

2 Sheets—Sheet 1.

No. 493,185.

Patented Mar. 7, 1893.



Inventor

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SLED.

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Fig. 3.

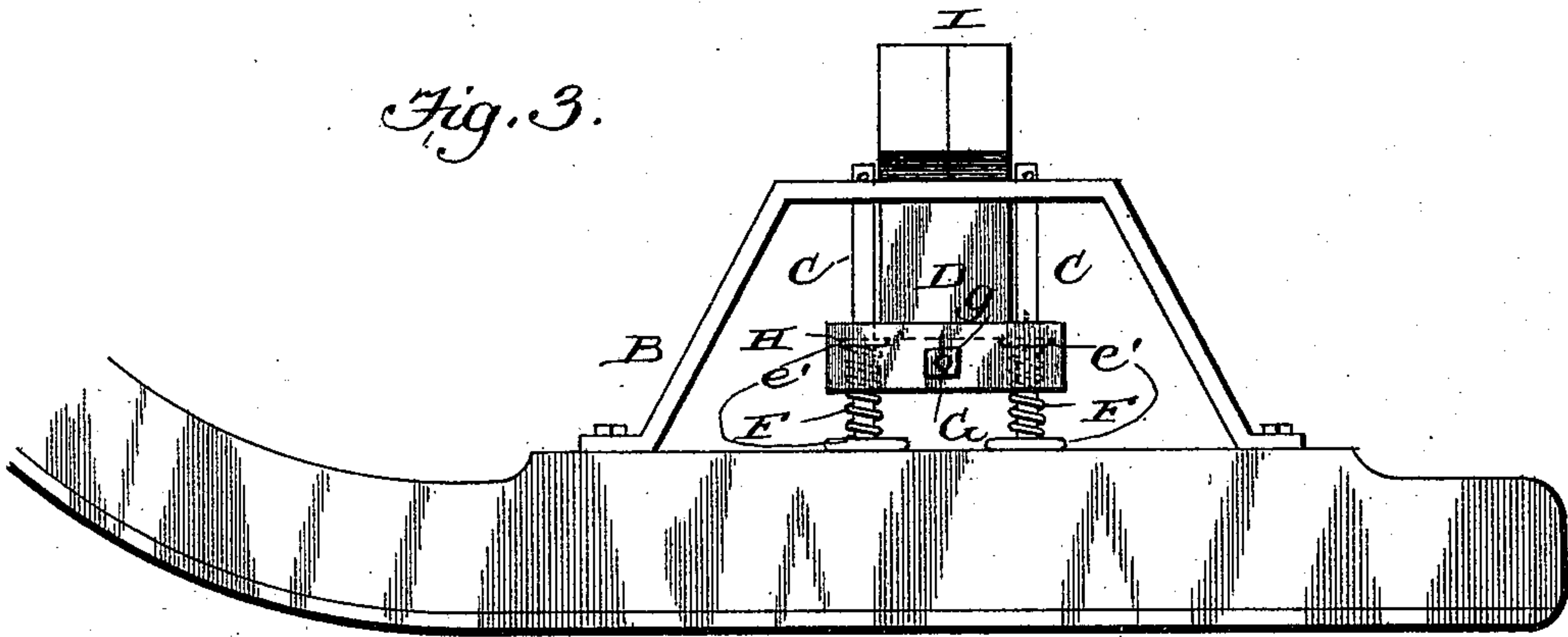


Fig. 4.

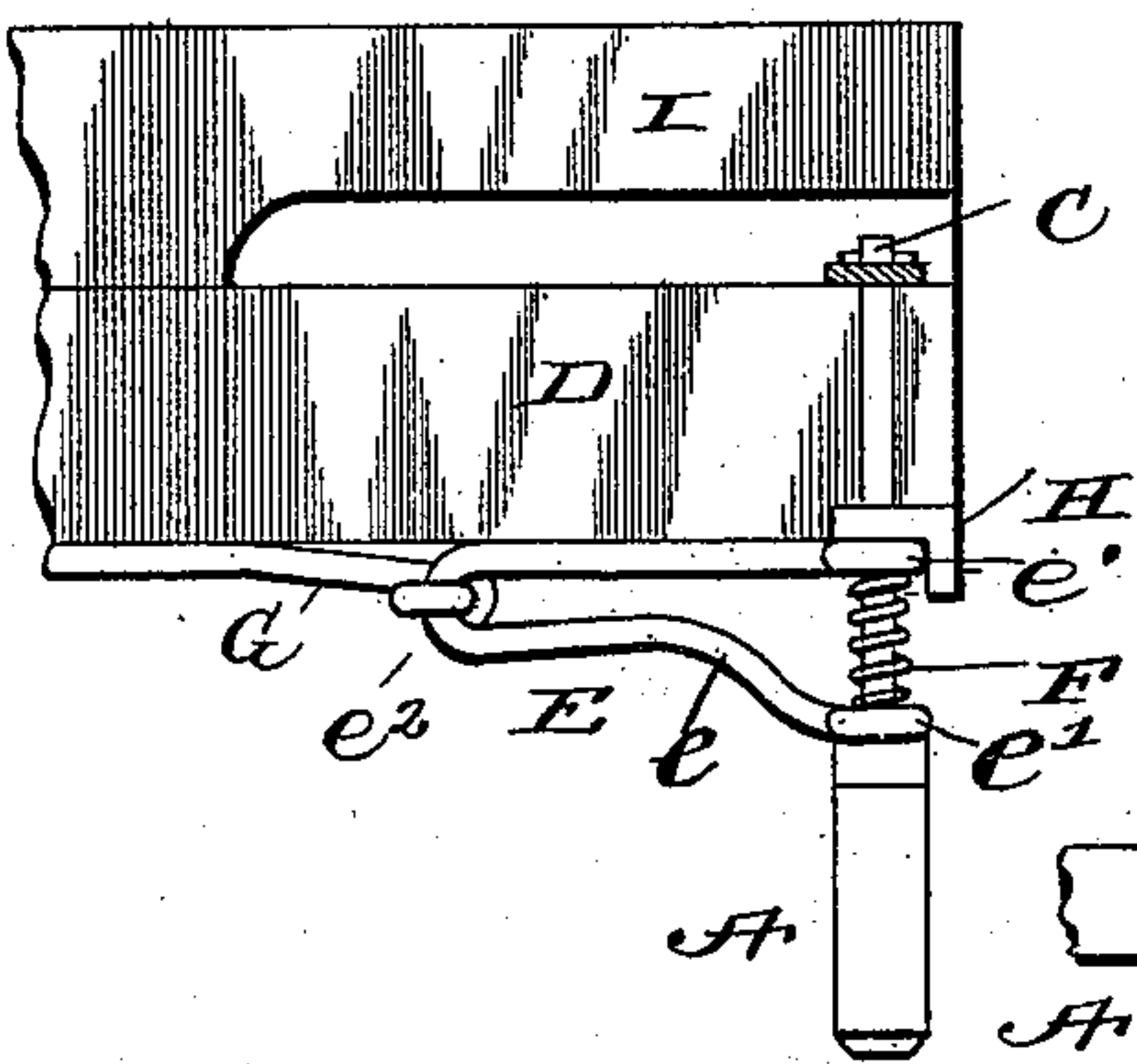


Fig. 5.

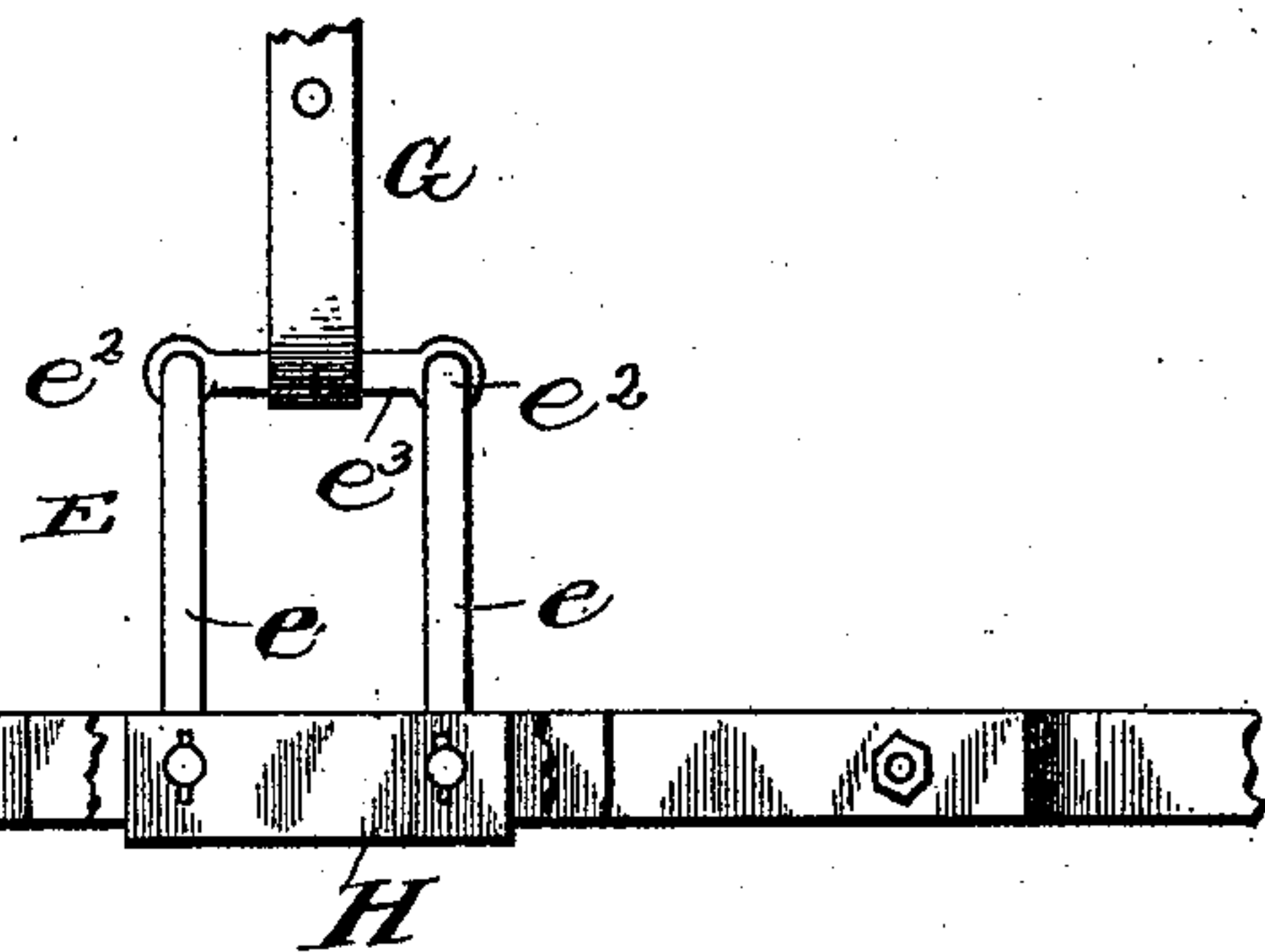


Fig. 6.

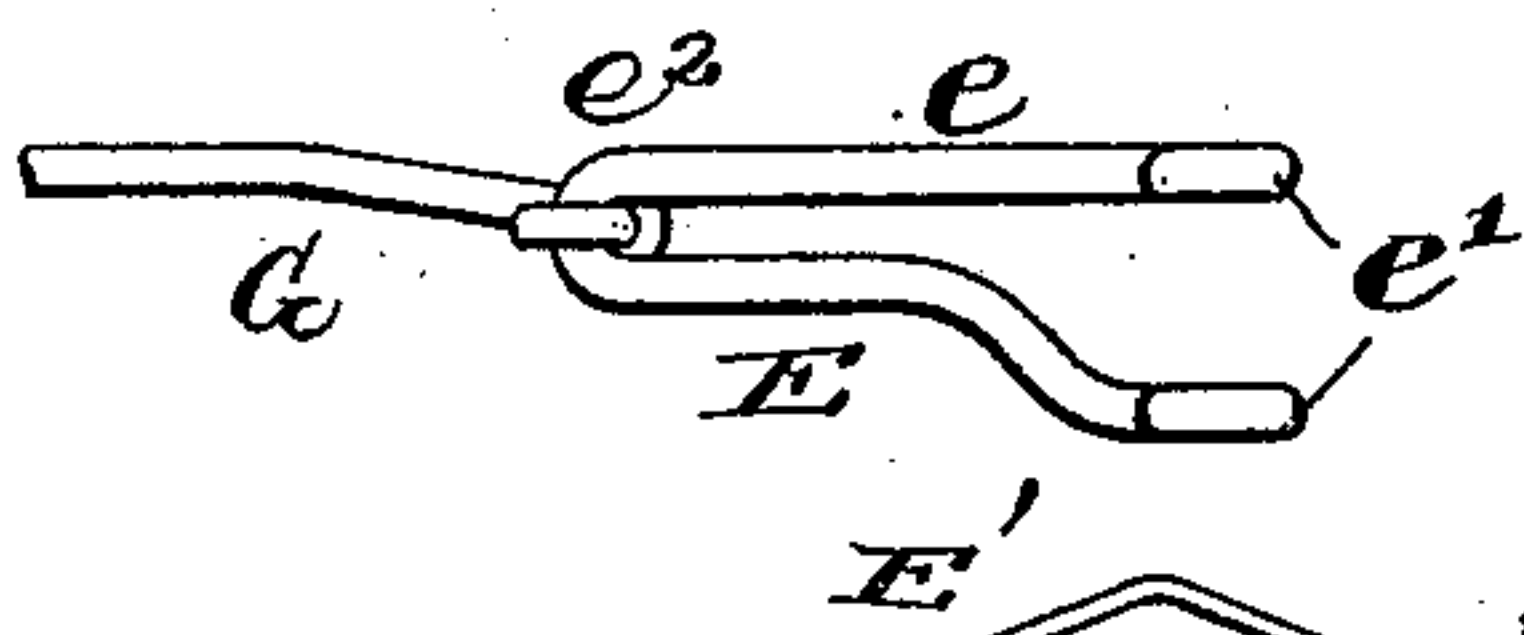


Fig. 7.

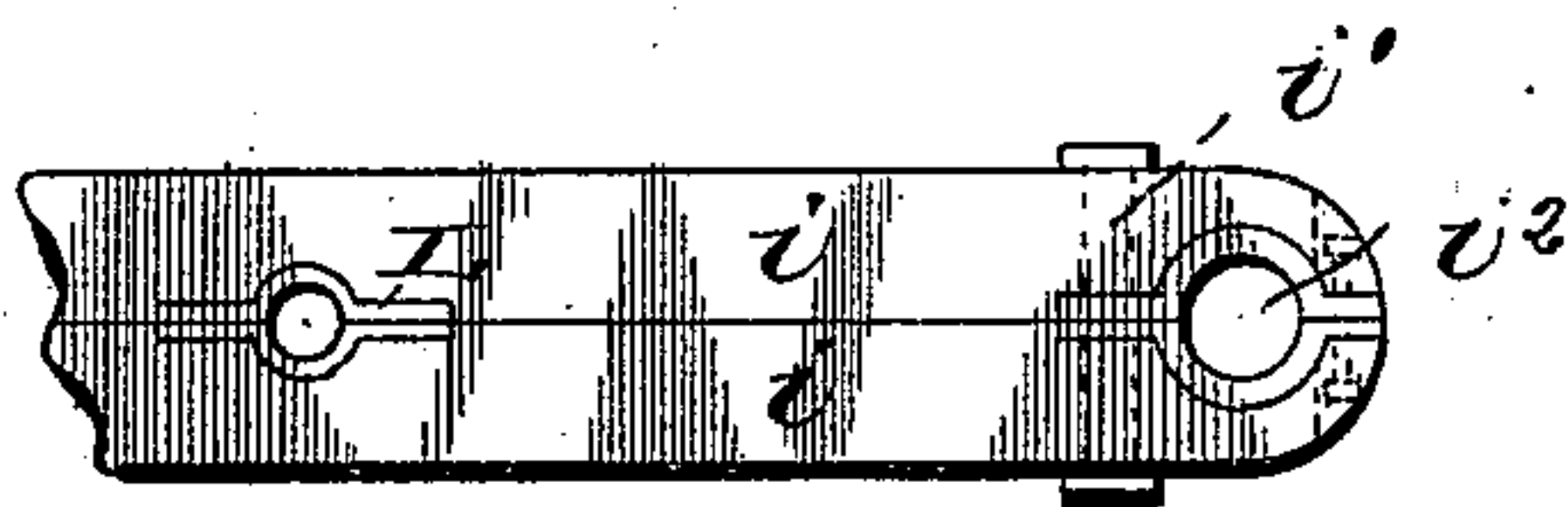


Fig. 8.

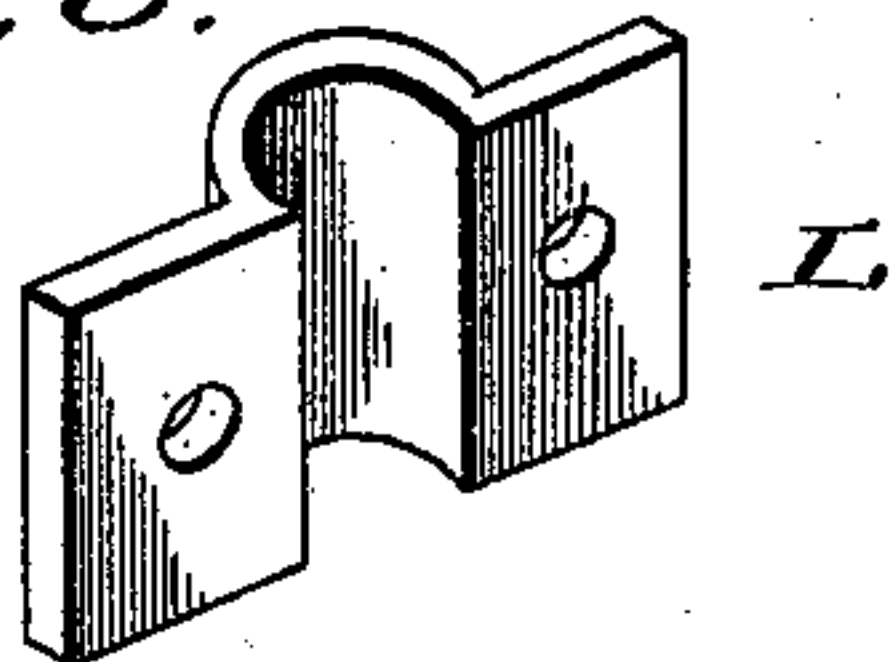
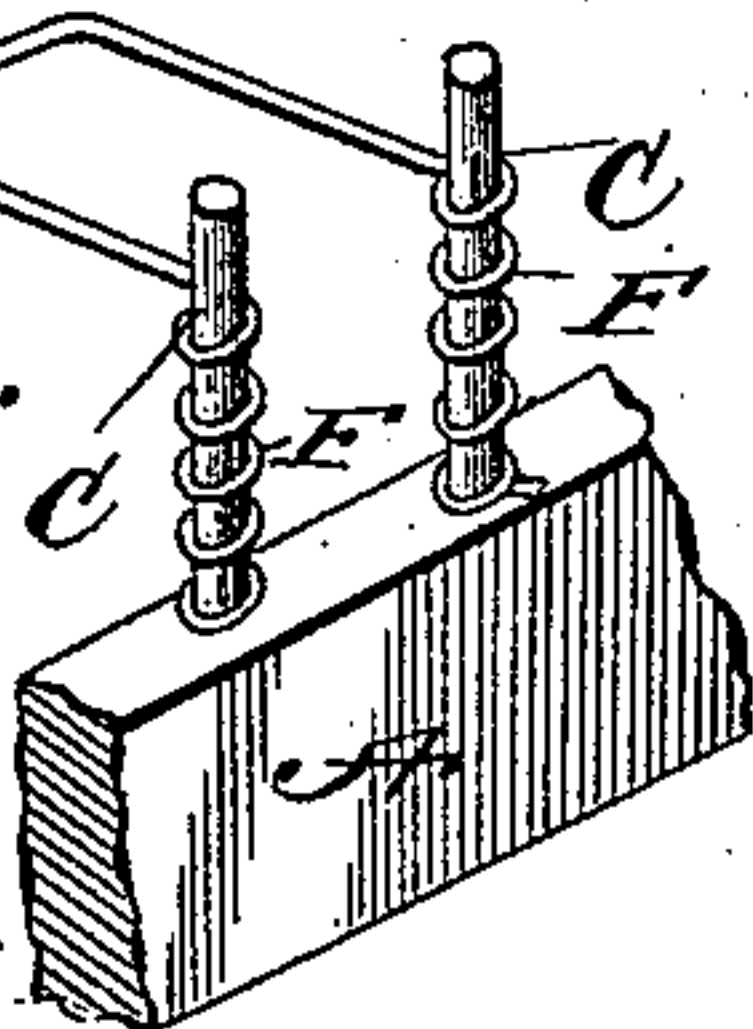


Fig. 9.



Witnesses

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By *His* Attorney

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UNITED STATES PATENT OFFICE.

MILO M. RUSSELL, OF AUGUSTA, WISCONSIN.

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SPECIFICATION forming part of Letters Patent No. 493,185, dated March 7, 1893.

Application filed March 3, 1892. Serial No. 423,652. (No model.)

To all whom it may concern:

Be it known that I, MILO M. RUSSELL, a citizen of the United States, residing at Augusta, in the county of Eau Claire and State of Wisconsin, have invented certain new and useful Improvements in Sleds; 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.

Figure 1, is a perspective view of this sled. Fig. 2, is a bottom plan view. Fig. 3, is a detail in side elevation. Figs. 4, 5 and 6 are detached detail views, illustrating a slight modification of the tie bar which I will hereinafter describe. Figs. 7 and 8, are details showing the hole for the king bolt, and its lining. Fig. 9, is a detail of a modified combination of the brace and spring.

This invention relates to that class of devices known as sleds, and the points of novelty consist in general, in providing a supplemental beam for the sled; in the construction of the bolster; in combining a spring with the beam &c; in combining a spring with the knee, in the construction of the several parts; in the combination of the several parts each with the other; and, finally, in the device as a whole; all as will now be more fully set forth and explained, reference being had to the accompanying drawings.

In these A, denotes the runners of the sled, to each of which is fixed the metal rave or bent piece B. In any ordinary way about in the center of each rave and in each runner are placed the metal pins or bolts C two, on each runner and at a suitable distance apart to allow the beam D, to fit between them. The parts may be constructed and secured in place accordingly to any well known way.

Mounted on each pair of the pins C, on the opposite sides of the sled, is a brace or bracket E, seen in Figs. 1, 4 and 5, which is composed of two metal rods bent to an angular form and having loops e' on their ends which embrace pins C, said bent rods e being connected at their bent inner ends e^2 by a bridge e^3 , having a loop at each end embracing said rods e at their bent portion e^2 . On the pins C, between the loops e' , e' , of the respective bent rods e ,

are mounted the springs F, and on said pins above the springs F are two angular tie plates H, H, extending between said pins.

G is a tie bar extending across the sled and passing through holes in the tie plates H, beyond which they are provided with nuts g , as clearly seen in Figs. 1 and 2. The tie plates H, H, on each side of the sled form supports for the beam D, and the pins C, C, pass up on each side of said beam. Thus it will be seen that the false beam, which is made up of the tie bar G and the brackets E, comes directly under the wooden beam D. The braces E may be iron rods bent to the proper form or may be made in any manner desired and the tie plates H may be omitted in some cases, when I prefer to employ the construction shown in Figs. 4, 5 and 6, which will be referred to hereinafter.

One of the advantages of the structure above described is that there need not be any special skill exercised in making the beam D. Any ordinary laborer can with an axe or saw shape a piece of timber for the purpose. It will also be noticed that the parts of the false beam, made as above, will act as braces in connection with the other parts of the structure to strengthen the sled in every direction.

In making the bolster I, the aim is to provide one that can not be split. Under the usual construction but one piece of wood is used for this purpose, but the trouble in that structure is that the king bolt K, by which it is attached to the beam acts frequently in the strain and twist of the runners as a wedge or pry to split the bolster along the center. To obviate all this I use two pieces of wood i , i , of proper size and length, and bolt them firmly together as at i' , and in the hole where the king bolt is placed I fit a metal lining L, made in two halves or sections, as seen in Figs. 1, 8, and provided with bolt holes whereby the same may be secured together. At each end of the bolster in the openings i^2 , is fixed a short piece of gas pipe M, which answers as a short stake, but if a longer stake is needed the end of a wooden stick m , can be fitted into the gas pipe.

Of course it will be understood that in the

mere detail of the shape, size or material of the several parts many changes or modifications can easily be made which will in no essential degree depart from the aim and scope of this invention, as above explained. For example the springs F and brace E may be formed integrally as illustrated in Fig. 9. In this view, the bracket E is omitted and the springs F are formed in one piece being connected by a tie piece E', which projects inward in the direction of the upper ply of the bracket E. Nor is it essential to my invention that the tie piece G shall extend entirely across the sled and be secured directly to the plates H; it may be of the construction seen in Figs. 4, 5 and 6 wherein it is shown as provided with a loop or hook at each end adapted to take about the tie bar e^3 , whereby the two braces E, on each side are conveniently and firmly locked together.

The runners of this sled being loosely connected to the beam will readily adapt themselves to the varying inequalities of the road on each side and in this respect will act independently.

What I claim is—

1. The combination with the runners of a sled, of a false beam comprising brackets secured to said runners and a tie-rod, and a sled beam on said rod and brackets, substantially as set forth.

2. The combination with the runners of a sleigh and the raves mounted thereon, of the false beam comprising the brackets and the tie rod connecting the same, the springs arranged under said false beam, and the sled beam arranged between said false beam and the apex of the raves, substantially as and for the purposes set forth.

3. The combination with the runners of a sled and the raves and pins thereon, of the braces mounted or secured on said pins, and the tie rod extending between said runners and supported on said braces, substantially as set forth.

4. The combination with the runners of a sled and the raves and pins thereon, of the braces mounted on said pins, the tie rod extending between said runners and supported on said braces, and the springs on said pins, of the sled beam supported on said tie bar

and held in place by the raves and pins, substantially as set forth.

5. The combination with the runners of a sled and the raves and pins thereon, of the braces mounted on said pins, the tie rod extending between said runners and supported on said braces and the springs on said pins, of the sled beam supported on said tie bar and held in place by the raves and pins and bearing the king bolt of the sled, and the bolster, composed of two halves or sections, bolted together and provided with a socket for said king bolt, substantially as and for the purpose set forth.

6. The combination with the sled, of a bolster made up of two sections secured together in the same horizontal plane, each of said sections having a semi-circular recess in its inner face, which recesses in the respective sections co-incide and form a socket for the reception of the king bolt, substantially as set forth.

7. The combination with the sled, of a bolster made up of two sections secured together in the same horizontal plane, each of said sections having three semi-circular recesses in its inner face, one at each end and one substantially at the center of the section, which recesses in the respective sections co-incide and form sockets at the ends of the bolster for the reception of the standards and at substantially the center of the bolster for the reception of the king bolt, substantially as set forth.

8. In a sled, the combination with the runners, of two pins or bolts C, in each runner, a spring on each of said pins, and a beam resting on the upper ends of said springs between the pins, substantially as set forth.

9. The combination with the runners and the raves fixed thereon and the pins or bolts passing between said runners and raves, of the false beam, substantially as described and the sled beam supported thereon and held in place by said rods, substantially as and for the purposes set forth.

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

MILO M. RUSSELL.

Witnesses:

F. N. THOMAS,
M. R. THOMAS.