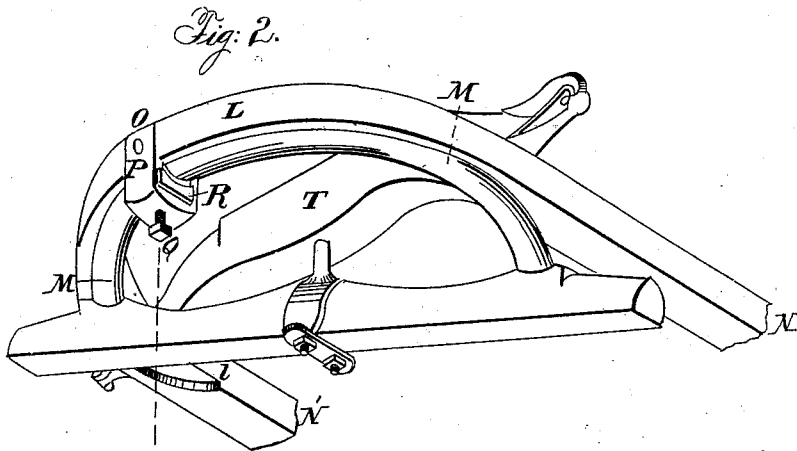
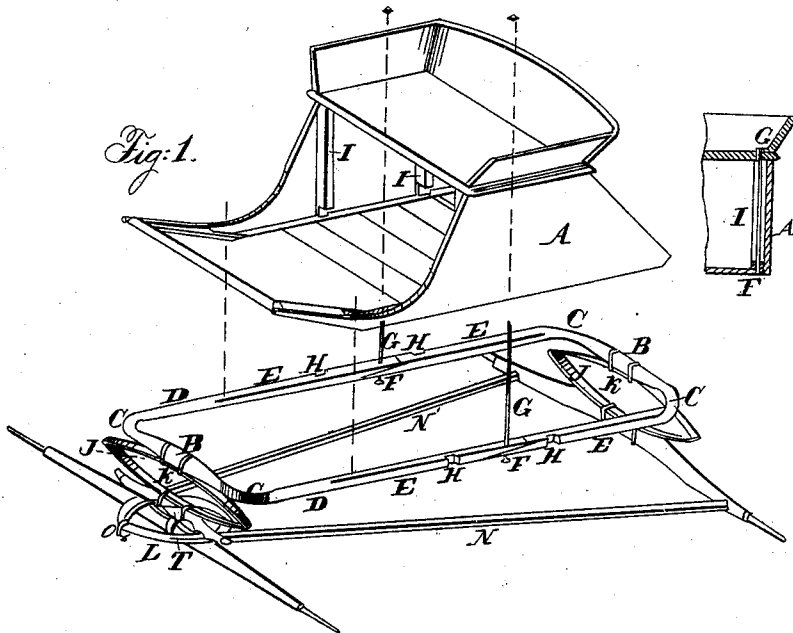


J. CURTIS.

Fifth Wheel.

No. 63,223.

Patented Mar. 26, 1867.



Witnesses.
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JOHN CURTIS, OF CINCINNATI, OHIO.

Letters Patent No. 63,223, dated March 26, 1867.

IMPROVEMENT IN CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same

TO WHOM IT MAY CONCERN:

Be it known that I, JOHN CURTIS, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Improvement in Wheel Carriages; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

This is an improvement in the construction of that class of wheel carriages whose body is supported on two (so called) elliptical springs; and my invention consists, first, in the provision of two pieces of hickory or other tough and elastic wood, so formed and applied as to take the place of eight essential members of every spring vehicle of the customary construction, namely, the two sills, the two spring-bars, and the four body-loops or bent iron rods which serve to connect the body to the spring bars. Moreover, a carriage body formed and supported on my plan is perfectly flush and smooth underneath, and, with the exception of the two regular stay-bolts, free from any bolts, nuts, or bars, or metal straps, which at present, besides forming a material part of the cost of a customary body, present unsightly projections, and add greatly to the weight, and are liable to work loose and rattle. In other words the said first part of my improvement consists essentially of a strip or strips of tough and elastic wood, bent into suitable form, hereinafter explained, and inserted in and forming a part of the body of the vehicle, and extending in a bowed or curved form in front of and behind it so as to be attached to the ordinary springs, and thus to dispense with those separately attached metallic portions necessarily used and known as body-loops, as well as with separate spring-bars, together with the numerous bolts (usually sixteen or eighteen in number) now required to secure the loops and the bars, and in addition to these advantages the said strips, from the nature of the material, afford a yielding or elastic connection between the body and the spring, so as to relieve a portion of the jar now wholly devolving upon the springs proper, and to increase the safety and durability, with a material reduction of weight, cost of construction, and an improvement in appearance.

The second part of my invention consists in the provision of a single strip of tough and stiff wood, so bent and attached as to perform the functions of the ordinary double perch, and also those of the upper member of the fifth wheel, and which by the avoidance of any mortise in the head-block or piece connecting the fifth wheel with the fore spring, enables, said block, as well as the fifth wheel itself, to be made much lighter, simpler, and more compactly, with equal or greater strength, and without the numerous bolts, clips, and other metallic appendages.

The third part of my invention consists in the provision of a guard-iron or stay, adapted to hold the upper and lower members of the fifth wheel together in such a manner as to prevent the rattling thereof, and to afford a means of rectifying at any moment the slackness of these important members incident to the wear and tear of ordinary use.

Figure 1 is a perspective view, representing the body and carriage part detached, and with the addition of a transverse section of one side of the body.

Figure 2 is an underside perspective view of my combined fifth wheel and double perch, together with cross-sections of the guard-iron and accessories.

The body A may be of customary construction, except that its sill-pieces are prolonged in front and rear beyond the body so as to form a strong, simple, and elastic connection with the front and rear springs respectively. The said sill-pieces consist of two strips of hickory or other very tough and elastic wood, bent into the form represented, their middle portions B taking the place and discharging the functions of the customary spring-bars, and merging by easy curves C into straight portions, whose parts D, extending beyond the body, take the place and discharge the functions of body-loops, and in addition to those functions serve by their elasticity to relieve the springs proper of a portion of their resilient duty, and whose parts E, being scarfed together at F, and traversed at said scarf by the ordinary stay-bolts G, form that portion of the carriage body known as the sills. Gains H, in the edges of the parts E, receive the tenons of the uprights I. The portions B are secured to the springs J by customary clips K.

The second part of my invention is as follows: In place of a single perch with stay-braces, or of two separate perches mortised into and weakening the head-block and necessitating a distinct metallic ring and its

accessories for the upper member of the fifth wheel, I provide a single strip of tough timber, whose middle portion L is bent to a semicircle, and rebated, Z, to take the metallic lower portion M of the fifth wheel, (which portion may be either of the represented C form, as in the illustration, or circular,) and whose side portions N N' diverge rearwardly and are mortised into or otherwise firmly fastened to the hind axle. The head-block T, instead of being mortised (and thereby weakened) to receive the front ends of the perches, is simply fastened to the upper side of the strip where the curved portion L merges into the straight portions N N'. To enable the two members of the fifth wheel to be set up as they wear, and to avoid all erratic or noisy movements thereof, I have provided what I style a stay or guard-iron, O, consisting of a clip or strap, P, which embraces and is bolted or riveted or otherwise secured to the middle portion of the upper member L of the fifth wheel. A set-screw, Q, tapped within the strap P, presses upward a gland, R, which is hollowed to correspond with the convexity of the lower member M of the fifth wheel. A pad or cushion, S, of leather or caoutchouc or other tough but flexible substance, is interposed between the gland R and the member M, and besides holding the two members snugly together prevents all rattling, &c., as before stated. The guard O may be used to set up the member M, either with or without the pad S, and is applicable to every kind of wheel carriage where a fifth wheel is employed. Where the fifth wheel is circular, as with the heavier description of carriages, the guard may be advantageously placed at the rear side of the circle. In case of the king-bolt breaking, the guard O will serve to hold the two members of the fifth wheel securely together, and thus prevent the serious casualties that sometimes arise from the giving way of this important bolt.

I claim herein as new, and of my invention—

1. The bent strip B C D E, of elastic timber, forming the sills of the body proper, and to take the place of the spring-bar and body-loops, as and for the purpose set forth.
2. The bent and rebated strip of timber L Z N N', discharging the functions of the double perch and of the upper member of the fifth wheel, as set forth.
3. The arrangement of strap P, screw Q, and gland R, to enable the members of a fifth wheel to be set up as they wear, in the manner explained.
4. In the described combination with the elements of claim 3, I claim the pad or cushion S for the purpose stated.

In testimony of which invention I hereunto set my hand.

JOHN CURTIS.

Witnesses:

GEO. H. KNIGHT,
SAMUEL KNIGHT.