C. W. BOND.

FOLDABLE CAMP STOVE.

APPLICATION FILED SEPT. 22, 1915.

1,198,693.

Patented Sept. 19, 1916.

3 SHEETS—SHEET 1.

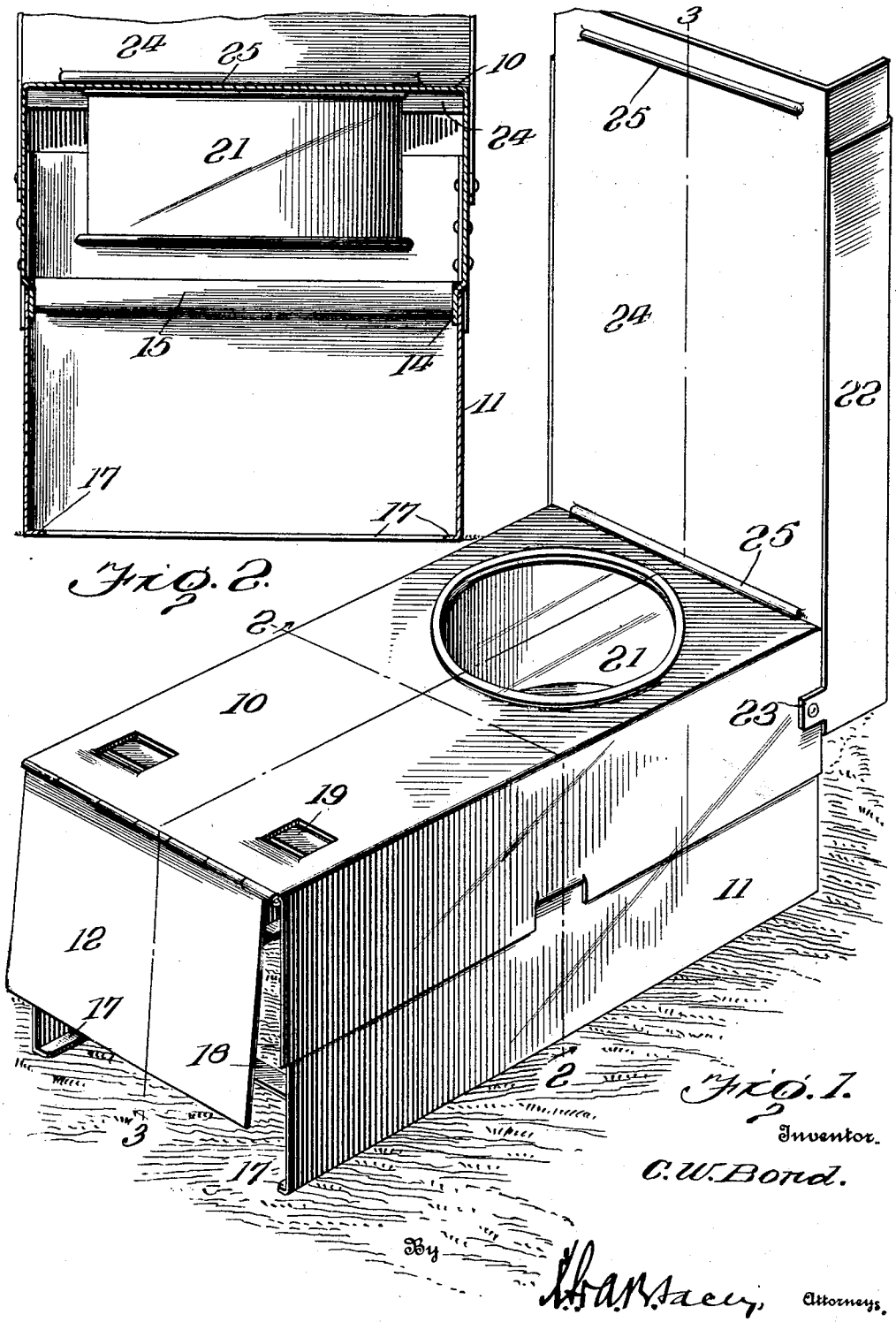


Fig. 2.

Fig. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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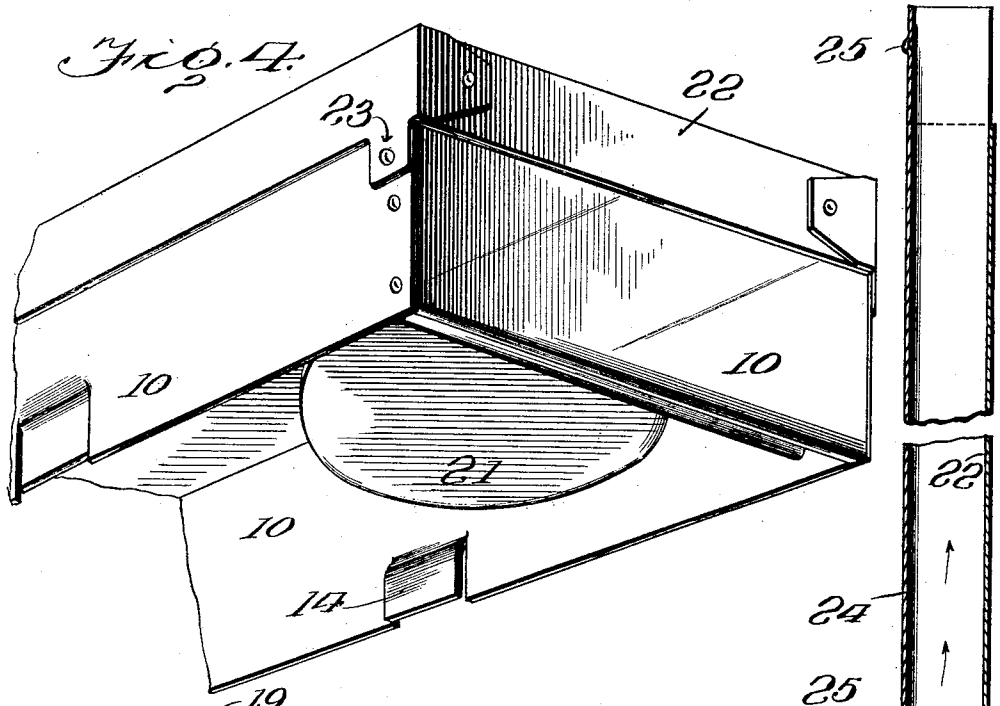
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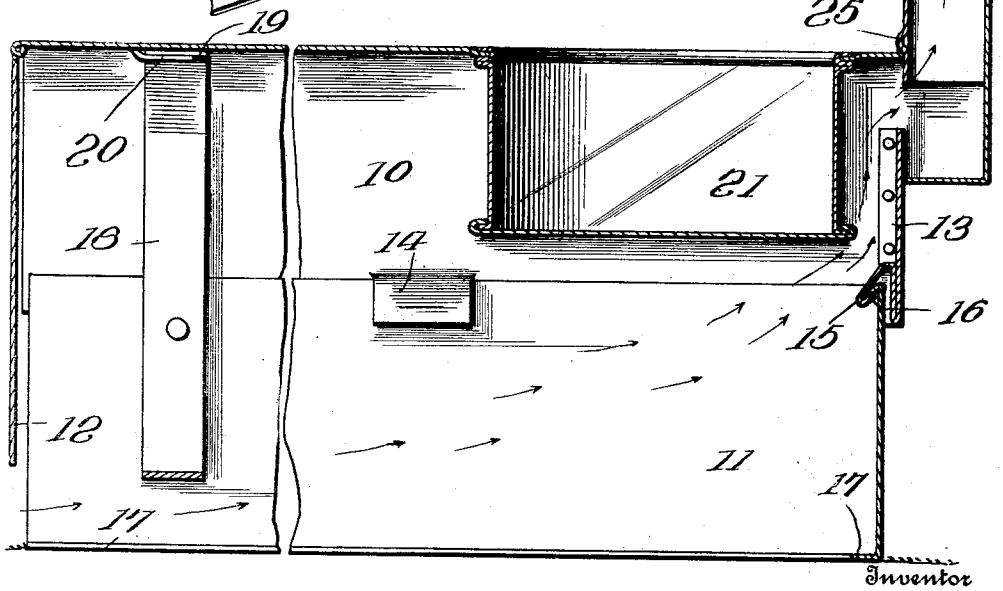
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3 SHEETS—SHEET 2.

Fig. 4.





Inventor

Fig. 3. C. W. Bond.

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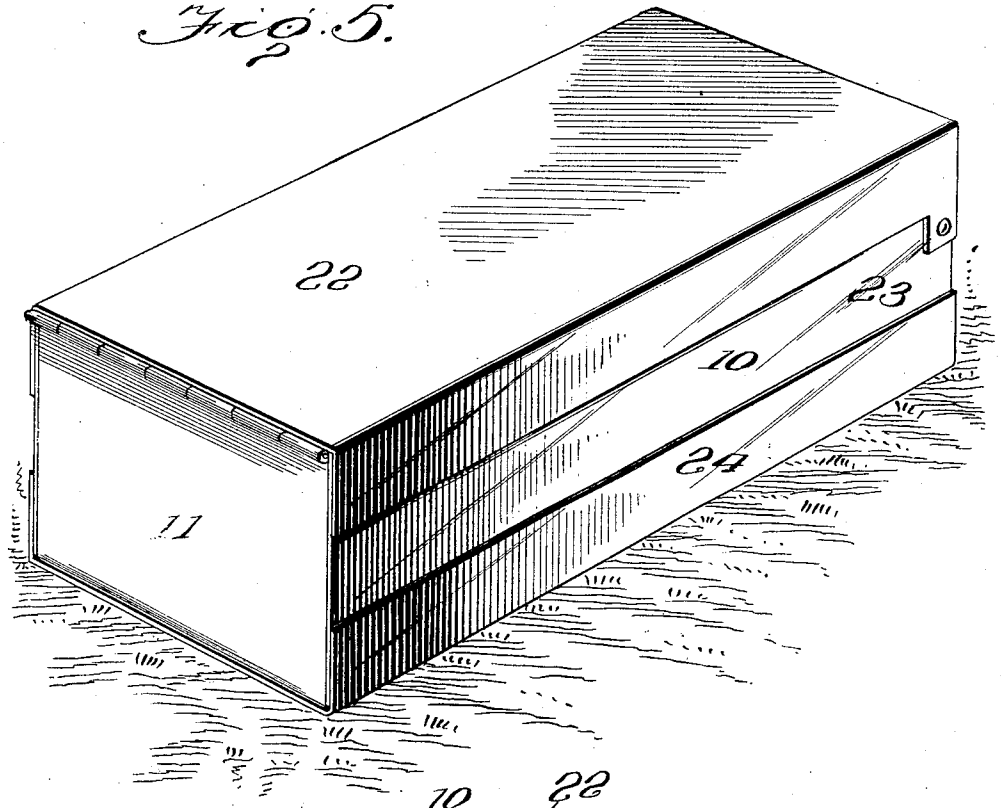
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3 SHEETS—SHEET 3.

Fig. 5.



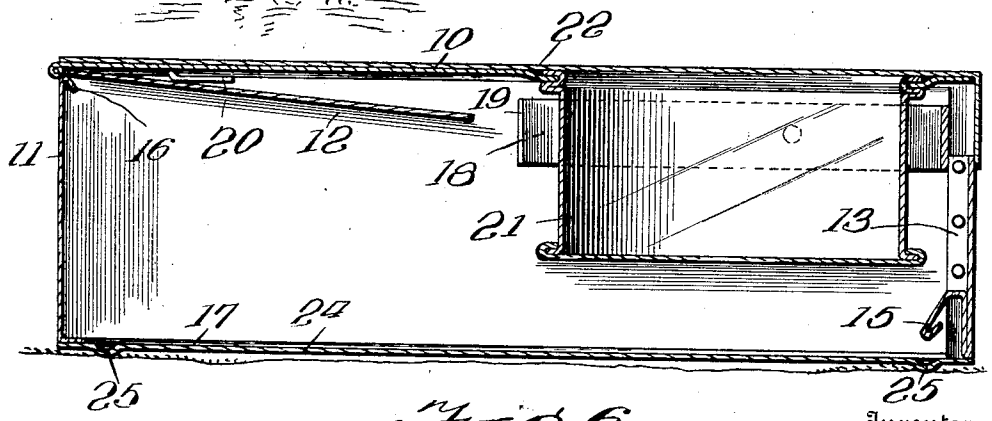


Fig. 6.

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UNITED STATES PATENT OFFICE.

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FOLDABLE CAMP-STOVE.

1,198,693. Specification of Letters Patent. Patented Sept. 19, 1916.

Application filed September 22, 1915. Serial No. 51,969.

To all whom it may concern:

Be it known that I, CLARK W. BOND, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Foldable Camp-Stoves, of which the following is a specification.

This invention contemplates an improved camp stove and has as its primary object to provide a device of this character which will, first of all, be efficient and which may, at the same time, be folded or nested to occupy a minimum space and may thus consequently be readily transported.

The invention has as a further object to provide a stove of this character so constructed that when folded, practically no surface thereof which may have been subjected to flame and thus become sooted, will be exposed so that the folded stove may be readily packed along with other articles.

A still further object of the invention is to produce a stove which will be provided with a flue of such character that an efficient draft will be set up within the stove and to also provide a door so arranged that the draft through the stove may be readily regulated.

The invention has as a further object to provide an improved stove of this character so constructed that when set up, the several parts thereof will be locked in proper assembled relation to thus form a rigid structure. And the invention has as a still further object to provide a stove which will be compact and relatively simple in construction, this latter feature being of importance in the manufacture of the stove.

Other and incidental objects will appear as the description proceeds and in the drawings wherein I have illustrated the preferred embodiment of the invention and wherein similar reference characters designate corresponding parts throughout the several views, Figure 1 is a perspective view showing my improved stove set up in position for use, Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1 and more particularly showing the manner in which the lugs at the sides of one section of the stove body are adapted to engage the side walls of the other section of the stove body for holding the sections in proper operative position, Fig. 3 is a longitudinal sectional view taken through the stove and clearly showing the manner in which the several parts thereof are assembled and locked when the stove is set up, Fig. 4 is a bottom perspective view of one of the sections of the stove more particularly showing the construction and mounting of the cover therefor, Fig. 5 is a perspective view showing the stove folded for transportation, and Fig. 6 is a longitudinal sectional view showing the manner in which the several parts of the stove when folded, are assembled.

In carrying out my invention, I employ a stove body, substantially rectangular in general contour and which is formed of sections 10 and 11 each preferably constructed of suitable sheet metal. The section 10 includes top and side walls and one end wall, the opposite end of the said section being open. The section 11 is of a height slightly less than the section 10 and is of such dimensions as to fit within the said last mentioned section, as more particularly illustrated in Fig. 6. The section 11 includes side walls and one end wall, the said section being open at its top and bottom and at one end thereof. Arranged to depend into the open end of the stove body is a door 12 which is preferably slightly less in length than the height of the stove body and is movable into the section 10 to confront the top wall thereof as also more particularly shown in Fig. 6. One end edge of the door 12 is provided with suitable hinge lugs as is also the adjacent free end edge of the top wall of the section 10 of the stove body, the said lugs mating and being swingingly connected by a suitable pivot rod, as clearly shown in Fig. 1.

The section 10 may be formed from a single piece of material as may also the section 11. In connecting the ends of the end wall of the section 10 with the side walls thereof, the extremities of the said end wall are preferably bent inwardly to provide flanges 13 confronting the inner faces of the said side walls and secured thereto in any suitable manner. Struck from the free longitudinal edges of the side walls of the section 10, at points intermediate the ends thereof are oppositely disposed lugs 14 adapted to engage over the upper edges of the side walls of the section 11 for supporting the section 10 thereon, as more particularly shown in Fig. 2. Furthermore, these lugs will prevent the side walls of the sections, when heated, from warping away from each other. Coöperat-

ing with the lugs 14 are interengaging flanges 15 and 16 carried by the end walls of the sections 10 and 11 respectively. In this connection, attention is more particularly directed to Fig. 3 of the drawings wherein it will be observed that the lower margin of the end wall of the section 10 is elongated and is rolled upon itself inwardly within the said section and is then rebent to provide the flange 15 which projects upwardly and obliquely toward the inner end of the said section. As particularly shown in Figs. 4 and 6, the flange 15 is cut away at its ends to receive the side walls of the section 11 when the said section is disposed within the section 10 as will be hereinafter more fully described. The upper margin of the end wall of the section 11 is also elongated or extended and then bent inwardly upon itself into the said section to provide the flange 16 which projects downwardly and obliquely away from the inner end of the said section to be received within the flange 15 and detachably engaged therewith. By shifting the section 11 rearwardly upon the section 10 longitudinally thereof and slightly in an upward direction, the flanges 15 and 16 may be readily disengaged from each other when the sections may be operated. As more particularly shown in Fig. 1 of the drawings, the bottom edges of the walls of the section 11 are preferably provided with inwardly turned bearing flanges 17 adapted to engage the ground or other surface for effectively supporting the stove as well as to overcome any tendency of the walls of the said section to warp or buckle when subjected to heat.

Connecting the free ends of the side walls of the section 11 of the stove body is a substantially U-shaped locking member 18 preferably formed from a strip of suitable metal bent into desired shape. The said locking member is swingingly connected by its side portions or arms to the side walls of the section 11 adjacent the upper longitudinal edges thereof and contiguous to the open end of the said section by suitable pivot pins or rivets and is movable to a horizontal position between the said walls of the section, as more particularly shown in Fig. 6. The side portions of the locking member 18, at the free ends thereof, are bent inwardly toward each other to provide laterally projecting lugs 19 and the said locking member is shiftable to a vertical position, as more particularly shown in Fig. 3, with the said lugs bearing directly beneath the top wall of the section 10 adjacent the outer end thereof, in which position, the said locking member will coöperate with the lugs 14 and with the flanges 15 and 16 in supporting the section 10 in proper operative position upon the section 11. Struck from the top wall of the section 10 adjacent the outer end thereof or secured thereto in any suitable manner, are oppositely disposed and transversely spaced lugs 20 which are bent inwardly beneath the said top wall to receive the lugs 19 of the locking member 18 as more particularly shown in Fig. 3, the free ends of the lugs 20 projecting rearwardly within the stove body. It will now be observed that when the section 10 is mounted upon the section 11 as illustrated in Figs. 1 and 3, and the locking member 18 is swung into engagement with the lugs 20, the said sections will be locked in proper operative position so that the stove body will form a rigid structure. In this connection, attention is further directed to the fact that the sections of the stove when so set up will be supported one upon the other at three respective oppositely disposed points spaced longitudinally of the said sections while, at the same time, the sections may be connected or disconnected with ease and facility.

Depending into the stove body, adjacent the inner end thereof is a preferably annular receptacle 21 which may, however, be of any other desired shape and which projects through the top wall of the section 10 and is supported thereby. The said top wall is provided with an annular opening to receive the said receptacle and the upper margin of the circular wall thereof is rebent upon itself as more particularly shown in Figs. 3 and 6 to provide an annular flange embracing the margin of the said top wall adjacent the opening. At its lower margin, the circular wall of the receptacle is bent outwardly to provide a radial flange which is embraced by an annular flange bent up from the flat bottom wall of the receptacle. This construction provides a very simple arrangement of such character that the said receptacle may be readily formed and connected to the stove body. As will be readily understood, it is intended that a fire shall be built within the stove body when set up, as illustrated in Figs. 1 and 3, and accordingly, vessels may be placed upon the top of the stove body and consequently heated. The purpose of the receptacle 21 now becomes apparent since it will be seen that vessels may be placed within the receptacle and consequently brought more directly into contact with the heat of the fire while, at the same time the flames will be prevented from coming in contact with such vessel to cause the sooting thereof.

Swingingly connected to the section 10 of the stove body at the inner end thereof, is a cover 22 also preferably formed of suitable sheet metal and which includes a top wall, side walls or flanges, and one end wall or flange, the opposite end of the cover being open as more particularly shown in Fig. 5. Preferably, the cover 22 is formed from a single piece of material and the inner ends of the side walls thereof are extended to

provide flaps as more particularly shown in Fig. 4, arranged to overlap the end wall of the cover to be secured thereto. Depending from the longitudinal edges of the side walls of the cover adjacent the inner ends thereof, are laterally projecting hinge lugs 23 arranged to confront the outer faces of the side walls of the section 10 of the stove body at their inner ends and to which the said lugs are pivotally connected in any suitable manner, at points substantially midway the transverse width of the said side walls. As shown in Fig. 5, the cover 22 is movable to fit over the upper portion of the section 10 of the stove body with the free end of the cover terminating flush with the outer end of the said section, in which position, the said cover will inclose the top wall of the said section. In this connection, it is to be observed that when the stove is folded as illustrated in Fig. 6, articles may, if desired, be placed within the receptacle 21 so that the space occupied by the said receptacle may be utilized. The cover 22 will, when folded, of course maintain the said articles within the receptacle.

Arranged to fit over the open side of the stove body in the folded position thereof, as illustrated in Fig. 5, is a closure 24 which is also preferably formed from a single piece of suitable sheet metal and is provided with longitudinally extending side walls or flanges, the ends of the said closure being open. The closure 24 will thus, when the stove is folded, prevent objects from coming in contact with the interior of the stove body and thus become sooted, the closure being equal in length to the length of the stove body. However, if desired, articles may be packed within the stove body and the space thereof so utilized, or a separate box could be fitted therein for packing purposes, the closure 22 being adapted to retain all such objects securely within the stove body. Formed in the closure 22, adjacent opposite ends thereof, are transversely extending upstanding ribs 25, as clearly seen in Fig. 3.

It will now be noted that the cover 22 is movable to a vertical position upon the stove body to provide one section of a flue with the end wall of the said cover abutting the end wall of the section 10 of the stove body for limiting the said cover in its pivotal movement upwardly upon the stove body. The end wall of the section 10 of the stove body, at its inner extremity, is cut away transversely, as also clearly shown in Fig. 3, to provide a flue opening which is closed by the end wall of the cover, as shown in Fig. 4, when the cover is moved to fit over the top of the section 10 of the stove body. The closure 24, upon being removed from the bottom of the stove body, is adapted to be fitted into the cover 22 to make therewith in the manner illustrated in Fig. 3, to form the other section of the flue, the side walls or flanges of the closure fitting within the side walls or flanges of the cover with the transverse connecting wall of the closure projecting at one end thereof, below the inner end edge of the top wall of the section 10 of the stove body. Either end of the closure may be placed downwardly toward the stove body, in assembling the flue sections and the said closure is moved to a position with one of the ribs 25 thereof engaging the upper face of the top wall of the section 10 of the stove body for limiting the closure in its downward movement within the cover. As will now be clear, the closure will engage the top wall of the section 10 of the stove body, to prevent any swinging movement of the flue toward the top of the stove and will thus coöperate with the end wall of the cover 22 in maintaining the flue rigidly fixed relative to the stove body. As will also be noted, the closure 24 will project above the upper end of the cover and will thus tend to direct smoke or other gases rising through the flue away from the stove body.

Attention is now directed to the fact that the sections of the flue may be readily assembled and may as easily be disassembled. The flue is arranged to communicate with the interior of the stove body at its inner upper end and will tend to set up an efficient draft within the stove body causing the heat and flames from the fire within the stove to be drawn upwardly around the receptacle 21 so that vessels within the said receptacle will be quickly heated. The draft through the stove body may be regulated through the medium of the door 12 which may be easily positioned relative to the open end of the stove to admit more or less air within the stove body. The door 12 is, as previously intimated, cut away at its lower end so that when in vertical position within the open end of the stove body, sufficient air will be admitted to the interior of the stove body to keep a fire burning therein and in this connection, attention is directed to the fact that the bight portion of the locking member 18 will provide a grate bar upon which fuel may be conveniently laid.

To fold the stove for transportation, the sections of the flue are first disconnected by removing the closure 24 when the cover 22 is swung to position fitting over the top of the section 10 of the stove body, as illustrated in Fig. 5. The locking member 18 is then disconnected from the lugs 20 and swung to substantially horizontal position within the section 11 of the stove body, as illustrated in Fig. 6. The section 11 is then shifted upon the section 10 and disconnected therefrom, as previously described. When the sections of the stove body have been so disconnected, the section 10 is preferably turned with its open side upwardly and the

door 12 is swung inwardly within the said section to confront the top wall thereof. The section 11 is then turned end for end from its normal position and is nested within the section 10 to embrace the door 12 with the locking member 18 presented inwardly and disposed around the receptacle 21 as seen in Fig. 6, and with the end wall of the section 11 closing the open end of the section 10, the free ends of the side walls of the section 11 being received between the ends of the flange 15 and the side walls of the section 10 and abutting the inner edges of the flanges 13. Thus, the stove when folded, is closed at both ends. The closure 24 is then fitted over the open side of the section 10 to thus completely close the stove as shown in Fig. 5 and particular attention is directed to the fact that practically no part of the stove which may have become sooted will be exposed, nor can foreign objects gain access thereto. The stove, when folded, is compact and may thus be readily transported, and the structural details thereof are of such character that the entire device may be readily manufactured as a commercial article of reasonable price.

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

1. A device of the character described including a stove body, and a sectional flue carried thereby, one of the sections of the said flue being adapted to provide a cover for the stove body and the other section of said flue being adapted to provide a closure for the stove body.

2. A device of the character described including a stove body, and a sectional flue carried thereby, one of the sections of said flue being swingingly connected to the stove body and movable to form a cover therefor and the other section of said flue being adapted to provide a closure for the stove body.

3. A device of the character described including a stove body provided with a flue opening, and a sectional flue carried by the stove body, one of the sections of said flue being adapted to provide a cover for the stove body fitting over said flue opening and the other section of said flue being adapted to provide a closure for the said body.

4. A device of the character described including a stove body, and a sectional flue carried thereby, one of the sections of said flue being swingingly connected to the stove body and movable to abut a wall thereof and the other section of said flue being adapted to abut an adjacent wall of the stove body to coöperate with said first mentioned section in supporting the flue in operative position with relation to the stove body.

5. A device of the character described including a stove body, and a sectional flue carried thereby, one of the sections of said flue being swingingly connected to the stove body and movable to a position with an end wall thereof abutting the stove body and the other section of said flue being adapted to fit within said first mentioned section in engagement with the stove body for holding the said first mentioned section against swinging movement when the flue is disposed in operative position relative to the stove body.

6. A device of the character described including a stove body provided with a flue opening, and a sectional flue carried by the stove body, one of the sections of said flue being freely connected to the stove body and movable from a position covering said flue opening to a position with the said opening uncovered, and the other section of said flue being adapted to mate with said first mentioned section and provided with a shoulder adapted to engage the stove body for holding the said second mentioned section in cooperative relation to said first mentioned section with the flue disposed in operative position.

7. A device of the character described including a sectional stove body having the sections thereof each open at one end and closed at the other and adapted to fit one within the other with the closed end of one section closing the open end of the other section, and a sectional flue carried by the stove body, one of the sections of said flue being adapted to provide a cover for the stove body and the other section of said flue being adapted to provide a closure for the stove body.

8. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation, the said sections being each open at one end and closed at the other by a solid end wall and one of the sections being reversible end for end to fit within the other section with the end wall of each section closing the open end of the other section, and means carried by the said sections for supporting the sections in operative position.

9. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation, the said sections being each open at one end and closed at the other and adapted to fit one within the other with the closed end of one section closing the open end of the other section, means for supporting the sections in operative position, and a locking member carried by one of the sections and movable to engage the other section for connecting the said sections with the said locking member extending between the sides of the sections ad-

jacent the open ends thereof to provide a brace for the said sides.

10. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation with the stove body open at one end, a flue communicating with the closed end of the stove body, and a door carried by one of said sections, said door being of a length substantially equal to the combined height of the sections and being movable to substantially close the open end of the stove body for regulating a draft through the stove body.

11. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation with the stove body open at one end, the said sections being adapted to fit one within the other with the closed end of one section closing the open end of the other section, a door arranged within the open end of the stove body and swingingly movable upon one of the sections to lie therein, and a sectional flue communicating with the closed end of the stove body, one of the sections of said flue being adapted to provide a cover for the stove body and the other section of said flue being adapted to provide a closure for the stove body.

12. A device of the character described including a stove body, a receptacle carried thereby and depending into the stove body, and a sectional flue carried by the stove body, one of the sections of said flue being adapted to provide a cover for the stove body fitting over said receptacle and the other section of said flue being adapted to provide a closure for the stove body.

13. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation, means for supporting the said sections in operative position, lugs carried by the top wall of one of the said sections, and a substantially U-shaped locking member swingingly mounted between the sides of the other of said sections and provided with lugs engaging said first mentioned lugs for connecting the sections.

14. A device of the character described including a sectional stove body having the sections thereof arranged one upon the other, and a locking member normally housed within one of the sections and connecting the said sections with the said locking member providing a grate bar spaced above the bottom edges of the stove body.

15. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation with each of the sections closed at one end and open at the other, coacting flanges carried by the closed ends of the said sections and interengaging for connecting the sections, lugs carried by the sides of one of the sections and engaging the other section for supporting the said sections one upon the other, and a locking member pivoted between the sides of one of the sections and movable thereon for connecting the sections adjacent the open ends thereof.

16. A device of the character described including a sectional stove body having the sections thereof arranged in superposed operative relation, and a locking member formed to extend between the sides of one of the said sections to provide a brace therefor and provided with arms engaging the other of said sections for connecting the said sections with the said arms projecting beneath the top wall of the uppermost section to provide vertical supports therefor.

17. A device of the character described including a stove body, and a sectional flue associated therewith, the flue being collapsible and the sections thereof being adapted to be fitted around the stove body to engage therewith and be carried by the stove body.

In testimony whereof, I affix my signature.

CLARK W. BOND. [L. S.]

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."