

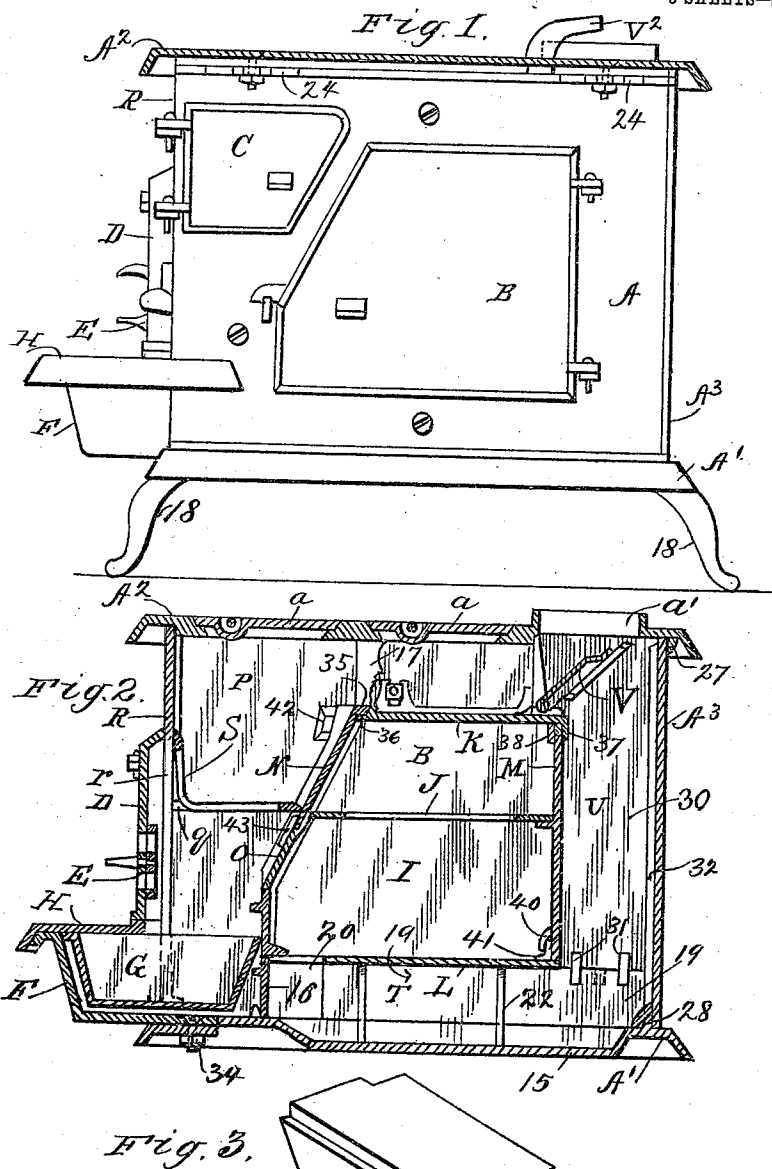
948,986.

F. M. BEVERLY.  
STOVE.

APPLICATION FILED SEPT. 22, 1908.

Patented Feb. 15, 1910.

3 SHEETS—SHEET 1.



Witnesses

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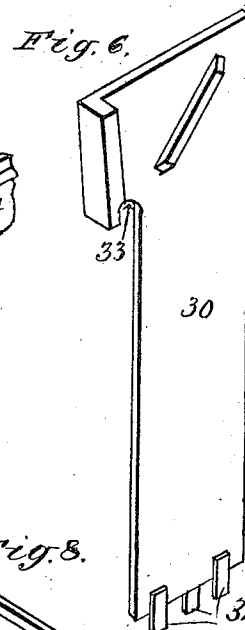
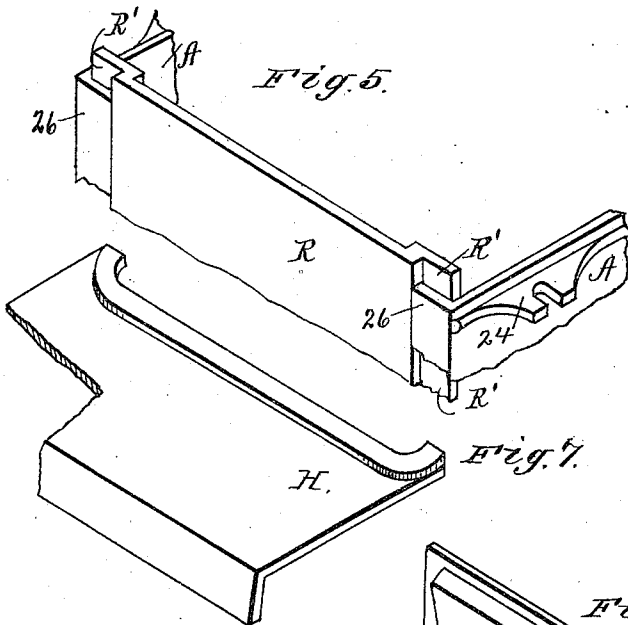
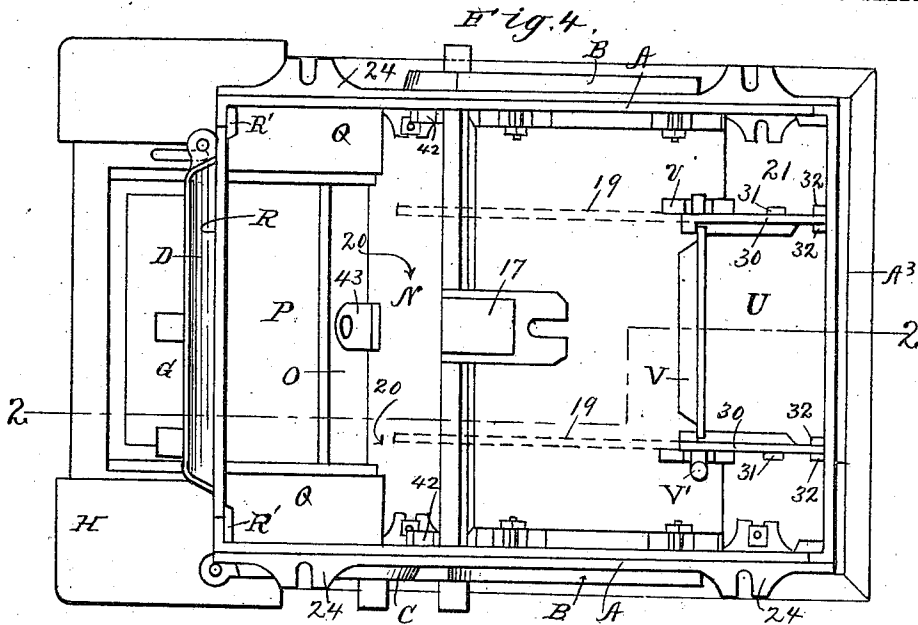
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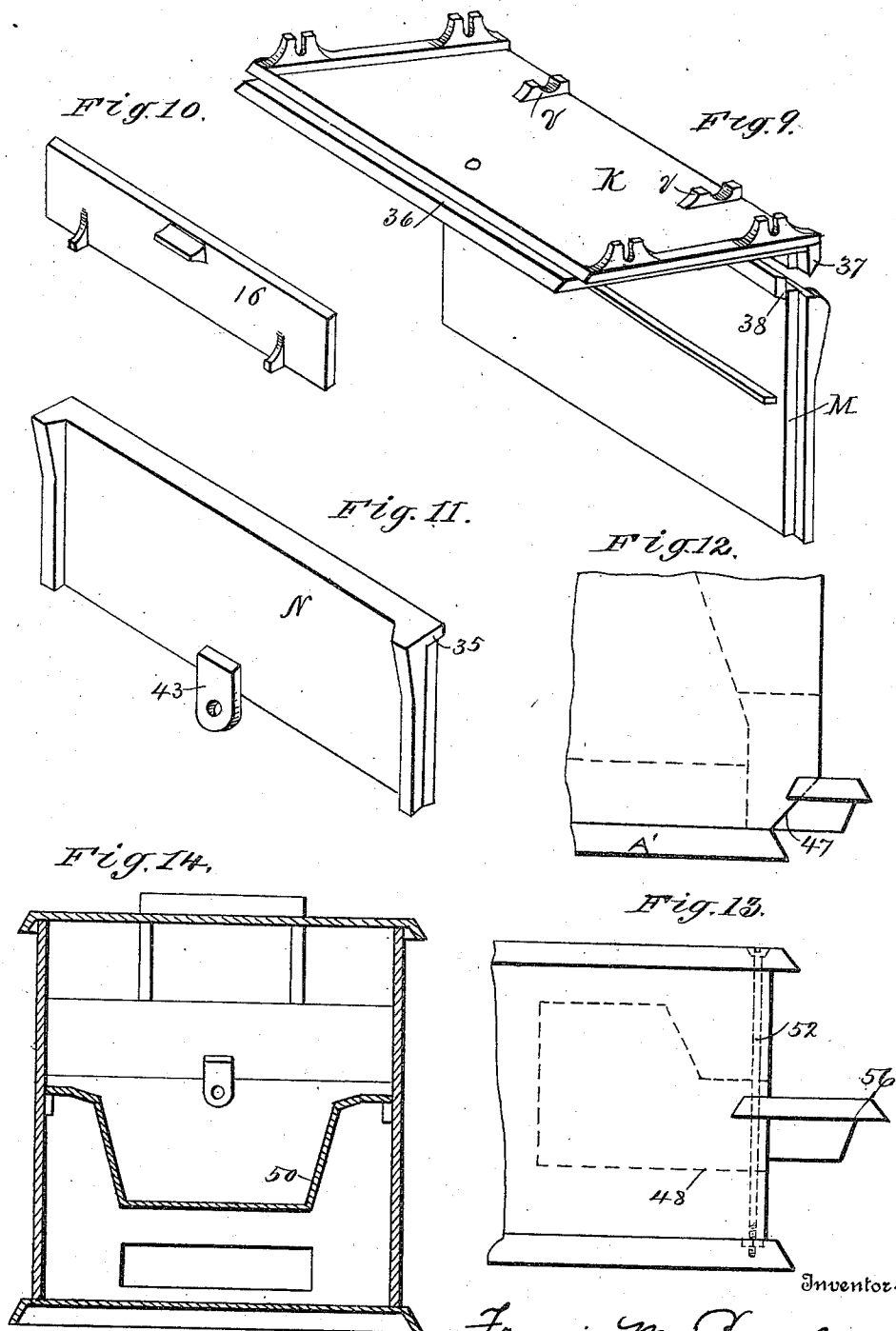
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

FRANCIS M. BEVERLY, OF GADSDEN, ALABAMA.

## STOVE.

948,986.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Application filed September 22, 1908. Serial No. 454,271.

*To all whom it may concern:*

Be it known that I, FRANCIS M. BEVERLY, a citizen of the United States of America, residing at Gadsden, in the county of Etowah and State of Alabama, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

This invention relates to improvements in stoves and refers more particularly to that class of stoves known as knock-down stoves, wherein the parts can be readily dismembered and packed in a compact form for transportation. By this means of constructing stoves, the liability of breakage is reduced to a minimum.

The principal object of this invention is to so construct a stove that the parts are removably secured through sliding connections of the parts within the main frame of the device.

Another object of the invention is to so construct a portion of the internal mechanism and also the main frame of a stove of this character, that the projecting ears integral with the various separate portions of the device are open mouthed or slotted, for the reception of a screw bolt, to allow for contraction and expansion of the various parts connected therewith and also save expense in casting.

Another and very important feature of this invention is to so construct the various removably secured parts that they can be immediately replaced or duplicated in case of accident, or through wear thereof.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1, illustrates a side elevation of the stove the top being in section; Fig. 2, illustrates a longitudinal vertical section taken in the direction of the dotted line 2—2 of Fig. 4; Fig. 3, illustrates one of the side plate linings of the ash pan; Fig. 4, illustrates a plan view of the entire stove with the top plate removed to more fully exhibit the various parts therein; Fig. 5, illustrates in perspective view, a fragmentary portion

of the front plate and side plates of the stove frame; Fig. 6, illustrates one of the flue plates which form walls for the damper; Fig. 7, illustrates in perspective view the apron cover; Fig. 8, illustrates the damper; Fig. 9, illustrates in perspective the top and also the vertical back oven plate; Fig. 10, illustrates the flue door 16, in the rear of the ash pan; Fig. 11, illustrates the angular sliding back wall of the fire box; Fig. 12, illustrates a fragmentary portion of a modified form of stove with the lower front portion indicated at an angle; Fig. 13, is also modified as regards the apron which is near the center of the stove; and Fig. 14, is a sectional view of a modified fire box having the sides and other portions thereof integral.

A novel feature in reference to the construction is the simple yet practical means for assembling the various parts. The outside frame work consists of side plates A, which are provided with oven doors B, and an end fire box door C. The front of the stove is also provided with a front fire box door D, which has arranged thereon an ordinary sliding draft door E. The apron F, is provided with an ash pan G, which has a cover H slidably mounted thereon, which is designed for regulating the draft to the fire box and also to close said ash pan G.

The oven I is provided with a tray J for supporting articles placed within said oven. The oven is bounded by a top oven plate K, a bottom oven plate L, a rear wall plate M, and angular plates N and O, respectively. The fire box is provided with side plate linings R', which are held in position by the front sliding plate R. Said front sliding plate R, has a large recess *r* formed therein as a provision for the door D, and ash pan G. Side plate linings Q forming the ash box are rabbeted at *q*, (see Fig. 3) for the reception of the grate S. The front portion of said grate S abuts the inside of the front sliding plate R, being held in position by gravity.

The bottom portion A' of the stove frame is depressed at 15, to give additional room for the flue T, and also for retaining the accumulated soot that gathers therein. The central vertical flue U, is provided with a hinged damper V, which is mounted in bearings *v* and operated by handles V' and V<sup>2</sup>. The top plate A<sup>2</sup>, is provided with lids *a*, and a flue exit *a'*, which projects above the

top plate A<sup>2</sup>, a sufficient distance to secure a stove pipe thereon. The flue door 16, adjacent to the ash pan G affords means for removing the soot from the stove when accumulated in a sufficient quantity.

Secured to the top oven plate K, is a standard 17, which contacts the top plate A<sup>2</sup>, and which prevents said plate from sagging or warping from excessive heat, as said plate frequently becomes heated to a red color when the stove is over fed.

The stove is supported by legs 18, which are secured in position by dovetailed cleats, the shank of the legs being also dovetailed so as to slide between said cleats, the means for securing said legs not being shown in the drawings as they form no part of the present invention.

The bottom plate L, of the oven is supported on longitudinal walls 19, (see Figs. 2 and 4) being shown in dotted lines in the latter figure. These walls 19, are for dividing the stove into draft channels, 21, and terminate at 20, of their forward ends, so that the products of combustion can pass around the oven when the damper V, is closed, thus shutting off the direct draft. Screw bolts 22, retain said oven plate in place.

Slotted ears are cast integral with the outside plates of the stove as a convenience in producing cheap castings as far as manual labor is concerned. In Fig. 1, the side of the top plate is indicated in section so as to exhibit the slotted ears 24, integral with the side plate A. In Fig. 4, the top plate is removed, which more fully illustrates said slotted ears 24. On the lower portion of said side plates A, are also indicated slotted ears for holding the bottom A' in position. The nuts on the bolts for securing these slotted ears to the side plates, top and bottom thereof, need only be loosened, but not removed from the bolts when the aforesaid parts can be separated.

The front stove plate R, is provided with recessed flanges R' which impinge on right angled flanges 26, integral with the side plates A. By this arrangement of the parts, the front plate R, slides between the opposing side plates A, when assembling a stove, see Fig. 5, indicating the front plate R partially raised from the side plates A. The rear plate A<sup>3</sup> is secured in position by a flange 27, on the top plate A<sup>2</sup>, and a similar flange 28, on the bottom plate A'. The damper flue plates 30, which form the walls for the central direct flue are removably secured in position by the vertical cleats 32, integral with the inside of the rear plate A<sup>3</sup>. The front edges of said plates 30 project over the top oven plate K and are held laterally by said plate K, and the impinging ends of the damper V. The extreme lowermost ends of said damper flue plates 30, are

provided with projecting fingers 31, which extend over the top edges of the horizontal damper plates 19. (See Figs. 2 and 6.)

The damper V, is retained in position by the hooked portion 33, of the damper plates 30, and bearings v. The angular fire back plate N, is slidably mounted between the side plates A of the stove and held in position by lugs 42 and 43 (see Fig. 11). The apron F, is secured in a recess on the bottom plate A' by bolts 34. The top oven plate K, is held in position by a rearward projecting flange 35, on the angular fire back plate N, which enters a rabbet 36, on the front edge of said plate K. The rearward edge of said plate K has a depending flange 37, which projects over a flange 38, on the back oven plate M, which sustains said plate K and also holds in a secure position the top portion of the back oven plate, M. The bottom of said back oven plate M is held in position by an overlapping lug 40, impinging on a cleat 41, which is integral with the plate L. (See Figs. 2 and 9, which fully illustrate the above mentioned parts.)

In Fig. 12 is shown a device which is similar in construction to that indicated in Fig. 1, with the exception of the lower corner of the stove which is arranged at an angle 47, and the front of the stove projecting beyond the base A', thus providing a larger oven.

Fig. 13, has its apron 56 slightly below the middle of the stove and the oven bottom, as indicated in dotted line 48, extending to the front of the stove and the parts secured together by continuous bolts 52.

In the modification indicated in Fig. 14, the fire box 50, and the side walls thereof are integral, which is well adapted to be used where a wood stove is especially desired and the expense of manufacture is considerably less.

The top, bottom and back of stoves of this character can be made in several parts if desired, but especially when these parts are for very large stoves, as there is less danger of the parts becoming warped in casting or breaking in transportation.

I do not limit myself to the exact construction as herein shown and described, as minor details of construction can be adopted without changing the character of my invention. For instance, I can employ short bolts for holding separate parts together as indicated in Fig. 1, at 24, or long bolts may be employed to extend from the top to the bottom of the stove, or both may be used in one stove at the discretion of the builder of stoves.

I claim:

1. A knock-down stove comprising front, back, side and top plates said top plate having a flue exit therein, flanges integral with said side plates whereby said front plate is

secured, an oven in said stove, said oven made of removably secured together plates, lugs on the top plate of said oven having a groove between them, flue plates between  
 5 said oven and the back plate of the stove registering with said flue exit and with a draft channel beneath the oven, said flue plates having hooks near the upper ends thereof, said hooks adapted to rest upon said  
 10 lugs, and a damper journaled in the groove between said lugs and held in place by said hooks adapted to close the space between said flue plates whereby the gases of combustion are prevented from traveling around  
 15 the oven.

2. A knock down stove consisting of a bottom plate, side plates removably secured to the bottom plate, a top plate having a flue opening, removably secured by slotted  
 20 ears to the side plates, longitudinally and rearwardly extending vertical walls on the bottom plate between the side plates, said walls extending part of the length of said bottom plate, an oven supported on said  
 25 longitudinal plates, vertically disposed flue plates between said oven and the back wall plate of the stove, said plates having their upper ends projecting into the flue opening in the top plate, said flue plates having fin-  
 30 gers on their lower ends engaging opposite sides of the top portion of the longitudinal plates, hooks near the upper ends of said

vertical flue plates, lugs on the top plate of said oven, said hooks adapted to rest upon said lugs, and a damper journaled in said  
 35 lugs.

3. In a knock down stove consisting of a bottom plate, side plates removably secured to the bottom plate, longitudinally extending vertical plates on said bottom, said  
 40 plates extending a part of the length of said bottom plate, an oven supported on said longitudinal plates, a front plate, said side plates having right angular flanges engaging rabbets on the front stove plate, vertical  
 45 flue plates on the rear portions of the longitudinal plates, a top plate having a flue opening therein, on the side plates, said flue plates extending into the opening in said top plate, means on the flue plates engag-  
 50 ing opposite sides of the rear portions of the longitudinal plates, and means on the flue plates engaging the rear edge of the top plate of said oven and a damper removably journaled in said last mentioned  
 55 means and adapted to close the space between said flue plates.

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

FRANCIS M. BEVERLY.

Witnesses:

W. R. USRY,  
 H. B. MYERS.