Nov. 17, 1953 D. H. BITNEY 2,659,360

PORTABLE OUTDOOR COOKING OR CAMP STOVE

Filed Nov. 10, 1950 2 Sheets-Sheet 1

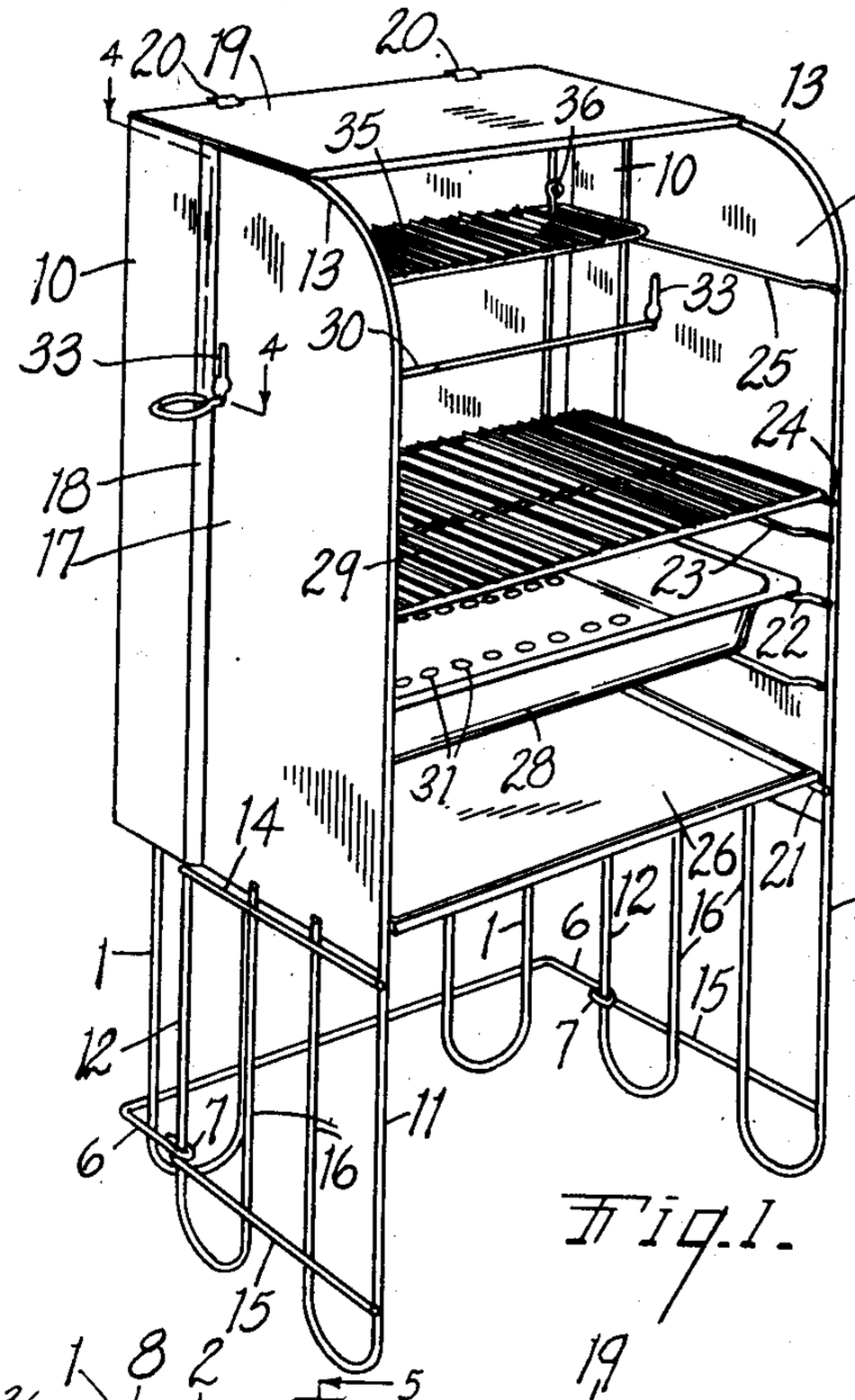

Fig. 1.

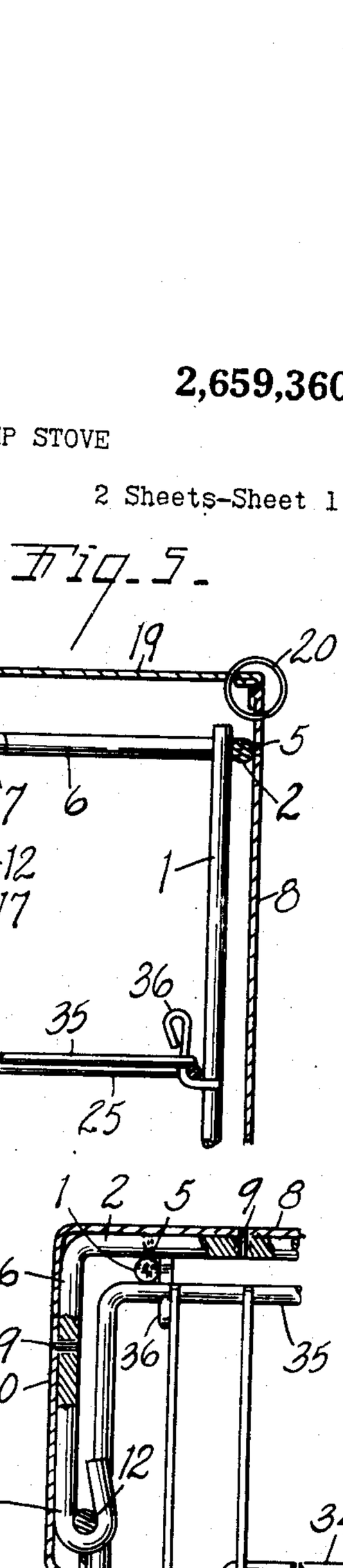

Fig. 3.

Fig. 2.

Fig. 4.

INVENTOR.
Dewey H. Bitney
BY
Otto Earl
ATTORNEY.

Nov. 17, 1953 D. H. BITNEY 2,659,360

PORTABLE OUTDOOR COOKING OR CAMP STOVE

Filed Nov. 10, 1950

2 Sheets-Sheet 2

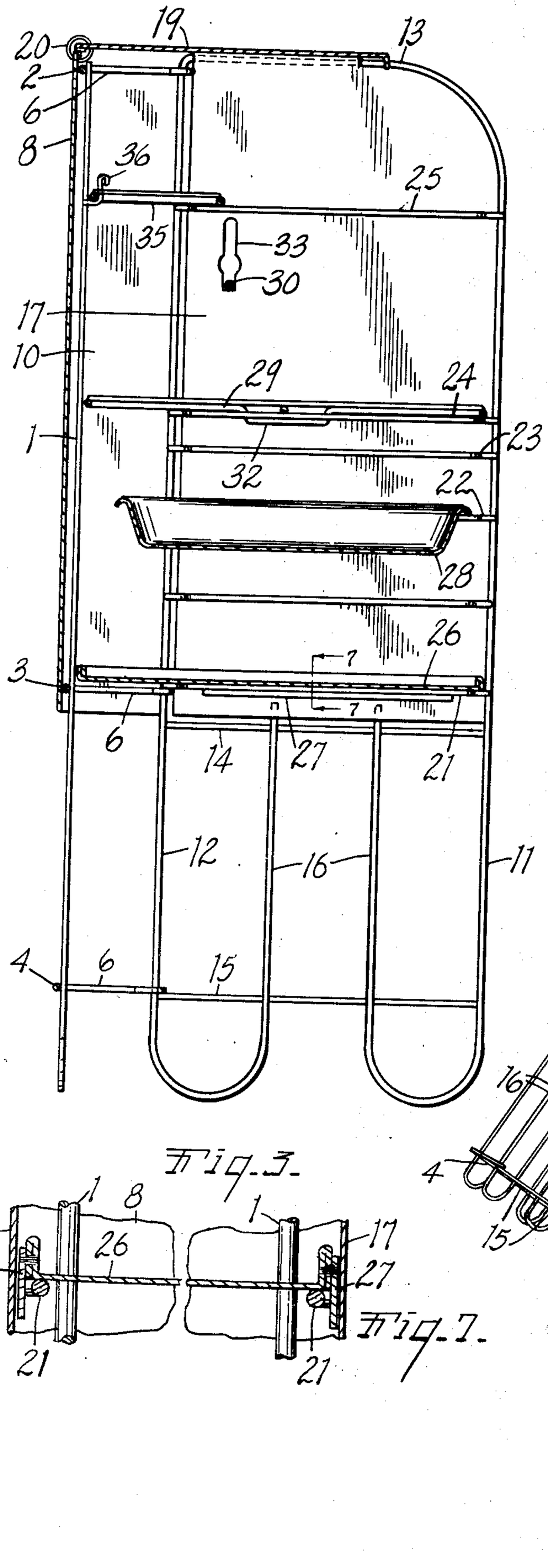

Fig. 1.

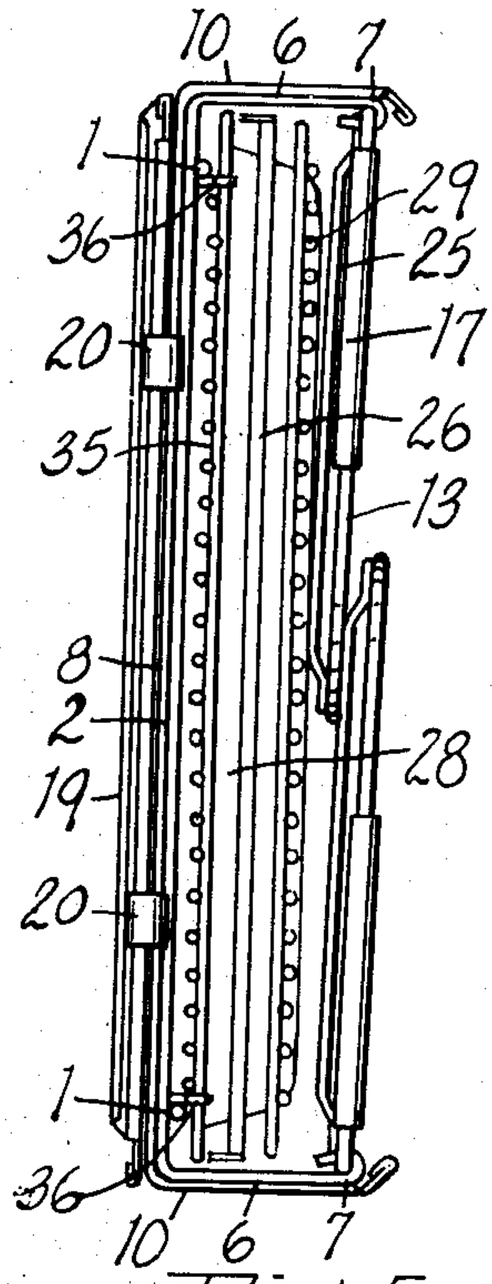

Fig. 6.

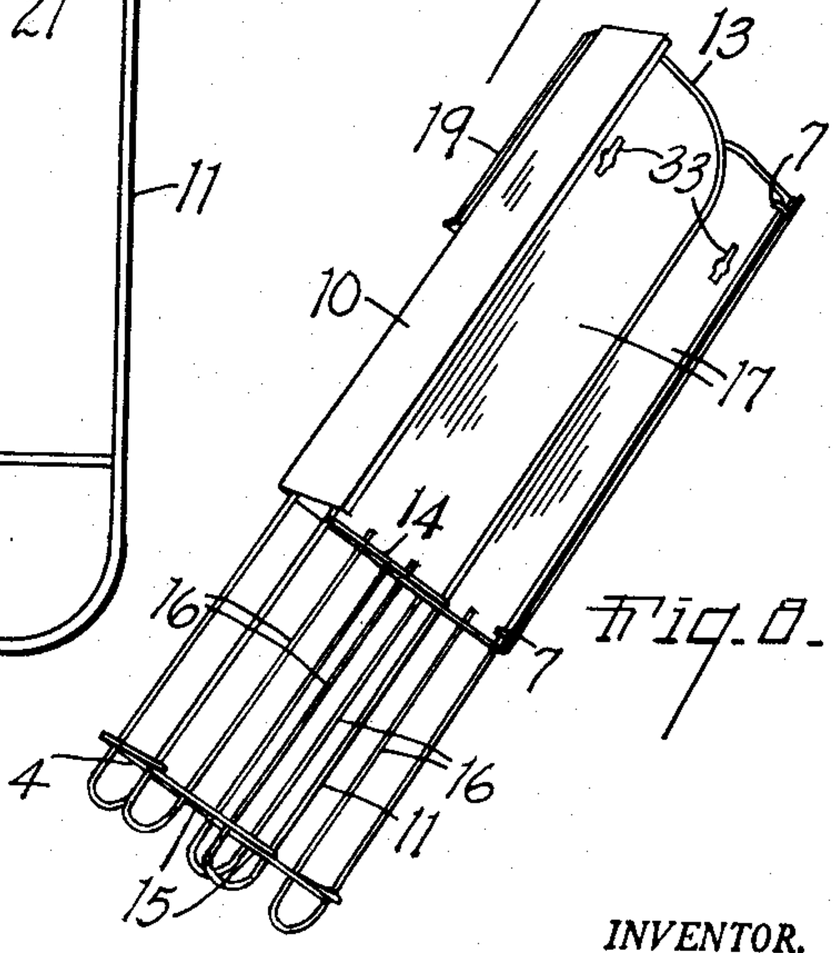

Fig. 8.

Fig. 3.

Fig. 7.

INVENTOR.
Dewey H. Bitney
BY
Otto A. Earl
ATTORNEY.

Patented Nov. 17, 1953

2,659,360

UNITED STATES PATENT OFFICE

2,659,360

PORTABLE OUTDOOR COOKING OR CAMP STOVE

Dewey H. Bitney, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.

Application November 10, 1950, Serial No. 195,085

11 Claims. (Cl. 126—25)

1

This invention relates to improvements in portable outdoor cooking or camp stoves.

The main objects of this invention are:

First, to provide a portable outdoor cooking or camp stove which may be quickly set up or collapsed and one in which the parts are very securely supported when they are in erected position and may be quite compactly collapsed.

Second, to provide a stove of this character which has a very considerable range of adaptation for the preparation of various foods.

Third, to provide a structure of the type described which may be practically formed of heavy wire or light rod and sheet metal and at the same time is attractive in appearance.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a front perspective view of a structure embodying my invention, completely erected and with a drip pan, fire pan and grid in assembled relation, the spit being also in erected position and the shelf adjusted to erected position.

Fig. 2 is a fragmentary top view, the top being partially broken away to show structural details.

Fig. 3 is a vertical section from front to rear of the erected structure shown in Fig. 1.

Fig. 4 is an enlarged fragmentary view partially in section on a line corresponding to the broken line 4—4 of Fig. 1.

Fig. 5 is an enlarged fragmentary view mainly in section on a line corresponding to line 5—5 of Fig. 2.

Fig. 6 is a top view of the structure collapsed, the drip pan, fire pan and grid being indicated in stored position.

Fig. 7 is an enlarged fragmentary view in section on a line corresponding to line 7—7 of Fig. 3.

Fig. 8 is a perspective view of the structure collapsed.

In the embodiment of my invention illustrated, I provide a back member comprising uprights 1 and top, intermediate and bottom crosspieces 2, 3 and 4, respectively. These crosspieces are fixedly secured to the uprights as by welds indicated at 5. The crosspieces have forwardly projecting arms 6 terminating in eyes 7. The back wall panel 8 is secured to the top and intermediate crosspieces preferably by welding, as indicated at 9 in Fig. 4. The back panel is provided with forwardly projecting flange-like side wall portions 10 which are fixedly secured to the arms of the top and intermediate crosspieces, as by the welds indicated at 9 in Fig. 4. The uprights extend below the wall panel to constitute legs, the lower ends of the uprights being return bent with their upturned ends secured to the intermediate crosspieces. The bottom crosspiece 4 is located adjacent the lower ends of the legs so it serves as an effective tie member therefor.

2

The side members comprise front and rear uprights 11 and 12 connected by the top, intermediate and bottom crosspieces 13, 14 and 15. The top crosspiece is desirably formed integrally with the uprights. The crosspieces 14 and 15 are fixedly secured to the uprights. The ends of the uprights are return bent at 16 and secured to the bottom and intermediate crosspieces to constitute legs corresponding to the legs of the rear member. The end panels 17 are secured to the uprights and the top crosspieces preferably by welding thereto.

The rear uprights of the side members are engaged in the eyes 7 of the forwardly projecting arms 6 of the rear crosspieces so that the side members are swingably supported relative to the rear member and may be adjusted into collapsed overlapping relation as shown in Figs. 6 and 8 or to erected parallel position as shown in Figs. 1, 2, 3, 4, 5 and 7.

The side wall portions 10 of the back panel project beyond the ends of the arms 6 of the top and intermediate back member crosspieces and are turned inwardly at 18 to substantially close the joint between the side wall panels and the rear member side wall portions. The top 19 is pivotally mounted on the rear wall panel by means of the hinge rings 20 so that the top may be swung to erected position, resting upon the side members as shown in Figs. 1, 2 and 3 or collapsed at the rear of the rear member as shown in Figs. 6 and 7.

The side members are provided with opposed pairs of vertically spaced rails 21, 22, 23, 24 and 25. The drip pan 26 is removably engageable with the rails 21 and is provided with downwardly projecting lug portions 27 which project between the wall panels and the rails, as illustrated in Fig. 7, so that the drip pan cannot slide off the rails and also it serves as a tie member for holding the structure in erected position. The drip pan is preferably of such dimensions as to extend between the side wall portions of the rear member as best shown in Fig. 3. The fire pan 28 is selectively engageable with the rails 22, 23 and 24 according to the requirements in cooking the material placed on the grid 29 when the grid is used or when the spit 30 is used. The fire pan has perforations 31 to promote combustion. Different types of fuel may be used but charcoal is a desirable fuel.

The grid 29 has downwardly projecting lugs 32 which engage the rails on which the grid is positioned so that the grid constitutes a tie member for the parts when in erected position. The wall panels 17 have slots 33 therein in which the

spit may be engaged. These are of such vertical length as to permit the tines 34 of the spits being passed therethrough.

The shelf 35 is supported by hook-like hangers or supports 36 mounted on the rear uprights in spaced relation to the top crosspiece, the shelf in erected position being supported by the rails 25.

For transportation or storage, the drip pan, fire pan and grid are disposed between the forwardly projecting side wall portions of the back member and the side walls swung to collapsed position over them as is indicated in Fig. 6. When the structure is collapsed, the top swings to the rear of the back member so that a very compact structure results.

When erected the parts are effectively held in erected position so that the stove may be moved about without danger of collapsing. This permits the structure being adjusted to ground conditions.

I have illustrated and described my invention as embodied in a highly practical commercial embodiment thereof. I have not attempted to illustrate adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced top, bottom and intermediate crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, the lower ends of the uprights being looped upwardly and secured to the lower and intermediate crosspieces to constitute legs, a back panel fixedly secured to said top and intermediate cross members and having forwardly projecting flange-like rear side wall portions fixedly secured to the forwardly projecting arms of the top and intermediate crosspieces, side members comprising front and rear uprights, vertically spaced top, bottom and intermediate crosspieces connecting said front and rear uprights, the lower ends of the uprights being bent upwardly and secured to the bottom and intermediate crosspieces to constitute legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels fixedly secured to said side member uprights, opposed pairs of vertically spaced rails mounted on the inner sides of said side member uprights, a member provided with rail engaging lugs engageable with a pair of said rails, and a top hinged to the back member to rest on the upper edges of the side members when erected or to be swung to a collapsed position at the rear of the back member.

2. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced top, bottom and intermediate crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, the lower ends of the uprights being looped upwardly and secured to the lower and intermediate crosspieces to constitute legs, a back panel fixedly secured to said top and intermediate cross members and having forwardly projecting flange-like rear side wall portions fixedly secured to the forwardly projecting arms of the top and intermediate crosspieces, side members comprising front and rear uprights, vertically spaced top, bottom and intermediate crosspieces connecting said front and rear uprights, the lower ends of the uprights being bent upwardly and secured to the bottom and intermediate crosspieces to constitute legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels fixedly secured to said side member uprights, and a member provided with rail engaging lugs engageable with a pair of said rails.

3. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced top, bottom and intermediate crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, the lower ends of the uprights being looped upwardly and secured to the lower and intermediate crosspieces to constitute legs, a back panel fixedly secured to said top and intermediate cross members and having forwardly projecting flange-like rear side wall portions fixedly secured to the forwardly projecting arms of the top and intermediate crosspieces, side members comprising front and rear uprights, vertically spaced top, bottom and intermediate crosspieces connecting said front and rear uprights, the lower ends of the uprights being bent upwardly and secured to the bottom and intermediate crosspieces to constitute legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels fixedly secured to said side member uprights, and a top hinged to the back member to rest on the upper edges of the side members when erected or to be swung to a collapsed position at the rear of the back member.

4. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced top, bottom and intermediate crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, the lower ends of the uprights being looped upwardly and secured to the lower and intermediate crosspieces to constitute legs, a back panel fixedly secured to said top and intermediate cross members and having forwardly projecting flange-like rear side wall portions fixedly secured to the forwardly projecting arms of the top and intermediate crosspieces, side members comprising front and rear uprights, vertically spaced top, bottom and intermediate crosspieces connecting said front and rear uprights, the lower ends of the uprights being bent upwardly and secured to the bottom and intermediate crosspieces to constitute legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels fixedly secured to said side member uprights, the edges of the side wall portions of said back panel projecting forwardly in overlapping relation to the side wall panels and having inwardly directed edge portions, and a top hinged to the back member to rest on the upper edges of the side members when erected or to be swung to a collapsed position at the rear of the back member.

5. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, a back panel connected to said uprights and having forwardly projecting flange-like rear side wall portions, side members comprising front and rear uprights, ver-

tically spaced crosspieces connecting said front and rear uprights, the lower ends of said uprights constituting legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels connected to said side member uprights, vertically spaced pairs of rails mounted on the inner sides of said side member uprights, a support member provided with rail engaging lugs engageable with a pair of said rails and constituting a tie member for the side members when in erected position, and a top hinged to the back member to be swung to a collapsed position at the rear of the back member.

6. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, a back panel connected to said uprights and having forwardly projecting flange-like rear side wall portions, side members comprising front and rear uprights, vertically spaced crosspieces connecting said front and rear uprights, the lower ends of said uprights constituting legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels connected to said side member uprights, vertically spaced pairs of rails mounted on the inner sides of said side member uprights, and a support member provided with rail engaging lugs engageable with a pair of said rails and constituting a tie member for the side members when in erected position.

7. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, a back panel connected to said uprights and having forwardly projecting flange-like rear side wall portions, side members comprising front and rear uprights, vertically spaced crosspieces connecting said front and rear uprights, the lower ends of said uprights constituting legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels connected to said side member uprights, and a top hinged to the back member to be swung to a collapsed position at the rear of the back member or to erected position upon said side wall members.

8. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced crosspieces connecting the uprights and having forwardly projecting arms at their ends terminating in eyes, a back panel connected to said uprights and having forwardly projecting flange-like rear side wall portions, side members comprising front and rear uprights, vertically spaced crosspieces conecting said front and rear uprights, the lower ends of said uprights constituting legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels connected to said side member uprights, the edges of the side wall portions of said back panel being in overlapping relation to the side wall panels when they are erected and having inwardly directed edges, and a top hinged to the back member to be swung to a collapsed position at the rear of the back member or to erected position upon said side wall members.

9. In a portable outdoor stove, the combination of a back member comprising uprights, vertically spaced crosspieces connecting the uprights and

having forwardly projecting arms at their ends terminating in eyes, a back panel connected to said uprights and having forwardly projecting flnage-like rear side wall portions, side members comprising front and rear uprights, vertically spaced crosspieces connecting said front and rear uprights, the lower ends of said uprights constituting legs, the rear side member uprights being pivotally engaged in the eyes of said back member crosspiece arms, side wall panels connected to said side member uprights, vertically spaced pairs of rails mounted on the inner sides of said end member uprights, a shelf, and upwardly facing hook-like supports on said rear member uprights with which said shelf is swingably engaged to be swung upwardly to collapsed position or to erected position in supported engagement with the rear ends of a pair of said rails.

10. In a portable outdoor stove, the combination of a back member including a back wall and side wall members projecting forwardly therefrom, walled side members pivotally mounted on the forwardly projecting side wall portions of said back member and adjustable to collapsed overlapping relation between said side wall portions or to an erected parallel relation, vertically spaced pairs of rails mounted on the inner sides of said side members, a drip pan removably engageable with a pair of said rails having downwardly projecting rail engaging members, a grid removably engageable with a pair of the rails and provided with rail engaging lugs, said grid and drip pan constituting tie members for maintaining the side members in their erected position, a fire pan selectively engageable with a pair of rails intermediate the drip pan and the grid, and a top hinged to the back member to be swung to erected position upon said back and side members or to a depending position at the rear of the back member, the side and back members when the side members are collapsed providing a space in which said drip pan, fire pan and grid may be stored.

11. In a portable outdoor stove, the combination of a back member including a back wall and side wall members projecting forwardly therefrom, walled side members pivotally mounted on the forwardly projecting side wall portions of said back member and adjustable to collapsed overlapping relation between said side wall portions or to an erected parallel relation, vertically spaced pairs of rails mounted on the inner sides of said side members, a drip pan removably engageable with a pair of said rails having downwardly projecting rail engaging members, a grid removably engageable with a pair of the rails and provided with rail engaging lugs, said grid and drip pan constituting tie members for maintaining the side members in their erected position, and a fire pan selectively engageable with a pair of rails intermediate the drip pan and the grid, the side and back members when the side members are collapsed providing a space in which said drip pan, fire pan and grid may be stored.

DEWEY H. BITNEY.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,212,162	Green	Jan. 9, 1917
1,238,142	Hitchcock	Aug. 28, 1917
1,404,808	Taylor	Jan. 31, 1922
1,986,078	Spang	Jan. 1, 1935
1,987,378	Tansley	Jan. 8, 1935
2,122,275	Bitney	June 28, 1938
2,307,914	Bitney	Jan. 12, 1943
2,600,191	Beach	June 10, 1952