No. 698,611. Patented Apr. 29, 1902.

J. WILLIAMS.

CARRIAGE OR WAGON SPRING.

(Application filed May 7, 1901.

(No Model.)

Fig. 3.

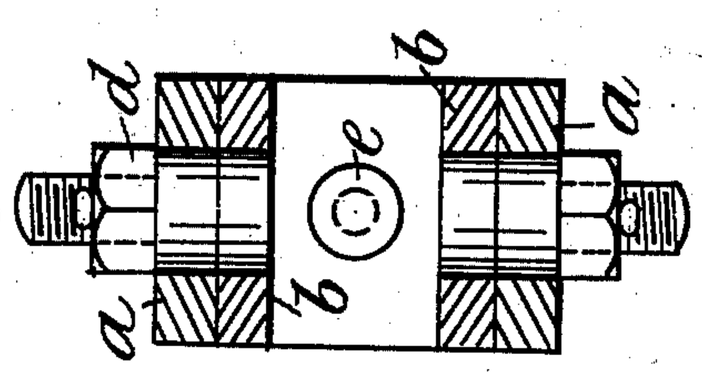


Fig. 1.

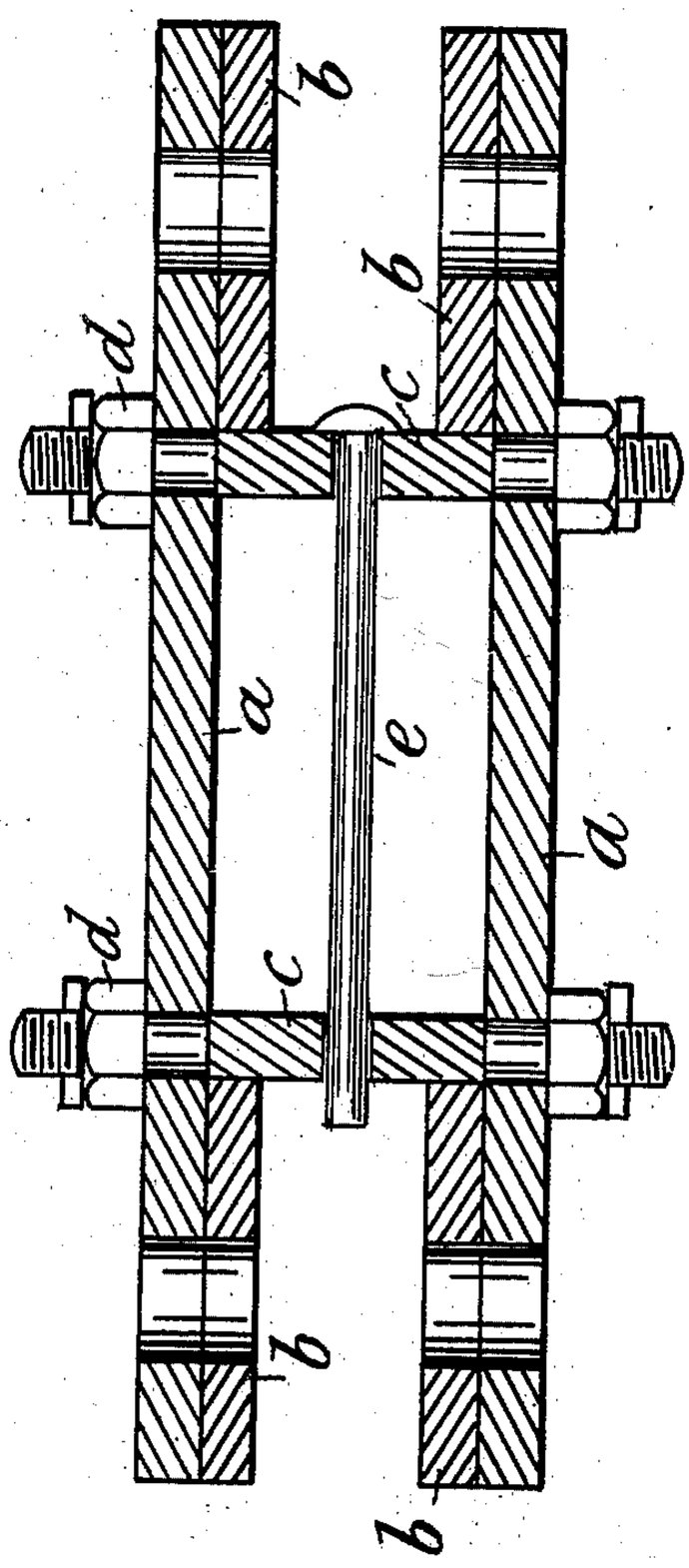
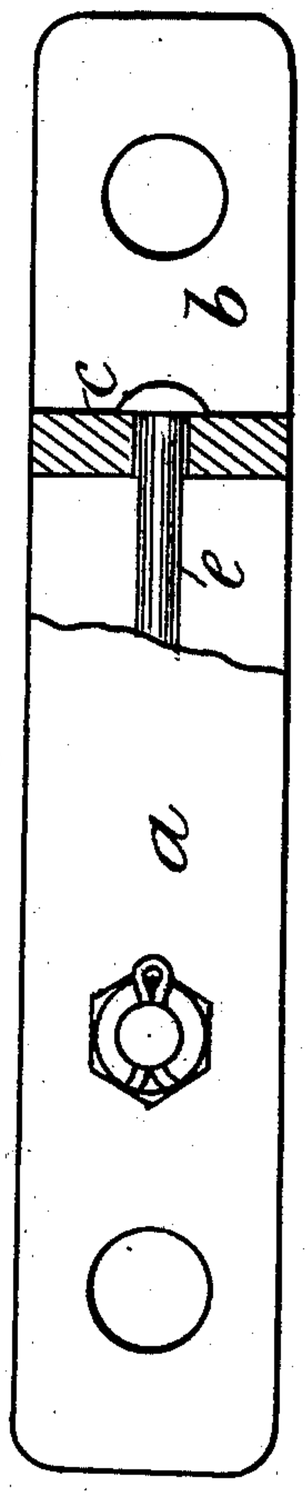


Fig. 2.



Witnesses
J. M. Mellor
J. J. Rawley.

Inventor
John Williams
per
J. B. Stewart
Attorney

UNITED STATES PATENT OFFICE.

JOHN WILLIAMS, OF GOWERTON, ENGLAND, ASSIGNOR TO JOHN REES, OF SWANSEA, ENGLAND.

CARRIAGE OR WAGON SPRING.

SPECIFICATION forming part of Letters Patent No. 698,611, dated April 29, 1902.

Application filed May 7, 1901. Serial No. 59,145. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAMS, wagon builder and repairer, a subject of the King of Great Britain and Ireland, residing at Westward Ho, Gowerton, R. S. O., in the county of Glamorgan, England, have invented certain new and useful Improvements in and Relating to Carriage and Wagon Springs, of which the following is a specification.

This invention relates to improvements in the draw-bar springs of carriages and wagons, and has reference to the buckles used for clamping the laminated plates of such springs together. The said invention refers more especially to improvements on the buckle in which the side cheeks of the buckle are bent or lapped over at each end, so as to form a double thickness where the draw-bar pin passes through. Now it has been found in practice that the said bent-over ends were liable to become distorted or broken by the pressure of the spring upon them; and the object of my invention is to overcome this difficulty. For this purpose instead of bending over the ends of the plates forming the cheeks to provide a double thickness or projecting portion for the distance-pieces to bear against I form the said projecting portions by means of separate plates welded to the inner sides of the said side cheeks or plates, thus providing strong and efficient side cheeks and obviating the liability of the same being distorted or broken.

In the accompanying sheet of drawings, Figure 1 is a vertical section of the improved buckle. Fig. 2 is a plan, partly in section; and Fig. 3 is a cross-section through the projecting portions or ends.

a a are the side cheeks or plates, and *b b* are the separate plates welded to the inner sides of the plates *a* to form the projecting portions or abutments for the distance-pieces *c* to bear against. The screwed ends of the distance-pieces pass through holes in the plates *a* close to the plates or abutments *b* and are fitted with the nuts *d* and split pins for clamping the cheeks to the spring-plates in the ordinary manner.

e is the rivet pin or bolt, which passes through holes in the distance-pieces and spring for holding them together.

By means of my invention I provide a stronger and more efficient buckle than those hitherto in use.

Having now fully described the nature of my said invention, what I claim, and desire to secure by Letters Patent, is—

In buckles for carriages and wagons the combination of the side cheeks *a*, plates *b*, distance-pieces *c*, nuts *d*, and rivet pin or bolt *e*, constructed and arranged, substantially as described and for the purpose specified.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN WILLIAMS.

Witnesses:
HAROLD SCHLESWICK,
JOSEPH ARCHIBALD NEWBOULD.