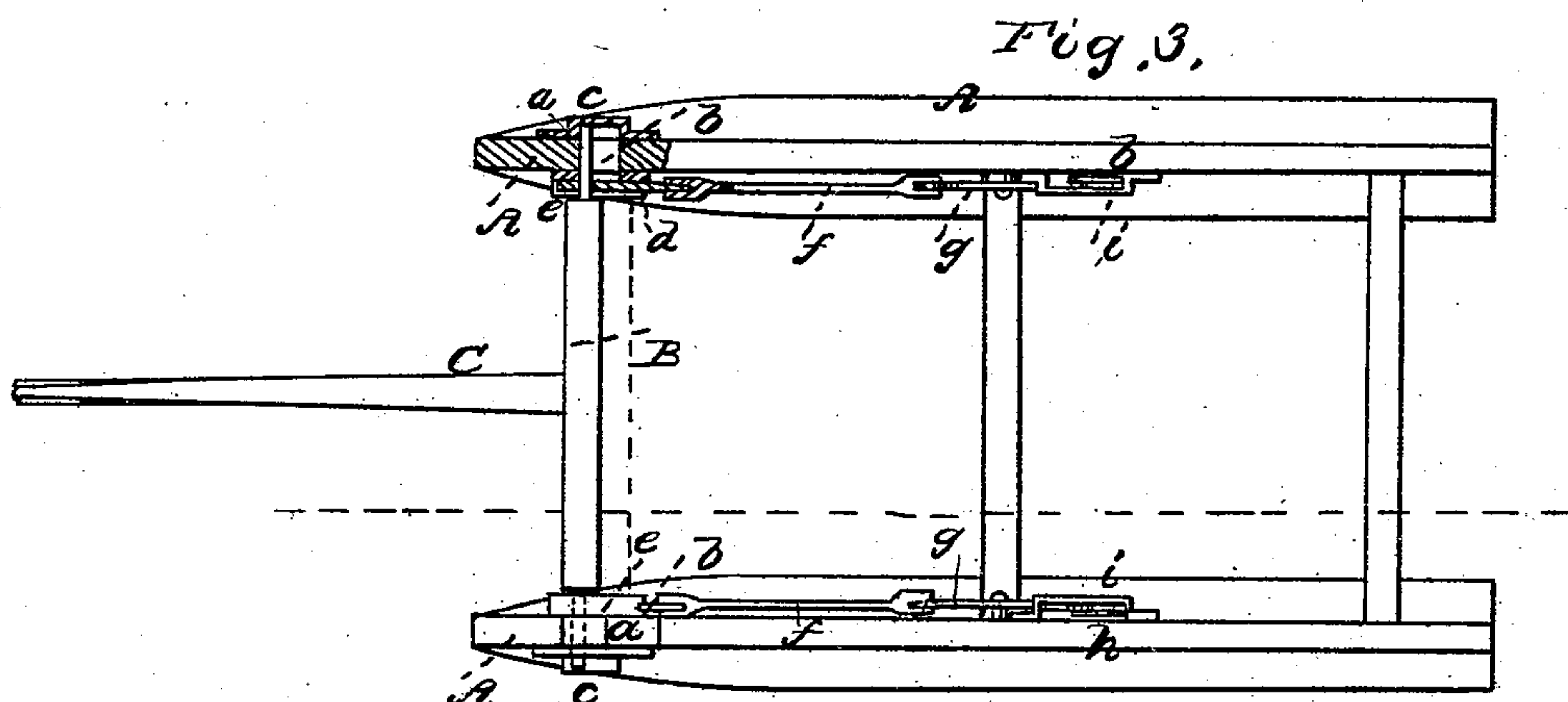
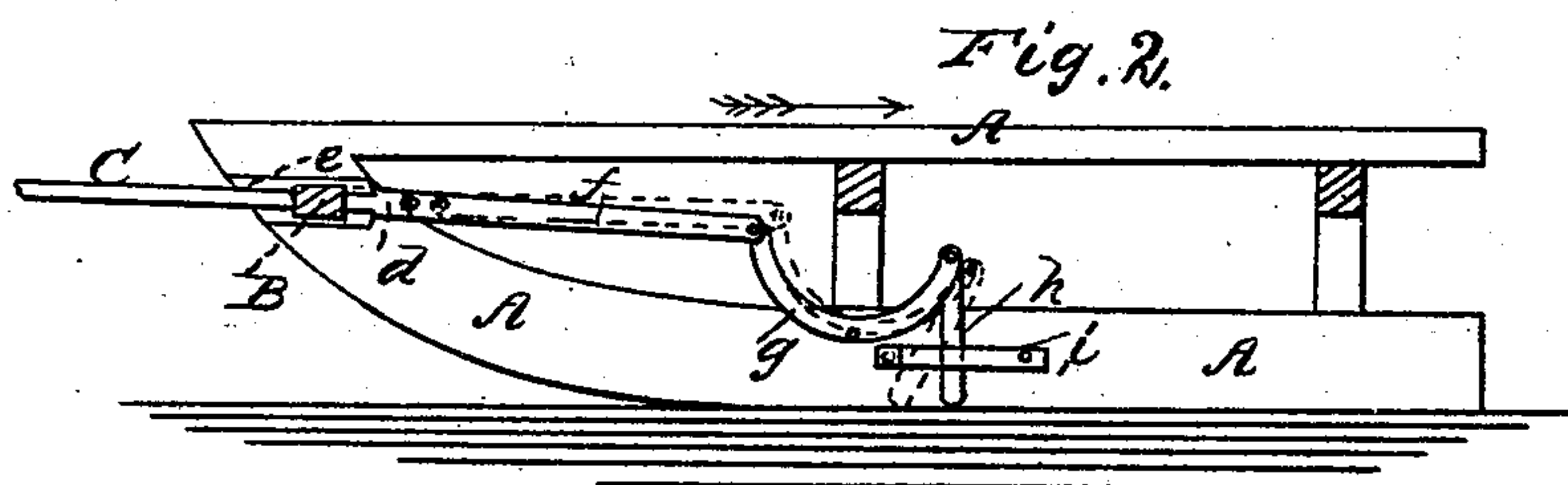
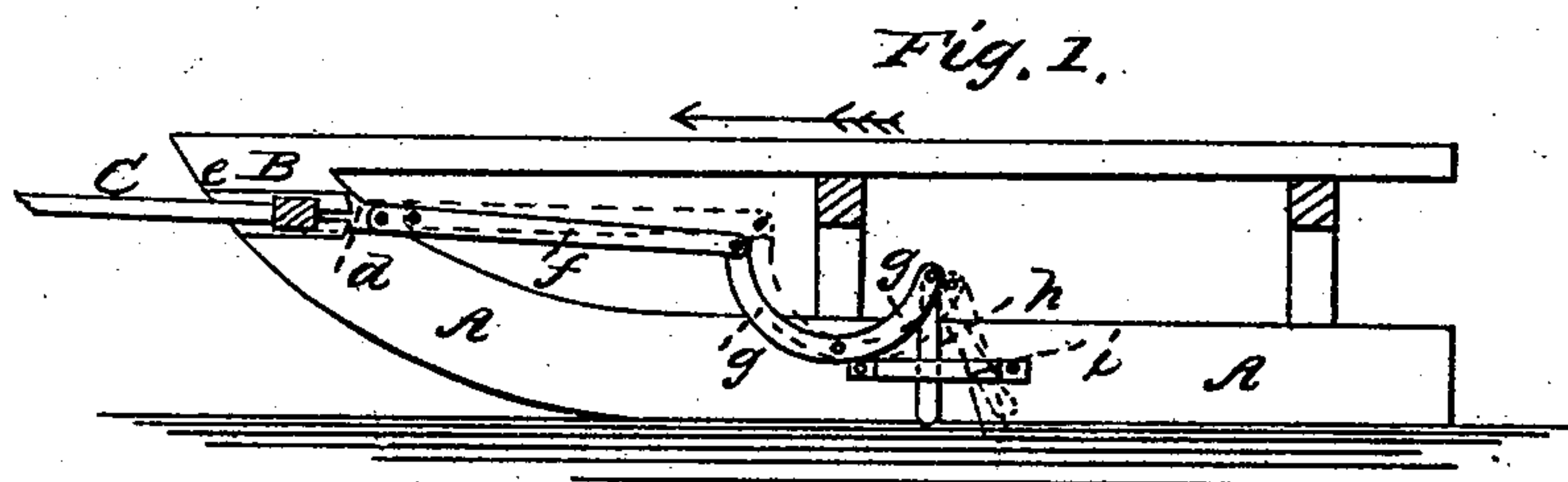


Sled Brake.

No. 72,851.

Patented Dec. 31, 1867.



Witnesses:
Geo Encke
H. Brown

Inventor:

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United States Patent Office.

J. L. HEFFRON, OF MARATHON, NEW YORK.

Letters Patent No. 72,851, dated December 31, 1867.

IMPROVED SLED-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. L. HEFFRON, of Marathon, in the county of Cortland, and State of New, York, have invented a new and improved Sled-Brake; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figures 1 and 2 are horizontal sectional views of a sled provided with my improved sled-attachment.

Figure 3 is a plan or top view, partly in section, of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new sled-brake, which is so arranged that it will only operate to retard the motion of the sled when the sled is crowding on the horses, while it will be out of the way when the sled is drawn ahead, or when backing.

The invention consists in fitting the ends of the roll-iron into slots in the noses of the runners, and in providing slides on the roll-iron, by which the slot in the runners is always kept closed, so that it cannot be filled with snow. To the slide is pivoted a lever, which is connected with the end of a semi-annular lever, pivoted near its centre to the sled-runner, and carrying on its rear end the dog. The lower end of the dog is rounded, to prevent its catching too hard on stones and other obstructions.

A A are the runners of a sled; B is the roller, to which the tongue C is secured; *aa* are two pins projecting from the ends of the roller, or are the ends of a rod passing through the roller. The pins *a* fit into slots provided in the noses of the runners A, as is clearly shown in fig. 3, the slots being long enough to give the required forward and backward play to the tongue, but being about as high as the diameter of the pin *a*, so as not to give up-and-down play to the roller. The outside of the slot *b*, in each runner, is closed by a wooden or metal plate, *c*, which is nailed or otherwise firmly secured to the runner. The inside of each slot is closed by a plate, *d*, which is secured to the pin *a*, and which is also fitted or dove-tailed between two horizontal bars, *e e*, projecting from the inner side of the runner. To the rear end of each plate *d* is pivoted the end of a lever, *f*, the other end of which is pivoted to the front end of a semi-annular lever, *g*. The lever *g* is, at or near its middle, pivoted to the side of the runner, and to its rear end is pivoted the dog *h*, which is a metal or other bar or plate, with rounded lower end. A metal plate, *i*, fitted around the dog *h*, to the runner, prevents lateral play of the dog, and confines its longitudinal motion within the desired limits.

The operation is as follows: The dog, when the sled is not in motion, is suspended in a vertical position from its pivoting-pin, as shown in fig. 1. As the sled is being drawn ahead, the snow crowds the dog back, as shown by dotted red lines in fig. 1; but when the sled crowds on the horses, so that the roller is moved back in the slots, during the forward motion of the sled, the dog will be forced into the snow (as shown by red lines in fig. 1,) thereby holding the sled back and retarding its motion. When the sled is being backed up, so that it moves back, the rear end of the lever *g* is thrown so far back, that when the dog is crowded forward by the snow, its end will be raised above the edge of the runner, as shown by red lines in fig. 2. The dog *h* is provided with holes near its upper end, so that its length may be adjusted at will, in accordance with the depth of snow.

I claim as new, and desire to secure by Letters Patent—

1. The sliding plate *d*, on the roller B, for closing the slot *b*, in the runner, when made and arranged as described, and when fitted between two bars, *e e*, as set forth.

2. The combination of the roller B, fitted in the slotted runner, with the sliding plates *d*, levers *f*, semi-annular levers *g*, and adjustable dogs *h*, all made and operating substantially as herein shown and described.

J. L. HEFFRON.

Witnesses:

SOLOMON BACON,
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