Dec. 28, 1926. 1,611,904

W. GOLDBERG ET AL

CAMP STOVE

Filed August 7, 1925 2 Sheets-Sheet 1

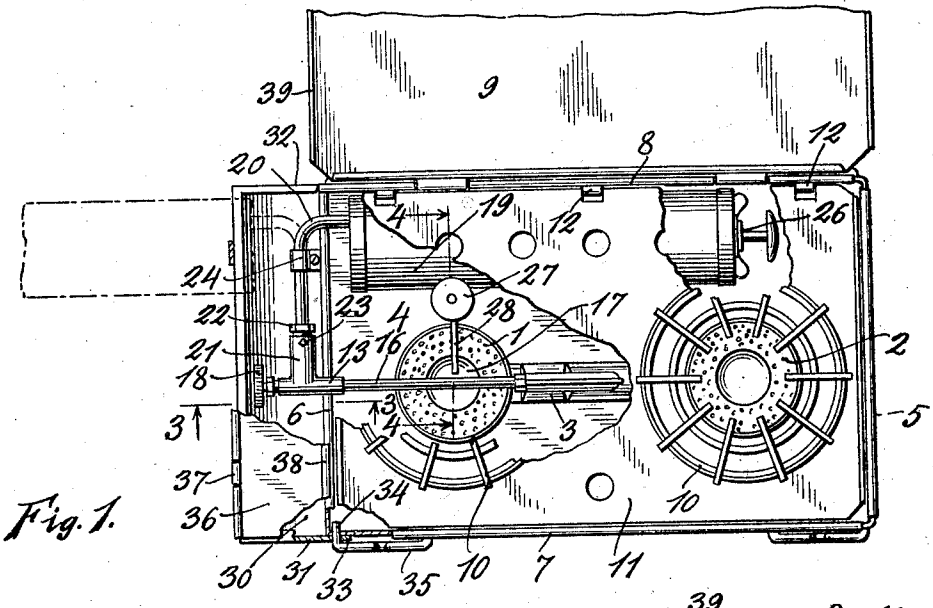


Fig. 1.

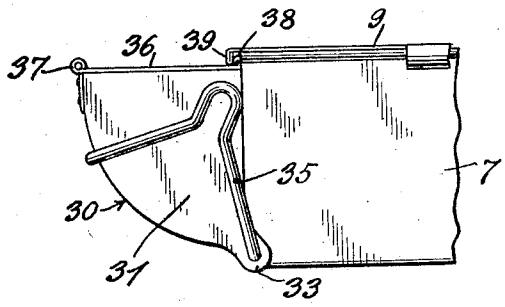


Fig. 2.

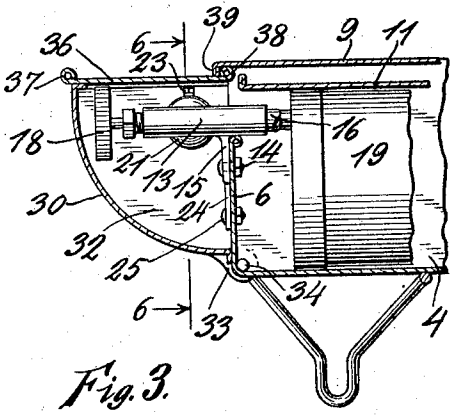


Fig. 3.

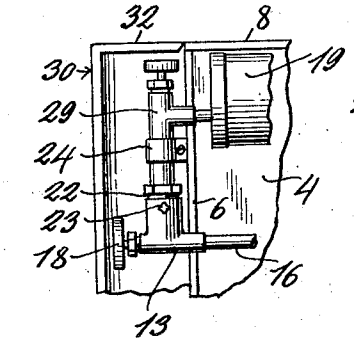


Fig. 5.

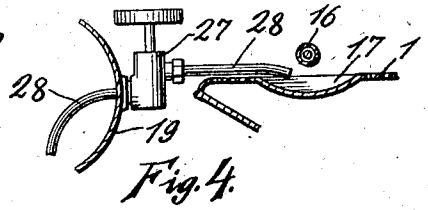


Fig. 4.

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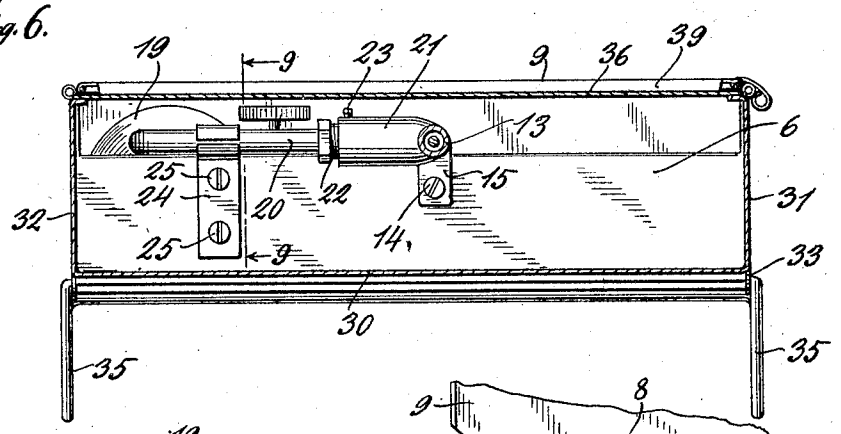
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CAMP STOVE

Filed August 7, 1925 2 Sheets-Sheet 2

Fig. 6.



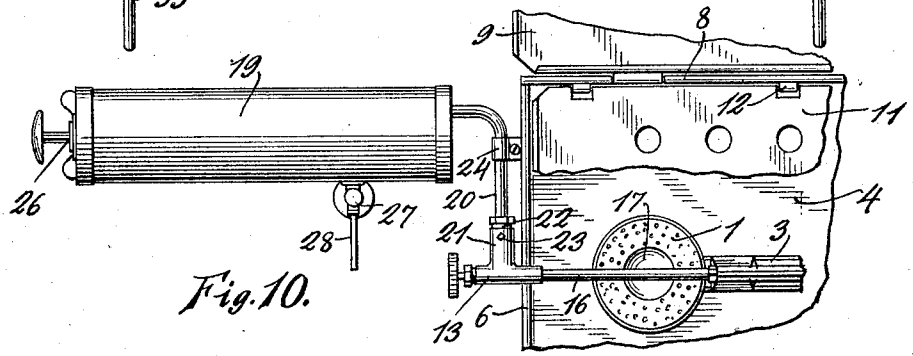


Fig. 10.

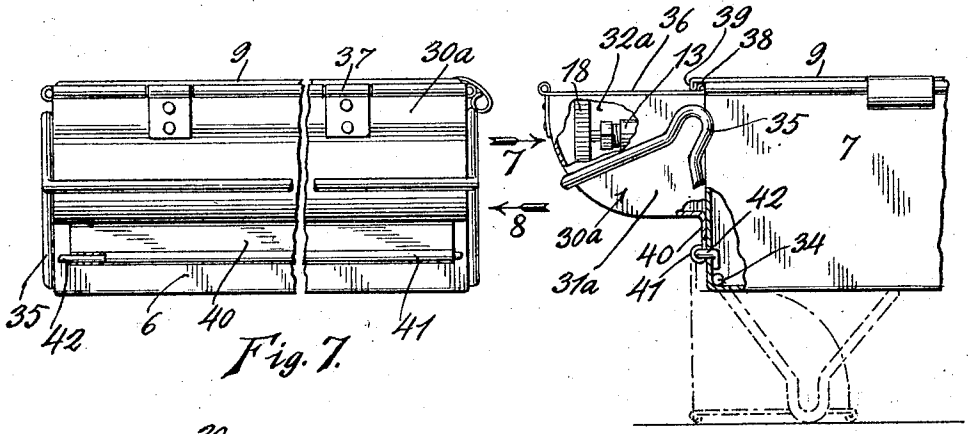


Fig. 7.

Fig. 8.

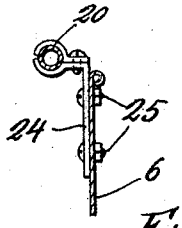


Fig. 9.

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UNITED STATES PATENT OFFICE.

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CAMP STOVE.

Application filed August 7, 1925. Serial No. 48,820.

This invention relates to improvements in portable camp stoves of the type employing gasoline as fuel.

In United States Letters Patent No. 1,517,355, granted to us on the 2nd day of December, 1924, we have shown and described a stove of the type to which our present invention relates and upon which this invention is an improvement.

In the construction shown in the patent above identified, the gasoline tank has a generator rigidly attached thereto. The tank and generator are detachable from the casing containing the burners and the tank is adapted to be placed within the casing when the stove is not in use. When the stove is started, gasoline is permitted to flow from the tank through the generator tube and into a priming cup in the burner. This leaves the generator tube full of gasoline and when the tube is heated by the flame from the gasoline in the priming cup, the gasoline contents is forcibly expelled from the generator and flows into the manifold where it later ignites, causing a flare of flame when the stove is ignited. This is highly objectionable especialy when the stove is to be used inside of buildings.

It is our object in the present construction to construct the stove in such a manner that gasoline can be delivered to the priming cup without first having to flow through the generator tube. In this way there will be no gasoline in the generator tube when it is first heated and therefore there will be no discharge into the manifold. Since we do not employ the generator tube in priming, it is not necessary that this shall be detachable and we are therefore enabled to attach the tube to the casing and to the manifold in a more or less permanent manner so that it will not be detached except for cleaning or for repairs. We connect the gasoline tank to the generator by a swivel connection that makes it possible to swing the tank into the casing when the stove is not in use. The tank and generator are attached to the casing so that there is no danger of losing them and so that there is no assembling of parts in changing the stove from operative to inoperative position and vice versa.

Our invention can be most clearly described and will be most readily understood when reference is had to the acompanying drawings in which the preferred embodiment thereof is shown and in which:

Fig. 1 is a plan view of our improved stove showing the cover open but the parts otherwise in the position that they occupy when the stove is in condition for transportation, parts being broken away to better disclose the construction;

Fig. 2 is a side elevation of one corner of the casing showing the end closure in place so as to protect the parts against injury;

Fig. 3 is a section taken on line 3—3, Fig. 1;

Fig. 4 is a section taken on line 4—4, Fig. 1 and shows the priming device;

Fig. 5 is a fragmentary plan view showing a modification;

Fig. 6 is a section taken along line 6—6, Fig. 3;

Fig. 7 is a view looking in the direction of the arrow 7 in Fig. 8;

Fig. 8 is a view looking in the direction of arrow 8 in Fig. 7 and shows by full lines the end closure and the leg as they appear when the stove is folded for shipment and by dotted lines the position that these parts occupy when the stove is in operative positon;

Fig. 9 is a section taken on line 9—9, Fig. 6, and

Fig. 10 is a top plan view similar to that of Fig. 1, with portions broken away and the parts arranged in operative position.

Our stove comprises two burners 1 and 2 that are connected by a manifold 3 and secured to the bottom 4 of an enclosing casing. The casing has end walls 5, 6 and side walls 7, 8 and cover 9. Grates 10 are secured in suitable openings in the grate support 11 which is connected to side 8 by hinges 12. The end 6 is lower than the sides 7 and 8 (Fig. 6) and to this the valve 13 is attached by means of a bolt 14 that passes through registering openings in the end 6 and the bracket 15 that is integral with the valve 13. The generator tube 16 extends from the valve 13 to the manifold 3. It will be noticed that the generator tube extends diametrically over the burner 1 which has a priming cup 17 that is adapted to receive the gasoline necessary to heat the generator. By means of the valve handle 18 the passage through the valve 13 can be opened or closed at will. The hydrocarbon fuel, usually gasoline, is contained in the

cylindrical tank 19 from which the tubular conduit 20 extends. This conduit or tube projects into an opening in the cylindrical portion 21 of the valve 13 and a tight joint is made between the two by means of a gland 22 which can be held in adjusted position by means of a set screw 23. A bracket 24 is secured to the end 6 by means of screws 25 and has a portion that embraces the pipe 20 so as to form a bearing in which the pipe may rotate when the tank is moved from the full line position to the dotted line position (Fig. 1). It is now apparent that the tank 19 is always connected with the valve 13 by means which permits it to be rotated about the axes of the member 21 into and out of the casing without, however, being detached from the casing. Tank 19 is provided with an air pump 26 by means of which the liquid contents of the tank can be subjected to air pressure. Secured to one side of the tank 19 is a priming device consisting of a valve 27 (Fig. 4) interposed in a pipe 28 that extends from the interior of the tank to a point above the priming cup 17. When the valve 27 is moved to open position, gasoline will flow through the pipe 28 into the priming cup. After the priming cup has been filled with gasoline, the tank is swung outwardly to the dotted line position in Fig. 1 or to the position shown in full lines in Fig. 10. The gasoline in the cup 17 is then ignited and the flame heats the tube 16. When the tube 16 has been thoroughly heated, the handle 18 is rotated so as to open the valve 13; this permits gasoline to flow into the generator tube 16 where it is converted into vapor and passes into the manifold thence to the burners. The flame from the burning gases keeps the generator tube 16 hot so that it will vaporize the gasoline and produce a constant flow of gas. Owing to the fact that the generator tube is empty when it is first heated, there will be no gasoline forced into the manifold and therefore there will be no burst of flame when the stove is ignited, which is the case when the tank and generator are made detachable and the priming is done through the generator tube. We desire to call attention to the fact that the priming device need not necessarily be connected directly to the tank but may be connected at any point between the tank and the valve 13, it being merely necessary that the priming can be done without introducing gasoline into the generator tube as this produces the objectionable results above referred to.

In Fig. 5 we have shown a slightly modified construction in which a valve 29 is located between the tank and the packing gland 23. The purpose of this extra valve is to prevent pressure on the swivel joint when the stove is not in use, and thereby prevent the possibility of leakage. When the extra valve 29 is employed, the admission of gasoline may be controlled by it to such an extent that the swivel joint is subjected to very litle pressure at any time and the valve stem operated by the handle 18 may be employed merely to control the flow of gas from the generator. When our stove is not in use the tank 19 occupies the position shown in full lines in Fig. 1. As the stove is intended primarily for use by campers and automobile tourists, it must be so constructed that the parts are protected against damage from rough usage. We have therefore provided means for guarding the valve 13 and associated parts against damage. This means comprises a box-like housing 30 whose ends 31 and 32 have perforated ears 33 that receive the ends 34 of the legs 35 which serve as pivots about which the box swings. A cover member 36 is hinged to the upper edge of the box 30 at 37. When the tank is in place within the casing, the box 30 is swung about its pivots 34 into the position shown in Figs. 1 to 5. The cover 36 is provided with a roll 38 that is adapted to be engaged by the roll 39 on the cover 9 (Figs. 2 and 3) so as to hold the box 31 in place about the parts that it is designed to protect. When the stove is in use, the protective box, or enclosure 30, is released and dropped down out of the way.

In Figures 7 and 8, we have shown the end closure 30 constructed in a slightly different manner. Instead of the sides having ears 33 that are pivoted on the ends 34 of the legs 35, the sides 31^a and 32^a are smaller and are not provided with ears like sides 31 and 32. The curved side 30^a has a downwardly extending part 40 that is rolled at 41 about the wire 42 that serves as a hinge pin. By this construction the closure can be swung into the dotted line position shown in Fig. 8.

It will be seen from the above that we have produced a stove in which the generator tube is attached to the casing and to the manifold and is intended to be removed only for cleaning or repairing. The tank, instead of being rigidly attached to the generator, is connected thereto by a swivelled connection that makes it possible to swing the tank out of inoperative position (full line position Fig. 1) to operative position (full line position in Fig. 9) or vice versa without disconnecting it from the generator. We have provided means for priming which is entirely independent of the generator tube with the result that a more desirable operation is assured.

Having described our invention what we claim as new is:

A camp stove comprising, in combination, a casing having, a bottom, two sides and two end walls, a burner located within said casing, a manifold, a generator tube extend-

ing across one of the end walls and over the burner one end of said generator projecting into the manifold, a right angle connector secured to the outer end of the generator, a valve mechanism in said connector, one end of said connector being provided with a stuffing box whose axis extends parallel with the end wall, a fuel tank, a pipe having one end connected to the tank and the other rotatably connected to the connector, a bracket secured to the end wall, said bracket having a bearing for the pipe, said tank being rotatable about the axis of said pipe into and out of said casing and means for enclosing the connector and pipe when the tank is within the casing.

In testimony whereof we affix our signatures.

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