

No. 612,385.

N. HALVARSEN.
SLED.

Patented Oct. 11, 1898.

(Application filed Nov. 26, 1897.)

(No Model.)

Fig. 1

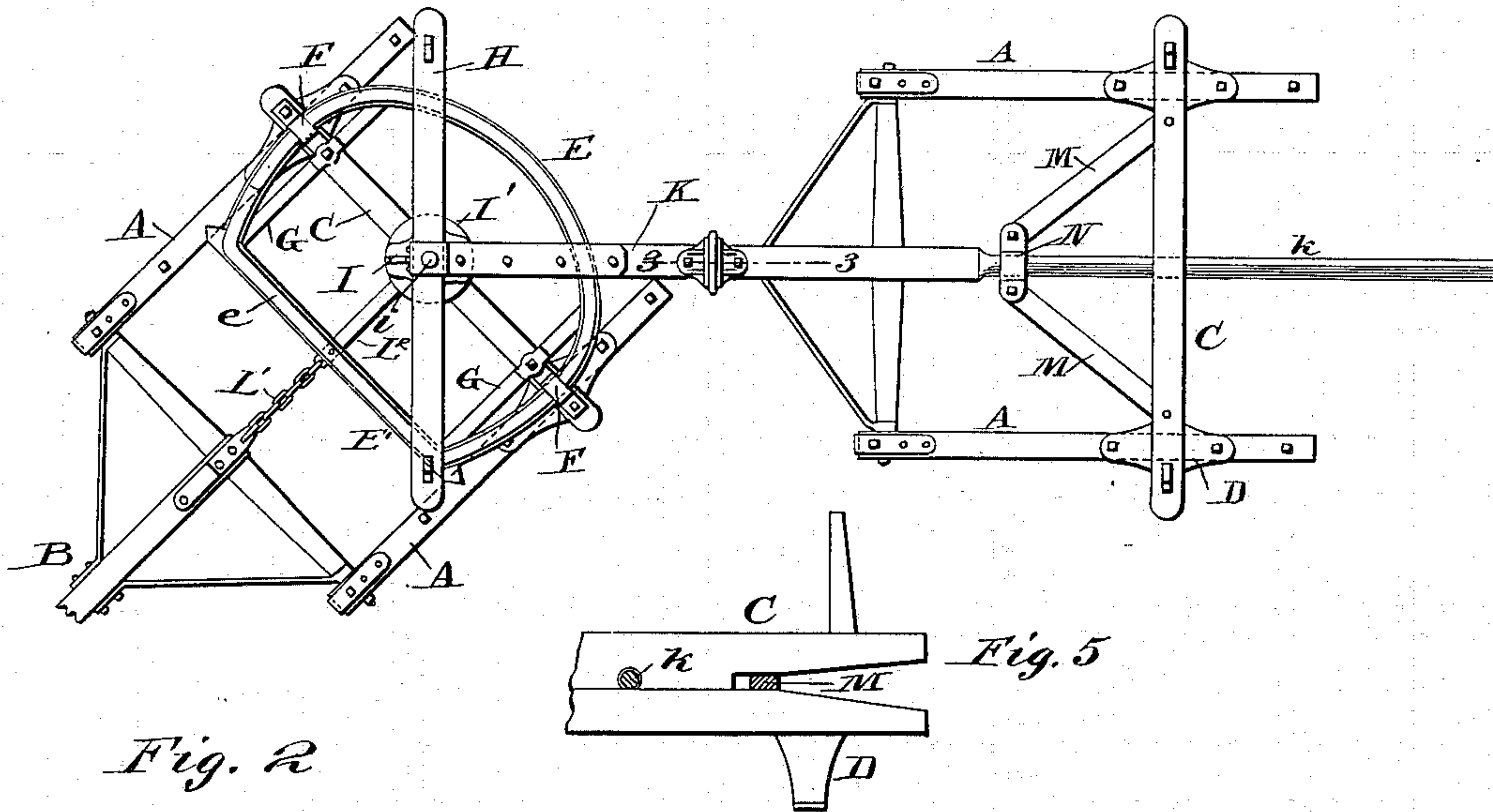


Fig. 2

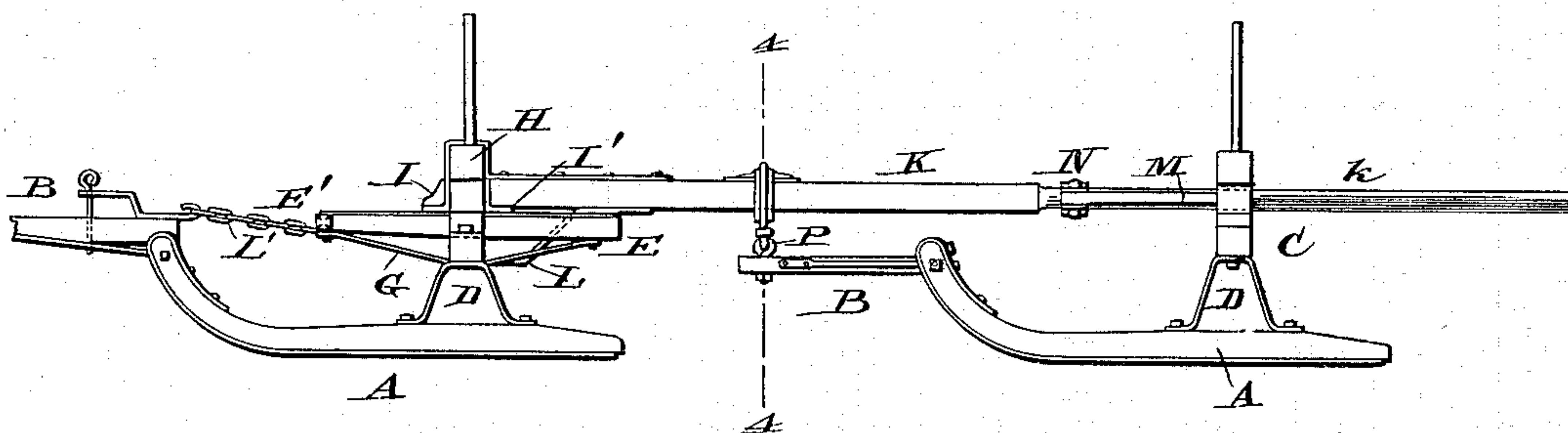


Fig. 3

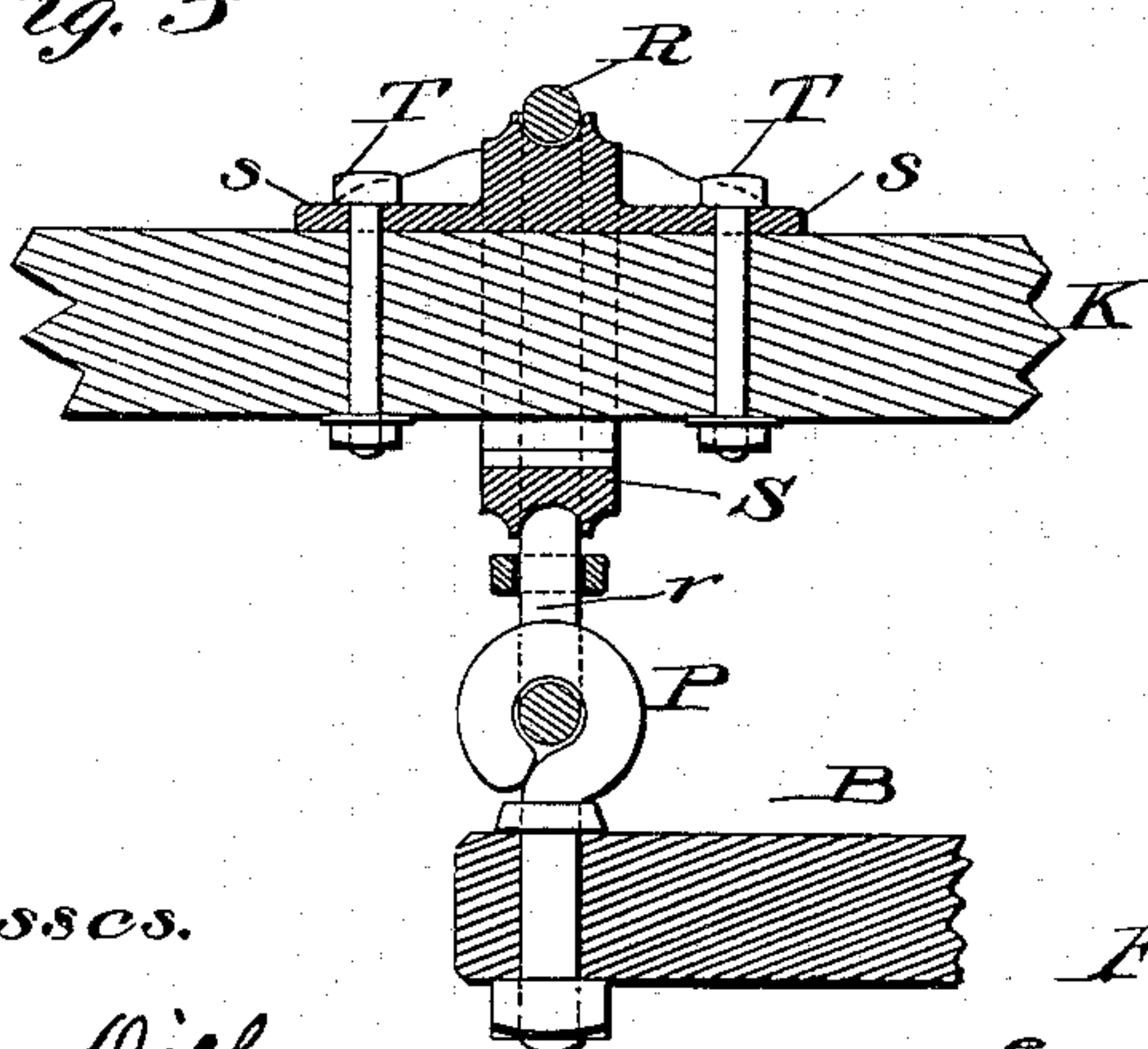


Fig. 4

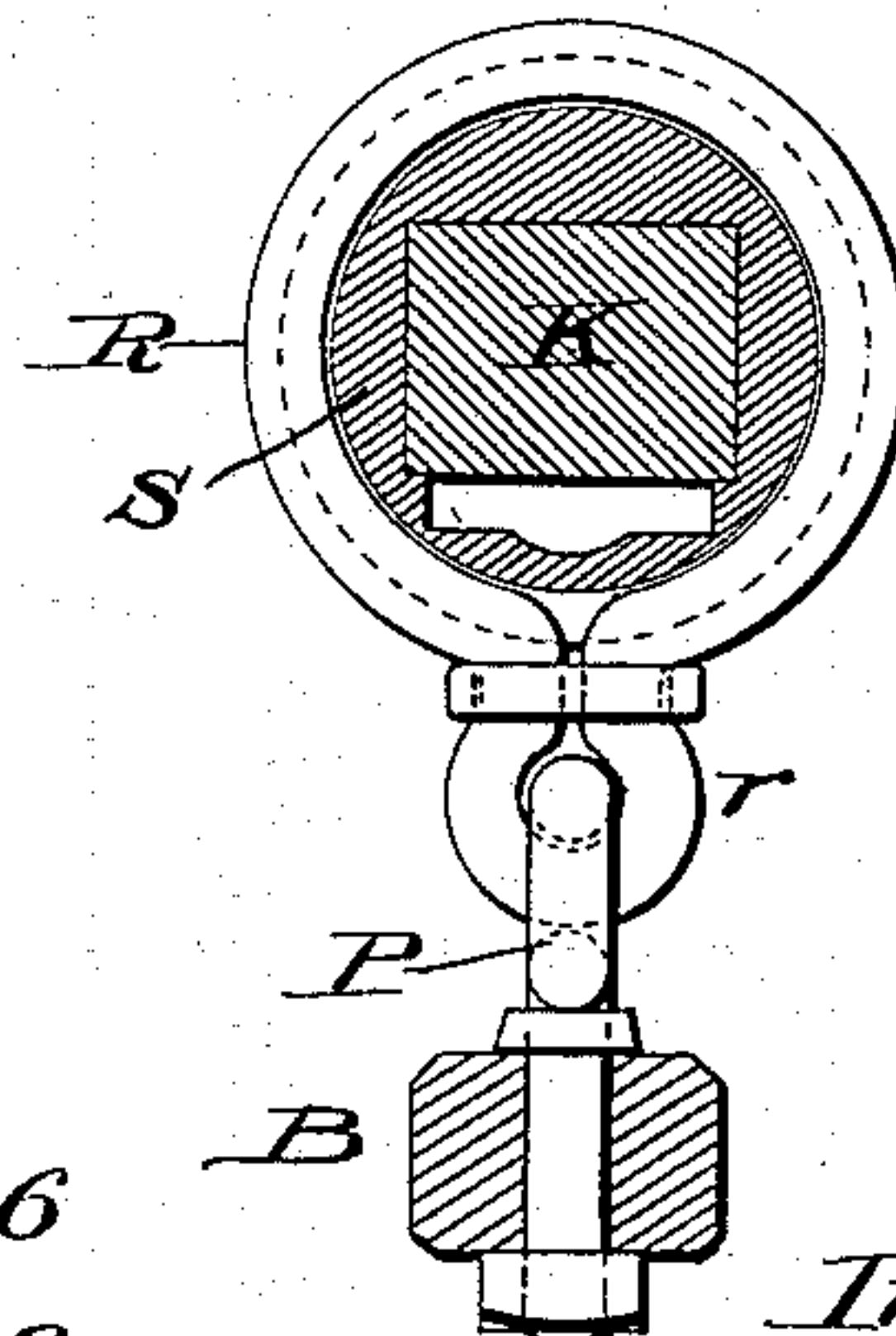
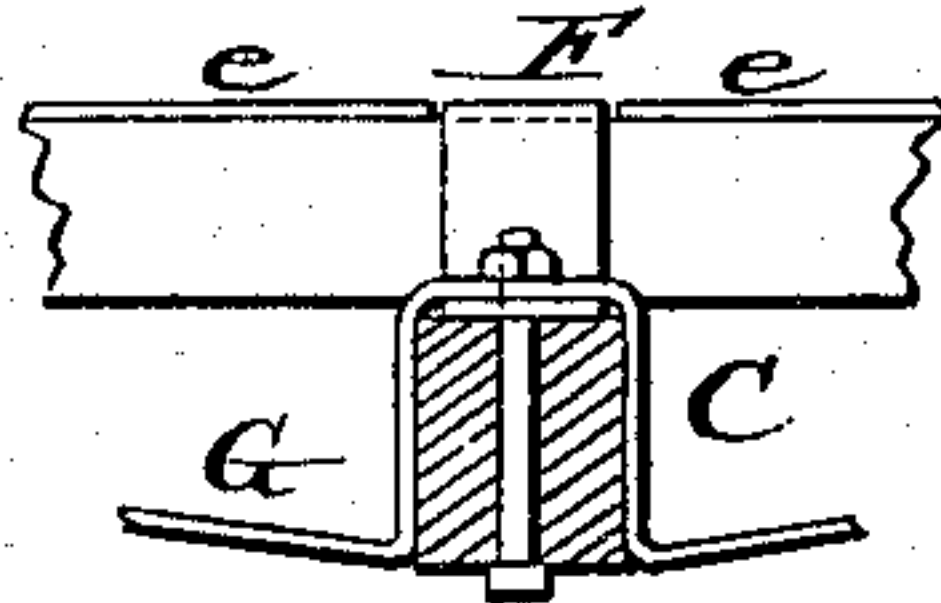


Fig. 6



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UNITED STATES PATENT OFFICE.

NELS HALVARSEN, OF STOUGHTON, WISCONSIN, ASSIGNOR TO THE
STOUGHTON WAGON COMPANY, OF SAME PLACE.

SLED.

SPECIFICATION forming part of Letters Patent No. 612,385, dated October 11, 1898.

Application filed November 26, 1897. Serial No. 659,741. (No model.)

To all whom it may concern:

Be it known that I, NELS HALVARSEN, a citizen of the United States, residing at Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Sleds; 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to sleighs; and its object is to improve the devices which give flexibility of movement to a sleigh composed of bob-sleds, especially what is known as a "single-beam" sleigh. Heretofore in this class of sleighs the ends of the bolster have had nothing to rest on when the sleigh was turned. Hence it was liable to tip, and this has been a constant cause of complaint against this style of sleigh. By my invention I accomplish in a single-beam oscillating-knee sleigh the rigidity formerly possessed only by two and three beam stiff-knee sleighs. I also provide that the two bobs shall have a free relative movement about a longitudinal axis in order that the sleigh may readily accommodate itself to differences of level in the two sides of the road.

This invention consists, first, in a curved hound attached to the bolster of the front bob and serving to support the reach and the front body-bolster, and thereby afford side bearing-points at some distance from the center bearing of the bob.

The invention consists, secondly, in a suitable swivel through which the reach passes and to which is attached the tongue of the rear bob. The rear portion of the reach is rounded and passes through bearings in the hound and bolster of the rear bob. This construction gives the rear bob a swiveling motion on the reach.

In the drawings, Figure 1 is a plan view of a sleigh embodying these improvements. Fig. 2 is a side elevation thereof. Fig. 3 is a longitudinal section of the swivel, on an enlarged scale, on line 3 3, Fig. 1. Fig. 4 is a cross-sectional elevation of the same on line 4 4, Fig.

2. Fig. 5 is a rear elevation of the rear bob. Fig. 6 is a detail.

The two bobs are of any suitable construction, having the usual runners A, pivoted tongues B, and transverse beams C, mounted on knees D. On the beam of the front bob is placed a curved hound E, consisting of a strip of wood bent into a horseshoe curve in a horizontal plane. It lies on the beam C, with its curved central portion to the rear and its arms crossing the beam near the ends of the latter and projecting forward, where they are fastened to a cross-bar E', substantially parallel with the beam. The upper surface of the hound and the cross-bar are protected by a chafe-iron e. Metallic clips F are preferably employed to secure the hound to the beam, and strap-braces G run from the hound to the cross-bar, passing down against the beam and over it. The chafe-iron is cut away where the clips pass over the hound in order to provide a level upper surface for the front body-bolster H to rest and slide upon.

The middle of the front body-bolster is fastened to a casting I, which forms the upper part of the center bearing. The lower part of this bearing is a circular plate I', resting on and secured to the beam C. The reach K is fastened to the casting I at right angles to the body-bolster H and extends rearwardly over the curved hound E. A brace L runs from the lower end of the vertical king-bolt i to the under side of the reach, preferably extending along the reach over the hound E, to serve as a chafe-iron. A chain L' connects the tongue with the strap L², running from the cross-bar E' to the king-bolt. This construction gives the reach and the body-bolster three bearing-points on the curved hound at such distance from the center bearing that the king-bolt is relieved from all lateral strains, and the bob is prevented from tipping sidewise with reference to the load.

The rear portion k of the reach is rounded. The rear bob has a round hole for the reach through the middle of the bolster, and the hounds M are united by a collar N, encircling the rounded reach. The short tongue of the rear bob is provided at its front end with an eyebolt P, engaging with a loop r, depending from a swivel-ring R, which encircles the

reach K. If the reach is not circular in cross-section at this point, a casting S may be used, having a circular periphery grooved to receive the ring R and provided with a central hole to fit the reach. The ring and loop are preferably integral, as shown, being formed from a larger ring by compressing it into the groove in the casting S and shaping the surplus into the smaller ring or loop *r*. A band around the meeting portions of the ring between it and the loop prevents it from opening out under strain. The casting has lugs *s* resting on the reach and fastened thereto by bolts T. With this construction it will be seen that if the rear end of the reach is lifted the rear bob can be swung completely around the reach. This mode of connection therefore provides for the freest possible movement of the rear bob with relation to the reach and the front bob, which are held in position with reference to each other by the curved hound and the front body-bolster.

These improvements in the sleigh render it more durable, better adapted to its work, and more satisfactory in every way without adding materially to its cost.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a bob-sled having a single beam, of a horseshoe-shaped bent wooden hound resting on said beam, its ends to the front, clips straddling said hound about midway of its length and fastening it to the beam, braces passing down against and then over the beam, a chafe-iron secured along the top of the hound, and a reach having a single transverse front body-bolster rigidly connected therewith and resting on said hound substantially as described.

2. The combination with a bob-sled having a single beam, of a horseshoe-shaped bent wooden hound resting about midway of its length on said beam, at points immediately above the runners, clips holding said hound to the beam, braces running parallel with the runners and secured to the beam and the hound, a cross-bar connecting the front ends of the hound, and a reach having a single transverse front body-bolster rigidly connected therewith and resting on said hound substantially as described.

3. The combination with a sleigh-reach having a rounded rear portion, of a rear bob having a forwardly-projecting pivoted tongue and provided with a bearing in its bolster for the reach, a collar surrounding the reach and rigidly uniting the hounds, and a swivel-ring encircling the reach and connected with the end of the tongue.

4. The combination with a sleigh-reach, of a rear bob rotatably mounted on said reach and having a pivoted tongue, a casting secured to the reach and having a circular periphery, and a ring encircling said casting, and attached to the tongue of said bob, substantially as described.

5. An improved sleigh-reach swivel, consisting of a casting S having a hole for the reach and a grooved circular periphery, a ring R received in said groove and provided with a depending loop *r*, and an eyebolt P engaging with said loop, substantially as described.

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

NELS HALVARSEN.

Witnesses:

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WM. C. HEGELMEYER.