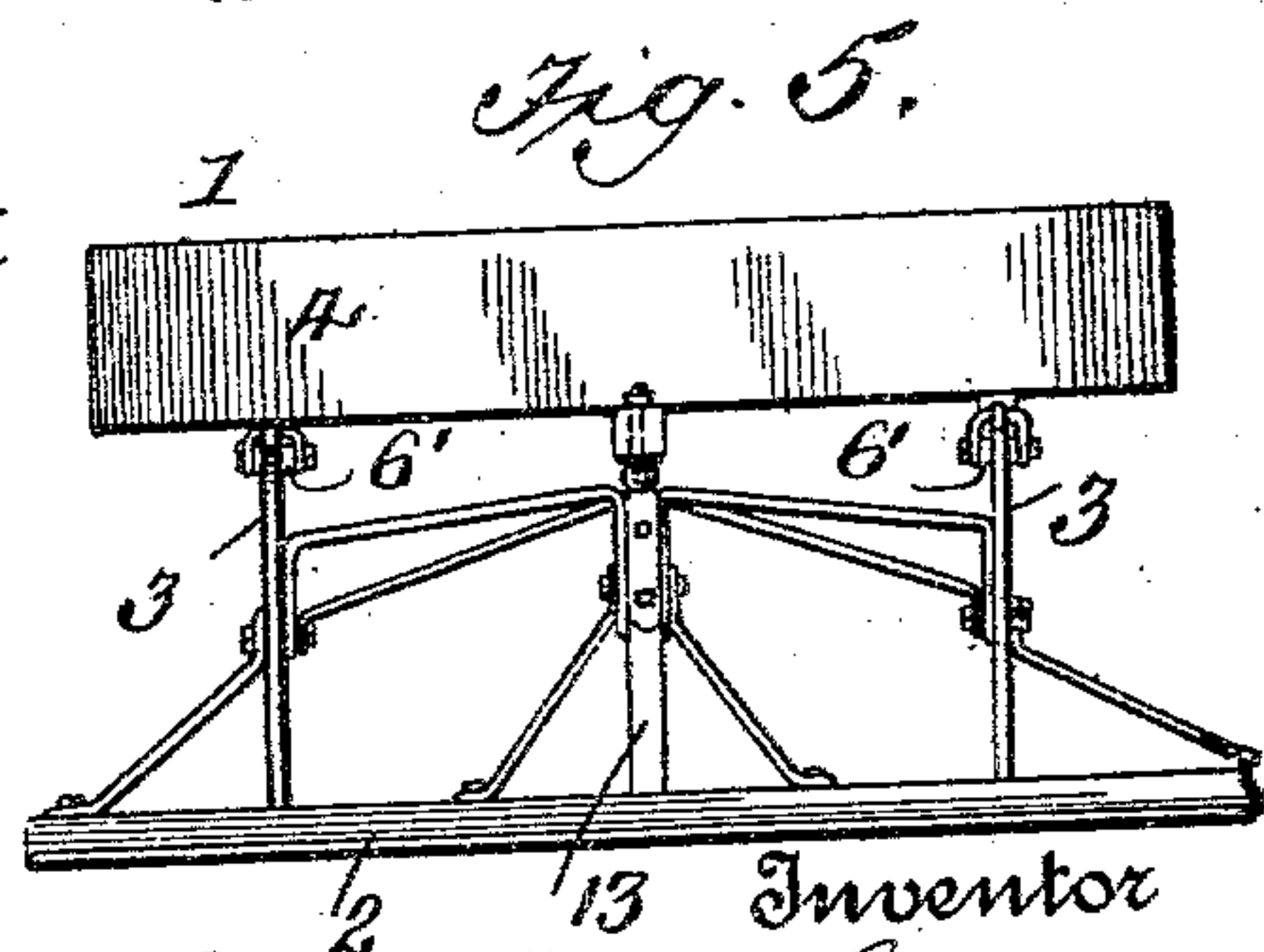
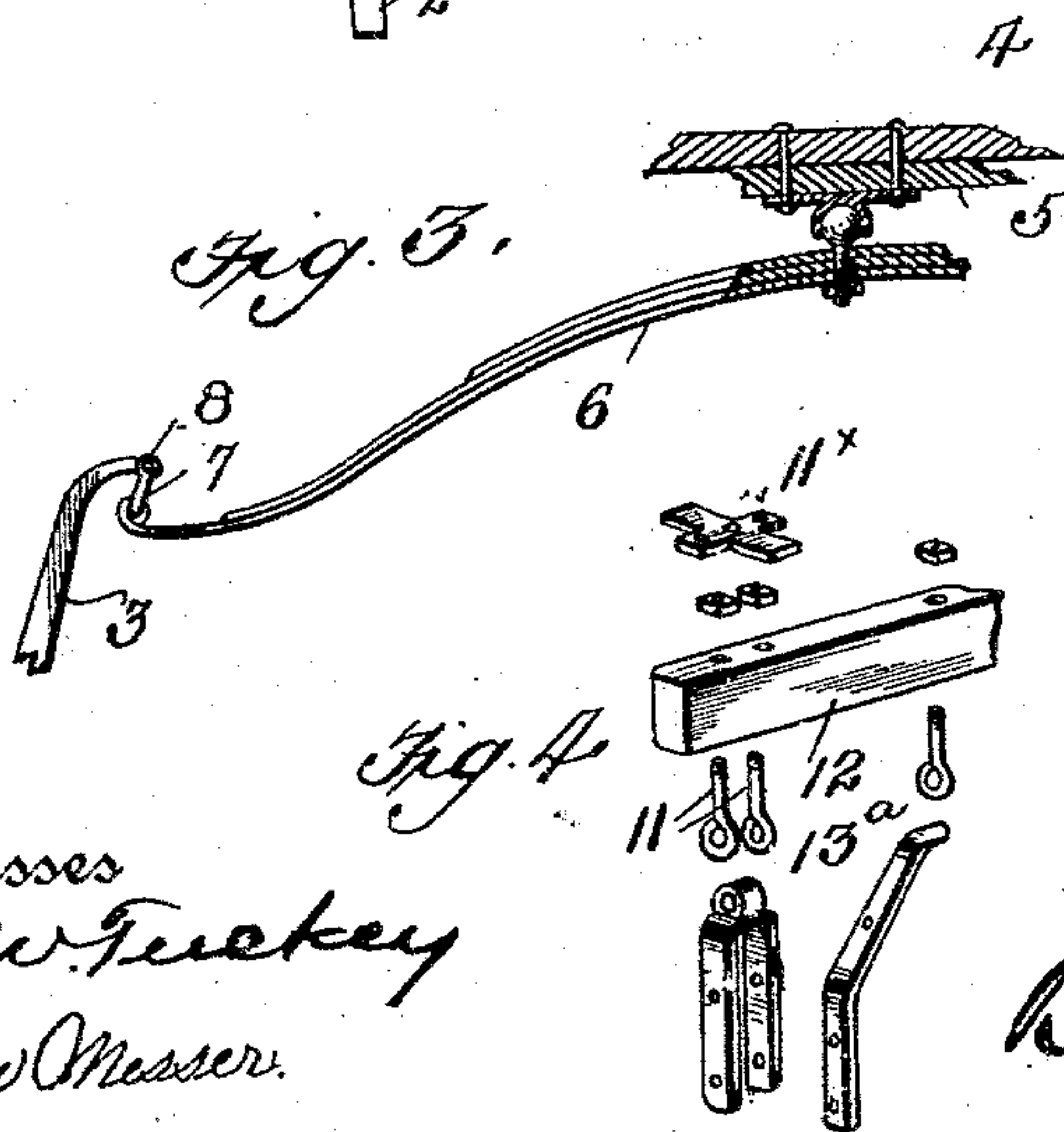
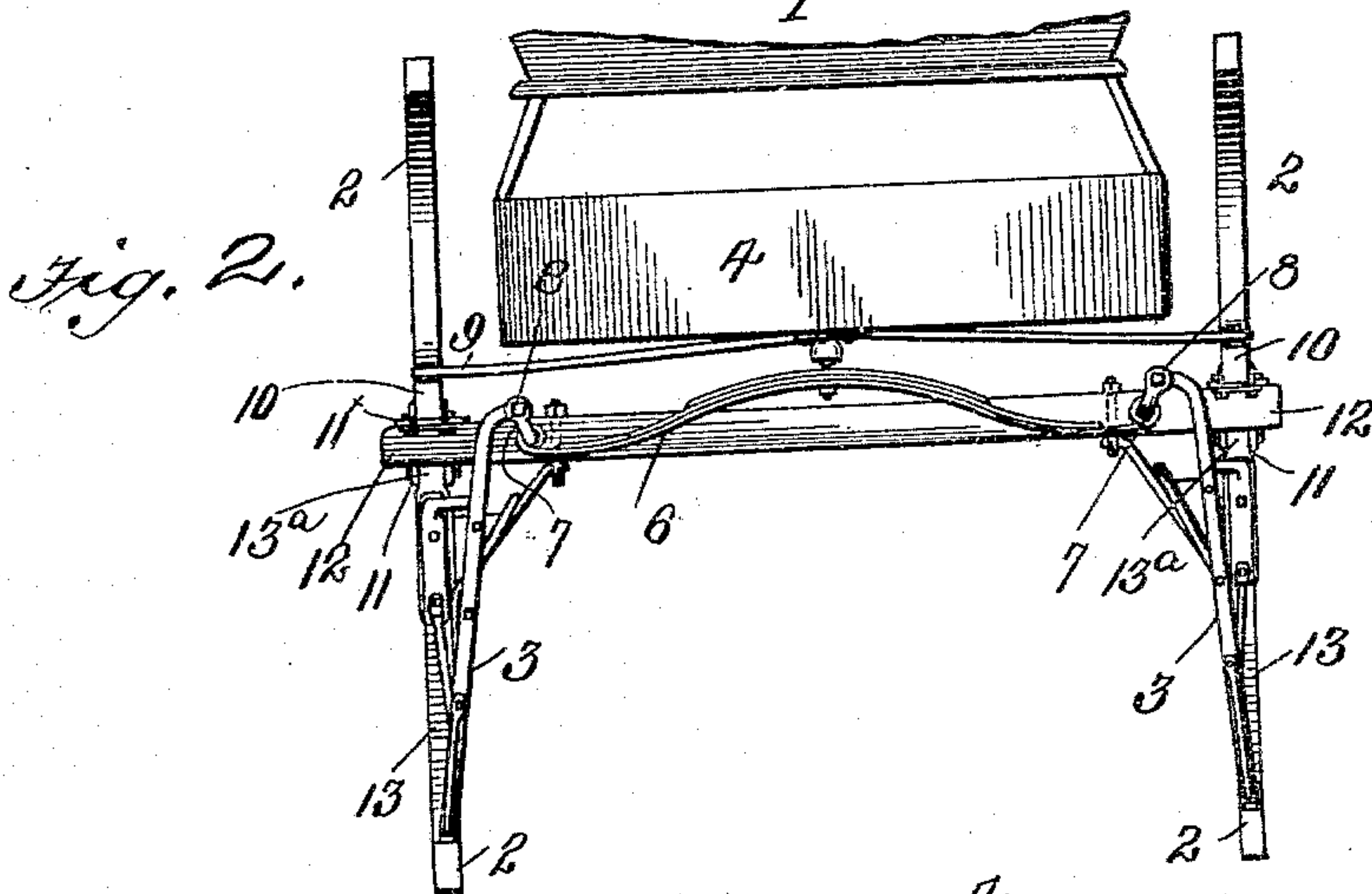
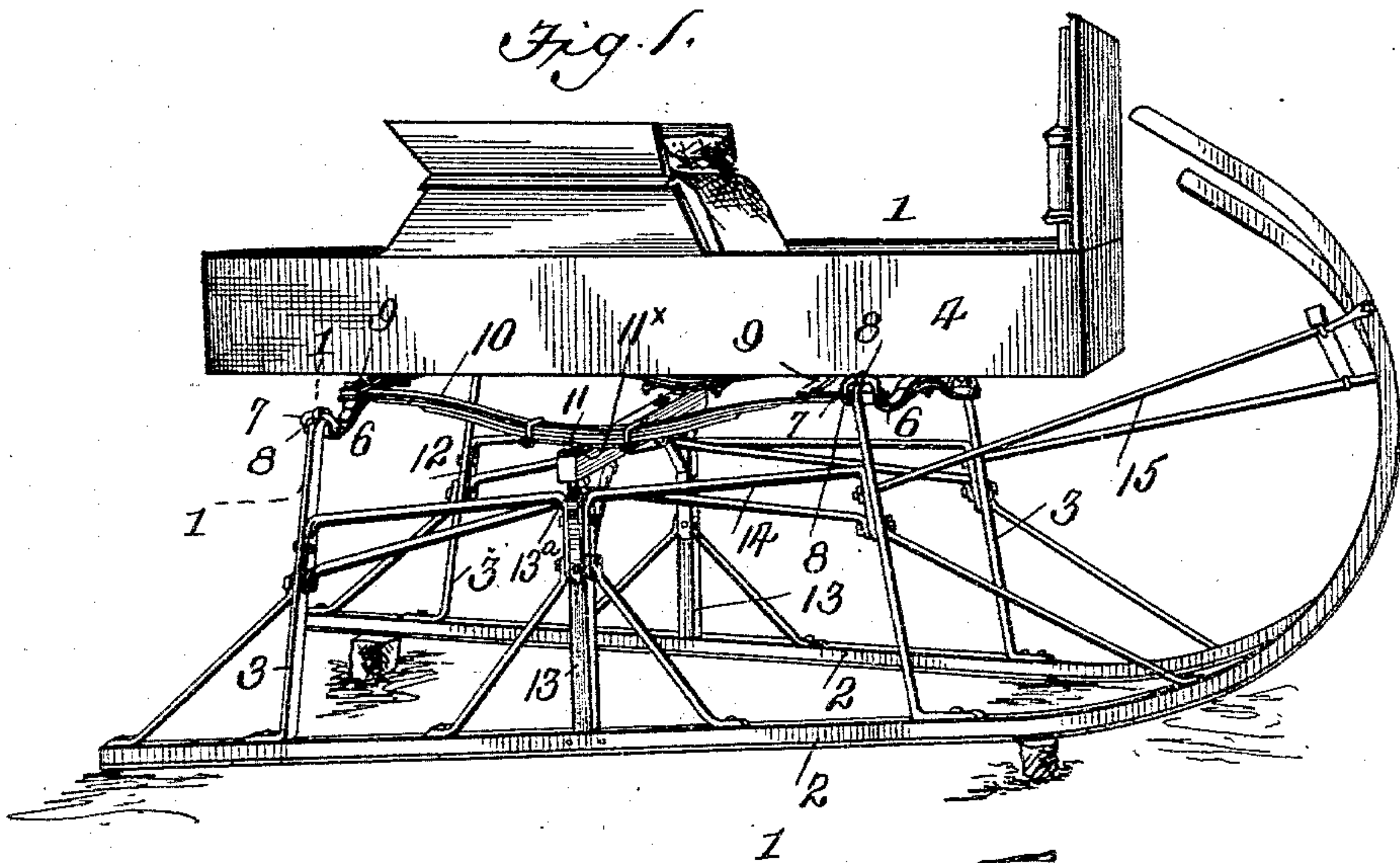


(No Model.)

E. L. THOMS.
SLEIGH.

No. 546,363.

Patented Sept. 17, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

ERNEST L. THOMS, OF ASHBY, MINNESOTA.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 546,363, dated September 17, 1895.

Application filed January 2, 1895. Serial No. 533,631. (No model.)

To all whom it may concern:

Be it known that I, ERNEST L. THOMS, a citizen of the United States, residing at Ashby, in the county of Grant and State of Minnesota, have invented certain new and useful Improvements in Sleighs; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention has relation to that class of sleighs which have their main body portion mounted on springs, so as to allow a free and easy movement and at the same time relieve the stiffness and jolting of the occupant when the sleigh passes over rough surfaces.

My invention has for its object to provide a sleigh that is extremely simple in construction, and one that is not liable to become out of order by the ordinary use that a sleigh is subjected to.

A further object is to provide a free and easy movement between the body, standards, and runners.

The above objects are accomplished by having the front and rear standards connected by shackles to the front and rear springs, which are connected to the body by a pivot or swivel. I also provide side springs, which have their ends secured to beams which are attached to the bottom of the sleigh. These springs are bolted at their center to a cross-beam, which is hinged to the upper ends of the middle standards, which are connected to and braced to the runners.

Various other objects and the manner in which they are accomplished will be more fully described hereinafter, and pointed out in the claims.

Reference is had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improvement. Fig. 2 is a rear view. Fig. 3 is a cross-section on the line 1 1 of Fig. 1. Fig. 4 is a detail of the hinge connection. Fig. 5 is a view of a modification.

The same numerals refer to like parts in all the figures.

In the drawings, 1 represents the sleigh, 2

the runners, 3 the standards, and 4 the body, all of which are of the well-known type.

To the under side of the body and at the front and rear are cross-beams 5 5, and at the center thereof I pivot or swivel springs 6 6, the outer ends of which are connected by shackles 7 7 to the upper curved ends of the front and rear standards, as at 8.

Connected to the outer ends of cross-beams 9 9 are flat springs 10 10, which are bolted or clamped at a point about their centers by eyebolts 11 11 and plate 11^x to a cross-beam 12. The cross-beam 12 is hinged to the middle standards 13 13. It will therefore be seen that I have provided a spring-joint on each side of the center of the body portion of the sleigh. I not only equalize the strain by the construction described, but greatly decrease the jolting common to this class of sleighs. Braces 14 connect the standards; also a brace 15 connects the curved ends of the runners with the front standard. Other braces connect the various parts and securely hold them together.

My invention is extremely simple in construction and will be readily understood by those skilled in the art to which it appertains. By the construction described the sleigh in passing over uneven places will afford a very comfortable movement for the occupant.

The invention can be manufactured at a very moderate figure, and I desire it to be understood that many minor details of construction can be made without departing from the spirit of my invention.

In Fig. 5 I have shown a modification in which I dispense with the side springs 10 10 and bolt the sleigh-body directly to the cross-beam 9. In this construction curved bars are used in place of the springs 6 6.

Having thus described my invention, what I claim is—

1. A sleigh having a body portion mounted on front and rear springs which are connected by shackles to the upper end of the front and rear standards of the runners, side springs having their ends connected to cross beams, extending across the sleigh body, and rigidly connected to a cross beam, hinged on the upper ends of the middle standards substantially as and for the purpose set forth.

2. In a sleigh having a spring body mount-

ed on front and rear springs which are connected by shackles to the front and rear standards, side springs connected at their ends to cross beams secured to the under side of the body, and connected at their centers to a cross beam which is hinged to the central standards, substantially as and for the purpose set forth.

3. A sleigh the combination with the body portion swiveled at the front and rear to cross bars 6'—6' which are shackled to the front and rear standards and bolted directly to a central cross beam, which is hinged upon the upper ends of the central standards, substantially as set forth.

4. A sleigh having its body portion mounted on front and rear springs, which are connected by shackles to the front and rear standards of the runners, said springs being connected at about their centers to the under side of the body of the sleigh, by a pivot or swivel connection, substantially as and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

ERNEST L. THOMS.

Witnesses:

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F. WAHLDECK.