F. DOEBERT.

MEAT-CHOPPING MACHINE.

No. 186,036. Patented Jan. 9, 1877.

FIG. 1.

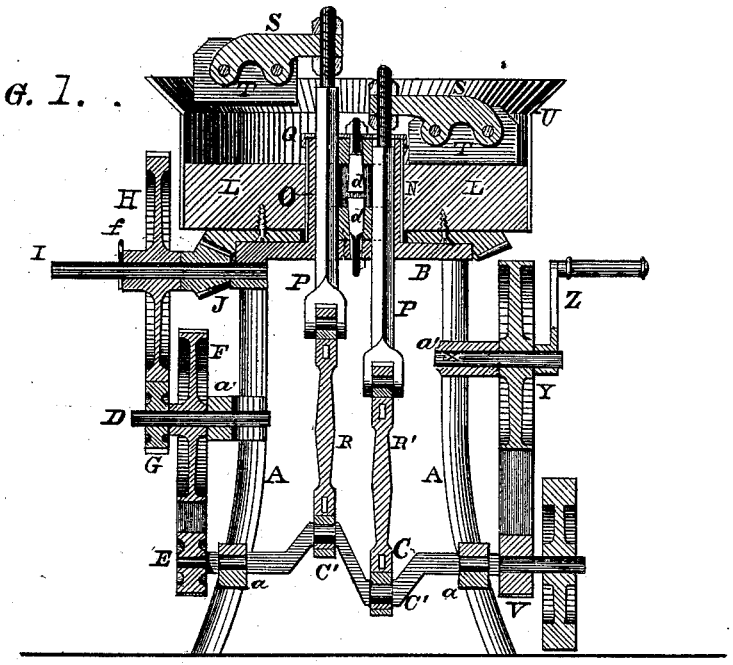



FIG. 2.

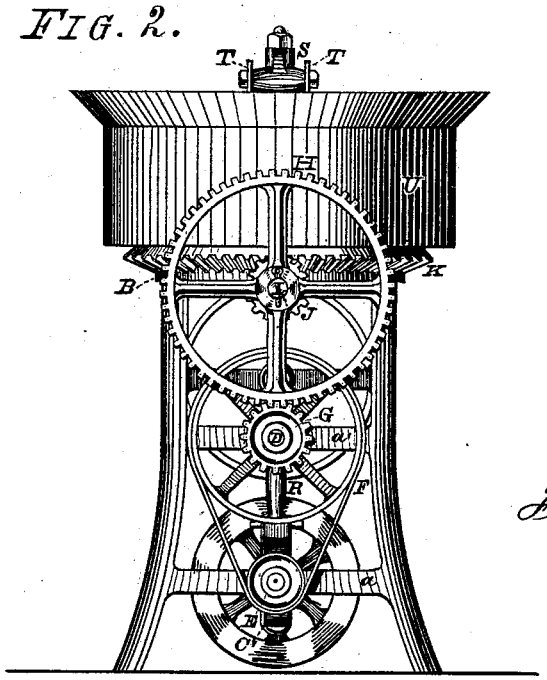
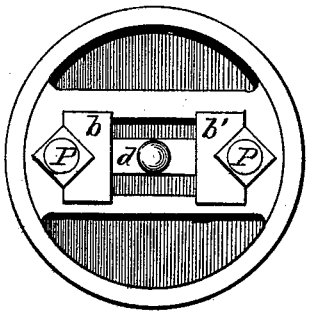



FIG. 3.

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# UNITED STATES PATENT OFFICE.

FERDINAND DOEBERT, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN MEAT-CHOPPING MACHINES.

Specification forming part of Letters Patent No. **186,036**, dated January 9, 1877; application filed July 8, 1876.

*To all whom it may concern:*

Be it known that I, FERDINAND DOEBERT, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on Meat-Cutting Machines; and I do hereby declare that the following description, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification.

This invention relates, in general, to meat-cutting machines; and it consists in the arrangement of parts and details of construction, as hereinafter first fully described, and then pointed out in the claims.

In the hereinbefore-mentioned drawings, Figure 1 is a longitudinal sectional elevation, Fig. 2 is a front elevation, and Fig. 3 a plan, of the cutter-bars and their adjustable bearings.

Like letters of reference indicate corresponding parts in the several figures.

A A are two standards secured to an annular plate, B, by their upper ends. Each of these standards is provided with two cross-pieces, *a a'*, the lower one serving as bearings for the crank-shaft C, and the upper one as such for the auxiliary shaft D. Attached to one of the extremities of the crank-shaft C is a pulley, E, engaging, by means of a belt, with a correspondingly-larger pulley, F, on the auxiliary shaft D. To the same shaft D is secured a pinion, G, meshing with a spur-wheel, H, revolving upon a stud, I, fastened in a boss or projection under the plate B. To this spur-wheel is attached a bevel-wheel, J, engaging with the bevel-wheel K, revolving in a horizontal plane upon the plate B. The train of gearing heretofore described serves to revolve a chopping-block, L, secured to the bevel-wheel K by means of screws. This block has centrally an aperture, into which is tightly inserted a hollow metallic cylinder, N. The top plate B is provided, centrally, with a cylindrical projection, O, fitting the cylinder N. This cylindrical projection serves as a guide for the chopping-block, and as a bearing-block for the two cutter-bars P, it being provided with adjustable boxes *b b'* on its upper edge and near its junction with the plate B. These boxes *b b'* are rendered adjustable by means of the wedges *d* passing through the plate B and the cover Q, respectively, and provided with screws and nuts to draw them tight. P are two angular cutter-bars reciprocated from the crank-shaft C, whose cranks C' are set diametrically opposite by means of the connecting-rods R R'. To the upper extremity of these cutter-bars P are adjustably attached cutter-heads S S', to which in turn are bolted the knives T. These cutter-heads are adjusted by means of screw-threads and nuts, in the usual manner.

If desired, elastic washers may be placed below the nuts to render said cutter-heads yielding, or the connecting-rods may be provided with means to produce the same effect. To the periphery of the chopping-block is fastened a jacket, U, projecting for some distance above the plane of said block, and having its upper edge flared to facilitate the introduction of the meat to be chopped into the annular space between the said jacket and the cylinder N.

The machine may be operated either by hand or other motive power applied to the pulley V. If the machine is run by hand-power I attach a counter-shaft, X, to one of the standards A, and provide it with a proper-sized pulley, Y, to connect with the pulley V by means of a belt, the counter-shaft X being provided with a crank, Z, for applying the necessary power.

The operation of my improved machine does not vary from those now in general use, and I therefore do not deem it necessary to describe the same.

It will be observed that in my present machine there are two reciprocating sets of cutters operating in opposite directions. The object of thus constructing a meat-cutter is to better equalize the power applied, so that it will be easier to run by hand than those machines in which only one cutter-head is applied. The arrangement of the operating parts being located below the chopping-block is also an improvement, since it prevents the drippings of the lubricant applied for lubrication from commingling with the meat, and thereby deteriorating the same.

Another feature in my machine is the adjusting device for the boxes of the cutter-bars, which can be set to take up wear from the outside of the machine without removing

any of the parts to obtain access to said boxes. This result, as heretofore described, is obtained by the wedges *d*, which, when drawn, expand the said boxes *b b'*, and force them toward the solid part of said block, thus taking up any play that may exist.

The spur-wheel H is rendered removable from the stud, to enable me to revolve the chopping-block L without moving the other parts of the machine. This I have designed to facilitate the removal of the chopped meat, and for scraping off of the block L. A pin, *f*, is inserted into the stud I in front of the spur-wheel; but if desired other means may be resorted to to enable the removal of said spur-wheel.

It will be further observed that the independently-operating cutter-bars P P are constructed of angular or square iron, and that they reciprocate in the correspondingly-shaped boxes *b b'*. This arrangement dispenses with separate guides or slides for the cutter-heads, which, being projected from said bars on one side only, and not balanced, as in those machines where one cutter-bar, with a transversing cutter-head, is employed, are apt to turn or rock. This rocking would have the effect of deranging the bearings of the connecting-rods, and would otherwise interfere with the proper working of the machine.

I am well aware that meat-cutters have been constructed in which one cutter-bar driven from below the chopping-block has been employed, and also that two cutter-heads and cutters reciprocating in opposite direction, driven from above the chopping-block, are not original with me; but

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

1. A meat-cutter, having its driving mechanism and a double crank-shaft, C, located below the chopping-block L, and the two connecting-rods R R' actuating the cutter-bars P P from said double crank-shaft in opposite directions, said cutter-bars being of a quadrangular transverse section, and guided by correspondingly-shaped bearings situated in a central stationary part concentric with the revolving chopping-block, and provided with radially-projecting cutters on their upper extremity, the whole constructed and arranged to operate substantially in the manner and for the use and purpose set forth and described.

2. The combination, with the plate B, of the projection O, serving as a guide for the chopping-block L, and provided with the boxes *b*, and the wedges *d*, substantially in the manner and for the use and purpose described.

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Witnesses:

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