June 7, 1938. W. F. SIVEY 2,119,799

COLLAPSIBLE STOVE

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Fig. 1

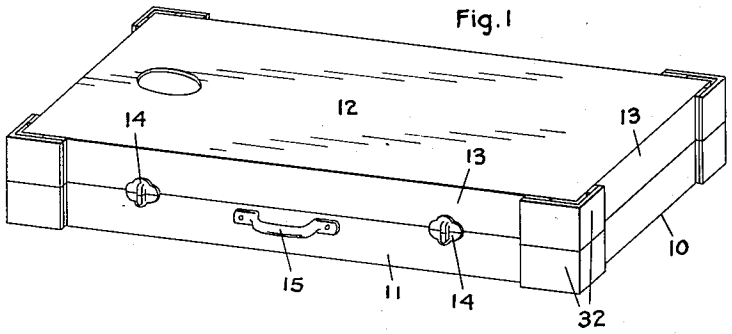
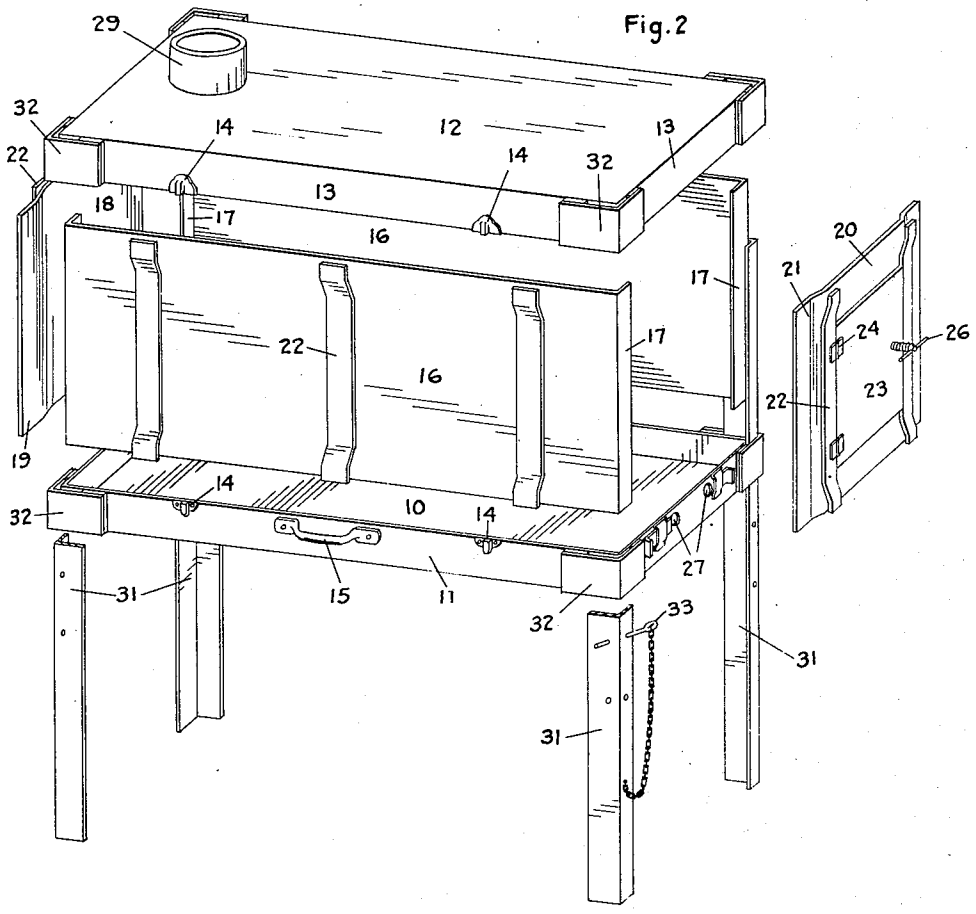


Fig. 2



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Fig.3

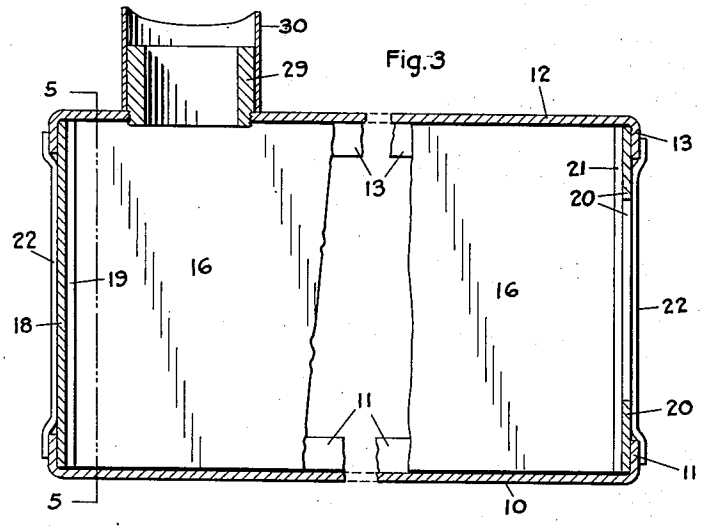


Fig.5

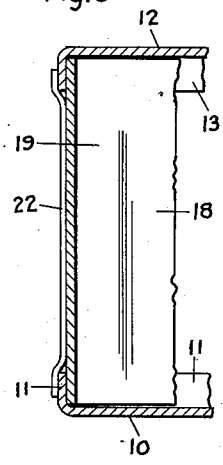


Fig.4

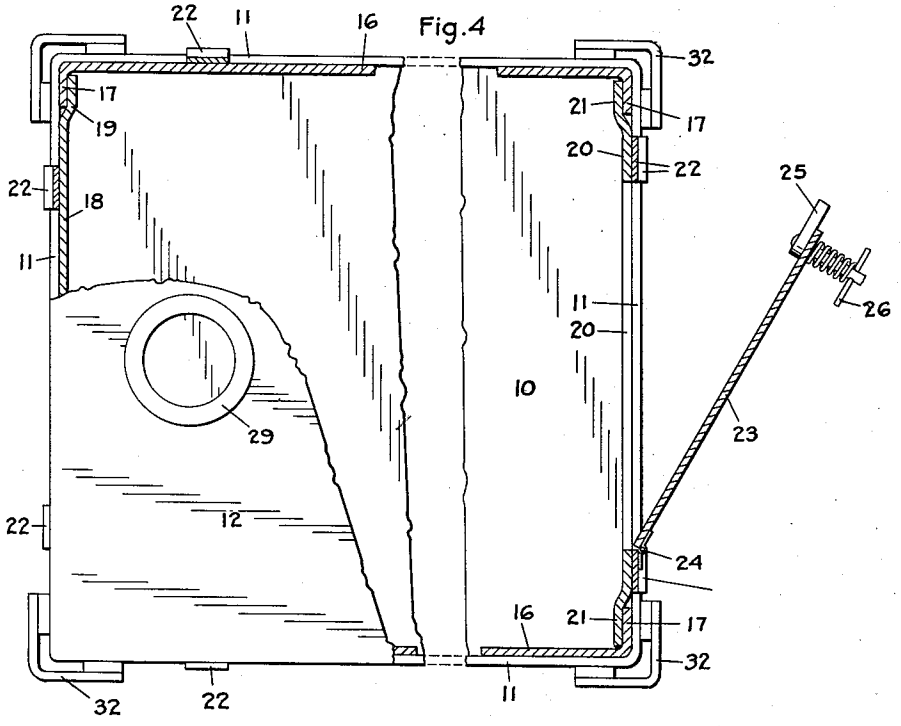
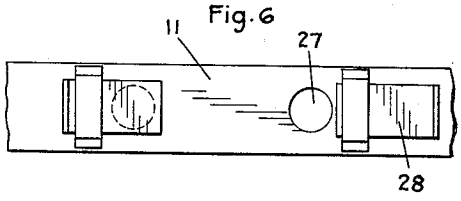


Fig.6



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Patented June 7, 1938 2,119,799

UNITED STATES PATENT OFFICE

2,119,799

COLLAPSIBLE STOVE

William F. Sivey, Tecumseh, Nebr.

Application April 15, 1937, Serial No. 137,060

1 Claim. (Cl. 126—9)

My present invention relates to portable stoves which are adapted for use in camping, the primary object being the provision of a portable stove in which the fire hazard is completely eliminated.

Another object of the invention is the provision of a stove which may be completely assembled or disassembled, the assembled stove having the various parts interfitting so tightly that no leakage of flame or of sparks is possible.

Another of my objects is the provision of a portable stove of assembled construction so that no undesired drafts may occur in the stove.

Another object which I have in view is the provision of a stove which may be collapsed into the minimum of space, the stove being "self contained" with the top and bottom enclosing all other parts of the stove.

Another of my objects is the provision of a collapsible stove having attached legs of novel construction, the legs being insertible into the flue which is adapted to be placed with the other parts of the stove in the space enclosed between the top and bottom of the stove.

Having in view these objects and others which will be pointed out in the following description, I will now refer to the drawings, in which

Figure 1 is a view in isometric projection of the stove in collapsed form and ready for transportation or storage.

Figure 2 is a view in isometric projection showing all of the parts of the stove in the semi-assembled relationship.

Figure 3 is a view of the stove in median vertical section.

Figure 4 is a view of the stove partly in plan and partly in horizontal section with parts of the stove broken away.

Figure 5 is a view in section on the line 5—5 of Figure 3.

Figure 6 is a view in front elevation of my draft regulating slides.

The bottom 10 with an upstanding flange 11 forms a rectangular tray which is open at the top only. The top 12 with a depending flange has the same length and breadth as the bottom 10. The bottom 10 and the top 12 are adapted to be positioned as shown in Figure 1 to constitute a container in the form of a suitcase but enclosing all other parts of the stove as well as the poker and other accessories of the stove. The available space within the container is not only sufficient for holding the stove parts and accessories but to hold the oven, of which the details are described in my co-pending application for Collapsible oven, Serial Number 128,958, filed March 4,1937. Secured to the top and bottom are latches 14 for releasably latching these parts in collapsed position. A bail handle 15 is also secured to the bottom 10 for convenience in carrying.

The two side walls 16 of the stove have lateral flanges 17, the lower edges of the side walls and flanges seating snugly against the flanges 11 as shown in Figure 4. The rear end wall 18 has inwardly offset portions 19 at its lateral edges so that the body portion of the back wall lies in the plane of the rear flanges 17 with the offset edges 19 overlapping the flanges 17. The front door frame 20 has similar offset flanges 21, having the same relation to the forward flanges 11 as the offset edges 19 have to the rear flanges 11. The upper edge portions of the rear end and side walls and the front door frame seat in identical manner against the inner surfaces of the flanges 13.

For clamping the side and end walls to the top and bottom I provide straps 22 on all of these parts, the straps being vertical and spot welded or otherwise secured to the respective parts. The end portions of these straps are offset a distance substantially equal to the thickness of the flanges 11 and 13. Owing to the resilience and binding action of these straps on the flanges, the parts are firmly but releasably secured together leaving no open spaces for the leakage of air and flame.

As thus far described the device is a collapsible box which may function as a container or receptable for any desired purpose. For my purposes the top, bottom and front are modified to adapt the box for use as a stove. The door 23 is hinged at 24 to one of the straps 22 of the door frame 20. In its closed position the door 23 is in the plane of the two straps 22 of the door frame 20 with its upper and lower edge portions pressed against the body of the door frame. The door is also provided with a spring pressed latch 25 having a detachable handle 26.

For the control of the draft, the forward flange 11 is provided with two apertures having slide closures 28 for either closing the apertures entirely or for partially or wholly opening the apertures for the perfect control of the inflow of air. The inlet air passages extend through the door frame 20, the door frame being provided with apertures, not shown, registering with the apertures of the flange 11. The top 12 in its rear portion has a screw threaded aperture for receiving a detachable collar 29 which con-

ducts the products of combustion through a flue 30. The length of the flue will depend to a large extent on the particular use. When the stove is used in a tent or cabin, the flue may be extended to and through a hole in the roof. If the stove is too low for convenience or if the soil is covered with inflammable material, the stove must be elevated and for this purpose I provide four angle iron legs 31. Secured to the flanges 11 and 13 at the corners thereof are straps 32 which are spaced intermediate their ends from the flanges. The angle iron legs 31 are slidable into or out of the passageways between the straps 32 and the flanges, thus making simple the assembly or disassembly. Pins 33 limit the sliding movement of the legs to thus maintain the stove at a fixed height. Chains connecting the pins to the legs prevent the misplacement and loss of the pins. Each leg is provided with a plurality of apertures for receiving the pins both for positioning the stove at a most convenient height and for leveling the stove when the camp site is on uneven ground surface.

My stove is made portable for convenience in transportation and use. Although portability is essential, as before stated my primary object is to provide a stove which has no fire hazard. It is true that the ordinary kitchen stove or range can be used in camp with little of no danger of starting forest or prairie fires. Such stoves are, however, not portable and they are therefore useless for tourists and especially for tourists who frequently make and break camp. Even despite the serious drawbacks, such stoves are sometimes used on dude ranches, the heavy cast iron stove being laboriously transported to the camp site. My stove not only eliminates the serious difficulty of transportation but it is equally effective for confining the fire within the stove. This is of great importance especially in forest camps and more particularly in those camp sites in which the soil is covered by a heavy layer of moldy vegetable material. Such material when dry or nearly so, will sometimes hold the spark for several days at a time and then result in a disastrous forest fire. Generally the only fire extinguishers available in camps are sand and water, but both of these are often of insufficient quantity to make certain that the danger has been entirely eliminated. Sand and water are moreover rather ineffective in a moldy soil covering which permits the almost indefinite flowing of a spark until suddenly the fire develops in serious proportion.

Having thus described my invention in such full, clear, and exact terms that its construction and utility will be readily understood by others skilled in the art to which it pertains, what I claim as new and desire to secure by Letters Patent of the United States is:

A collapsible stove having tray like top and bottom with opposing flanges, side walls having lateral inturned flanges and adapted to seat against the opposing flanges of said top and bottom, a rear wall and a front door frame each having offset side portions overlappping the lateral flanges of said side walls with the major portions of the upper and lower edges of said rear wall and front door frame seated against the inner surfaces of the flanges of said top and bottom, and resilient straps vertically secured to said side walls and said rear walls and said front door frame, the upper and lower portions of said straps being outwardly offset whereby the flanges of said top and bottom are releasably clamped between said straps and said side walls and said rear wall and said front door frame.

WILLIAM F. SIVEY.