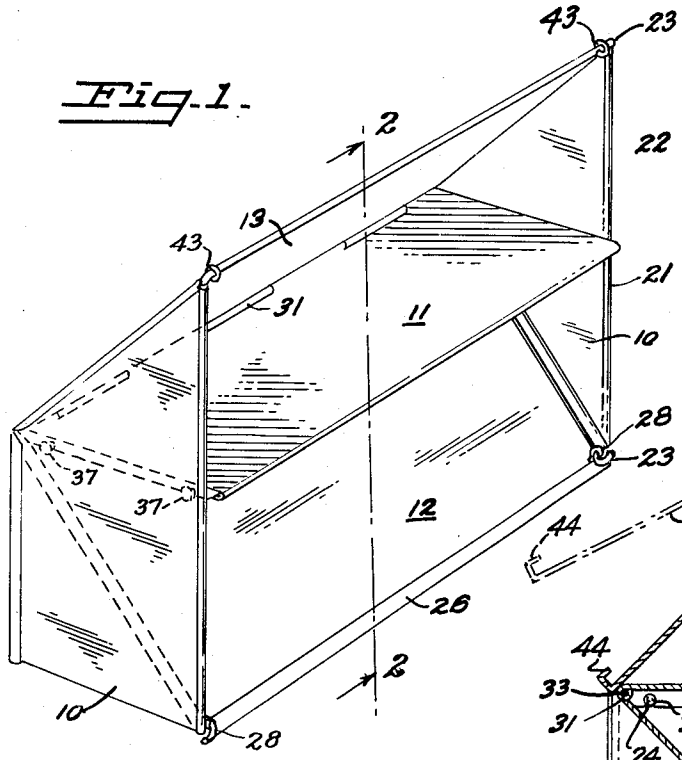
Aug. 7, 1956 L. A. McDOWELL 2,757,664

REFLECTOR OVEN

Filed July 7, 1953

Fig. 1.



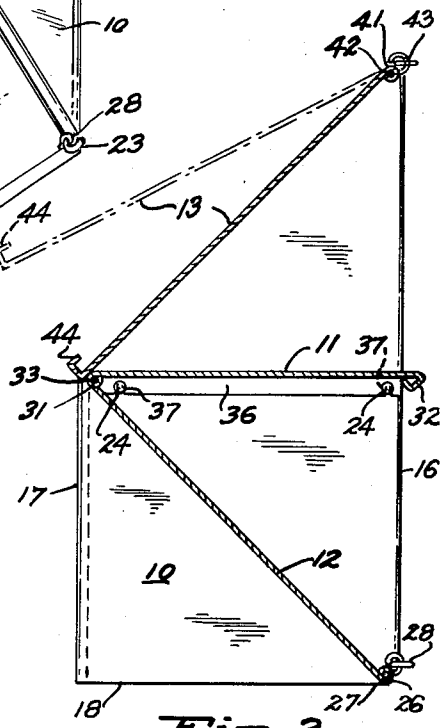
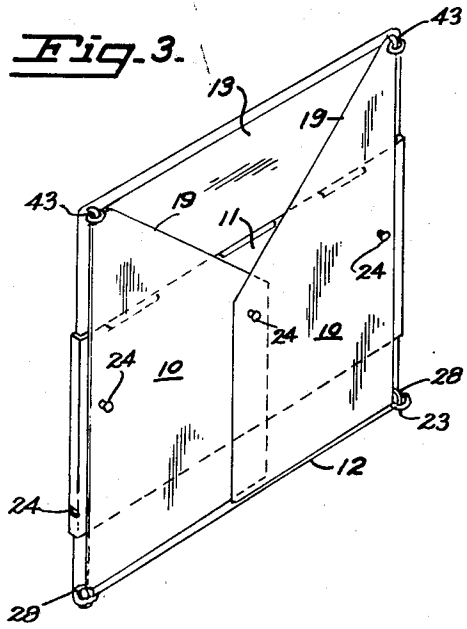


Fig. 2.

Fig. 3.



INVENTOR.
LONZO A. McDOWELL
BY
Townsend, Townsend & Hoppe
ATTORNEYS

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REFLECTOR OVEN

Lonzo A. McDowell, Vallejo, Calif.

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4 Claims. (Cl. 126—275)

This invention relates to new and useful improvements in folding reflector ovens of the type used by campers. Reflector ovens are used before open fires and comprise a pair of angularly disposed reflectors of tin or other heat reflective material which reflect heat from a fire onto a horizontal shelf disposed between the two reflectors. The effect of the reflectors is to concentrate the radiant heat of the fire upon the shelf. The present reflector oven, accordingly, comprises a horizontal shelf raised above and supported by the sides of the oven. The top and bottom reflectors are positioned above and below the shelf disposed at a 45° angle with respect to the shelf.

The present oven is formed of five pieces of metal, all of which are hinged to one or more other pieces so that the entire oven may be folded compactly but at the same time, since all of the pieces are connected, no single piece can be lost or misplaced.

One of the particular features of the invention is the fact that the top reflector is hinged at its forward edge to be raised to provide access to the shelf from the rear—i. e., without the camper having to approach the shelf from the fire side. The hinged top reflector also provides a ready means for adjusting the temperature of the oven in that by raising the cover a draft may be admitted which cools the shelf and its contents.

In the drawings:

Fig. 1 is a perspective of the oven in assembled position.

Fig. 2 is a vertical section through the oven showing the top reflector in closed position in full lines and in partially open position in dotted lines.

Fig. 3 is a perspective of the oven folded in compact form for storage or transportation.

The instant invention comprises two sides **10**, a horizontal shelf **11** supported by the sides, a bottom reflector **12** below the shelf **11** extending from the rearward corner of the shelf to the forward lower corner of the sides **10** and a top reflector **13** extending upwardly from the rear of the shelf to the top forward corners of the sides **10**. The parts are made of sheet metal, preferably shiny, so as to reflect heat. Sheet aluminum is a suitable material of construction.

Each side **10** is trapezoidal in shape with the parallel edges disposed vertically. The longer parallel edge **16** is positioned at the front of the oven and the shorter parallel edge **17** at the back. One of the non-parallel edges **18** is perpendicular to the front and rear edges and provides the base on which the oven rests. The other non-parallel edge **19** is disposed at an angle of 45° to the front edge in a downwardly inclined position. Each side **10** is formed with its edges folded back to form hems to prevent injury from sharp sheet metal. The front edge **16** is formed with a rolled bead **21** in which is imbedded a wire **22**. Each wire is bent at the top and bottom inwardly and formed with an eye **23** which constitutes one of the members of the hinge hereinafter described. On the inner surface of each side **10**, spaced

along a horizontal line, is a pair of studs **24** which support the shelf **11** as hereinafter set forth.

The bottom reflector **12** is formed of a substantially rectangular piece of metal and in assembled position is inclined at an angle of approximately 45° with the horizontal slanting upwardly from the front bottom corner of sides **10** to the back of the oven. The sides of the bottom reflector **12** are folded inwardly to form a hem to prevent injury to the user. A rounded bead **26** is formed along the bottom edge and in the bead is imbedded a wire **27**, the ends of which are bent up to form eyes **28** which hook into the eye **23** at the lower front corner of each side **10** to form a hinge joint. The upper edge of the bottom reflector **12** is fabricated for connection with the rear edge of the shelf **11** in a piano type hinge **31** as hereinafter set forth.

The horizontally disposed shelf **11** is substantially rectangular and is formed with a bead **32** at the front which prevents injury to the user and is fabricated at its rear edge for connection with the bottom reflector **12**. It will be understood that several types of hinges may be employed to join the shelf and the bottom reflector, but as herein illustrated a convenient hinge is of the piano type whereby a wire **33** is employed for the hinge pin and alternate adjacent projections of the edges to be joined are bent around the hinge pin. Each side edge of the shelf is turned in downwardly extending flange **36** which is formed with a pair of notches **37** along its bottom edge into which the studs **24** in the sides **10** fit. These studs **24**, one adjacent the front and one adjacent the rear of the shelf **11** provide the support for the shelf.

The top reflector **13** likewise is rectangular in shape and folded in hems along its edges. A bead **41** is rolled at the top of the reflector and in the bead is imbedded a wire **42**, the ends of which are bent upward and formed in eyes **43**, one at each side, which engage the top eyes **23** of the sides **10** to provide a hinge joint between the top forward edge of the sides **10** and the top edge of the top reflector **13**. The bottom edge of the top reflector **13** is bent backward in a U shape which provides a handle **44** for lifting the top reflector.

In assembled position, as shown in Fig. 1, the sides **10** rest on the ground or other support. The shelf **11** is disposed horizontally and is supported on the studs **24** which engage the notches **37** in flanges **36**. The bottom reflector **12** is supported by hinge **31** from the shelf **11**. The top reflector **13** is supported by the eyes **23—43** and rests at its rear edge upon the rear of the shelf **11**. In such position the two reflectors **12** and **13** are disposed at 45° angles with respect to the shelf **11** and reflect heat from the fire onto the shelf, concentrating the heat for cooking purposes.

One of the features of the oven is the fact that the top reflector **13** is hinged so that it swings upward providing access to the shelf from the rear. See Fig. 2. This enables the user to reach the shelf without the necessity of getting between the oven and the fire. Further, when the top reflector **13** is partially raised, the temperature of the shelf can be adjusted in that raising the reflector creates a draft which cools the shelf.

When it is desired to pack the oven for transportation the studs **24** are disengaged from the notches **37** and the reflectors **12** and **13** and shelf **11** collapse. Thereupon the sides **10** are folded over against the shelf. It will thus be observed that the oven, when not in use, may be stored in a minimum of space and may be set up and disassembled rapidly.

Although I have described my invention in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes

and modifications may be practiced within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A folding reflecting oven comprising a pair of spaced, rigid, integral sides, a bottom reflector arranged when said oven is assembled to extend upwardly rearwardly from the bottom front edge of said oven, first means hingedly connecting each bottom front corner of said sides with a corresponding bottom front corner of said bottom reflector, a shelf arranged when said oven is assembled to extend horizontally centrally of said oven, second means hingedly connecting the rear edge of said shelf with the upper rear edge of said bottom reflector, third means carried by said sides for supporting the side edges of said shelf, a top reflector arranged when said oven is assembled to extend downwardly rearwardly from the top front edge of said oven, and fourth means hingedly connecting each top front corner of said sides with a corresponding top front corner of said top reflector, the side edges of said bottom and top reflectors being adjacent but discrete relative to said sides.

2. An oven according to claim 1 in which the rear edge of said top reflector is arranged to rest on the rear edge of said shelf and in which said rear edge of said top reflector is arranged to be swung upwardly to provide access to said shelf from the rear of said oven, said swinging movement being about said fourth means and about a horizontal axis through the extreme top, front portion of said oven.

3. An oven according to claim 1 in which said first and fourth means include wires carried in the front edges of said sides and said top and bottom reflectors, each end of each of said wires being formed with an eye interlocking with a corresponding eye of the member to which it is hingedly connected.

4. An oven according to claim 1 in which each said side is trapezoidal with the longer parallel edge constituting the front edge of said side and in which the bottom edge of said side is perpendicular to the parallel sides.

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