum below the grate.

The grate G is supported on the cast-metal ring H, which latter is secured to the inner face of the drum just above the ash-chamber. This ring is provided with a series of lugs *f*, one of which projects horizontally under the top wall of frame E and is secured thereto by a bolt and nut, while others depend vertically from the ring and are secured to the body of the drum by nuts and bolts. The upper face of the ring is provided with a continuous recess forming a seat for the lining-sections and is also provided with inwardly-projecting lugs *g*, forming rests for the grate G, which latter is loosely mounted on the lugs and can be turned by passing a shaker or lever through the ash-door and connecting it to the grate in the usual manner.

Formed in the front of the stove, above the ash-door, is the fuel-opening I. Flanges *h*, formed integral with the drum, are located on opposite sides of the fuel-opening in the drum and extend forwardly to or adjacent to the rear face of the jacket and the two openings. The one in the jacket and the other in the drum are surrounded by the cast-metal box J, which latter extends from the jacket to the drum and surrounds both openings, the flanges *h* on the drum resting against the inner faces of the sides of the box J. The box J is provided with flange *i* on its inner end, which rests against the outer face of the drum, around the opening therein, and is provided on its outer end with an inwardly-projecting flange *j*, to which the door-frame K is bolted. The box is secured in place by bolts passing through the inner flange *i* and the drum, through the flanges *h* of the drum and the sides of the box, and to the jacket by bolts passing through the door-frame, jacket, and outer flange of the box. By this construction the fuel-openings in the drum and jacket are connected in practically an air-tight manner, and as the space between the two is bridged or spanned by the cast-metal box the hot air passing upwardly within the jacket and around the drum is prevented from entering the drum, but is deflected sidewise and passes around and up over the box.

The door-frame K carries a door having a damper adapted to admit air above the fuel for the purpose of holding a slow fire.

The top of the drum is closed and is covered by the cast-metal top M of the jacket A. This top M is preferably dome-shaped, so as to form a comparatively-large air-space above the drum, is perforated at its four corners for the exit of the heated air, and is preferably provided with a flanged opening for the attachment of a hot-air pipe adapted to convey hot air to a room above, and is also preferably provided with an opening *n*, adapted to receive a kettle or other similar utensil. This top M rests on the top edge of the angular jacket A and is provided with an outer flange

n', which overlaps the outer top edge of the jacket, and is also provided at its four corners and at points intermediate the corners with lugs *n*², which latter rest against the inner face of the top edge of the jacket. This flange and the lugs brace the upper end of the sheet-metal jacket and prevent distortion, due to either heat or pressure.

The smoke-flue passes from the drum, near the top thereof, through the jacket and is provided with a flange for the attachment of the smoke-pipe.

In the modification shown in Figs. 6 and 6^a the drum is open at its top and is closed by the cast-metal top M', which also serves as a top for the jacket. In this construction the top M' is provided with a depending circular flange *m'*, which latter extends down and within the upper open end of the drum, the top M' and the drum being connected by the L-shaped braces M², secured to and depending from the top.

In the construction shown in Fig. 1 the drum is supported by the frame E, box J, and smoke-flue, whereas in the modification the weight of the drum is mainly borne by the top M'.

With a stove of this construction the air passes under the lower open edge of the jacket and rises between the latter and the drum and escapes in a highly-heated condition through the openings in the cover and through the hot-air flue to another room.

I make no claim in this case to an outer angular jacket open at its lower end and a fire-pot or drum closed at its bottom and curvilinear in cross-section, the fire-pot or drum being of less diameter than the shorter diameters of the jacket, thus forming restricted air-spaces at diametrically-opposite points intermediate the four corners of the jacket and enlarged air-spaces at the four corners, as such a construction is covered by my Patent No. 600,248, before referred to.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a stove the body or jacket of which is open at its bottom, of a base composed of sections and legs intermediate the sections, and secured to said sections, the legs having upwardly-projecting ends projecting into the open end of the body and secured against the inner face of the latter.

2. The combination with a stove comprising a jacket open at its lower end and a fire-pot closed at its lower end of a base composed of legs and intermediate sections secured to the legs, the latter having upwardly-projecting ends overlapping the lower edge of the body.

3. The combination with a jacket open at its lower end and a drum or fire-pot within the jacket and closed at its lower end, of a base supporting the lower end of the jacket the said base comprising legs and intermediate sections secured to the legs, the upper

ends of the legs overlapping the lower end of the body and secured to the latter.

4. The combination with a jacket open at its bottom, an open center base supporting the lower edge of the jacket and a sheet-metal drum located within and supported wholly by the jacket, the said drum being closed at its bottom, of a ring secured to the inner face of the sheet-metal drum and provided with projections, the said ring adapted to support a lining and grate.

5. In a stove, the combination with an outer jacket having an opening in its side, and an open lower end, a base having an open center and forming a support for the lower open end of the jacket, and a cylindrical drum closed at its bottom and supported within and solely by the jacket, the said drum being provided near its bottom with a projecting angular frame the outer end of which is secured against the inner face of the jacket, around the opening in the side.

6. In a stove, the combination with a jacket open at its bottom, and provided with a fuel-opening, a base open in its center and forming a continuous support for the lower edge

of the jacket, and a drum closed at its bottom and having a fuel-opening and laterally-projecting flanges at the sides of said opening; of a box-frame bridging the space between said openings and secured to the inner face of the jacket and outer face of the drum and also to the lateral flanges of the drum, and a door-frame secured to the jacket around the fuel-opening therein.

7. In a stove the combination with a base having an open center, a jacket open at its bottom and resting on the base, and a cast-metal top for the jacket, the said top provided with an outer flange resting against the outer face at the top edge of the jacket and lugs resting against the inner face of the jacket at the corners thereof; of a drum closed at its bottom; and suspended from the top of the jacket.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM HENRY JAMES.

Witnesses:

MATT. J. DAY,

PHINEAS S. PHILLIPS.