

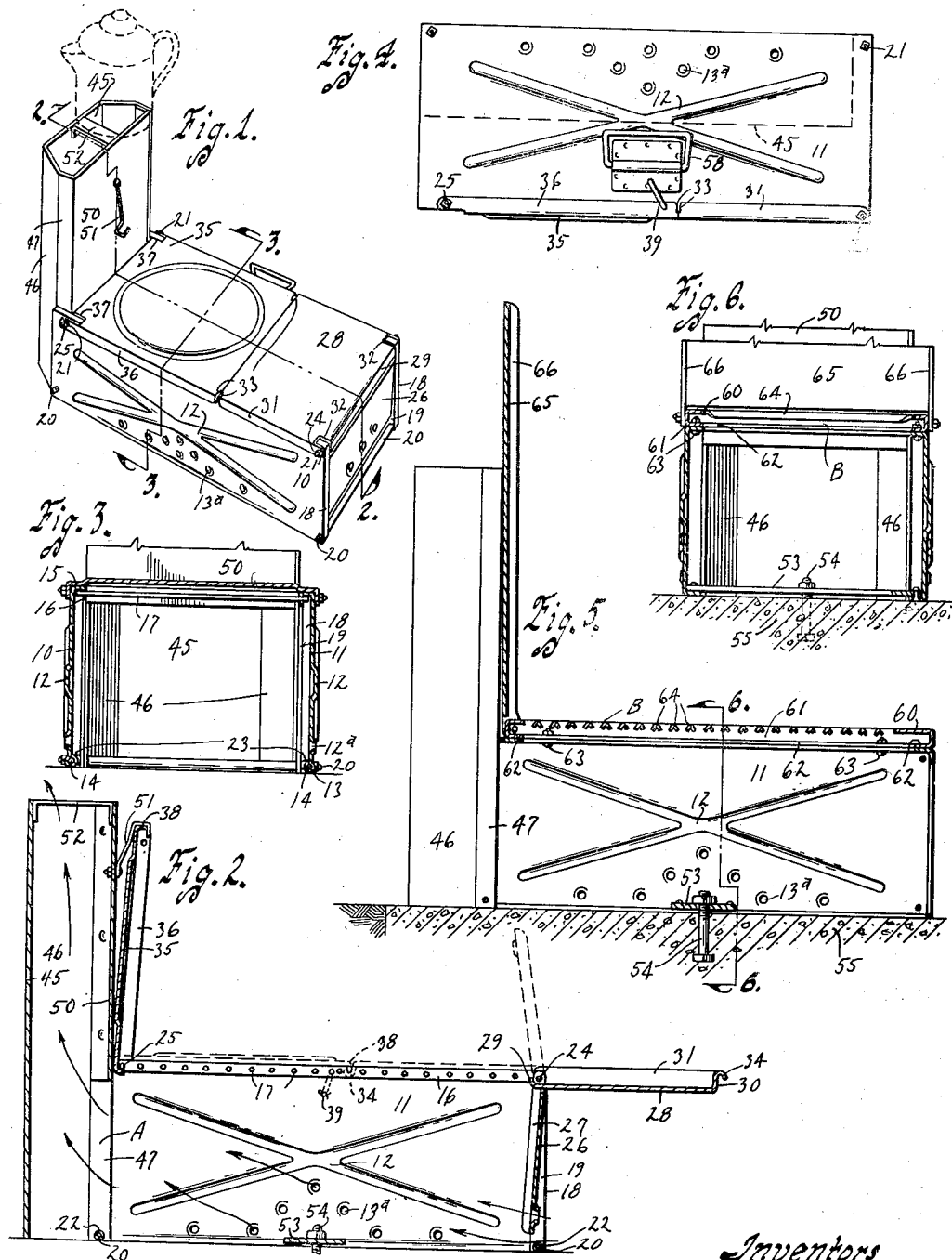
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STOVE

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STOVE

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The object of our invention is to provide for outdoor use a stove of very simple, durable and inexpensive construction.

Another object is to provide as a part of such stove a chimney or stack of novel construction and having novel features of cooperation with the stove proper adapted when not in use to be placed inside the stove.

Another purpose is to provide a stove with such a stack, the parts having cooperating elements whereby the stack is so connected with the stove body that it may be swung to its different positions without wholly disconnecting the stack from the stove body.

It is also our purpose to provide such a stack, relatively wide from side to side and narrow from front to rear when installed, so as to allow the draft from the stove to enter the stack across substantially the entire width of the stove.

More particularly, it is our object to provide a stove of the kind under consideration, having side walls and provided with a grid at the top with a lid or lid members, which can be moved from position resting above the grid to position leaving the grid exposed when desired.

Another purpose is to provide such a stove with a lid member of the kind mentioned, which when swung forwardly will automatically assume a position where it may be used as a shelf.

Another object is to provide a stove with such lidlike members, which when covering the grid are supported by the stove side walls rather than by the grid, and which form a cover for the stove when the latter is not in use, but which may be secured in cover forming position by suitable means provided for the purpose.

Another object is to provide a stove of the kind under consideration having a grid, which can be readily disassembled for purposes of repair or replacement.

Still another purpose is to provide a stove with such a removable grid having a handle hinged thereto.

Still a further object is to provide such a stove with means for rotatably anchoring it in an outdoor location in such manner as to permit its being swung about in accordance with changes in the wind.

With these and other objects in view, our invention consists in the construction, arrangement and combination of the various parts of our stove, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a stove embodying our invention, set up in position ready for use.

Figure 2 is a vertical, sectional view taken on the line 2—2 of Figure 1, some of the parts of the stove being adjusted to different positions from that shown in Figure 1.

Figure 3 is a transverse, sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a side elevation of the stove upside-down, the chimney being illustrated in dotted lines on the inside of the stove.

Figure 5 is a vertical, sectional view similar to that shown in Figure 2 of a preferred form of stove, in which the grid is removable; and

Figure 6 is a vertical, sectional view taken on the line 6—6 of Figure 5.

Our improved stove has the spaced side walls 10 and 11. These may be provided with the reinforcing ribs 12 and ventilating holes 13a. The lower edges of the side walls 10 and 11 are strengthened and reinforced by being curled as at 13 around stiff rods 14. At the upper edge of each side member 10 and 11, the material is bent inwardly to form a horizontal flange 15, which terminates in a down-turned flange 16.

Transverse rods 17 have their ends extended through the flanges 16 and substantially abutting against the walls 10 and 11, as shown for instance in Figure 3 for forming a grid.

At the front and rear of the stove, the material of the side walls is turned inwardly to form inwardly extending vertical flanges 18, which terminate in rearwardly extending flanges 19 (see Figures 1 and 2).

At the bottom of the side walls, at each of the front and rear ends, a rod 20 is extended through the walls and the flanges 19 and is provided with nuts 21 on its ends.

Between the flanges 19 a tubular sleeve 22 forms a spacer on each rod 20. We preferably provide short sleeves 23 on the rod 20 between each flange 19 and its adjacent side 11 or 10 as the case may be.

Thus the side walls are thoroughly braced at the bottom and front and rear.

At the front of the stove, the upper corners of the side walls 11 and 12 are connected, reinforced and braced by a transverse rod 24 on the ends of which are ordinary nuts 21, such as those on the rods 20. A similar rod 25 is extended through the side walls at their upper rear parts, spaced forwardly a short distance from their rear ends. On the outer ends of the rod 25 are nuts 21.

At the front of the stove, a sheet 26 forms a

fuel and draft door. It has the rear-turned reinforcing flanges 27 at its side edges, and these flanges project upwardly above the sheet 26 and are pivotally mounted on the front upper rod 24.

Normally the door or the like 26 hangs in vertical position as shown in Figures 1 and 2, but may be swung upwardly and forwardly to admit fuel or air.

We provide our stove with what might be called lid members, which may be used for covering the grid when desired, or for forming part of an enclosure. Preferably there are two of these lid members. One is indicated generally at 28 and is provided at what is normally its front edge with a down-turned flange 29 (shown up-turned in the inverted position of the lid in Figure 2), at what is normally its rear edge, with a down-turned flange 30 and at its side edges with the down-turned flange 31.

At its front edge at its corners, the lid 28 is provided with slots 32 (see Figure 1). The flanges 31 are journaled on the rod 24 as shown for instance in Figures 1 and 2, and the slots 32 are of such size and shape in connection with the other parts that when the lid 28 is swung over from its position shown in Figure 1 to its position shown in Figure 2, the edges of the slots 32 will engage the flanges 18 at the forward edges of the side members for holding the lid 28 in forwardly projecting horizontal position to serve as a shelf.

The flanges 31 are arranged so as to fit down over the side walls of the stove when the lid is in position for covering its share of the grid as shown in Figure 1.

The flange 30 has notches 33 at its ends to permit the flange 30 to clear the flanges 15 at the upper edges of the side walls.

The flange 30 has at what is normally its lower edge a rearwardly extending flange 34 of such length as to readily pass between the flanges 16.

A somewhat similar lid member 35 has down-turned flanges 36 at its side edges adapted to extend outside the side walls of the stove when the lid member 35 is lowered. The rear ends of the flanges 36 are pivoted on the rod 25.

The lid 35 has at its rear edge adjacent its sides, the notches 37 to allow the lid member 35 to be swung from horizontal position shown in Figure 1 to upright position shown in Figure 2, without being interfered with by the upper edges of the side walls and their flanges 15.

The front edge of the lid 35 has the down-turned flange 38 of such length as to readily pass between the flanges 16 of the side members when the lid is down.

The parts are so arranged that when both lids are in grid covering position, the flange 38 rests substantially upon the flange 34 shown in dotted lines in Figure 2.

It is sometimes desirable to lock the lid 35 down so that it will hold the lid 28 down. This can be done in various ways. We have shown a U-shaped locking device 39, the arms of which may be slid through holes in the side wall of the stove and in the flange 36 and hold the lid in place.

The chimney, its shape and relation to the other parts, is of considerable importance and will now be described. Considering the chimney in its upright position, it has the shape shown in Figures 1 and 2. Describing it as in its upright position and as made of sheet metal, it may be said that it has the rear wall 45 of considerably less width than the stove and adapted to extend

from position flush with the bottom of the stove to position extending considerably above the stove.

At its side edges, the back member 19 has forwardly and laterally inclined flanges 46 terminating in rather narrow forwardly extending parallel, vertical flanges 47, so positioned as to fit snugly between the rear ends of the side walls of the stove. The lower ends of these flanges 47 are pivoted on the lower rear rod 20 between the ends of the sleeve 22 thereon, and the side walls of the stove.

The flanges 47 of the chimney fit between the flanges 19 of the opposite sides of the stove, when the chimney is in upright position for use.

The chimney has a front wall 50, which is connected to the flanges 47 and is of such length that when the chimney is installed, the wall 50 projects slightly below the flanges 16 of the side walls and extends upwardly flush with the upper edge of the wall flanges 45.

There is thus left at the lower part of the chimney a smoke entrance opening indicated generally at A in Figure 2, which is substantially as wide and substantially as high as the stove.

Pivoted to the upper part of the wall 30 is a swinging hook 51, which may be used to engage the lid 36 for holding it in raised position as shown in Figure 2.

The chimney may have a fore-and-aft cross plate 52 at the top, so that a coffee pot or the like may be set on one-half of the chimney if desired.

The side 11 is preferably provided with a suitable carrying handle 58.

A cross plate 53 may be detachably fastened in the bottom of the stove in any suitable way or may be riveted in place if desired. This is preferably done at the time of installation, so that up until that time the plate 53 will not interfere with the folding of the stack or chimney into the body of the stove. The plate 53 has a pivotal connection with a rod 54 set in a suitable base as of concrete, at 55. The purpose of this structure is to anchor the stove, so that it can not be readily removed or stolen, and yet to permit it to be turned to different positions in accordance with the direction of the wind, so as to thus make the most draft the most effective for the purpose for which the stove is used.

In Figures 5 and 6, we have shown certain modification in the stove. In these figures, we have shown a removable one-piece grid, having a single lid member fastened thereto. The one-piece grid, indicated generally at B (Figure 5) comprises a sheet of metal forming a frame 60 with downturned flanges 61 at its side edges. These flanges terminate in in-turned flanges 62 adapted to rest on the flanges 15, such as has heretofore been referred to.

In this form of the invention, the flanges 16 may be omitted if desired.

The flanges 62 and 15 may be fastened together by short bolts 63.

The single piece grid B has the grid members 64 formed in it by dies or the like.

A cover member 65 has the side flanges 66 journaled to the rear end of the grid B and adapted to be swung from horizontal position covering the grid to upright position against the chimney as shown in Figure 5.

Some people may prefer one form of stove and some another. We rather lean toward the form shown in Figures 5 and 6, because we have found in our experience that the grid is the first part of the stove to wear out, and the construction

shown in those figures makes it easy to quickly remove the old grid and replace it with another. The grid may be thus sold and handled as a repair part, which makes for the convenience of the user of the stove.

Use and advantages

We shall now explain somewhat the use to which our improved stove may be put and endeavor to set forth some of its advantages. It is intended to be used for burning wood by camping parties.

It is obvious that it may be placed on the ground practically anywhere. The fire can be started in the stove, and the door 26 adjusted to control the draft. A stew pan, pancake griddle or the like can be set on the lids 28 and 35.

Where the form of stove having the removable grid and lid is employed, it will be observed that upon any injury or undue wear to the grid, the grid and lid may be removed and new parts conveniently and easily installed.

It will be observed that while most camp stoves have cold spots at their rear ends near the sides, that the entire top of our stove will get hot and especially these cold spots will be eliminated, because of the fact that the draft in the chimney extends across the entire width of the stove.

The lid 28 may be tilted over from position shown in Figure 1 to position shown in Figure 2 to serve as a shelf and to expose the members 17 for use as a grid. The lid 35 may be lifted to position shown in Figure 2, if it is desired to use the full size of the grid.

It will be seen that the grid may be used for broiling steaks or the like, and the stove may be readily adapted for almost any kind of outdoor cooking.

When it is desired, the lids can be swung to position shown in Figures 1 and 4 and locked by means of the member 39. The stove may be swung on its side and the chimney can be swung on the rear rod 20 from position shown in Figures 1 and 2 to position shown in Figure 4. Preferably the door 26 is first swung inwardly.

The stove may then be conveniently carried by means of the handle 58.

We claim as our invention:

1. In a stove of the kind described, spaced side walls, grid means supported between the side walls at the upper parts thereof, means for holding the side walls in properly spaced position, including a transverse rod at the upper front part thereof, a lid member having at its sides vertical flanges adapted when said member is in lid forming position to receive between them the upper parts of the side walls, said flanges being pivoted on said rod, the lid member having slots to permit the swinging of the lid member from lid forming position to forwardly extending horizontal position for forming a shelf, the slots being of such size that their edges are arranged to engage the forward edges of the side members when the lid member is in its latter described position for limiting the downward swinging movement of the lid member.

2. In a stove of the kind described, a pair of spaced side members, rods at the front of the stove for connecting the side members in spaced relation at their upper and lower parts, rods at the rear of the stove spaced forward from the rear end of the side members for connecting the side members together at their upper and lower parts, a chimney of substantially the same width as the stove adapted to have its forward lower portion

projecting between the side walls and having its lower forward part pivoted to the lower rearward rod connecting the side walls and having an opening at its lower part of substantially the same width as that of the stove, the chimney being of such dimensions that it may be swung from its position in which it functions as a chimney to position received within the stove.

3. In a stove of the kind described, a pair of spaced side members, rods at the front of the stove for connecting the side members in spaced relation at their upper and lower parts, rods at the rear of the stove spaced forward from the rear end of the side members for connecting the side members together at their upper and lower parts, a chimney of substantially the same width as the stove adapted to have its forward lower portion projecting between the side walls and having its lower forward part pivoted to the lower rearward rod connecting the side walls and having an opening at its lower part of substantially the same width as that of the stove, the chimney being of such dimensions that it may be swung from its position from which it functions as a chimney to position received within the stove, a lid member on said stove, hinged at its rear edge adjacent the rear upper part of the stove, a swinging hook on said chimney adapted to engage the lid member when the latter is raised for holding it up, the parts being so arranged that when the chimney is swung to position within the stove, said swinging hook member will coact with the lower forward rod connecting the side members for holding the chimney in the stove.

4. In a stove of the kind described, a pair of spaced side members, rods at the front of the stove for connecting the side members in spaced relation at their upper and lower parts, rods at the rear of the stove spaced forward from the rear end of the side members for connecting the side members together at their upper and lower parts, a chimney of substantially the same width as the stove adapted to have its forward lower portion projecting between the side walls and having its lower forward part pivoted to the lower rearward rod connecting the side walls and having an opening at its lower part of substantially the same width as that of the stove, the chimney being of such dimensions that it may be swung from its position from which it functions as a chimney to position received within the stove, a lid member on said stove, hinged at its rear edge adjacent the rear upper part of the stove, a swinging hook on said chimney adapted to engage the lid member when the latter is raised for holding it up, the parts being so arranged that when the chimney is swung to position within the stove, said swinging hook member will coact with the lower forward rod connecting the side members for holding the chimney in the stove, a second lid member pivoted to the upper or front portion of the stove, means for locking one of the lid members in position where it forms a lid and also a closure member, said lid member having coacting parts whereby when one of said lid members is so locked the other is held in lid forming position and closure forming position.

5. In a structure of the kind described, a stove having side walls, a rod at the upper part of the side walls connecting the side walls, a front door member pivoted to said rod having a central transverse slot adjacent the rod, a lid and shelf forming member pivoted to said rod in said slot and adapted in one position to serve as a lid and when swung to another position to engage said

door whereby it is held in shelf-forming position.

6. In a stove of the class described, side walls having in-turned flanges at their upper edges, a detachable grid having at its edges down-turned flanges terminating in in-turned flanges adapted to rest on the in-turned flanges of the stove walls, and means for detachably securing the in-turned flanges of the grid to the in-turned flanges of the stove walls.

7. A stove having front and side walls and a top, and being open at its rear end, a chimney at the rear end of the stove having an inlet opening at the open rear end of the stove of substantially the same width and height as that of the stove to afford a draft flow substantially the width and height of the stove, said chimney being slightly narrower than the stove and otherwise being of dimensions to fit into the stove, and hinged to the

side walls of the stove at the lower front part of the chimney, to be foldable into the stove.

8. In a structure of the kind described, a stove having front and side walls and a top and being open on its under side, a chimney of slightly less width adapted to have its forward lower portion projecting between the side walls of the stove and having its lower forward part pivotally mounted between the lower rearward part of the walls, and having an opening in its lower part to communicate with the rear end of the stove, said chimney being adapted to rest on the same support as the stove, the chimney being of such dimensions that it may be swung pivotally from its position in which it functions as a chimney to position received within the stove.

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