

No. 697,766.

Patented Apr. 15, 1902.

H. K. WOOD.
FOOD CHOPPER.

(Application filed Nov. 14, 1901.)

(No Model.)

Witnesses
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UNITED STATES PATENT OFFICE.

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FOOD-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 697,766, dated April 15, 1902.

Application filed November 14, 1901. Serial No. 82,223. (No model.)

To all whom it may concern:

Be it known that I, HUBERT K. WOOD, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Food-Choppers, of which the following is specification.

My invention relates to what are known to the trade as "food-choppers," or machines in which food of various kinds may be reduced to minute fragments for domestic and other uses. Heretofore in this class of machines trouble has been caused by the massing or accumulation of the food and by the jamming of the same in front of the forcer and against the stationary cutter, requiring considerable exercise of power to actuate the forcer and cause the machine to accomplish its purpose. My invention is intended to remedy the defects in these old styles of machines, and has for its object the provision of a stationary cutting-plate having passages of such form that ample clearance is provided for the food and all liability of the accumulation of the same within the casing and its mashing by the forcer are obviated.

A further object of the invention is the provision of a grid or stationary cutter-plate having a series of arms connecting its hub and periphery, the same being thicker on their outer than on their inner ends and forming, practically, a wedge tapering from the base to the point, whereby an opening flaring toward the inner side is formed between each pair of arms, thereby enabling the material in the casing to pass readily through said spaces as the forcer drives it forward without liability of clogging.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of a food-chopper involving my invention, with the forcer in elevation. Fig. 2 is an end view of said chopper, the shaft being in section. Fig. 3 is an end view of one form of forcer that may be employed. Fig. 4 is a plan view of the case with the cutting-plate or grid in section, one of the arms of the movable cutter also being in section, said section being taken on line *x x* of Fig. 2.

Like numerals refer to similar parts throughout the several views.

Referring to the drawings, the numeral 5 designates a casing, preferably formed as a single casting and provided on its inner surface with spiral ribs 6, which cooperate with the ribs 7' of a forcer 7 in cutting the food—for instance, meat—which is fed to the casing through the hopper 5', and the numeral 8 designates a stationary cutter or grid having arms or spokes 8' of inwardly-beveled or wedge shape, as at 9 in Fig. 4, thereby producing a flaring or bell-mouthed opening, through which the meat or other material is forced by the forcer 7. The end convolutions 7² of said forcer are made flat or slightly rounded on their outer surfaces, as at 7⁴, and these surfaces are diametrically opposed and do not act in the slightest degree as cutting instrumentalities, the mass in front of said forcer being driven by said flat or rounded surfaces 7⁴ against the sharp ends 8² of the arms 8'. Heretofore these arms 8' have had comparatively broad surfaces on their ends adjacent to the end of the forcer and the material has had a tendency to clog or jam between said surfaces and said forcer; but by constructing the arms in the manner described all liability of clogging is avoided and the sharp ends 8² of the arms sever the meat or other material as it is driven against them by the forcer and enable it readily to enter the flaring space between said arms.

The grid or plate 8 is shown formed as an integral part of the casing; but it will readily be understood that it may be made separate therefrom and secured thereto in any approved manner desired. At its rear end the forcer is provided with a circular disk or plate 7³, which fits in an opening in the end of the casing and serves as a means for supporting and steadying said forcer. At its forward end the forcer is provided with a journal 10, fitted in a bearing of the grid or stationary cutting-plate, and this journal is equipped with laterally-extending lugs 12, which fit into slots 13' of the movable cutter 14, and it is also extended at 15 and is threaded on such extension to receive a nut 16, having thumb

or wing pieces 16' for clamping the movable cutter-plate to the end of the forcer. Secured to an extension of the forcer is a handle 17 for turning the same, and depending from the casing 5 is a standard 18, which will be equipped in practice with usual means for securing the machine to a table or other support. The arms or spokes 14' of the movable cutter shear the material fed through the openings in the stationary cutter against the outer sharp edges of said cutter with a clean cut, and by providing this stationary cutter with the beveled arms or spokes described free clearance is given to the food and all danger of clogging is entirely obviated.

The invention is not limited to the specific kind of forcer illustrated and described, for other forms of this device may be employed without departure therefrom; nor is it limited to a grid or cutter-plate formed as an integral part of said casing. So, too, the mode of arrangement of the arms or spokes of the stationary plate and of the cutting-arms of the rotary cutter may be varied from the construction illustrated. In other words, said arms or spokes may be radially instead of tangentially disposed, as shown, without departure from the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a food-chopper, the combination, with a casing, of a stationary cutter having inwardly-flaring walls each having a cutting

edge; a screw forcer a convolution of which terminates in a blunt surface, said surface serving to force the food against the inner cutting edges of the stationary cutter; and a rotary cutter coöperating with exterior cutting-surfaces of said stationary cutter.

2. In a food-chopper, the combination, with a casing, of a screw forcer, two of the convolutions of which terminate in blunt surfaces; a stationary cutter-plate having inwardly-inclined arms against the inner sharp ends of which the food is forced by the non-cutting end surfaces of the forcer; a rotary cutter; and means for securing said rotary cutter to the forcer.

3. In a food-chopper, the combination, with a casing, of a screw forcer journaled for rotation within said casing, and having its convolutions terminating in diametrically opposed, flat or rounded surfaces; a stationary cutter-plate or grid at the end of the casing and having inwardly-flaring passages, the walls of which have cutting edges at their inner ends, for the delivery of the food; and a cutter carried by the forcer and movable therewith and adapted to sever the food against the outer cutting-surfaces of said stationary cutter.

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

HUBERT K. WOOD.

Witnesses:

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