No. 661,508. Patented Nov. 13, 1900.

C. T. FLETCHER.

RUNNING GEAR FOR VEHICLES.

(Application filed Mar. 10, 1900.

(No Model.)

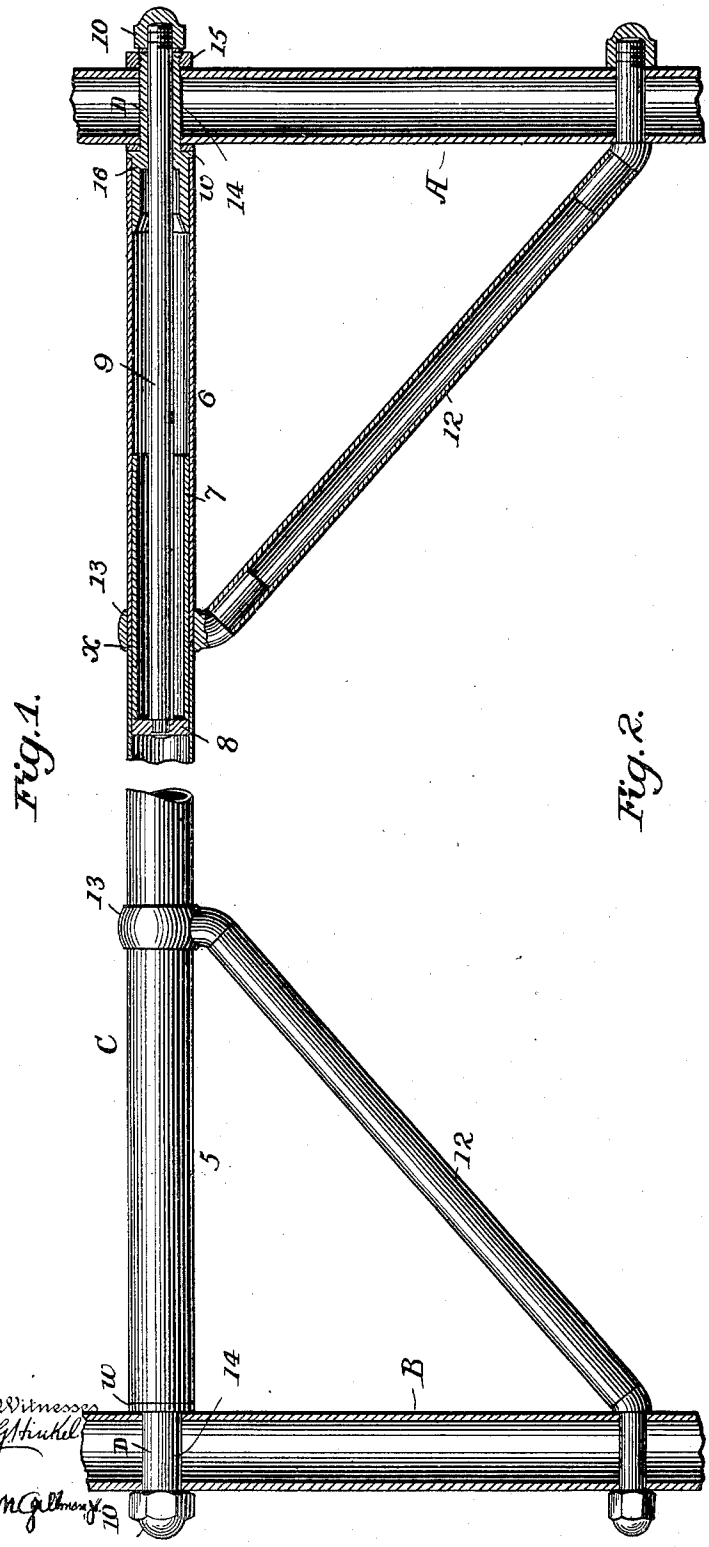

Fig. 1.

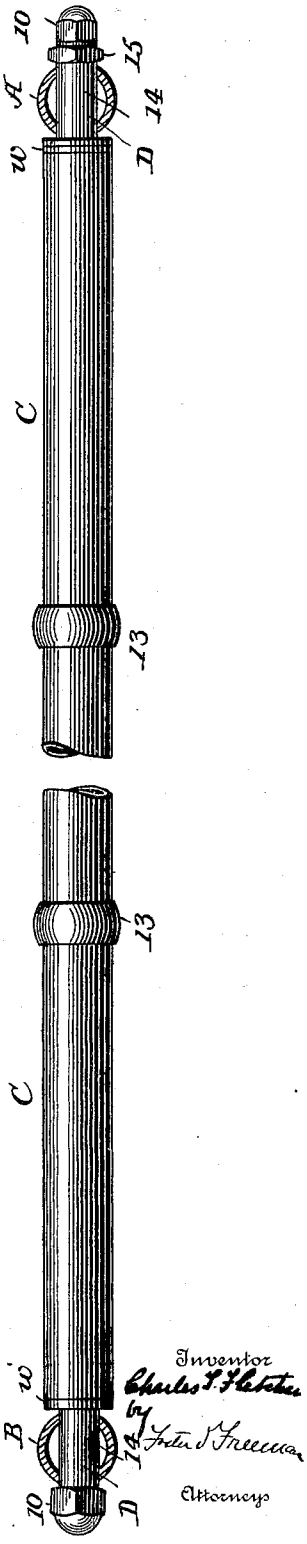

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES T. FLETCHER, OF WESTBOROUGH, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE LOCOMOBILE COMPANY OF AMERICA, OF NEW YORK, N. Y.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 661,508, dated November 13, 1900.

Application filed March 10, 1900. Serial No. 8,211. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. FLETCHER, a citizen of the United States, residing at Westborough, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Running-Gear for Vehicles, of which the following is a specification.

My invention relates to metallic running-gear for vehicles, and especially to that class in which the axles are connected by tubular metallic perches, which have heretofore proved objectionable in consequence of their rigidity; and my invention consists of means for permitting a certain amount of play without strain or torsion upon the perches, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional plan showing parts of two axles and one of the connecting-perches. Fig. 2 is an edge view of the perches, the axles being in section.

The front axle B and the rear axle A are connected by one or more perches C, each of which consists of two sections 5 6 of metallic tubing abutting each other at the inner ends at *x* and respectively connected in any suitable manner at their outer ends to the axles. In order to maintain the two sections in alinement and yet permit one to turn to a slight extent independently of the other, I contract the end of one section sufficiently to permit it to be extended into the other. This may be done by shrinking the terminal portion of one section to the necessary extent, or, as shown, by brazing a tube 7 into a position projecting for a short extent into one section and adapted to extend into and turn in the other when the section to which it is brazed is twisted to any extent. The parts thus constructed and fitted together may be connected, so as to be incapable of longitudinal movement, in any suitable manner. Thus the section 6 may be provided with a transverse diaphragm or partition 8, through which extends the headed end of a bolt 9, which extends through the other section and through the axle and is provided with a nut 10, by turning which the two sections may be brought to bear firmly upon each other at their abutting ends, and by which they are held in position longitudinally, and also by means of which any wear or slack may readily be taken up.

Where the tube 7 is brazed within the section 6, the end of said tube forms a good abutment for the partition 8, which may either be a disk or cross-bar.

Where it is desired to strengthen the perches so as to better resist lateral strain, this may be done by means of diagonal braces 12 12, each connected at its outer end in any suitable manner with the axle and having a ring 13 at the inner end, through which extends the adjacent section of the perch, which is brazed or otherwise suitably connected therewith. The ends of the sections may be connected to the axles in any suitable manner. I have shown a connecting-piece D with a tubular neck 14, adapted to a socket in the axle and threaded at the outer end to receive a nut 15 and with an enlarged head 16, adapted to be fitted in and brazed to the outer end of the adjacent section of the perch and provided with an annular shoulder *w*, against which said end bears. This permits ready connection with the axle by passing the neck 14 through a socket in the axle, which is clamped between the shoulder afforded by the head or enlargement 16 and the nut 15, while the hollow head and neck permit the passage of the bolt 9 and are strengthened thereby.

While the braces may be connected to the sections of the perch at any desired point, it is preferable to have the abutting ends within the ring 13 of the brace, which both adds to the strength and improves the appearance of the structure.

Without limiting myself to the precise construction and arrangement shown, I claim as my invention—

1. The combination with the axles of a vehicle, of a metallic perch consisting of two tubular sections one extending into the other, and a bolt connected at the inner end of one of the sections, extending through the other section and connected to the axle, substantially as set forth.

2. The combination with the axles of a vehicle, of two tubular metallic sections abut-

ting at their inner ends, connected at their outer ends with the axles, a partition or cross-piece in one of the sections, and a bolt connected at one end with the cross-piece, extending through the other section, and connected at its outer end with the axle, substantially as set forth.

3. The combination with the axle, of a perch consisting of two tubular metallic sections, one provided with a reduced portion extending into the other, and a bolt connecting the two sections, substantially as set forth.

4. The combination with the axles of a vehicle, of a perch consisting of two hollow metallic sections abutting at their inner ends, a tube brazed within one section and extending into the other, a cross-piece bearing against one end of the tube, and a bolt connected to the cross-piece and extending through one of the axles, substantially as set forth.

5. The combination with the axle of a vehicle, of a perch consisting of tubular metallic sections abutting at their inner ends and connected by a bolt, and a brace extending to the axle and provided with a ring encircling the abutting ends of the said perch, substantially as set forth.

6. The combination with axles having transverse sockets, of tubular perches and connecting-pieces D having hollow heads and necks, the heads brazed to the perches and the necks extending through the sockets of the axles and threaded and provided with nuts, and bolts 9 connected with the perches and extending through the connecting-pieces and threaded and provided with nuts at their outer ends, substantially as set forth.

7. The combination of an axle having a transverse socket, a sectional tubular metallic perch, and a connecting-piece having a head brazed within the perch, and a tubular neck passing through the axle, threaded at the outer end, and provided with a nut, and a bolt extending from the inner section of the perch through the outer section and through said neck and also provided with a nut, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES T. FLETCHER.

Witnesses:
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