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1,527,087

S. SCHULMAN

HOUSEHOLD ARTICLE

Filed Dec. 20, 1922

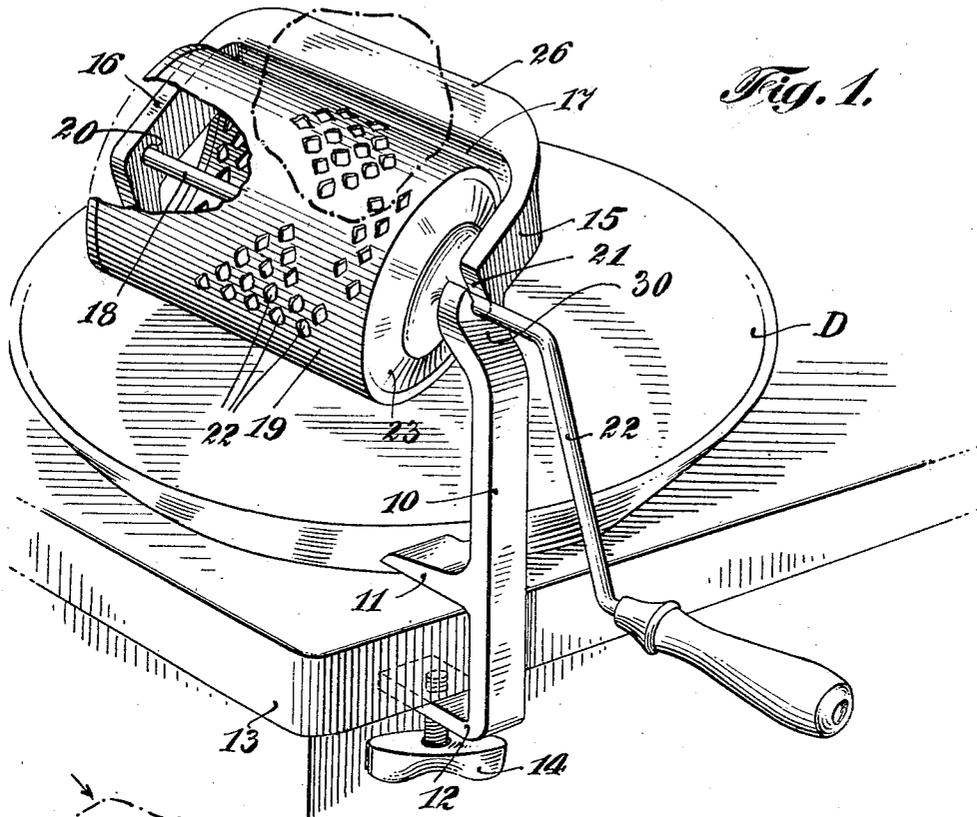


Fig. 1.

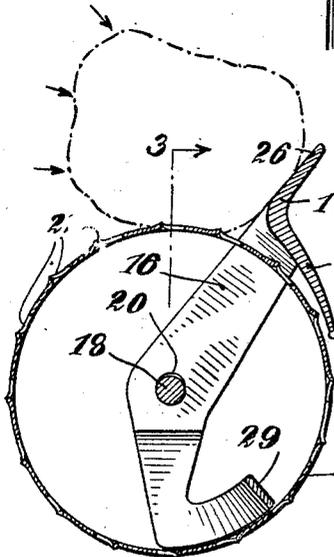


Fig. 2.

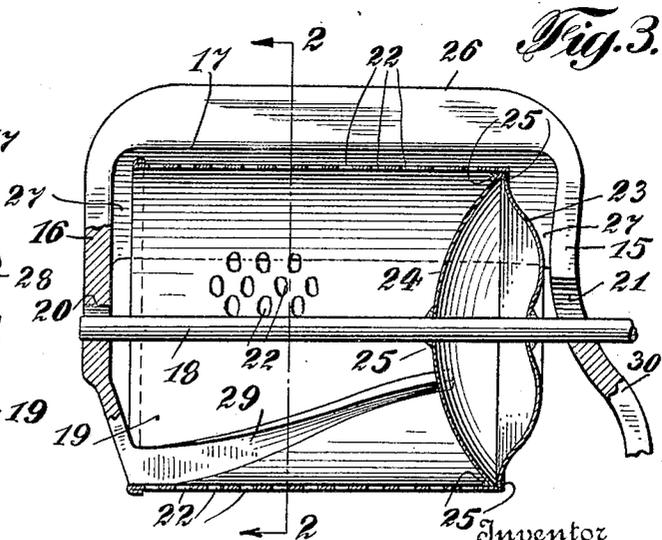


Fig. 3.

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UNITED STATES PATENT OFFICE.

SOLOMON SCHULMAN, OF NEW YORK, N. Y., ASSIGNOR TO LABOR SAVING APPLIANCE CORP., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

HOUSEHOLD ARTICLE.

Application filed December 20, 1922. Serial No. 607,943.

To all whom it may concern:

Be it known that I, SOLOMON SCHULMAN, a citizen of the United States, and resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Household Articles, of which the following is a specification.

My present invention relates to household articles, particularly to vegetable graters.

Among the objects of the invention are to provide a grater of simple, inexpensive and rugged construction, which shall be easy to set up for use, easy to clean, and easy to operate without injury to the fingers and without clogging by the pomace or ejection thereof beyond the edge of the collecting dish.

Other objects will be in part obvious and in part pointed out hereinafter.

In the accompanying drawings in which is shown one of various possible embodiments of the several features of this invention,

Fig. 1 is a perspective view of a preferred embodiment, set in readiness for use,

Fig. 2 is a sectional view taken along the line 2-2 of Fig. 3, and;

Fig. 3 is a sectional view taken along the line 3-3 of Fig. 2.

Similar reference characters refer to similar parts throughout the views of the drawings.

In the drawings, I have shown a grater set up for use, comprising an integral metal casting including a standard 10 having rigid jaws 11 and 12, to straddle the edge of a table, bench, or support 13, for clamping thereon, by means of a clamping screw 14 through the lower of the jaws. Integral with the standard 10 is formed a yoke having parallel arms 15 and 16 connected by cross-bar 17, arm 15 constituting substantially an extension of the standard 10. The axle 18 of grating drum 19 is formed of a rod fitting at one end into the opening 20 in arm 16 and inserted into a notch 21 at the opposite arm 15, said opening and notch constituting the journal supports for the axle. The notch 21 is preferably curved, as shown, in well understood manner, so as to permit removal of the axle therefrom only by a compound movement and not by a direct upward thrust. The axle rod is formed with a crank arm 22 integral therewith, extending beyond the standard 10, to permit operation

without striking the table or other support. The comminuting drum 19 which is rigid upon axle 18, is a cylindrical sheet metal element with appropriate grating burs 22 therein. The end of the grating drum adjacent the handle is rigidly sustained upon the axle 18 by any appropriate means, such as a hub, soldered at its center to the axle and at its periphery to the drum. The hub is preferably composed of a pair of dished plates 23 and 24 having contacting peripheries, extending into and soldered at the end of the drum. The plates being dished are spaced from each other by a substantial distance at their centers, effecting a secure support upon the axle, extending therethrough and to which they are preferably soldered as at 25. The drum and axle, thus constitute a rigid unitary structure, although substantially the entire length of the grating drum is freely exposed from one end thereof.

The cross-bar 17 of the yoke has preferably an angle-bar formation, as shown, affording substantial mechanical strength and stiffness. The upstanding fin 26 constitutes a rest or support for the article being grated, as best indicated in Fig. 2 and the complementary portion 27 preferably extends in a slight curvature along and toward the drum, to afford a minimum gap with respect to the drum at its free edge 28. The cross-bar thus acts as a presser in a manner which will be best understood from the description of the operation below.

As shown in the drawing, the standard is relatively short to provide sufficient space merely for the insertion of an ordinary dish under the drum, thereby rendering the construction more stable and effecting economy in material. The handle crank arm is of length greater than that of the standard to provide sufficient leverage, and as shown in the drawing, the handle thereof projects beyond and below the edge of the table, thereby obviating all possibility of striking the knuckle or finger tips against the table in operation.

Cast integral with the free arm 16, is an ejector bar 29, which extends obliquely or helically, as indicated in the drawings, into the drum 19 from the open end thereof, and near the inner surface of the drum.

As indicated, the yoke arms in the set-up device, extend preferably obliquely forward and downward from the cross-bar 17,

as shown, while the standard 10 is vertical, thereby affording additional stiffness and strength by reason of the curved juncture 30 between the lower end of arm 15 and standard 10 integral therewith, and also affording a desirable location for the presser arm 17, whereby the comminuted material, after being forced thereby against the drum, drops downward from the drum into the dish D therebelow. The curved juncture 30 between the standard and the yoke arm 15 is, moreover, preferably curved inward, as shown, so that the width between the two yoke arms is less than the over-all width of the casting, whereby a dish contacting the standard 10, projects beyond the inner end of the drum 19, and will collect all of the comminuted product delivered from the drum, without likelihood of any portion thereof being ejected beyond the rim of the dish.

The axle of the grating drum being laterally of the clamp jaw 11, it will be seen that the latter does not interfere with the disposition of the dish substantially symmetrically with respect to the drum axle, and at the same time in contact with the standard 10.

The apparatus, it will be seen, consists merely of the simple standard and yoke casting and the grater drum structure formed integral with the axle and handle. The assembly is easy, the open end of the drum 19 being passed over the projecting end of the ejector bar 29 and the projecting free end of the axle 18 inserted into the journal support 20, which preferably provides clearance as shown, for facility in assembly. Thereupon the other end of the axle is inserted into the notch 21, and the device is clamped to the table by tightening screw 14, as shown.

In operation, the vegetable or other article is preferably held against the presser bar 26 while the handle is rotated, the burs on the drum forming the abraded product, which is forced between the drum and the cross-bar 27, and drops beyond the edge 28 of the latter into the dish D therebelow. Part of the product will have a tendency to pass through the bur openings into the interior of the drum, but the stationary ejector bar 29 tends, in the rotation of the drum, as will be understood, to clear the interior of the drum, ejecting the product from the open end of the drum into the dish therebelow. After a vegetable has been substantially completely comminuted, only the tip being left, the latter is simply released at the presser bar, and it will be forced therebeyond in the continued rotation of the drum, and will emerge at the free edge 28 of the presser bar in comminuted condition. The ejector bar is particularly useful where large quantities of

vegetable are being comminuted, although for ordinary household use, this element may be dispensed with.

The end of the drum near the handle being closed, there is no likelihood of ejection of material toward the standard, the product being delivered through the open end of the drum beyond which the dish projects, as well as at the burs. The drum can be cleaned after use, with substantially the same facility as the ordinary old-fashioned grating board.

It will thus be seen that there is herein described, apparatus in which the several features of this invention are embodied, and which apparatus in its action attains the various objects of the invention and is well suited to meet the requirements of practical use.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent of the United States is:—

1. A comminuting device comprising a standard, a comminuting drum releasably supported thereby, an angle presser bar integral with said standard extending lengthwise of the device, said presser including an upstanding fin constituting a rest for the article being comminuted, and a curved element integral therewith extending for a short arc peripherally of said drum.

2. A grater comprising a vertical standard, an oblique yoke having one arm integral with the upper end of said standard, a grating drum separably journaled between the arms of said yoke and having a bearing substantially at the top of the standard, a projecting operating handle for said drum, the intermediate portion of said yoke constituting a presser and lying throughout its entire length in proximity to the surface of said drum.

3. In a grater, in combination, a unitary casting comprising a yoke having openings in the arms thereof in which a grating drum is adapted to be journaled, a supporting standard forming a continuation of one yoke arm, and a curved wiping ejector forming a continuation of the other yoke arm and adapted to lie in close proximity to the interior surface of a grater drum journaled in the yoke arms.

4. In a grating apparatus, in combination, a rotary drum, support means therefor, a presser bar extending longitudinally along the exterior of the drum, an ejector bar ex-

tending obliquely into the interior of the drum, said presser and ejector bars constituting an integral unitary structure.

5 A grater comprising in combination, a yoke having arms, a grater drum fitting therebetween and having an axle journaled in said arms, said yoke having a cross bar extending in proximity of the external surface of the drum and constituting a presser, 10 an ejector bar integral with one of said arms and extending obliquely into the interior of said drum adjacent the surface thereof, and support means for sustaining said yoke in operative position.

15 6. A grater comprising in combination, a yoke having arms, an axle removably journaled in said arms, a grater drum upon said axle rigid therewith and extending between said arms, a standard integral with said 20 yoke having means at the lower end thereof for attachment to a support, and an ejector

bar integral with said yoke and extending obliquely into the interior of the drum.

7. In a grater, in combination, a yoke having parallel arms, and a cross-bar integral therewith, an axle removably journaled in said arms, a grater drum rigid with said axle and sustained thereon near one end thereof, open at the other end, and extending in proximity of said cross-bar, a standard integral with an constituting an extension of one of said yoke arms and having means at the lower end thereof for attachment to a support, and an ejector bar rigid with the other said arm and extending obliquely from the open end of said drum along the interior surface thereof. 25 30 35

Signed at New York city in the county of New York and State of New York this 18th day of December A. D. 1922.

SOLOMON SCHULMAN.