

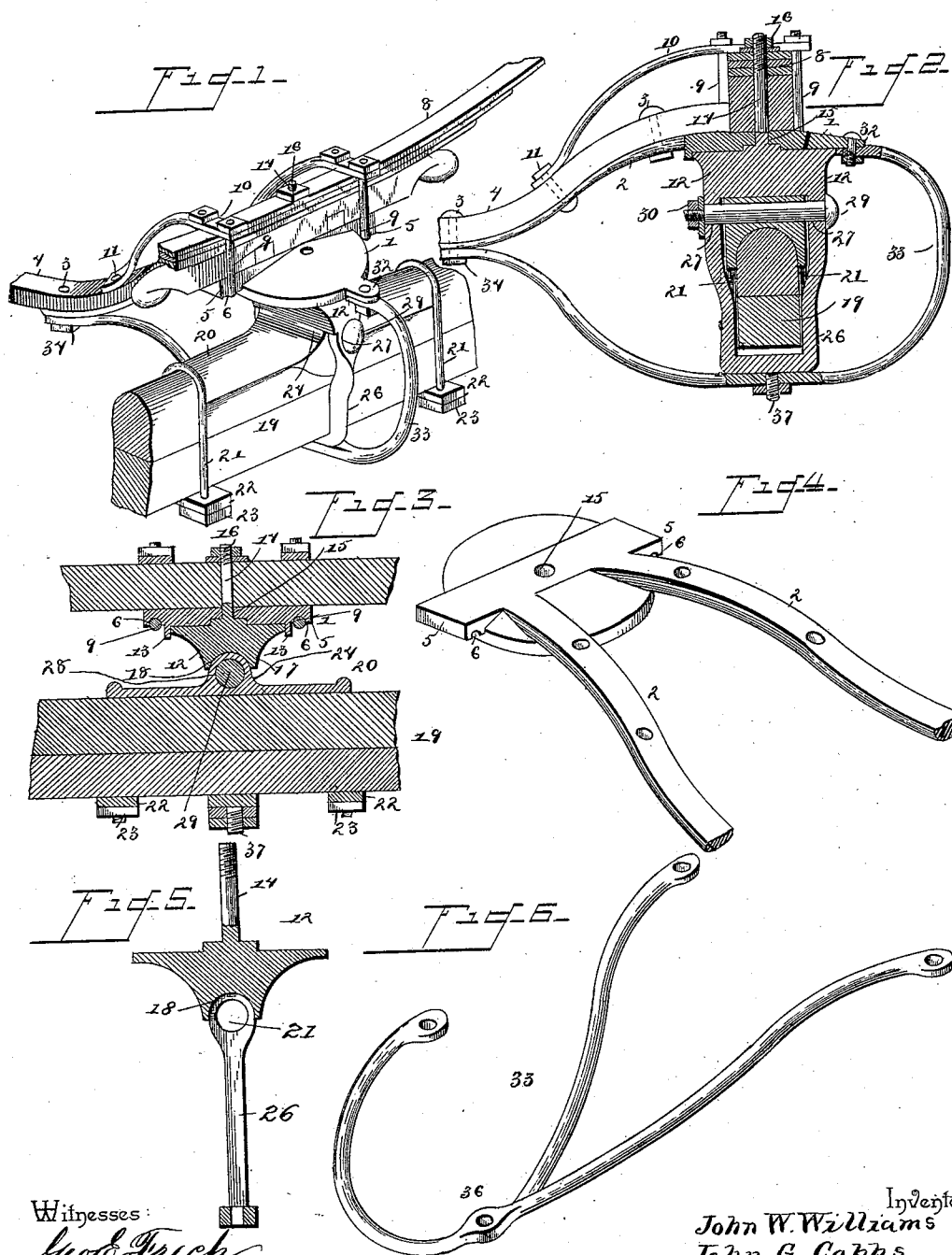
(No Model.)

J. W. WILLIAMS & J. G. CAPPS.
FIFTH WHEEL FOR VEHICLES.

FIFTH WHEEL FOR VEHICLES.

No. 468,905.

Patented Feb. 16, 1892.



Witnesses :

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UNITED STATES PATENT OFFICE.

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FIFTH-WHEEL FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 468,905, dated February 16, 1892.

Application filed July 14, 1890. Serial No. 358,615. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. WILLIAMS and JOHN G. CAPPS, citizens of the United States, residing at Lowell, in the county of Benton and State of Arkansas, have invented a new and useful Fifth-Wheel, of which the following is a specification.

This invention has relation to improvements in fifth-wheels for vehicles; and the objects in view are to provide a fifth-wheel of cheap and simple construction so constructed as to permit of a vertical oscillation of the axle independent of the vehicle to obviate the employment of the king-bolt and consequent perforating and weakening of the axle and its bed, and to permit of an easy turning of the axle, all as will hereinafter appear in the following description, the novel features being particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a fifth-wheel constructed in accordance with our invention. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section. Fig. 4 is a detail in perspective of the upper fifth-wheel section. Fig. 5 is a vertical section of the lower fifth-wheel section. Fig. 6 is a view of the reach-yoke.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the upper circular disk-section of the fifth-wheel, from the rear of which there projects a pair of diverging integrally-formed reach-arms 2, bolted, as at 3, to the upper section 1 are provided with a pair of laterally-extended ears 5, the lower edges of which are provided with transverse grooves 6. Upon the upper disk or section rests in this instance the spring 8, or it may be the head-block, as desired, said spring being secured in position upon the section by means of U-shaped clips 9, which take into the grooves in the under side of the ears and up each side of the spring, their terminals being connected by tie-plates 10, extended to the rear beyond the clips and bolted, as at 11, to the reach-irons 2.

12 designates the lower fifth-wheel section, also of circular form, and has its perimeter surrounded by a depending annular flange

13, formed upon the perimeter of the upper disk. The lower section is provided with an integral upwardly-projecting bolt 14, which passes through a central opening 15, formed in the upper section and a similar opening formed in the spring, or it may be the head-block, and above the same is provided with a nut 16. Upon the under side of the lower fifth-wheel section is formed a depending longitudinally-disposed rib 17, provided with a semicircular bearing-groove 18.

19 designates the axle, and 20 the clip-plate, mounted upon the upper central portion of the axle and terminating at its ends in depending axle-embracing clips 21, connected at their lower extremities by tie-plates 22 and nuts 23. The clip-plate is provided at its center with a superficial semicircular bearing-rib 24, having a central opening, and upon said rib is mounted the depending rib 25.

26 designates a U-shaped stirrup, which depends from the under side of the lower fifth-wheel section, with which section it is made integral, said stirrup being of a width so as to somewhat snugly fit the axle and yet permit an independent movement of the axle without interference by the stirrup. The stirrup is provided with bolt-openings 27 in its opposite terminals, which bolt-openings align with the longitudinal bore 28 of the rib 24, and through the bolt-opening of the rib and those of the stirrup is passed a horizontal pivot-bolt 29, said bolt being provided with a nut 30, whereby it is secured in position. The lower end of the stirrup is provided with a bolt-opening 31, and the upper front edge of the upper fifth-wheel section is provided with a perforated ear 32.

33 designates a Y-shaped brace or yoke, the bifurcations extending rearward and being bolted, as at 34, to the reach-sections. The yoke at its point of bifurcation is provided with a bearing-opening 36, registering with the lower bolt-opening of the stirrup, and through the two openings passes a pivot-bolt 37. The front portion or stem of the brace extends beyond the axle and is upwardly and rearwardly curved and connected by a bolt 38 to the upper perforated ear 32, projecting from the upper section of the fifth-wheel.

It will be apparent that the front axle is free to oscillate vertically, as caused by the wheels thereof passing over obstructions, such as stones, uneven ground, &c., and is prevented from any lateral oscillations independent of the lower fifth-wheel section by reason of the depending stirrup, which, it will be observed, is extremely strong and rigid by being formed integral with the lower section of the fifth-wheel.

It will be observed that the weight of the vehicle at the front end of the same is not sustained wholly by the bolt, but by the contact of the semicircularly-recessed rib bearing upon the semicircular rib. The Y-shaped yoke prevents any disarrangement or springing of the parts and maintains the axle, the spring, and its connections in perfect vertical alignment.

Having described our invention, what we claim is—

1. The combination, with the upper fifth-wheel section and the lower fifth-wheel section, the latter provided with a depending integral stirrup having opposite bolt-openings and between said stirrup with a depending rib having a semicircular recess, of an axle mounted in the stirrup and provided with a clip-plate embracing the upper edge of the same, said clip-plate having a superficial centrally-bored rib taking bearing in the rib of the fifth-wheel section, and a bolt passing through the bolt-openings of the stirrup and the bored rib, substantially as specified.

2. The combination, with the upper fifth-wheel section having laterally-disposed

grooved ears, the spring mounted thereon, the clips embracing the spring and seated in the grooves, the diverging perch-irons extending rearwardly from the section, and the perforated lug extending from the front end of the section, said section having a depending annular flange, of the lower fifth-wheel section having a central threaded bolt on its upper side projecting through the upper section and the spring and having its periphery inclosed by the depending flange of the upper section, the depending oppositely-perforated integral U-shaped stirrup extending from the lower section, the central longitudinally-disposed rib having a semicircular recess, the axle having the U-shaped clip-plate mounted thereon, said plate terminating in clips embracing the axle and having a central superficial rib bored to align with the openings in the stirrup, a bolt passed therethrough, and a Y-shaped brace having its terminals rearwardly extended and connected to the perch-sections, pivoted at the junction of its terminals to the lower end of the stirrup, and having its stem portion forwardly, upwardly, and rearwardly disposed and bolted to the ear of the upper fifth-wheel section, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN W. WILLIAMS.
JOHN G. CAPPS.

Witnesses:

ROBERT FAIRBANKS,
M. C. BURCH.