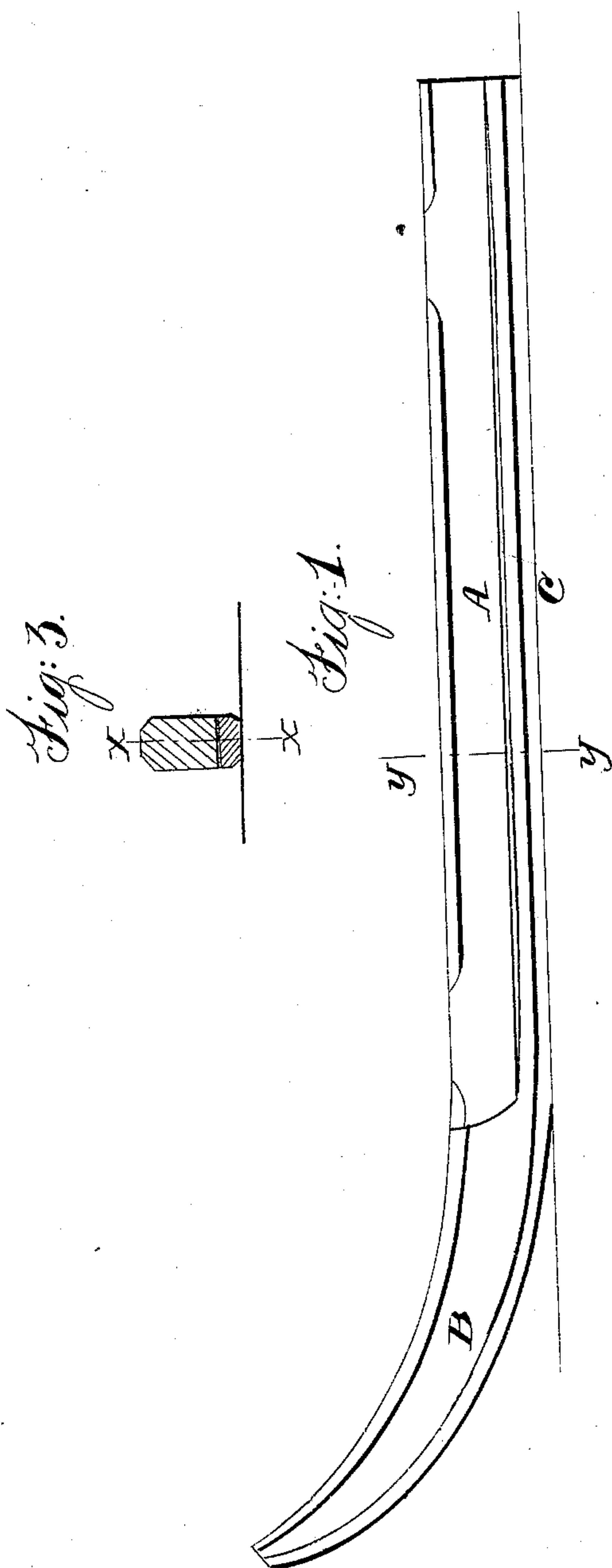


S. H. NOBLE.

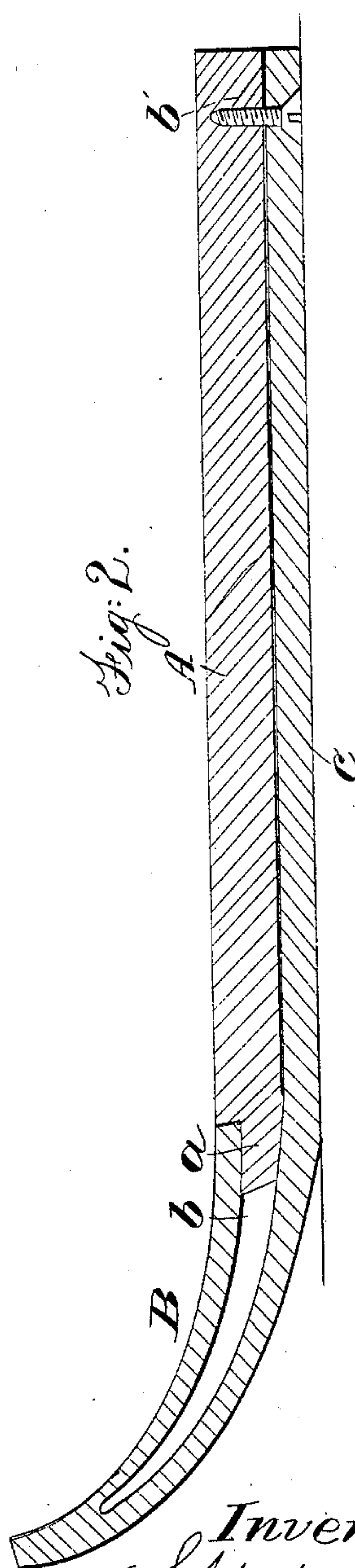
Sleigh-Runner

No 35.106

Patented Apr 29. 1862



Witnesses;
J. W. Coombs
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Inventor;
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UNITED STATES PATENT OFFICE.

S. H. NOBLE, OF VERNON SPRINGS, IOWA.

IMPROVEMENT IN SLED OR SLEIGH RUNNERS.

Specification forming part of Letters Patent No. 35,106, dated April 29, 1862.

To all whom it may concern:

Be it known that I, S. H. NOBLE, of Vernon Springs, in the county of Howard and State of Iowa, have invented a new and useful Improvement in the construction of Sled or Sleigh Runners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a longitudinal central section of the same, taken in the line *x x*, Fig. 3; Fig. 3, a transverse vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in constructing a sled or sleigh runner of cast metal and wood combined in such a manner that a straight piece of wood may be used for the main portion of the runner and cast metal for the crook or curve and also for the shoe of the wood portion.

The object of the invention is to avoid the natural wood crook and the steamed and bent crook of the ordinary wooden runners, and thereby obtain a much more durable as well as a more economical runner than those constructed entirely of wood, as usual.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the straight portion of the runner, which may be of wood, of any suitable dimensions, and provided at its front end with a tenon, *a*, as shown clearly in Fig. 2.

B represents the front portion or crook of the runner, which is of cast-iron, and is cast hollow or with a socket, *b*, to receive the tenon *a* of the wood part A of the runner.

The cast-iron part B may have its lower part, C, extend along the whole length of the wooden part A of the runner to form a shoe, which may be secured to A by means of bolts or screws *b'*, one or more, as shown in Fig. 2.

The runner thus formed may be very

cheaply constructed. The casting B of course can be furnished at a very moderate expense, and a perfect crook obtained of any desired curve, and as no knees require to be attached to it, and it is not subjected to any great strain or stress, cast-iron will answer a good purpose. The wooden part A has the knees attached to it in the usual way, and it is firmly retained in position at its front part in consequence of the tenon *a* fitting in the socket *b* of the cast metal B.

The objection to the natural crook of the wooden runner is that it is liable to split and warp, and the steamed and bent crooks are liable to get out of shape, as they will bend or readily give if subjected to concussion, and when once thus bent the metal shoe prevents them from springing back to their proper position, the shoe giving or yielding with the wood and holding the latter in misshaped form. These difficulties are obviated by my invention, while a very durable and cheap runner is obtained, for the labor of putting the two parts together is very trifling, and the wood part A, being perfectly straight, may be furnished at a small cost, and the labor of applying special shoes, as heretofore, is dispensed with.

I would remark that if steel shoes should be required in certain cases the crook B may be cast without the shoe C, and a straight steel shoe bolted to A, the front end of the steel shoe lapping over or under the back end of the lower part of B.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent as a new and improved article of manufacture, is—

A sled or sleigh runner formed of a cast-iron crook, B, with or without the shoe C, and a straight wooden portion, A, combined or put together, substantially as herein shown and described.

S. H. NOBLE.

Witnesses:

S. J. HANDLEY,
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