(No Model.)

# O. M. HILL.

## CENTRIFUGAL HONEY EXTRACTOR.

No. 494,421. Patented Mar. 28, 1893.

Fig: 3.

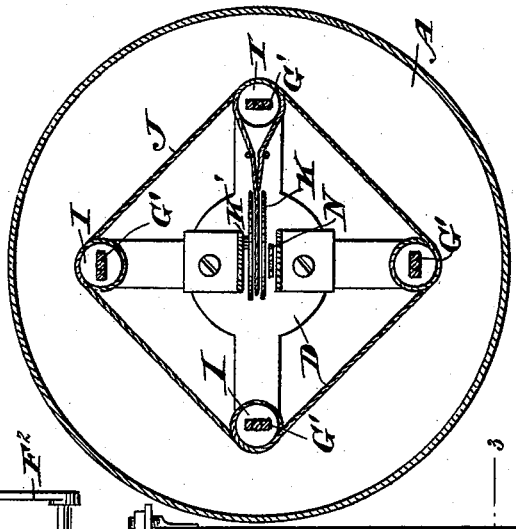


Fig: 1.

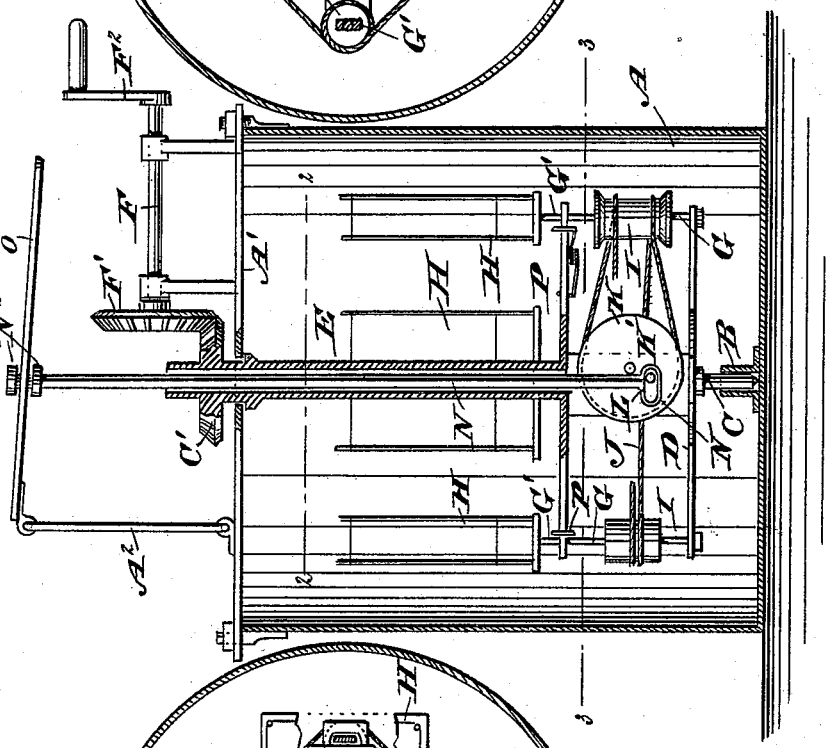
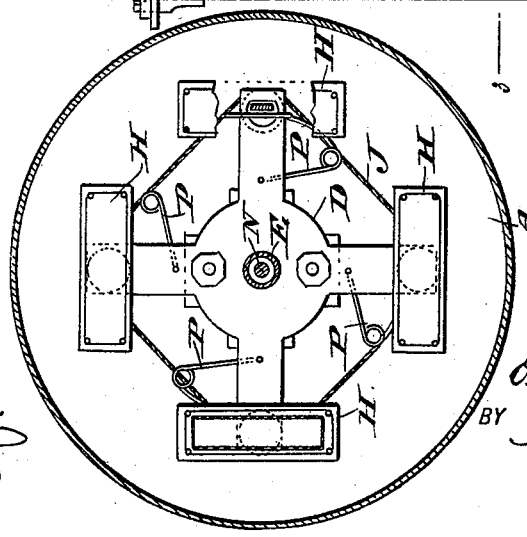


Fig: 2.



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## CENTRIFUGAL HONEY-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 494,421, dated March 28, 1893.

Application filed October 1, 1892. Serial No. 447,561. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR MELVAN HILL, of Santa Paula, in the county of Ventura and State of California, have invented a new and Improved Centrifugal Honey-Extractor, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved centrifugal honey extractor which is simple and durable in construction, very effective in operation and arranged to be conveniently and readily reversed to change the position of the baskets carrying the combs, so that the honey is extracted from both sides of the combs.

The invention consists of a frame mounted to turn and carrying shafts supporting the baskets, and a mechanism of special construction for reversing the position of the shafts and baskets.

The invention also consists of certain parts and details and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a sectional plan view of the same on the line 2—2 of Fig. 1; and Fig. 3 is a similar view of the same on the line 3—3 of Fig. 1.

The improved honey extractor is provided with a suitably constructed vessel A in the bottom of which is arranged a step B engaged by a shaft C carrying a frame D provided at its upper end with a hollow shaft E in alignment with the shaft C and mounted in bearings formed in a cross bar A′ secured to the open top of the vessel A.

On the hollow shaft E and near the upper end of the same is secured a bevel gear wheel C′, in mesh with a like gear wheel F′ secured on the horizontally-extending shaft F journaled in suitable bearings secured to the cross bar A′. A crank $F^2$ on the outer end of the shaft F serves to turn the latter so that the motion of the shaft is transmitted by the gear wheels F′ and C′, to the hollow shaft E, and consequently to the frame D which is thus caused to revolve in the vessel A.

In the frame D are journaled a series of vertically disposed shafts G, each supporting at its upper end a basket H into which a comb of honey can be inserted. On each shaft G is secured a drum I, around which passes several turns of an endless rope or belt J, also passing from one of the drums to a grooved pulley K journaled on a stud K′ secured to the frame D at or near the middle thereof, as plainly shown in the drawings. On the front face of this pulley K is secured a crank pin L engaged by an elongated slot N′ formed on the lower end of a rod N extending upwardly through the hollow shaft E. On the upper end of the said rod N are formed two collars $N^2$ engaged by a lever O, fulcrumed on a link $A^2$ pivoted to the cross bar A′, as shown. By the operator swinging the lever O upward or downward, the position of the pulley K can be changed, the said pulley being revolved on its stud K′, so that a traveling motion is given to the rope J which, on account of passing around the several drums I, causes the shafts G to turn, the movement being one-half turn on either the up or down stroke of the lever O.

In order to lock the shafts G in position during the time the reversing gear is not actuated as above described, I form part of each shaft with a flat part G′ on which presses the free end of a spring P secured on the frame D.

The operation is as follows: When the several parts are in the position as illustrated in the drawings, and the baskets H are filled with the combs, then the operator turns the handle $F^2$ so as to impart a turning motion to the frame D, and consequently to the baskets H supported on the said frame, whereby the honey on the outer side of the combs is extracted by centrifugal force, as is well known. The extracted honey collects in the lower part of the vessel A and when all the honey from the outer side of the combs has been extracted, the operator, without stopping the revolving motion of the frame D, swings the lever O upward so that the rod N pulls on the crank pin L to change the position of the pulley K, whereby a rotary motion is given to the several shafts G, each of which makes a half-revolution, so that the former inner side of the comb becomes the outer side and the former empty outer side assumes an innermost position. On the further rotation of

the frame D, the honey of this half of the combs is extracted by centrifugal force. When all the honey has been extracted, as has been described, the operator stops turning the shaft F, removes the empty combs from the baskets H and refills the latter with filled combs, and the above described operation is repeated.

It will be seen that this device is very simple and durable in construction, and the several baskets carrying the combs can be readily reversed without interrupting the revolving of the frame D supporting the baskets.

It is understood that instead of the crank arm $F^2$ the shaft F may be provided with a pulley connected by belt with suitable machinery for imparting a rotary motion to the shaft F by power.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A centrifugal honey extractor comprising a frame mounted to revolve, a series of shafts journaled in the said frame, a basket secured on the upper end of each of the said shafts, drums secured on the said shafts, an endless rope or belt winding around the said drums, a pulley journaled in the said frame and over which passes the said belt or rope, the said pulley being mounted to turn, and means, substantially as described, for turning the said pulley to reverse the position of the said baskets, without interrupting the revolving of the said frame as set forth.

2. A centrifugal honey extractor comprising a frame mounted to revolve, a series of shafts journaled in the said frame, a basket secured on the upper end of each of the said shafts, drums secured on the said shafts, an endless rope or belt winding around the said drums, a pulley journaled in the said frame and over which passes the said belt or rope, the said pulley being mounted to turn, a crank pin secured in the face of the said pulley, a rod connected with the said crank pin, and means for imparting a sliding motion to the said rod, as set forth.

3. A centrifugal honey extractor comprising a frame mounted to revolve, a series of shafts journaled in the said frame, a basket secured on the upper end of each of the said shafts, drums secured on the said shafts, an endless rope or belt winding around the said drums, a pulley journaled in the said frame and over which passes the said belt or rope, the said pulley being mounted to turn, and springs engaging the said shafts for holding the same in position until reversed, substantially as shown and described.

OSCAR MELVAN HILL.

Witnesses:
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