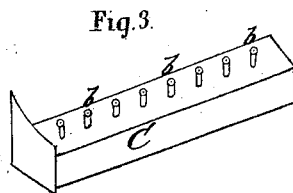
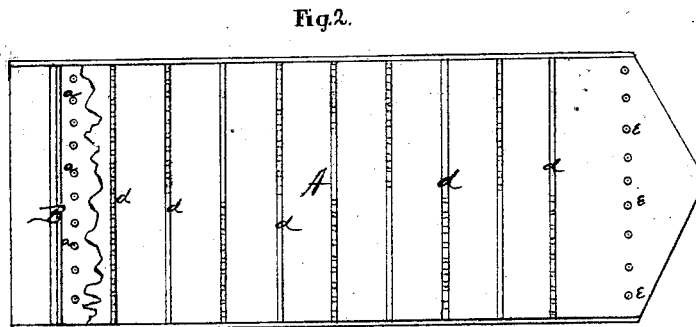
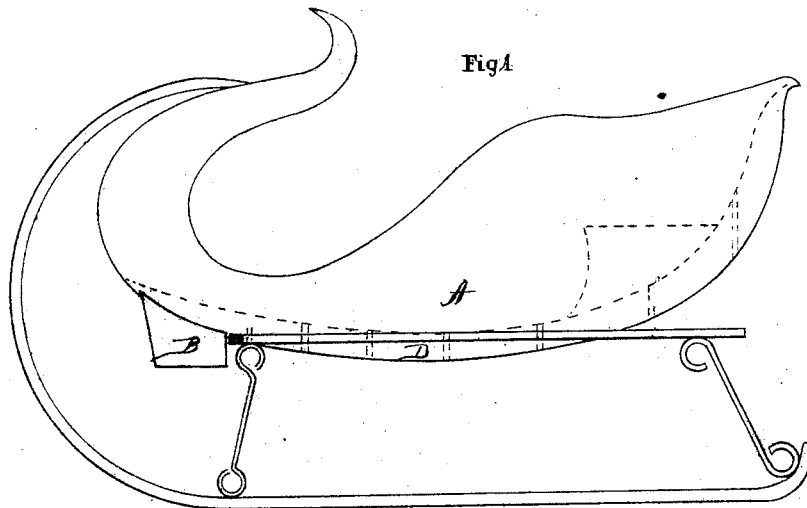


ALFRED NORTON.

Improvement in Sleigh-Heaters.

No. 114,466.

Patented May 2, 1871.



Witnesses:
Jas. C. Hutchinson
Chas. L. Everett

Inventor.
Alfred Norton.
per
Alexander Mason
Atty.

United States Patent Office.

ALFRED NORTON, OF KOKOMO, INDIANA.

Letters Patent No. 114,466, dated May 2, 1871.

IMPROVEMENT IN SLEIGH-HEATERS.

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, ALFRED NORTON, of Kokomo, in the county of Howard and in the State of Indiana, have invented certain new and useful Improvements in Sleighs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in a metallic sleigh or carriage-body provided with means for heating, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of a sleigh-body;

Figure 2 is a plan view of the lower bottom of the sleigh; and

Figure 3 is a perspective view of a lamp used for heating.

The body A is made of any suitable metal, and double—that is, an outer and an inner body connected together—and so constructed as to leave a space between them sufficiently large to allow the passage of heated air, as will be presently described.

Under that part of the body or bed A where the feet of the rider will come, and on the under or lower side of the outer bottom of the body, is formed a box, B, running the entire width of the body. In the outer bottom above said box is a narrow opening for the admission of heated air.

The bottom of the box toward the rear end is perforated, as shown in fig. 2, with a number of holes, *a a*.

A lamp, C, is inserted in the box B in front of the holes *a a*, or in any way so as to leave these holes uncovered. This lamp is large enough to extend from end to end of the box B, and is so constructed as to close the open end of the box. It is provided with a series of wick-tubes, *bb*, in which wicks are inserted and lighted.

The bottom, which forms the hot-air chamber D, which passes from the front of the sleigh or vehicle under the bottom and back of the body, is made strong by means of perforated cross-pieces *d d*, that are placed between the bottoms of the two bodies, as shown in figs. 1 and 2.

The cross-pieces *d d* are perforated as follows: The one next to the lamp is full of holes all the way across; the next one is perforated nearly half way, commencing at one side; and the next the same way, commencing at the other side; and so on alternately all the way through. This causes the heat to pass from side to side until it goes out at the upper end of the body through the holes *e e*, made for that purpose.

The heat being greatest at the starting point will keep the feet the warmest, and as it passes back under the rider, will warm the legs as well as the whole body.

The bed or body A being made of metal, will be as cheap, strong, and much more suitable than any other material, and easier formed.

I do not confine myself to sleigh-bodies alone, as the same means for heating may be applied to any carriage or buggy-bodies, if so desired.

Although I prefer to use a lamp as above described, other means for heating air within the body may be applied.

Having thus fully described my invention,

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

In combination with the body A and the heating-box B, the heating-chamber D, passing under the bottom and back, provided with the cross-plates *d*, having tortuous heat-passages heated by the lamp C, with its series of wick-tubes, and placed under the forward end of the body, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of February, 1871.

ALFRED NORTON.

Witnesses:

A. H. DUKE,
J. W. COOPER.