S. C. SHEPARD.

Sleigh.

No. 102,603. Patented May 3, 1870.

Fig. 1

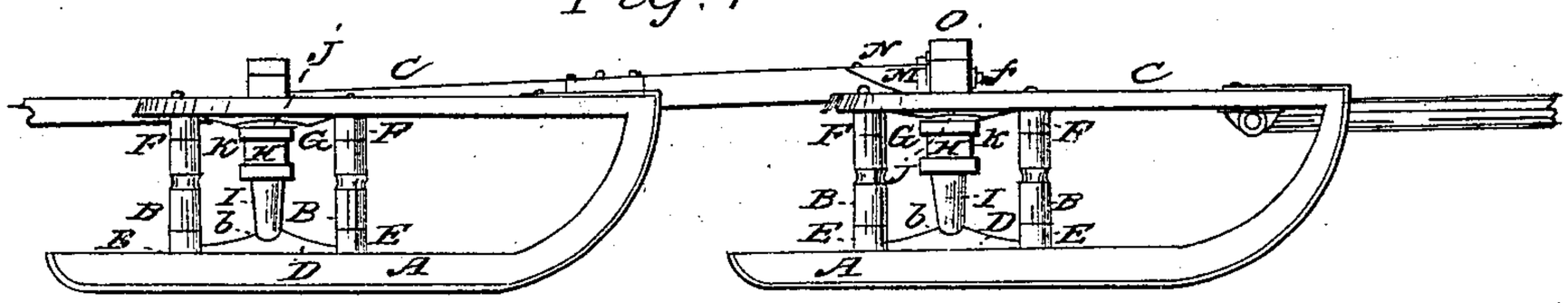
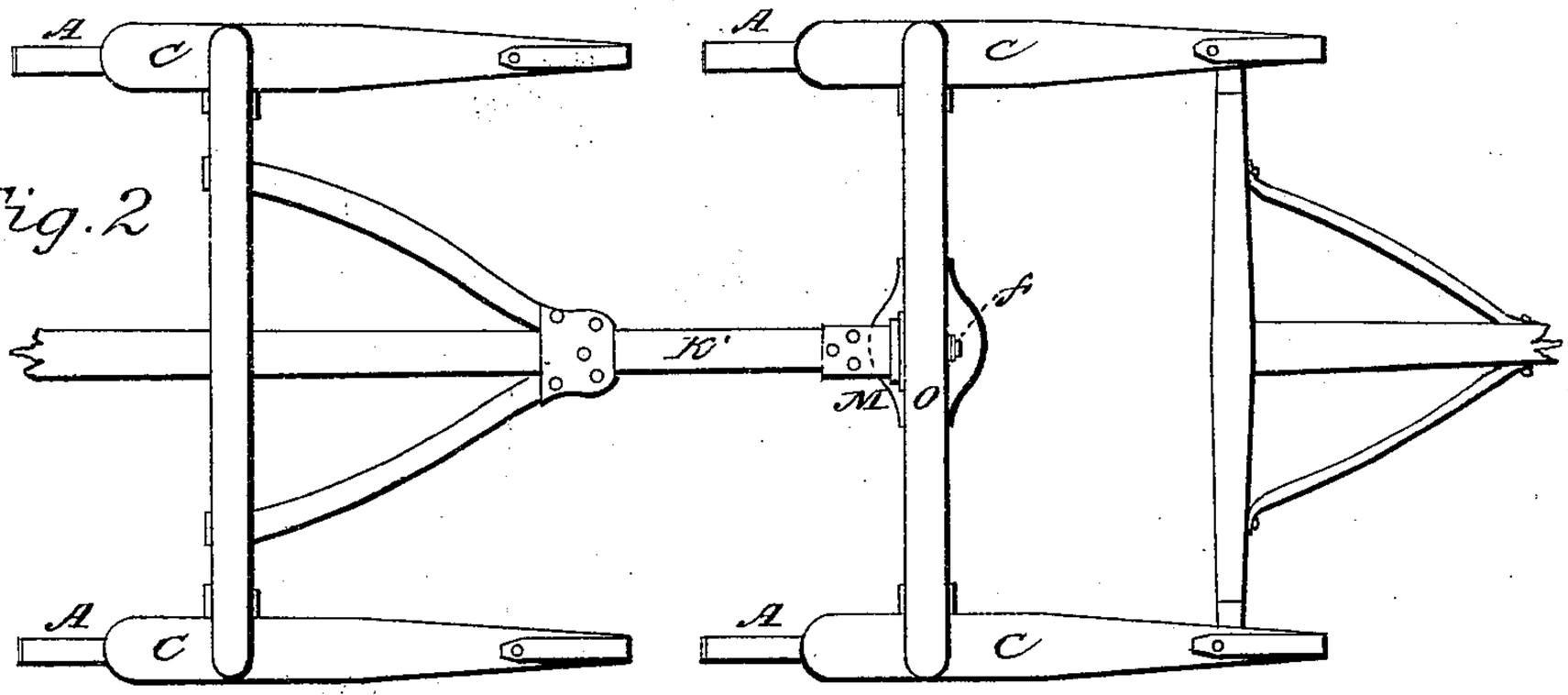


Fig. 2



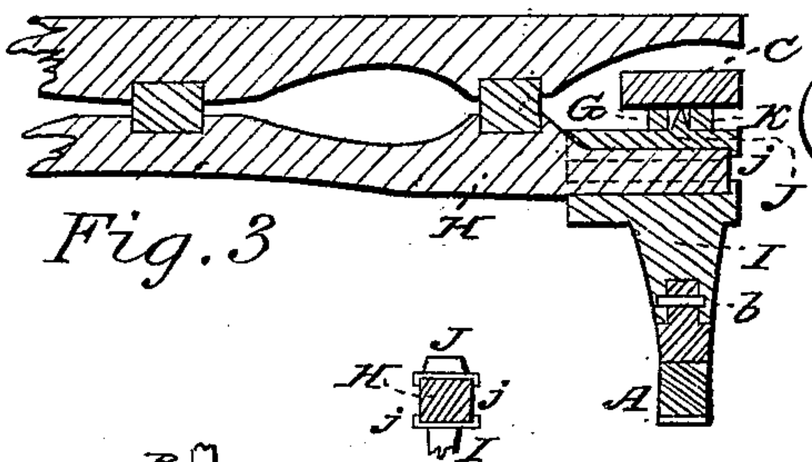


Fig. 3

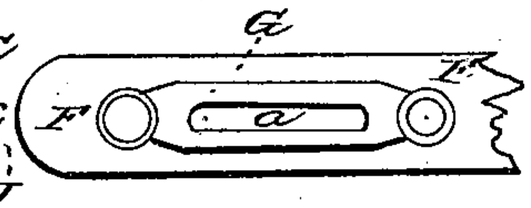


Fig. 4

Fig. 8

Fig. 7

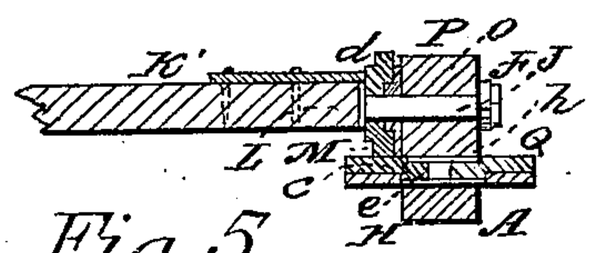


Fig. 5

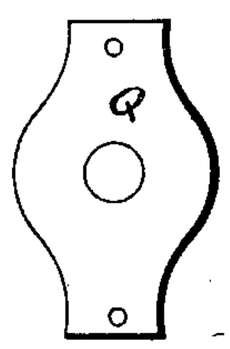


Fig. 6

Witnesses:

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SYLVANDER C. SHEPARD, OF RICHFIELD, OHIO.

Letters Patent No. 102,603, *dated May* 3, 1870.

IMPROVED BOB-SLED.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, SYLVANDER C. SHEPARD, of Richfield, in the county of Summit and State of Ohio, have invented a certain new and improved Sleigh; and I do hereby declare that the following is a full, clear, and complete description of the same, reference being had to the accompanying drawings making part of this specification, in which drawings—

Figure 1 is a side view of the sled;

Figure 2, a view of the top;

Figure 3, a detached vertical section; and

Figures 4, 5, 6, 7, and 8, detached sections.

Like letters of reference refer to like parts in the several views.

This invention relates to the beams of a bob-sled, which are so connected to the runners thereof that they have a vibratory movement in direction of said runners.

It also relates to the manner of connecting the reach to the bolster, so that it may have a rotating movement; and

It further relates to the manner of attaching the bolster to the beam of the sled, by the use of plates, whereby is avoided the use of a king-bolt, passing through the bolster and beam, all of which is hereinafter more especially set forth.

In fig. 1—

A represents the runners of the sled, and

B, the standards, whereon are supported the sides or rails C.

D is a block, at the extreme ends of which is a socket, E, in which are inserted the lower ends of the standards.

The under side of the plate or block D is concaving at *i*, along its entire length, so as to lap onto the top and sides of the runner, as seen in fig. 7. The under side of the plate D may be so changed as to form a recess with a flange on each side of the runner. By this means the parts will be firmly and securely held in place upon the runner.

The upper end is also secured in sockets F at each end of the guide-plate G, a detached view of said plate is shown in fig. 4, in which it will be seen that lengthwise between the sockets is a slot, *a*, the purpose of which will presently be shown.

The beam H, fig. 3, is supported on the runner and attached thereto, and to the rail by means of a standard, I, and plate J.

On the sides and outer end of the head of the standard are flanges *j*, which form a recess to receive the end of the beam H. There is also a similar recess in the plate J, formed by flanges at the sides and outer end, which also receives the end of the beam, as seen in figs. 3 and 8. Thus the ends of the beam are held in place between the plate J and standard I, by means of the flanges when secured together with the beam. This construction aids in forming a firm and strong attachment, preventing the connecting posts from being displaced by the strain to which they are subjected.

The foot of the standard is pivoted in the block D at the point *b*, whereby is obtained to it a vibratory movement in direction of the runners.

To the top of each end of the beam is secured a plate, J, provided with a rib or lug, K, fitted closely but loosely in the slot of the plate G, secured to the under side of the rail immediately over each standard, as shown in fig. 1. Said slot serves as a guide for the longitudinal movement of the standards and beam, and also prevents the runners from spreading laterally from each other. It will be obvious that, by this device, the runners or bobs have a vibratory movement, the pivoted point or axis being at *b*, immediately above the upper edge of the runner, whereas the line of draft is above, near in line with the rails.

By thus giving a vibratory movement to the bobs in the direction specified, and placing the axial point of vibration low down, the bobs will be enabled to run over uneven ground without there being exerted any great degree of strain upon them, as the runners will rise and fall according to the condition of the road, without affecting the rest or position of the weight placed upon them, and, as the line of draft is considably above the pivoted point, the sled will be drawn over ordinary obstructions by the freedom with which the front end of the runners will rise over such obstructions.

The standards I supporting the beam, and upon which the load is borne, will remain unaffected by the pivoted movement of the runners, which will, therefore, run without being greatly strained by the weight of the load.

In order to prevent any twisting of the bobs relatively to each other, I connect the two by a pivoted coupling, consisting of a bolt, J′, fig. 5, one end of which is connected to the reach K′ by means of a head, L, on its extreme end.

M is a collar, attached to the end of the reach by a plate, N.

Said collar incloses the bolt, so as to bring the head thereof between it and the end of the reach, whereas the bolt penetrates the bolster O, and is secured thereto by a nut, *f*.

To the bolster is attached a washer plate, P, fig. 5, provided with a boss, *b*, fitted closely, but loosely, in a recess of the collar M.

It will be obvious that, by this device, a free rotary movement is obtained to the reach, so that the two bobs can move independently of each other without any twisting or wrenching strain being exerted upon either, and, at the same time, the reach it attached to the bolster in a strong and durable manner.

A further improvement consists in the manner of securing the front bolster to the beam, thereby dispensing with the use of a king-bolt—thus: To the under side of the bolster O is attached a plate, Q, fig. 5, of the shape shown in fig. 6. On the lower side of said plate is a boss, *c*, fitted into a recess of a corresponding plate, R, secured to the upper side of the beam. A short pivot, *e*, passes through the center of each plate, and holds them in close relation to a head, *h*, recessed in the upper face of the plate, and the lower end of the pivot is provided with a rivet-head, lodged in a countersink in the under side of the plate R.

By this means the two plates are closely secured to each other, and, each being bolted respectively to the bolster and beam, the two are therefore connected without the use of a king-bolt, and in a much more durable manner, as the bolster and beam are not weakened by having a large hole bored through them for the admission of a king-bolt, in the ordinary way.

It will be obvious that, by this device for connecting the bolster to the beam, there is no restriction to the rotary movement of the bolster, but that it can be turned with equal freedom around in whichever way the direction of the sled may be moved.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The pivoted standard I, block D, and beam H, in combination with the plate J, guide-plate G, standards B, and rails C, constructed and arranged in the manner and for the purpose substantially as set forth.

2. The standard I and guide-plate J, provided with flanges *j*, in combination with the lug K, block D, and guide-plate G, provided with sockets F, constructed and arranged substantially as and for the purpose set forth.

3. The bolt J′, collar M, and plate P, in combination with the plates Q R, pivot *c*, bolster O, and beam H, constructed and arranged in the manner and for the purpose substantially as set forth.

Witnesses: SYLVANDER C. SHEPARD.

W. H. BURRIDGE,

J. H. BURRIDGE.