

(No Model.)

W. M. PECK.
SPRING CLIP.

No. 427,357.

Patented May 6, 1890.

Fig. 2

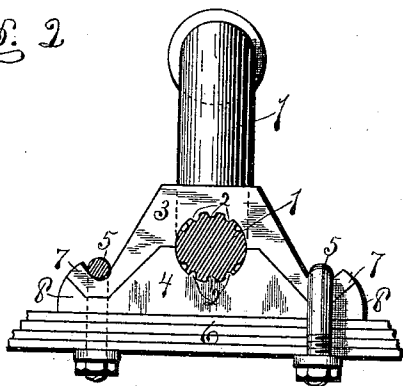


Fig. 1.

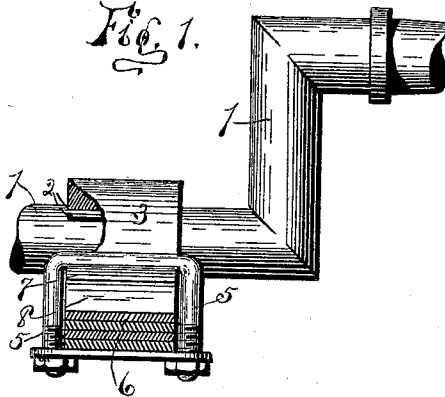


Fig. 4

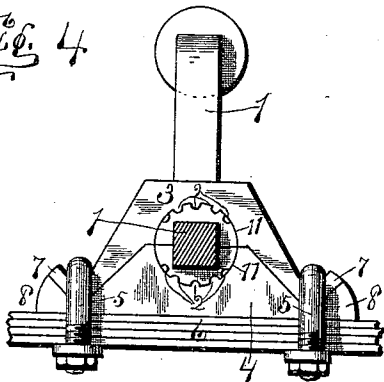


Fig. 3.

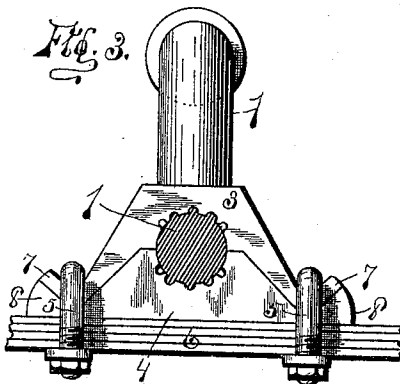
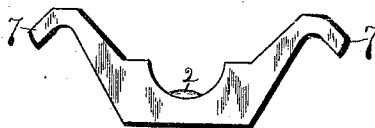


Fig. 5.



Fig. 6.



WITNESSES:

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BY
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UNITED STATES PATENT OFFICE

WELLS M. PECK, OF SYRACUSE, NEW YORK.

SPRING-CLIP.

SPECIFICATION forming part of Letters Patent No. 427,357, dated May 6, 1890.

Application filed November 6, 1889. Serial No. 329,450. (No model.)

To all whom it may concern:

Be it known that I, WELLS M. PECK, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful
5 Improvements in Spring-Clips, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in
10 holding-clips for securing the springs to axles in two-wheeled carts, coaches, and various styles of vehicles, in which either a cranked or a straight axle is used; and it consists in certain peculiarities of detail construction, where-
15 by the same may be adapted to either square or round axles and the springs held firmly thereon in such manner that they may be adjusted as is sometimes desirable in vehicles.

In the annexed drawings, similar letters of
20 reference indicate corresponding parts in all the views.

Figure 1 is a side view of a cranked axle provided with my improved spring-securing clip, the axle being broken off and the clip being partly broken away to better illustrate
25 details hereinafter referred to. Fig. 2 is a sectional end view of the axle taken just inside of the clip, and showing the form of axle as well as the manner of securing the springs to my improved clip. Fig. 3 is a similar view
30 of a slightly modified construction. In the form illustrated in Fig. 2 the ribs or projections hereinafter referred to are formed on the clip-pieces, while in Fig. 3 the parts are reversed and the ribs are formed on the axle,
35 the seats or depressions therefor being formed in the clips. Fig. 4 is a view similar to Figs. 2 and 3, showing my device arranged for use with a square axle, in which case an auxiliary box
40 composed of two parts 11 is used to surround the square axle, the parts of the box being formed circular on their outer faces and being of the same shape thereon as the round axle herein referred to. Fig. 5 illustrates a
45 top plan view of one form of the clip, while Fig. 6 illustrates a side view of the same.

In the construction of coaches and heavy vehicles, as well as in the manufacture of two-wheeled carts, a round axle where it can
50 be used is in many instances considered more desirable than a square axle, but heretofore

it has been almost impossible to use a round axle, owing to the want of some suitable fast-
ening device for securing the springs thereto in such manner that they will be held at a
55 fixed angle and will be secure.

By my invention I am enabled to use a round axle, and the springs of the vehicle may be secured thereto and held firmly there-
60 on in such manner as to avoid slipping or accidental displacement, as well as avoiding movement of the springs longitudinally of the axle.

Heretofore square-sided axles have been most generally used, and the springs held
65 thereto by clips corresponding in contour to the exterior faces of the axle.

In the manufacture of vehicles in large quantities it has been found difficult to secure
70 clips which will conform so closely to the contour of the axles as to form a perfect fit of the parts, and the consequence has been that when strain is applied to the springs and torsional strain is applied to the clips they have
75 been found to slip and yield in a greater or less degree to such torsional strain, in consequence of which they soon begin to rattle and slide longitudinally on the axle to the great
80 injury of the springs and the parts connected therewith.

By the use of my invention these difficul-
ties have been overcome. A round axle is preferable to a square-sided axle, although I have illustrated my invention in connection
85 with a square-sided axle to show how it may be applied thereto.

In practice I prefer to use the form of axle illustrated in Figs. 1 and 2, in which channels or seats 2 are cut in the exterior face of the
90 round axle sufficiently deep and long to form a close fit for corresponding ribs or projections formed on the inner faces of the clip-pieces 3 and 4, which surround said axle, except that one or more extra channels are
95 formed than there are ribs or projections on the inner faces of the clips surrounding the same. Above the axle 1 is held the clip-piece 3, provided with ribs or projections, which fit closely in the channels 2, formed in the face of
100 the axle, and the bridge-piece 4 rests immediately under the clip-piece 3 and axle 1, and is provided with the same projections as the

clip-piece 3, while the leaves of the spring 6 lie next under the bridge-piece 4, and all the parts are bound together by the clips 5 5. (Shown in Figs. 1, 2, 3, and 4.)

5 For the purpose of better securing the parts against slipping, I provide the clip-piece 3 with upturned ends marked 7, while the bridge-piece 4 has upturned ends marked 8, corresponding to 7, so that when the parts are
10 properly united the clips 5 will surround the spring, bridge-piece, and clip-piece in such manner as to prevent either longitudinal or lateral movement thereof.

In the form illustrated in Fig. 3 the arrangement of parts is reversed and the axle 1 is
15 provided with the ribs or projections, while the seats therefor are formed in the parts 3 4, surrounding the same, while in the form illustrated at Fig. 4 a square axle is used which
20 is surrounded by a two-part box 11, the outer face of which may be provided with ribs or channels, and the same form of clip and bridge-piece 3 4 may be used therewith.

With the clip-piece illustrated at Figs. 5
25 and 6 the projections are I-shaped, and the axle must be formed with a corresponding depression into which the I-shaped projection 2 will fit. The form illustrated in Figs. 5 and 6 may be used where it is desired to place the
30 springs at only one angle upon the axle; but where it is desirable to change the angle at which the springs 6 are hung I form a greater number of channels in the axle than there are projections in the clip and bridge-pieces 3 4,
35 and the angle may be changed by loosening said parts, and the ribs may be set into channels either to the right or left, and again closed upon the axle when the springs will be again securely held in the changed position.
40 This may also be done with the form illustrated at Figs. 3 and 4 in substantially the same manner, as will be apparent to any one skilled in the art to which this invention pertains.

45 In practice my invention is applied as follows: The spring and bridge-piece are placed underneath the axle at the proper angle with the ribs fitting into their corresponding seats, when the clip-piece 3 is applied to the axle,
50 after which the clips 5 are applied and tightened to place.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A spring-holding clip for carriages, constructed in two parts, each with a half-seat for the axle, and the seat in each part formed with alternate projections or depressions, in combination with an axle having on opposite sides projections or depressions to engage or
55 receive the projections or depressions of the two parts of the clip, the number of depressions in one member exceeding the number of projections on the other member, whereby
60 rotary adjustment of the clip and angular adjustment of the spring are permitted, as set forth.

2. A spring-securing clip for vehicles, consisting of two parts constructed to surround and embrace the axle, and having angular
70 meeting faces to prevent movement relatively to each other, one of said parts having hooked ends to receive and hold auxiliary clips, in combination with the axle and spring, and
75 with auxiliary clips to clamp and hold the parts together, said spring-holding clips and axle having corresponding teeth and depressions to engage each other and prevent rotary movement relatively to each other, substantially as shown and described.

3. A spring-holding clip for vehicles, consisting of two parts constructed to surround and embrace the axle, and having angular
80 meeting faces to prevent movement relatively to each other, one of said parts having hooked ends to receive and hold auxiliary clips, in combination with the axle and spring, and
85 with auxiliary clips to clamp and hold the parts together, said spring-holding clips and axle having corresponding teeth and depressions to engage each other and prevent rotary movement relatively to each other, the
90 number of depressions in one member exceeding the number of teeth in the other member, whereby a rotary adjustment of the
95 clips on the axle is permitted to change the angle of the spring, substantially as shown and described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 21st day of October, 1889.

WELLS M. PECK.

Witnesses:

FREDERICK H. GIBBS,
G. WILLIS GIBBS.