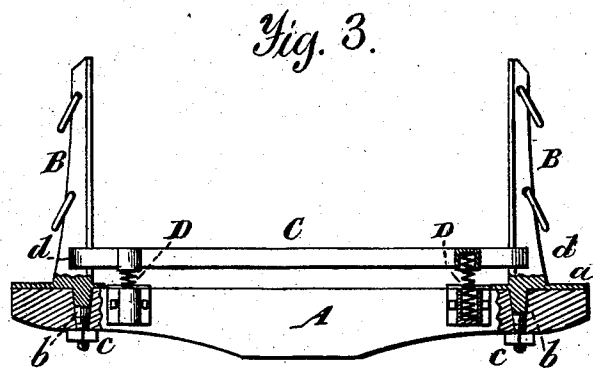
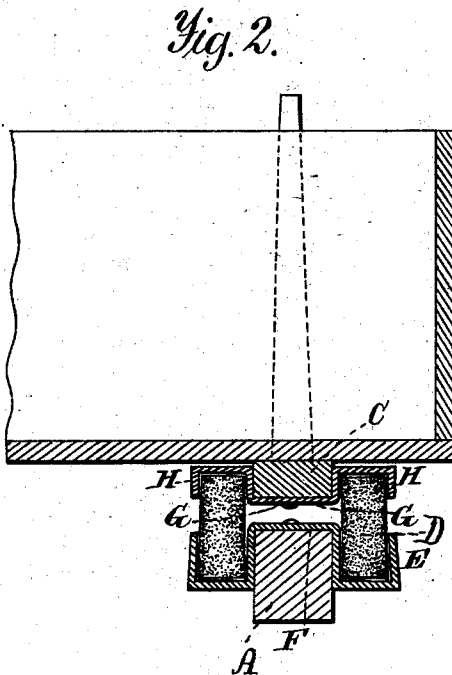
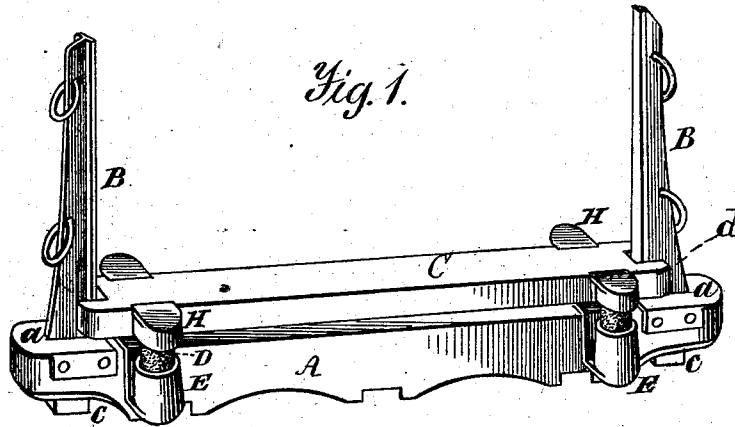


C. HEINEN.
Wagon Spring.

No. 239,774.

Patented April 5, 1881.



Witnesses:
A. Ruppert.
James H. Lange.

Inventor:
Christopher Heinen.
per Edson Bro's.
Attorneys.

UNITED STATES PATENT OFFICE.

CHRISTOPHER HEINEN, OF LEAVENWORTH, KANSAS.

WAGON-SPRING.

SPECIFICATION forming part of Letters Patent No. 239,774, dated April 5, 1881.

Application filed November 25, 1879.

To all whom it may concern:

Be it known that I, CHRISTOPHER HEINEN, of Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Wagon-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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improvement in wagon-springs. Fig. 2 is a vertical transverse section thereof; and Fig. 3 is a side elevation, partly in section, of the same, with a modified form of spring applied thereto.

This invention contemplates improvements in wagon-springs, the object of which is to break concussion between the body and bolsters; and it consists in disposing springs between said parts, and of sockets connected to each side of the bolster and a support for the body, and springs confined in said sockets, substantially as hereinafter more fully set forth.

A in the accompanying drawings designates a vehicle-bolster, supplied at each end with a removable standard, B, with the usual rings or eyes, as shown, and formed at its lower end both with a cap or plate, *a*, fitted upon the end of the bolster, and with a downwardly-tapering extension, *b*, cut with a screw-thread and nutted, as at *c*. This extension or bolt *b* passes through a hole in the bolster and is secured thereto by its nut *c*. This strengthens and braces the standards and forms a solid and firm connection between the standard and bolster.

C is a bar or plate, one adjusted upon each bolster upon springs D D, and upon which the vehicle-body is supported. The ends of this bar or plate are slotted to provide projections or arms *d d* upon each side of the standards, the object of which is to hold the bar or support, with the body, in position upon the same.

E E are sockets formed in one piece, having

saddle-plates F fitted upon and across the bolster, so as to allow the sockets to be disposed one upon each side and alongside of the bolster and at each end of the bolster, as shown. These plates, with their sockets, are firmly fastened or bolted upon the bolster. These sockets afford receptacles to hold the springs D D, which may be either rubber or metalsprings. Similar plates G, having similar inverted sockets H, are fastened to the body-support or bar C, to rest or fit upon the springs D D, and thus mount the bar C with the vehicle-body upon the bolster upon springs. By this arrangement it will be seen that concussion between the bolsters and body is avoided, thereby lessening undue friction and wear, and giving an easy resilient motion to the body.

I am aware that it is not new in bolsters of this kind to avoid violent concussion by pads or springs, and such constructions of bolsters, with such object broadly in view, are not sought to be covered in this application.

I am aware of the Patent No. 74,363, of February 11, 1868; but in that construction the upper holding-plates which formed the sockets for the spring were duplex, and to correspond with that construction duplicate body-plates were necessary, and such duplicate plates were held together by ties. This construction is liable to become out of order because of lack of rigidity in the upper socket-plates and the duplication of the devices is necessarily more expensive.

In my invention the upper socket-plates are made in one piece, and the form is such that but one body-plate, C, is necessary. This forms a rigid holding-surface for the springs, and is important in practice.

The novelty in this invention consists, essentially, in the saddle-plates G F, which form spring-holding sockets E H, arranged oppositely, the lower embracing the bolster A and the upper one receiving the body-plate C. It will be observed that this construction not only furnishes spring-holding sockets, but also embraces body-plate and bolster, and that the device is simple and cheap of manufacture.

Having thus fully described my invention,

I claim and desire to secure by Letters Patent—

5 The upper saddle-plate, G, providing spring-sockets H, and formed in one piece, the single body-plate C, embraced thereby, and the saddle-plate F, arranged oppositely to the plate G and embracing the bolster A, in combination with said bolster A, single body-plate C, standards B, and pads or springs D, all constructed,

arranged, combined, and adapted to serve as to and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of November, 1879.

CHRISTOPHER HEINEN.

Witnesses:

G. H. BURNETT,
JAS. J. MOONAN.