No. 751,159. PATENTED FEB. 2, 1904.

J. W. GAGE.

GRATING IMPLEMENT.

APPLICATION FILED JAN. 31, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

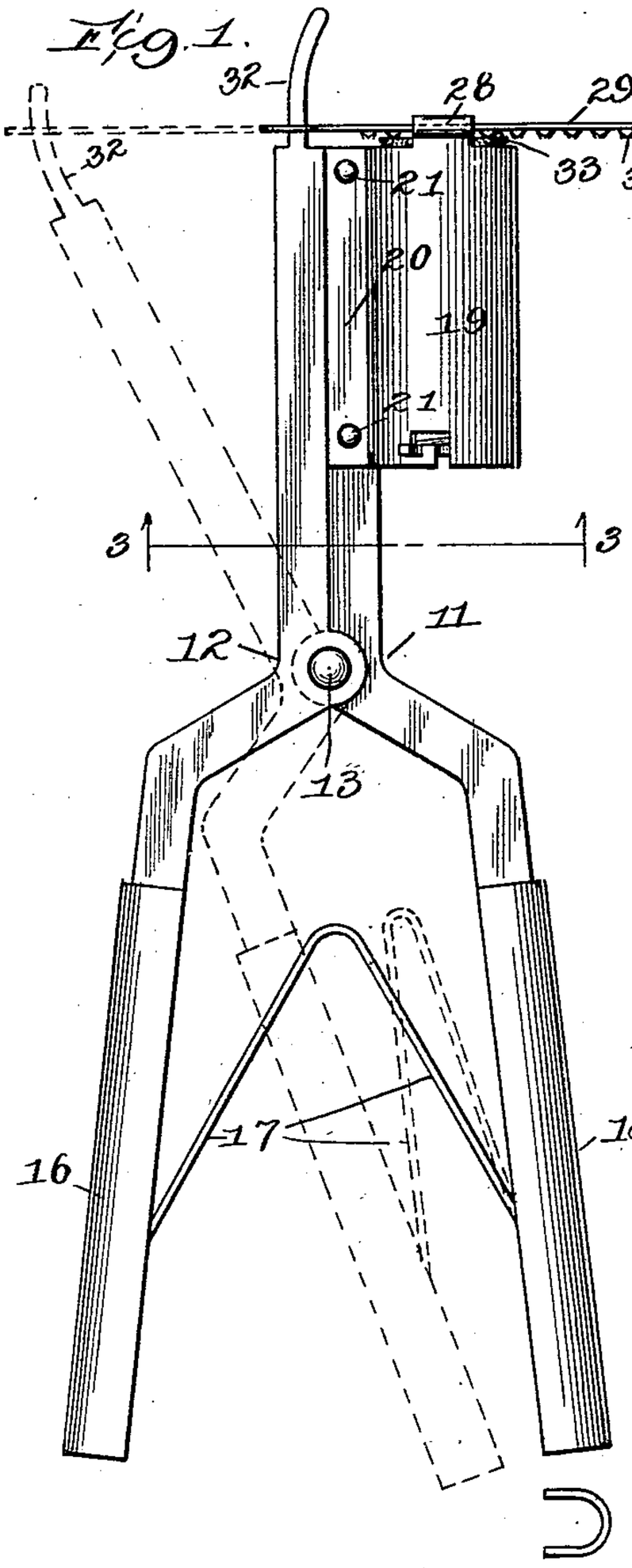


Fig. 2.

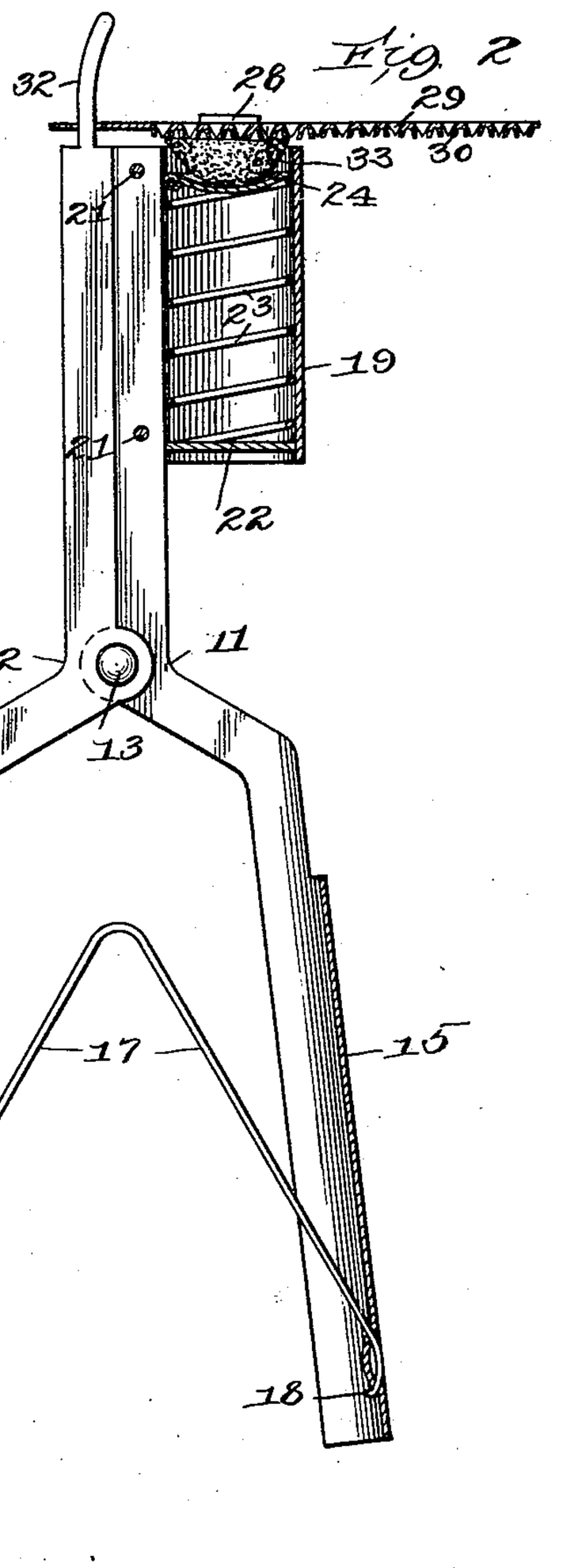
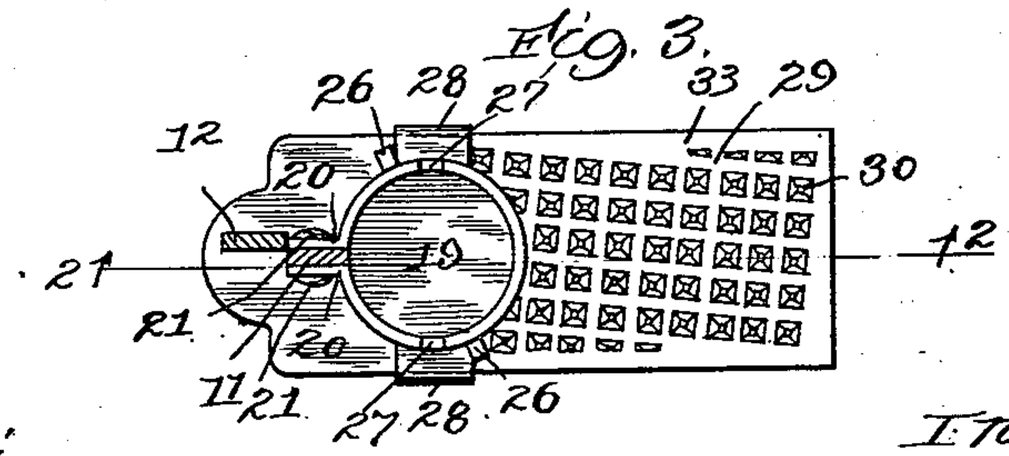


Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig 4.

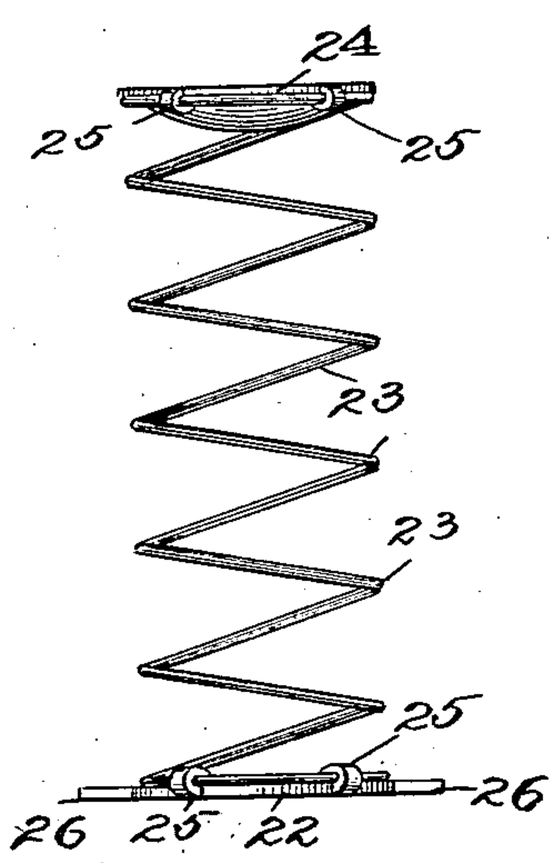


Fig. 5.

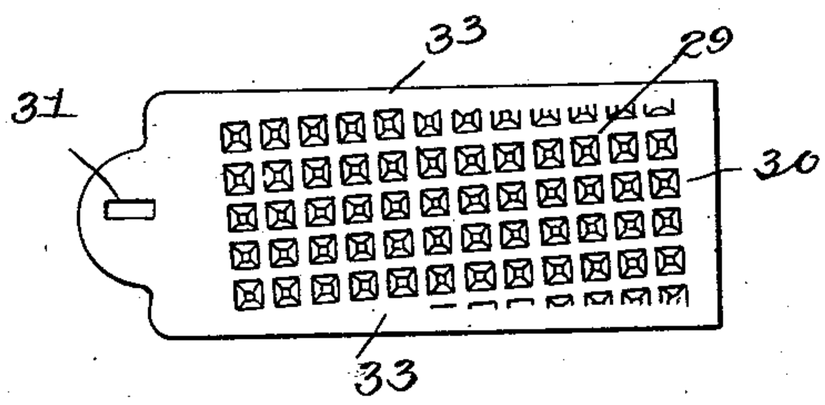


Fig. 7.

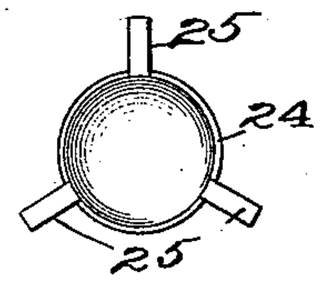


Fig 8.

Fig. 6.

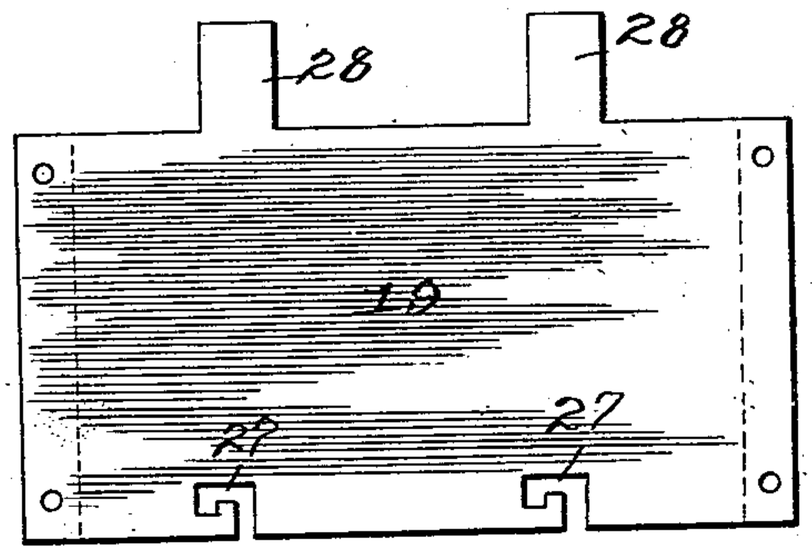


Fig. 9.

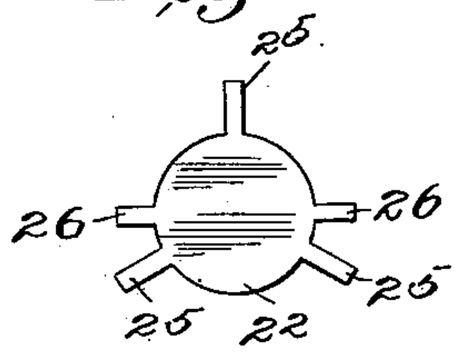
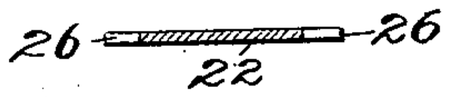


Fig. 10.



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No. 751,159. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

JOHN WILLIAM GAGE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN P. WIENS, OF MILWAUKEE, WISCONSIN.

GRATING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 751,159, dated February 2, 1904.

Application filed January 31, 1903. Serial No. 141,231. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAM GAGE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grating Implements; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to grating implements, such as are employed to grate nutmeg or the like.

The primary object of my invention is to produce an implement of the character described capable of rapid and convenient manipulation to effectively and completely grate or comminute the nutmeg or other substance to be acted upon.

A further object is to provide a construction at once simple, cheap of manufacture, convenient, and efficient in operation.

With a view to attaining these and other objects, which will become apparent from the following description, my invention consists in the features of construction and combinations of parts hereinafter specified, and more particularly pointed out in the claims.

In the drawings, wherein I have illustrated an operative embodiment of my invention, Figure 1 is a side elevation of my grating implement complete. Fig. 2 is a transverse vertical section taken on line 2 2 of Fig. 3. Fig. 3 is a transverse section on line 3 3 of Fig. 1 looking in the direction of the arrow. Fig. 4 is an enlarged detail illustrating the spring and its attached plates. Fig. 5 is a detail of the grating-plate detached. Fig. 6 represents a blank from which the barrel of the grating implement is formed. Figs. 7 and 8 are respectively a plan view and a central section of the follower secured to the upper end of the compression-spring, as illustrated in Fig. 4. Figs. 9 and 10 are respectively a plan view and a transverse section of the bottom plate or closure of the barrel secured to the base of the spring.

Throughout the drawings like numerals of reference are used to indicate like parts.

Referring now to the drawings, 11 and 12 indicate two bent levers pivotally connected at 13 and preferably formed of sheet metal. Said levers are preferably arranged so that when in normal position the portions thereof on one side of the pivot extend in parallelism and edge to edge from the pivot-point to their ends. On the other side of the pivot said levers are preferably divergently bent for a suitable distance and then again bent in directions conveniently suitable and approximating parallelism. The separated ends of the levers are provided with suitable handles 15 and 16, preferably formed integral with the levers proper by bending a suitable lateral extension of the handle to a proper curve, as indicated in Fig. 1.

17 indicates a spring, preferably of a flat bowed shape, arranged to maintain the levers normally in the position shown in full lines in Figs. 1 and 2. Said spring is preferably secured to the levers at its opposite ends by passing the extremities of said spring through openings formed in the respective handles 15 and 16 of the levers 11 and 12 and suitably upsetting or bending said extremities to securely hold them against withdrawal.

19 indicates a barrel for receiving and holding the material to be grated. The barrel is preferably formed of sheet metal bent to cylindrical form and provided with laterally-extended lips 20, which are secured to the upper extremity of lever 11 by suitable rivets 21. The barrel 19 is provided with a removable closure or bottom 22, which affords a bearing for and is preferably secured to a helical compression-spring 23, which when in position bears against dish-shaped follower 24, preferably also secured to the spring. The bottom 22 and follower 24 are conveniently

secured to the spring 23 by providing them with integral projecting tongues 25 and bending said tongues to embrace the spring, as best indicated in Fig. 4. The bottom 22 is likewise provided with a pair of diametrically-opposed tongues 26, arranged for engagement with suitable bayonet-slots 27, formed in the lower edge of the barrel 19.

28 28 are guides preferably formed integral with the barrel 19, adapted to slidingly engage and support the grater-plate 29, provided with the usual protruding grating-teeth 30. At one end the grater-plate 29 is provided with an elongated aperture 31, adapted to receive a curved finger 32, carried by the lever 12 and preferably formed integral therewith. It will be noted that the rows of grating-teeth 30 are angularly disposed relative to the longitudinal axis of the plate and that they stop short of the side edges of the plate to leave a smooth surface 33 on both sides of the plate to afford a smooth sliding path for the guides 28.

In the use of my invention to insert the material to be grated the tongues 26 of the removable closure or bottom of the barrel are first freed from their retaining-slots 27 27 and said closure with the attached spring 23 and the dished follower 24 are withdrawn from the barrel. The nutmeg or other article to be grated is then inserted in the barrel and the spring with its associated follower and closure replaced and the removable closure locked in position in its bayonet-slots. The tension of the spring 23 now acts against the follower and bottom to force the nutmeg, indicated by 33 in Fig. 2, forward against the toothed surface of the grater-plate. If now the handles 15 and 16 be manipulated to successively move the parts to the position shown in dotted lines in Fig. 1 and to permit them to return under the impulse of the spring 17 to the position shown in full lines in Fig. 2, the plate 29 is thereby reciprocated across the end of the barrel, effectively shredding or grating the material contained therein. It will be noted that the curvature of the finger 32 is such as to permit the oscillation of the plate 29 as the levers are separated with but little frictional resistance.

It will be apparent that by the use of the implement described a nutmeg or the like may be completely disintegrated and that the grating operation may be performed conveniently and with one hand without cramping the fingers and without danger of abrading them.

While I have described in detail an operative construction of my invention, I do not desire to be limited to the specific details herein described for purposes of full disclosure, as it is apparent that slight changes might be made therein without departing from the spirit and scope of my invention.

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

1. In a grating implement, a pair of levers pivoted together at a point intermediate their ends, said levers having normally separated handles at corresponding ends, a spring arranged to hold said handles normally apart, a holder for the material to be grated carried by the free end of one of the levers, and a grating member slidably mounted in operative proximity to the material-holder, and operatively connected with the free end of the opposing member, whereby relative movement of the handles imparts relative movement to the holder and grating member.

2. In a grating implement, a pair of levers pivoted together intermediate their ends, and each having at one end a handle part adapted to be grasped in the hand, an open-ended material-holder carried by the free end of one lever, a grating member operatively associated with the open end of the holder for movement relative thereto to grate the held material, and an operative connection between said grating member and the free end of the opposite lever whereby relative movement of the levers imparts relative movement to the grating member and material-holder.

3. In a grating implement, two levers pivotally connected and adapted to be opened or closed, means for normally holding said levers in closed position, a barrel carried by one lever member, a grater-plate attached to the opposite member for movement therewith, and closing one end of said barrel, and a spring-pressed follower within the barrel arranged to hold material within the barrel against the grating-plate.

4. In a grating implement, a pair of pivoted levers, provided with handles at one end thereof, an open-ended holder for the material to be grated, secured to one of said levers, and provided with a guideway at its open end, and a grater-plate slidably mounted in said guideway and loosely attached to the opposite levers.

5. In a grating implement, a pair of angular levers, pivoted together at their angles, a spring interposed between said levers to hold them separated on one side of the pivot and in close proximity on the other side, handles provided on the separated ends of the levers, and coacting holding and grating members operatively associated in movable relation and connected with the respective normally adjacent ends of the levers.

6. In a grating implement, a pair of pivoted levers, a material-holder secured to one of said levers, guides upon said holder, a grater-plate slidably arranged in said guides, and provided at one end with an aperture, and a finger carried by the opposing lever engaging in said aperture.

7. In a grating implement, a pair of pivoted levers provided with handles at one end, a spring interposed between said handles, an open-ended barrel mounted on the opposite end of one of said levers, provided with guides 28 at its upper end, means within the barrel arranged to force material toward the open end of said barrel, a grater-plate slidably mounted in said guides, said plate having an aperture in one end thereof, and a curved finger 32 carried by the opposing lever and engaging in said aperture.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN WILLIAM GAGE.

In presence of—
GEO. T. MAY, Jr.,
MARY F. ALLEN.