Nov. 17, 1931. A. J. YEAGER 1,831,834

CAMP STOVE

Filed Oct. 23, 1925 2 Sheets-Sheet 1

Fig. 1.

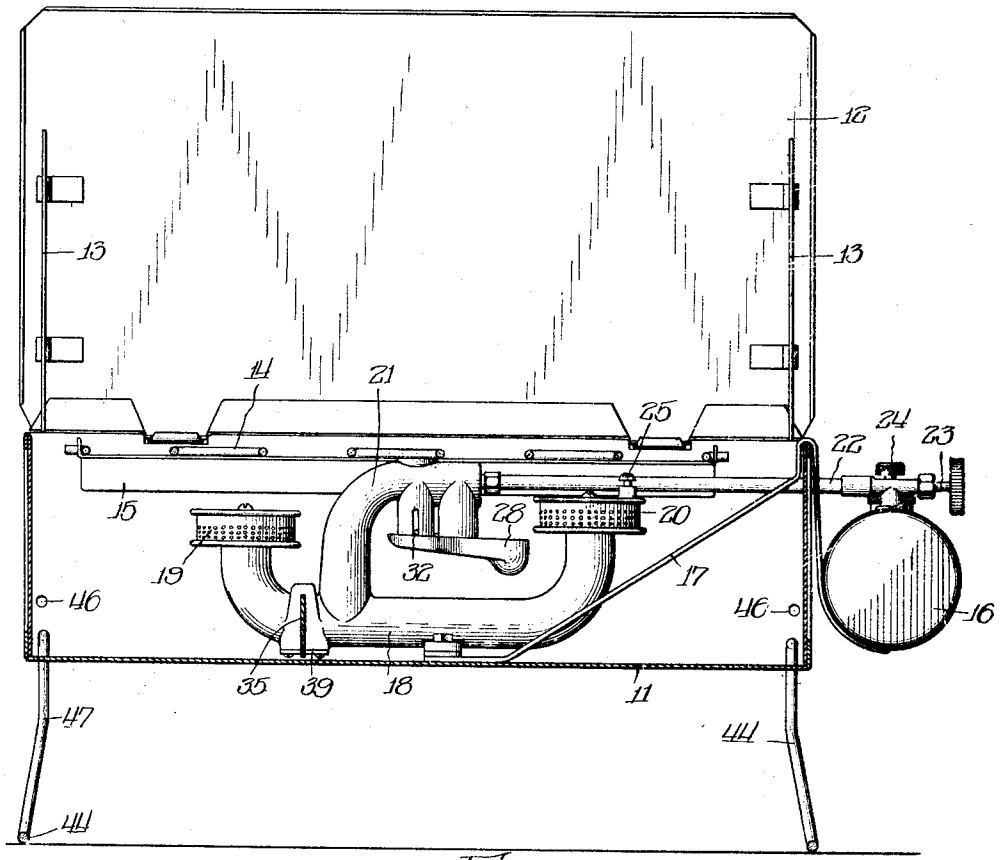
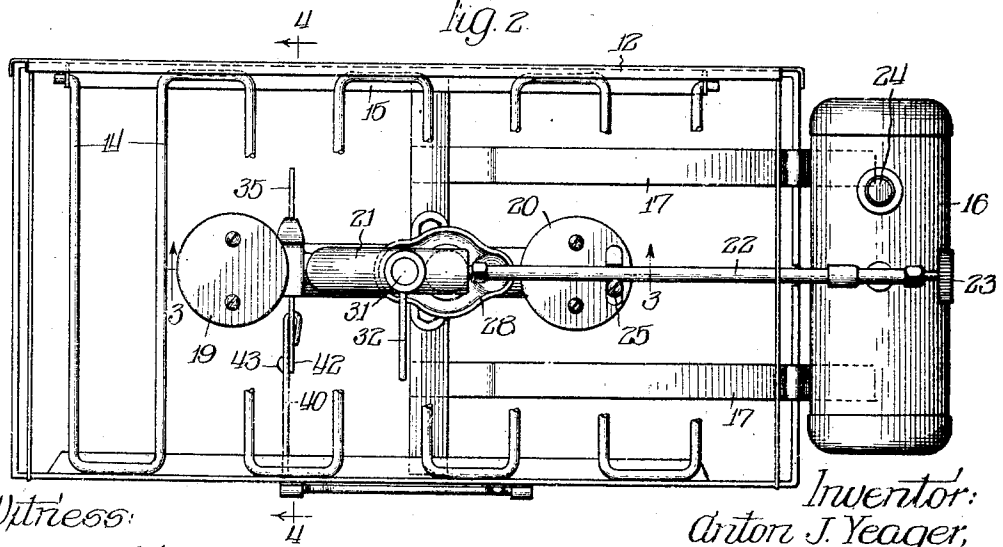


Fig. 2.



Witness:
R. Burkhardt.

Inventor:
Anton J. Yeager,
By Wilkinson Huxley Byron & Knight
Attys.

Nov. 17, 1931. A. J. YEAGER 1,831,834

CAMP STOVE

Filed Oct. 23, 1925 2 Sheets-Sheet 2

Fig. 3.

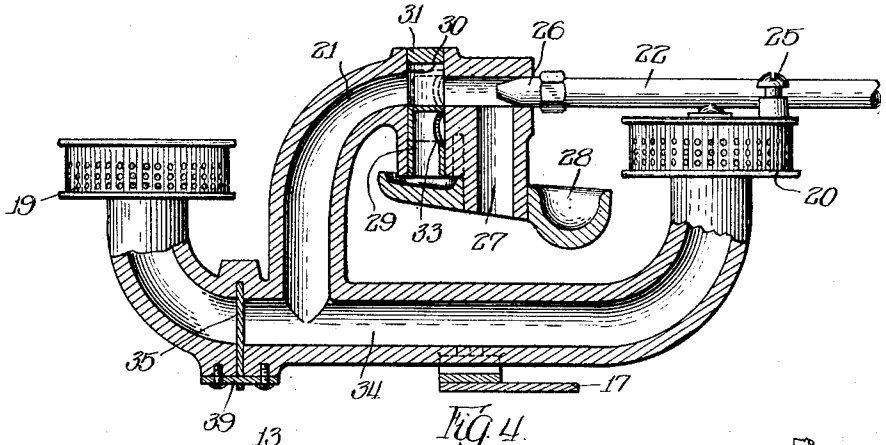
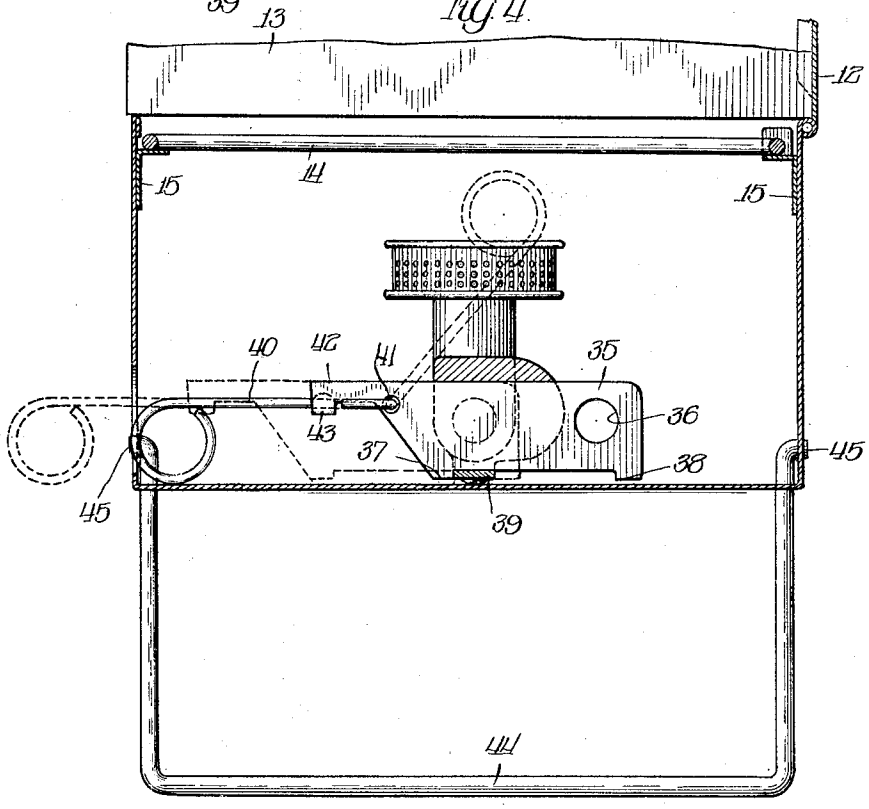


Fig. 4.



Witness:
R. Burkhardt.

Inventor:
Anton J. Yeager,
By Wilkinson Huxley Byron & Knight Attys.

Patented Nov. 17, 1931 1,831,834

UNITED STATES PATENT OFFICE

ANTON J. YEAGER, OF WISCONSIN RAPIDS, WISCONSIN, ASSIGNOR TO PRENTISS-WABERS STOVE COMPANY, OF WISCONSIN RAPIDS, WISCONSIN, A CORPORATION OF WISCONSIN

CAMP STOVE

Application filed October 23, 1925. Serial No. 64,286.

This invention relates to a new and improved camp stove and more particularly, to a collapsible stove of the type using gasolene for fuel. With stoves of this type using gaseous fuel under pressure it is highly desirable that all connections be permanently made in order to eliminate danger from leaking fuel. Since the gasolene must be gasified before being burned and this gasification is carried out by the application of heat, it is necessary to provide means for initial gasification upon starting the stove in operation.

It is an object of the present invention to provide new and improved means for preheating a portion of the gas conduit preliminary to starting the stove.

It is a further object to provide means for by-passing a portion of the fuel to a heating or generating cup.

It is an additional object to provide a new and improved valve structure for controlling the flow of the gasified fuel.

It is also an object to provide a new and improved supporting structure for stoves of this character.

Other and further objects will appear as the description proceeds.

I have illustrated a preferred embodiment of my invention in the accompanying drawings, in which

Figure 1 is a front view of the stove with the front of the casing removed;

Figure 2 is a plan view of the stove;

Figure 3 is a section on an enlarged scale taken on line 3—3 of Figure 2, and

Figure 4 is a transverse section taken on line 4—4 of Figure 2.

The stove comprises the box-like metal casing 11 having the top 12 hinged thereto. The top is provided with the hinged side wings 13 and the box is provided with the hinged grate 14 resting upon ledges 15. The heating apparatus comprises the gas tank 16 which is secured by strap members 17 to the burner unit 18. The burner unit is provided with the burners 19 and 20 and with the upwardly extending mixing passage 21. The fuel pipe 22 controlled by valve 23 leads from the fuel tank 16 to the mixing passage 21. The fuel tank 16 is provided with the usual filling opening closed by the member 24. The pipe 22 passes across the top of the burner 20 and is retained in place by means of the screw 25. As best shown in Figure 3, the end 26 of the pipe 22 extends into the mixing passage 21.

The downwardly extending air inlet passage 27 leads into the passage 21 adjacent the end 26 of the pipe 22. The generating cup 28 is fixedly secured encircling the passage 27. The by-pass sleeve 29 is slidably fitted into a bore 30 which extends vertically through the passage 21, the upper end of the bore being closed by the plug 31. This sleeve 29 may be raised and lowered by the handle 32 shown in Figures 1 and 2. Sleeve 29 is open at its lower end and is provided in its upper portion with the opening 33 adapted to be brought into communication with the portion of the passage 21 adjacent the end 26 of the pipe 22.

The mixing passage 21 is permanently in connection with the passage 34 leading to the two burners. The slide valve 35 is adapted to interrupt communication between passage 34 and burner 19. This valve member 35 is provided with the opening 36 adapted to be brought in registration with passage 34. The lower side of the valve member is provided with the downwardly extending lugs 37 and 38 which are adapted to engage the retainer member 39 to limit movement of the valve member. The valve member 35 is provided with the handle 40 which is pivotally connected to the member at 41. An extension 42 of the valve member is provided with a hook portion 43 adapted to receive the handle 40 and limit its downward movement.

The box or casing 11 is supported by the legs 44 which are U-shaped members provided with outwardly extending ends 45, as best shown in Figure 4. The casing is provided with a plurality of openings 46 to receive the ends 45 so that the legs may be adjusted at different heights. The legs are shown as bent outwardly at 47 to increase the length of the supporting base. It will be understood that the vertical portions of the legs may be pressed together to spring the ends 45 clear of the holes 46 and that the legs

may be forced upwardly into the casing when the stove is not in use.

When the stove is not in use, the gas tank 16 is housed in the casing. This is accomplished by swinging up the grate 14 and lifting the burner and tank assembly until the straps 17 clear the end of the housing. The assembly is then moved to the left as seen in Figure 1 and lowered into the housing. For use, the parts are restored to the position of Figure 1 by reversal of this operation. During these movements, the valve handle 40 is swung upwardly to the dotted line upper position of Figure 4. The handle 40 is swung downwardly to the full line position when the stove is to be used. The valve member and handle are sufficiently long so that the valve may be moved to bring the opening 36 in registration with passage 34 and also moved to entirely close off passage 34 while the handle is still outside of the casing.

To start the stove in operation, the handle 32 is raised which raises the by-pass sleeve 29. The valve 23 is opened partly and gasolene is forced through pipe 22 and passes through the opening 33 into the sleeve and down through the sleeve to the generating cup 38. This gasolene is then ignited and serves to heat a portion of the pipe 22 and of the passage 21 and also, to heat the air intake passage 27. It will be understood that the sleeve 29 is lowered as soon as sufficient gasolene has accumulated in the generating cup and before the gasolene is ignited. As soon as the gasolene flame has heated the parts, the valve 23 is turned to admit gasolene, which is gasified in the passage 21 and passes to the burner 20. It will also pass to the burner 19 when the valve 35 is properly adjusted. During the operation of the stove, heat from burner 20 keeps the pipe 22 hot and the gasolene is gasified before it reaches the passage 21 where it is mixed with the air drawn in through passage 27.

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 spirit and scope of the appended claim.

I claim:—

In a gasolene stove or the like, a gas conduit, a generating cup located adjacent the gas conduit, a passage connecting the gas conduit and generating cup, and a tubular member having a closed top and lateral opening adjacent the top movable into the gas conduit to deflect to said passage.

Signed at Wisconsin Rapids, Wisconsin, this 20th day of October, 1925.

ANTON J. YEAGER.