(No Model.)

2 Sheets—Sheet 1.

E. I. BELL.

FISH CUTTING MACHINE.

No. 572,626. Patented Dec. 8, 1896.

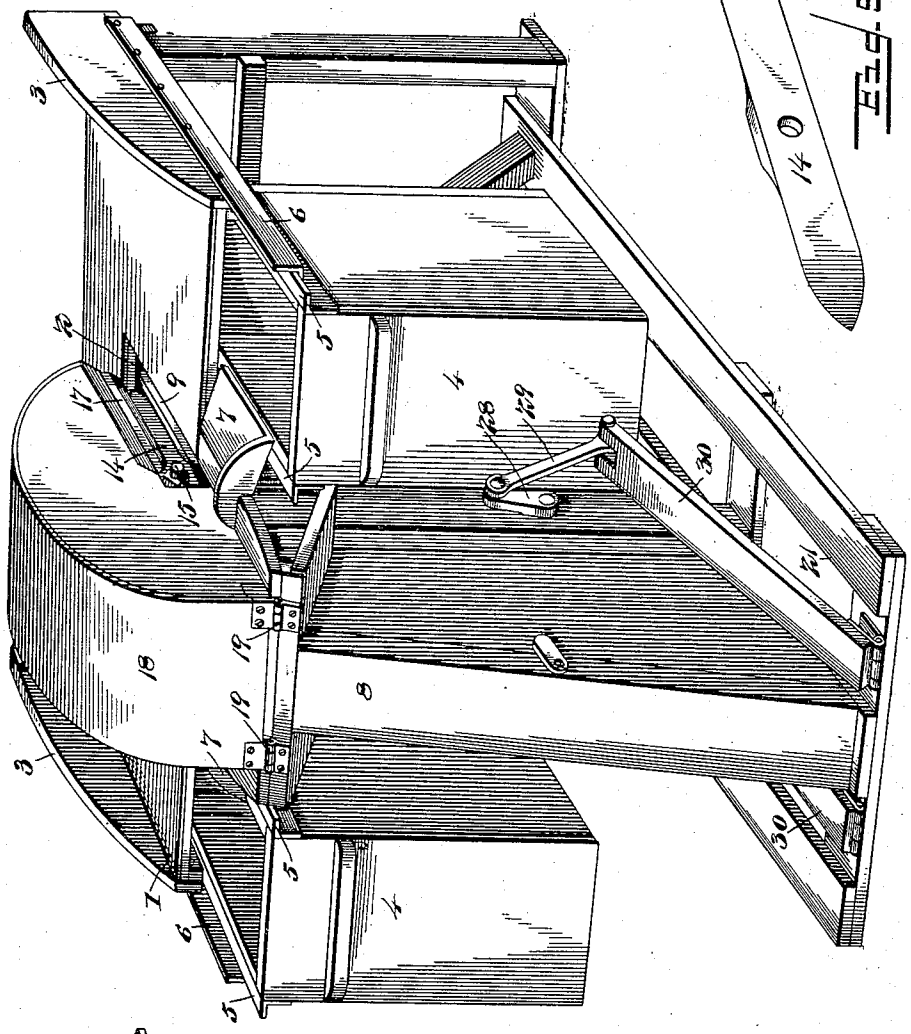


Fig. 5.

Fig. 4.

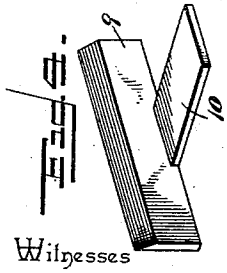
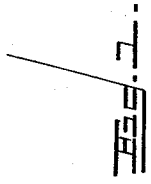


Fig. 7.



Witnesses

E. K. Stewart.

O. E. Hoyt

Inventor

Elmer I. Bell

By his Attorneys.

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

E. I. BELL.

FISH CUTTING MACHINE.

No. 572,626. Patented Dec. 8, 1896.

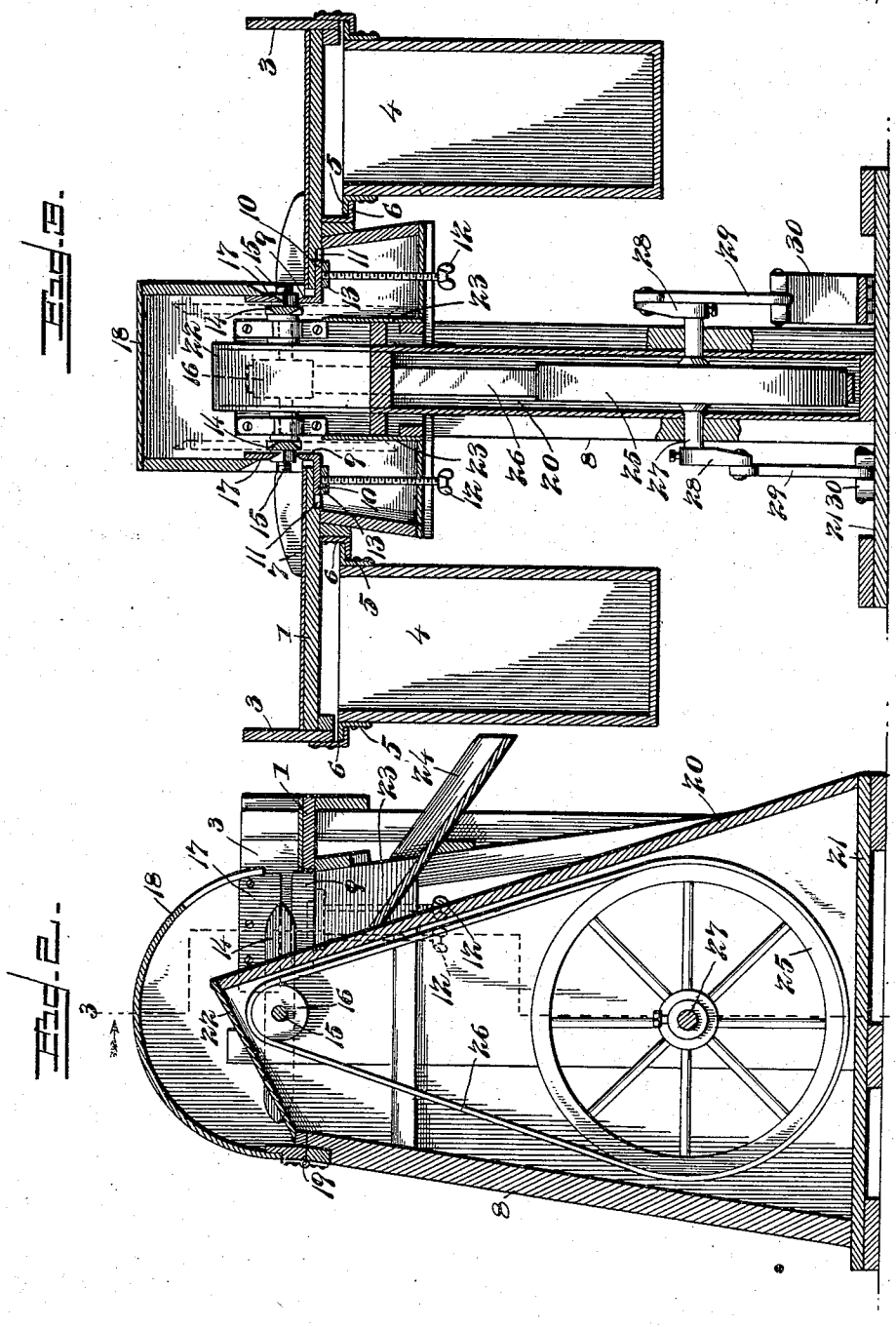


Fig. 2.

Witnesses
E. F. Stewart
C. E. Foss

Inventor
Elmer I. Bell

By his Attorneys.
Cashow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELMER I. BELL, OF WHITING, MAINE.

FISH-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 572,626, dated December 8, 1896.

Application filed August 8, 1896. Serial No. 602,164. (No model.)

To all whom it may concern:

Be it known that I, ELMER I. BELL, a citizen of the United States, residing at Whiting, in the county of Washington and State of Maine, have invented a new and useful Fish-Cutting Machine, of which the following is a specification.

My invention relates to a fish-cutting machine adapted for removing the heads and tails of fish in the process of preparing them for packing, the same being adapted especially for operation upon sardines; and the objects in view are to provide a simple and inexpensive construction and arrangement of parts whereby the removal of the heads and tails of the fish may be accomplished with facility and accuracy and without loss of time.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a transverse vertical section on the line 3 3 of Fig. 2. Fig. 4 is a detail view of one of the lower stationary knives. Fig. 5 is a similar view of one of the rotary knives.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a cutting-table which is duplicated upon opposite sides of a central opening 2 and is flanged at its outer edges to form guards 3. Arranged to slide under the cutting-tables, respectively upon opposite sides of said intermediate opening, are the fish-receptacles 4, provided at their upper side edges with slides 5 to fit in horizontal guides 6, which project forwardly from the under sides of the tables, guide-chutes 7 being arranged in front of the tables and inclining outwardly and downwardly from the plane thereof to direct cut fish into the receptacles and prevent the same from falling into the space between the inner sides of the receptacles and the contiguous walls of a central casing 8.

Arranged contiguous to the inner edges of the cutting-tables are stationary knives 9, adapted for horizontal lateral adjustment toward and from the contiguous edges of the tables, and provided for the purpose of adjustment with tongues 10, which fit in guides 11 in the tables and are engaged by set-screws 12, which are threaded in longitudinal bars 13, forming the lower sides of said guides, and coöperating with these stationary knives are movable or rotary knives 14, preferably of armed construction, carried by a transverse spindle 15, upon which is fitted a pulley 16. These movable knives are double-edged, and in order to adapt them to be operated or rotated in either direction a second or upper set of stationary knives 17 is employed, said knives 17 being carried by the side walls of a hood 18, which is hinged, as at 19, to swing over and close the central or intermediate opening between the cutting-tables. This hood is held in its normal or operative position by gravity or other yielding force, whereby as the fish are brought into operative relation with the knives the pressure thereof against the lower or cutting edges of the knives 17 is adapted to raise the hood more or less to suit the size of the fish. The yielding downward pressure of the hood serves to hold the inserted end (either the head or the tail) of the fish in proper position until detached by means of the rotary knife.

The above-mentioned casing 8 is provided with a rear inclined wall 20, which at its upper extremity is located within the hood, from which point it inclines downwardly and rearwardly to the base 21 of the apparatus, and the upper end of said wall 20 is connected with the front wall of the casing by means of a downwardly and forwardly inclined top wall 22. Side guard-plates 23 are also arranged contiguous to the planes of the knives to cause the severed or waste portions of the fish to fall into the waste-chute 24, which inclines downwardly and rearwardly from the opening between the cutting-tables.

Any suitable means may be employed for imparting rotary motion to the knife-spindle, such as a driving-wheel 25, connected by means of a belt 26 with the pulley 16, the spindle 27 of said driving-wheel being provided with terminal cranks 28, which are connected by pitmen 29 with foot-treadles 30.

Thus the mechanism may be operated without the use of the hands of the operator to leave both hands free to apply the fish.

In operation the machine, as described, is preferably arranged contiguous to or with its rear side in contact with the edge of an ordinary fish-table, with its upper surface flush with that of said fish-table, whereby the operator, standing in front of the apparatus, may draw the fish forwardly upon the cutting-table, and thus introduce their heads and tails successively between the upper and lower stationary knives without lifting them from the plane of the table, and after the severance of the extremities the fish may be drawn to the front and allowed to drop into the receptacles provided therefor.

I have deemed it unnecessary to illustrate the cutting apparatus in connection with a fish-table, inasmuch as it may be used independently thereof, if preferred; but it will be understood that in practice an important advantage of the apparatus resides in the fact that it may be disposed in the above-named position with relation to an ordinary fish-table in order that handling of the fish, as in transmitting the same from the fish-table to the cutting-table, may be avoided.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. A fish-cutting apparatus having a cutting-table, a stationary knife, a vertically-yielding hood arranged at one edge contiguous to and in the plane of said stationary knife, a movable knife for coöperation with the stationary knife, and means for operating the movable knife, substantially as specified.

2. A fish-cutting apparatus having opposite cutting-tables and an intermediate opening, a vertically-movable hood arranged over said opening, oppositely-located upper and lower knives carried respectively by the hood and the tables contiguous to said opening, movable knives for coöperation with said stationary knives, and means for operating the movable knives, substantially as specified.

3. A fish-cutting apparatus having cutting-tables arranged upon opposite sides of an intermediate opening communicating with a waste-chute, a vertically-yielding hood arranged over said opening, stationary knives carried respectively by the hood and the inner edges of the tables, the upper knives which are carried by the hood being yieldingly held in their operative positions, rotary armed knives for coöperating with the stationary knives, and means for communicating motion to the rotary knives, substantially as specified.

4. A fish-cutting apparatus having horizontal cutting-tables provided with outer side guards and an intermediate opening communicating with a waste-chute, stationary knives arranged upon the tables at their inner edges, means for adjusting said knives laterally, contiguous parallel guards, rotary armed knives for coöperating with the stationary knives and adapted to pass between the same and said parallel guards, fish-receptacles mounted to slide under the tables and adapted to project at their front sides beyond the front edges of the tables, side guide-chutes arranged contiguous to the front edges of the tables, and means for operating the rotary knives, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELMER I. BELL.

Witnesses:
FRED L. GARDNER,
RALPH A. GARDNER.