N. G. ABBATE.

OYSTER OPENING MACHINE.

APPLICATION FILED JULY 27, 1916.

1,228,383.

Patented June 5, 1917.

2 SHEETS—SHEET 1.

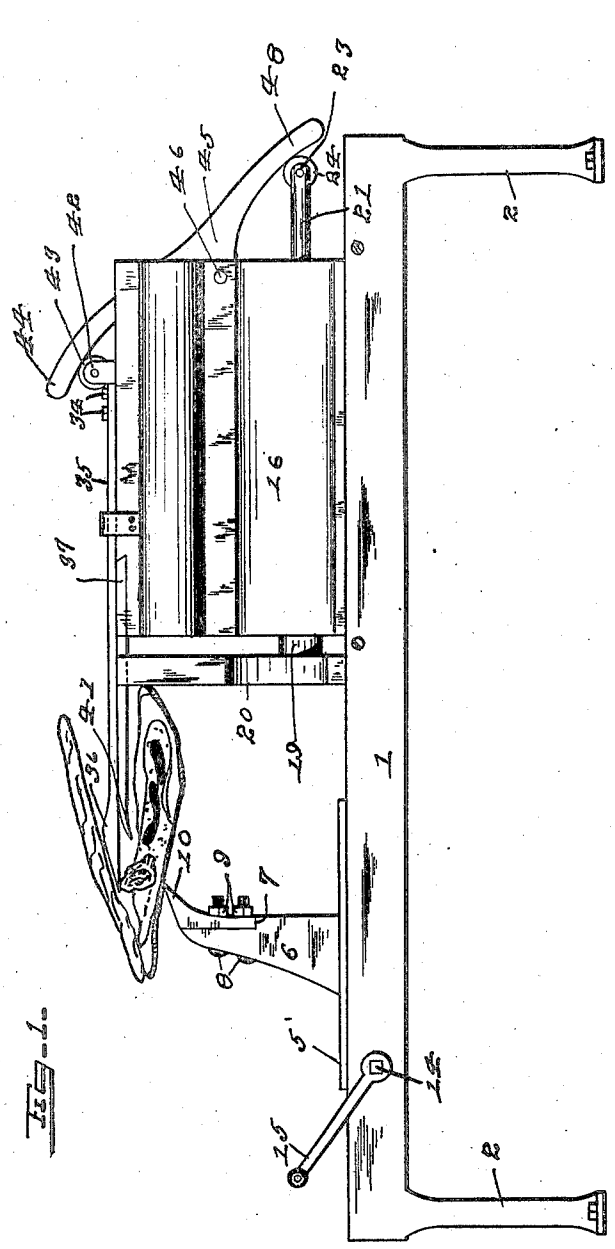


Fig. 1.

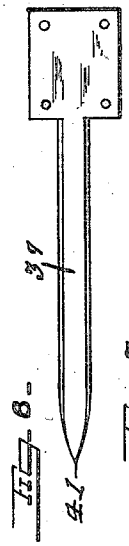


Fig. 8.

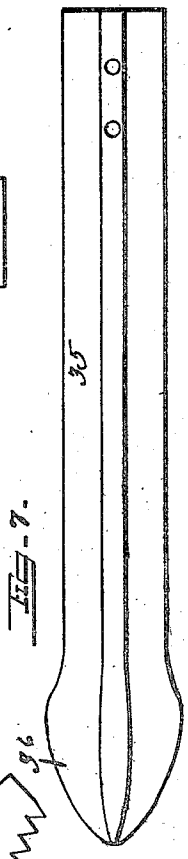


Fig. 7.

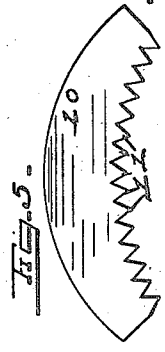


Fig. 5.

Witnesses
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2 SHEETS—SHEET 2.

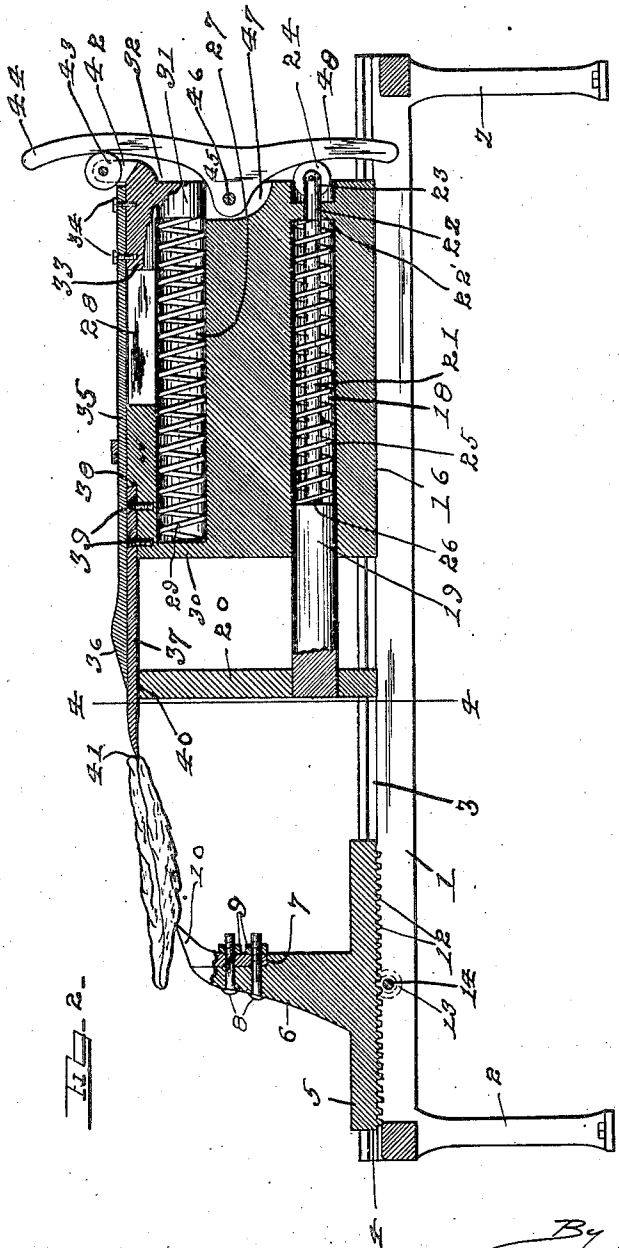


Fig. 2.

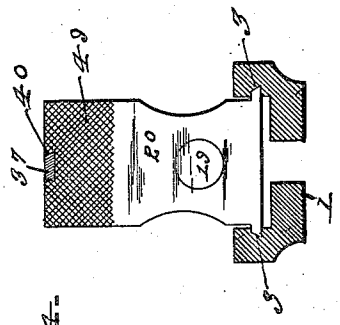


Fig. 4.

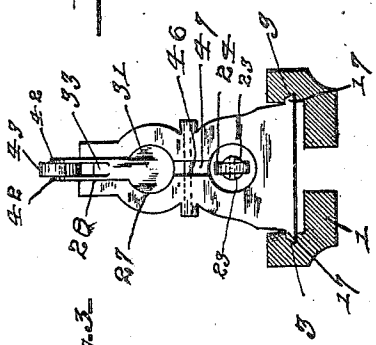


Fig. 3.

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UNITED STATES PATENT OFFICE.

NICHOLAS G. ABBATE, OF NEW YORK, N. Y.

OYSTER-OPENING MACHINE.

1,228,383. Specification of Letters Patent. Patented June 5, 1917.

Application filed July 27, 1916. Serial No. 111,603.

To all whom it may concern:

Be it known that I, NICHOLAS G. ABBATE, a subject of the King of Italy, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Oyster-Opening Machines, of which the following is a specification.

My invention relates to improvements in oyster shuckers, and the main object is the provision of a machine which will rapidly open the shells and remove the oysters and which will accommodate oysters of all shapes and sizes.

A further object of my invention is the provision of an oyster shucking machine which can be manipulated with ease by a single attendant, which will be simple, strong and durable in construction and thoroughly efficient and practical in every particular.

With the above and other objects in view which will appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts, hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made without departing from the spirit of the invention.

In the accompanying drawings, I have illustrated one complete example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles of my invention.

Figure 1 represents a side elevation of an oyster shucker constructed in accordance with and embodying my invention.

Fig. 2 represents a central longitudinal sectional view of the machine.

Fig. 3 represents an end elevation of the knife carriage with the walking beam or lever removed.

Fig. 4 represents a view taken on line 4—4 of Fig. 2.

Fig. 5 represents an enlarged top plan view of the oyster retaining fork.

Fig. 6 represents an enlarged top plan view of the lower rigid oyster opening knife, and

Fig. 7 represents a similar view of the upper movable knife.

Referring by numeral to the drawings in which similar characters of reference denote corresponding parts in all the views:—

The numeral 1, designates a table, provided with supporting legs 2, and having the guide slot 3 extending the entire length thereof.

Slidably mounted on the table by means of the lugs or flanges 4 engaging the guide slot 3, is the base or platform 5 having formed thereon the standard or upright 6, having near its top the shoulder 7 on which is secured by means of the bolts 8 and nuts 9, the oyster retaining fork 10 formed with the teeth 11, whose purpose is to engage and retain the oyster shell in proper place. (See Figs. 1 and 2.)

The underneath side of the base or platform 5 is formed with the teeth 12 forming a rack which engages the teeth on the gear wheel 13 mounted on the shaft 14 journaled in the table and operated by the crank lever 15, the operation of which will be hereinafter described.

Also mounted upon the table and in line with the standard or upright 6, is the carriage 16 having the guides or flanges 17 engaging the guide slots 3, and the lower cylindrical chamber 18 in which is mounted the plunger 19, of the vertical plate forming an abutment 20, having the reduced portion 21, passing through the chamber 18 and the opening 22 in the rear wall 22′ thereof and having pivoted in its forked end 23 the roller 24, said reduced portion 21, having coiled therearound the spiral spring 25 bearing against the rear wall 22′ and the shoulder 26 formed by plunger 19.

The carriage 16 is also provided with the upper cylindrical chamber 27, having in communication therewith the slot or guide way 28, and having therein the spiral spring 29 bearing against the wall 30 of the cylindrical chamber 27, and the cylindrical portion 31 of the carrier 32, having the angular portion 33, said cylindrical and angular portions of the carrier 32, engaging the cylindrical chamber 27 and the guide way 28, respectively.

Secured to the angular portion 33 of the carrier by means of the bolts 34 is the upper knife 35 having the end 36 for cutting the oyster away from the upper shell, said

knife 35 being disposed above the lower rigid oyster opening knife 37 fixed to the carriage 16 at 38 by the screws 39 and engaging the slot 40 of the vertical plate 20, said knife 37 having the pointed end 41 which engages and opens the oyster as stated.

The carrier 32 has formed thereon the bifurcated arms 42 in which is pivoted the roller 43 which engages the upper arm 44 of the lever or walking beam 45 pivoted at 46 in the recess 47 in the carriage 16, said lever 45 having the lower arm 48 engaging the roller 24 for the purpose hereinafter set forth.

Thus it will be readily seen that the oyster is placed as shown by Fig. 2, the crank lever 15 is turned which causes the rigid knife 37 to force open the oyster, the lower shell engaging the roughened face 49 of the vertical plate 20, (see Fig. 1) and further turning of the lever 15 causes the lower shell to force the vertical plate 20 inward which causes the roller 24 to force the arm 48 outward and the arm 44 inward which causes the carrier 32 to push the knife 35 forward, the knife 35 projecting out beyond the lower rigid knife and cutting the oyster away from the upper shell as clearly shown by Fig. 1.

It will be obvious that when the standard or upright 6 has been returned to normal position by means of the crank lever 15, the springs 25 and 29 will in turn return the knife 35 and the vertical plate 20 to normal position or in position to receive another oyster for opening.

It is evident that I provide a machine in which the shell is instantly clamped in position and opened and the movable knife is automatically operated to remove the oyster from the shell, thus enabling a single attendant to shuck or open the oysters in a rapid manner and to adapt the machine to oysters of any size and shape.

It will be understood that the machine embodies few parts insuring simplicity, durability and cheapness of production, also that the machine may be used in connection with any kind of a table and made in various sizes and that in every particular the invention is thoroughly efficient and practical.

I claim:—

1. In an oyster shucker, the combination with a support, of an upright movably mounted thereon, oyster retaining means carried by said upright, a fixed carriage, a knife mounted thereon, a movable knife cooperating with the fixed knife, and means for moving the movable knife, said means being operated by the moving of the upright when the oyster is being operated upon.

2. In an oyster shucker, the combination with a support, of a movable upright, an oyster retaining fork mounted thereon, a fixed carriage, a knife mounted thereon, a movable knife operating in conjunction with the fixed knife, and means for moving the movable knife when the oyster is being operated upon.

3. In an oyster shucker, the combination with a support having guide slots therein, of a movable upright having guide flanges engaging said guide slots, a fixed carriage on said support and in line with said upright, a rigid knife mounted thereon, a movable knife operating in conjunction with said rigid knife, means for operating said movable knife, and means for operating said movable upright.

4. In an oyster shucker, the combination with a support having guide slots therein, of a movable upright having guide flanges engaging said guide slots, a fixed carriage on said support and in line with said upright, a rigid knife mounted thereon, a movable knife for operating in conjunction with said rigid knife, means for operating said movable knife, and means for operating said movable upright consisting of teeth on the underneath side of said upright forming a rack gear, a gear wheel engaging said rack gear and mounted on a shaft journaled in said support, and a crank lever for manipulating said upright.

5. In an oyster shucker, the combination with a support, of a movable upright having oyster retaining means, a fixed carriage, a knife mounted thereon, a movable knife operating in conjunction with said fixed knife, means for operating said movable knife consisting of a vertical plate forming an abutment, a rocking lever pivoted in said carriage, means connecting the vertical plate and one end of said rocking lever, means carried by the movable knife and engaging the other end of said rocking lever, and means for operating said movable upright to effect the shucking of the oyster, substantially as described.

6. In an oyster shucker, the combination with a support, of a movable upright, a toothed oyster retaining fork mounted thereon, a fixed carriage, a knife mounted thereon, a movable knife operating in conjunction with the fixed knife, and means for moving the movable knife when the oyster is being operated upon.

7. In an oyster shucker, the combination with a support, of a movable upright mounted thereon, oyster retaining means carried by said upright, a fixed carriage, a knife mounted thereon, a movable knife coöperating with the fixed knife, a vertical abutment, and means operated by said abutment for moving said movable knife when the oyster is being operated upon.

8. In an oyster shucker, the combination with a support, of a movable upright having

oyster retaining means, a fixed carriage, a knife carried thereby, a sliding carrier mounted in said fixed carriage, a knife secured to the carrier, and means for moving the carrier and causing the knife carried thereby to coöperate with the fixed knife when the oyster is being operated upon.

In testimony whereof I affix my signature in the presence of two witnesses.

NICHOLAS G. ABBATE.

Witnesses:
FRED. SPENGLER,
CHARLES PENNECKE.