July 30, 1946. B. I. WINN 2,405,103

ELECTRIC CALDRONS

Filed March 10, 1945 3 Sheets-Sheet 1

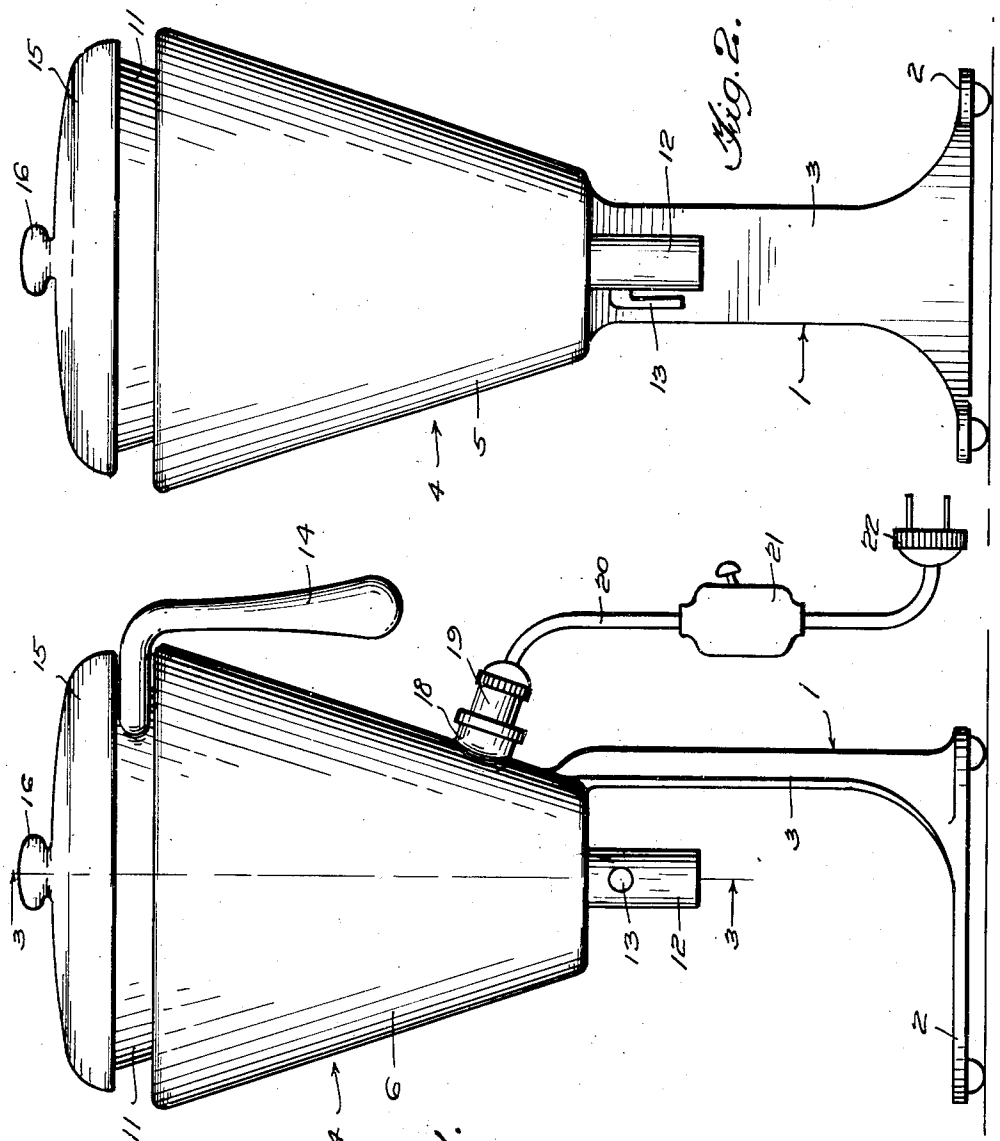


Fig. 2.

Fig. 1.

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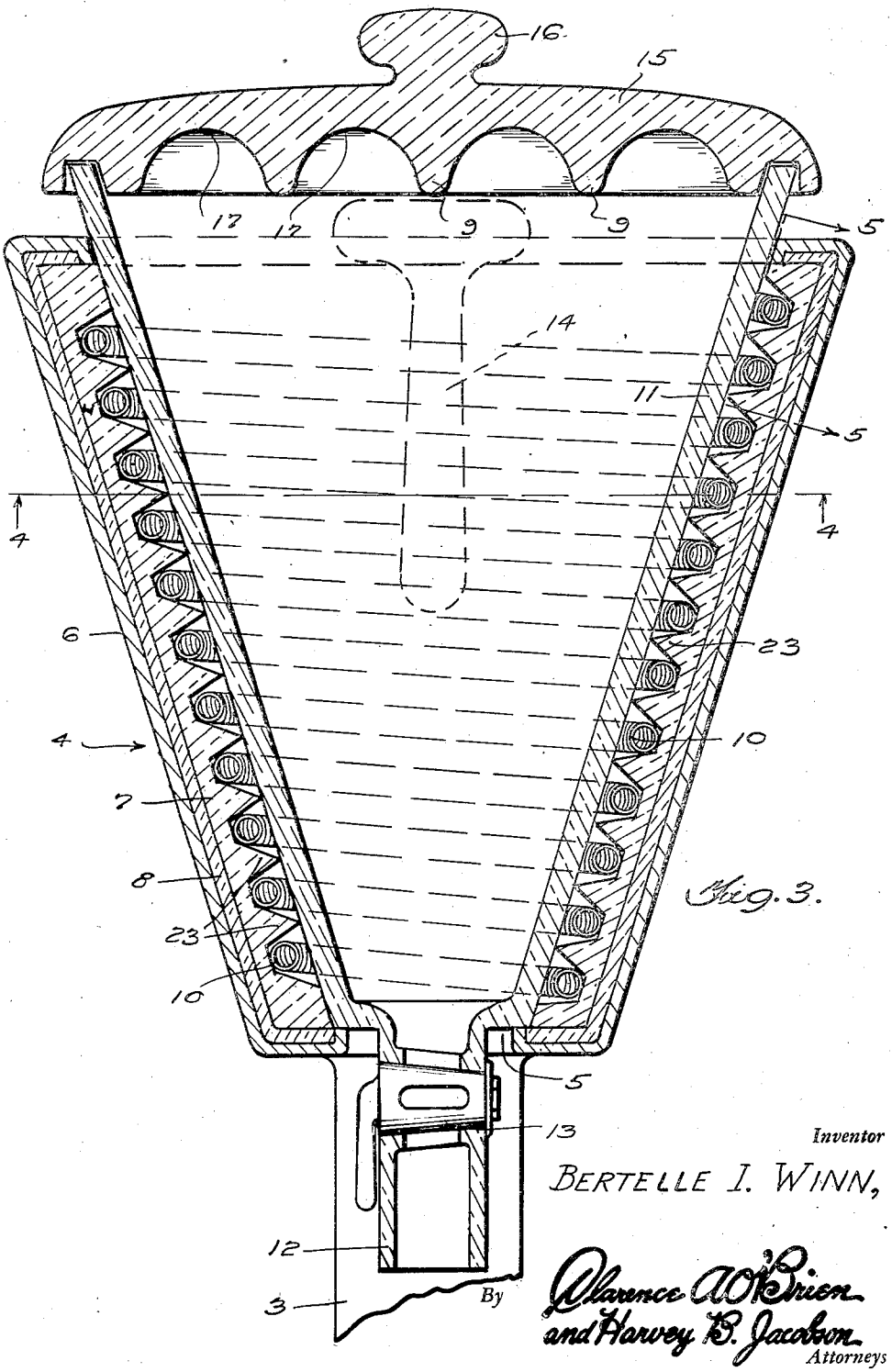


Fig. 3.

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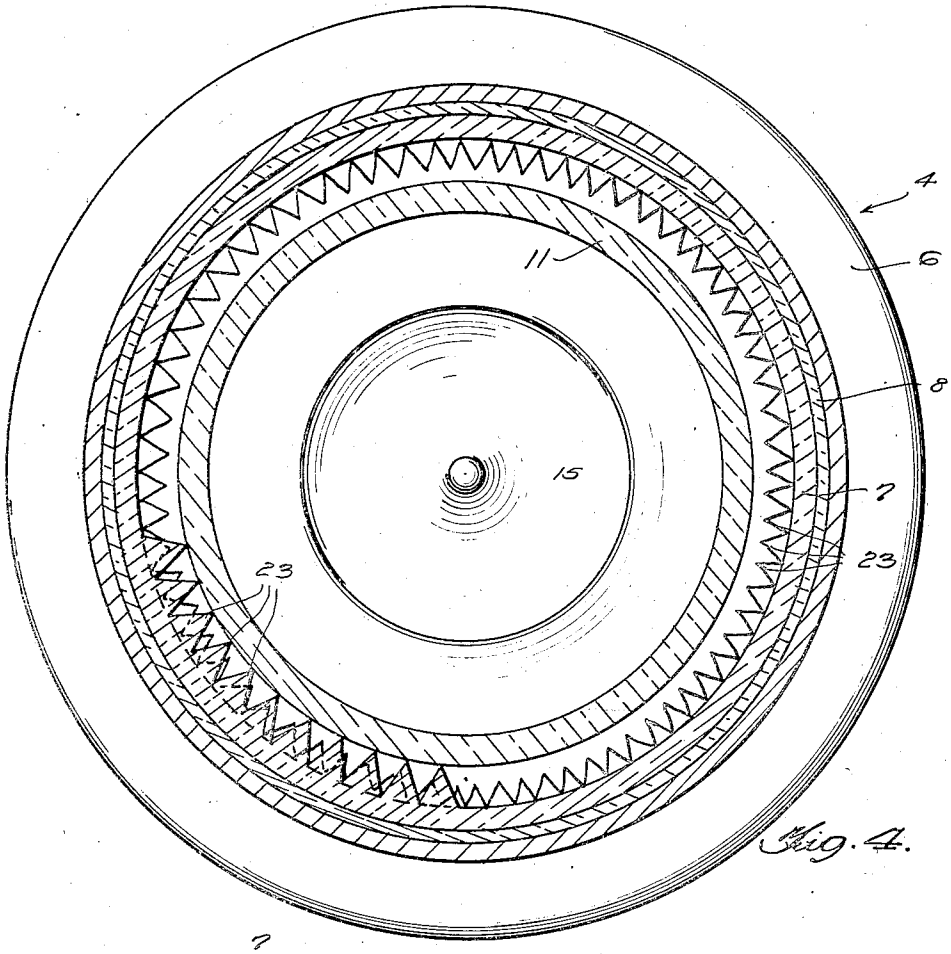


Fig. 4.

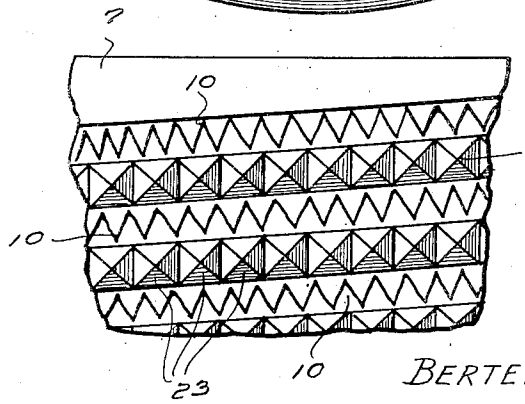


Fig. 5.

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Patented July 30, 1946 2,405,103

UNITED STATES PATENT OFFICE

2,405,103

ELECTRIC CALDRON

Bertelle I. Winn, Yonkers, N. Y.

Application March 10, 1945, Serial No. 581,973

4 Claims. (Cl. 219—43)

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The present invention relates to new and useful improvements in domestic electrical appliances for use particularly in rendering fat from meat scraps, although it will be understood, of course, that the device may be used for any other purpose for which it may be found adapted.

The primary object of the invention is to provide, in a device of the character described comprising an outer container and an inner container removably mounted therein, electric means of a unique construction and arrangement in said outer container for rapidly and uniformly heating the inner container and the contents thereof to the desired temperature.

Other objects of the invention are to provide an electric caldron of the character set forth which will be comparatively simple in construction, strong, durable, compact, light in weight, portable, attractive in appearance, economical in operation, which may be safely handled, and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of an electric caldron constructed in accordance with the present invention.

Figure 2 is a view in front elevation of the device.

Figure 3 is a view in vertical section, taken substantially on the line 3—3 of Figure 1.

Figure 4 is a view in horizontal section, taken substantially on the line 4—4 of Figure 3.

Figure 5 is a fragmentary view in elevation of a portion of the interior of the outer container.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a stand which is designated generally by reference character 1. The stand 1 includes a base 2 which may be mounted on any suitable support. The base 2 is substantially U-shaped to accommodate a suitable receptacle (not shown) to receive the fat. Rising from the bight portion of the base 2 is a standard 3.

Mounted over the base 2 on the upper end portion of the standard 3 is a substantially frustoconical outer container 4. As illustrated to advantage in Figure 3 of the drawings, the bottom of the outer container 4 has formed therein a centrally located opening 5. The container 4 includes a shell 6 of metal or other suitable material. Mounted in the shell 6 is a lining 7 of suitable refractory material. A heat insulating element 8 of asbestos or other suitable material is interposed between the lining 7 and the shell 6.

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The refractory lining 7 has formed integrally with its inner periphery a spiral of substantially pyramidal radiants 23 which are immediately adjacent each other. The radiants 23 support a coiled electric element 10 in the refractory lining 7 and project inwardly therebeyond.

The container 4 accommodates a removable, substantially conical inner receptacle or container 11 which rests on the points of the radiants 23. Depending from the lower end of the inner container 11 is a discharge spout 12 which projects downwardly through the opening 5. A manually operable valve 13 controls the discharge spout 12.

The inner container 11 extends above the open top of the outer container 4 and has fixed thereon a handle 14. A removable lid 15 is provided for the inner container 11. A suitable lifting knob or handle 16 is formed integrally with the lid 15. Formed in the under surface of the lid 15 is a plurality of annular grooves or channels 17 providing lands or eaves 9.

The element 10 of the outer container 4 is electrically connected to a suitable socket 18 on said container. The socket 18 receives a plug 19 on one end of an attachment cord 20. A control switch 21 is interposed in the cord 20. A conventional plug 22 is provided on the other end of the cord 20.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, when rendering or frying fat, the meat scraps are placed in the inner container 11 and the lid 15 is mounted thereon. A suitable receptacle is placed within the confines of the base 2 beneath the discharge spout 12, and the valve 13 is opened. The switch 21 is then closed for heating the electric element 10. Thus, the inner container 11 and the contents thereof are brought rapidly and uniformly to the desired temperature for extracting the fat therefrom without stirring or basting, the scraps falling to new positions of contacts and exposures. The rendered fat flows downwardly by gravity in the inner container 11 and is discharged through the spout 12 into the aforementioned receptacle therebeneath. The construction and arrangement of the element 10, the radiants 23, etc., is such that maximum heating efficiency is had through centripetal radiation, etc., due to the

conical shape of the container and the pyramidal shape of the radiants 23. The lid 15, which is a highly important and desirable feature of the invention, effectively retains substantially all heat, odors, vapors, etc., in the caldron, in addition to confining spatterings thereto. Such spatterings, vapors, etc., gravitate to the lands 9 and drop onto the material in the caldron, being thus prevented from running to the sides and overflowing, as would occur if the under surface of the lid 15 were flat or substantially so. The annular lands 9 also prevent the fat from running out should the lid become tilted. Further, the annular concentric grooves or channels 17 are formed to provide substantially parabolic surfaces which reflect the heat downwardly from the under surface of the lid 15. When substantially all of the fat has been recovered, the valve 13 may be closed or left open and the inner container 11 may be readily removed from the outer container 4 through the medium of the handle 16 for emptying and cleaning. When the device is used for purposes other than rendering fat, the valve 13 may be closed or left open.

It is believed that the many advantages of an electric caldron constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. An electric caldron of the character described comprising a substantially frusto-conical outer container including a refractory lining, an electric heating element in the lining, substantially pyramidal radiants integral with the lining, said radiants retaining the element in position and projecting inwardly therebeyond, and a substantially conical inner container removably mounted in the outer container and adapted to be heated by the element and the radiants, said inner container resting on the points of said radiants.

2. An electric caldron of the character described comprising a stand, a substantially frusto-conical outer container mounted on the stand and having an opening in its bottom, said outer container including a shell, a refractory lining in said shell, an insulating medium between said lining and the shell, an electric heating element mounted in the lining, substantially pyramidal radiants integral with the lining, said radiants retaining the element in position and projecting inwardly beyond said element, a substantially conical inner container removably mounted in the outer container and resting on the radiants to be heated by the element and said radiants, and a valve-controlled discharge spout depending from the inner container and extending downwardly through the opening in the outer container.

3. An electric caldron of the character described comprising a stand, a substantially frusto-conical outer container mounted on the stand and having an opening in its bottom, said outer container including a shell, a refractory lining in said shell, an insulating medium between said lining and the shell, inwardly directed annular locking flanges on the ends of said shell for locking said insulating medium in position, an electric heating element mounted in the lining, substantially pyramidal radiants integral with the lining, said radiants retaining the element in position and projecting inwardly beyond said element, a substantially conical inner container removably mounted in the outer container and resting on the radiants to be heated by the element and said radiants, and a valve-controlled discharge spout depending from the inner container and extending downwardly through the opening in the outer container.

4. An electric caldron of the character described comprising a stand, a substantially frusto-conical outer container mounted on the stand and having an opening in its bottom, said outer container including a shell, a refractory lining in said shell, an insulating medium between said lining and the shell, inwardly directed circular locking flanges formed on the ends of said shell for locking said insulating medium in position, a downwardly extending lip on the end of said upper flange adapted to seat on the top of said refractory lining to lock the same in said shell, an electric heating element mounted in the lining, substantially pyramidal radiants integral with the lining, said radiants retaining the element in position and projecting inwardly beyond said element, a substantially conical inner container removably mounted in the outer container and resting on the radiants to be heated by the element and said radiants, and a valve-controlled discharge spout depending from the inner container and extending downwardly through the opening in the outer container.

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