S. SCOTTON.

Ice Cutter.

No. 16,152. Patented Dec. 2, 1856.

Fig. 2

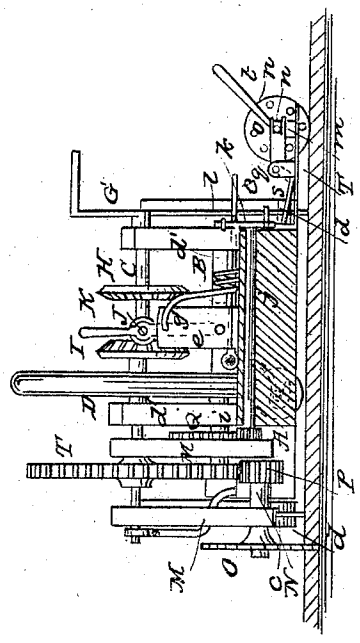


Fig. 1

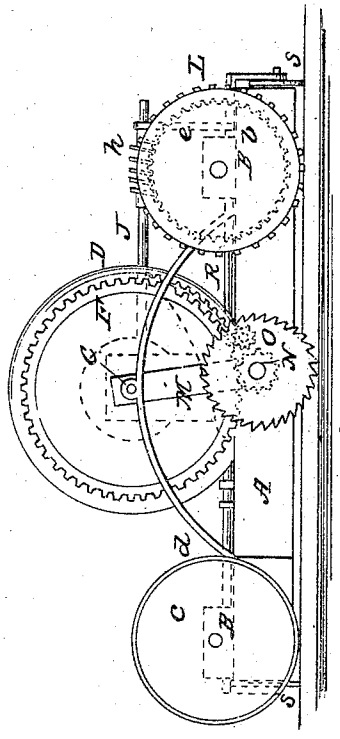
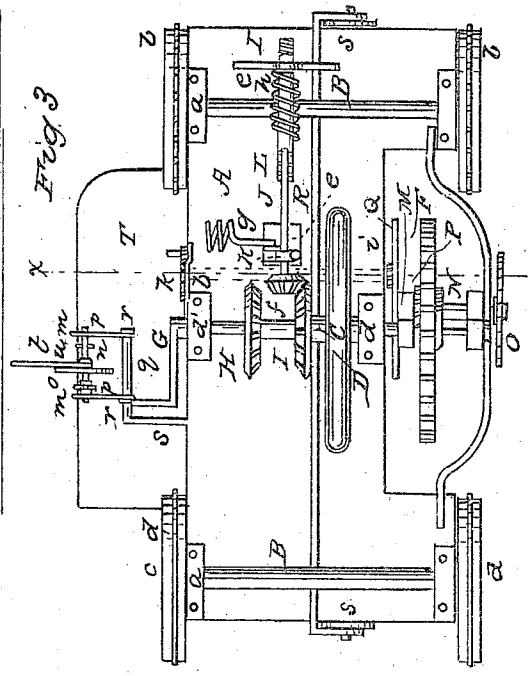


Fig. 3



THE ECKERT LITHOGRAPHING CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

S. SCOTTON, OF RICHMOND, INDIANA.

ICE-SAW.

Specification of Letters Patent No. 16,152, dated December 2, 1856.

To all whom it may concern:

Be it known that I, STEPHEN SCOTTON, of Richmond, in the county of Wayne and State of Indiana, have invented a new and useful Machine for Sawing Ice; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of my improvement. Fig. 2, is a transverse vertical section of ditto, *x*, *x*, Fig. 3, showing the plane of section. Fig. 3, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine for sawing out blocks of ice from ponds or rivers, and consists in the employment or use of a circular saw placed in a swinging or adjustable frame, the saw arbor or shaft being connected with a proper feed motion to propel the carriage to which the saw is attached. The carriage is also provided with a device to adjust it when necessary, so that blocks of ice may be sawed of the required width. The whole being arranged as will be hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a horizontal platform which is supported by four wheels. The wheels are attached permanently to the axles B, B, which rotate in bearings *a*, attached to the platform. The two front wheels *b*, *b*, have points driven in their peripheries, and the two back wheels *c*, *c*, have a sharp or knife-edged plate *d*, driven in their peripheries, said plates extending entirely around the wheels.

C, represents the driving shaft of the machine. This shaft has its bearings in uprights *d'*, attached to the platform A, the shaft being placed transversely with the platform. On this shaft a flywheel D, is placed, and a toothed wheel F, is placed on one end and a crank G, at the opposite end. Two toothed wheels A, I, are also placed on the shaft C, at a suitable distance apart.

J, represents a shaft which is placed and works in proper bearings *e*, *e*, on the platform A. This shaft has a pinion *f*, on its inner end, which pinion may be made to gear into either of the wheels A, I, by moving the shaft J, by means of a lever K, the shaft being retained in the desired position by means of a catch *g*.

The outer end of the shaft J, has a screw *h*, upon it, and this screw gears into a toothed wheel L, on the front axle B, as shown in Figs. 1 and 3.

On the end of the shaft *c*, opposite to the end on which the crank G, is attached there is placed a swinging frame M which swings on the end of the shaft C. This frame has an arbor or shaft N, passing through its lower end, and a saw O, is placed on the outer end of the arbor or shaft N, and a pinion P, on its inner end, the pinion P, gearing into the toothed wheel F.

To the inner side of the swinging frame M a segment rack Q, is attached, and a pinion *i'*, gears into this rack. The pinion *i'*, is attached to a shaft *j'*, which passes transversely through the platform A, and has a notched crank wheel *k*, on its end, into which wheel a pawl *t*, catches to retain the shaft *j'*, and consequently secure the swinging frame M at any desired angle.

R, represents a shaft which is placed longitudinally upon the platform A. The ends of this shaft are bent to form right angles with the main portion, and wheels S, are fitted in the bent portions, the edges of said wheels being serrated.

To the side of the platform A, opposite to the side at which the saw O, is placed, there is attached a horizontal plate T, having two uprights *m*, attached to it. The upper ends of these uprights are slotted vertically, and a small shaft *n*, is fitted therein, said shaft having a wheel *o*, placed upon it, the wheel *o*, having a serrated edge. The ends of the shaft *n*, fit in slotted arms *p*, *p*, which are attached to a shaft *q*, fitted in uprights *r*, *r*, on the plate T. One end of this shaft has a crank *s*, attached to it.

On the shaft *n*, a lever *t*, is fitted, said lever having a pin *u*, attached to one side. This pin, when the wheel *o*, is to be turned is fitted into either of a series of holes made into said wheel.

The operation is as follows:—The swinging frame M, is turned to the desired angle by turning the wheel *k*, so that the saw O, may be set at the proper height to cut through the ice. The crank G, is then

turned by hand, the person or operator being on the platform A. As the saw O rotates and cuts the ice, the platform is moved along and the saw fed to its work in consequence of the screw *h*, gearing into the toothed wheel L, and as the front wheel *b*, *b*, have points in their peripheries, the platform is moved along and is kept in a right line, as it moves, by the knife-edge plates *d*, on the peripheries of the back wheels *c*, *c*. When the device has reached the end of its cut, the wheels of the platform are raised up from the ice by turning down the wheels S, so that they bear upon the ice. This is done by turning the shaft R, by means of a lever which is attached to it. The wheel *o*, is also depressed and made to bear upon the ice by turning or moving the crank *s*, of the shaft *q*, and by operating the lever *t*, the wheel *o* is turned and the platform is moved laterally the width the blocks or strips of ice are intended to be. The platform, it will be seen may be moved in either direction by reversing the pinion *f*.

The machine is extremely simple, operates well and cuts the ice in a rapid manner and there are no parts liable to get out of repair.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. The saw O, operated or rotated as shown and placed in the swinging frame M, which is rendered adjustable by means of the rack Q, pinion *i'*, and notched wheel *k*, as described, for the purpose set forth.

2. I claim moving the platform A, and feeding the saw O, to its work by means of the wheels H, I, on the driving shaft C, the pinion *f*, and screw *h*, on the shaft J, and the toothed wheel L, on the axle B, as herein shown and described.

3. I claim moving the platform A, laterally, when necessary, by means of the wheels S, S, on the shaft R, and the wheel *o*, on the plate T, the above parts being arranged as described.

STEPHEN SCOTTON.

Witnesses:
A. N. NERTON,
GEO. TAYLOR.