

(No Model.)

H. G. PORTMANN.

SPRING GEAR FOR CHILDREN'S CARRIAGES.

No. 395,585.

Patented Jan. 1, 1889.

Fig. I.

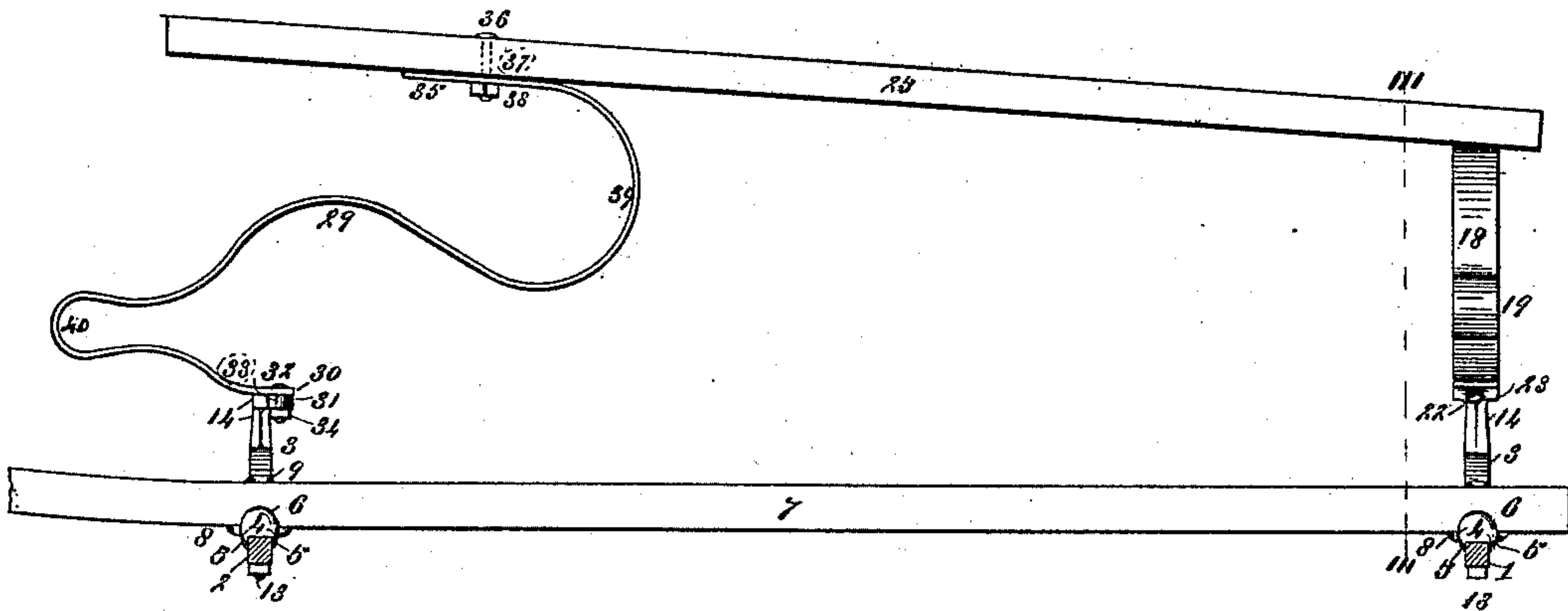


Fig. II.

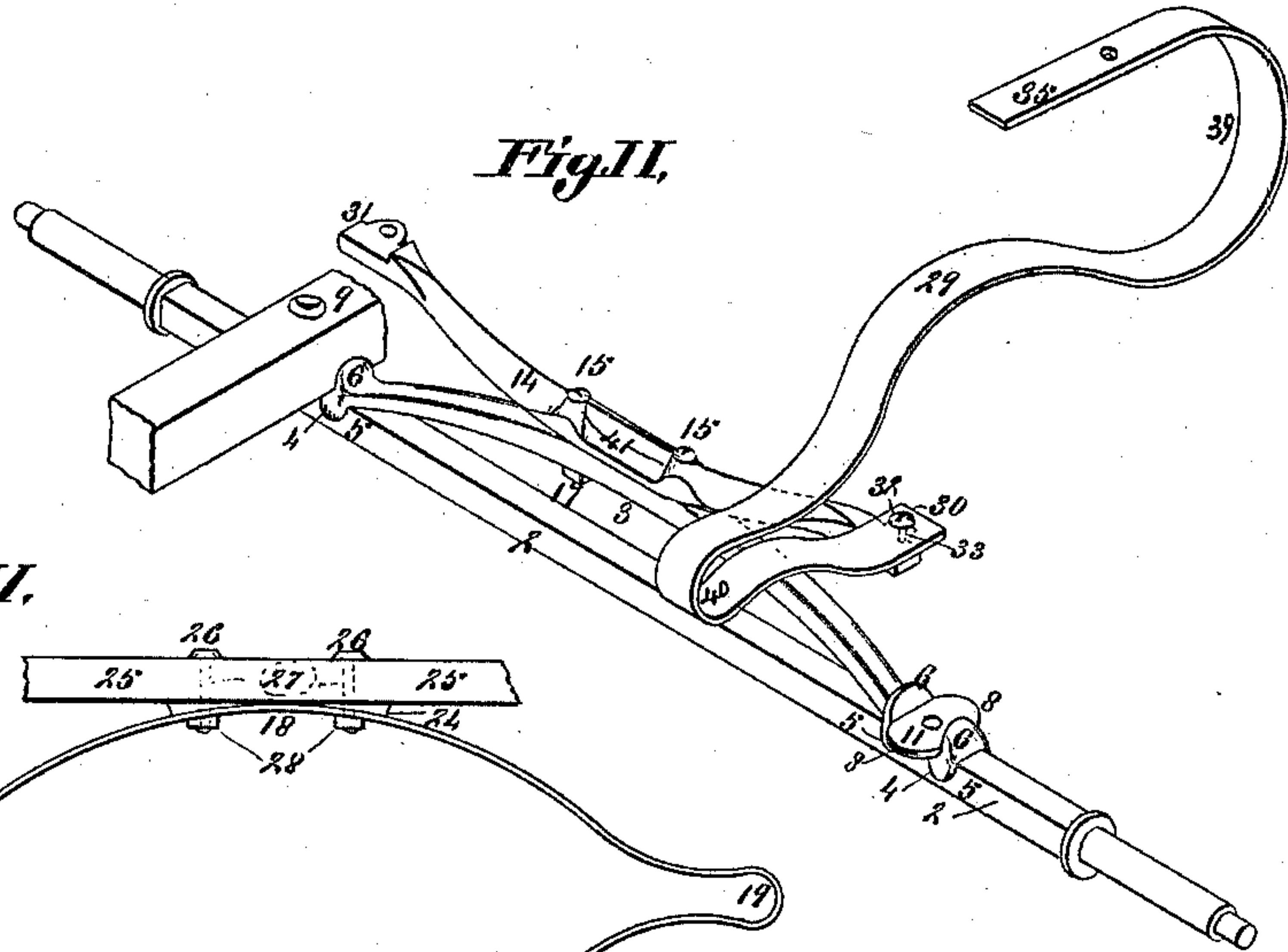


Fig. III.

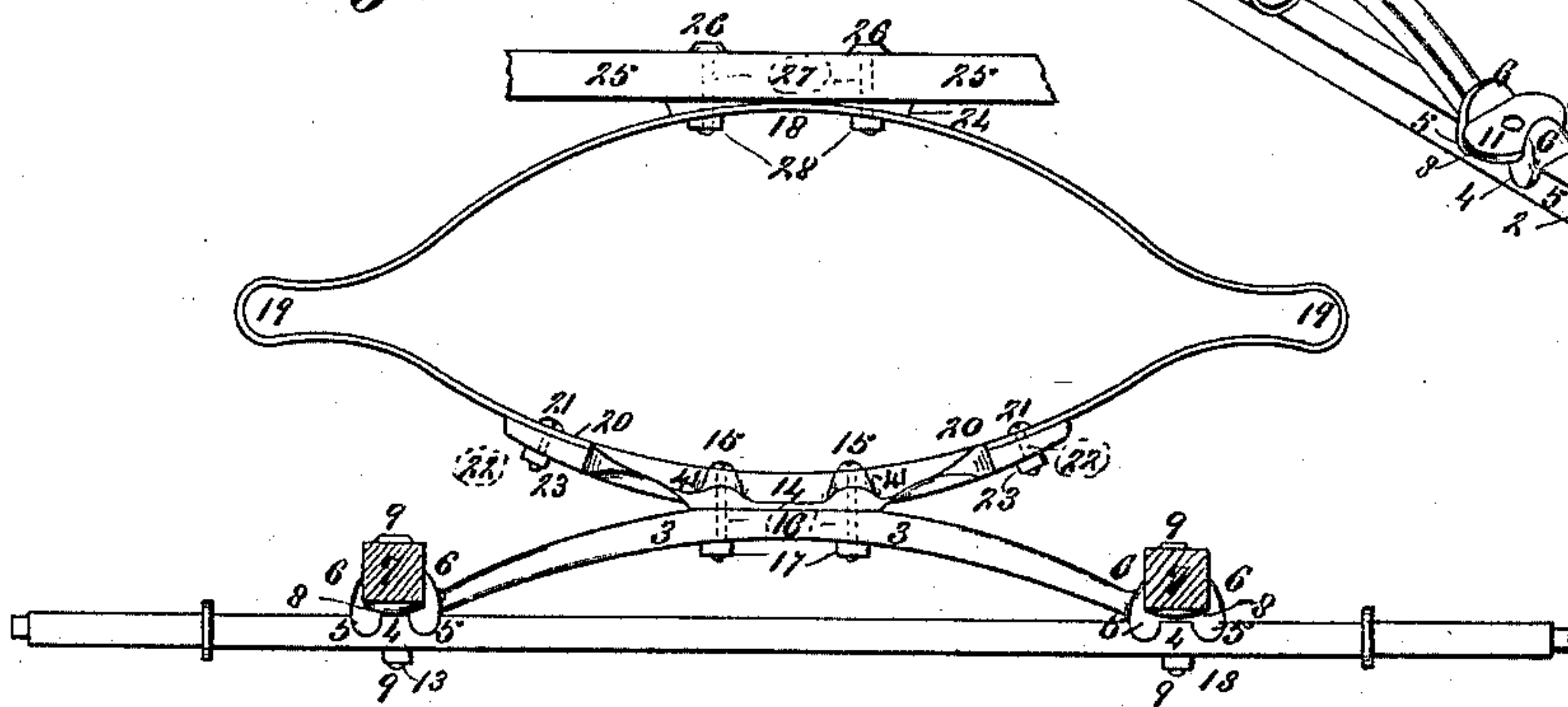


Fig. IV.

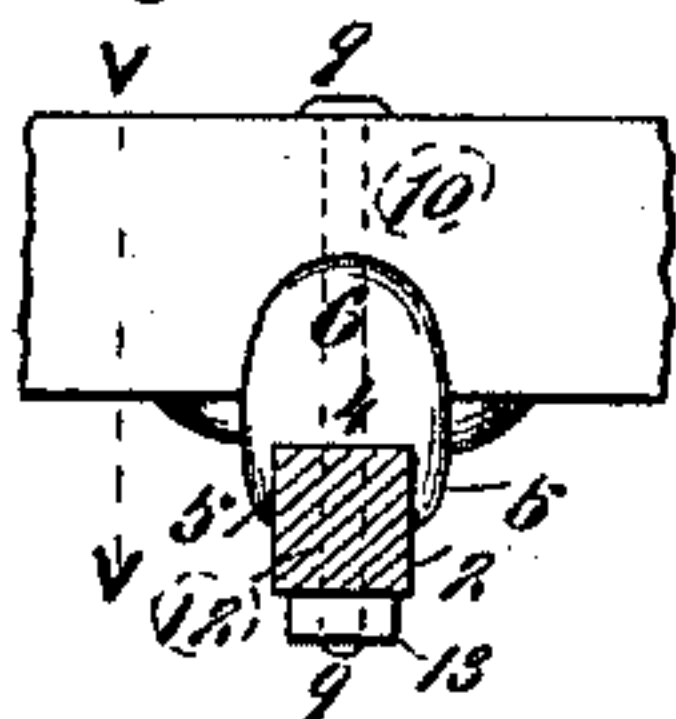
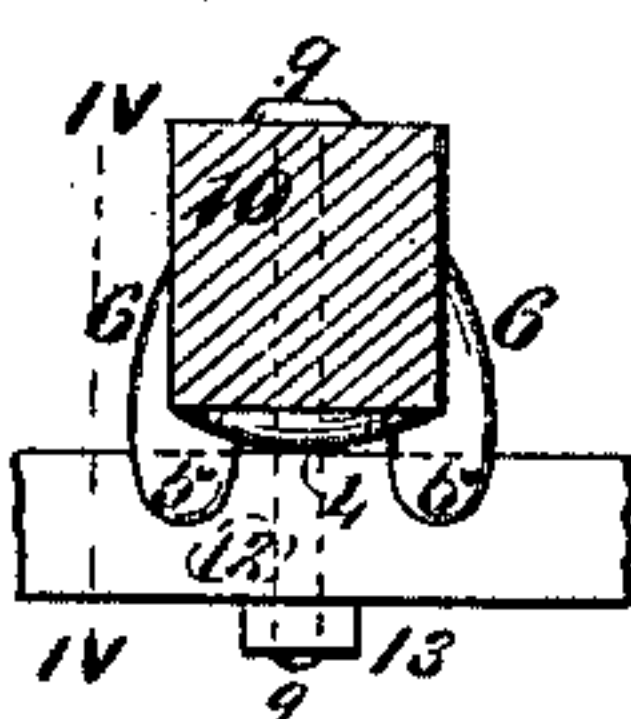


Fig. V.



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UNITED STATES PATENT OFFICE.

HENRY G. PORTMANN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
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SPRING-GEAR FOR CHILDREN'S CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 395,585, dated January 1, 1889.

Application filed November 10, 1888. Serial No. 290,435. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. PORTMANN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Spring Teeter-Gears for Children's Carriages, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This invention relates to spring-gears for children's carriages, the rear springs of which, while acting as buoyant spring-supports to that end of the carriage, also provide the means for a vertical teeter when it is desired
15 to soothe the child to sleep; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims, the device being an improvement on my inventions patented January 31, 1888, No.
20 377,270, and that of October 9, 1888, No. 390,898.

Figure I is a side elevation of the running-gears of the carriage and shows the combination elliptic spring and spring-bar in front
25 and the combination teeter-spring and spring-bar in the rear. Fig. II is a perspective detail and shows one of the teeter-springs attached to the spring-bar. Fig. III is a vertical section taken on line III III, Fig. I, and
30 shows the forward spring and spring-bar, the arch-bar on which it is seated, and the foot-clamps of said arch-bar, whose transversely-presented lugs clutch the axle beneath and the side bar which carries the handle above.
35 Fig. IV is a vertical detail section taken on line IV IV, Fig. V, and shows a detail of the side bar and vertical section of the axle, and also shows the foot-lugs of the arch-bar that clutch both the axle and the side bar; and Fig. V is
40 a like view and shows a vertical section of the side bar and a detail of the axle.

Referring to the drawings, in which similar figures of reference indicate like parts in all the views, 1 represents the front axle, and
45 2 the rear axle, of a child's carriage to which my invention is attached.

3 represents the arch-bars, which have foot-clamps 4 at each end, integral therewith, the said clamps having vertical twin lugs 5, that
50 present downward on each side of the axle

and take a firm clutch-hold of the same, and upwardly-presenting lugs 6, that clutch the combined side and handle bar 7, the handle to which is, as usual, bent at the rear end of said side bar and integral therewith. 8 are the
55 horizontal bearer-plates of said foot-lugs, on which the side pieces are supported, and to which they are secured by the bolts 9, that pass through perforations 10 in said side pieces, corresponding holes 11 in the bearer-
60 plates and 12 in the axles, and are secured by screw-nuts 13, which screw onto the projecting ends of said bolts beneath the axles. It will be seen that the said foot-clamps of the arch-bars, with their bearer-plates and
65 lugs projecting in transverse directions to clamp both the axles beneath and the side bars above in conjunction with the bolts, make a firm grip-connection of said axles, arch-bars, and side bars, and present on the
70 apex of the arch-bars secure beds for the spring-bars 14, which spring-bars are secured to the arch-bars by the screw-bolts 15, which pass through perforations 16 in said spring-bars and arch-bars, and are secured beneath
75 the arch-bars by screw-nuts 17, that engage on the threaded ends of the bolts. Swells 41 on the spring-bars strengthen it around the bolts.

18 represents the three-quarter loop-ended
80 elliptic forward spring, which is preferably made integral in one piece, with loop or swan-neck return bends 19 at the outer ends. The lower terminals 20 of said springs are secured by screw-bolts 21 to the spring-bars by pass-
85 ing through perforations 22 in said springs and spring-bars and having screw-nuts 23 engaged on their lower ends. The apex of said forward spring is surmounted by a bed-block, 24, on which rests the forward end of
90 the carriage-bed 25, to which and to the spring it is fastened by screw-bolts 26, that pass through perforations 27 in the bed of the carriage, the bed-block, and spring, and are there
95 secured by screw-nuts 28, that engage with the projecting ends of the bolts.

29 represents the teeter-spring, which combines the functions of a very buoyant spring for the support of the rear or head of the buggy-bed and a teeter-spring for teetering
100

the buggy-bed to quiet the child in the carriage when it becomes restless or soothe it to sleep. The spring is made in a double return-loop curvilinear form, having preferably a
 5 wide loop at top and narrow one at bottom, and runs lengthwise of the carriage. The lower terminals 30 of said springs are fastened to the spring-seats 31 at the ends of the rear spring-bar by screw-bolts 32, that pass through
 10 perforations 33 in said springs and spring-arm, and are there secured by screw-nuts 34, that engage on their projecting ends.

The child's carriage is a great convenience to mothers and nurses when children are being taken out for an airing until the little
 15 ones get sleepy, when frequently they require a different movement to the usual movement of the carriage, nearer akin to that of the cradle, and the child in consequence has to be lifted from the carriage and carried by its attendant. One of the features of this invention (its rear double-fold ogee teetering-springs) is intended to overcome that difficulty, and by its reciprocating movement of
 20 the carriage-bed to soothe the restless child and induce it to go to sleep.

I claim as my invention—

1. In a child's carriage, the combination of the arch-bar that supports the springs, the
 30 foot-clamps on the ends of said bar; and the lugs that project from said foot-clamps and clutch the axles beneath and the side bar above, substantially as and for the purpose set forth.

2. In a child's carriage, the combination of 35 the arch-bars that support the springs, the foot-clamps on the ends of said bars, provided with bed-plates 8, that carry the side bars, said plates integral with the foot-clamps, and the lugs that project transversely from said 40 foot-clamps and clutch the axles beneath and the side bars above, substantially as and for the purpose set forth.

3. In a child's carriage, the combination of the arch-bars, the spring-bars seated on said 45 arch-bars, and the double-fold ogee teeter-springs 29, that couple the rear spring-bar to the bed of the carriage and provide the means of teetering said carriage-bed and of its elastic rear support, substantially as and for the 50 purpose set forth.

4. In a child's carriage, the combination of the arch-bars, the foot-clamps provided with transversely-presenting lugs that clutch the axles beneath and the side bars above, the 55 spring-bars that surmount said arch-bars, the loop-ended three-quarter elliptic spring that is secured to the front spring-bar and to the front of the carriage-bed, and the double-fold ogee teeter-springs that couple the rear spring- 60 bar to the bed of the carriage, arranged to provide the means of teetering said carriage-bed and of its elastic support, substantially as and for the purpose set forth.

HENRY G. PORTMANN.

In presence of—

BENJN. A. KNIGHT,
 EDW. S. KNIGHT.