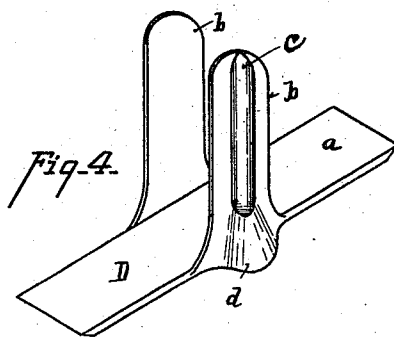
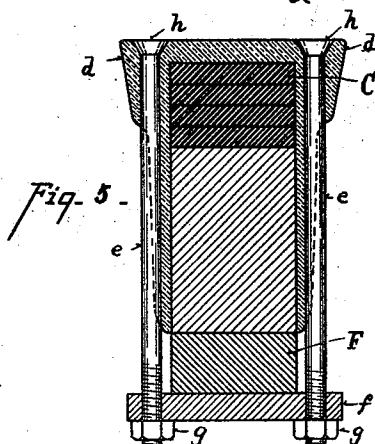
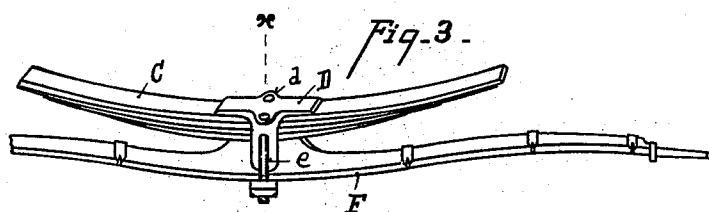
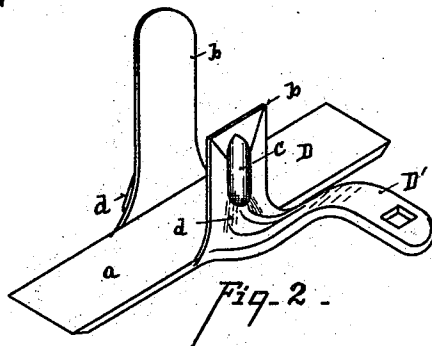
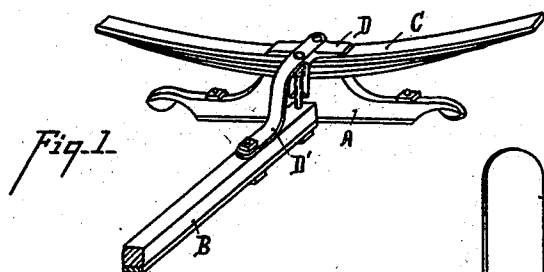


(No Model.)

W. J. KAUFFMAN.
SPRING CLIP.

No. 510,345.

Patented Dec. 5, 1893.



Attest—
C. W. Miles.
T. Simmons.

INVENTOR—
William J. Kauffman.
By Wood & Co. Attys.

UNITED STATES PATENT OFFICE.

WILLIAM J. KAUFFMAN, OF MIAMISBURG, OHIO.

SPRING-CLIP.

SPECIFICATION forming part of Letters Patent No. 510,845, dated December 5, 1893.

Application filed June 9, 1893. Serial No. 477,040. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. KAUFFMAN, a citizen of the United States, residing at Miamisburg, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Spring-Clips, of which the following is a specification.

The object of my invention is to provide improved means for holding vehicle springs to their base of support, the various features of which are fully set forth in the description of the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of the spring bolster and perch of my improved clip connecting the parts. Fig. 2 is a perspective view of the clip. Fig. 3 is a perspective view partly in section of the spring clip and rear axle. Fig. 4 is a modification of Fig. 2. Fig. 5 is a section on line *x, x*, Fig. 3.

A represents the headblock of a carriage; B, the perch; C, one leaf of the spring; D, the clip.

D' represents a brace rigidly attached to the clip and extending rearward and attached to the perch B.

The clip is composed of the following parts made integrally, preferably of malleable iron: *a* represents the saddle plate. *b* represents pendent arms provided with grooves *c*. *d* represents ears which are formed by a lateral extension of the saddle plate *a* and pierced with holes *h* through which the yoke bolts *e* pass. *f* represents the yoke; *g*, the nuts for securing the yoke to the bolts. *h* represents holes pierced through the ears upon one side of the saddle plate for making a firm anchorage for the head of the bolt; they are countersunk so that the head of the bolt rests within the clip.

In Figs. 3, 4, 5, the clip is shown for attachment to the back axle F, and without the brace

D'; this brace may be used on both the front and rear clips if desired. By this means the springs are rigidly attached to the axle, or to the head block, of a carriage without piercing the same, and hold the same firmly in position, making a stronger and better support than the means hitherto used for this purpose.

Having described my invention, what I claim is—

1. A spring-holding clip, consisting of the saddle plate *a* adapted to lie on the spring, and formed with the parallel pendent arms *b*, adapted to embrace the spring; and each having a longitudinal bolt-receiving groove *c*, and a bolt-eye *d* which is formed at the upper end of each arm in juxtaposition to the saddle plate, substantially as described.

2. The combination with a head-block A, a spring C, and a perch B, of a spring-holding clip having the saddle-plate *a* lying against the upper side of the spring and formed with the brace D' secured to the perch, and parallel pendent arms *b* embracing the spring and each having a longitudinal bolt-receiving groove *c* and a bolt-eye *d* formed at the upper end of the arm in juxtaposition to the saddle-plate, and bolts *e* passing through said eyes and lying in said grooves, substantially as described.

3. A spring-holding clip, consisting of the saddle-plate *a* formed integral with the curved brace arm D', and parallel pendent arms *b* each having a longitudinal bolt receiving groove *c* and a bolt-eye *d* which is formed at the upper end of each arm in juxtaposition to the saddle-plate, substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM J. KAUFFMAN.

Witnesses:

JAMES BURNS,

ARNOLD F. GROINER.