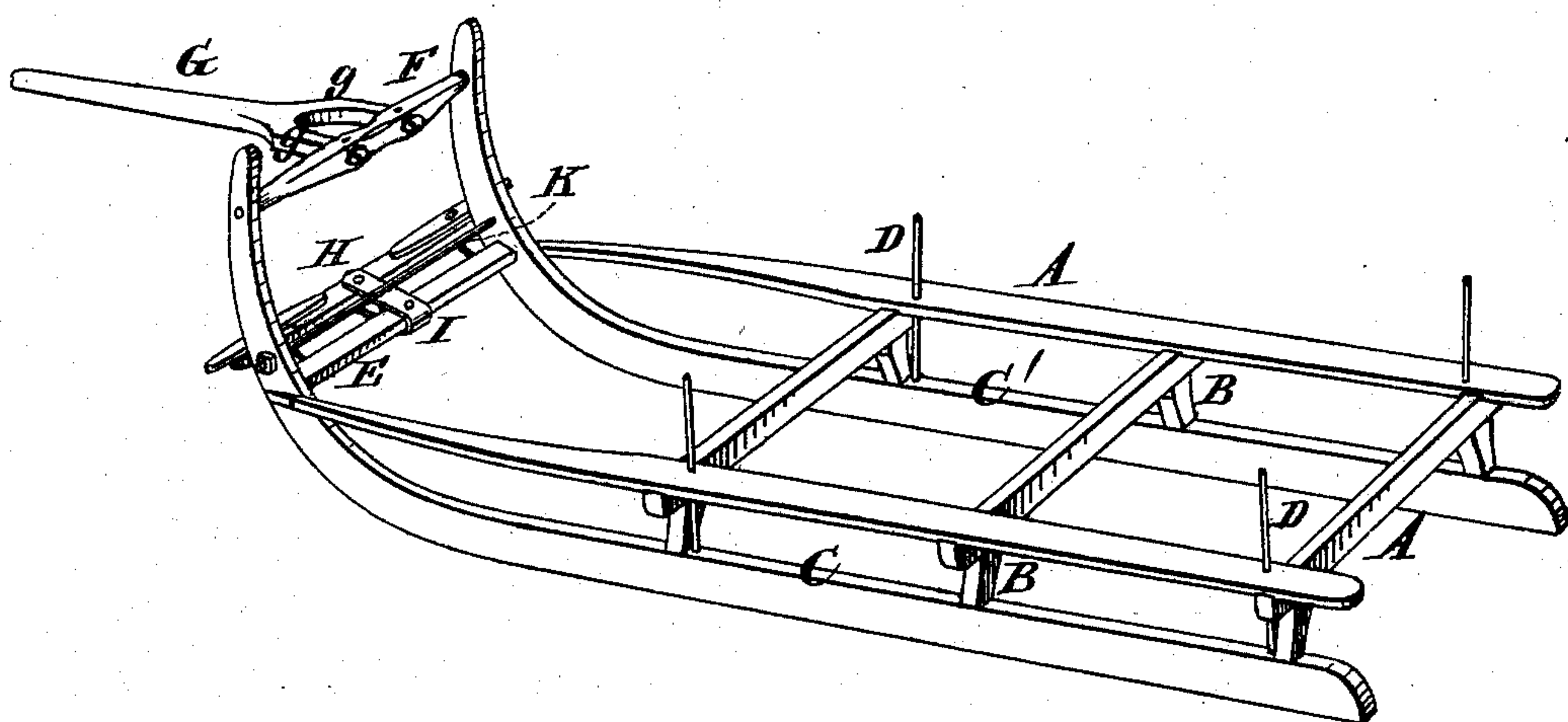


S. MILLS.

Sleds.

No. 157,410.

Patented Dec. 1, 1874.



Witnesses.

A. Ruppert.

H. E. Quinn

Samuel Mills

Inventor.

by O. E. J. Eils
his atty

UNITED STATES PATENT OFFICE.

SAMUEL MILLS, OF NEW CASTLE, OHIO.

IMPROVEMENT IN SLEDS.

Specification forming part of Letters Patent No. **157,410**, dated December 1, 1874; application filed October 27, 1874.

To all whom it may concern:

Be it known that I, SAMUEL MILLS, of New Castle, in the county of Coshocton and State of Ohio, have invented certain Improvements in Sleds, of which the following is a specification:

The nature of my invention consists in combining with a pole or tongue pivoted near the top of the forward turned-up ends of the runners, so as to obtain a better purchase on the sled in the act of holding back without abnormal wear on the soles of the runners, a whiffletree, hinged to and supported by a flat clevis projecting from the foremost cross-bar of the sled some distance beneath the pole, and so disposed that the draft will be applied to the sled at the most advantageous point.

The annexed drawing illustrates my improved sled in perspective, showing the body of the same as consisting of a rectangular frame-work, A, of wood, mounted by standards B on the runners C and C', and provided with a series of rungs, D, for confining the load which may be placed upon it for transportation. The forward ends of the side timbers of the frame are extended to the turned-up runners and secured thereto at points where the runners are united by the cross-bar E, as clearly shown. The forward turned-up ends of the runners are carried somewhat higher than ordinarily, and near the top of them the bar F is pivoted, extending across from one to the other, and centrally carrying the pole or tongue G, the hounds *gg* of which are detachably connected to the bar F, so that the pole may be readily removed when not needed. The pole may also be folded back upon the body of the sled for compactness in storing it. Placing the tongue or pole in this elevated position has several advantages, chief among which may be mentioned that in holding back on descending grades the power will

be applied squarely against the sled and its load, and the consequence is that its course can be held in check with less exertion on the part of the draft-animals, and that it will retain its position the same as when passing over a level, so that the wear on the soles of the runners will be uniform under all circumstances. The whiffletree H, composed of the usual double-tree and single-trees, is pivoted between the forwardly-projecting legs of the flat clevis I, which is firmly secured to the cross-bar E, and sustains the whiffletree in proper position.

It will be observed that, the whiffletree being located nearly on a line with the body of the sled, the draft is consequently applied where it must of necessity be the most effective.

Just above the cross-bar E the runners are connected by a tie-rod, K, to give additional strength to the structure at this point, where it is much needed.

The described arrangement of the whiffletree and pole or tongue relieves the draft-animals of the entire weight of the former, and of the latter they have to carry only the light forward end.

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

1. In a sled, the combination of the tongue G, pivoted in an elevated position to the turned-up ends of the runners, and the whiffletree H, connected to the sled nearly on a line with its bed or body, substantially as and for the purposes specified.

2. The combination of the cross-bar E, flat clevis I, and whiffletree H, substantially as and for the purpose specified.

In testimony whereof I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

SAMUEL MILLS.

Witnesses:

F. M. BUXTON,
C. E. JOHNSON.