C. THOMAS.

Carriage.

No. 168,430. Patented Oct. 5, 1875.

Fig. 1.

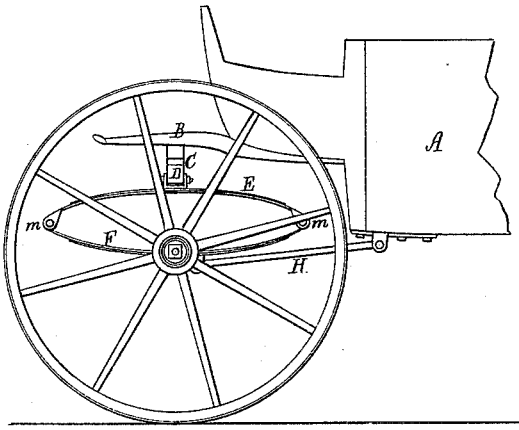


Fig. 2.

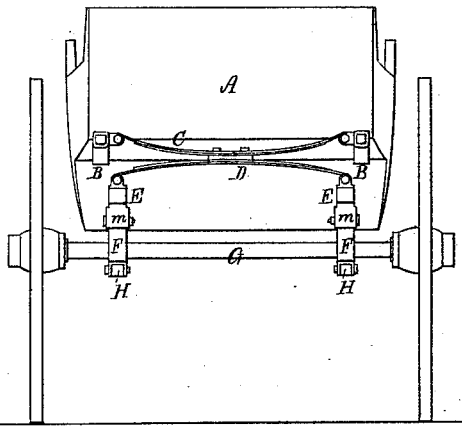
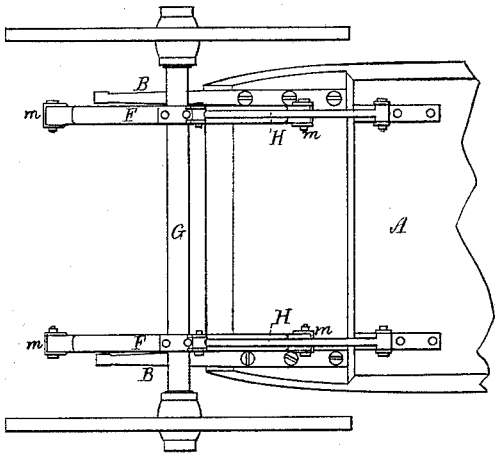


Fig. 3.



Witnesses.

S. W. Pifer

L. O. Stoller

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R. H. Eddy

UNITED STATES PATENT OFFICE.

CHAUNCEY THOMAS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CARRIAGES.

Specification forming part of Letters Patent No. **168,430**, dated October 5, 1875; application filed May 11, 1875.

To all whom it may concern:

Be it known that I, CHAUNCEY THOMAS, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Wheel-Carriages; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a side elevation, Fig. 2 a rear view, and Fig. 3 an under-side view, of a carriage-body and its rear axle provided with my invention.

My invention relates to a peculiar combination of transverse and longitudinal springs applied to the hangers and rear axle of a carriage-body; also to such end connection-rods extending from the axle or the lowest springs and pivoted to the body, such affording a cheap and simple means of applying the axle to the body, and saving all necessity of a perch, my invention being specially useful for landaulets, barouches, and park phaetons, as well as for various other kinds of wheel-carriages.

In the said drawings, A denotes the body, provided with two hangers or arms, B B, extended rearward from it, in the manner represented. At or near the middles of the two hangers there are connected to them the ends of an inverted arched spring, C, which, at its crown, is supported by another arched spring, D, the two springs being arranged as represented, and connected at or near their crowns. The lower spring is at its ends pivoted to and rests upon the crowns of two springs, E E, arranged longitudinally of the carriage, and supported at their ends *m* and connected to two inverted springs, F F, which, at their middles, are fixed to the axle G. Extending from or pivoted to the axle are two connection-rods, H H, which, at their inner ends, are hinged or pivoted to the carriage-body. These rods play up and down with the axle, prevent the upper springs from being twisted, and save the necessity of a perch to the carriage. The two transverse springs C D, arranged and combined, as shown, with the hangers B B, and also with the main longitudinal springs E E and F F, applied and arranged together and with and supported by the axle, in manner as set forth, not only contribute to give ease of motion to the carriage-body, but operate to relieve the main springs of strain in various directions.

In the place of the upper spring C I sometimes use a rigid bar, but such in no respect is so advantageous, as, besides the increase of elasticity gained by the spring, it affords the carriage more room to play vertically, and in other respects, and saves lateral strain on the main springs.

I do not claim brackets and jointed coupling-bars, combined with a carriage-body and a double elliptic or bow spring arranged transversely of the body, all being as shown in the United States Patent No. 141,190. In my invention the coupling-rods H H are combined with two double bow or elliptic springs arranged longitudinally of the body, and transversely of the axle, and with a spring going transversely of the body and connecting the two double elliptic springs; and, therefore, in my combination of the springs, the axle, and the connection-rods H H, these latter perform new functions—that is, they prevent the longitudinal springs E E from twisting the cross-spring D and breaking away from it; and they also aid in holding the latter spring so as to prevent it from breaking from its counter-spring C, and the latter from its hangers or supports B B.

I claim—

1. The combination of the springs C D, arranged as described, with the hangers B B, applied to the carriage-body A, and also with the main springs E E F F, arranged together and with the axle, all substantially as specified.

2. The connection-rods H H, pivoted to the body A, in combination therewith and with the axle G, and the longitudinal and transverse springs E E, F F, and D, applied to it, and the hangers, all substantially as specified.

CHAUNCEY THOMAS.

Witnesses:

R. H. EDDY,

J. R. SNOW.