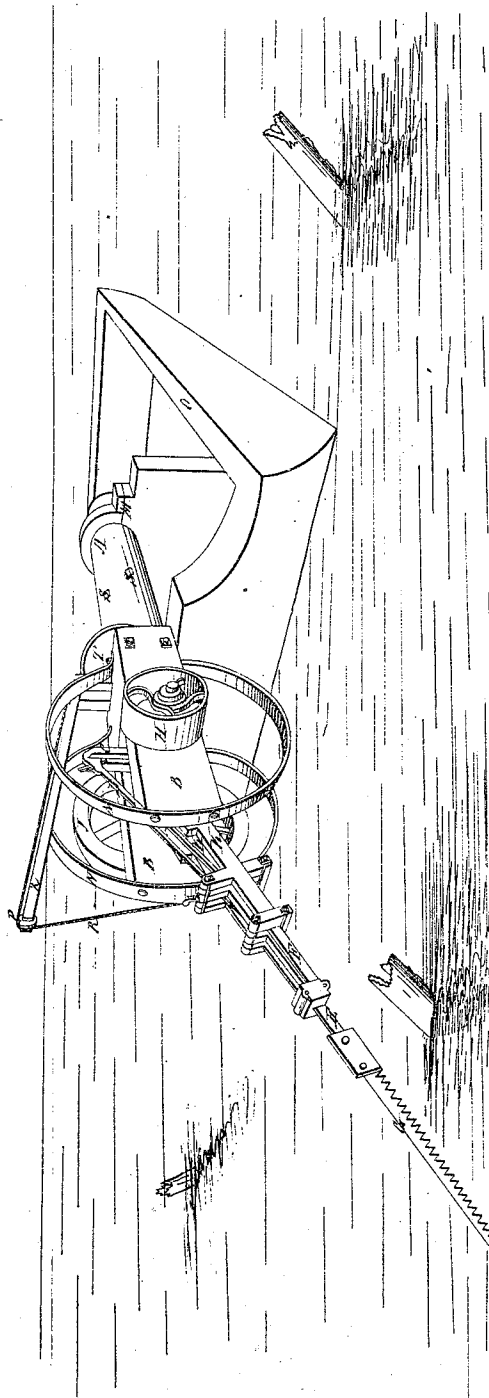


J. Hamilton.

Harbor Cleaver.

N^o 1,663.

Patented Jun. 27, 1840.



Witnesses
J. J. Hamilton
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UNITED STATES PATENT OFFICE.

JAMES HAMILTON, OF NEW YORK, N. Y.

MACHINE FOR SAWING OR CUTTING SNAGS.

Specification of Letters Patent No. 1,663, dated June 27, 1840.

To all whom it may concern:

Be it known that I, JAMES HAMILTON, of the city, county, and State of New York, engineer, have invented a new and useful improvement in the mode or means of cutting or removing snags and rafts from rivers, lakes, &c., which may be on or under the surface of the water, and is applicable to other useful purposes, and that the following is a full and accurate description of the construction and operation of the said machine as invented by me, reference being had to the drawings annexed hereto and making a part of this specification, wherein the figure is a front quarterly view of said machine.

The object of the machine is to obtain an effect from a saw in cutting against or through any object such as a tree, post or pile at any angle whatever. To obtain this effect, I first form a horizontal shaft of wood or iron A upon the front end of which are bolted two side pieces B B, and upon and within this frame are fitted the working parts of the machine as follows: C is a revolving crank, D the connecting rod or pitman, E is the sliding shaft, F the slide box that gives direction to the sliding bar, or shaft E, G the saw, H the pulley, I the fly wheel, K K the arms that support the slide box or case F. Through these arms the crank C passes. These arms are supported by boxes on the two fixed bearings of metal, each projecting from the inner side of the two side pieces B B, having a boss turned on each to receive the ring on the ends of the arms and further secured by circular clamps screwed into the bosses as a center for the arms to move and turn on.

M is the bearing on which the extreme end of the shaft A rests and is secured.

N, N are two circular bars of iron screwed to the ends and sides of the two side pieces B B. These circular bars of iron are for the purpose of sustaining the arms that support the slide box F when moving up and down but more especially when the machine is fixed to operate in an angular or horizontal position, as they act as a railway for the arms to move around on, the sides of the arms being made to bear on them.

O is a flat bottomed boat for the machine to be worked on.

Q is a crane with a pulley P in the end and a rope or chain R to regulate the cut of the saw, and which is attached to the arm

of the slide box F by which means the saw is easily let down to cut, or raised up to be disengaged as occasion may require.

The large shaft A has two bearings, one on the front end of the boat, the other on the extreme end of the shaft, and by means of a lever run through the shaft A and into the mortises S S the whole machine is turned around to operate at any point or angle whatever. When the machine is to operate horizontally, it is necessary to attach a crane of a similar kind as the one heretofore described, on the opposite side to bear the saw up to the work. A large division plate of iron T is bolted to the shaft A and turns with the shaft directly behind this plate and touching the same is the bearing in which the shaft A turns. On the top of the box of this bearing is a piece cast on it standing up as high as the circle of the division plate; through these two plates holes are drilled to correspond with each other, and a pin fitted which secures the machine fast for any particular operation. Other holes are made in the division plate T to correspond with the one in the top of the bearing box which is a fixture. By the means of these holes and the pin, the saw may be made fast at any angle so as to operate vertically, perpendicularly, horizontally, or at any given angle. A band is to be put on the pulley running back to a long pulley or drum placed at an angle corresponding with the center on which the machine turns. The machine can be worked as well when the saw is in one position as another. It is designed to be worked by steam or any other power applicable to the purpose for which it is intended.

When it is desired to operate the machine the lever is turned so as to bring the saw to act at the required angle. The pin is then inserted in the hole in the division plate and in the top of the bearing box, touching the same to keep the saw fast to its required position, the power is then applied and the machine will operate and saw through a tree, post, pile, timber or other material to be sawed. When the object to be sawed is above or below the surface of water the machine is to be attached to the bow or other part of a flat-bottomed or other boat and can then be operated upon snags, rafts, &c., in rivers, lakes and harbors, &c.

I do not claim as my invention and improvement said saw or shaft, or division

plates separately and without their connection in said machine or application to the purposes aforesaid nor any other parts of said machine separately. But

5 I do claim as my invention and improvement—

The application of said saw above substantially described for the purposes afore-

said in combination with the shaft, cheeks, or sidepieces, division plates and circular 10 bars or guides as above substantially described.

JAMES HAMILTON.

Witnesses:

A. I. HAMILTON,
S. H. HAMILTON.