No. 691,380. Patented Jan. 21, 1902.

A. B. HOWER.

STEAM COOKER.

(Application filed Apr. 15, 1901.)

(No Model.)

Fig. 1.

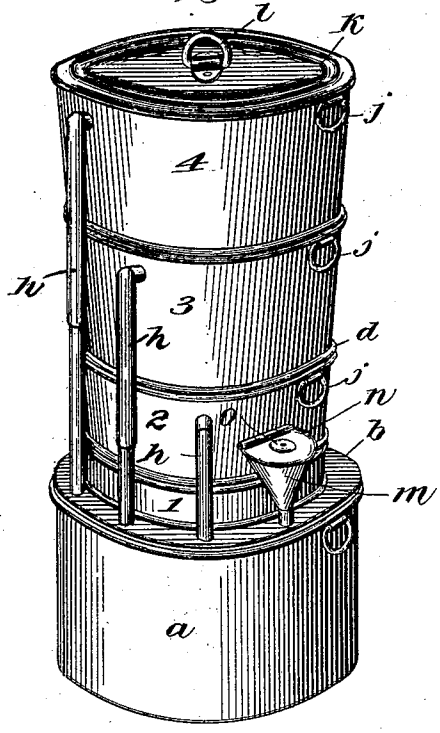


Fig. 2.

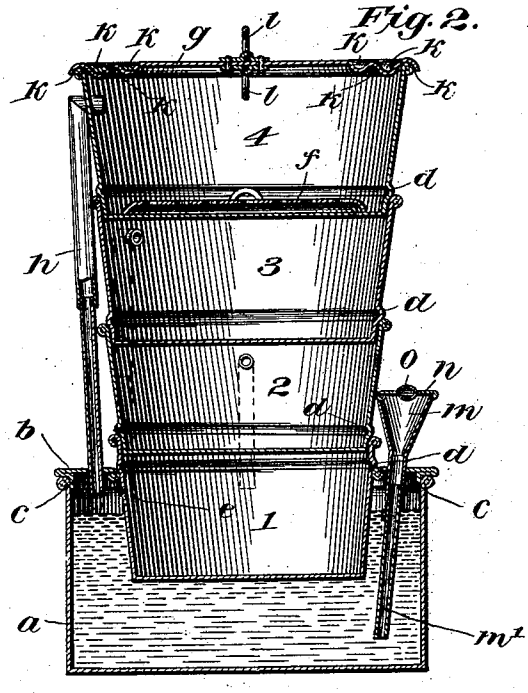


Fig. 3.

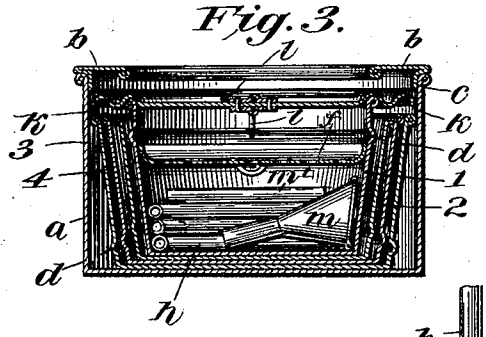


Fig. 4.

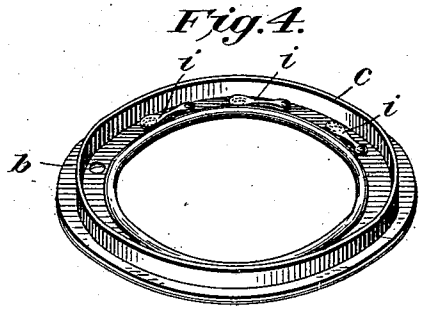
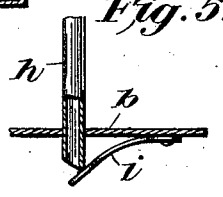


Fig. 5.



Witnesses

Elmer Seavey

R. H. Bishop.

Inventor,

Aten B. Hower,

By Davis & Davis,

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D.

UNITED STATES PATENT OFFICE.

ATEN BOWMAN HOWER, OF LOGAN, UTAH.

STEAM-COOKER.

SPECIFICATION forming part of Letters Patent No. 691,380, dated January 21, 1902.

Application filed April 15, 1901. Serial No. 55,909. (No model.)

To all whom it may concern:

Be it known that I, ATEN BOWMAN HOWER, a citizen of the United States, and a resident of Logan, county of Cache, State of Utah, have invented certain new and useful Improvements in Steam-Cookers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective view; Fig. 2, a vertical sectional view of a cooking apparatus provided with my improvements; Fig. 3, a vertical section of the apparatus packed for shipment; Fig. 4, a perspective view in detail of the under side of the removable supporting-ring, and Fig. 5 a detail section showing one of the valves for closing the steam-openings in the ring.

The main object of this invention is to provide an efficient steam cooking apparatus whose parts are adapted to be separated and packed or nested in the main or water section for compactness in shipping and storage and which shall be capable of easy erection.

The invention has other minor objects in view, which shall appear in the course of this specification.

Referring to the drawings by reference characters, *a* designates the main or water section, which is adapted to rest upon the stove. Fitting within the rim of this section is a supporting-ring *b*, provided with a flange *c* to properly center it, and within this ring fits the lowermost section of a series of cooking vessels (numbered 1, 2, 3, and 4) superposed one upon the other. The lower section 1 is provided near its upper edge with an outward-extending bead or flange *d*, which rests upon the inner edge of ring *b* and supports the section at the proper height within the water-section, and to provide for the ingress of steam into this section it is provided with an opening *e* at a point a little below the bead *d*.

The section 2 fits within the rim of section 1, and so on, each section having its lower end fitting within the section next below and being supported therein by a bead or flange *d* similar to the flange *d* on the lowermost section. Within the upper section is preferably placed a removable false bottom *f*, and a cover *g* is provided for this section. Steam is supplied to sections 2, 3, and 4 by means of a series of external pipes *h*, whose lower ends extend through respective openings in the ring *b*, and whose other ends are provided with elbows which enter the respective sections through openings formed in them near their respective upper ends. The two longest pipes *h* are formed each of two detachable telescoping sections. These tubes *h* are made independently detachable, so that the steam may be cut off from any one of the sections without interfering with the remaining sections by simply detaching the tube connecting the particular section to the steam-space. To close the opening in ring *b* when one of the pipes *h* is removed, any suitable closure device may be employed; but I prefer to use some device that will automatically close the opening when the pipe is removed—as, for instance, a small spring-valve *i*, as shown in Figs. 4 and 5, this valve being fastened to the under side of the ring and adapted to be pushed away from the opening by the end of the pipe when the same is inserted.

As will be observed, each of the sections 1, 2, 3, and 4 tapers upward and also the sections increase in size upward, the lowest section being smaller than the section next above, the second being smaller than the third section, and the third section being smaller than the top section. The object of thus employing tapering sections and making them of different sizes is that they may be nested for shipment, the third section being placed in the top section, the second section within the third, and the first within the second, and in order that these sections thus nested may be placed within the water-section the supporting-ring *b* is made removable. As shown in Fig. 3, by thus employing a water-section large enough to receive the largest steam-section and making the steam-pipes detachable and telescopic all the parts may be packed into the water-section for shipment. For compactness the sections are provided with ring-handles *j*, which are adapted to fold closely against the exterior of the vessels, so that they will not interfere with nesting the sections. As will be observed, when all the parts

are placed within the water-section the cover *g* will rest upon the top of the sections, and the ring *b* will be in place upon the rim of the water-section.

In order to adapt the cover *g* to each of the sections, so that a less number than the entire stack of four may be employed whenever it is desirable to do so, the cover is provided near its edge with a series of concentric grooves *k* in its upper and lower face, each one of these grooves being adapted to fit down over the rim of one of the cooking-sections. The cover is adapted to be reversed, so that the grooves on both sides may be utilized, and it is preferably provided with a folding ring-handle *l* upon its upper as well as its lower side, so that it may be readily handled whichever side is uppermost.

A filling-funnel *m* is removably inserted through an opening in ring *b*, the stem of this funnel being preferably made detachable for convenience in packing and long enough to extend to a point within an inch or so of the bottom of the water-section, so that its lower end will be water-sealed until the water is nearly exhausted from the water-section. The funnel is provided with a hinged lid *n*, which is provided with a whistle *o*, this latter serving to sound an alarm when the water in the water-section gets so low as to permit the steam to pass up through the funnel. This low-water alarm is of a special value in that it avoids the necessity of removing these sections during the cooking, operating to ascertain the quantity of water remaining in the water-section, and it renders the danger of burning the food a remote contingency. It will be observed, further, that by thus arranging the steam-pipes exterior to the cooking vessels and making them detachable the cooking-sections may be manufactured at less expense than where the steam-conducting tubes are fastened permanently to the interior or exterior of the vessels, it being possible with my improvements to construct these sections each out of a single plate of metal pressed into shape, it being a simple matter to cut openings for the steam-inlets either before or after the sheet is pressed into shape; secondly, the sections are more easily and quickly adjusted to each other; thirdly, thus putting steam-pipes on the outside and making them detachable renders not only the pipes but the sections easier to keep clean and in perfect sanitary condition; fourthly, thus making the steam-pipes separate from each other and rendering them detachable separately enables the steam to be cut off from any one or all of the sections at any time without dismantling the apparatus, the sections being allowed to remain in position and the food being kept hot until it is served. It will be observed also that the advantage of making the longer pipes telescopic is that they may be readily adjusted to the lower sections in case of injury to the pipes especially provided for such sections.

As shown in Fig. 5, the lower end of each of the tubes *h* is beveled, so that the steam will have free entrance into it without inserting the tube a great distance into the boiler.

Having thus fully described my invention, what I claim is—

1. A steam cooking apparatus comprising a series of different-sized superposed cooking vessels detachable from each other, and a reversible cover provided with a series of concentric rim-receiving grooves near its edge, one or more of the grooves being formed in each side or face of the cover, for the purpose set forth.

2. A cooking apparatus, consisting of a water-section, a series of removable steam-sections superposed thereon and separable from each other, each of said sections being smaller than the one next above it and the top or larger section being smaller than the water-section, and means for removably supporting the lower, smaller section within the water-section, whereby the steam-sections may be nested within each other in reverse order and the sections thus nested inclosed within the water-section, for the purpose set forth.

3. In combination with a water-section and a removable supporting-ring fitted therein, of a series of cooking-sections superposed and made separable, the lower section being supported within said ring and the sections above supported one within the other, all of said sections being tapered downward and each section being larger than the one next below it, and means for conveying steam to the various cooking-sections.

4. In combination with a water vessel, and a series of superposed cooking-sections, of steam-pipes entering the water vessel through steam-openings and communicating with the various cooking-sections and made detachable independently, and means for automatically closing the steam-openings when said pipes are removed from the water-section.

5. In a steam cooking apparatus, the combination of a water-section, and a series of superposed steam-sections resting thereon and being separately detachable and each provided with an opening near its top, and a series of external detachable pipes connecting the steam-spaces of the respective steam-sections, the upper ends of said pipes being provided with elbows which are inserted in said openings in the respective steam-sections, the longer ones of said pipes being each constructed of telescoping sections.

6. In a steam cooking apparatus, the combination of a water-section and a steam-section superposed thereon, a steam-pipe connecting the water-section to said steam-section, the lower end of said pipe entering said

water-section and being beveled at its lower end, and an automatic valve in the interior of the water-section bearing normally against the beveled end of said pipe and adapted to close the pipe in the water-section when the pipe is withdrawn.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 1st day of April, 1901.

ATEN BOWMAN HOWER.

Witnesses:
S. J. FINCH,
L. DENHAM.