I. G. Greenleaf.

Bait & Vegetable Cutter.

No. 74682 Patented Feb. 18, 1868.

Fig. 2

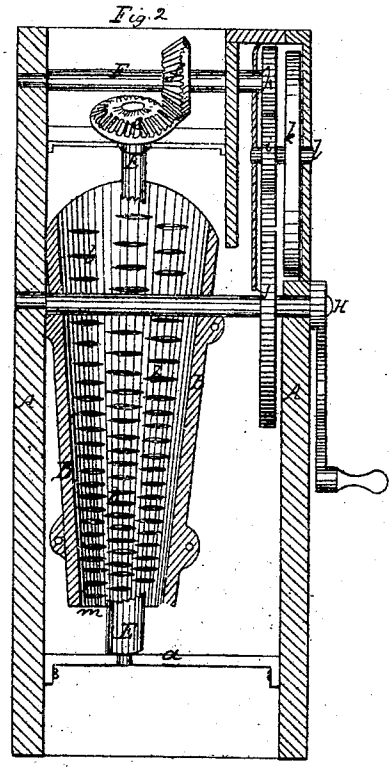


Fig. 1

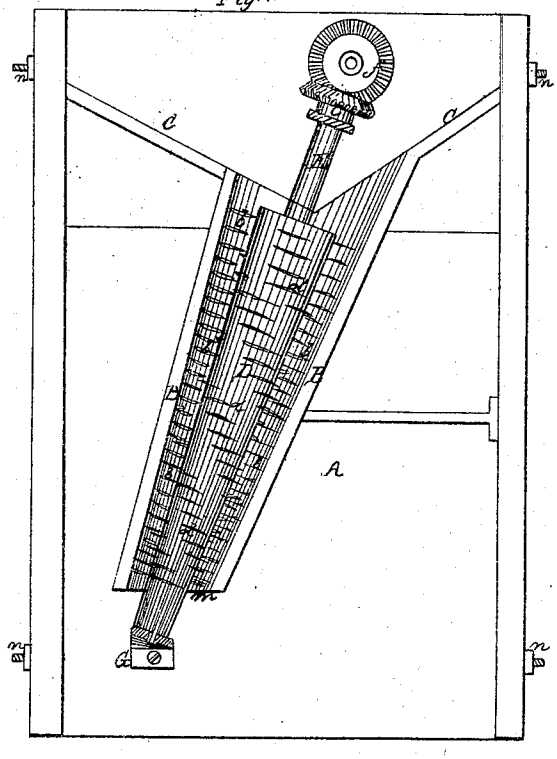


Fig. 4.

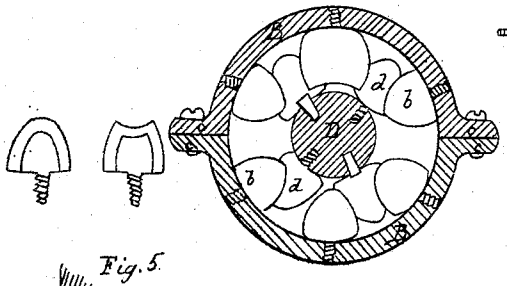


Fig. 3.

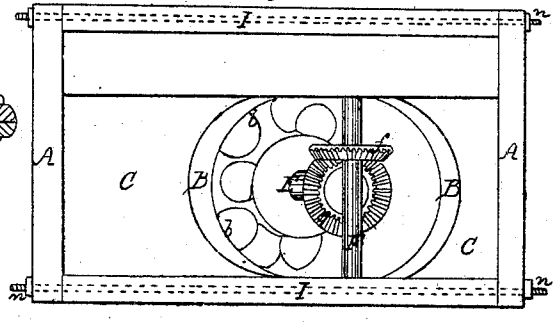
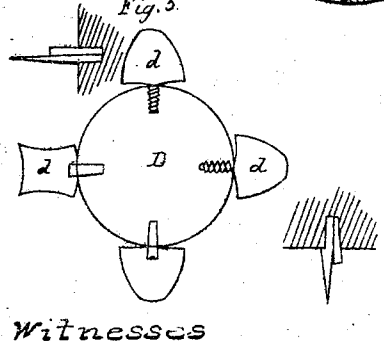


Fig. 5.



Witnesses

A. B. Woodruff

E. Young

Inventor

J. G. Greenleaf

United States Patent Office.

ZEBULON G. GREENLEAF, OF BATH, MAINE.

Letters Patent No. 74,682, *dated February* 18, 1868.

IMPROVED BAIT AND VEGETABLE-CUTTER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ZEBULON G. GREENLEAF, of the city of Bath, in the county of Sagadahoc, in the State of Maine, have invented certain new and useful Improvements in Bait and Vegetable-Mills; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a vertical section through a side elevation of the mill.

Figure 2 shows a section through the edge of the same.

Figure 3 is a plan or top view of the mill, showing the hopper and gear.

Figure 4 shows a cross-section through the cutting or grinding-mechanism.

Figure 5 represents detached views of the teeth or cutters, and different modes of fastening.

The object of my invention is to cut up or grind porgies, or any other kind of fish, suitable for toling mackerel or other fish; also for cutting mincing-meat, vegetables, or other substances.

My invention consists in the mode of constructing the cutting and grinding-mechanism; also in the arrangement of the gear-mechanism for operating either by hand or power, and the manner of fastening and strengthening the frame or case.

To enable others to make and use my invention, I will describe it more in detail, referring to the drawings, and to the letters of reference marked thereon.

I make the frame or case A A, of wood or metal, of any desired form or dimensions. The cutting or grinding-mechanism, which consists of a cylindrical or concave case, B B, made of either wood or metal, into which series of cutting-blades or teeth, *b b b b b*, are secured by means of a screw-thread or key, so that they may be easily taken out for sharpening and renewing. The cylinder or concave case B B may be secured in the case or frame A A in any desired position. For my purpose, it is desirable to make the concave case B B in a conical form, and when a complete cylinder, two of the concaves are secured together by ears *c c*, and belts. The hopper C C is so constructed and placed in the frame or case A, over the grinding-mechanism, that the substance to be cut or ground is easily admitted. I make the stock or revolving cone D, in which series of cutting-blades *d d d* are secured, of either hard wood or metal. The cone-stock D may be made hollow, or it may be solid, with a shaft, E, passing through its centre, extending far enough below the case B B to allow a free discharge of the cut or ground substance, the shaft E having a step or journal-box, G, to run in at the lower end. The top end of the shaft E may extend above the cutting-mechanism or hopper C, any required distance, to attach the gear-wheel *e*, which is connected with the bevel-gear wheel *f*, on the horizontal shaft F, to which a series of spur-gear wheels, *h i j*, are connected to give motion and power to the cutting or grinding-mechanism; the motion being equalized by a balance or fly-wheel, *k*, on the counter-shaft *l*, which connects the pinion *i* with the pinion *h* and driving-wheel *j* on the crank-shaft H. The gear or driving-mechanism may all be encased or boxed up, so as not to come in contact with any of the substance to be cut up or ground. If desirable to cut or grind the substance very fine, a slide may be so placed at the bottom of the concave cylinder B B, that the outlet *m* may be partially or wholly closed up, for the time necessary to mince the mass therein contained. I make the frame or box A so that it may be light and portable, and yet very strong, by putting bolts I I through to clamp the parts together by tightening up the nuts *u u* on the screw on both ends.

The advantages of my improved bait-mill are in its peculiar construction, whereby the porgies or other fish come in contact with the cutting-blades, and are rapidly reduced to the desired substance for toling mackerel, &c.

It will readily be seen that by the construction and arrangement of my improved bait-mill as above described, it will meet all of the necessary requirements. And it may be used at other seasons for cutting mincing-meat, or cutting up vegetables for various purposes.

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

The combination of the cutting-blades provided with screw-shanks, with the hollow cylindrical case B, and central shaft D, arranged as and for the purposes herein described.

Z. G. GREENLEAF.

Witnesses:

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E. YOUNGS.