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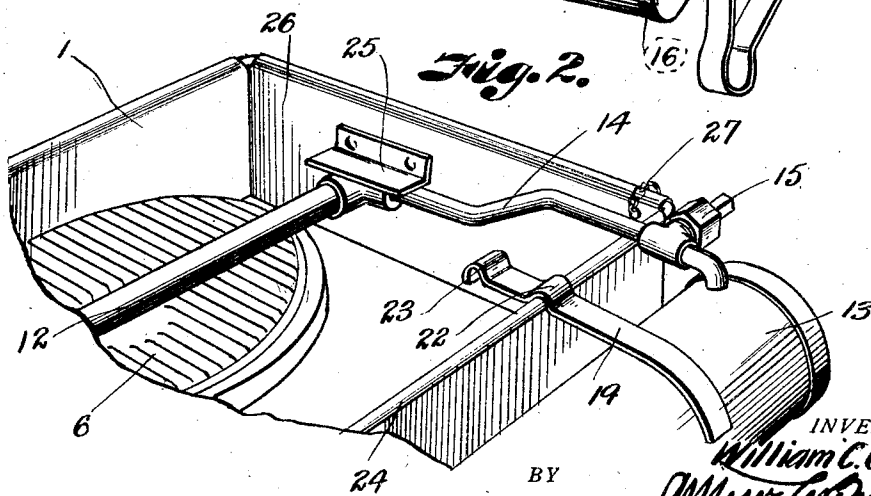
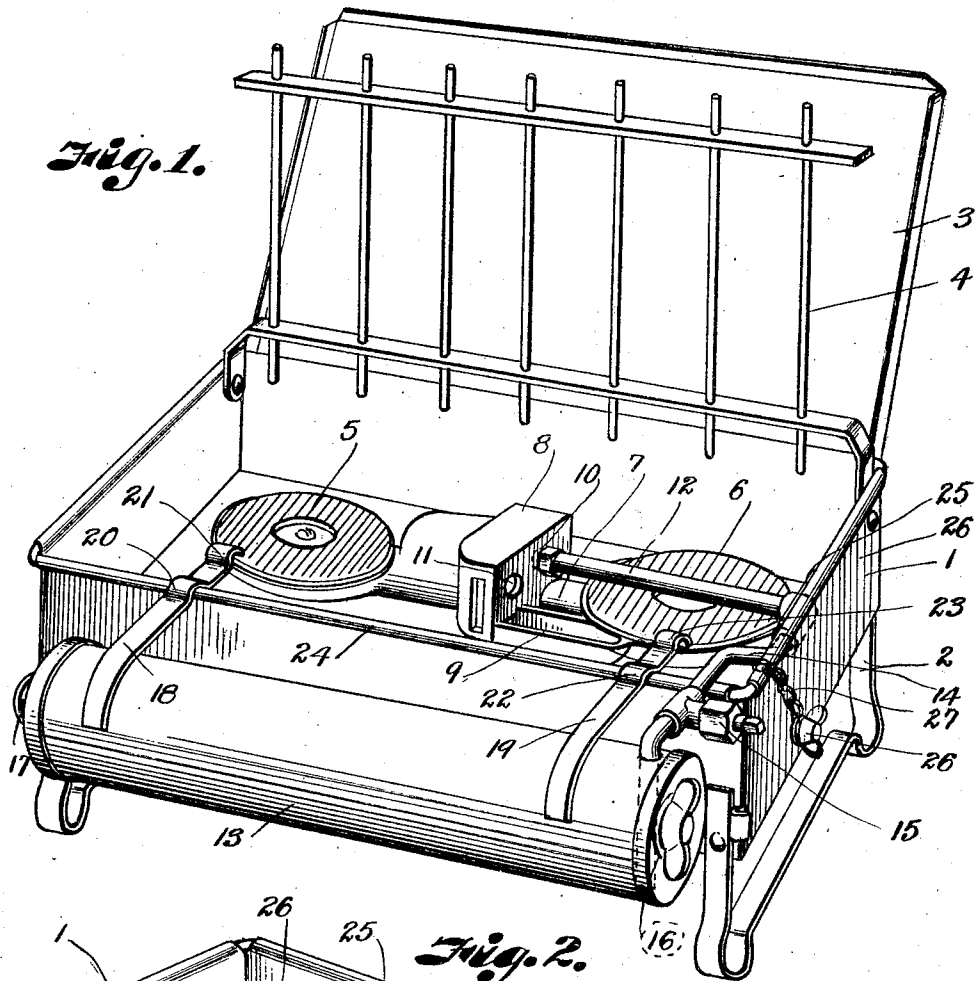
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CAMP STOVE

Filed Sept. 15, 1924

2 Sheets-Sheet 1



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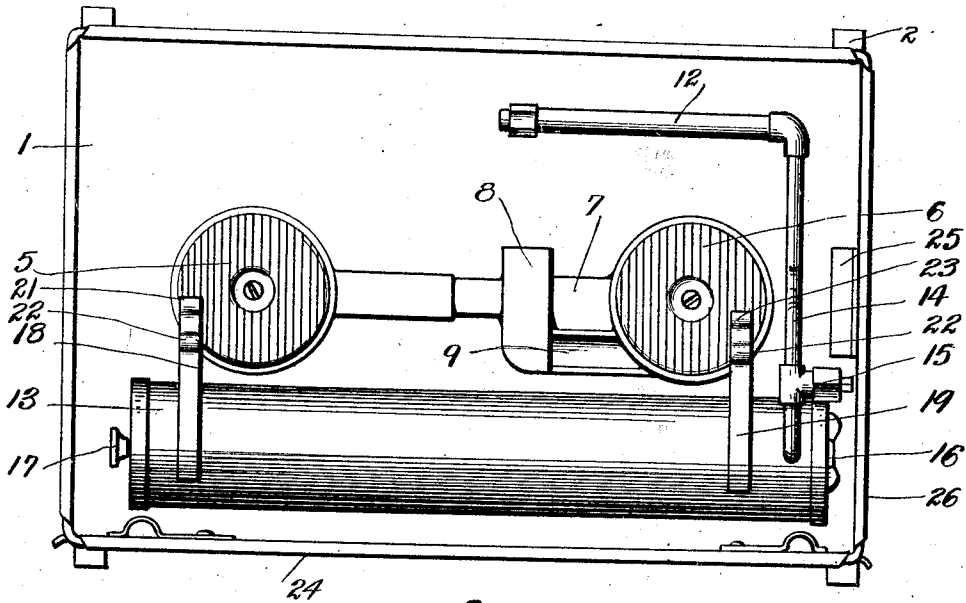
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CAMP STOVE

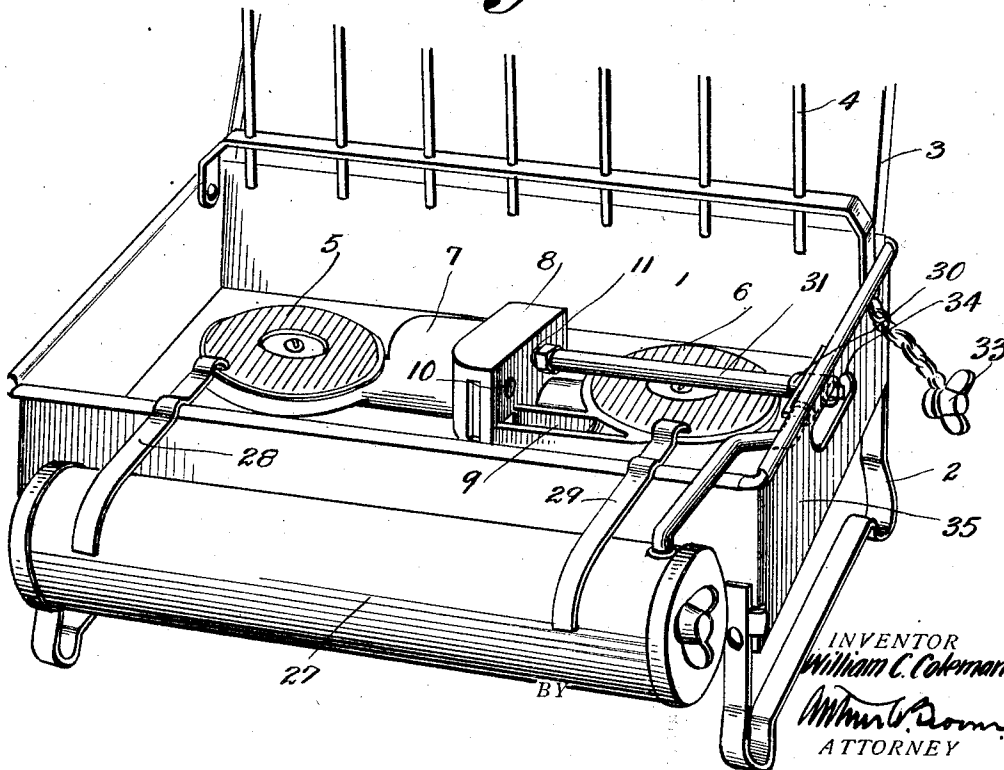
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*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

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## CAMP STOVE.

Application filed September 15, 1924. Serial No. 737,862.

This invention relates to portable camp stoves and the primary object of the invention is to provide a novel form of camp stove which can be readily collapsed for transportation and conveniently set up for use. Camp stoves usually employ one or more burners which are supplied with fuel oil from a supply tank. For safety the supply tank should be outside the case when in use, but for convenience in transportation, the tank should be inside the case so the stove can be collapsed in a compact manner.

Prior to my invention, many devices have been devised for accomplishing the desired result and I do not claim broadly the idea of having a tank movable into and out of the stove case, nor do I claim broadly the idea of having a tank and vaporizing chamber separable from the tank case or burner, as this general construction is very old and well known, but my invention consists in certain novel parts and arrangement of parts, which will be specifically described hereinafter, reference being had to the accompanying drawings, in which—

Fig. 1 is a perspective view of one form of camp stove constructed in accordance with my invention.

Fig. 2 is a perspective view of one end of the stove with the tank on the outside of the case.

Fig. 3 is a plan view showing the tank inside the case, and

Fig. 4 is a modified form of the invention.

The stove case 1 may be supported by any convenient means on legs 2 and a cover 3 is provided with a hinged grid or grate 4. Inside the case are the burner plates or caps 5 and 6 supplied by a manifold 7 through a hollow block 8 with which the vaporizer communicates.

The hollow block is provided with a preheater cup 9 and there are two openings 10 and 11 in the block to receive the vaporizer tube 12. When the vaporizer tube communicates with the opening 10, fuel is supplied to the burner and when it communicates with the opening 11 fuel is supplied to the preheater cup 9. All of this construction is old and well known. My invention consists rather in the arrangement of the supply tank or reservoir 13, the vaporizing tube 12 and the connection 14 between the tank 13 and the vaporizer tube and the controlling valve 15 for controlling the flow of fluid from the tank 13 to the vaporizer tube 12.

The tank 13 is provided with an inlet opening 16 and with a pump 17 to provide pressure on the fuel as is well understood.

The connecting pipe 14 extends at right angles from the tank 13 and merges into the vaporizing tube 12. The tank is provided with a plurality of transverse straps 18 and 19 which extend at right angles therefrom and which are provided with notches. The strap or arm 18 is provided with notches 20 and 21 while the strap 19 is provided with notches 22 and 23 adapted to engage the edges 24 of the case 1. The weight of the tank and the liquid which it contains would tend to swing or teeter the arms 18 and 19 upon the edge 24 unless some means were provided to counteract this effect, so I have provided a stop 25 along the inner face of the end wall 26 of the case 1. When the device is not in use, the tank can lie within the case 1 along one longitudinal edge thereof, the connecting member 14 lying along the end and the vaporizing tube lying along the longitudinal wall of the case opposite to the tank 13 so that the vaporizing tube 12 and the tank are parallel, the burners 5 and 6 being between the tank and the vaporizing tube 12. Therefore the tank and vaporizing tube together with its connection can be received within the case so that the lid or cover 3 can be closed down over the edge of the case. When, however, it is desired to use the stove the tank 13 can be grasped and moved laterally of the case so that the notches 21 and 23 will receive the edge 24 of the case 1, the connecting member 14 and one end of the vaporizing tube lying beneath the stop 25.

In this position liquid fuel may be caused to flow into the opening 11 when the valve 15 is unseated. The valve may be operated by a key 26 connected to the case by a chain 27. When the liquid flows into the opening 11, it will gravitate into the cup 9 which is in communication with the hollow block 8. A match may then be applied to the liquid fuel so that the flame will heat the vaporizing tube 11 to vaporize the fuel. When the fuel is vaporized, the tank is again shifted so that the notches 20 and 22 engage the edge 24 of the case 1. In this position, the vaporizing tube communicates with the opening 10 in block 8 to feed vaporized fuel to the manifold 7 and through it to the burners 5 and 6. The tank can be shifted to either posi-

tion in a convenient manner, the stop 25 being long enough to permit the back and forth movement of the connector tube during the shifting of the tank. When it is desired to  
 5 discontinue the use of the stove, the valve 15 can be closed and the tank moved over to the position shown in Fig. 3 whereupon the grid and lid may be closed down and the legs folded as will be well understood.

10 In the modified form shown in Fig. 4 the tank 27 has arms 28 and 29 corresponding to the arms 18 and 19 in the preferred form. Instead of having the valve 15 adjacent to the tank, a valve 30 is provided at the end of  
 15 the vaporizing tube 31. The valve is entirely inside the case 32 but it may be operated by a key 33 insertable through the elongated slot 34 in the end 35 of the case 32. In either case, it will be apparent that it will  
 20 not be necessary to entirely take out the tank, vaporizer tube and connection assembly and insert the vaporizing tube through the slot 32.

It will be necessary only to shift the  
 25 tank laterally, then key 32 being insertable through the slot 34 for the purpose of manipulating the valve. The operation with respect to the construction shown in Fig. 4 will be in all other respects identical with  
 30 that described in the construction shown in Figs. 1 and 3.

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

35 1. In combination, a stove comprising a substantially rectangular case, a burner mechanism rigidly mounted in the case, having a fuel inlet, and a removable unitary structure in the case comprising a tank and  
 40 ported vapor-generating member rigidly fastened to the tank for establishing communication between the tank and the fuel inlet of the burner mechanism, notched arms rigidly fastened to the tank engageable with  
 45 the edge of the case for positioning the vapor generator in line with the inlet opening to the burner when the tank is outside the case, the unitary structure being removable from the case independent of the burner mechanism.

50 2. In combination, a stove comprising a substantially rectangular case, a burner mechanism rigidly mounted in the case, a fuel tank movable into and out of the case and having a ported member for establishing  
 55 communication between the tank and the burner mechanism and arms on the tank for engagement with the edge of the case to support the tank on the edge of the case and a stop member in the case under which the ported member may abut to prevent tilting  
 60 of the ported member with respect to the burner mechanism.

65 3. In combination, a stove comprising a substantially rectangular case, a burner mechanism mounted in the case having a

fuel inlet and a unitary structure co-operative with the burner mechanism, said structure comprising a tank, a ported vapor generating member connected to the tank  
 70 for establishing communication between the tank and the fuel inlet of the burner mechanism and laterally disposed arms rigidly fastened to the tank, engageable with the edge of the case for positioning the vapor  
 75 generator in line with the fuel inlet of the burner mechanism when the tank is outside the case and stop means for preventing tilting of the tank when it is supported outside the case by the arms.

4. A stove comprising a rectangular case, 80 a burner mechanism in the case having two ports, one for the burners and the other for a priming cup, a priming cup in communication with said other port, a tank, a vaporizer tube, a tubular connection between the  
 85 vaporizer tube and the tank, the tank being shiftable laterally to cause the vaporizer tube to register with either of said ports and notched arms carried by the tank for engagement with the edge of the case to hold  
 90 the tank outside the case and to maintain the vaporizer tube in register with either of said ports.

5. A stove comprising a rectangular case, 95 a burner mechanism in the case having two ports, one for the burners and the other for a priming cup, a priming cup in communication with said other port, a tank, a vaporizer tube, a tubular connection between the  
 100 vaporizer tube and the tank, the tank being shiftable laterally to cause the vaporizer tube to register with either of said ports and notched arms carried by the tank for engagement with the edge of the case to hold  
 105 the tank outside the case and to maintain the vaporizer tube in register with either of said ports, a valve at the end of the vaporizer tube and a key insertable through an opening in the end of the case for operating  
 110 the valve.

6. A stove comprising a substantially rectangular case, a burner mechanism rigidly 115 secured within the case, a fuel tank, a ported member including a generating tube in communication with the tank, lateral arms connected to the tank having sets of notches for engagement with the edge of the case so that when one set of notches is engaged  
 120 by the edge of the case the vaporizing tube will be in position to supply fuel to the burner mechanism, and when the other set of notches is engaged by the edge of the case the vaporizing tube will be out of position to supply fuel to the burner mechanism.  
 125

7. A stove, comprising a substantially rectangular case, a burner mechanism rigidly 130 secured within the case, a fuel tank, a ported member including a generating tube in communication with the tank, lateral arms con-

nected to the tank having sets of notches for engagement with the edge of the case so that when one set of notches is engaged by the edge of the case the vaporizing tube will be in position to supply fuel to the burner mechanism, and when the other set of notches is engaged by the edge of the case the vaporizing tube will be out of position to supply fuel to the burner mechanism, the tank and vaporizing tube being all connected in a rigid unitary structure adapted to be moved bodily into and out of the tank.

8. A stove comprising a rectangular case, a burner mechanism in the case having two ports, one for the burners and the other for a priming cup, said priming cup in communication with said other port, a tank, a vaporizer tube, a tubular connection between the vaporizer tube and the tank, the tank being shifted laterally to cause the vaporizer

tube to register with either of said ports and arms carried by the tank for engagement with the edge of the case to hold the tank outside the case and to maintain the vaporizer tube in register with either of said ports.

9. In combination, a stove comprising a substantially rectangular case, a burner mechanism rigidly mounted in the case, having a fuel inlet and a removable unitary structure comprising a tank, a vapor generating member communicating with the tank and spaced arms rigidly fastened to the tank, the arms being receivable on the top edge of the case to aline the vapor generating member with the fuel inlet to the burner mechanism.

In testimony whereof I affix my signature.

WILLIAM C. COLEMAN.