

(No Model.)

J. ZBORNIK.

SLEIGH.

No. 245,597.

Patented Aug. 9, 1881.

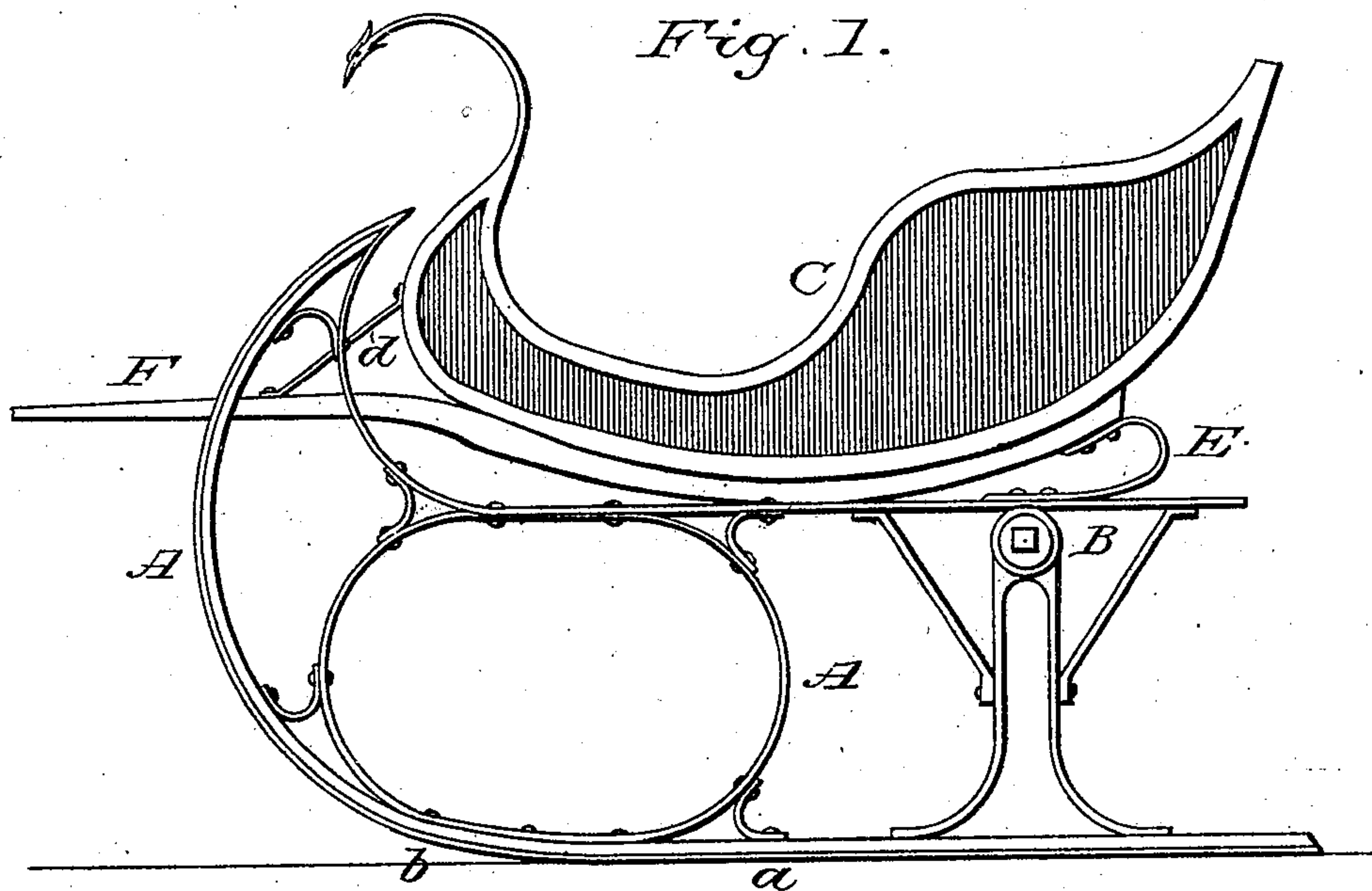
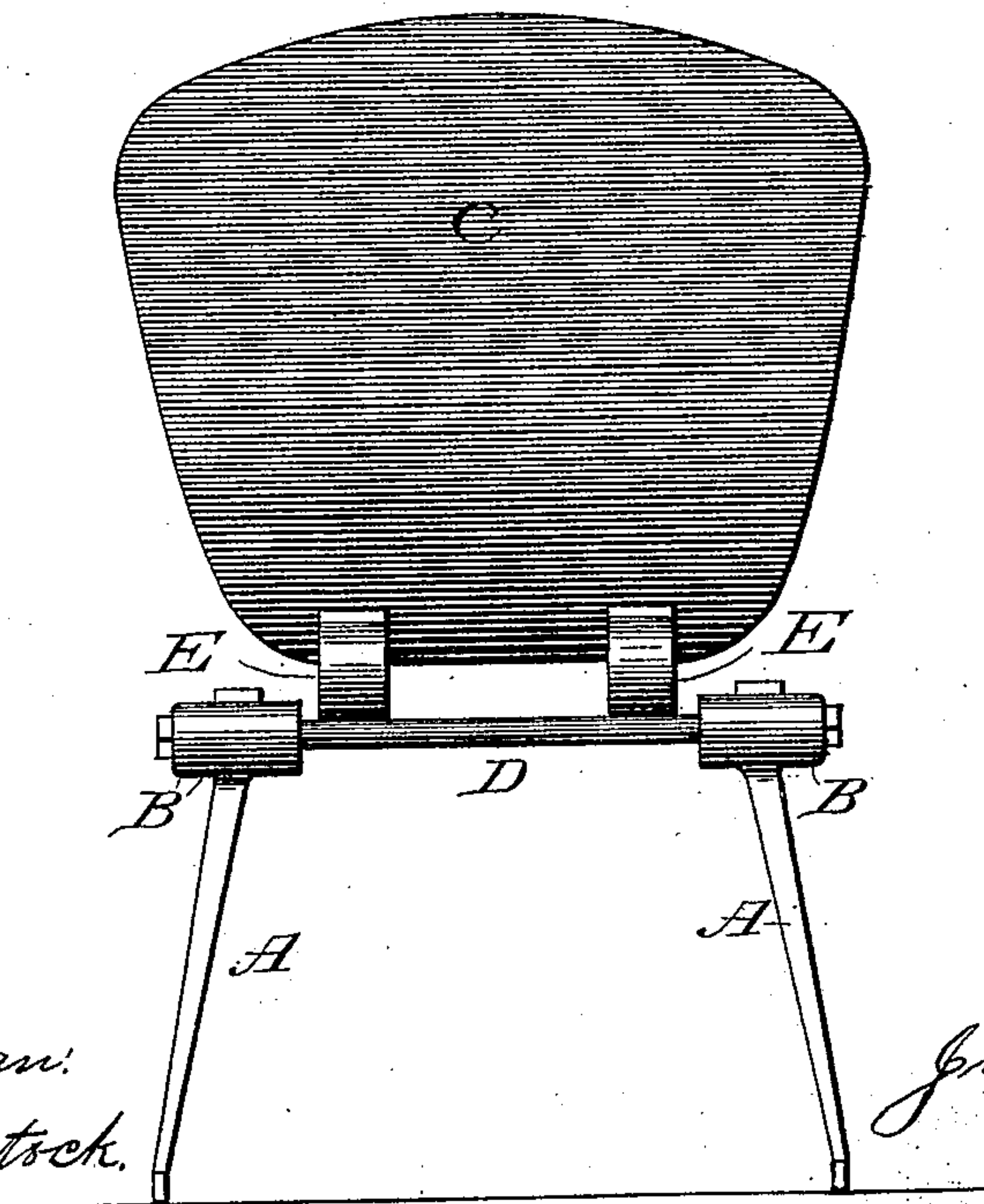


Fig. 2.



Witnesses:
John H. Foreman.
Frank McClintock.

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UNITED STATES PATENT OFFICE.

JOHN ZBORNIK, OF OLD MISSION, IOWA.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 245,597, dated August 9, 1881.

Application filed April 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN ZBORNIK, of Old Mission, Fayette county, Iowa, have invented a new and useful Improvement in Light Sleighs, of which the following is a specification.

The object of my invention is to furnish an easy-riding and easy-running sleigh, with the runners so arranged that they will conform to the unevenness of the roads without strain upon the runners or box, and will run without jolting or bumping over the roughest roads. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the sleigh, and Fig. 2 a rear elevation.

The runners A, instead of resting on the ground the full length, begin to curve upward at about the center *a* in a gradual curve until at *b* they are about two inches above the plane of the rear end of the runner. This construction allows the sleigh to be more easily turned than when the entire length of the runner rests on the ground.

A hub, B, is fixed to the upper part of the runner, about one-third of the length of the runner from the rear end.

The sleigh-box C is of the ordinary construction; but, instead of being rigidly attached to the runners, it has an axle, D, fastened to it, as nearly as possible beneath the center of gravity of the box when loaded, by means of springs E. The runners are placed on this axle the same as wheels on a cart, and are entirely independent of each other.

The tongue or thills F are rigidly attached to the front of the sleigh-box C, and firmly

braced by braces *d*. The tongue or thills serve to keep the box C from tipping either backward or forward, while, the center of gravity being as nearly as possible over the axle, there is but little strain on them.

Heretofore such sleighs have been constructed with the runners rigidly attached to the body of the sleigh, with the tongue or shafts attached by a flexible joint, so as to allow the runners to accommodate themselves to the inequalities of the road. These sleighs in passing over any rough or uneven places in the road jump and jar the occupant, as the body of the sleigh must necessarily partake of all the movements of the runners.

In my sleigh the runners, upon meeting with an obstruction or depression in the road, rise or descend, as the case may be, without communicating the jerking or pitching to the body of the sleigh, which by means of the tongue or thills is kept in nearly a level position, while the springs convert the up-and-down movements into an easy undulation, making it much more comfortable and easy riding for the occupants and also easier work for the horses.

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

A sleigh having tongue or thills rigidly attached to the body or box, with an axle connected by springs to said box, in combination with independent runners, substantially as shown and described.

JOHN ZBORNIK.

Witnesses:

FRANK MCCLINTOCK,
JOHN H. FOREMAN.