April 17, 1962 W. M. DOYLE 3,029,754

PORTABLE INCINERATOR AND COOKER

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Fig. 1

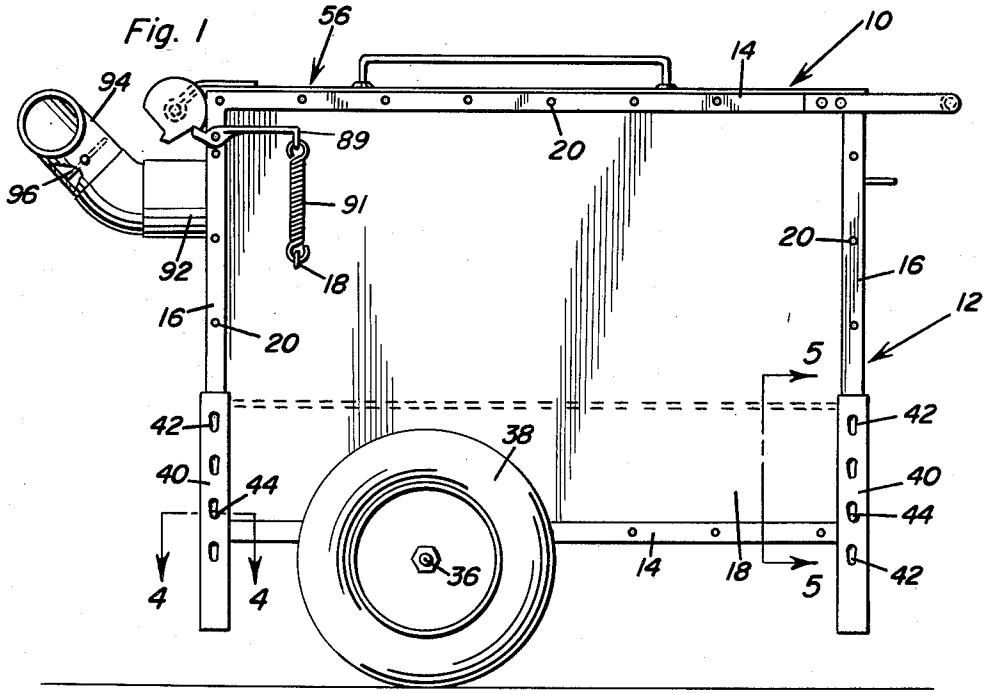
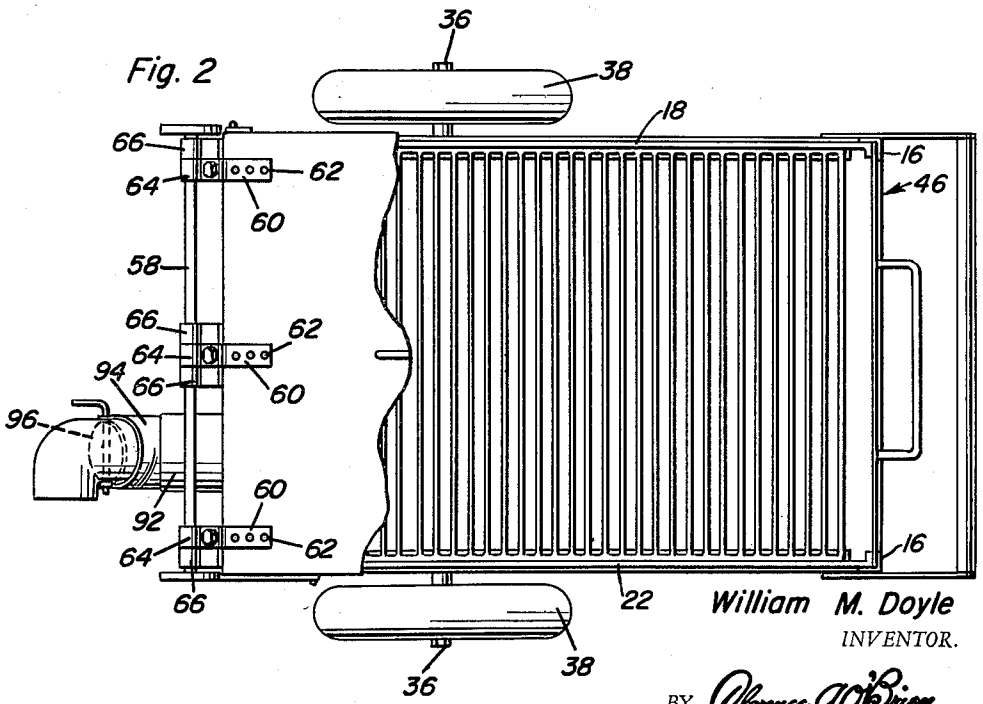


Fig. 2



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PORTABLE INCINERATOR AND COOKER

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Fig. 5

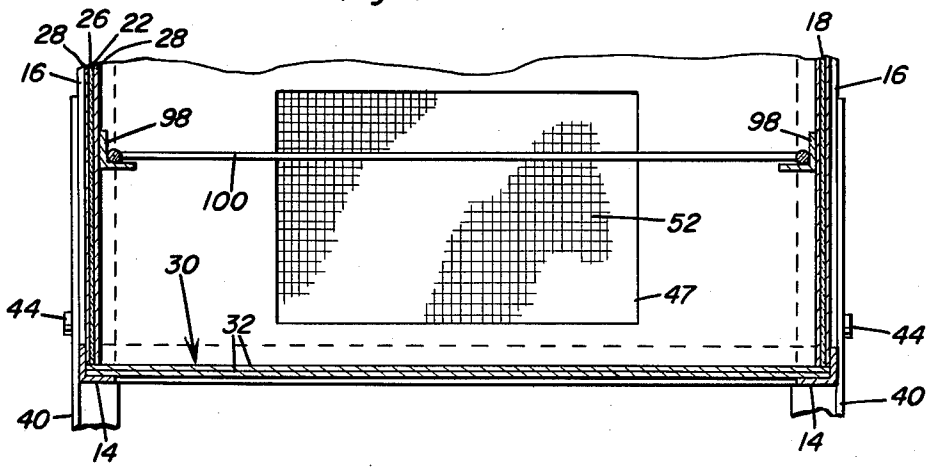
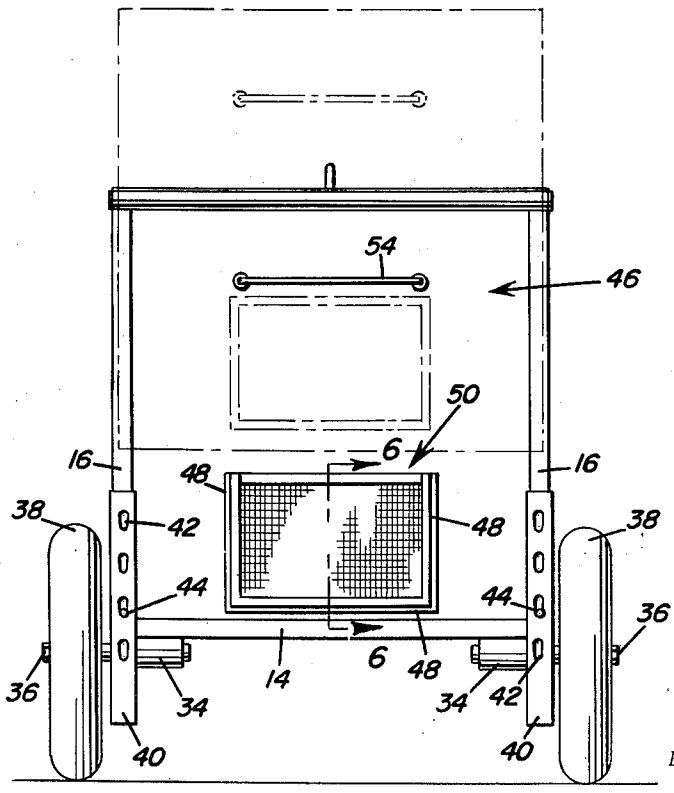


Fig. 3



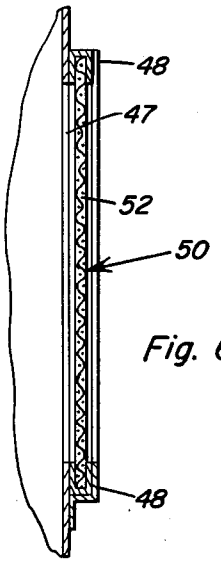


Fig. 6

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PORTABLE INCINERATOR AND COOKER

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Fig. 8

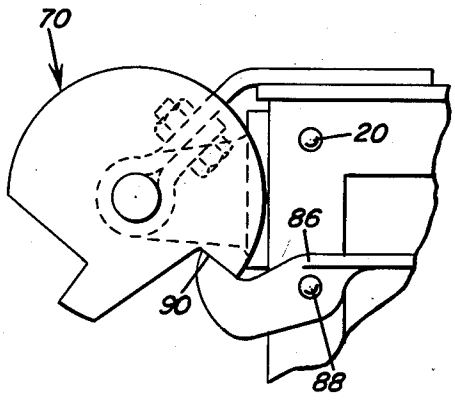


Fig. 9

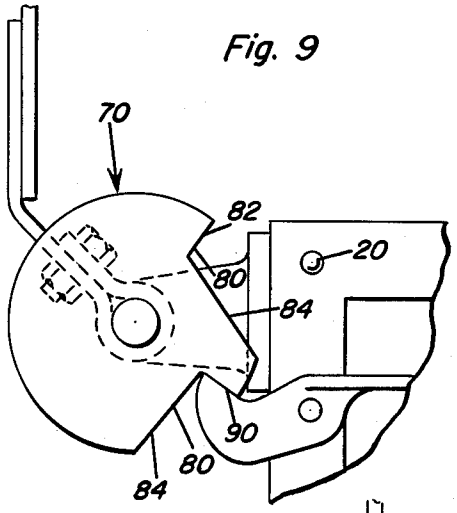
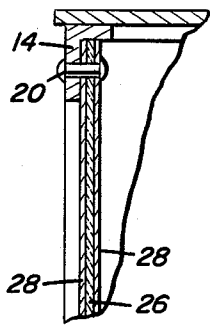


Fig. 7



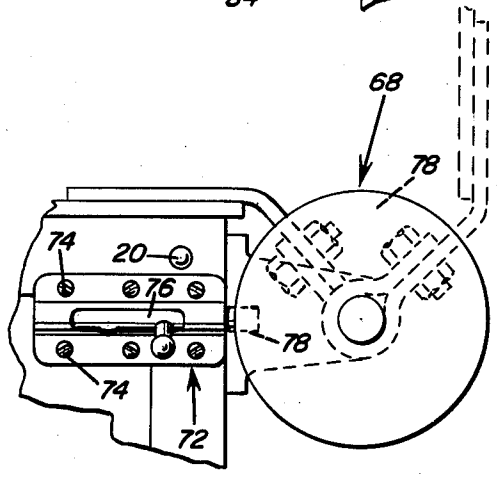


Fig. 10

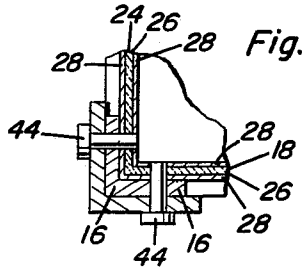


Fig. 4

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PORTABLE INCINERATOR AND COOKER

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Filed July 6, 1960, Ser. No. 41,118
13 Claims. (Cl. 110—19)

This invention relates to a novel and useful portable incinerator and cooker, and more particularly to a portable incinerator and cooker which may be readily moved from one location to another and utilized as either an incinerator or a cooker.

The present invention resides in the provision of a cabinet assembly having opposite side walls and front and rear walls interconnected by means of a bottom wall with the cabinet provided with at least one pair of supporting wheels whereby it may be readily moved from one location to another. The cabinet is provided with a hinged top wall which, when in a closed position, overlies the upper edges of the opposite side walls and the front and rear walls. The front wall is slidably mounted for vertical movement relative to the cabinet and may be removed therefrom. However, when the top wall is in the closed position, the front wall cannot be removed and access to the interior of the incinerator or cooker is restricted. The front wall is provided with a draft inlet door covered by a screen and the upper portion of the rear wall is provided with a flue opening in which one end of a flue is secured. A latch means is provided for resiliently and positively maintaining the top wall in a closed position with the latch means including a positive latch means carried by one side of the cabinet assembly and a resilient latch means carried by the other side of the cabinet assembly.

The side walls of the cabinet assembly are each constructed of a panel of asbestos covered on both sides by a panel of aluminum thereby insulating the outer surfaces of the cabinet from the interior thereof. In this manner, the portable incinerator and cooker may be utilized with considerable degree of safety, in comparison to other types of portable incinerators and cookers, in locations where the curiosity of small children might tempt them to investigate the operation of the portable incinerator and cooker. The positive latch means can be utilized to rigidly secure the top wall in a closed position and the securing of the top wall in a closed position also secures the front wall in a closed position. Therefore, unauthorized access to the interior of the incinerator and cooker can be prevented to a reasonable degree.

Inasmuch as the portable incinerator and cooker is substantially completely enclosed with the exception of the draft inlet opening and the flue, it may be operated in substantially all types of weather and refuse to be burned can be stored in the cabinet until the desired quantity has been collected without the refuse becoming damp from precipitation and the like.

The supporting wheels of the cabinet are journaled for rotation about an axis extending transversely thereof between the opposite ends of the cabinet and the opposite ends of the cabinet are provided with support legs which are adjustable in vertical heights whereby the incinerator may be supported in a horizontal position on uneven ground. Further, the hinged top wall is provided with a resilient latch mechanism for resiliently retaining the top wall in a closed position and for resiliently retaining the top wall in an open position during the use of the cabinet assembly as either a portable incinerator or cooker.

The main object of this invention is to provide a cabinet assembly which may be conveniently utilized as either a portable incinerator or cooker.

A further object of this invention, in accordance with the preceding object, is to provide a portable incinerator or cooker which will be substantially enclosed and protected from the elements such as precipitation.

Still another object of this invention, in accordance with the preceding objects, is to provide a portable incinerator and cooker cabinet assembly having insulated upstanding walls whereby younger persons will not as likely be severely burned upon touching the outer surfaces of the cabinet while the latter is being used.

A further object of this invention is to provide a means for preventing unauthorized access to the interior of the cabinet assembly whereby small children and the like will not be able to play with the fire therein.

Still another object of this invention is to provide a removable cover of the foraminous and heat dissipating type for the draft inlet opening of the cabinet assembly whereby even direct contact with the draft inlet for the incinerator and cooker will not result in severe burns.

A final object to be specifically enumerated herein is to provide a portable incinerator and cooker which will conform to conventional forms of manufacture, be of simple construction, and easy to use so as to provide a device that will be economically feasible, long lasting and convenient to use.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side elevational view of the portable incinerator and cooker comprising the instant invention;

FIGURE 2 is a top plan view of the portable incinerator and cooker illustrated in FIGURE 1 of the drawing, a portion of the top wall thereof being broken away to more clearly illustrate the internal details of construction of the incinerator and cooker;

FIGURE 3 is a front end elevational view of the portable incinerator and cooker, a raised position of the front wall of the incinerator and the cooker being shown in phantom lines;

FIGURE 4 is a fragmentary horizontal sectional view on somewhat of an enlarged scale of one corner of the portable incinerator and cooker taken substantially upon the plane indicated by the section line 4—4 of FIGURE 1;

FIGURE 5 is a fragmentary enlarged vertical sectional view taken substantially upon the plane indicated by the section line 5—5 of FIGURE 1;

FIGURE 6 is a fragmentary enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 6—6 of FIGURE 3;

FIGURE 7 is a fragmentary vertical transverse sectional view on somewhat of an enlarged scale taken through the upper portion of one of the side walls of the portable incinerator and cooker;

FIGURE 8 is a fragmentary enlarged side elevational view of a portion of the resiliently urged latch means mechanism comprising a part of the latch means for retaining the top wall in selected adjusted positions, the top wall being shown in a closed position;

FIGURE 9 is a fragmentary enlarged elevational view similar to that of FIGURE 8 but showing the top wall being retained in open position; and

FIGURE 10 is a fragmentary enlarged side elevational view of the portion of the latch means for rigidly securing the top wall in an open or a closed position.

Referring now more specifically to the drawings the numeral 10 generally designates the portable incinerator and cooker which includes a cabinet assembly generally

referred to by the reference numeral 12. The cabinet assembly 12 includes a framework of side and corner angle irons 14 and 16 respectively which may be constructed of any convenient material such as aluminum. A side wall 18 is secured between the upper and lower side channel members 14 and the front and rear corner channel members 16 on one side of the cabinet 12 by means of suitable fasteners such as rivets 20.

The other side of the cabinet 12 is provided with a similar side wall 22 and a rear wall 24 is secured between the rear corner channel members 16 and the corresponding upper and lower side channel members 14.

With attention now directed to FIGURES 4, 5 and 7 of the drawings, it will be noted that the rear and opposite side walls 24, 18 and 22 are each constructed of a panel of asbestos 26 covered on opposite sides by means of panels 28 of suitable metallic material, such as aluminum.

The cabinet 12 also includes a bottom wall generally designated by the reference numeral 30 which includes a pair of bottom panels 32 secured between the four lower side channel members 14. The bottom wall panels 32 may also be constructed of a suitable metallic substance having high heat resistant and corrosion resistant properties such as aluminum.

With attention now directed to FIGURE 3 of the drawings it will be noted that the cabinet assembly 12 includes a pair of journal members 34 each rotatably receiving a stub axle shaft 36 by which the supporting wheels 38 are rotatably journaled on the cabinet assembly 12 for rotation about aligned transversely extending axes. The four corner members 16 are each provided with a leg member 40 having a plurality of keyhole slots 42 formed therein for receiving the head and shank portions of the fasteners 44 by which the legs 40 are secured to the corner members 16. In this manner, each of the legs 40 may be individually adjusted in vertical height relative to the cabinet assembly 12 whereby the latter may be supported in a horizontal position on uneven ground.

The cabinet assembly 12 also includes a front wall generally designated by the reference numeral 46 having a draft inlet opening 47 formed therein. Secured about the draft inlet opening 47 on the outer surface of the front wall 46 are a plurality of securing members 48 by which an open frame-like draft door generally referred to by the reference numeral 50 may be secured aligned with the draft inlet opening 47 and mounted for vertical movement relative to the front wall 46.

The frame-like draft door 50 includes a heat dissipating screen 52 secured between the confronting edges of the open frame-like draft door member 50.

The front wall 46 is vertically slidably disposed between the forward corner angle members 16 and the forward ends of the corresponding side walls 18 and 22 for vertical movement relative to the cabinet assembly 12 as can be clearly seen in FIGURES 2 and 3. A handle 54 is secured to the front wall 46 for facilitating raising and lowering relative to the cabinet assembly 12 and the front wall 46 is movable vertically to enable ashes to be removed from the cabinet assembly 12, to enable a flame to be applied to the bottom of a pile of combustible material disposed within the cabinet, and to enable the grate 100 to be removed and replaced, etc.

The cabinet assembly 12 is also provided with a top wall generally referred to by the reference numeral 56. A pivot shaft 58 is rigidly carried by the top wall 56 by means of brackets 60 that may be secured to the top wall 56 at one end by means of suitable fasteners (not shown) secured through the apertures 62 formed in one end of the brackets 60. The pivot shaft is clampingly engaged by the clamp assemblies 64 carried by the ends of the brackets remote from the apertures 62. The rear wall 24 of the cabinet assembly 10 is provided with a plurality of journal members 66 which project rearwardly from the rear wall 24 and rotatably journal the pivot shaft 58 at points spaced longitudinally therealong. In this manner, the top wall 56 is pivotally secured to the cabinet assembly 12 adjacent its rear edge for movement about a transversely extending horizontally disposed axis.

With attention now directed to FIGURES 8 through 10 of the drawings it will be noted that one end of the pivot shaft 58 is provided with a keeper disk generally referred to by the reference numeral 68 and that the other end of the shaft 58 is provided with a cam disk generally referred to by the reference numeral 70.

A conventional slide bolt latch assembly generally referred to by the reference numeral 72 is secured on one side wall of the cabinet assembly 12 by means of suitable fasteners 74 with an end of its slide bolt 76 aligned with the medial plane of the keeper disk 68 and the longitudinal axis of the pivot shaft 58. The keeper disk 68 is provided with a plurality of radial bores 78 and the adjacent end of the slide bolt 76 is receivable in a selected one of the radial bores 78 to rigidly retain the top wall 56 in either an upright open position or a horizontally disposed closed position overlying the upper edges of the opposite side walls 18 and 22 as well as the front and rear walls 24 and 46. In this manner, the top wall 56 may be retained in a closed position overlying the upper edges of the front wall 46 whereby upward sliding movement of the latter will be prevented and thus making unauthorized access to the interior of the cabinet 12 by small children and the like difficult.

With attention now directed more particularly to FIGURES 1, 8 and 9 of the drawings, it will be noted that a cam disk 70 has a pair of peripheral notches 80 formed therein having an approach surface 82 lying substantially upon radii of the cam disk 70 and departure surfaces 84 lying substantially upon chords of the cam disk 70.

A pivoted latch lever 86 is pivotally secured to the cabinet assembly 12 by means of transversely extending pivot pin 88 and one end of the lever 86 is provided with a flat abutment surface 90 engageable with the approach surfaces 82 of the disk 70. The other end of the lever 86 is provided with a hook 89 engaging one end of an expansion spring 91 whose other end is engaged with an eye secured to the side wall 18 of the cabinet assembly 12. In this manner, the abutment surface 90 is resiliently urged toward a position in engagement with a selected one of the approach surfaces 82. Thus, as can be noted from FIGURE 9 of the drawings, when the top wall 56 is pivoted to the open position, the abutment surface 90 is engaged with the approach surface 82 of the lowermost notch 80. Thus, the resiliency of the spring 91 surfaces to resiliently retain the top wall 56 in an upstanding open position and the departure surface 84 will engage the end of the lever 86 to limit the movement of the top wall 56 away from the closed position. When it is desired to close the top wall 56, it is merely grasped by the free end and pivoted downwardly toward the cabinet assembly 12 whereupon the abutment surface 90 will be cammed out of the lower notch 80 and subsequently seated in the upper notch 80 as the top wall 56 is pivoted to a closed position such as that illustrated in FIGURE 8 of the drawings. It is to be noted that although the keeper disk 68 may be utilized to maintain the top wall 56 in a closed position, even though the slide bolt 76 is not engaged with the keeper 68, the end of the lever remote from the spring 91 will engage the departure surface 84 of the upper notch 80 in the cam disk 70 when the top wall 56 is moved from a closed position such as that illustrated in FIGURE 8 toward an open position such as that illustrated in FIGURE 9 thereby positively limiting the movement of the top wall 56 to an open position.

The rear wall 24 of the cabinet assembly is provided with an outlet sleeve 92 in which one end of a flue conduit 94 is secured in any convenient manner. It is to be

noted that the flue conduit **94** includes a damper **96** which may be adjusted to afford the desired amount of draft through the cabinet assembly **12**.

The inside surfaces of the side walls **18** and **22** each have at least one angle bracket **98** secured thereto in any convenient manner by which a grate **100** may be supported within the cabinet assembly **12**.

In operation, it is to be noted that the cabinet assembly **12** may be utilized either as a portable incinerator or as a cooker. In any event, the grate **100** is to be used for supporting the combustible material within the cabinet assembly **12** and the damper **96** may be adjusted for the desired amount of draft passing through the draft inlet opening **48** and through the flue conduit **94**.

If it is desired to use the cabinet assembly **12** as an outdoor cooker, the top wall **56** may be pivoted to an open position and a grate placed over the upper edges of the opposite side and end walls to support the food which is to be cooked. When the cabinet assembly **12** is to be used as an incinerator, the top wall **56** may be pivoted to a closed position and retained in that position by actuation of the slide bolt **76** and its seating within the appropriate radial bore **78**. Further, the lever **86** will also limit the movement of the top wall **56** toward the open position should the slide bolt **76** be moved to a retracted position. The cabinet assembly **12** may thus be completely enclosed when utilized as an incinerator and the insulating properties of the opposite side walls and the rear wall together with the provision of a heat dissipating foraminated draft door will provide considerable assurance that children and the like will not be severely burned upon contact with the outer surfaces of the cabinet assembly **12**. Inasmuch as the cabinet assembly **12** is constructed of aluminum, it is particularly well adapted to be constantly stored out of doors. The ability of the cabinet assembly **12** to have a fire therein while completely closed with the exception of the draft door opening and the flue **94** insures that precipitation and the like will not be able to enter the cabinet assembly **12** to extinguish a fire therein or to wet refuse being collected therein prior to burning of the refuse. The ability of the front wall **46** of the cabinet assembly **12** to be completely removed therefrom and the particular manner in which the grate **100** is supported by the angle brackets **98** also enables the use of the cabinet assembly **12** as an outdoor cooker with the access opening therefor being provided through the front wall of the cabinet assembly **12**. It is to be understood of course that numerous pairs of angle brackets **98** may be secured in various vertically adjusted positions within the cabinet assembly **12** and that a fire may be either supported by the bottom wall **30** by a suitable lower grating **100** with the food being cooked supported by an upper grating **100**.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A portable incinerator and cooker comprising a cabinet assembly having opposite side walls and front and rear walls interconnected by a bottom wall, at least one pair of supporting wheels carried by said cabinet assembly and journaled for rotation about a transversely extending axis, means removably and slidably mounting said front wall for vertical movement between the forward end portions of said side walls, said front wall having a draft inlet opening, a door for said draft inlet opening, means removably and slidably mounting said draft inlet door for vertical movement on said front wall between positions aligned with an out of alignment with said draft inlet opening, a flue opening formed in the upper portion of said rear wall, and a top wall overlying the upper edges of said opposite side and front and rear walls, means hingedly securing the top wall to an upper portion of the rear end of said cabinet assembly for movement about a transversely extending axis, and latch means for removably securing said top wall in a closed position and thereby preventing unauthorized entrance into said cabinet assembly by the opening of either said top wall or said front wall.

2. The combination of claim 1 wherein said latch means includes a resiliently urged latch mechanism on one side of said cabinet assembly and latch member on the other side of said cabinet assembly.

3. The combination of claim 2 wherein said latch means includes means engageable by said resiliently urged latch mechanism for retaining said top wall in both an open and a closed position.

4. A portable incinerator and cooker comprising a cabinet assembly having opposite side walls and front and rear walls interconnected by a bottom wall, at least one pair of supporting wheels carried by said cabinet assembly and journaled for rotation about a transversely extending axis, means removably and slidably mounting said front wall for vertical movement between the forward end portions of said side walls, said front wall having a draft inlet opening, a door for said draft inlet opening, means removably and slidably mounting said draft inlet door for vertical movement on said front wall between positions aligned with and out of alignment with said draft inlet opening, a flue opening formed in the upper portion of said rear wall, and a top wall overlying the upper edges of said opposite side and front and rear walls, means hingedly securing the top wall to an upper portion of the rear end of said cabinet assembly for movement about a transversely extending axis, and latch means for removably securing said top wall in a closed position and thereby preventing unauthorized entrance into said cabinet assembly by the opening of either said top wall or said front wall, said top wall including a transversely extending pivot shaft rigidly secured thereto, said hinged securing means comprising a pair of aligned journal members carried by the upper rear portion of said cabinet rotatably journaling said pivot shaft at spaced points therealong.

5. The combination of claim 4 wherein said latch means includes a keeper disk carried by one end portion of said pivot shaft, said keeper disk including at least one radial bore, said latch member slidably mounted on said cabinet assembly for movement aligned with said disk and said pivot shaft and for seating engagement within said radial bore.

6. The combination of claim 5 wherein said disk includes a plurality of radial bores for engagement by said latch member and removably retaining said top wall in a closed position and at least one open position.

7. The combination of claim 4 wherein said latch means includes a cam disk rigidly secured to an end portion of said shaft, said cam disk including at least one peripheral notch, a lever arm pivotally secured to said cabinet assembly for movement about a transversely extending axis with one end engageable with said notch in said cam disk, and resilient means secured between said lever and said cabinet assembly urging said one end of said lever into frictional engagement with the periphery of said cam disk.

8. The combination of claim 1 including at least two legs carried by one end of said cabinet assembly and adjustably secured thereon for vertical adjustment relative to said assembly.

9. The combination of claim 1 including a grate, means removably mounting said grate in said cabinet assembly above said bottom wall for horizontal sliding movement between said opposite side walls forwardly of said rear wall.

10. The combination of claim 1 wherein said rear and

opposite side walls each include a panel of asbestos covered on opposite sides by a panel of aluminum.

11. The combination of claim 1 wherein said draft door includes an open frame-like member having a sheet of screen secured between opposite sides thereof.

12. A portable incinerator and cooker comprising a cabinet assembly having opposite side walls and front and rear walls, means removably and slidably mounting said front wall for vertical movement between forward end portions of said side walls, said front wall having a draft inlet opening formed therein, a draft door movably mounted on said front wall for varying the effective size of said opening, a flue formed in the upper portion of said rear wall, and a top wall overlying the upper edges of said opposite side and front and rear walls and hingedly secured to an upper portion of the rear end of said cabinet for movement about a transversely extending axis, and latch means for securing said top wall in a closed position and thereby preventing unauthorized entrance into said cabinet assembly by the opening of either said top wall or said front wall.

13. A portable incinerator and cooker comprising a cabinet assembly having opposite side walls and front and rear walls interconnected by a bottom wall, means removably and slidably mounting said front wall for vertical movement between forward end portions of said side walls, one of said walls having a draft inlet opening therein, a top wall overlying the upper edge of said front wall and hingedly secured to said cabinet for movement about an axis extending along the upper edge of one of said walls other than said front wall, a flue opening formed in one of said walls, and latch means for removably securing said top wall in a closed position and thereby preventing unauthorized entrance into said cabinet assembly by the opening of either said top wall or said front wall.

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