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PATENTED NOV. 6, 1906.

W. WOOLGAR.  
BODY HANGER FOR VEHICLES.  
APPLICATION FILED APR. 25, 1905.

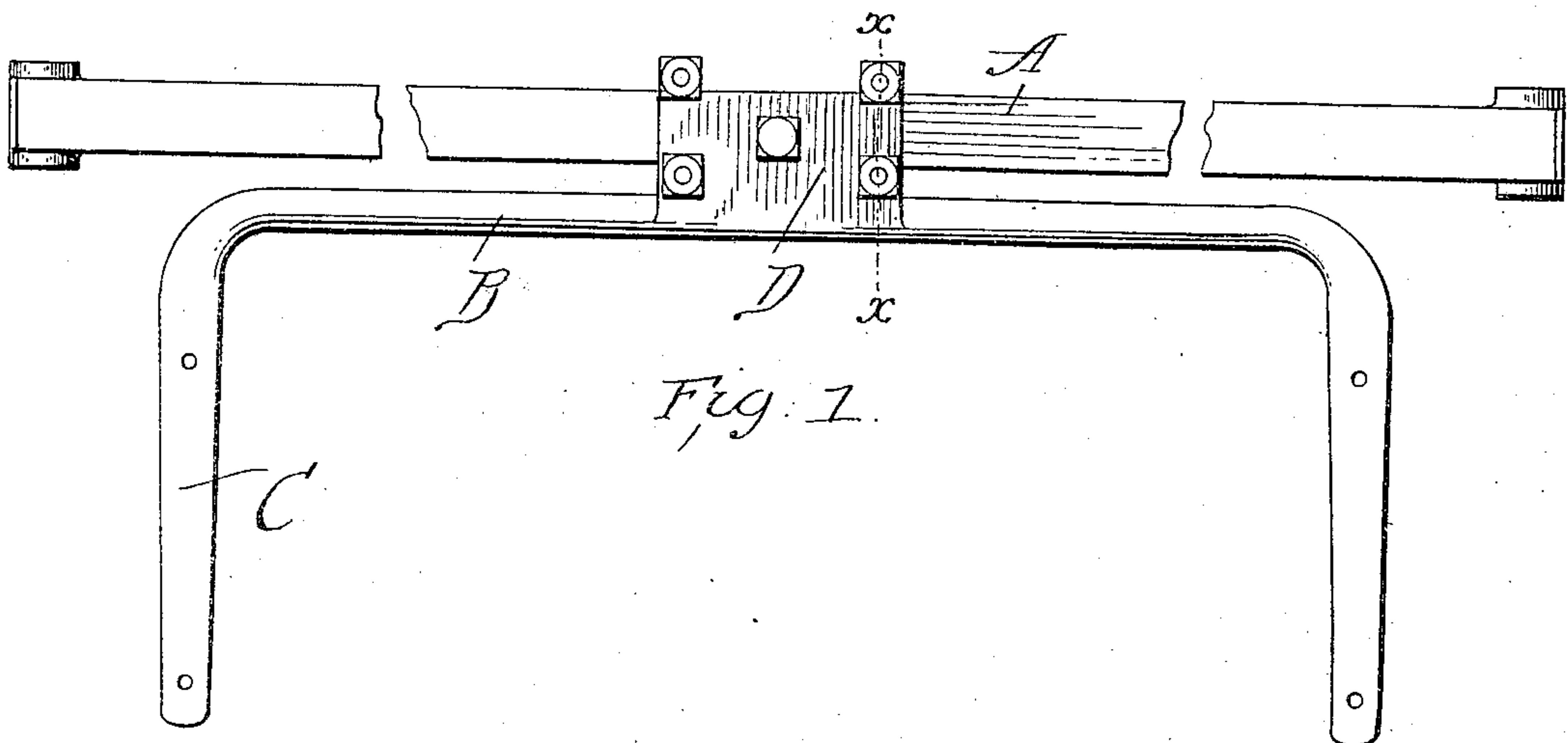


Fig. 1.

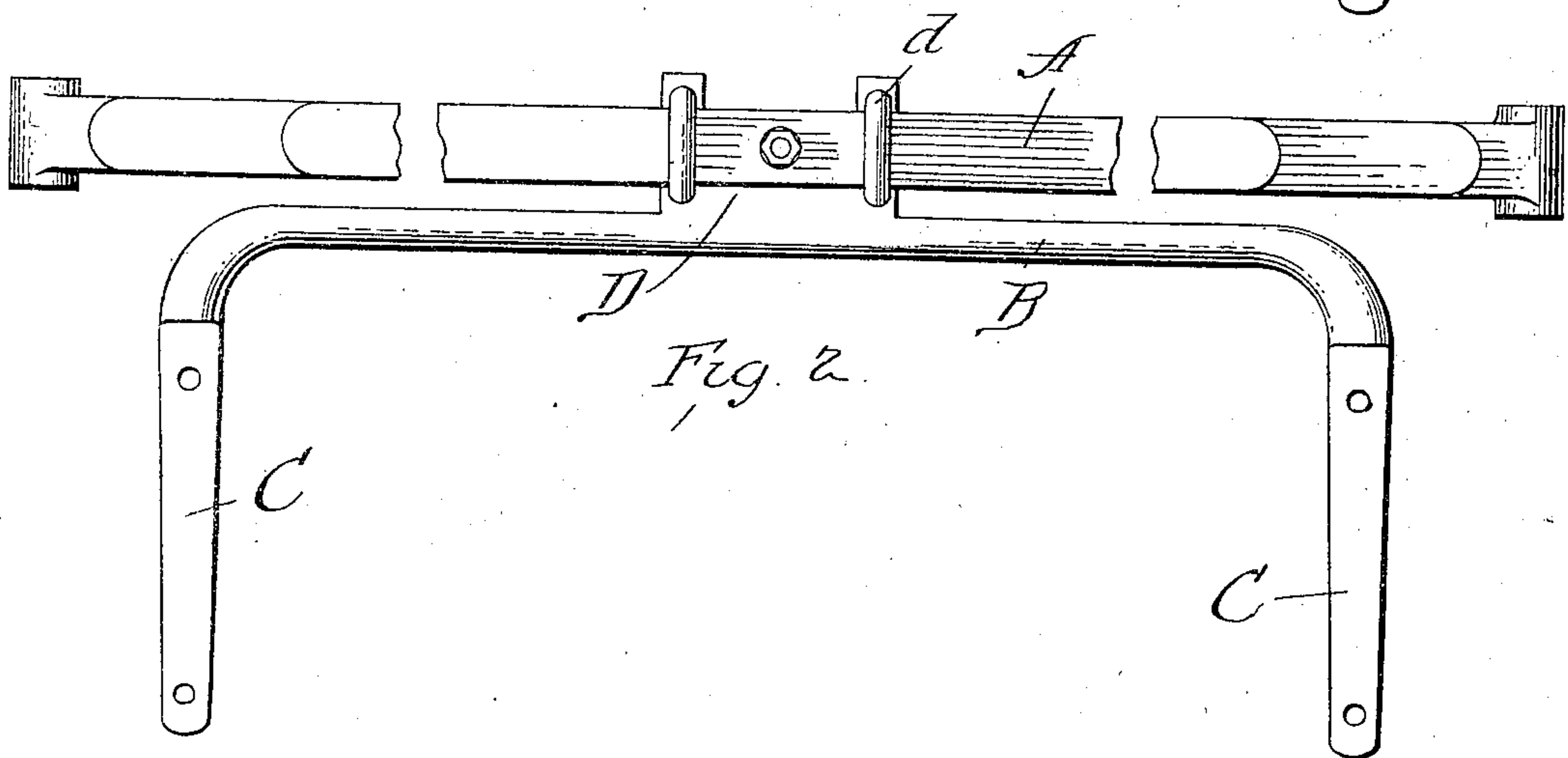
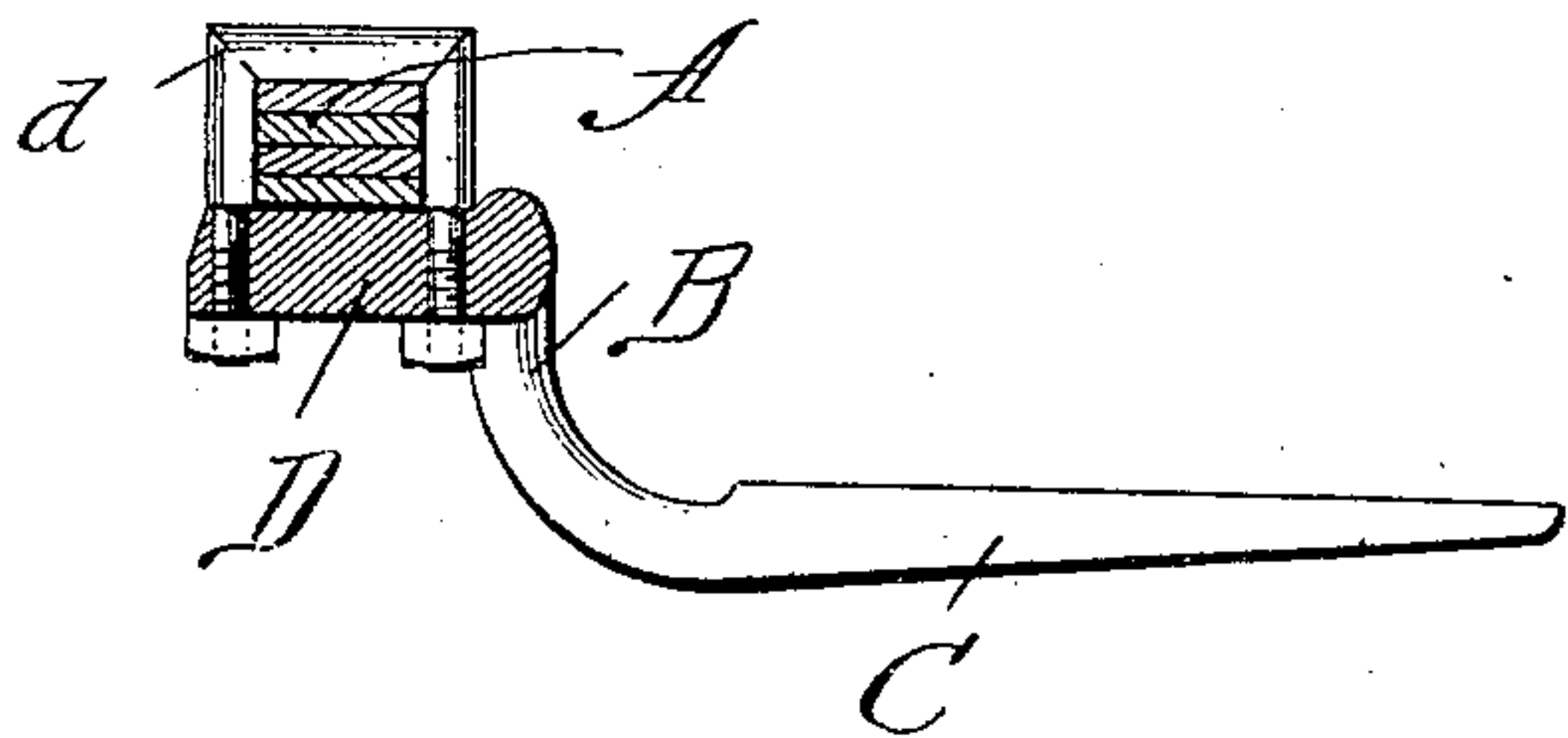


Fig. 2.

Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM WOOLGAR, OF SAGINAW, MICHIGAN.

## BODY-HANGER FOR VEHICLES.

No. 835,342.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed April 25, 1905. Serial No. 257,362.

*To all whom it may concern:*

Be it known that I, WILLIAM WOOLGAR, a citizen of the United States, residing at No. 936 South Fourth street, Saginaw, Michigan, have invented certain new and useful Improvements in Body-Hangers for Vehicles, of which the following is a specification.

My invention relates to body-hangers for carriages, and has for its object the production of such a connection between the spring and the body of the carriage as will enable me to dispense with the usual spring-bar, and, further, to provide a connection that will be almost entirely hidden from sight, that will be very strong and not liable to become loose and rattle, and that will not tend to draw the top of the spring in toward the body of the carriage.

With these objects in view my invention consists of the construction hereinafter described, and more fully pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a bottom plan view of my device attached to an ordinary elliptic spring. Fig. 2 is a top view of the same. Fig. 3 is a cross-sectional view on the line  $x x$ , Fig. 1.

In the drawings, A is an elliptic spring of the usual type, which is connected to the axle of the carriage-wheels in any suitable manner.

B is the metal body-loop having the hanger-arms C extending forward and adapted to be firmly secured to the body of the carriage. Extending rearwardly from near the center of the body-loop and formed integral therewith is a lip or flange D, which extends beneath the upper leaf of the elliptic spring and is rigidly secured thereto by the clips  $d$ , which pass over the spring and through the lip or flange D and are fastened by means of nuts or in any suitable manner. The hanger

thus constructed is at one side of and parallel to the spring, allowing the same absolute freedom of movement and permitting it to be compressed to its fullest extent.

By forming the lip or flange D integral with the body-loop I provide a much stronger hanger and one that is less liable to become loose and to rattle. By extending the lip D beneath the leaf of the spring instead of over it I am able to greatly reduce the upward reach of the hanger-arms and by thus reducing the leverage largely eliminate the tendency to draw the top of the spring in toward the body of the carriage. This tendency is further eliminated by the fastening-clips  $d$ , which extend over the leaf of the spring and down on either side to the lip D, thus distributing the weight equally on the hanger.

Having thus described my invention, what I claim is—

In a body-hanger for vehicles adapted to connect the end of the body with a double elliptical spring, the combination with the spring and body, of a bar B extending parallel to the spring and having a centrally-arranged rearwardly-extending integral plate or flange D located on the under side of the upper half of the spring, said bar having downwardly-curved ends terminating in angularly-extended arms C adapted to be bolted to the bottom of the body at opposite sides thereof, and clips of inverted-U shape embracing the spring and having threaded ends passing through openings in the plate D and nuts on said threaded ends, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM WOOLGAR.

Witnesses:

LINCOLN E. BRADT,  
MAY BRADT.