

No. 622,981.

Patented Apr. 11, 1899.

E. B. SMITH.
FIFTH WHEEL.

(Application filed Oct. 28, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

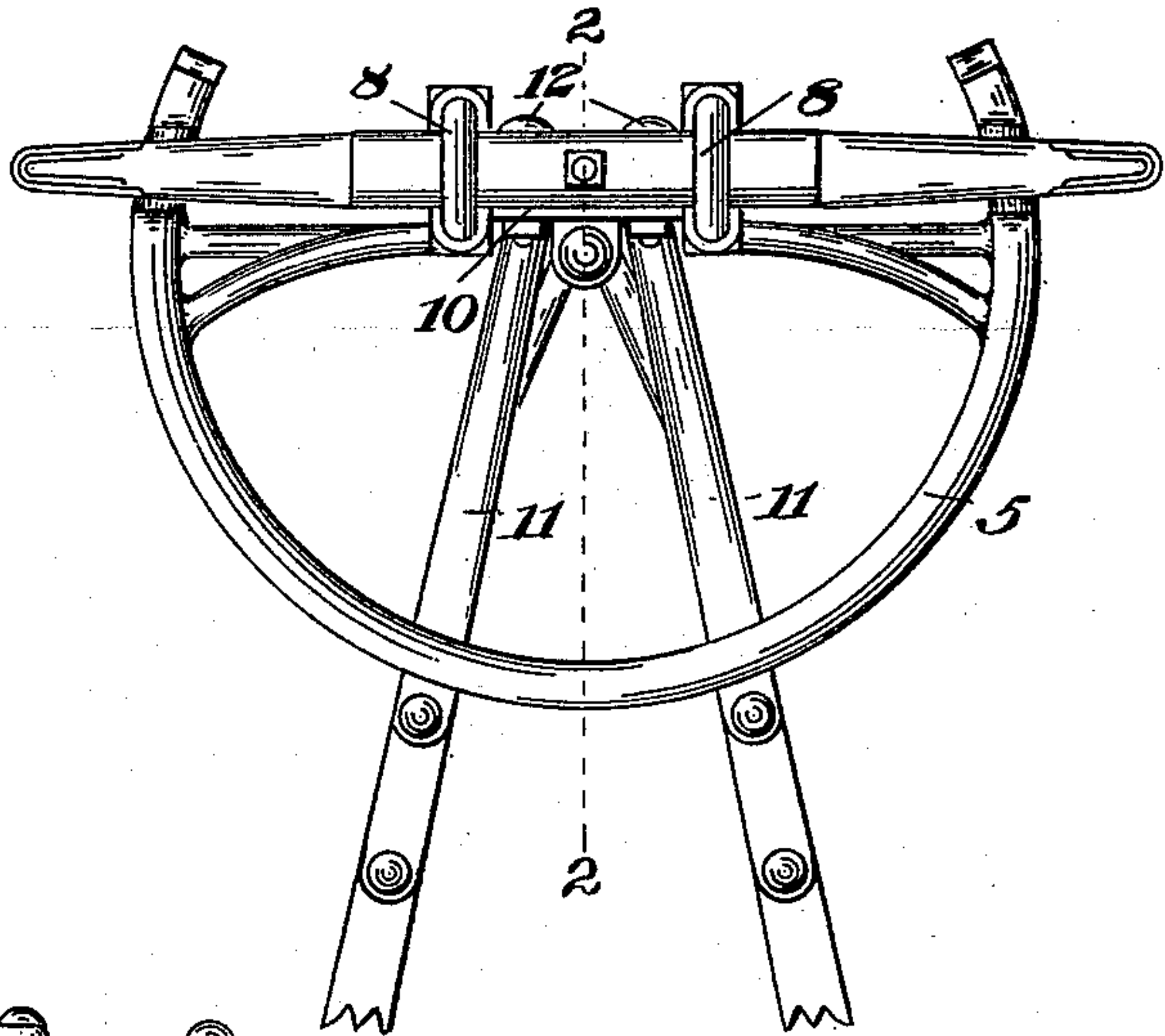


Fig. 2.

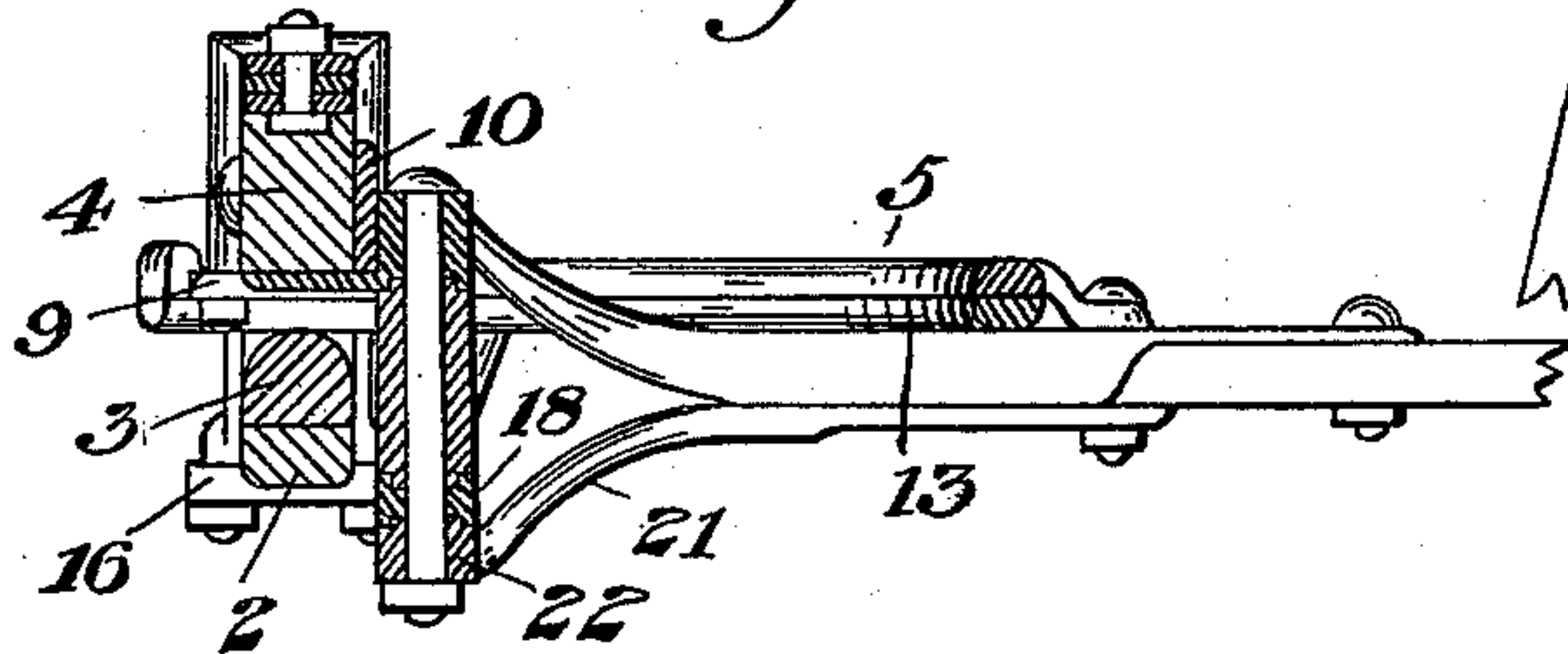


Fig. 5.

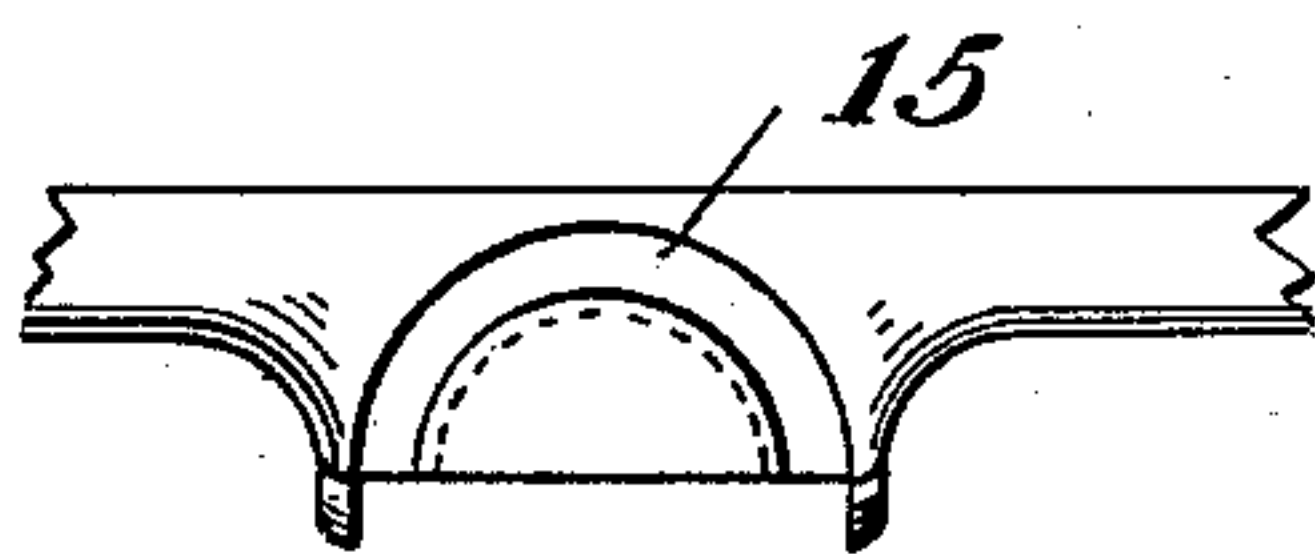


Fig. 3.

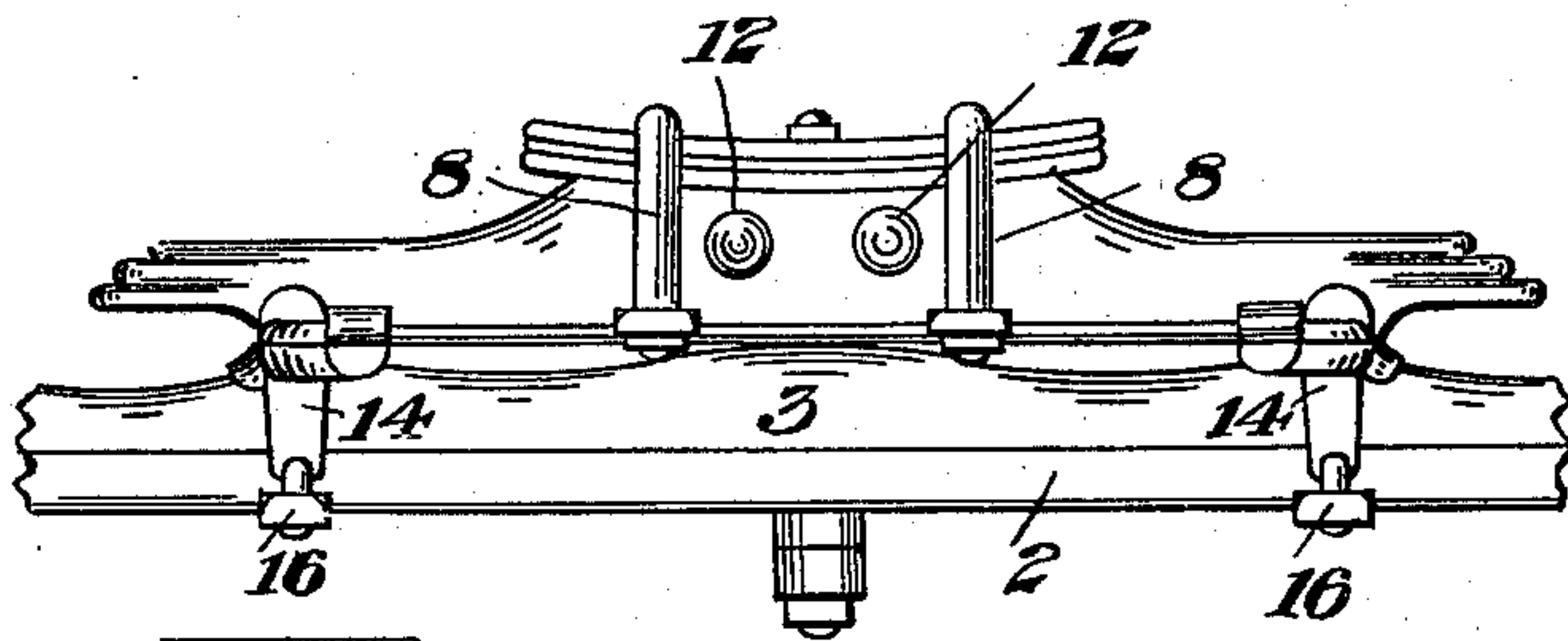
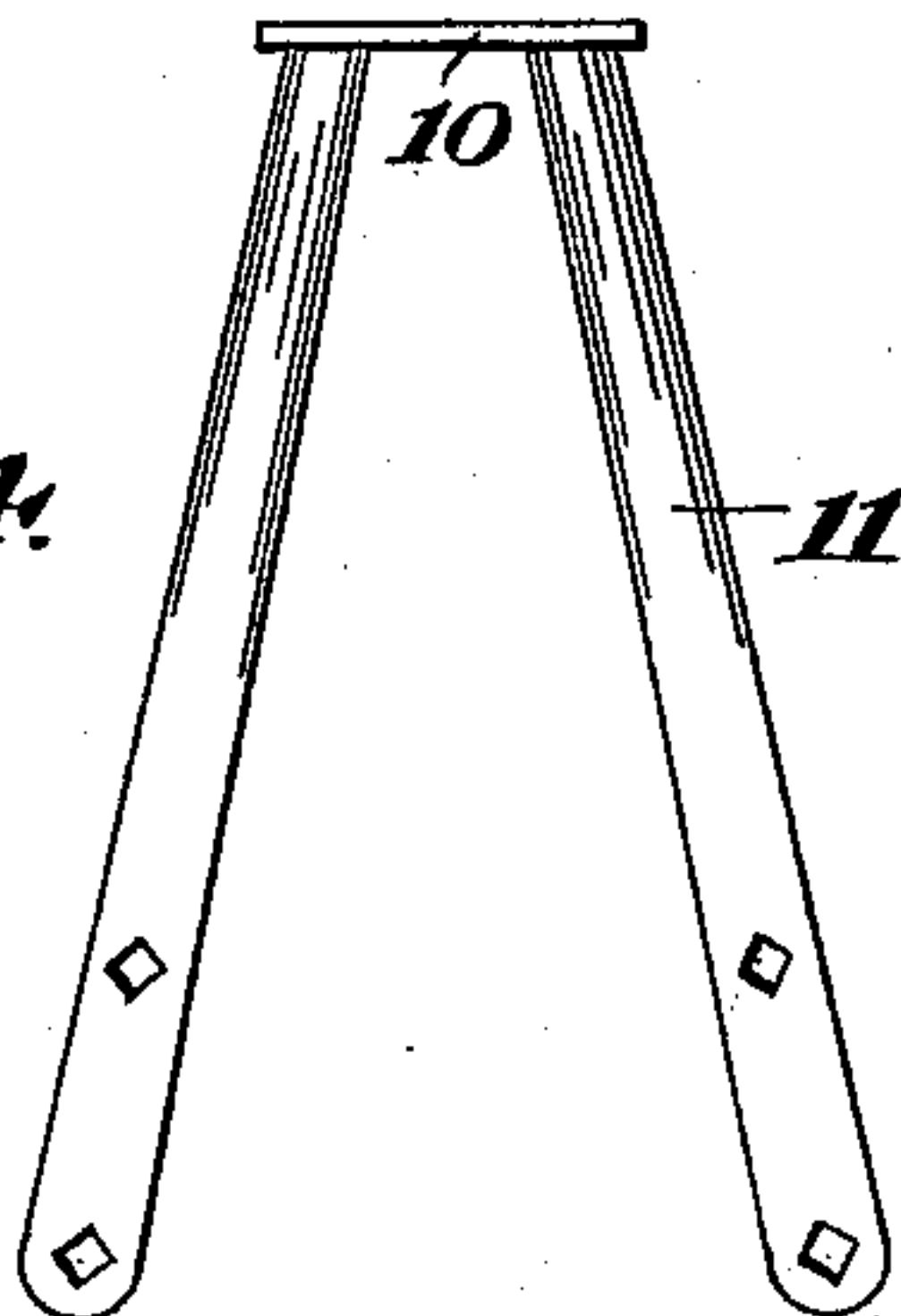


Fig. 4.



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Fig. 6.

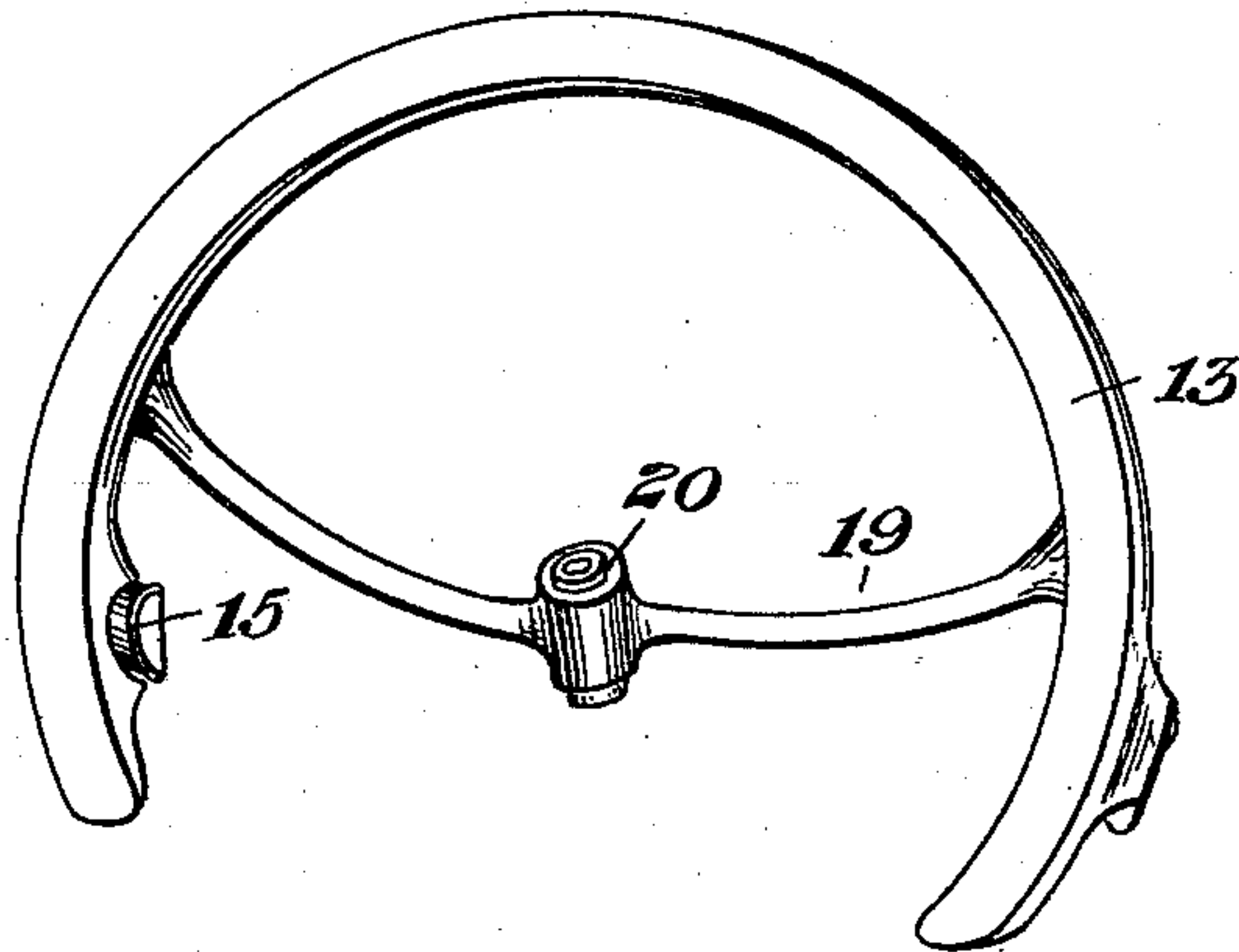


Fig. 7.

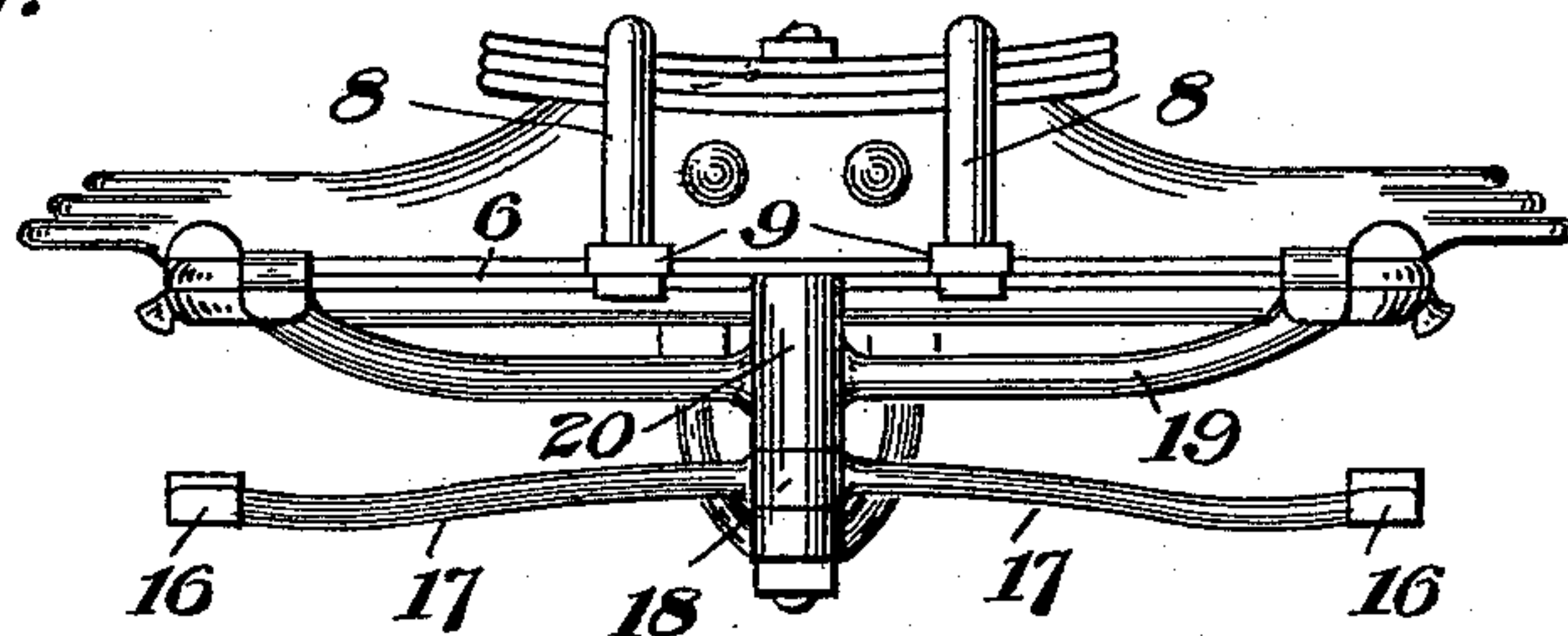


Fig. 8.

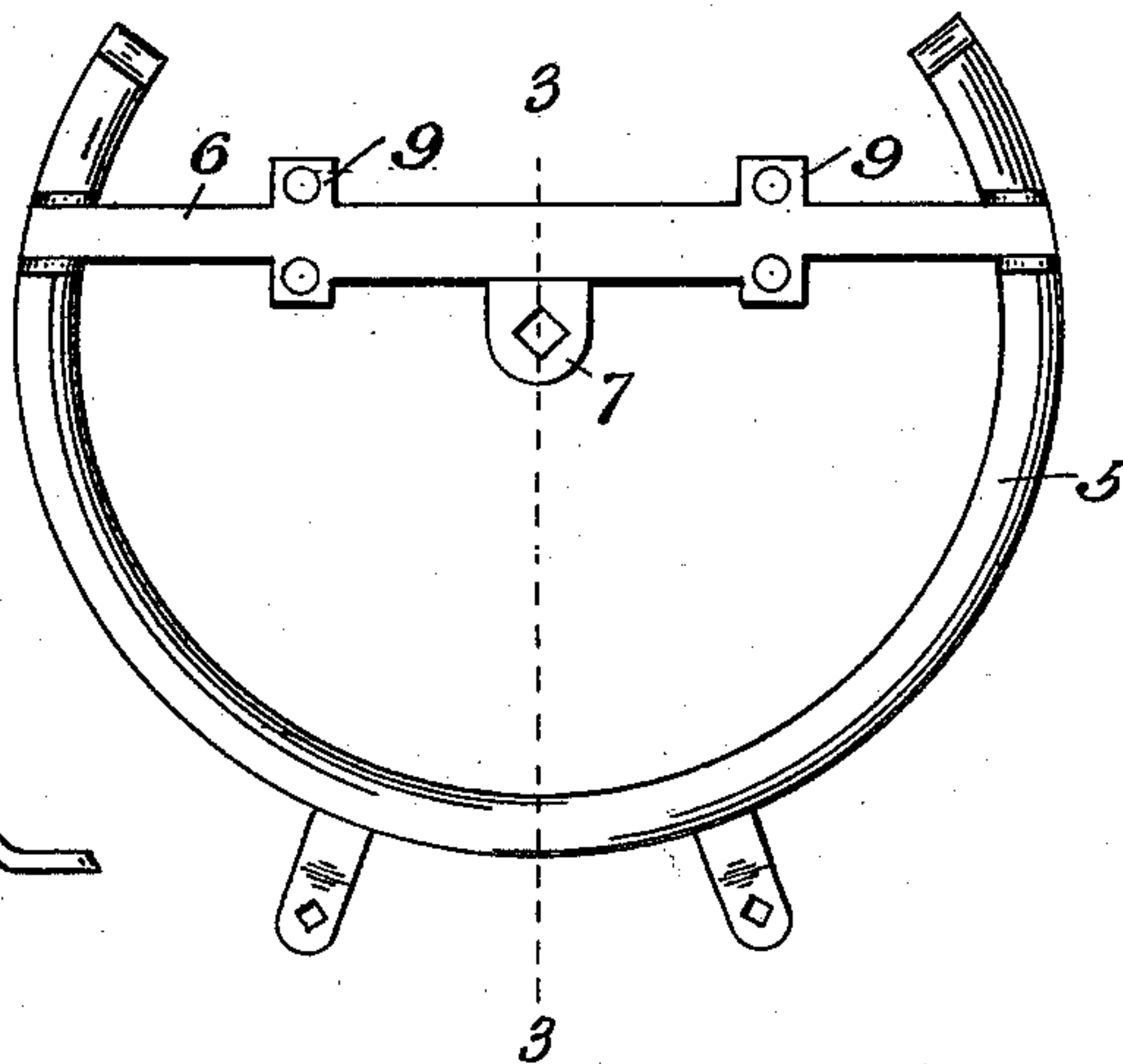
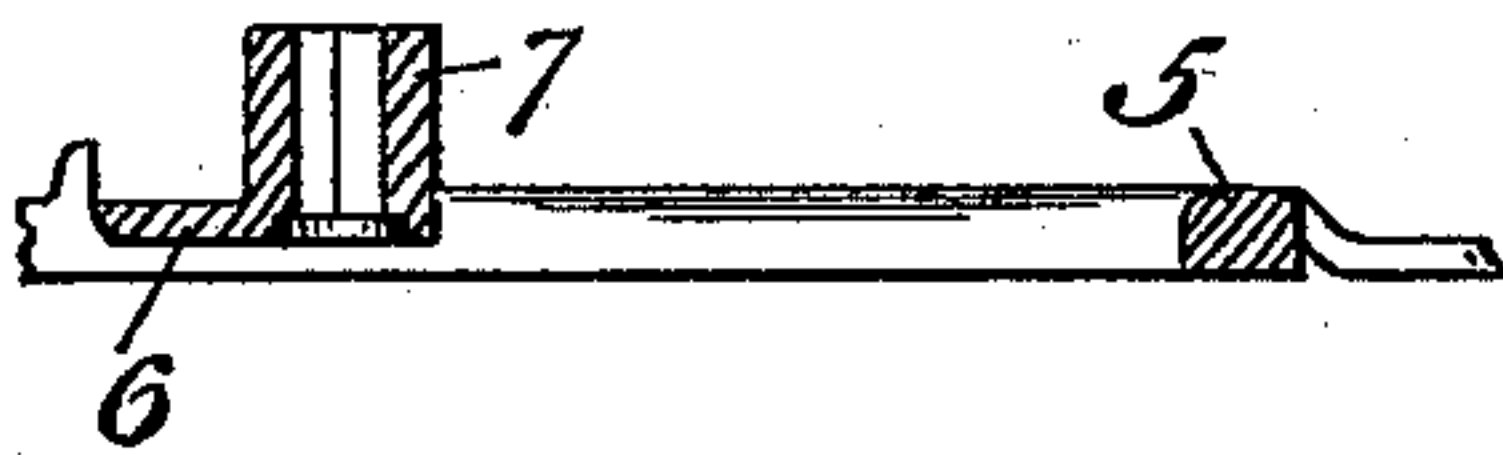


Fig. 9.



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UNITED STATES PATENT OFFICE.

EZRA B. SMITH, OF CINCINNATI, OHIO.

FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 622,981, dated April 11, 1899.

Application filed October 28, 1898. Serial No. 694,835. (No model.)

To all whom it may concern:

Be it known that I, EZRA B. SMITH, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Fifth-Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a plan view of my improved fifth-wheel, showing the rear braces. Fig. 2 is a cross-section on the line II II of Fig. 1. Fig. 3 is a front elevation. Fig. 4 is a top plan view of the upper perch-irons. Fig. 5 is a broken detail showing the recess of the lower circle for receiving the clip. Fig. 6 is a perspective view of the lower circle. Fig. 7 is a front elevation showing the axle-cap and axle removed. Fig. 8 is a top plan view of the upper circle, and Fig. 9 is a section on the line III III of Fig. 8.

My invention relates to fifth-wheels; and it consists in certain new constructions and arrangements of the circle-plates, the perch-irons, and the other parts, as hereinafter more fully described, and set forth in the claims.

In the drawings, 2 represents the axle, 3 the axle-bed, and 4 the head-block.

5 is the top circle-plate, having the connecting-plate 6, which in its central portion is widened and at its center is provided with the integral upwardly-projecting king-bolt socket 7. The front face of this socket is flat, and when it is secured to the head-block by the usual clips 8 8, passing through holes in the lugs 9, a space is left between the rear face of the head-block and the flat face of the king-bolt socket, into which fits the plate 10 at the front end of the top perch-iron 11, this plate 10 being secured by bolts 12, extending through the head-block or bolster. The upper perch-iron is thus made independent of the king-bolt device, allowing the perch to be put on after the gear is assembled, which is of special advantage for large manufacturers.

15 The lower circle-plate 13, which is shown in Fig. 6, is fastened to the axle by U-shaped clips 14, which fit within semicircular recesses 15, as shown in Fig. 5, and the legs of which pass through holes in plates 16, secured to brace-arms 17, extending from a collar 18, through which the king-bolt extends. The

lower circle-plate, by reason of these connections and its connecting-bars 19, which extend to a collar 20, surrounding the king-bolt, may be made without a plate extending between the axle connections, thus allowing the manufacturer to cut away the woodwork in any desired way, as shown in Fig. 3. The braces extending from this under circle to the king-bolt obviate the necessity of fastening the king-bolt collar to the axle or the woodwork thereon.

21 is the usual lower perch-iron, having the collar 22, and by which the king-bolt is fastened to the perches.

The advantages of my invention will be apparent to those skilled in the art. The fixing of the king-bolt socket to the upper circle allows the upper perch-iron to be made independently of the king-bolt and applied after the parts are assembled. The widening of the plate extending across the upper circle allows the top perch-iron to rest thereon, so that when the king-bolt is tightened this portion of the plate will serve as a guide to properly position the perch-iron. The braces extending from the lower circle to the king-bolt collar do away with the necessity of fastening this collar to the axle, while the peculiar clip-fastenings of the lower circle allow it to be used without the connecting axle-plate, so that the woodwork may be cut away between the axle connections into any desired shape. The fastening of the clip-ties for the lower circle to the bottom plates having the brace-arm connections with the king-bolt sleeve gives a secure and cheap fastening of the king-bolt to the bottom of the axle.

Many changes may be made in the form and arrangement of the parts without departing from my invention, since

I claim—

1. The combination with an upper circle-plate, having a king-bolt socket secured thereto and arranged to fit in the rear of the bolster, of a perch-iron made independent of the king-bolt socket, and having a plate arranged to be secured to the bolster; substantially as described.

2. The combination with an upper circle-plate, having a connecting-bar provided with a rear king-bolt socket, of a perch-iron having a front plate arranged to fit between the

king-bolt socket and the rear face of the head-block; substantially as described.

3. The combination with an upper circle-plate, having a connecting-bar which is arranged to project rearwardly beyond the back face of the head-block, and provided with a king-bolt socket, of an upper perch-iron having a plate arranged to fit upon the projecting portion of the connecting-bar and rest between the king-bolt socket and the head-block; substantially as described.

4. A fifth-wheel having an upper king-bolt socket secured to the bolster, a lower circle-plate having clip-fastenings near its ends by which alone it is secured to the axle, a lower perch-iron, and collars arranged to surround the king-bolt below the upper socket, all of said collars being secured to the iron-work independently of the axle, whereby the central portion of the axle is unobstructed; substantially as described.

5. A lower circle-plate having near its ends curved recesses arranged to receive U-shaped clips by which it is secured to the axle, said circle having brace-arms connected to a king-bolt collar; substantially as described.

6. The combination with a lower circle-plate, having clip-fastenings near its ends, of a king-bolt sleeve having brace-arms provided

with plates made separate from the lower circle-plate, and to which the lower circle-clips are secured; substantially as described.

7. The combination with a lower circle-plate, having brace-arms connected to a king-bolt collar, of clip-fastenings near its ends, and a lower king-bolt sleeve having brace-arms provided with plates separate from the lower circle-plate, the legs of the lower circle-clips being fastened to these plates; substantially as described.

8. A fifth-wheel having an upper circle-plate provided with a king-bolt socket arranged to fit in the rear of the bolster, a lower circle-plate provided with brace-arms secured to a king-bolt collar below the socket, and a lower king-bolt collar having brace-arms provided with plates secured to the axle; substantially as described.

9. A lower circle-plate having near its ends curved recesses arranged to receive U-shaped clips by which it is secured to the axle; substantially as described.

In testimony whereof I have hereunto set my hand.

EZRA B. SMITH.

Witnesses:

J. C. HARPER,

H. Y. SAINT.