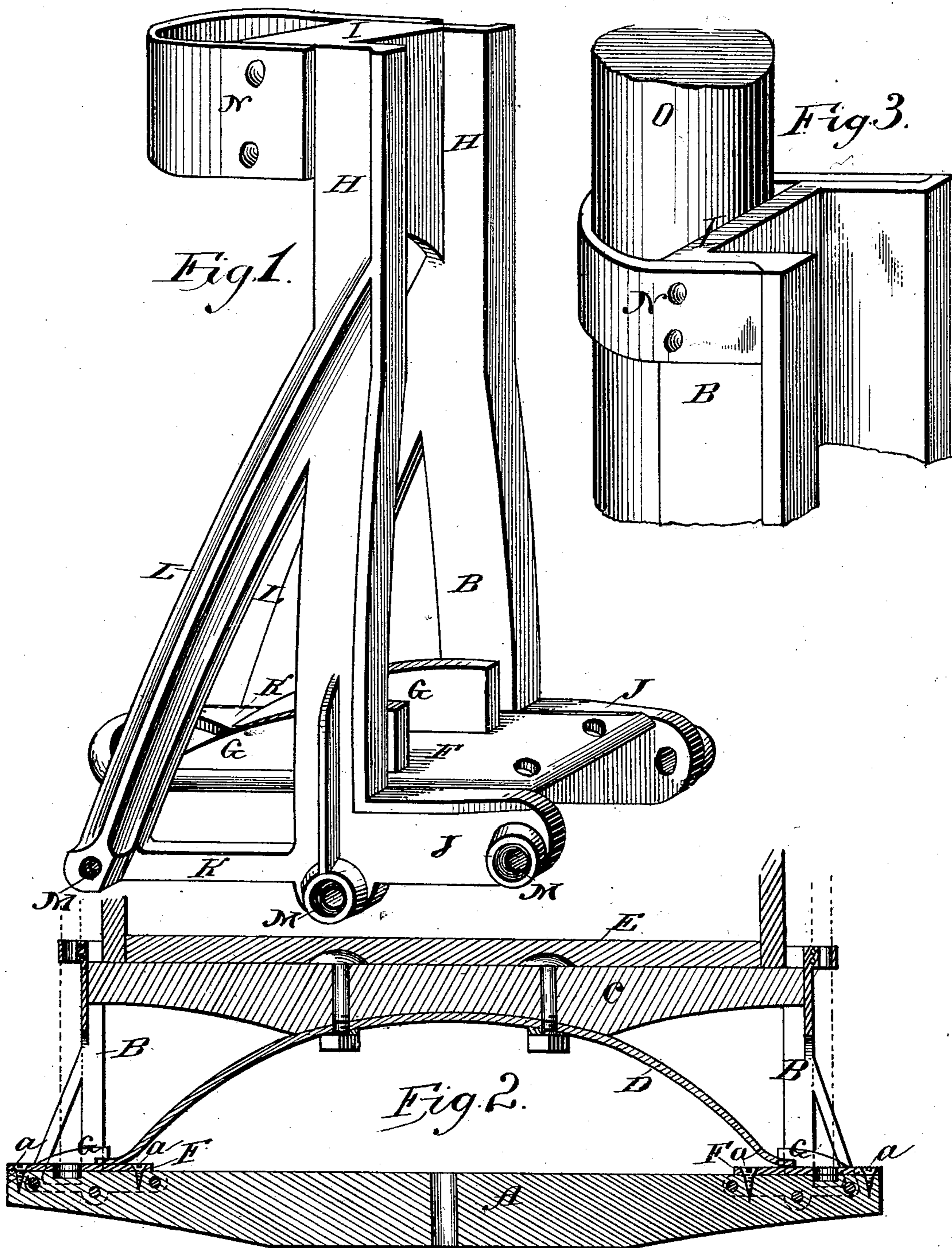


(No Model.)

J. PAULU.
Wagon Standard.

No. 234,889.

Patented Nov. 30, 1880.



WITNESSES

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JOHN PAULU, OF MILWAUKEE, WISCONSIN.

WAGON-STANDARD.

SPECIFICATION forming part of Letters Patent No. 234,889, dated November 30, 1880.

Application filed May 19, 1880. (No model.)

To all whom it may concern :

Be it known that I, JOHN PAULU, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in wagon standards, springs, and spring-bars; and it pertains to that class of wagons in which the spring-bars upon which the wagon-box rests are supported upon a bow-shaped spring, the convex surface of which is bolted at its center to the bar, and the respective ends of the spring rest upon the wagon-bolster.

Heretofore the spring and spring-bar have been retained upon the bolster by slotting the respective ends of the bar and spring, so that when placed upon the bolster the standards enter the respective slots, and thus retain the spring and spring-bar between the standards in a vertical position above each other and the bolster. The objection to this form of construction, as found by experience, is that the spring-bar is liable to be split where slotted by the forward and rearward motion of the load resting upon it, and also that the slotted ends of the spring, which have a constant reciprocating motion, caused by the action of the load upon the center of it, is constantly wearing and cutting into the respective sides of the standards, whereby the standards are soon greatly injured or destroyed. The ends of the spring being slotted are, for that reason, more liable to be broken.

The object of my improvement is to obviate the defects mentioned, to retain an unslotted spring-bar and spring upon the bolster, and to provide a metallic standard which can be more rigidly secured to the bolster, and which will retain a non-slotted spring-bar and spring upon the bolster.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of my improved standard detached from the bolster. Fig. 2 represents a longitudinal vertical section of my invention. Fig. 3 is a detailed view of one form of the standard, showing an extension-standard for retaining an additional box above the standard proper.

Like parts are indicated by the same reference-letters throughout the several views.

A is the wagon-bolster. B B are standards. C is the spring-bar, the ends of which are cut at right angles to the upper surface, and are smooth and uniform in shape. D is a bow-shaped spring. E is the wagon-box, which rests upon the spring-bar between the respective standards, as shown. F F are metallic plates for supporting the ends of the spring to prevent the spring from wearing the bolster. The plates F are respectively provided with flanges G G, to retain the ends of the spring in their position upon the plate. The plates F F are secured to the bolster in the position shown by screws *a a*.

The standards B B are formed of metal cast in a single piece, consisting in upright bars H H, connected together at their upper ends by block or lug I, and are respectively provided at their lower ends with arms J J and K K and braces L L.

The lower ends of the standards are provided with bolt-holes M M M, for the reception of bolts by which they are secured to the bolster.

The lugs I, in addition to connecting the bars H H, serve an important end in supporting the band for the extension-standard O.

It is obvious that by my improvement the unslotted spring-bar and spring are retained between upright bars H H, and are thus relieved from all tendency of splitting; that the spring-bar has a free upward and downward movement between said bars H H, and the lower ends of the springs move freely upon the metallic plates F, between the flanges G G, thus preventing all contact of the spring with the standard.

Having thus described my invention, I do not claim a metallic standard or a spring and spring-bar, broadly, as I am aware that they are not new.

What I do claim as new, and desire to secure by Letters Patent, is—

1. Metallic standards B B, respectively cast
in a single piece, consisting of bars H H, con-
nected by blocks I, arms J J and K K, pro-
vided with bolt-holes M M M, braces L L, and
5 block I, in combination with bolster A and
plates F F, respectively provided with flanges
G G, all substantially as and for the purpose
specified.

2. The combination of metallic standard B,
10 cast in a single piece of metal, with bars H H,
arms J J K K, braces L L, and bolster A, un-
slotted spring-bar C, retained between the up-

right bars H H, and adapted to move freely
upward and downward between them, and un-
slotted spring D, adapted to reciprocate hori- 15
zontally between the lower ends of bars H H,
all substantially as and for the purpose speci-
fied.

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

JOHN PAULU.

Witnesses:

JAMES B. ERWIN,
W. J. SINNOTT.