

(No Model.)

2 Sheets—Sheet 1.

S. BURDSALL.

RUNNING GEAR FOR VEHICLES.

No. 362,423.

Patented May 3, 1887.

Fig. 1.

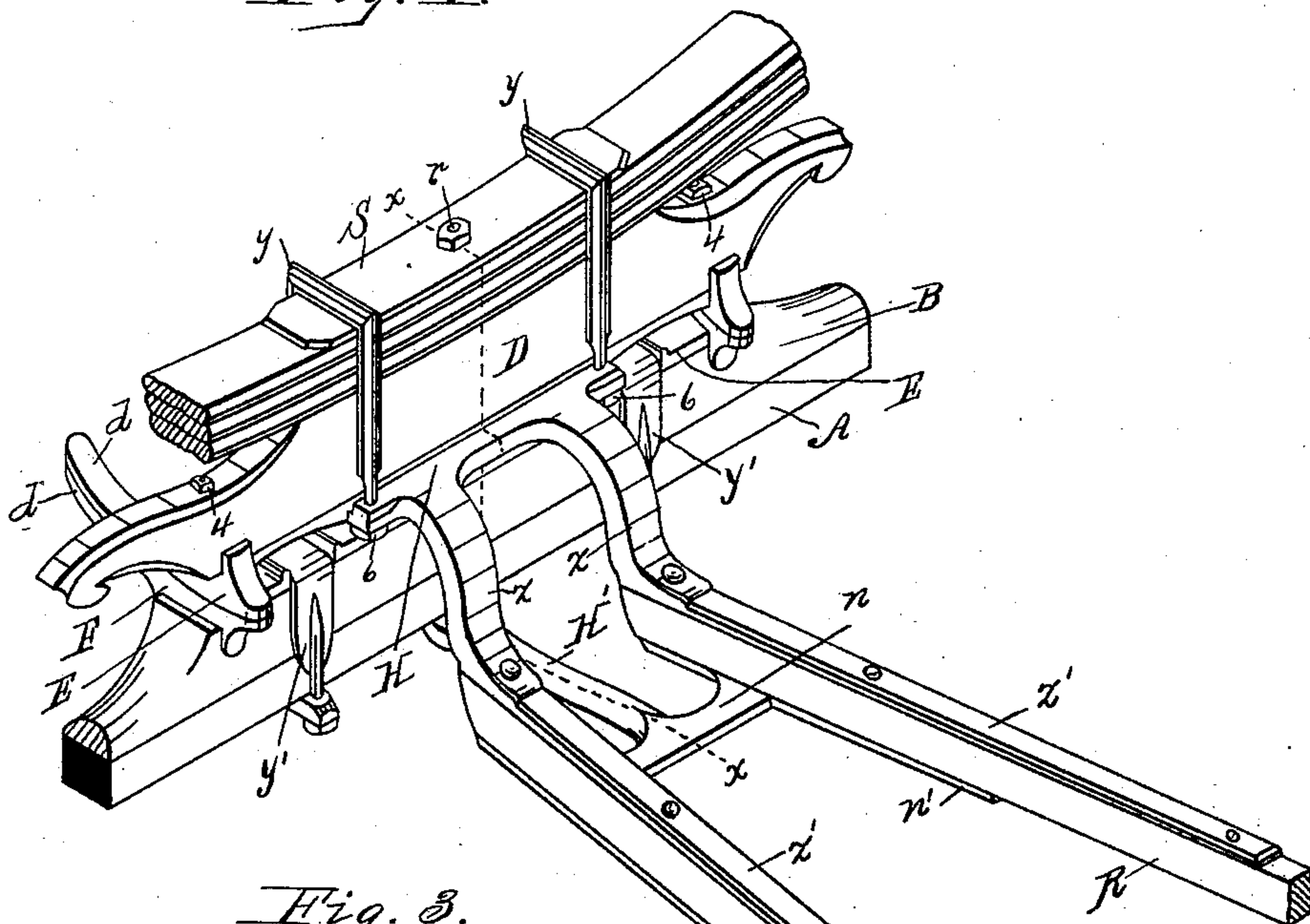


Fig. 3.

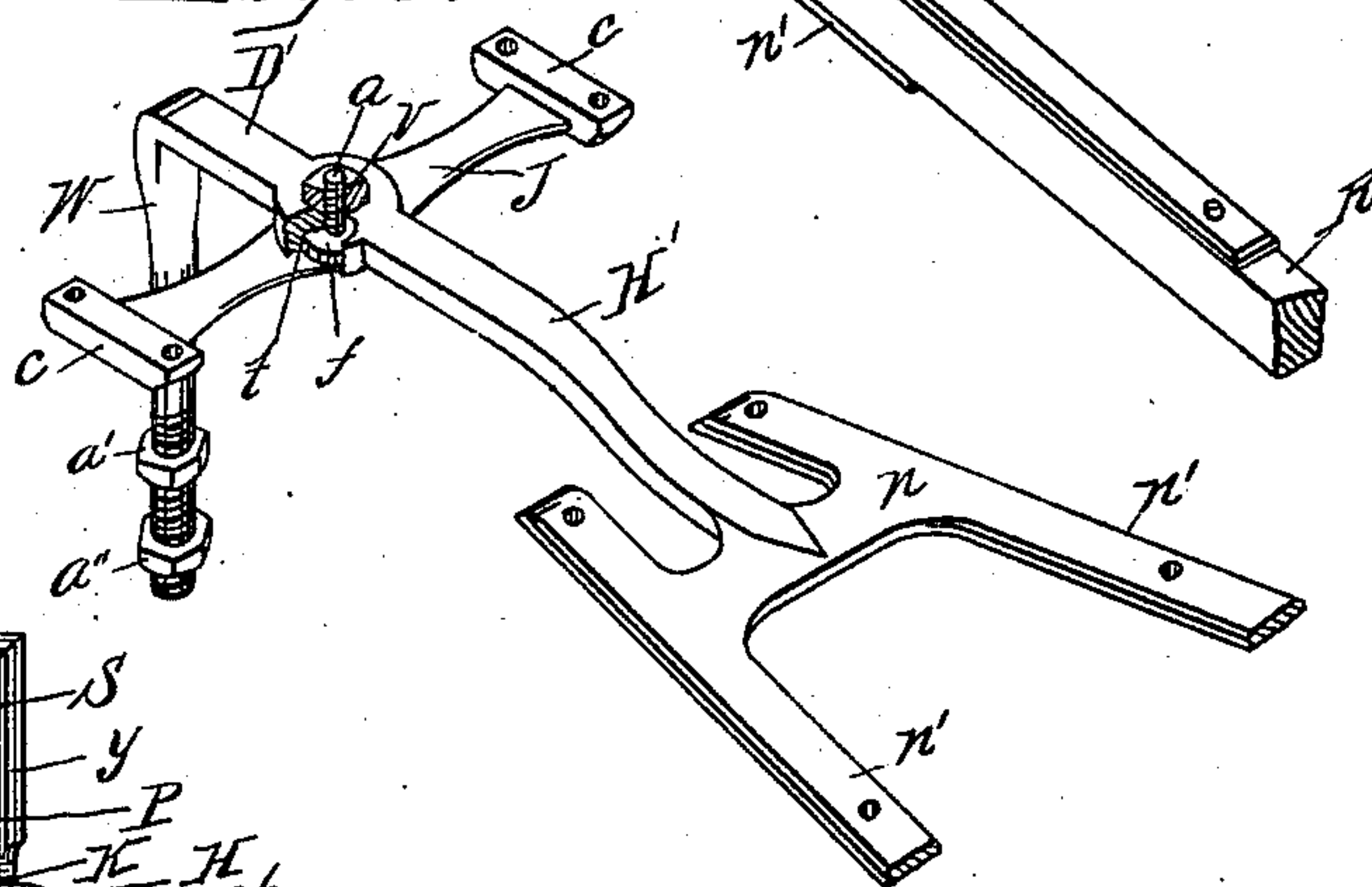
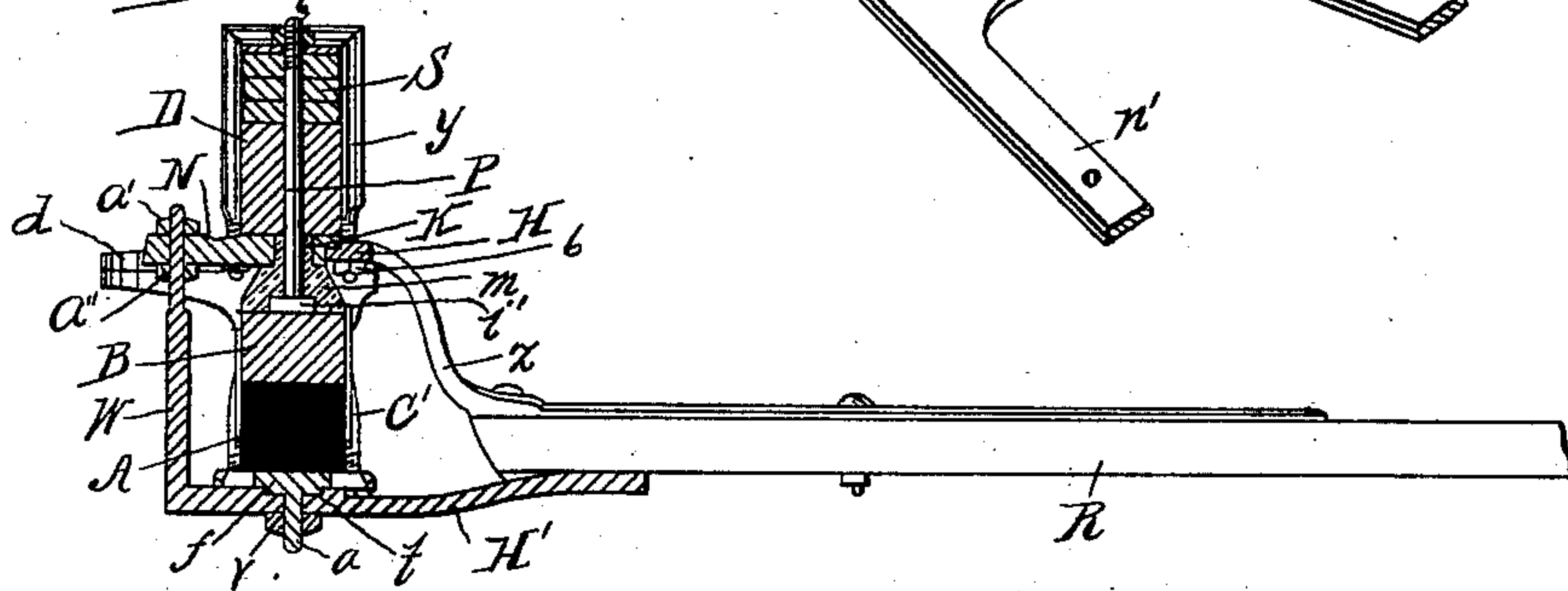


Fig. 2.



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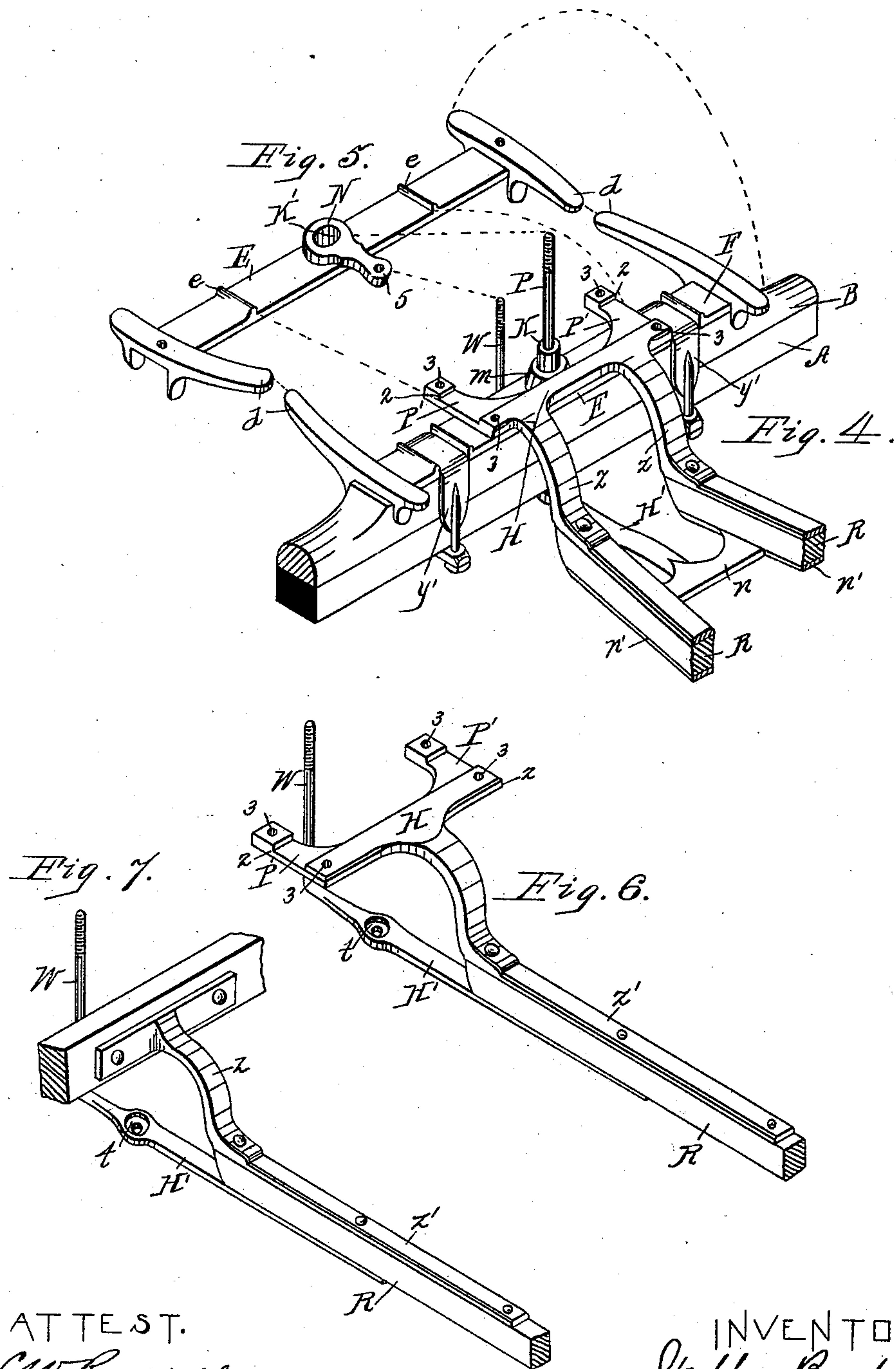
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# UNITED STATES PATENT OFFICE.

STEPHEN BURDSALL, OF FREMONT, OHIO.

## RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 362,423, dated May 3, 1887.

Application filed January 20, 1887. Serial No. 224,837. (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-Gear 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.

My invention relates to the construction of the gear-irons for coupling the forward end of a single or double perch or reach to the fore axle of a vehicle, the head of the perch-iron being made separate from the upper section of the fifth-wheel and so constructed that it may be attached to the upper section of the fifth-wheel and onto the under face of the head-block. This enables the manufacturer to attach to the fore axle and its head-block the two-section fifth-wheel, which enables using them with various styles of vehicles. The style of vehicles will determine the style of perch-head to be used.

This invention also enables me to pivotally attach the gear-irons to the vertical center of the fore axle at the top and bottom. The lower brace-iron, which I pivotally attach to the under face of the axle, may be used with any style of vehicle, excepting that the rear end is provided with one or more divergent shanks to meet the under face of a single or double perch, as may be required. The forward vertical end of the lower coupling-arm I pivotally attach to the central arm of the upper section of the fifth-wheel, thus acting as a brace, preventing the fore axle from rocking; and my invention consists in the construction of parts, as hereinafter fully set forth, and pointed out particularly in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective of my invention, taken from the rear side, showing parts in position, with a two-part perch. Fig. 2 is a vertical central cross-section taken on dotted line *xx* of Fig. 1. Fig. 3 is an enlarged inverted view of the lower brace-iron and coupling-plate, showing pivotal connection. Fig.

4 is a perspective of lower fifth-wheel section, showing the perch-iron head and rear couplings. Fig. 5 is an inverted view of the upper section of the fifth-wheel. Figs. 6 and 7 are modified details, as will be fully explained.

As indicated in the drawings, A represents the iron portion of the fore axle, B the wood portion, D the head-block, S the springs, and R the perch, all of which are in common use. To the upper face of the axle I attach the lower plate, F, of the fifth-wheel by means of the yokes *Y' Y'*, their threaded ends passing through the ends *cc* of the attaching-plate J, which I locate on the under face of the iron axle A. The attaching-plate is clearly shown in Figs 2 and 3. The bearing-arms *dd* of the fifth-wheel have a forward extension, as clearly shown in Figs. 4 and 5.

I form integral with the lower section of the fifth-wheel, at the center, a hub or riser, *m*, terminating with the sleeve K. The under face has a chamber, *i'*, to receive the head of the king-bolt P, which passes through the sleeve K and head-block and spring S, receiving the nut *r* at the upper end. (See Figs. 1 and 4.)

The upper section, E, of the fifth-wheel is attached to the under face of the head-block D by means of the bolts 4 4. Said section is provided on its under face with transverse ribs *ee* and central forward projecting arm, N, having the chamber K' to receive the sleeve K of the fifth-wheel section F and hole 5 at the free end to receive the threaded vertical end of the stem W of the lower brace-iron, H'. Said stem is provided with the nuts *a' a''* to allow of vertical adjustment to the arm N to regulate the bearing of the joining faces of the bearing-arms *dd* of the fifth-wheel.

In Figs. 1 and 4 I show a two-part perch or reach, R R, and in Fig. 6 I show a single reach. The head H of the perch-iron is the same in Figs. 1, 4, and 6, the only difference being in Figs. 1 and 4, in which I show two divergent shanks, Z Z, terminating with the perch-straps Z' Z', while in Fig. 6 I show one shank Z and one strap Z', its construction being for a single reach or perch.

The head H of the perch-iron on its upper face is provided with a depression or chamber, P', which is made sufficiently large to receive the body of the upper section or plate, E, of the fifth-wheel.



When the parts are in position, as shown in Figs. 1 and 2, the flanges *e e* of the plate E of the fifth-wheel drop over the ends of the perch-head H at 2 2, (see Figs. 4 and 5,) thus locking the parts together, preventing lateral displacement.

I securely attach the perch-head H to the plate of the fifth-wheel and head-block D by means of the yokes Y Y, their screw-threaded ends passing through the holes 3 of the head H, and are bound tightly by nuts 6.

The brace-iron H', when constructed for a double perch, is provided at the rear end with the H-shaped iron, consisting of the cross-bar *n*, having the diverging plates *n' n'* for attaching it to the under face of the reaches, as clearly shown in Fig. 3.

For a single reach the brace-iron H' is constructed as shown in Fig. 6, consisting of a single rear-extending plate.

The brace-iron is provided with a hub, D', having an annular chamber, *t*, to receive the circular head *f*, formed on the under face of the plate J. A screw-threaded stud, *a*, is made fast to the plate J, and projects through the head *f* and the brace-iron H', having a nut, *v*, on its lower end, as clearly shown in the inverted view, Fig. 3. The circular head *f* relieves the stud *a* from undue lateral strain, the parts forming a pivot-bearing under the vertical center of the axle.

In Fig. 7 I show the brace-iron H' with connecting parts for the style known as the "Timkin," having no end springs.

Having described my invention sufficiently to be understood by those skilled in the art, what I claim as new, and desire to cover by Letters Patent, is—

1. In a vehicle, and in combination, the fore axle, the lower plate, F, of the fifth-wheel having the bearing-arms *d d*, and central sleeve with king-bolt anchored therein, the yokes and attaching-plate J, securing said parts together, the head-block, the upper plate of the fifth-wheel having the transverse ribs, and the detachable perch-head having one or more perch-arms and adapted to be attached to the upper plate of the fifth-wheel by means of the yokes Y Y, as and for the purposes specified.

2. In a vehicle, the combination of the fore axle, the lower plate, F, of the fifth-wheel having the bearing-arms *d d*, and the hub and sleeves formed integrally therewith, the king-bolt, the yokes securing said plate to the axle,

the attaching-plate J, having the depending stud *a*, the head-block, the upper section of the fifth-wheel E, having the central arm, with chamber K' and hole 5, the detachable perch-head H, adapted to receive the body of the plate E of the fifth-wheel and having one or more diverging perch rods or braces, the yokes Y' Y', and the brace-iron H', having the rear end attached to the perch, being pivotally attached to the stud below the axle, its free vertical end being adjustably attached to the central arm of the upper plate of the fifth-wheel forward of the axle, substantially as specified.

3. In a vehicle, the combination of the head-block, the upper plate, E, of the fifth-wheel having the flanges *e e* and bearing-arms *d d*, the bolts attaching said plate to the head-block, the detachable perch-head having one or more rearwardly-diverging perch rods or braces, said perch-head adapted to receive the upper plate of the fifth-wheel, the spring, the yokes Y Y, their threaded ends passing through the perch-head, and nuts securing said parts together.

4. In combination with the fore axle and its fifth-wheel plate F, having the central hub and sleeve, the king-bolt mounted therein, the yokes Y', the attaching-plate having the heads *c c* to receive said yokes, and the central stud with annular flange *f*, the perch, the brace-iron H', having one end attached to the perch and having pivotal connection to the stud and flange, its stem W, having the adjusting-nuts, the head-block, and the upper plate of the fifth-wheel attached thereto and having the central horizontal arm, with chamber and hole to receive the sleeve of the plate F and stem of brace-iron, substantially as specified.

5. In combination with the fore axle and the head-block, the two-plate fifth-wheel F E, the king-bolt anchored to the lower plate of the fifth-wheel and passing through the head-block, the perch, and the perch-head having one or more diverging arms, said perch-head adapted to be attached to or detached from the upper plate, E, of the fifth-wheel, 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.