

No. 747,814.

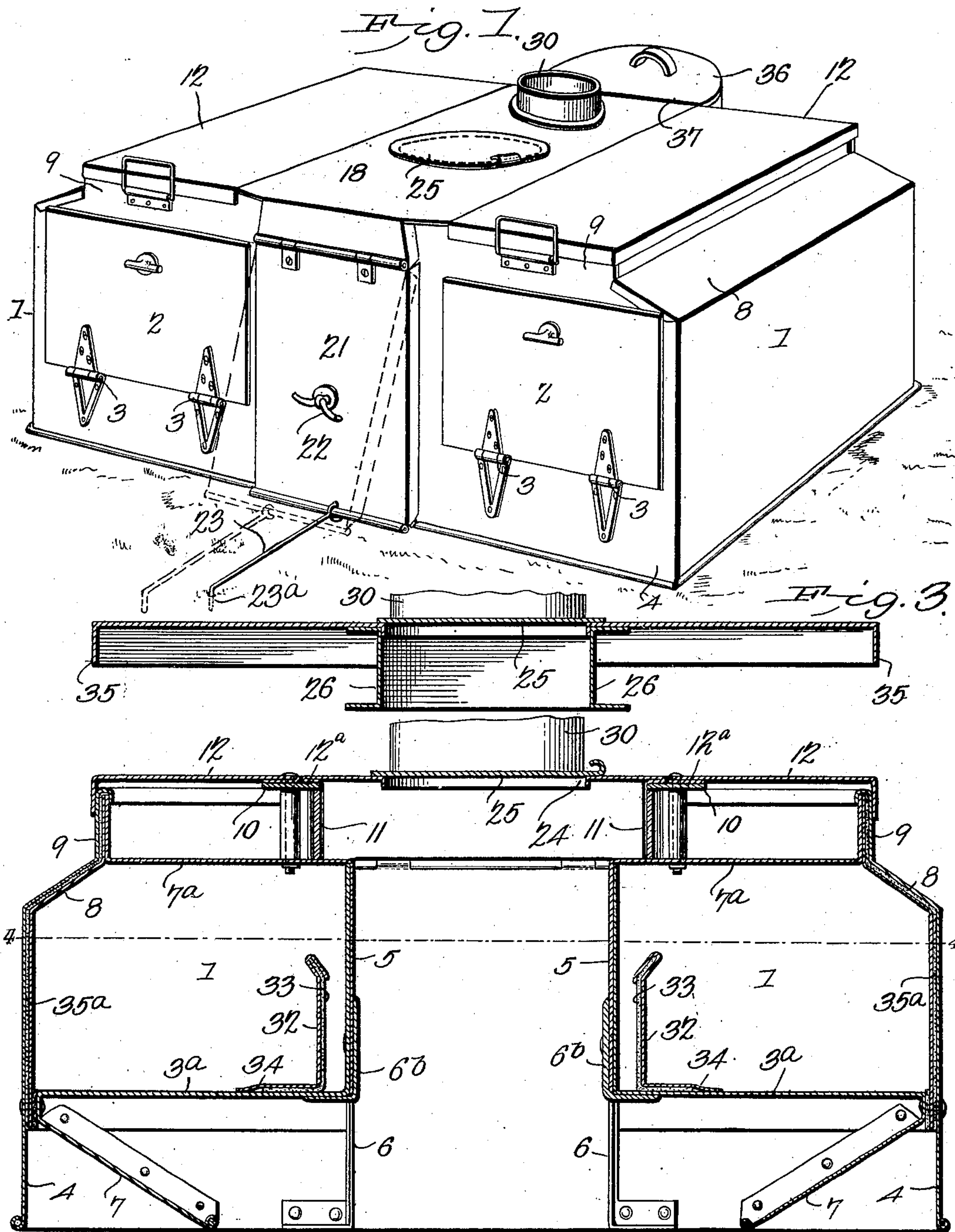
PATENTED DEC. 22, 1903.

J. WATSON.
PORTABLE STOVE.

APPLICATION FILED JUNE 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. C. Stewart
Wm. Ragger

Fig. 2. J. Watson, Inventor.
by *C. A. Snow & Co.*
Attorneys

No. 747,814.

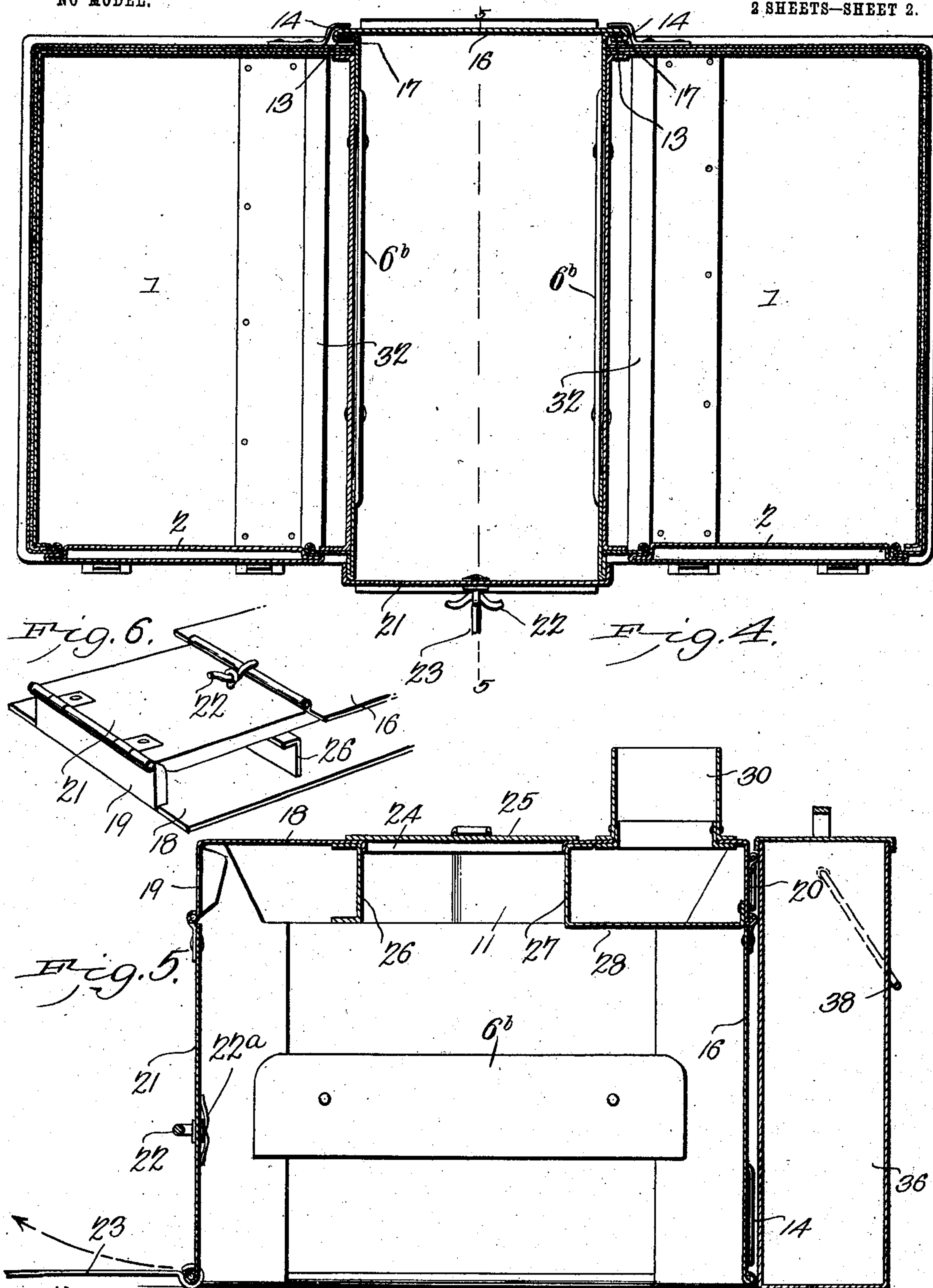
PATENTED DEC. 22, 1903.

J. WATSON.
PORTABLE STOVE.

APPLICATION FILED JUNE 26, 1903.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses
E. Stewart
Wm. Bagger

J. Watson, Inventor.
by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JAMES WATSON, OF MARINETTE, WISCONSIN.

PORTABLE STOVE.

SPECIFICATION forming part of Letters Patent No. 747,814, dated December 22, 1903.

Application filed June 26, 1903. Serial No. 163,266. (No model.)

To all whom it may concern:

Be it known that I, JAMES WATSON, a citizen of the United States, residing at Marinette, in the county of Marinette and State of Wisconsin, have invented a new and useful Portable Stove, of which the following is a specification.

This invention relates to portable stoves; and it has for its object to provide a stove which shall be especially adapted for all outdoor purposes, such as for camping parties, lumbermen, herders, prospectors, and others who are compelled to spend much time outdoors and who being obliged at times to move frequently require a stove which shall be simple in construction, easily manipulated, and sufficiently light to be conveniently transported from place to place.

My present invention, which may be described as being in the nature of an improvement on the portable stove for which Letters Patent of the United States No. 716,501 were granted to myself on the 23d day of December, 1902, may be briefly described as being composed of a pair of ovens adapted to be set upon the ground and connected by means of a covering device or connecting-plate which shall serve not only to maintain the said ovens in their proper position with relation to each other, but also to form a cooking-surface of considerable extent.

The invention further consists in the improved construction of the ovens whereby while they will be to a large extent surrounded by the flames they shall be protected from excessive heat, thereby obviating burning or scorching of the material that is being baked.

The invention further consists in so constructing the ovens and the connecting device that a direct draft shall be avoided, the fire being deflected over and around the tops of the ovens, thereby distributing the heat, intensifying the heat within the ovens, and producing generally a more satisfactory result.

My invention further consists in the improved construction, arrangement, and combination of parts tending toward the production of a device of the class referred to which shall possess superior advantages in point of

simplicity, durability, and general efficiency, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a portable stove constructed in accordance with the principles of my invention. Fig. 2 is a transverse sectional view of the stove complete. Fig. 3 is a sectional view showing a modified form of the top or connecting-plate of the ovens detached. Fig. 4 is a horizontal sectional view taken on the line 4 4 in Fig. 2. Fig. 5 is a vertical sectional view taken on the line 5 5 in Fig. 4. Fig. 6 is a perspective detail view showing part of the stove-top folded for transportation.

Corresponding parts in the several figures are indicated by similar numerals of reference.

The ovens of my improved stove, which are designated 1, are each composed of a casing provided at its front end with a door 2, hinged at its lower edge, as shown at 3, the front, rear, and outer sides of said casing being extended below the bottom 3^a, so as to form a supporting-flange 4. The inner sides 5 of the ovens are not extended downwardly, except at their front and rear edges, where downward extensions 6 are formed to assist in supporting the ovens upon the ground. Deflecting-plates 7 are disposed between the front and rear flanges 4, and said plates are inclined upwardly from the lower edges of said flanges to the outer edges of the oven-bottoms 3^a. The oven-tops 7^a have short inclined portions 8 at their outer edges, which not only impart a degree of neatness of appearance, but which also in wet weather serve to shed any moisture. The front, rear, and outer sides of the ovens are provided with upwardly-extending flanges 9, the front and rear parts of which support a top brace 10, between which and the top 7^a of the oven is interposed a support 11, which also serves as a smoke-deflector, as will be hereinafter set forth. I place over the top piece 10 a cap 12, of sheet metal, which does not extend entirely to the inner edge of the brace 10, but leaves a shouldered flange 12^a for the support of the connecting-piece, which will be presently described. The ovens are provided at

the inner edges of their rear ends with vertical-spaced flanges 13 and with oppositely-faced stops 14 at the lower ends of the latter.

The connecting-piece of my improved oven 5 comprises a rear plate 16, which has flanges 17 to engage the flanges 13 of the ovens and which by likewise engaging the stops 14 serve to hold the rear ends of the ovens properly connected and spaced. The rear piece 16 is 10 hingedly connected with the top piece 18. The latter is provided at its front and rear ends with downturned flanges 19 and 20, with the latter of which the rear piece 16 is hingedly connected. A fire-door 21 is hingedly con- 15 nected with the lower edge of the flange 19 of the top piece. This fire-door is of a suitable width to engage the flanged forward ends of the ovens, the fire-box being formed by the space between said ovens, which is shut 20 by the said fire-door. The latter is provided with a handle constituting a turn-button 22, which is adapted when the connecting-piece is folded for transportation to engage the edge of the opposite end piece or rear plate 25 16, so that the parts will be held securely together while in transit. The member 21, which I designate the "fire-door," is also provided at its lower edge with a hinged hook 23, the point of which may engage the ground, 30 as shown in Fig. 1 at 23^a, thus holding the door shut or open in any desired position for the purpose of admitting draft.

The top 18 is of such a width that it will normally fit between the shoulders 12^a of the 35 caps 12, so as to form, in connection with said caps, a perfectly smooth and unbroken top surface. Centrally in the said top piece 18 is formed a griddle-hole 24, provided with a cover 25, and in front and rear of said griddle- 40 hole, upon the under side of the top piece 18, are disposed flanges or deflectors 26 27, the former of which is disposed some distance in front of the front ends of the supporting members 11 upon the ovens and the latter of 45 which coincides with the rear ends of said members. From the lower edge of the flange or deflector 27 an angular deflecting-plate 28 leads to the lower edge of the depending flange 20 at the rear end of the top piece 18.

The operation of this device and the ad- 50 vantages of the same will be readily understood from the foregoing description, taken in connection with the accompanying drawings. To place the stove in condition for op- 55 eration, it is only necessary to place the ovens upon the ground suitably spaced apart, so that the flanges 17 of the plate 16, hingedly connected with the rear end of the spacing-piece, may be placed in engagement with the 60 flanges 13 and the stops 14 of the ovens. The top piece 18 is folded down into such a position that it will rest upon the inner edges of the tops of the ovens, the thickness of said plate being equal to that of the auxiliary cap 65 12, so that a perfectly flush and unbroken surface is produced. The fire-space, it will

be observed, is located between the ovens. The fuel which is fed through the door is placed direct upon the ground. As the fuel 70 becomes ignited the products of combustion are forced by the flange 26 in an outward direction above the ovens, they being compelled to make a circuit around the supports 11 before entering the space between the top 18 and the deflecting-plate 28, from which a 75 pipe 30 rises, through which the products may finally escape. As the fire becomes brisk the flames will spread below the ovens, the admission of cold air being prevented by the deflectors 7, which not only protect the 80 bottom of the oven from cold air, but also serve to reflect stronger heat to the point farthest from the fire. Cast-iron fire-plates 6^b upon the corners of the ovens protect the latter from being destroyed from the heat, 85 making the same practically as durable as ovens in a steel range. Roasting and baking may thus be performed therein with a high degree of success. In fact, to prevent the ovens from being overheated I place 90 within said ovens adjacent to their inner sides angular pieces of sheet-iron, which rest upon the bottoms of the ovens and which are slightly spaced from their inner sides. These angular metallic protectors, which are 95 designated 32, are exteriorly lined with asbestos 33 or other heat non-conducting material. The lower flanges of these angular pieces, with their interposed lining of asbes- 100 tos, will be somewhat raised above the bottoms of the ovens, as will be clearly seen at 34, and the edges of baking-pans inserted in the ovens will thus be somewhat raised from contact with the oven-plates at the points where the latter are most excessively heated. 105 Thus by this simple construction I not only interpose heat non-conducting material between the hottest of the oven-plates and the baking-pans, but the latter are slightly raised from contact with the said plates, thus 110 permitting a circulation of air to take place which effectually prevents injury to the material that is being cooked.

In the accompanying drawings I have shown the ovens as being constructed practically 115 each of an outer shell and an inner lining with an intermediate lining 35^a of asbestos. I desire to state that while this general construction is preferred it may be considerably modified within the scope of my in- 120 vention—thus, for instance, may asbestos lining be used at the rear end and in the door as well as around the sides of the ovens or said asbestos lining may be distributed in any other way that may be deemed suitable and 125 convenient. It is obvious that being a non-conductor of heat the asbestos lining will not only prevent excessive heating of the ovens at the precise points where it is located, but will also prevent loss of heat by radiation at 130 the points which are not exposed to the direct action of the flames.

By the modification of my invention which has been illustrated in Fig. 3 I simply increase the width of the top or spacing piece and provide the latter with a depending flange 35 of sufficient dimensions to fit over the ovens and to completely cover the auxiliary caps 12 of the same. This flange forms a neater finish, it serves to assist in bracing the ovens against displacement, and it forms a cooking-surface preferred by some on account of its perfect smoothness and the absence of joints therein.

I have shown in the drawings hereto annexed a pail or bucket 36, having a flat side 37 and a handle or bail 38. This bucket when filled with water may be conveniently placed in juxtaposition to the hinged plate 16 at the back of the fire-space and will thus serve for the purpose of supplying hot water, the contents of said bucket being readily heated when placed in position. This bucket not only serves as a water-heater, but will be found an extremely convenient adjunct for the purpose of carrying water, it being remembered that it is desirable in camps and places where this device is to be used to get along with as few impedimenta as possible.

I have in the foregoing described what I consider to be a simple and preferred form of my invention; but I desire it to be understood that I do not desire to limit myself strictly to the structural details herein set forth, but reserve the right to any changes, alterations, and modifications which may be resorted to without departing from the spirit or scope of the invention or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. A portable stove of the class described having a fire-box, the side members of which are composed of ovens equipped with auxiliary top pieces or caps spaced above the same, in combination with a connecting member consisting of a top piece having depending front and rear flanges, and rear and front members connected hingedly with said flanges, said hingedly-connected top, rear and front pieces coacting to form the top, the rear end and the front door of the fire-box and said hinged rear piece and the adjacent rear edges of the ovens being provided with interlocking flanges.

2. In a portable stove, a pair of ovens spaced apart to form a fire-box, spacing members constituting the top, rear and front ends of said fire-box, braces supported above the ovens, and caps disposed above said braces and terminating at a distance from the inner edges of the latter which support the top spacing member flush with the said caps.

3. In a portable stove, a pair of ovens spaced apart to form a fire-box, said ovens having braces spaced above the tops of said ovens, and supports interposed between the oven tops and the braces to form deflectors, in combination with spacing members disposed to form the top, front and rear ends of the fire-box, said top member being provided with transverse flanges forming deflectors and disposed in front and in rear of the supports interposed between the oven-tops and the superimposed braces.

4. In a portable stove, a pair of ovens spaced apart to form an intermediate fire-space, in combination with a spacing and connecting member comprising a top plate having depending front and rear flanges, a door hinged to the front flange and a back wall hinged to the rear flange, said ovens being provided with braces supported above the tops of the same and interposed spacing members forming deflectors, deflecting-flanges upon the under side of the top spacing member, a deflector connecting the lower edge of the rear deflecting-flange with the lower edge of the flange to which the rear wall is hinged, and a smoke-escape opening above said deflector.

5. In a portable stove of the class described, and oven adapted to form one side of the fire-space, said oven being provided with an interiorly-disposed angular flange secured to the bottom of said oven and spaced from the side thereof which constitutes the side of the fire-chamber, said flange having a lining of asbestos whereby the portion thereof supported upon the bottom of the oven is somewhat elevated above the latter to form an edge support for pans placed in the oven.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES WATSON.

Witnesses:

JOHN J. MCGILLIS,
MARGARET FORBES.