R. JORDAN.

NUTMEG GRATER.

APPLICATION FILED OCT. 16, 1909.

944,241. Patented Dec. 21, 1909.

Fig. 1.

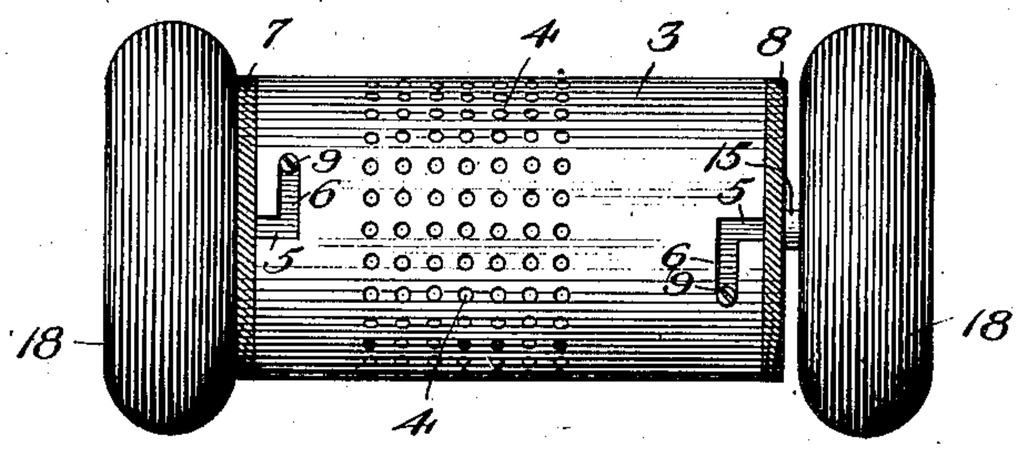
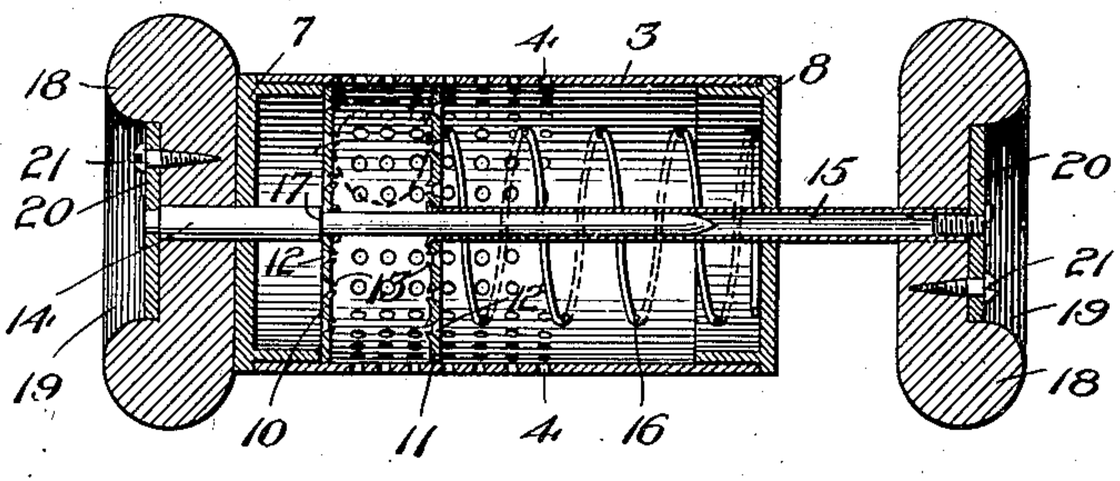


Fig. 2.



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NUTMEG-GRATER.

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To all whom it may concern:

Be it known that I, RODNEY JORDAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Nutmeg-Graters; and I do hereby 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.

My invention relates to grating and grinding devices, and has reference, more particularly stated to a hand operated device for grinding or grating the outer surface of aromatic, pungent vegetable substances such as nutmeg, cinnamon, cloves, pepper, allspice and mace; but it is designed, arranged and adapted more especially as a convenient, efficient and sanitary means of grating nutmegs so commonly used as a flavoring for foods and beverages.

The invention will be hereinafter more fully described and pointed out in the claims following.

In the accompanying drawings which form part of this application, and whereon corresponding numerals refer to like parts in both figures; Figure 1 represents the invention in its entirety, assembled and ready for use. Fig. 2 is a longitudinal central section of the invention showing a nutmeg or similar article in position to be grated.

Reference being had to the drawings and numerals thereon, 3 indicates a cylindrical body of sheet-metal, seamless tubing or other suitable material, perforated circumferentially by a plurality of outlets 4 for the material grated, while the opposite ends of said cylindrical body 3 are entered by inwardly projecting longitudinal slots 5, 5, having oppositely disposed transverse laterals 6, 6 forming parts of a bayonet joint.

Into the open ends of body 3 are inserted flanged end-caps or closures 7 and 8 each provided with a radial pin or screw 9 adapted to enter and traverse said angular slots 5, 6, thus constituting bayonet joints for securing said caps into the ends of said cylindrical body, as shown by Fig. 1.

Within body 3 are located circular revoluble and relatively adjustable grating disks 10 and 11 arranged in parallel planes, and of a diameter to freely permit rotation, these grinding or grating disks are preferably sheet metal and provided with perforations 12 oppositely punched and burred as at 13 on their opposing faces, for grating or grinding purposes. Both disks 10 and 11 are rigidly and centrally affixed to supporting shafts 14 and 15 respectively, the latter by preference being of tubular form and rotatably supported in the center of end-cap 8. Surrounding said tubular shaft 15, and interposed between grating disk 11 and the inner surface of cap 8 is a coil compression spring 16 the tendency whereof is to seat disk 11 upon disk 10 and to exert pressure upon any intermediate object. In like manner the grating disk 10 is mounted upon its supporting shaft 14 the latter being shouldered at 17 to receive it; this shaft, however, is preferably formed from a solid rod, slightly reduced in diameter inside of its said shoulder 17 and adapted to enter and slide telescopically within the tubular shaft 15 aforesaid. The outwardly projecting end of shaft 14 finds a bearing in the center of end-cap 7, and, as best shown by Fig. 2 of the drawings, the projecting ends of both shafts 14 and 15 are equipped with hand or operating wheels 18 by preference formed of hard wood and recessed upon the outer face as at 19. A metallic washer 20 is also provided, the same being seated in said recess 19, rigidly affixed to the end of its respective shaft, and provided with a screw or other suitable fastening as 21 passing through said washer and into the hand wheel for the purpose of securely binding said shafts and wheels together.

This being a description of my invention in its preferred form of construction, its use and operation may be briefly stated as follows: A partial rotation and withdrawal of the flanged end-cap 7 disconnects its bayonet joint coupling with the cylindrical body 3, and permits the removal of hand-wheel 18 together with shaft 14, and grating disk 10. A nutmeg, for example, now having been introduced into the open end of cylinder 3, as indicated by dotted lines Fig. 2, the removable parts aforesaid are replaced by an operation the reverse of that described. During this charging operation the nutmeg or other article to be grated serves to offset the grating disk 11 a distance equal to the diameter of said article thus placing spring 16 under tension. In this relation of parts it is obvious that a rapid rotation of the hand wheels 18 in opposite directions serves to finely grate the surfaces of a nutmeg or

other vegetable substance held between disks 10 and 11, and that such grating process may be continued until the subject under operation is entirely consumed, all gratings in the meantime finding a ready outlet and uniform distribution through perforations 4 in the cylindrical body 3. It will also be noted that the telescoping arrangement and relation of shafts 14 and 15 performs several important functions, firstly, that of holding the nutmeg, or other subject under operation, to one side of the axes of rotation where the grating action is most effective, without, at the same time, preventing a complete closure of the space between operating disks 10 and 11; and, secondly, that of holding all rotatable parts of this invention in better alinement during operation, thus minimizing wear upon the moving parts.

While admirably suited for hand use, as hereinbefore described upon tables in kitchens, hospitals, and wherever a thorough and uniform grating is desired in a speedy and sanitary manner for foods and beverages, it is a self evident fact that a mere change in proportion and size of the parts employed renders this appliance equally suitable for grinding various other hard or soft substances in large or small quantities, it being entirely within the spirit of this invention to employ wheels 18 as power transmitting pulleys to be driven by belts from any suitable source of power, and to be driven thus in opposite directions, or in the same direction at different rates of speed.

With this understanding of the invention its operation and uses, what I now claim and desire to secure by Letters Patent is:

1. In a grinding and grating mill the combination with a cylindrical body, of revoluble grinding disks relatively adjustable within said body, operating shafts affixed to each of said disks extending longitudinally through said body, a projection between said grinding disks at the axial center thereof, and means for applying power to said shafts to rotate them.

2. In a grinding and grating mill the combination with a cylindrical body, of revoluble grinding disks relatively adjustable within said body, independent operating shafts telescopically arranged and affixed to their respective grinding disks, and means for rotating said shafts.

3. In a grinding and grating mill the combination with a perforated cylindrical body, of revoluble grinding disks relatively adjustable within said body, operating shafts affixed to each of said disks extending longitudinally through said body, a projection between said grinding disks at the axial center thereof, and hand wheels affixed to said shafts whereby they may be rotated.

4. In a grinding and grating mill the combination with a circumferentially-perforated cylindrical body, of parallel revoluble grinding disks relatively adjustable within said body, independent operating shafts telescopically arranged and affixed to their respective grinding disks, and hand wheels upon each of said shafts whereby they may be rotated.

5. In a grinding and grating mill the combination with a cylindrical body, of revoluble grinding disks relatively adjustable within said body, operating shafts affixed to each of said disks, a projection from one of said shafts between the grinding disks at the axial center thereof, removable closures for both ends of said body through which the operating shafts project, and handwheels for rotating said shafts reversely.

6. In a grinding and grating mill the combination with a cylindrical body, of revoluble grinding disks relatively adjustable within said body, independent operating shafts telescopically arranged and affixed to their respective grinding disks, removable closures for both ends of said body, a compression spring interposed between one of said end closures and one of the grinding disks, and hand wheels for rotating said shafts reversely.

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

RODNEY JORDAN.

Witnesses:
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HUGH M. STERLING.