

Sept. 13, 1966

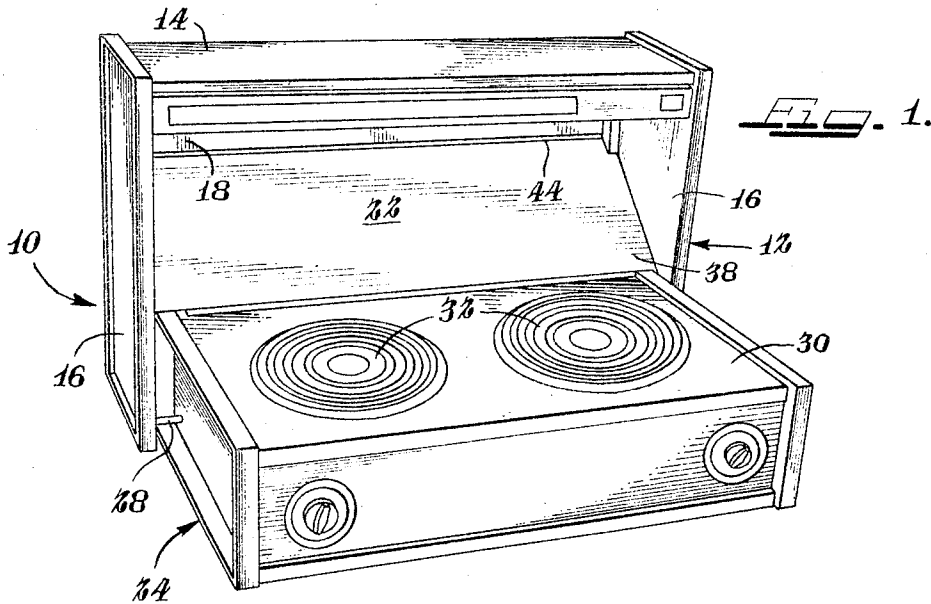
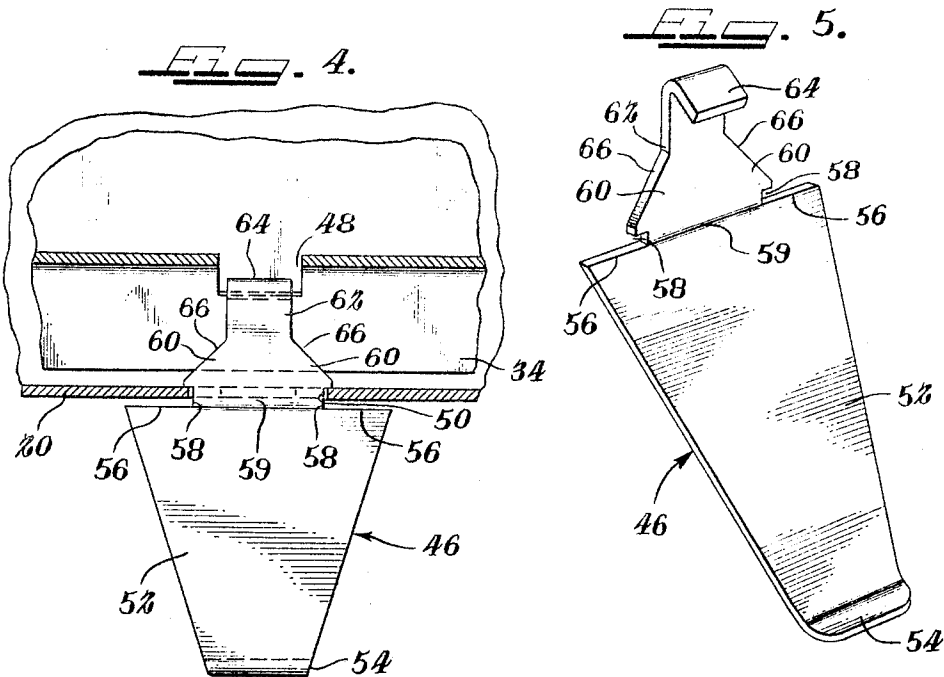
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3,272,196

PORTABLE FOLDING STOVE

Filed Oct. 19, 1964

2 Sheets-Sheet 1



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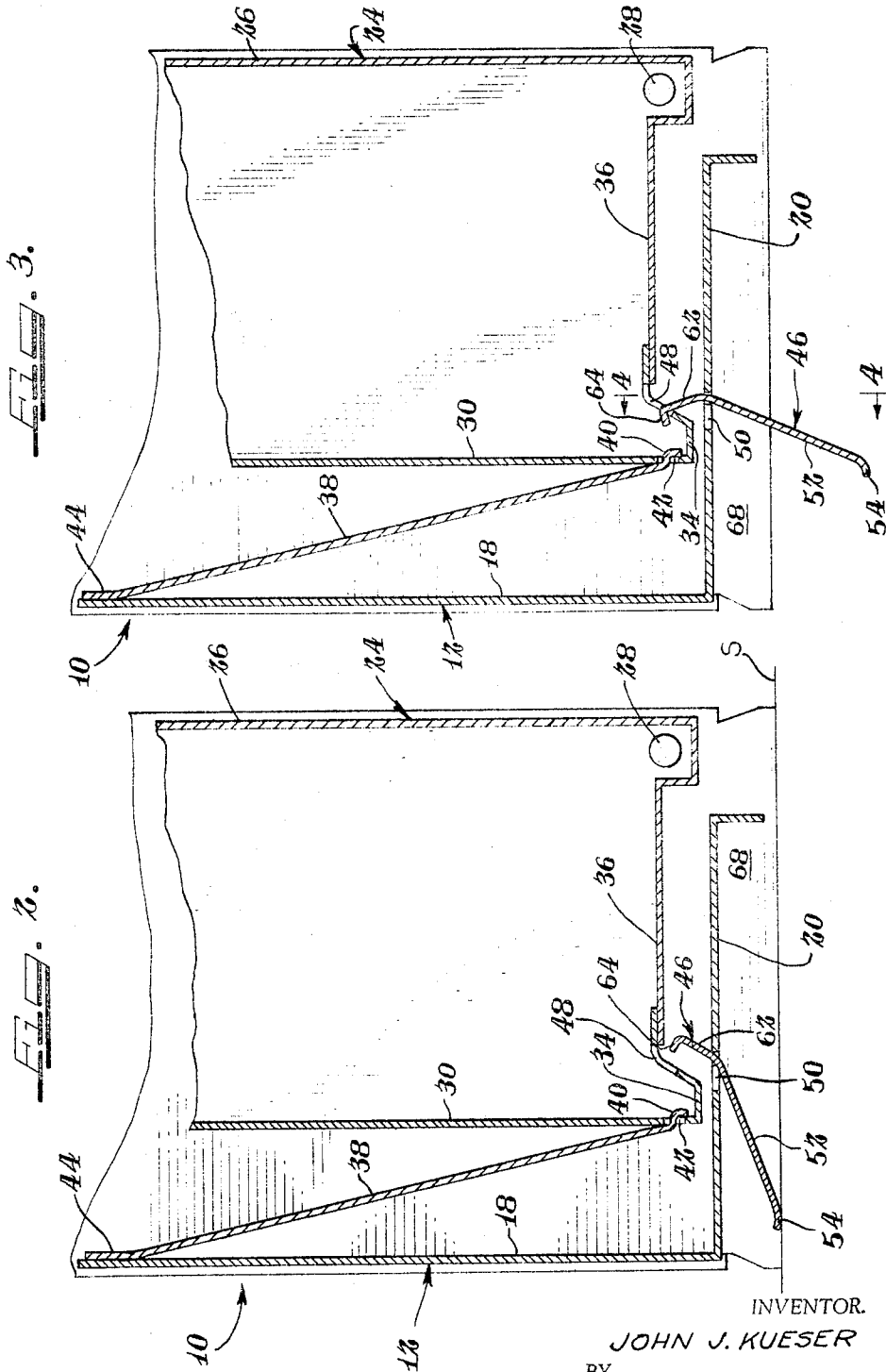
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PORTABLE FOLDING STOVE

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5 Claims. (Cl. 126—38)

This invention relates to portable folding stoves and it particularly relates to improved latching or locking mechanisms for maintaining the stove body assembly within the cabinet when the cabinet is not resting upon a supporting surface.

Portable folding stoves of the type wherein the stove body is foldable or pivotable in and out of a storage cabinet are well known. Such stove assemblies generally include a substantially rectangular storage cabinet having a front opening and a stove body assembly which is pivotally secured to the storage cabinet at the lower front portion of each of the sides thereof to thereby permit swinging movement of the stove body in and out of the cabinet. The base or bottom of the stove body assembly encloses the front opening of the cabinet when the stove is not in use or when the unit is being transported. The stove body is adapted to be swung or pivoted outwardly to a substantially horizontal position when being used as a stove.

When portable folding stoves of the type described are moved from place to place, it is the natural action for a person to grip the opposite sides of the stove cabinet. Thus, when lifting the cabinet with the stove stored therein, the center of gravity of the stove is aligned with the gripping points of the stove assembly so that the stove will tend to stay within the cabinet. However, if during lifting or movement of the stove unit, the unit is tipped forward or jolted, it is likely that the stove body will tip forwardly and outwardly from the cabinet body whereby the center of gravity is suddenly moved forwardly through a substantial distance. This will very likely pull the stove out of the hands of the person who is holding it, causing damage to the stove and possibly to the person holding it or to adjacent objects.

It is therefore an important object of this invention to provide an improved portable folding stove which substantially avoids the disadvantages of prior art devices.

It is also an object of this invention to provide an improved portable folding stove wherein the stove body assembly is automatically locked in position in the cabinet when the stove assembly is away from a supporting surface, but the lock is automatically released when the stove is placed upon a supporting surface.

It is a further object of this invention to provide an improved portable folding stove wherein locking means are provided for maintaining the stove body within the storage cabinet therefor only when the stove is stored within the cabinet and only when the cabinet base is away from a supporting surface.

It is another object of this invention to provide an improved portable folding stove having means for locking the stove body in position within the storage cabinet while at the same time the stove body is held in firm securement so as to substantially avoid undesired rattling during transportation.

It is still another object of this invention to provide an improved portable folding stove having means for automatically locking the stove body within the cabinet while being transported, wherein the locking means is characterized by its simplicity and economy of construction and manufacture.

Further purposes and objects of this invention will appear as the specification proceeds.

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A particular embodiment of the present invention is illustrated in the accompanying drawings wherein:

FIGURE 1 is a perspective view of my portable folding stove showing the stove body assembly in the open position;

FIGURE 2 is a fragmentary, vertical sectional view through my portable folding stove wherein the position of the latching mechanism is shown when the stove is resting upon a supporting surface;

FIGURE 3 is a view similar to FIGURE 2 except that the position of the latching mechanism is shown when the stove is away from a supporting surface;

FIGURE 4 is an enlarged sectional view taken along the line of 4—4 of FIGURE 3; and

FIGURE 5 is a perspective view of the latch member provided for locking the stove body within the storage cabinet.

With reference to the drawings, my portable folding stove unit, generally 10, is provided with a storage cabinet 12 which has a substantially rectangular configuration. The cabinet 12 includes a flat top 14, opposite upright end walls 16, a rear wall 18 and a bottom 20. An opening 22 is provided in the front portion of the cabinet 12, through which the stove body assembly 24 is adapted to be pivoted. The base or bottom 26 of the stove body 24 is adapted to substantially enclose the opening 22 when the stove body 24 is stored within the cabinet 12.

As seen most clearly in FIGURES 2 and 3, the stove body assembly 24 is pivotally mounted on the opposite end walls 16 of the cabinet 12 by means of pivot pins 28. The pivot pins 28 are positioned at the inner side of the lower front portion of the end walls 16 for providing an axis of rotation for the stove body 24, which axis is substantially parallel to the surface S upon which the cabinet 12 rests. The top portion 30 of the body 24, as seen in FIGURE 1, is provided with burners 32. The burners 32 may be heated either through the use of electricity or gas, as desired. The top portion 30 also includes a rearwardly projecting beaded portion 34 which extends downwardly to form part of the rear portion 36 of the stove body assembly 24.

Preferably, an apron 38 is pivotally secured to the rear of the top portion 30 of the stove body assembly 24. The planar apron member 38, as shown in FIGURE 1, encloses the space between the rear of the stove body 24 and the rear wall 18 of the cabinet 12; in this position, the apron 38 collects any material that spatters during cooking to thereby facilitate cleaning of the stove 10. The apron 38 is provided with an offset or hooked portion 40 which pivotally engages a longitudinal aperture 42 which extends along the rear of the top 30 of the stove body 24. The upper portion 44 of the apron 38 slidably bears against the inner surface of the wall 18 of the cabinet 12 while the stove body 24 is pivoted in and out of the cabinet 12. When in the closed position, the apron 38 bears against the wall 18 and assists in maintaining the stove body 24 in a substantially fixed position during transportation so as to substantially avoid rattling caused by movement thereof.

It is important that one or more latch members 46 be pivotally mounted in the base 20 of the cabinet 12 in order to engage cooperating apertures 48 in the rear of the beaded portion 34 of the stove body 24. Each aperture 48 is in alignment with, or is associated with, an opening 50 in the bottom 20 of the cabinet 12, the opening 50 being arranged to pivotally receive the latch member 46.

The latch 46, as shown most clearly in FIGURE 5, is provided with a tail or lower, offset portion 52 which extends downwardly from the bottom 20 of the cabinet 12. The offset portion 52 terminates with an upturned end 54. The upper end of the offset portion 52 has a pair of shoulders 56 which are located immediately below the

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lower wall 20 of the cabinet 12. Recesses 58 are formed above the shoulders 56 and define a neck portion 59 therebetween. Outwardly projecting ears 60 form the upper-side of the recesses 58. The ears 60 converge inwardly and upwardly until they meet the central part of the upwardly projecting portion 62. A hook 64 is provided at the upper end of each latch 46 and is adapted to enter and engage an aperture 48 provided in the stove body 24.

In order to mount the latch member 46 in the bottom 20, the upper portion 62 is passed through the T-shaped opening 50 in the base 20. The restricted rearward portion of the T-shaped opening 50 permits the passage of the hook portion 64 while the wide forward portion of the opening 50 permits the passage of the ears 60. More specifically, the tapered upper edges 66 of the ears 60 are forced through the forward portion of the opening 50 whereby the bottom 20 of the cabinet 12 is engaged by the recesses 50 of the latch member 46; this pivotally secures the latch 46 in the bottom 20. Although the ears 60 are constructed to pass upwardly through the opening 50, the lower edges of the ears 60 abut the upper surface of the bottom 12 to thereby prevent the passage of the latch 46 downwardly through the opening 50. The latch 46 is thus pivotally engaged by the bottom of the cabinet 12.

In operation, when a person desires to move the stove unit 10 from the surface S upon which it is resting, as the unit 10 is lifted, the lower offset portion 52, which, as shown in FIGURE 2, normally bears against the surface S and is located in the recessed portion 68 formed below the bottom 20 of the cabinet 12, is pivoted downwardly and away from the bottom 20; this is due to the weight of the lower portion 52 being substantially greater than the upper portion 62. Thus, when the unit 10 is lifted away from the surface S, the center of gravity of each latch member 46 pivots the latch 46 to a substantially upright position, as seen in FIGURE 3, and causes the hook 64 at the upper end of the latch 46 to enter an associate aperture 48 in the stove body 24 to engage and hook a portion of the structure surrounding aperture 48. This engagement prevents undesired pivoting of the stove body 24 during transportation. The apron 38 also cooperates to assist in preventing rattling and movement of the stove during such transport.

When the stove is set down upon another surface S, the upturned end 54 contacts the surface S and as the unit is lowered upon the surface S, the camming of the offset portion 52 against surface S causes the latch 46 to disengage the structure of stove body 24 and to be pivoted toward the bottom 20 and this moves the hook 64 out of engagement with the aperture 48 in the stove body 24, whereby the stove body 24 thereafter may be pivoted forwardly and outwardly to the working position. It is to be understood that suitable stop means (not shown) may be provided for limiting the outward swinging movement of the stove body 24 so that it moves out to a position at substantial right angles to the cabinet 12, but will not normally move beyond this position.

While in the foregoing there has been provided a detailed description of a particular embodiment of the present invention, it is to be understood that all equivalents

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obvious to those having skill in the art are to be included within the scope of the invention as claimed.

What I claim and desire to secure by Letters Patent is:

1. In combination with a folding stove of the type having a stove body and a cabinet, with a bottom, for storing said stove body, a locking mechanism comprising an opening in said stove body, and a latch member pivotally carried by the bottom of said cabinet for engaging said opening only when said stove is stored within said cabinet and only when the cabinet bottom is away from a supporting surface.

2. In combination with a folding stove of the type having a stove body with a rear portion and a cabinet, with a bottom, for storing said stove body, a locking mechanism comprising an opening in the rear portion of said stove body, and a latch member pivotally carried by the bottom of said cabinet, said latch member including a tail portion which is adapted to be in a substantially upright position when said cabinet bottom is away from a supporting surface whereby said latch member engages said opening, and when said base is resting upon a supporting surface, said tail portion is pivoted toward said bottom whereby said latch member is disengaged from said opening.

3. In combination with a folding stove of the type having a stove body with a rear portion and a cabinet, with a base portion, for storing said stove body, a locking mechanism comprising an opening in the rear portion of said stove body, an aperture in the base of said cabinet, a latching member pivotally mounted in said aperture in the base of said cabinet, means provided on said latching member for engaging the opening in the rear portion of said stove body, said latching member having a lower portion extending downwardly from said base and being pivoted away from said base for causing said locking means to engage the opening in said rear portion when said cabinet base is away from a supporting surface and when said cabinet bottom rests upon a supporting surface, said lower portion is pivoted away from said base for disengaging said locking means from the opening in the rear portion of said stove body.

4. The locking mechanism of claim 3 wherein said latching member includes a pair of ears which are adapted to be forcibly passed through the aperture in said base but which are substantially prevented from passing back through said aperture.

5. In combination with a folding stove of the type having a stove body with a top portion and a rear portion and a cabinet, with a base portion and a rear portion, for storing said body comprising an opening in the rear portion of said stove body, a latch member pivotally carried by the base of said cabinet for engaging said opening only when said stove is stored within said cabinet and only when the cabinet base is away from a supporting surface, and an apron pivotally carried at the rear portion of said stove body and having a portion which is adapted to bear against the rear portion of said cabinet for assisting in maintaining said stove body firmly in position within said cabinet.

No references cited.

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