W. W. SOMERFORD.

HORIZONTAL HONEY EXTRACTOR.

APPLICATION FILED DEC. 14, 1916.

1,273,286.

Patented July 23, 1918.

4 SHEETS—SHEET 1.

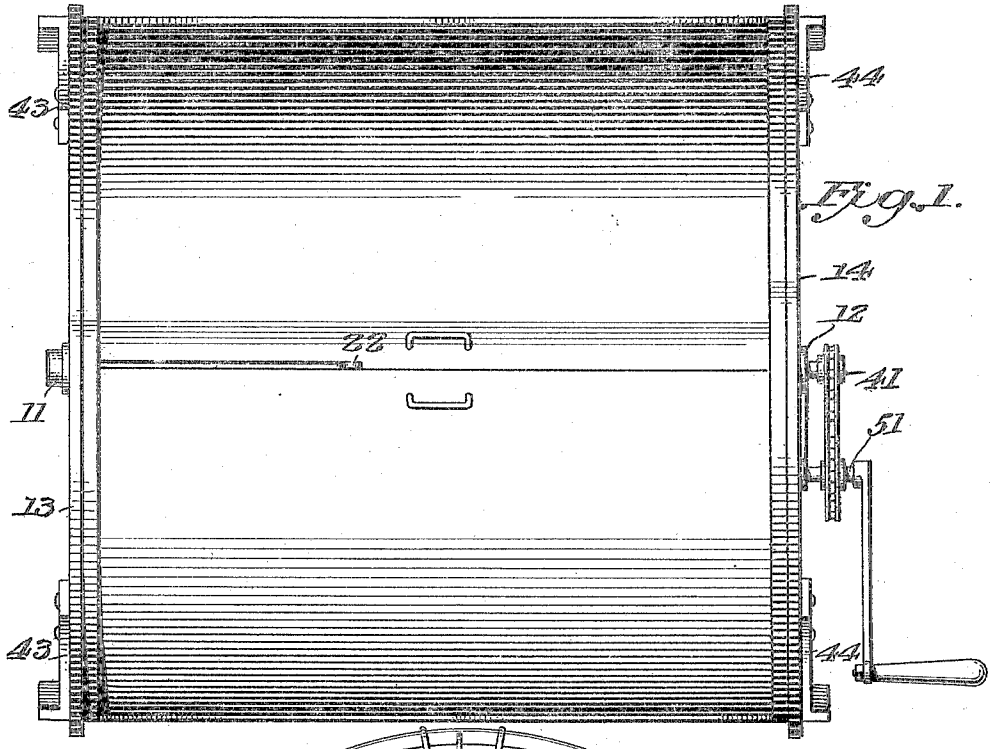


Fig. 1.

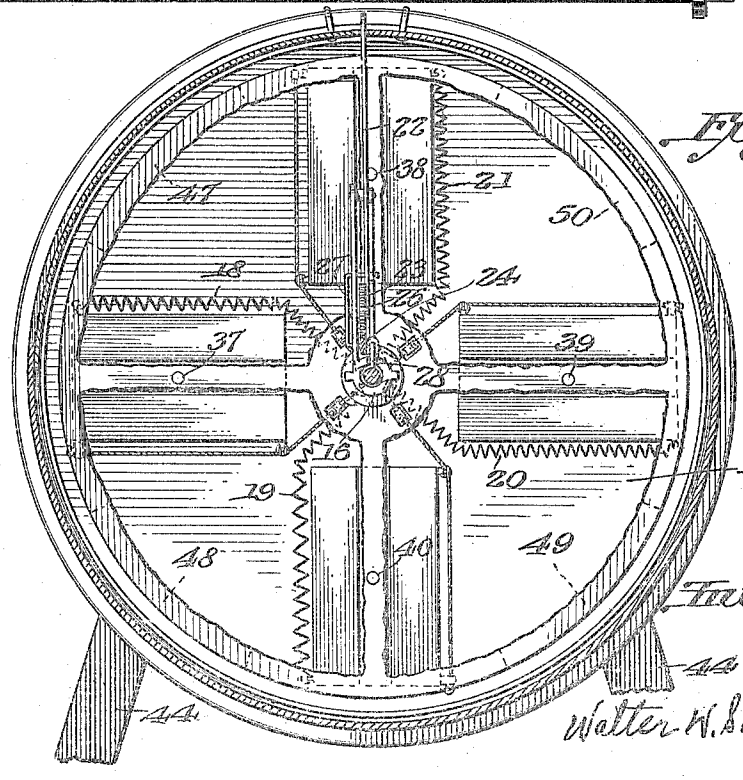


Fig. 2.

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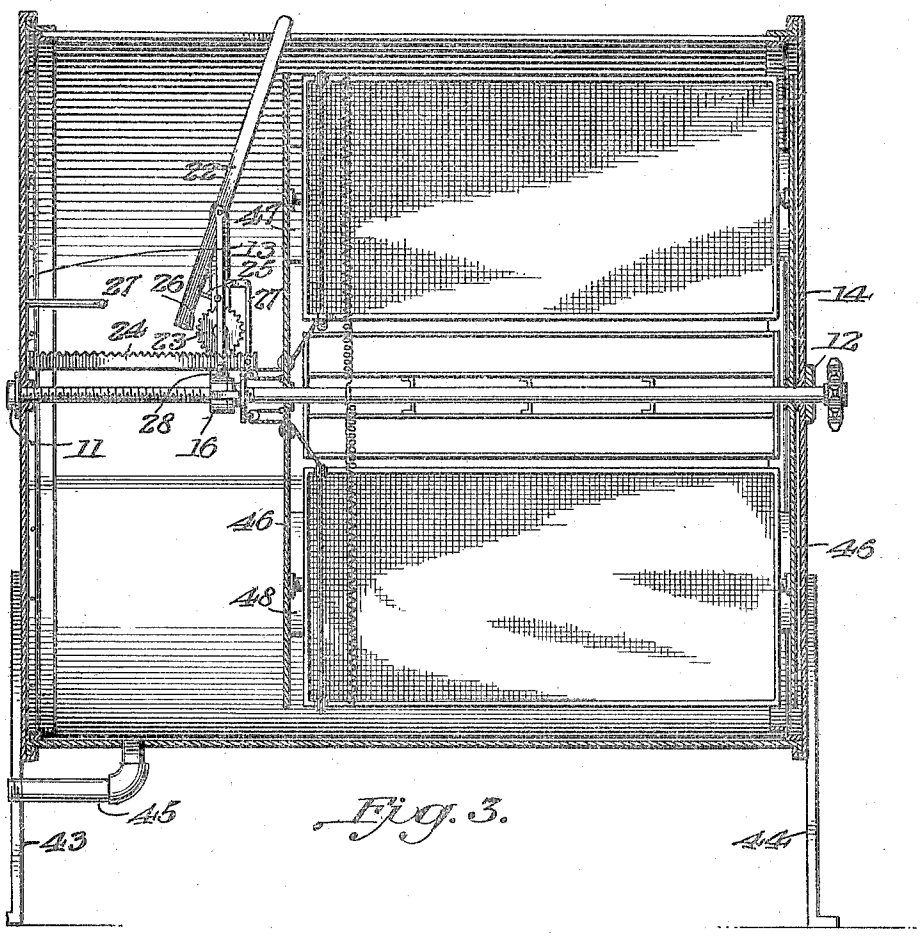


Fig. 3.

Fig. 4.

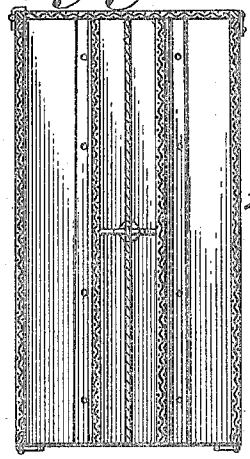
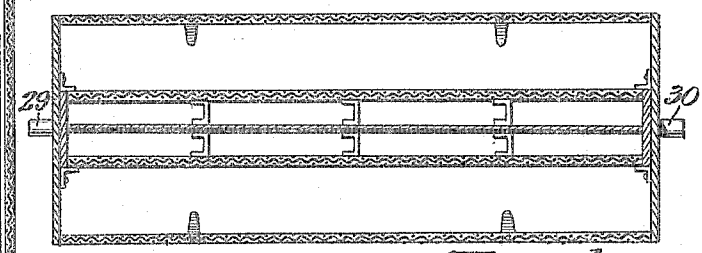


Fig. 5.



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Fig. 6.

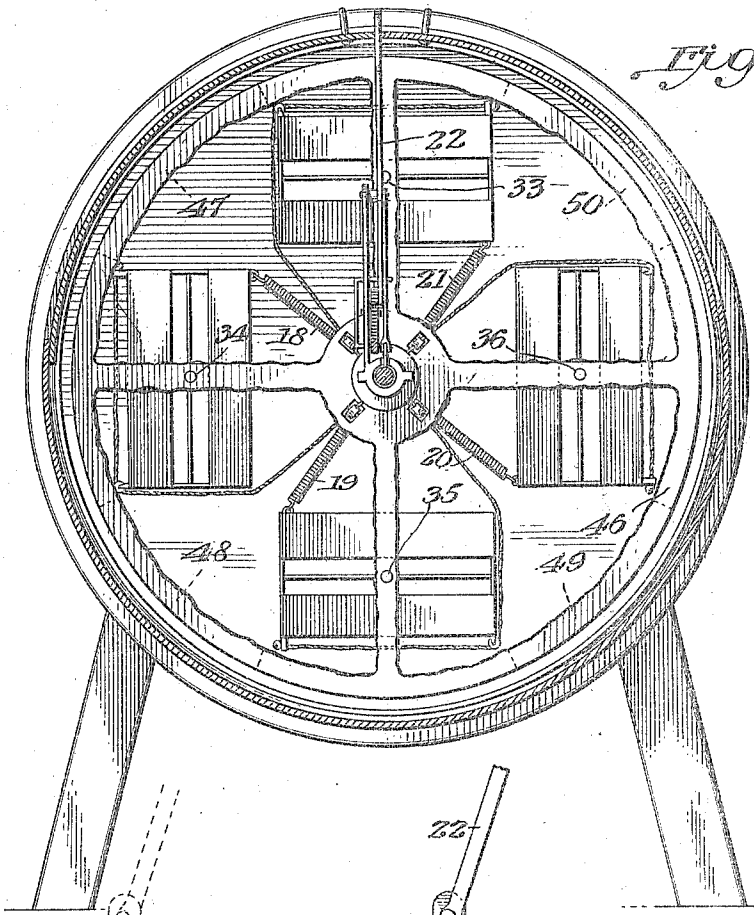
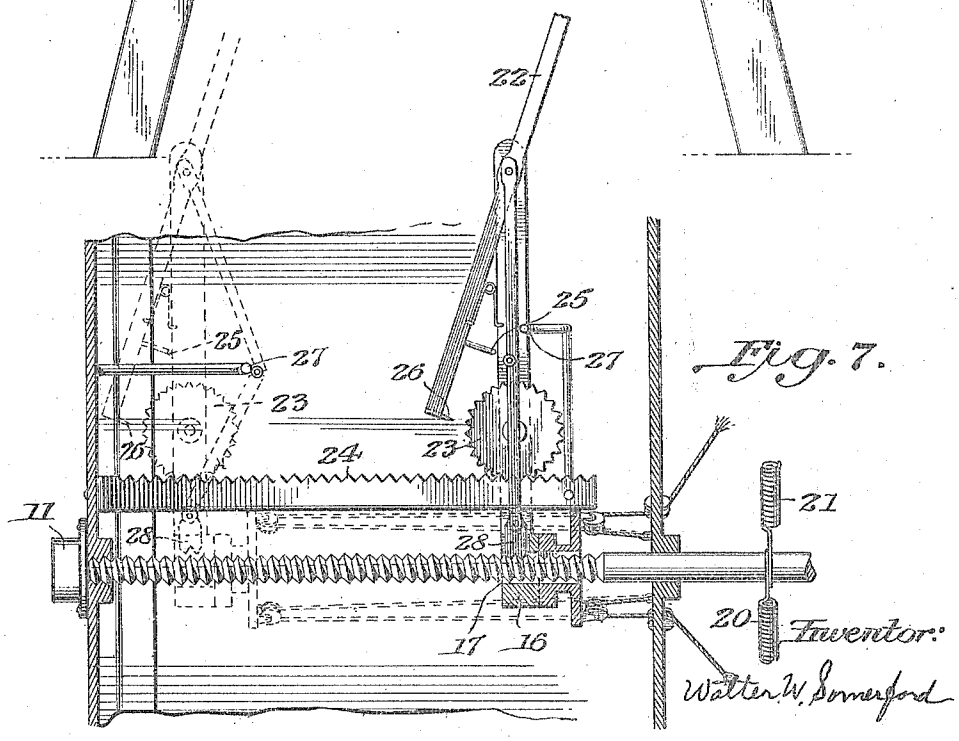


Fig. 7.



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Fig. 8.

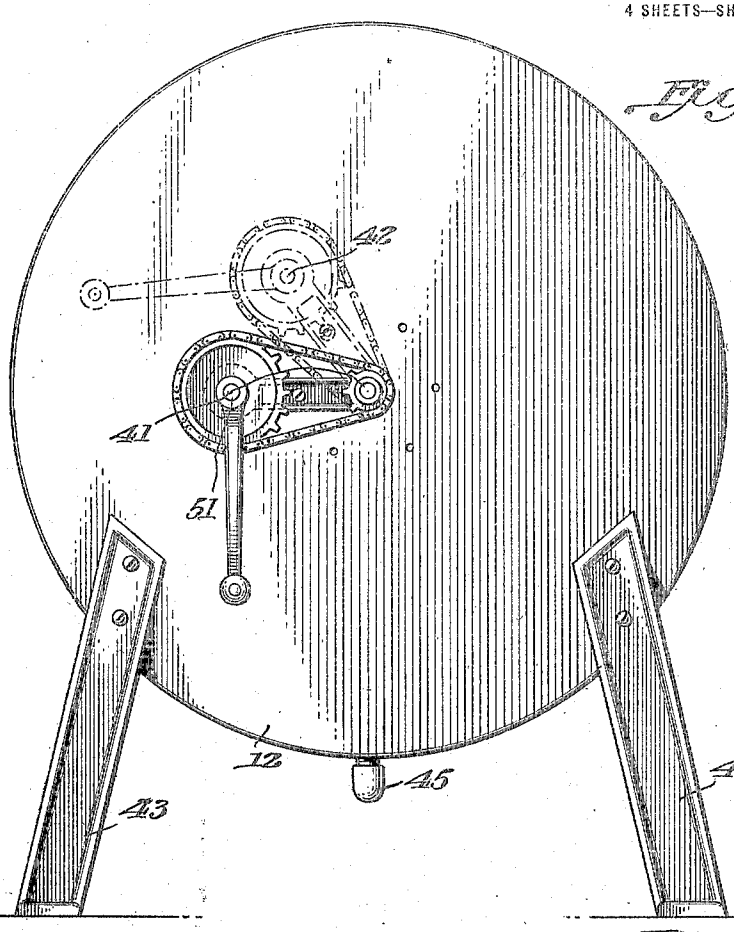


Fig. 10.

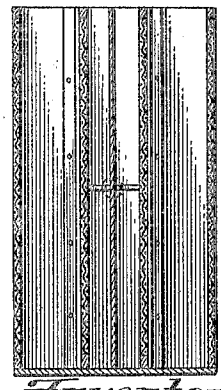
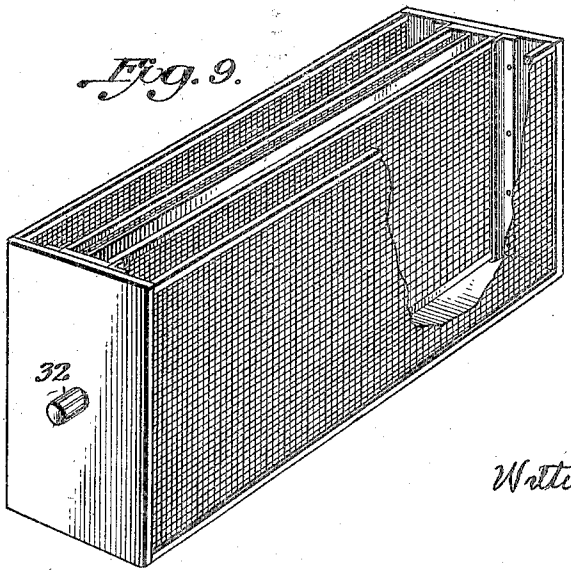


Fig. 9.



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UNITED STATES PATENT OFFICE.

WALTER W. SOMERFORD, OF ROSSLYN, VIRGINIA.

HORIZONTAL HONEY-EXTRACTOR.

1,273,286. Specification of Letters Patent. Patented July 23, 1918.

Application filed December 14, 1916. Serial No. 136,963.

To all whom it may concern:

Be it known that I, WALTER W. SOMERFORD, a citizen of the United States, residing at Rosslyn, in the county of Alexandria, in the State of Virginia, have invented a new and useful Horizontal Honey-Extractor, of which the following is a specification.

My invention relates to washing clothes, and extracting honey from the combs—with said combination cylinder machine, a cylinder body container horizontally mounted on legs to perform the two purposes—extracting honey with centrifugal force, or laundry washing with revolving clothes-comb baskets, and the object of my invention is to first provide a cylinder body container, and therein revolve a horizontally mounted cylinder-carrying-cylinder with said baskets pivoted between the cylinder heads, each pair of baskets separately mounted therein, and bodily movable therewith: and secondly; to provide automatic means to reverse the baskets in one direction while the cylinder is traveling with its axle continually straight-over in one direction, while the basket-pockets rotate automatically at predetermined times, independent of the continuous travel of the driven cylinder that is mounted in centers of container body cylinder, and thirdly: to provide cylinder construction readily closed and easily constructed with elimination of cross arms or bars, necessary in the perpendicular type of open top extractors now in universal use.

I attain this object by rotating automatic means, allowing driven cylinder to travel continuously in one direction while clothes baskets rotate constantly on their several axes journaled in traveling cylinder heads, between the periphery of the said cylinder heads and the driven axle, or shaft therein; said driven shaft carrying sleeve and threaded shoe, and automatic means to engage at predetermined times with threads on a screw shaped shaft to cause to rotate clothes-honey baskets.

I attain these objects by mechanism shown in accompanying drawings.

These combination objects and how they are performed are shown in the accompanying drawing and described in the specification and pointed out in the affixed claims.

In the drawings like characters show like parts of the several views:

Figure 1 is a top view looking down on the invention from above.

Fig. 2 is an end view with the cylinder head of the body container removed, to show clearly how the container-comb or clothes-pockets are reversed;

Fig. 3 is a view of the container body and rotatable cylinder split in half from end to end, of both container body and revoluble pocket carrier cylinder.

Fig. 4 is an end view of container pockets and Fig. 5 is a view looking through comb pockets showing separator sheets and screens attached to said metal sheet, with ribs to hold apart from said sheet, for the passing out and into the body container—the honey as fast as thrown from the inner sides of combs onto said metal sheet-separator.

Fig. 6 is a view showing pockets in operative position with comb faces to the periphery and pull cords for reversing; also the retractile spring for returning to initial position.

Fig. 7 is a side view of the splined and threaded driven shaft, that carries the cylinder heads of the rotatable pocket carrying cylinder; also showing toggle arm trip—parallel to rack and pinion—for determined, and predetermined stopping, and reversing when desired; the sliding sleeve carrying a threaded shoe, attached to an end of said toggle arm to trip and mesh, and unmesh said threaded shoe alternately at each end of rack, to go and come, pulling the reverse cords, tripping and releasing the springs to reverse automatically at predetermined times and places, for loading and unloading said revolving pockets.

Fig. 8 is an end view of the cylinder container body showing end of driven shaft and novel mode of raising or lowering the driving crank, also showing the legs of the horizontal cylinder body container.

Fig. 9 is a view showing through the broken away side of the pocket, how the middle sheets, and ribs, can be removed, or slid out of the grooves to increase the size of the pockets for laundry purposes as

clothes containers rotatably mounted in a revolving cylinder, a new and novel idea.

Fig. 10 is an inside end view of comb pocket showing the angle-grooves for holding middle rib honey-combination in its working position, showing how it can be slid in and out, to change the pockets from a honey comb pocket, to rotatable laundry washing pockets.

In putting my invention to practice, I first provide a horizontal cylinder container, which may be of any desirable material, with double sliding doors at the top of cylinder container body for opening and closing said container, while loading and emptying said rotatable pockets, of the inner cylinder. These sliding doors run in grooves in the container cylinder heads. But as this feature does not form the important part of the invention, I desire not to limit myself to exact means of securing or sliding said doors. At the center of cylinder body container heads I provide at 11 and 12, bearings for the shaft that carries the inside cylinder heads seen in split section at 13 and 14 in Fig. 3

The said carrying shaft is grooved or split to carry sliding collar 16, which is moved along said splined shaft by its being threaded as seen in Fig. 3, and inserted through said collar at 17 is a threaded shoe attached to the foot of toggle arm, said arm being tripped automatically at predetermined times, meshing and releasing said shoe threads from their contact points as desired, in a manner to pull the rotating cards that are twined about said rotatable receptacle pockets that also carry reversing spring, that are shown in Fig. 6 at 18—19—20 and 21.

By referring to Fig. 7 a plainer view can be had of the reverse mechanism, how it is tripped automatically at each end of its leeway; or stopped on the shaft and locked at any desired fixed point, by lever 22 and pinion wheel 23 on rack 24, point of lever 25 and 26 act in combination, point 25 tripping toggle arm at 27 and 27 while point 26 locks said pinion to rack 24. The tripping device is automatic, except when desired to engage pinion wheel 28 to stop and hold said collar in a position to load or unload pockets as shown in Fig. 2, the loading or starting point with mouths of pockets to periphery of cylinder container body. Fig. 4, 5, 9 and 10, show the pockets in different views, to understand their rotatable nature better, 29, 30, 31 and 32, shows their axis points that rest at 33, 34, 35 and 36 in Fig. 6, and in Fig. 2, at 37—38—39 and 40. Fig. 8 at 41 and 42 is seen the adjustable crank attached to cylinder head for raising or lowering to suit the size of operator; 43 and 44 show the end pair of legs attached to heads that are perpendicular. 45 shows water, or honey gate for emptying container cylinder. In pocket Fig. 9, is seen an important feature of this invention: The inner sheets that attach to ribs for letting out the extracted honey. The three sheets, two of wire and one of solid construction, are attached together forming the middle of the honey pockets, and removable to thus increase the size of the honey pockets to the size of laundry clothes pockets. So when the machine is not wanted for a honey centrifugal, by sliding out the sheets that are attached together (and washing it out) the machine is thus turned into the most useful home article—a high grade rotatable, automatic self-reversible, horizontal washing laundry machine.

The pockets being pivoted between two inner cylinder heads 46, that are seen in Fig. 3; said inner cylinders are tied together and partially closed at 47—48—49 and 50, respectively, making a revoluble drum, that revolves by the action of the crank attached at 51 on the outer case in Fig. 1. By being closed and in a closed cylinder, the high speed necessary for the perfect extraction of honey is much easier attained, as wind currents are shut out, which is not so in the perpendicular type of open top honey centrifugal, that the rats so readily enter and badly litter-up (even worse than soap suds), which can readily be washed out with hot water, which is not the case with our (ratty-scented), present open top perpendicular machines, that are now in general use throughout the country. This horizontal type (top closing), is a new feature never seen before in a honey centrifugal, nor in this form of rotatable pocket washer, separate pockets for separate kinds of laundry to be washed. I am aware that prior to my invention, cylinder washing machines were in use, but none can, I find, having the advantages of rotatably mounted clothes pockets, that are separate receptacles, constantly reversing themselves at predetermined times, as the cylinder revolves through the liquid, in said container body, for cleaning purposes. Therefore, I claim broadly a new feature combination, in extracting and washing machine.

I claim:

1. In a honey centrifugal a series of horizontally mounted comb pockets, means for centrifugally driving the same about a horizontal axis, with shifting means to reverse said pockets while under the action of centrifugal force, and automatic means to return the same to initial position.

2. A honey extractor frame structure revolubly mounted, a series of comb-pockets movable bodily with said frame, to cause the centrifugal extraction of honey, and automatic means to rotate on individual axis and return said pockets to position at predetermined times during operation.

3. In a horizontal honey extractor, a horizontal container body, a carrying structure rotatably mounted therein, comb-pockets carried by said structure, driving means for said carrying structure, means for reversing said pockets at fixed times during the operation of centrifugal force, and yieldable means for returning said pockets to initial position at desired times of rotation.

4. In a centrifugal horizontal honey extractor, a container body, a rotatable frame, comb-pockets in pairs rotatably mounted therein, resilient means to hold one side of said comb pockets outwardly for the action of centrifugal force, and means for driving said frame, means to draw and reverse said comb pocket against the tension of its spring to reversed position, where the inner side of each pair will be thrown to the outer position with respect to the carrying frame, and means operative at predetermined times to release said pairs of pockets for the purpose of reversing the same.

5. In a horizontal honey extractor a horizontal honey body container, a horizontal carrying shaft, a horizontal frame structure fixed to said shaft and rotatable bodily therewith, comb-pockets normally associated with said frame structure and bodily movable therewith, resilient means to retain said pockets in set position, a threaded shaft and a movable collar thereon, means connecting said collar thereon, means connecting said collar with said comb-pockets, means to drive the shaft and rotate the carrying frame structure, means to engage said collar with the screw threads to slide the collar on the shaft, and means to release said collar from the screw at predetermined times, to permit said springs to reverse the side of the pockets.

6. In a horizontal centrifugal for honey, a horizontal body container having disk heads, a carrying shaft supported in the heads of said body container, a frame structure on said carrying shaft and rotatable therewith, a number of pockets single or double, carried by said frame structure, and movable therewith, means to propel the shaft, coil springs having one end fixed to said shaft and the other end attached to the corners of the pockets, a sliding collar having screw engagement with the shaft and movable horizontally thereon, pulleys journaled in said collar, pliable cables affixed to the outer corners of the comb pockets and trained around said pulleys, a cable to each pocket, and the other end of each cable attached to the rotatable cylinder head.

7. A horizontal rack bar, a grooved screw shaft parallel thereto, a sliding-collar having pulleys thereon, and having means engaging the screw-threads of the shaft, a pinion wheel supported by the collar and meshing with rack-bar teeth, the lower one of which is attached to said collar, a trip and lock-lever attached to the upper toggle arm simultaneously as a trip for the toggle-arm, and a lock for the pinion-wheel, the lower end of the toggle arm lifting the threaded-shoe out of engagement with the threads on the shaft, thus stopping the rotation of the pockets at the desired loading position, and at the same time permitting the cylinder to revolve until slowed-down to a stop with the mouths of the pockets in their outer position for loading or emptying as desired.

8. The combination of a grooved and threaded shaft, a sliding-collar thereon having means for engaging the screw-threads, and a rotatable frame affixed to the shaft with rotatable pockets therein, revoluble independently, each on its own axis, independent of the direction of rotation of the frame, cables attached to said collar and pockets to reverse the positions of the pockets and retractile-springs to return them to initial position, as specified.

9. The combination of a horizontal rotating frame, pockets revolubly mounted thereon, means for reversing said pockets at predetermined times, while the frame continuously travels in one direction, and a container cylinder surrounding said parts as specified.

In testimony whereof I affix my signature.

WALTER W. SOMERFORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."