No. 719,467. PATENTED FEB. 3, 1903.

F. B. HOLDER.

POTATO MASHER.

APPLICATION FILED DEC. 7, 1901.

NO MODEL.

Fig. 1.

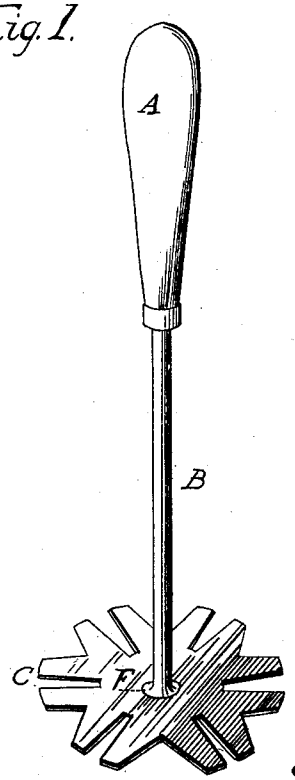


Fig. 3.

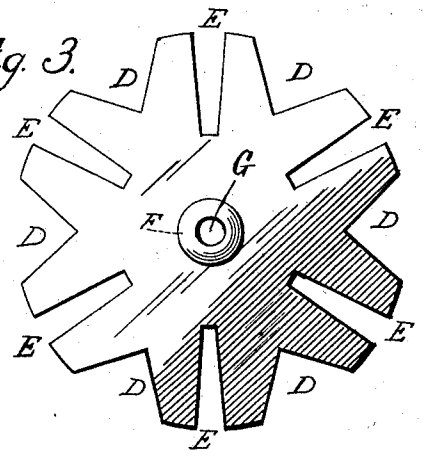


Fig. 4.

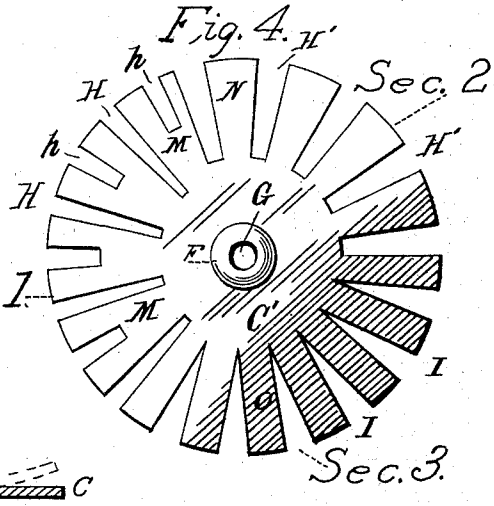
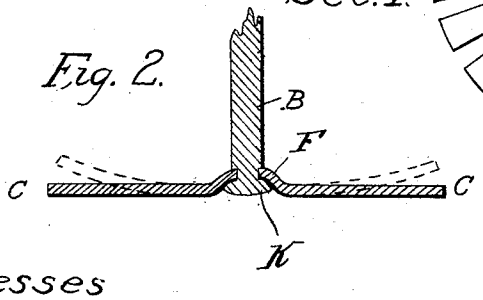


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANKLIN B. HOLDER, OF LANSING, MICHIGAN.

POTATO-MASHER.

SPECIFICATION forming part of Letters Patent No. 719,467, dated February 3, 1903.

Application filed December 7, 1901. Serial No. 85,093. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN B. HOLDER, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Potato-Mashers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to potato-mashers.

The object of the invention is to produce a potato-masher of which the operative part shall be composed of a flexible metallic plate, preferably a steel plate, having unequal projecting splines or fingers which normally lie in a horizontal plane, but which will bend under pressure, the metal having sufficient elasticity to resume the flat position when pressure is removed.

Figure 1 is a perspective view of the potato-masher. Fig. 2 is a broken cross-section indicating in dotted lines the flexing of the metal. Fig. 3 is a bottom plan of the face-plate. Fig. 4 is a plan of a modification.

Let A indicate a piece or hand-grasp of any well-known or usual form for a tool-handle.

B denotes a metallic rod, preferably of steel, which extends from the hand-grasp A to the masher-head C and completes with the part A, what is generally called the "handle" of the tool.

C denotes the masher-head. This is a plate of sheet metal, preferably steel, and the general form of a disk is preferred. Centrally in this disk there is a concavo-convex portion F, the concave side being on the face, which is the lower or operative side, the upper face of this portion F forming a dome. In the center of this dome there is a hole G. The rod B passes through hole G and has a shoulder overhanging the edge of the hole. In the concave portion of the plate a head K is formed within the dome by expansion or riveting, so that plate C is firmly attached to the handle, yet there is no projection of the lower end of the handle below the plane of the lower face of plate or disk C. The edge of the plate or disk C is slotted or serrated in peculiar manner. The object of the slots or serrations is to produce splines or fingers of unequal width and elasticity and to have the slots or notches vary, so that different parts of the plate act in different manner, and by rotating the tool while causing it to reciprocate the user can bring different sections of the plate or disk to operate on the same part of the vessel or receptacle or on the vegetables inclosed in the receptacle, the operation of the different fingers or section and of the notches or slots between them being different according to position. Thus larger lumps or bodies of the material can pass through some of the notches than through others, and by turning the masher around a different kind of action is had on the mass. A lump which will pass through a side notch may then be compelled to pass through a narrow one, and so ground or mashed to fineness. In the example, Figs. 1 and 3, the slots E are cut with sides nearly radial to the disk and with the inner ends of said slots substantially arcs of a circle, say, about half-way between the center and the periphery of the disk. The notches D, which lie between the slots E, are substantially triangular, the apex of the triangle being inward. It thus happens that when the masher is brought down on the vegetable the vegetable matter, which is pressed upward through the notches or slots, will be acted on differently by each kind of aperture, and by rotating the tool a more effective mashing action can be had than if the apertures were all similar.

In Fig. 4 a modification is shown wherein the same idea of changed construction is further amplified. This disk C′ is marked as divided into three sections. Section 1 has alternate long slots H and short slots *h*, producing divided fingers M. Section 2 has only the deep slots H′, producing fingers N with substantially radial sides, and section 3 has notches I, leaving fingers O with parallel sides. Some of these fingers are more flexible than others, so that the action of different portions of the surface and different form of notches is very effective in mashing the vegetables if the tool be partially turned on the axis of the handle while reciprocating to mash the vegetable.

As shown in the drawings, none of the slots or notches have parallel sides; but these sides diverge more or less, and the notches or slots, while wider at their outer than at their inner ends, are not uniformly so, but purposely vary

in form, so that the bodies of material forced upward through these slots by the descent of the implement on potatoes or similar vegetables are not uniform in size or in shape. This variation of the size and form of the slots is effective in mixing and thoroughly mashing the vegetables. If the slots and fingers were uniform, the action of all the parts of the masher would be practically uniform even were the device rotated on its center in the hand, as is usual; but the variation in form and size of the notches or slots and of the fingers causes a different mechanical action on the material operated on when the masher is turned on its center between blows, as is usual in using hand-mashers.

It will be understood from the foregoing that my invention is not limited to a precise construction.

What I claim is—

1. A potato-masher, consisting of a handle provided with a hand-grasp, and a substantially flat metallic plate centrally attached to said handle, said plate having slots or notches in its edge and extending toward the center where the handle is attached, the notches varying in width, in their angles of divergence, and in extension toward the center, in the different parts of the plate.

2. A potato-masher consisting of a handle and a flat metallic plate centrally connected to said handle, said plate having its edges divided by slots or notches of divers forms and depths, and having fingers of different width and differing in elasticity, substantially as described.

In witness whereof I hereunto set my hand and seal this 4th day of December, A. D. 1901.

FRANKLIN B. HOLDER. [L. S.]

In presence of—

D. J. GILLAM,

HELEN POWERS.