

Feb. 12, 1924.

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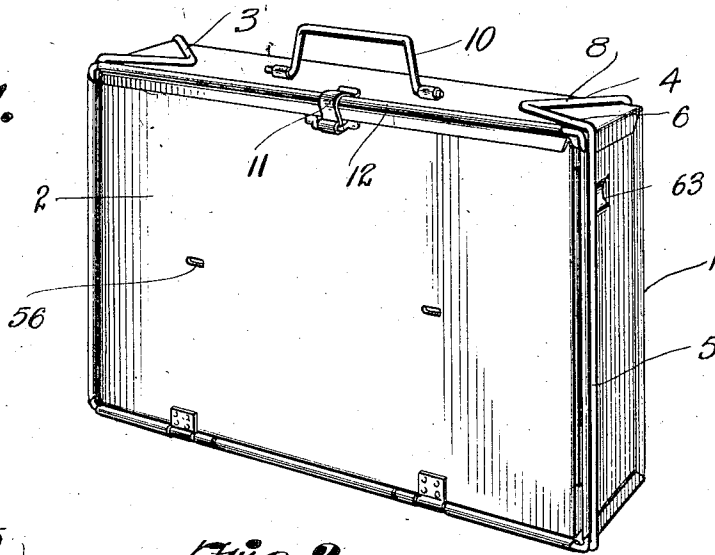
W. C. COLEMAN

PORTABLE STOVE

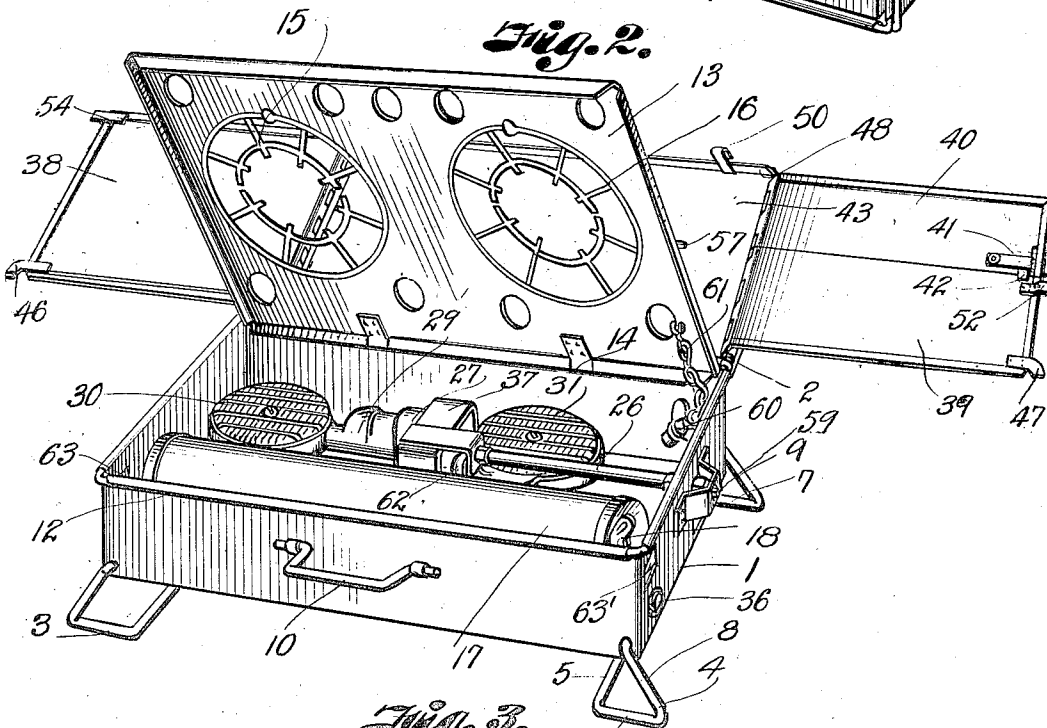
Filed March 30, 1923

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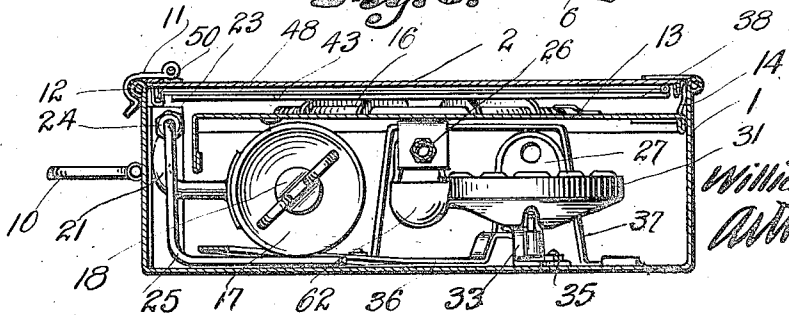
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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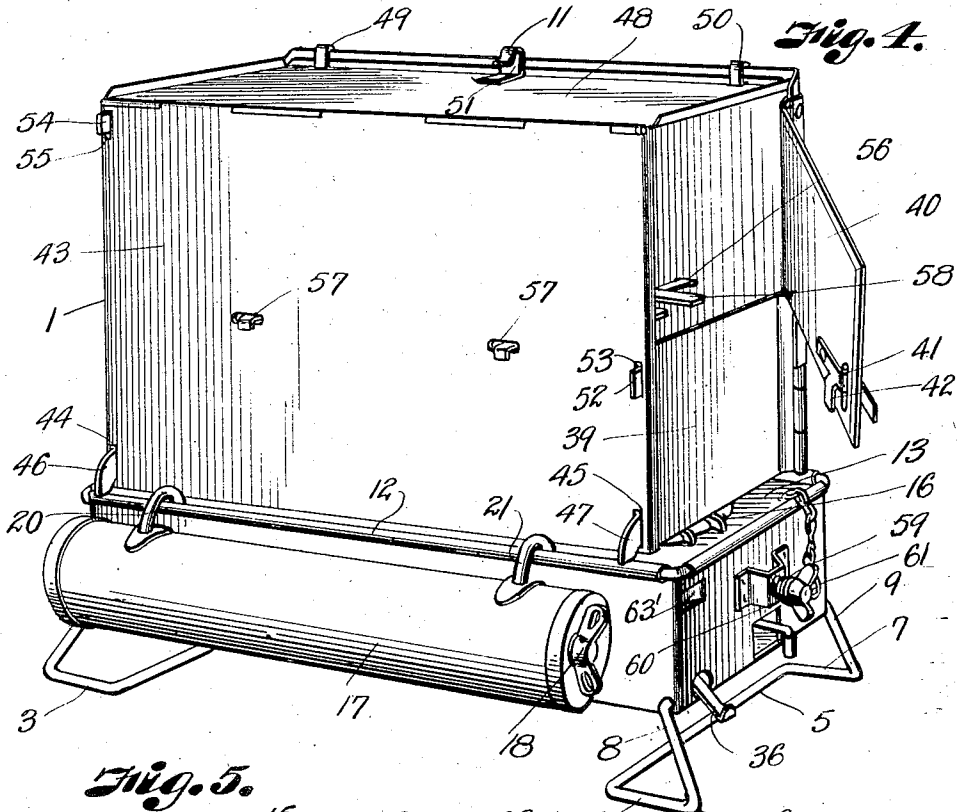
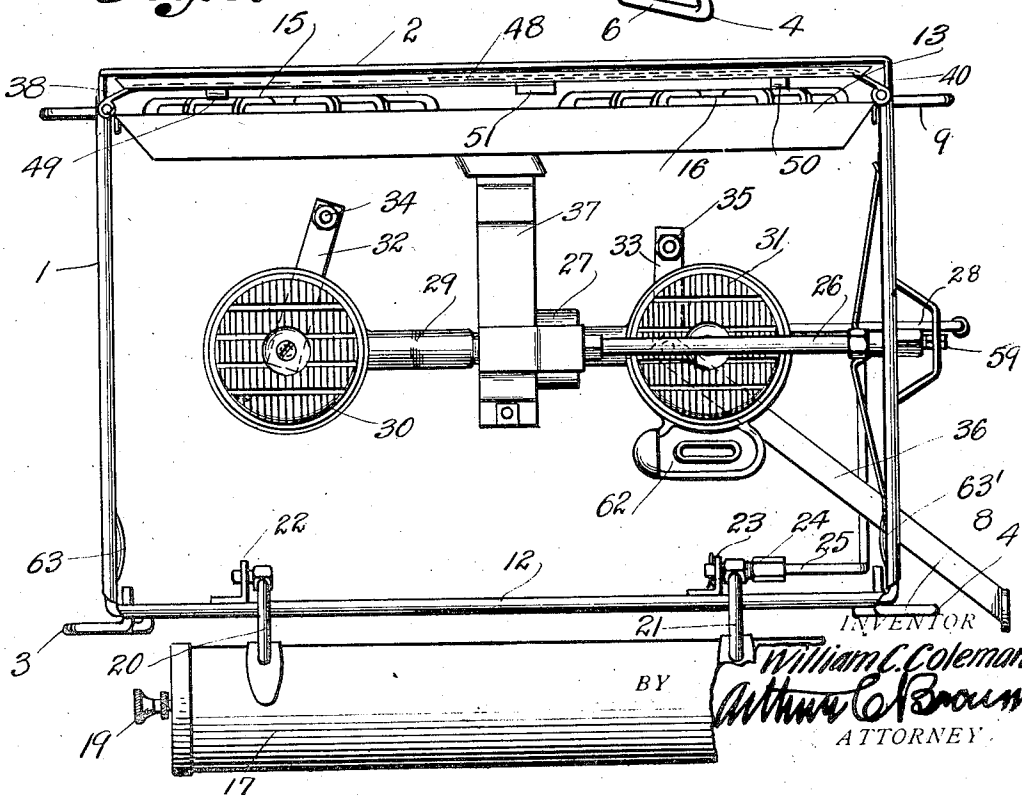


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WILLIAM C. COLEMAN, OF WICHITA, KANSAS.

PORTABLE STOVE.

Application filed March 30, 1923. Serial No. 623,764.

*To all whom it may concern:*

Be it known that I, WILLIAM C. COLEMAN, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Portable Stoves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to portable stoves and particularly to that class known as camp stoves generally used by campers or motorists. This application is one of a series of applications filed by me on portable stoves, co-pending applications Serial Nos. 627,329, 627,330, and 634,138, being directed to subject matter not claimed herein.

The primary object of this invention is to provide a portable stove which can be "knocked-down" or collapsed into a relatively small case for transportation and it is desirable in such a device to provide means whereby the stove can be readily set up for use.

In the present embodiment of my invention I have provided a stove in which an oven may be provided, adapted to be set upon the base or collapsed and contained within the base. The present embodiment of the invention comprehends a stove, the base of which is about the size of an ordinary suit-case and it is so arranged that all of the operating parts can be contained within it in a compact manner. However, the parts may be set up to make a stove with an oven of an appreciable size adapted to efficiently utilize the heat of a plurality of burners.

There are other features of the invention which are important but these are incorporated in other applications for patents, the present application being limited to the general organization which permits the parts to be contained within the base or case in a convenient manner and which also permits them to be readily set up for use.

The preferred embodiment of my inven-

tion will be apparent by reference to the following description in connection with the accompanying drawings, in which

Fig. 1 is a perspective view of a complete stove in a "knocked-down" state with the parts enclosed in the case.

Fig. 2 is a perspective view showing the interior of the case, the burner or cover plate and two end wings of the oven.

Fig. 3 is a cross sectional view through the case, showing the parts contained therein.

Fig. 4 is a perspective view of the stove set up ready for use, and

Fig. 5 is a top plan view of the stove showing the burner plate in a vertical position.

The case 1 constitutes the base of the stove and it is shown as a rectangular case with a cover 2 hinged along one longitudinal edge. The base may be supported upon legs or rests 3 and 4. Each rest is shown as comprising a transverse bar 5 with right angularly extending end members 6 and 7 terminating in upstanding arms 8 and 9, the ends of which are trunnioned in the end portions of the case 1. Therefore, the rest can be swung downwardly to assume the position shown in Fig. 4 when the stove is set up or they may be swung so that the portions 7, 8, 9 and 10 lie against the sides of the case with the bar 5 lying close to the end of the case, as shown in Fig. 1 when the device is knocked down ready to be transported.

In order to assist in carrying the case I provide a handle 10 secured to one side wall of the case. The cover 2 carries a latch 11 which may fit over a bed 12 on the case 1 to thereby hold the cover in closed position.

A burner plate or top 13 is hinged to one longitudinal edge of the case by hinges 14 and in the embodiment selected for illustrative purposes the top 13 carries spiders 15 and 16 which constitute rests for the cooking utensils and also permit the heat from the burners to pass into the oven when the oven is set up.

The fuel is supplied from a liquid container or tank 17, which may be filled by removing the plug 18 and the liquid in the tank may be put under pressure by a pump

19 contained within the tank and operable from the outside.

The tank is swingingly supported on the case by means of two curved arms 20 and 21, which are mounted in brackets 22 and 23. The arm 21 is hollow and it communicates through a bushing 24 with a supply pipe 25, which leads to a vaporizing tube 26, discharging into a mixing chamber 27, one of the burners being controlled by a valve on the end of the stem 28. The mixing chamber communicates with the manifold 29, on the ends of which are burners 30 and 31.

The mixing chamber, the manifold and the burners are all rigidly connected together and by mounting the burners 30 and 31 on the arms 32 and 33, pivoted at 34 and 35, to the bottom of the case 1, the burners can be moved out of line with the vaporizing chamber or toward the back of the case to permit the tank to be swung over into the position shown in Figs. 2 and 3.

When it is desired to collapse the stove, the shifting movement of the burners and manifold may be accomplished by a bar 36, extending through one end of the case 1 and connected to the manifold, as shown in Fig. 5.

The member 37 is a bracket to support one end of the vaporizer 26 and it straddles the manifold so that the manifold may freely move when it is operated from the bar 36.

The hinged cover 2 carries at one end an end wing 38, co-extensive with the width of the cover and at the other end an end wing 39, which is approximately one-half the width of the cover, there being a separate wing or door 40 hinged adjacent to the member 39 which may swing independently thereof. The combined width of the members 39 and 40 is approximately equal to the width of the cover 2. The door 40 has a latch 41 with a lug 42 thereon, which may engage the inner face of the member 39 to hold the door closed. The cover 2 and the end members 38, 39 and 40 constitute three sides of the oven. The fourth side consists of a plate 43 which has slots 44 and 45 engaged by the notched lugs 46 and 47. Carried by the members 38 and 40 and at the top of the member 43 is an oven top 48 hinged to 43 and which carries hooks 49 and 50 to engage the upper edge of the cover 2, the members 43 and 48 being held in place by the latch 11, which engages over the tongue 51 carried by the top 48, as will be clearly seen in Fig. 4.

The end member 39 carries a lug 52, which engages in a slot 53 in the member 43. The member 38 has a similar lug 54 which engages in the slot 55 in the member 43, as will be seen by reference to Fig. 4. The members 2 and 43 have slots 56 and 57 to

receive the ends of the side bars of a grate 58 so that the grate can be supported in the oven and above the bottom thereof.

The supply of liquid fuel to the vaporizer 26 can be controlled by a valve on the end of the stem 59, the stem being adapted to be operated by a key 60 which may be fastened to the case by a chain 61. The mixture to the burners may be controlled by a valve on the end of the stem 28, both stems being accessible from the outside of the stove.

The burner 31 is shown as carrying a priming cup 62, which will receive the liquid fuel when the burners are shifted over to the rear side of the case. The priming cup will then be under the vaporizer 26 so that it will locally apply heat to the vaporizer to get it hot enough to efficiently vaporize the fuel into the mixing chamber 27, but the priming cup feature of this invention is not claimed in this application because it forms the subject matter of another application.

The plate 15 is provided with depending flanges which may engage struck-out stop members 63 and 63' in the ends of the case. Therefore, the plate will be supported at one edge by the hinges 14 and at the other by the stop members 63 and 63'.

When the parts are assembled in the case, the burners will be shifted over to the position shown in Fig. 2; the tank will be swung inside the case, the top 13 will lie upon the stop members 63 and 63', and the members 43 and 48 will be folded one upon the other and placed upon the top 13. The end members 38, 39 and 40 will be folded over on the inside face of the cover 2; the cover will then be closed down on the case and the rest will be folded up over the case as shown in Fig. 1. The entire stove will then be encompassed in a relatively small space, easily transportable.

When it is desired to set up the stove, the movable parts will be taken out of the case, the tank will be swung over to the positions shown in Figs. 4 and 5 and the oven will then be set up as heretofore explained. When the members 43 and 48 are fastened to the ends 38, 39 and 40 and to the cover 2, the oven will be in effect a unitary structure with the door 40 adapted to be swung into closed or open position. Therefore, when the parts are set up as shown in Fig. 4 and it is desired to cook on the stove, for example as in boiling, the entire oven can be swung back to a horizontal plane, in which position it will serve as a warming oven and if the wind is strong, the hinged members 43 and 48 can be removed, leaving the end walls 38, 39 and 40 in the cover 2 to constitute a wind break.

It will be seen from the foregoing that the stove can be collapsed in a compact man-

ner, that it will take up very little room when not in use, and that it can be readily set up in a minimum space of time when it is desired to use it.

5 What I claim and desire to secure by Letters Patent is:

1. In a portable stove structure, a hollow case provided with a hinged cover, a burner ring plate hinged within the case at one 10 edge of the plate, stops in the case to support the free end of the plate, a burner mechanism within the case, a fuel supply tank for the burner mechanism swingingly secured to the case whereby it may be moved 15 to one position outside the case and moved to another position inside the case, legs carried by the case having swinging movements whereby in one position the legs can lie closely against the case and when in another 20 position they will lie away from the case to support the case above the lower ends of the rests, and means for holding the cover in a closed position.

2. A portable stove comprising a case, a 25 hinged cover carried by the case and wings hinged to the cover, a side and top device consisting of two hinged members to cooperate with the hinged cover and the wings to form an oven, a hinged burner ring plate 30 carried by the case, a burner mechanism

within the case, and a fuel tank constantly connected to the burner mechanism and mounted to swing so that in one position it will be outside the case and in the other position inside the case. 35

3. A portable stove comprising a case, a hinged cover carried by the case and wings hinged to the cover, a side and top device consisting of two hinged members to co- 40 operate with the hinged cover and the wings to form an oven, a hinged burner ring plate carried by the case, a burner mechanism within the case, a fuel tank constantly connected to the burner mechanism and mount- 45 ed to swing so that in one position it will be outside the case and in the other position inside the case, and swinging rests for the case mounted at the respective ends thereof.

4. In a portable stove, a case having a 50 hinged cover, a burner mechanism, means for shifting the burner mechanism to one side of the case, and a fuel tank for the burner mechanism mounted to swing into 55 the case when the burner mechanism is shifted to one side thereof and to swing out of the case to permit the burner mechanism to be shifted toward the center of the case.

In testimony whereof I affix my signature.

WILLIAM C. COLEMAN.