

No. 618,467.

Patented Jan. 31, 1899.

W. KNAPP.  
FIFTH WHEEL.

(Application filed Oct. 17, 1898.)

(No Model.)

Fig. 1

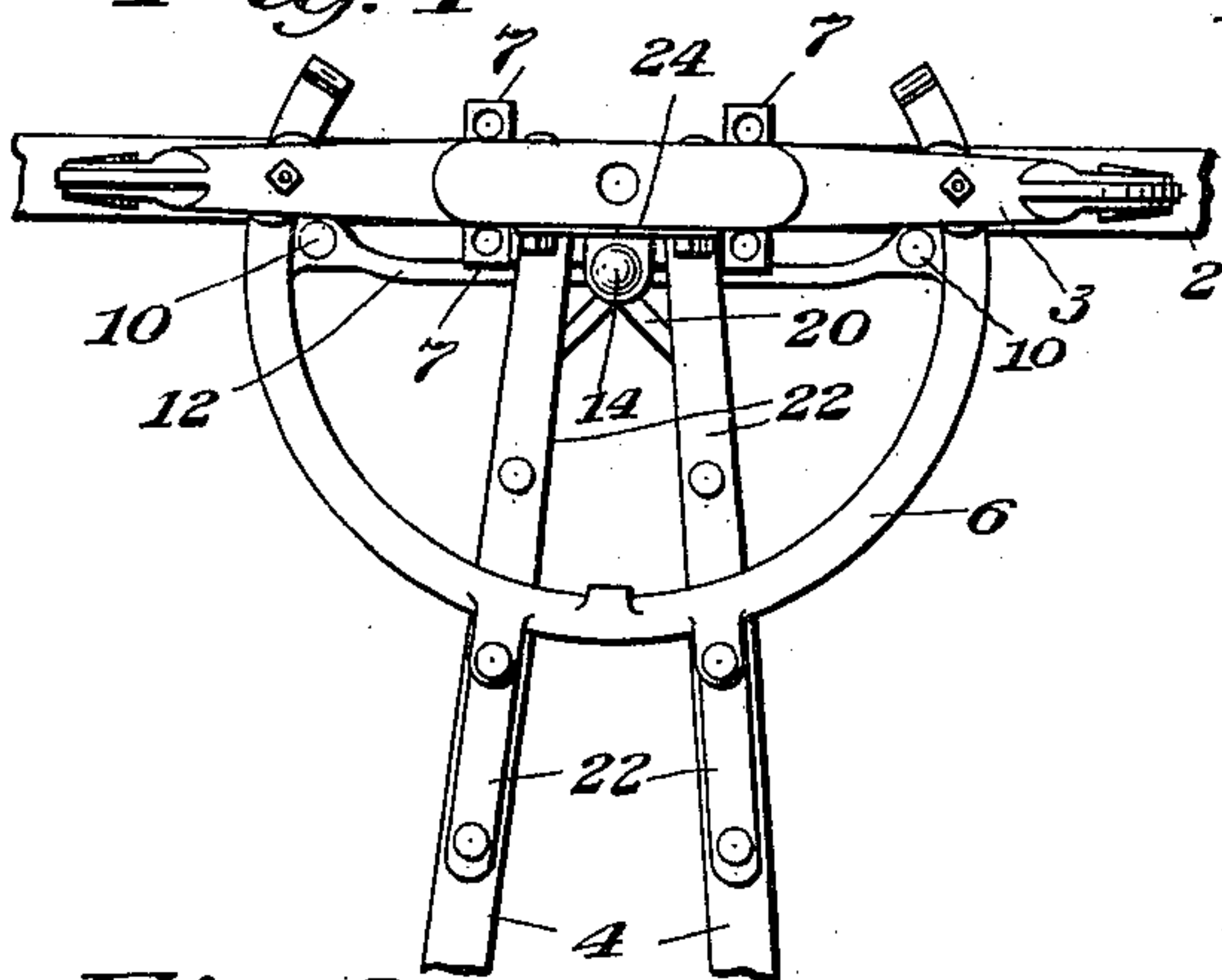


Fig. 5

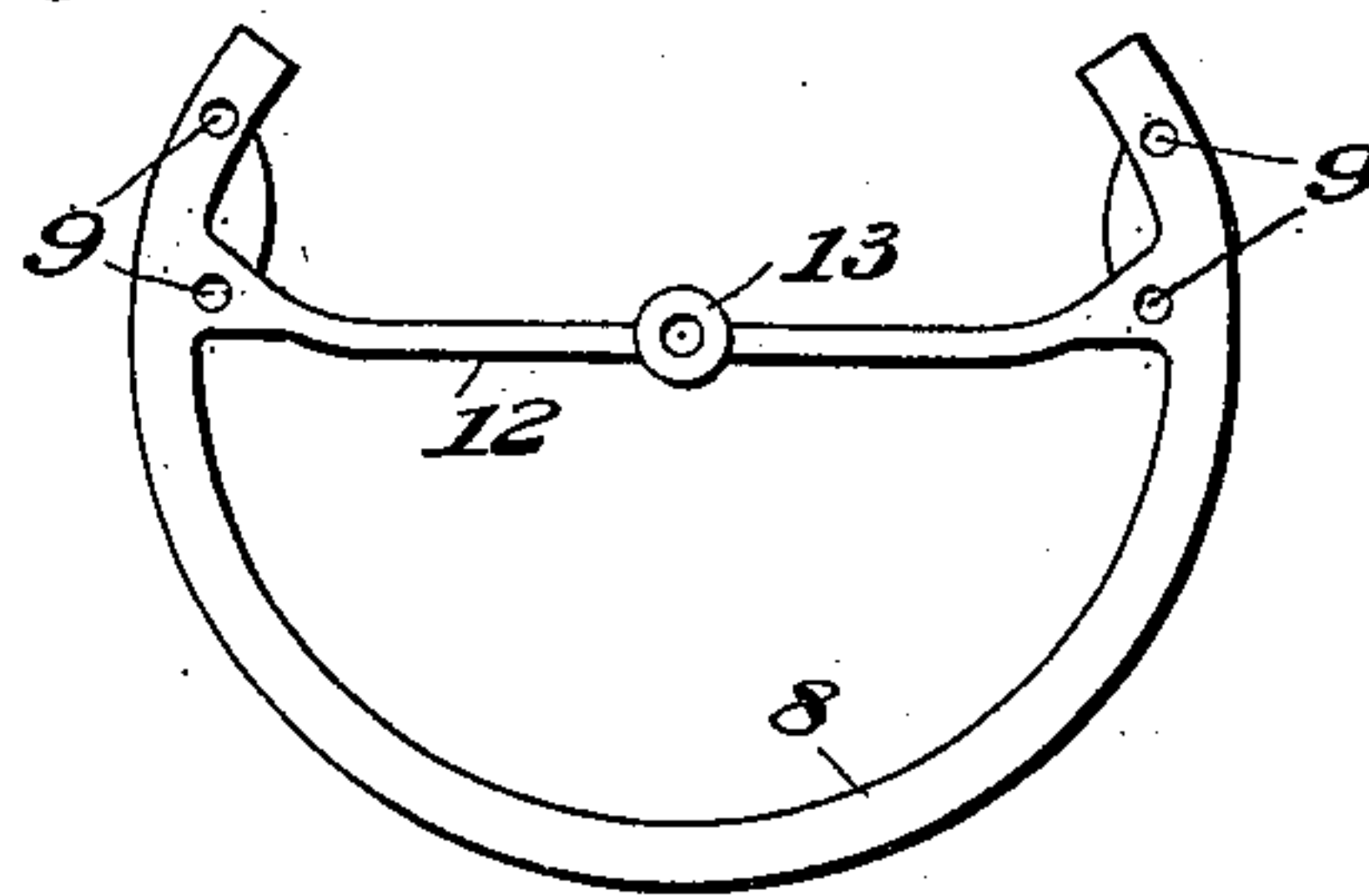


Fig. 2

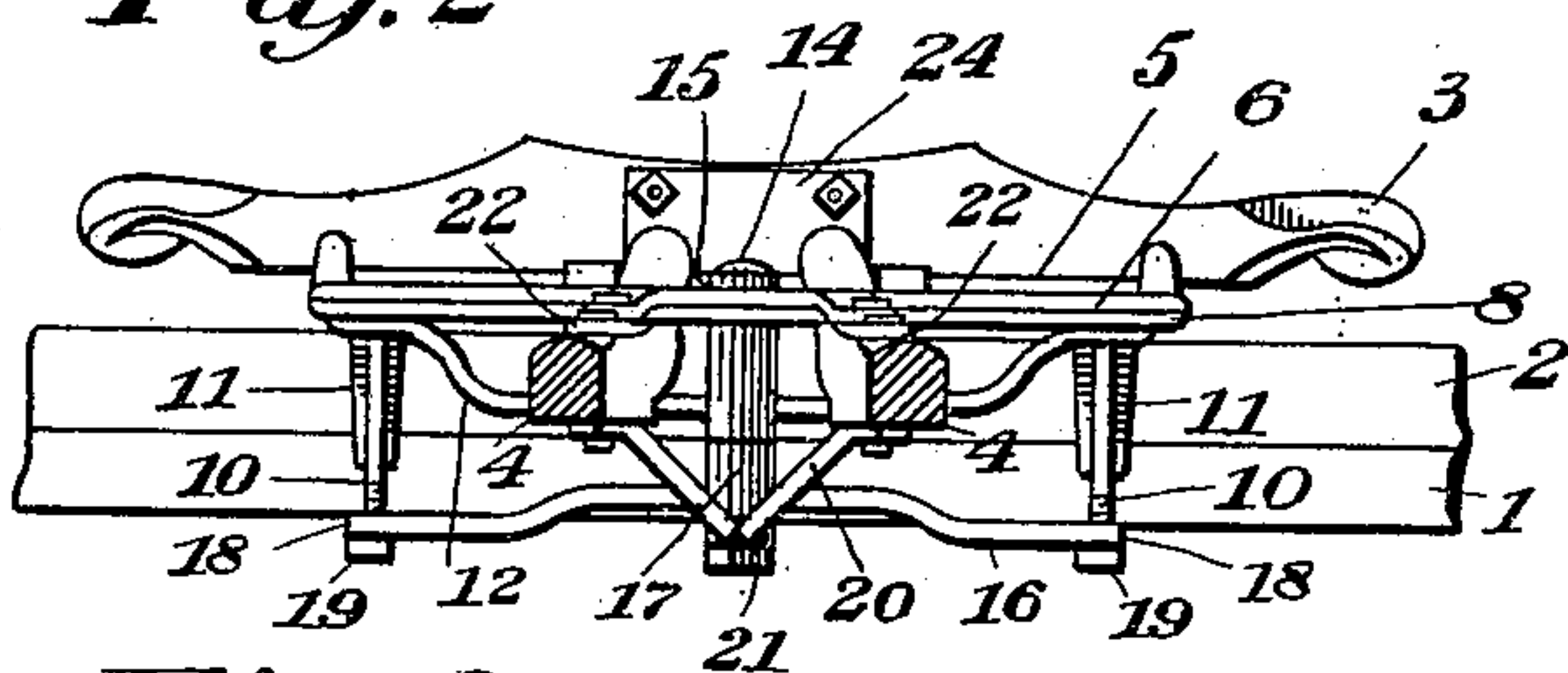


Fig. 6

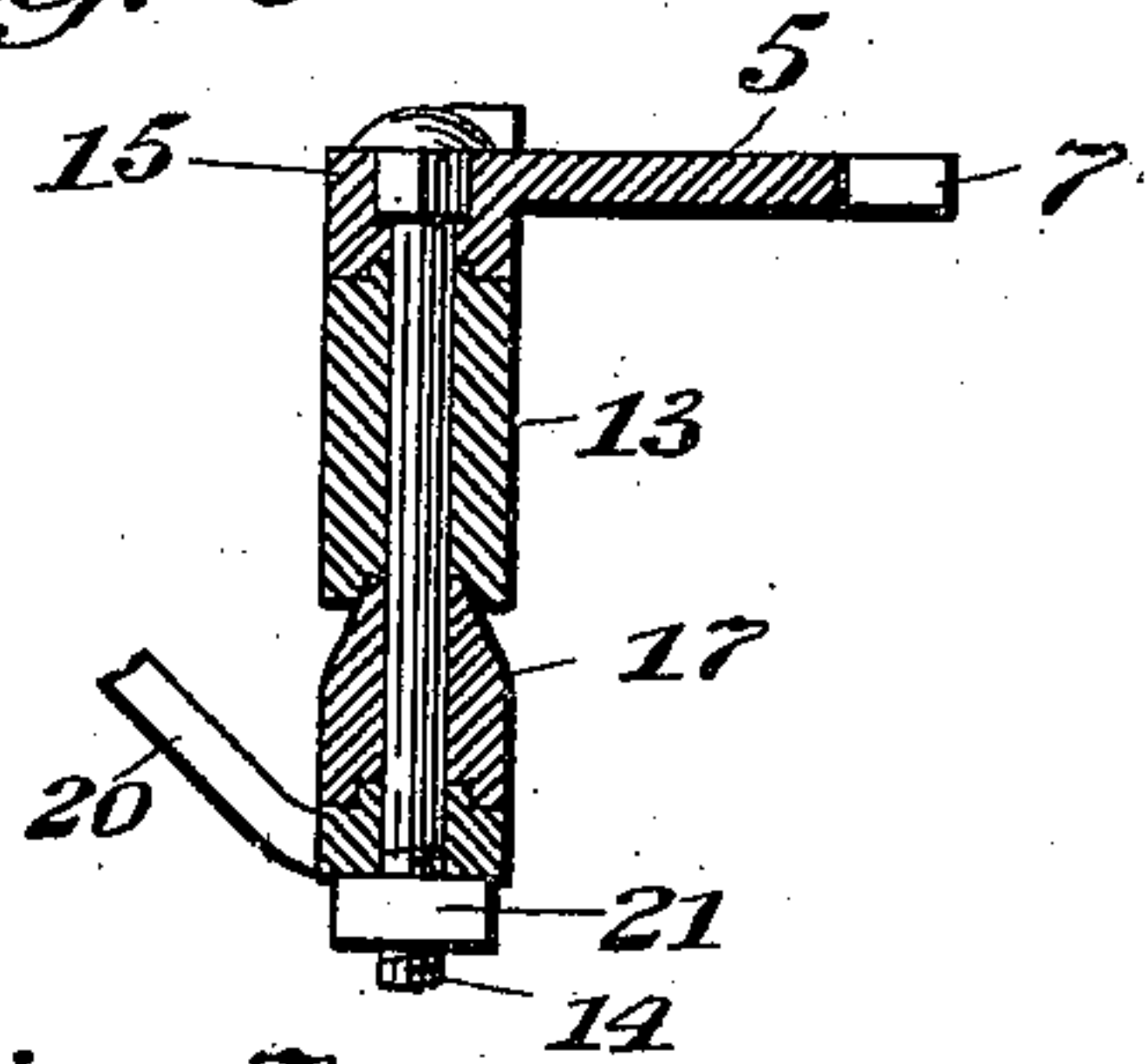


Fig. 3

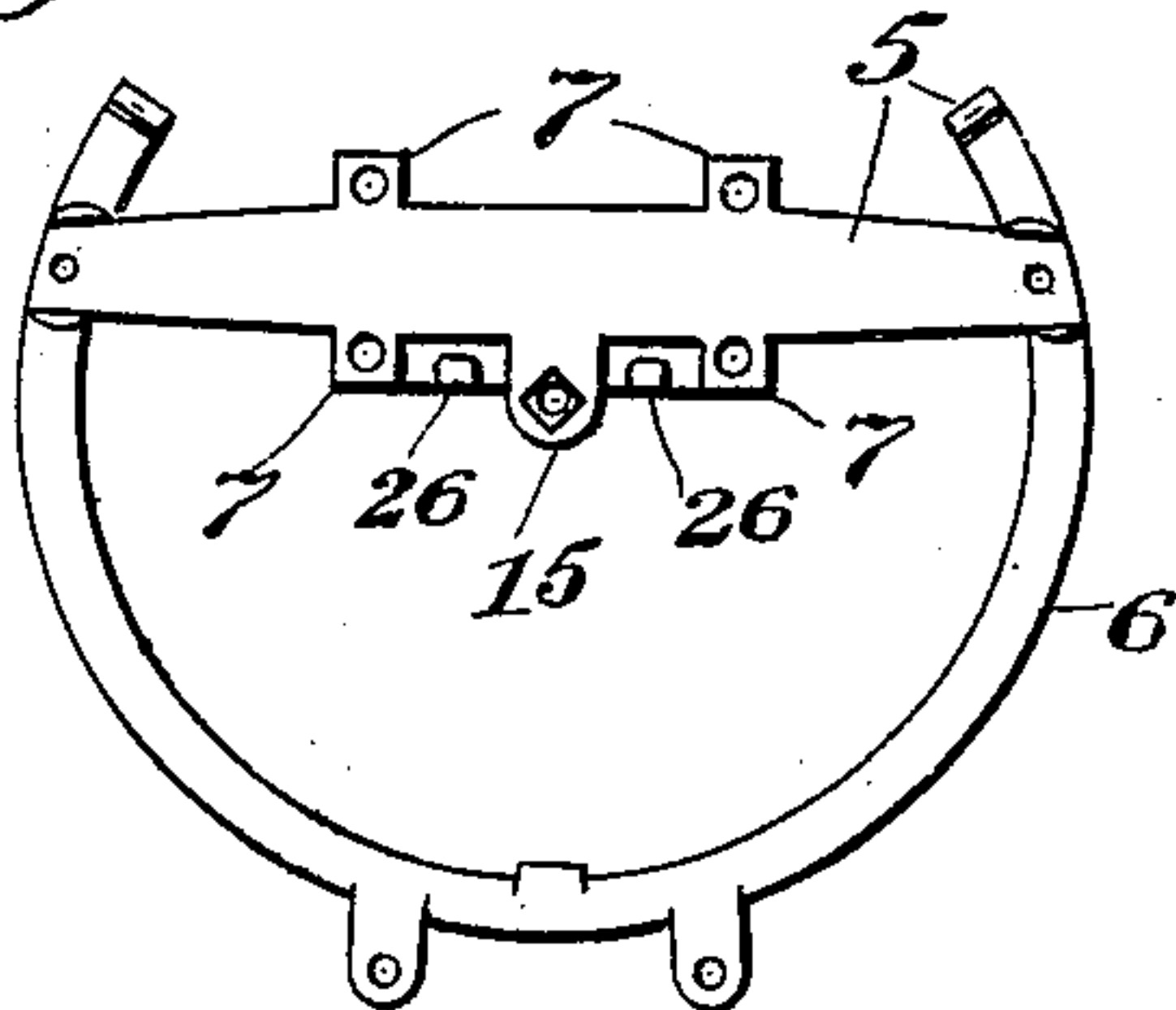


Fig. 7

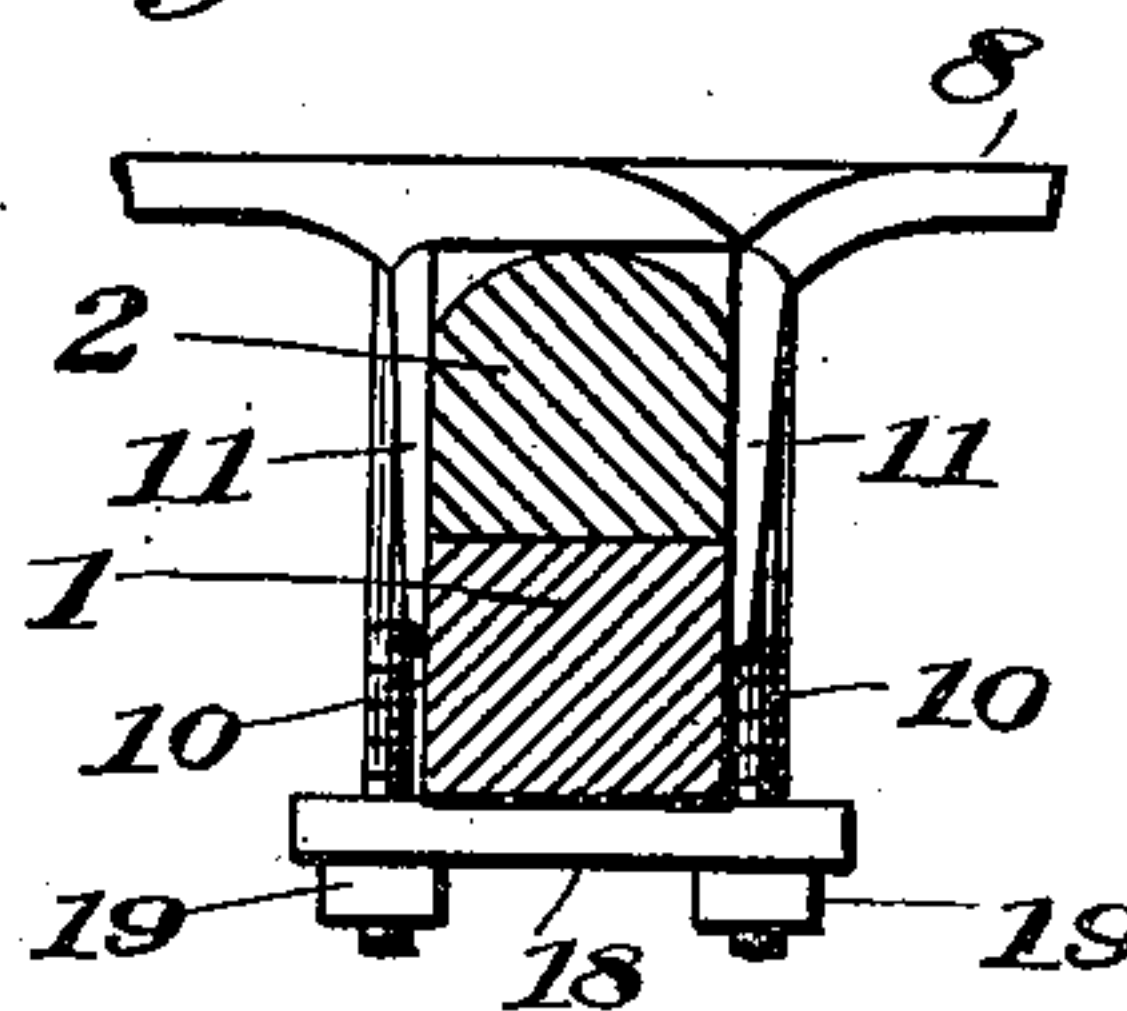


Fig. 4

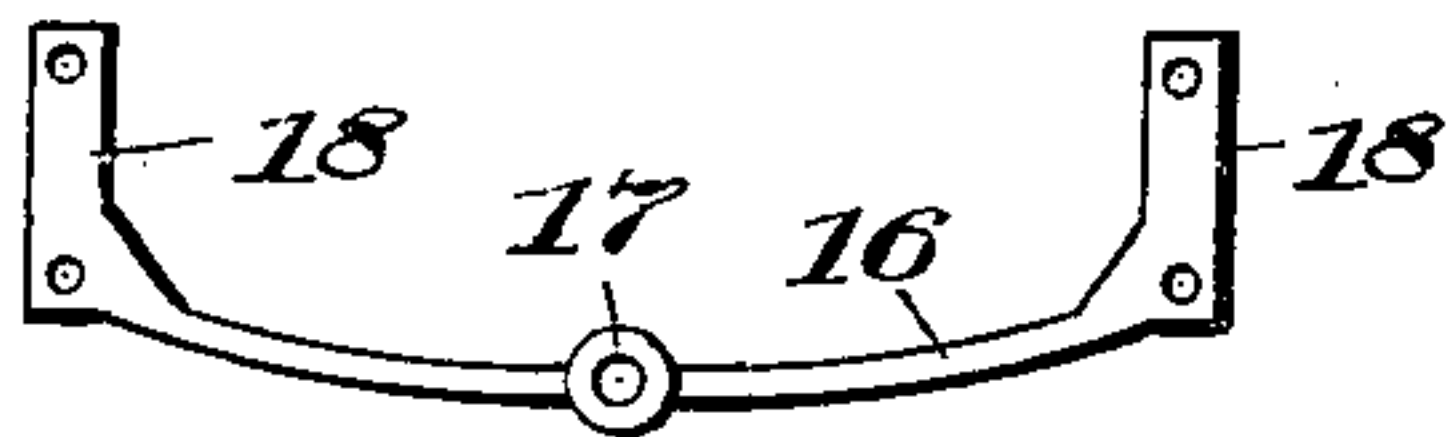
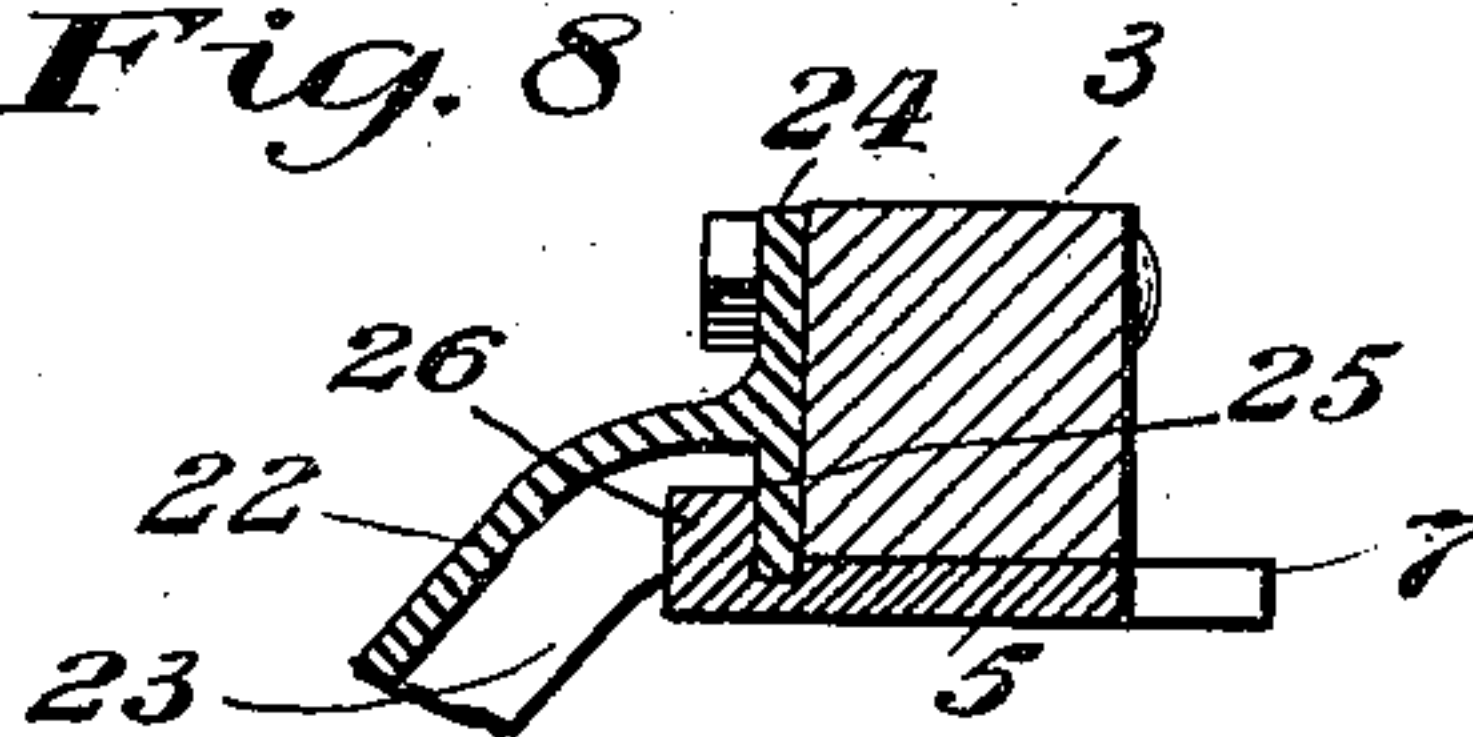


Fig. 8



Inventor

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Witnesses

J. D. Thorne  
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# UNITED STATES PATENT OFFICE.

WILLIAM KNAPP, OF CINCINNATI, OHIO.

## FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 618,467, dated January 31, 1899.

Application filed October 17, 1898. Serial No. 693,740. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM KNAPP, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Fifth-Wheels; 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 figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in fifth-wheels for vehicles, and particularly in that class of these devices wherein the king-bolt is mounted to the rear of the axle; and the object of the invention is to provide a fifth-wheel of this general character which shall be of a simple and inexpensive construction and of a strong and durable nature.

The invention consists in certain novel features of construction, combination, and arrangement of the several parts of the improved fifth-wheel, whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a plan view showing a fifth-wheel embodying my improvements, and Fig. 2 is a rear elevation of the same. Fig. 3 is a plan view showing the upper circle and connected parts detached. Fig. 4 is a plan view showing the lower brace or cross-bar of the device detached. Fig. 5 is a plan view showing the lower circle and connected parts detached. Fig. 6 is an enlarged sectional view taken vertically in the plane of the king-bolt axis and showing the arrangement of the eyes wherein the same is held. Fig. 7 is an enlarged section taken transversely through the axle and bed and showing the construction of the clip for holding the lower circle thereon. Fig. 8 is an enlarged detail sectional view showing the means for connecting the forward end of the perch-iron to the head-block plate.

In the views, 1 indicates the axle, and 2 the axle-bed mounted thereon.

3 indicates the head-block or bolster, and 4 4 indicate the reaches.

5 indicates the head-block plate or rest extending under and secured at its ends to the head-block or bolster 3, being made integral with the upper circle 6 and provided at its forward and rear sides with perforated lugs 7 to receive the lower ends of bolts (not shown) by means of which the spring is secured in place on the bolster.

8 indicates the lower circle of the fifth-wheel, having at opposite sides countersunk eyes 9 9 for the passage of bolts 10, by means of which said circle is secured in place on the axle and bed. The bolts 10 are arranged to extend down on opposite sides of the axle and bed, and in order to hold them spaced away from these parts I provide the under side of said circle 8 with depending lugs or fingers 11, which lie flush against the sides of the axle-bed and are recessed on their outer surfaces to receive said bolts 10. The lower circle 8 is also braced and strengthened by means of an upper brace or cross-bar 12, which extends across it and is made integral with said circle, being provided at its central part with an eye or socket 13 to receive the king-bolt 14, which turns therein and is carried at its upper end in a squared socket or eye 15, extending from the head-block plate or rest 5 on the rear side of the head-block or bolster 3.

16 indicates the lower brace or cross-bar, having a central eye 17 alined with the eye 13 of the upper cross-bar 12 and also adapted to receive the king-bolt 14, which turns therein. The ends of said lower brace or cross-bar 16 are constructed with integral clip-ties 18, arranged to extend forward under the axle 1 and perforated for the passage of the bolts 10, by means of which the lower circle 8 is secured in place. The lower ends of said bolts 10 are provided with nuts 19, as clearly shown in the drawings.

20 indicates the lower perch iron or brace, made with a central eye to receive the lower end of the king-bolt 14 and having arms which extend up divergently and are secured at their rear ends under the forward ends of the reaches 4, as clearly seen in Fig. 2. The



king-bolt 14 is threaded and provided with a nut 21 at its lower end, and in order to insure a proper turning movement of the eyes upon one another said eyes are provided  
5 with reciprocal bosses and recesses to be engaged with said bosses in the ordinary way.

22 22 indicate the upper perch irons or braces, secured at their rear ends to the upper faces of the reaches 4 and each constructed  
10 with a longitudinal channel or recess 23 in its under side. The irons or braces 22 are bent up at their forward ends and are connected integrally to a tie-plate 24, adapted to be secured by means of bolts or the like  
15 to the rear face of the bolster or head-block 3, and said tie-plate 24 is extended at its lower part, as clearly shown in Fig. 8, across the end of the channel or recess 23 in each perch iron or brace 22 to form a stop 25, integral  
20 therewith and adapted to engage in front of a lug or ear 26, formed on the upper face of the head-block plate or rest 5, which is made wider at its central part than the bolster or head-block which rests upon it, so that said  
25 plate or rest 5 projects on the rear side of the bolster, as clearly shown in Figs. 1 and 8. The lugs or ears 26 are arranged, as shown in Fig. 3, at opposite sides of the eye 15, which holds the upper end of the king-bolt 14, and  
30 are between the lugs 7 at the rear side of the bolster or head-block 3.

If desired, the eye or socket 15, in which the upper end of the king-bolt 14 is held, may be formed integrally with the forward  
35 ends of the perch plates or braces 22 or with the tie-plate 24, which connects said parts, in lieu of being formed as a part of the head-block plate or rest 5, as shown in the drawings.

40 The improved fifth-wheel constructed as above described is of an extremely simple and inexpensive nature, since it comprises but few parts and these are constructed and arranged in such a manner as to give to the  
45 completed device the maximum of strength and durability. By reason of the engagement of the stops 25 on the forward ends of the perch irons or braces 22 with the lugs or ears 26 on the projecting rear part of the  
50 head-block plate or rest 5 it will also be seen that the front ends of the reaches 4 are connected to the said plate or rest 5, as well as to the bolster 3, to which they are connected by the bolts which secure the tie-plate  
55 24 thereto, so that the strain which would otherwise be imposed wholly upon the connections between the tie-plate and the bolster is divided, and the consequent liability of breakage of these parts is reduced to a minimum.  
60 The construction of the lower circle with a transverse brace also adds materially to the strength of this part, and the construc-

tion of the lower brace or cross-bar 16 with integral clip-ties 18 at its ends insures a simple and inexpensive means for securely connecting the ends of said brace or cross-bar  
65 under the axle and also for connecting the lower circle 8 to the axle and axle-bed.

It will also be obvious from the above description that the improved fifth-wheel constructed according to my invention is capable of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself  
75 to the precise form and arrangement of the several parts of the device as herein set forth.

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

1. In a fifth-wheel for vehicles, the combination of a head-block, a head-block plate secured thereto and having a central king-bolt eye, a perch-brace and devices carried by said perch-brace and head-block plate on opposite sides of said central king-bolt eye and adapted for mutual engagement to hold said parts locked together, substantially as set forth.

2. In a fifth-wheel for vehicles, the combination of a head-block, a head-block plate secured thereto and provided with lugs, and perch-braces having their forward ends recessed and provided with stops at the ends of said recesses to engage said lugs on the head-block plate, substantially as set forth.

3. In a fifth-wheel for vehicles, the combination of a head-block, a head-block plate secured thereto and provided with lugs, perch-braces connected at their forward ends by a tie-plate and provided on their under sides with recesses to receive the lugs on the head-block plate, the said braces having, at the ends of said recesses, stops to engage in front of said lugs on the head-block plate, and means for securing said tie-plate to the head-block, substantially as set forth.

4. In a fifth-wheel for vehicles, the combination of a head-block, a head-block plate secured to and arranged under the head-block and provided with a widened part which projects at one side of the head-block and is formed with a central king-bolt eye and with lugs on opposite sides of said eye, and perch-braces having their forward ends connected to the head-block and provided with recesses to receive the lugs on the projecting part of the head-block plate, substantially as set forth.

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

WILLIAM KNAPP.

Witnesses:

W. H. McCUNLY,

W. P. BIDDLE.