

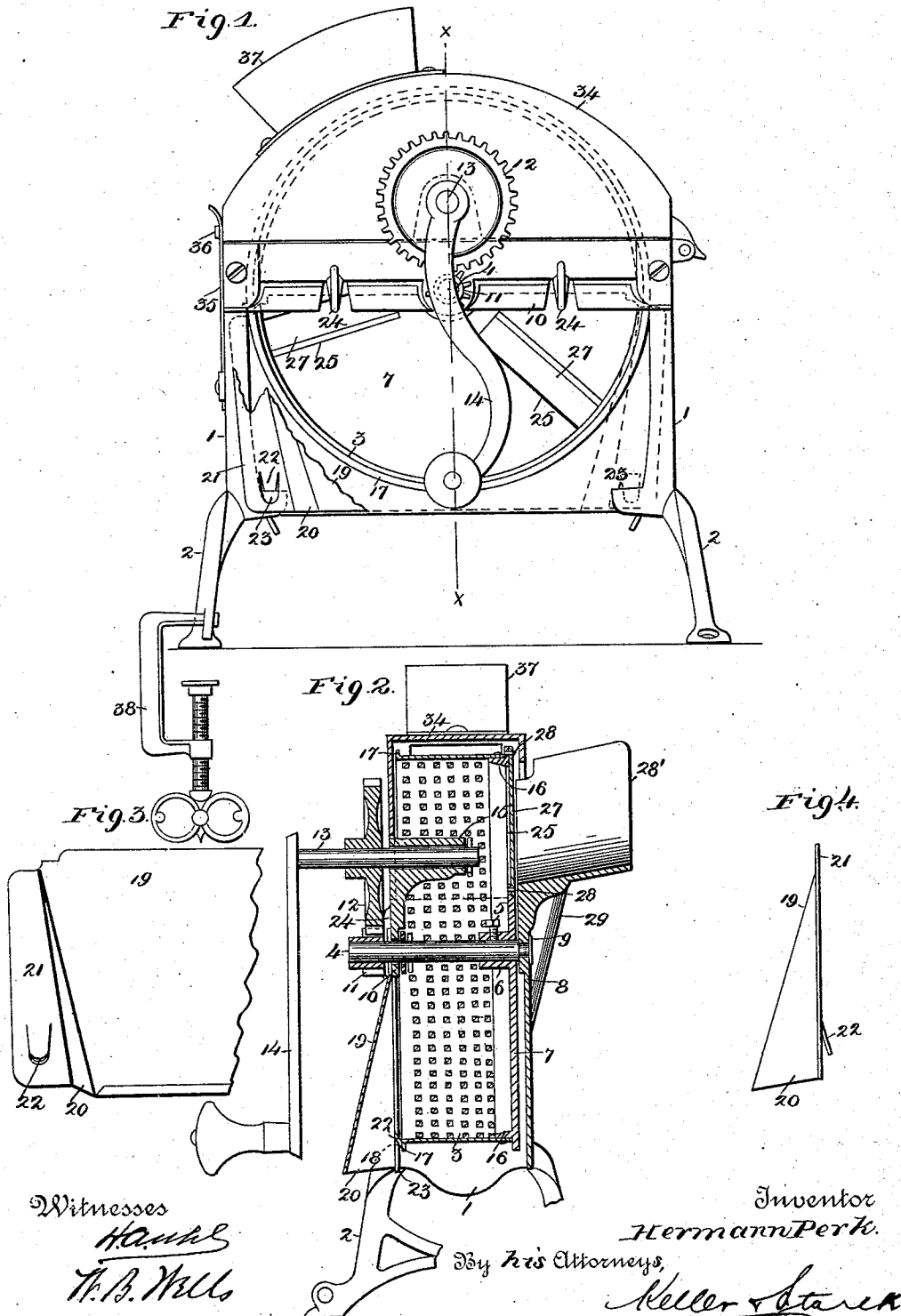
(No Model.)

2 Sheets—Sheet 1.

H. PERK.
COMBINED SLICER AND GRATER.

No. 576,886.

Patented Feb. 9, 1897.



(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

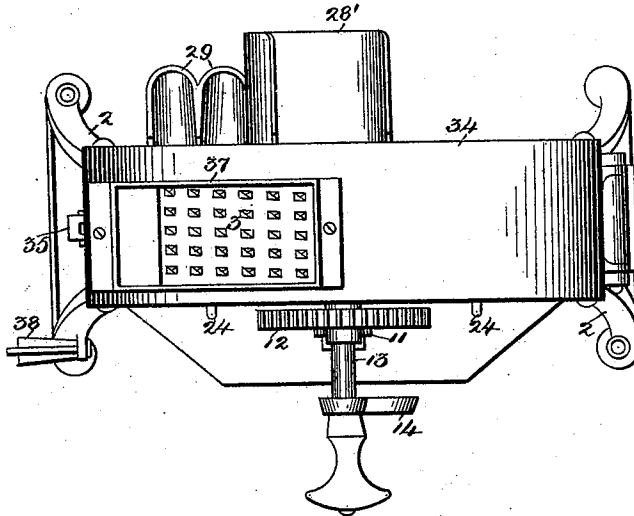


Fig. 8.

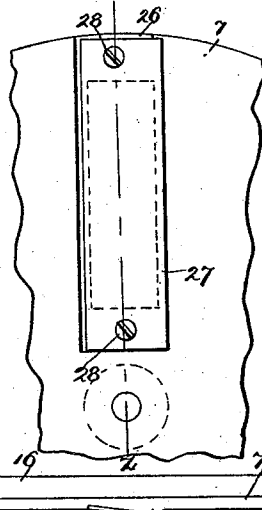


Fig. 10.

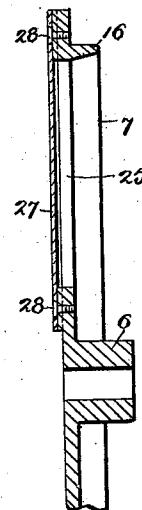


Fig. 6.

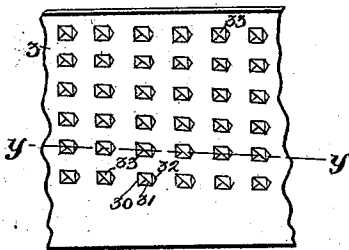


Fig. 7.

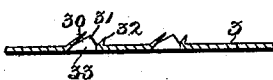


Fig. 9.

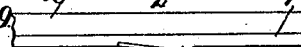
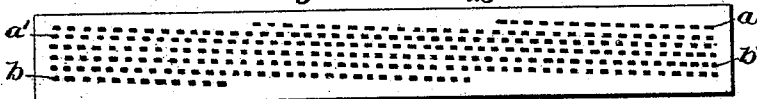


Fig. 11.



Witnesses

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HERMANN PERK, OF ST. LOUIS, MISSOURI.

COMBINED SLICER AND GRATER.

SPECIFICATION forming part of Letters Patent No. 576,886, dated February 9, 1897.

Application filed February 20, 1895. Serial No. 539,044. No model.)

To all whom it may concern:

Be it known that I, HERMANN PERK, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in a Combined Slicer and Grater, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in combined slicers and graters; and it consists in the novel arrangement and combination of parts more fully set forth in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a front elevation of my device with a portion of the front removable plate broken away. Fig. 2 is a vertical section on the line xx of Fig. 1. Fig. 3 is a rear view of one end of the front removable plate, which is adjacent to the open end of the grater-cylinder. Fig. 4 is an end view of the same. Fig. 5 is a top plan view of the machine. Fig. 6 is a top plan view of a portion of the grater plate or cylinder. Fig. 7 is a section through the teeth thereof, taken on yy of Fig. 6. Fig. 8 is a view of a portion of the rear wall of the grater-cylinder, showing the manner of securing the cutting knives or blades thereto. Fig. 9 is an end view thereof. Fig. 10 is a vertical section on zz of Fig. 8; and Fig. 11 is a diagrammatic view showing the disposition of the rows of teeth on the grater-plate when unfolded.

The object of my invention is to construct a combined slicer and grater in a single machine which shall be compact, simple, durable, and have a maximum capacity for the number of parts employed. To this end I have devised a machine which in detail can be described as follows:

Referring to the drawings, 1 represents a frame provided with legs 2, to which the several operative parts are secured and within which they are mounted. Within the frame is centrally mounted an open cylindrical revolving grater 3, the said grater being secured to a shaft 4 by means of a binding-screw 5 in the tubular collar 6, forming a part of the rear wall 7 of the grater, through which collar the shaft 4 passes, the reduced rear end of the shaft having a bearing in the rear wall 8 of the frame and held in place by the expanded

head 9 at the outer end thereof. The front end of the shaft 4 has a bearing in an upper longitudinal bar 10, the projecting front end of the shaft carrying a pinion 11, which meshes with a gear-wheel 12 on a shaft 13, operated by a handle 14, which shaft 13 finds a suitable mounting in the inwardly-extended bearing 15, forming a part of or cast with the bar 10.

The grating-plate of the grater 3 is secured at its closed end directly to an inwardly-projecting flange 16, forming a part of the wall 7 of the grater, the free open end of the grating-plate having a terminal peripheral turned-up edge 17, which construction acts to stiffen the grater-plate when pressure of the article to be grated is brought to bear upon its surface. The gratings from the grater-cylinder escape or drop from the mouth 18, formed by the outwardly-inclined wall of a detachable front plate 19, forming the front wall of the frame.

The plate 19 has terminal walls 20, which have outwardly-extended folded portions or wings 21, from which suitable inwardly-projecting lips 22 are punched, the said lips being adapted to pass over the inwardly-turned ledges 23 of the frame and thus hold the plate 19 temporarily in place on the frame. The upper edge of the plate 19, too, is held by the downwardly-projecting lugs or ears 24, formed or cast with the bar 10, the latter being suitably cut away on either side of each lug 24, as best seen in Fig. 1. The upper edge of the plate 19 is first passed under the lugs, when the lips 22 at the lower end will be in position to be passed over the ledges 23, after which the plate can be firmly secured by pulling down on the plate and allowing the lips to fairly embrace the ledges 23, by which the plate is supported.

The rear wall of the grater is provided with a series of radially - arranged rectangular openings or slots 25, at the opposite terminal edges of each of which is formed an outwardly-inclined ridge 26, so that when the cutting knives or blades 27, forming the slicer, are superposed over the openings the said blades will be inclined outward, as best seen in Fig. 9, the said blades being secured by means of screws 28 to the ridges. With the rear wall 8 of the frame are integrally cast a

suitably-inclined pocket 28' for slicing cucumbers, and other pockets 29 for beans and like vegetables, the open rear ends of the several pockets leading directly to the series of revolving blades secured to the rear wall of the grater-cylinder. Each grater-tooth, as best seen in Fig. 7, is composed of three members, two large members 30 31 and a reduced member 32, and, as best seen in Fig. 6, the plate is so punctured that the members 30 and 31 remain contiguous to one another, whereas the member 32 recedes from the other two, so that when the opening between the members is viewed in plan it will be substantially a triangular one, as shown by 33 in Fig. 6. This form of tooth and the opening resulting, therefrom is the only one, so far as I am aware, which will not clog and which can be readily cleaned. To the top of the frame at one end thereof is hinged the hood 34, which is adapted to close over the grater-cylinder and have its opposite end secured or fastened by the spring plate or latch 35 snapping over the lug 36, forming part of the hood. The hood carries a hopper 37 for introducing the necessary vegetable to be grated, such as a potato, horse-radish, and the like.

As best seen from Figs. 6 and 11, the rows of teeth of the grater are inclined to the outer parallel edges of the grater-plate, so that when the latter is folded or bent into the cylindrical position a number or series of spiral rows of teeth will be formed. Fig. 11 is a diagrammatic view showing the general disposition of the several rows of teeth forming the grater-surface. The view shows the cylindrical plate laid open.

It will be seen that there is a short row of teeth located at the opposite diagonal ends of the plate, the row at each end having its beginning at a point about one-third along the length of the plate. There is a second row having its beginning at a point about two-thirds the length of the plate. There is a third row having its point of beginning at the end of the plate. There are then intermediate rows running the full length of the plate. All the rows are symmetrically disposed about the medial longitudinal line of the plate, or about the middle rows extend-

ing the full length of the plate and are inclined to the opposite parallel edges of the plate, and when the latter is bent into the cylindrical form there will be formed three series of spiral rows, each having a distinct point of beginning and ending, the place of beginning for one row being in advance of the place of beginning of each succeeding row. In bending the plate into the cylinder form the point *a* is brought opposite the point *a'*, the point *b* is brought opposite the point *b'*, and the remaining rows accordingly, thus making the several rows continuous across the meeting edges of the plate. By this construction the teeth sweep back and forth over the surface of the article to be grated, grating every portion of it without leaving any portion ungrated, as would be the case were the rows simply arranged at an incline and without the consecutive spiral arrangement here described. The machine can be clamped to a table by a securing-clamp, as best seen in Fig. 1.

Having described my invention, what I claim is—

1. In a combined slicer and grater, a suitable frame, a rear wall for the same, a bar secured along the front portion of the frame, a series of lugs or ears depending therefrom, inwardly-projecting ledges on opposite sides of the bottom of the frame, an outwardly-inclined plate, having terminal walls, wings forming a part of said walls, and inwardly-punched lips on said wings adapted to embrace the ledges upon insertion of the upper edge of the plate under the lugs of the bar, substantially as set forth.

2. In a combined slicer and grater, a suitable grater-plate, a series of teeth disposed thereon, each tooth having two upwardly-projecting large members, and a third oppositely-receding small member, substantially as set forth.

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

HERMANN PERK.

Witnesses:

H. A. UHL,
E. STAREK.