Aug. 29, 1950 W. T. BRAND 2,520,304

HONEY CAPPING MELTER

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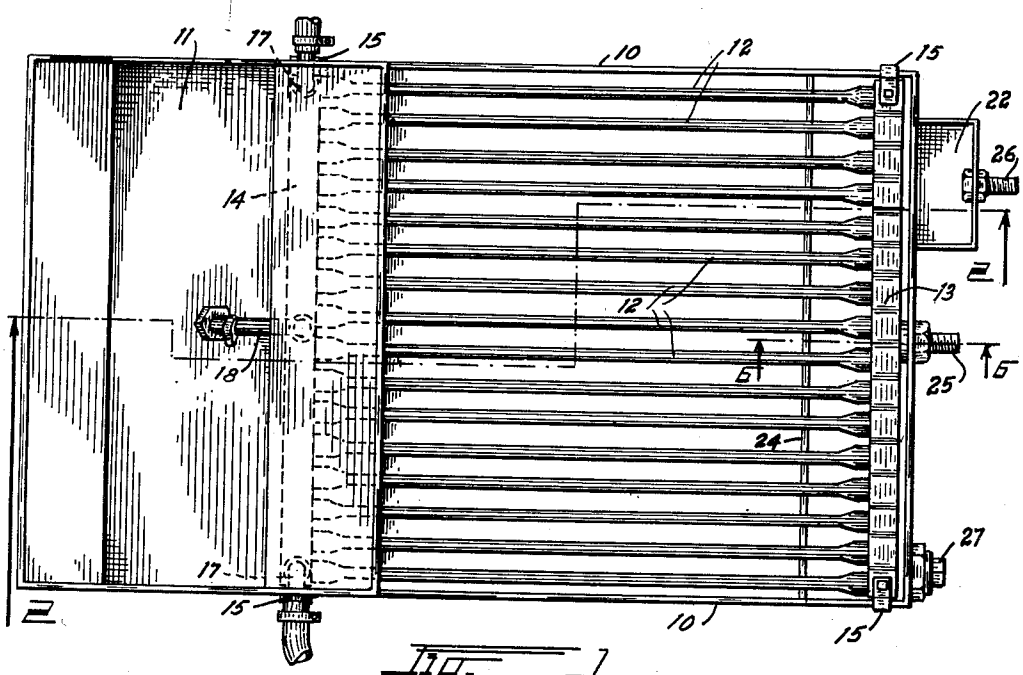


Fig. 1

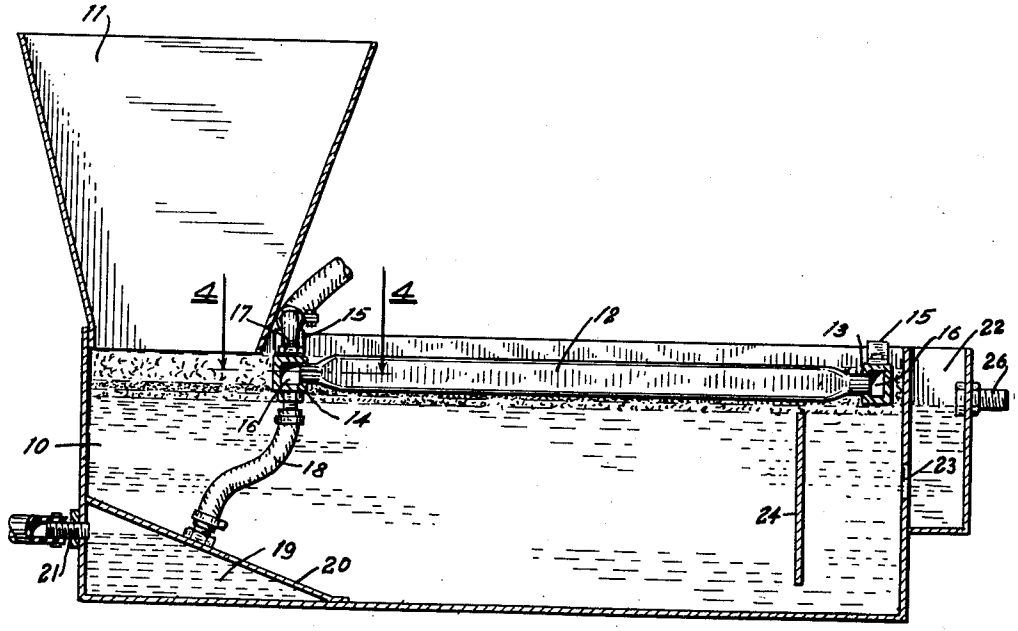


Fig. 2

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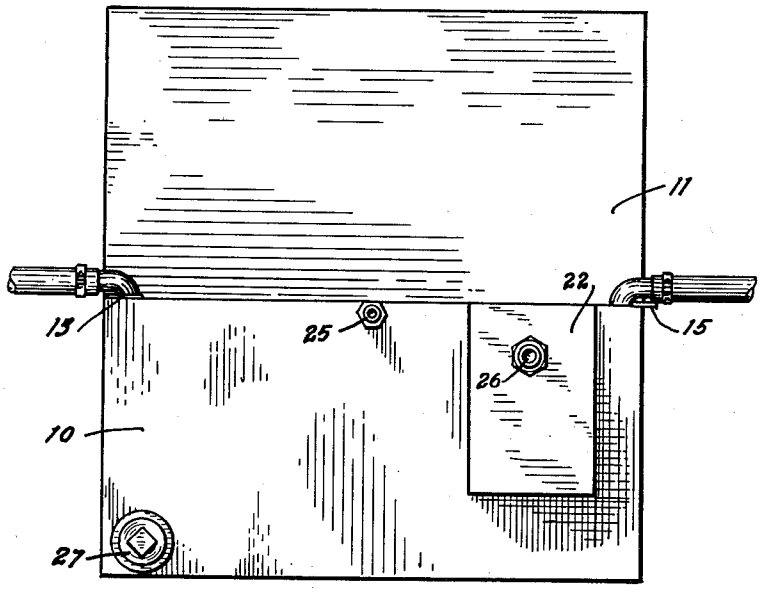


Fig. 3.

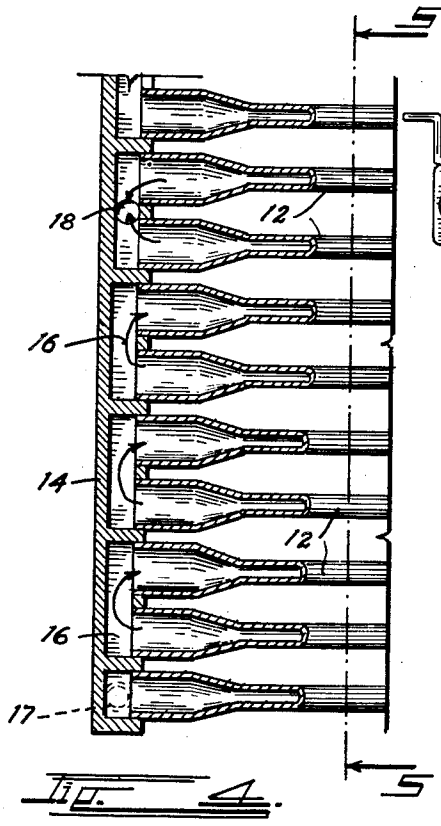


Fig. 4.

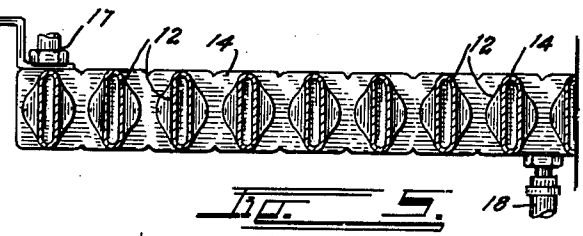


Fig. 5.

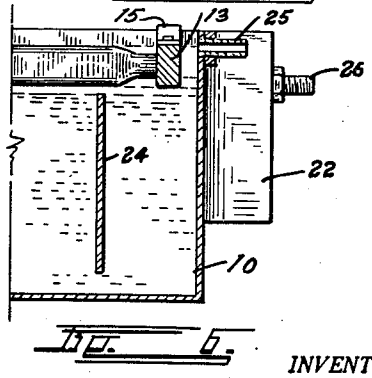


Fig. 6.

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HONEY CAPPING MELTER

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Application March 4, 1947, Serial No. 732,281

4 Claims. (Cl. 210—52.5)

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This invention relates to a honey capping melter. Honey is extracted from combs by slicing the tops from the latter with a heated knife. These tops, known as "cappings," consist principally of wax with a percentage of honey adhering thereto. This invention relates to a device for melting the cappings and separating the wax from the honey so that both may be recovered.

The principal object of the invention is to provide a device of this character which will rapidly and completely separate the wax from the honey in a continuous operation without clogging and without overheating or scorching the honey.

Another object of the invention is to so construct the device so that it will require but a minimum of attention on the part of the operator and will be economical to operate, and so that the recovered honey will not be contaminated with wax, slum-gum, or other impurities.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a plan view of the improved capping melter;

Fig. 2 is a longitudinal section, taken on the line 2—2, Fig. 1;

Fig. 3 is an end view thereof;

Fig. 4 is a plan view partly in section of a heating grid employed in the melter; and

Fig. 5 is a detail section taken on the line 5—5, Fig. 4; and

Fig. 6 is a detail section through a typical heating grid tube taken in the line 6—6, Fig. 1.

The melter comprises an open pan 10, preferably but not necessarily rectangular in cross-section. The pan is provided at its intake extremity with an upwardly extending receiving hopper 11 extending the full width thereof.

A heating grid, consisting of a plurality of parallel metallic tubes 12, extends from the hopper 11 to the discharge extremity of the pan. The tubes 12 extend between two steam headers 13 and 14 which are removably suspended from the sides of the pan upon suitable hangers 15.

The headers are constructed to provide internal connecting passages 16 which connect the tubes in pairs and provide a continuous alternating path of flow through the adjacent tubes. The tubes themselves are flattened vertically to present a maximum of heating surface at the sides thereof.

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The heating grid is positioned horizontally just below the top of the pan 10 and is supplied with live steam from any suitable source through intake hose nipples 17, one being positioned at each extremity of the header 14. The steam and condensate discharge from the mid-point of the header 14 through a discharge conduit 18 to a hot water compartment 19.

The compartment 19 is formed by placing an inclined sub-bottom 20 in the pan 10 immediately below the discharge of the hopper 11. The water overflows from the compartment 19 through a discharge nipple 21.

A honey receiving chamber 22 is formed on one extremity of the pan 10 and communicates with the interior of the latter through a submerged honey outlet 23. A baffle plate 24 extends across the pan 10 in front of the honey outlet 23. The baffle plate 24 terminates above the bottom of the pan 10 and below the grid as shown in Fig. 2. A wax outlet 25 is provided in the discharge extremity of the pan 10 above the heating grid and a honey overflow 26 is positioned in the wall of the honey chamber 22, immediately below the heating grid. It is preferred to have the bottom of the wax outlet 25 in line with the top of the grid, and the bottom of the honey overflow 26 in line with the bottom thereof.

In use, the comb cappings are dumped in the hopper 11 and descend into the hot honey over the hot sub-bottom 20. This partially softens and initiates the melting of the wax. The melted wax and the unmelted portions thereof then rise to the surface of the honey between the heated tubes 12. This completes the melting thereof and the melted wax flows off through the outlet 25. No wax can reach the submerged honey outlet 23 due to its difference in specific gravity and to the baffle plate 24 which prevents submerged wax pieces from being carried to the honey chamber 22.

The water for the hot water compartment 19 is supplied by the condensation of the steam in the tubes 12. It will be noted that the process is continuous and that wax and honey will flow from the melter as rapidly as the cappings are deposited in the hopper 11. A clean-out-plug 27 is provided for the final clean out of the entire device.

While a specific form of the improvement has been described and illustrated herein, it is de-

sired to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A honey capping melter comprising: an open pan of greater length than width and having intake and discharge extremities; a hopper supported over said pan at the intake extremity thereof; a heating grid extending from said hopper to the discharge extremity of said pan and adjacent the top thereof; a honey receiving chamber on said pan at the discharge extremity; a honey outlet communicating between the pan and said chamber below the solution level of said pan; a honey overflow from said chamber positioned below the general plane of said grid; and a wax outlet from said pan having its intake positioned above the general plane of said grid.

2. A honey capping melter comprising: an open pan of greater length than width and having intake and discharge extremities; a hopper supported over said pan at the intake extremity thereof: a heating grid extending from said hopper to the discharge extremity of said pan and adjacent the top thereof; a honey receiving chamber on said pan at the discharge extremity; a honey overflow from said chamber positioned below the general plane of said grid; a honey outlet communicating between the pan and said chamber below the level of said overflow; a wax outlet from said pan positioned above the general plane of said grid, said grid consisting of plurality of parallel tubes extending longitudinally of said pan; and a header at each extremity of said tubes supporting and connecting each tube with the next adjacent tube.

3. A honey capping melter comprising: an open pan of greater length than width and having an intake and a discharge extremity; a hopper supported over said pan at the intake extremity thereof; a heating grid extending from said hopper to the discharge extremity of said pan and adjacent the top thereof; a honey receiving chamber on said pan at the discharge extremity; and a honey overflow from said chamber positioned below the general plane of said grid; a honey outlet communicating between the pan and said chamber below the level of said overflow, said tubes being flattened transversely so as to have a greater height than width.

4. A honey capping melter comprising: an open pan; a feed hopper supported over said pan to discharge therein; an open heated grid suspended horizontally in said pan adjacent the top thereof and alongside of said hopper; a honey receiving chamber adjacent said pan; a passage communicating between said pan and said chamber at substantially the mid-height of said pan for transferring honey from said pan to said chamber; a wax outlet from said pan positioned at an elevation above said grid; and a honey overflow from said chamber positioned at an elevation below said grid.

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