

C. BOCK & D. BOCK.  
Improvement in Shafts for Sleighs.

No. 118,682.

Fig. 1.

Patented Sep. 5, 1871.

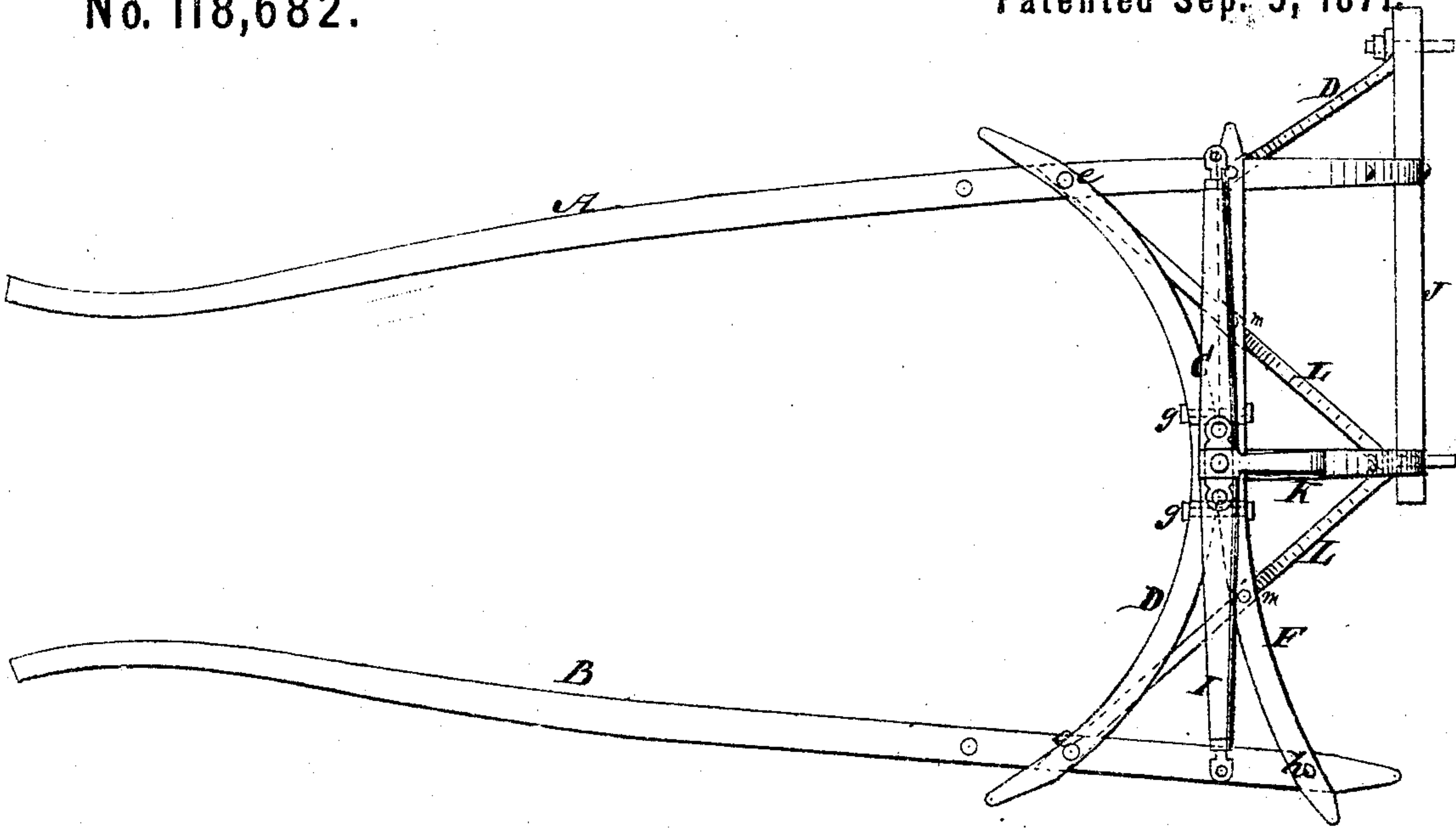
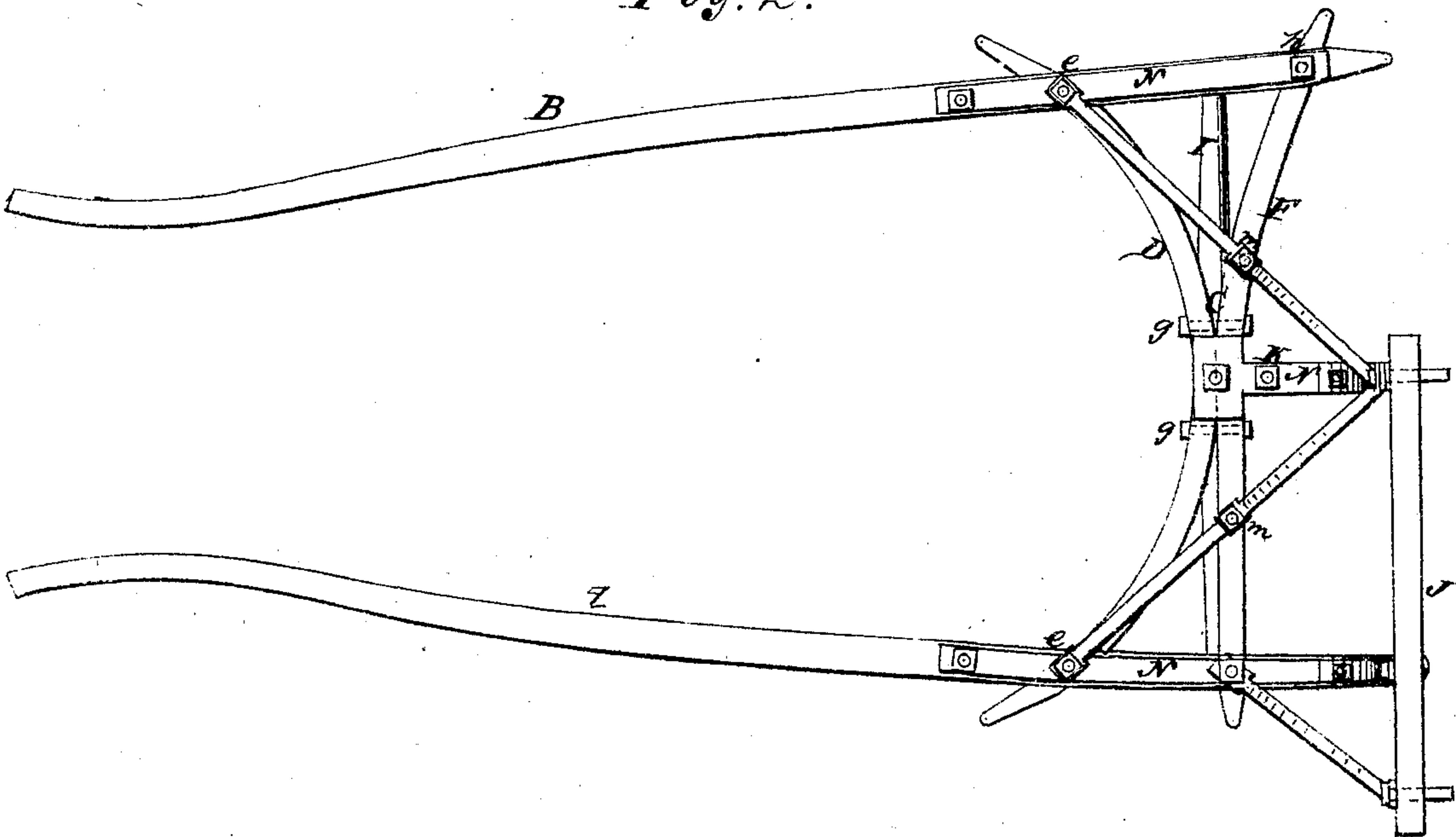


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SHAFTS FOR SLEIGHS.

Specification forming part of Letters Patent No. 118,682, dated September 5, 1871.

*To all whom it may concern:*

Be it known that we, CHARLES BOCK and DANIEL BOCK, of Drum's, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in One-Horse-Sleigh Shafts; and we 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 drawing forming part of this specification.

The object of this invention is to so construct the shafts or thills of one-horse sleighs or "cutters" that they will allow the horse to travel directly forward in the left-hand path of the snow-track, while the runners of the sleigh run free in the track and the body of the sleigh keeps in its proper position; and it consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing, Figure 1 represents a top view, and Fig. 2 an under-side view of a pair of shafts constructed according to my invention.

Similar letters of reference indicate corresponding parts.

A is the right-hand shaft or thill, and B is the left-hand thill. The thills or shafts are connected together by the cross-bar C, made in two parts. The forward part D is the arc of a circle, fastened at the ends to each of the shafts, as seen at *e e*. At the middle it is bolted to the other part F, as seen at *g g*. This part F extends from the right shaft to the center in a straight line, from whence it curves back and is fastened to the left shaft at *h*. I is the whiffletree. J is a horizontal bar by which the shafts are attached to the

sleigh. The right-hand shaft is curved downward to the bar J, which bar is dropped to the proper point on the runner to allow of the proper application of power to the sleigh. K is a bar curved like the end of the shaft A, extending from the center of the cross-bar C down to the bar J. LL are braces extending from the lower end of the curved bar K to each of the shafts, where the ends are fastened by the bolts *e e*. These braces are also fastened to the part E of the cross-bar at the points *m m*. O is a brace from the end of K to the end of E. The left shaft B is straight at its back end. N represents plates of metal on the under sides of the shafts, and the curved bar K covering and strengthening the connections. In Fig. 1 the shafts are represented as when attached to the sleigh.

By this arrangement the sleigh, as well as the horse, is enabled to move forward naturally, while the former is protected by the projecting left shaft. The construction and style are light and elegant, and the device obviates many objections to the old style of shafts.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The shafts A B, double cross-bar C, draft-bar J, and curved bar K, constructed and arranged together substantially as and for the purposes described.

2. The short curved bar K, in combination with the shafts of a sleigh or cutter.

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Witnesses:

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