

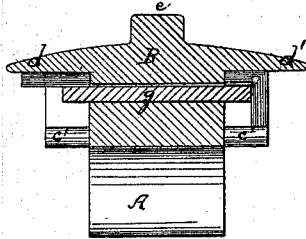
R. A. CLARK.

Buggy Spring.

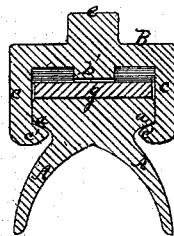
No. 112,549.

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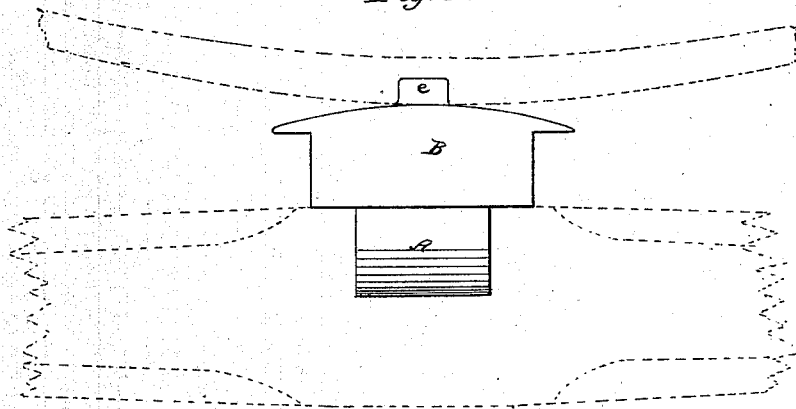
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*S. J. Hayes*  
*John F. Fennell*

Inventor

*Richard A. Clark*  
*J. H. Person, associate*

# United States Patent Office.

RICHARD A. CLARK, OF UNADILLA, NEW YORK.

Letters Patent No. 112,549, dated March 14, 1871: antedated March 9, 1871.

## IMPROVEMENT IN CLIPS FOR BUGGY-SPRINGS.

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

### *To all whom it may concern:*

Be it known that I, RICHARD A. CLARK, of Unadilla, in the county of Otsego and State of New York, have invented a new, useful, and improved Clip for Buggy-Springs; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention consists of an improved clip for attaching springs to the axles of buggies or other carriages, the peculiar nature of which clip will be hereinafter more fully set forth.

In the drawing—

Figure 1 represents a sectional side elevation;

Figure 2, a sectional end elevation; and

Figure 3, my improved clip when attached to the spring and axle.

The part marked A is to be attached to the axle or other part to which the spring is to be applied. It is constructed to bestride the axle, and may be secured thereto by projecting tongues with yoke and nuts, or in any suitable manner.

The upper part is made in dovetail-form, as shown at *a*. It may be swaged out or forged, or constructed in any suitable manner.

The part B is made with a recess of form corresponding to the upper part of A.

In the top of this recess is a space to receive a packing, *b*, which may fit over a lug, *b'*, if necessary.

This packing, which may be of leather, rubber, or any suitable material, is of width exactly to fill the space between the sides *c c*, and of length to permit the ends to be turned up until the extreme end comes quite up to the flanges *c' c'*. One end of the packing is represented in the figure as turned up in place.

The part B is also provided with projections, *d d'*, of the same width as the main body of the clip, and long enough to cover, when turned up, the end of the open recess in the part B.

The part B is forged or swaged with the flanges *d d'* extended. The part B must be longer than A, to permit the movement of the parts, as the spring extends and contracts in length under the irregular compression to which it is ordinarily subjected. The relative length will depend upon the spring, and may be determined by experiment.

On the top of the part B, which may be slightly rounded, is a projection, *e*. This is for the purpose of holding the end of the spring, which may be punched and held thereto by nut or in any convenient manner.

When the part B has been formed, either struck out in a die or forged, with its flanges at the ends projecting horizontally, the packing is first put in place. Then over it is placed a friction-plate, *g*, which may be securely riveted, if necessary, to the part B, through countersunk holes. When the friction-plate is in place the part A is slipped in its proper position, the ends of the packing turned up, and the ends of the metal struck up to cover the packing and hold the part A securely in place, while at the same time it has free longitudinal movement to a limited extent.

The packing at the ends forms a cushion, against which the part A may strike as it moves back and forth.

It will be understood that the spring used with this clip will be, ordinarily, the single half-elliptical spring, (a simple curved bow-spring,) placed concave down, the ends resting in these clips and the body of the buggy resting on the upper central part of the spring; and it makes a practicable and exceedingly light, noiseless construction of spring-buggy.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An improved clip, formed of the parts A and B, constructed and adapted to each other, in the manner described.

2. The packing and friction-plate, in combination with A and B, as described.

3. The packing, when turned up to cover the part A, as set forth.

4. The improved clip, when all the parts are constructed and arranged and operate in the manner described.

This specification signed and witnessed this 1st day of July, 1870.

RICHARD A. CLARK.

Witnesses:

G. W. SCHULTZ,  
ROBT. SIVER.