

May 15, 1951

P. N. OVERMAN
PORTABLE STOVE

2,552,861

Filed March 24, 1947

3 Sheets-Sheet 1

Fig. 1.

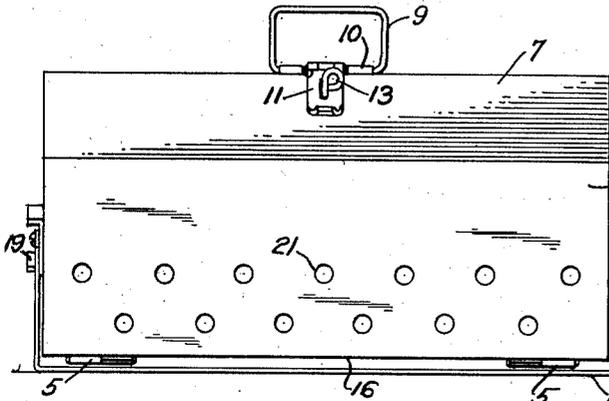


Fig. 2.

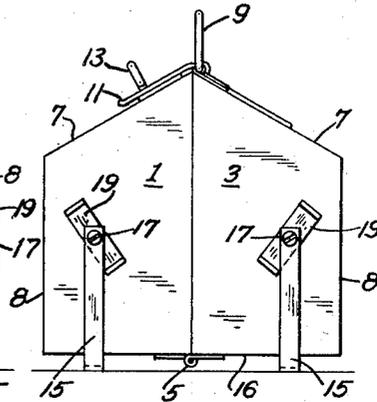


Fig. 3.

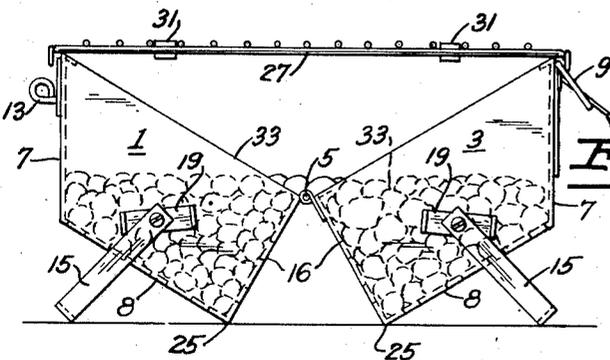
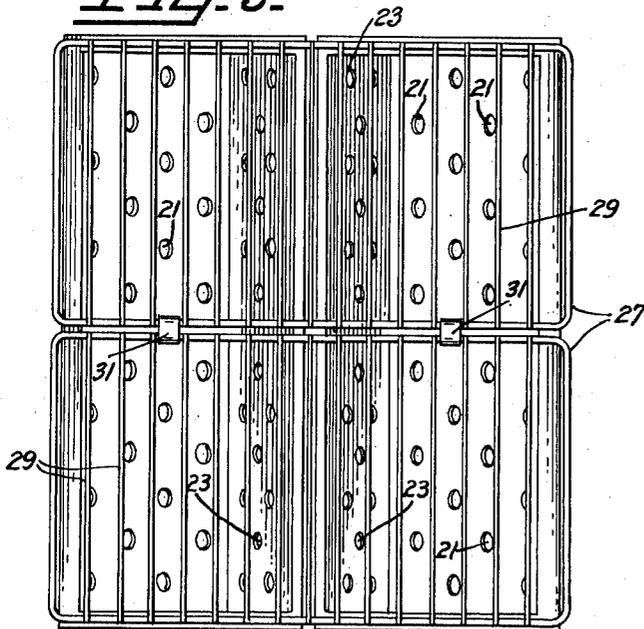


Fig. 4.

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Fig. 5.

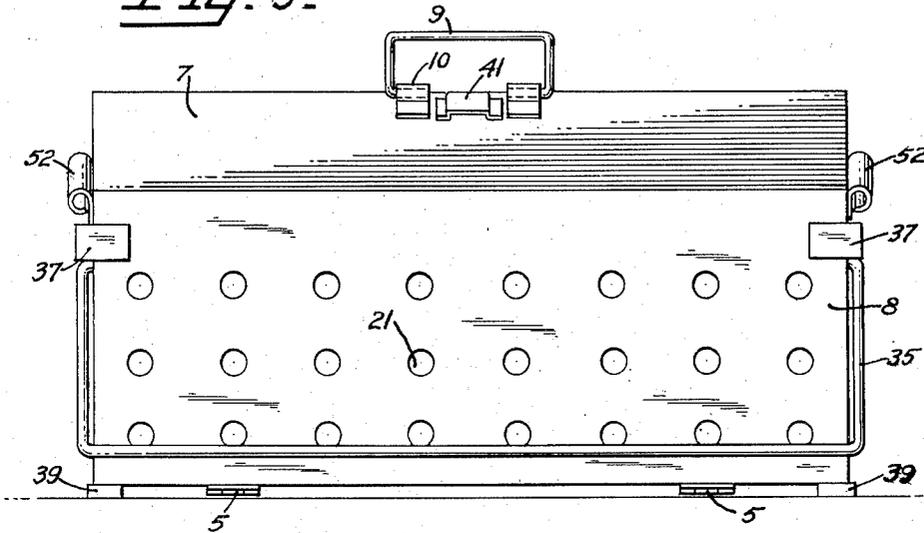
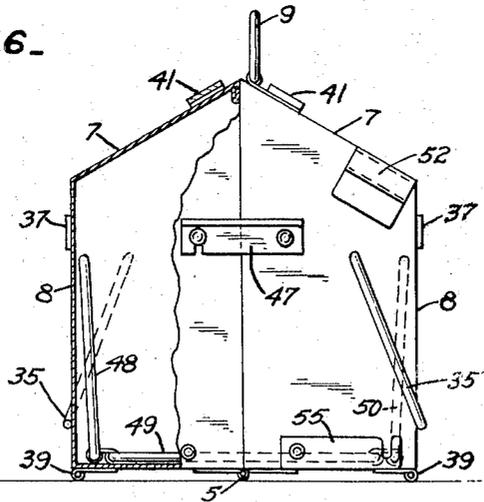


Fig. 6.



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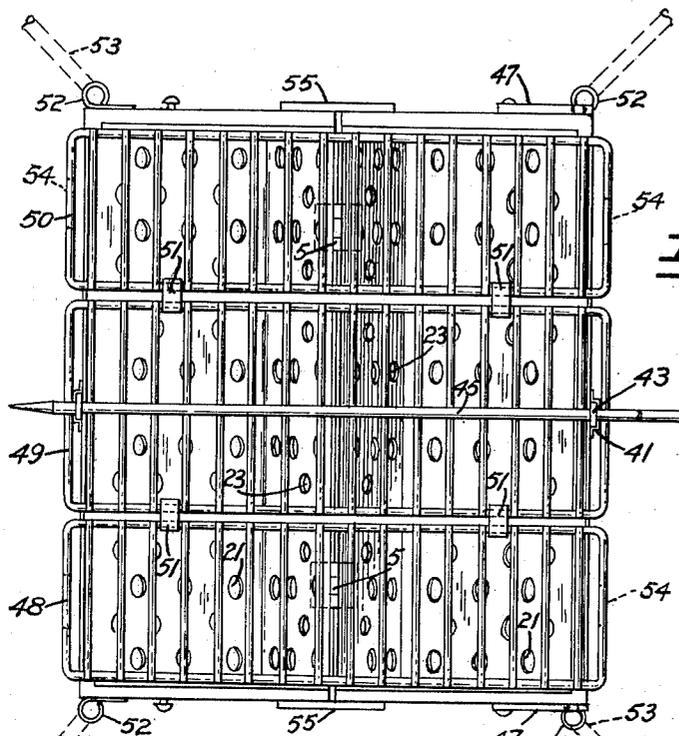


Fig. 7.

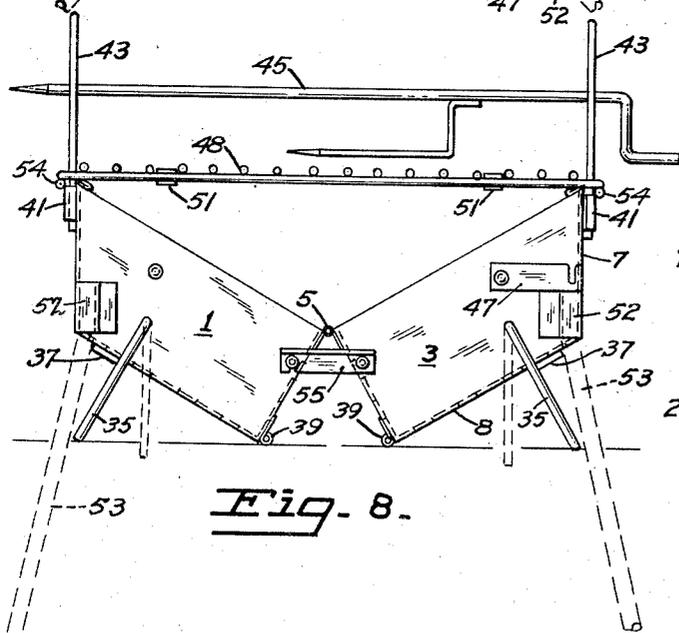


Fig. 8.

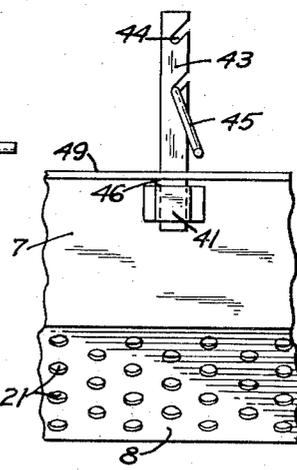


Fig. 9.

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UNITED STATES PATENT OFFICE

2,552,861

PORTABLE STOVE

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5 Claims. (Cl. 126—9)

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My invention relates to portable stoves, and more particularly to a box type of stove that can be easily carried and then opened to provide a relatively large fire box area.

The principal object of my invention is to provide a portable stove in the form of a box, that may be used to transport fuel and utensils therein, and which may be opened for use.

Further objects of my invention are: To provide a portable stove, hinged, and opening to form an extended cooking area; to provide a portable stove having a unique draft arrangement; and to provide a compact portable camp stove which can be readily made to rest solidly on rough terrain.

Other objects of my invention will be apparent or will be specifically pointed out in the description forming a part of this specification, but I do not limit myself to the embodiment of the invention herein described, as various forms may be adopted within the scope of the claims.

My invention may be more fully understood by direct reference to the drawing, wherein—

Figure 1 is a side view of the closed stove;

Figure 2 is an end view of the closed stove;

Figure 3 is a top view showing the stove as opened;

Figure 4 is an end view of the stove as opened;

Figure 5 is a side elevational view of a modification of the stove of Figure 1;

Figure 6 is an end elevational view of the stove of Figure 5, partially broken away to expose its interior;

Figure 7 is a top plan view showing the stove of Figure 5 in its set-up condition;

Figure 8 is an end elevational view of the stove of Figure 5 in the open condition depicted in Figure 7;

Figure 9 is a view illustrating a detail in the construction of the stove of Figure 5.

The stove of my invention is essentially a box of fireproof material, such as sheet metal, for example, having two similar halves 1 and 3, the box being split longitudinally and vertically along the center line. The two halves are connected by hinges 5 along the bottom division line only.

I prefer to incline the top surface 7 of each half upwardly from each side wall 8 to meet at a peak, to provide a handle 9 on one of the halves near the peak and anchored thereto by handle hinges 10, and to provide a hasp 11 engaging a dog lock 13 on the other half. Each half 1 and 3 is provided with a leg element 15 in the form of a U-bar extending from one end wall of each

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half, crossing beneath the bottom 16 of the box and running upwardly along the opposite end wall, the leg elements being hinged to the end walls by hinge bolts 17. The legs are free to rotate outwardly only to a limited angle, such rotation of each leg element being limited by leg element stops 19 on each end wall. These stops also position the legs vertically when the stove is closed.

The lower portions of each side wall of the stove are provided with draft holes 21, and the entire bottom surface of the box is provided with similar holes 23.

The stove may be opened by releasing hasp 11 and swinging the two halves outwardly thus causing the outward edges of the bottom to constitute the lowermost portions of the box. At the same time, the leg elements are swung outwardly and the stove comes to rest in a stable position, as shown in Figures 3 and 4. The stove rests, only partially open, on the outer bottom edges 25, and on the leg elements 15 as controlled by stops 19. In this connection, it is important to note that the area of contact with ground or other supporting surface has thus been reduced to spaced line contacts, which facilitates the setting up of the stove for use, in spite of the roughness of the terrain upon which it is to be placed.

In its set-up condition, the extended area of the top of the stove is large, and I prefer to provide a cooking top by the use of a folding grill 27 of a plurality of sections 29 joined by hinges 31. This grill, when folded, may be stowed within the closed stove.

In the stable open position, as shown in Figures 3 and 4, the bottom surface and the side walls of the stove form a pair of parallel fuel channels 33 in which fuel, such as, for example, charcoal or similar brickettes, may be deposited and burned. Both fuel channels are provided below with the draft apertures 21 and 23, as there is no flat surface of the stove, when open and in operation, in contact with the ground, and air may therefore enter the stove from the sides, and through the center between edges 25.

The angle of top surfaces 7 is correlated with the opening angle so that these surfaces are substantially perpendicular with the ground and lie in substantially vertical planes when the stove is open. In that manner, an extended cooking area is provided, with complete enclosure of the fire and with full draft.

I have found that the stove of my invention may be utilized to carry, not only the grate 27,

but also sufficient fuel for extended operation, and that the storage space required is small compared to the cooking area obtained when the stove is opened.

In the embodiment of Figure 5, the fire box is very similar to that of Figure 1, the departures from the construction of that illustrated in Figure 1 residing mainly in the appurtenances applied to the box.

In lieu of the leg elements 15 which extend under the floor of the box in its closed condition and function under these circumstances, as a support for the box, I provide similar U-shaped legs 35 which are not long enough to swing under the box, but which under the action of gravity will lie against the box sides, with the box in its closed condition.

However, when the box is open for use, these legs may function as such to stabilize the box in much the same manner as those in Figure 1, suitable limit stops being provided in the form of short strips 37 of metal affixed adjacent upper ends of each side wall 3 and extending slightly beyond the end walls.

With the legs designed to normally rest against the box sides as described, I provide at each corner of the bottom, a foot 39, preferably utilizing for this purpose a handle hinge similar to that which holds the handle to the box top. These feet serve to support the box in its closed condition, slightly above the supporting surface to provide clearance for the box hinges.

On each of the inclined top surfaces 7 to either side of the handle, I provide a spit rest holder 41, which in the set-up condition of the stove, will appear at each side of the cooking area where it is adapted to receive a spit rest in the form of a metal strip 43 having a plurality of downwardly sloping edge notches 44 to selectively receive and support a spit 45 above the cooking area.

Each spit rest is preferably flattened at one point adjacent its lower end as by a blow from a relatively sharp instrument to produce a teat 46 to act as a limiting stop for the spit rest in its holder.

Inasmuch as the spit rest holders occupy the position previously allotted to the hasp 11 and dog lock 13 of the embodiment of Figure 1, the corresponding function of such hasp and lock is served in the embodiment of Figure 6 by a hook fastener 47.

In the modified form of my invention, the grill is preferably formed in three sections 48, 49 and 50, joined by loose hinges 51, the center section 49 being of substantially the same shape but slightly less in area than the bottom of the fire box when in its closed condition, while each of the end sections 48 and 50 is somewhat less in width than the height of the side walls.

Thus, in packing the stove for transporting the same, the grill may be laid in the bottom with the end sections of the grill upright and resting against the side walls, thus leaving the box available, substantially in its entirety, for the packing of fuel and other items. Or, the end sections of the grill might, as an alternative, be folded down upon the center section, in packing the box.

When put in use, the grill may be precluded from slipping around on the open box, by a plurality of stops depending from the grill at locations about its periphery. These may take the

form of cleats 54 welded to the grill at such locations.

For those who prefer to support the stove at a substantial height above ground, I provide at each end wall 1 and 3 adjacent its upper edge, an element 52 similar to though preferably larger than one of the handle hinges, and adapted to receive a leg 53 in the form of a rod of the desired length. In the set-up condition of the stove, these leg-receiving elements will assume vertical positions to receive such legs. Such legs are each preferably bent at an angle to enlarge the ground area enclosed thereby, thus enhancing stability of the stove assembly.

When thus raised above ground, I prefer to rigidify the fire box to avoid undue sagging strain, by a hook fastener 55 adapted to span the hinge angle at each end of the box and tie the complementary end walls 1 and 3 together.

From the above description of my invention, it will be apparent that the same will fulfill all the objects recited therefor, and while I have described the same in considerable detail, I do not desire to be limited in my protection to such details except as may be necessitated by the appended claims.

I claim:

1. A portable stove comprising a box of fire-proof material, said box being divided vertically and centrally into halves, means hinging said halves together along the bottom division line only, whereby said box may be opened to permit opposite edges of the bottom thereof to constitute the lowermost portions of said box, said box halves having draft openings in walls thereof adjacent said bottom edges, a plurality of feet affixed to said box adjacent said bottom edges to provide clearance for said hinge means in the closed condition of said box and means engaging said box in its open condition for stabilizing the same with said box halves inclined at an angle to the horizontal and said bottom forming an inverted V.

2. A portable stove comprising a box of fire-proof material, said box being divided vertically and centrally into halves, each half having a top surface inclined upwardly toward the other to meet at a peak, means hinging said halves together along the bottom division line only, whereby said box may be opened to permit opposite edges of the bottom thereof to constitute the lowermost portions of said box, said box halves having draft openings in walls thereof adjacent said bottom edges, and means engaging said box in its open condition for stabilizing the same with said box halves inclined at an angle to the horizontal and said bottom forming an inverted V.

3. A portable stove comprising a box of fire-proof material, said box being divided vertically into halves, means hinging said halves together along the bottom division line only, whereby said box may be opened to permit resting upon the opposite edges of the bottom thereof, said box halves having draft openings adjacent said bottom edges, and means for limiting the opening of said box to a fixed angle between the bottoms of said halves, said means including legs extending from said box halves and, in the open position of said box, adapted to engage a supporting surface and means for rigidly bracing said legs in such surface engaging positions.

4. A portable stove comprising a box of fire-proof material, said box being divided vertically and centrally into halves, each half having a top surface inclined upwardly toward the other

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to meet at a peak, means hinging said halves together along the bottom division line only, whereby said box may be opened to permit resting upon the opposite edges of the bottom thereof, said box halves having draft openings adjacent said bottom edges, means for limiting the opening of said box to a fixed angle between the bottoms of said halves which will leave said top surfaces in substantially vertical planes, said means including a leg affixed to said box in its open condition at substantially each outer corner thereof, said legs being of sufficient length to support said open box above a supporting surface and a hook fastener spanning the angle between the bottoms of said halves and affixed to end walls of said box halves.

5. A portable stove comprising a box of fireproof material, said box being divided vertically and centrally into halves, each half having a top surface inclined upwardly toward the other to meet at a peak, means hinging said halves together along the bottom division line only, whereby said box may be opened to permit resting upon the opposite edges of the bottom thereof, said box halves having draft openings adjacent said bottom edges, means for limiting

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the opening of said box to a fixed angle between the bottoms of said halves which will leave said top surfaces in substantially vertical planes, a spit rest holder affixed to each of said top surfaces midway of the ends thereof, a spit rest engageable in each of said spit rest holders with the box in its open condition, and a spit adapted to span the distance between said spit rests and be supported thereby.

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