No. 706,881. Patented Aug. 12, 1902.

F. BARR.

VEGETABLE OR MEAT CUTTER.

(Application filed May 22, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

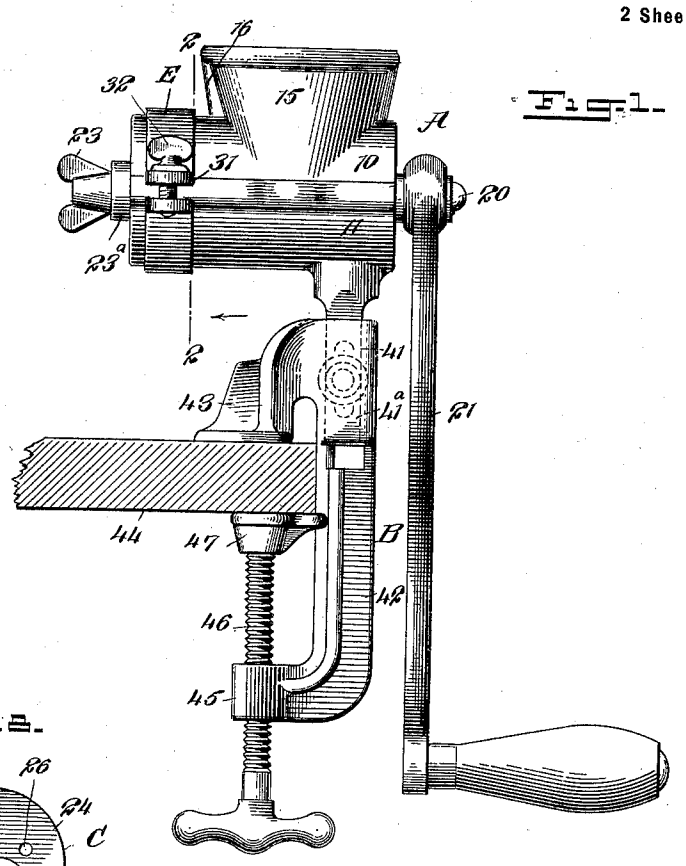


Fig. 3.

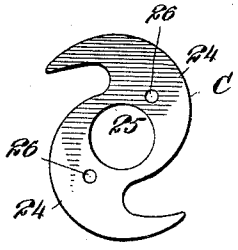
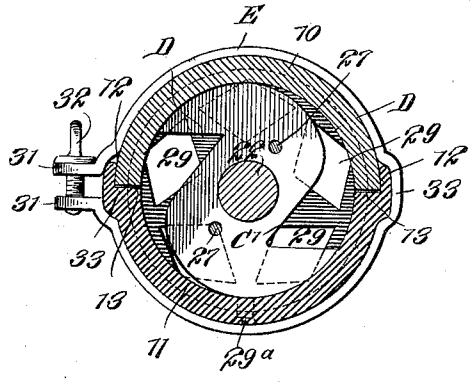


Fig. 2.



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Fig. 3.

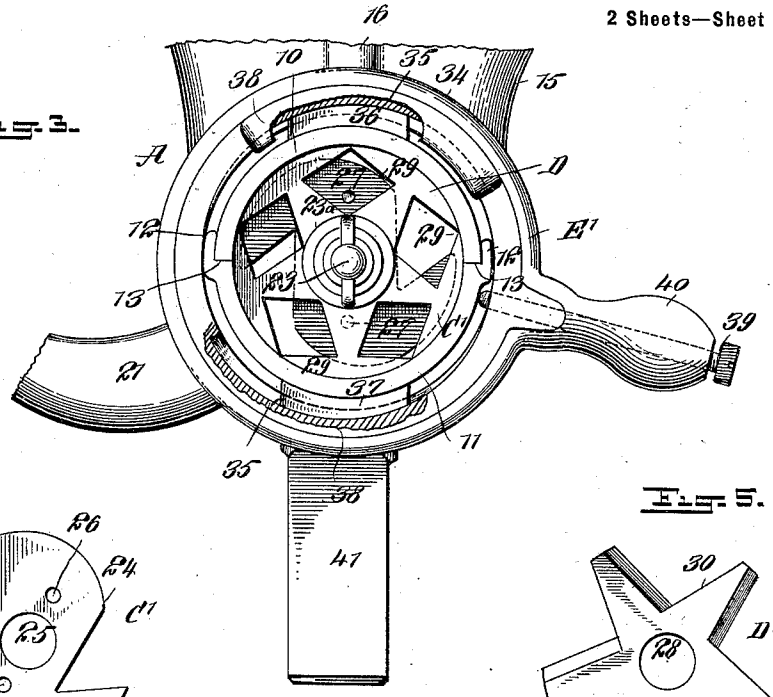


Fig. 7.

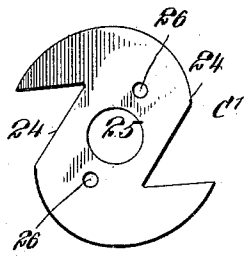


Fig. 5.

Fig. 6.

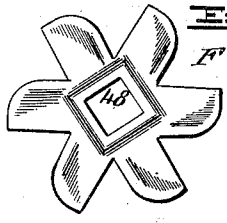


Fig. 10.

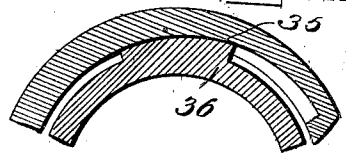


Fig. 9.

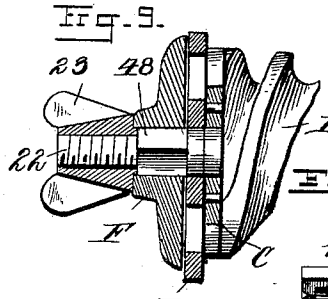
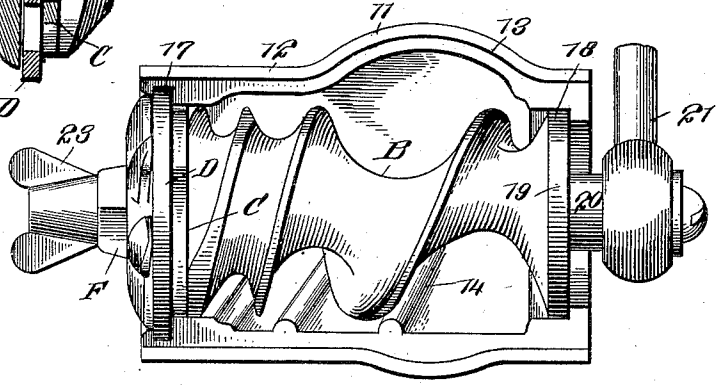


Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDERICK BARR, OF NEW YORK, N. Y.

VEGETABLE OR MEAT CUTTER.

SPECIFICATION forming part of Letters Patent No. 706,881, dated August 12, 1902.

Application filed May 22, 1901. Serial No. 61,396. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BARR, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Vegetable or Meat Cutter, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a device adapted to be used for cutting or mincing either meat or vegetables, particularly the latter, and to so construct the device that the cutting or mincing can be finely or coarsely done.

A purpose of the invention is to construct the shell or body in upper and lower separable sections, so that the interior mechanism may be laid bare at any time and all of the parts rendered readily accessible, enabling the device to be readily cleaned and throughly inspected and, furthermore, admitting of the casting of the shell without a core.

Another purpose of the invention is to provide a simple and conveniently-applied clamp for the sections of the shell which will hold the sections together in a liquid-tight manner, the clamp being capable of being quickly applied and brought in position to exert tension on the parts of the shell.

Another purpose of the invention is to so construct a base-clamp for the device that it will be detachable from the shell, the base-clamp being provided with a socket and set-screw and the bottom section of the shell with a member to enter the said socket.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the device attached to a support. Fig. 2 is a transverse section taken on the line 2 2 of Fig. 1. Fig. 3 is an outer end view of the device drawn upon a larger scale and illustrating the application of a preferred form of clamp for the shell, parts of the clamp being broken away. Fig. 4 is a plan view of the lower portion of the shell, the feed-screw, and cutters, illustrating the arrangement of the cutters for mincing very fine. Fig. 5 is a perspective view of one of the outer cutters. Fig. 6 is a front elevation of the auxiliary cutter, and Figs. 7 and 8 are front elevations of the cutters adapted to be applied directly to the feed-screw. Fig. 9 is a side elevation of the forward end of the feed-screw and its forward trunnion and a section through the parts carried by the trunnion, and Fig. 10 is a detail sectional view of the clamp shown in Fig. 3.

The invention consists particularly of a body or shell A and a clamping-base B. The body or shell A is made in two sections—an upper section 10 and a lower section 11. The lower section is provided with side marginal upwardly-extending flanges 12 and inwardly-extending horizontal seats 13 at the said flanges, as is shown in Fig. 4. The upper section of the shell rests upon the seats 13, the flanges 12 extending above the connection and making practically a water-tight joint, as is best shown in Fig. 2, when the two sections of the body or shell are brought together by clamps E or E′, to be hereinafter particularly described. The lower section 11 of the body or shell is provided with interior spiral ribs 14, and the inner face of the upper shell-section carries corresponding ribs, as is customary in this class of machines. The upper shell-section 10 is provided with a hopper 15 and usually a vertical rib 16 at the front of the hopper, as is shown in Figs. 1 and 3.

At the forward end of each section of the shell A an annular groove 17 is produced to receive outer cutting-plates D D′, to be hereinafter mentioned, and at the rear end of the sections of the shell an annular stepped groove 18 is produced, the larger diameter of which receives the head 19 of a feed-screw B to be turned in the shell. At the head portion of the feed-screw a central extension 20 is formed, and to this extension a handle 21 is secured of any approved type. A forward extension 22 is provided at the forward end of the feed-screw B. This forward extension is plain for a distance in its length, but its outer end portion is threaded, and between the plain portion of the extension and its threaded portion a polygonal surface is formed, the surface of the extension between

its polygonal surface and the front face of the feed-screw being round in cross-section. A thumb-nut 23 is adapted to be secured upon the outer end of the forward extension of the thumb-screw, and under ordinary circumstances or when a coarse mince is to be made of vegetables or meat the thumb-screw 23 bears against a collar 23^a, which is fitted upon the polygonal section of the front extension of the said feed-screw.

A cutter is firmly attached to the forward end of the feed-screw proper, B. This cutter may be in the form shown at C in Fig. 8, in which the cutter is S-shaped, or it may be in the form shown at C′ in Fig. 7, in which the cutter is Z-shaped, and the cutting edges of these cutters are designated in the drawings as 24. Either of these cutters C or C′ is adapted to the shape of the forward end of the body or main portion of the feed-screw B, and each of these cutters is provided with a central aperture 25. When the cutters are in position on the feed-screw, the apertures 25 receive the inner rounded portion of the feed-screw extension at the front. The cutters are also provided with apertures 26 at each side of their centers, and these apertures 26 receive studs 27, which extend outwardly from the forward end of the body or main portion of the feed-screw B. These cutters C and C′, whichever form may be used, may be detachably attached to the feed-screw or may be securely fastened thereto. These cutters C and C′ when in position on the feed-screw are adjacent to the annular groove 17 at the forward portion of the shell. Cutting-plates are used in connection with the cutters attached to the feed-screw, and these cutting-plates, two forms of which are shown, being designated as D and D′, are provided with central openings 28, which receive the round plain surface of the forward extension of the feed-screw, and whichever cutting-plate D or D′ is employed is made to bear closely against whichever inner cutter C or C′ is attached to the feed-screw B. One form of cutting-plate, the form D, is shown best in Figs. 2 and 3. This plate is of disk form and is provided with a series of diamond or lozenge shaped openings 29 at an equal distance from the central opening 28, and all of the edges of the openings 29 are cutting edges. The plate is provided, preferably, with a recess at its periphery adapted to fit over a projection 29^a in the forward groove 17 of the shell, since the peripheral portion of the outer cutting-plates D and D′ when placed in position are made to enter the said groove 17. The outer cutting-plate D′ (shown in Fig. 5) consists of a series of arms 30, which radiate from the center, and the entire plate is of stellated form. The longitudinal edges of the arms of the plate are beveled and sharpened.

A clamp is necessary to hold the two sections of the shell firmly together. This clamp may be of any approved form. In the drawings two forms of clamps are shown fitted to that end—namely, a clamp E, which is illustrated in Figs. 1 and 2, and a clamp E′, which is shown in Fig. 3. The clamp E is one that may be placed upon the shell quickly and can be fitted on the shell no matter in what manner it is introduced thereon. This clamp consists of a spring-band provided at its ends with opposing horizontal apertured lugs 31, and these lugs are drawn together by a set-screw 32, which set-screw tightens the band on the shell, said band being placed on the exterior of the shell. To that end the band is provided with opposing recesses 33, which accommodate and receive the side offsets or flanges 12 on the lower section 11 of the shell. The form of clamp E′ which is shown in Fig. 3 consists of a ring-like body 34, provided with opposing inner cam-surfaces 35, the upper cam-surface being arranged to engage with the upper curved face of a lug 36, formed centrally upon the upper section 10 of the shell, and the lower cam-like surface is adapted to engage with a similar lug or projection 37, formed centrally upon the lower section 11 of the shell. In order that the clamp E′ shall not pass too far to the rear, guard projections 38 are offset from the front face of the clamp, at the cam portions thereof. This form of clamp E′ is provided with a handle 40 in order that it may be quickly manipulated, and a set-screw 39 is passed through this handle to an engagement with the shell, so that this form of clamp has likewise a double-locking contact with the shell to which it is applied. Either form of clamp E or E′ may be and preferably is provided with a recess at the top to receive the rib 16 at the front of the hopper 15 when the clamp is in its proper position.

The lower section 11 of the shell is provided with a vertical stem 41, extending down therefrom, and this stem 41 is adapted to enter a socket 41^a, formed at the upper body portion of the base-clamp B, the body portion 42 of which clamp extends some distance below its socket-section 41^a and terminates at its bottom in a horizontal extension 45, having a threaded aperture therein. The threaded aperture of this extension 45 receives an adjusting-screw 46, carrying a platform or head 47 at its upper end to engage with the under face of a table 44 or other support to which the base-clamp is to be applied, and feet 43 extend forwardly and downwardly from the socket portion of the base-clamp to an engagement with the upper face of the table or support.

When the meat or vegetables are to be cut very fine, the collar 23^a is removed and in its stead an auxiliary outside cutter F of the usual type for such machines is applied, the cutter having a polygonal opening 48 to receive the polygonal portion of the forward extension of the feed-screw, and when the auxiliary cutter F is applied the thumb-nut 23 when screwed to place engages with the same. When this auxiliary cutter F is

not used, the thumb-screw engages with the collar 23^a and the collar in its turn engages with the outer cutting-plate D or D', whichever is employed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a cutter of the class described, a longitudinally-divided casing having the members thereof fitted snugly together, an annular series of external cam projections spaced on the outer surface of said casing members, and an axially-adjustable clamping-ring circumferentially embracing the members of the casing and provided with internal cam-surfaces cooperating with said cam projections and adapted to tightly force the casing members together, combined with a feed-screw and suitable cutters, as set forth.

2. In a cutter of the class described, a divided casing having the members thereof provided with an annular series of external cam projections spaced at intervals on the outer surface thereof, an external ring circumferentially embracing the members of the casing and having internal cam-surfaces coöperating with said cam projections, and a clamp carried by said ring and adapted to impinge said casing to hold the clamp against retrograde movement, combined with a feed-screw and suitable cutters, as set forth.

3. In a meat and vegetable cutter, a shell, a feed-screw mounted to revolve within said shell, a cutter constituting a continuation of the delivery end of the feed-screw, and an extension from the delivery end of the feed-screw, of a cutting-plate stationarily held in the said shell, the cutting-plate being provided with a series of large openings having cutting edges, a locking device for the outer cutter, carried by the extension of the feed-screw, and means whereby an auxiliary outer cutter may be located on said extension of the feed-screw in engagement with the cutter held in the shell, as and for the purpose set forth.

4. A cutter apparatus, comprising a divided shell provided with external clamping means and with an internal annular seat, a stationary cutter provided with arms forming openings and with cutting edges, said stationary cutter being received in said annular seat and clamped in position by the shell, a feed-screw having an extension which is partly plain and partly threaded, a revoluble cutter mounted fast on the feed-screw extension and disposed in coöperative relation to the stationary cutter, an auxiliary cutter, and means whereby the auxiliary cutter may be secured removably to the feed-screw extension.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK BARR.

Witnesses:
J. FRED. ACKER,
JNO. M. RITTER.