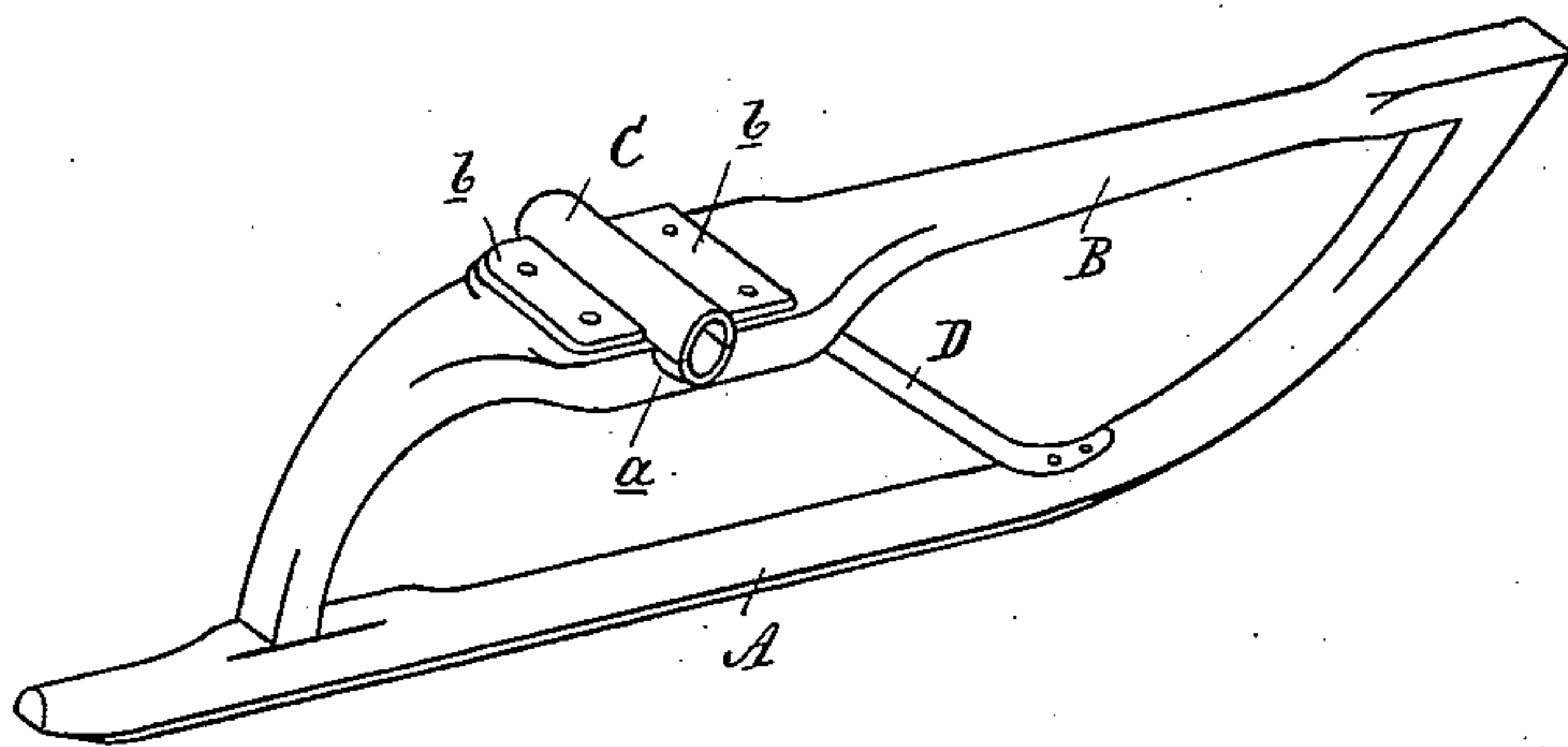


(No Model.)

J. MOSES.
BOB SLED RUNNER.

No. 343,054.

Patented June 1, 1886.



Attest:
John Schuman.
E. Scully

Inventor:
Joseph Moses.
by his Atty
Thos S. Sprague

UNITED STATES PATENT OFFICE.

JOSEPH MOSES, OF LAPEER, MICHIGAN.

BOB-SLED RUNNER.

SPECIFICATION forming part of Letters Patent No. 343,054, dated June 1, 1886.

Application filed September 16, 1885. Serial No. 177,270. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MOSES, of Lapeer, in the county of Lapeer and State of Michigan, have invented new and useful Improvements in Bob-Runners; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and useful improvements in bob-runners of that class designed to be adjusted upon the arm of a wagon-axle for converting the wagon into a bob-sleigh; and it consists in the peculiar construction of the runner, as more fully herein-
15 after described and claimed.

In the accompanying drawing, which forms a part of this specification, my improved bob-runner is shown in perspective, and in which
20 A represents the runner. To the forward and upturned end of this runner I rigidly secure the forward end of the rave B, the rear end of such rave being turned or curved downwardly and framed or otherwise rigidly secured to the
25 runner near its heel. This rave is widened, as at *a*, to form a bearing for the box C, which is designed to receive the axle-arm of the wagon. This box C, I preferably cast with two arms or flanges, *b*, by means of which and suitable bolts
30 or clips it may be rigidly secured upon the bearing *a* of the rave; but I do not wish to confine myself to this construction, as there are many

ways in which the axle can be secured to place without departing from the spirit of my invention. 35

D is a brace interposed between the rave and the runner, to avoid the danger of springing the rave under a heavy load.

By this construction I produce a runner for the purpose designed that is simple and strong 40 in construction, while the rave performs the functions of a rave and knee.

I am aware of the Patent No. 83,864, in which metallic plates are used to form a bearing for the axle, and make no claim to such 45 construction as forming part of my invention.

I deem it important that the rave be widened, as shown, to form a bearing for the cap C, for by this means I dispense with the plates necessary in the construction shown in the said 50 patent, thereby lessening the number of parts and reducing the cost of the runner.

What I claim as my invention is—

As a new article of manufacture, a runner, A, in combination with a knee and rave, such 55 knee and rave being formed of a single piece bent to the proper shape, and the rave having formed integral therewith the enlargement *a*, to form a support for the axle, substantially as described.

JOSEPH MOSES.

Witnesses:

H. S. SPRAGUE,
E. SCULLY.