

(No Model.)

H. C. SWAN.
SPRING SHACKLE FOR VEHICLES.

No. 582,492.

Patented May 11, 1897.

Fig. 1.

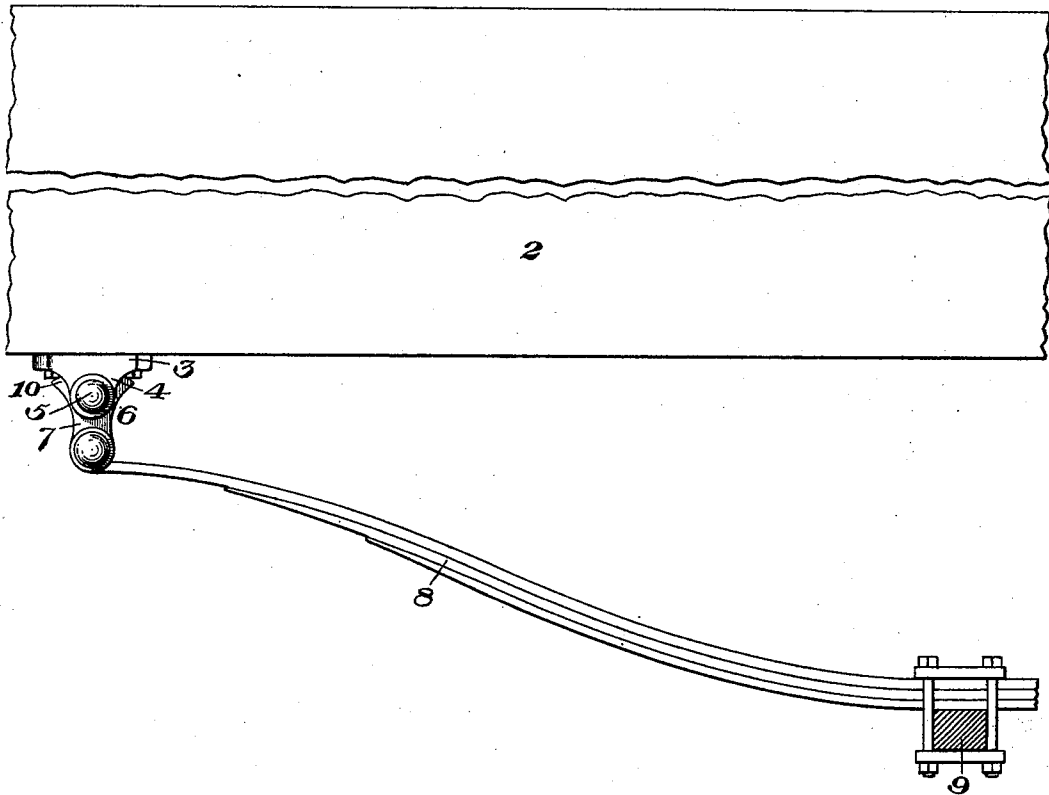
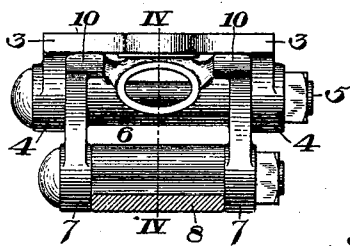


Fig. 2.



WITNESSES

Warren W. Swartz
H. M. Corwin

Fig. 4.

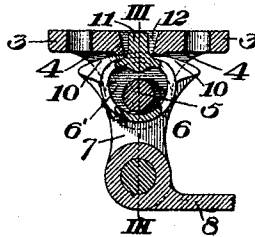
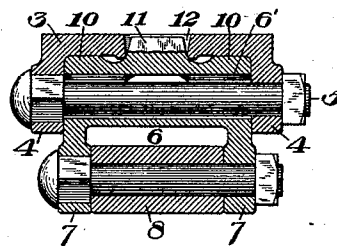


Fig. 3.



INVENTOR

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UNITED STATES PATENT OFFICE.

HENRY C. SWAN, OF OSHKOSH, WISCONSIN.

SPRING-SHACKLE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 582,492, dated May 11, 1897.

Application filed January 12, 1897. Serial No. 618,958. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SWAN, of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Spring-Shackles for Vehicles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved shackle applied to a wagon. Fig. 2 is a detail elevation of the shackle, being at right angles to Fig. 1. Fig. 3 is a longitudinal section on the line III III of Fig. 4, and Fig. 4 is a cross-section on the line IV IV of Fig. 2.

In the use of spring-wagons, truck-wagons, and other vehicles employing semielliptical springs, the end of the spring being at a higher level than the bearing of the spring over the axle when the body of the vehicle is depressed by a load, the end of the spring is of course depressed at the same time, and means must be provided for taking up the elongation of the line between the end of the spring and said bearing. Various devices, such as swinging shackles to which the end of the spring is attached, have heretofore been used for this purpose, but such swinging shackles, while providing for the elongation of the spring when depressed, do not permit its end to move in a horizontal line parallel with the body, and in consequence an uneven tension is exerted upon the spring and a jerking motion is communicated to the vehicle.

My present invention overcomes the difficulties above mentioned and provides, as I believe for the first time, means for permitting the spring to elongate and its end to move in a line parallel with the body, so that there shall be no substantial resistance exerted by the shackle at any point in its movement.

In the drawings, 2 represents the part of the vehicle-body to which the shackle is attached. The shackle comprises a plate 3, having ears 4, perforated to permit passage of a bolt 5 and adapted to receive between them the oscillating link or spring-shackle proper, 6, whose arms 7 are pivotally connected to the end of the spring 8 in the usual manner.

9 is the axle, upon which the spring rests. The base of the shackle, which bears against the plate 3, is formed with two parallel rocking surfaces 10, shaped on the arc of a circle whose center is the end of the spring 8. The shackle may, therefore, rock in contact with the plate, and to permit such rocking motion the eye or hole 6' in the shackle 6, through which the bolt 5 passes, is made considerably larger than the bolt, so that the sides of the eye shall not come into contact with the bolt except at the extreme limits of the desired rocking motion.

For the purpose of holding the shackle 6 in its proper central position against the plate 3 I provide said shackle with a pin or lug 11, fitting in a hole 12 in the plate 3. This lug, while keeping the parts in the proper relative position, opposes no resistance to the free rocking motion of the shackle.

In the use of the vehicle whose spring is connected as above described when the body 2 is depressed the end of the spring will always maintain an equal distance from the body, because of the rocking of the shackle on the center 7. An easy even motion of the spring is thus insured whether the vehicle is under a heavy or a light load.

Within the scope of my invention as defined in the claims modifications in the form and construction of the parts may be made by the skilled mechanic, since

What I claim is—

1. A spring-shackle consisting of an oscillating link to which the end of the spring is connected, said link having at its end a rocking bearing affording lateral travel as well as pivotal motion.

2. A spring-shackle consisting of an oscillating link to which the end of the spring is connected, said link having at its end a securing pin or bolt, and a bolt-hole enlarged to permit lateral motion of the link.

3. A spring-shackle comprising an oscillating link pivotally connected at one end to the spring and at the opposite end having a plate against which its end has a rocking bearing.

4. A spring-shackle comprising an oscillating link, pivotally connected at one end to the spring, and at the opposite end having a plate against which its end has a rocking bearing

on an arc described on the center of the pivotal connection with the spring.

5. A spring-shackle having a plate on which it has a rocking bearing, a securing bolt or
5 pin, and a bolt-hole enlarged to permit the rocking motion.

6. A spring-shackle having a plate on which it has a rocking bearing, and a lug connect-

ing the plate and shackle for holding the same in proper relative positions. 10

In testimony whereof I have hereunto set my hand.

HENRY C. SWAN.

Witnesses:

WM. J. WILSON,
J. A. MCKAY.