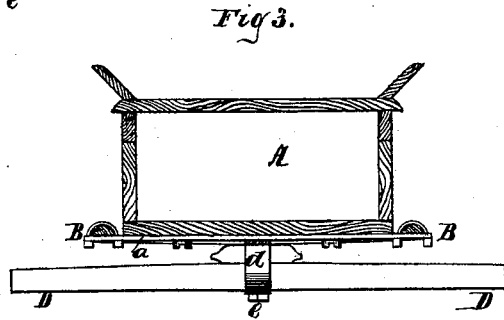
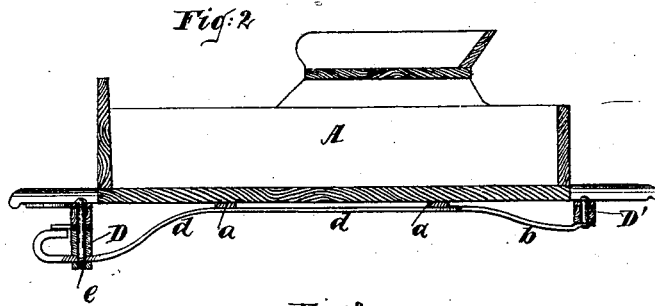
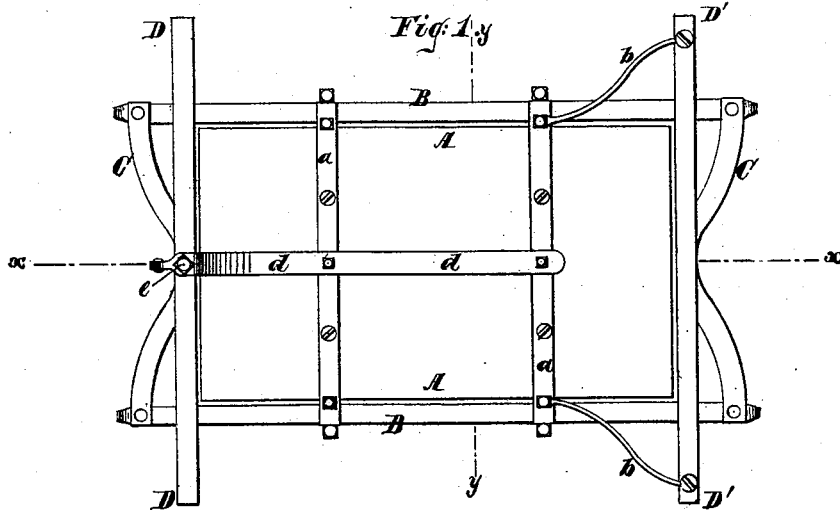


J. BATT.  
Vehicle-Spring.

No. 202,506.

Patented April 16, 1878.



Witnesses:  
J. N. Wahlers  
Hugo Bruggemann

Inventor:  
Jacob Batt  
Van Santvoord & Hauff  
his attys.

# UNITED STATES PATENT OFFICE.

JACOB BATT, OF WILKESBARRE, PENNSYLVANIA.

## IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **202,506**, dated April 16, 1878; application filed March 13, 1878.

*To all whom it may concern:*

Be it known that I, JACOB BATT, of Wilkesbarre, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Wagons, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 is an inverted plan view. Fig. 2 is a section in the plane  $x x$ , Fig. 1. Fig. 3 is a section in the plane  $y y$ , Fig. 1.

Similar letters indicate corresponding parts.

This invention consists in the combination, with the sills or rigid side bars firmly attached to the springs, and forming with the same a frame on which the wagon-body can rest, of a reach bent into a curved form, so as to form a king-bolt brace, and at the same time an additional spring.

In the drawing, the letter A designates the wagon-body. B B are the sills or rigid side bars, which are firmly attached to the springs C C. D is the front axle, and D' the hind axle. To the sills B B are firmly fastened the cross-bars  $a a$ , on which the body A rests. To one of the cross-bars are attached the braces  $b b$ , which serve to steady the hind axle D'. The reach  $d d$  is attached to the cross-bars  $a a$ , and at its fore end is bent into a curved form, Fig. 2. This curved form allows the end of the reach to pass underneath the front axle D. The reach is provided with a hole or perforation, through which the king-bolt  $e$  passes.

By bending the forward end of the reach into such a form as above described, the reach forms not only a king-bolt brace, but also an additional spring. The reach may also, if desired, be extended backward and attached to the hind axle D' in the same manner as to the forward axle D, so as to form a fourth spring; but I do not confine myself to this construction, the chief feature of my invention being the attachment of the sills to the springs, so as to form a frame, and the arrangement of the reach, whereby a king-bolt brace and an additional spring are formed.

I am aware that side-bar wagons have been constructed before, being shown, among others, in the patents of C. A. Collins, No. 159,392, and of M. G. Hubbard, No. 15,885; but I disclaim any arrangement shown and described in these and other patents, the principal features of my invention being those above described.

I also bend the springs C C edgewise, throwing their outer ends outside of the axles D D' both back and front, whereby the axles are prevented from rolling in the wheels. If the back and front springs were straight instead of edge-bent, and one or more persons should be in the buggy, the sills B B, springing down in the center, would naturally cause the axles to follow the motion of said sills and throw the wheels out of track.

This disadvantage I have overcome. The bearings of the sills, which rest upon the edge-bent springs C C, extending over the axles both back and front, allow the springs to bend independently of the axles, and prevent the axles from following the motion of the sills, which would produce what is called "rolling" in the wheels.

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

1. The combination, with the sills fastened at their ends to the springs C C, of a reach constructed, as herein described, so as to form a king-bolt brace and a spring, all combined and operating substantially in the manner set forth.

2. The combination, in a buggy, as above described, of sills B B, fastened to springs C C, which springs are edge-bent, so as to prevent the axles from rolling in the wheels, substantially in the manner above described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of February, 1878.

JACOB BATT. [L. S.]

Witnesses:

J. A. WALTERS,  
JAMES HIGGS.