(No Model.)

W. L. PIKE & B. H. SYKES.

ROAD CART.

No. 454,006. Patented June 9, 1891.

Fig. 1.

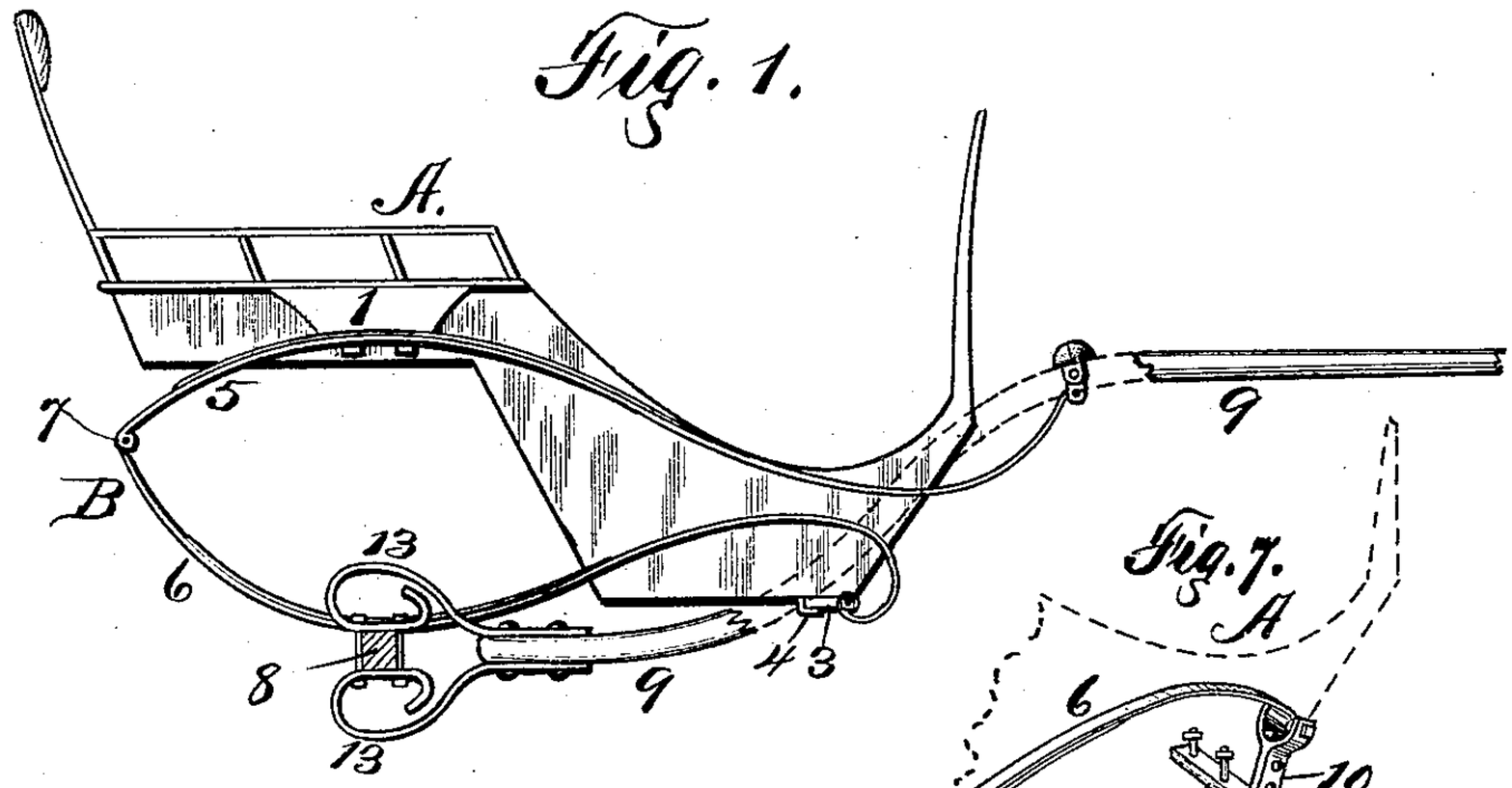

Fig. 7.

Fig. 2.

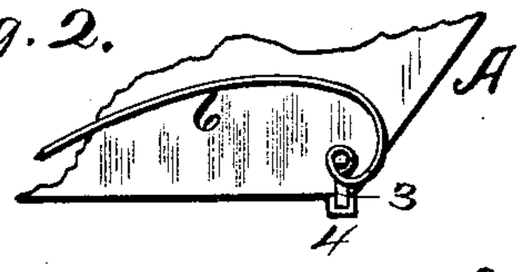

Fig. 3

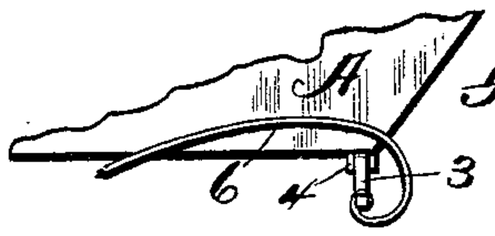

Fig. 4.

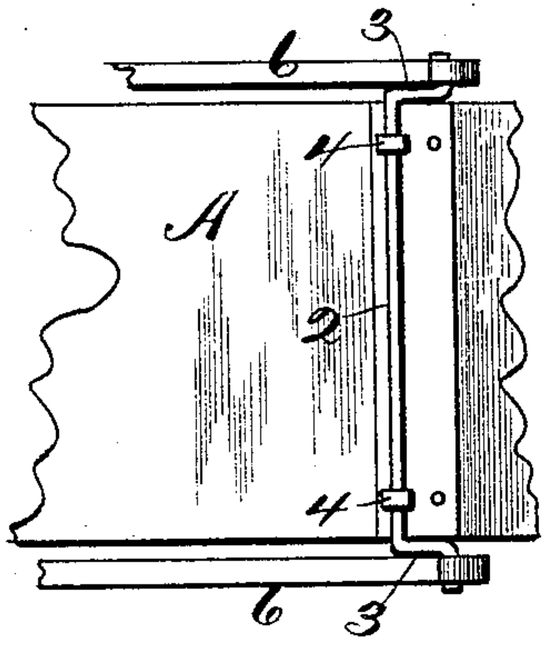

Fig. 5.

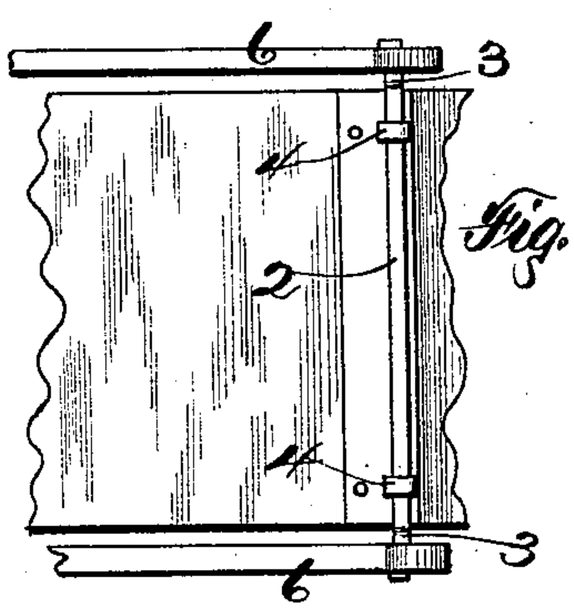

Fig. 6.

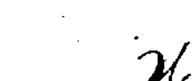

Fig. 8.

Witnesses
H. A. Carhart,
C. B. Kinne.

William L. Pike & Byron H. Sykes Inventors
By their Attorneys
Smith & Denison

UNITED STATES PATENT OFFICE.

WILLIAM L. PIKE AND BYRON H. SYKES, OF GROTON, NEW YORK; SAID SYKES ASSIGNOR TO SAID PIKE.

ROAD-CART.

SPECIFICATION forming part of Letters Patent No. 454,006, dated June 9, 1891.

Application filed February 2, 1891. Serial No. 379,876. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM L. PIKE and BYRON H. SYKES, of Groton, in the county of Tompkins and State of New York, have invented new and useful Improvements in Road-Carts, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to two-wheeled vehicles, and particularly to the body-supporting springs, their connection, and to the means for taking up the horse motion.

Our object is to improve the spring-support of the body and to reduce the horse motion, thereby producing an easy-riding vehicle by the use of a spring having its rear end of substantially elliptic form and having the front portions of the sections converge and then diverge, so that the front end of the upper section is connected to the shaft in front of the body and the front end of the lower section is connected to the lower front corner of the body or adjacent thereto, and also adjustably connected thereto in order to raise or lower the front of the box, and, further, to connect the rear end of the shafts to the axle by coil or semi-coil spring connections secured to the top and bottom of the axle, or to one face only, and this takes up a part at least of the horse motion.

Our invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the body, body-spring, shaft-spring, and one shaft partly broken away, with the lower section of the body-spring connected to a crank-arm which lies normally in a horizontal position. Fig. 2 is a detail of part of the lower section of the body-spring and its connection to a crank-arm which is normally vertical. Fig. 3 is a like view of the same, in which the crank-arm stands downward. Fig. 4 is a bottom plan of the front part of the body, the crank-rod, and of the front ends of the lower sections of the body-spring as shown in Fig. 1. Fig. 5 is a like view of the same as shown in Figs. 2 and 3. Fig. 6 is a plan of the crank-rod. Fig. 7 is a detail of another adjustable connection mounted detachably upon a bar projecting from the side of the body, either straight or in cranked form. Fig. 8 is a detail of the hooked bolt used in connecting the crank-rod to the body.

A is the body provided with a spring-block 1 on each side and with a rectangular bar 2, provided with cranks 3 on each end, secured detachably to the under side of the body by means of the rectangular hooked bolts 4, so that by loosening the bolts the crank-rod can be turned therein, so that the arms will stand horizontally or vertically up or down, and by this we change the height of the front of the body as desired.

B is the body-spring, consisting of two sections 5 and 6, having their rear ends curved and united at 7, the upper section being secured to the spring-block 1 and the lower one to the axle 8. In front of their connections the sections converge, and then the upper section curves upward and is secured to the shaft 9 at substantially the position shown, and the lower section curves downward and is connected to the crank-arm 3, or it may curve less and be connected to the connecting-bar 10, Fig. 7, which is pivotally mounted on a crank-arm, or, as shown, upon a stud on the outer end of the bar 11, said connecting-bar having a series of holes 12 for the adjustment thereof.

The rear ends of the shafts are on each side of the body connected to the axle by the coiled or semi-coiled springs 13 above and below, secured to the axle and to the shaft, or by a single spring thus connected.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with the body, the axle, and shafts, of a spring on each side of the body, consisting of sections united at the rear, having the upper sections secured to the body and at the front end to the shaft, the lower section being secured to the axle and at the front connected to an adjustable bearing upon the front end of the lower part of the body, as set forth.

2. The combination, with the body, the axle, and the shafts, of a spring on each side of the body, consisting of an upper and a lower sec-

tion united at their rear ends, the upper section being secured to the body and thence extending forward and having its front end secured to a shaft, and the lower section secured to the axle and thence extending forward and having its front end adjustably connected to the front of the body, and coiled springs secured to the axle and to the rear ends of the shafts, substantially as set forth.

In witness whereof we have hereunto set our hands this 28th day of January, 1891.

WILLIAM L. PIKE.
BYRON H. SYKES.

In presence of—
B. R. WILLIAMS,
E. A. MARSH,
H. P. DENISON.