Nov. 26, 1935. H. V. HANCOCK ET AL 2,021,915

CAMP STOVE

Filed May 15, 1933

Fig. 1.

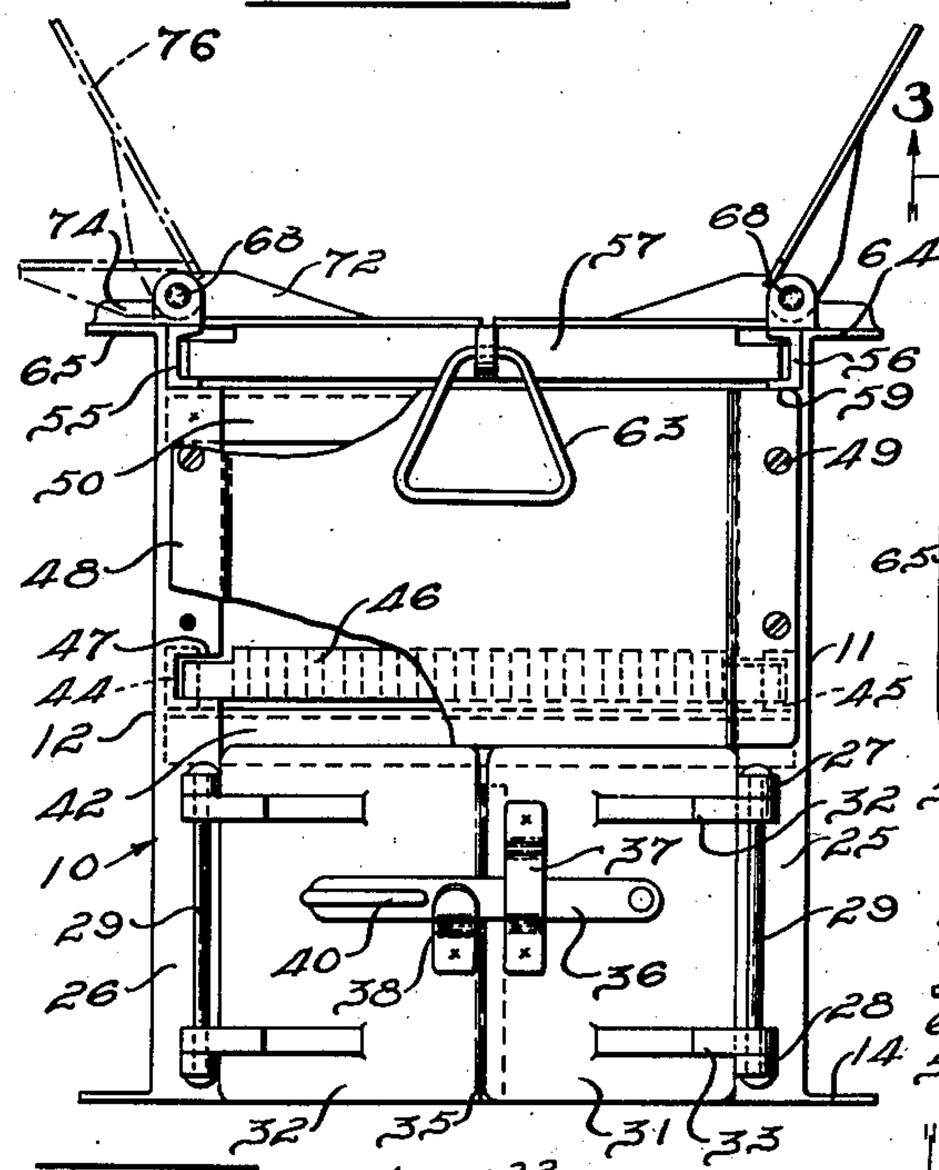


Fig. 2.

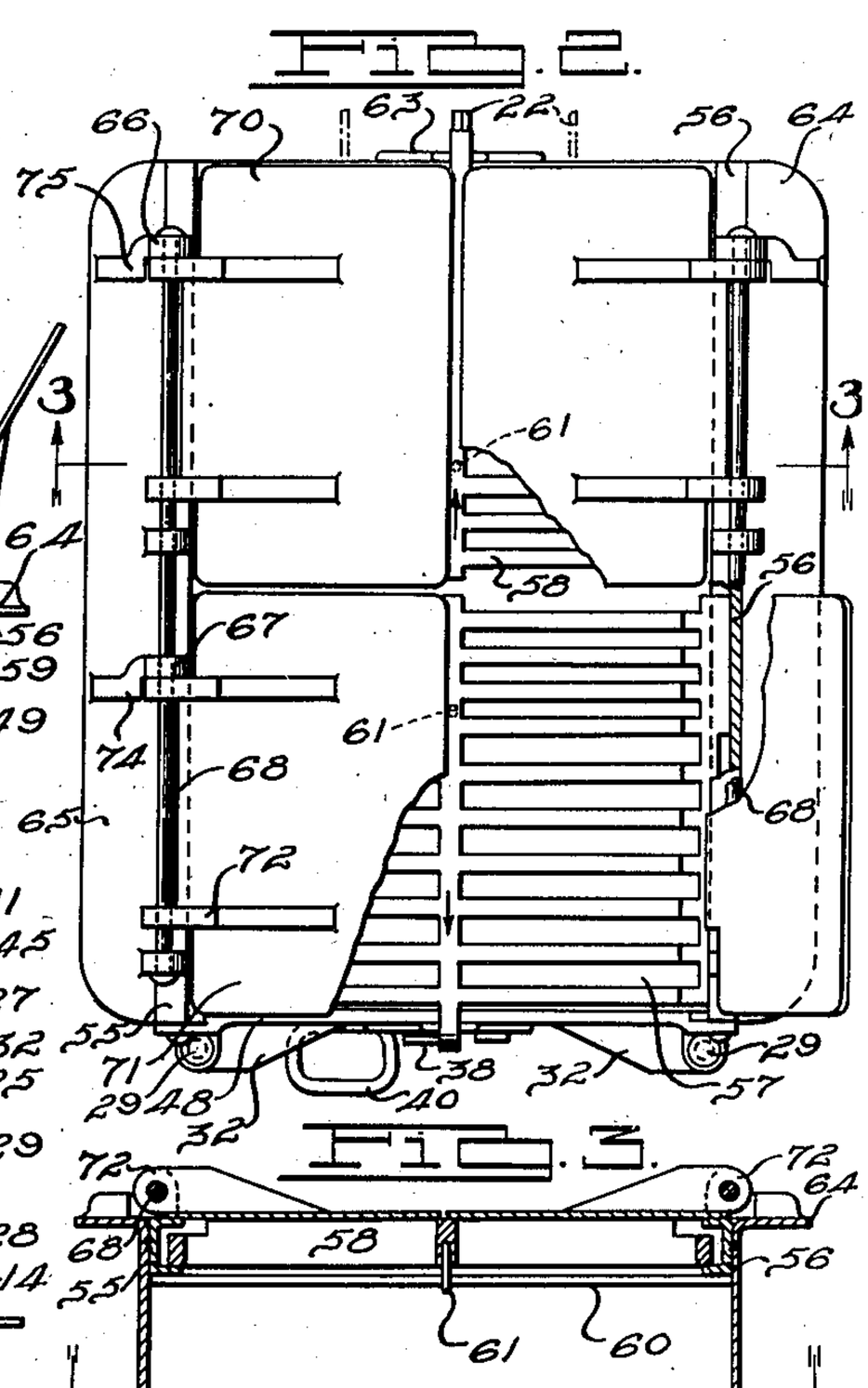


Fig. 3.

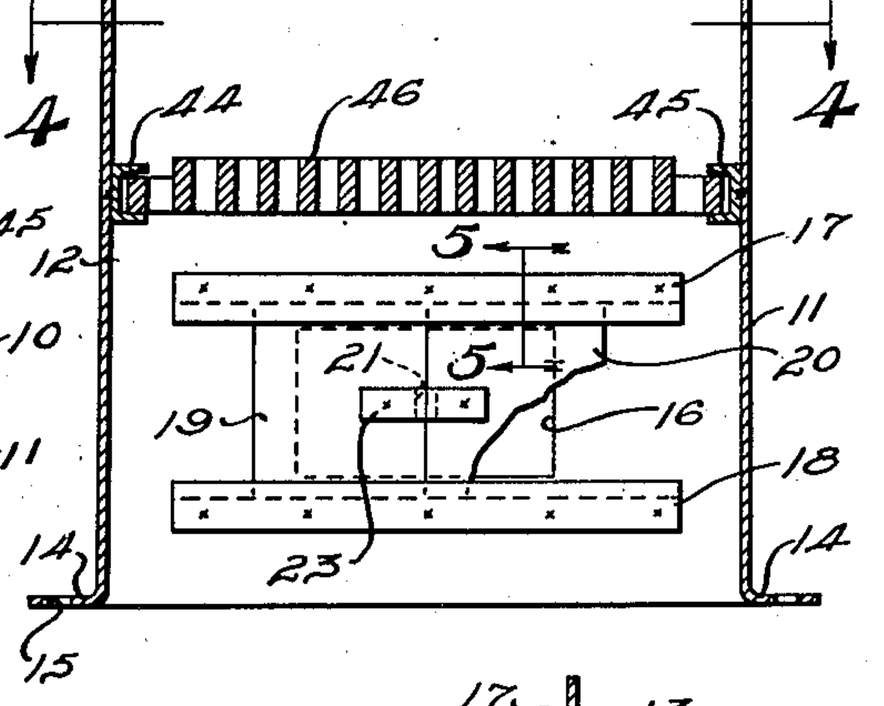


Fig. 4.

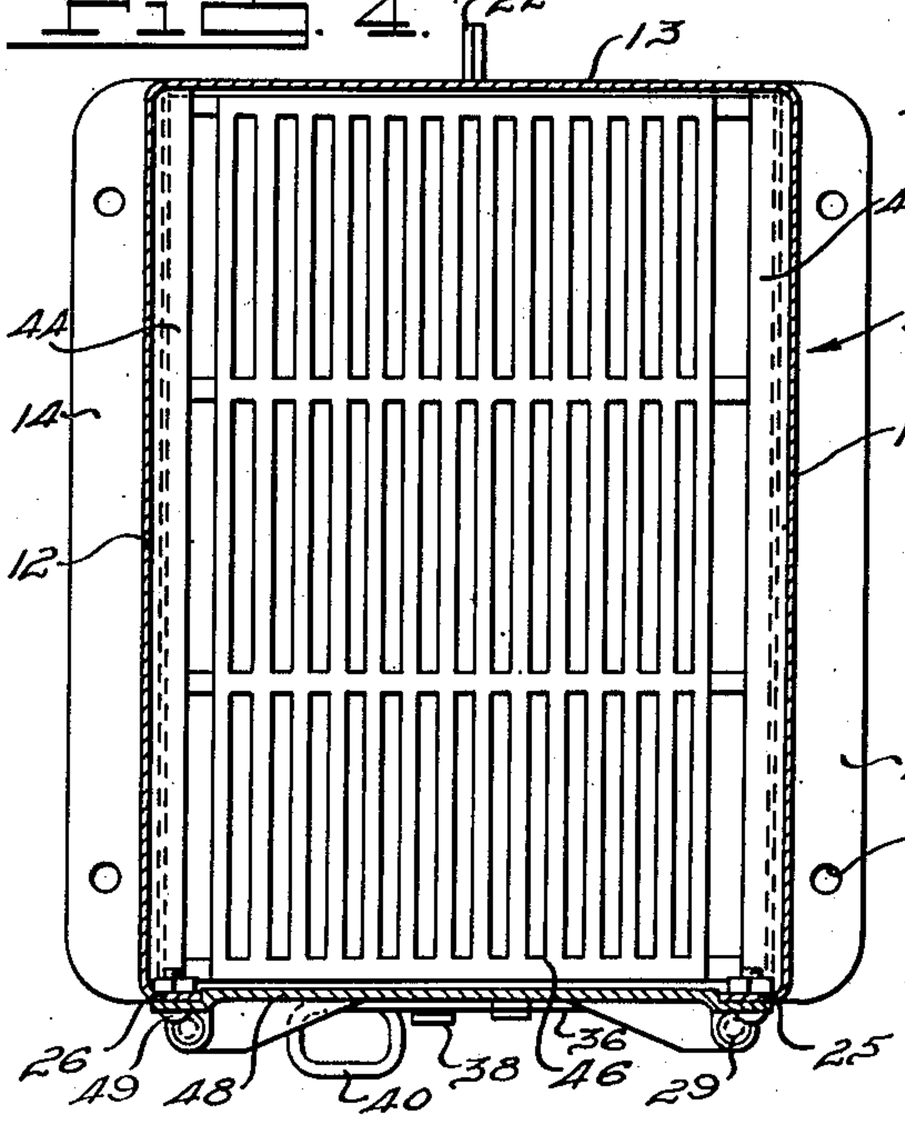
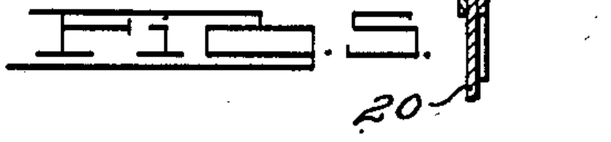


Fig. 5.



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2,021,915

CAMP STOVE

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10 Claims. (Cl. 126—29)

The invention relates generally to stoves, and it has particular relation to a stove for use in parks, or similar places.

One object of the invention is to provide an improved park stove which will be more satisfactory and convenient to campers or others enjoying the facilities of a park, in the preparation of lunches or the like.

Another object of the invention is to provide an improved park stove of inexpensive construction, which is adapted to become a permanent fixture and wherein various parts of the stove are normally secured against removal.

Another object of the invention is to provide an improved park stove which is so constructed and arranged that a fire may quickly be built in the stove and controlled and utilized in a highly efficient and convenient manner.

Another object of the invention is to provide an improved park stove in which the undesirable effects of wind drafts may largely be avoided.

Other objects of the invention will become apparent from the following description relating to the drawing, and from the claims hereinafter set forth.

For a better understanding of the invention, reference may be had to the drawing, wherein:

Figure 1 is an end elevational view of a park stove constructed according to one form of the invention, with certain parts broken away for the purpose of illustrating details more clearly.

Fig. 2 is a plan view of the construction shown by Fig. 1 and also having certain parts broken away to show details of the construction.

Fig. 3 is a cross-sectional view taken substantially along the line 3—3 of Fig. 2.

Fig. 4 is a cross-sectional view taken substantially along the line 4—4 of Fig. 3.

Fig. 5 is a cross-sectional view taken substantially along the line 5—5 of Fig. 3.

Referring to Figs. 1, 3 and 4 particularly, the stove illustrated includes a sheet metal shell 10, having side walls 11 and 12 and an end wall 13. Each of the side walls 11 and 12 has an outwardly directed flange 14 at its lower edge to provide a larger supporting base, and these flanges may be provided with openings 15 by means of which the stove may be bolted to a concrete or other base if this is found desirable.

For the purpose of providing a draft control in the wall 13, the lower portion of the latter is provided with an opening 16 as shown by Fig. 3, and at the upper and lower sides of the opening, oppositely disposed angle irons 17 and 18 are secured to the wall, as for example, by spot welding. These angle irons, as best shown by Fig. 5, provide a guideway at the inner side of the wall and for adjustably covering or uncovering the opening 16 to control the draft, plate members 19 and 20 are slidably mounted in the guideways. For adjusting the plates from the exterior of the stove, adjacent edges of the plates have notches 21 for receiving handle portions 22 projecting to the exterior of the stove and which terminate at their inner ends in angular flanges 33 that may be spot welded to the inner side of the plates, respectively. It is apparent that either plate may be moved separately of the other, and that by manipulation of the plates the amount of draft may be conveniently and closely controlled.

At their ends opposite the wall 13, the side walls 11 and 12 terminate, respectively, in sharp, inwardly directed flanges 25 and 26. The lower portion of each of these flanges, as best shown by Fig. 1, is provided with hinge elements 27 and 28 that may be welded or otherwise secured to the flange and such hinge elements are apertured for receiving a pintle 29. Such pintles hingedly support a pair of doors 31 and 32 and each door is provided with hinge elements 32 and 33 welded or otherwise secured thereto and which have apertured ends receiving the pintle. It will be noted that the hinge elements 32 and 33 fit in between the hinge elements 27 and 28 and adjacent thereto respectively, so as to provide a vertical support for the doors, and that they are of such shape and length as to reinforce the doors in a very desirable manner.

The door 32 at its inner edge has an inwardly and slightly offset portion 35 which permits overlapping of the door 31 when the doors are in their closed position and locating their outer surfaces substantially in the same plane. For holding the doors in their closed position, the door 31 is provided with a pivoted latch element 36 projecting through and having its vertical movement limited by a U-shaped element 37 welded or otherwise secured to the door, and such latch element is adapted to cooperate with an upwardly open keeper 38 welded or otherwise secured to door 32. The outer end of the latch element has a handle portion 40 for facilitating its manipulation. For limiting closing movement of the doors, a strip of angle iron 42 extends between and at the inner side of the flanges 25 and 26 of the shell 10, and when the doors reach their closed position, their upper edge portions slightly overlap and abut the vertically disposed leg of the angle iron. This angle iron provides a strong connecting means between the flanges 25 and 26

of the shell and thus strongly increases the rigidity of the construction.

Referring now particularly to Fig. 3, channel irons 44 and 45 have their base portions welded or otherwise secured to the side walls 11 and 12 substantially midway between upper and lower edges thereof and slightly above the upper edges of the doors. These channel irons provide guideways for slidably receiving a grate 46 and in this connection it may be stated that preferably the grate is constructed of cast iron. For permitting insertion and withdrawal of the grate whenever this should be necessary, each of the flanges 25 and 26 at points in alignment with the channel irons, is provided with a notch 47, as best shown by Fig. 1. Normally, however, the grate is not to be removed except in the event it becomes broken, and in view of this, the notches 47 in the flanges 25 and 26 may be covered once the grate is in position. For normally preventing removal of the grate and at the same time covering the space between the flanges 25 and 26 above the doors, a cover plate 48 is provided which, at its lower edge, overlaps angle iron 42 and at its side edges, is bolted to the flanges as indicated at 49. Preferably, the bolts employed have nuts on their inner ends so as to render it more difficult for anyone to remove the cover plate and then remove the grate 46. This cover plate may be provided with any suitable indicia on its outer surface, indicating ownership of the stove and it may be preferred to use a cast iron plate having this indicia cast on the outer surface thereof. For further reinforcing the flanges 25 and 26 of the shell and hence providing a more rigid construction, an angle iron 50, similar to angle iron 42, extends between the flanges and is welded to the inner surfaces thereof, adjacent the upper edge of the cover 48.

From the description so far given, it will be appreciated that the lower part of the stove may be cleaned of ashes by opening the doors 31 and 32 and that these doors also may be used for regulating draft through the stove. It also will be appreciated that the draft control in the wall 13 will enable convenient and close control of the draft in conjunction with or separately of the doors 31 and 32. It will be apparent that the grate 46 provides a suitable support for the material to be used in making the fire and that upon combustion thereof, ashes or the like will drop through the grate and into the lower part of the stove where they may be removed through the doors 31 and 32.

At the upper edge of the shell 10, and as best shown by Figs. 1 and 3, a second pair of channel irons 55 and 56 are secured as by spot welding to the side walls 11 and 12 to provide guideways for a pair of upper grates 57 and 58 shown in Fig. 2. These grates, preferably, are constructed from cast iron and are inwardly and outwardly slidable in the channel guideways. For permitting this sliding movement, of the grates, the flanges 25 and 26 are notched in alignment with the channels as indicated at 59 in Fig. 1, and the upper edge of the wall 13 is flanged over inwardly of the stove and under the channel irons as indicated at 60 in Fig. 3.

Once the grates are disposed partly in the guideways, studs, as indicated at 61 in Fig. 3, may be threaded into the center rib of the grate from the under side thereof and at points near their inner ends respectively. These studs are so positioned that entire removal of the grates is impossible as the studs will engage either the turned over flange 60 on the wall 13 or the angle iron 50 connecting the flanges 25 and 26. Preferably, each grate may be withdrawn approximately three-quarters of its length and when so withdrawn, the grates may, if desired, be used exteriorly of the shell for supporting pots, pans and the like. It will be appreciated that withdrawal of both grates permits access to the grate 46 for building a fire and this is extremely advantageous to anyone building a fire on the latter grate. For facilitating movement of the grates 57 and 58, handle elements 63 may be pivotally connected to the outer ends thereof, as best shown by Fig. 1.

The side walls 11 and 12 at their upper edges are provided with outwardly directed flanges 64 and 65 and each of these flanges has two pairs of hinge elements 66 and 67 welded or otherwise secured to its upper surface. These hinge elements are apertured for receiving a pintle 68 extending substantially the length of the flange upon which they are mounted. Each pintle hingedly supports a pair of lids 70 and 71 having rib-shaped hinge elements 72 welded thereto and apertured at their ends for receiving the pintle and each lid is disposed between a pair of the hinge elements 66 and 67. The lids may be opened separately and when opened the full amount, the ribs 72 rest on the flanges 64 and 65 as the case may be, and in such position that the then upper surfaces of the lids will be substantially horizontal and will be suitable for supporting pots or pans used in cooking. It will be appreciated that the entire upper surface of the grates 57 and 58 may be exposed for cooking with all of the lids open or that one or more of the lids may be closed leaving one or more open and a correspondingly smaller amount of the upper surface of the grate exposed for cooking. This is advantageous in that the heat of the fire on the grate 46 may be more concentrated for cooking in a given area of the upper grate.

In order to avoid the effects of wind draft, means are provided to secure any or all of the lids in a semi-open position as shown in broken lines at 76 in Fig. 1. This is accomplished by providing raised and laterally offset projections 74 and 75 on the flanges 64 and 65 which may or may not be integral with certain of the hinge elements 66 and 67 and which are adapted to be located in the path of movement of the hinge elements 72 on the lids, if such lids are shifted slightly in one direction longitudinally of the pintles. For example, with the lids in the position shown by Fig. 3, opening of either or all lids will cause the hinge elements 72 to engage the raised projections 74 and 75 upon opening of the lids approximately two thirds and when so opened the lids will be maintained in this position by their own weight. If the lids are shifted longitudinally of the pintles slightly from the positions shown in Fig. 3, they may be opened without engagement of the hinge elements 72 with the projections 74 and 75 and hence may be fully opened and into their horizontal positions as shown by Fig. 1. Placing either side pair of the lids in the partly open position provides a wind breaker and anyone familiar with the building of outdoors fires will appreciate the advantage of a wind breaker to prevent interference with the fire.

All parts of the stove illustrated and described are fixedly connected to avoid removal thereof by persons using the stove in parks or other places where the stoves are located, and prefer-

ably, the stove is manufactured in such size that its weight will be sufficient to prevent any easy removal. Hence the stove becomes a permanent fixture in the park. Manifestly, by opening the lids and separating the upper grates and opening one or more of the draft control means, a fire may be quickly started on grate 46 and controlled by adjusting the draft means. The lids in addition to providing convenient supports when they are in fully opened positions, are useful in providing wind breakers on either or both sides when in partly open position, and additionally for covering a variable area of the upper grates so as to obtain a more concentrated heat at the remaining exposed grate surface. It is apparent that the doors 31 and 32 in addition to providing a draft control, provide a ready means for removing ashes from beneath the fire grate 46. Moreover, it will be appreciated that after use of the stove, the lids and draft controls may be closed, to substantially eliminate any fire hazard after users of the stove depart.

While the parts of the stove are fixedly connected, any of the parts may be readily replaced whenever this is necessary although normally sufficient difficulty would be encountered if removing any part that the ordinary camper would not take the trouble to remove it. The construction provided is extremely rigid and strong and will last indefinitely, and actual experience has demonstrated that campers and others interested in preparing outdoor meals find the stove extremely convenient and efficient not only in building and controlling a fire but in the preparation of cooked food.

Although only one form of the invention has been described and illustrated in detail, it will be apparent to those skilled in the art that various modifications may be made without departing from the scope of the appended claims.

We claim:

1. A camp stove comprising spaced walls, grate means between upper portions of the latter, cover means movable from a substantially horizontal position in covering relation to the grate means, to a substantially horizontal position at one side of the grate means or to a position upwardly inclined to the horizontal for service as a wind breaker, and means for holding the cover means in either of the last mentioned positions.

2. A camp stove comprising spaced walls, grate means between upper portions of the walls, cover means pivotal from a substantially horizontal position in covering relation to the grate means, to a substantially horizontal position at one side of the stove, means for holding the cover means in the last mentioned position, and means optionally holding the covering means in a pivotal position between said horizontal positions for service as a wind breaker.

3. A camp stove comprising spaced walls, grate means between upper portions of the walls, cover means at opposite sides of the stove for covering the grate means, and mounted for movement from the grate covering positions to substantially horizontal positions directed away from the stove or to intermediate positions angled to the horizontal for service as a wind breaker, means for holding the covering means in said horizontal positions, and means for optionally holding the covering means in said angled positions.

4. A camp stove comprising spaced walls, grate means between upper portions of the walls, cover means for covering the grate, pintle means pivotally mounting the covering means on the walls for movement from said covering position to a position at the side of the stove, and means rendered effective by shifting the covering means longitudinally of the pintles for holding the covering means in a position upwardly angled with respect to the horizontal, for use as a wind breaker.

5. A camp stove comprising side walls, a pair of vertically spaced channel guideways on each side wall, a grate slidable in the upper set of guideways, a grate mounted in the lower set of guideways, means permitting limited withdrawal of the upper grate longitudinally from the guideways but positively preventing complete withdrawal movement of the grate, and normally fixed but removable means for preventing withdrawal of the lower grate from the guideways but permitting such withdrawal upon removal of said means.

6. A camp stove comprising spaced side walls, grate means between upper portions of said walls, cover means for covering the grate, pintle means pivotally mounting the cover means on said walls for movement from a position covering the grate to a position at the side of the stove, abutment means on the stove for holding the cover means in a position upwardly angled with respect to the horizontal for use as a wind breaker, and means rendering said abutment means effective by relative movement of the abutment means and cover means so as to place the former in the path of movement of the latter.

7. A camp stove comprising opposed side walls and an interconnecting end wall, a pair of vertically spaced channel guideways on each side wall, a grate slidable in the upper set of the guideways, a grate mounted in the lower set of guideways, means permitting limited withdrawal of the upper grate longitudinally from the guideways but positively preventing complete withdrawal movement of the grate, and normally fixed but removable means for preventing sliding withdrawal movement of the lower grate from the guideways.

8. A camp stove comprising opposed side walls and an interconnecting end wall, a pair of vertically spaced channel guideways on each side wall, a grate slidable in the upper set of the guideways, a grate mounted in the lower set of guideways, means permitting limited withdrawal of the upper grate longitudinally from the guideways but positively preventing complete withdrawal movement of the grate, and normally fixed but remomovable means for preventing sliding withdrawal movement of the lower grate from the guideways, said last mentioned means comprising an end cover at the end of the stove opposite the end wall and bolts fixedly securing the sides of the cover to the sides of the stove.

9. A camp stove comprising spaced side walls and an interconnecting end wall, channel guideways on the side walls and disposed in vertically spaced relation, a grate slidable in an upper set of the guideways, a second grate mounted in the lower set of guideways, a cover fixedly secured to the sides of the stove at the end opposite said end wall and closing the lower set of guideways so as to prevent sliding withdrawal of the lower grate except when the cover is removed, and a pivotal ash door mounted on the stove below said fixed cover.

10. A camp stove comprising spaced side walls and an interconnecting end wall, channel guideways on the side walls and disposed in vertically

spaced relation, a grate slidably mounted in an upper set of the guideways, a second grate mounted in a lower set of the guideways, a cover fixedly secured to the sides of the stove at the end thereof opposite the end wall and closing the end of the lower set of guideways, said cover being disposed below the upper set of guideways so as to permit sliding withdrawal of the upper grate, and means permitting a limited withdrawal movement of said upper grate and positively preventing its complete withdrawal from the guideways.

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