

W. E. BAXTER.
COOKING APPARATUS.
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1,040,119.

Patented Oct. 1, 1912.

3 SHEETS—SHEET 1.

Fig. 1.

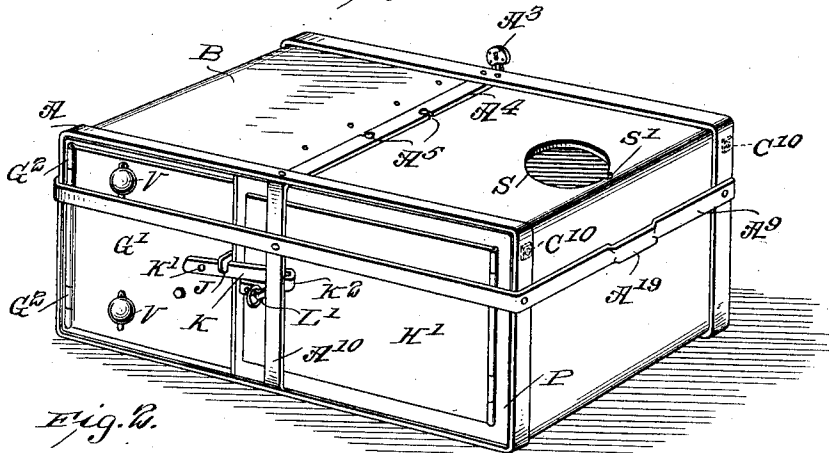


Fig. 2.

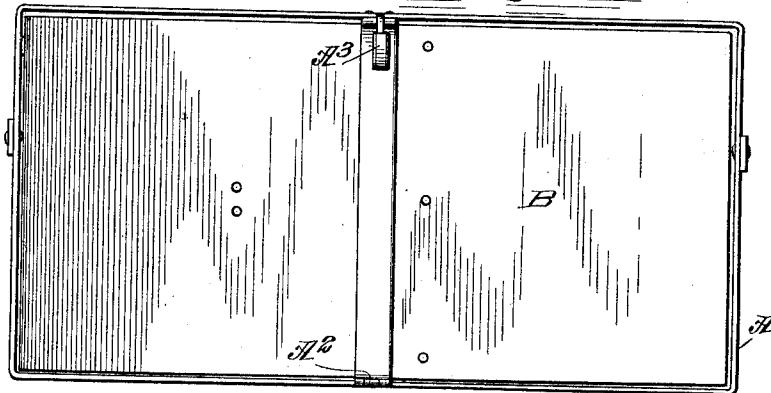
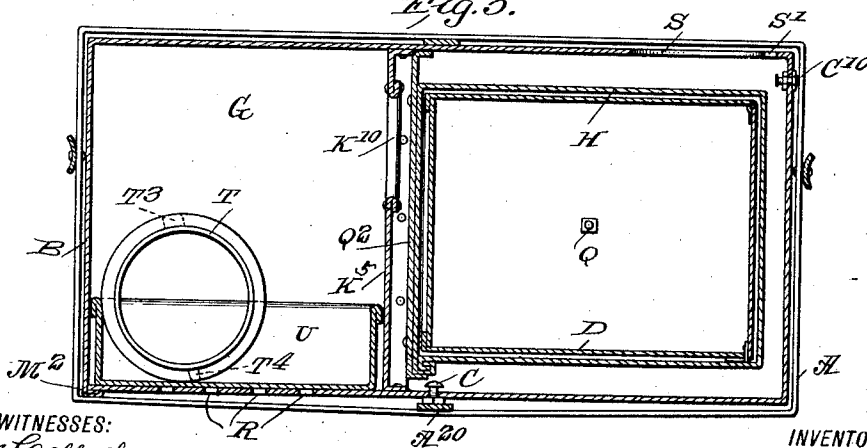


Fig. 3.



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3 SHEETS--SHEET 3.



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COOKING APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM EDWARDS BAXTER, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Cooking Apparatus, of which the following is a specification.

This invention is an improvement in cooking apparatus and has for an object to provide a novel construction in the nature of a combined cooking and heating stove and combined house and camp (or portable) stove; and the invention provides in connection with the stove proper, a non-breakable crate and support which is adapted to inclose the stove proper for shipment, carrying by hand or storage and to form a support for the stove proper when the crate is placed below the stove proper, interlocking means being provided for securing the stove proper upon the crate.

The invention also provides a novel form of support having means for carrying an ash-pan, &c.

The invention also provides certain novel improvements in the stove proper and the provision in connection with the stove proper of a water tank interlocked with the stove proper and partially supported upon the crate; and the invention consists in certain novel constructions and combinations of parts as will be hereinafter described and claimed.

In the drawings Figure 1 is a perspective view of an apparatus embodying my invention, with the stove proper within the combined crate and support. Fig. 2 is a rear elevation thereof. Fig. 3 is a longitudinal section drawn through the crate and support and the stove proper therein. Fig. 4 is a perspective view of the apparatus erected for use, the stove proper and the water tank being mounted upon the combined crate and support. Figs. 4^a and 4^b are detail sections respectively on line 4^a—4^a and 4^b—4^b of Fig. 4. Fig. 5 is a detail perspective view illustrating the construction at the mouth or door opening of the oven. Fig. 6 is a detail bottom plan view, partly broken away, of the combined crate and support. Fig. 7 is a detail perspective view of the water tank from the side thereof, which interlocks with the stove proper.

Fig. 8 is a detail perspective view of the combined ash-pan support and grip key. Fig. 9 is a detail sectional view illustrating the connection of the ash-pan support with the stud on the underside of the stove proper. Fig. 10 is a detail sectional view illustrating the interlocking connection between the water tank and the stove proper. Fig. 11 is an inverted perspective view of the stove proper in place upon the combined crate and support, the combined ash-pan support and grip key being shown in place. Fig. 12 is a vertical transverse section of the stove proper through the oven. Fig. 13 is a detail perspective view of the lower end of the stove pipe. Fig. 14 is a vertical section illustrating the stove pipe in connection with the stove proper. Fig. 15 is a detail horizontal section illustrating the fastening for the door of the fire box. Fig. 15^a is a detail section on about line 15^a—15^a of Fig. 15. Fig. 16 is a detail perspective view showing a somewhat different arrangement of the notches in the intermediate top bar of the combined crate and support from that shown in Figs. 1, 6 and 11. Fig. 17 illustrates the connection of the stay or grip key bar with the intermediate top cross bar of the combined crate and support, all of which will be described.

As best shown in Figs. 1, 2 and 3, the combined crate or support A is adapted to inclose the stove proper B when the parts are packed for shipment, carrying by hand, or storage and to this end, the combined crate and support A is provided with an intermediate upright side bar A' hinged at one end A² and having at its other end a lock A³ by which it may be detachably connected with the frame. This is an important feature of my invention because it permits me to open one side of the crate for the introduction or removal of the stove proper B and for locking the stove within the crate as shown in Fig. 1, when the parts are in the condition illustrated in said figure. At the same time, when the crate is adjusted to form a support for the stove, the bar A' may be locked in the position shown in Fig. 11, and thus brace the crate and aid in supporting the stove, as will be understood from Figs. 4 and 11 of the drawings. The side bars A⁷ and A⁹ are bent at their centers at A¹⁷ and A¹⁹ to form hand holds for carry-

ing, as shown in Figs. 1 and 6. When the stove is adjusted upon the crate as shown in Fig. 4, it is interlocked therewith to which end the crate has an intermediate top cross bar A⁴ provided in its edges with notches A⁵ disposed on opposite sides of the center of the bar A⁴ and opening in opposite directions as best shown in Figs. 1 and 6 of the drawings. For coöperation with the notches A⁵, I provide the stove proper on its underside with permanently connected bolts C having a limited up and down movement in connection with the stove, preferably having only sufficient play to admit of ready insertion, between the bottom of the stove and the nuts C', of the metal bars intended for engagement with the bolts C, see Fig. 9. On each of the bolts C below the stove is a shoulder, preferably provided by means of a nut C', whose further outward displacement and possible loss is prevented by a slightly headed or battered end of the bolt C at C² as will be understood from Fig. 9 of the drawings. I provide two of these bolts C, see Fig. 6. Bolts C¹⁰ are provided in connection with the end or side of the stove to interlock with the water tank D which is correspondingly notched at D' for the penetration of the rounded heads of the bolts C¹⁰ into the water tank D, said notches D' having each an upwardly extending slot just wide enough and long enough to slip snugly down over the bolts C¹⁰ and engage same just back of the rounded heads of the bolts C¹⁰ and in front of the nuts C¹¹, as will be understood from Figs. 1, 7 and 10 of the drawings. In practice, before attaching the bolts C¹⁰ to the stove, a nut C¹¹, see Fig. 10 is screwed down on the said bolt to a point sufficiently spaced from the rounded head of the bolt which space around the bolt, between the nut C¹¹ and bolt head is to receive, when in use, the gage of tank metal plate forming and bordering the slot at D' of water tank as mentioned above, and as shown in Fig. 10. The free threaded end of the bolt is then placed from the outside through a hole in the end or side of the stove, the oven proper being for the time out of the way, and a second nut C¹² is screwed on the end of the bolt from within the stove, in such manner as to bind the metal plate of the stove between the nuts C¹¹ and C¹², thus rigidly fixing the bolt to the stove and the bolt being ready at all times for the ready alinement of the stove and tank without extra fixing or screwing.

In adjusting the parts to the position shown in Fig. 4, the stove may be placed upside down and the crate applied thereto with its slots A⁵ in proper relation to the bolts C and the crate be then given a slight turn to bring the bolts into the slots A⁵ as shown in Fig. 11, when by tightening up the nuts, the parts may be clamped in position, when the

combined lock and pan supports are not used. In this position of parts, it will be noticed that the crate projects slightly beyond the oven end of the stove so that when the water tank D is interlocked with the stove, it will rest upon and in part be supported by the crate, as best shown in Fig. 4, and in part by the bolts C¹⁰. This extension A⁶ of the crate not only forms a support for the water tank D but also provides a crate of sufficient size to receive the stove proper in the packing of the parts, as shown in Figs. 1, 2 and 3.

As before described, the slots A⁵ open in opposite directions in order to prevent the stove from working loose and slipping out of the slots and this construction may be preferred, but it will be understood that where desired, the slot holes in the central top bar A⁴ may both open in the same direction, as shown at A¹⁵ in Fig. 16.

An ash-pan holder E consists of two metal bars or strips E' and E² pivoted together at 1 so they may be turned to a right angle as shown in Figs. 6, 8 and 11 for use or may be folded scissors-like for packing. The strip E' is shorter in angled length than the normal intervening distance between bars A⁴ and A⁷, so that when the strip is applied as shown in Fig. 6, it will spring into place and draw the bar A⁷ inwardly to a slight extent. The strip is bent at a right angle at one end forming a depending hook portion E³ which, in use, engages over the bar A⁷ of the crate, the opposite arm of the strip E' having an upwardly inclined portion E⁴ connected with an end portion E⁵ slotted at E⁶ to engage with the rear bolt C, such portion E⁵ of the strip E' fitting between the crate bar A⁴ and the stove proper, so that the ash-pan holder will be supported at such end from the cross bar A⁴ and will also, by the springing connection of the hooked end E³ with the side bar A⁷ of the crate, prevent any possibility of the rear bolt C being pulled out of the slot A⁵ in which it is received. The slotted portion of E⁵ is first placed in position engaging the rear bolt C, then the hooked portion E³ is placed in position over the side bar A⁷ by pressing or springing the bar A⁷ into engagement with hooked portion E³.

The arm E² of the ash-pan support is curved down slightly at its front end E⁷ to facilitate the slipping of the pan into the position shown in Fig. 4 and at its rear end the arm E² has an upwardly extending portion E⁸ provided with a rearwardly extending portion E⁹ at its upper end, which laps upon the rear top bar A⁸ of the crate when the parts are in the position shown in Figs. 4 and 11 of the drawings. By these means, the ash-pan is securely supported and is prevented from sliding too far backward

by E⁸, and this arm E² also operates to brace the side bar A⁷ of the crate in connection with the top cross bar A⁴ as well as aiding in preventing the displacement of the strip E' from its locked engagement with the bars A⁴ and A⁷ which the combined ash-pan holder and grip key locks and with which it interlocks when the parts are as shown in Figs. 4 and 11 of the drawings. Another bar F is arranged to connect the intermediate top bar A⁴ with the end crate bar A⁹ opposite the bar A⁷. This bar F is hooked at its outer end to engage over the end bar A⁹, see Fig. 11, and has at its inner end an upwardly inclined portion F² which is slotted to engage with the front bolt C, see Figs. 11 and 17, in such manner as to brace and grip between the bars A⁴ and A⁹ and to lock the forward bolt C within the slot A⁵ in which it is fitted when the parts are as arranged in Figs. 4, 6 and 11. The slotted end of bar F is first placed in position so that the rounded enlarged end of the slot fits over the bolt C, between the bottom of the stove and the top of bar A⁴, then the bar F is turned into position and the bar A⁹ is sprung into connection with the hooked end of bar F. This bar F may also be utilized as a support for a bread pan so that the contents of the latter may be heated up or be kept warm.

It will be noticed that the bolts C and their respective slots A⁵ are sufficiently far apart to provide, when the parts are connected up as shown in Figs. 6 and 11, a firm, substantial connection between the crate and stove proper, as is desirable in this class of devices. The slots A⁵ are rounded and enlarged at their inner ends and are thereby not so easily displaced from bolts C.

The stove proper has the fire box G and the oven H provided respectively with doors G' and H' and the mouth of the fire box is reinforced and stiffened by an angle frame I, one wing I' of which projects inwardly into the fire box and the other wing I² of which projects slightly across the mouth of the fire box and at one side forms a support to which the door G' is hinged at G², the angle frame I being riveted in place. This angle frame aids in securing a fixed latch bar J which projects at its outer end beyond the fire box and is provided with a boss or projection J', slightly rounded, over which the swinging edge of the door G' springs, thus making the opening and closing of the door G' automatic and operating to hold the door G' in closed position so it can be easily released. This bar J is secured at its inner end at J² by a single rivet to the partition K which separates the fire box from the oven, and the wing I' of the angle frame I overlies the bar J, and rivets J³ arranged on opposite

sides of the bar J and passing through the wing I', aid in securing the bar J firmly in place. The bar J is notched in its underside at J⁴ for engagement by the pivoted latch bar K, which, when in the position shown in Fig. 4, by engaging in the notch J⁴, operates to hold the fire box door securely closed. This bar K is pivoted at K', is also automatic in its combination, and its outer end is hooked outwardly at K² so that when the stove proper is crated as shown in Fig. 1, the bar K may be swung to the position shown in Fig. 1, with its hooked end K² underlying and engaged with the intermediate front upright bar A¹⁰ of the crate in which position it will be held by the crate so that both doors G' and H' will be firmly locked by the same latch bar when the stove is locked within the combined crate and support. To adjust the latch bar K to the position shown in Fig. 1, the stove door is opened to a point slightly beyond the outer end of the bar J and the bar K is then turned on its pivot to the right, to a horizontal position in relation with the lower edge of the bar J. The stove door is then pressed to and at the same time the bar K is snapped into place into engagement with the notch J⁴ of the bar J, the lower edge of the bar K sliding over the upwardly projecting edge of the catch L of the oven door.

The catch L on the oven door H' has a handle ring L' and a curved portion securing the same and this curved portion L² projects sufficiently from the face of the door H' to be engaged by the latch bar K when the latter is turned to the position shown in Fig. 1 and thus operates in connection with the other parts to prevent any slipping or displacement of the latch bar K from the position in which it will hold both door G' and H' closed, and differs from the oven door catch in my former Patent No. 828,801 by the placing of the pull ring between two rivets, thus strengthening the catch. The catch L has at the swinging end of the door H', an inwardly turned lip L³ which engages in a slot or opening L⁴, see Fig. 5, the lip L³ being slightly bent so it will lock automatically when pressed into the slot L⁴ as best shown in Fig. 15 of the drawings.

The doors G' and H' are hinged by means of knuckle straps G¹⁰ and H¹⁰ coöperating with pintles and with knuckles bent from their respective doors, the knuckle straps G¹⁰ and H¹⁰ being bent and held in place as shown respectively in Figs. 4^a and 4^b.

The one piece angle frame I at the mouth of the fire box stiffens and strengthens the fire box opening and forms an abutment for the door G' while its wing I² coöperates in affording a firm anchorage for the free ends of the knuckle straps G¹⁰, which are passed through slots therein with one end bent at

right angles to and firmly against the inner face of the wing I², as best shown in Fig. 4^a of the drawings. In Fig. 4^b I show a knuckle strap both ends of which are bent along the inner face of the flange.

The body of the stove, see Fig. 3, is made up of a single plate of metal bent to the desired form and double seamed at the joined ends of the plate, at the lower left angle of the rectangular body, preferably, thus making the stove cheap to manufacture and stiffening and strengthening the entire structure. Before the single sheet of metal forming the body of the stove is bent into rectangular shape, the edge that is to form the front of the stove is hemmed, that is turned or folded back upon itself, preferably twice, as shown at the upper and lower corners at the right end of Fig. 12, after which the sheet is bent into rectangular form and double-seamed at the lower left angle, underneath, to the left of grate holes, at M² as shown at the left lower corner in Fig. 3. The back N of the stove is made of one piece and double seamed to the rear edges of the rectangular body or stove proper at N', N'—the double seamed edges and hemmed front edge thus improving the appearance and increasing the stiffness and rigidity of the stove. The mouth of the inner shell is double seamed at O to the flange plate P which closes the mouth of the space between the inner and outer shells of the oven, the oven door being hinged to the flange P, as will be understood from the drawings and foregoing description. The inner shell of the oven is the part H, see Fig. 12, and the outer shell of the oven is the casing M forming a part of the body of the stove proper B.

A square headed bolt Q is permanently fastened to the rear center of the outer shell of the oven so that the said bolt will not turn and will always be in easy alinement with the inner shell of the oven when the said shell is removed and replaced before and after cleaning.

The inner shell of the oven is reinforced at Q' surrounding the opening for the bolt to strengthen the same and I also prefer to reinforce the side of the oven shell at Q² where the fire first strikes the oven, such reinforcement Q² extending as best shown in Fig. 3, upwardly to close the space at the top of the inner shell in order to force the heat and draft down around the oven, enough heat passing over the oven to equalize the distribution of heat. The plate or partition K⁵ between the oven and fire box has an opening K¹⁰, the edges of which may be slightly turned or hemmed as shown in Fig. 3, and the three right angle lips at the top, bottom and rear edge (see Fig. 3) of the plate K⁵ are preferably turned toward the oven space and riveted with as few

rivets as possible to the stove proper, an idea followed out in building the stove being to do with as few rivets as possible, consistent with the necessary strength and rigidity of the stove. The front edge of plate K⁵ is hemmed this turning also toward the oven space. The bottom of the fire box, which is a part of the shell or casing of the stove, is perforated at R to form the grate.

A stove pipe opening S is provided in the top of the stove with a slight extension or wing S' and the stove pipe T is formed with a bead T', a flange T² below the same and lugs T³ and T⁴ struck up from the flange T² and projecting outwardly below the bead T'. The lug T⁴, see Figs. 13 and 14, is made continuous with a part of the double seam of the pipe, for strength, and is sufficiently small to pass through the wing S' of the stove pipe opening while the lug T³ is wider so it will not pass through the said wing, so that in operation if the stove pipe be applied to the opening S, with the lug T³ below the wall of the opening S opposite the wing S', the lug T⁴ can be slipped into the wing S' so that both lugs T³ and T⁴ will lie below the top plate of the stove, when if the stove pipe be given a half turn, the wide lug T³, as shown in Fig. 14, may be brought below the wing S' through which it cannot pass thus closing the wing S' and securely connecting the stove pipe with the stove in such manner that it will not easily be displaced. The stove pipe may preferably be formed of telescopic sections, see Fig. 14, which may be, in general respects, of ordinary construction. It will be noticed (see Fig. 13) that the stove pipe section which connects with the stove proper is, fastenings and all, in one piece, avoiding the necessity of riveting any lugs or the like to the body of the stove pipe.

In operation, the water tank D may be applied for use as shown in Fig. 4, and when the stove is being crated may be removed and placed within the oven. This water tank is a novel attachment and may be used where desired for house use and when packed within the oven may form a receptacle into which the clean part of a duffle is placed.

The stove pipe and the ash-pan U and the combined handle and poker and the ash-pan and bread pan lifter, may be placed within the fire box and when stove lids are used, they may also be placed within the fire box in packing the stove; however, the gage of metal designed to be used in the present stove is thin enough to avoid the necessity of using lids.

When the slots in the top cross bar of the crate are disposed in the same direction, as illustrated in Fig. 16, the bars E' and F may be applied to turn in opposite directions from these respective slot openings and fasten at their outer ends to the same end bar

or strip of the crate, thus locking the bolts of the stove proper in the slots A¹⁵ of the crate bar.

It will be observed that when the stove is packed and locked into the metal crate or support, as shown in Figs. 1, 2 and 3, the lower central strip A²⁰ of the crate, see Fig. 3, will cover and protect the nuts and bolts C on the bottom of the stove; the right, front and rear vertical bars of the crate will protect and cover the nuts and bolts C¹⁰ and the crate bars will also cover like bolts, when necessary to use same, and the crate will also cooperate with the latch devices in locking the fire box and oven doors to prevent any access to the contents of the fire box or oven when the stove is locked within its crate.

The stove may be utilized for heating as well as for cooking purposes and will operate with a special efficiency as a heating stove when the oven door is left open.

The fire box door is provided with upper and lower draft openings and with slides controlling the same as shown at V in Fig. 4, which aid in controlling the heating and cooking operations.

It will be noticed especially in Fig. 10, that there is a slight space between the stove and tank which keeps the water from becoming superheated or from boiling over.

I claim:

1. A cooking apparatus comprising a stove proper, a combined crate and support adapted to support the stove proper in use and to inclose the stove proper when the parts are packed for carrying by hand, storage or shipment, said crate having means interlocking with cooperating parts on the stove when the latter is supported on the crate, and means carried by the crate for supporting an ash-pan below the stove when the latter is on the crate.

2. A cooking apparatus comprising a stove proper, a frame below and supporting the stove proper and interlocked therewith and a pan holder connected with the frame and securing the same in interlocked relation with the stove proper.

3. A cooking apparatus comprising a stove proper, a frame below and supporting the stove proper, interlocking means between the frame and stove proper, and a pan holder comprising a bar hooked at one end into engagement with the frame and connected at its other end with the interlocking means between the frame and the stove proper and securing the frame in interlocked relation with the stove proper.

4. A cooking apparatus comprising a stove proper and a combined crate and supporting frame therefor having an upright side bar hinged at one end whereby it may be opened to permit the introduction and removal of the stove, and a lock at the other end of said bar for securing it in connection

with the frame whereby the bar may operate as a retaining means for the stove when within the crate and as a means for stiffening the crate when the latter is utilized as a support for the stove.

5. A cooking apparatus comprising a stove proper, a crate adapted to receive the same and having a top bar provided with an edge notch, a bolt carried by the stove and engaging said notch and a pan holder engaging with said bolt, substantially as set forth.

6. The combination of a supporting frame having a bar notched in its edge, a stove having on its underside a bolt engaging in said notch, and a bar engaged at one end with said bolt and at its other end with the frame for holding the stove bolt in the notch of the frame.

7. A cooking apparatus comprising a stove proper, spaced apart bolts projecting from the underside thereof and a supporting frame having a bar provided in its opposite edges with slots opening in opposite directions and receiving the bolts of the stove, said bolts having means engaging below the bar.

8. A cooking apparatus comprising a stove proper, a frame supporting the stove proper and projecting at one end beyond the same and a tank connected with the end of the stove and supported upon the projecting portion of the frame, whereby the tank is supported partly by the stove and partly by the frame which supports the stove.

9. The combination of a stove, a crate below the same and having an edge notch, a bolt carried by the stove and movable laterally into and out of the crate notch and a pan holder engaged at one end with the said bolt and at its other end with the crate, substantially as set forth.

10. A cooking apparatus comprising a crate, a stove proper thereon and a tank interlocked with the stove proper and partially supported upon the crate.

11. A cooking apparatus comprising a stove proper, and a crate adapted to support the stove proper and to inclose the same when the parts are packed for storage or shipment, the stove proper having bolts interlocking with the crate when the stove is mounted thereon, the crate having means overlying and protecting the said bolts when the stove is within the crate.

12. A cooking apparatus comprising a crate, a stove adapted to be inclosed therein and having an oven door and a fire box door alongside each other, a latch bar pivoted to one of said doors and adapted to extend thence at one end across the swinging edge of the other door and having at such end means to engage with a portion of the crate whereby to lock the latch bar in connection with the crate.

13. A stove having a stove pipe opening with a slot extending therefrom, a stove pipe having a bead to rest on the stove, a flange below the said bead to project into
 5 the stove pipe opening and lugs projecting outwardly from said flange below the bead, one of said lugs being wider and the other lug being narrower than the slot of the stove pipe opening.

10 14. A stove having a stove pipe hole and a slot extending therefrom, and a stove pipe having an integral bead, an integral flange below the bead, and lugs integral with the flange and projecting outwardly
 15 from the flange below the bead.

15 15. A stove proper having a fire box and an oven alongside the same, a fire box door, a partition plate between the fire box and oven, a fixed latch bar projecting at its
 20 outer end beyond the fire box and provided

on such extension with a boss or projection over which the swinging edge of the fire box door springs, a rivet securing the inner end of the latch bar to the partition plate, an angle frame within the mouth of
 25 the fire box and having a wing overlying the latch bar, and rivets passing through said wing on opposite sides of the latch bar.

16. A stove having a stove pipe hole and a slot or wing extending therefrom and a
 30 stove pipe having a bead to rest upon the stove and a portion to extend into the pipe hole and having said extended portion slitted forming lugs bent laterally outward to underlie the top of the stove.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
 Washington, D. C."