

(No Model.)

J. HESSONG.
VEHICLE SPRING.

No. 459,005.

Patented Sept. 8, 1891.

Fig. 1.

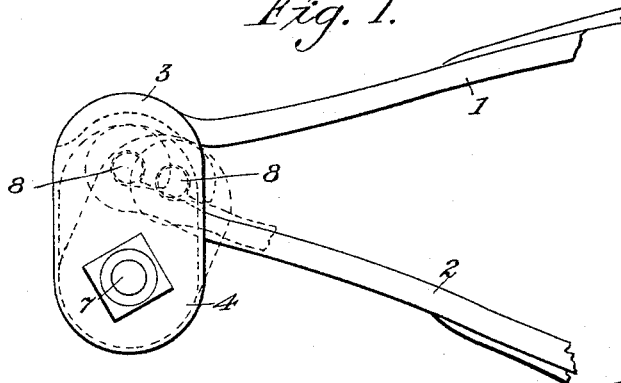


Fig. 2.

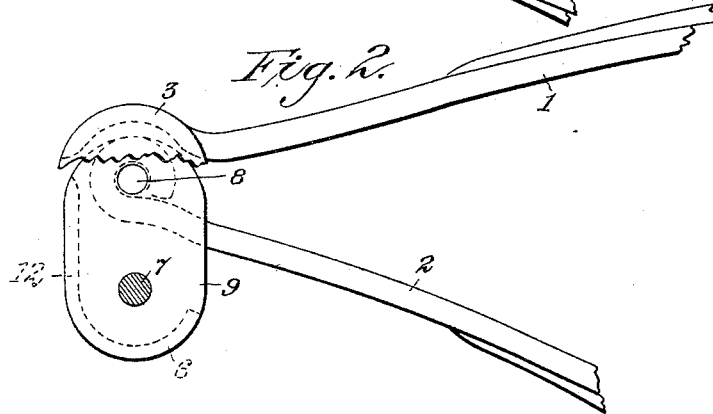


Fig. 3.

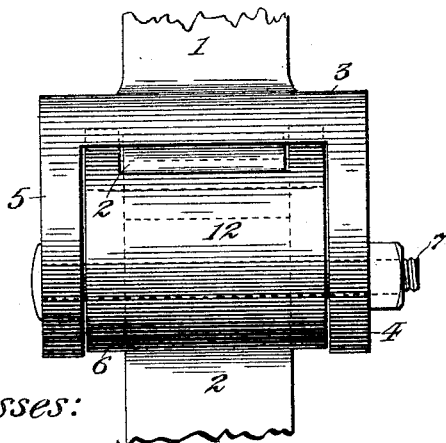
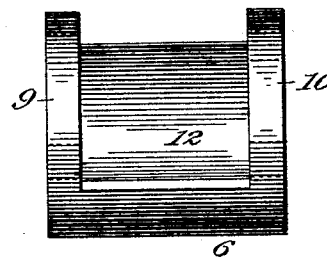


Fig. 4.



Witnesses:

Arch. M. Catlin.
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by
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UNITED STATES PATENT OFFICE.

JAMES HESSONG, OF CHILLICOTHE, OHIO.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 459,005, dated September 8, 1891.

Application filed December 22, 1890. Serial No. 375,468. (No model.)

To all whom it may concern:

Be it known that I, JAMES HESSONG, a resident of Chillicothe, in the county of Ross and State of Ohio, have invented certain new and
5 useful Improvements in Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 The object of the invention is to provide a durable and protected shackle for an elliptic spring suitable for carriages, buggies, sulkies, and the like, which shall also be adapted to permit a limited motion of the two semi-elliptic parts of the spring; and it consists in the
15 construction hereinafter described and particularly pointed out.

In the drawings, Figure 1 is a side elevation of a shackle and of parts of the semi-
20 elliptic springs. Fig. 2 is a similar view, one limb of the exterior member of the shackle being broken away. Fig. 3 is an end view of the parts shown in Fig. 1, and Fig. 4 is an elevation of the inner member of the shackle,
25 the view being in a direction opposite that in Fig. 3.

Numerals 1 and 2 indicate the ends of semi-elliptic springs of usual form. The upper one, however, has formed on its outer end
30 and integrally with it a head or yoke-like piece 3, having two members 4 and 5 pendent from its upper portion, which latter is preferably rounded from the spring outwardly and downwardly, and forms a roof or cover
35 for the other parts of the shackle.

6 denotes a link or member of the shackle, which is loosely supported on a bolt 7, that passes through and is secured in the pendants 4 and 5. It consists of two standards or side
40 members 9 and 10, connected by a plate or web 12, which plate closes the back side and one end of the link. 8 is a pin or bolt supported in the sides 9 and 10 of the link 6. When the parts are coupled together for use,
45 this plate 12 closes or nearly closes the space between the pendants 4 and 5 of the head and the outside, as shown in Fig. 3. The end of the lower spring is bent about and secured upon the bolt 8, as illustrated, whereby a
50 swinging connection between the two parts of the spring is permitted, the other parts of

the shackle connection being made as above stated. If spring 1 be stationary and a longitudinal movement imparted to spring 2, then its support 8, by reason of the link 6, 55 will move about the bolt 7; or if part 2 is held stationary and part 1 be moved endwise, then its supporting-bolt 7 will move about 8, the link 6 swinging in a vertical plane, as indicated by dotted lines in Fig. 1 in both of 60 these supposed cases. In actual operation, however, both of the semi-elliptic springs are free to move endwise within the limits determined by the shackle, so far as such movement may be occasioned by the simple compression of the two parts of the spring, which 65 tends to elongate the spring, considered as a whole, and the upper one of the semi-elliptic springs is free to yield to the momentum of the body supported thereon. By this means 70 the body and its occupant are relieved in great measure from the jar incident to the running of a vehicle over a rough surface.

The preferred arrangement of the device is that illustrated, in which the top of the 75 yoke 3, which is continuous with spring 1, covers the shackle, and the plate 12 closes the exterior space between the two pendent arms of the yoke, thereby excluding water and dirt from the joints, which is an important feature, 80 as the connected parts of ordinary shackles are quickly destroyed by their constant movement upon each other with sand and dirt interposed. Water will be thoroughly 85 shed by my construction and much dust and sand excluded. It is obvious that the head or yoke could be used upon either of the semi-elliptic springs; but if the head were on the under spring the upper one would guide rain- 90 water into the interior of the shackle, and such arrangement will not generally be desirable.

The improved spring-shackle can be used in any vehicle requiring a spring. Its length and other dimensions may be varied, it being 95 only important to preserve the substantial principles of operation and construction.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. In combination with an elliptic spring, a 100 yoke fixed to an end of one member of the spring and a link pivoted to the pendent arms

of said yoke and pivotally secured within the yoke to the other member of the spring, substantially as set forth.

2. In combination with an elliptic spring, a yoke fixed to an end of one member of the spring and integral therewith and a link pivoted to the pendent arms of said yoke and pivotally secured within said yoke to the other member of the spring, substantially as set forth.

3. In combination with an elliptic spring, a yoke fixed to an end of one member of the spring and a link pivoted to the pendent arms

of said yoke and pivotally secured within the yoke to the other member of the spring, the yoke covering the joints of the shackle at the top and sides and the link normally closing the exterior space between the arms of the yoke, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES HESSONG.

Witnesses:

B. W. WHEELER,
W. D. EVANS.