(No Model.)

M. M. RUSSELL.

SLED.

No. 493,184. Patented Mar. 7, 1893.

Fig. 1.

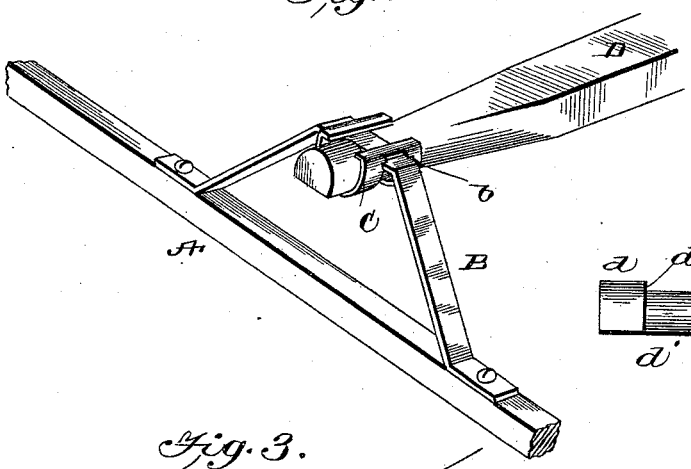


Fig. 2.

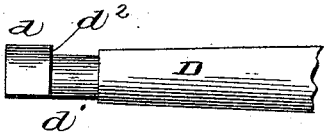


Fig. 3.

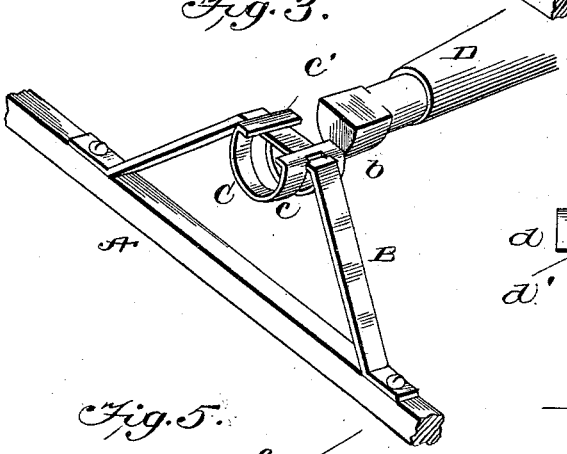


Fig. 4.

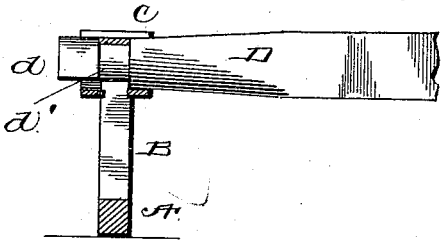


Fig. 5.

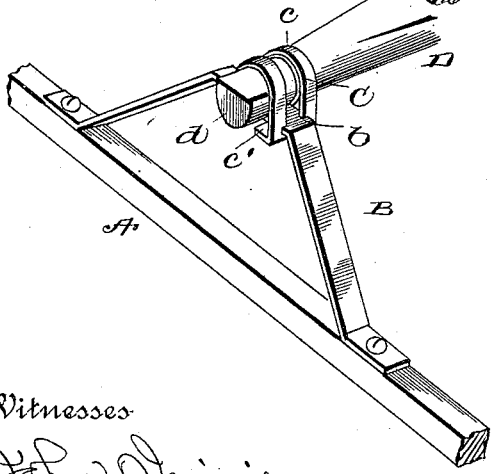
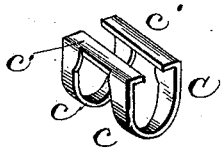


Fig. 6.



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MILO M. RUSSELL, OF NEW RICHMOND, WISCONSIN.

SLED.

SPECIFICATION forming part of Letters Patent No. 493,184, dated March 7, 1893.

Application filed February 6, 1892. Serial No. 420,513. (No model.)

To all whom it may concern:

Be it known that I, MILO M. RUSSELL, a citizen of the United States, residing at New Richmond, in the county of St. Croix 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 a portion of a sleigh in which is embodied the present invention. Fig. 2, is a detail in elevation showing the end of the beam. Fig. 3, is a detail in elevation showing the first position of the beam when being placed in its supporting and retaining devices. Fig. 4 is a sectional view through one of the knees, the end of the beam being seen in elevation. Fig. 5 is a perspective view showing the collar or clip and the beam in a position the reverse of that seen in Fig. 1, by which change a low sled may be made a high sled. Fig. 6 is a detail of the collar or clip, detached.

This invention relates to improvements in the manufacture of sleds and the novelty consists in the construction of the beam; and in the means for attaching and securing it, to the brace or rave upon the runner; and in the combination of the collar or clip of peculiar structure for the purpose of holding the end of the beam and finally in the construction of the several parts that constitute this device and in their combination as a whole; all as will now be more fully set forth and explained, reference being had to the accompanying drawings.

In this A, denotes the runner of any ordinary sled, one runner only being now shown as that is sufficient in connection with the other parts of the sleigh represented in the drawings to indicate with sufficient clearness to all skilled in this art, the nature and scope of the present invention.

To each of the runners of the sleds is attached in any usual or any ordinary way the knee or rave B, which is preferably of sheet metal. Upon the flattened apex *b*, of this brace knee or rave is placed the metal collar or clip C, where it is sustained by means of its cross pieces *c'*, which rest upon the top *b*, of the brace, its rounded portions *c*, of the collar depending below the brace. In this position the collar or clip is ready for the reception of the end of the beam D, to enable this to be fitted into and held securely in position in the collar or clip, the extreme outer part is made with a bead *d*, which in cross section is three quarters of a circle, the other portion being flat. Inside of this is a groove *d'*. Thus this end is of proper shape and size to fit into the collar or clip C, when it is placed, as above described, upon the top of the knee. But when it is thus ready to be put into the collar or clip, the beam is bottom side up so that the flattened part of the bead at the end will come upon the flat top *b*, of the brace or knee and the rounded part of the bead on the beam will coincide with the rounded opening formed by the depending portion of the collar or clip. Now by a slight pressure the end of the beam can be easily pushed into the clip and when in by turning the beam round into its normal or proper position it will be securely locked in the ring. This happens because the shoulder d^2, formed on the inside of the bead *d*, by the groove *d'*, comes against the edge of the part *b*, of the knee or brace. The groove *d'*, is of the same width as the top *b*, and the fit of the end of the beam is snug and sure. In this position the rounded portions of the collar rest respectively on the beam at the sides of the groove. The beam can only be removed from this lock by reversing the operation by which it was locked in.

If it is desired to raise the sled body to a higher position than it would occupy when the beam is in position as shown in Fig. 1, it is only necessary to reverse the position of the ring on the top of the brace so that its rounded ends shall project upward above the knee as is shown in Fig. 6. To enable the clip to retain this position when so placed and prior to the insertion of the end of the beam in it, the rounded portions of the collar or clip may have a spring action to bind it upon the top of the knee. By this simple change in the position of the collar or clip on the knee a low or high sled may be had.

In securing the several parts starts may be

used if so desired. the same as is common in one beam sleds. So also braces may be extended from the runner to the beam.

In using the term sled above, it is intended of course to use sleighs as well, or bob sleighs.

In the structure above described, there is almost no chance for the beam to split.

As a sled or sleigh the device may other, than as above, be of any ordinary construction and be adapted for the various uses and purposes of sleds or sleighs.

What I claim is—

1. The combination with the runners and knees fixed thereto, of a collar or clip C, reversibly secured upon each knee and the beam arranged across said sled and adapted to engage said collar in either of its two positions, whereby, as may be desired, a high or low sled may be had, substantially as set forth.

2. A sled provided with a knee and having a reversible beam and a reversible collar secured to said knee, whereby the beam may be elevated or lowered relatively to the knee for making a high or a low sled, substantially as set forth.

3. In a sled, the combination with the knee, of a rotatable beam having a head and a groove at each end, one side of said head being cut away and a clip for securing the beam to the knee, the ends of which clip engage with the knee and the middle portion of which is at a distance from the knee substantially equal to the diameter of the grooved portion of the beam, whereby the beam must be partially rotated upon its axis to be locked to the knee, substantially as set forth.

4. A sled, the beam of which has an eccentric head and a groove inside said head at each end, the knee, the top or upper portion of which is straight and is adapted to engage said groove, and the collar C, secured to said knee and having a loop to receive said eccentric head, whereby the end of said beam may be locked to said knee, substantially as set forth.

5. In a sled, the combination with the knee and the beam, of the reversible clip C, comprising the two U-shaped loops united at their ends by the cross pieces c', as set forth.

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

MILO M. RUSSELL.

Witnesses:
JNO. W. SMITH,
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