(No Model.)

I. C. PINGREE.

SNOW PLOW.

No. 355,471. Patented Jan. 4, 1887.

Fig. 1.

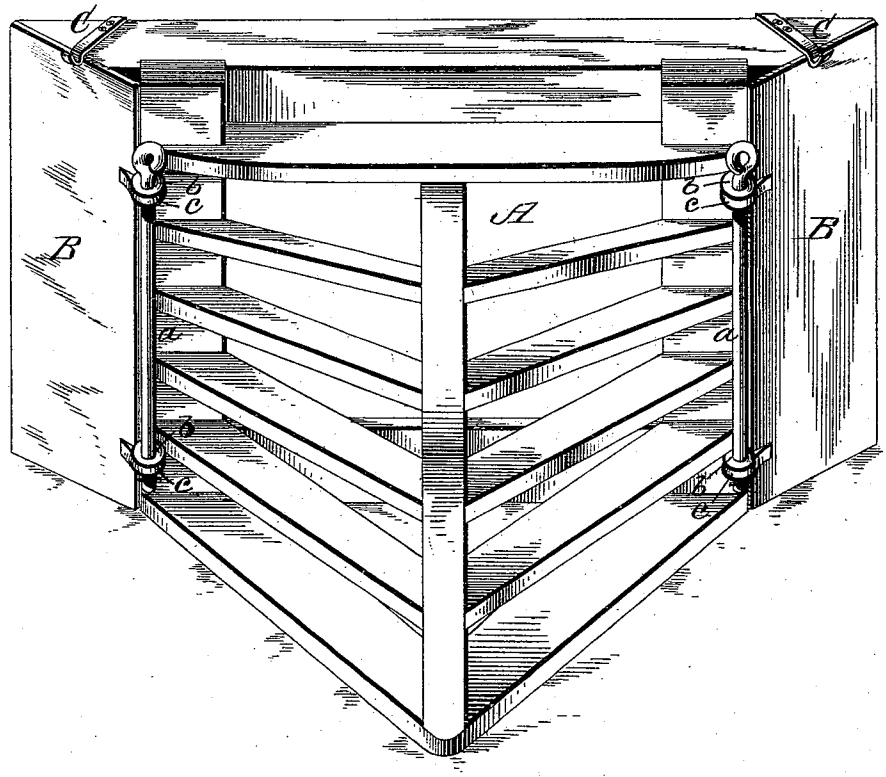
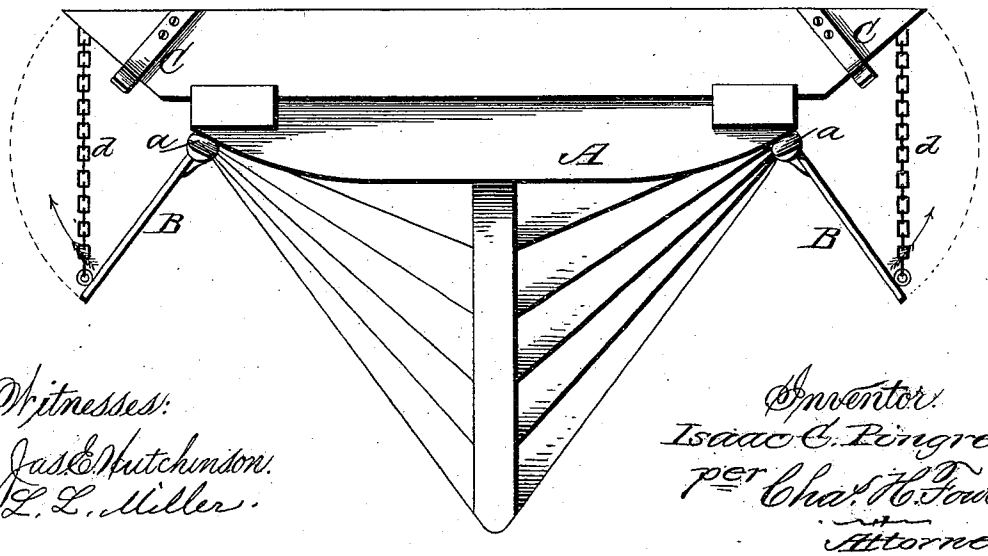


Fig. 2.



Witnesses:
Jas. E. Hutchinson.
L. L. Miller.

Inventor.
Isaac C. Pingree.
per Chas. H. Fowler
Attorney.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ISAAC C. PINGREE, OF LAWRENCE, MASSACHUSETTS.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 355,471, dated January 4, 1887.

Application filed October 27, 1886. Serial No. 217,332. (No model.)

To all whom it may concern:

Be it known that I, ISAAC C. PINGREE, a citizen of the United States, residing at Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Snow-Plows; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a front elevation of the cow-catcher of a locomotive with my improved snow-plow attachment connected thereto, and Fig. 2 a top plan view thereof.

The present invention has relation to certain new and useful improvements in snow-plow attachments to be applied to the cow-catcher of a locomotive.

In this class of snow-plows, unless there is quite a depth of snow upon the track, a large snow-plow attached to the front of the engine is seldom used, for the reason that it is difficult to employ it in train service, and generally the locomotive, with its cow-catcher, forms its own plow, and consequently it takes but a short time, when the engine is in motion, to fill the opening in the cow-catcher hard and solid. A further objection is that the snow is packed in a narrow path so hard on either side that if the engine is stopped it is almost impossible to back it, from the fact that the lower side corners of the cow-catcher hook onto the sides of the snow track or path and stall the machine.

It is the object of the invention to provide a snow-plow attachment to the cow-catcher that will operate effectually either when the engine is going forward or backward, the wings constituting the plow being automatic in their adjustment, as will be hereinafter described and claimed.

In the accompanying drawings, A represents the cow-catcher of an engine of any of the usual forms, and to the sides of which are suitably hinged wings B by means of rods *a* and eyes *b c*, respectively on the cow-catcher and wings. Any preferred means, however, may be employed for hinging the wings to the sides of the cow-catcher that will admit of their being detached and removed when not required for use.

Suitable chains, *d*, or other flexible connections, are employed to prevent the wings B from extending too far forward, as shown in Fig. 2, when the engine is backing. When the engine is going forward, the wings B swing back against the sides of the cow-catcher and are held in position by a spring latch or latches, C, which form scrapers of the proper width; and when the engine backs, the moment there is the least catch or resistance the wings open the extent to which the flexible connections will allow them, thereby forming a like scraper in backing, and not only keeping the path open to the same width, but slipping over or by any obstacle; and when the engine again starts forward, the wings at once swing back into the first position, as indicated in Fig. 1.

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

1. The combination, with the cow-catcher of a locomotive, of a snow-plow consisting of automatically-swinging wings detachably connected to the sides thereof, substantially as and for the purpose set forth.

2. In a snow-plow for the cow-catcher of a locomotive, suitable wings detachably hinged to the sides of the cow-catcher and operating automatically, as set forth, in combination with flexible connections to limit the swing of the wings, and spring-latches to hold them in a closed position, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ISAAC C. PINGREE.

Witnesses:

WALTER S. DONALD,

ZACHARY T. MERRILL.