(No Model.)

M. J. McNAMARA & C. GUSSETT.

COMBINED SPRING BAR AND BODY LOOP.

No. 590,767. Patented Sept. 28, 1897.

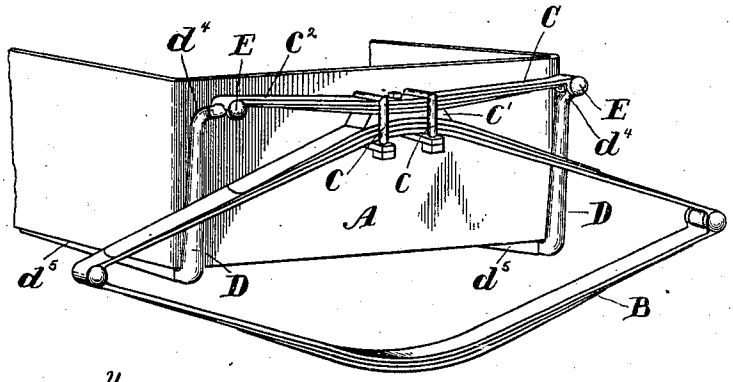


Fig. 1

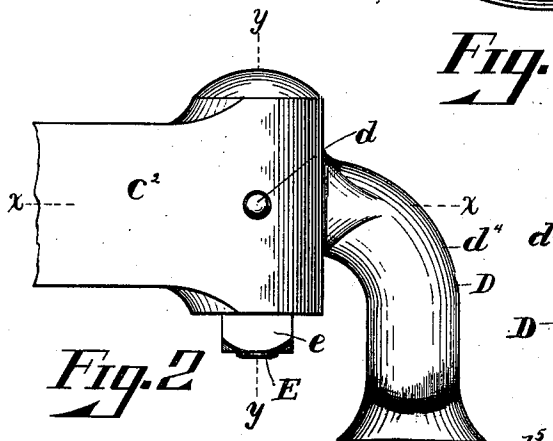


Fig. 2

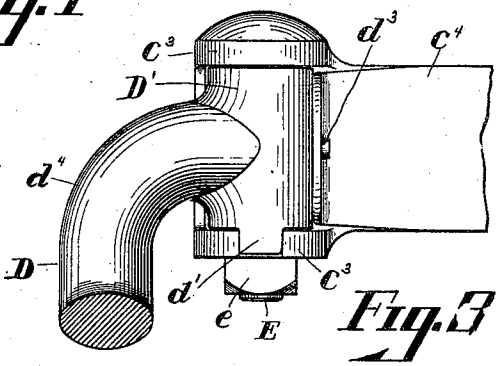


Fig. 3

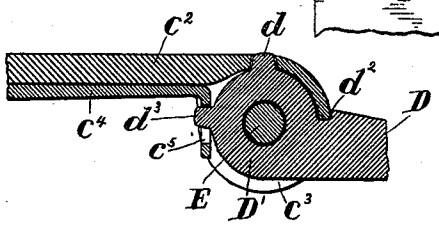


Fig. 4

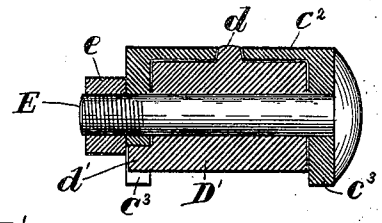


Fig. 5

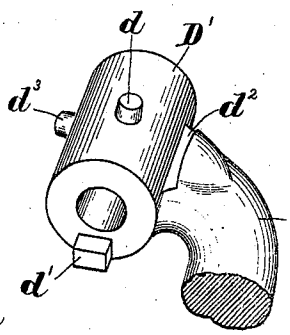


Fig. 6

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UNITED STATES PATENT OFFICE.

MICHAEL J. McNAMARA AND CHARLES GUSSETT, OF CINCINNATI, OHIO.

COMBINED SPRING-BAR AND BODY-LOOP.

SPECIFICATION forming part of Letters Patent No. 590,767, dated September 28, 1897.

Application filed April 26, 1897. Serial No. 633,890. (No model.)

To all whom it may concern:

Be it known that we, MICHAEL J. McNAMARA and CHARLES GUSSETT, citizens of the United States, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in a Combined Spring-Bar and Body-Loop, of which the following is a specification.

Our invention relates to means for coupling the body of vehicles, and especially buggies, to a spring-gear. Its object is to provide a simple reliable means to couple the gear-springs through a spring-bar to the body-loop without the use of shackles or similar appliances, which, in addition to cost of manufacture and fitting, rattle in use and permit unsteady swaying movements of the body.

The invention will be first fully described in connection with the accompanying drawings and then particularly referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a perspective view of the end of a piano-box buggy provided with our improvements. Fig. 2 is a detail plan view, upon a greatly-enlarged scale, of one end of the spring-bar and one end of the body-loop to which it is coupled. Fig. 3 is an inverted plan view of the same. Fig. 4 is a central longitudinal sectional view of the same, taken through line $x\ x$ of Fig. 2. Fig. 5 is a transverse diametrical sectional view through line $y\ y$ of Fig. 2. Fig. 6 is a perspective view of the upper end of one of the body-loops, which is to be coupled to the spring-bar.

The body A and the elliptic spring B are of ordinary construction. The specific description of the same is not therefore necessary further than to say that the lower semi-elliptic portion of the spring is connected to the gear over the rear axle or fifth-wheel block in the usual manner.

C is the spring-bar, which is coupled to the upper half of the elliptic spring by ordinary clip-ties c, an intervening wooden block c' being preferably interposed between the spring-bar and elliptic spring, the upper and lower faces of which conform to the spring and spring-bar to make a strong rigid coupling at the center. The spring-bar C may be composed of any suitable number of leaves. We have found ordinarily that two leaves are sufficient, the upper one c^2 of which is curved downward at the ends to fit over the upper portion of the body-loop D. The leaf c^2 has downwardly-turned perforated lugs c^3 upon each side to receive the coupling-bolt E, which passes through the lug c^3 and through the eye in the head of the body-loop D. The body-loop D has extending from its top a pin d, which passes through a perforation in the end of the spring-leaf c^2, and one of the lugs c^3 is notched to receive a lug d', which projects from one end of the loop-head D'. The loop-head D' where it joins the neck of the loop is recessed at d^2 to receive the curved end of the upper spring-leaf c^2.

The under leaf c^4 of the spring-bar has its ends turned down at a substantially right angle to the body, and is centrally slotted at c^5 to receive a pin d^3, which projects inwardly from the head D' of the body-loop. The arms of the body-loop curve forward at their upper ends at d^4 to clear the ends of the body A, and have right-angle bends d^5 to pass under and be secured to the bottom of the body to support it when coupled to the gear.

The main purpose of the perforation in the top of the leaf c^2 and the pin d is to enable the workman to readily couple the loops to the sping and bar, the loops being first secured to the bottom of the buggy when the body is placed in position and the head D' brought up under the spring-leaf. The pin d, entering the perforation in the upper leaf, brings the perforations in the heads D' and in the lugs c^3 in true alinement, so that the bolts E may be readily inserted to receive the tightening-nuts e. The pins d also assist to steady the parts rigidly in place and in connection with the pins d^3, which pass through the perforations c^5 in the downwardly-turned ends of the lower plate, will prevent the body from dropping should one or more of the bolts E break or fall out of place.

The purpose of the notch d^2 in the arm to receive the curved end of the spring-bar plate c^2 is to prevent the loops from sagging outwardly when the vehicle is running on a side-hill road, or the wheels upon one side pass

over obstructions in the road, and the purpose of the notch in the lugs c^3 in connection with the lug d' is to prevent the loop from sagging outwardly. It will thus be seen that when the spring-bar is coupled to the body-loop the couplings are practically rigid, allowing only a slight flexion of the spring-bar and preventing all rattling and swaying motion of the body in either direction.

It is obvious that one or more of the locking pins or lugs projecting from the loop-head into the coupling ends of the spring-bar may be omitted and still a strong substantial coupling obtained between the spring-bar and the head of the body-loop, but it would be an inferior modification of our invention to omit any of its features, but while we have shown it in what we believe to be its perfect form we do not desire to limit ourselves to the exact construction shown.

What we claim is—

1. In a combined spring-bar and body-loop the combination of the upper plate of the spring-bar having its ends curved to fit over the heads of the body-loops and perforated lugs upon opposite sides to receive coupling-bolts, the lower plate of said bar having downwardly-turned ends perforated to receive pins projecting inwardly from the loop-heads, the body-loops having perforated heads to pass between the lugs extending down from the top leaf of the spring-bar, inwardly-projecting pins to enter perforations in the angular ends of the lower leaf of said bar, and the bolts for coupling the spring-bar and loops, substantially as shown and described.

2. The combination substantially as hereinbefore set forth, of the spring-bar having the ends of its upper leaf curved to pass over the head of the body-loops, downwardly-projecting perforated lugs upon each side of the curved ends to receive said head, the lower leaf of the spring-bar having angular perforated ends between the lugs of the upper bar, the body-loops to fit between said downwardly-projecting lugs axially perforated to register with the perforations in said lugs and having upwardly-projecting and inwardly-projecting pins to enter respectively the perforations in the upper and lower leaf of the spring-bar, and the bolts for coupling the spring-bar and loops together.

3. The combination as hereinbefore set forth of the spring-bar having its upper leaf curved at the ends, provided with downwardly-projecting lugs to receive the head of the body-loops and perforated between the lugs, the lower plate having its end extending between the lugs of the upper plate, the body-loop adapted to fit between the lugs of the upper spring-bar plate, notched on the ends to receive the curved ends of said upper spring-plate and having upwardly-projecting pins to enter the perforations in said curved ends, and the bolts coupling the parts together.

4. The combination as hereinbefore set forth of the spring-bar having the ends of its upper plate curved and formed with downwardly-projecting lugs to receive the coupling-head of the body-loop, one of said lugs being notched on the under side, the lower plate having angular ends to pass between the lugs of the upper plate, the body-loops having heads to pass between the lugs of the spring-bar and a projecting lug to enter the notch in one of said lugs, and the bolts to couple the body-loop and spring-bar.

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