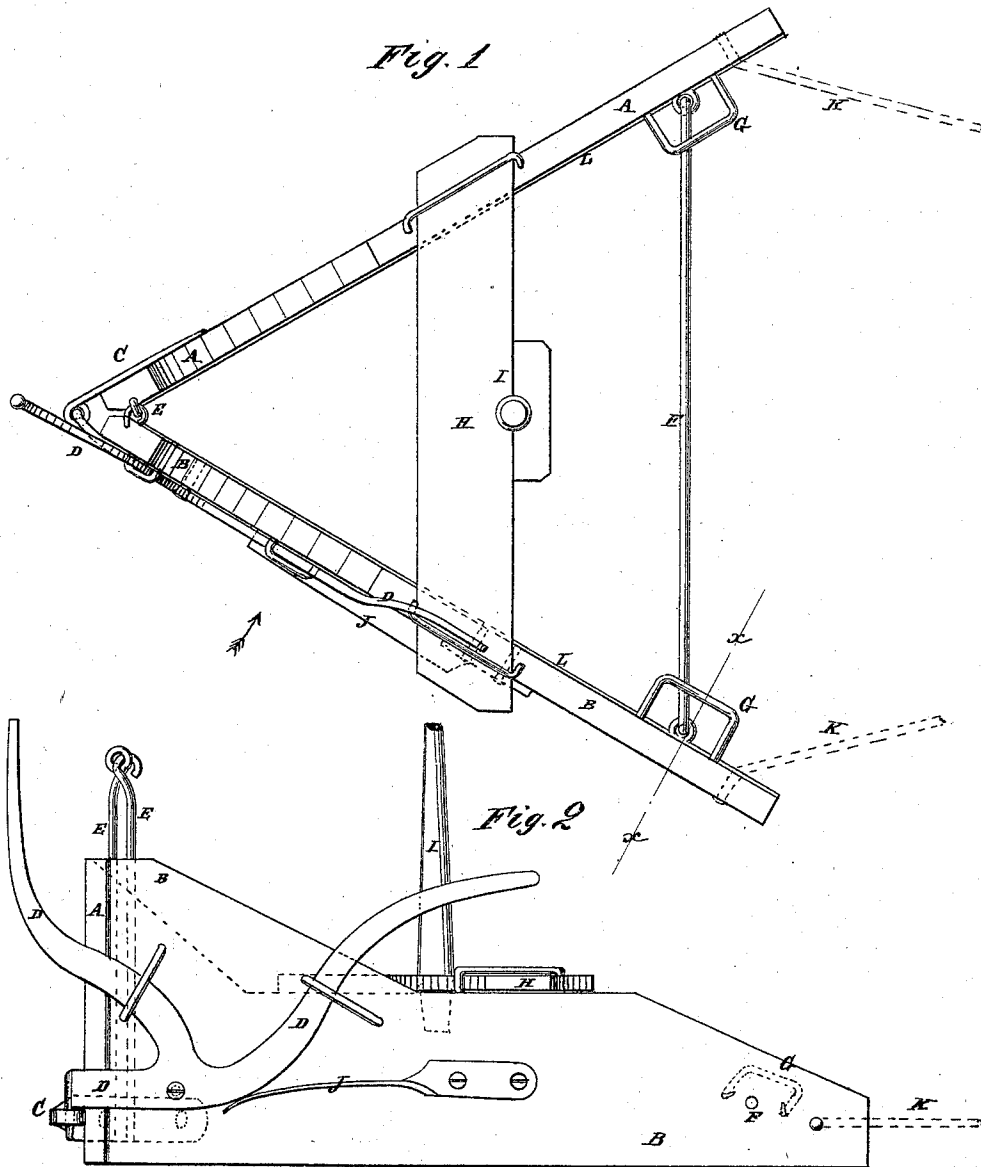


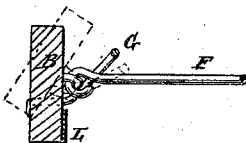
H. LITTLE.
Ice Snow-Scrapers.

No. 147,334.

Patented Feb. 10, 1874.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY LITTLE, OF MIDDLETOWN, NEW YORK.

IMPROVEMENT IN ICE-SNOW SCRAPERS.

Specification forming part of Letters Patent No. 147,334, dated February 10, 1874; application filed January 17, 1874.

To all whom it may concern:

Be it known that I, HENRY LITTLE, of Middletown, in the county of Orange and State of New York, have invented a new and useful Improvement in Ice-Snow Scrapers, of which the following is a specification:

Figure 1 is a top view of my improved scraper. Fig. 2 is a side view of the same looking in the direction of the arrow. Fig. 3 is a detail section taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine for scraping the snow from the surface of ice, preparatory to sawing and harvesting it, which shall be simple in construction, convenient in use, and easily controlled and operated. The invention consists in the combination of the side-boards, the bar, and lever, the spring, the hinged rods, and the pivoted or hinged connecting-rod, with each other; in the combination of the stops with the side-boards and the pivoted or hinged connecting-rod of the scraper; and in the combination of the platform and standard with the side-boards of the scraper, as hereinafter fully described.

A B are the two side-boards of the machine, which are made of convenient length, of such a thickness as will give them the necessary strength, and of such a width or height, especially at their rear ends, as will enable them to contain enough snow for a load. The rear ends of the side-boards A B meet at an angle. To the lower part of one of the side-boards A B is attached a bar or strap, C, the rear end of which projects, and has an eye formed in it to receive the pintle formed upon the rear end of the lever D, which is pivoted to the other of the side-boards A B. The lever D is branched, one branch or arm projecting forward into such a position that it can be conveniently reached and operated by the driver from this platform. The other arm or branch of the lever D projects rearward and upward into such a position that it may be conveniently reached and operated by the driver when standing in the rear of the machine. The arms of the lever D pass through keepers attached to the side-

board of the machine to keep the said lever in place. To the inner side of the rear ends of the side-boards A B are attached two vertical bars, E, the upper ends of which project above the upper edges of said side-boards, and are hinged to each other, so that the lower parts of the said ends may spread apart to discharge the collected snow. The forward ends of the side-boards A B are connected and held at the proper distance apart by a rod, F, the ends of which are pivoted or hinged to said side-boards. The side-boards A B are kept from spreading too far apart by stop-bars G, attached to the said side-boards, and which come in contact with the connecting-rod F. H is a board, which forms a platform for the driver to stand upon, the ends of which pass through keepers attached to the upper edges of the side-boards A B, so that the said platform will not interfere with the proper operation of the said side-boards. The platform H may be kept from longitudinal movement upon the edges of the side-boards A B by cleats attached to its lower side, or by pins projecting from its lower side. To the middle part of the platform H is attached a standard, I, for the driver to hold on by when standing upon the said platform. The lever D is held in connection with the bar C by a spring, J, attached to the side-board, and which bears against the said lever, as shown in Fig. 2. To the forward ends of the side-boards A are attached the ends of a chain or rope, K, to which the draft is applied. The lower part of the inner sides of the side-boards A B are faced with metal plates L, to prevent wear.

In using the scraper, it is drawn to the place whence the snow is to be scraped; the side-boards A B are then brought into a vertical position; the lever D and bar C are connected together; and the scraper is drawn to the place where the snow is to be deposited. The lever D is then operated to disconnect it from the bar C, and discharge the collected snow, and the scraper is drawn back for another load.

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

1. The combination of the side-boards A B, the bar and lever C D, the spring J, the hinged

rods E, and the pivoted or hinged connecting-rod F, with each other, substantially as herein shown and described.

2. The combination of the stops G with the side-boards A B and the pivoted or hinged connecting-rod F of the scraper, substantially as herein shown and described.

3. The combination of the platform H and

standard I with the side-boards A B of the scraper, substantially as herein shown and described.

HENRY LITTLE.

Witnesses:

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