Aug. 10, 1926. 1,595,133

A. J. YEAGER

COLLAPSIBLE STOVE

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Fig. 1

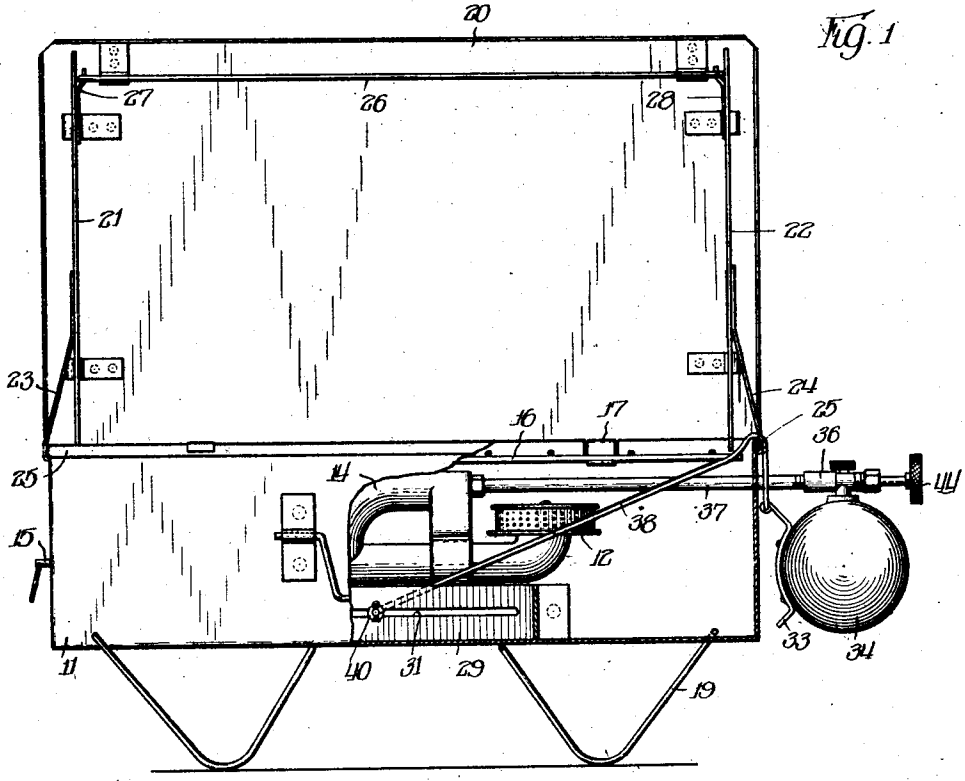
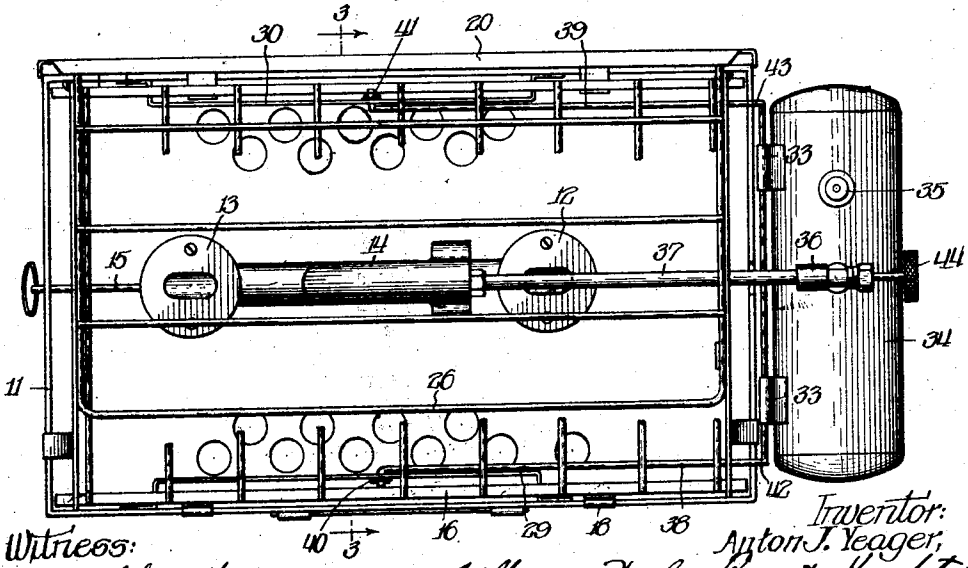



Fig. 2.




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Fig. 3.

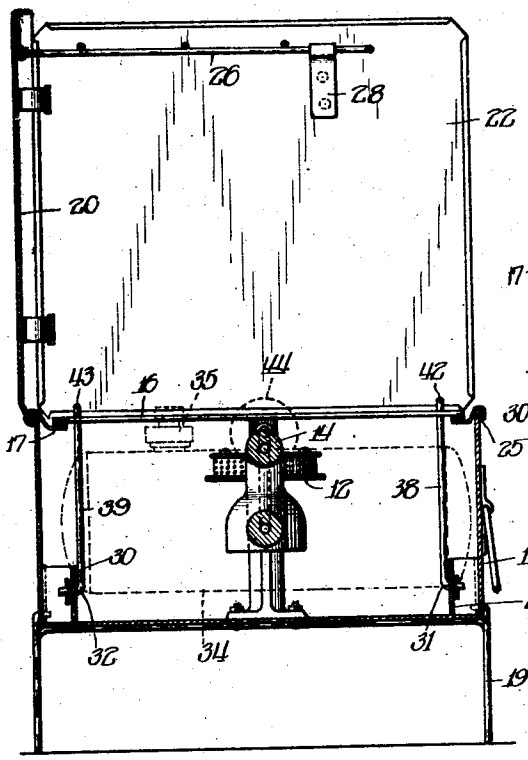



Fig. 4

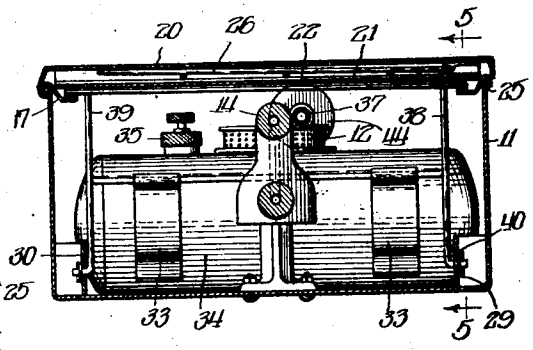
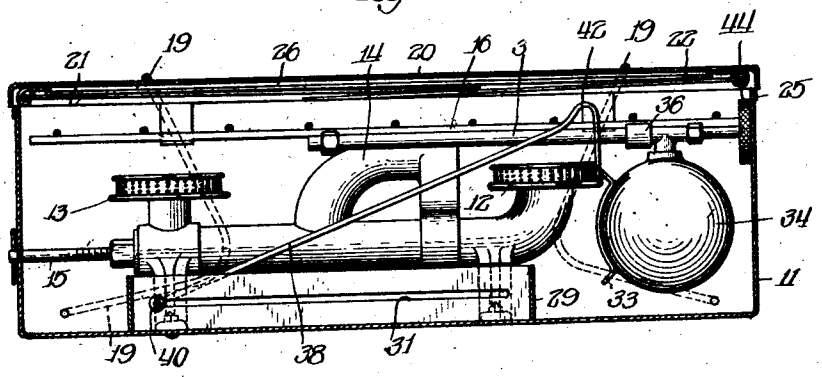



Fig. 5




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# UNITED STATES PATENT OFFICE.

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## COLLAPSIBLE STOVE.

Application filed September 26, 1924. Serial No. 740,012.

This invention relates to a new and improved collapsible stove, more particularly, to the type of stove for use with liquid fuel and having a fuel tank capable of being moved from a transport to an operating position.

Stoves of this type have heretofore been made with a stove housing adapted to contain the burners and gas forming elements, and to contain the fuel tank when the stove is closed up for carrying or shipping. When the stove is set up for use the gas tank is removed from the housing and placed outside the housing with a connection extending through the housing to the gas forming mechanism and burners. It has heretofore been customary for such gas tanks to be unsupported other than by the ground or surface on which the stove rests and to be unattached to the stove except for the detachable connection between the fuel pipe and burner.

It is an object of the present invention to provide a new and improved collapsible stove in which the fuel tank is permanently attached to the stove proper by means permitting the tank to be moved from the transport to the operating position.

It is a further object to provide construction of this character in which the means connecting the tank and stove serve to support the tank upon the stove in the proper operating position.

It is an additional object to provide a tank connecting means which serves together with the housing, to maintain the tank in fixed travelling position.

It is also an object to provide collapsible stove construction in which a warming shelf is provided and serves to maintain the wind break members in proper position.

Other and further objects will appear as the description proceeds.

I have shown in the accompanying drawings one preferred form of my invention in which—

Figure 1 is a front view of the stove in operating position, parts being broken away in order to show portions of the mechanism.

Figure 2 is a plan view of the stove in operating position,

Figure 3 is a vertical section taken on line 3—3,

Figure 4 is a vertical section similar to Figure 3, but showing the stove closed and,

Figure 5 is a section taken on line 5—5 of Figure 4.

The stove comprises the rectangular box housing 11 formed of sheet metal, the burners 12 and 13 and the fuel mixing mechanism 14 being secured to the inner side of the bottom of the housing. The valve 15 is provided for controlling the burner 13. The utensil supporting grill 16 is pivotally secured to the back of housing 17 and is supported to the front of the housing by hooks 18. The housing is provided with the swinging legs 19 which are shown in the operative position in Figure 1 and are shown in broken lines in Figure 5, in the carrying or transporting position. The cover 20, which also serves as a wind break member is hinged to the rear of the housing and the end wind break members 21 and 22 are hinged to the cover 20. The members 21 and 22 are provided with the spring hooks 23 and 24, which engage under the bead 25 running around the top edge of the housing to assist in maintaining the members in their proper position. The warming shelf 26 is hingedly secured to the cover 20 and is adapted to be swung up to the horizontal position as shown in Figures 1 and 3. In this position, it rests upon the hooks 27 and 28 on members 21 and 22. This connection serves not only to support the warming shelf, but to maintain the members 20, 21 and 22 in the desired relation.

The housing contains the two guide members 29 and 30, which are secured to the inner faces of the front and back walls of the housing. These members are provided with the longitudinally extending slots 31 and 32 respectively. The connector member 33 is fixedly secured to the fuel tank 34. This tank is provided with the seal cap 35 and with the valve 36. It is provided with the connecting pipe 37 adapted to be detachably engaged with the fuel mixing conduit 14. The connecting arms 38 and 39 are hingedly connected to the gas tank by means of member 33. The opposite ends of these members are turned outwardly and extend through the slots in the members 29 and 30 as shown in Figure 2 at points 40 and 41. As shown at these points, the ends of the arms are provided with washers and cotter pins to retain them in place in the slots. The arms 38 and 39 are provided with the offset portions 42 and 43 adapted to engage

the edge of the housing as shown in Figure 1 to retain the tank in the proper operating position. When the tank is placed within the housing for transport as shown in Figure 5, it will be noted that the valve handle 44 engages the end of the housing to prevent movement of the tank in one direction. The arms 38 and 39 engage the opposite ends of the slots 31 and 32 and prevent movement of the tank in the opposite direction.

The method of opening up the stove for use and returning it to transport position will be readily apparent from the drawings and from the above description. With the stove in the position shown in Figure 5, the two legs are swung outwardly to the position shown in Figure 1. The cover 20 is raised carrying with it the members 21, 22 and 26. The grill 16 is raised and the tank 34 lifted out. The end of the pipe 37 is inserted in member 14 and the tank supported from the edge of the housing by the arms 38 and 39. The wind breaks 21 and 22 may then be swung out and the spring catches 23 and 24 brought to an engagement with a bead on the housing. If it is desired to use the warming shelf 26, this is raised and placed upon the hooks 27 and 28. The parts are now in the operating position, which is fully shown in Figure 1. The parts may be returned to the travelling position by a reversal of the movements just described.

With the construction shown the tank is positively connected to the stove at all times and consequently cannot become mislaid. This connection with the locating offsets in the arms also assist in maintaining the feed pipe in proper connection with the burner mechanism. The tank is positively and firmly supported in use and when travelling is restrained against moving around in the housing. The warming shelf is particularly useful in itself and also aids in maintaining the wind break members in their proper relation.

I have shown one preferred form of construction, but it is to be understood that I contemplate such changes and modifications as come within the scope of the appended claims.

I claim:—

1. In a collapsible stove, a housing, burners supported therein, a fuel tank adapted to be carried in the housing for transport and to be placed outside the housing to be connected to the burners for operation, and arms connected to the tank and having a pivoted sliding connection with the housing whereby the tank may be moved from transport to operating position.

2. In a collapsible stove, a housing, burners supported therein, a fuel tank adapted to be carried in the housing for transport and to be placed outside the housing to be connected to the burners for operation, and arms connected to the tank and having a pivoted sliding connection with the housing whereby the tank may be moved from transport to operating position, the arms having offset portions adapted to engage an edge of the housing to maintain the tank in proper operating position.

3. In a collapsible stove, a housing, burners supported therein, a fuel tank adapted to be carried in the housing for transport and to be placed outside the housing to be connected to the burners for operation, guide members secured inside the housing and provided with longitudinally extending slots, and arms connected to the tank and having portions extending into the guide slots.

4. In a collapsible stove, a housing, burners supported therein, a fuel tank adapted to be carried in the housing for transport and to be placed outside the housing to be connected to the burners for operation, guide members secured inside the housing and provided with longitudinally extending slots, and arms connected to the tank and having portions extending into the guide slots, the arms engaging one end of the slots when the tank is in transport position to prevent movement of the tank in one direction.

5. In a collapsible stove, a housing, burners supported therein, a fuel tank adapted to be carried in the housing for transport and to be placed outside the housing to be connected to the burners for operation, guide members secured inside the housing and provided with longitudinally extending slots, and arms connected to the tank and having portions extending into the guide slots, the arms engaging one end of the slots when the tank is in transport position to prevent movement of the tank in one direction, means rigidly associated with the tank in transport position engaging an end of the housing to prevent movement in the opposite direction.

6. In a collapsible stove, a housing, wind break members pivotally secured to the housing and adapted to be swung upwardly, and a warming shelf pivotally secured to one of said wind break members and means to detachably secure it to another of said members to support the shelf and maintain the wind break members in fixed relation.

Signed at Wisconsin Rapids, Wisconsin, this 17th day of September, 1924.

ANTON J. YEAGER.