

W. L. SHEEDLO

PORTABLE FOLDING STOVE

Filed Dec. 9, 1957

3 Sheets-Sheet 1

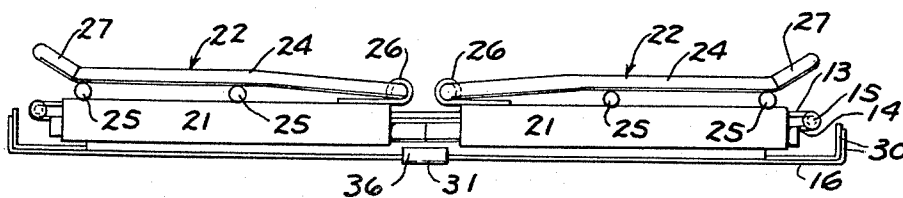


FIG. 2

INVENTOR.  
WILFRED L. SHEEDLO

BY  
Bernes, Kissell, Raisch & Choate  
ATTORNEYS

Dec. 15, 1959

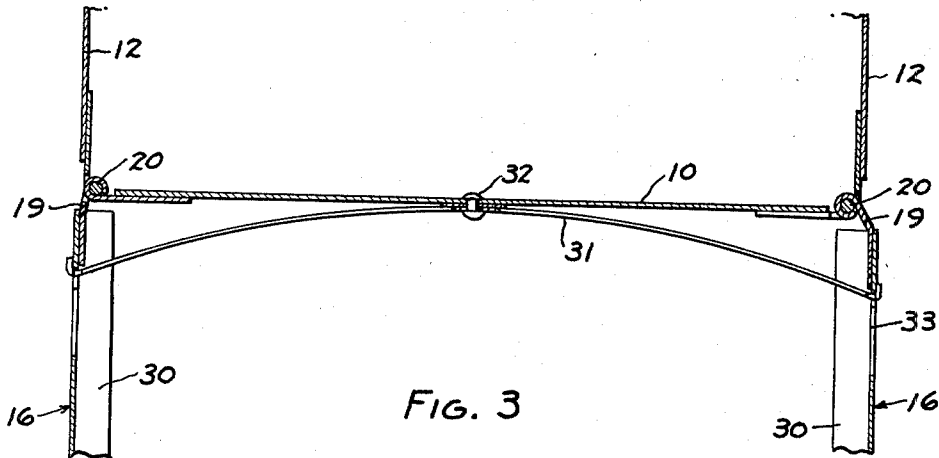
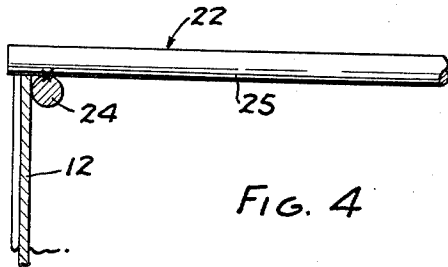
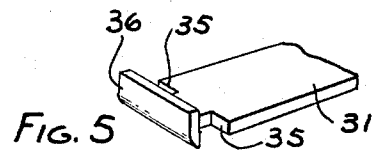
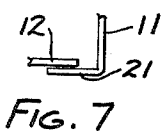
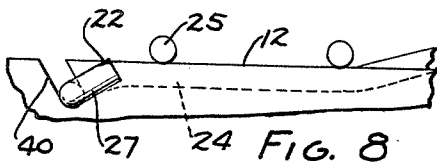
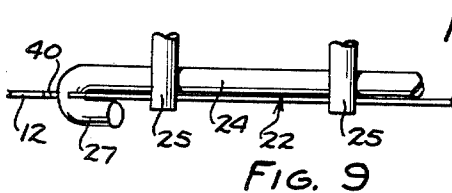
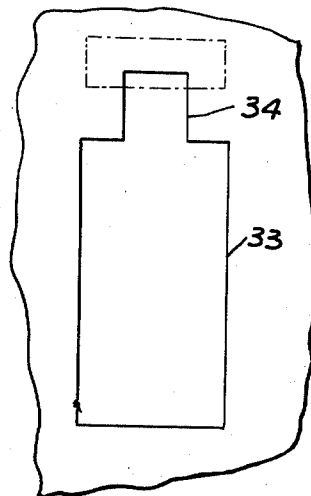
W. L. SHEEDLO

2,917,039

PORTABLE FOLDING STOVE

Filed Dec. 9, 1957

3 Sheets-Sheet 2



INVENTOR.  
**WILFRED L. SHEEDLO**  
BY  
*Barnes, Russell, Risch & Choate*  
ATTORNEYS

Dec. 15, 1959

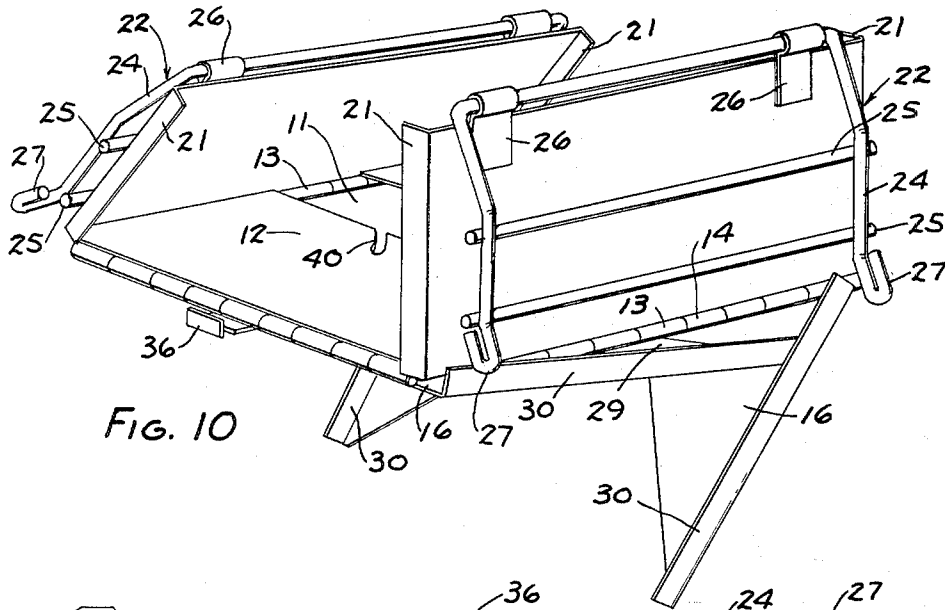
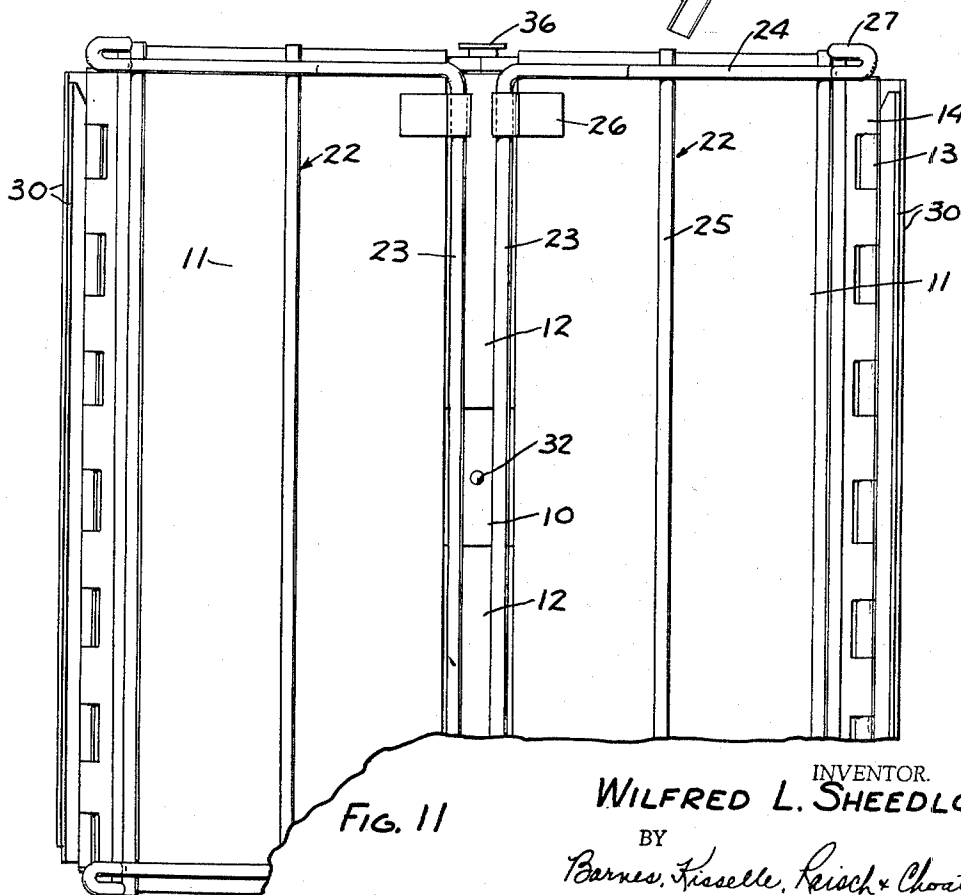
W. L. SHEEDLO

2,917,039

PORTABLE FOLDING STOVE

Filed Dec. 9, 1957

3 Sheets-Sheet 3



INVENTOR.  
WILFRED L. SHEEDLO

BY  
Barney, Kisselle, Reich & Choate  
ATTORNEYS

1

2,917,039

## PORTABLE FOLDING STOVE

Wilfred L. Sheedlo, Sault Ste. Marie, Mich.

Application December 9, 1957, Serial No. 701,378

1 Claim. (Cl. 126—9)

This invention relates to portable folding stoves and particularly to small pocket size stoves.

The need for small compact folding stoves for burning wood, charcoal and the like has been long established by outdoorsmen such as campers, hunters and the like. It is desirable that such a stove be made of lightweight material and be readily set up and collapsed. In addition, for ease of handling and storing it is preferred that all the parts be connected to one another so that there is no likelihood of losing important parts. In the case of sportsmen who must move about, the stove should not be bulky, preferably of pocket size or smaller.

It is therefore an object of this invention to provide a lightweight compact folding stove particularly adapted for charcoal which has all the parts thereof interconnected and which can be readily set up.

In addition, it is an object to provide such a stove which when folded is flat and compact and can readily be carried in a pocket.

In the drawings:

Fig. 1 is a perspective view of the folding stove embodying the invention.

Fig. 2 is an end elevational view of the stove in folded condition.

Fig. 3 is a fragmentary sectional view taken along the line 3—3 in Fig. 1.

Fig. 4 is a fragmentary sectional view on an enlarged scale taken along the line 4—4 in Fig. 1.

Fig. 5 is a fragmentary perspective view of a portion of the stove.

Fig. 6 is a fragmentary side elevational view on an enlarged scale of a portion of the stove, parts being broken away.

Fig. 7 is a fragmentary plan view of the lower right-hand corner of the stove shown in Fig. 1.

Fig. 8 is a fragmentary elevational view of a portion of the stove shown in Fig. 1.

Fig. 9 is a fragmentary plan view of the portion of the stove shown in Fig. 8.

Fig. 10 is a perspective view of the stove showing the parts in partially folded condition.

Fig. 11 is a fragmentary plan view of the stove in folded condition.

Referring to Fig. 1, the foldable stove comprises a flat rectangular bottom member 10, a first pair of side members 11 pivoted to opposite side edges of bottom member 10 and a second pair of side members 12 pivoted to the other opposite side edges of bottom member 10. Side members 11 are pivoted to bottom member 10 by hinge elements 13, 14 which have spaced loop portions through which a rod 15 extends to form a piano type hinge. Legs 16 are pivoted to the side edges of bottom member 10. Hinge elements 17, 18 and 19 on each of side members 12, bottom member 10 and legs 16, respectively, have loop portions through which a rod 20 passes to form a piano type hinge which pivots side members 12 and legs 16 to the bottom member 10.

2

Bottom member 10, side members 11, 12 and legs 16 are made of sheet metal, preferably aluminum.

The height of each respective side member 11, 12 is less than the length of the side edges of the bottom member 10 opposite to the side edges to which the respective side member is attached. By this construction the side members 12 are foldable into a position overlying and generally parallel with the bottom member 10, and the side members 11 are foldable over the side members 12 into a position parallel and overlying the side members as shown in Fig. 2. Side members 11 are provided with inwardly turned flanges 21 along the vertical edges thereof which contact the outer surface of the side edges of the side members 12 when the stove is set up.

A grill member 22, preferably made from steel rods, is pivoted to the upper edge of each side member 11. Each grill member 22 is generally U-shaped and comprises a bight portion 23, legs 24 and cross members 25 fixed to and extending between legs 24. Brackets 26 are fixed to side members 11 and have a loop intermediate their ends which surrounds the bight portion 23 of each grill member 22 to pivot the grill member 22 to the side member 11.

As shown in Figs. 1, 4 and 8 the ends of cross bars 25 project outwardly beyond legs 24 and contact the upper edges of side members 12 when the stove is in erected position. The legs 24 contact the inner surfaces of side members 12, clamping the side members 12 between the legs 24 and the flanges 21.

In order to provide adequate strength, preferably not less than two-thirds of the length of each leg 24 contacts the inner surfaces of side members 12.

The free ends of legs 24 are bent outwardly to form a loop 27. In the operative position the opposed loops 27 extend downwardly and inwardly toward each other. These loops engage notches 40 in the upper edge of the side member 12. Notches 40 on each side member 12 extend downwardly away from each other. In this manner the grill members 22 lock the side members 11, 12 in operative position (Figs. 8 and 9).

As further shown in Fig. 8 in operative position the leg members have the portion thereof nearest the bight portion 23 bent downwardly so that the bight portion 23 and the cross bars 25 lie in substantially the same horizontal plane to form a planar grill surface for supporting utensils.

Since the cross bars 25 of each grill member extend beyond the side members 12 (Fig. 4) and the hinge brackets 26 are on the outer surface of side members 11, the grill members provide a utensil-supporting area that is greater in size than the area of bottom member 10. The spacing between adjacent bars 25 is sufficient to permit placing charcoal on the bottom 10 of the stove without lifting grill members 22.

As shown in Fig. 1 each leg member 16 is made from a flat sheet material and includes a triangular cut-out 28 which forms spaced leg portions 29. Each leg 16 is formed with inwardly turned flanges 30 along the side edges thereof which serve to reinforce the legs. The height of each leg is substantially equal to the length of each side member 11, while the width of one leg is slightly greater than the width of the other so when the legs are folded into underlying relationship to the bottom member 10 the flanges 30 nest as shown in Fig. 2.

A flat strip 31 of spring material is fastened intermediate its ends to the undersurface of bottom member 10 by a rivet 32 (Fig. 3). The ends of strip 31 extend through rectangular slots 33 in legs 16. The upper end of each slot 33 is formed with a rectangular notch 34 (Fig. 6). As shown in Fig. 5 each strip 31 is provided with notches 35 along the side edges thereof near each end and the end 36 of each strip is turned upwardly.

When the legs 16 are folded parallel to bottom mem-

3

ber 10, spring strip 31 tends to keep the legs 16 in the folded condition. When the legs 16 are pulled outwardly to the operative position, strip 31 flexes and notches 35 and 34 interengage to lock the legs in the operative position. Upwardly turned end 36 prevents the legs 16 from being pivoted outwardly to such an extent as to disengage from the strip 31.

In order to collapse the stove from the operative position shown in Fig. 1 to the folded position shown in Fig. 2, the stove is inverted and each end of strip 31 is raised to disengage the notches 35 from notches 34. Each leg 16 is then pivoted downwardly and inwardly to the folded position adjacent bottom member 10. The spring strip 31 holds the legs 16 in the folded position. The stove is then turned top side up and the side members 11 are pressed inwardly to release the loops 27 from the notches 40 in side members 12. The grill members 22 are then pivoted to a position depending alongside the outer face of side members 11. Side members 12 are pivoted into overlying relationship with bottom member 10 and then the side members 11 are pivoted into overlying relationship with side members 12 (Fig. 10). In the collapsed position the relative parts are as shown in Figs. 2 and 11.

It can thus be seen that I have provided a small compact lightweight folding stove which may be readily set up and collapsed. In the collapsed condition the stove is flat and pocket size.

I claim:

A portable stove comprising a generally flat rectangular base member, a pair of legs pivoted along opposite side edges of said base member for movement from an operative position to a position generally parallel to and underlying the under surface of said base member, a first pair of side members pivoted to opposite side edges of said base member, a second pair of side members pivoted to the other opposite side edges of said base member, said side members being movable from a position wherein the planes thereof are at generally right angles to the base member to a position wherein the planes thereof are generally parallel to and overlie the upper surface of said base member, a pair of grill members, one said grill member being pivoted to the upper edge of one of said first pair of side members and the other grill mem-

4

ber being pivoted to the upper edge of the other of said first pair of side members, each said grill member being movable from a position generally overlying said base member when said side members are at right angles to said base member to a position generally parallel to and overlying the outer surfaces of said first pair of side members when said side members are folded into parallel relationship with the base member, each said grill member being generally U-shaped and comprising a bight portion and 5 leg members extending from said bight portion, means for pivoting said grill member to its respective side member comprising means on said side members engaging said bight portion, each said grill member including transverse rods fastened to and extending transversely of said leg members of said grill, the ends of said transverse rods extending outwardly beyond said leg members of said grill and contacting the upper edges of said second pair of side members when the stove is in operative position, and means for stabilizing and locking said side 10 members and grill members in position comprising inwardly turned flanges on said first pair of side members releasably engaging the outer surfaces of the side edges of said second pair of side members when the side members are moved to a position wherein they are at generally right angles to the bottom member, said leg members of said grill members engaging the inner faces of said second pair of side members in the operative position of said grill, said upper edges of said second pair of side members having notches therein, each said leg 15 member having a hooked portion extending outwardly beyond the adjacent side member and releasably engaging the notch therein.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

|           |             |               |
|-----------|-------------|---------------|
| 340,087   | Birchard    | Apr. 20, 1886 |
| 941,524   | Krumsee     | Nov. 30, 1909 |
| 1,438,345 | Tait et al. | Dec. 12, 1922 |
| 2,559,243 | Brown       | July 3, 1951  |
| 2,746,378 | Lang        | May 22, 1956  |

##### FOREIGN PATENTS

|        |             |               |
|--------|-------------|---------------|
| 75,327 | Switzerland | Mar. 16, 1917 |
|--------|-------------|---------------|