W. E. SHARP.

STOVE.

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1,023,968. **Patented Apr. 23, 1912.**

Fig. 1.

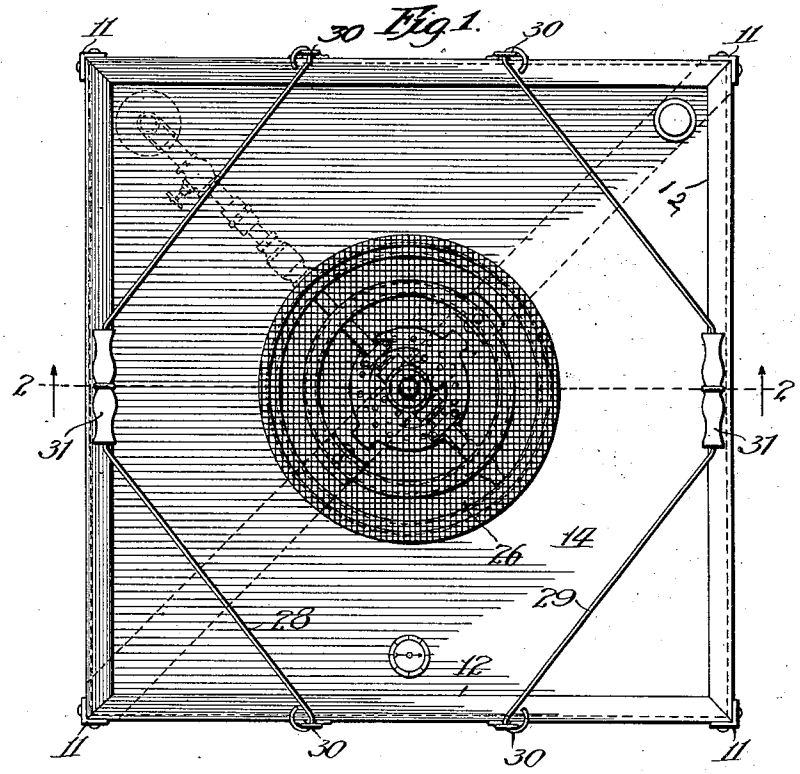
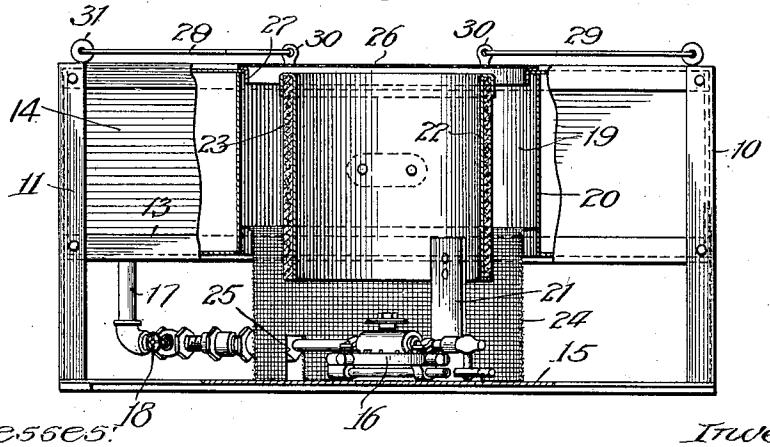


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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STOVE.

1,023,968. Specification of Letters Patent. Patented Apr. 23, 1912.

Application filed January 20, 1911. Serial No. 603,722.

To all whom it may concern:

Be it known that I, WILLIAM E. SHARP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, (whose post-office address is 5528 South Sangamon street, Chicago, Illinois,) have invented new and useful Improvements in Stoves, of which the following is a specification.

One of the leading aims and purposes of the present invention is the provision of a portable stove or heater which can be readily carried or transported, which will occupy but small space, which will be thoroughly safe to use, and which will be so constructed as to be free from possible damage or injury.

The particular form and style of stove or heater, hereinafter described in detail, is especially well adapted for employment and use in the heating of railway cars, warehouses, store rooms, etc., where a heater or stove of this kind is only temporarily required, but it is, of course, understood that this particular embodiment of the invention is not limited or restricted to any particular use to which it may be put.

I have found that a simple and compact stove of this kind may be conveniently and desirably constructed by placing the burner below the reservoir adapted to contain or hold the alcohol or other liquid fuel, and I so construct the reservoir or tank that it will have a discharge above the burner through which the heat and products of combustion arising from the same may pass. In order, however, to eliminate all danger because of the proximity of the flame to the reservoir, I provide in such discharge a chimney over the burner and space the same away from the side walls of the passage, leaving between the chimney and the reservoir an annular passage through which air will be drawn by the heat of the chimney so as to create or produce a current of air around the latter to maintain the reservoir cool and in safe condition. I also supply this burner with screens at the top of the reservoir and around the burner proper to prevent any article, such as paper, cloth or the like, from coming into contact with the flames.

In order that a full and complete understanding of this invention may be had, I have illustrated a preferred and desirable embodiment of the same in the accompanying drawing, which forms a part of this specification and to which reference should be made in connection with the following description.

In this drawing like parts have been supplied with the same reference characters throughout.

In the drawing, Figure 1 is a plan view of the improved stove or heater; Fig. 2 is a fragmentary central vertical section on the line 2, 2 of Fig. 1.

Referring to the drawing, it will be noticed that this particular embodiment of the portable stove or heater has a skeleton frame 10, composed of four up-right corner angle bars 11, 11, connected together at their tops by the mitered horizontal angle bars 12, 12, riveted or otherwise desirably secured to the top ends of the posts. About midway of their height these posts are also connected together by similar lower angle bars 13, a substantially square or rectangular tank or alcohol reservoir 14 being held in position in the upper part of the frame by the bars 11, 12 and 13. The lower part of the frame has a floor or bottom plate 15, centrally mounted on which is a burner 16 adapted to consume a liquid fuel, such for example as alcohol, such burner being connected by means of a pipe 17 and suitable controlling valve 18 with the reservoir, as is clearly illustrated, whereby the fuel may be fed to the burner as is necessary.

The reservoir 14 has extended upwardly therethrough and centrally thereof a passage 19, the side wall 20 of which is of cylindrical shape. Suitably mounted in this passage by any desired number of brackets 21 is a metal chimney 22, the outer cylindrical face of which is covered with a fire proof heat insulating material 23, such as asbestos, the diameters of the chimney and the wall 20 being such that an annular space 19 of substantial proportions is provided between the chimney and reservoir. As is clearly shown the burner is centrally disposed beneath the chimney so that the heat thereof and the products of combustion pass upwardly through the latter without heating the reservoir, due to the upward current of cool air passing through the space between the chimney and the wall 20, pro-

vided the chimney becomes heated sufficiently to cause a draft in such passage.

In order to protect the burner 16 from having any combustible articles come in contact with its flames, I slidingly mount in the passage 19 of the reservoir a round wire screen 24, notched or cut away at 25 for the accommodation of the feed pipe which conducts the alcohol to the burner. When the burner requires attention for any reason this screen can be lifted, the same passing upwardly readily in the passage 19. The top of passage 19 is covered with a removable wire screen 26, having a flange 27 adapted to be accommodated therein, such screen acting to prevent any combustible substance from falling through the chimney on to the burner.

In order that this stove or heater may be readily picked up and transported, it is supplied with a pair of bails 28 and 29 hinged to the frame at 30, 30 and supplied with a pair of handles 31, 31, such bails and handles being of the shape shown in Fig. 1 and adapted to fall down into horizontal position away from the burner and chimney during operation of the stove.

Although I have herein set forth one particular embodiment of this invention, I wish to have it understood that the invention is susceptible of a variety of embodiments, and that it is not limited and restricted to the precise and exact mechanical features of construction herein set forth.

I claim:

1. A liquid fuel stove comprising a supporting frame, a fuel reservoir supported by said frame and having an aperture extending upwardly therethrough, a burner below said aperture, means for supplying fuel from said reservoir to said burner, a chimney within said aperture and spaced away from the wall of the latter, and a screen vertically movable in the annular space between the wall of said aperture and said chimney for preventing access of foreign material to said burner, substantially as described.

2. A liquid fuel stove comprising a supporting frame, a fuel reservoir supported by said frame and having an aperture extending upwardly therethrough, a burner below said aperture, means for supplying fuel from said reservoir to said burner, a chimney within said aperture and spaced away from the wall of the latter, a screen vertically movable in the annular space between the wall of said aperture and said chimney for preventing access of foreign material to said burner, and a second screen covering the upper end of said chimney and said annular space, substantially as described.

3. In a device of the character described, the combination of a supporting frame, a liquid fuel reservoir supported in the upper portion of said frame and having a passage extended upwardly through the same, a burner below said passage, a fuel-supplying connection between said burner and said reservoir, a screen slidingly mounted in said passage and adapted to surround said burner, and a removable screen fitted over the top of said passage, whereby the products of combustion may pass upwardly through said passage and top screen and the burner be protected by the screens, substantially as described.

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