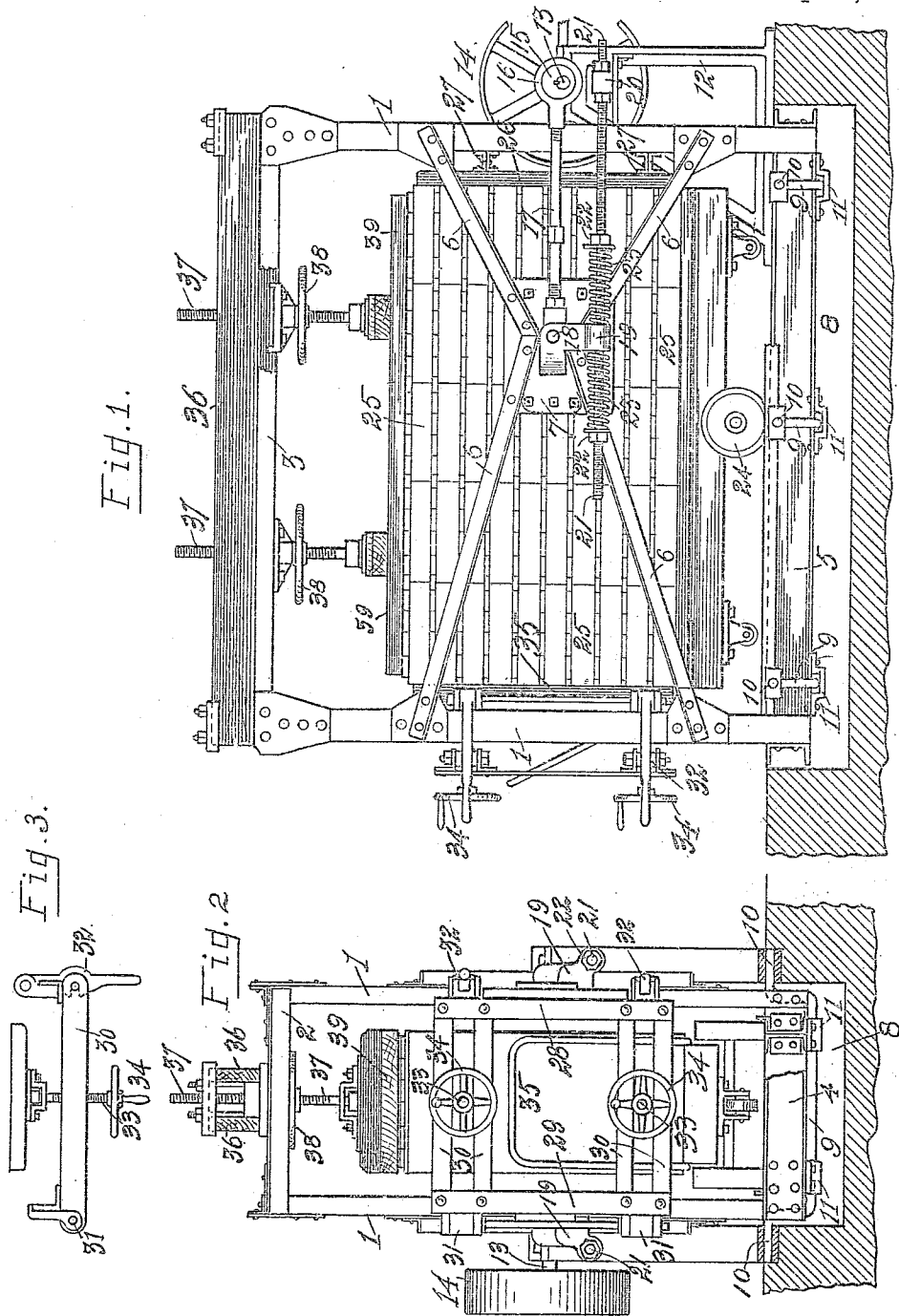


O. PEPPARD.
 AGITATOR.
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953,760.

Patented Apr. 5, 1910.



WITNESSES:

D. C. Walter
 Louis Hubert

INVENTOR.

BY Orrin Peppard.
 Howard Hall Hiscox.

UNITED STATES PATENT OFFICE.

ORRIN PEPPARD, OF DELTA, OHIO, ASSIGNOR TO THE HELVETIA MILK CONDENSING COMPANY, A CORPORATION OF ILLINOIS.

AGITATOR.

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To all whom it may concern:

Be it known that I, ORRIN PEPPARD, a citizen of the United States, residing at Delta, in the county of Fulton and State of Ohio, have invented certain new and useful Improvements in Agitators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

In the production of condensed milk, the substance is, immediately after it is sealed up in cans, in a viscous or semi-fluid condition. It is desirable that the contents of the cans be vigorously agitated to reduce it to a fluid state. In large establishments where great quantities of cans of condensed milk are produced daily, the manual handling and shaking of these cans is a tedious and expensive feature of the business.

My invention is designed to overcome the difficulties and objections here indicated by providing a machine adapted to receive a truck-load of filled cans, in their trays, as they come from the canning processes, and to vigorously shake the whole load at once, including the cans, trays and the truck. I attain these objects by means of the devices, construction and arrangement of parts hereinafter described, and shown and illustrated in the accompanying drawings, in which,—

Figure 1 is a side-elevation of my machine; Fig. 2, a front end-elevation of the same seen from the left in Fig. 1, and Fig. 3, a top-plan view of the gate hereinafter referred to.

Like numerals indicate like parts throughout the drawings.

A rectangular frame of such interior dimensions as to receive a truck loaded with trays of cans, consists of corner uprights 1, top-end pieces 2, top-side pieces 3, bottom-end pieces 4, and bottom-side pieces 5. The bottom side-rails of the frame form a track to receive and guide truck-wheels, the track being on a level with the floor of the room where the machine is installed. At each side the frame is provided with converging braces 6 secured at their converging ends to a stout plate 7. In the floor of the room where the machine is located and directly

beneath the machine is a rectangular opening 8.

9—9 are a series of crank-like shafts or hangers,—in the present instance, for illustration, three in number,—having their ends journaled, as at 10, in bearings secured to the floor at opposite sides of the opening 8, the shaft being bent downwardly and extending across beneath the frame of the machine. The lower side-members of the frame rest upon these shafts or hangers, the side-bars and hangers being pivotally connected or journaled together, as at 11. It will be seen that by reason of its pivotal support upon the transverse crank-like shafts 9, the frame of the machine may have a limited longitudinal reciprocatory movement, the frame at the same time rising and falling in the arcs described by the lower part of the hangers 9. The longitudinal and vertical movement of the frame, above referred to, is obtained by means of the mechanism now to be described.

At the rear end of the machine, upon brackets 12, secured to the floor at opposite sides of the machine, is journaled a shaft 13 carrying a pulley or other suitable driving means 14. Upon the shaft 13 are two cams or eccentrics 15, each carrying a cam-strap 16 from which leads a cam-rod 17 pivotally connected, as at 18, to a stout bracket 19 projecting from the plate 7. The shaft 13 being caused to revolve, the cams 15 disposed at opposite sides of the frame communicate to the frame a short, rapid, vibratory movement of the character above indicated. To relieve the device from too great shock or concussion, stout threaded horizontal rods 21 are connected to brackets 12, as at 20, and pass loosely through an opening in brackets 19 at each side of the frame. On each of the threaded rods 21, at opposite sides of the bracket 19, are two nuts 22 between which and the bracket are interposed coiled compression-springs 23, which alternately receive the shock of the thrust of the frame as it moves to and fro. The tension of the springs 23 is adjustable by the movement of the nuts 22 upon the rod 21.

The trucks employed in connection with my machine are preferably mounted upon two side-wheels 24 disposed midway of the length of the truck, though other forms of truck will answer. The cans,—the contents of which are to be treated,—are handled in

trays—indicated at 25. A truck is loaded with these trays, as indicated in Fig. 1, and is wheeled onto the track-rails 5. It is now necessary to secure the truck and its load rigidly in fixed position within the frame. This is accomplished as follows: The truck and its load are pushed against a broad vertical bar or plank 26 rigidly secured by cross-bars 27 to the rear corner uprights. The front end of the frame is provided with a gate which is next closed. This gate consists of a frame comprising side vertical members 28 and 29 and top and bottom transverse-members 30. The vertical members 28 are hinged, as at 31, to one of the front corner uprights, the opposite upright member of the gate being adapted for engagement at top and bottom with fastening devices 32. The bottom and top cross-members 30 of the gate carry stout screws 33, having at their outer end hand-wheels 34 and pressing at their inner ends against a stout upright bar or plank 35 which rests against the outer end of the truck and its load. The gate being fastened, now by setting up the screws 33, the truck and its load are tightly clamped longitudinally between the bars or planks 26—35. A stout beam 36 extends lengthwise and centrally of the frame of the machine, and is secured at its ends to the upper end cross-bars 2. Stout vertical screws 37 are mounted in this beam 36 and carry hand-nuts 38 by means of which the screws are moved vertically and caused to press downwardly upon a stout bar or plank 39 which rests centrally and longitudinally upon the top of the load upon the truck. The truck being supported centrally upon the wheels 24 accommodates itself readily to any unequal movement of the screws 37. It will be seen that the truck and its load are now both longitudinally and vertically tightly clamped in position upon the pivotally supported frame, and that when the shaft 13 is caused to rotate, the frame with the truck and its load are rapidly and vigorously shaken to and fro, and up and down, and that the contents of the great number of cans carried by the truck are simultaneously and uniformly vigorously agitated.

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

1. In a device of the described character, a frame adapted for the support of a truck and its load, pivotal supports for the frame, means for securing the truck and its load rigidly to the frame, and means for shaking the frame upon its pivotal support.

2. In a device of the described character, a frame, crank-like hangers for the frame, the hangers being adapted for the support of the frame with its bottom in operative alinement with a floor, means for rigidly securing to the frame a truck and its load, and means for shaking the frame upon said hangers.

3. In a device of the described character, a frame adapted to receive a truck and its load, supports for the frame which permit a limited movement of the frame, means for rigidly clamping a truck and its load to the frame, means for shaking the frame upon its supports, and springs connected with the frame and which co-act with the shaking means.

4. In a device of the described character, a frame adapted to receive a truck and its load, supports for the frame which permit the frame to be shaken thereon, vertical clamping screws and horizontal clamping screws for securing the truck and its load in place, means for shaking the frame upon its support, and springs connected with the frame and which co-act with the shaking means.

5. A device of the described character, comprising a frame, supports for the frame which permit a limited movement of the frame, track-rails at the bottom of the frame, means for rigidly securing a truck and its load in fixed relation to the frame, and means for shaking the frame upon its support.

In testimony whereof I affix my signature in presence of two witnesses.

ORRIN PEPPARD.

Witnesses:

EDWARD CASLER,
CLARENCE BOWERMAN.