

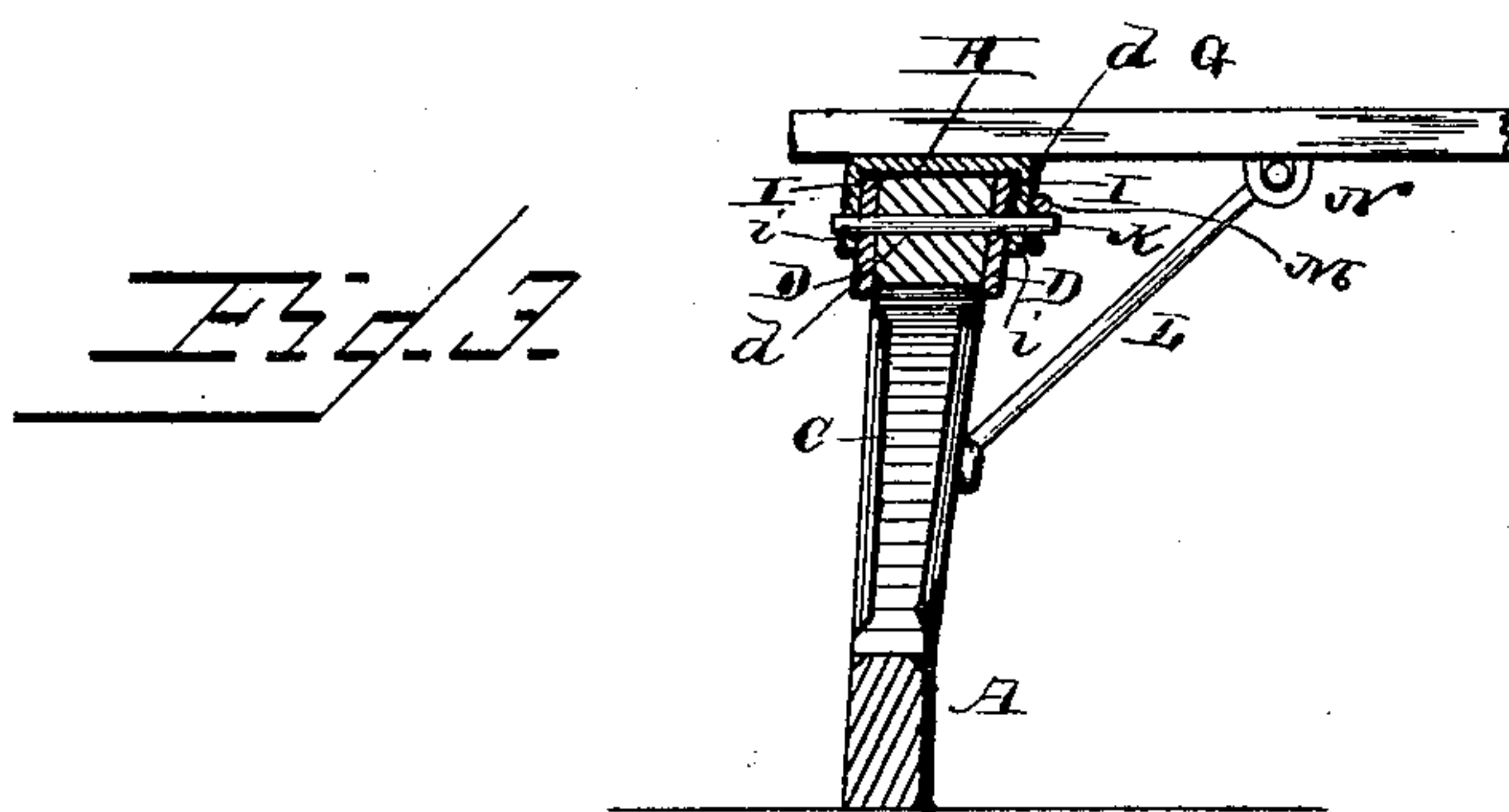
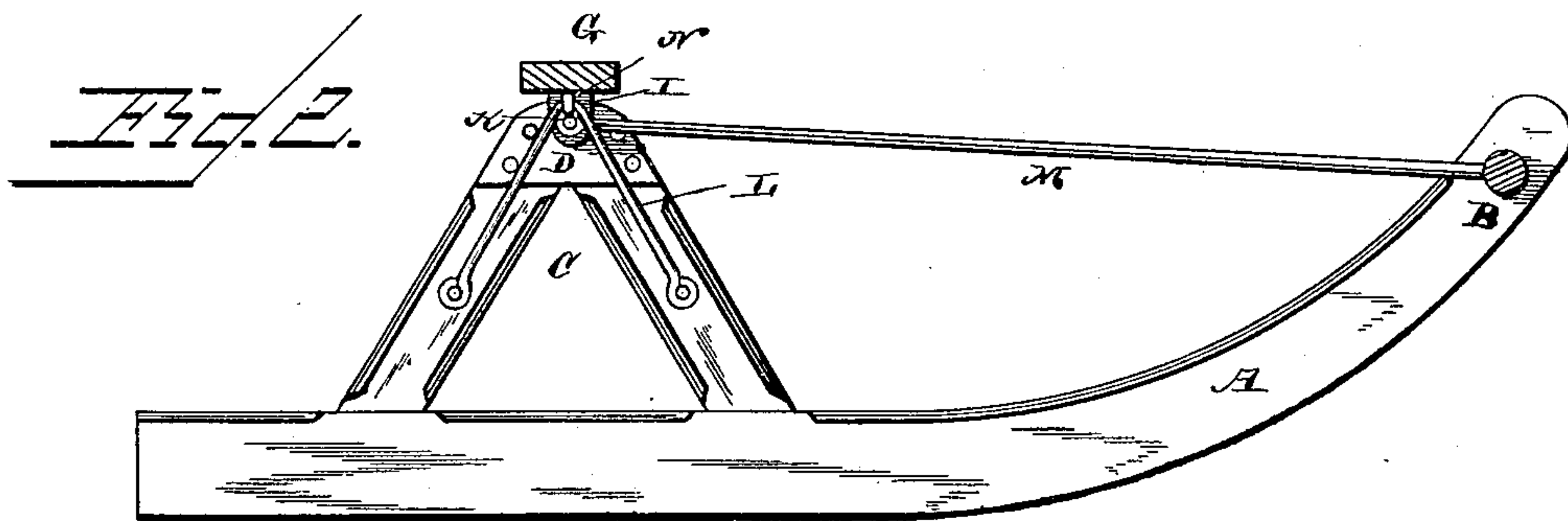
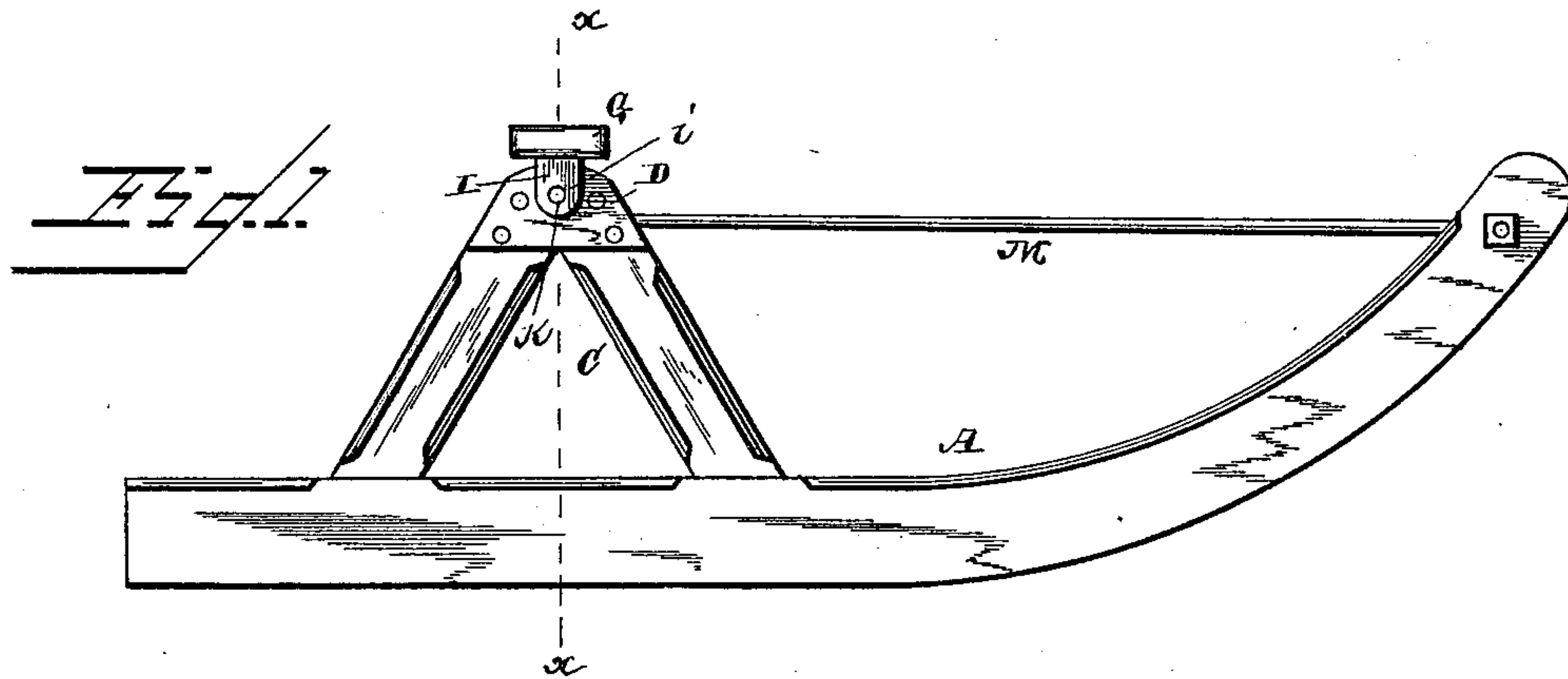
(No Model.)

J. J. DUNBAR & H. HOLLOWAY.

BOB SLED.

No. 366,716.

Patented July 19, 1887.



Witnesses

*C. E. Doyle*  
*E. J. Sigg*

Inventors

*John J. Dunbar*  
*H. Holloway*

By their Attorneys,

*C. A. Howells*

# UNITED STATES PATENT OFFICE.

JOHN J. DUNBAR AND HERMAN HOLLOWAY, OF GUNNISON, COLORADO.

## BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 366,716, dated July 19, 1887.

Application filed May 7, 1887. Serial No. 237,468. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN J. DUNBAR and HERMAN HOLLOWAY, citizens of the United States, residing at Gunnison, in the county of Gunnison and State of Colorado, have invented a new and useful Improvement in Bob-Sleds, of which the following is a specification.

Our invention relates to improvements in bob-sleds, consisting in a certain novel construction and arrangement of parts for service, fully set forth hereinafter, and specifically pointed out in the appended claims.

In the drawings hereto annexed, Figure 1 is a side view of a sled provided with our improvements. Fig. 2 is a central longitudinal section. Fig. 3 is a transverse section on the line *xx* of Fig. 1.

Referring to the drawings by letter, A designates the runners of the sled, B the roller or brace at the front ends of the said runners, and C the trussed knees secured to the said runners and having rounded upper ends.

D D designate side plates on the outer and inner sides of the said knees, and G is the cross-bar or bench of the sled, to the under side of which at each end is secured a plate, H, having the downwardly-turned ends, forming ears I I, provided with openings or bearings *i i*, to align with an opening or bearing, *d*, formed in the side plates, D, and the upper end of the knee, and through the said aligned bearings is passed the pivot-bolt K, thus pivoting the bench on the knee.

L represents a trussed or double brace having the lower extremities of the arms secured to the members of the trussed knee, and having the upper end passed through a staple or eye, N, on the under side of the bench. It will be seen that the said brace, although serving to support the bench, will not interfere with the rocking motion thereof.

M represents a brace-rod secured at the front end to the bolt which secures the round in place and at the rear end to the pivot-bolt K, causing the strain upon the knee (in drawing upon the sled to move it) to be equalized.

We are aware that pivoted or rocking knees have heretofore been made, and we do not,

therefore, claim this; but the means which we provide for bracing the parts and equalizing the strain are of great importance, giving rigidity to the entire frame, and are important features in the invention; also, the peculiar construction of the head of the knee, with the side plates and the ears secured to the underside of the bench, and having a pivot-bolt passed through aligned openings therein and the said head of the knee, is very simple, strong, and effective.

Having thus described our invention, we claim—

1. As an improvement in bob-sleds, the trussed knee, side plates, D, bearings in the said plates and the upper end of the knee, bench G, having the plate H on the under side, provided with the depending ears I I, and the bolt K, to pass through the said ears and the bearing in the upper end of the knee, substantially as described.

2. As an improvement in bob-sleds, the trussed knee, bearing *d* in the upper end, bench G, having the depending ears I, to pass on opposite sides of the said knee, bearings *i* in the said ears, bolt K, to pass through the bearings *i* and *d*, the eye or staple N on the under side of the bench, and the double brace L, passing at the upper end through said eye and having the lower ends of the arms thereof secured to the trussed knee, substantially as and for the purpose set forth.

3. As an improvement in bob-sleds, the runner A, knee C, bearing *d* in the upper end, bench G, having the depending ears I, bolt K, to pass through the said ears and the bearing *d*, and the brace-rod M, secured at the front end to the front end of the runner and at the rear end to the bolt K, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN J. DUNBAR.

HERMAN HOLLOWAY.

Witnesses:

IRA BROWN,  
MIKE ARCH.