No. 753,472. PATENTED MAR. 1, 1904.

L. CRISE.

VEHICLE BODY LOOP.

APPLICATION FILED JAN. 12, 1903.

NO MODEL.

Fig. 1.

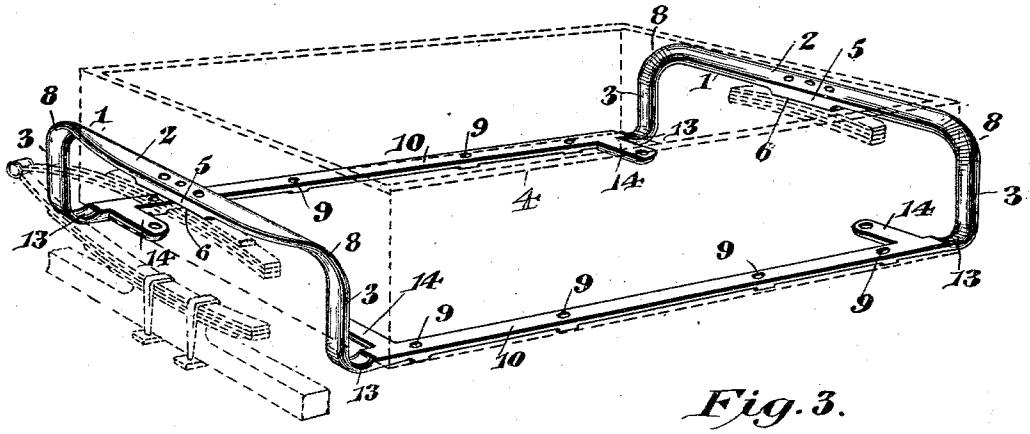


Fig. 3.

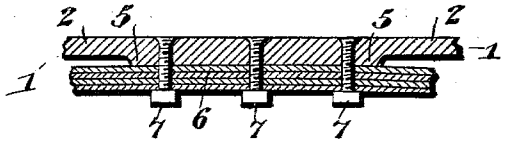


Fig. 2.

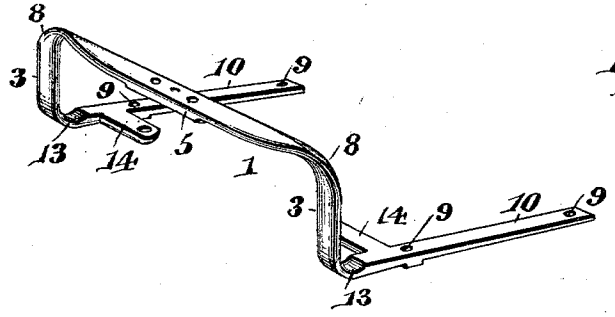


Fig. 4.

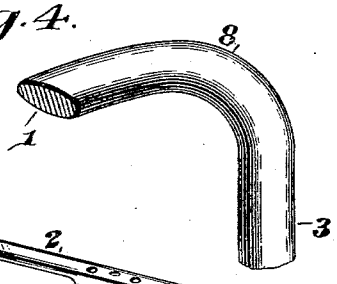
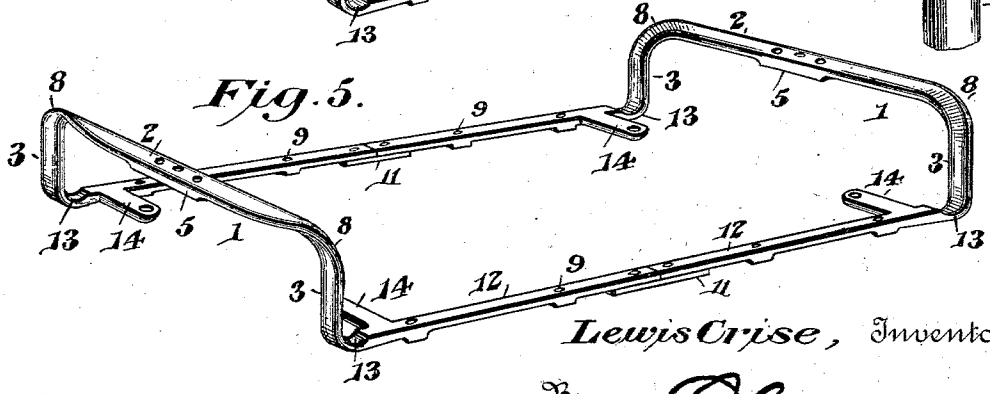


Fig. 5.



Witnesses

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No. 753,472. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

LEWIS CRISE, OF UPPER SANDUSKY, OHIO, ASSIGNOR OF ONE-HALF TO THE CENTRAL OHIO BUGGY CO., OF UPPER SANDUSKY, OHIO.

VEHICLE-BODY LOOP.

SPECIFICATION forming part of Letters Patent No. 753,472, dated March 1, 1904.

Application filed January 12, 1903. Serial No. 138,777. (No model.)

To all whom it may concern:

Be it known that I, LEWIS CRISE, a citizen of the United States, residing at Upper Sandusky, in the county of Wyandot and State of Ohio, have invented a new and useful Vehicle-Body Loop, of which the following is a specification.

The invention relates to improvements in vehicle-body loops.

The object of the present invention is to improve the construction of vehicle-body loops and to provide a simple and comparatively inexpensive one of great strength and durability adapted to throw the weight of the body of the vehicle squarely upon the spring, and thereby prevent twisting, straining, or breaking the spring.

A further object of the invention is to provide the body-loop adapted to equalize the load and prevent any undue strain upon either the body of a vehicle or the springs and capable of spacing its upright portion and also the spring from the body to prevent the latter from being scratched or otherwise marred through contact with the loop or the spring.

The invention also has for its object to provide a vehicle-body loop in which there will be no angles, offsets, or holes of any kind to catch and hold dirt and mud, and thereby enable the vehicle to present a neat and attractive appearance and to facilitate washing and cleaning the same.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereto appended, it being understood that changes in the form, proportion, and minor details of construction within the scope of the claims may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a pair of vehicle-body loops constructed in accordance with this invention and shown applied to a vehicle-body, the latter being illustrated in dotted lines. Fig. 2 is a detail perspective view of one of the loops. Fig. 3 is a detail sectional view illustrating the manner of securing the loop to the spring. Fig. 4 is a detail view of a portion of the loop, illustrating the construction of one of the upper side curves. Fig. 5 is a perspective view of a pair of body-loops, illustrating a slight modification of the invention.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 1 designate a pair of body-loops, each consisting of an approximately horizontal top portion 2 and depending side portions 3, which are extended inward beneath the bottom of a vehicle-body 4, as hereinafter explained. Each loop, which is constructed of iron, steel, or other suitable material, may be cast or otherwise constructed, and it consists of a single bar oval in cross-section, as clearly illustrated in Fig. 4 of the drawings. The central portion of the top horizontal part of the loop is thickened and extended downward slightly at 5 to form a seat for the top of a spring 6, which has its upper side centrally secured to the top of the loop by screws 7 or other suitable fastening devices. The screws 7 extend through registering perforations of the upper side of the spring and the top of the loop, being provided at their lower ends with suitable heads, as clearly shown in Fig. 3 of the drawings. The upper portions of the perforations of the top of the loop are enlarged or countersunk, and the upper ends of the screws are riveted in the enlarged portions of the said perforations and have their upper faces or edges flush with the upper face of the top of the loop. By this construction the top of the loop presents a smooth unbroken upper face to prevent it from catching and holding mud, dirt, and the like and to facilitate cleaning the loop. The depending enlarged portion of the center of the top of the loop offsets the spring from the lower faces of the side portions of the top of the loop, which extends horizontally to points adjacent to the side faces of the vehicle-body. The ends of the top portion are given a quarter-bend at a curve downward and rearward, as shown, and gradually merge into the depending upright sides 3 of the loop, which

have their side faces arranged in planes parallel with the end face of the body. The upper curved portion 8 at each end of the top of the loop has a slight longitudinal twist, and by this construction a graceful longitudinal curve is produced and sharp bends and angles obviated. This form of bend also enables the loop to be constructed of oval metal and to be bent without weakening the material. The major diameter of the oval portion of the top of the loop is in a horizontal plane and the major diameter of the oval of the upright side portions is arranged in a plane transversely of the vehicle, and the partial spiral curve which constitutes the quarter-bend and arranges the major diameter of the oval of the upright portions at right angles to the major diameter of the oval of the horizontal portions carries the strength of the metal throughout the entire loop. The sides 3, which are approximately vertical, extend downward to within a short distance of the lower face of the bottom of the body and are spaced from the ends of the same and from the spring 6, the distance between the sides 3 and the spring being considerably greater than the distance between the sides 3 and the end of the body. Sufficient space is provided between the parts to enable the vehicle to be readily cleaned, and the side portions of the loop are arranged to shed dirt and mud and present smooth faces devoid of angles, openings, or offsets liable to collect mud or dirt or interfere with the cleaning of the vehicle. The metal is curved at the lower ends of the sides to arrange the flat faces of the metal against the lower face of the bottom of the body, and suitable perforations 9 may be provided in the longitudinal bottom arms or bars 10 to enable the same to be bolted or otherwise secured to the body. The side bars or arms 10 may be extended to the center of the bottom of the body at opposite sides thereof and be welded together to form a continuous bar at each side of the body, as illustrated in Fig. 1 of the drawings; but the bottom bars or arms may terminate at the center of the vehicle and be connected by a bottom plate or rub-iron 11, as illustrated in Fig. 5 of the drawings. The bottom bars or arms are in practice secured to the side sills of the body, and the rub-irons 11, (shown in Fig. 5,) which underlie the adjacent ends of the bars or arms 12, are suitably bolted or riveted to the same. The longitudinal bottom bars or arms are provided adjacent to the curved bends 13, which connect the bars or arms with the sides of the loop, with lateral extensions or arms 14, arranged at right angles to the longitudinal bottom bars or arms and located at the corners of the body. This braces the body and reinforces the same at the corner-joints and prevents the parts from separating thereat incident to the twisting and straining of the body while driving over uneven ground. This reinforcing-brace also prevents the first bolt or end bolt of the loop from breaking and enables the sills and other parts of the body to be held firmly in place.

It will be seen that the vehicle-body loop is exceedingly simple and inexpensive in construction, that it presents a neat and attractive appearance, and that it is devoid of angles, offsets, holes, and the like, liable to catch mud or interfere with the cleaning of the vehicle. Furthermore, the upright portions of the loop are offset from the body and from the spring, and both the spring and the loop are prevented from scratching or otherwise marring the finish of the body. Also the loop rests squarely upon the top of the spring, and the top portion of the loop extends to within a short distance of the side faces of the body, so that the strain is equalized and evenly distributed to prevent any one portion of the spring and the body from being subjected to too severe a strain.

What I claim is—

1. A vehicle-body loop comprising upright side portions, and a horizontal transverse portion provided with an enlargement at the center forming a seat for a spring, said horizontal body portion being constructed of oval metal at each side of the central portion with the major diameter of the oval arranged in a horizontal plane to present substantially horizontal upper and lower side faces, and the horizontal portion being given a quarter-bend at each end to arrange the major diameter of the upright side portions in a plane transversely of the vehicle, said bend being gradually and uniformly curved and twisted forming a partially spirally-curved connecting portion, whereby the tensile strength of the metal is carried throughout the entire loop, substantially as described.

2. A vehicle-body loop having a horizontal top portion curved inward and downward at its ends to form partially spirally-curved connecting portions, upright sides depending from the curved portions of the top and extended inward at their lower ends to form arms or bars, the latter being disposed longitudinally of the body, and the inwardly-projecting arms extending from the said arms or bars and located at the corners of the vehicle, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

LEWIS CRISE.

Witnesses:
F. A. SMITH,
W. R. HARE.