No. 724,820. PATENTED APR. 7, 1903.

J. M. & S. R. CROWNER.

STOVE.

APPLICATION FILED AUG. 20, 1902.

NO MODEL.

Fig. 1

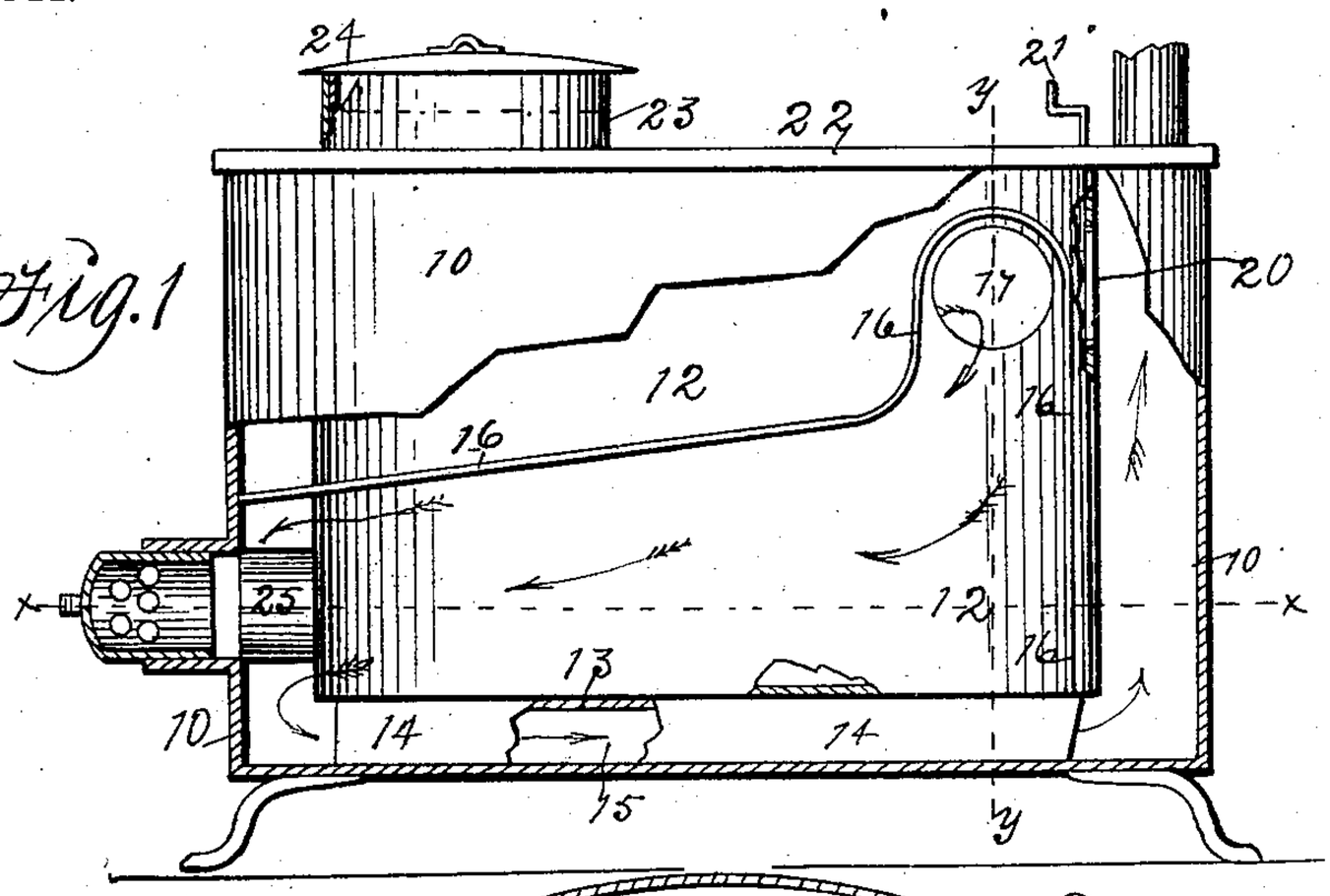


Fig. 2

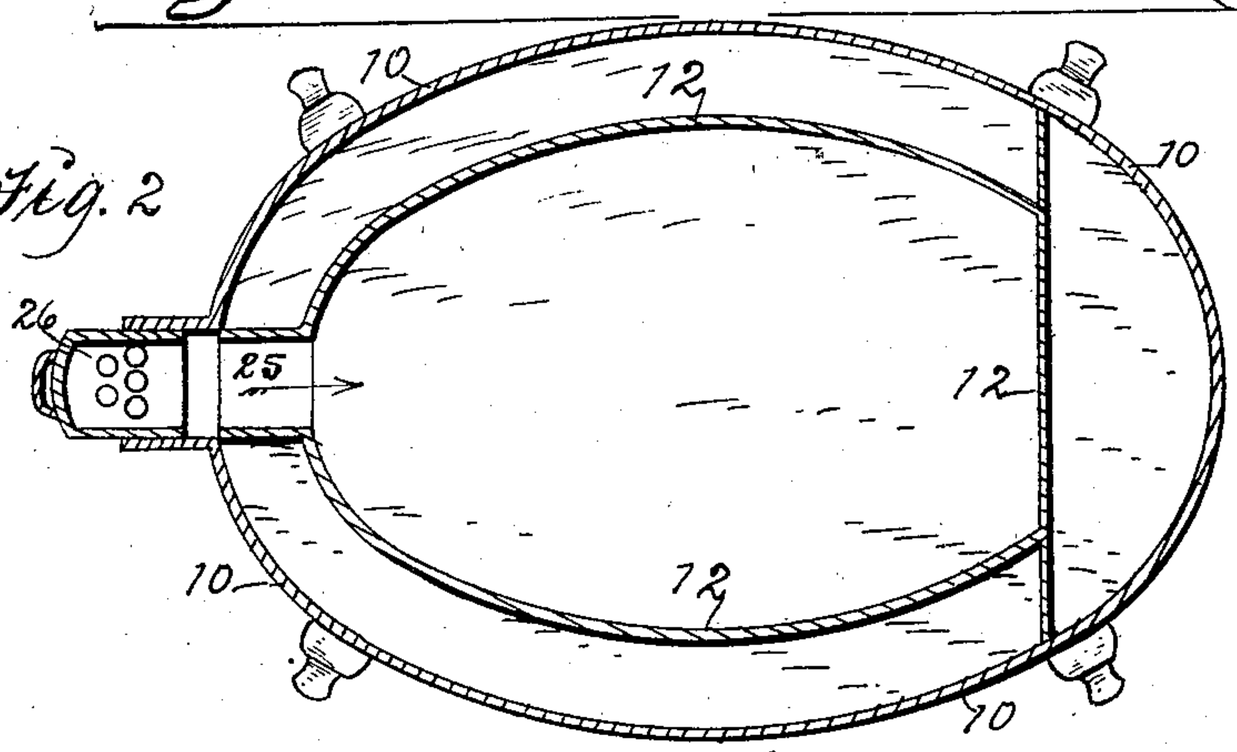
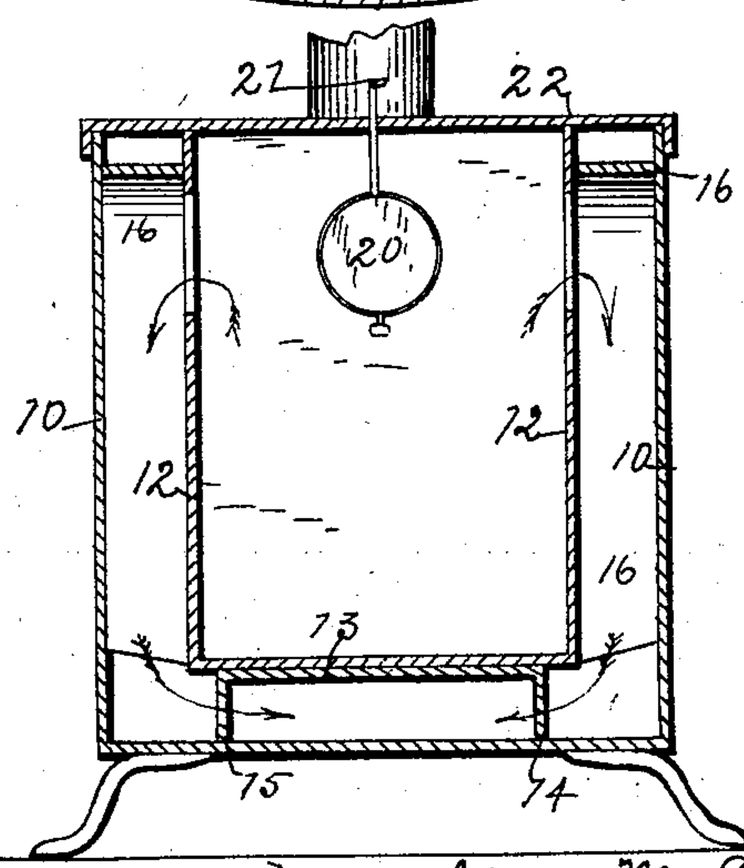


Fig. 3



Witnesses:
Henry Manger.
L. H. Orwig.

Inventors: James M. Crowner
and States R. Crowner,
By Thomas G. Orwig, Attorneys.

UNITED STATES PATENT OFFICE.

JAMES M. CROWNER AND STATES R. CROWNER, OF MARION, IOWA.

STOVE.

SPECIFICATION forming part of Letters Patent No. 724,820, dated April 7, 1903.

Application filed August 20, 1902. Serial No. 120,344. (No model.)

To all whom it may concern:

Be it known that we, JAMES M. CROWNER and STATES R. CROWNER, citizens of the United States, residing at Marion, in the county of Linn and State of Iowa, have invented a new and useful Stove, of which the following is a specification.

Our object is to provide a simple and cheap double-wall base-burner stove specially adapted for burning wood, charcoal, corn-cobs, &c., for heating rooms and preventing the waste of heat incident to the use of single-walled stoves and the escape of heat through the pipe and chimney.

Our invention consists in the construction, arrangement, and combination of parts, as hereinafter set forth, pointed out in our claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our stove and shows parts broken away to show the interior construction and the manner in which the products of combustion are circulated and the radiating-surface increased. Fig. 2 is a horizontal sectional view on the line x x of Fig. 1 and shows the register through which air is admitted to pass into the combustion-chamber, and the passage-way for the products of combustion that starts at the top and front portion of the stove and extends to the rear and lower portion and then forward under the combustion-chamber to the front to pass upward through an escape-pipe at the top. It also shows the damper for changing the downdraft to a direct upward draft from the combustion-chamber to the escape-flue. Fig. 3 is a vertical sectional view on the line y y of Fig. 1, that shows the passages at the sides and under the combustion-chamber and also the passage in the top leading direct to the escape-pipe.

The numeral 10 designates the outside wall of the stove, preferably made of sheet metal and elliptical in shape and to vary in size as desired. The inner wall 12 corresponds in shape with the outer, but is smaller, as required to be placed inside of the outer wall. It has a double bottom produced by fixing a flat plate 13 to the under side of its flat bottom and bending the parallel edges of the plate down at right angles to produce vertical partitions 14 and 15 and a central passage-way from the front to the rear and a passage-way on each side leading from the rear to the front. A continuous flange 16 starts at the bottom and rear end and passes upward around an aperture 17 and from thence forward and downward around the front end and then backward and upward around an aperture 18 and from thence down to the bottom. This flange projects outward at right angles from the surface of the inner wall 12, and its continuous edge contacts with the inner face of the outer wall 10, so that it serves as a partition between the two walls to support the walls in parallel position and to direct the products of combustion from the apertures 17 and 18 rearward and downward to pass forward in the central passage between the flanges 14 and 15, as required to make the lower portion of the outer wall and the bottom radiate heat, in the manner of base-burning stoves, more effectually than when the products of combustion are allowed to rise to the top of the double wall. The partition that thus serves as a deflector also very materially reinforces and strengthens the complete double wall.

The rear end of the inner wall 12 is preferably straight, and the space between it and the rear end of the outer wall 10 serves as a hot-air chamber, through which the smoke escapes upward into a pipe 19 at its top.

A damper 20, fitted in an aperture in the flat or straight rear end of the inner wall 12, is provided with a handle 21, that extends up through the top of the stove, so the aperture can be readily opened and closed, as required to regulate the draft direct upward or downward through the base.

A top 22 is fixed to the top edge of the inner wall 12 and extends out over the top edge of the outer wall 10, as required to close the space between the two walls at their tops.

An aperture in the top and front portion is adapted for admitting fuel, and 23 is a flange projecting upward therefrom, to which is fitted a removable cover 24.

A short tube 25 is fixed in an aperture in the front of the inner wall 12 and an air-register 26 fixed in a coinciding aperture in the outer wall 10, as shown in Fig. 1, or in any

suitable way, as required to feed air to the combustion-chamber. The feet may be attached to the bottom in any suitable way.

Having thus described the purpose of our invention and its construction and operation, its practical utility will be readily understood by persons familiar with the art to which it pertains, and

What we claim as new, and desire to secure by Letters Patent, is—

1. In a stove, an outer wall having an air-register at its front end and lower portion, a fixed bottom and an open top, and an inner wall having a fixed bottom and open top and an aperture coinciding with the air-register fixed in the outer wall, corresponding apertures in the upper portion of its rear end and a flange extending from the bottom of its rear end portion over the said apertures and from thence forward and downward and around the front end to contact with the inside face of the outer wall, for the purposes stated.

2. In a stove, an outer wall having an air-register at its front end and lower portion, a fixed bottom and an open top, and an inner wall having a fixed bottom and open top and an aperture coinciding with the air-register fixed in the outer wall, corresponding apertures in the upper portion of its rear end and a flange extending from the bottom of its rear end portion over the said apertures and from thence forward and downward and around the front end to contact with the inside face of the outer wall and parallel flanges at the bottom of the inner wall, arranged and combined to operate in the manner set forth for the purposes stated.

3. A base-burner stove comprising an outer wall having a fixed bottom and open top, an inner wall having a fixed bottom, a plate fixed to the under side of said fixed bottom and provided with parallel flanges extending from end to end, an open top corresponding apertures in its rear and upper portion, a flange extending outward at right angles from its rear and lower end up over the said apertures and then forward and downward, a damper in the rear and top portion of the inner wall, a top fixed to the outer wall an opening in said top to admit fuel a cover for said opening, a pipe in the rear end of said top, an air-register in the lower portion and front of the outer wall and a tube extending from the air-register into an aperture in the front of the inner wall, all arranged and combined to operate in the manner set forth for the purposes stated.

JAMES M. CROWNER.
STATES R. CROWNER.

Witnesses:
HARRY HOLCOMB,
FRANK STROTHER.