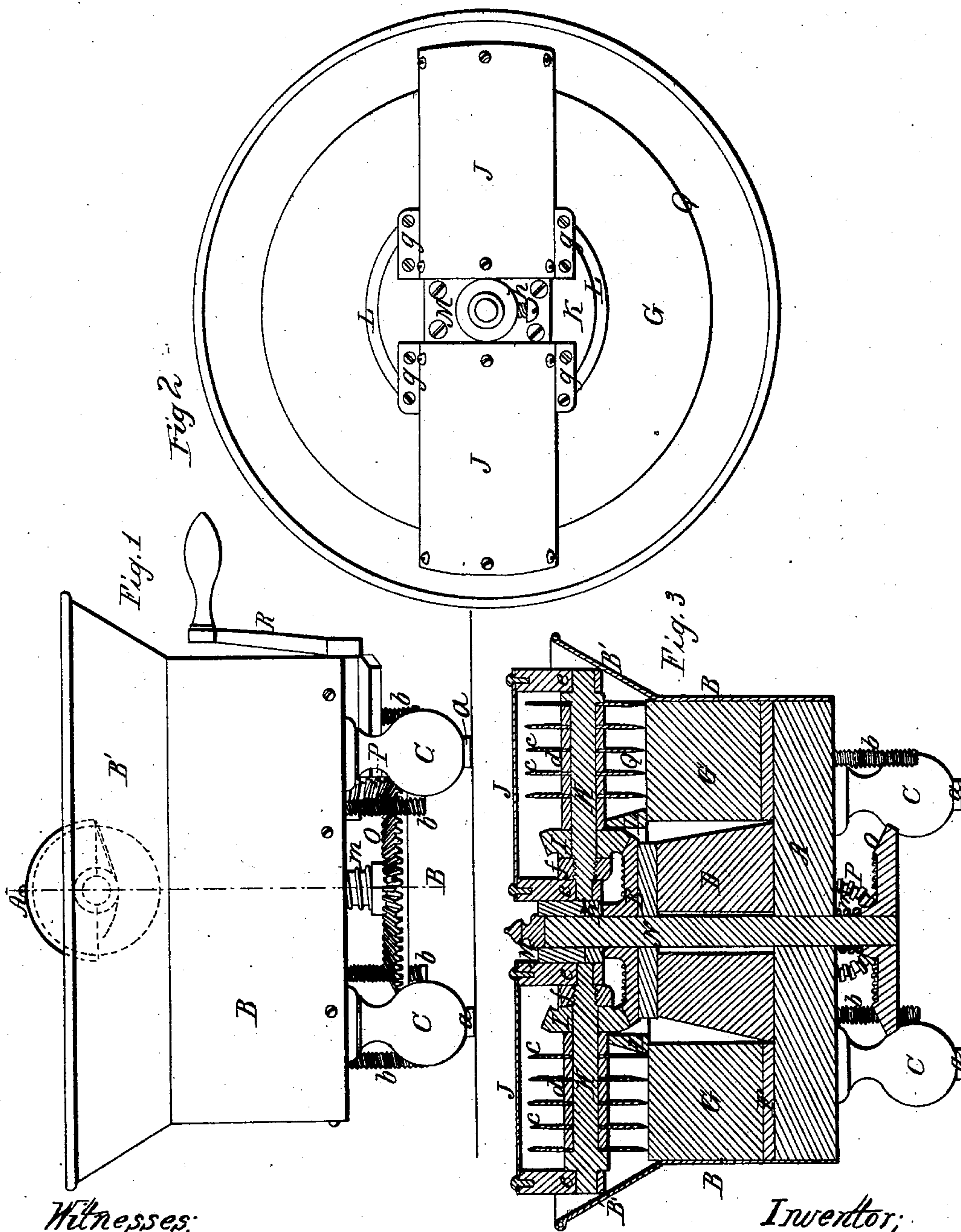


No. 81,088.

PATENTED AUG. 18, 1868.

J. C. HOWE.
MEAT CUTTER.



Witnesses;
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United States Patent Office.

JOHN C. HOWE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND THOMAS GATES.

Letters Patent No. 81,088, dated August 18, 1868.

IMPROVED MEAT-CUTTER.

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

KNOW ALL MEN BY THESE PRESENTS:

That I, JOHN C. HOWE, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Meat-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side view of my improved meat-chopper.

Figure 2 represents a top or plan view of the same, and

Figure 3 represents a vertical central section on line A B, fig. 2.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists, principally, in the combination, with a stationary bed, of a series of circular cutters, having a compound motion, as hereafter described; also, in the peculiar mode of combining the stationary bed with the frame of the machine, in such a manner that it can be readily adjusted as the top of the bed is worn off by the action of the cutters, as hereafter described; also, a certain special combination of mechanism for giving a compound motion to the cutters; also, in the peculiar construction of the main and cutter-frames.

In the drawings, A is the base of the frame, which may be made of wood or metal, having vertical sides, B, with a flaring top, B'. The base, A, is supported by legs C, tipped with rubber steps, *a*. Upon the top of the base, A, is secured the central stationary piece D, to the top of which is fastened the bevel-gear E. Between the sides B and the central piece D is arranged the disk F, which rests upon the top of the adjusting-screws *b*, which pass through the base, A, for the purpose of adjusting the latter, together with the stationary bed or cutting-table G, as it is worn off by the action of the cutters.

The circular cutters *c* are fastened upon the shafts H H, rings, *d*, being placed between them, as shown in the drawings. The ends of shafts H are supported and turn in the bearing-pieces *e e*. The bevel-gears I I are placed upon the inner ends of shafts H, and fastened securely thereto by means of the nuts *f f*, whereby gears I and cutters *c* are rigidly fastened to the shafts H. To the circular tops of the bearing-pieces *e e* are fastened the metal tops or covers J J. The inner flanged edges *g g* of the covers J J are fastened to the top piece, K, of the cutter-frame, the bottom part, L, of which is made in dish-form, which extends downward, in an inverted position, to the cutting-table G, as shown, and forms the inner side of the receptacle for the meat or other material to be cut. M is a metal bearing-piece, fastened to the centre of the top piece K, and between the inner bearing-pieces *e e*, for supporting the upper end of shaft N, which passes up through the base, A, and is fastened to the bearing-piece M by a screw, *h*.

Gears I I mesh into the stationary gear E, while the gear O, fastened to the bottom of shaft N, meshes into a bevel-gear, P, upon a horizontal shaft, which extends out, and is provided with a crank, R, as indicated in the drawings. A spiral spring, *m*, may be placed upon shaft N, below the base, A, for the purpose of keeping the cutters down upon the cutting-bed G, when the gears O and P are fitted to mesh loosely. By this last arrangement, the cutters *c* can yield up in case any hard substance, such as a piece of bone, happens to be caught between the knives and bed.

The bevel-gear O may be reversed, and the gear P, and its shaft, so arranged that said gears will mesh below gear O instead of above it. One edge of each metal cap J is slotted, and turned in between the cutters, to form cleavers or meat-distributors.

In some cases, I contemplate using a ring or disk, inserted in a groove or a recess in the inner upper edge of the cutting-block, to form a part or the entire inner side of the meat-receptacle. When said ring only forms a part of said inner side of such receptacle, I contemplate arranging it so as to extend up on the inner side of the part L, and break joints therewith.

The operation is as follows: The meat or other material to be cut is placed in the receptacle Q, formed by the flaring case B' and the part L of the cutter-frame. The operator now, by means of crank R, gives shaft N, and the frame which supports the cutters, a rapid rotary motion, thereby, in consequence of gears I I being smaller than the cutters c, giving the latter a drawing rotary cutting motion, which effectually cuts the meat or other material in a very expeditious manner. If the gears I I were not used, or were of the same size as the cutters c, the latter would simply have a rolling motion upon the bed G, whereas, by the use of gears smaller than the cutters, the latter are driven faster than they would move by simply being rolled upon or over the bed or table G, which produces the drawing and compound cutting motion referred to.

Bed or table G may be made in sections, or it may be made in a single piece, as shown in the drawings. The part L moves or revolves with shaft N.

My meat-cutter has been tested, and works well.

In practice, it may be found best to cast the cutter-frame, including the bearing-pieces e and piece K, of iron, and in a single piece. The shell B may also be made so as to cover only a portion of the upper end of the cutting-block, while a rib or flange, cast on the upper face of the base, A, holds the bottom of the block in place.

Having described my improved meat-cutter, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement, in a meat-cutting machine, substantially as described, of the vertical cutters c and horizontal cutter-shafts, in the manner set forth, whereby the said cutters, while revolving around a vertical axis, shall have an independent rotary movement in a vertical plane upon their own axes, so as to produce the compound drawing cutting-motion, substantially as specified.
2. The combination, with a cutting-bed, and a receptacle for meat or other material, of the central shaft N, horizontal shaft or shafts H, having cutters, c, of greater diameter than the gears I I, and arranged for joint operation, substantially as and for the purposes set forth.
3. The combination, with the base, A, and cutting-table or bed G, of the disk F and adjusting-screws b, substantially as and for the purposes set forth.
4. The combination and arrangement of the parts A, F, G, and D, substantially as and for the purposes set forth.
5. The combination, with the parts A, B, D, and E, of the operating-shaft N and cutting-mechanism, substantially as and for the purposes set forth.

JOHN C. HOWE.

Witnesses:

THOS. H. DODGE,
D. L. MILLER.