

July 31, 1956

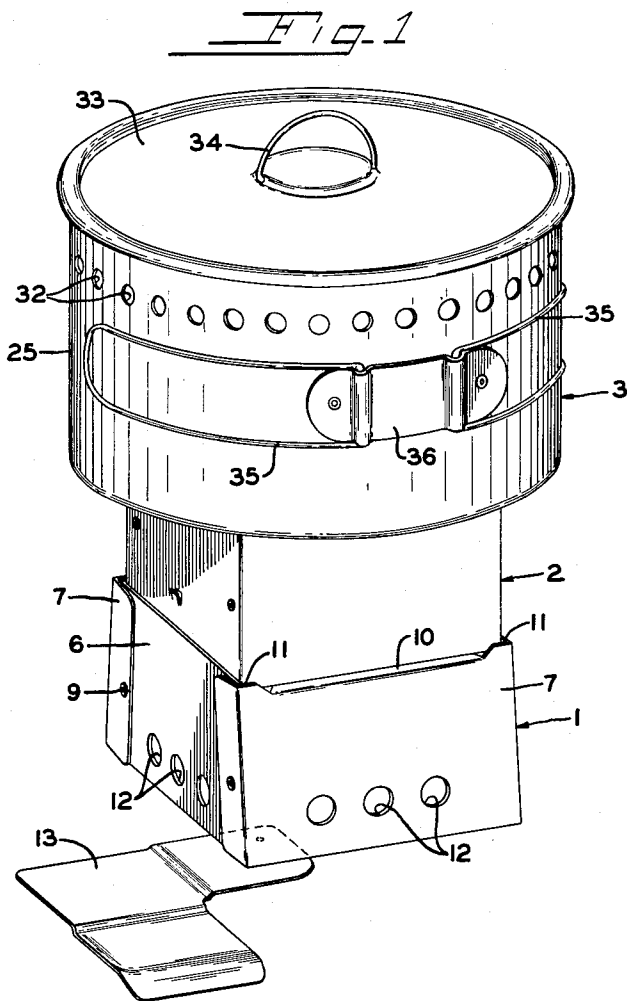
C. H. KRATZ

2,756,738

FIELD STOVE

Filed Oct. 16, 1952

4 Sheets-Sheet 1



INVENTOR.
COURTNEY H. KRATZ

BY
DESJARDINS, ROBINSON & KEISER

C. H. Robinson
HIS ATTORNEYS

July 31, 1956

C. H. KRATZ

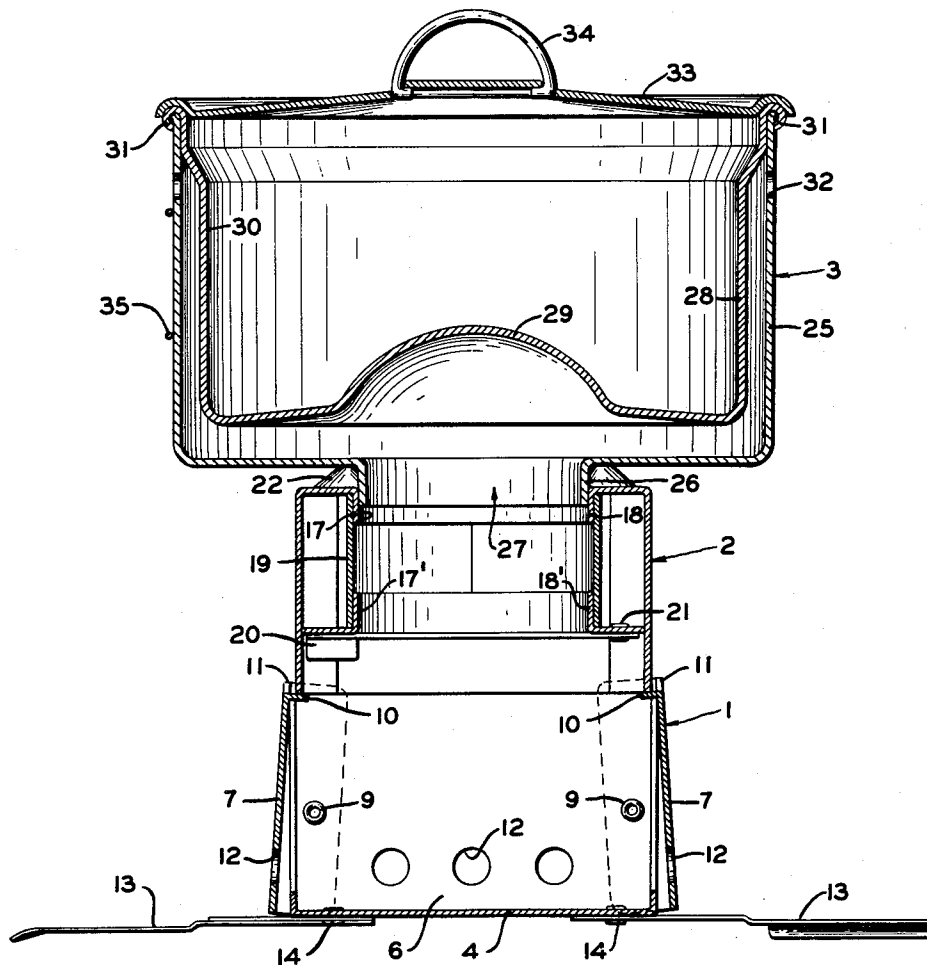
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Fig. 2



INVENTOR.
COURTNEY H. KRATZ

BY
DES JARDINS, ROBINSON & KEISER

Robert F. Robinson
HIS ATTORNEYS

July 31, 1956

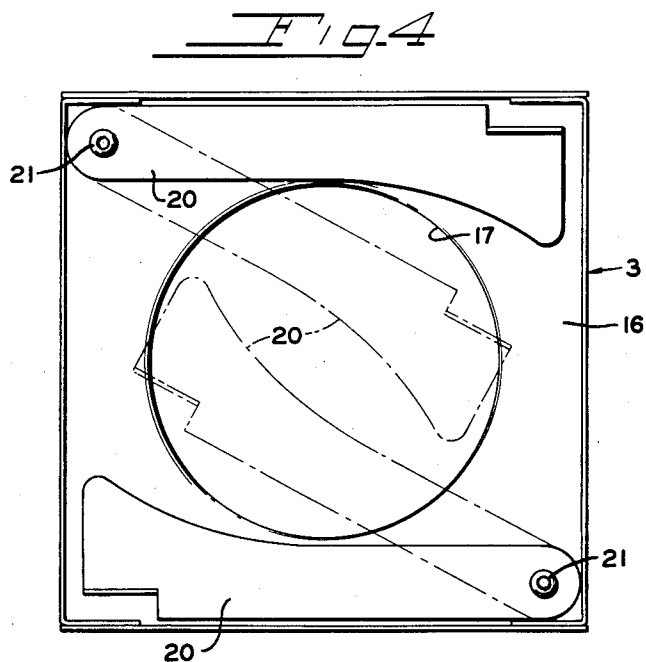
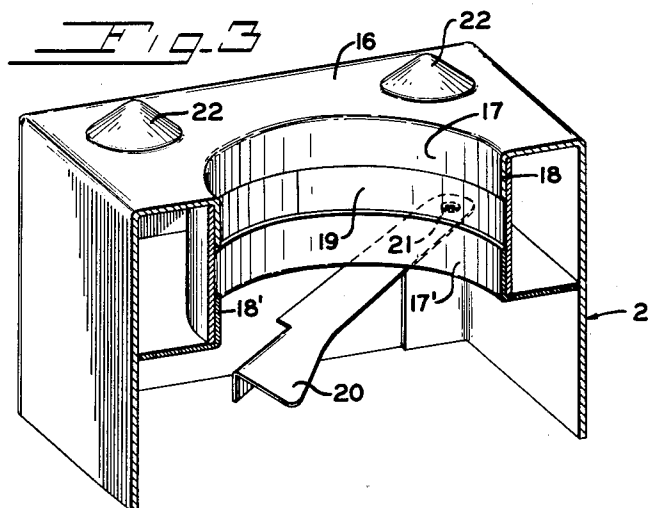
C. H. KRATZ

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FIELD STOVE

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INVENTOR.
COURTNEY H. KRATZ

BY
DESJARDINS, ROBINSON & KEISER

Albert F. Robinson
HIS ATTORNEYS

July 31, 1956

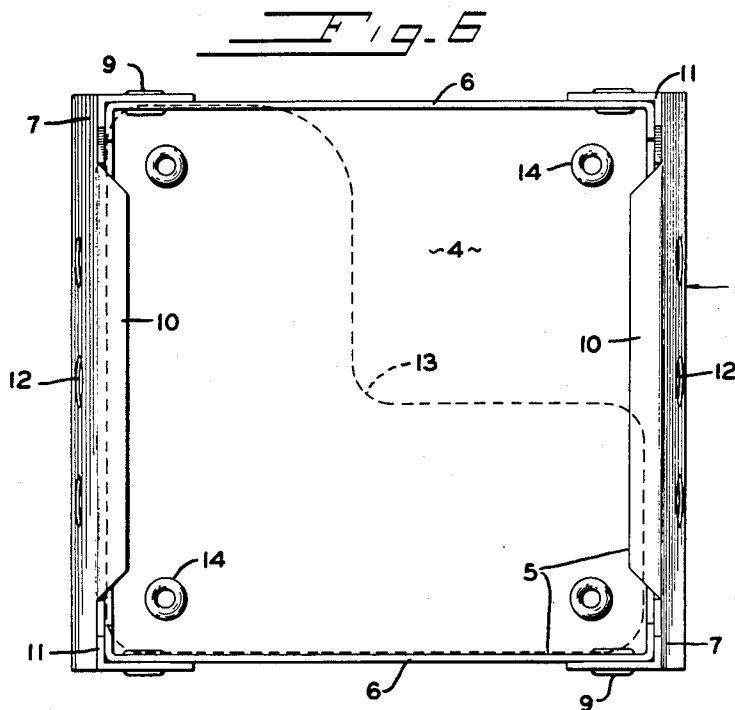
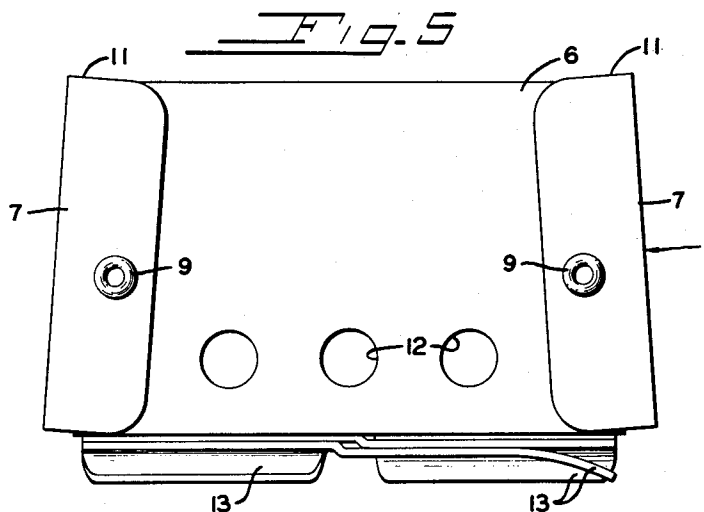
C. H. KRATZ

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FIELD STOVE

Filed Oct. 16, 1952

4 Sheets-Sheet 4



INVENTOR.
COURTNEY H. KRATZ

BY
DESJARDINS, ROBINSON & KEISER

Robert F. Robinson
HIS ATTORNEYS

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2,756,738

FIELD STOVE

Courtney H. Kratz, Covington, Ky., assignor to Kratz-Wilde Machine Company Inc., Covington, Ky., a corporation of Kentucky

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8 Claims. (Cl. 126—9)

This invention relates to a field stove, and more particularly to one which is a part of emergency equipment for use by airmen in the armed forces who may be forced to land in uninhabited places and need survival equipment for sustenance until rescued.

The invention relates to a small stove which is efficiently heated, is highly resistant against being extinguishable by wind and rain upon exposure to the elements, can be easily and quickly assembled, and can be as easily and quickly disassembled into a compact unit to occupy the least possible space in being carried about. It is 70% or more efficient in heating as compared with heating units now in use which are only about 20% efficient in heating.

One of the principal objects of the invention is a small field stove which is simple in construction and highly efficient in operation.

Another object of the invention is a small field stove which can be quickly and easily assembled from a compact knock-down condition.

Another object of the invention is a small field stove comprising sections adapted to be nested in disassembled or knock-down condition.

Still another object of the invention is a small field stove having a burner section, with insulated walls, adapted to be readily mounted on a base section, intermediately of said base section and a top boiler section, also provided with insulated walls.

Further objects, and objects relating to details of construction and economies of operation, will readily appear from the detailed description to follow. In one instance, I have accomplished the objects of my invention by the device and means set forth in the following specification. My invention is clearly defined and pointed out in the appended claims. A structure constituting a preferred embodiment of my invention is illustrated in the accompanying drawings, forming a part of this specification, in which:

Fig. 1 is a perspective view of a small field stove unit embodying by invention set up in assembled condition ready for use.

Fig. 2 is a vertical cross sectional view of the unit.

Fig. 3 is an enlarged cross sectional view of the burner section.

Fig. 4 is a bottom plan view of the burner section showing some parts in phantom position.

Fig. 5 is a side elevation of the base section.

Fig. 6 is a top plan view of the base section showing one of the legs in dotted position.

The invention, generally described, comprises a hollow base section, preferably with extendable legs to provide a larger base area, having a top portion which may be selectively restricted for mounting the burner section thereon or extended to nest said burner section therein. This objective is obtained by having two of the opposite sidewalls pivotally mounted so that they can be moved to widen or narrow the opening in the top of the base section, the top of the pivoted sidewalls carrying ledges for seating the bottom end of the burner section thereon.

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The burner section is also hollow with top and bottom open ends in a surrounding wall. The surrounding wall is doubled over most of its area, with the double walls spaced apart to provide an air chamber therebetween.

5 The burner section conforms generally to the shape of the base member, and is adapted to be nested therein when the top opening is extended or to seat thereon when said top opening is restricted. A plurality of projections are provided on the top end of the burner section surrounding the top end opening. The bottom of the burner is provided with a pivoted arm or arms adapted to be swung back for non-use or swung in position to form a grate on which fuel can be placed.

15 A boiler is adapted to be seated on the projections at the top end of the burner section, it being a member provided with an annular neck portion adapted to fit within the top opening of the burner section. A liner or false bottom is fitted in the boiler having side and bottom walls spaced from the bottom and sidewalls of the boiler, said false bottom being suspended in the boiler by an outwardly extending peripheral lip on the liner, at its top edge, fitting over and engaging the top edge of the boiler. There is a concavo-convex central portion in the bottom of the false bottom or liner. An annular row of perforations is provided in the wall of the boiler, near the top of the space formed between the boiler and the liner. A cover, with a handle, fits over the open top of the boiler and liner, and one or more extensible arms is fitted to the sidewall of the boiler to provide a handle, said arms being retracted against the sidewall of the boiler when not in use.

Referring specifically to the drawings in which like numerals designate like parts, there are the base section 1, the burner section 2, and the boiler section 3, the burner section 2 being adapted to be nested within base section 1 and the nested sections 1 and 2 in turn being adapted to be nested in the boiler section 3, so that the nested sections are in a compact unit for being carried or packed when not in use.

40 The base section 1 is a box-like construction, preferably rectangular, with a closed bottom 4 and open top 5. Two of the opposite walls 6 are integrally formed with the bottom 4, whereas the two other opposite sidewalls 7 are pivoted to said bottom section at 9. The top ends of the pivoted sidewalls are each provided with an inwardly turned flange 10 to provide means for restricting and extending the area of the opening 5 in the top of the base section. When the opening 5 is restricted, these flanges are in position for seating the bottom end of the burner section 2, and, when extended, will permit the burner section being inserted and nested within the base section. It may be noted that the flanges 10 are well below the unbent corner portions 11 so that said corner portions will shield against wind and rain being blown between the assembled sections. Near the bottom of the base section, in the sidewall, are a plurality of draft openings 12.

60 The bottom of the base section may also be provided with any number of extensible legs 13, pivoted at 14, in order to increase the surface area of the base section when extended. A can of "Sterno" or other burnable means may be placed in the base section, beneath the bottom opening 15 in the burner section.

65 The burner section is a hollow metal member having four side walls closed at their top ends by end wall 16 having an opening 17 formed therein which has an annular flange 18 turned back into the hollow interior of the burner. An interwall 19, conforming to the shape of the top end wall, is fixed to the interior of the hollow member and has an opening 17' surrounded by flange 18'. An annular sleeve is fitted to the flanges 18 and 18' to provide

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a chamber therein. One or more arms 20 is pivoted at 21 to the bottom of the burner section to permit the free end of the arm or arms being swung into position to form a grate portion on which sticks of burnable material can be placed in lieu of a can of "Sterno." If these arms are not to be used for a grate, their free ends can be swung back, clear of the central opening, beneath the air chambers in the wall in non-used position. The top of the burner section is provided with projections 22 formed in the top end wall 16, upon which the boiler section 3

seats. The boiler section 3 is a cup-shaped member with a surrounding sidewall 25 and a bottom web portion terminating in a neck portion 26 surrounding a bottom opening 27. The cup-shaped false bottom or liner 28, having a concavo-convex portion 29 in its bottom wall, has its sidewall 30 terminating in a lip 31 fitting over the top edge of the boiler wall to be suspended in said boiler with the bottom and sidewall of the liner spaced from the wall of the boiler to provide an air chamber therebetween. An annular row of perforations 32 are formed in the wall of the boiler near the top of the air chamber. A cover or lid 33, having handle 34, is fitted to the top of the boiler. One or more extensible members 35 is pivoted to the outer wall of the boiler by clips 36, these being adapted to have their free ends swung out adjacent each other to form a handle or swung back adjacent the boiler to be out of the way when not in use.

From the foregoing description it will readily become apparent that the burner section 2 can be nested within the base section 1 through its top opening by spreading the top ends of the pivoted opposite sidewalls. These nested sections can then be nested in the boiler section. When the sections are being assembled for use, the base and burner sections are removed from the boiler section, and then separated. The bottom ends of the pivoted opposite walls of the base section are pinched together to spread apart their opposite top ends, thereby permitting the burner section to be removed from the base section. Then the top ends of the pivoted sidewalls are pinched towards each other to narrow the opening therebetween to be in position for seating the burner section thereon. The legs on the base section are extended, if desired, and said base section is set up on the ground with the burner section placed on top thereof. A can of "Sterno" is either placed in the base section beneath the burner section, or the arms on the bottom of the burner section can be swung from their retracted position for heat-tabs to be placed thereon. The boiler is then placed on top of the burner section.

I am aware that there may be various changes in details of construction without departing from the spirit of my invention, and, therefore, I claim my invention broadly as indicated by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by U. S. Letters Patent, is:

1. A base and burner sectional unit for a field stove comprising a rectangular base frame with two of its opposite sides pivoted to the other two sides for spreading and contracting the open top of said base, inwardly extending flanges disposed on the pivoted sides substantially below the top edge of said base frame, radially extensible legs pivoted to the base frame, a burner section of smaller cross section adapted to be seated on the inwardly extending flanges of the base frame when the open top of said base is contracted and to be nested therein by spreading

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the open top of said base frame, and a radially adjustable grate arm pivoted to the burner section for being moved to and from operative position.

2. The unit of claim 1 in which the inwardly extending flanges are formed by bending inwardly portions of the top margins of the pivoted walls.

3. The sectional unit of claim 1 having draft openings formed in the sidewalls of the base below the inwardly extended flanges.

4. The sectional unit of claim 2 having draft openings formed in the sidewalls of the base below the inwardly extending flanges.

5. A base and burner section unit for a field stove comprising a rectangular base frame with two of its opposite sides provided with means for spreading and contracting the open top of said base, inwardly extending supporting flanges disposed on said spreading and contracting means substantially below the top edges of said base frame, a burner section of smaller cross section than the base frame adapted to be seated on the inwardly extending flanges of the base frame when the open top end of the said base is contracted and to be inserted within said base frame through its open top end when said open top end is spread, and a radially adjustable grate arm fitted to the burner section for being moved to and from operative position.

6. A small emergency field stove comprising a hollow base section having an open top end, means for spreading or restricting the top open end of said base section comprising opposite pivoted wall portions, a burner section, provided with a grate, having an insulated wall adapted to seat on the base section when the top open end of said base section is restricted and to be nested therein when said open top end is spread, a boiler section having a side wall and a bottom wall with an open neck portion fitting the top side of the boiler section, and a false bottom mounted on the boiler section and spaced from the bottom and side walls of the boiler section, said boiler section being adapted to house the nested base and burner sections.

7. The small emergency field stove of claim 6 in which the top ends of the opposite pivoted wall portions are provided with a ledge for seating the burner section.

8. The small emergency field stove of claim 6 in which the false bottom of the boiler is provided with a concave-convex portion concentric with the burner section.

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