

(No Model.)

2 Sheets—Sheet 1.

T. G. MANDT.
RUNNING GEAR FOR VEHICLES.

No. 375,642.

Patented Dec. 27, 1887.

Fig. 1.

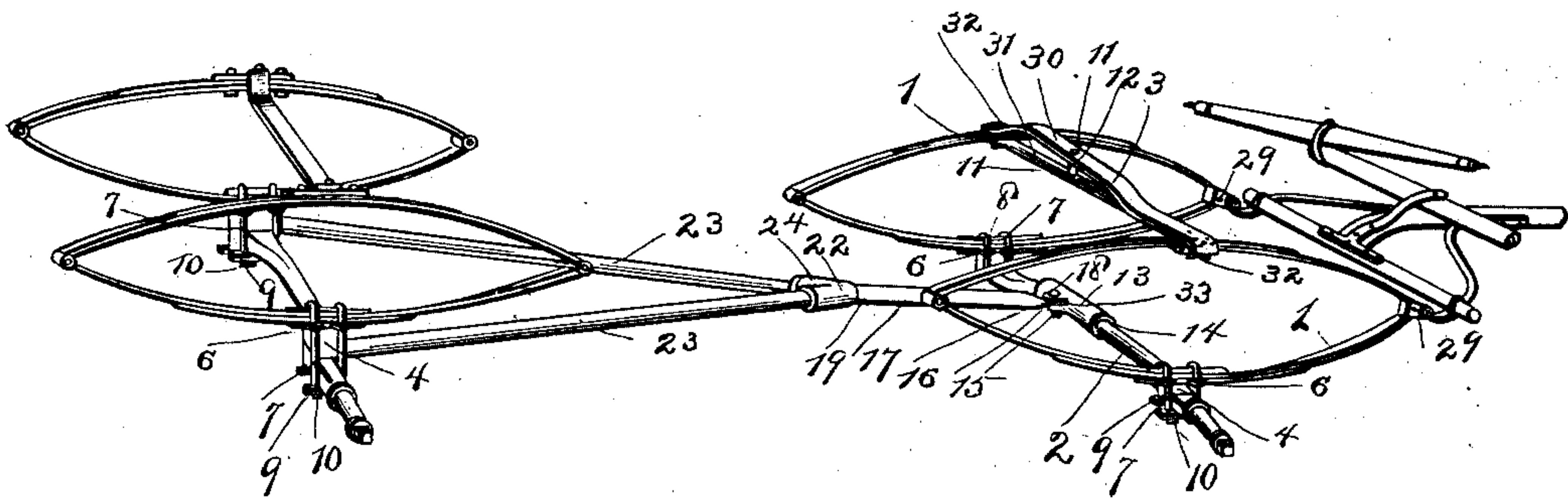
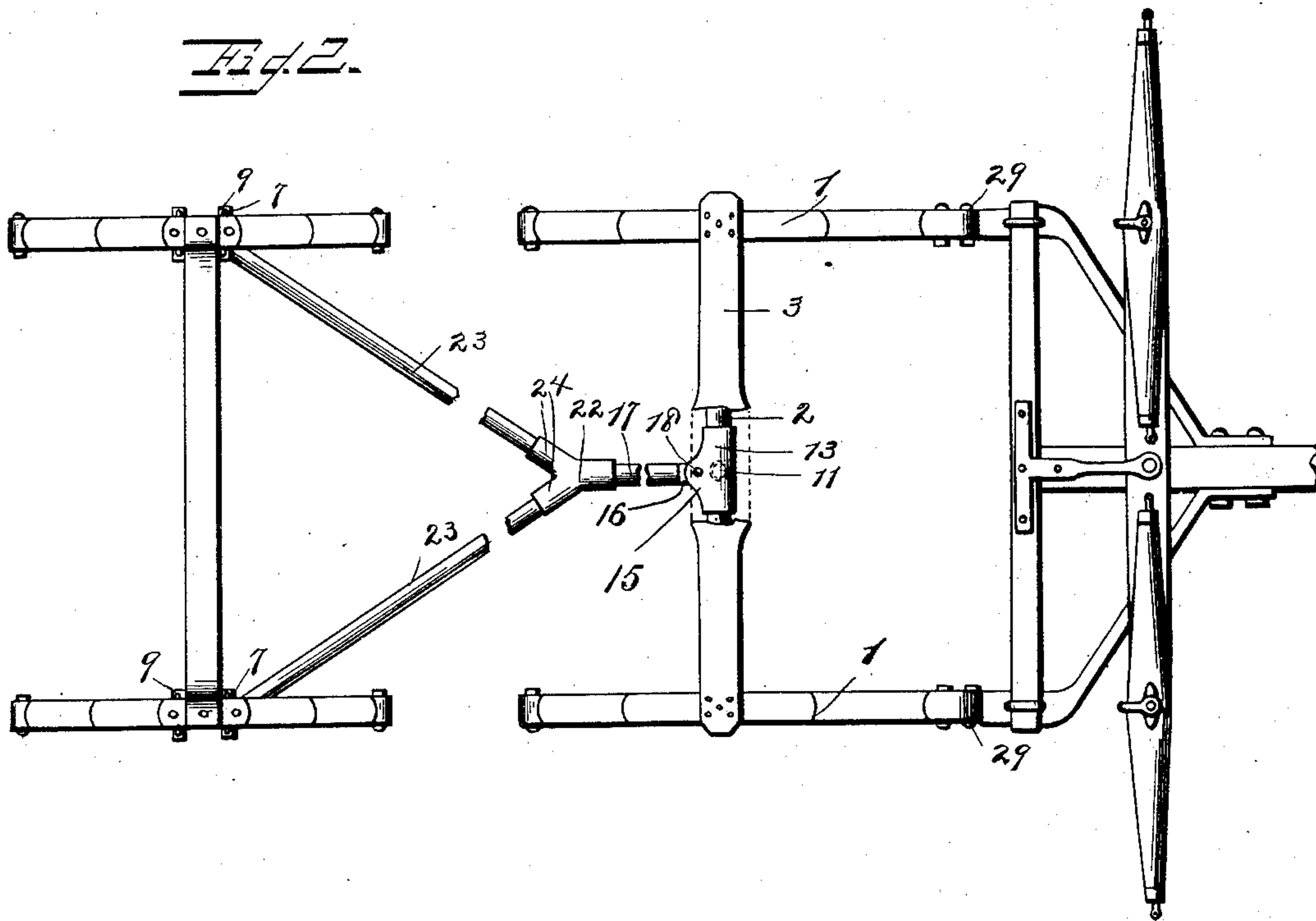


Fig. 2.



Witnesses
F. L. Ourand
Benj. G. Cowf.
H

Inventor
T. G. Mandt.
By his Attorneys
Louis Dagher & Co.

(No Model.)

2 Sheets—Sheet 2.

T. G. MANDT.

RUNNING GEAR FOR VEHICLES.

No. 375,642.

Patented Dec. 27, 1887.

Fig. 3.

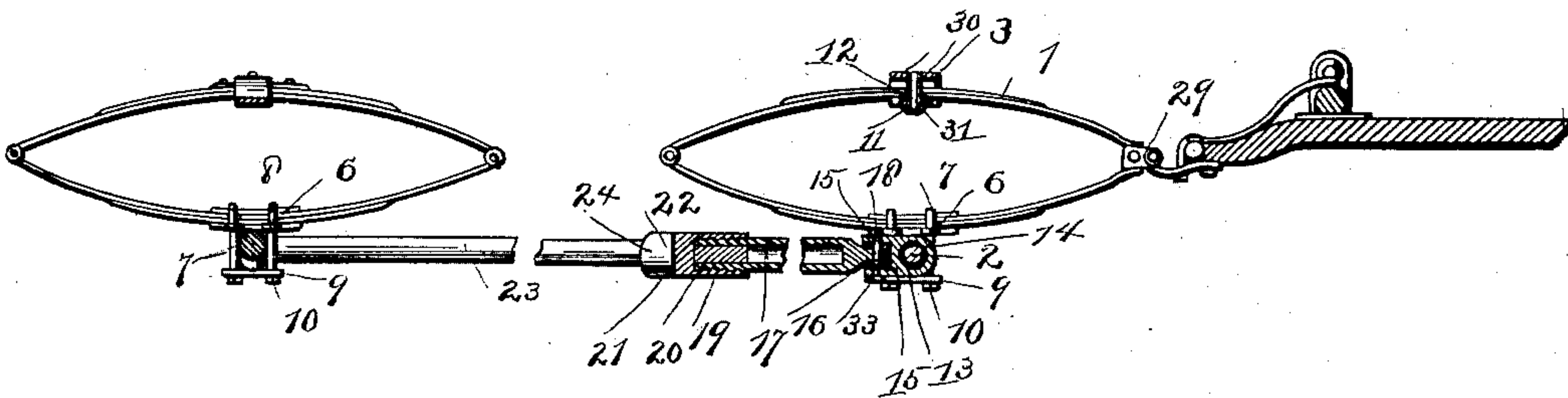


Fig. 4.

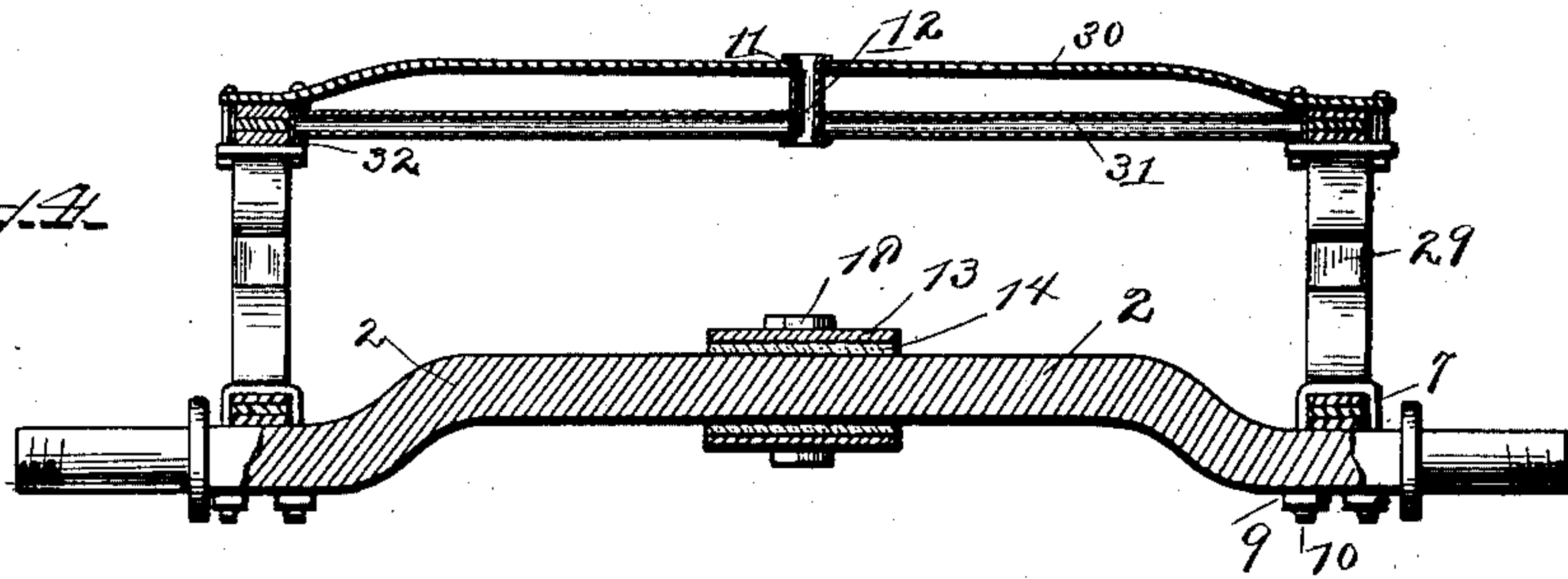
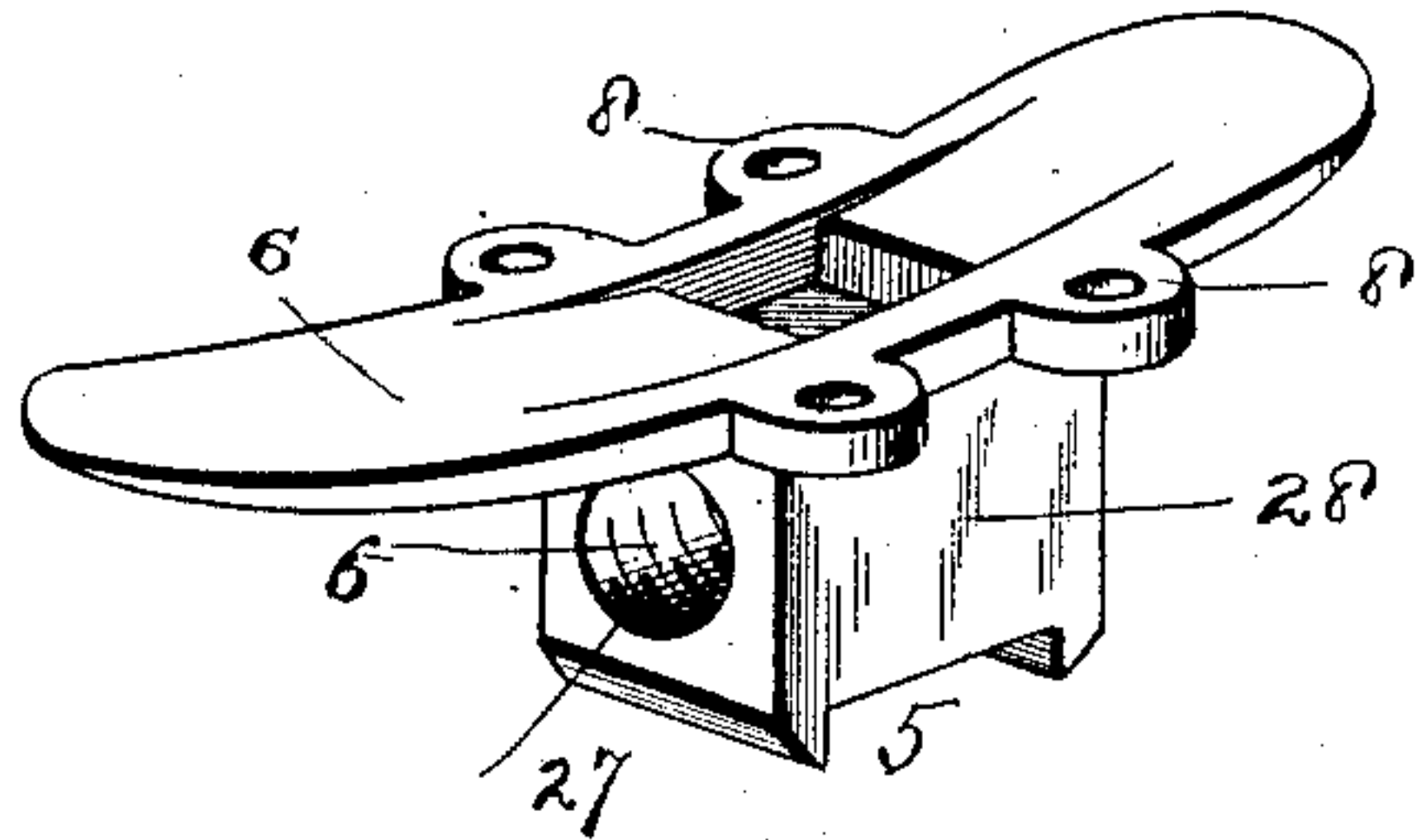


Fig. 5.



Witnesses
F. L. Ourand.
Benj. F. Cowf.

Inventor
T. G. Mandt,
By his Attorneys
Louis Dagguth & Co.

UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 375,642, dated December 27, 1887.

Application filed June 30, 1887. Serial No. 242,999. (No model.)

To all whom it may concern:

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Running-Gears for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved running-gear for vehicles. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal vertical sectional view through the reach. Fig. 4 is a longitudinal sectional view of the front axle; and Fig. 5 is a perspective detail view of the block securing the rear ends of the bifurcated reach to the rear axle and springs.

Similar numerals of reference indicate corresponding parts in all the figures.

My invention has relation to that class of running-gears for vehicles in which the parts are formed of metallic tubes; and it consists in the improved construction and combination of parts of such a running-gear, as hereinafter more fully described and claimed.

In the accompanying drawings, the numeral 1 indicates the front springs, which are common elliptic springs, secured to the front axle, 2, at the middles of their lower halves and to the ends of a head-block or cross-bar, 3, at the middles of their upper halves. The lower halves of the springs are secured to blocks 4, having transverse recesses 5 in their under sides, with which they rest upon the axle, and having curved bars 6 upon their upper sides, having their concave sides facing upward, and clips 7 straddle the springs and pass through perforated ears 8 upon both sides of the curved bars, and have the lower ends connected by means of shackles 9, crossing under the axle and secured by means of suitable nuts, 10, upon the said screw-threaded ends. The cross-bar or head-block is formed by a flat bar, 30, and a tubular brace-rod, 31, having its ends screwed into the clips 32, securing the head-block to the springs, and the

flat bar and the brace-rod are formed with central registering perforations, 11, into which the ends of a sleeve, 12, are secured, the said sleeve forming a bearing for the king-bolt, upon which the forward truck of the vehicle is pivoted.

A sleeve, 13, is slipped upon the middle of the front axle before the latter is finished, and is secured upon the middle of the same by means of a filling, 14, formed by pouring molten metal between the inner side of the sleeve and the axle, the sleeve having a greater diameter than the axle. This sleeve is provided with two rearwardly-extending perforated lips, 15, and the flattened and perforated forward end, 16, of the forward portion, 17, of the reach is pivoted between these lips upon a bolt, 18, concentric with the king-bolt. A block, 33, of a suitable yielding material, and having its rear side recessed to fit against the rounded edge of the eye of the reach, is placed between the perforated lips, resting against the side of the sleeve, and by bearing against the eye of the reach it will prevent rattling of the eye of the reach between the lips and upon the bolt. This forward portion of the reach is formed from a metallic tube, and has a rear end, 19, screw-threaded and filled with a plug, 20, of the same metal welded into the end, thus re-enforcing the end, which has been weakened by cutting the screw-thread. The screw-threaded rear end of this forward portion of the reach is screwed into the female screw-threaded socket 21 at the forward end of a Y-coupling 22, which has the forward ends of the two rear portions, 23, of the reach screwed into its rearwardly-projecting sockets 24, the said rear portions being tubular similar to the forward portion, and having screw-threaded ends provided with plugs welded into them in the same manner as shown and described for the rear end of the forward portion of the reach. The rear ends of these rear portions of the reach are screwed into screw-threaded sockets 27, formed in blocks 28, of the same construction as the blocks securing the forward springs to the front axle, and these blocks serve in a similar manner to secure the rear springs to the rear axle.

The forward ends of the forward springs

have clips 29, similar in construction to the clips used in the platform-springs, for which Letters Patent No. 212,716 were granted to me on the 25th day of February, 1879, and the thills or pole of the vehicle are secured to these clips in the same manner as in the aforesaid patent, thus throwing the draft evenly on the springs and preventing any tilting forward of either the lower or upper portions of the springs, as sometimes is the case when the draft is either attached to the axle or to the upper portions of the springs.

It will be seen that the tubular parts of the gear will be strong as well as light, and a certain amount of play will be allowed between the screw-threaded end of the forward portion of the reach and the Y-coupling, the said portion turning slightly in the socket of the coupling, so that in passing over any obstructions this joint will admit of the rear and front portion of the gear rocking in different planes without twisting any of the parts of the gear, the turn of the reach in the Y-coupling being so slight that it will not wear any of the parts to any extent, nor will it in any manner loosen the coupling, as the parts will be brought back into their normal position as soon as the vehicle arrives again on level ground.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a running-gear for vehicles, the combination of a tubular metallic reach-piece pivoted to the forward gear and having its rear end screw-threaded and re-enforced by a metallic plug welded into it, a Y-coupling having the rear end of the reach-piece screwed into its forward socket, and two rear reach-pieces of tubular metal secured with their forward screw-threaded and plugged ends in the rear sockets of the coupling, and with their rear screw-threaded and plugged ends to blocks upon the rear axle, as and for the purpose shown and set forth.

2. In a running-gear for vehicles, the combination of the front axle having two flat perforated lips projecting rearward from its middle, a tubular metallic reach-piece having its flat-eyed end pivoted upon a bolt between the lips and having its rear end screw-threaded

and filled with a metallic plug welded into it, a Y-coupling having the rear end of the reach-piece screwed into it, blocks secured upon the rear axle and having the rear springs secured to them and formed with screw-threaded sockets in their forward ends, and rear reach-pieces of tubular metal having their ends screw-threaded and filled with metallic plugs welded into them and having the ends screwed into the rear sockets of the Y-coupling and in the sockets of the blocks upon the rear axle, as and for the purpose shown and set forth.

3. In a running-gear for vehicles, the combination of the forward axle, a cross-bar or head-block having a central perforation for the king-bolt, elliptical springs secured to the front axle and to the ends of the cross-bar or head-block, the reach pivoted to the middle of the forward axle concentric to the king-bolt, and the shafts or pole secured to clips at the forward ends of the springs, as and for the purpose shown and set forth.

4. In the running-gear of a vehicle, the combination of a flat upwardly-curved bar having its ends secured by clips to the upper halves of the forward springs, a tubular rod having its ends screwed into the clips securing the ends of the bar forming a brace-rod for the said bar, and a short sleeve or tube having its ends secured in registering perforations in the middles of the bar, and the rod forming a bearing for the king-bolt, as and for the purpose shown and set forth.

5. In the running-gear of a vehicle, the combination of the forward axle having two perforated lips projecting rearward, a reach portion having its eyed forward end pivoted upon a bolt between the said lips, and a yielding block having a concave rear face and placed between the lips bearing against the axle and against the rounded edge of the eye, as and for the purpose shown and set forth.

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

TARGE G. MANDT.

Witnesses:

B. E. WAIT,
L. K. LUSE.