H. F. REINHOLD.

CHEESE PRESS.

APPLICATION FILED JUNE 16, 1915.

1,168,330. Patented Jan. 18, 1916.

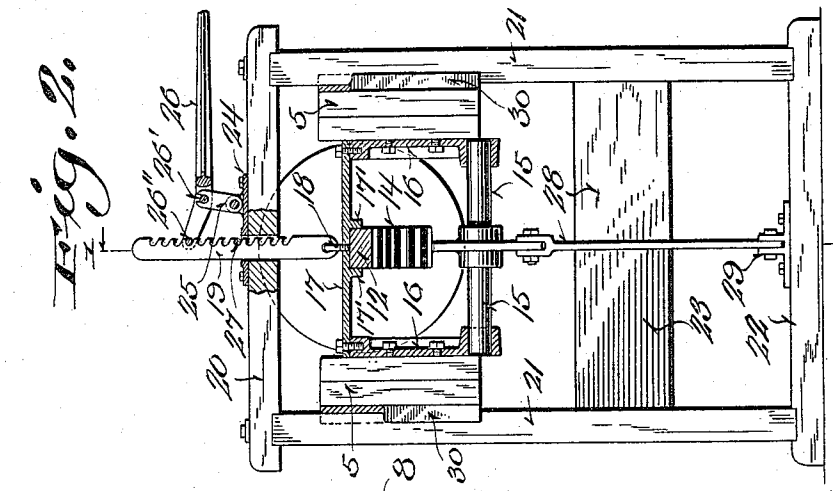


Fig. 2.

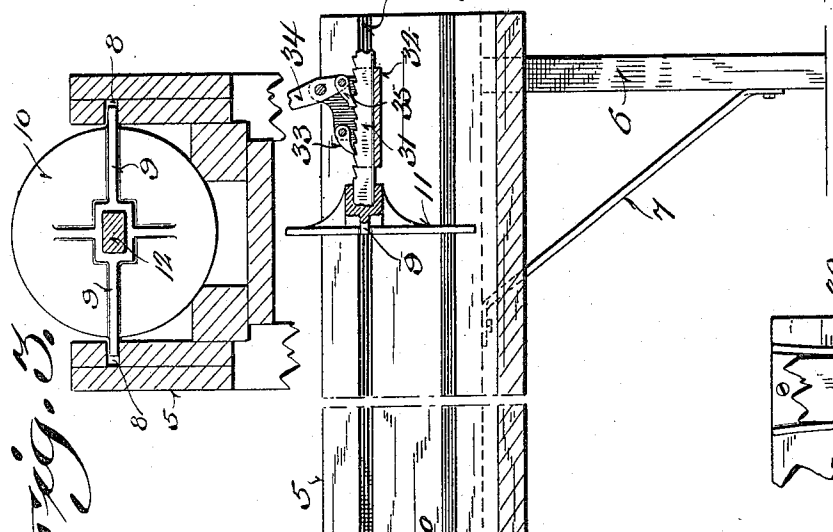


Fig. 3.

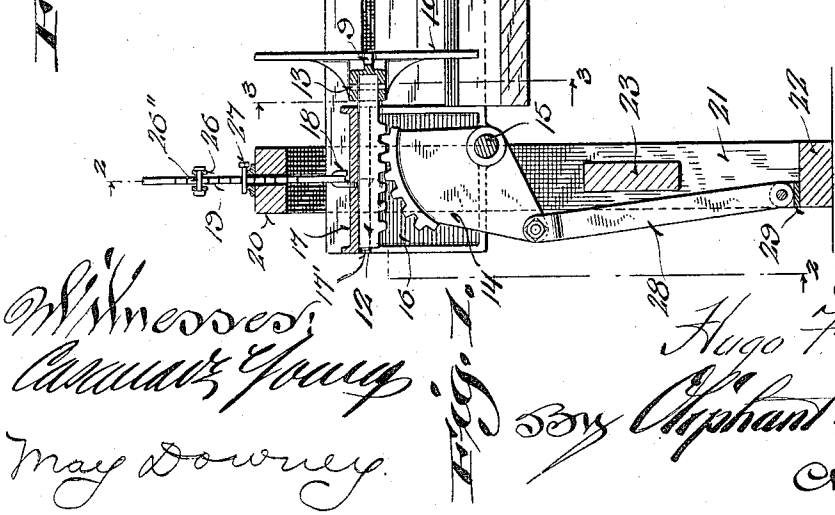


Fig. 1.

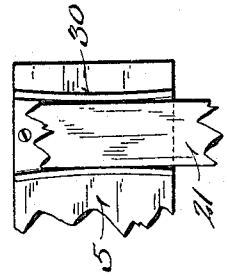


Fig. 4.

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CHEESE-PRESS.

1,168,330. Specification of Letters Patent. Patented Jan. 18, 1916.

Application filed June 16, 1915. Serial No. 34,349.

To all whom it may concern:

Be it known that I, HUGO F. REINHOLD, a citizen of the United States, and resident of Plymouth, in the county of Sheboygan and State of Wisconsin, have invented certain new and useful Improvements in Cheese-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple, economical and efficient cheese-presses in each of which provision is had for an automatic compression of the cheeses by an application of the force of gravity to actuate gear-mechanism in connection with a follower of the press.

Figure 1 of the drawings represents a vertical longitudinal sectional view of one of my improved cheese-presses, the view being indicated by line 1—1 in the next described figure; Fig. 2, a partly sectional front elevation of the press indicated by line 2—2 in Fig. 1; Fig. 3, a cross-section view on the plane indicated by line 3—3 in Fig. 1, and Fig. 4, a side elevation of a detail of the press.

Referring by numerals to the drawings, 5 indicates the trough of my improved cheese-press, 6 one of its rear legs and 7 a leg-brace, the general construction of said trough being that ordinarily practised. Each side of the trough is provided with an inner longitudinal groove 8, and guided in the grooves are laterally projecting ends of horizontal back flanges 9 of opposite followers 10, 11. The follower 10 is fashioned to provide a central back socket engaged by one end of a horizontal rack 12, that may be fastened in place by a pin 13 or other suitable means. The rack constitutes a shank of the follower and it meshes with a segment-gear 14 having trunnions 15 that turn in plates 16 fastened by screws or other suitable means to front extensions of the sides of the trough. Similarly secured in connection with plates upon the upper edges of the same is a cover plate 17 provided with a pair of parallel flanges 17′ between which the rack 13 is guided. The plates 16 and 17 together constitute a housing, and fast in said plate 17, central of the same, is a hook 18 that engages an eye in the lower end of a vertical ratchet-bar 19 guided in a slot of the top member 20 of a frame having side members 21, a base member 22 and a brace member 23. The ratchet-bar is also guided in a slot of a bracket 24 fast on the top member of said frame, and trunnioned in connection with the bracket is a rocking fulcrum 25 engaged by a crosspiece 26′ of a forked lever 26, and another crosspiece 26″ of the lever is engageable with said ratchet-bar to provide for lifting the trough of the press from a tilted to horizontal position. To hold the trough in horizontal position while cheeses are being placed therein between the followers 10, 11, a stop-pin 27 is engaged with the ratchet-bar over the bracket 24. A supporting link-bar 28 is pivotally connected at one end to the segment-gear 14, and at its other end it is likewise connected to a bracket 29 fast on the base member of the aforesaid frame. Engaging the side members of said frame are guide-plates 30 fast on the front extensions of the trough-sides, and said guide-plates are fashioned to compensate for a tilt of the trough.

Engaging a back socket of the follower 11 is a ratchet-shank 31 guided on a carrier 32 suspended in the grooves of the trough-sides, and a detent 33 hung in connection with the carrier engages said shank of said follower. A lever 34 is fulcrumed in connection with the carrier, and a pawl 35 hung on the lever also engages the ratchet-shank 31 of the follower 11.

The trough being in horizontal position, cheeses are laid therein between the followers 10, 11, and the lever 34 actuated to tighten up the adjacent follower against the opposing cheese, after which the pin 27 is displaced and the lever 26 disconnected from the ratchet-bar 19. Due to shrinkage of the cheeses, clamped between the followers, there is a corresponding gradual downward tilt of the trough and parts therewith that results in an automatic rearward movement of the follower 10 to exert pressure on the cheese and compensate for said shrinkage, this movement being due to the meshing of the rack-shank 12 of said follower with the segment-gear 14 to which the supporting link 28 is attached. It is to be noted that the pressure is continuous as long as may be necessary to properly compress the cheeses

between the followers 10, 11, and that said press requires no attention after the compressing operation has been started.

I claim:

1. In a cheese-press, a tiltable trough, a frame, means in connection with the frame and an end of the trough for adjusting said trough to normal position, means for temporarily suspending said end of the trough, opposite followers movable in the trough, means for securing one of the followers in adjusted position, a segmental-gear in connection with the aforesaid end of the trough, a link-bar connected at its ends to the gear and the base of said frame, and a rack-shank of the other follower in mesh with said gear, whereby an inward pressing movement of the last named follower is had when the trough is free to tilt.

2. In a cheese-press, a tiltable trough having each side thereof provided with an inner longitudinal groove, means in connection with one end of the trough for adjusting said trough to normal position, means for temporarily suspending said end of the trough, opposite followers having projections guided in the trough-grooves, a carrier slidable in said grooves, a ratchet-shank of the rear follower guided on the carrier, a detent with the carrier engaging said shank, a lever fulcrumed in connection with the carrier, a pawl with the lever engaging said follower-shank, and means whereby pressing movement is imparted to the other follower on release of the aforesaid end of the trough.

3. In a cheese press, a tiltable trough having side extensions at one end, a housing secured between said side extensions of the trough, a frame, means in connection with the housing and frame for adjusting the trough to normal position, means for temporarily suspending said trough in said position, opposite followers in the trough, means for securing one of the followers in adjusted position, a segmental gear fulcrumed in the housing, a link-bar connecting the gear and the base of said frame, and a rack-shank of the other follower guided in said housing and meshed with said gear.

4. In a cheese press, a tiltable trough having side extensions at one end, a housing secured between said side extensions of the trough, a frame, means in connection with the housing and frame for adjusting the trough to normal position, means for temporarily suspending said trough in said position, opposite followers in the trough, means for securing one of the followers in adjusted position, a segmental gear fulcrumed in the housing, a link-bar connecting the gear and the base of said frame, a rack-shank of the other follower guided in said housing and meshed with said gear, and guide plates on the side extensions of the trough engaged by side members of the frame, said guide-plates being fashioned to compensate for tilt of said trough.

In testimony that I claim the foregoing I have hereunto set my hand at Plymouth in the county of Sheboygan and State of Wisconsin in the presence of two witnesses.

HUGO F. REINHOLD.

Witnesses:

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A. H. BORGES.

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