No. 627,699. Patented June 27, 1899.

D. J. MARSTON.

CARRIAGE COUPLING.

(Application filed Mar. 9, 1899.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

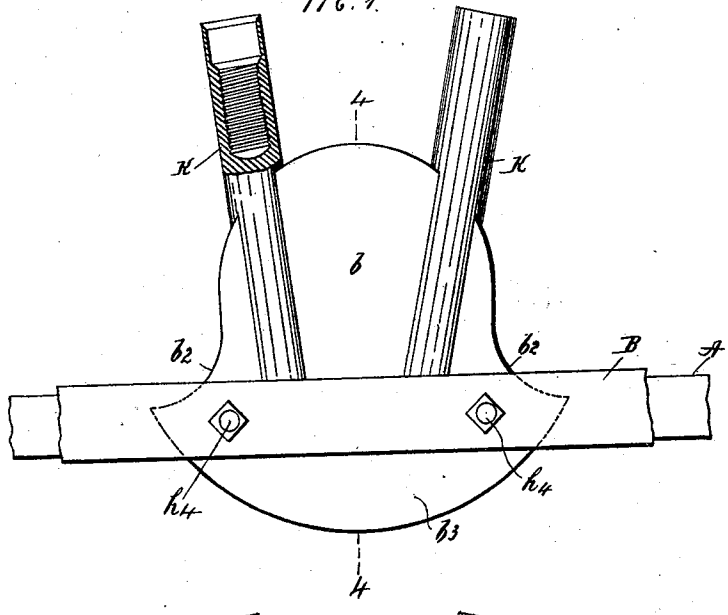
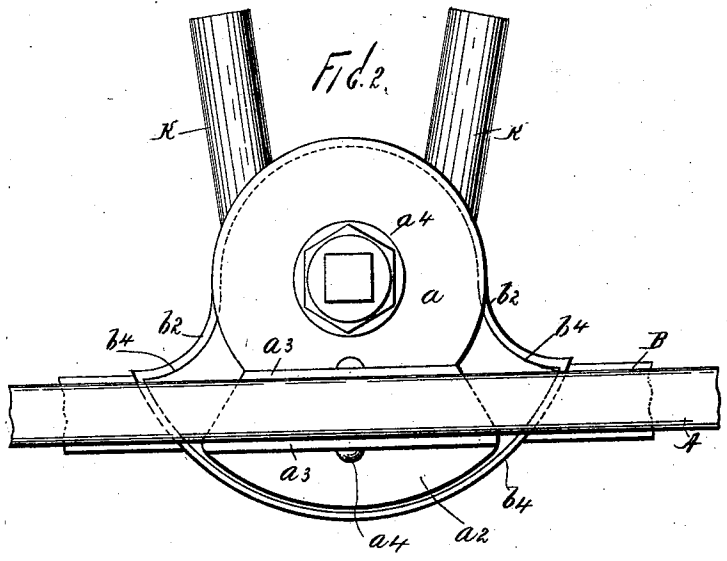


FIG. 2.



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FIG. 3.

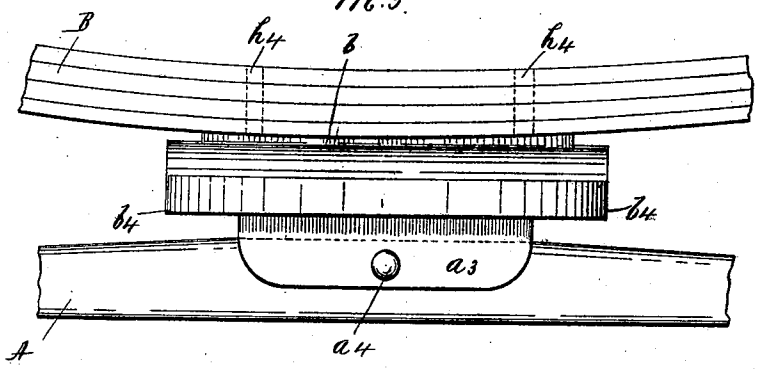


FIG. 4.

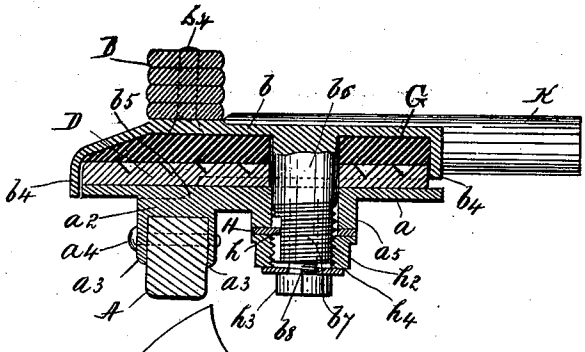
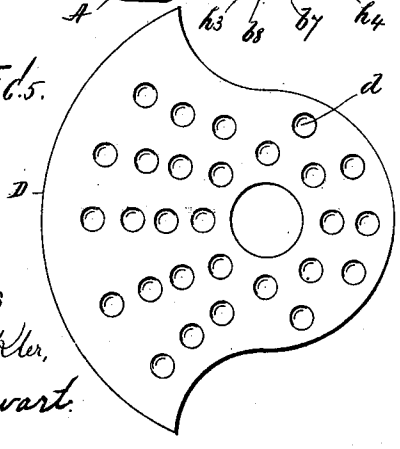


FIG. 5.



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UNITED STATES PATENT OFFICE.

DUDLEY JEFFERSON MARSTON, OF AMESBURY, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO THE CARRIAGE MACHINE COMPANY, OF SAME PLACE.

CARRIAGE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 627,699, dated June 27, 1899.

Application filed March 9, 1899. Serial No. 708,320. (No model.)

To all whom it may concern:

Be it known that I, DUDLEY JEFFERSON MARSTON, a citizen of the United States, residing at Amesbury, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Carriage-Couplings, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to carriage-couplings; and the object thereof is to provide improved devices of this class of novel character and construction for connecting the front axle, the front spring, and the perches which lead to the rear axle and the rear spring; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a top plan view of the coupling which I employ; Fig. 2, a bottom plan view thereof; Fig. 3, a front view; Fig. 4, a section on the line 4 4 of Fig. 1, and Fig. 5 a plan view of a detail of the construction.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same letters of reference in each of the views, and in said drawings I have shown at A a part of the front axle of a carriage or other vehicle and at B a part of the front spring, and in the practice of my invention I provide a coupling comprising two principal parts, one of which is secured to the axle A and the other to the spring B, and other parts hereinafter described.

That part of my improved coupling which is secured to the axle A compries a circular disk or plate a, provided at its front edge with a transverse extension a^2, the front edge of which is segmental in form, and having depending transverse flanges a^3, as shown in Figs. 2 and 4, between which the axle A is bolted or otherwise secured, as shown at a^4, and said circular disk or plate a is provided centrally with a downwardly-directed tubular neck a^5. The circular disk or plate a projects backwardly from the axle A, and that part of the coupling which is connected with the spring B comprises a corresponding disk or plate b, the sides and rear portions of which are circular in form. The sides of the disk or plate b adjacent to the spring B are outwardly curved, as shown at b^2, and said plate is projected forwardly to form a segmental extension b^3, and said plate and the extension b^3 thereof are provided around the perimeter with a depending flange b^4.

Mounted on the plate a within the flange or rim b^4 of the plate b is a metal plate D, the form of which is shown in Fig. 5, and said metal plate D in outline is substantially the same as the plate b and fits within the flange or rim b^4 thereof, and said plate D is smooth on its under surface and preferably provided on its upper surface with cavities or recesses d, and placed thereon is a cushion G, composed of rubber, rubber and canvas, or other suitable material and the outline of which is the same as the outline of the plate D, and said cushion is also inclosed by the flange or rim b^4 of the plate b. The flange or rim b^4 at the front of the plate b and backwardly along the sides thereof to the downwardly-directed curve of the dotted line b^5 extends below the plate a, and therefore incloses the front part of said plate, and the front part of said plate, the plate D, and the cushion G are entirely concealed from view. The plate b is also provided centrally with a downwardly-directed coupling-pin b^6, formed integrally therewith, which passes through the cushion G, through the plate D, and through the plate a and the tubular neck a^5, formed on the bottom thereof, and the lower end of said coupling-post is screw-threaded, as shown at b^7, and provided with a reduced screw-threaded extension b^8.

The threads on the coupling-pin b^6 and on the reduced extension b^8 are reverse threads, and mounted on said coupling-pin is a washer H, one side of which is provided with an inwardly-directed projection, which fits in a longitudinal space formed in the coupling-pin b^6, as shown at h, and mounted on said coupling-pin below said washer is a nut h^2, and another nut h^3 is placed on the screw-threaded extension b^8 of the coupling-pin, and between the nuts h^2 and h^3 is a washer

h^4. The washer h and the reverse nuts h^2 and h^3 constitute a lock which holds these parts in place, and the said nuts cannot become loose or accidentally come off, and the parts are securely bound together at all points.

The spring B is secured to the plate b by bolts, pins, or screws, as shown at h^4, and the top and bottom portions of the coupling are pressed together by the nut h^2, and the object of the cushion G is to diminish the vibration or jar caused by the wheel going over rough ground or rough pavements and at the same time to make just friction enough to keep the forward axle from moving with every motion of the horse or horses, or, in other words, to prevent said axle from turning too freely and also to prevent the rattling which is usually common to couplings of this class. The top plate b is also provided with backwardly-directed arms K, which are preferably tubular in form, as shown in Fig. 1, and also preferably screw-threaded, and these arms are adapted to receive or serve as attachments for the reaches or perches by which connection is made with the rear axle and the rear spring. The arms K may, however, be of any desired form, and the perches or reaches may be connected therewith and with the rear axle and spring, the latter being not shown, in any desired manner, and one or more of said arms may be employed, as desired.

My improved coupling is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and it will be apparent that changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A coupling for carriages, comprising top and bottom plates, a metal plate, and a cushion placed between said plates, the top plate being provided with a depending flange or rim which incloses said metal plate and said cushion, said top and bottom plates being connected by a coupling-pin formed on the top plate, and passing downwardly through said cushion, through said metal plate and through said bottom plate, said coupling-pin being provided at its lower end with lock-nuts, substantially as shown and described.

2. A coupling for carriages, comprising a plate secured to the front spring, a plate secured to the front axle, a metal plate and a cushion placed between said first-named plates, the plate which is secured to the spring being provided with a depending flange or rim which incloses the metal plate and the cushion, and the plate which is secured to the spring being also provided centrally with a depending coupling-pin formed integrally therewith which passes downwardly through said metal plate, said cushion and through the plate which is secured to the axle, substantially as shown and described.

3. A coupling for carriages, comprising top and bottom plates adapted to be connected with the front spring and axle respectively of the vehicle, and a metal plate and cushion placed between said plates, said top plate being also provided with backwardly-directed tubular arms screw-threaded interiorly and adapted to receive the front ends of the perches or reaches, substantially as shown and described.

4. A coupling for carriages, comprising a top plate, a bottom plate which is secured to the front axle of the vehicle, a metal plate, and a cushion placed between said top and bottom plates, the top plate being also provided with a depending flange or rim which incloses said metal plate and said cushion, and said top plate being provided with a coupling-pin which passes downwardly through the said cushion, the said metal plate and the said bottom plate, substantially as shown and described.

5. A coupling for carriages, comprising a top plate, a bottom plate which is adapted to be secured to the front axle of the vehicle, a cushion placed between said plates, said top plate being also provided with a downwardly-directed coupling-pin which passes through the cushion and through the bottom plate, substantially as shown and described.

6. A coupling for carriages, comprising a top plate, a bottom plate which is adapted to be secured to the front axle of the vehicle, a cushion placed between said plates, said top plate being also provided centrally thereof with a downwardly-directed coupling-pin which passes through the cushion and through the bottom plate, and said top plate being also provided with a depending flange or rim which incloses said cushion and the bottom plate at the sides and front thereof, substantially as shown and described.

7. A coupling for carriages, comprising a top plate, a bottom plate adapted to be secured to the front axle of the vehicle, a supplemental metal plate, and a cushion placed between said top and bottom plates, a coupling-pin connected with the top plate and passing downwardly through said supplemental plate and cushion and through the bottom plate, said top plate being also provided with backwardly-directed tubular arms adapted to receive the front ends of the reaches or perches, and said arms being provided with screw-threaded sockets, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 27th day of February, 1899.

DUDLEY JEFFERSON MARSTON.

Witnesses:
AMMI W. WALLACE,
ENOCH N. HOYT.