C. HEISLER & J. M. DEREMER.

Ice-Cutting Machine.

No. 162,919. Patented May 4, 1875.

Fig. 1.

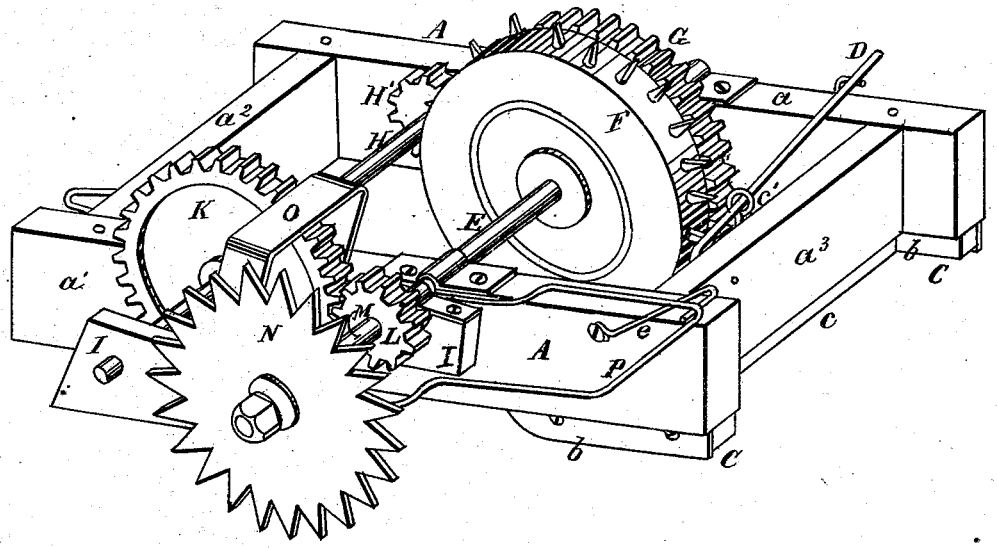


Fig. 2.

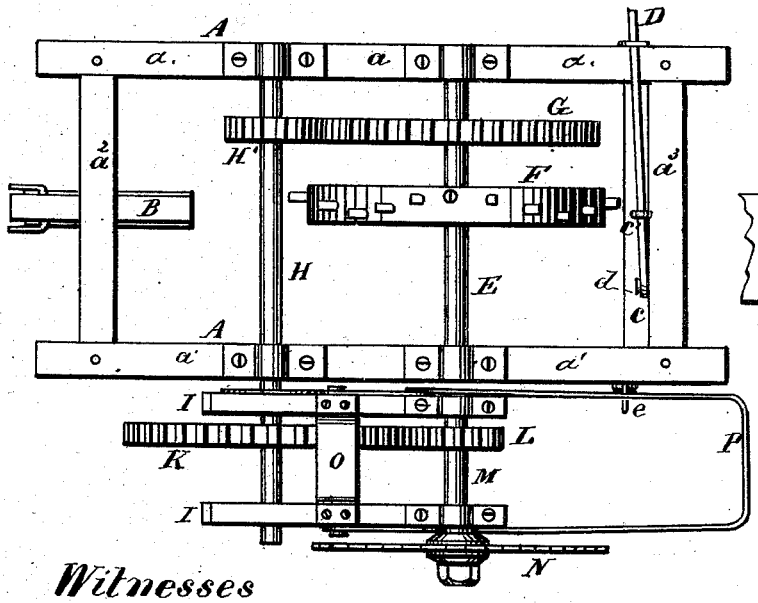
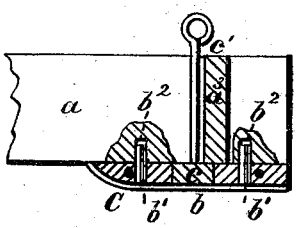


Fig. 3.



Witnesses

R. F. Dyer
Charles Thurman.

Inventors

Charles Heisler
John M. Deremer
By Geo. W. Dyer & Co. attys.

UNITED STATES PATENT OFFICE.

CHARLES HEISLER AND JOHN M. DEREMER, OF WILLIAMSPORT, PA.

IMPROVEMENT IN ICE-CUTTING MACHINES.

Specification forming part of Letters Patent No. 162,919, dated May 4, 1875; application filed April 12, 1875.

To all whom it may concern:

Be it known that we, CHARLES HEISLER, of Williamsport, in the county of Lycoming and State of Pennsylvania, and JOHN M. DEREMER, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Ice-Cutting Machines; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object we have in view is the production of an ice-cutting machine that will do away with the ice-plow and handsaw usually employed in harvesting ice, and will cut sufficiently deep in one operation that, by the use of a splitting-bar, it can be broken into the desired blocks, and will also make a great saving in time and cost; and our invention therein consists, first, in mounting the frame of the machine on sleds, and the peculiar means whereby the said frame is raised off of the sleds, so as to clear the driving-wheel; and, further, in the peculiar combination and arrangement of the several parts of the machine, all as more fully hereinafter set forth.

To enable others skilled in the art to make and use our invention, we proceed to describe the same in connection with the drawings, in which—

Figure 1 is a perspective view, Fig. 2 a top view, and Fig. 3 a detached sectional view, of the rear end of the machine, having the side beam cut away to show the guide-rods.

Similar letters denote corresponding parts in each figure.

A represents the frame of a rectangular form, consisting of the side beams a a^1 and the end pieces a^2 a^3. This frame is supported upon the sleds B C. The sled B is placed under the end piece a^2, which forms the front part of the machine, and is connected to it by a suitable ring-bolt, which allows the sled to be turned around when it is desired to turn the machine. To this sled B is connected one or more whiffletrees for any number of horses. The sled C consists of two runners or separate sleds, b b, which are rigidly connected by a tie-piece, c, and supports the rear of the machine. Upon the top of each sled b there are one or more rods, b^1, which slide in guide-holes b^2 on the under side of the beams a a^1, near the end piece a^3. To the tie-piece c are rigidly secured one or more uprights or rods, c', which are connected at their upper ends to a horizontal lever, D, which is pivoted at one end to end piece a^3, and which, when pressed down, raises the frame up off of the sled C, the guide-rods keeping it from tilting. This lever may have any suitable means, d, for holding it in that position. E represents a shaft, which is journaled in the side beams a a^1, and having keyed upon it the large spiked wheel F, which, by contact with the ice, revolves the said shaft. G is a large cog-wheel of less diameter than the wheel F, and is also keyed on the shaft E. H is a shaft that runs parallel with the shaft E, and is journaled in the side beams a a^1, and has one end projecting beyond the side beam a^1. To the shaft is secured a small cog-wheel, H′, which meshes with the cog-wheel G. Two arms, I I, are sleeved by one end to the outer end of the shaft H, outside and clear of the side beam a^1, and form a frame for carrying the cutting mechanism. K is a large cog-wheel keyed on the shaft H between the arms I I, and meshes with a small cog-wheel, L, on the shaft M, which is journaled in the arms I I near the opposite ends. The shaft M projects beyond one arm, I, and carries a circular saw, N, which is secured to said shaft in the usual way. O is a rigid band, which connects the arms I I, and keeps them the proper distance apart. P is a lever of any desired form, which is secured to the frame I I, and is provided with a suitable handle, by which the end of the frame carrying the circular saw may be lowered the proper distance for the saw to cut into the ice by a person walking by its side. This lever may have any suitable means, e, for holding the frame and saw above the ice when desired. There may be one or more seats on the machine for the driver and a person to raise and lower the saw.

By this machine there is no need of first marking the ice with a plow, and the saw can be made large enough to cut from six to eight inches deep, or even more, if required.

Having thus described our machine, what we claim as our invention, and desire to secure by Letters Patent, is—

1. In an ice-cutting machine drawn upon sleds, and capable of being raised off of the sleds, so as to clear the driving-wheel, the combination of the frame I I, placed on the outside of the frame A, having the circular saw N, band O, and hand-lever P, the several parts being constructed and arranged substantially as described and shown, for the purpose set forth.

2. The combination, with the frame A, of the sleds B C, guide-rods b^1, uprights c', and lever D, substantially as described.

This specification signed and witnessed this 3d day of April, 1875.

CHARLES HEISLER.
JOHN M. DEREMER.

Witnesses:
MICHAEL SHURE,
ROBERT H. WHITE.