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H. R. HAWKINS.

Sleigh.

No. 96,589. Patented Nov. 9, 1869.

Fig. 1

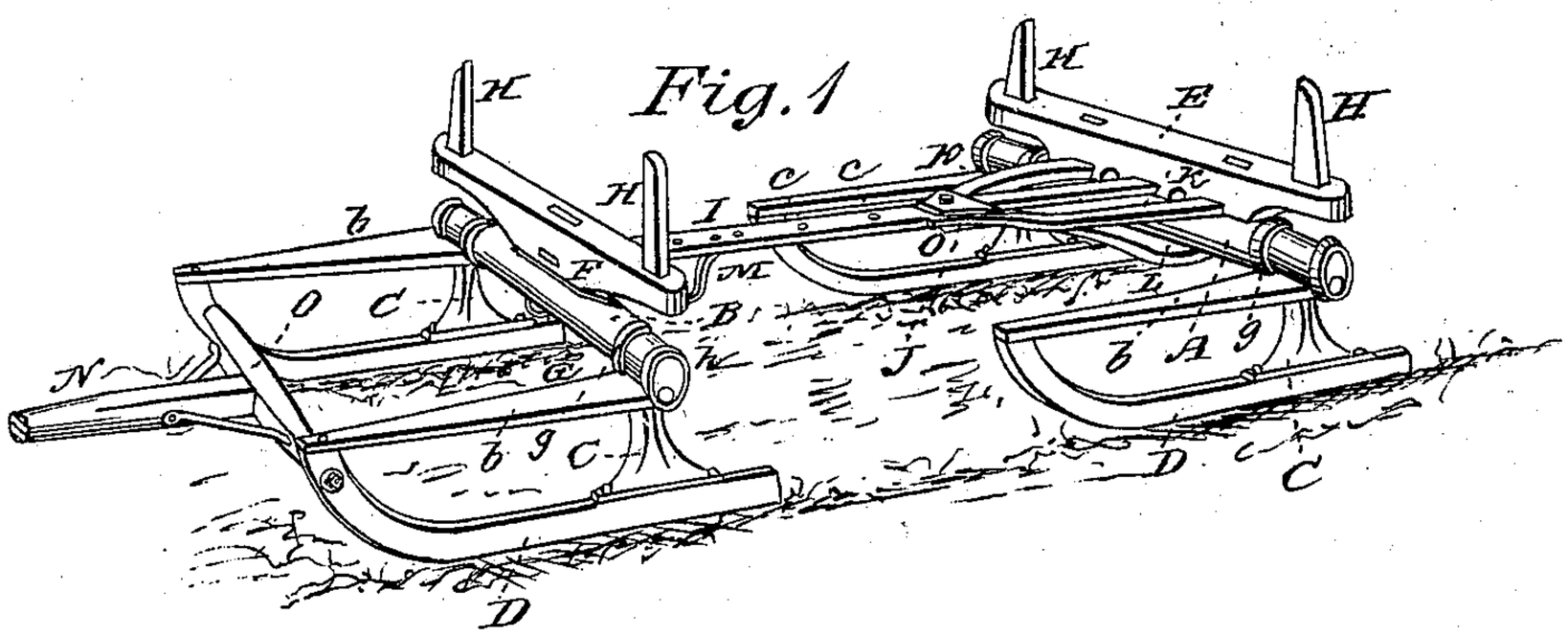


Fig. 2

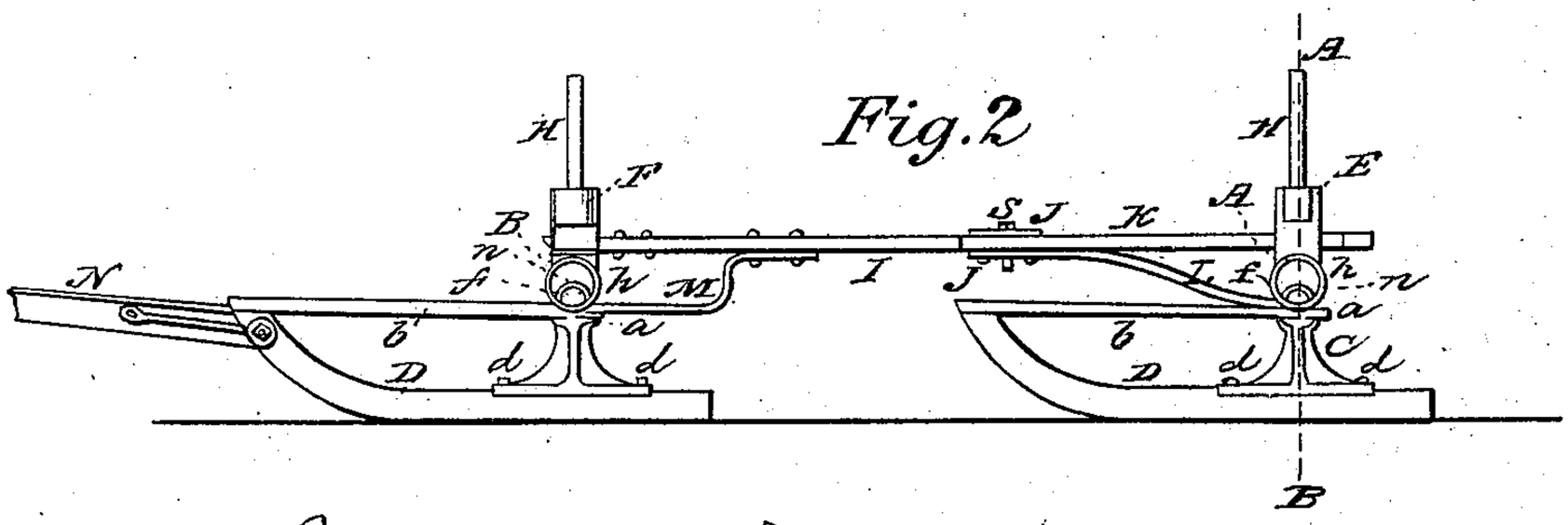
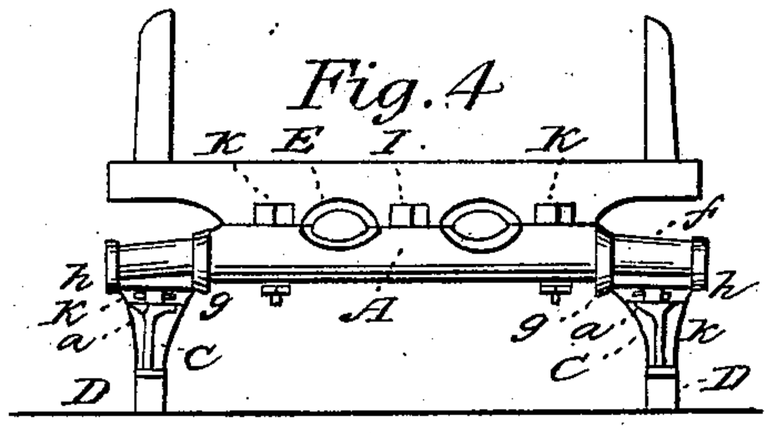


Fig. 4



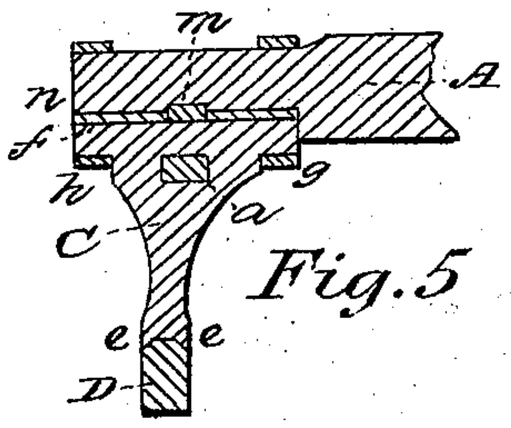


Fig. 5

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2 Sheets—Sheet 2.

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Sleigh.

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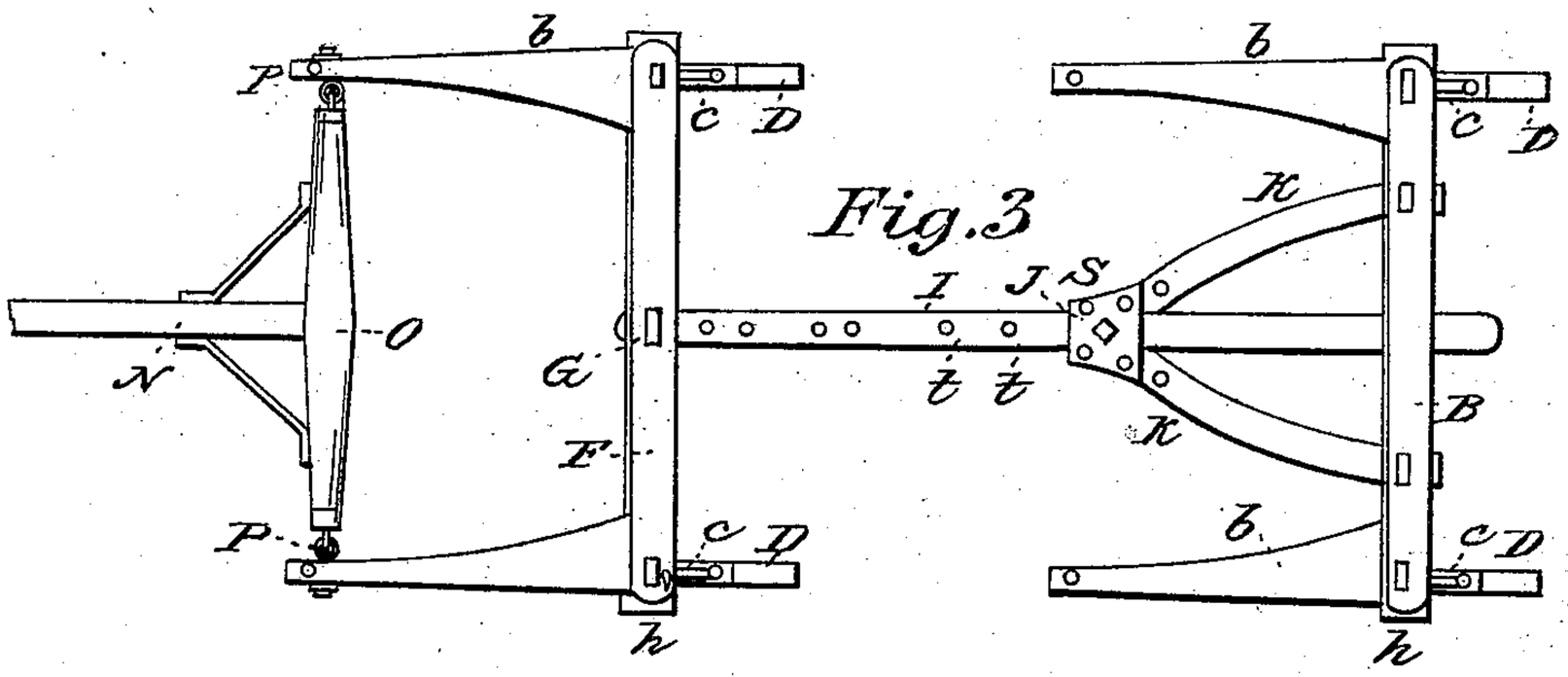

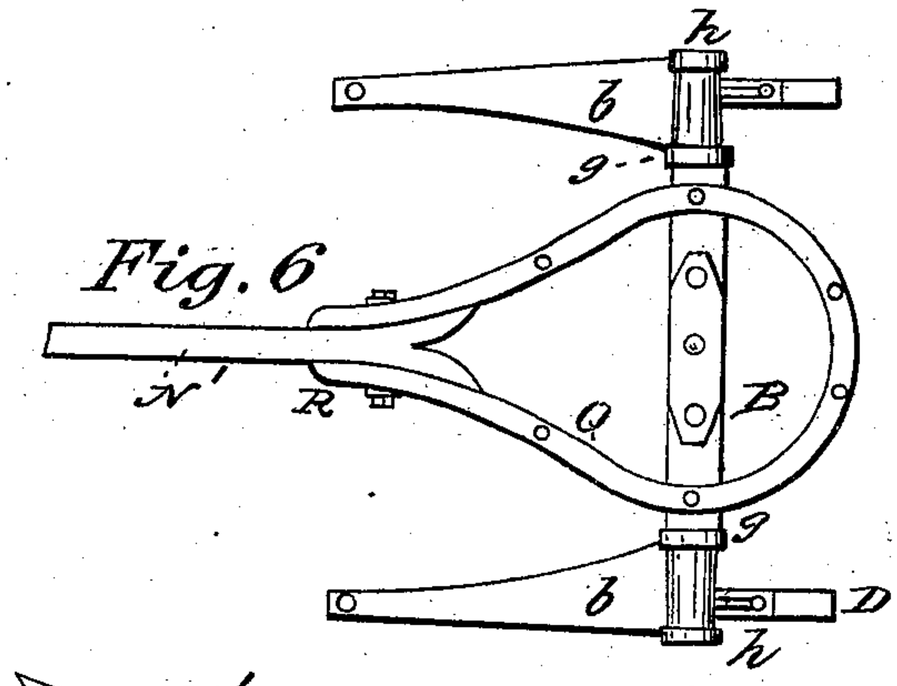

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Letters Patent No. 96,589, *dated November* 9, 1869.

IMPROVEMENT IN SLEDS.

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

Know all men by these presents:

That I, H. R. HAWKINS, of Akron, in the county of Summit, and State of Ohio, have invented certain new and useful Improvements in Sleds; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of my improved sled;

Figure 2 represents a side view of my improved sled;

Figure 3 represents a plan view;

Figure 4 represents a rear view;

Figure 5 represents a section of one of the knees on line A B, fig. 2;

Figure 6 represents a plan view of the forward runners, with a somewhat different attachment of the pole; and

Figure 7 represents a side view of the pole-attachment, shown in fig. 6.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

In the drawings, the part marked A is the rear beam, and B the forward beam, to the ends of which are attached the metallic knees C, by means of which the beams are supported upon the runners D.

The runners D are formed of wood or metal, and are curved up at their forward ends in the usual manner, and have fastened thereto wooden raves, *b*, that extend back to the knees C, to which their rear ends are secured.

The bottom parts or seats of the knees C are made the same width as the thickness of the runners D, upon which they rest, the top corners of the latter being bevelled at an angle of thirty or forty degrees, to receive the flanges *e*, formed at either side along the seat of the knee C, whereby a firm bearing is obtained upon the top of the runners, and at the same time an equally secure bearing laterally.

The knees C are secured to the runners D by screws or bolts *d*, at each end of the seats, and are also provided with cylindrical tops, *f*, of considerable length, which are arranged transversely to the runners D, as shown.

These cylindrical tops are fitted into grooves formed in the lower side of the beams A and B, where they are retained by means of the clasps or bands *g* and *h*, as fully indicated in the drawings.

Small projections, *m*, are formed on the upper side of the cylindrical tops *f* of the knees C, which fit into corresponding depressions in the beams, (see fig. 5,) thereby preventing the knees C from crowding against and displacing the bands *g* and *h*, or the projections may be on the under side of the beams, and corresponding depressions in the top of the knees.

The grooves in the beams are furnished with metallic linings, *n*, to prevent excessive wearing of the parts.

Beneath the cylindrical tops *f* are square holes, formed in the knees C, through which are passed the tenons *a*, on the rear ends of the raves *b*, where they are secured by pins *k*, that are inserted in holes formed for that purpose through the tenons *a*, just back of the knees C.

By the above-described method of construction, it will be seen that the runners are free to rise and fall at their front ends in passing over uneven surfaces.

The raves *b* are made wider at their rear ends, where they rest against the knees C, acting as a brace, thereby forming a very stiff and durable connection.

Upon the rear beam A is mounted a bolster, E, and upon the front beam B, a rocker, F, which is pivoted to the beam B, by a king-bolt, G, suitable metallic plates being attached to the beam and rocker to prevent rapid wearing away of the parts.

The ends of the rocker F and bolster E are bevelled off on their lower sides, thereby leaving sufficient space to lay a pole across from the front to the rear beam, upon which to rest skids when loading logs or lumber, a convenience which has been lacking in sleds as heretofore constructed.

Holes are formed in the ends of the rocker and bolster, in which are placed the stakes H.

The rocker F and bolster E are joined by a reach-bar, I, which is braced at its sides from the bolster E by hounds K, as shown in the drawings.

Metallic plates, J, are secured to the top and bottom of the hounds, between which the reach I passes, and is secured by a bolt, *s*.

By taking out the bolt *s*, the rear portion of the sled may be moved forward or back, to adjust the slide to different lengths, holes, *t*, being formed at different places through the reach, to receive the bolt *s*.

The hounds K are braced by rods L, from the lower side of the beam A, so that the draught will be equally distributed, and from the reach I, a brace, M, extends to the lower side of the beam B, where it is furnished with an eye, to fit on to the lower end of the king-bolt G, and there retained by a key inserted in the end of the bolt G.

The pole N is attached to a cross-bar or roll, O, that is placed across between the forward runners, to which it is secured by ring-bolts, P, one of which is fixed in the end of the roll O, and the other in the runner D, as fully indicated in the drawings.

The pole may also be attached in the manner shown

in figs. 6 and 7, wherein a bow, Q, is framed and braced to the front beam B and the pole N′, pivoted between the forward ends R, as fully shown.

By this arrangement, the forward runners are left free, as is the case with the rear runners, and the weight of the double-trees is placed upon the sled, thereby making the pole very light.

Having described my improvement in sleds,

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

1. The combination of the metallic knees and their cylindrical tops or projections *f*, with the grooved beams A B, (with or without their metallic lining-pieces *n*,) and the clasps or other binding-devices, for holding together said knees and beams, substantially as shown and described.

2. The construction of the metallic knee with a projection to enter a corresponding recess in the beam, or with a recess to receive a corresponding projection on the beam, and with a mortise to receive the tenon of the rave *b*, as and for the purposes described.

3. The combination of the beams and the runners with the metallic knees, connected with and held to said parts, substantially in the manner shown and set forth.

4. The herein-described combination, with the mortised metallic knees, of the tenoned raves *b*, constructed substantially as shown and specified.

5. The combination of metal clasps or bands with the knee and beam, to secure the union of the knee and beam in an independent runner-sled, as shown and described.

H. R. HAWKINS.

Witnesses:
R. S. BEAN,
W. L. CLARKE.