No. 638,502.

J. DWYER & J. H. LANE.

STOVE.

(Application filed June 19, 1899.)

Patented Dec. 5, 1899.

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

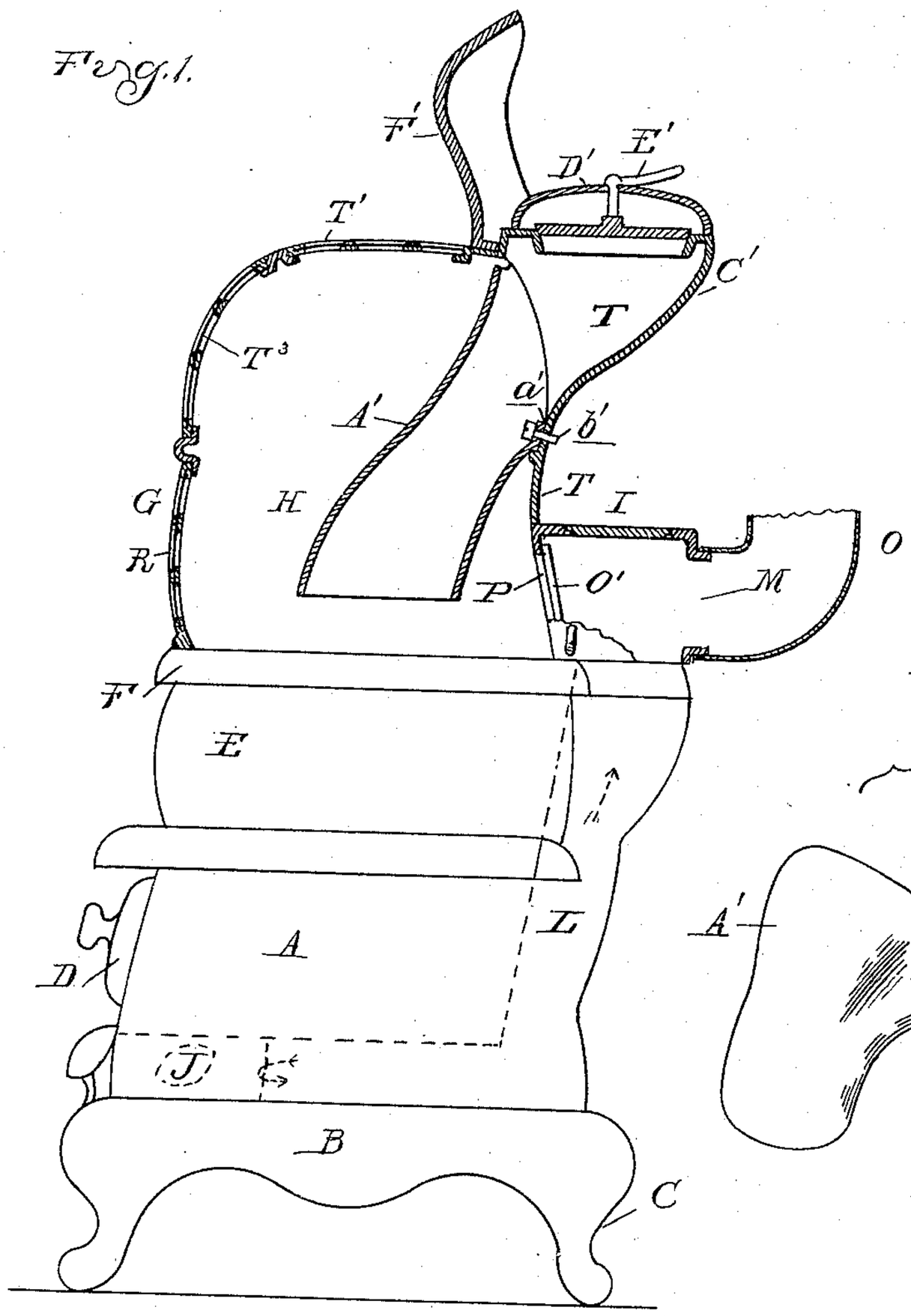

Fig. 6.

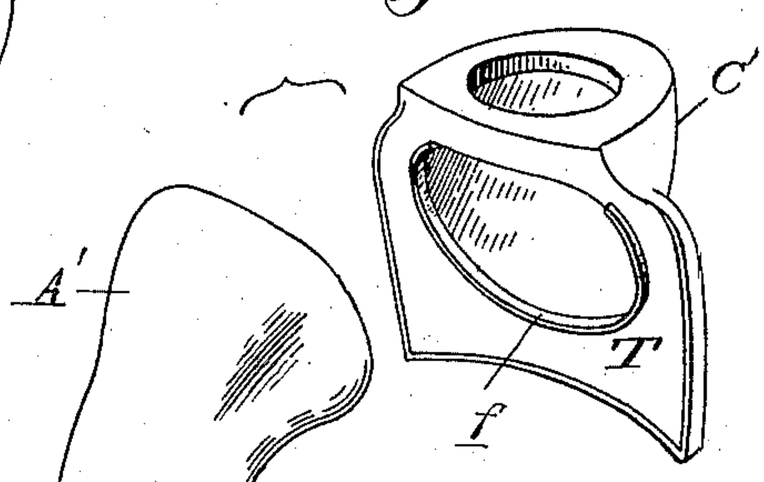

Fig. 2.

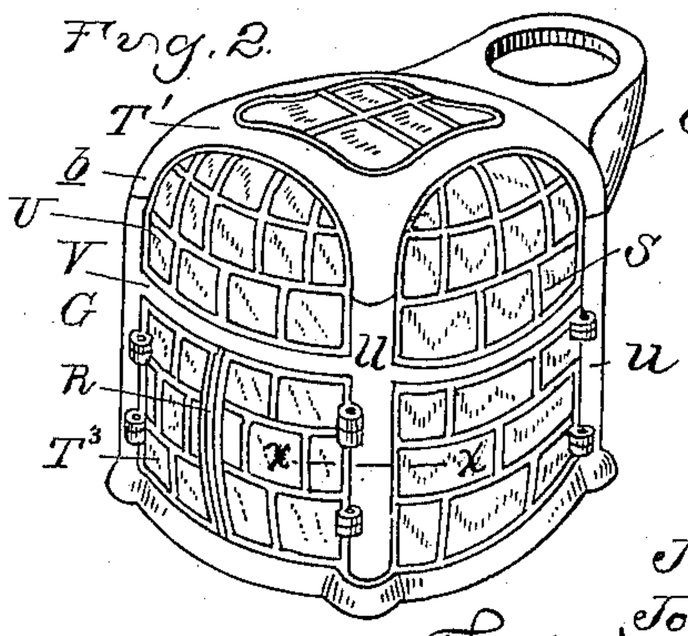

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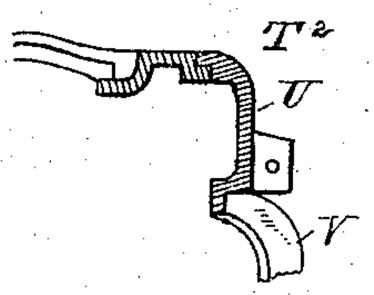
Fig. 7



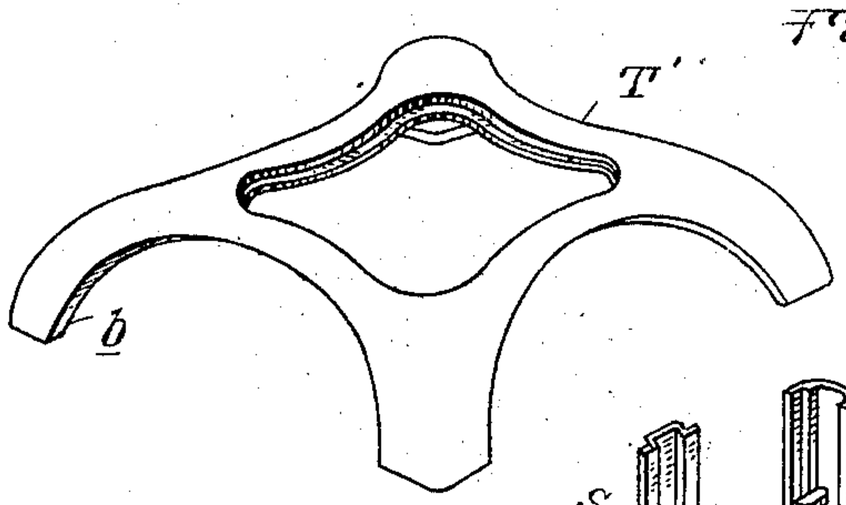
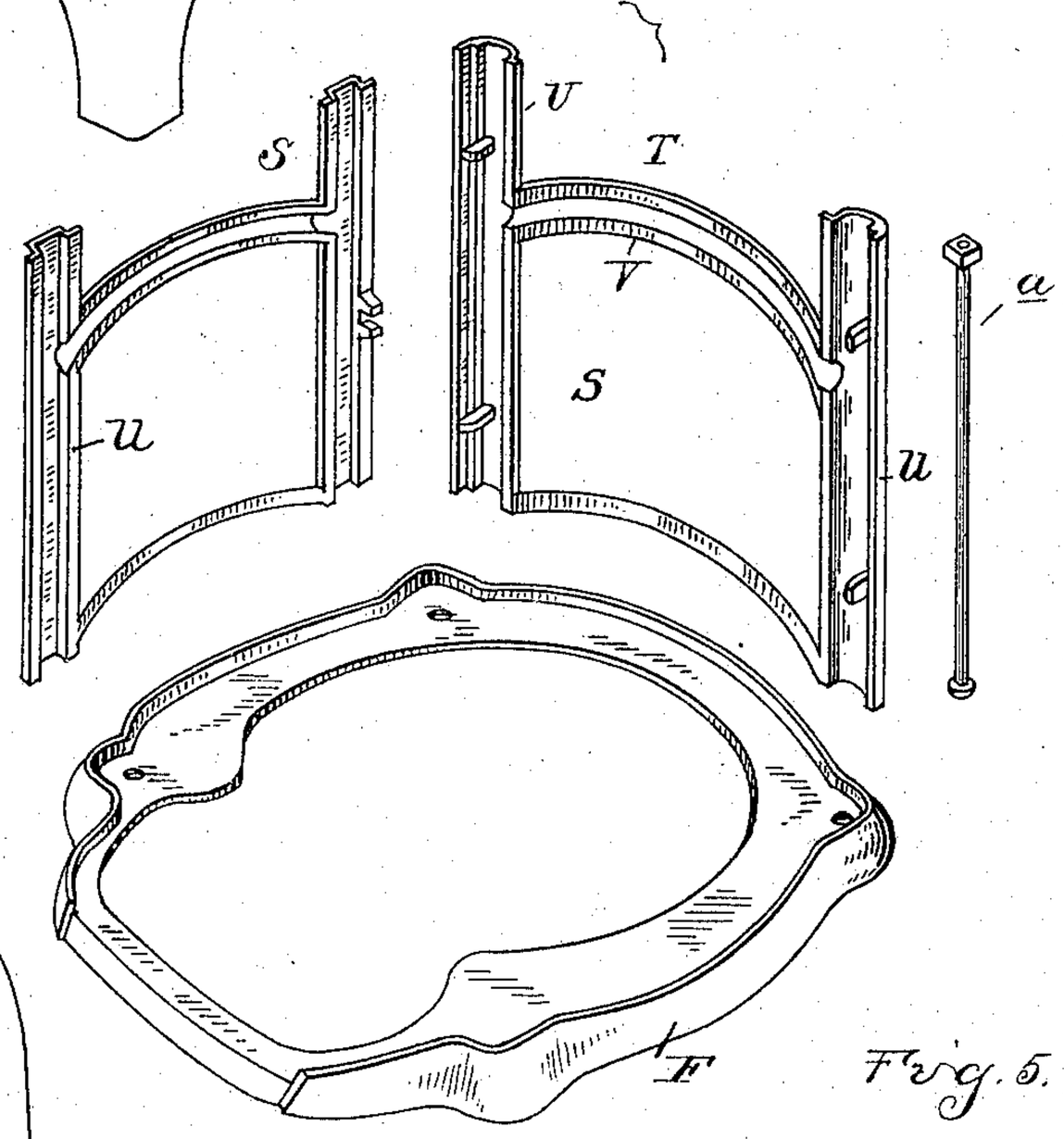


Fig. 3.



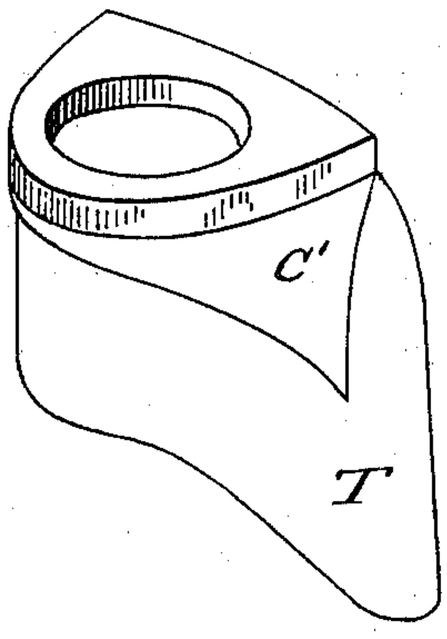
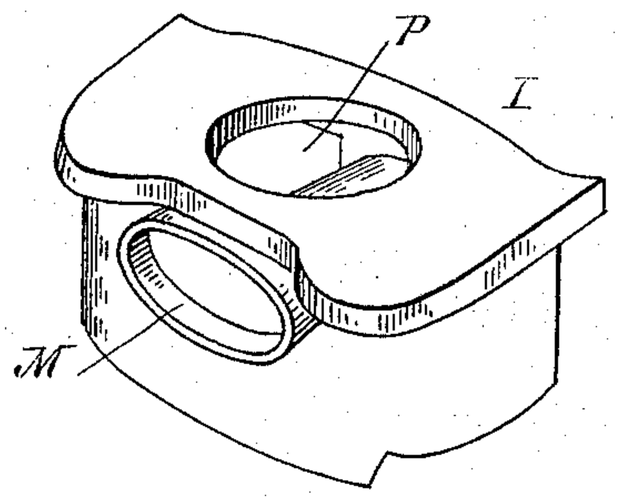
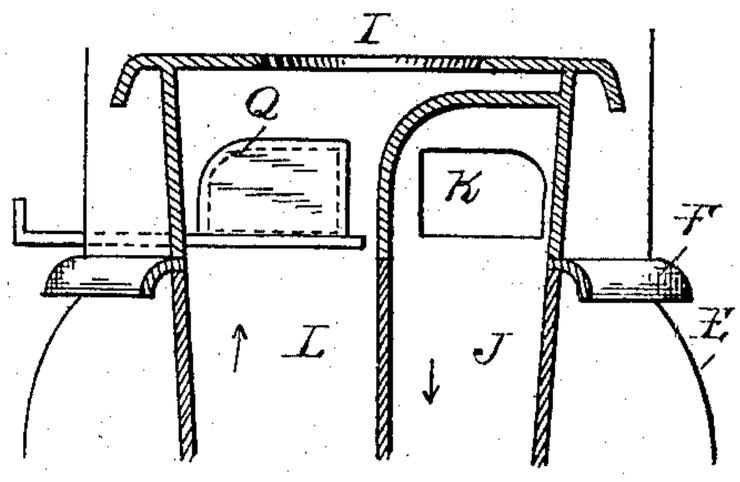


Fig. 5.

Fig. 4.





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UNITED STATES PATENT OFFICE.

JAMES DWYER AND JOHN H. LANE, OF DETROIT, MICHIGAN, ASSIGNORS TO THE PENINSULAR STOVE COMPANY, OF SAME PLACE.

STOVE.

SPECIFICATION forming part of Letters Patent No. 638,502, dated December 5, 1899.

Application filed June 19, 1899. Serial No. 721,092. (No model.)

To all whom it may concern:

Be it known that we, JAMES DWYER and JOHN H. LANE, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a magazine-stove; and it consists in the novel construction of a magazine therefor so formed and arranged that the draft is prevented from passing therethrough, whereby the stored fuel is maintained in its normal condition until to be used.

The invention further consists in so constructing the stove that the entire top thereof may be utilized as the combustion-chamber and in forming the chamber-casing of a mica construction, whereby a better heating effect is obtained and the appearance of the stove is improved.

The invention still further consists in the peculiar construction, arrangement, and combination of the various stove parts, as more fully hereinafter described, and shown in the drawings, in which—

Figure 1 is an elevation of my improved stove, the upper portion thereof being shown in section to illustrate the construction and arrangement of back plate and magazine. Fig. 2 is a perspective view of the closed casing or wall the interior of which constitutes the combustion-chamber of the stove. Fig. 3 is a similar view showing the parts which form the casing detached. Fig. 4 is a perspective view of the smoke-pipe connection. Fig. 5 is a vertical central section through said smoke-pipe connection. Fig. 6 is a perspective view of the magazine and back plate, the magazine-sections being shown detached; and Fig. 7 is a section taken on line *x x* of Fig. 2.

In the drawings thus briefly referred to the reference-letter A designates the ash-pit section of the stove, mounted upon a base B, which in turn is supported upon suitable legs C. D is a door for the ash-pit. E designates the fire-pot section, F a supporting-ring arranged upon the top of said section, and G a closed casing arranged over and supported upon the ring F, the interior of said casing constituting the combustion-chamber H of the stove. The parts thus briefly described, which are arranged below the supporting-ring F, constitute no part of my invention and therefore may be of any approved construction.

The letter I designates the smoke-pipe connection of the stove, and J is a downdraft passage or flue communicating with the interior of the stove through an opening K and passing downward at the rear of the stove in the usual manner and along the base of the latter.

L designates the updraft-passage or return-flue, which communicates with the flue J and through an opening M, formed in the connection I, with the smoke-pipe O.

P designates the usual opening formed in the casing, through which the products of combustion may, if desired, pass directly from the interior of the stove into the smoke-pipe, and Q designates the usual damper controlling said opening.

The closed casing, as before stated, is supported upon the ring F and comprises in its construction the front door-frame R, the side sections or frames S, and back T, the back being in the form of a plate of the construction hereinafter more fully set forth, and a dome T′. The frames are each composed of vertical post members U and transverse connecting-bars V, as shown in Fig. 3, the post members being secured to each other in any suitable manner, as shown in Fig. 7, and each pair of adjacent posts forming a corner-post, as plainly set forth in the figure last referred to. The securing means for the posts may be of any approved type, as they form no part of my invention, so a detailed description thereof will not be necessary. The reference-letter *a* designates a rod which extends through the ring F and through each corner-post, securely holding the frames upon the ring. The dome T′ is provided with downwardly-extending complementary feet *b*, which rest upon the frame-posts, the said feet being secured to the posts in any suitable manner. The frames thus described constitute when assembled a skeleton casing which is provided with mica windows T^3. Thus a mica construction

is obtained for the sides, front, and top of the stove from the fire-pot up, whereby a maximum amount of illuminating-surface and a better heating effect is obtained.

The magazine for the stove is formed in two sections and is arranged in connection with the stove in such manner that the hopper or mouth section of the magazine extends entirely without the combustion-chamber at a point considerably above the smoke-pipe connection, while the lower portion or discharge-section of the magazine extends within and is arranged centrally over the fire-pot section. By this method of construction the fuel stored within the magazine-section without the chamber is not heated, as the draft does not at any period enter the magazine, but passes, with the products of combustion, through the stack below both the combustion-chamber and magazine. Also, in addition to preventing the substance of the fuel from being wasted, the construction of the parts is such that the combustion-chamber is free from smoke and the desired glowing effect obtained. In construction the magazine comprises the discharge-section A′, which is arranged at an angle to the back plate T and is secured to the latter in any suitable manner, as by means of lugs *a′* and bolts *b′*. The complementary portion of the magazine comprises a hopper or mouth section C′, which extends outwardly and upwardly from the back plate T and communicates with the section A′ through an opening *f*, formed in the back plate, as plainly shown in Figs. 1 and 6. The back plate referred to constitutes the back for the greater portion of the closed casing G, and the hopper-section of the magazine is preferably cast integral with said plate, as shown.

D′ designates a cover or lid for the magazine, which is hinged to the latter in any suitable manner, and E′ is a handle therefor.

Secured to the closed casing G and arranged in front of the hopper-section of the magazine, completely hiding the latter from view, is a reflector-plate F′, which plate, besides hiding from view the hopper-section of the magazine, reflects the heat and light.

The smoke-pipe connection I, before described, is located, as set forth, below the hopper-section of the magazine and is so constructed as to form, besides a connection, an extension constituting a tea-kettle attachment.

By the construction and arrangement of the combustion-chamber with the magazine entering through the back a very large extent of radiating-surface is obtained both at the sides and top, and, further, by locating the exit-flue at the base of the combustion-chamber the deposition of carbon or soot on the inner surface of the combustion-chamber is largely prevented, it being well known that such deposits greatly lessen the radiation of heat, and where mica is employed it soon becomes fouled and coated with the carbon or soot, thereby destroying the illuminating effect. This construction also provides what may be practically called an "expansion-chamber" of large area for the heated gases out of the direct line of draft, permitting a large part of the heat thereof to radiate through the thin walls of the chamber before the gases enter the exit-flue.

What we claim as our invention is—

1. In a magazine-stove, the combination of the fire-pot section, a closed casing above said section forming within the combustion-chamber, a magazine extending at an incline downward into the combustion-chamber and out through the rear wall of the casing, and the smoke-pipe extending out of said casing-wall below the inclined portion of the magazine.

2. In a magazine-stove, the combination of the fire-pot section, a closed casing above said section, forming within the combustion-chamber, a magazine extending at an inclination through the rear wall of the combustion-chamber casing into the combustion-chamber and having its fuel-opening outside at the rear of the stove, a smoke-flue below the magazine and a reflector-plate around the rear top portion of the combustion-chamber casing in front of the magazine-opening.

3. In a magazine-stove, the combination of the fire-pot section, a closed casing above the section forming within the combustion-chamber, said casing comprising a front, sides, and a rear wall, the latter consisting of an apertured back plate, and a magazine projecting through said plate extending upwardly from one side and downwardly from the opposite side thereof, around said aperture, and a smoke-flue leading out from the casing at the base of the combustion-chamber.

4. In a magazine-stove, the combination of the fire-pot section, a closed casing above said section forming within the combustion-chamber, said casing comprising a front, sides, and a rear wall, the latter in the form of an apertured back plate, and a magazine extending through said plate, said magazine comprising a hopper-section outside the stove extending upwardly and outwardly from said plate around the aperture, and a discharge-section secured to the inner wall of the plate and extending inwardly and downwardly therefrom, and a smoke-flue at the base of the combustion-chamber.

5. In a magazine-stove, the combination of a fire-pot section, a closed casing above said section, forming within the combustion-chamber, said casing comprising a front, sides and a rear wall, the latter in the form of an apertured back plate, and a magazine formed in two sections extending through said plate, the mouth or hopper of the magazine formed on and constituting a part of the back plate, and the discharge or interior section secured to and projecting downwardly at an angle from the inner face of said plate and a smoke-flue at the base of the combustion-chamber.

6. In a magazine-stove, the combination of

the fire-pot section, a closed casing above the section forming with the combustion-chamber, said casing comprising a front, sides and a rear wall the latter in the form of a back plate, the smoke-pipe connection above the fire-pot section at the base of the combustion-chamber, a magazine projecting through the back plate on both sides thereof, and at an angle thereto, the upper end being above the smoke-pipe connection and the lower end extending within the fire-pot section, and a cover for the magazine.

7. In a magazine-stove, the combination of the fire-pot section, a closed casing above said section forming within the combustion-chamber, said casing comprising a front and side frames said frames having vertical post members, and connecting-bars therefor, a rear wall in the form of a back plate and a dome provided with complementary feet adapted to rest upon and be secured to the post members, and a magazine at the rear of the closed casing, said magazine extending downwardly at an angle through the back plate, and discharging over the fire-pot section, substantially as described.

8. In a stove, the combination with the fire-pot section, of a superimposed combustion-chamber, comprising a back wall, sides, front and top; said side and top walls of the chamber being each formed with mica sections and extending unbroken to the back wall, a smoke-flue at the base of the combustion-chamber in the rear, and an inclined magazine entering through the back.

9. In a stove, the combination with the fire-pot section, of a superimposed combustion-chamber, comprising a back wall, sides, front and top, said front, top and side walls of the chamber being each formed with mica sections, and the side and top walls extending unbroken to the back wall, a smoke-flue at the base of the combustion-chamber in the rear, and an inclined magazine entering through the back.

10. In a stove, the combination with the fire-pot section, of a superimposed combustion-chamber, comprising a back plate, sides, front and top walls, each wall formed with mica sections and the side and top walls of the chamber extending unbroken to the back plate, and a reflector-plate in the plane of the back wall at the edges of the top and side walls, and a smoke-flue at the base of the combustion-chamber in the rear.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES DWYER.
JOHN H. LANE.

Witnesses:
JAMES WHITTEMORE,
L. J. WHITTEMORE.