April 13, 1954 R. BURY 2,674,990

STOVE WITH FOLDING COVER

Filed March 6, 1950

Fig. 1.

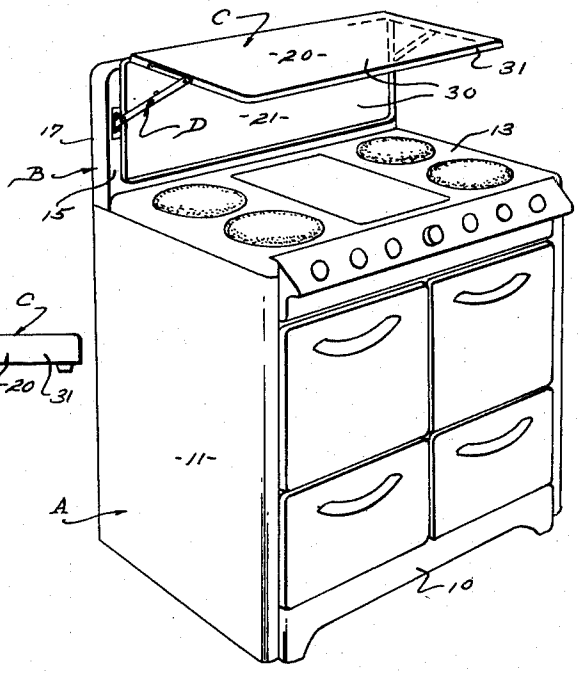


Fig. 2.

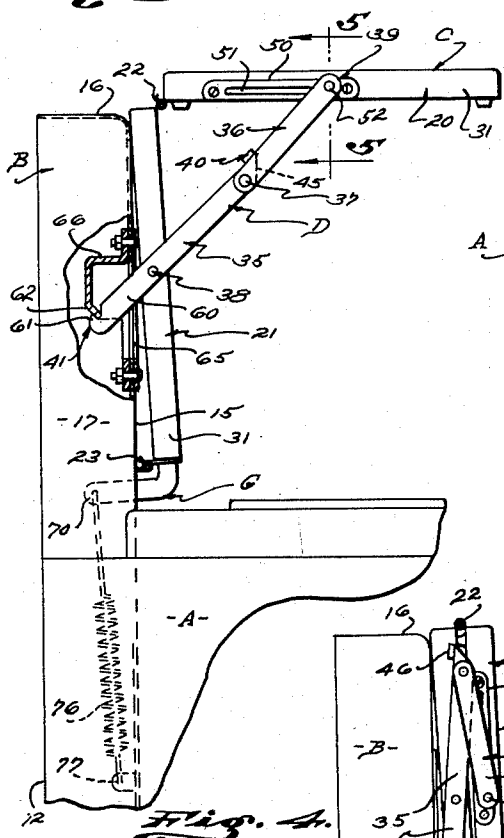


Fig. 6.

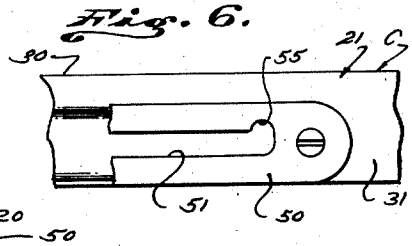


Fig. 4.

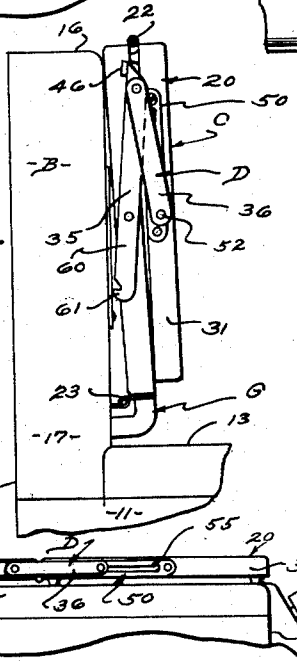


Fig. 5.

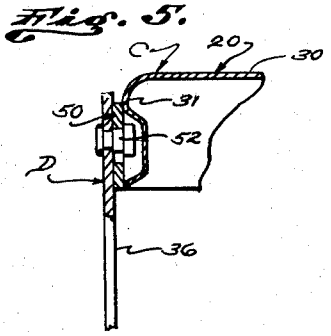


Fig. 3.

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STOVE WITH FOLDING COVER

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10 Claims. (Cl. 126—214)

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This invention relates to a stove with a folding cover, it being a general object of the invention to provide a cook stove of this general type including an improved dependable easily operated supporting means that serves to effectively support an element of the cover in an up position and horizontally disposed where it may be used as a shelf.

The present invention is practical as applied to a cook stove such as is used for domestic purposes and in its preferred form it is applied to a stove having a box-like body with a flat top where cooking elements are located. A guard projects upwardly at the back of the body and a substantial distance above the top of the body, and a sectional cover is hinged to the upper rear portion of the structure formed by the guard and body. The cover is sectional and involves a rear section hinged where the body and guard connect and a front section hinged to the forward edge portion of the rear section. When the cover is down the sections are in a common horizontal plane and cover the top of the body and when the cover is up the rear section is up and against the front of the guard while the front section extends horizontally forward from the upper edge portion of the rear section and is in position to form a shelf. In a folded position the rear section of the cover is up and against the front of the guard while the front section is folded down and is against the rear section. The structure provided for releasably holding the cover in the up position preferably involves a unit at each end portion of the cover and each such unit involves a collapsible brace which in its preferred form has two arms pivotally connected together. Of the two arms the outermost is slidably pivotally connected to the front section of the cover. The innermost arm is pivoted to the rear section of the cover at a fixed point. A stop means limits pivotal movement between the brace arms when they have passed over center from a folded position where they are substantially parallel, and when the arms are in the over center position and are substantially end to end, and the outer arm is at the forward end of its movement relative to the front cover section, the brace serves as an effective support holding the front section in a horizontal position. A latch means releasably couples the inner arm of the brace to the guard so that the cover is held back or against the guard. The latch means preferably involves a latch member continuing rearward from or beyond the point of pivotal connection with the rear cover section and the latch member has a latch head that hooks

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with or engages a keeper carried on or fixed to the guard. In the preferred arrangement the latch member enters an opening in the guard and the keeper is a part of a bracket which is fixed to the guard.

A general object of the present invention is to provide a releasable support of the general character referred to characterized by an over center lever mechanism and which is so coupled and related to the cover sections as to support the front section in an up position so that it is firmly and dependably held in that position.

Another object of the invention is to provide a mechanism of the general character referred to which is simple and compact and which may be located at an end of the cover without materially encumbering the cover and without being unsightly or in any manner disagreeable or undesirable as a part of the stove.

A further object of the invention is to provide a structure of the general character referred to which is simple and convenient to operate, both to engage so that the front cover section is supported in the up position and to release the front cover section from the up position to allow it to be either folded against the rear cover section or down to a position where it overlies the top of the stove body.

The various objects and features of my invention will be fully understood from the following detailed description of a typical preferred form and application of the invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a perspective view of a typical cook stove of the domestic type showing a sectional cover supported in the up position by the structure provided by the present invention. Fig. 2 is an enlarged view of a portion of the structure shown in Fig. 1 and showing parts broken away to illustrate details of construction. Fig. 3 is an end elevation of a portion of the structure shown in Fig. 1, showing the cover in a down position. Fig. 4 is an end elevation of parts shown in Fig. 2, showing the cover in a folded position. Fig. 5 is an enlarged detailed sectional view taken as indicated by line 5—5 on Fig. 2, and Fig. 6 is an enlarged view of a portion of the structure shown in Fig. 3.

The present invention is applicable, generally, to stoves where a folding sectional cover is provided in connection with the body. In the drawings I have illustrated a typical cook stove of the domestic or home type which stove involves a box-like body A with a guard B projecting up-

wardly at the rear of the body and having a folding sectional cover C which is operable between a down position where it covers the top of the body A, an up position where it has a section forming a shelf, and a folded position where its sections are folded together and against the guard.

The body A is shown as having a front 10, ends 11, a back 12 and a top 13. The front 10 is occupied largely by closures for usual stove compartments and a panel carrying suitable controls. The top 13 is provided with a plurality of cooking elements in the form of burners and a griddle.

The guard B is fixed to and is, in effect, a part of the body A and it extends upwardly therefrom to the rear of the body. In the particular form of the invention illustrated the guard B has a front vertical panel 15, a horizontally disposed rearwardly projecting top flange 16 at the upper edge of the panel 15, and vertically disposed rearwardly projecting end flanges 17 at the ends of the panel 15. These parts form a rearwardly opening shallow box-like structure that is rigid and which is of the desired size and shape. In practice this element of the stove is commonly employed to carry or to form a support for various attachments or accessories as may be desired. It is to be understood that the present invention contemplates that the guard may be used in any suitable manner, or as a support for any parts or equipment that may be required.

The cover C is a sectional cover pivotally connected to the unit formed by the body A and guard C. In the particular case illustrated the cover C involves a front section 20 and a rear section 21 which sections are pivotally connected together by a hinge means 22. The cover is pivotally mounted by hinge means 23 which connect the rear section of the cover to the stove structure formed by the body and guard. The means 23 connects the cover to the stove at the corner formed by the body and guard. In the particular case illustrated the means 23 involves a hinge construction that is carried by the guard adjacent the point where the guard joins the body. The hinge means 22 connecting the cover sections joins the forward edge portion of the rear section 21 and the rear edge portion of the front section 20.

With the general arrangement and combination of parts just described the cover is operable between a down or working position such as is shown in Fig. 3 where the sections 20 and 21 are in a common horizontal plane and overlie the top 13 of body A to effectively cover it, and an up position such as is shown in Fig. 2 where the section 21 projects upwardly and is adjacent the front of the guard B while the front section 20 is horizontally disposed and projects forward from the upper edge of section 21. The cover can be further operated to a folded position such as is shown in Fig. 4 where the front section is down from the position shown in Fig. 2 and is adjacent the rear section 21 which is against the guard B. In practice the cover sections 20 and 21 are preferably like plain flat rectangular elements elongate in form and extending lengthwise of the stove. In the particular case illustrated each cover section is formed by a panel 30 and depending edge or marginal flanges 31 which construction serves to provide ample strength and rigidity while maintaining a light, inexpensive construction.

The present invention provides means D for releasably supporting the cover in the up position shown in Figs. 1 and 2 of the drawings. A preferred form of the invention involves a plurality of like units each serving as a support for the cover and in the case illustrated a unit of means D is provided at each end of the stove or cover construction. Each unit of means D preferably involves inner and outer brace arms 35 and 36, respectively. Means 37 pivotally connects the adjoining or inner ends of the arms 35 and 36 together while a means 38 pivotally connects the inner arm 35 to the rear section 21 of the cover and a means 39 slidably pivotally connects the outer end of the outer arm 36 to the outer section 20. A stop means 40 limits relative pivotal movement between the arms 35 and 36 and a latch means 41 releasably connects the inner arm 35 with the guard B.

The arms 35 and 36 may be simple, straight, rigid elements of substantially equal length and their inner or adjoining ends are pivotally connected together by the means 37. When the arms are in operating position, as shown in Fig. 2 they are substantially in line or end to end, being but slightly over center beyond a directly aligned position, in which over center position they are stopped by the means 40. The means 37 preferably permanently connects the arms 35 and 36 and may involve a simple pivot pin. Stop means 40 is shown as involving a simple extension 45 on the inner end of one of the arms which extension carries a lug 46 which overlies and engages the other arm to limit or stop pivotal movement between the arms. In the particular case illustrated the extension 45 is on the inner arm 35 and the lug 46 overlies arm 36.

The means 38 pivotally connects the outer or rear end portion of arm 35 to the rear section 21 of the cover at a point substantially midway between the two longitudinal edges of the cover. The arm 35 is so pivoted to the cover section 21 and is so related thereto as to be movable between an inactive position such as is shown in Fig. 3 where it extends parallel with the end flange 31 of the cover section 21 and is immediately adjacent thereto, a folded position where it is substantially parallel with the end flange 31 of section 21, as shown in Fig. 4, and an operating position as shown in Fig. 2 where it is angularly related to the cover section 21 and projects upward and forward from the point where the means 38 connects it with the section 21. The arm 35 is of such length as to be confined to the end of section 21 when in the positions shown in Figs. 3 and 4, so that it does not project up beyond the folded cover when the cover is folded as shown in Fig. 4.

The means 39 slidably pivotally connects the arm 36 to the end of cover section 20 and in the preferred construction it involves a guide 50 fixed on the end flange 31 of the cover section 20, which guide has a slot 51 that extends parallel with the flange 31 to which the guide is attached. A slide 52 is fixed on the outer end of arm 36 and slidably operates in the guide slot 51. The guide slot 51 is of such length and is so located as to allow the slide 52 to freely operate between positions such as are shown in Figs. 2 and 3. When the cover is down, as shown in Fig. 3, the arms 35 and 36 are end to end and parallel and the cover sections are edge to edge in a horizontal plane so that the front section 20 is in a maximum forward position. With this relationship of parts the slide 52 is located in the rear end portion of the guide slot 51. When the means D is in operating position with the arms 35 and 36 slightly over

center and stopped by the means 40 and extending diagonally upward from the pivotal mounting 38, the slide 52 is in the forward end of the slot 51. It is preferred, in practice, to provide a lateral opening or notch 55 in the slide 51 at the forward end thereof to releasably hold the slide 52 at that end of the slot when the parts are positioned as shown in Fig. 2.

When the notch 55 is employed the slide can be released therefrom by a slight lifting of the forward edge of the section 20 from the position shown in Fig. 2 preliminary to otherwise manipulating the mechanism as will be hereinafter described.

The latch means 41 serves to releasably connect the cover and the means D thereby to the guard B with the cover in the up position shown in Fig. 2. In the preferred form of the invention the latch means 41 involves an extension 60 on the rear end of arm 35. The latch extension has a head or lug 61 at its projecting end. The lug 61 is engageable with a keeper or striker plate 62 which is carried by or which may be a part of the guard B. In the particular case illustrated the latch extension 60 of arm 35 is of substantial length and enters an opening 65 in the panel 15 of the guard and the striker plate 62 is at the inner side of the panel 15. The plate 62 is shown as being a part of a suitable bracket construction 66 which is suitably attached to the panel 15 at the inner side thereof and in register with the opening 65. In the particular case illustrated a counterbalancing means G is provided in connection with the cover to partially counteract or counterbalance the weight of the cover construction. The particular means G shown in the drawings involves an arm 70 projecting from the inner edge portion of cover section 21 and a tension spring 76 which has one end fixed to arm 70 and the other end fixed at 77 to the rear portion of the stove body A.

When the cover C is down as shown in Fig. 3 the cover sections 20 and 21 are in a common horizontal plane and effectively cover the top 13 of body A. With the cover in this position the arms of each of the units of means D are in substantial alignment with and against the end flanges 31 of the cover sections and the slides of the arms 36 are at the rear ends of the slots 51.

To establish the cover in the up position shown in Fig. 2 the cover sections are moved so that the rear section is up and against the front of the guard while the front section is horizontally disposed. As the covers are moved to this position the arms of the units D are moved to the working position shown in Fig. 2 and the latch means 41 engage the guard holding the rear section against the guard. When positioned as shown in Fig. 2 the slides 52 are in the forward ends of the slots 51 and the arms 35 and 36 are slightly over center so the supporting structure will remain in operating position. To release the means D either to lower the cover to the position shown in Fig. 1 or to the folded position shown in Fig. 4 the slides 52 are disengaged from the notches 55 and the pivotal connection between the arms 35 and 36 is swung rearwardly or in the direction indicated by the arrow in Fig. 2, which operations disengage the latches 41 allowing free movement of the parts to either of the positions shown in Figs. 3 and 4.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the following claims:

Having described my invention, I claim:

1. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof and having a striker plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a folding brace having arms pivotally connected together and to each of the sections of the cover, one of the arms having a projecting portion with a hook at its outer end adapted to engage the striker plate on the guard when the cover sections are in the up position.

2. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a striker plate on the guard, a folding brace having arms pivotally connected together and one pivotally connected to one of the sections of the cover and the other pivotally connected to the other section of the cover, and means stopping the arms in an over center position where they are substantially end to end and extending diagonally from one section to the other, one of the arms having a projecting portion with a hook adapted to connect to the striker plate on the guard when the cover sections are in the up position.

3. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof and having a striker plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a folding brace having arms pivotally connected together and to each of the sections of the cover, and a projection on the arm pivoted to the rear section having a latch part adapted to engage with the striker on the guard and releasably connecting the cover to the guard with the cover in the up position.

4. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, the guard having a striker plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means connected to and carried by the cover and adapted to support the cover in the up position including, a folding brace having arms pivotally connected together, one arm being pivotally connected to the front section of the cover and the other arm being pivotally connected to the rear section of the cover, and a projection on said other arm having a latch engageable with the plate when the cover sections are in the up position and the rear section vertically disposed and adjacent the guard.

5. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a striker plate on the guard, a folding brace having arms pivotally connected together, one of the arms being pivoted to one cover section and the other being slidably pivoted to the other cover section, one of the arms having a projecting portion adapted to connect to the striker plate on the guard when the cover sections are in the up position.

6. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, and having a striker plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, front and rear arms, means pivotally connecting adjoining ends of the arms, means slidably pivotally connecting the outer end of the front arm to the front section of the cover, and means pivotally connecting the rear end of the rear arm to the rear section of the cover, the rear arm having an extension adapted to hook to the striker plate on the guard when the cover sections are in the up position.

7. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a striker plate on the guard, pivotally connected front and rear arms, means pivotally connecting adjoining ends of the arms, means slidably pivotally connecting the outer end of the front arm to the front section of the cover, means pivotally connecting the rear end of the rear arm to the rear section of the cover, and stop means limiting relative pivotal movement between the arms with the arms slightly over center from a position where they are in line and extend diagonally between the cover sections, the rear arm having an extension adapted to hook to the striker plate on the guard when the cover sections are in the up position.

8. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof and having a striker plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projecting horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, front and rear arms, means pivotally connecting adjoining ends of the arms, means slidably pivotally connecting the outer ends of the front arm to the front section of the cover, means pivotally connecting the outer ends of the front arm to the section of the cover, and an extension on the rear arm having a hook-shaped terminal end portion cooperatively engaging the striker plate on the guard to hold the rear cover section adjacent the guard with the cover sections in the up position.

9. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projecting horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, a striker plate on the guard, front and rear arms, means pivotally connecting adjoining ends of the arms, means slidably pivotally connecting the outer end of the front arm to the front section of the cover, means pivotally connecting the rear end of the rear arm to the rear section of the cover, stop means limiting relative pivotal movement between the arms with the arms slightly

over center from a position where they are in line and extend diagonally between the cover sections, and an extension on the rear arm having a hook-shaped end portion cooperatively engaging the striker on the guard to hold the rear cover section adjacent the guard with the cover sections in the up position.

10. A stove including, a box shaped body having a guard projecting upwardly at the rear thereof and having a strike plate thereon, a cover including front and rear sections pivotally connected together, means pivotally connecting the rearmost edge portion of the rear cover section to the body adjacent the base portion of the guard, the cover sections being operable between a down position where they are in a common horizontal plane and cover the top of the body and an up position where the rear section is up at the front of the guard and the front section projects horizontally forward from the uppermost portion of the guard, and means carried by the cover and adapted to support the cover in the up position including, front and rear arms, means pivotally connecting adjoining ends of the arms, means slidably pivotally connecting the outer ends of the front arm to the front section of the cover including, a guide on the end of the front cover section and a slide on the front arm and carried by the guide, and means pivotally connecting the rear end of the rear arm to the rear section on the cover, the rear arm having an extension engaging and releasably connected to the striker on the guard when the sections are in the up position.

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