

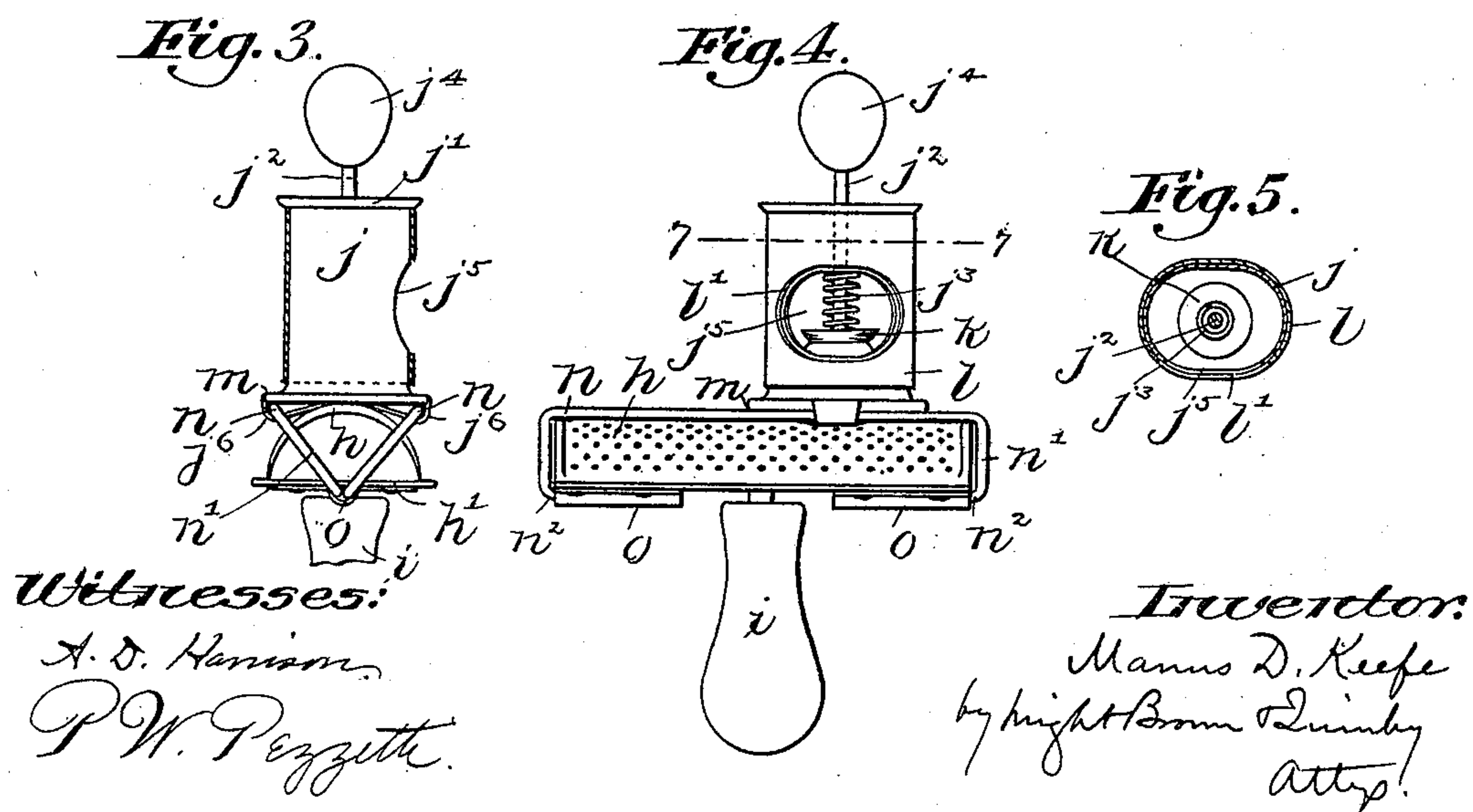
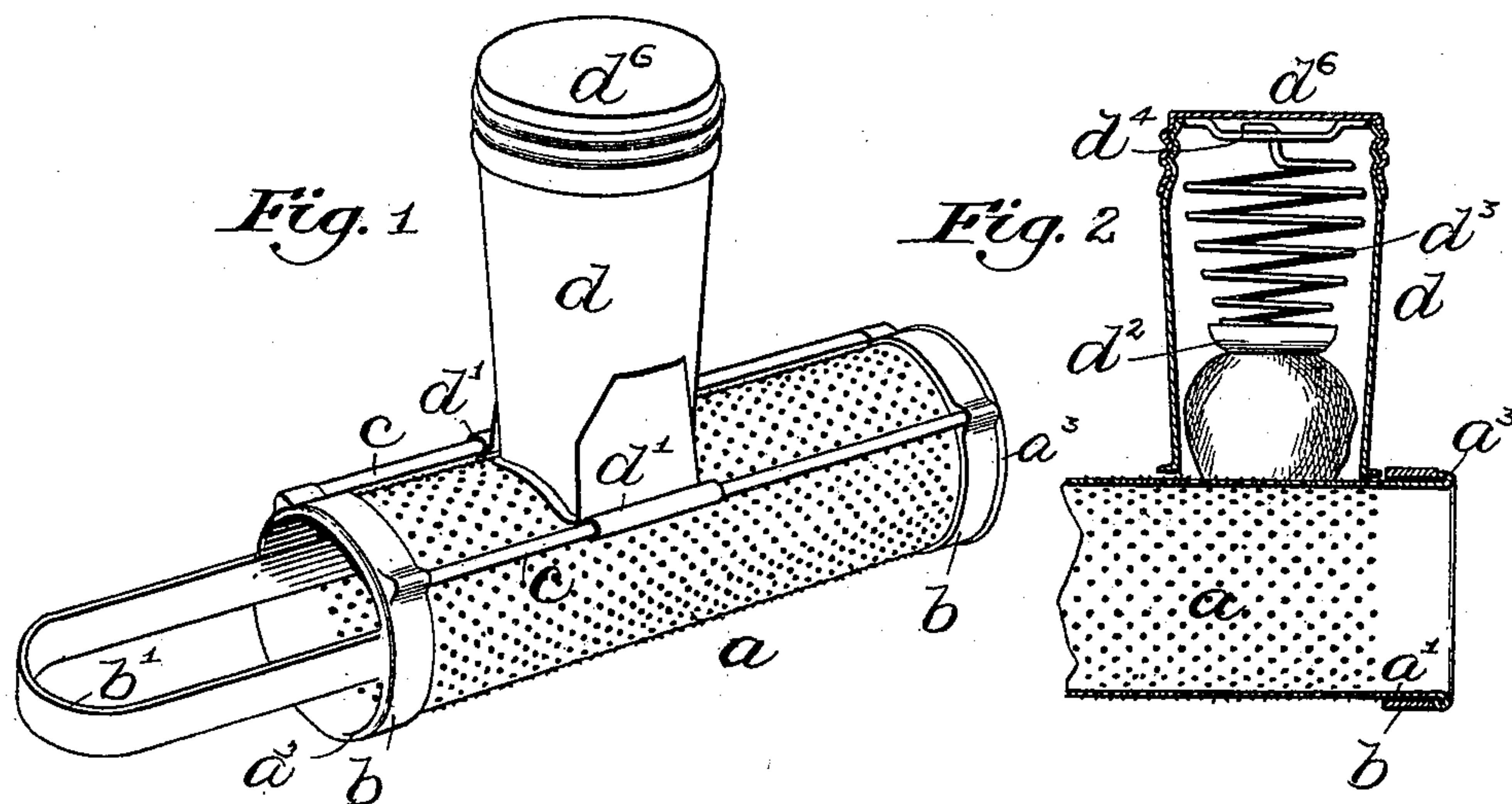
No. 619,489.

Patented Feb. 14, 1899.

**M. D. KEEFE.
GRATER.**

(Application filed Apr. 2, 1898.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

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GRATER.

SPECIFICATION forming part of Letters Patent No. 619,489, dated February 14, 1899.

Application filed April 2, 1898. Serial No. 676,160. (No model.)

To all whom it may concern:

Be it known that I, MANUS D. KEEFE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Graters, of which the following is a specification.

This invention has relation to graters or devices for grating nutmegs, cocoanuts, and other articles of food, and has for its object to provide certain improvements in the same whereby a larger operative surface may be exposed and more of it utilized for grating purposes than heretofore.

Another object of the invention is to simplify the construction of devices or articles of this character and render them more compact and at the same time to increase their efficiency and durability.

To these ends the invention consists of a grater embodying certain features of construction and relative arrangement of parts, all as I have illustrated upon the drawings and shall now proceed to describe and then point out in the appended claims.

Reference is to be had to the accompanying drawings, and to the letters of reference marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 represents in perspective view one embodiment of the invention in which the grating-surface is cylindrical and may be revolved beneath the holder in which the substance to be grated is placed and in which the grating-surface may be moved longitudinally beneath the holder. Fig. 2 represents a longitudinal sectional view through the end of the same. Fig. 3 represents another embodiment of the invention in which the grating-surface is semicylindrical, the holder for the nutmeg being connected to two parallel guides to move longitudinally of the grating plate or surface. Fig. 4 represents an end view of the same. Fig. 5 represents a section on the line 5 5 of Fig. 3.

Referring to the drawings, and more particularly to Figs. 1 and 2, the grating-plate *a* is cylindrical in shape and is provided with unperforated and smooth ends *a'*, which form bearings for the rings *b b*. The said rings

encircle the ends and are held against axial movement by the extremities of the cylindrical grating-plate being flanged or beaded, as at *a³*. The rings *b* are connected by two parallel rods or guides *c c*, soldered or otherwise rigidly secured to them, whereby the rods are movable transversely of the grating-plate.

The holder for the nutmeg or other substance to be grated is indicated at *d*, and it is substantially cylindrical in side elevation, being provided with downwardly-projecting lips *d'*, which encircle the guide-rods and form guideways for the same, so that the holder may be moved longitudinally along the grating-plate.

The lower end of the holder is curved to fit snugly around the curved grating plate or surface, and the nutmeg or other article is held against said surface by the follower *d²* on the end of a spiral spring *d³*, having its upper end swiveled in a screw-cap *d⁶*, screwed upon the threaded upper end of the said holder. The swiveled connection between the spring and the cap is effected by bending the end of the spring which lies in the axial line thereof and passing it through a cross-bar *d⁴*, soldered in the cap, as shown in Fig. 3.

A device for turning the grating-plate is attached thereto, and consists of a bar *b'*, bent to the shape of a horseshoe or into U shape and having its end soldered inside the end of the grater-plate.

Now it will be seen from the foregoing description that if the holder be grasped in one hand the grater-plate may be revolved therebeneath by means of the handle extending out from the end thereof and that in addition to revolving the cylindrical grating-plate beneath the holder it may be moved axially of the holder by drawing or pressing against it longitudinally.

Of course it will be understood that, if desired, the grating-plate may be held stationary and the holder reciprocated axially thereof or be revolved about it, or it may be moved angularly across the grating-surface.

Various changes may be made in the construction of the grater without departing from the spirit and scope of the invention. For instance, I may prefer to construct the grater as shown in Figs. 3 and 4. In this

event the grating-surface h is semicylindrical and has its longitudinal edges rigidly secured to the edges of a flat plate h' .

On the under side of the plate is rigidly secured a handle i , forced upon a tine or tang soldered to the plate midway between the ends thereof. The holder j is elliptical in cross-section and is provided with a closed upper end j' , through which the rod j^2 projects. Longitudinal ribs are formed in the interior of the holder to project into grooves in the ends of the follower k , which is secured upon the lower end of the rod j^2 , there being a spring j^3 surrounding the rod and having one end abutting against the top of the holder and the other end bearing against the follower.

A knob or handle j^4 is placed upon the end of the rod j^2 , whereby assistance may be given to the spring in forcing the nutmeg against the grating-surface.

A flexible metallic band or sleeve l encircles the holder and is provided with an aperture l' , adapted to register with an aperture j^5 in the holder j . When the nutmeg has been put in place in the holder, the flexible band may be revolved, so as to close the aperture therein.

To the lower end of the holder is affixed a wire band m , to which are affixed bent lips or guideways j^6 , similar to the guideways d' . (Shown in Fig. 1.) Through these guideways pass two parallel guide-rods $n n$, having their ends bent downward, as at n' , and then inward, as at n^2 , the said inwardly-bent portions n^2 of the rods extending into bearings $o o$, formed on the under side of the plate h' at the ends thereof. The ends of the guide-rods are mounted loosely in their bearings, so that they are capable of being swung from side to side or transversely of the grating-plate. In this last-described embodiment of my invention the grater is similar to the one first described in that the holder is supported upon the two parallel guide-rods, which are outside of and parallel with the grating-plate, and are secured to the grating-plate by connections having provisions for preventing endwise movement of the guide-rods independently of the grating-plate and permitting rotation of the grating-plate independently of the guide-rods, so that the grat-

ing-plate may be moved longitudinally, transversely, or angularly relatively to the holder.

It will be seen that by providing the two parallel guide-rods extending outside the grating-plate and mounting the holder slidably thereon I am enabled to reduce the grater to more compact form than would be possible if the holder were attached rigidly to a bar which slides with the holder and necessarily extends beyond the ends of the grating-plate, as shown in Letters Patent of the United States numbered 458,041 and 571,218. My guide-rods do not extend to any appreciable extent beyond the ends of the grating-plate, and therefore do not materially add to the length of the grater.

By the term "curved grating-plate" as used in the following claims I mean either a cylindrical plate, as shown in Fig. 1, or a semicylindrical plate, as shown in Figs. 3 and 4.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. A grater comprising a curved grating-plate, parallel guide-rods located outside the grating-plate and extending parallel therewith, connections between the ends of said rods and the grating-plate, said connections having provisions for preventing endwise movement of the guide-rods and for permitting a rotary movement of the grating-plate, independently of the rods, and a holder for the substance to be grated, slidably mounted on said guide-rods.

2. A grater comprising a cylindrical grating-plate, supporting-rings encircling the ends of said plate and fitted to turn thereon, parallel guide-rods connected to said rings and extending outside the periphery of the grating-plate parallel with its axis, and a holder for the substance to be grated, slidably mounted on said guide-rods.

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

MANUS D. KEEFE.

Witnesses:

A. D. HARRISON,
C. F. BROWN.