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1,714,264

CAMP STOVE

Filed March 19, 1928

2 Sheets-Sheet 1

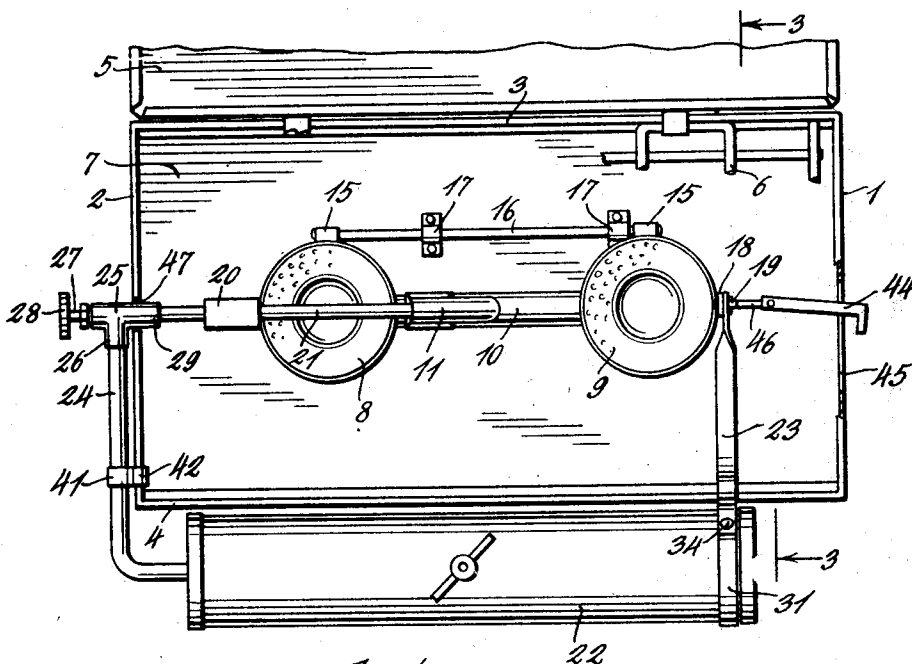


Fig. 1.

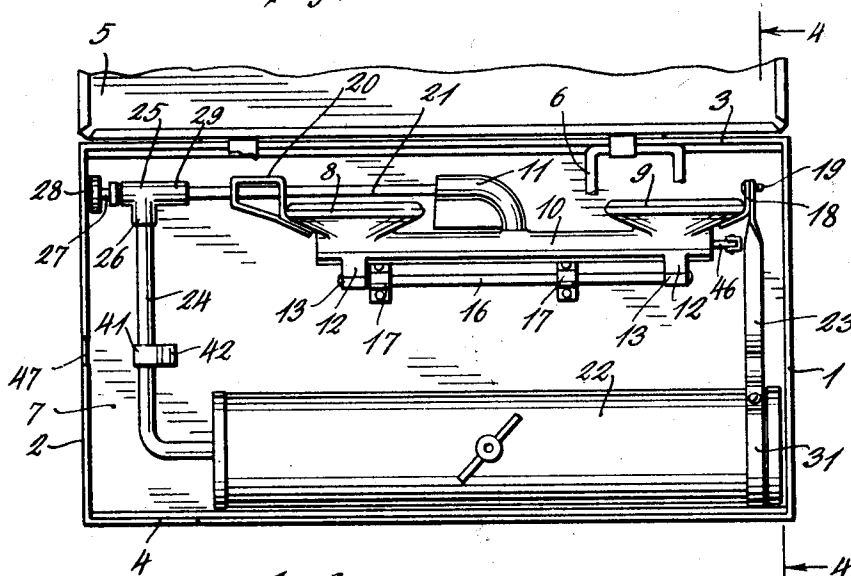


Fig. 2.

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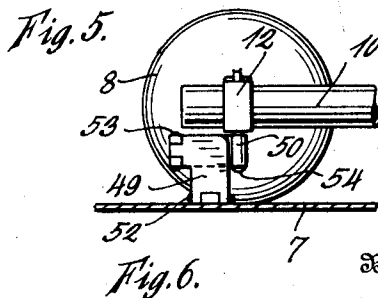
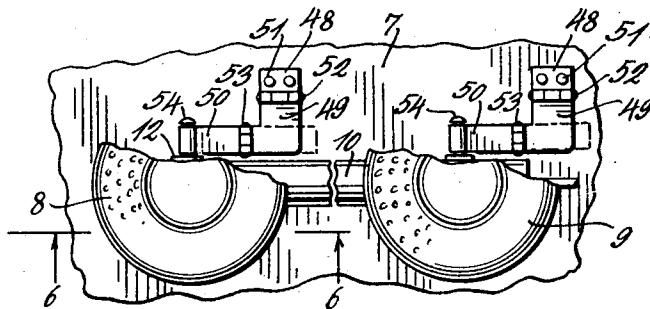
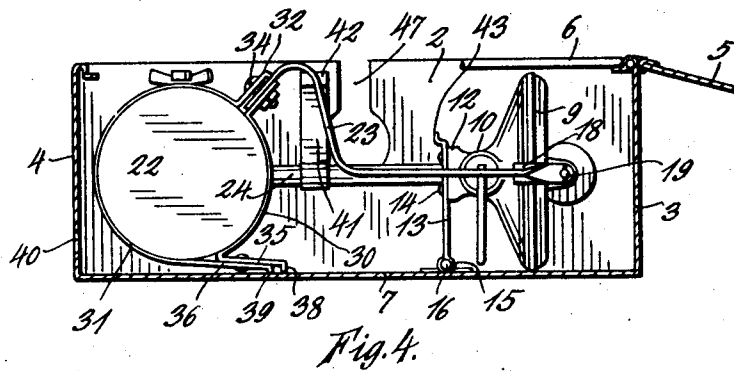
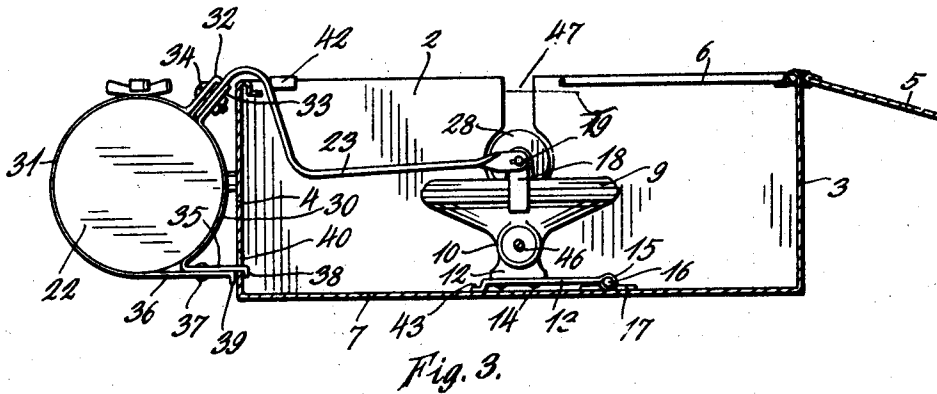
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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CAMP STOVE.

Application filed March 19, 1928. Serial No. 262,770.

This invention relates to improvements in gasoline stoves of the type sometimes referred to as camp stoves.

Owing to the great prevalence of camping by hunters, fishermen and tourists, a type of gasoline stove has been developed which is especially well adapted for use by campers, as it can be folded very compactly and can therefore be readily packed and transported and as the fuel employed is gasoline, the stove can be put into operative condition very quickly. Stoves of this type are often subjected to rough usage during transportation and it is therefore necessary that the burner, the gasoline tank and the generator tube shall be well protected against injury and at the same time it is necessary that the gasoline tank be placed in a position outside of the casing during the time that the stove is in use, so as to expose it to the circulation of the air and protect it as much as possible from the heat generated by the burners.

It is the object of this invention to produce a gasoline stove of the type referred to which shall be so constructed that when the stove is not in use, the burner and the gasoline tank will be located inside of the casing so as to be protected and which can be readily moved to operative position when the stove is to be used.

The stove which forms the subject of this invention can be most clearly described and readily understood when reference is had to the accompanying drawings in which the preferred embodiment thereof has been illustrated, and in which:

Fig. 1 is a top plan view of a stove showing the parts in operative position;

Fig. 2 is a top plan view showing the parts in the position which they occupy during transportation;

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

Fig. 4 is a section taken on line 4—4, Fig. 2;

Fig. 5 is a top plan view of a fragmentary portion of a stove constructed in a slightly different manner; and

Fig. 6 is a section taken on line 6—6, Fig. 5.

The stove which forms the subject of this invention is provided with a sheet metal casing having end walls 1, 2, side walls 3, 4 and a cover 5. A grate 6 is also hinged to one edge of the casing, but as the particular construction of the grate has nothing to do with the present invention, only a portion of the grate has been shown. Located within

the casing and secured to the bottom 7 thereof, is a burner assembly comprising two burners 8 and 9, which are attached to opposite ends of the manifold 10. This manifold has a mixing chamber 11, to which reference will hereinafter be made. The manifold is provided with two downwardly extending lugs 12, to which a hinge member 13 is secured by means of screws or rivets 14. This hinge member extends a considerable distance to one side of the manifold in the manner shown in Fig. 3 and is provided with a curved portion 15, that encloses the rod 16. This rod is secured to the bottom 7 by means of spaced straps 17 and can be rotated about its axis and since the straps 17 are placed a shorter distance apart than the ends of the hinge members 13, it is also possible to slide the rod 16 longitudinally and therefore the burner assembly which is secured to rod 16 can be moved longitudinally of the casing and can also be rotated about the axis of rod 16 from the position shown in Fig. 3 to the position shown in Fig. 4. Attached to burner 9 is a bracket 18 whose upper end is provided with an opening for the reception of a pin 19 and secured to the burner 8 is a bracket 20, which is constructed in the manner shown in Fig. 2. Bracket 20 has openings through which the generator tube 21 may extend. A tank 22 is provided for the storage of gasoline and secured to one end of this tank is a strap 23 whose other end is provided with an opening through which the pin 19 extends. It is therefore apparent that strap 23 can be rotated about pin 19 as a pivot. Extending from the other end of the tank is a pipe 24, one end of which is connected with the valve member 25 at 26. Valve operating member 27 is provided with a knurled head 28, by means of which it can be rotated. The generator tube 21 is connected to the outlet end 29 of the valve 25, and by rotating the valve controlling member 27, gasoline will be permitted to flow from the tank 22 through the generating tube end into the mixing chamber 11 or prevented from flowing as may be desired. Strap 23 has been shown as attached to the tank 22 by means of two clamping members 30 and 31. These clamping members are provided with radially extending arms 32 and 33 which embrace the outer end of the strap 23 and are secured together by means of a bolt 34. The other ends of the clamping

members extend tangentially in the manner indicated by reference numerals 35 and 36. Parts 35 and 36 are secured together by means of a rivet 37 and part 35 extends somewhat farther than the part 37 and is provided with a short downwardly extending end portion 38, while part 36 has a similar downwardly extending portion 39. Side 4 of the casing has an opening 40 through which the end of member 35 extends in the manner shown in Fig. 1 and which serves to hold the tank in the desired position while the stove is in operation. For the purpose of holding the other end of the tank, a strap 41 has been secured to pipe 24 and this strap is provided with a hook 42 that is adapted to engage the upper edge of end member 2 for the purpose of holding the pipe 24 in position when the stove is in use. Attention is called at this point to the fact that the strap 23 does not come in contact with the upper edge of side 4, but merely acts as a tension member which connects the tank with the pin 19, and therefore the weight of the tank is supported on the tangentially extending part 35 in the manner shown in Fig. 3. This construction has been found to be very satisfactory for the reason that the tension thus produced in strap 23 tends to hold the burners in the position shown in Fig. 3, whereas if strap 23 rested on the upper edge of side 4, a slight accidental bending of this strap would have a tendency to destroy the proper adjustments of the burner and the latter would therefore frequently be held in a position in which the end 43 of the hinge member 13 would not rest on the bottom 7 as it should.

When the stove is in operative position, the burners should be located on a line extending through the center of the casing and burners 8 and 9 should be spaced equal distances from their corresponding end members. It is apparent, however, that in order to get the tank 22, pipe 24 and operating member 28 within the casing, it is necessary to move the entire assembly towards end 1 and this is accomplished in the following manner. Starting with the parts in the position shown in Fig. 1, the operating handle 44 is moved inwardly through slot 45 so as to extend substantially perpendicular to the rod 46. The tank 22 is now rotated about the axis of pin 19 and of the generator tube 21 into a vertical position and the entire assembly is then moved towards end member 1, the pipe 24 passing through the slot 47. After the head 28 has been positioned inside of end 2, the burner assembly is rotated about the axis of rod 16 from the position shown in Fig. 3 to that shown in Fig. 4 and the tank 22 is then moved downwardly until the ends 38 and 39 rest on the bottom 7 in the manner shown in Fig. 4. The grate 6 and the cover 5 can then be closed and the stove is ready for transportation.

Attention is called at this point to the fact that with the construction above described, the tank and generator tube are always secured to the burner assembly so that the parts are always in properly adjusted position. If, however, it should be necessary to detach the tank for any purpose, this can readily be accomplished by removing the pin 19 when the generator tube 21 can be withdrawn from the bracket 20 in a manner quite obvious from the drawings.

Attention is also called to the fact that the burner assembly can be moved longitudinally of the casing and then rotated about an axis parallel with the longitudinal sides of the casing and this construction permits the parts to be very quickly moved from inoperative to operative position and therefore provide a very convenient arrangement for stoves of this kind.

In Figs. 5 and 6, a slightly modified construction has been shown. In this construction the rod 16 has been dispensed with and in lieu thereof two special hinges have been provided, each hinge consists of three members 48, 49 and 50. Members 48 are secured to the bottom 7 by means of rivets 51 and are connected to members 49 by means of a hinge comprising a hinge pin 52. It will be observed that member 49 is of angular construction and that each of these members is connected to member 50 by means of a hinge pin 53. The other end of each member 50 is provided with a cylindrical opening through which a pin 54 extends. The other end of this pin passes through the lug 12 which is provided with an opening for this purpose.

Having reference now more particularly to Figs. 5 and 6, it will be observed that the burner assembly comprising the manifold 10 and burners 8 and 9 can be moved longitudinally of the casing by a circular motion about the hinge pins 53. By raising the burner assembly and moving it towards the right, members 50 can be rotated through an arc of substantially one hundred eighty degrees from the full line position to the dotted line position shown in Fig. 5. This movement is the equivalent of the sliding movement above described and permits the pipe 24 and the knurled head 28 to be moved from a position in which they lie outside of the casing like shown in Fig. 1, to a position in which they lie within the casing. After the burner assembly has been moved to the right in the manner described, it can then be rotated about hinge pins 52 to the position shown in Fig. 6. This last movement is equivalent to the rotation about the axis of rod 16 and moves the parts towards the side 3 a sufficient distance to permit the tank to be placed inside of the casing somewhat in the manner shown in Fig. 4.

The construction shown in Figs. 5 and 6 permits an operation that is very similar to

the operation permitted by the construction shown in Figs. 1 to 4. As there is first a longitudinal movement of the burner assembly, which is of sufficient extent or value to move the parts towards the right, a sufficient distance to bring the valve operating member 28 within the casing and there is then a transverse movement which includes a rotation about a longitudinal axis so as to move the parts towards the rear of the casing a sufficient distance to permit the tank to be brought into position within the latter.

From Figs. 1 and 2 it will be seen that when the parts are in operative position (Fig. 1) pipe 24 and valve 25 are on the outside of the casing and are therefore shielded from the heat by the interposition of the end 2. It is, of course, possible to dispense with the longitudinal movement by which pipe 24 is moved from one side of end 2 to the other side and when this is done pipe 24 will always remain on the inside of the casing which is not as desirable as the arrangement shown.

From the above description it will be apparent that by means of the construction shown and described an arrangement has been achieved which permits the tank and attaching means to be quickly disposed within the casing for transportation and which permits them to be moved to operating position with equal facility.

Attention is also called to the important fact that the burner assembly is always attached to the bottom of the casing and that the tank is connected with the burner assembly so that the user of the stove will not be called upon to connect and disconnect the parts in arranging them for use or for transportation.

Having described the invention what is claimed as new is:

1. In a portable stove, a casing, a burner assembly, means for shifting the burner assembly longitudinally and then transversely, a fuel tank for the burner assembly and means for pivotally connecting the tank with the burner assembly.

2. In a portable stove, a casing, an elongated burner assembly, means for shifting the assembly in the direction of its length and for rotating it about an axis parallel

with its length, a fuel tank and means for pivotally attaching the tank to the burner assembly.

3. In a portable stove, a casing, an elongated burner assembly, a two-part hinge for connecting the assembly with the casing, one part of said hinge being secured to the casing and the other part to the burner assembly, the pivot pin of said hinge extending parallel with the burner assembly and means for moving the assembly longitudinally with respect to the hinge pin.

4. In a portable stove, a casing having a bottom, a burner assembly comprising an elongated tubular manifold with a burner at each end, a hinge for securing the burner assembly to the bottom of the casing, said hinge comprising a hinge pin extending substantially parallel with the axis of the manifold, means for securing the hinge pin to the bottom of the casing, means for connecting the manifold with the hinge pin so that it can be moved in the direction of the length of the hinge pin, a fuel tank and means for pivotally attaching the tank with the burner assembly so that it may be rotated about an axis parallel with the hinge pin.

5. In a portable stove, a casing, a burner assembly, a hinge pin secured to the burner assembly in parallel relation with its axis, means for rotatably and slidably connecting the hinge pin with the casing, a fuel tank and means for pivotally connecting the tank with the burner assembly.

6. A portable stove comprising, in combination, a casing having a bottom, a burner assembly comprising an elongated manifold, means for pivotally securing the burner assembly to the bottom, said means comprising a hinge having a hinge pin which extends substantially parallel with the manifold and which permits the burner assembly to be rocked about the axis of the hinge pin, a fuel tank, and means for pivotally attaching the fuel tank to the burner assembly.

In testimony whereof we affix our signatures.

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