(No Model.)

W. N. SEWELL.

SPRING FOR CARRIAGE TOP JOINTS.

No. 359,638. Patented Mar. 22, 1887.

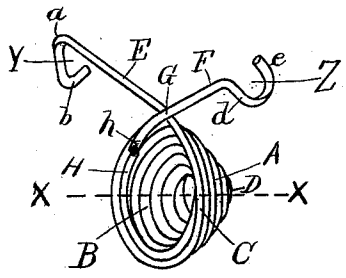


FIG. 1.

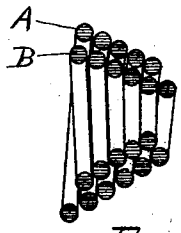


FIG. 2.

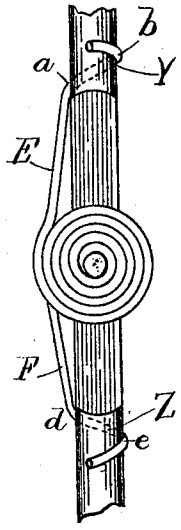


FIG. 3.

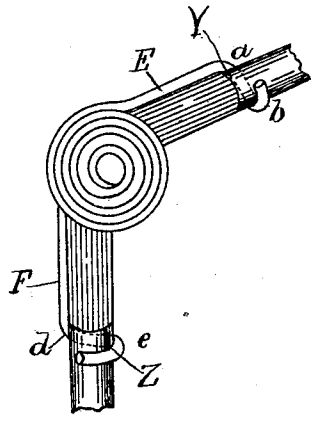


FIG. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM N. SEWELL, OF CINCINNATI, OHIO.

SPRING FOR CARRIAGE-TOP JOINTS.

SPECIFICATION forming part of Letters Patent No. 359,638, dated March 22, 1887.

Application filed June 23, 1886. Serial No. 205,970. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. SEWELL, of Cincinnati, Hamilton county, and State of Ohio, have invented certain new and useful Improvements in Springs, of which the following is a specification.

The object of my invention is to provide a spring attachment that may be adjustably or permanently secured to a buggy-top joint, and that will hold said joint rigid, not allow it to rattle, that will assist the operator in elevating the top, and hold the top firmly in position when up, and when the top is let down will equalize the weight of the top, allow it to drop gradually and lightly, relieving all shock to the top.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the spring attachment. Fig. 2 is a central cross-section taken at the line X X of Fig. 1. Fig. 3 shows the spring attachment in position on the buggy-top joint when the top is up. Fig. 4 shows the spring attachment in position on the buggy-top joint, showing the position of the spring when the top is being let down.

The spring attachment is made of one piece of spring-wire or any other suitable material, and coiled into two coils, A and B, reverse to one another, lying in juxtaposition, the coil B lying inside of the coil A, and tapering from the base C to the apex D, forming a spring conical in shape. The ends of each coil A and B extend and form the respective arms E and F, which arms cross each other at the point G, and then diverge in an oblique line. At the end of each arm E and F, respectively, are the retaining catches or hooks Y Z. The arm E is bent nearly at a right angle at *a*, and then bent down in the shape of a hook at *b*, forming an opening through which the buggy-top joint passes. The arm F is bent inward at *d* and outward at *e*, and at the same time downward, and thus suitably formed to allow the buggy-top joint to pass through. These ends of the arms E and F may be bent at any angle or shape, so as to encircle the buggy-top joint and retain the attachment in position.

The inner coil has one member less than the outer coil. Therefore, in order to enable arm F to cross over the arm E, the member H on the inner coil projects outward at *h*, so as to clear the arm E, and also projects outward at *h*, to better enable the coils to rest perfectly and snugly over the rivet-head, &c., of the buggy-top joint.

To attach the spring, hook the retaining-catch Y on the upper link of the buggy-joint, allowing the arm E to run along the back of the joint. Then press the coils over the rivet-head. Then spring the arm F down, allowing it to run along the back of the joint until the retaining-catch Z grasps the lower link of the buggy-joint, the coils of the spring always appearing on the outside of the buggy-joint.

The spring is made of sufficient elasticity to enable the links or arms of the buggy-top joint to be brought together and parallel to each other when the top is down, and retain a pressure after the joint rebounds into position when the top is elevated, at the same time holding the joint rigid and not allowing it to rattle.

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

1. A cone-shaped reverse coiled-wire spring having oppositely-extending arms formed so as to grasp the carriage-top joint, substantially as and for the purposes specified.

2. A spring having arms extending from the same side, suitably formed to grasp the buggy-top joint, substantially as and for the purposes specified.

3. A double cone-shaped reversed coiled spiral spring having two arms extending from the same side, suitably formed to grasp a buggy-top joint, substantially as and for purposes specified.

WILLIAM N. SEWELL.

Witnesses:
SAML. C. COX,
H. L. COOPER.