W. E. BAXTER.

PORTABLE STOVE.

APPLICATION FILED OCT. 17, 1916.

1,366,444.

Patented Jan. 25, 1921.

3 SHEETS—SHEET 1.

Fig. 1

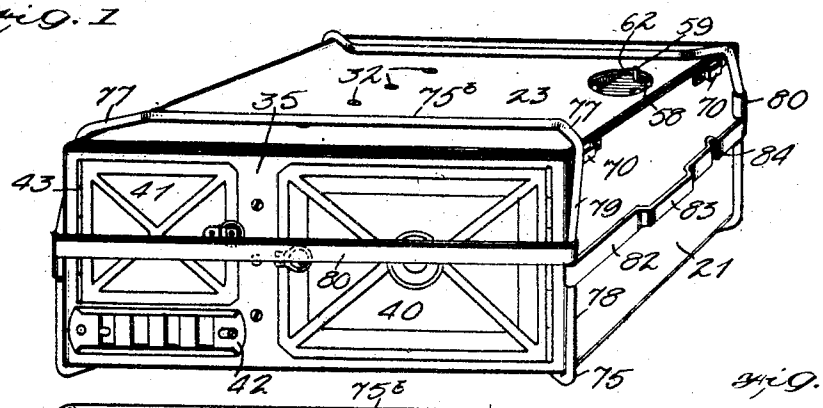


Fig. 2.

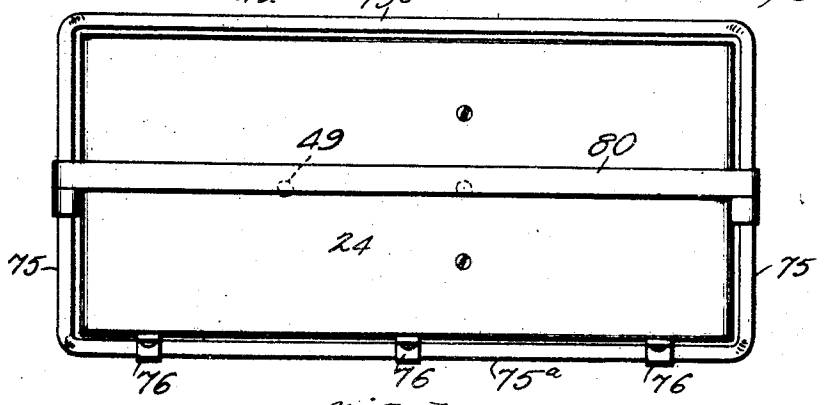
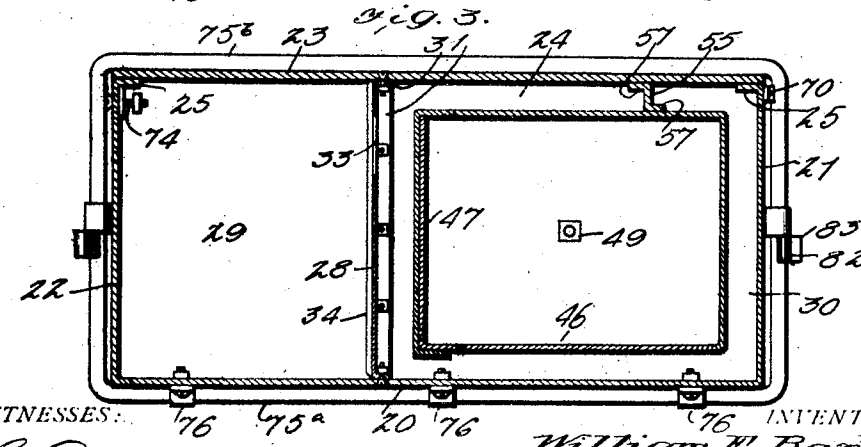


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 4.

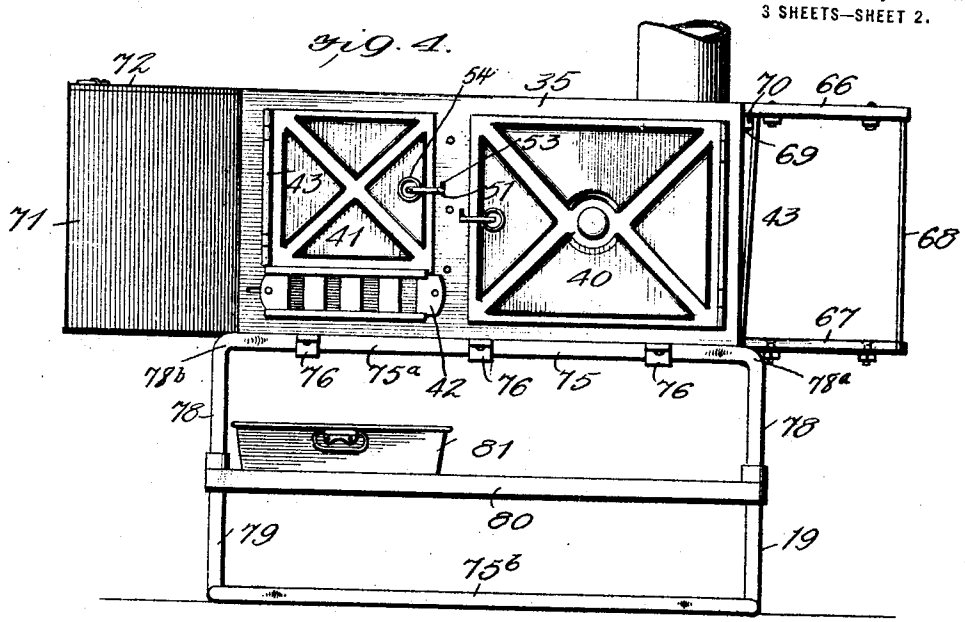


Fig. 5.

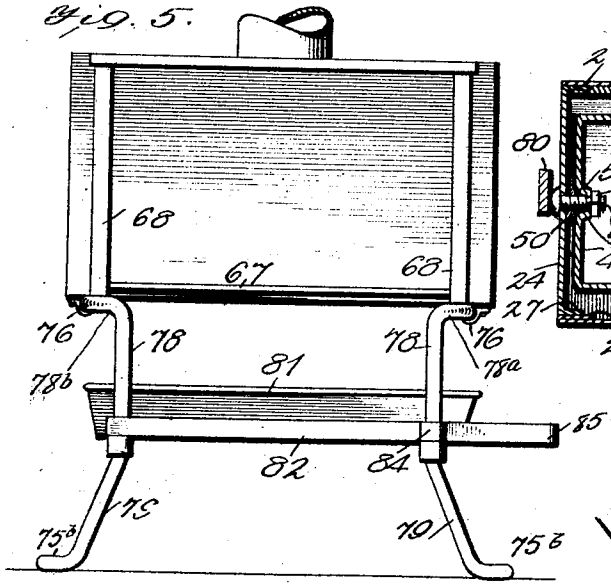


Fig. 6.

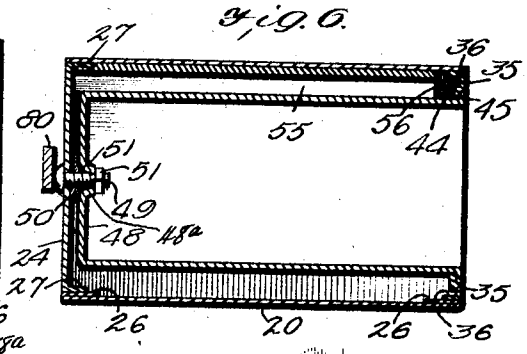


Fig. 15.

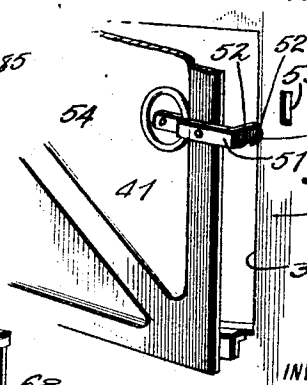
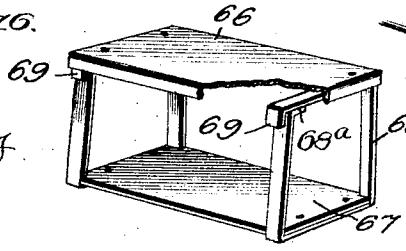


Fig. 16.



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3 SHEETS—SHEET 3.

Fig. 7.

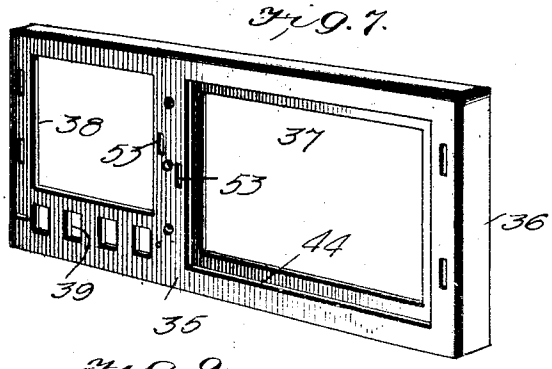


Fig. 8.

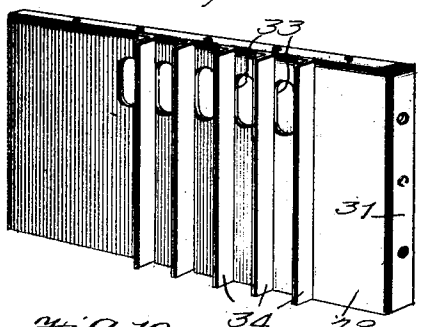


Fig. 9.

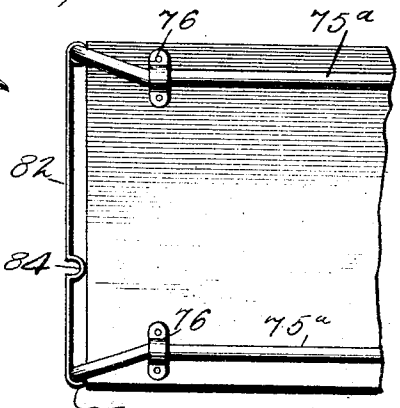


Fig. 10.

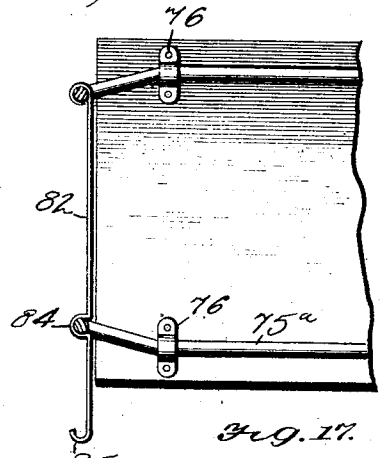


Fig. 11.

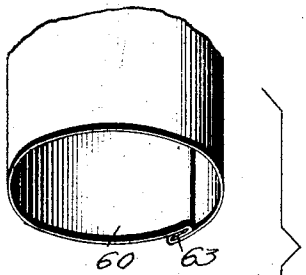


Fig. 13.

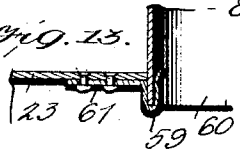


Fig. 17.

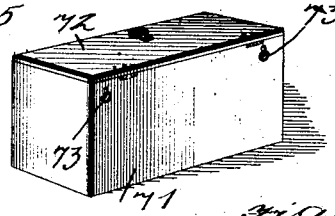


Fig. 12.

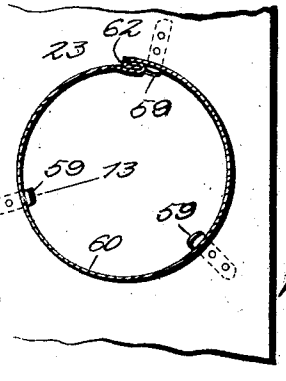
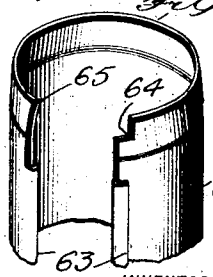


Fig. 14.



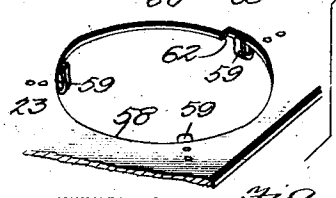
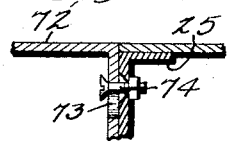


Fig. 15.



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PORTABLE STOVE.

1,366,444. Specification of Letters Patent. Patented Jan. 25, 1921.

Application filed October 17, 1916. Serial No. 126,099.

To all whom it may concern:

Be it known that I, WILLIAM EDWARDS BAXTER, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Portable Stoves, of which the following is a specification.

My present invention relates generally to portable stoves, and more particularly to stoves of this nature, complete in detail in all the parts thereof, intended for the ready use of automobile tourists, campers and others, capable of effective service under various conditions.

An object of my present improvement is to provide a stove that will be efficient and serviceable and will give tourists, campers, and health seekers, the benefit of cooking facilities in the open, or on rainy days, within doors, under tents, or various other covers.

Another object is to provide a portable stove in which may be stored food and vessels, or cooking and serving outfits, and which may be carried by hand, in a light vehicle, or checked as baggage in traveling.

A still further object is to provide a stove of the character described, the supporting members of which are permanently attached to, and adapted to be folded about, the body of the stove, to protect the same when stored or in course of transportation, and to form rigid and strong supports and act as a warming device when erected.

A still further object is the provision of a stove of the character described, which may be economically constructed, and in which such parts as are liable to deterioration may be easily and quickly replaced.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts illustrated in the accompanying drawings, forming a part of the specification, and wherein;—

Figure 1 is a perspective view of my improved stove folded;

Fig. 2 is a rear elevation thereof;

Fig. 3 is a vertical transverse section through the stove in folded position;

Fig. 4 is a front elevation of the stove erected ready for use;

Fig. 5 is a side elevation thereof;

Fig. 6 is a vertical longitudinal section taken on a line through the oven;

Fig. 7 is a detail perspective view of the front plate removed;

Fig. 8 is a similar view of the partition removed;

Figs. 9 and 10 are partial bottom plan views, illustrating the parts respectively held in folded and extended position, the legs being shown in section in Fig. 10;

Fig. 11 is a detail perspective view illustrating the connection of the stove pipe with the pipe opening of the stove;

Fig. 12 is a horizontal section through the stove pipe looking downwardly upon the part to which the stove pipe is connected;

Fig. 13 is a detail vertical section taken substantially on the line 13—13 of Fig. 12;

Fig. 14 is a detail perspective view of the upper end of the stove pipe;

Fig. 15 is a detail perspective view illustrating the latch of one of the stove doors;

Fig. 16 is a detail perspective view of the double warming shelf removed;

Fig. 17 is a detail perspective view of the water tank removed; and

Fig. 18 is a detail vertical section through one of the connections of the water tank with the stove.

Referring now in detail to these drawings the body of the stove consists of a rectangular casing, preferably formed of sheet metal, and of which the base appears at 20, the sides at 21 and 22, the top at 23, and the back at 24, referring particularly to Figs. 1, 2 and 3 of the drawings.

According to my present construction, the sides 21 and 22, as clearly seen in Fig. 3 are integral with the bottom 20, being bent upwardly from the sides of the bottom at right angles thereto, with their top edges having inturned flanges 25, providing for he connection of the top 23, secured to said flanges by suitable means, preferably electrical spot welding. It is apparent that the separate top permits of the use of a top plate of heavier gage than the remaining portions, thus adding to its durability and consequently its life in use. Before the strip of which the base and sides are formed is bent in shape, its longitudinal side edges are preferably bent inwardly and flattened thereupon to form reverting flanges 26, as seen in Fig. 6, thus reinforcing the forward and rear edges of the base 20 and the sides 21 and 22.

The back plate 24 is preferably formed of a single piece of sheet metal, having flanges

telescoped within the rear of the casing, the flanges 27 thereof appearing in Fig. 6 and being secured to the inner surfaces of the casing at the rear thereof, preferably by electrical spot welding, so that the outer surface of the back plate is flush with the rear edges of the top, bottom and side walls.

A division plate 28 is secured longitudinally within the body between its sides 21 and 22 and parallel therewith, dividing the space within the casing into two compartments, namely, a fire box 29 and an oven space 30, the said division plate fitting closely within the casing and having thereabout laterally extended flanges 31 as seen in Figs. 3 and 8, apertured to correspond with apertures in the walls of the casing adjacent to which the flanges 31 extend, for the purpose of receiving connecting bolts 32, securely fastening the partition plate in position. As seen in the detail Fig. 8 of the division plate 28, this plate is provided near its upper edge with a plurality of openings 33, providing for the passage of the products of combustion from the fire box 29 to the oven space 30. As also shown in the same figure, the partition plate 28 is provided on the fire box side thereof a plurality of vertical angle-bars 34, forming strengthening ribs to stiffen the plate and space the fuel therefrom.

The front plate 35 of the casing, as seen in Figs. 1, 4 and 6, and in the detail Fig. 7 is formed of a single sheet with flanges 36 therearound to telescope within the front portion of the casing, the flanges and consequently the front plate being properly secured to the forward portion of the casing walls preferably by electrical spot welding, substantially the same as the back plate 24. This front plate 35, as seen in Fig. 7, is provided with an opening 37 at one side leading into the oven space 30, and has an upper opening 38 at its opposite side leading into the fire box 29, and below this latter opening is further provided with a series of draft openings 39, such openings 37, 38 and 39 of the front plate being closed in use by doors 40, 41, and 42, of which the doors 40 and 41, covering the oven and fire box openings are hinged to the front plate 35 at 43 at their outer edges as will be hereinafter more fully described. The door 42 controlling the draft openings is slidable laterally beneath the door 41.

The opening 37 of the front plate 35 is surrounded by a marginal depressed portion 44 standing at a right angle, which serves to stiffen the front plate 35 and to receive and seat the forward flanged right angle edges 45 of the oven 46, which as seen by a comparison of Figs 3 and 6, is positioned within the oven space 30 in spaced relation to the walls of the casing. By reference to Fig. 3, it will be noted that the side walls of the oven 46 are made from a single sheet of metal bent into rectangular form, the ends of which metal sheet are lapped the entire length and width of one side wall of the oven 46 nearest the partition plate 28, as seen at 47, the two portions so lapping being preferably connected by electrical spot welding, thus giving a double thickness for protection and strength at the point where the heat strikes the oven as it comes through the openings 33 of the partition plate. The oven 46 is, of course, open at its forward end and is closed at its rear end by the end plate 48, and this end plate is provided with an opening 48^a punched inwardly therefrom so as to form a guide for the bolt 49 which passes through the rear plate 24 of the casing, and the nut 50 which serves not only to hold said bolt rigidly in place with regard to the casing, but also serves as a spacing means to permit the passage of heat around the end of the oven. This bolt 49 is provided on its inner end with a nut 51^a which holds the inner end of the oven securely in place relative to the casing, and thus drawing and seating its flanges 45 snugly within the marginal depression 44 surrounding the opening 37 of the front plate 35, as before mentioned. To remove the oven from the casing with ease for repairs or cleaning, it will be sufficient to unscrew the nut 51^a and pull out the oven body to the front. For easy replacement the oven body is guided exactly to its proper alinement and position by sliding movement along the lower face or flange of the brace or damper plate 55.

Each of the front doors 40 and 41 is retained in the closed position by means of hinges 43 made up in part of the doors, and a latch arrangement comprising a bar 51 secured fast to the door and having an inwardly projecting arm 52, notched as at 52^a, which bar is rigidly secured to the door and also serves as a holder for the ring 54, which serves as a convenient handle to the door when said ring is swung out, but the said ring may be swung close in against the face of the door when desired, as shown in Figs. 1 and 15.

This notched arm 52 has its lower inclined surface 52^b slightly below the lower wall of the slot 53, cut in the front plate 35, so that when the door is swung to the closed position the inclined face 52^b will ride up on the lower wall of said slot, causing the resiliency of the metal parts to snap the latch into engagement, and the door will be held firmly closed against accidental displacement. In order to open the door, it will be simply necessary to lift on the bar 51, disengaging the latch from engagement with the lower wall of the slot 53. This lifting can be conveniently done by inserting a lifting tool through the ring 54.

Thus it will be seen that this latch automatically operates when the door is swung

quickly to, and the door may be opened by simply lifting up on the latch and swinging it outward.

The latch, be it noted, is rigidly attached to, and is to all intents and purposes an integral part of the door.

When the stove is in the knock-down position, as shown in Fig. 1, the bar 80 covers the rings 54, and not only prevents rattling, but also prevents the rings from swinging outward. Moreover, this bar serves as an auxiliary latch to prevent the doors from opening.

Within the casing a combined brace and cut-off plate 55 is provided, shown most clearly in Figs. 3 and 6, which is shown as Z-shaped in cross section, and is secured to the underside of the top plate, terminating at a distance from the front wall of the casing, so as to provide a passage 56 for the hot products of combustion, as shown in Fig. 6. This cut-off plate not only serves as a baffle plate, but also serves as a guide and brace at the top of the oven. The lower and unattached flange of this plate 55 tends to be expanded by the heat to form a tight joint with the top of the oven, except at the open space 56.

The top plate 23 is provided with an opening 58 for the lower end of the stove pipe, and around this opening I provide a plurality of upwardly-opening hooks 59, preferably three in number, which are spaced around the opening 58 and have their inner ends 61 secured to the top plate 23, as shown most clearly in Figs. 1, 12 and 13. These hooks are used to lock the lower end of the stove pipe in place, by pressing outwardly against the lower, inner wall of the pipe 60. The opening 58 in the top plate 23 is provided with a shoulder 62 (see Fig. 12) to engage, in connection with one of the hooks 59, the interlocking folds 63 of the lower end of the stove pipe, and hold same in locked position when the stove pipe is mounted in place on the stove.

The stove pipe 60, open at one side, as shown in Fig. 14, is provided with oppositely-disposed engaging flanges 63, which flanges tend to hook into each other owing to the resiliency of the metal when it is desired to set up the pipe, as shown in Fig. 11, but which permit the pipe to be rolled in a compact mass and stored within this portable stove.

In such event, the pipe is stowed in the furnace compartment of the stove. It will be seen that when the lower end of the stove pipe is placed *in situ*, as shown in Figs. 1 and 13, these hooks will serve to keep the lower part of the stove pipe distended, and will lock the flanges in the engaging position against inward pressure from any cause.

As shown in Fig. 14, the upper end of the stove pipe is cut away at the upper portion of one edge, as at 64, and has the adjacent portion of the opposite edge curved inwardly, as at 65, so that when the flanges 63 are interlocked, the lip 65 snaps into and engages the recess formed by the notch 64, and thus a lock is provided at the upper end of the pipe for preventing the said pipe from being compressed or unlocked at its upper end; the one piece of pipe being sufficient to cause the necessary draft for this portable stove.

As seen in Figs. 4 and 16 a double warming shelf is provided, comprising the upper and lower plates 66 and 67 connected together by brackets 68, in spaced relation. These brackets are preferably formed of a single metal bar lapped over, as at 68^a, and having the free ends 69 serving as hooks to engage the eyes 70 formed by staples secured to the casing, as shown most clearly in Figs. 2 and 4.

The plates 66 and 67 are preferably detachably secured to the brackets as by means of suitable bolts so that the plates and the brackets may be knocked down and conveniently stored within the stove in transport.

The inner edge of the frame constituted by the plates 66 and 67 and the brackets 68 rests on the bend 78^a of the supporting legs, thus supporting the warming shelves as will be hereinafter more fully described.

The water tank 71, see Figs. 4 and 17, preferably rectangular in cross section, is provided with a cover 72 and engaging notches 73 adapted to slip over and engage the bolts 74 (see Fig. 18), by means of which the tank is connected to the casing of the stove. The inner bottom edge of this tank is supported upon the bend 78^b of the legs 78, as shown in Fig. 4, as will be hereinafter more fully described.

A pair of supporting members 75 is pivotally attached to the bottom of the stove casing a short distance from and parallel with the front and back of the stove by suitable means, preferably clips 76, the supporting members being substantially quadrangular in shape and being of such dimensions that, when folded up around the casing, as in Figs. 1, 2, and 3, they will snugly fit the same and form an effective protection therefor.

The members 75 just mentioned are each preferably made of an integral piece of metal circular in cross section, the top and bottom members, 75^a and 75^b thereof being identical, each with a central section which is substantially straight and with inclined end portions 77 which lead to the sides formed of straight and inclined portions 78 and 79, the top and bottom members just mentioned being in parallel horizontal planes but occupying different vertical

planes due to the fact that the portions 79 of the side are bent at angles as seen with respect to the portions 78. This structure is such that the frames when folded will snugly encompass the ends of the stove casing as seen in Fig. 1, with the major portion of the sides of such frames extending along the corners of the casing to afford maximum protection and as seen in Figs. 1 and 3, the reverse position of the obtuse angle of the portions 79 covers and protects the staples 70, and the heads of bolts 74. It will be noted that the bends 78[a] and 78[b] of the supporting members serve to support the shelf frame on one side, and the water tank on the other, respectively, thus taking the weight off the fastening means shown near the top of the shelf frame and the water tank, respectively.

With the supporting members 75 in the position as shown in Figs. 1 and 2, horizontal bars 80 are engaged with the sides of the frames to extend across the front and rear of the stove casing, the front bar covering the two doors 40 and 41, so as to protect same and rings 54 and keep the latter closed during transportation and storage, these same bars similarly connecting the sides of the same as seen in Fig. 4 with the frames extending downwardly in position for use in order to form a rack upon which warming pans or similar utensils 81 may be placed.

Transverse latch bars 82 are pivotally attached to the sides of the supporting members 75 to extend along the sides 21 and 22 of the casing in folded position, as shown in Fig. 1, having bent or recurved ends 85 to engage the opposite supporting members, and having offset portions 83 intermediate their ends to form handholds, by which the entire structure in the folded position, as shown in Fig. 1, may be raised and transported from place to place. The latch bars 82 are also provided intermediate their ends with bent clamping portions 84 for engagement with one of the supporting frames when the latter are turned downwardly in operative position, inasmuch as the supporting frames in this position are closer together than they are in their folded position around the casing, as shown in Fig. 1, so that the latch bars may, in the erected position, effectively prevent spreading and rocking movement of the supporting frames 75.

The hooks 85, at the free ends of the latch bars 85, project outwardly when the stove is shown set up in Fig. 5, and serve as convenient arms on which to hang the various articles used in connection with the operation of the stove.

In operation, in dismantling the stove from its operative position, as shown in Fig. 4, the latch bars 82 are disengaged from the opposite supporting frame 75 after the warming shelf has been dismounted and packed with the duffle or cooking and service outfit in the tank 71, and the latter placed within the oven compartment, and the pipe 60 and other necessary utensils are placed in the fire box compartment and the doors closed, the supporting frames 75 are then folded up around the casing to the position shown in Fig. 1 and the latch bars 82 again attached, this time at their recurved ends 85 to the opposite supporting frame 75, thus securely fastening all of the parts and forming a single, compact, complete, and convenient package which may be readily transported and again quickly erected when occasion requires.

The several constructions formerly described with respect to the various parts combine to make a light, strong, rigid, portable stove compact and complete in detail as and for the purpose set forth, effecting considerable economy in construction and increased efficiency in cooking, baking, and heating qualities. The removable division plate and also the separate stove top before described provide means whereby quick and effective repair or replacement of those parts of the stove which suffer most from the heat of the fire, may be made, while the demountable, double warming shelf and the fluid tank add materially to the range of use of the stove and to its effectiveness in use and the alinement and easy removal and insertion of the oven provides for cleaning the oven space at all times, as well as for repairs to the division plate.

It is further to be seen that the folding supporting members, in addition to their function as supports in the use of the stove, effectively protect the latter when folded thereabout and their connections provide for readily carrying the stove by hand, as well as a warming rack beneath the stove for pans and their contents, as before described. It is obvious also that the detachable and demountable collar or pipe 60 is an effective part for this portable stove which, in the folded position of the stove, may be readily removed leaving top plate 23 clear and rolled to occupy a minimum storage space and which collar or pipe, as before stated, is itself of sufficient length to complete the desired draught function of this stove.

I claim:

1. A cooking apparatus comprising an outer casing a removable division plate arranged to divide said casing transversely and forming a fire box and an oven space, an oven within said oven space and spaced therefrom, and a combined brace and cut-off plate extended downward from the outer casing and contacting with said oven, said combined brace and cut-off plate arranged

parallel with the said division plate and extending from the rear of the casing to within a spaced distance of the front wall thereof.

2. A cooking apparatus comprising an outer casing, a removable division plate extending from front to rear of the casing and dividing the same into side compartments respectively forming a fire box and an oven compartment, an oven within said oven space the walls of which are spaced entirely therearound from the walls of the casing and said division plate, and a combined brace and cut off plate completely filling the space between the top wall of the oven and the top wall of the casing said plate being disposed at a point, intermediate the sides of the oven and extending from the rear wall of the casing parallel with the said division plate to a point adjacent the front wall of the casing, and leaving a space between its forward end and the front wall of the casing through which the products from the fire box may find their way to the outer side of the oven.

3. In combination, a cooking apparatus, comprising a casing, a division plate and means for removably securing said plate within the casing, said plate being provided with a plurality of elongated draft openings in its upper portion and having a plurality of vertical ribs alternated with said openings.

4. In combination, a cooking apparatus, comprising a casing, the bottom and sides of which are formed of one strip of metal of a given gage, a top of heavier gage affixed thereto, one piece front and back plates, a plate dividing said casing laterally to form a fire box and an oven space, said front plate provided with an opening leading into said oven space and having a marginal depression about said opening forming an inwardly offset rim which serves to stiffen the front plate, and an oven comprising a casing open at one end and having outwardly extended flanges at the open end, said oven extending into the oven space through said opening and means connecting the oven at its rear end with the rear wall of the casing, acting to draw said flanges within said marginal depression and snugly seat the same against said rim.

5. In a cooking apparatus of the character described, a casing, members pivotally connected thereto, and adapted to be swung into different positions, in one position supporting said casing and in another affording protection during transportation, and means connected with one of said members and adapted to be engaged with the other thereof to secure said members in either of said positions.

6. In a cooking apparatus of the character described, a casing, members pivotally connected to the bottom thereof and adapted to be swung into different positions, in one position supporting said casing and in another affording protection thereto during transportation, and means for securing said members in position operative also to secure said members in the other position.

7. In a cooking apparatus of the character described, a casing, members pivotally connected to the bottom thereof and adapted to be swung into different positions, in one position supporting said casing, and in another affording protection thereto during transportation, means for securing said members in said positions, means being connected with one of said members and adapted to be engaged with the other thereof to secure said members in either of said positions.

8. In a cooking apparatus of the character described, a rectangular casing, a pair of frames pivotally connected to the bottom thereof, and adapted to be swung into different positions, in one position serving as a support therefor and in another position folded about the casing and affording protection therefor, means for securing said frames in said positions said means being connected with one of said frames and engageable with the other thereof to secure said frames in either of said positions and extending along the sides of the casing in folded position.

9. In a stove, a casing, a pair of substantially rectangular frames disposed about said casing, said frames each comprising side members, connecting end members, and an intermediate member connected to the end members, said frames being pivotally connected to the bottom of the casing and adapted to be swung down to serve as supports for the casing, and latch bars pivotally connected to the end members of one frame and adapted to engage with the end members of the other frame to lock said frames in either position.

10. In a stove, a casing, a pair of substantially rectangular frames, said frames comprising end members and side members, the end members being off-set relative to the vertical plane of the side members, the members being bent so that when the frames are disposed about the casing, with the vertical side members in alinement with the corners thereof, the end members will lie back a spaced distance from the edges thereof, said frames being pivotally connected to the bottom of the casing, and a latch bar swung on a vertical member of one frame adapted for locking engagement with a vertical member of the other frame.

11. In a cooking apparatus, a casing, a pair of frames comprising vertical side members and offset end members, said frame being pivotally connected by an end member to the bottom of the casing and adapted to

be swung into different positions, the vertical side members being closer in one position than in the other, a swingable latch bar mounted on a vertical member of one frame and having a terminal curved portion adapted to engage with a vertical member of the other frame when in one position and adapted to engage with said member in the other position.

12. In a stove of the character described, a casing, an intermediate clasp, a pair of frames, each frame having parallel end members and each having side members, said frames being pivotally connected at one end member to the bottom of the casing and adapted to be swung into different positions, in one position depending below and serving as a support, in the other position being folded about the casing, and longitudinal and horizontal bars connecting the side members of each frame, said bars in the first mentioned position serving as a warming rack, and in the second position affording protection to the front, back and sides of the stove.

13. In a stove, a casing, supporting frames pivotally attached to the casing and foldable thereabout in disuse, and latch bars engageable with said frames to hold the latter in operative and inoperative positions, each of said latch bars having integral clasps at its ends, and at an intermediate point.

14. In a stove, a casing, supporting frames pivotally attached to the casing and foldable thereabout in disuse, latch bars engageable with said frames to hold the latter in operative and inoperative positions, each of said latch bars having integral clasps at its ends, and at an intermediate point, and also having offset intermediate portions forming handles in the folded position.

15. In a stove, a casing, supporting frames pivotally attached to the casing and foldable thereabout in disuse, latch bars engageable with the said frames, said latch bars having an intermediate handle for carrying the casing with the frames in folded position, and said latch bars having clasps at their ends engaging the said frames in the folded position and movable to more tightly grip the latter when the casing is lifted by said handles.

16. A cooking apparatus comprising a casing, supporting leg frames hinged to said casing on opposite ends thereof and provided with shoulders adjacent to but projecting beyond the sides of said casing, and a frame carrying warming shelves attached to said casing and having its lower inner edge resting on the adjacent pair of said shoulders.

17. A cooking apparatus comprising a casing, supporting leg frames hinged to said casing on opposite ends thereof and provided with shoulders adjacent to but projecting beyond the sides of said casing, and a frame carrying warming shelves attached to said casing and having its lower inner edge resting on the adjacent pair of said shoulders, with a water tank connected to said casing at the opposite side from said warming shelves and having its lower inner edge supported upon the opposite shoulders of said supporting frames.

18. A cooking apparatus comprising a casing, supporting leg frames hinged to said casing on opposite ends thereof and provided with shoulders adjacent to but projecting beyond the sides of said casing, and a water tank detachably connected to one end of said casing near its upper end and having its lower inner edge resting upon the adjacent shoulders of said supporting frames.

19. In a cooking apparatus the combination with a casing provided with eyes near the upper edge thereof, and having supporting leg frames hinged to opposite ends thereof, said frames being provided with shoulders projecting beyond the sides of said casing, of a rectangular frame provided with two parallel shelves and with hooks adapted to engage said eyes, the lower inner edge of said frame being adapted to rest upon said shoulders.

20. In a cooking apparatus the combination with a casing, of a top plate closing the top of said casing and provided with a hole for the draft pipe with a series of hooks grouped around said draft pipe hole and provided with shanks secured to said plate, and a draft pipe in the form of a slotted curved sheet having flanges adjacent to its edges and adapted to engage each other when the draft pipe is ready for use, the said hooks serving to engage the bottom of said draft pipe and to securely lock the said flanges against disengagement when the draft pipe is mounted on the stove.

21. In a cooking apparatus the combination with a casing provided with a top plate perforated to receive the stove pipe, and a series of U-shaped hooks opening upward and located around and projecting into said perforation, of a draft pipe comprising a slotted plate having engaging flanges adjacent to said slot, the said pipe being adapted to fit between the edge of said hole and said hooks and the said hooks serving to lock the said flanges against disengagement.

22. In a cooking apparatus the combination with a casing, of a top plate closing the top of said casing and provided with a hole for the draft pipe with a series of hooks grouped around said draft pipe hole and provided with shanks secured adjacent to said pipe hole, and a draft pipe in the form of a slotted and curved sheet having flanges adjacent to the slotted por-

tion adapted to engage each other when the draft pipe section is ready for use, the said hooks serving to engage the lower, inner wall of said draft pipe and to securely lock the said flanges against disengagement when the draft pipe is mounted on the stove, said draft pipe being also provided with a notch at the upper end thereof, and with a curved lip bent inwardly and adapted to engage said notch and to lock the upper part of said draft pipe section against compressive strains tending to disengage said flanges.

23. In a cooking apparatus the combination with a casing provided with a top plate perforated to receive the draft pipe, and a series of U-shaped hooks opening upward and located around and projecting into said perforation, of a draft pipe comprising a slotted plate having engaging flanges on its edges, the said pipe being adapted to fit between said hooks and said hole and said hooks serving to lock the said flanges against disengagement, said draft pipe being also provided with a notch at the upper end thereof, and with a curved lip bent inwardly and adapted to engage said notch and to lock the upper part of said draft pipe against compressive strains tending to disengage said flanges.

24. In a cooking stove, a casing having a draft pipe opening in its wall, a connecting draft pipe having interlocking flanges, said opening being cut away to fit the contour of the pipe and having a shoulder at one side against which the interlocking folds abut, and clasping members for engaging the pipe in position within the opening, one of which clasping members is located to engage the interlocking folds adjacent to said shoulder and to hold said pipe against turning when mounted in place on the stove.

25. In combination, a cooking apparatus comprising a casing divided laterally to form a fire box, and an oven space, the front wall of said casing having an opening leading into the oven space and a marginal depression about the opening forming an inwardly offset rim and an oven comprising a casing open at one end and having a lateral flange about said open end, said oven extending into the oven space through said opening of said front wall, said flange being received in said depression, a bolt extending inwardly through the rear wall of the casing and through the rear central portion of said oven, a nut on the bolt against the rear wall of the casing to support the bolt in position and to serve as a spacing means to permit the passage of hot gases between the contiguous plates, and a nut within the oven seated on the bolt whereby the oven is held in position and its flange tightly seated against said rim.

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