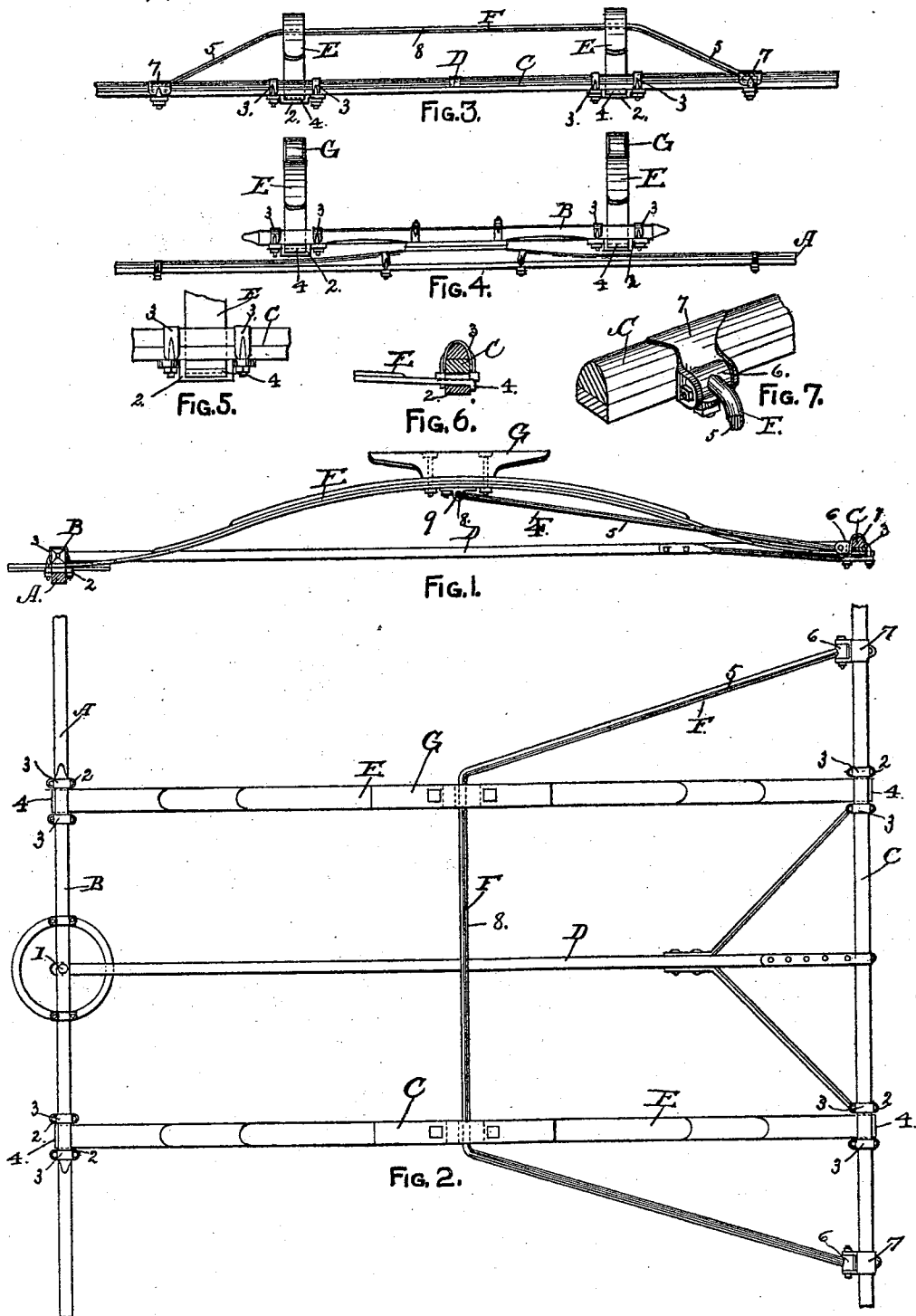


(No Model.)

J. M. HOLLER.
VEHICLE SPRING.

No. 498,270.

Patented May 30, 1893.



WITNESSES

S. B. Brewer
C. L. Chapman

INVENTOR:

JOHN M HOLLER

BY

William H. Low
ATTORNEY,

UNITED STATES PATENT OFFICE.

JOHN M. HOLLER, OF ALBANY, NEW YORK.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 498,270, dated May 30, 1893.

Application filed March 18, 1892. Renewed November 26, 1892. Serial No. 453,214. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. HOLLER, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Vehicle-Springs, of which the following is a specification.

My invention relates particularly to improvements in side-springs for light wagons and the manner of connecting the same to the running-gear of the wagons, all as hereinafter described and specified in the claims at the conclusion of this specification.

In the accompanying drawings, which are herein referred to and form part of this specification, Figure 1 is a side elevation of my invention, showing the manner of connecting the side-springs to the spring-bar—on the forward-axle—and to the rear-axle. Fig. 2 is a plan view of the same. Fig. 3 is a rear elevation of the rear-axle. Fig. 4 is a front elevation of the forward-axle; and Figs. 5, 6, and 7 are enlarged and detached details of construction of parts of my invention.

As represented in the drawings, A designates the forward-axle, B the spring-bar attached to the forward-axle by means of a king-bolt, 1, or other suitable means, C the rear-axle, and D the reach rigidly attached to said spring-bar and rear-axle; all of said parts are constructed and arranged in the old and well-known manner and form no part of this invention.

E designates arched or semi-elliptic springs whose opposite ends have no positive connection to either the spring-bar or the rear-axle, but said spring-ends are carried in stirrups, 2, which are secured in place, to said spring-bar or rear-axle as occasion requires, by means of clips, 3, like those commonly used in carriage-work. Said ends are fitted to have a loose endwise movement in said stirrups, but preferably each of them has a downwardly-turned lip, 4, as shown in Fig. 6, which will engage with the stirrup to prevent the displacement of the spring therefrom.

F designates a bent yoke having at the end of each arm, 5, a joint-sleeve, 6, which forms a flexible joint with lugs of a clip, 7, secured in a corresponding position on the rear-axle. C. The cross-bar 8 of said yoke is journaled in bearings, 9, which are secured to the springs E in such manner that it will permit said yoke to readily yield to any required vertical movement of the middle portion of said springs, and, at the same time, it will restrict

the endwise movement of said springs to a distance which is governed by the curve described by said cross-bar.

G designates the body-pieces or bearers for supporting the body of the vehicle on the springs F; one of said body-pieces being interposed between the upper side of each of said springs and the body of the vehicle.

When preferred the yoke F may be arranged to have its arms 5 lead forward to the spring-bar B, to which the sleeves 6 of said arms will be flexibly jointed in substantially the same manner as hereinbefore described in respect to the jointing of said arms to the rear-axle C; the essential feature being that said arms must be flexibly jointed to some transverse member of the running-gear which remains in a stationary position in respect to the springs E.

By my invention provision is made for obtaining an easy up-and-down movement of the wagon-body without involving any unpleasant jarring motion of the vehicle whereby the comfort of the occupants might be imperiled, and this effect is largely due to the operation of the yoke F, which prevents a disagreeable fore-and-aft motion of the body of the vehicle.

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

1. In vehicle springs, the combination of a pair of side-springs of which one end of each is carried by the rear-axle and the opposite end carried by a spring-bar arranged above the forward-axle; all the ends of said springs being fitted to slide loosely in stirrups, and a yoke consisting of a cross-bar provided with two side arms which are flexibly jointed to the rear-axle; said yoke being journaled by its cross-bar to said springs, as and for the purpose herein specified.

2. In vehicle springs, the combination of a pair of side-springs whose opposite ends are fitted to slide endwise in stirrups attached to stationary parts of the running-gear, and a yoke consisting of a cross-bar provided with two side arms which are flexibly jointed to a stationary part of the running-gear of the vehicle; said cross-bar being journaled to said springs, as and for the purpose herein specified.

JOHN M. HOLLER.

Witnesses:

HENRIETTA HOYLAND,
WM. H. LOW.