

UNITED STATES PATENT OFFICE.

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RUNNING-GEAR FOR WAGONS.

SPECIFICATION forming part of Letters Patent No. 231,082, dated August 10, 1880.

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To all whom it may concern :

Be it known that I, ROBERT C. PARVIN, of Forest Grove, in the county of Gloucester and State of New Jersey, have invented certain new and useful Improvements in Running-Gear for Wagons; 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification, in which the figure is a perspective of my invention.

My invention has for its object to substitute metal for wood in the running-gear of wagons, so as to reduce the expense and increase the efficiency and durability of the same; and my invention consists in the peculiar construction and combination of parts hereinafter fully set forth, having reference principally to the following points: first, to making the axle-bed of steel or iron and in the form of a bridge, which bears upon the axle at two points only—*i. e.*, just inside of the journal-collar—whereby the springing of the axle at its center and the consequent cutting of the wheel-boxes are avoided; second, to making the hounds and slider of angle-bars, whereby lightness, strength, and symmetry are secured, said hounds being cut away at their junction with the axle and bolted and strapped thereto, and said slider being constructed so as to combine with said angle-hounds and brace the same, as hereinafter fully set forth; third, to certain details of construction and combination hereinafter fully set forth.

Referring to the accompanying drawing, A and B are, respectively, the front and rear axles of a wagon running-gear, and C the reach connecting the same. D D' represent the axle-beds, which are of metal, preferably of cast-steel or malleable iron. They are of the peculiar form shown, being constructed in bridge shape, so as to rest upon their respective axles at two points only—*viz.*, just inside of the journal-collars *a b*—and are T-shaped in cross-section. The bridge thus consists of the arched web *d*, the vertical ends *d' d'*, with laterally-projecting feet *d² d²*, and horizontal top plate, *d³*, on which latter the bolster rests. *e e* are straps or clips which encircle the feet

d² d² and fasten the beds D D' to their respective axles. F F are the hounds, made of bars of angle-iron, and connected at their rear ends by a bar of like material, which forms the slider.

The vertical parts of the bars which form the hounds are cut away, as shown at *f f*, for the passage of the axle D, while straps G G, which pass beneath said axle, are secured by rivets or bolts at *g g* to the horizontal portions of said bars, bolts *g' g'* also passing through such parts, through the axle D, and through said straps, as shown.

The horizontal part *h* of the slider H rests upon the hounds, its vertical portion *h'* being cut away at either end, as shown, the bolts or rivets *h² h²*, which connect said hounds and slider together, passing also through the ends of the straps G G.

I I are bolster-bars, which are bolted to the axle-bed D at *i i* and to the hounds at *i' i'*, being bent at *i² i²*, so as to permit their attachment to said parts, and at the same time to keep them sufficiently elevated to form supports for the bolster K when the latter sets at an angle to the axle. Said bolster is made of wood with an iron plate, *k*, on its under side, and a king-bolt, L, passes through the same, through the axle-bed D, reach C, and axle A, being free to play up and down in these several parts.

M M are the crotches, consisting of flat or square bars whose forward ends lap upon each other, and are fastened to the reach by a bolt, N. By preference a countersunk bush, *n*, is fitted at the junction of said crotches and reach. The rear ends of said bars M M are bent so as to be parallel with the reach C and to form a junction with the axle B just inside of the journal-collars *b b*, being held to said axle by the clips which fasten the bed D' to said axle.

P P are crotch-braces, which are fastened at their forward extremities to the crotches M M, and incline thence upwardly to their junction with the top of the axle-bed D', to which latter they are duly fastened by bolts. Said crotches are thereby braced from the axle-bed D' without imposing any strain upon the axle B.

The slider H should be provided with a top plate, h^3 , to take up wear and be susceptible of ready removal when worn out.

5 The peculiar form given to the axle-bed has this advantage, that it may be cast instead of forged, and, while possessing great strength and rigidity, offers no obstruction to the other parts of the running-gear.

10 The arched form of the web permits the employment of but two supports—viz., at the ends—and dispenses with the necessity of a center support, whose pressure upon the axle would tend to effect an undesirable and injurious strain.

15 The bolster-bars I serve admirably, in connection with the webbed axle-bed, to support the hounds, which otherwise would want that firmness and stability which is so desirable. These bolster-bars also form counter-supports
20 or braces to the axle-bed, and prevent any lateral movement thereof should there be any tendency to such.

What I claim as my invention is—

1. The metallic axle-bed herein described,

consisting of a cast bridge-shaped bar, T, 25 formed in cross-section, having an arched web, d , vertical ends d' d' , projecting feet d^2 d^2 , and a horizontal top plate, d^3 , and adapted to rest upon the axle at two points only—viz., just inside the journal-collars—substantially as 30 shown and described.

2. In combination with the bridge-bed D and angle-bar hounds F F, the bolster-bars I I, crossing said bridge-bed and secured upon the top thereof, substantially as shown and de- 5 scribed.

3. The combination of the bridge-bed D, having arched web d , the angle-iron hounds F F, plates G G, and the arched bolster-bars I I, bolted to said hounds and bridge-bed, sub- 40 stantially as shown and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1879.

ROBERT C. PARVIN.

Witnesses:

ISAAC J. POTTER,
CHARLES R. PORTER.