(No Model.)

J. PATCHEL.

MEAT CUTTER.

No. 259,711. Patented June 20, 1882.

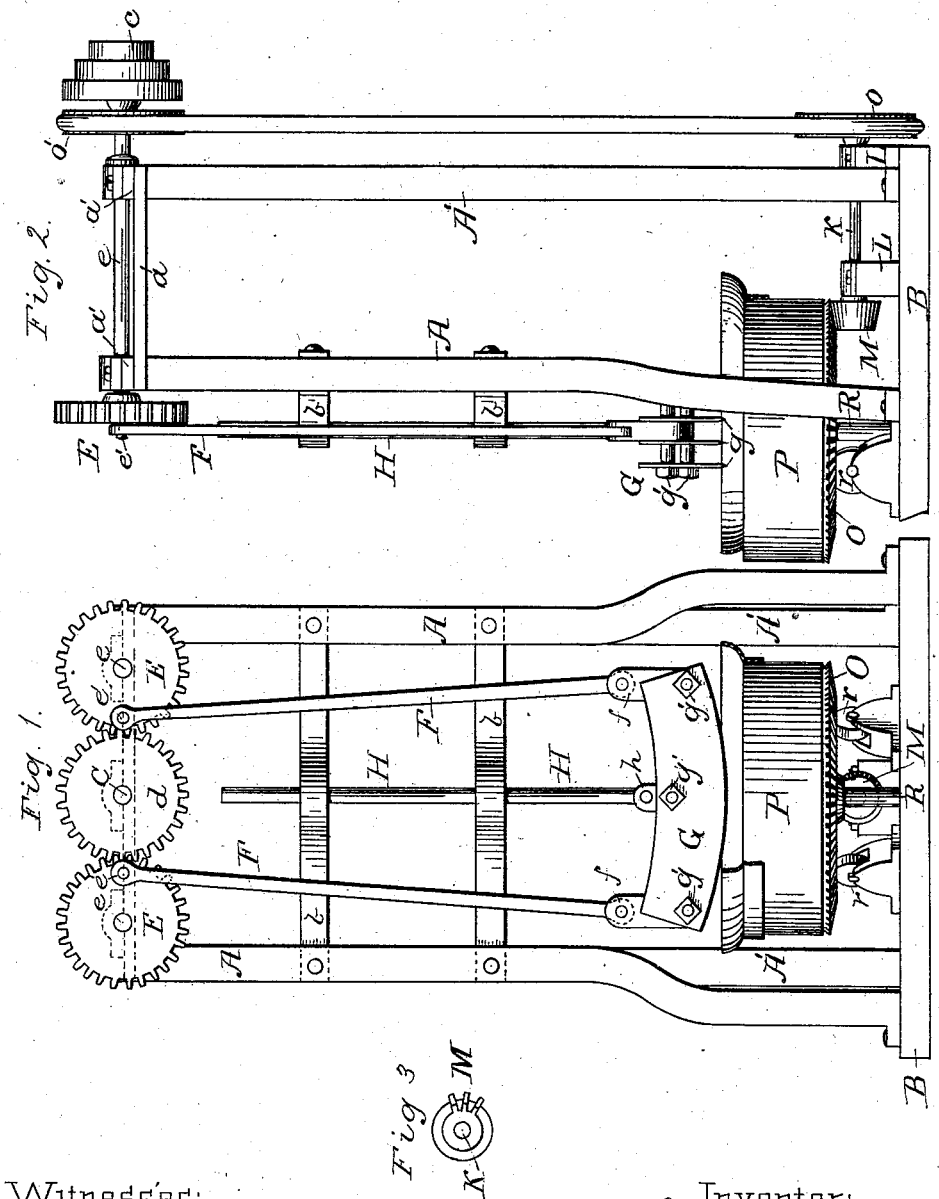

Fig. 2.

Fig. 1.

Fig 3

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JAMES PATCHEL, OF CHICAGO, ILLINOIS.

MEAT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 259,711, dated June 20, 1882.

Application filed February 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES PATCHEL, of Chicago, in the county of Cook and State of Illinois, 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 invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a meat-cutter operated by steam, hydraulic, pneumatic, or hand power, the knives of which are segmental shaped and have an oscillating reciprocal motion, operating similar to the same shaped cutter worked by hand, only more rapidly and thoroughly.

My invention consists of a segmental cutter having an oscillating reciprocal motion, cutting upon a bed-block mounted upon a turn-table having an intermittent motion imparted to it from a segmental gear located under and near the periphery of the same, which is so arranged that it moves the bed-block, when the cutter is raised from off said block, just sufficiently to carrry the meat receiving the previous incision out from under said cutter.

In the drawings, Figure 1 is a front elevation of my invention. Fig. 2 is a side elevation of the same; and Fig. 3 is a detail view, showing the segmental gear-wheel.

The frame-work of my invention consists of two front and two back uprights or standards, A A and A′ A′, describing a rectangle at their bases and resting upon the platform B, and being connected at their tops by the side pieces, *a a*, and the cross-beams *a′ a′*, the ends of which rest upon said side pieces. This frame may be made either of wood or metal. If of the latter material, it is preferred to bend and shape the front standards, as shown in the drawings, so as to narrow the dimensions of the machine above the bed-block and cutter. The front standards are connected above and between the cutter and the cross-beam *a′* by two braces, *b b*, which are bent outward to be adapted to serve as a guide for the vertical shaft, as will be hereinafter more fully explained.

Having bearings in and running centrally across the beams *a′ a′* is the driving-shaft C, extending from the back of the machine, where it terminates in the speed-pulley *c*, to the front, on which end it has the intermediate and principal gear-wheel, *d*, which is located almost over and on the longitudinal line intersecting the pivotal center of the bed-block, and which meshes with the side gear-wheels, E E, of equal diameter, fast on the ends of the shafts *e e*, running parallel with and being journaled in the same beams as the drive-shaft.

Extending from the front faces of the gear-wheels E E, and placed diametrically opposite each other in their relative positions, are the studs *e′ e′*, from which the pitmen F F, pivoted thereon, extend downward, and are pivoted to the lugs *f f* on either end of the cutter G.

If preferred, instead of having the pitman extend directly to the cutter, it may be shortened to one-third its length and connected by links to a connecting-rod, the lower end of which is pivoted to the lugs on the ends of the cutter. If this mechanism is adopted, it is necessary to place midway on said links a head, which slides on and between segmental or straight guides, which are placed on the inner sides of the front standards and upon guide timbers or frames, respectively.

The cutter G can be constructed of as many segmental or rocker shaped knives *g* as desired, running parallel to and separated from each other a distance of about three inches, the whole series being firmly secured by bolts and nuts *g′ g′ g′*, said bolts having sleeves over them between said knives, so as to strongly and securely keep them their proper distances apart.

Projecting vertically from the longitudinal and transverse center of the cutter is the lug *h*, to which is pivoted the head of the vertical shaft H, the same forming the point of oscillation of said cutter. The shaft H rises vertically through the perforations in the braces connecting the front standards, which serve as guides to said shaft, thus preventing the cutter from moving or oscillating off the bed-block.

It will be seen that the motion described by the cutter is an oscillating reciprocal motion, the reciprocal motion being produced when the studs in the faces of the side gear-wheels are on a horizontal line intersecting the pivotal centers of said wheels. The interval during

which the cutter is raised from off the bed-block is utilized to move said bed-block sufficiently to carry the meat out from under the cutting-edge of the knives.

Journaled in suitable bearing, L L, and placed directly under and in the same direction as the driving-shaft, is the shaft K, provided with a concave pulley, *o*, on its outer end, which is connected by means of a belt to a similar pulley, *o'*, just within the speed-pulley on the drive-shaft, and having on its inner end a beveled segmental gear-wheel, M, which meshes with the beveled gearing near the periphery and on the under side of the turn-table O. Mounted upon and having a diameter a little greater than this turn-table is the bed-block P, which has a corresponding center as said table.

Projecting from the center of the turn-table downward through the platform is the vertical shaft R, which forms the pivotal axis of said table and bed-block.

Arranged under and just within the annular rim of the beveled gear of the turn-table are two or more rollers, *r r*, having suitable bearings resting on the platform used to keep the table or block from tipping.

The distance of travel of the intermittent motion imparted to the bed block may be varied by adding to or deducting from the number of cogs on the segmental gear, and the rapidity with which the machine is run may be regulated by the speed-pulley on the end of the drive-shaft.

The advantage of the rocking motion described by the cutter is that as the point of oscillation is fixed above the same the tendency is to work the meat toward the center instead of off the bed-block, and the motion of the bed-block renders it almost impossible to bruise the meat, thus avoiding premature putrefaction.

As it is almost impossible to prevent the knives tossing the meat off the block, I find it advisable to place around the same an annular circular or curved shaped rim or flange to catch the dripping, as shown in the drawings.

Thus it will be readily perceived that my invention can be made cheap and durable, strong and simple, and free from the intricacies of most cutters made on a similar scale of dimensions.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a cutter consisting of a series of segmental-shaped knives arranged parallel to each other and operated by pitmen connected to lugs on either side of the same, with a vertical shaft moving in suitable guides and pivoted to a central lug on said cutter, which point of connection forms the center of oscillation of the same, substantially as hereinbefore specified.

2. A meat cutting or chopping machine consisting of a drive-shaft driven through the medium of a speed-pulley, and having a gear-wheel at its forward end, which meshes with a gear-wheel of same diameter, said side gears having studs projecting from their outer faces, pitmen pivoted to and extending downward from said studs and connected to lugs extending upward from the ends of the oscillating cutter, said cutter having its oscillating center at its point of union with the vertical shaft located above and reciprocating in suitable guides, a horizontal shaft near the base of the machine, having suitable bearings placed under, extending in the same direction with and operated by the driving-shaft through the medium of belt and pulleys, a segmental gear on the end of said horizontal shaft, a beveled gear meshing with and driven by said segmental gear, a bed-block mounted upon said bevel-gear, and a turn-table attached thereto, said block and turn-table having their pivotal center immediately under said vertical shaft, substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JAMES PATCHEL.

Witnesses:
S. S. SCHOFF,
FRANK D. THOMASON.