G. W. BAKER.

SELF LEVELING STOVE FOR SHIPS.

APPLICATION FILED APR. 29, 1921.

1,421,890. Patented July 4, 1922.

3 SHEETS—SHEET 1.

Fig. 1.

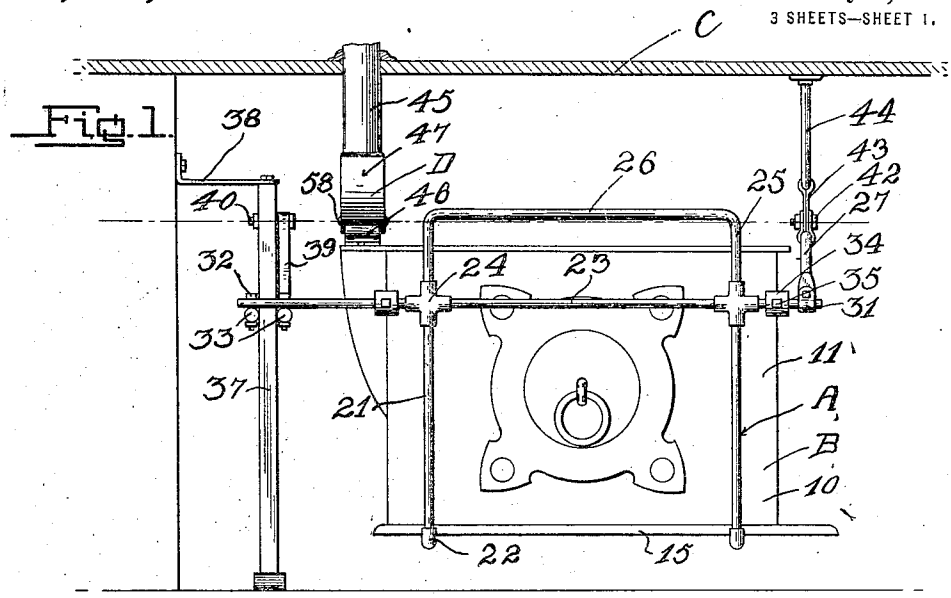
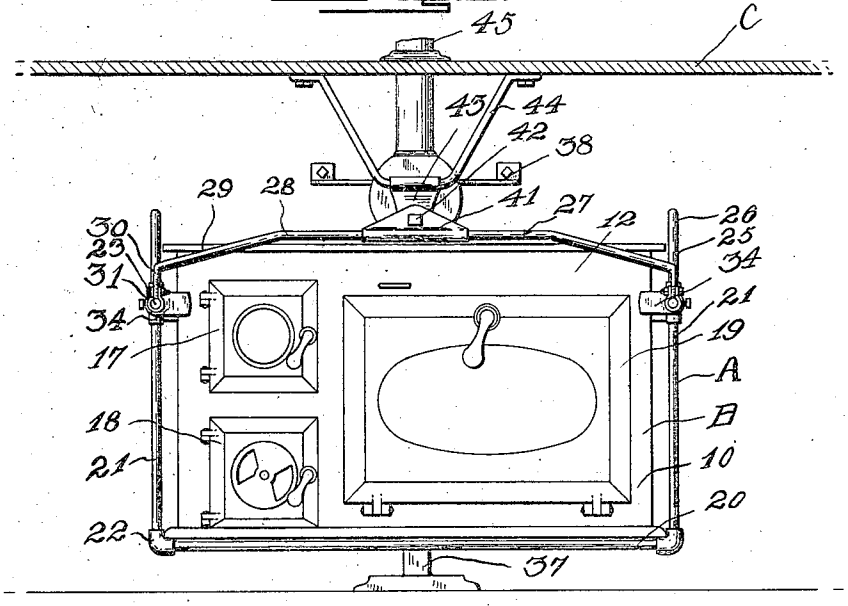


Fig. 2.



Inventor

George W. Baker.

By Lancaster & Allwine

Attorneys

G. W. BAKER.

SELF LEVELING STOVE FOR SHIPS.

APPLICATION FILED APR. 29, 1921.

1,421,890. **Patented July 4, 1922.**

3 SHEETS—SHEET 2.

Fig. 3.

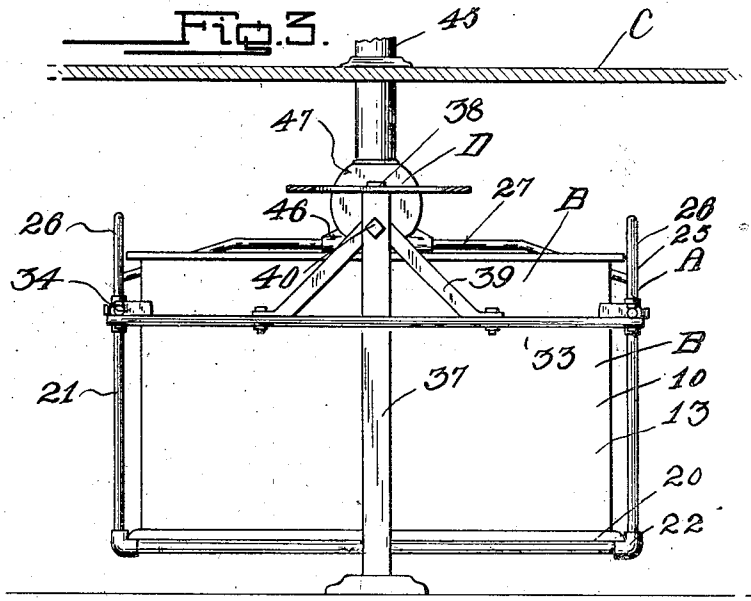
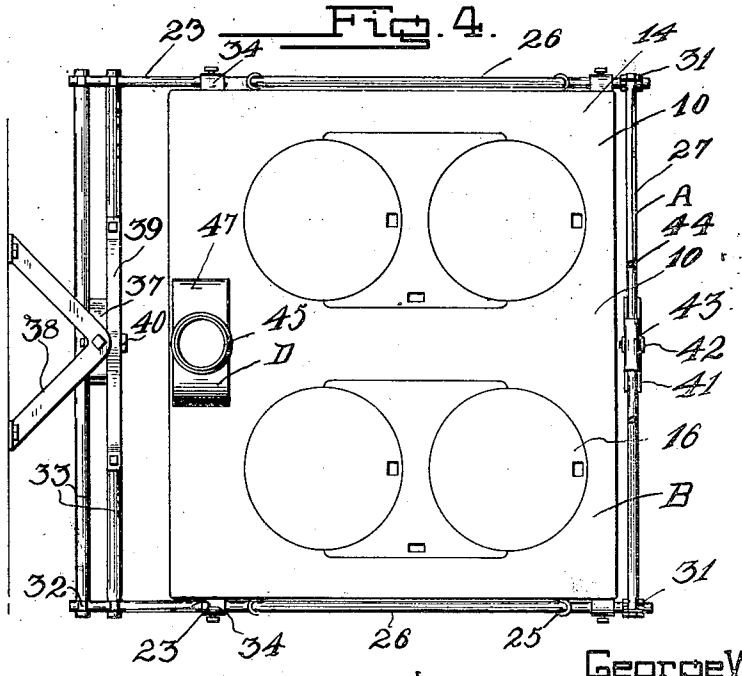


Fig. 4.



Inventor

George W. Baker.

By Lancaster and Allwine

Attorneys

G. W. BAKER.

SELF LEVELING STOVE FOR SHIPS.

APPLICATION FILED APR. 29, 1921.

1,421,890.

Patented July 4, 1922.

3 SHEETS—SHEET 3.

Fig. 5.

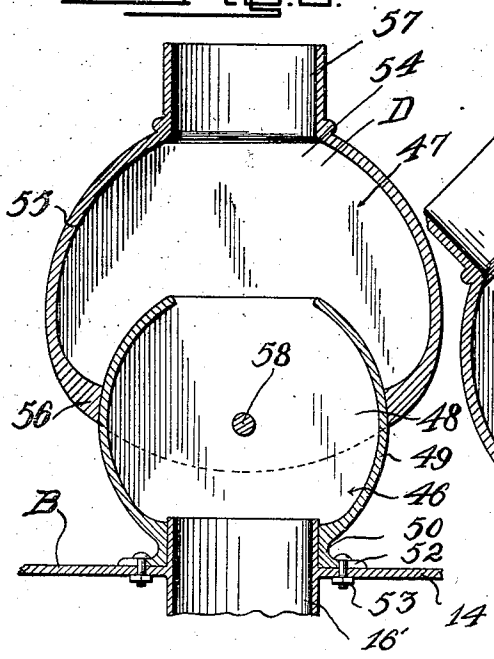


Fig. 6.

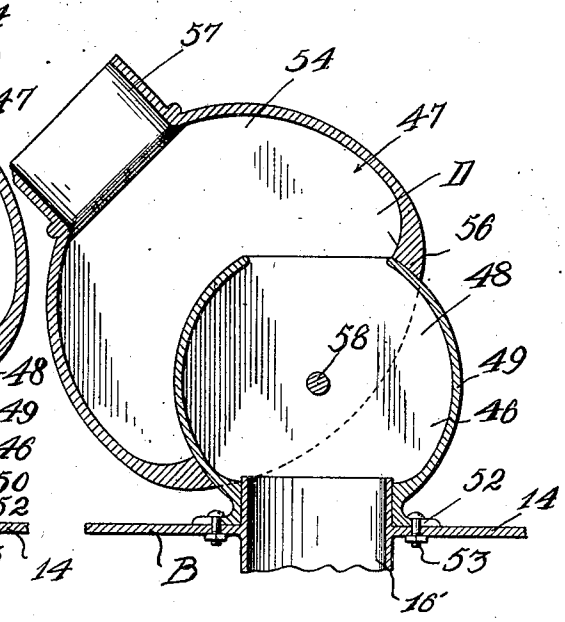


Fig. 7.

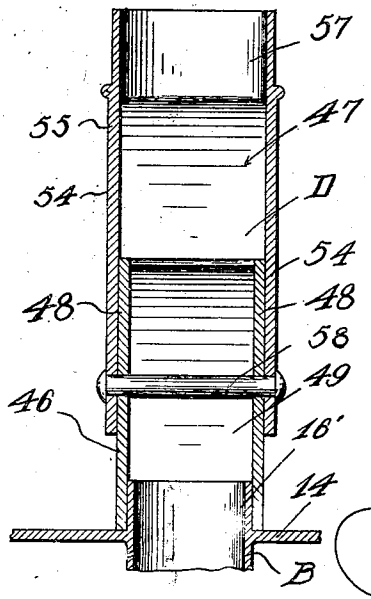
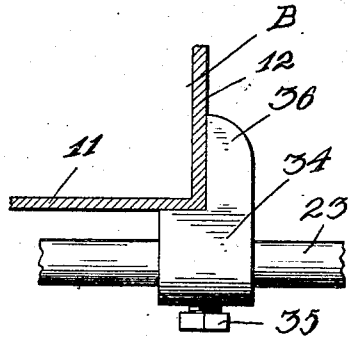


Fig. 8.



Inventor

George W. Baker.

By Lancaster and Allwine

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. BAKER, OF JACKSONVILLE, FLORIDA.

SELF-LEVELING STOVE FOR SHIPS.

1,421,890. Specification of Letters Patent. Patented July 4, 1922.

Application filed April 29, 1921. Serial No. 465,535.

To all whom it may concern:

Be it known that I, GEORGE W. BAKER, a citizen of the United States, residing at Jacksonville, in the county of Duval and State of Florida, have invented certain new and useful Improvements in Self-Leveling Stoves for Ships, of which the following is a specification.

This invention relates to stoves, and the primary object of the invention is to provide an improved means for supporting a stove on board ship, so that the stove will be self leveling at all times, irrespective of the roll of the ship, thereby eliminating the inconveniences usually experienced, by cooks cooking on ordinary cook stoves during rough weather.

Another object of the invention is the provision of a novel cradle for receiving an ordinary ship stove, and a novel means for suspending the cradle so that the stove will be free to rock back and forth during the rolling of a ship, so that the top thereof will always be in a horizontal plane.

A further object of the invention is the provision of a novel joint for the stove and pipe, so as to permit the free passage of the products of combustion from the stove during the swinging motion thereof, the joint for the stove and pipe being in direct horizontal alignment with the pivot joints for the cradle for supporting the stove.

A still further object of the invention is to provide a novel means for suspending the cradle so that the entire stove will be below the pivot points thereof, whereby the weight of the stove itself will tend to hold the stove in a level position, thereby obviating the necessity of providing a weight for the bottom of the stove as heretobefore contemplated in other level seeking devices.

A still further object of the invention is to provide an improved cook stove of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed and illustrated, in the accompanying drawings, forming a part of this specification, in which drawings:

Figure 1 is a side elevation of the cook stove, showing the same arranged in the novel cradle provided therefor.

Figure 2 is a front elevation of the cradle with the cook stove therein.

Figure 3 is a rear elevation of the cradle with the cook stove therein.

Figure 4 is a top plan view of the same.

Figure 5 is an enlarged vertical section through the novel stove pipe connections for permitting the stove to rock to and fro so as to be normally held in a horizontal position during the rolling of the vessel.

Figure 6 is a similar view showing the position of the joint when the vessel has rolled to its limit of movement.

Figure 7 is a vertical transverse section through the improved joint.

Figure 8 is an enlarged horizontal section through a portion of the frame and stove illustrating the clamp for engaging the stove to hold the same against accidental movement in relation to the cradle.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A indicates the improved means for suspending a cook stove B in a galley C of a ship. D indicates the novel joint for the stove B and its stove pipe.

The stove B may be the usual or any preferred type of stove, and as shown consists of the body 10 having the side walls 11, the front wall 12, the rear wall 13, the top 14 and the bottom wall 15. The top 14 is provided with the usual cooking hole openings which are adapted to be closed by the stove lids 16 and the flue 16′, to which is attached the novel joint D which will be hereinafter more fully described. The front wall 12 is provided with the usual fire and ash pit doors 17 and 18 and the oven door 19. The improved cradle A for suspending the cook stove B includes the lower transversely extending rods 20, which are arranged adjacent to the opposite ends of the stove B and are adapted to engage the lower wall 15 thereof. The transversely extending rods 20 are connected to pairs of vertically extending supporting rods 21 arranged on opposite sides of the stove by means of elbow joints 22. If so desired the frame A may be formed out of piping, or the like, but it is

to be understood that other material may be used and that the rods can be made solid if so desired. The vertical rods 21 are connected at their upper ends to longitudinally extending rods 23 by means of cross shaped joints 24 and these joints 24 may have connected thereto U-shaped rods 25, the upper horizontal portion 26 of which may form end rails for the stove. The forward ends of the longitudinally extending rods 23 have connected thereto a front transversely extending supporting rod or bar 27, and this rod is also of a substantially inverted U-shape and includes the upper horizontal portion 28, which forms a front railing for the stove and extends slightly beyond the upper edge of the same, the inclined downwardly extending end portions 29 and the depending feet 30. The feet 30 are connected by means of cuffs 31 to the forward terminals of the longitudinally extending rods 23. The rear terminals of the rods 23 have bolted or otherwise secured as at 32 a pair of spaced rear transversely extending rods 33 and these rods may be formed substantially straight if so desired. In order to hold the stove B against movement in the frame or cradle A, adjustable clamps 34 are slidably mounted on each one of the longitudinally extending rods 23 and these clamps are held in their adjusted positions by means of thumb screws 35, which are adapted to impinge against the longitudinally extending rods 23. These clamps 34 are each provided with lugs 36 which are adapted to engage the corners of the stove B. This effectively holds the stove against movement in relation to the frame.

The necessity of feet for the stove is entirely eliminated, and the stove is not bolted to the deck of the ship as in the usual stove construction, as the cradle permits the stove to swing during the rolling of the vessel. The cradle is suspended in a novel manner which will now be described, so as to permit the swinging of the stove.

A supporting post 37 is provided and as shown this post 37 is secured at its lower end to the vessel, but it is to be understood, however, that if it is so desired, this post may be suspended from the deck. The post 37 is disposed in rear of the stove, so as not to interfere with the moving of pots and pans on the stove, and the upper end of the post may be braced by rearwardly extending brackets 38 which may be bolted or otherwise connected to one wall of the galley C. The rods or bars 33 are adapted to embrace the opposite sides of the post 37 so as to prevent relative lateral movement of the frame in relation to the post, and these bars 33 form a guide for the cradle or frame during the transverse swinging thereof. One of the bars or rods 33 has secured thereto the upwardly extending triangular shaped bracket 39 and the upper end of this bracket has its apex portion disposed above the upper surface of the stove adjacent to the longitudinal center thereof and is pivotally connected by means of a pivot bolt or the like 40 to the post 37 adjacent to the upper end thereof. The forward rod or bar 27 has a centrally disposed cuff or clamp plate 41 secured thereto, and this clamp plate or cup is in turn pivotally connected by means of a pivot bolt or the like 42, with a plate 43 carried by the depending U-shaped bracket 44 which is bolted or otherwise secured to the deck of the galley. The pivot bolt 42 is arranged substantially at the longitudinal center of the stove B above the upper surface thereof and in direct horizontal alignment with the pivot bolt 40. This allows free swinging movement of the frame or cradle and stove during the rolling movement of the vessel.

The joint D for connecting the stove with the stove pipe which is designated by the numeral 45 is also in direct alignment with the pivot bolts 40 and 42 and this joint is so constructed as to permit the free passage of the products of combustion from the stove to the atmosphere.

The joint D comprises a lower stationary section 46 and an upper socket section 47. The lower stationary section 46 includes the side plates 48 and the end curved plates 49, which form a part of a circle. The lower end of the stationary section 46 is provided with a thimble 50 for receiving the flue 16'. The upper ends of the end walls 49 are spaced to form the smoke outlet. The attaching thimble 50 is provided with the diametrically extending slotted ears 52, which are adapted to receive suitable bolts 53 or the like for connecting the same rigidly to the stove top 14.

The upper socket section 47 is formed relatively larger than the lower section 46 and is so constructed that irrespective of the position of the two sections, the smoke and other products of combustion will have unimpeded passage from the stove to the atmosphere. As shown the upper socket section 47 includes the side plates or walls 54 and the arcuate end plates 55. The side plates 54 are adapted to extend on opposite sides of the side plate 48 of the lower removable section 46, and the lower ends of the end walls 55 are adapted to snugly engage the outer surface of the end walls 49 at all times, so as to prevent the escape of smoke between the lower section 46 and the upper section 47. If so desired, the lower ends of the end walls 55 may be gradually thickened as at 56 so as to form large bearing surfaces for engaging the outer surface of the lower member. When the upper section 47 reaches the extreme limits of its movement, as shown in Figure 6, the lower thick-

ened ends 56 of the walls 55 form stops for engaging the thimble 50 and prevent further movement of the stove and its cradle in relation to the upper section. A nipple 57 is provided on the upper end of the section 47 and is adapted to receive the smoke pipe or stack 45. The nipple 57 can be slidably mounted in the smoke stack or the stack itself can be slidably mounted in a thimble carried by the upper deck of the vessel. The side plates 54 of the upper section 46 and the side plates 48 of the lower section 46 are pivotally connected together by means of a pivot bolt or the like 58, and this pivot bolt is in direct alignment with the pivot bolts 40 and 42 which permit the free movement of the cradle and the joint in relation to each other.

From the foregoing description, it can be seen that a novel form of ship stove has been provided, which will permit the stove to assume an upright position at all times, irrespective of the rolling of the ship and thereby permit the easy cooking on the stove.

Changes in details may be made without departing from the spirit or scope of this invention; but,

I claim:

1. The combination with a galley stove, of a cradle therefor including transversely extending bars arranged under the stove, uprights secured to the terminals of the bars, longitudinally extending side bars secured to the uprights, rigid supports secured to the ship, means pivotally connecting the side bars with the rigid supports, and adjustable clamps carried by the side bars arranged to engage the stove.

2. In a ship, the combination with a galley stove having a flue, a smoke stack, a stationary section carried by the flue, a socket section carried by the stack, a pivot bolt connecting the stationary section with the socket section, of a cradle for supporting the stove including a U-shaped frame receiving the stove, rigid supports secured to the ship arranged in direct alignment with each other and with the longitudinal center of the stove, bolts pivotally connecting the frame with the support, the bolts being arranged in direct longitudinal alignment, and with the pivot means of the socket and the stationary section of the stack joint.

3. The combination with a galley stove, of a cradle therefor including a U-shaped frame arranged to support the stove having longitudinally extending side bars, a transversely extending front rod secured to the side bars, a pair of spaced transversely extending rods secured to the rear ends of the side bars, a depending post arranged at the front end of the stove, a supporting post arranged at the rear end of the stove and disposed intermediate the spaced pairs of bars, and means pivotally connecting the front bar and the rear bar to said rigid posts.

4. The combination with a galley stove, of a cradle therefor including a U-shaped frame arranged to receive the stove, said frame consisting of transversely extending bottom bars, vertically disposed side bars, longitudinally extending side bars connecting the vertical bars, side railings carried by the side longitudinally extending bars, adjustable clamping members carried by the longitudinally extending side bars arranged to engage the stove, rigid supports, and means pivotally connecting the side bars with the rigid supports.

5. In a self leveling galley stove, a smoke stack joint including a lower section having side plates and substantially semi-circular end walls, an upper section for receiving the lower section including side plates and end walls, a pivot bolt for connecting the sections together, the end walls of the upper section being arcuate shaped and flared outwardly from the opposite sides of the semi-circular end walls of the lower section, the lower terminals of the arcuate end walls being gradually thickened to form enlarged bearing faces for snugly engaging the outer surfaces of the semi-circular end walls of the lower section.

GEORGE W. BAKER.