

(No Model.)

2 Sheets—Sheet 1.

E. RENNER & J. HOFBAUER.
MEAT CUTTER.

No. 454,527.

Patented June 23, 1891.

Fig. 1.

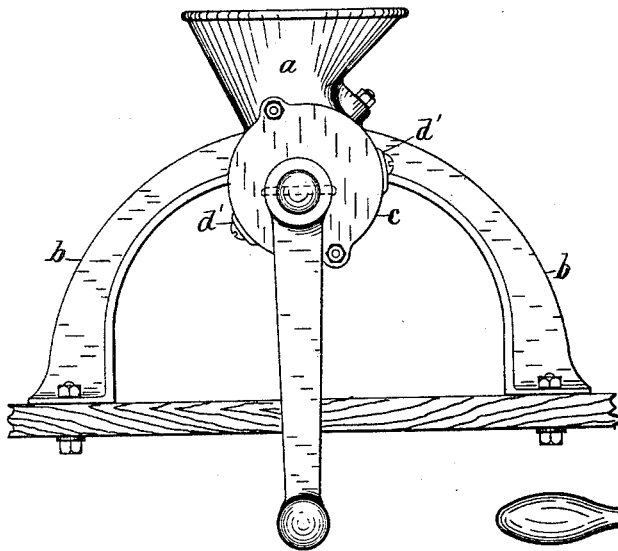


Fig. 2.

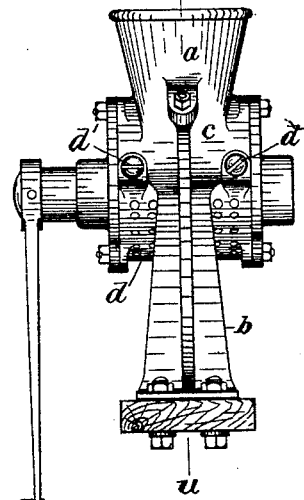


Fig. 3.

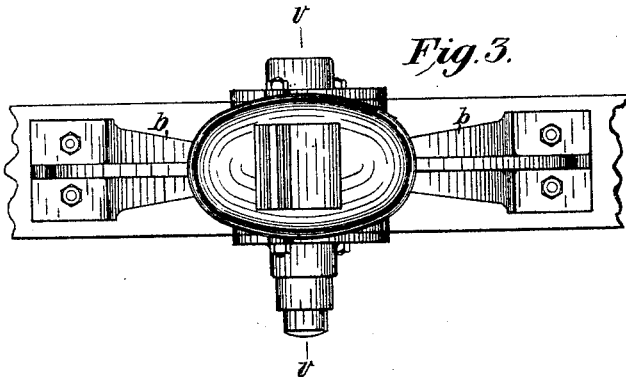


Fig. 5.

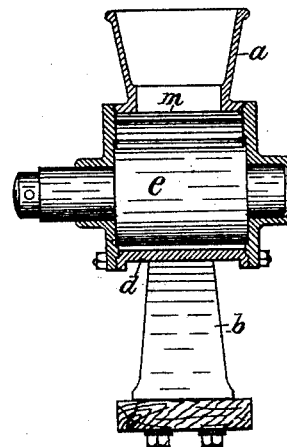
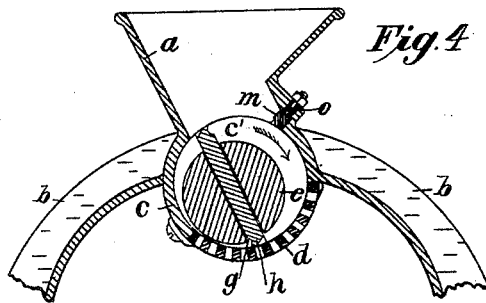


Fig. 4.



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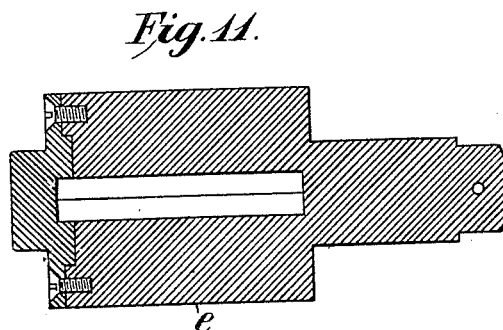
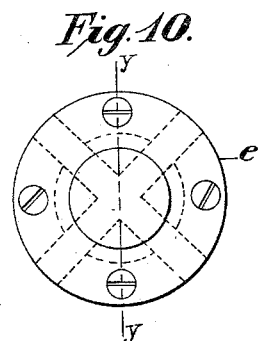
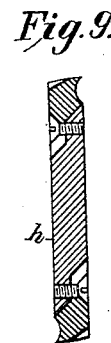
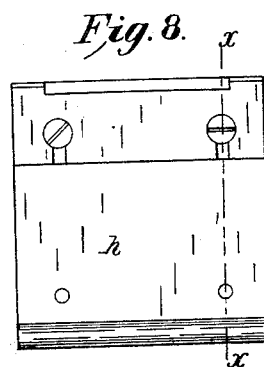
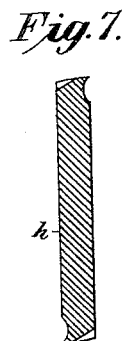
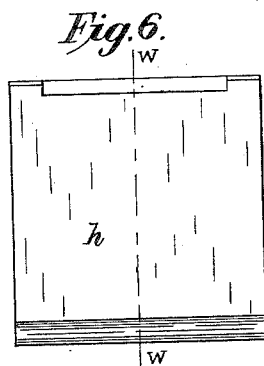
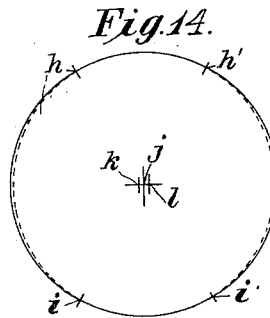
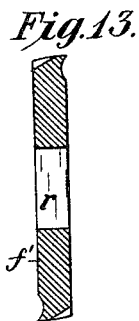
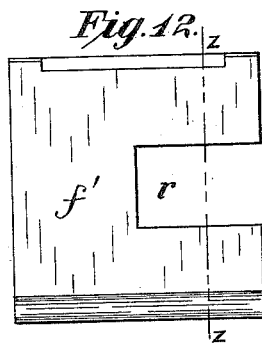
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UNITED STATES PATENT OFFICE.

EDMUND RENNER AND JOHN HOFBAUER, OF PHILADELPHIA, PENNSYLVANIA.

MEAT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 454,527, dated June 23, 1891.

Application filed February 24, 1891. Serial No. 382,644. (No model.)

To all whom it may concern:

Be it known that we, EDMUND RENNER and JOHN HOFBAUER, both citizens of the United States, residing in the city of Philadelphia, State of Pennsylvania, have invented a new and useful Meat-Cutter, of which the following is a specification.

This invention relates to meat-mincing machines of the class in which a rotary knife is used.

Our object is the construction of an efficient machine which shall easily be kept clean and free from acids and in good cutting condition.

In the annexed drawings, Figure 1 is a front elevation, Fig. 2 a side elevation, and Fig. 3 a plan, of said machine. Fig. 4 is a vertical section of the same on the line *u u* of Fig. 2. Fig. 5 is a vertical section of the same on the line *v v* of Fig. 3; Fig. 6, a detail plan of the knife used in a single-knife machine, and Fig. 7 a section of the same on the line *w w* of Fig. 6. Fig. 8 is a plan of a knife provided with removable cutting-edges, and Fig. 9 a section of the same on the line *x x* of Fig. 8. Fig. 10 is an end elevation of the knife-carrier in a two-knife machine, and Fig. 11 a longitudinal section of the same on the line *y y* of Fig. 10. Fig. 12 is a plan of a knife of the form used in a two-knife machine, and Fig. 13 a section of the same on the line *z z* of Fig. 12. Fig. 14 illustrates the form in cross-section of the interior space or chamber of the casing.

Similar letters of reference denote similar parts in the several figures.

The hopper *a*, legs *b*, and casing *c*, omitting that portion of the casing referred to below as a perforated plate, constitute an integral casting.

d is a perforated plate forming part of casing *c*, to which it is removably attached by means of lugs and tap-bolts *d'*.

e is the knife-carrier, which is a solid cylinder provided with journals and a diametrical mortise *g*, Fig. 4.

h represents the knife, which slides freely in mortise *g*, its two cutting-edges—one at each end—facing in opposite directions and traveling in close contact with the interior surface of the casing.

It will be seen that the cross-section of the inclosed space or chamber *c'* of the casing

departs from the form of a circle, being composed of arcs of three intersecting circles and being represented by the full lines in Fig. 14, wherein the portions *h h'* and *i i'* are arcs of a circle described from a center marked *j*, the portion *h i* an arc of a circle described from a center marked *k*, and the portion *h' i'* an arc of a circle described from a center marked *l*.

The interior surface of the casing *c* is practically smooth—i. e., without ribs or projections. The knife-carrier *e* is journaled eccentrically within the chamber *c'* in contact with the chamber wall or casing at one side.

m represents a cutting-bar of steel placed at the throat of the hopper flush with the chamber-wall and forming a continuation of that wall. A screw-threaded lug proceeding from the back of bar *m* passes through an aperture *o* and engages a nut or set-screw by which said bar is removably secured in its position.

The throat of hopper *a* is rectilinear in cross-section, (see Fig. 3,) as opposed to round, oval, or other curvilinear form, it having been found that when the throat has the last-named form the meat will not pass automatically into chamber *c'*.

The cutting-edge of the knife *h* may consist of removable pieces secured to the body of the knife, as indicated in Figs. 8 and 9.

When it is desired to use two knives, the knife-carrier *e* is provided with two mortises crossing each other at right angles, as indicated by dotted lines in Fig. 10. *f*, Fig. 12, represents the knives used in such case, each knife being provided with a recess *r*, which is made large enough to permit the knives to slide freely in their respective mortises without interfering with each other.

When more than one knife is to be used, one end of the knife-carrier is made removable, as shown in Fig. 11, to admit of introduction of the second knife into its mortise. The knife-carrier *e* rotates in the direction of the arrow, Fig. 4. The meat in the hopper *a* passes down the throat of the hopper receiving a primary cutting as it enters chamber *c'* by the opposing action of the bar *m* and the knife or knives, and is driven by the latter into the wedging-space bounded by said throat, the point of contact of the knife-car-

rier with the casing-wall, the body of the knife-carrier, and the perforated plate, and is forced through the perforations in plate *d* in a more or less finely-divided state, according to the size of the perforations in plate *d*.

We claim—

1. In a meat-cutter, the combination of, first, a casing consisting in part of a solid wall having a plain interior surface and in part of a perforated plate, said casing inclosing a chamber *c'* of the curvilinear form described; second, a cylindrical knife-carrier arranged eccentrically in and in contact with the wall of said chamber at one side thereof, said knife-carrier being provided with one or more diametrical mortises, and, third, a knife working freely in each of such mortises, while its opposite ends or cutting-edges travel in close contact with the interior surface of said casing, substantially as set forth.

2. In a meat-cutter, the combination of,

first, a casing consisting in part of a solid wall having a plain interior surface and in part of a perforated plate, said casing inclosing a chamber *c'* of the curvilinear form described; second, a cylindrical knife-carrier arranged eccentrically in and in contact with the wall of said chamber at one side thereof, said knife-carrier being provided with one or more diametrical mortises; third, a knife working freely in each such mortise, while its opposite ends or cutting-edges travel in close contact with the interior surface of said casing, and, fourth, a cutting-bar *m*, located at the throat of the device and forming a continuation of the casing-wall, substantially as and for the purpose set forth.

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Witnesses:

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