No. 698,120. Patented Apr. 22, 1902.

E. W. LEACH.

KITCHEN UTENSIL.

(Application filed May 2, 1901.)

(No Model.)

Fig. 2.

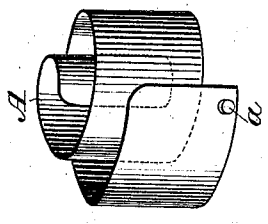


Fig. 3.

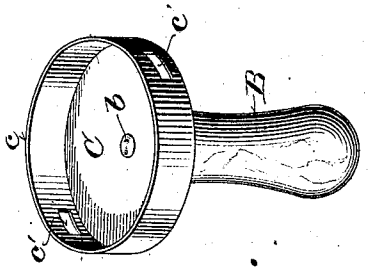
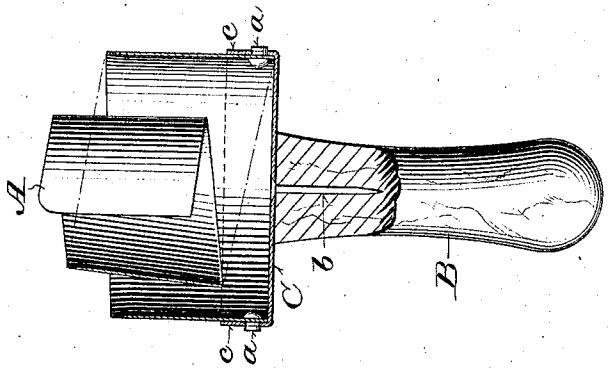


Fig. 1.



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UNITED STATES PATENT OFFICE.

EUGENE W. LEACH, OF RACINE, WISCONSIN, ASSIGNOR OF ONE-HALF TO WILLIAM Q. MORTON, OF RACINE, WISCONSIN.

KITCHEN UTENSIL.

SPECIFICATION forming part of Letters Patent No. 698,120, dated April 22, 1902.

Application filed May 2, 1901. Serial No. 58,407. (No model.)

To all whom it may concern:

Be it known that I, EUGENE W. LEACH, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Kitchen Utensils, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates particularly to chopping-knives, but is applicable to other kitchen utensils, such as meat-tenderers, cookie-cutters, &c.

The main object of the invention is to provide a chopping-knife that will do its work quickly with the expenditure of but little energy.

It consists in certain peculiarities of construction and in the arrangement and combinations of parts hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings, illustrating one of various forms in which my invention may be embodied, like letters designate the same parts in the several figures.

Figure 1 is a partial axial section of a chopping-knife. Fig. 2 is a perspective view of the blade, and Fig. 3 a similar view of the handle detached.

A is the blade, which is made from a thin flat strip or band of steel, preferably bent into spiral form and drawn out in an axial direction at its inner end, as shown in Figs. 1 and 2, into the shape of a cone or volute. It may, however, be made in the form of a flat spiral, so that the cutting edge will all be in the same plane. When it is made in the form of a volute or conical spiral, the inner end is unsupported at the back of the blade, as shown in Fig. 1, and is therefore capable of yielding in an axial direction and making a long progressive shear cut. The blade may also be made of annular or cylindrical form and attached at one end only to the handle, the distance of the cutting edge gradually increasing in an axial direction from the handle and the projecting end of the blade being unsupported and capable of yielding axially.

B designates one of various forms of handles to which the blade may be attached. It is represented in Figs. 1 and 3 of the drawings of a form in which it may be conveniently turned out of wood. To its squared end is attached, by means of a central rivet *b*, a circular metal disk C, formed with a marginal flange *c*, into which the spiral blade A is adapted to be sprung and detachably held by any suitable fastenings. As suitable means for fastening the blade in the socket-plate C of the handle, studs *a a*, secured in opposite sides of the blade near its back and adapted to engage with openings *c' c'* in the flange *c* of said socket-plate, are shown. It is obvious that the parts of the fastening might be reversed in arrangement by providing the plate C with inwardly-projecting studs and forming corresponding slots or openings in the blade or that other forms of fastening might be employed with the same result.

The utensil herein shown and described as primarily designed for a chopping-knife may be advantageously used as a meat-tenderer and with little or no change might also be used as a vegetable-masher. By constructing the blade in the form of a spiral of decreasing or variable radius from one end to the other a long cutting or working edge is obtained within a small compass, and by drawing out the spiral into the form of a cone or volute which is unsupported at one end the cutting or working edge of the blade readily adapts itself to the contour of the surface against which it works, such as the plane surface of a board or the concave surface of a chopping-bowl. The knife is made to operate with a shear cut, beginning at one end of the blade and progressing toward the opposite end. The hand is relieved of jar by the spring of the blade. The chopper is caused to rebound or recoil, thus assisting in its operation, and material forced between the coils or turns of the blade is ejected and thus prevented from clogging the knife. By making the blade detachable from the handle it may be more readily cleaned and sharpened. It may be sharpened by filing or by grinding.

Any convenient form of handle may be used in place of that shown, and each handle may be provided with a number of interchangeable blades, so that as one becomes dull, or in case it is broken, it may be replaced by a

sharp or new blade, or blades of different kinds may be supplied with a single handle for different kinds of work.

Various changes in the minor details of construction other than those hereinbefore specifically mentioned may be made without departure from the principle and intended scope of the invention.

I claim—

1. A kitchen utensil consisting of a suitable handle and a curved spring-blade attached at one end to the handle with its back toward the handle, and having a spiral edge capable of yielding backward toward the handle gradually from its free toward its fixed end, substantially as described.

2. A kitchen utensil consisting of a suitable handle and a volute spiral spring-blade attached at one end to the handle with its back toward the handle, and having a spiral edge capable of yielding axially from its free end gradually toward its fixed end, substantially as described.

3. A kitchen utensil consisting of a suitable handle and a curved spring-blade adapted to be attached at one end to the handle and having a spiral edge capable of yielding backward toward the handle, said handle and blade having studs and openings which are arranged to be engaged with each other by the compression and expansion of the blade, substantially as described.

4. A kitchen utensil consisting of a volute-shaped spiral spring-blade and a handle having a flanged socket-plate in which the back of the blade is detachably fitted, the blade and handle being provided with interlocking studs and openings, substantially as described.

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

EUGENE W. LEACH.

Witnesses:
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ROY MILES.