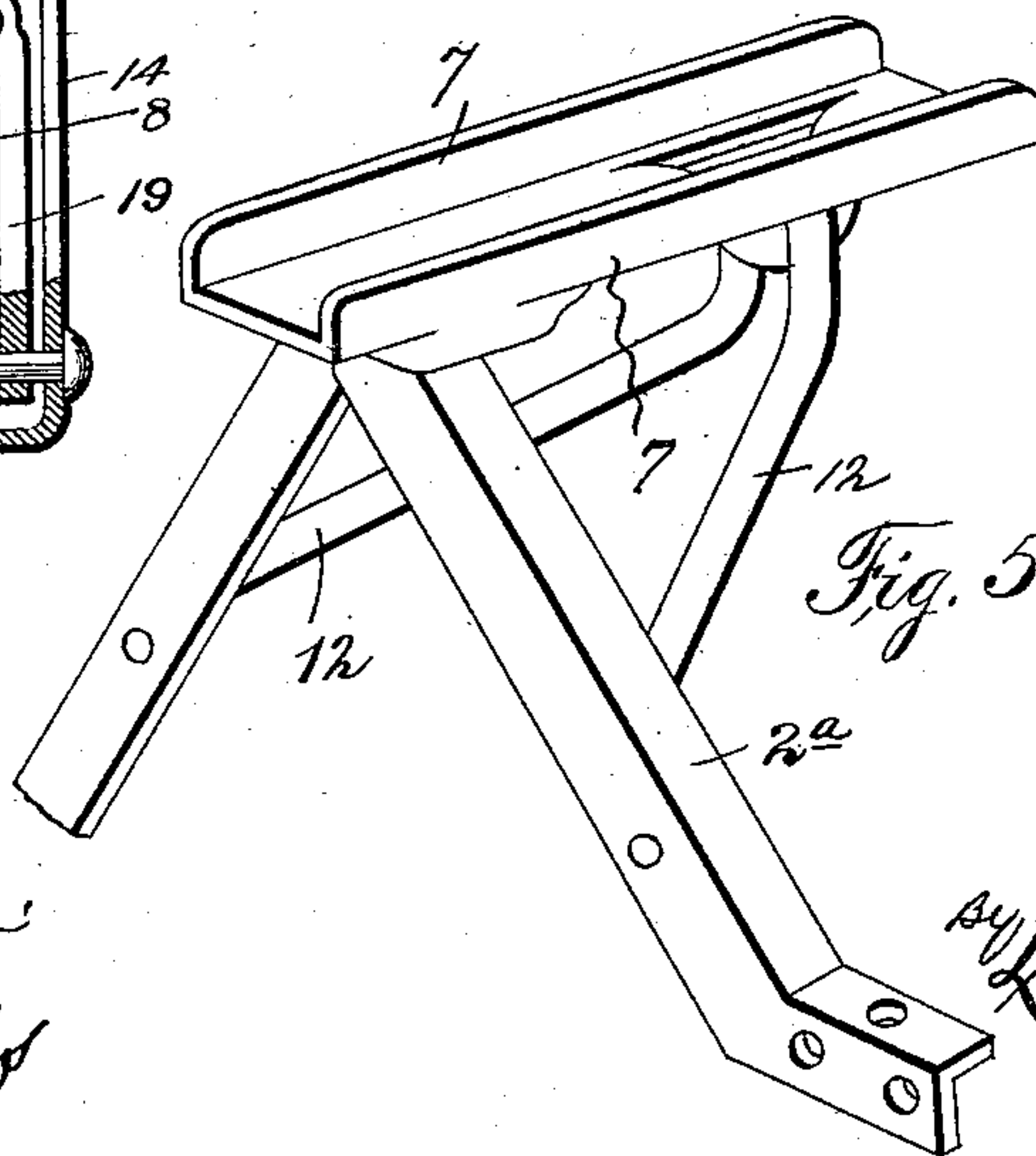
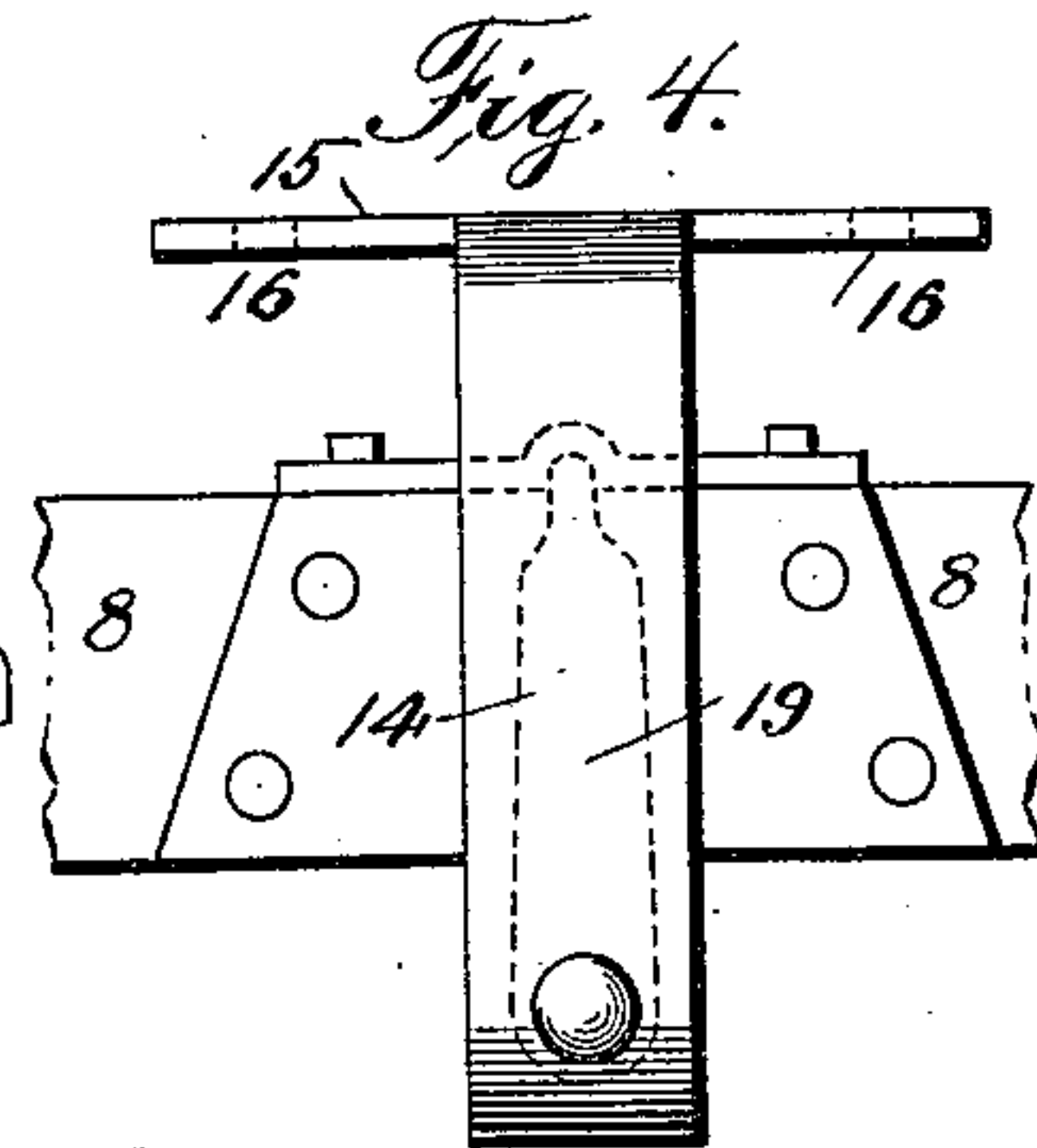
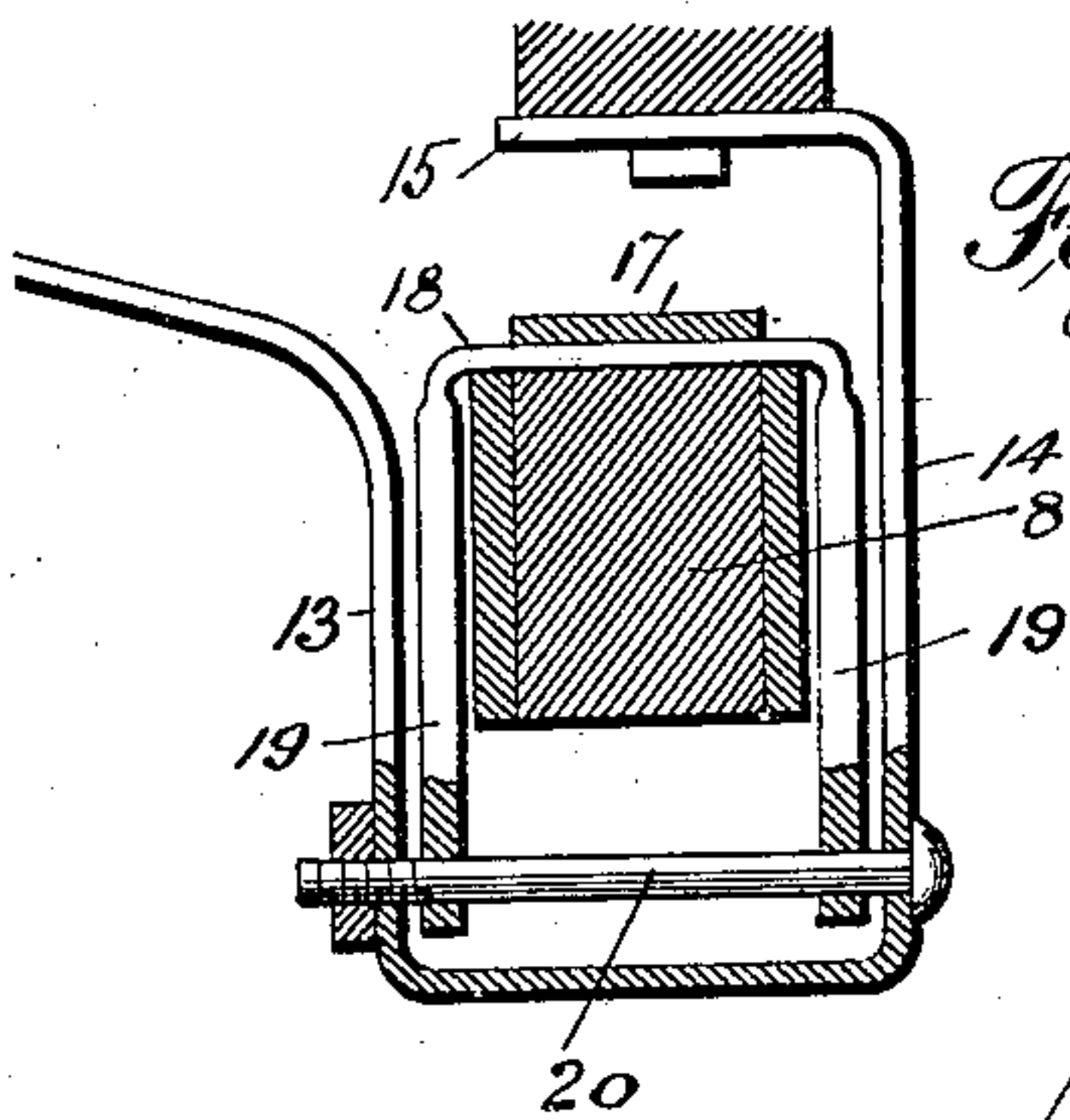
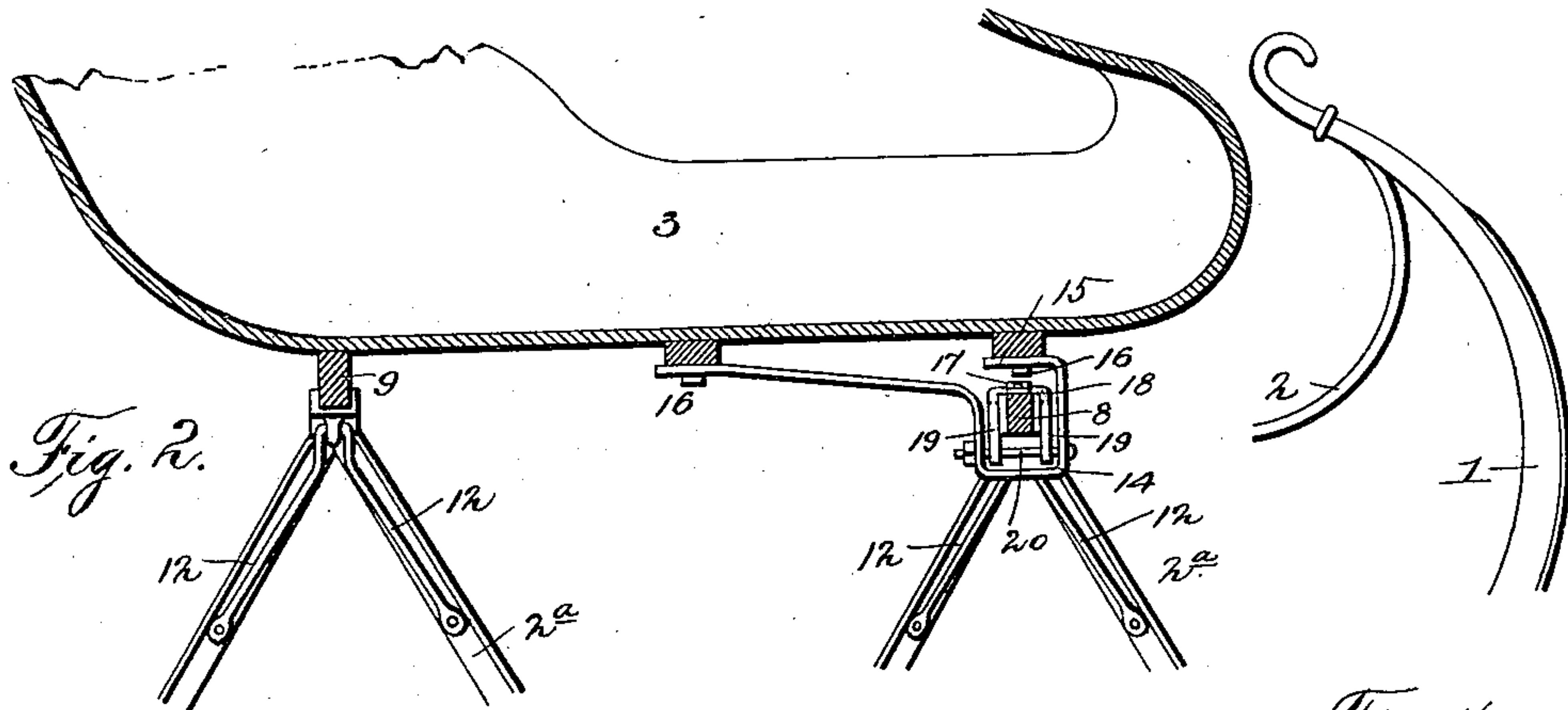
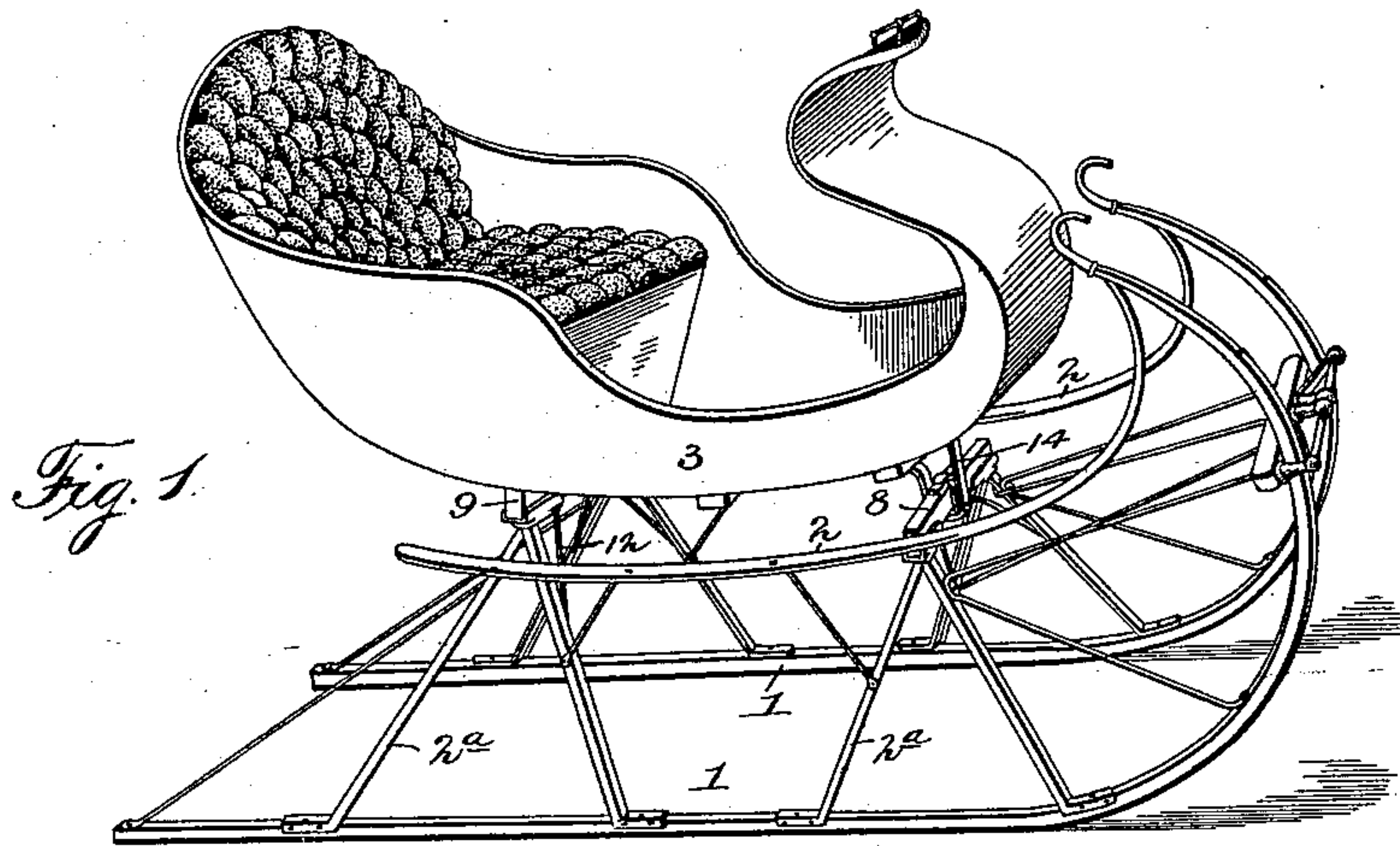


(No Model.)

T. G. MANDT.  
SLEIGH.

No. 561,012.

Patented May 26, 1896.



Witnesses  
F. L. Ourand  
J. L. Coombs

Inventor  
Targe G. Mandt,  
by Louis Bagger & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

## SLEIGH.

SPECIFICATION forming part of Letters Patent No. 561,012, dated May 26, 1896.

Application filed April 5, 1895. Serial No. 544,626. (No model.)

*To all whom it may concern:*

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Sleighs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to sleighs or cutters; and its object is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use.

The invention consists, essentially, in hinging the knees, to which the runners are secured, to the cross-beams of the sleigh and rigidly securing the rear portion of the body to the rear cross-beam and pivotally connecting the front portion of the body to the front cross-beam in such manner that the body and runners may have a twisting or torsional movement with respect to each other to avoid liability of wrenching the body in passing over uneven ground, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a cutter constructed according to my invention. Fig. 2 is a central longitudinal section of the same. Figs. 3 and 4 are detail views showing the pivotal connection of the plate secured to the under side of the front end of the body to the front cross-beam. Fig. 5 is a detail perspective view of one of the knees.

In the said drawings the reference-numeral 1 designates the runners, 2 the side bars, and 3 the body, of a sleigh or cutter, which may be of any ordinary or suitable construction.

The numeral 2<sup>a</sup> designates the knees, consisting of a single angle-bar bent over at the center, forming two angle-arms, the lower ends of which are secured to the runner. At the point of the bend said bar is cut away to allow of such bending, and the arms are formed with apertures for the passage of a pivot-bolt 3<sup>a</sup>, having a head 4 and a nut 5. This bolt also passes through alined aper-

tures in lugs 6 of a plate 7, bolted or otherwise secured to the ends of the front and rear cross-beams 8 and 9. The inner ends of the plates 7 are formed with a loop 10, with which engages a brace 12, consisting of a metal rod bent over at its center, and the ends passed through the loop and secured to the angle-bar intermediate the ends thereof. The loop 10 is somewhat larger than the diameter of the brace-bar, so as to allow the latter to have a slight play therein, thus permitting the knees to turn or oscillate on their pivots.

The rear portion of the body 3 is bolted or otherwise rigidly secured to the rear cross-beam 9. Secured to the under side of the body near the front end thereof is a plate consisting of a metal bar having its front end bent downwardly and upwardly, forming two arms 13 and 14, the arms 14 being formed with two lateral lugs 15, provided with holes 16 for the passage of bolts for securing it to the body. The horizontal portion of the plate is also provided with bolt-holes 16 for a similar purpose. Secured to the upper side of said front beam is a bracket 17, in which is journaled a shackle 18, consisting of a metal rod bent over at its center, forming two downwardly-depending arms 19, which are flattened and which loosely embrace said beam. The ends of the arms 19 are formed with alined apertures, through which passes a pivot-bolt 20, which also passes through apertures in the arms 13 and 14.

From the above it will be seen that by reason of the hinging of the knees to the cross-beams and pivotally connecting the front portion of the body to the front cross-beam, as described, the body and knees, when the sleigh is traveling over uneven ground, will have a torsional movement, thus preventing wrenching of the body.

Having thus fully described my invention, what I claim is—

1. In a sleigh or cutter, the combination with the front and rear cross-beams, and the body rigidly connected with the rear beam and pivotally connected with the front beam, of the knees hinged to said beams, substantially as described.

2. In a sleigh or cutter, the combination with the front and rear cross-beams and the body rigidly connected with the rear beam and pivotally connected with the front beam,

of the knees hinged to said beams and the brace-rods secured to the knees and pivotally connected with the cross-beams, substantially as described.

5 3. In a sleigh or cutter the combination with the front and rear cross-beams, the body rigidly secured to said rear cross-beam, the plate secured to the front end of the body having vertical arms and lateral lugs, the  
10 shackle journaled in a box or bearing on the upper side of the front cross-beam and the bolt passing through said vertical arms and through apertures in the shackle, substantially as described.

15 4. In a sleigh or cutter the combination

with the runners the front and rear cross-beams and the body rigidly secured to the rear cross-beam, and pivotally connected with the front cross-beam, of the knees secured at their lower ends to the runners and pivoted 20 or hinged to the ends of the cross-beams, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

TARGE G. MANDT.

Witnesses:

TILLA G. MANDT,  
ALFRED ERICKSON.