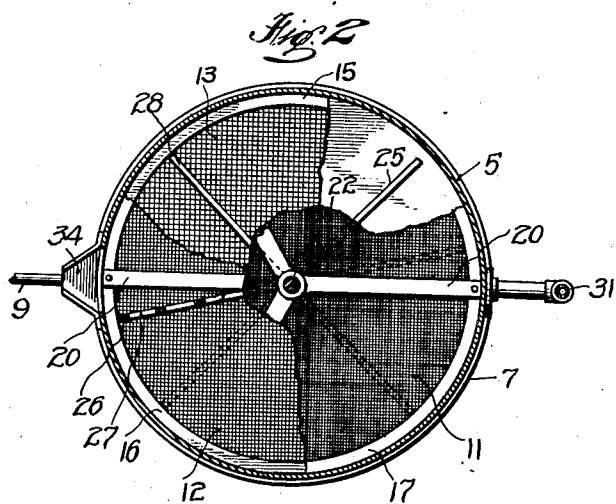
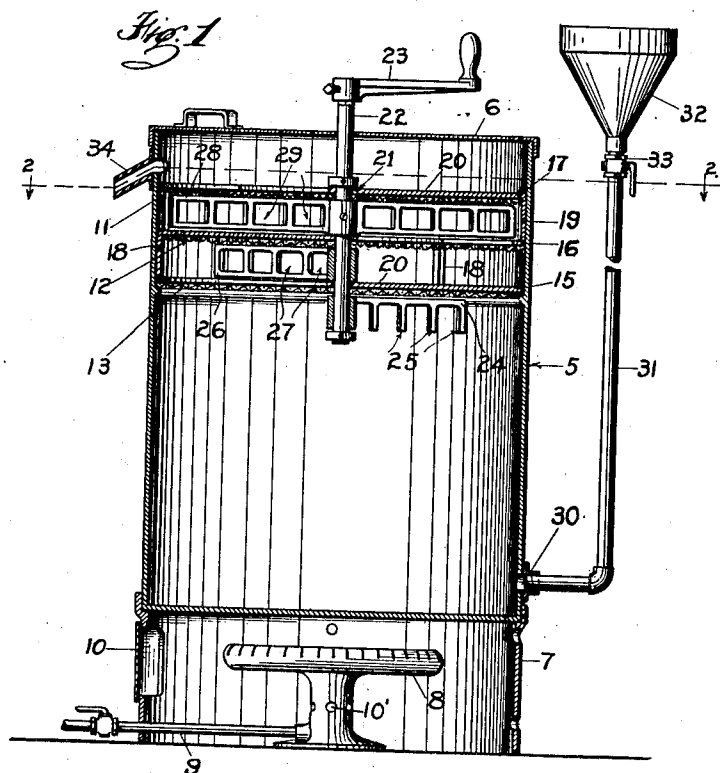


No. 871,046.

PATENTED NOV. 12, 1907.

G. B. SAVAGE.
BEESWAX SEPARATOR AND PURIFIER.
APPLICATION FILED OCT. 3, 1906.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE B. SAVAGE, OF OAK GROVE, CALIFORNIA.

BEESWAX SEPARATOR AND PURIFIER.

No. 871,046.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed October 3, 1906. Serial No. 337,221.

To all whom it may concern:

Be it known that I, GEORGE B. SAVAGE, a citizen of the United States, residing at Oak Grove, in the county of San Diego, State of California, have invented new and useful Improvements in Beeswax Separators and Purifiers, of which the following is a specification.

This invention relates to an apparatus for separating and purifying the wax contained in old honey combs and slum-gum from all impurities and foreign substances, so as to render the wax fit for commercial purposes.

Heretofore in the preparation of commercial beeswax, old honey combs, "slum-gums" and other bee products containing wax, were first subjected to a heating so as to reduce the combs to a liquid state before removing therefrom the foreign substances. This practice has been found to be totally inadequate, as the removal of the dirt and foreign substances from the wax could only be accomplished by straining and squeezing the liquid through bags or screens, thus resulting in the "freezing" of the wax before the impurities could be eliminated.

By the use of my improved separator and purifier all the above stated objections are eliminated, rendering the purifying process an extremely simple, inexpensive and satisfactory operation.

An object of my invention is to provide an apparatus in which the operation of separating and purifying the bees-wax is continuous.

Another object of my invention is to provide an apparatus in which the liquid wax is maintained at a relatively high temperature, so that the screens secured therein will be kept clear of all impurities, and at the same time to thoroughly sterilize the liquid so as to free the resultant product from all disease germs that are liable to be introduced thereto by foul or diseased combs.

A further object is to provide an apparatus in which the refined product continually flows therefrom during its operation.

A final object is to provide an apparatus which is simple and efficient in operation and economical in construction.

I accomplish these objects by means of the device described herein and illustrated in the accompanying drawings forming a part of these specifications in which:—

Figure 1.—is a central vertical section of my improved apparatus. Fig. 2.—is a sectional plan view taken on line 2—2, of Fig. 1.

Referring to the drawings 5 represents a wax purifying receptacle preferably cylindrical in form, provided with a removable cover 6 and mounted on a base 7. Secured in the space formed by the base and the

bottom of the receptacle 5 is a burner 8 connected by pipe 9 to a fuel supply (not shown). A hand hole 10 in the base provides means for access to the burner and openings 10' are for the admission of air to the burner.

Secured near the top of the purifying receptacle 5 are a plurality of screens 11, 12 and 13 of varying meshes. Screen 13 is preferably the coarsest and rests on an annular ledge or ridge formed on the inside of the receptacle 5. These screens are preferably attached to annular supporting rings 15, 16 and 17. Rings 16 and 17 are provided with downwardly extending legs 18 and 19 respectively, legs 18 resting on ring 15 and legs 19 resting on ring 16. Each of the annular rings have a plurality of radial arms 20 extending to a central bearing 21, in which is mounted a vertically disposed operating shaft 22, to the outer end of which is detachably secured an operating handle 23. Shaft 22 extends downwardly and beyond screen 13, and is provided on its lower end with an agitator arm 24 having a plurality of teeth 25 secured thereto. Rigidly secured on shaft 22 and between screens 12 and 13 is an agitator arm 26 provided with openings 27, and between screens 11 and 12 another agitator arm 28 is rigidly secured to shaft 22 and is provided with openings 29. The purpose of these agitator arms are to keep the screens free from clogging during the operation of refining and purifying.

Receptacle 5 is provided with a water inlet 30 which is connected by pipe 31 to a water pressure tank 32, valve 33 secured to pipe 31 controlling the flow of water into the purifying receptacle. Near the upper edge of receptacle 5 is an outlet 34 through which the refined wax is discharged to molds (not shown).

In the operation of the device the cover 6 is removed and the supporting rings and other mechanism taken out. The receptacle is then filled with old combs and other bee products containing wax, and water is admitted through inlet 30 to the purifying receptacle in suitable quantities. The interior mechanism is then replaced and the cover secured to the receptacle and the burner is lighted. As the temperature of the mass increases and comes to a boil, the operator rotates shaft 22 by means of handle 23 so as to keep the impurities away from the screens by means of the agitator arms secured to the shaft. Screen 13 being coarsest keeps all the larger impurities from rising above it and screens 12 and 11 being finer thoroughly strain the liquid before it leaves the discharge outlet 34. During the operation of refining the wax, water is admitted from the fluid pressure tank through inlet 30 so as to always force the refined liquid wax in the receptacle upwardly to the outlet 34, thus making the operation continuous until all the wax has been extracted.

It will be noted from the foregoing description that I have produced an apparatus that renders the refining of bees-wax an extremely simple operation.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet adjacent the top thereof; a plurality of removable screens each of a different mesh mounted transversely in said receptacle adjacent the top thereof; agitating and scraping means mounted in said receptacle adjacent said screens; and means to operate said agitator means.
2. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to inlet of said purifying receptacle; a plurality of screens in said purifying receptacle; agitating and scraping means mounted in said receptacle; and means to operate said agitator means.
3. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said purifying receptacle; a plurality of screens removably secured in said purifying receptacle; agitating and scraping means revolvably mounted in said receptacle; and means to operate said agitator means.
4. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said purifying receptacle; pressure tank controlling means; a plurality of removable screens of varying meshes secured in said receptacle; agitating and scraping means revolvably mounted in said receptacle; and means to rotate said agitator means.
5. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said receptacle; pressure tank controlling

means; a plurality of removable screens of varying meshes secured in said receptacle adjacent the top thereof; a revoluble shaft mounted in bearings secured in said receptacle; agitating and scraping arms rigidly secured to said shaft; and means to rotate said shaft.

6. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said receptacle; pressure tank controlling means; a plurality of removable screens of varying meshes adjacent each other secured in the top of said receptacle; a revoluble shaft mounted in bearings secured in said receptacle; radially projecting agitating and scraping arms rigidly secured to said shaft, an agitator arm rotating directly beneath each of the removable screens, and means to rotate said shaft.

7. A bees-wax separator and purifier, comprising a cylindrical receptacle having inlet and outlet means secured thereto; heating means located adjacent the bottom of said receptacle; a water pressure tank located above said receptacle communicating with said inlet means; a plurality of removable screens of varying meshes located in the top of said receptacle, said screens being equally spaced apart, the screen of the finest mesh being located above the others; a revoluble shaft mounted in bearings secured in said receptacle; a plurality of radially extending agitator arms secured to said shaft, a pair of said arms being located directly beneath each of said screens and adapted to contact therewith; and means to rotate said shaft.

In witness that I claim the foregoing I have hereunto subscribed my name this 22nd day of September, 1906.

GEORGE B. SAVAGE.

Witnesses:

EDMUND A. STRAUSE,
M. A. JONES.