

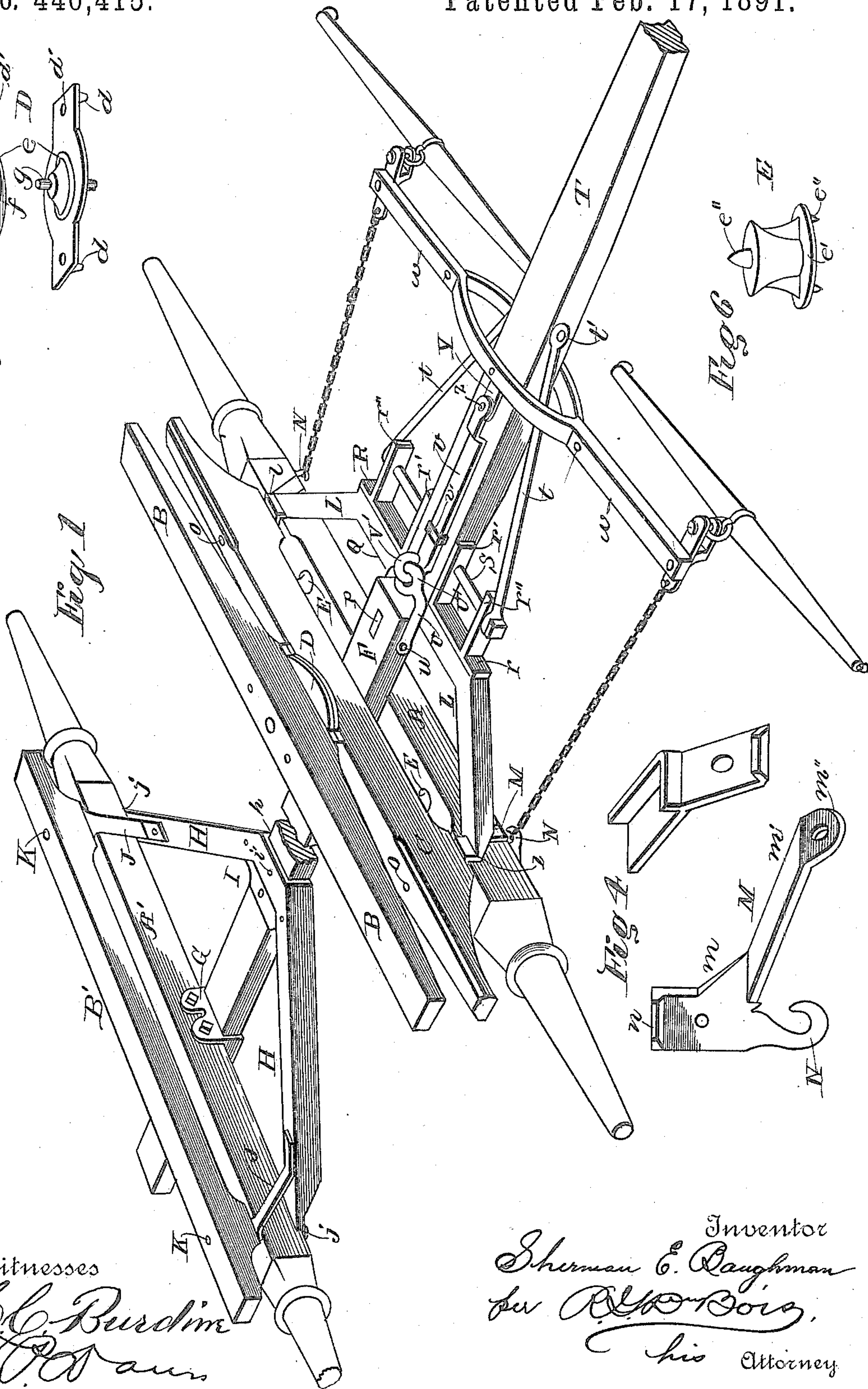
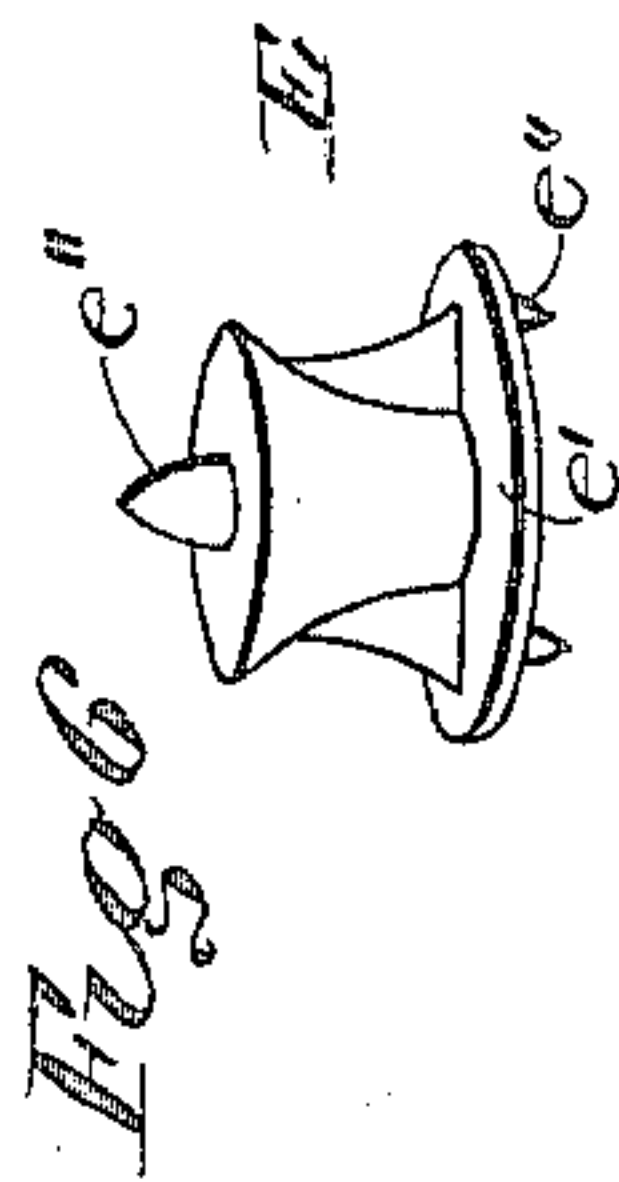
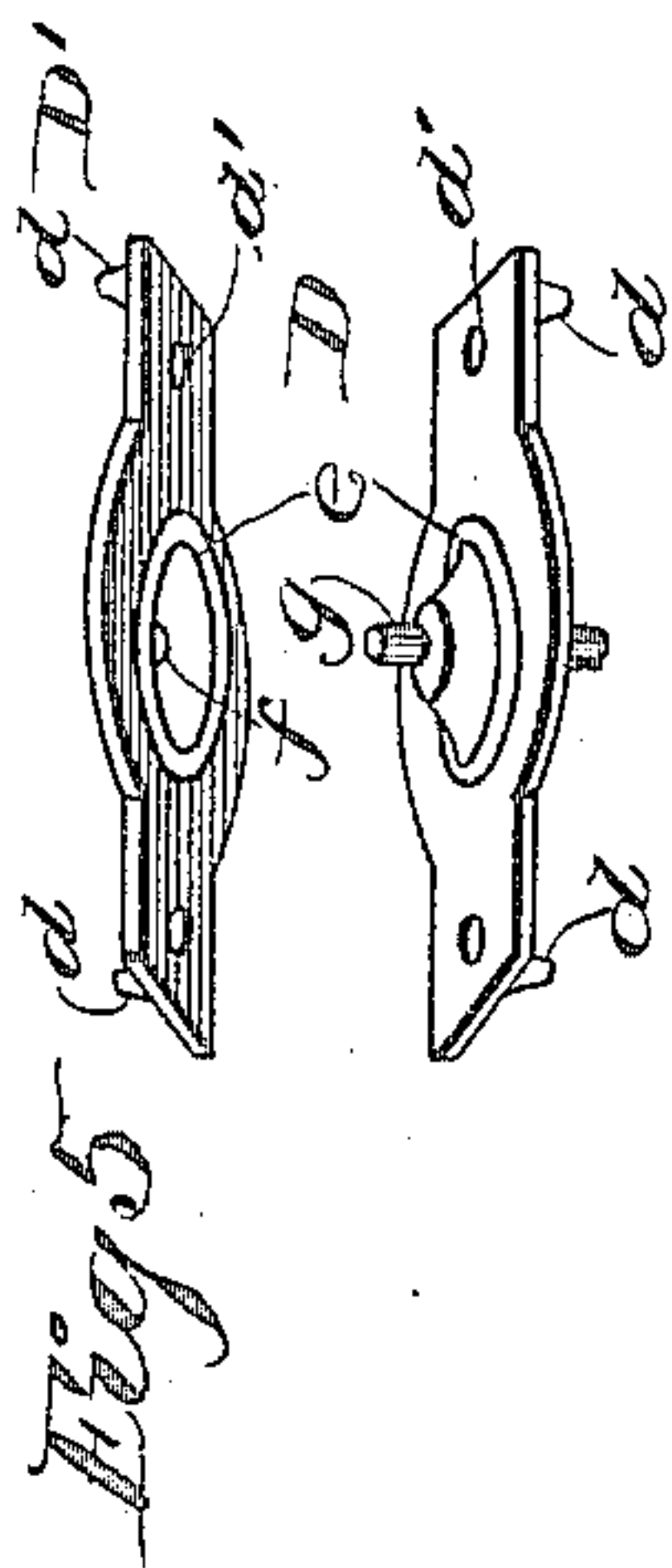
(No Model.)

2 Sheets—Sheet 1.

S. E. BAUGHMAN.
VEHICLE RUNNING GEAR.

No. 446,415.

Patented Feb. 17, 1891.



Witnesses

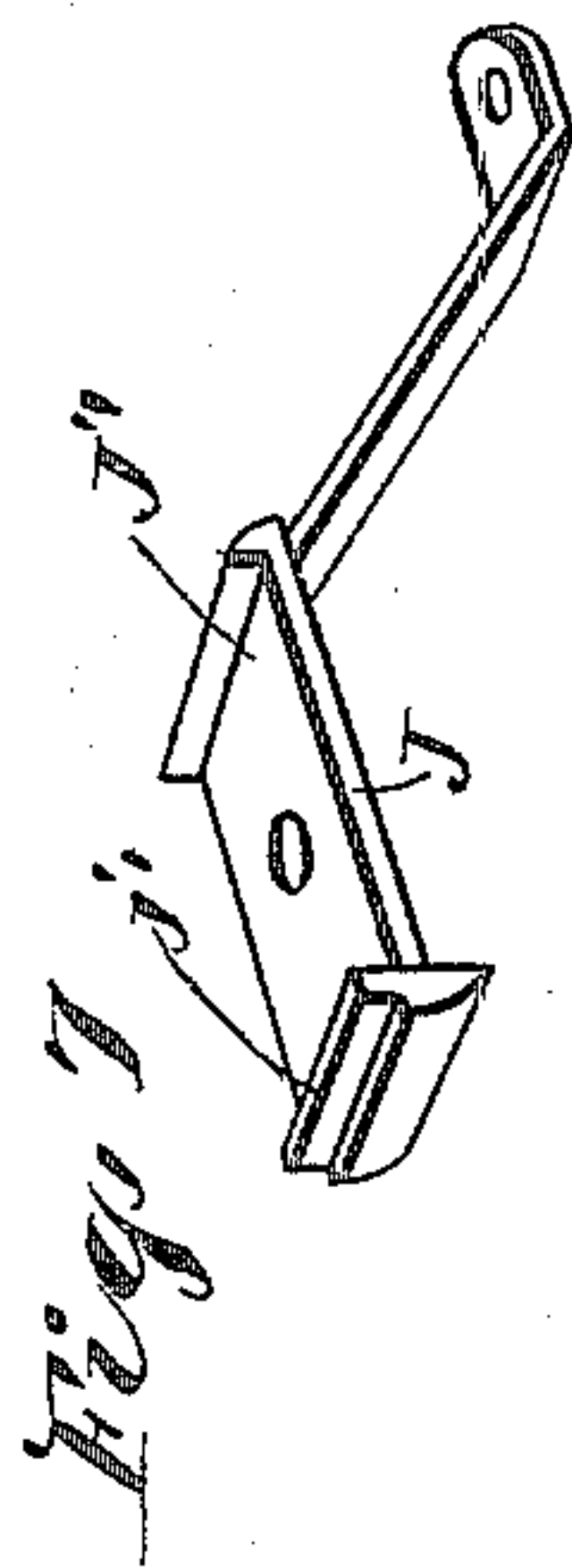
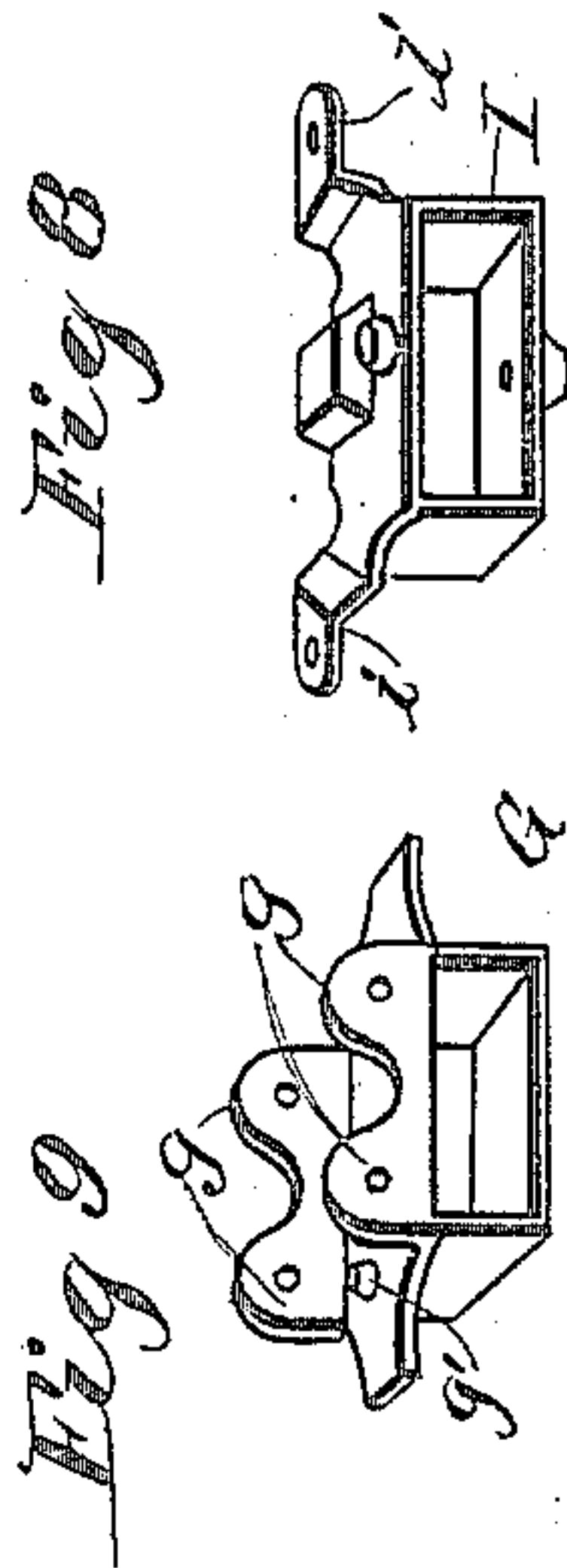
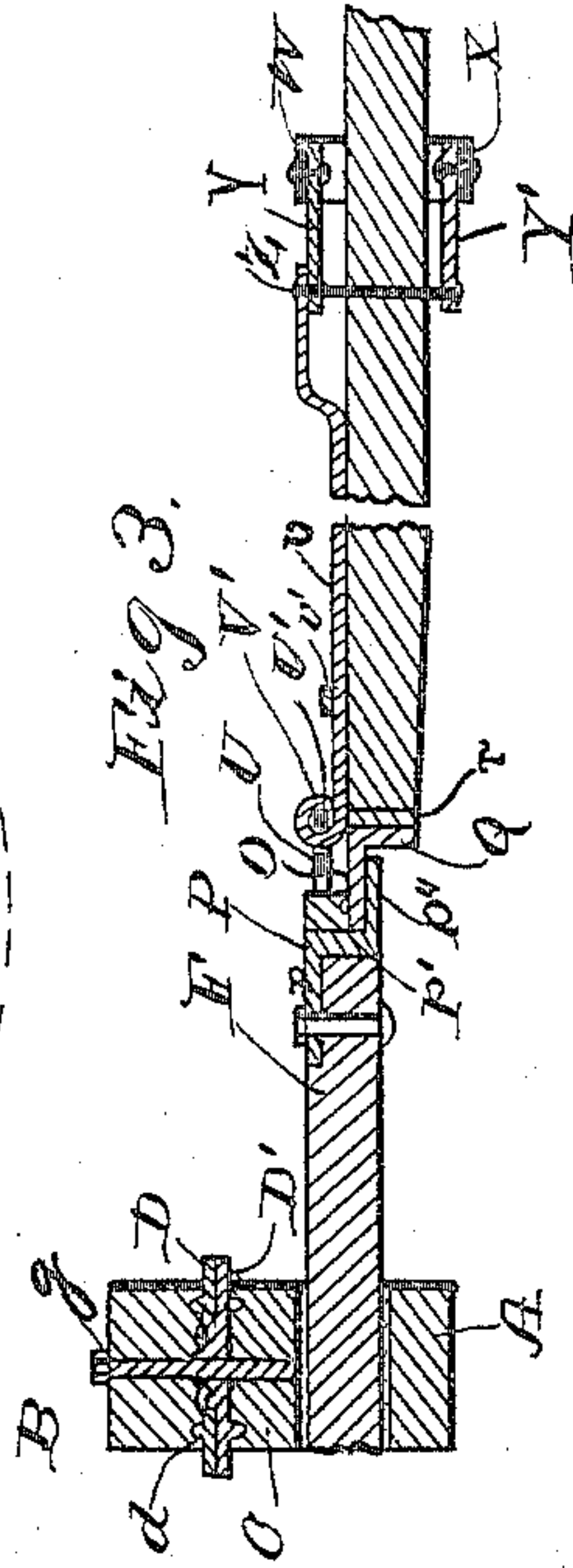
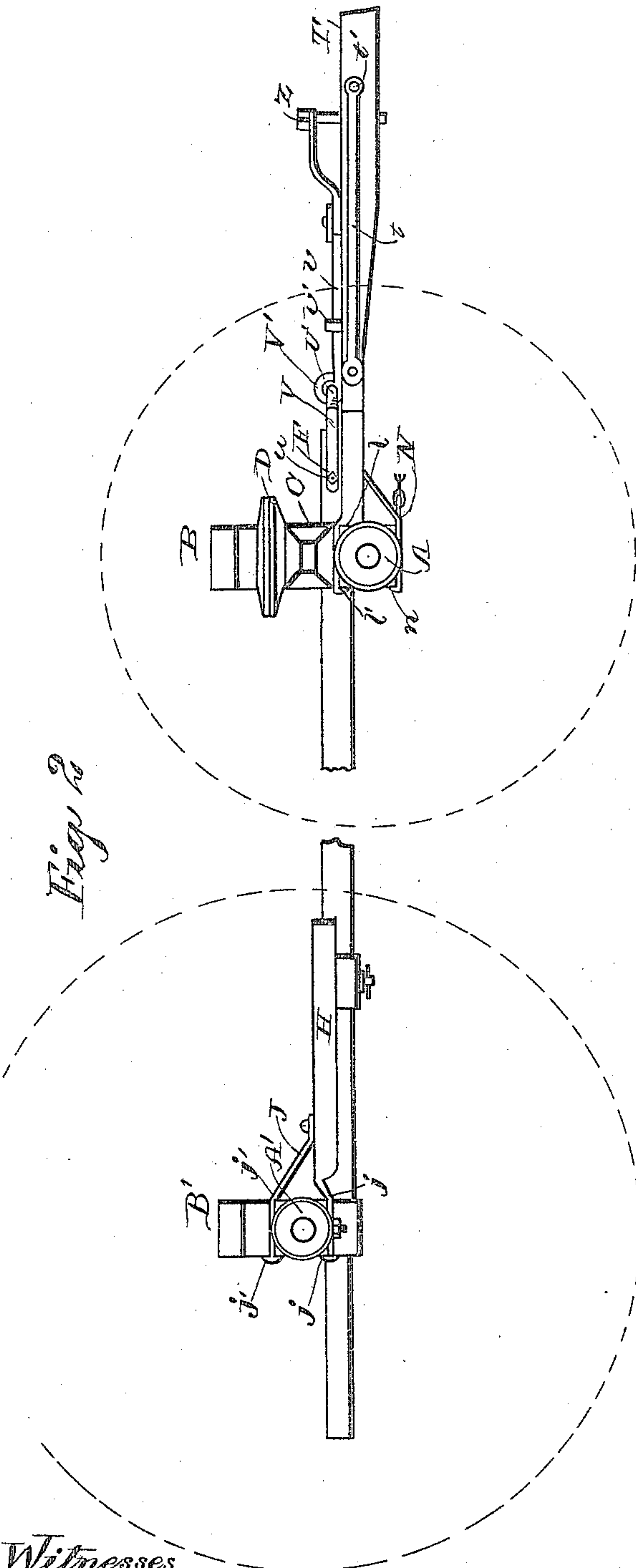
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UNITED STATES PATENT OFFICE.

SHERMAN E. BAUGHMAN, OF TAYLORVILLE, ILLINOIS.

VEHICLE RUNNING-GEAR.

SPECIFICATION forming part of Letters Patent No. 446,415, dated February 17, 1891.

Application filed May 14, 1890. Serial No. 351,762. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN E. BAUGHMAN, a citizen of the United States, residing at Taylorville, in the county of Christian and State of Illinois, have invented certain new and useful Improvements in Vehicle Running-Gear; and I do hereby 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.

My invention relates to running-gear for four-wheeled vehicles, but more especially two-horse wagons or drays for transporting heavy loads.

The object sought to be accomplished is to produce a more simple, cheap, and durable construction than has hitherto been known, and particularly to perfect an arrangement of parts whereby the draft is communicated directly from the tongue to the rear running-gear by means of the coupling-pole or reach and in which the king-bolt extending through the bolster, sand-board, and axle is dispensed with.

A further object is to provide improved means for rigidly holding the front gear in upright position; and a still further object is to bring the doubletree in the direct line of draft, thus maintaining a direct draft from the horses' shoulders to the point of resistance, thereby causing the draft from team to lift upon the weight instead of bearing down.

With these ends in view my invention consists in the peculiarities of construction and combinations of parts more specifically described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a perspective view of my complete arrangement; Fig. 2, a side elevation; Fig. 3, a longitudinal section through the front running-gear; and Figs. 4, 5, 6, 7, 8, and 9, detail views illustrating the special construction of different parts.

The axles A A' have mounted above them, as usual, the bolsters B B', and the rear bolster B' is fastened directly to the axle, while the ordinary sand-board C is interposed between the forward bolster B and the axle A and rigidly bolted to the latter. In place of

a king-bolt passing through all three of these parts, I form the pivotal point by means of a pair of bearing-plates D D', secured, respectively, to the adjacent faces of the bolster and sand-board by means of the projecting lugs or spurs d, arranged to be driven into the wood, and suitable bolts or rivets d'. These plates are provided with raised centers e, and through them extend perforations f, entered by the bolt g, which is arranged to project through the bolster B and partially through the sand-board, thus forming the pivot on which the front gear turns.

The sand-board is securely bolted to the axle at either end and also supported by the posts E, provided with base-plates e' and spurs e'', projecting from said plates and the upper surfaces of the posts and arranged to be driven into the axle and sand-board, respectively, to secure the parts together.

The coupling-pole or reach F passes beneath the rear axle, and is supported by a box G, surrounding it and depending from said axle, being secured thereto by means of the upwardly-projecting ears g, passing on either side of the axle, and the spurs g', projecting from the upper face of the box and arranged to be driven into the bottom of the axle. The reach is further supported and strengthened by the braces or hounds H, which consist of a single piece of angle metal arranged to straddle the reach at the juncture of the hounds, and there provided with a depression h for the purpose. This brace is secured to the reach at this point by means of a box I, surrounding the latter and bolted to it, and also bolted to the angle-iron through the ears i, fitting beneath the upper plate of the same, and the bolt i' at the center.

The rear ends of the hounds pass beneath the rear axle and are provided with suitable shoulders j, fitting on each side of the latter, and angular metallic clips J are secured at their outer ends to the upper sides of the hounds and extend beneath the upper surface of the rear axle, and the bolster B' being provided with lugs j' to fit on either side of these parts.

Bolts K extend entirely through the bolster, clips, axles, and hounds, and thus securely clamp the parts together.

The forward end of the reach F extends through the space left between the front axle and sand-board C, and hence it will be seen that it occupies a position parallel with the ground surface, and hence a direct line of draft is maintained between the front and hind gear with a lifting-draft in place of a bearing-down draft, as in the old way.

The front hounds L, like the hind ones, are made of a bar of angle metal, and their rear ends pass over the upper surface of the axle between it and the sand-board and are dropped down at l to bring the upper plate of the angle-iron nearly level with the lower side of the reach, and also provided with lugs l', fitting against the rear side of the axle. Each hound is provided with a clip M, consisting of an angular portion m, fitting the under and front sides of the axle, and a projecting plate m', extending beneath the upper plate of the angle-iron and bolted thereto through the ear m''. A suitable lug n projects from the lower plate of the angular portion of the clip behind the axle, and a stay-chain hook N is cast integral therewith and extends forward of the axle.

The bolts O extend entirely through the sand-board, hounds, axle, and clips, and thus securely clamp the parts together.

The forward extremity of the reach is cut away underneath at o and projects over the upper surface of the angle-iron, and an angular plate P is introduced through the wood, its upper portion p being sunk in the surface of the reach and its vertical portion p' extending down through the latter and provided with the projection p'', extending slightly beyond the outer end of the coupling-pole and in alignment with the lower side of the same, and hence leaving a space between it and the cut-away portion.

As before stated, the outer end of the pole projects over the upper plate of the angle-iron, and it will thus be clear that the projection p'' will extend beneath said plate. By this arrangement the front gear will be held in rigid upright position.

To the front wall of the straight portion Q of the angle-iron is bolted the tongue-supporting iron R, which consists of the base-plate r, the arms r', between which the rear end of the tongue fits, and the outside arms r'', supporting the outer ends of the coupling bolt or pin S, which extends through the arms r' and the tongue T. Braces t t are fitted on the outer ends of the coupling-bolt S and extend to the tongue, to which they are secured by a transverse bolt t'.

The reach and tongue are coupled together as follows: A bail U is pivotally hung from the front end of the reach by means of the transverse pin u, and this bail extends in front of said reach and is formed into an eye or link U'. This link is engaged by a hook V' on the rear end of a bar v, lying along the upper surface of the tongue and confined and

guided by a staple or box v', surrounding it and secured to the tongue. It will be seen by reference to Fig. 3 that the bail and bar and connection between the two will lie in direct line with the center of the coupling-pole. The bar r is connected to the double-tree W by means of a pin z, and thus a direct line of draft is maintained from the horses' shoulders through the middle of the tongue, reach, and axles, and thereby the least resistance offered.

The draft is carried directly from the tongue to the rear gear, and hence the former will be kept in rigid parallel position by the weight on the hind gear, and the more weight added the stiffer it will become, and on a rough road this weight will assist the wheel in overriding obstacles instead of causing the tongue to be thrown from side to side against the horses.

The use of angle metal for the hounds reduces the amount of material and cheapens the cost, at the same time increasing the strength of the structure.

It is evident that my structure could be varied in many slight ways which might suggest themselves to a skilled mechanic. Hence I do not confine myself to the precise construction herein shown, but consider myself entitled to all such slight variations as come within the spirit and scope of my invention.

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

1. The combination of front and rear running-gear, the reach supported beneath the rear axle and above the front one, the tongue-hounds, the tongue pivoted thereto, a swinging bail secured in the end of said reach and extending in front of the same, and pivotal connections between said bail and the tongue, substantially as and for the purpose described.

2. The combination of front and rear running-gear, the reach supported beneath the rear axle and upon the front one, the tongue-hounds, the tongue pivoted thereto, a bail hung in the end of the reach and extending in front of the same, and a coupling-bar attached to the tongue and having a hook on its rear end engaging said bail, substantially as described.

3. The combination of front and rear running-gear, the reach supported beneath the rear axle and upon the front one, the tongue-hounds, the tongue pivoted thereto, a swinging bail secured in the end of the reach, extending in front of the same, and a coupling-bar lying along the upper surface of the tongue and provided with a hook at its rear end engaging said bail and at its opposite front end connected to the doubletree, substantially as and for the purpose described.

4. In vehicle running-gear, the combination of tongue-hounds having a straight connecting portion, the reach extending over the latter, and a projection from said reach extend-

ing under it, substantially as and for the purpose described.

5 5. In vehicle running-gear, the combination of angle-metal tongue-hounds, the reach projecting over the connecting straight portion between them, and an angular plate fixed in said reach and extending beneath said straight portion, substantially as and for the purpose described.

10 6. The combination of front and rear running-gear, the reach connecting them and supported beneath the rear axle and above the front one, tongue-hounds connected by a

straight portion over which said reach projects, a plate secured to the latter and extending beneath said straight connecting portion, a bail secured in the end of the reach, the tongue pivoted to the hounds, and pivotal connections between said bail and bar, substantially as and for the purpose described. 15 20

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

SHERMAN E. BAUGHMAN.

Witnesses:

E. A. VANDEVEER,
W. H. GILBERT.