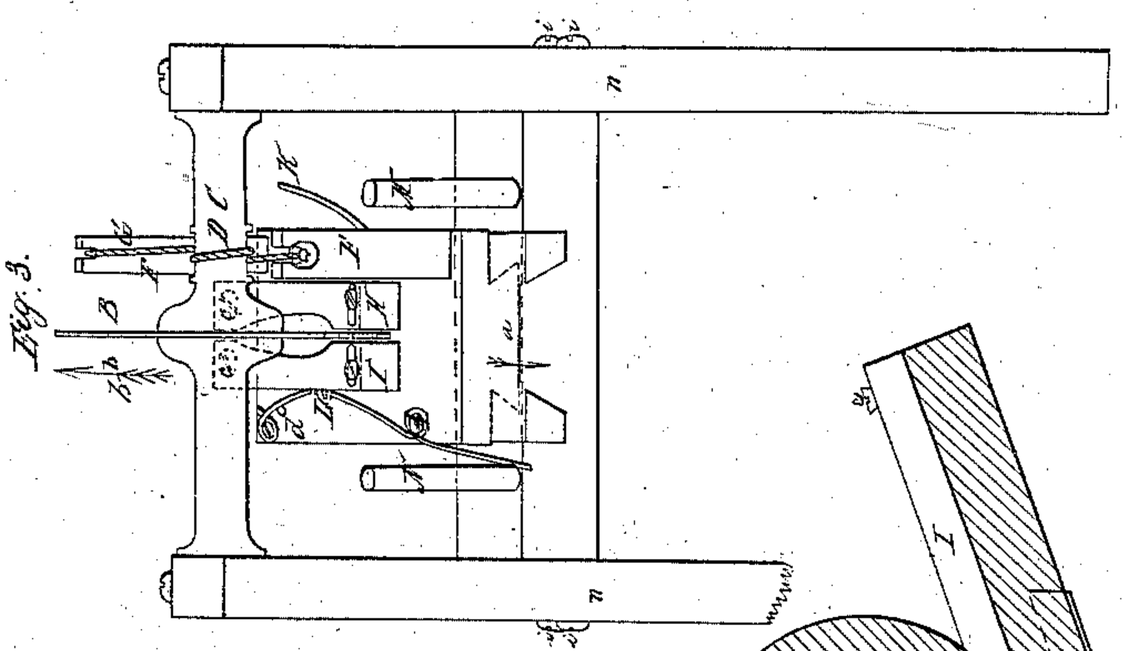
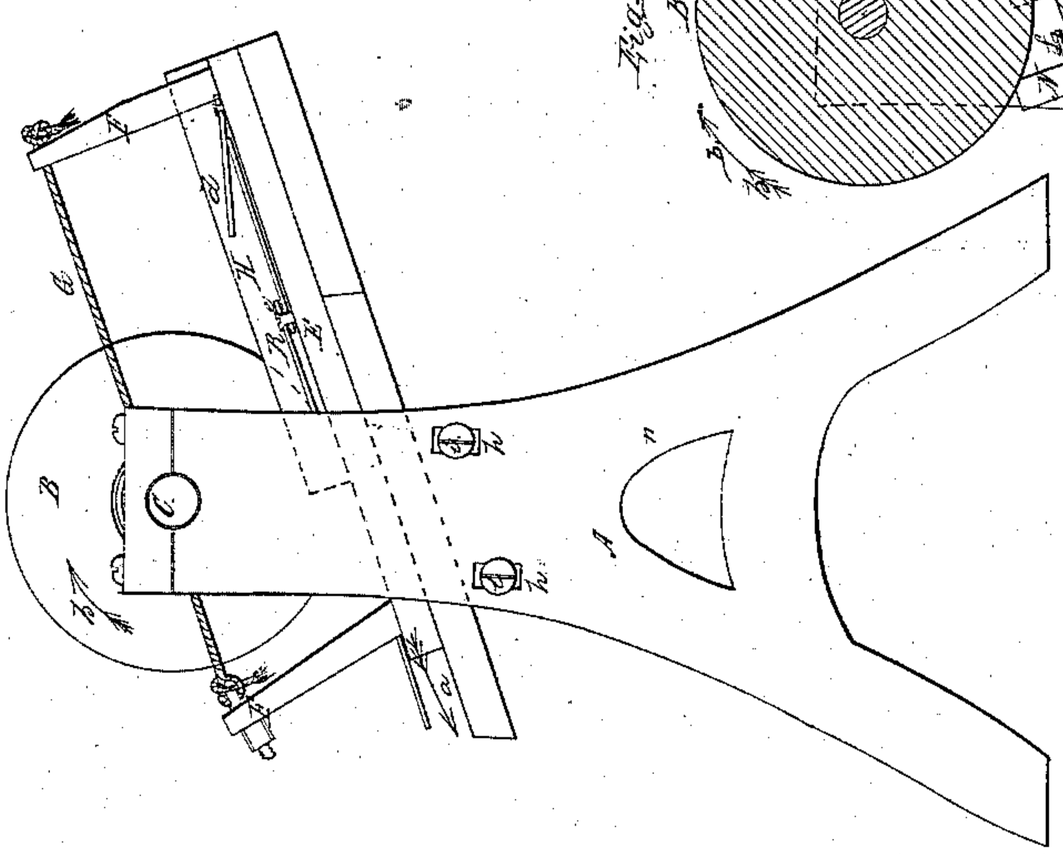
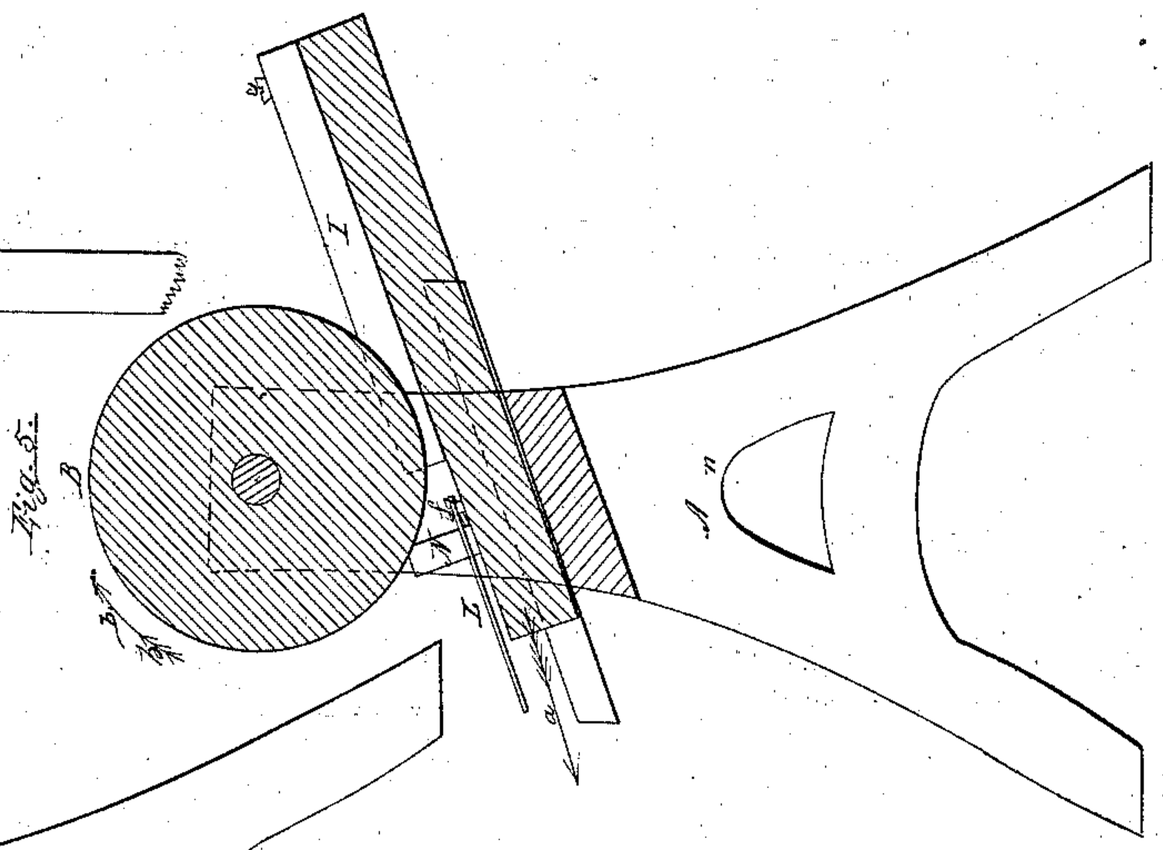
S. S. Turner,

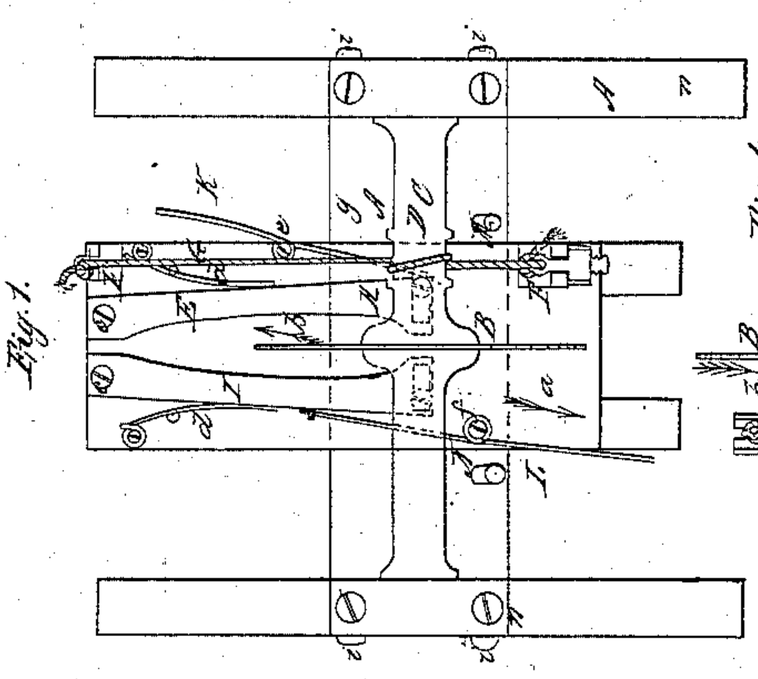
Fish Splitter,

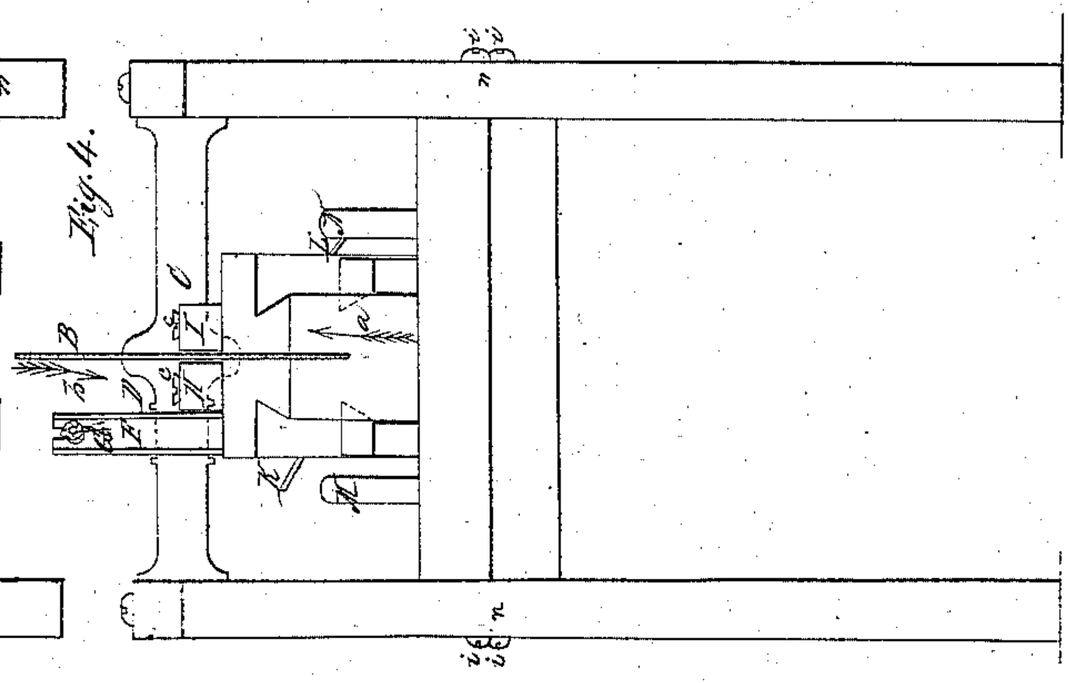
No. 15,941. Patented Oct. 21, 1856.











N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SIDNEY S. TURNER, OF LEWISTON, MAINE, ASSIGNOR TO SIDNEY S. TURNER AND ELMER TOWNSEND.

MACHINE FOR SPLITTING MACKEREL.

Specification forming part of Letters Patent No. **15,941**, dated October 21, 1856.

To all whom it may concern:

Be it known that I, SIDNEY S. TURNER, of Lewiston, in the county of Androscoggin and State of Maine, have invented a new and useful Machine for Splitting Mackerel; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a top view of the said machine; Fig. 2, a side elevation of it; Fig. 3, a front elevation, Fig. 4 a rear elevation, and Fig. 5 a vertical and longitudinal section, of it.

In such drawings, A exhibits the frame by which the main operative parts of the mechanism are supported. B is a circular cutter or knife mounted on a rotary shaft, C, provided with a pulley, D, and arranged at the upper part of the frame A. Underneath the said cutting-knife is a carriage, E, so applied to the frame A as to be capable of being slid or moved rectilinearly forward and backward underneath the cutting-knife. From this carriage two standards or posts, F F, extend upward, a band, G, being fastened at one of its ends to one of them and wound around the pulley D and fastened at its other end to the other standard, as shown in the drawings, the same being constructed so that when the carriage E is moved forward in the direction of the arrow *a*, the cutter-wheel C shall not only be put in rotation or movement in the direction of the arrow *b*, but so that its cutting-edge or periphery or part that enters the fish shall have a velocity of movement faster than that of the said carriage. The object of this will be hereinafter explained.

Applied to the carriage and on opposite sides of the cutting-knife, or so that said cutting-knife shall run between them, are two jaws or holders, H I, each being made to turn laterally on a pin, *c*, arranged at or near its rear end, as shown in the drawings. To each jaw and the carriage E a spring, *d*, is applied in such a manner as to press the jaw inward toward the cutting-knife; and besides the said spring, each jaw has one of two levers, K L, connected or jointed to it, the said levers being arranged as shown in the drawings, wherein one is represented as extended rearward and the other forward from its jaw. The fulcra of these levers are seen at *e* and *f*, and as projecting upward from the movable carriage. The spring-jaws serve to centralize the fish or bring or hold it in a proper position to be cut by the knife. In order to operate these levers at suitable times, two posts or studs, M N, are extended upward from the cross-tie *g* that supports the carriage, the said posts being arranged as shown in Fig. 1.

In the operation of my machine, when its carriage is drawn entirely backward it is ready to receive a mackerel between the jaws or holders H I. During the act of retracting the carriage the front arm of the lever K will be drawn against the post N, so as to cause the lever to be moved on its fulcrum, and thereby move the jaw I away from the jaw H, thus opening the jaws for the reception of a fish. On introducing the mackerel between the jaws its head is to be presented toward the cutting-knife, and so that the back of the mackerel shall be upward and the belly, of course, resting on the carriage E. This being done, the carriage is to be moved forward quickly, so as not only to force the mackerel against and underneath the cutting-knife, but to impart to such knife a rapid rotary motion, and also to force the rearmost arm of the lever K into contact with the post M and cause said lever to move so as to move the front end of the jaw H away from that of the jaw I. During this operation of the machine the mackerel will be split, and by the adhesion of the cutting-knife to it, as well as by the rapid rotation of said knife, the fish will be thrown out from between the jaws and discharged from the machine.

Generally speaking, it is not desirable to split the mackerel entirely through in a vertical direction, and for this reason the lower edge of the cutting-knife should be a short distance from the top of the bed or carriage. In order to regulate or adjust this distance the supporting-bar *g* may be applied to the remainder of the frame A by contrivances that will admit of its being raised or lowered as circumstances may require. For this purpose the side portions, *n n*, of the frame may be provided with slots, as seen at *h h*, and screws *i i* may extend through these slots and into the rail *g*, the heads of said screws being made to overlap the slots. In practice my machine has been found to operate to great advantage.

I claim—

1. Combining with the cutting-knife D and the movable carriage E a set of centering and holding jaws, H I, or the mechanical equivalent therefor.

2. The improvement of making the knife move faster than the carriage, or, in other words, combining with the cutting-knife and the carriage a mechanism for rotating the cutting or splitting part of the knife at a greater velocity than the carriage may be moved, the same being not only to facilitate the splitting of the fish, but to cause the discharge of it from the carriage in manner as described.

3. Combining with the holding-carriage, the centering-jaws, and the splitting-knife a mechanism for operating or opening the centering-jaws to allow of the discharge of the fish by the action of the knife, as specified.

4. Combining with the holding-carriage, its centering-jaws, and the knife a mechanism to open the said jaws during the backward movement of the carriage, the same being to prepare said jaws for the reception of a fish, substantially as set forth.

In testimony whereof I have hereunto set my signature this 30th day of August, A. D. 1856.

SIDNEY S. TURNER.

Witnesses:
R. H. EDDY,
F. P. HALE, Jr.