

No. 120,079.

H. A. LUTTGENS.

Patented Oct. 17, 1871.

Body Loop for Carriages.

Fig I

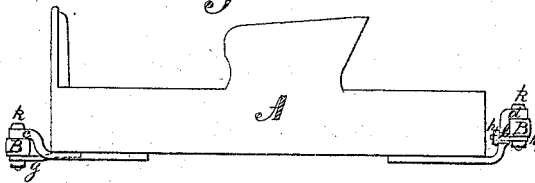


Fig II

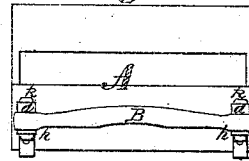


Fig III

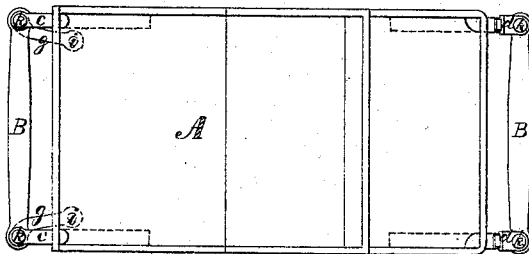


Fig IV

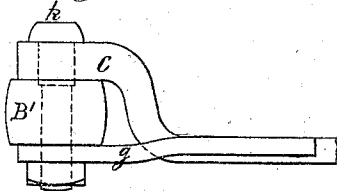


Fig V

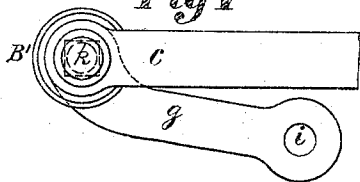


Fig XII

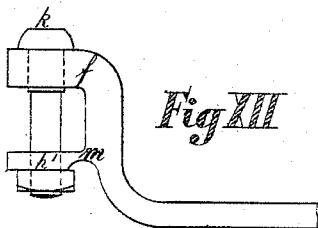


Fig VI

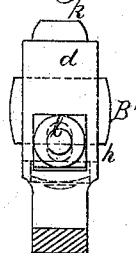


Fig VII

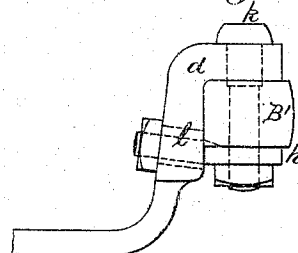


Fig IX

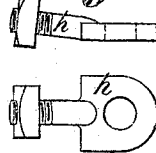


Fig VIII

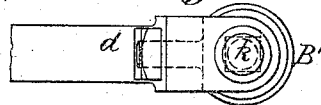


Fig X

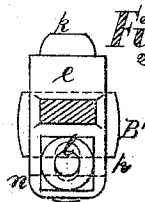
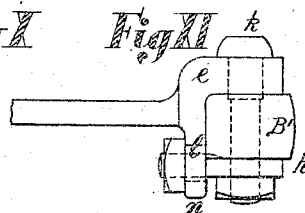


Fig XI



Witness
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UNITED STATES PATENT OFFICE.

HENRY AUGUSTUS LUTTGENS, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN BODY-LOOPS FOR CARRIAGES.

Specification forming part of Letters Patent No. 120,079, dated October 17, 1871; antedated October 5, 1871.

To all whom it may concern:

Be it known that I, HENRY AUGUSTUS LUTTGENS, of Paterson, in the county of Passaic, in the State of New Jersey, have invented a new and Improved Body-Loop for Carriages; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figures I, II, and III represent side elevation, end view, and top view of a carriage-body, with the body-loops and spring-bars attached thereto. Figs. IV and V represent side elevation and top view, drawn on an enlarged scale, of one manner of application of the improved body-loop. Figs. VI, VII, and VIII represent end and side elevation and top view of a second manner of application, and Figs. X and XI represent end and side elevation of a third manner of application of the same. Fig. IX represents side elevation and top view of one part of the body-loop drawn in detail, and Fig. XII represents a side elevation of a substitute for the improved body-loop.

Similar letters of reference indicate corresponding parts in each of the several figures.

My invention consists in providing a movable and, so far as its adaptability to the bottom face of the end of the spring-bar is concerned, an adjustable plate, placed between the nut and lower side of the spring-bar, of the bolt connecting the body-loop with the spring-bar, which, while it is entirely free to adapt itself to any ordinary oblique position of the bottom face of the end of the spring-bar, and capable of following up any compression of the wooden spring-bar caused by firmly securing the parts together, it is likewise capable of being firmly secured either to the bottom face of the carriage-body, being lengthened for this purpose into a light bar, adapted in its shape to the position of the spring-bar, body-loop, and bottom face of the carriage-body, or it is formed into a bolt which passes through a slotted hole provided in the vertical portion of the body-loop, and is firmly bolted to the latter. These different modes of fastenings are essential, so that the improvement may be applied to spring-bars and body-loops of various heights with reference to the bottom face of the carriage-body; or, in other words, that its application may be possible, whether the bottom face of the spring-bar is above, level, or nearly level with,

or below the plane of the bottom face of the carriage-body.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the body of a carriage. B are the spring-bars placed at each end of the carriage, upon which the carriage-body is placed by means of body-loops *c* and *d*. These latter are secured to the body A of the carriage in the usual manner, and the body-loops *c* and *d* to the spring-bars by bolts *k*, while plates *g* or *h*, as the case may be, are also secured by the same bolts to the bottom of spring-bars B. Plate *g* is extended into a light bar, shaped to adapt itself to its peculiar position, and provided with a hole near its end, through which passes bolt *i*, securing the bar or plate *g* to the bottom-side of the carriage-body A. The plate *h* is formed on one side thereof into a bolt, which passes through a slotted hole, *l*, provided on the inner or vertical portion of the body-loop *d*, being firmly secured to the latter by a nut fitted to the bolt of plate *h*. The vertical or inner part of the body-loop *d* may be formed so as to meet the spring-bar B, which latter is represented by a wooden block, B', in the detail drawings from Figs. IV to XI. This shape of the body-loop *d* gives additional thickness to that portion of the same which receives the slotted hole *l*, and therefore leaves sufficient strength to the body-loop. The body-loop *e*, represented in the Figs. X and XI, differs from the last described in being adapted to a different relative position of the spring-bar B and carriage-body A. It is extended downward into the shape of flange *n*, which receives the slotted hole *l*. In the case of body-loop *e*, the part thereof resting on the top of spring-bar B, as also that portion extending downward to meet the position of the bottom of carriage-body A, is made in the usual manner. In the substitute represented in Fig. XII the body-loop is made in the usual manner, with the exception of a plate, *h'*, forming part of the same. This plate, where it meets the body-loop at *m*, is so much reduced in thickness as to be able to bend freely while the nut of bolt *k'* is pressing the bottom face of plate *h'*, in the act of securing together the body-loop *f*, spring-bar B, (not shown in this figure,) and plate *h'*.

The operation of the body-loop is as follows:

The weight of the carriage-body A rests, by means of the body-loops *c* and *d*, upon the top of the spring-bars B, the center of the bars being secured, as usual, to the top of the spring, (not shown in the drawing;) and while the bolts connecting the ends of the springs do not show any play from wear, so as to allow the spring to rock, the body-loop at present in common use answers a good purpose; but whenever there is a looseness of the spring-bolts in their sockets, a rocking motion is caused thereby, since the bolt connecting the end of the spring-bars with the body-loop is not found sufficiently strong to resist this tendency to a rocking motion, and it is often found that the carriage-body A will then take a position in advance or rear of its normal position with reference to the running-gear of the carriage, which, if done, will introduce a different and injurious strain upon portions of the running-gear, since the weight of the carriage-body A and its load will then be carried beyond the centers of support of the axles. By the use of the improved body-loop this difficulty is avoided, since, by means of plate *g* or *h*, placed below the spring-bars B, and which are secured either to the carriage-body A or to the body-loop *d*, the bolts *k*, which firmly secure the body-loops, spring-bars, and plates together, are able to resist the strain brought upon them by any tendency to a rocking motion existing in the carriage-spring, thus firmly holding the spring and spring-bar in their proper position. The ability of the improved body-loop of thus firmly securing the parts consists in the fact that the plates *g* or *h*, as the case may be, are able, by means of the pressure of the nut of bolt *k*, to adapt their

position freely to the bottom surface of the spring-bar, and also to follow up whatever compression the wooden spring-bar B can or may be subjected to in the act of securing or bolting this part together; and the action of bolt *k*, through plates *g* or *h* and body-loop *c* or *d*, upon the spring-bar B, is similar to that of an ordinary vice pressing and holding the spring-bar, since, after the operation of bolting, the plates *g* or *h* are themselves firmly secured to the carriage-body A or body-loop *d*. The substitute represented in Fig. XII will only be able to answer a similar purpose when plate *h'*, forged to the body-loop *f*, is reduced in thickness at *m* so as to be able to bend readily in the operation of bolting; and then the plate *h'* is by no means able to adapt its position freely to the bottom face of the spring-bar, or to exert a uniform pressure upon the latter when bolted; and it therefore but imperfectly possesses the advantages claimed for the improved body-loop.

I do not claim constructing body-loops for carriages with ordinary jaws, having rigid sides, embracing the ends of the spring-bars; but

I claim as my invention and desire to secure by Letters Patent—

The movable or adjustable plate *g* or *h*, bolted firmly to the bottom face of spring-bars B and also to the carriage-body A, or body-loop *d*, adapted to varied relative heights of the spring-bars B and carriage-body A, substantially in the manner and for the purpose described.

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Witnesses:

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