(No Model.)

J. K. RUDYARD.

CENTRIFUGAL HONEY EXTRACTOR.

No. 263,228. Patented Aug. 22, 1882.

Fig. 1.

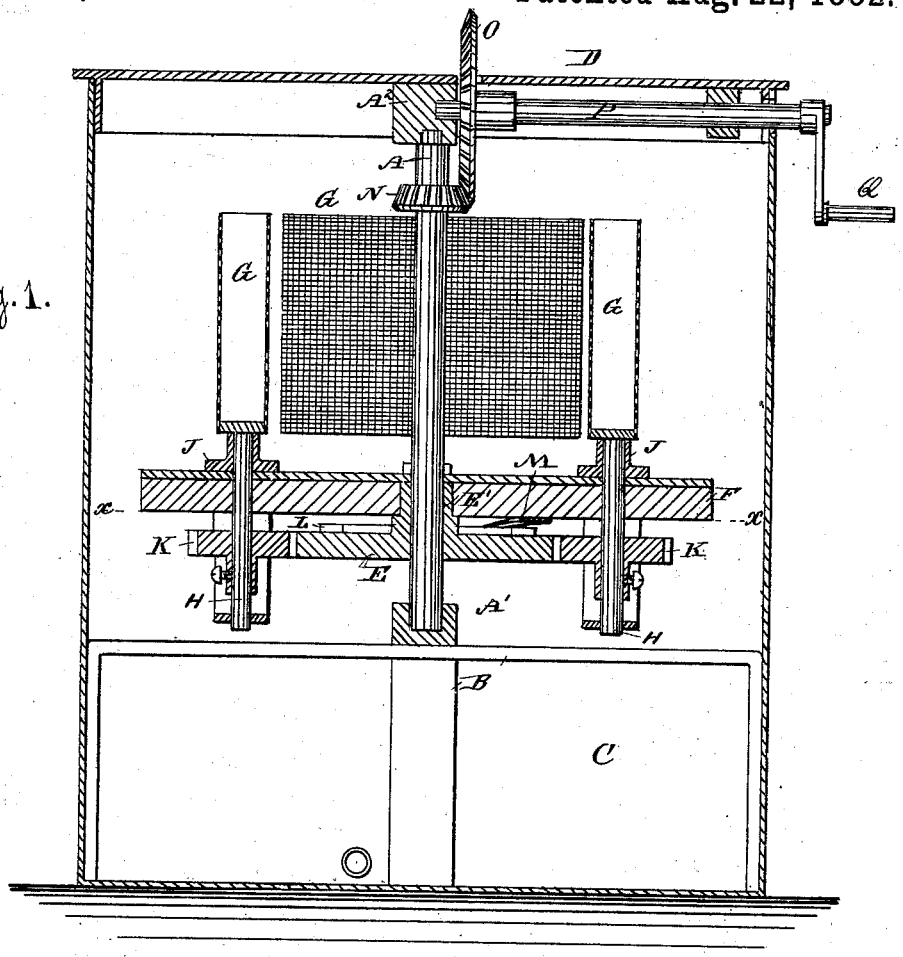
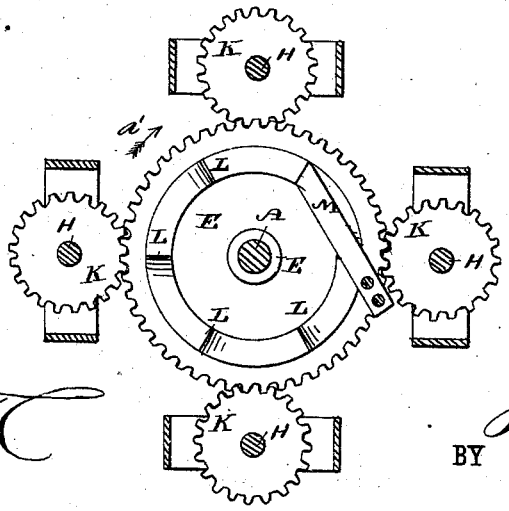


Fig. 2.



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JOSEPH K. RUDYARD, OF EAST NORTHPORT, NEW YORK.

CENTRIFUGAL HONEY-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 263,228, dated August 22, 1882.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH K. RUDYARD, of East Northport, in the county of Suffolk and State of New York, have invented a new and useful Improvement in Centrifugal Honey-Extractors, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate the reversing of the comb-holders of a centrifugal honey-extractor without stopping the machine.

The invention consists in a series of comb-holders resting on a plate or frame loosely mounted on a vertical shaft in a vessel, which comb-holders have pivots or pintles projecting from the bottoms, on which pintles pinions are mounted, which engage with a cog-wheel rigidly mounted on the shaft below the loosely-mounted plate, this cog-wheel being provided on its upper surface with a series of notches, and the plate or frame being provided on its under side with a pawl-strip adapted to catch on the notches, whereby the honey will be thrown from the combs by the centrifugal force when the shaft is rotated, and when the motion of the shaft is slackened the comb-holders will be reversed, as will be fully described hereinafter.

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 both the figures.

Figure 1 is a cross-sectional elevation of my improved honey-extractor. Fig. 2 is a cross-sectional plan view of the same on the line *x x*, Fig. 1.

A vertical shaft, A, is journaled at its lower end in a bearing, A′, resting on cross-pieces B of a vessel, C, the upper end of the shaft being journaled in a bearing, A^2, on the under side of the lid D. A cog-wheel, E, is rigidly mounted on this shaft A near its lower end, and on the collar E′ of this wheel E a circular plate or frame, F, is loosely mounted. The comb-holders G, made of wire-netting, are each provided with a pintle or pivot, H, projecting from the bottom of the same through collars J, projecting from the upper surface of the frame or plate F, the comb-holders resting on the upper edges of these collars J. A pinion, K, is mounted on each pintle or pivot H, these pinions engaging with the cog-wheel E. The cog-wheel E is provided on its upper surface with a series of notches, L, or equivalents, arranged in a circle, and a spring pawl-strip, M, is attached to the under side of the plate or frame F in such a manner that its free end can catch in these notches L. A bevel-pinion, N, is rigidly mounted on the upper end of the shaft A, and engages with a bevel cog-wheel, O, rigidly mounted on a horizontal shaft, P, journaled on the bearing-block A^2 and in the side of the vessel, which shaft is provided at its outer end with a crank, Q, or equivalent device.

The operation is as follows: The combs are uncapped and placed into the comb-holders G, which must be at right angles to radial lines from the shaft A to the pivots or pintles H. The shaft P is revolved, whereby the cog-wheel E will be revolved in the direction of the arrow *a′*, and as the pawl-strip M catches on one of the notches or equivalents L the plate F, with the comb-holders, will also be rotated in the direction of the arrow *a′*, and by the centrifugal force the honey will be thrown out of outer sides of the combs into the vessel C. When one side of the combs has been emptied the comb-holders must be reversed, so that the honey in the other sides of the combs can be thrown out. To accomplish this the motion of the shaft P is retarded, whereby the motion of the wheel E will also be retarded. The momentum carries the frame F around faster than the wheel E, and as the wheel E engages with the pinions K the latter will be rotated and will turn the comb-holders half-way round. By that time the end of the pawl-strip M has passed into the next notch L, and if the speed of the wheel E is now increased again this wheel E and the plate F will be rotated with the same rapidity and the comb-holders will remain in position. The comb-holders can thus be reversed very rapidly and easily by simply retarding the motion of the wheel E, which may be accomplished by holding back on the crank, or in some other suitable manner. The notches L must be so spaced that the movement of the pawl-strip M from one notch L to the other produces a half-rotation of the pinions K and the comb-holders G.

Any number of comb-holders can be combined with one cog-wheel E, according to the size of the machine.

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

1. In a honey-extractor, the combination, with the vessel C, of the rotary horizontal plate F, carrying perforated comb-holders G, vertically pivoted at their centers on said plate F, as shown and described.

2. The combination, with the plate F and central vertical shaft, A, of the comb-holders G, shafts H, pinions K, and spur-gear wheel E, as shown and described.

3. The combination, with the central vertical shaft, A, and the spur-gear wheel E, secured thereto, of the plate or disk F, free to turn thereon, the perforated comb-holders G, the vertical shafts H, the pinions K, and a connecting device like a pawl, and rack-teeth between the spur-wheel E and plate F, by means of which said plate is revolved by said gear in one direction only, as shown and described.

4. The combination, with the shaft A, wheel E, plate F, comb-holders G, shafts H, and pinions K, of the pawl M, secured to the wheel E, and the notches or teeth L in the plate F, as shown and described.

5. The combination, with the shaft A, wheel E, plate F, comb-holders G, shafts H, pinions K, and the pawl M, secured to the wheel E, of the notches or teeth L, arranged on the plate F at intervals corresponding to arcs of the wheel E equal to one-half a circle of the pinions K, for the purpose of reversing the comb-holders, as shown and described.

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