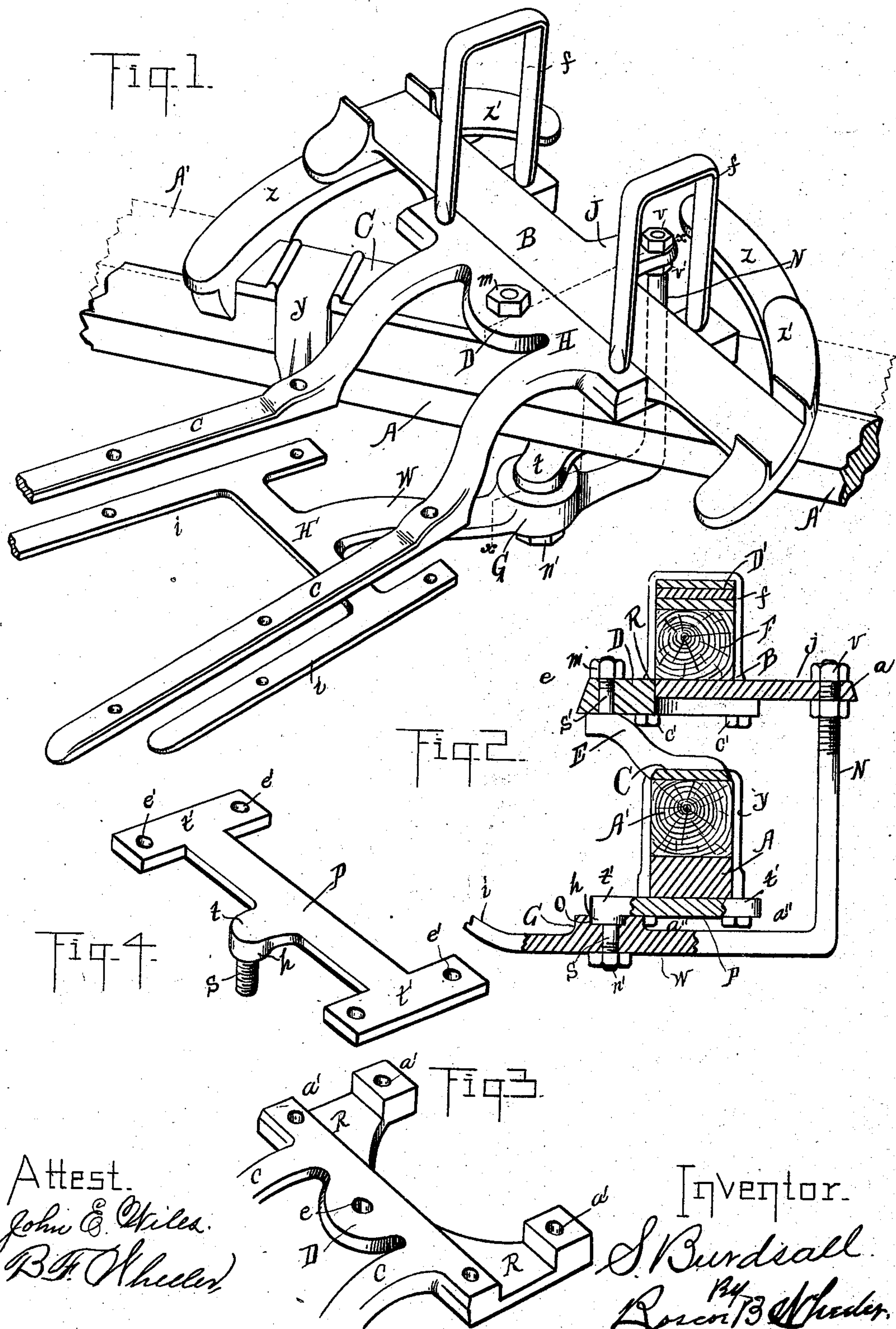


(No Model.)

S. BURDSALL.  
RUNNING GEAR FOR VEHICLES.

No. 382,636.

Patented May 8, 1888.



Attest.  
John E. Wiles.  
B. F. Wheeler.

Inventor.  
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By B. F. Wheeler.  
att'y.



# UNITED STATES PATENT OFFICE.

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AND DAVID DAVIS, OF SAME PLACE.

## RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 382,636, dated May 8, 1888.

Application filed January 21, 1888. Serial No. 261,452. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN BURDSALL, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Running - Gears for Vehicles; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improved features in running - gears for vehicles, in which the perch-heads are made so as to be attached to and removed from the upper and lower section of the fifth-wheel plates, as shown in Letters Patent issued to me on May 3, 1887, No. 362,423, the present device being an improvement on said Letters Patent. The couplings of the king-bolt in the former patent are located over and under the axle. In the present device I have what is known as a "rear coupling," it being much preferred and much cheaper in construction, more convenient to get at, and one that gives the fore axle greater range in turning as the axle oscillates on its bearings, as will be hereinafter more fully set forth, and the essential features pointed out particularly in the claims.

In the accompanying drawings, forming a part of the specification, Figure 1 is a view in perspective of my improved running - gear mounted on the iron axle, the wood part and head-block being removed. Fig. 2 is a cross-section taken on the dotted line *xx* of Fig. 1, showing also the wood-work in cross-section. Fig. 3 is a perspective of the upper perch-head iron. Fig. 4 is a perspective of the binding-plate located against the under face of the iron axle in Fig. 1.

A represents the iron axle; A', the wood part; B, the upper and C the lower fifth-wheel plates.

Z Z are the rub-irons of the lower, and Z' the rub-irons of the upper, plates of the fifth-wheel.

F is the head-block.

H is the upper perch-head, having the two perch-prongs *c c*.

D is a rear extension or ledge formed integral with the perch-head and having a hole, *e*.

R is a longitudinal channel formed in the upper face of the perch-head, which is made to receive the body of the upper section, B, of the fifth-wheel, as shown in Figs. 1 and 2.

The section B of the fifth-wheel has formed integral therewith the forwardly - projecting nose J, having a hole, *a*, which receives the vertical stem N of the perch-head H', thereby forming a pivotal bearing in front of the axle.

The plate C of the fifth-wheel has a rearwardly and upwardly projecting prong or arm, E. (See Fig. 2.) Said arm has a lug or bolt, S', made fast thereto. Said bolt passes through the hole *e* of the perch-head H, being secured thereto by means of the nut *m*, thus forming a rear pivotal bearing.

The plate P is provided with end extensions, *t'*, having holes *e'* to receive the yoke Y, by which said plate is secured to the under face of the axle A, as shown in Fig. 2. Projecting from the rear edge of the plate P is an arm, *t*, having an annular shoulder, *h*, and depending lug or bolt S.

H' represents the under perch-head, which has rear extensions, *i*, for a two-part perch or reach. Its forwardly extending stem or arm W is provided with a hub, G, having a hole through it to receive the bolt S, and an annular chamber, O, in its upper face, to receive the annular shoulder *h* of the arm *t* of the plate P, being secured thereto by means of the nut *n'*, (see Figs. 1 and 2,) whereby a second rear pivotal bearing for the axle is formed, and on said pivotal bearings the fore axle oscillates as the vehicle is turned.

N is a vertical extension of the arm W, its upper end being secured to the nose or projection J of the upper fifth-wheel plate, B, by means of the nuts V V', thereby forming a support forward of the axle.

The springs D', the head-block F, and plate B of the fifth-wheel are secured to the perch-head H by means of the yokes *f* passing through the perch-head, and having nuts *c'* on their lower ends, as clearly shown in Fig. 2.



I have shown in the accompanying drawings the perch-heads having each two rearwardly-projecting prongs. Such is the style for what is known as a "double-perch vehicle;" but to use the plates B C on a vehicle having a single perch I attach perch-heads constructed identical with the ones shown, excepting that they have but one rearwardly-projecting prong, which receives the single perch or reach.

It will be observed that the pivot-bearings in the rear of the axle are short and strong, and as the bolts S S' are made fast to or formed integral with the supporting-arms there are no bolts to work loose, drop out, or to rattle, thus making a durable and cheap coupling, allowing a greater swing of the fore axle, whereby the vehicle can be turned about in less space than as heretofore constructed.

I am aware that heretofore the running-gears of vehicles have been constructed with pivotal bearings in the rear of the axle; but I am not aware that perch-heads made so as to be attached to or be detached from the fifth-wheel plates have been provided with such rear pivotal bearings.

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

1. In combination with the fore axle, the fifth-wheel plate B, the detachable perch-head H, having one or more rearwardly-extending

perch-prongs, and rear extension, D, with hole e, the fifth-wheel plate C, having the rearwardly-extending arm E, said arm being pivoted to the extension D of the perch-head, the perch-head H', having one or more rearwardly-extending perch-prongs and forward extension, W, the hub G, formed therein and having a hole through said hub, the plate P, located under the fore axle and having the rear extension, t, with depending bolt S, said bolt being pivotally connected to the hub G and having the nut n', as and for the purposes specified.

2. In combination with the fifth-wheel plate B, the detachable perch-head H, having the rearwardly-extending ledge D, and the fifth-wheel plate C, having the rearwardly-extending arm E, said arm having a pivotal connection with the ledge D of the perch-head, and the plate P, having the rear extension, t, with depending prong S, the perch-head H', having the forward extension pivotally connected to the prong t of the plate P in the rear of the axle, and its vertical prong N, pivoted to the nose J of the fifth-wheel plate B in advance of said axle, substantially as and for the purposes specified.

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

STEPHEN BURDSALL.

Witnesses:

E. F. DICKINSON,  
GEO. W. GURST.