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H. E. PHILLIPS
REFUSE BURNING DEVICE

3,428,004

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FIG. 1

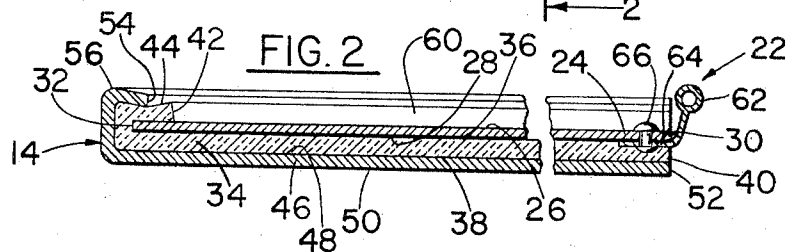
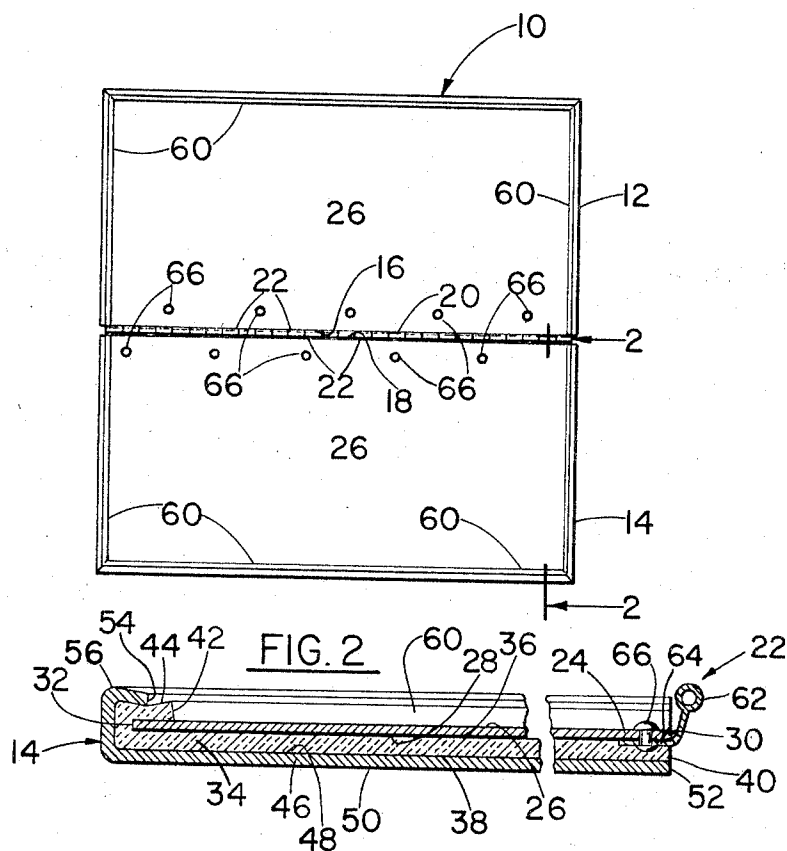


FIG. 3

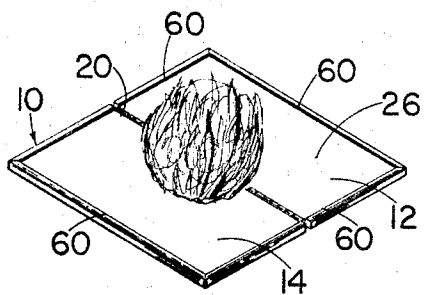
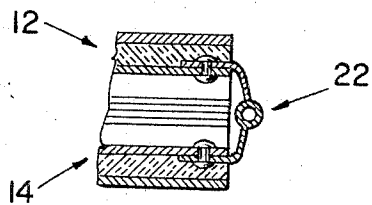


FIG. 4



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REFUSE BURNING DEVICE
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3 Claims

ABSTRACT OF THE DISCLOSURE

A refuse burning device upon which trash, leaves and the like can be burned without damage to grass, pavement or the like. The device comprises two sheets hingedly connected together so as to be able to be laid flat as a single sheet and to be folded into a size smaller than a single sheet having the same surface area as the two sheets of the device. Each sheet of the device has a fire and heat resistant surface upon which trash and leaves, and the like can be positioned and burned. Each of the sheets also has a ground-engaging surface which is insulated from the first-mentioned sheet surface. The entire device is bounded by a peripheral ridge which upstands from the first-mentioned surface of the device. This ridge will function to help to retain the trash, leaves and the like on the fire and heat resistant surface of the device. The height of the ridge, however, does allow leaves and the like to be raked, swept or the like onto the fire and heat resistant surface of the device during use.

The present invention relates to an improved device for burning refuse, and more particularly, to a device on which leaves, trash and the like can be positioned and burned on a lawn, driveway and the like without damaging the same.

Whenever refuse, trash, leaves and the like accumulate it may be desirable to dispose of the same by burning. At times the most convenient way to burn refuse is to rake the same into a pile and to burn the same in place without placing the refuse in a container which requires lifting and possible transporting the refuse. This manner of disposing of refuse, trash, leaves and the like has been used for some time; however, whenever used, the ground adjacent to the pile burned is damaged. For example, when a pile of refuse is burned on a lawn, the grass may be burned, scorched or the like and an unsightly spot on the lawn is produced which only disappears after an appreciable amount of time has elapsed, the grass has grown to an appreciable height again and the ashes from the refuse has disappeared. If the burning takes place on a sidewalk, or driveway, the pavement can become scorched thereby producing a permanent spot in the pavement; and, no matter where the burning takes place, unsightly ashes, produced by the burning are left. These ashes may, in some instances, be difficult to remove; for example, ashes deposited on grass. Therefore, it is highly desirable to provide an improved device which allows refuse, trash, leaves and the like to be raked into piles and burned without damaging the surface adjacent to the pile burned by burning, scorching or the like, and which retains the ashes on the device such that they may be easily collected and disposed.

Therefore, it is the primary object of this invention to provide an improved device onto which refuse, trash, leaves and the like may be positioned in a pile and burned without damaging the ground adjacent to the burning.

Another object of this invention is to provide an improved device onto which refuse, trash, leaves and the like may be positioned in a pile and burned; the device insulating the burning refuse and the like from the ground supporting the device whereby the heat from the same will not damage the ground surface.

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Yet another object of this invention is to provide an improved refuse burning device having a fire and heat resistant surface on which refuse, trash, leaves and the like can be positioned and burned and a peripheral ridge surrounding said surface for retaining the same and the ashes resulting from the burning thereof whereby the ashes can be collected and easily disposed of.

A further object of this invention is to provide an improved refuse burning device having a fire and heat resistant surface on which refuse, trash, leaves and the like can be burned which is constructed in sections hinged together in edge to edge relationship such that the device can be folded into a size smaller than the size of said surface.

The above-mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention itself will be best understood by reference to the following description of an embodiment of the invention taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a top view of the improved refuse burning device of this invention;

FIG. 2 is a cross-sectional view of one section of the improved refuse burning device of this invention illustrated in FIG. 1 and taken substantially along the section line 2—2;

FIG. 3 is a perspective view of the improved burning device of this invention illustrating a pile of refuse, trash, leaves and the like positioned on the fire and heat resistant surface of the device; and

FIG. 4 is a fragmentary view showing the two sections of the device in folded relationship.

In the broader aspects of this invention there is provided a refuse burning device comprising a sheet having a fire and heat resistant surface and means secured to said sheet for supporting the same in a generally horizontal and spaced apart relation with the ground and for insulating said sheet from the ground.

Referring to the drawings, there is shown the improved refuse burning device 10 of this invention to generally comprise two sheet-like sections 12, 14, each of which has an edge 16 and 18 respectively, hinged together in edge to edge relation by hinge 20.

Each of the sections 12 and 14 are identical except for the respective mating portions of the hinge 20; and this difference consists solely of the positioning of the cylindrical elements 22 of the hinge 20 along the edges 16 and 18, respectively, such that the elements 22 of the portion 12 can be positioned in between the elements 22 of the portion 14 so as to accommodate a pivot rod (not shown) such as is provided in a conventional hinge. Thus, for the purposes of simplicity, only section 14 will be described herein with the understanding that section 12 is identical to section 14 except as above-mentioned.

Referring to FIG. 2, section 14 is shown to comprise a metal sheet 24 having a fire and heat resistant surface 26 and an oppositely facing surface 28. Sheet 24 is bounded by a straight edge 30 and edge 32 which extends for a portion of its length in spaced apart relation to edge 30 and has opposite end portions which connect with the opposite ends of edge 30 thereby defining the periphery of sheet 26. In the specific embodiment illustrated, sheet 26 is rectangular, edge 30 is a longitudinal edge thereof, and edge 32 is the opposite longitudinal edge and the connected end edges.

A sheet 34 of insulating material is provided with opposite surfaces 36 and 38. Sheet 34 is superposed on the sheet 26 with the surfaces 28 and 36 facing and in intimate contact with each other. In this position, sheet 34 overlays sheet 26. Sheet 34 has a peripheral straight edge 40 and a peripheral edge 42 which, like edge 32 of sheet 26, has an intermediate portion extending in a spaced apart rela-

tion to the edge 40 and opposite end portions which connect with the opposite ends of ends 40. Sheet 34 is provided in a size such that when edge 40 is aligned with edge 30, a peripheral portion 44 adjacent to the edge 42 extends beyond the edge 32 of the sheet 26. This portion 44 is bent around the edge 32 so as to cover the edge 32 and overlay a peripheral portion of the surface 26 of sheet 24. Obviously, the sheet 34 also completely covers the surface 28 of the sheet 24.

A metal sheet 46 is provided with oppositely facing surfaces 48 and 50; and like sheets 24 and 34, sheet 46 is bounded by a straight peripheral edge 52 and an edge 54, similar to edges 32 and 42, which extends in spaced apart relation to the edge 52 and connects with the opposite ends of the edge 52. Sheet 46 is superimposed on the sheet 34 with the surfaces 48 and 38 facing and in intimate contact with each other. Similarly to the sheet 34, the sheet 46 is provided in a size such that when edge 52 is positioned flush with edges 30 and 40 of the respective sheets 24 and 34, sheet 46 has a peripheral portion 56 which extends beyond the edge 32 of the sheet 24. Portion 56 is folded over the portion 44 and adjacent to end 54 is bent downwardly toward the surface 26 of the sheet 24 in a manner deforming the portion 44 of the sheet 34. Thus, sheet 46 forms a clamp by which the sheets 24, 34 and 46 are joined in the overlying relationship above-described. In the preferred embodiment of this invention, no other means is required to secure the respective sheets 26, 34 and 46 together.

Sheet 46, similarly to sheet 34 and surface 28, completely covers surface 38 of the sheet 34. Thus, substantially only the edges 40 and 42 of the sheet 34 remain exposed after the respective sheets 24, 34 and 46 are assembled as above-described. Further, portions 56 and 44 of sheets 46 and 34, respectively, upstand from the surface 26 adjacent edge 32 of the sheet 24 thereby to form a peripheral ridge 60. Surface 50 becomes the bottom surface of section 14.

Secured adjacent the edges 30, 40 and 52 of the respective sheets 24, 34 and 46 in a hinge element 62. Hinge element 62 comprises a plurality of cylindrical portions 22 secured to an edge of a sheet-like portion 64 and aligned on the same axis such as is conventional with a standard hinge element, for example, a piano hinge. Portion 64 of hinge element 62 is inserted between sheets 24 and 34 and secured to sheet 24 by means of a plurality of rivets 66. As above-mentioned, the only difference between the sections 12 and 14 of device 10 is the location of portions 22. The portions 22 are positioned on the respective sections 12 and 14 in spaced-apart relation. Portions 22 are assembled in alternating relation on the same axis such that a pivot rod (not shown) can be positioned within elements 22 to complete the structure of hinge 20.

In a specific embodiment of this invention, sheets 24 and 46 are aluminum, sheet 34 is asbestos, corrugated asbestos, fiber glass or the like, and hinge 20 is a conventional piano-type hinge. The preferred embodiment of this invention can be made both as illustrated with two sheets 24 and 46 hinged together or as a single unhinged sheet similar to sections 12 and 14. In the hinged embodiment, each section 12 and 14 measures 3½ feet long and 1¾ feet wide; in the unhinged embodiment the device 10 is 3½ feet square; in both preferred embodiments sheet 34 is ¾ inch thick and sections 12 and 14 are ½ inch thick at a position remote from the ridge 60.

In operation, device 10 is laid flat on the ground with bottom surface 50 being in intimate contact with the ground and surface 26 facing upwardly. The refuse, trash, leaves and the like which are desirably burned are raked, swept or the like onto surface 26 into a pile positioned approximately in the center of surface 26. (See FIG. 3.) In order to do this, the refuse, trash, leaves and the like must be raked or swept over ridge 60. For this reason, in a preferred embodiment of this invention, sheets 24, 34 and 46 are provided in thicknesses such as give device 10 a dimension measured vertically through ridge 60 which

will be relatively small thereby to facilitate the movement of refuse, trash, leaves and the like onto the surface 26. Sheets 24, 34 and 46 having relatively small thicknesses can be used to construct the device 10 and still provide the device 10 with the rigidity required to be durable and useful since the ridge 60 constructed as above described is sufficiently rigid and strong thereby giving the device 10 the degree of rigidity necessary.

Once the refuse, trash, leaves and the like is positioned on the surface 26 of the device 10 as illustrated in FIG. 3, the refuse or the like can be burned without burning, scorching or otherwise damaging the surface on which the device 10 rests. This is achieved since the sheet 46 which is in contact with the surface supporting the device 10 is completely insulated from the sheet 24 on which the burning is taking place. Further, the hinge 22 does not come in contact with the surface supporting the device 10 since both hinge elements 62 are spaced from the surface 50 of the sheet 46 as illustrated in FIG. 2.

Further, the ashes remaining after the burning of the refuse, trash, leaves and the like has taken place are retained on the surface 26 of the device 10 by the ridge 60. Thus, the ashes are not distributed on the area of ground surrounding the refuse burned thereby to cause litter. In contrast, the device 10 can be merely picked up and carried easily to a place where the ashes can be easily dumped from the device 10 by tipping the device upside down.

After use, the device 10 can be folded by means of the hinge 20 into a size smaller than the total area of the surface 26. In the embodiment illustrated, the device 10 can be folded into the size of one of the sections 12, 14; and thus, the device 10 is reduced in size by one-half, as shown in FIG. 4. This facilitates the handling of the device 10 when not in use, and also the storage of the device 10 in a garage or some other likely place.

While there have been described above the principles of this invention in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of the invention.

What is claimed is:

1. An apparatus on which leaves, trash and the like can be burned comprising first and second sheets, each of said sheets having a fire and heat resistant sheet surface and a surface facing oppositely thereto, first means for supporting said sheets in spaced apart relation to and thermally insulated from the ground with said first-mentioned surface being generally horizontal and facing upwardly, and second means for hingedly connecting said sheets together in edge-to-edge relation whereby said sheets may be laid flat and folded into a size smaller than said sheets in flat condition, said first means comprising third and fourth sheets of thermal insulating material respectively overlaying and completely covering said oppositely facing surfaces, said third and fourth sheets each having a surface facing away from said first and second sheets, said third and fourth sheets each having a portion thereof respectively overlaying the edges of said first and second sheets and a boundary portion of said fire and heat resistant surface which is adjacent to the boundary of the connected first and second sheets, and fifth and sixth sheets respectively overlaying and completely covering said last-mentioned surface of said third and fourth sheets, said fifth and sixth sheets each having a portion thereof respectively overlaying said portion of said third and fourth sheets, whereby said first and third and second and fourth sheets are respectively clamped to said fifth and sixth sheets, each of said fifth and sixth sheets having a ground-engaging sheet surface facing away from said third and fourth sheets.

2. The apparatus of claim 1 wherein said portions of said third, fourth and fifth and sixth sheets overlaying said fire and heat resistant surface adjacent to the boundary of the connected said first and second sheets upstand therefrom thereby providing a peripheral leaf and trash retaining ridge surrounding said fire and heat resistant surface.

3. The apparatus of claim 2 wherein said first and second and fifth and sixth sheets are metal.

2,743,686	5/1956	Samuelson	-----	110—19
3,236,198	2/1966	Kreft	-----	110—19

References Cited

UNITED STATES PATENTS

1,308,151	7/1919	Vogel.	
2,591,786	4/1952	Cronheim	----- 126—221 X

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