(No Model.)

J. W. HENNEY.

RUNNING GEAR FOR VEHICLES.

No. 440,707. Patented Nov. 18, 1890.

Fig. 1.

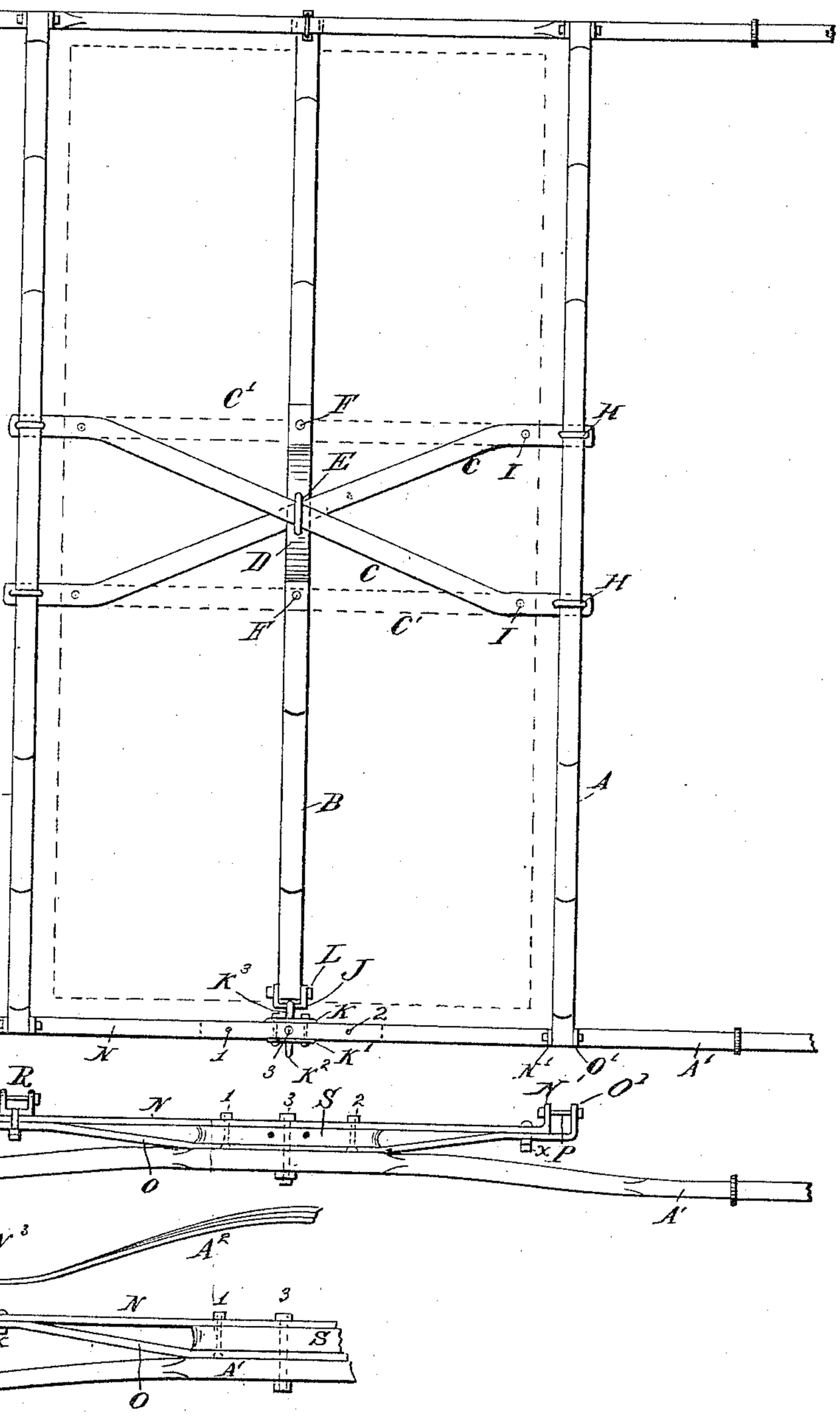

Fig. 4.

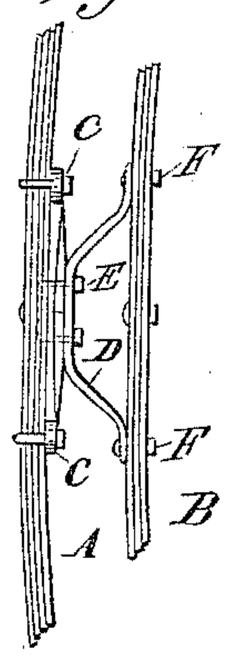

Fig. 2.

Fig. 3.

Witnesses:

J. Hughes.

J. A. McCall.

Inventor.

John W. Henney

UNITED STATES PATENT OFFICE.

JOHN W. HENNEY, OF FREEPORT, ILLINOIS.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 440,707, dated November 18, 1890.

Application filed July 22, 1890. Serial No. 359,713. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HENNEY, of the city of Freeport, State of Illinois, have invented certain new and useful Improvements in Running-Gears for Vehicles, whereof the following is a specification embodying my said invention, reference being had to the accompanying drawings, whereof—

Figure 1 is a plan view of a vehicle running-gear embracing the several features of my invention. Fig. 2 is a front elevation of the axle and bolster seen in Fig. 1. Fig. 3 is also a front elevation of said axle and bolster, representing a modification; and Fig. 4 is a side elevation of the middle portions of the side and center springs and their connections as seen in Fig. 1.

The object of my invention is, first, to maintain the square of the gear without the employment of the usual axle-stays and reach by connecting the middle portions of the side springs by two obliquely-extended plates or bars arranged to cross each other at their centers and having their terminal ends rigidly secured to the side springs; second, the employment of a central spring extended to connect the axles and suspended in a lower plane than the side springs, whereby to prevent the rotation of the axles, said central spring having its central portion rigidly fixed in relation to the obliquely-arranged cross-bars, and, third, a metallic bolster consisting, preferably, of two steel plates and adapted to maintain the spring-support carrying the front end of the body, all as hereinafter more fully described, and as pointed out in the appended claims.

The axles in this instance are of the "coached" form, discarding the usual wood bed overlying the axle. The side and center springs A A and B are of the usual form, having their terminal eyes pivotally secured to the rear axle and front bolster.

For the purpose of staying the side springs and rear axle in their squared or right-angled position to each other without the employment of the usual rigid reach and axle-stays, I connect them by the two bars or plates C C, preferably of steel, which are obliquely extended at such angle as to cross each other at their centers, and having their terminal ends rigidly secured to the side springs A A, preferably by clips H H, all as clearly shown in Fig. 1. The middle portion of the center spring B is provided with a bracket D, having its central portion arched up to meet and rigidly connect with the bars C C at their point of crossing by the clip E or other equivalent means which will securely bind these several parts together. The terminal ends of said bracket are bolted or clipped to the center spring at F F, as is fully shown in Figs. 1 and 4. These bars or plates C C also serve as a base on which to support the body, the side sills of which are bolted thereto through the holes I I. (Seen in Fig. 1.) When desired for greater strength or carrying capacity, the bars or plates C C may be re-enforced by two additional right-angled bars, (represented by the dotted lines C′ C′,) the opposite ends of which take the clips and bolts H and I after the latter pass the plates C C.

I construct the bolster over the front axle (seen in Figs. 1 and 2) from two plates N and O. An interposed block S or other equivalent bearing is placed between their center portions, thus separating them to any required extent. The outer ends of these plates are brought in direct contact with each other and rigidly united by bolts or rivets X and extended to form the upturned ears N′ and O′, and provided with a transverse bolt P, thereby forming a pivotal or shackle bearing for the terminal eyes of the side springs A A; but, if preferred, I may attach to the ends of said bolster-plates a spring-shackle R, and which will answer the same purpose; but I prefer said shackle-ears to be made integral with the ends of said plates, as seen at N′ and O′.

Another modification is seen in Fig. 3, wherein the opposite ends of the top plate N of the bolster is turned up, forming a bracket terminating with an eye, adapted to carry the link N^3, connecting therewith the eye of the spring A^2. It will therefore be understood that the improved bolster shown and described is not limited to its use in connection with the side springs A A, since it is equally applicable for the support of side bars or a cross-spring adapted to support the body.

As before stated, the center spring is suspended from the axle and bolster in a lower

plane than the side springs in the usual way, and for the purpose of preventing the rolling tendency of the axles by the vibration of the springs seen in Fig. 1.

I claim—

1. The combination, in a running-gear for vehicles, of side springs arranged parallel to each other and extended to connect with the rear axle and front bolster, their middle portions being united by two separately-constructed plates or bars overlying each other at their centers and having their terminal ends rigidly secured to said springs, and a central spring extended to connect the axles in a lower plane than the side springs and having its center portion rigidly fixed in relation to said crossed plates or bars at their point of contact by means of an interposed bracket, substantially as and for the purpose set forth.

2. The combination, in a bolster of the character described, of the two plates N and O, an interposed head-block or bearing S separating their middle portions, the ends of said plates being riveted or otherwise rigidly connected to each other and extended beyond their point of contact to form the upturned ears N′ and O′, provided with a transverse bolt P, thereby providing a pivotal or shackle bearing for the terminal ends of the side springs A A, substantially as set forth.

JOHN W. HENNEY.

Witnesses:
C. W. SALADEE,
J. L. HUGHES.