

A. SHEPARD.  
MEAT CUTTER.

No. 473,166.

Patented Apr. 19, 1892.

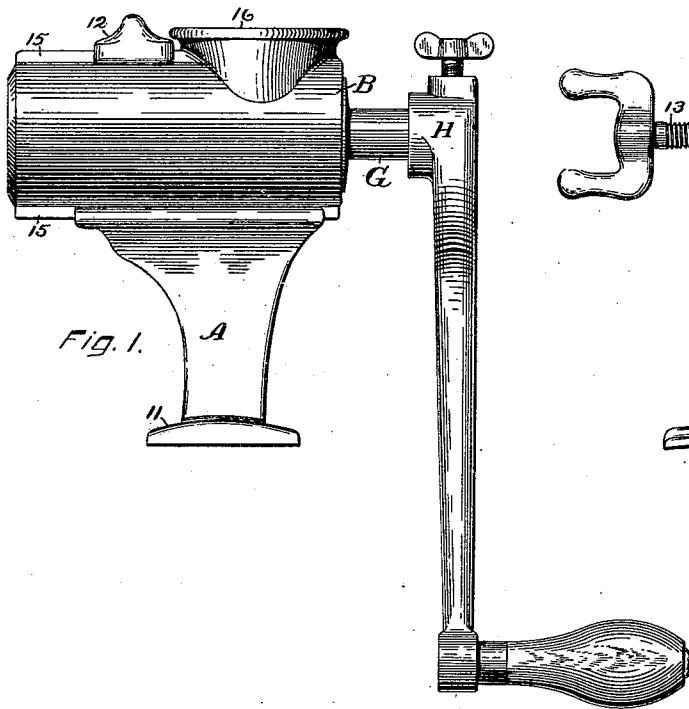


Fig. 1.

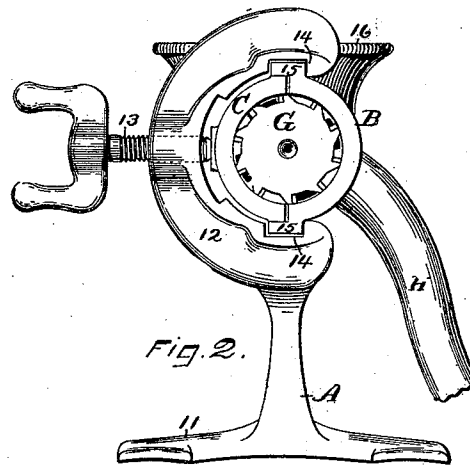


Fig. 2.

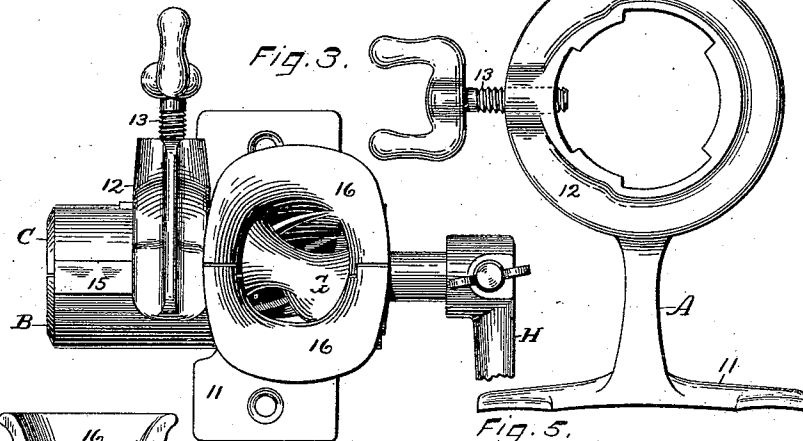


Fig. 3.

Fig. 5 1/2.

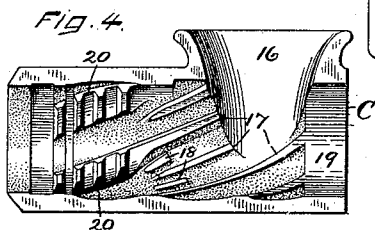


Fig. 4.

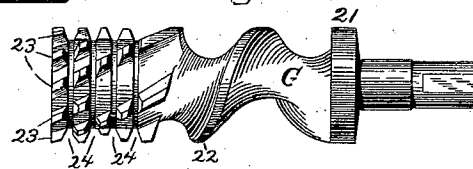


Fig. 5.

Witnesses.

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Att'y.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 6.

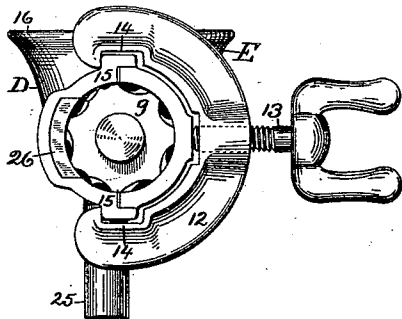


Fig. 7.

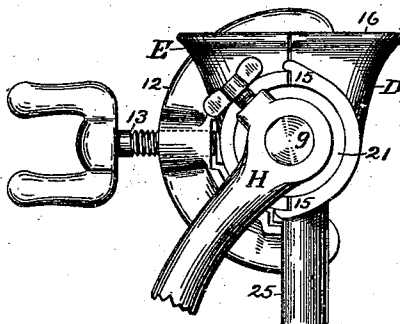


Fig. 8.

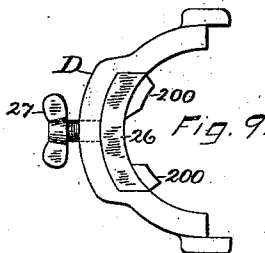
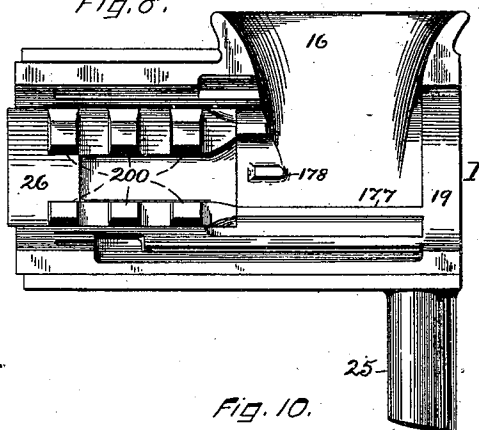
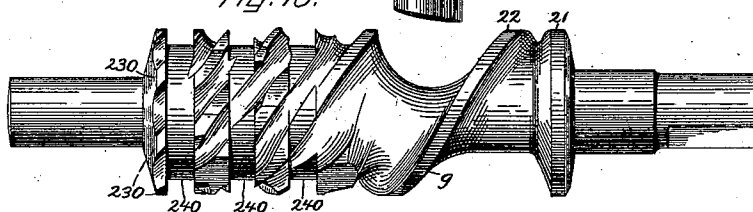


Fig. 10.



Witnesses.

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Arthur G. Brack

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Amos Shepard

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# UNITED STATES PATENT OFFICE.

AMOS SHEPARD, OF PLANTSVILLE, CONNECTICUT.

## MEAT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 473,166, dated April 19, 1892.

Application filed December 5, 1891. Serial No. 414,183. (No model.)

*To all whom it may concern:*

Be it known that I, AMOS SHEPARD, a citizen of the United States, residing at Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Meat-Cutters, of which the following is a specification.

My invention relates to improvements in meat-cutters; and the objects of my improvements are simplicity and cheapness of construction, durability, efficiency, and convenience of the machine.

In the accompanying drawings, Figure 1 is a front elevation of my machine. Fig. 2 is a side elevation thereof, showing the left-hand end. Fig. 3 is a plan view of the same. Fig. 4 is a front elevation showing the inner side of the rear part of the case. Fig. 5 is a detached elevation of the screw. Fig. 5½ is a side elevation showing a modification of the clamp. Fig. 6 is a side elevation showing the left-hand end of my machine in a somewhat modified form. Fig. 7 is a side elevation showing the opposite end of the same. Fig. 8 is an enlarged front elevation showing the inner side of the rear part of the case in said modified form. Fig. 9 is a side elevation showing the left-hand end of the same, and Fig. 10 is a detached elevation showing the screw thereof.

A designates the standard, provided with any suitable base or foot 11 for securing it to a bench, table, or other support. Its upper end is provided with a clamp 12, made integral with said standard and provided with a clamping device 13 in the form of a screw. This clamp is of a curved form in side view and is provided at its inner edge with opposing notches or recesses 14.

I make the case in two segmental parts, the front part B having rabbeted ribs or longitudinal ledges 15, adapted to be received within the recesses 14 of the clamp 12, and into the rabbets of which the rear part C of case fits, as shown. The hopper 16 is formed partly in each of the parts B C. The inner side of the case near the hopper is provided with what I may term "long" and "short" feeding-ribs 17 and 18, extending along the length of the case, preferably in a somewhat spiral form, in accordance with the long and short ribs of my patent, No. 369,744, dated Septem-

ber 13, 1887. At the hopper end of the case there is a plain band 19 on each part, that is turned out or milled smooth and flush with the tops of said ribs. Toward the opposite or delivery end of the case there is a series of cutting-elevations 20, with spaces between the elevations and spaces extending directly around the case circumferentially without inclining longitudinally, although said series of cutting-elevations are arranged in spiral form. The tops and sides of these cutting-elevations and the bottoms of the spaces between them are also milled or turned smooth and true concentrically. The inner face of the part B is the same as that of the part C.

G designates the rotary part of the cutter, which I term, for convenience, the "screw," although it is in fact a combined screw and cutter. At one end it is provided with any ordinary crank H or other means for driving it, and also with a short cylindrical portion 21, that takes its bearing in the plain band 19 of the case. The screw-web 22 extends along from the short cylindrical portion 21 in an ordinary form, with the top or greatest projection of the web of a height that will bear on the feeding-ribs. Toward the delivery end of the screw G there are other webs 23, divided into a series of cutting-elevations by circumferential grooves 24, the surface of which cutting-elevations take their bearing in and are fitted to the cutting-elevations of the case, the elevations on one part entering and filling the circumferential grooves or spaces between said elevations on the other part.

The parts are not only turned or milled to fit each other, but they should, when fitted, be ground to insure a close fit between the bearing parts on the screw and case. The ledges on the part B rest in the notches of the clamp 12, and the clamping device 13 not only holds the case to the standard, but binds the two parts of the case firmly on the screw, a slight space being left between the confronting edges of the two parts of the case, as shown in Fig. 2, to always insure a proper bearing of the screw and case instead of permitting the two parts of the case to bear against each other. The screw not only takes its axial bearing in the case, but the circumferential grooves therein and the cutting-ele-

variations on the case, which enter said grooves, serve to hold the screw and two parts of the case against moving one upon the other in a longitudinal direction. The action of the screw in connection with the long and short ribs of the case is the same as in my aforesaid patent. The cutting-elevations on the screw and case act to cut the meat rapidly and surely, and inasmuch as their cutting-faces are in actual contact nothing can pass by them without being cut. As the parts all bear and can be taken up as fast as they wear, the machine is self-sharpening and very durable.

In Figs. 6, 7, and 8 I have shown the rear part D of the case as having a stem 25 for being secured to a standard having a socket, as in my patent, No. 422,644, dated March 4, 1890. I have also shown the ledges 15, before described, as on said rear part D and the other part E fitted in the rabbet of said ledges, while said two parts are held together by the same form of clamp 12 and screw as before described, although said clamp is not made a part of the standard. This form of case, clamp, and standard may be applied to a machine having a screw and case with inner faces of the form first described.

The inner faces of the parts D E have long and short ribs 177 and 178; but the particular form of feeding-ribs is not necessary so long as the top of web 22 is fitted to and bears upon the top of said ribs. Neither is the form of the cutting-elevations and spaces or grooves on the case and screw essential so long as they are fitted to each other, as hereinbefore specified. In Figs. 6, 8, and 9 I have shown the cutting-elevations 200 as formed on a segmental portion 26, let into the part D of the case. This can be adjusted to its working position by the clamping device 13 of the clamp 12, as before described, and, if desired, it may be packed by one or more sheets of paper or other suitable packing placed between its back and the bottom of the recess within which it rests, or it may be furnished with a special adjusting-screw 27, as shown in Fig. 9. The other part E of the case may have a like segment, or the cutting-elevations and intervening spaces may be formed directly on said part E. The screw *g* has the short cylindrical portion 21 and web 22, as before described, and other webs 230, divided by the circumferential grooves 240 into cutting-elevations and spaces of the case, substantially as in the construction first described. This segment of less than half of the case and the two-part case first described will clearly suggest the idea of making that portion of the case which does the cutting in segments of two or more parts adapted to be tightened upon the inclosed screw.

One advantage of making the working parts—viz., the screw and case—detachable from the standard is that a retailer of cut meats may use the cutter and then place these

working parts in his ice-box, where the little meat that remains in the cutter will keep sweet and clean, leaving the machine in proper condition for use in cutting meat for the next customer without having to clean the cutter each time. The compactness of the working parts makes this storage in the ice-box practicable when it would be impracticable in a cutter with the standard permanently attached.

Instead of notching the clamp on its inner edges to make it take hold of the ledges on the case it may be made in ring form, as shown in Fig. 5½. In either form the case is held in the standard by its cylindrical portion, which may be slipped endwise therein, and when the case is detached it bears no special standard attachment—as, for instance, the stem 25 or a special socket or the like—as has generally been the case with many meat-cutters.

While I prefer the form of clamping devices herein shown—viz., the clamping device 13 and clamp 12—it is evident that a screw and case having cutter-elevations with circumferential spaces or grooves between, all fitted together as described, may be held in place by ordinary clamping devices, which for the purpose of this combination I consider the equivalent of those shown.

It should be noticed that the two last spaces at the delivery end of the case have their bottom extending continuously around the case, and the grooves in the screw are all preferably formed in the same way, while the circumferential spaces toward the hopper end of the case have the bottoms of the grooves broken instead of continuous. This permits the cutting to be more gradual, as it leaves at first more room for the passage of meat without severing the entire body of meat passing through the machine; but when the meat reaches a point where the bottom of the space and groove on both the screw and the case is continuous the volume of meat passing out is necessarily severed, so that no long stringy pieces can escape. I prefer that the continuous grooves should be the last ones at the delivery end of the case; but so long as one of them has the continuous bottom the desired result will be attained even if said continuous bottom is not in the last groove. I also prefer that most or all of the grooves or spaces having broken bottoms shall be formed in the case; but a space for the passage of meat around the cutting devices may be formed by making the bottoms of the spaces or grooves on either part broken.

I claim as my invention—

1. The combination of the standard having a clamp 12 formed thereon, the segmental case fitted for reception in said clamp, and a clamping device for binding the parts of said case within said standard, substantially as described, and for the purpose specified.

2. The combination of a case having substantially a cylindrical portion, a standard having formed thereon a clamp for embrac-

ing the cylindrical portion of said case when it is slipped endwise therein, and a clamping device for binding said cylindrical portion within said clamp, substantially as described, and for the purpose specified.

5 3. The combination of the clamp having the holding notches or recesses, the clamping device, and the case having the ledges fitted to said recesses, substantially as described, and for the purpose specified.

10 4. The combination of the segmental case, a screw fitted thereto, and clamping devices for holding said case and screw together, substantially as specified.

15 5. The combination of a screw having cutting-elevations with circumferential grooves or spaces between, a segmental case having cutting-elevations and spaces fitted in bearing contact with said cutting-elevations and grooves on said screw, and clamping devices, substantially as described, and for the purpose specified.

20 6. The combination of a screw having the

short cylindrical portion 21, web 22, and cutting-elevations with circumferential grooves between, a segmental case having the plain band 19, feeding-ribs, cutting-elevations, and spaces, all fitted to said screw, and clamping devices, substantially as described, and for the purpose specified.

7. The combination of clamping devices, a segmental case having cutting-elevations with spaces between, and a screw having cutting-elevations and circumferential spaces fitted in bearing contact with said elevations and spaces of said case, with one circumferential space and groove on said case and screw at the delivery end, having its bottom extending continuously around the same, substantially as described, and for the purpose specified.

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Witnesses:

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