

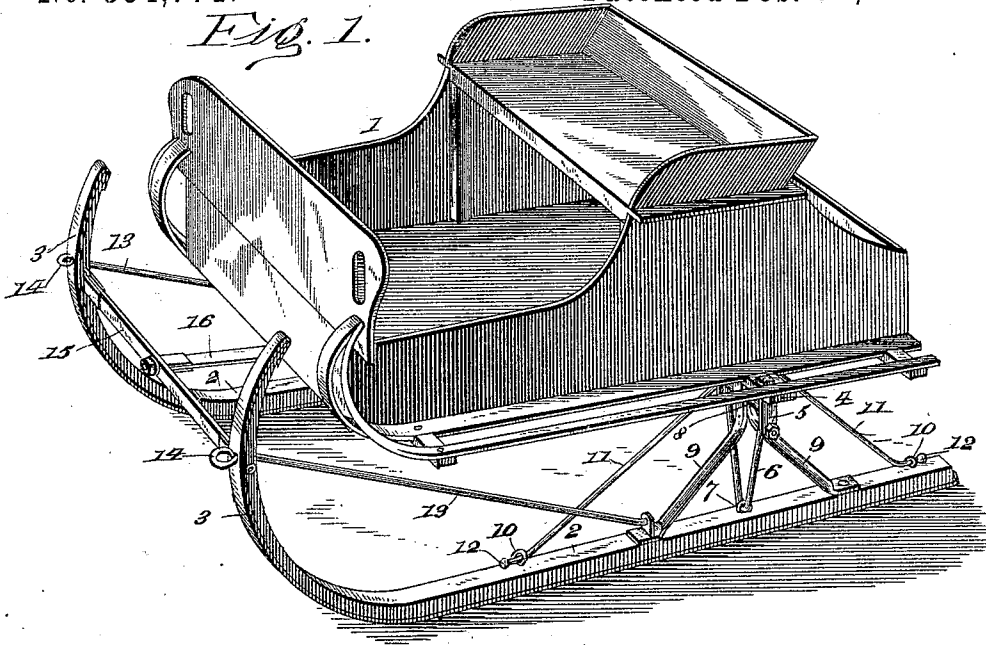
(No Model.)

H. E. CAPRON.  
SLEIGH.

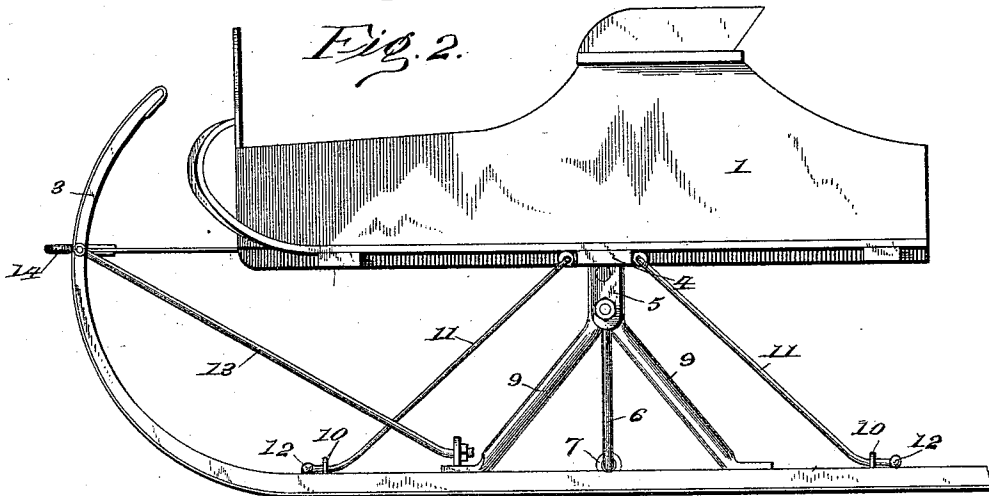
No. 554,771.

Patented Feb. 18, 1896.

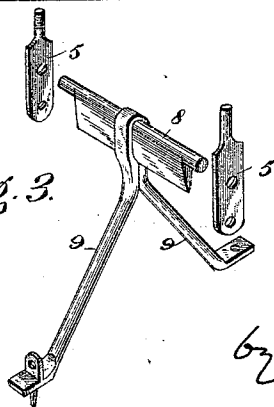
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
Theo. L. Gatche,  
W. P. Wilson

Inventor  
Henry E. Capron  
by H. M. Stockbridge  
his Attorney.

# UNITED STATES PATENT OFFICE.

HENRY E. CAPRON, OF PINKHAMTON, COLORADO.

## SLEIGH.

SPECIFICATION forming part of Letters Patent No. 554,771, dated February 18, 1896.

Application filed June 19, 1895. Serial No. 553,330. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. CAPRON, a citizen of the United States, residing at Pinkhamton, in the county of Larimer and State of Colorado, have invented certain new and useful Improvements in Sleighs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in sleighs, the object of the same being to so improve sleighs of the bob and cutter types that the chances of tipping over are reduced to a minimum, and also to provide means whereby the weight is brought at all times upon the runners throughout their entire lengths, so that the sleigh may be driven over crusted snow and not cut through the same, as would be the case with sleighs constructed in the usual manner.

The invention consists of a body, a pair of runners and improved knee connections between the body and the runners, the said runners being connected at their forward ends by a cross-bar which is pivoted at its central point to a rod or beam projecting forwardly from the under side of said body.

It also consists in other details of construction and combinations of parts which will be more fully hereinafter described and claimed.

In the drawings forming a part of this specification, Figure 1 represents a perspective view of a cutter constructed according to my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detached perspective view of my improved knee.

Like reference-numerals indicate like parts in the various views.

1 represents the body of the cutter, which may be of any approved form of construction, and 2 2 the runners thereof, which are formed with upturned forward ends 3. On the under side of the body 1, preferably secured to the bolster 4 of said body, is a bracket 5, in the lower ends of the arms of which are pivoted the arms of the V-shaped link 6 connected to the runners 2 through an eye-bolt 7 on the upper sides thereof. Also pivotally connected to the arms of the bracket 5 is a rod or shaft 8 having secured to it angularly-arranged arms 9 9, which are secured to the

runners 2, as clearly shown. These runners are also provided with eyebolts 10 10, through which project the lower outer ends of a pair of brace-rods 11 11, having balls or knobs 12 upon their outer ends, which brace-rods are connected in any suitable way to the bolster 4. The knobs 12 project slightly beyond the eyebolts 10, so as to permit a limited rolling movement to the runners 2 on their pivotal connection with the body 1. Brace-beams 13 13 are secured to the upper side of the runners 2, and extend forwardly and upwardly through the upturned ends 3 of said runners and have loops or rings 14 14 formed in their outer ends, to which the draft appliance of the sleigh will be connected. Pivotal connecting the upturned ends 3 of said runners is a beam 15, which is pivoted at its center to a beam 16, which extends forwardly from the under side of the body 1.

By the construction just described it will be seen that the runners 2 have a short range of movement upon their pivotal connection with the body 1, so that if an obstruction is met by one of the runners, the said runner is permitted to rise and roll over the same without any danger whatever of tipping over the sleigh. Also, by reason of the flexible connection between the runners and the body, the runners at all times bear upon the surface of the snow throughout their entire length, thereby preventing cutting through crusted snow. The knee connection described between the runners and the body is, of course, adapted to use upon either bob sleighs or cutters or any other form of sleigh.

Having thus described the invention, what is claimed as new is—

1. In a sleigh, the combination with the body and runners thereof, of a flexible knee connection between the same consisting of brackets secured to the under side of the bolster of said body, rods pivotally connected to said brackets and runners, eyebolts on the upper sides of said runners and brace-rods having balls or knobs on their outer ends passing through said eyebolts and connected to said body, substantially as and for the purpose described.

2. In a sleigh, the combination with the body and runners thereof, of a flexible knee connection between the same consisting of

brackets secured to the under side of the bolster of said body, links pivotally connected to said brackets and to the upper sides of said runners, rods or shafts pivoted in said brackets and secured at their lower ends to said frame, eyebolts on the upper sides of said runners, and brace-rods having balls or knobs on their outer ends passing through said eyebolts and connected to said body, substantially as and for the purpose described.

3. In a sleigh, the combination with the body and runners thereof, of a flexible knee connection between the same consisting of brackets secured to the under side of the bolster of said body, links pivotally connected to said brackets and to the upper sides of said runners, rods or shafts pivoted in said brackets and secured at their lower ends to said frame, eyebolts on the upper sides of said runners, brace-rods having balls or knobs on

their outer ends passing through said eyebolts and connected to said body, brace-bars secured to the upper sides of said runners, extending forwardly through the upturned ends of said runners, and formed with loops at their forward ends to which the draft appliance of the sleigh may be attached, and a cross-bar or lever pivotally connected to the forward end of said runners and fulcrumed at its central point to a beam extending forwardly from the under side of said body, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY E. CAPRON.

Witnesses:

PLEasant BAIN,  
RUPERT H. ORTIZ.