Aug. 25, 1936. J. KANZLER 2,052,231

OYSTER OPENING MACHINE

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Fig. 1.

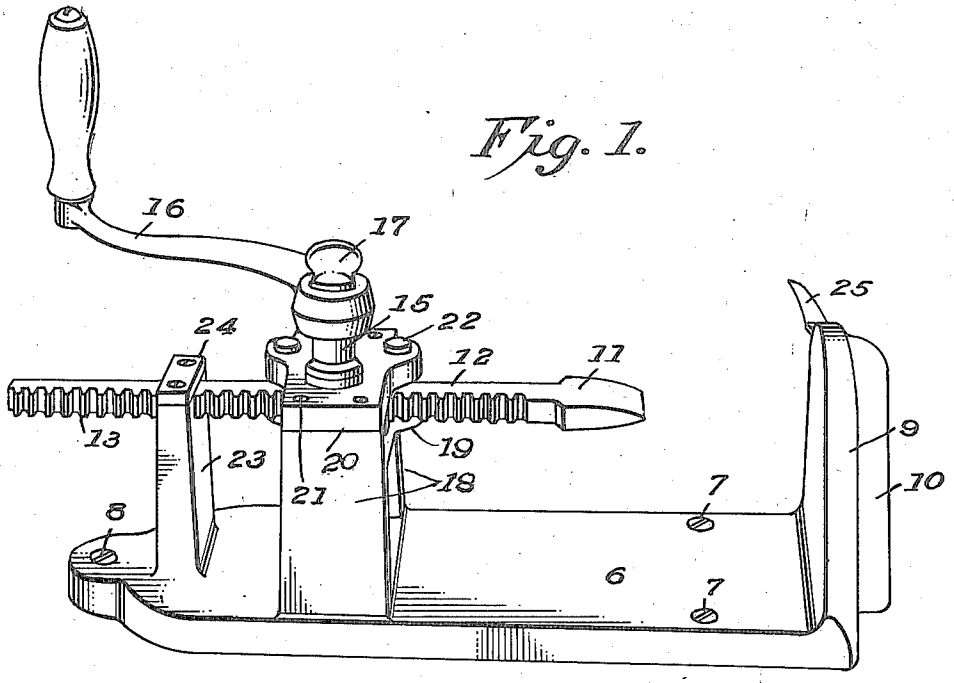

Fig. 2.

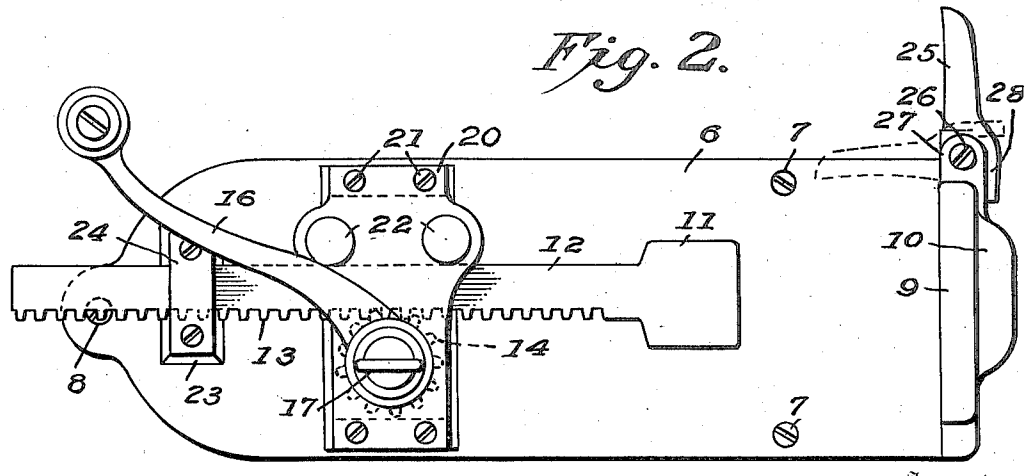

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Fig. 3.

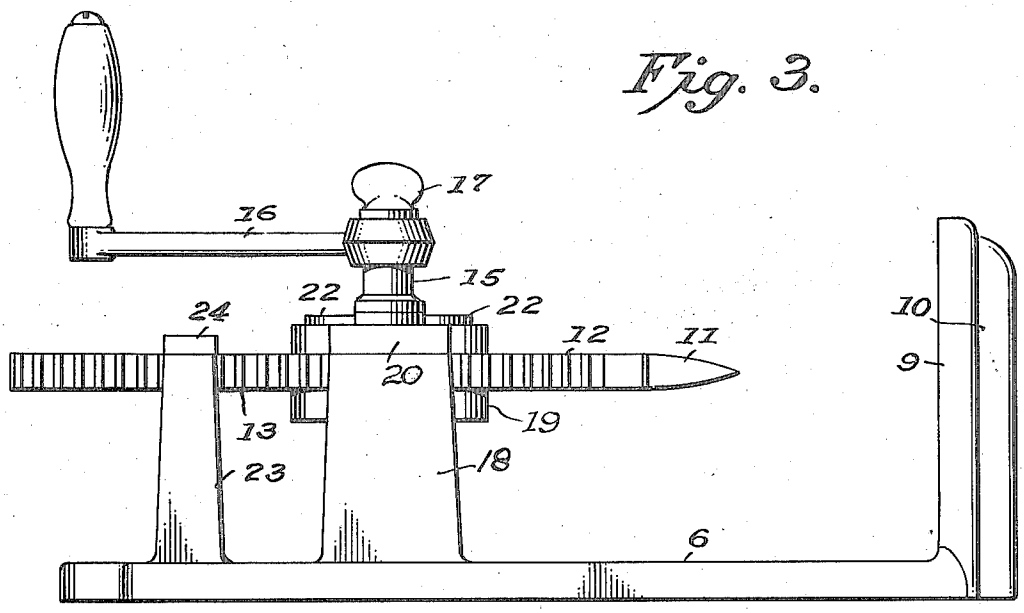


Fig. 4.

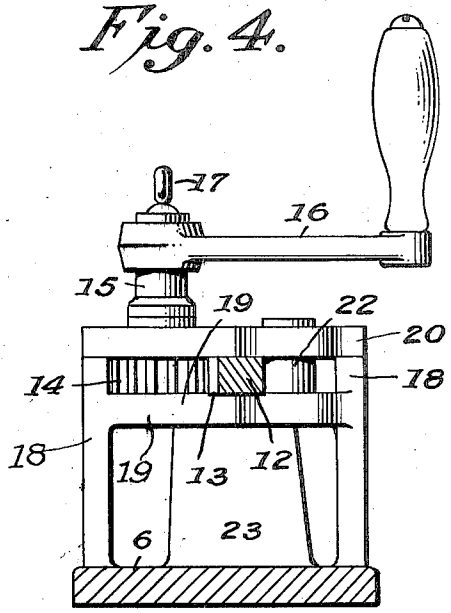
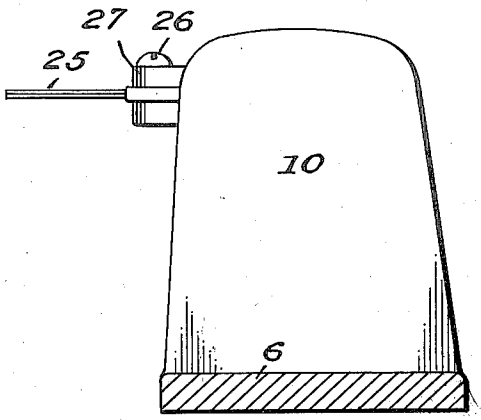


Fig. 5.



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UNITED STATES PATENT OFFICE

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OYSTER-OPENING MACHINE

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Application October 20, 1933, Serial No. 694,471

1 Claim. (Cl. 17—9)

The present invention relates to machines for opening oysters or other bivalves, and consists in the combinations and arrangements of elements hereinafter described and particularly set forth in the accompanying claim.

The purpose of the invention is to produce a machine of this character which will serve for opening oysters in an effective and clean manner, and without requiring any special skill on the part of the operator; and the invention further contemplates the employment of an auxiliary device which will by a simple manipulation clearly cut away or sever the muscle of the oyster from the shell.

Another object of the invention is to produce a machine of this character having the minimum number of operating parts, which are arranged to function with the least physical effort on the part of the person opening the oysters, and one wherein the elements which actually engage with the oyster shell will not crack or scrape thereagainst with the resultant consequence of solid particles coming into contact with the oyster proper. In machines heretofore proposed for opening oysters this disadvantage or defect is usually present, but due to the novel construction and manner of operation of the present machine this fault is overcome.

The invention is shown by illustration in the accompanying drawings, wherein:

Figure 1 is a perspective view of the machine complete.

Figure 2 a top plan view thereof.

Figure 3 a side elevational view.

Figure 4 a transverse sectional view, and;

Figure 5 a transverse sectional view towards the abutment end of the machine, and showing the muscle severing device.

Referring to the construction in further detail, and wherein like reference characters designate corresponding parts in the different figures shown, the machine consists of a suitable base portion 6 constructed preferably of aluminum metal and adapted to be secured to a table or bench top by the screws 7 and 8, or other appropriate means. At one end the base is formed with an integral and upstanding abutment or anvil portion 9 having a substantial reinforcing element 10 after the manner illustrated in Figures 1, 2, and 3.

The oyster opening or shell engaging element per se consists of a wedge-like element 11 on one end of a rack bar 12 whose teeth 13 mesh with the pinion 14 mounted on shaft 15. A crank arm 16 on shaft 15 serves for operating the pinion and said arm is fixedly secured to the shaft by the thumb nut 17, as shown in Figures 1 and 2.

The wedge manipulating device is rigidly mounted on the aluminum base 6 by the two upright members 18 which are of substantial proportions to the end of withstanding the strain and appreciably rough usage to which the machine will be subjected in its normal operation. To this end the two uprights 18 are connected together by an integral cross portion 19 and a separate or removable top plate 20, and within the space between said portions 19 and 20 the rack and pinion elements 13 and 14 are journalled. The plate 20 is secured to the two uprights 18 by screws 21.

To further facilitate the function or operation of the wedge carrying rack bar 12 there is provided a pair of guiding and thrust rollers 22 located between the cross members 19 and 20, and against which rollers 22 the smooth side of said rack bar 12 bears in its reciprocating movements. Said rollers 22 are located at points divergent from said pinion 14 whereby to effectively brace the rack bar 12 and facilitate its operation. The rollers 22 and in like manner the pinion shaft 15, are constructed of Monel metal, and the fastening screws 21 are preferably of nickel. The rack and pinion 13 and 14 are of eight-pitch design which is believed the most suitable for the machine to operate as intended. The rack bar 12 is further reinforced and held in proper alinement by the combined support and guideway 23 located at the opposite end of the base 6, and a removable closure or top piece 24 is secured thereto as shown.

To the end that the machine will completely open the oyster and leave the same ready for service, there is provided a suitable knife or blade movably mounted on the abutment or anvil portion as shown in Figures 1 and 2. Said knife or blade 25 is conveniently located on said abutment and is designed to be swung into and out of position as indicated in Figure 2. The blade pivot 26 consists of a screw fitted on the two lugs 27, and an extension 28 on said blade serves to limit the opening position thereof when the same is moved into functioning position.

The machine in its entirety is constructed of anti-rust material and from its simplicity and apparent ease of operation it will be evident the oyster or other bivalve may be conveniently and effectively opened without liklihood of breaking or fracturing the oyster shell with the consequent result that the dust, or shell particles will not come into contact with the meat of the oyster proper. And it will be further obvious that the machine will effectively perform its functions

when operated by one person, without requiring special skill or previous training.

It will be understood the invention as herein disclosed is not limited to the details of construction shown and described, and that these may be varied widely without departing from the spirit of the invention except as defined by the claim.

What is claimed as new is:

In an oyster opening machine of the character described, the combination of a base portion, an upright, abutting element at one end thereof, a pair of upright members located medially of the base adjacent the side edges thereof, and having an integral cross portion, a removable plate connecting the upright members at the top thereof and with said cross portion providing a restricted space for movement of a reciprocating rack bar, a rack bar fitting within said space and having close bearing contact with said cross portion and the top plate, a pair of rollers journalled in the cross bar and top plate and having bearing contact with said rack bar opposite the teeth thereof, a pinion journalled within the space of the cross portion and top plate opposite said pair of rollers and engaging the teeth of the rack bar, a wedge element carried by the rack bar co-operable with the abutting element, and a second upright located at the opposite end of the base and providing a guide and bearing element for the rack bar, and a crank arm for actuating the pinion of the rack bar, substantially as set forth.

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