

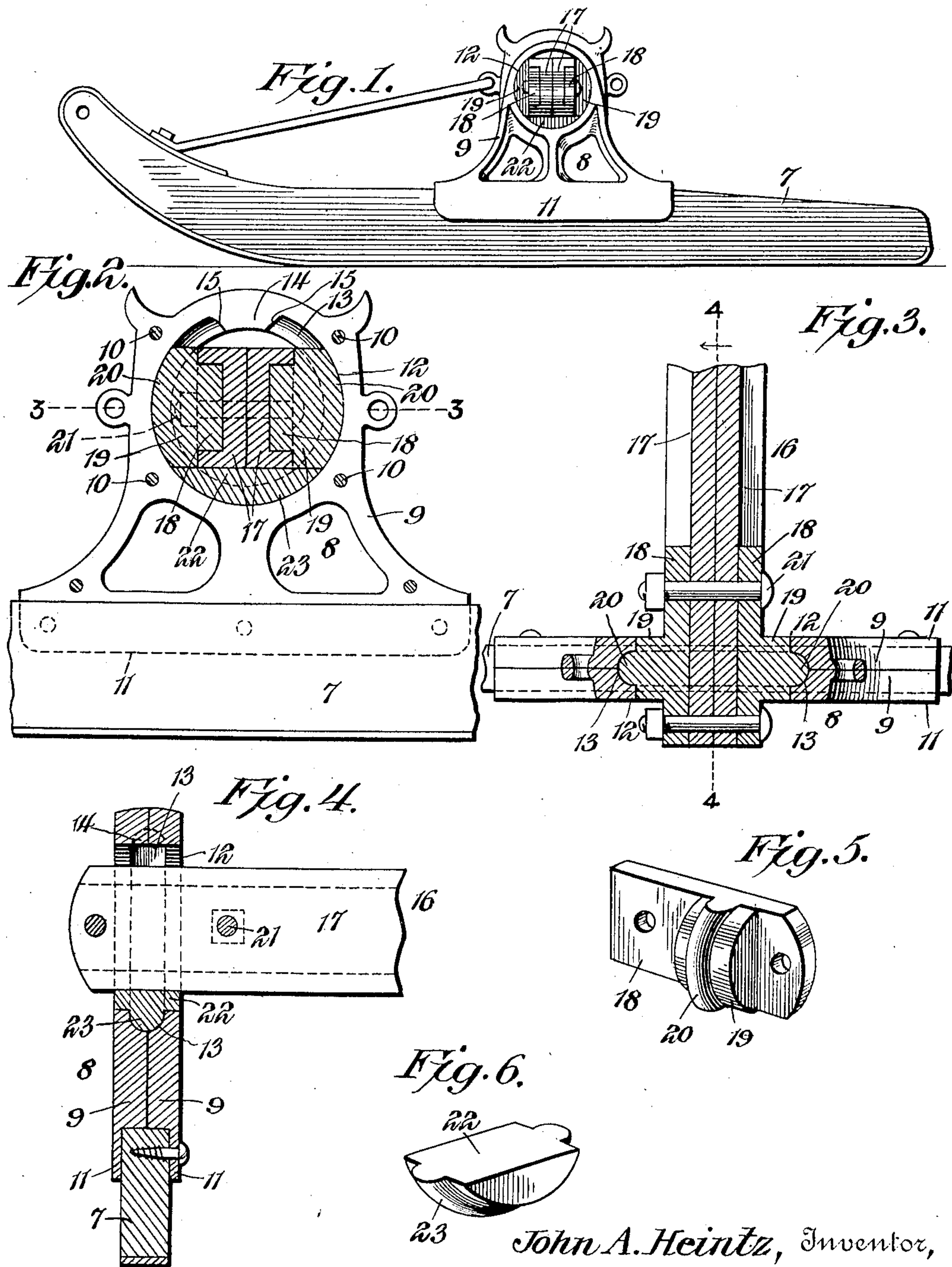
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PATENTED MAY 19, 1908.

J. A. HEINTZ.

SLEIGH KNEE.

APPLICATION FILED NOV. 15, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. HEINTZ, OF MENOMONIE, WISCONSIN.

SLEIGH-KNEE.

No. 888,168.

Specification of Letters Patent.

Patented May 19, 1908.

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To all whom it may concern:

Be it known that I, JOHN A. HEINTZ, a citizen of the United States, residing at Menomonie, in the county of Dunn and State of Wisconsin, have invented a new and useful Sleigh-Knee, of which the following is a specification.

This invention relates more particularly to sleigh knees, and the means for connecting the same to the cross bar of the body frame.

The principal object is to provide a novel and simple connection which will permit the necessary play of the runner when passing over uneven surfaces without straining the parts, said connection being strong and effective, and comprising parts not liable to injury or derangement, said parts furthermore being readily detachable to permit the dismemberment of the structure.

The preferred embodiment of the invention is illustrated in the accompanying drawing, wherein

Figure 1 is a side elevation of a runner showing the improved knee structure applied thereto. Fig. 2 is a vertical sectional view through the same on an enlarged scale. Fig. 3 is a horizontal sectional view, on the line 3—3 of Fig. 2. Fig. 4 is a sectional view on the line 4—4 of Fig. 3. Fig. 5 is a detail perspective view of one of the journal sections. Fig. 6 is a similar view of the wear section.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

In the embodiment illustrated, the runner is designated 7, and may be of any suitable shape and structure. Mounted thereon is a knee bracket 8, composed of sections 9 riveted or otherwise secured together, as shown at 10. Instead of the sectional structure, the bracket may be formed of a single piece. Said bracket is provided with depending runner embracing flanges 11, and in its upper portion is formed a substantially circular bearing 12 in the form of a ring. This bearing is provided with an intermediate groove 13, formed partially in both of the sections, as shown in Fig. 3, and a lug 14, projecting downwardly into the upper portion of the bearing across the groove 13, forms stop shoulders 15.

The cross bar 16 forming a part of the sleigh frame, is employed. Said cross bar in the present instance, is composed of channel beams 17 arranged flat against each other,

though a single piece bar may be employed if desired. The said cross bar extends through the bearing and constitutes a spreader that is located between a pair of journal sections interlocked in said bearing. These journal sections consist of plates 18 having enlarged curved portions 19 that are located within the bearing, and have curved ribs 20 engaged in the groove on opposite sides of the stop lug 14. A bolt 21 passes through the plates 18, and the cross bar 16 and serves to hold the various parts in position. A wear section 22 is located in the lower portion of the bearing beneath the cross bar and the journal sections, said wear section bridging the joints between the same and having a rib portion 23 engaged in the groove.

It will be apparent that with this structure, the runners and knee bracket can rotate freely on the journal and with respect to the cross bar, so that said runner can pass over uneven surfaces without placing the strain upon the parts. The greater part of the wear is brought upon the wear section 22. This portion may be replaced when worn without the necessity of an entirely new structure. To remove the runner, and knee bracket from the cross bar, it is only necessary to detach the bolt 21, whereupon the bearing with the wear and journal sections can be slipped from the end of said cross bar. With the cross bar removed, it will be apparent that the journal sections can be brought together, thereby displacing the rib portions 20 from the groove and permitting the detachment of said sections. To assemble the parts, it is only necessary to reverse the above described operation. This structure affords a simple and effective connection, and one that is not liable to injury or derangement.

From the foregoing, it is thought that the construction, operation, and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a sleigh, the combination with a

knee bracket having a bearing, of a journal rotatably fitted in the bearing and comprising sections movably engaged therewith, and a wear section located in and engaging the bearing, said wear section bridging the joint between the journal sections.

2. In a sleigh, the combination with a knee bracket having a bearing, of a journal rotatably fitted in the bearing and comprising sections movably engaged therewith, a spreader located between the journal sections, and a wear section located below the journal sections and spreader and bridging the joint between the same.

3. In a sleigh, the combination with a knee bracket comprising sections having depending runner embracing flanges, each of said sections having an upper continuous circular bearing portion, said bearing portions when secured together forming an intermediate groove, of a journal rotatably fitted in the bearing and comprising sections having curved rib portions that operate in the groove, and a spreader located between and secured to the journal sections for maintaining the ribs in said groove.

4. In a sleigh, the combination with a knee bracket having lower runner engaging means, and an upper continuous and substantially circular bearing provided with an intermediate groove, of a journal rotatably fitted in the bearing and comprising spaced sections having outer curved ribs rotatably mounted in the groove, a spreader located between the sections, and a stop arranged in the groove between the ribs of said section.

5. In a sleigh, the combination with a knee bracket having depending runner embracing flanges, and an upper substantially circular bearing provided with an inner groove, said bracket having a stop located in the groove, of a journal comprising sections arranged in the bearing and having rib portions engaged in the groove on opposite sides of the stop, and a cross bar comprising channel beams arranged together and disposed between the journal sections, said channel beams and journal sections being secured together.

6. In a sleigh, the combination with a knee bracket including a continuous bearing in the form of a ring, of a cross bar having a portion arranged within and surrounded by the bearing, plates secured to opposite sides of the cross bar and having curved enlargements that movably interlock with the bearing, and a wear plate located in the bearing beneath the cross bar and the enlargement of the plates.

7. In a sleigh, the combination with a knee bracket having a substantially circular bearing, of a journal engaged in the bearing and comprising sections detachably secured together against relative movement and re-

movable from the bearing when detached, and a wear section located beneath said journal sections and bridging the joint between them.

8. In a sleigh, the combination with a runner, of a knee bracket having an upper substantially circular bearing provided with a stop, a cross bar extending into said bearing, journal sections secured to opposite sides of the cross bar and having enlargements that interlock with the bearing, and a wear plate located in the bearing beneath the journal sections and the cross bar and bridging the joint formed thereby.

9. In a sleigh, the combination with a knee bracket including a substantially continuous ring bearing, of a cross bar comprising channel beams arranged together, and plates fitted in the channels of the beams and detachably secured thereto, and having curved enlargements that movably interlock with the bearing.

10. In a sleigh, the combination with a runner, of a knee bracket having an upper circular and substantially continuous bearing in the form of a ring provided with a stop, a cross bar extending into and surrounded by said bearing, journal sections secured to opposite sides of the cross bar and interlocking with the bearing, and a wear plate located in the bearing beneath the cross bar and journal sections, said bar and sections resting upon the wear plate.

11. In a sleigh, the combination with a knee bracket comprising sections having depending runner embracing flanges, each of said sections having an upper substantially continuous circular bearing portion, of a journal rotatably fitted in the bearing portions and comprising sections movably interlocked with opposite sides of the same, and a spreader located between the sections and maintaining the same in said interlocked engagement.

12. In a sleigh, the combination with a knee bracket comprising sections having depending runner-embracing flanges, each of said sections having an upper substantially continuous circular bearing portion, of a journal rotatably fitted in the bearing portions and comprising sections movably interlocked with opposite sides of the same, a spreader located between the sections and maintaining the same in said interlocked engagement, and means for securing the journal sections and spreader together.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN A. HEINTZ.

Witnesses:

N. BURCH,
G. E. SMITH.