

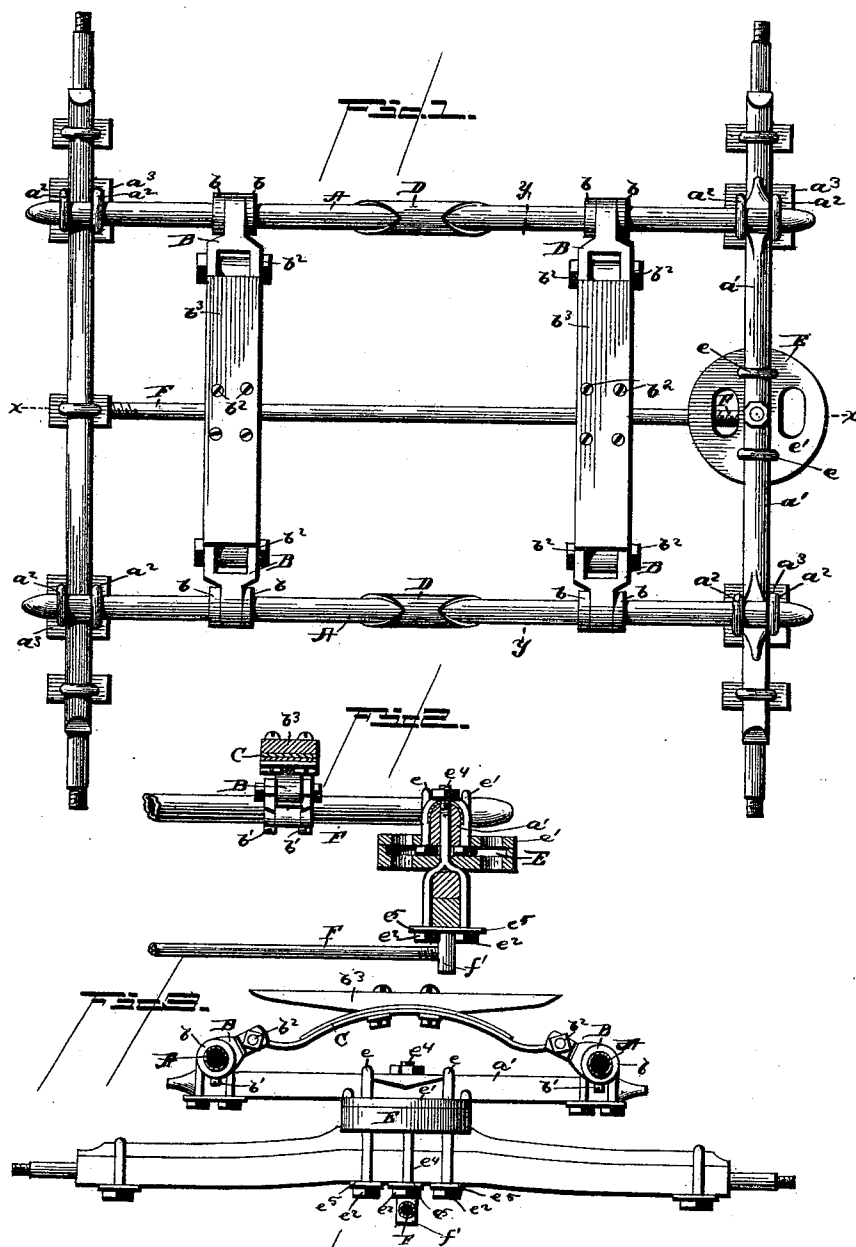
(No Model.)

S. S. SCHOFF.

RUNNING GEAR FOR VEHICLES.

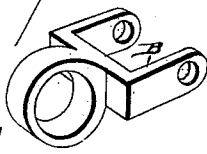
No. 394,544.

Patented Dec. 11, 1888.



WITNESSES

*M. H. Humphrey*  
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INVENTOR  
*Samuel S. Schoff*  
*By [Signature]*  
Attorneys

# UNITED STATES PATENT OFFICE.

SAMUEL STOVER SCHOFF, OF HAGERSTOWN, MARYLAND, ASSIGNOR OF ONE-HALF TO AUGUST SCHULTZ, OF SAME PLACE.

## RUNNING-GEAR FOR VEHICLES.

**SPECIFICATION** forming part of Letters Patent No. 394,544, dated December 11, 1888.

Application filed May 18, 1888. Serial No. 274,286. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL STOVER SCHOFF, a citizen of the United States of America, residing at Hagerstown, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Running-Gears, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in running-gears; and it comprises the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved running-gear. Fig. 2 is a central longitudinal sectional view thereof on the line *x x*. Fig. 3 is a central transverse section on the line *y y*, and Fig. 4 is an enlarged detail perspective view of one of the clips and its connections.

The chief object of the invention is to dispense with the wooden side bars heretofore employed in running-gears, and to use in lieu thereof hollow metallic bars or rods, thus greatly strengthening the vehicle and making the same more durable and lasting.

Referring to the drawings, A A designate two parallel hollow side bars or rods connected at their rear ends to the axle *a* and at their front ends to the transverse head-bar *a'*, the connection between said bars or rods and axle and head-bar being effected by clips *a<sup>2</sup> a<sup>2</sup>*, passed over the ends of said side bars or rods and through apertures of lower horizontal plates, *a<sup>3</sup>*, as shown. The ends of these clips have nuts fitted thereon for tightening the same in position.

B B are two oppositely-disposed clips or shackles fitted two on each hollow side bar or rod, as shown, the outwardly-projecting portions of said clips being apertured for projection therethrough of said bars or rods. These clips are secured or held in place by means of two rings or collars, *b b*, located on either side thereof and provided with set-screws *b'*, bearing against said bars or rods. By means of these rings or collars the clips are prevented from having a lateral movement, and thus avoid injury to said side bars or rods. The inner U-shaped portions of the oppositely-dis-

posed clips are secured to the outer ends of springs C C, the same being held by nutted bolts *b<sup>2</sup>*, passed through looped ends of said springs. A flat bolster-board, *b<sup>3</sup>*, is secured to each spring C, as shown, and to these bolster-boards the vehicle-body (not shown) is attached. By means of these clips or shackles the springs have a free swing when weighted down, and all elongation of the springs is taken up by said clips, thereby removing the strain from the hollow side bars or rods, and said clips are so held by the rings or collars as to prevent any lateral deflection of the springs or the striking of the clips against the side bars, thus obviating the wear and friction usually experienced by pendent clips and the strain on the springs caused by the rebound thereof when the vehicle-body moves up or down.

D D are curved plates or collars fitted upon the side bars, A, and are each provided with a set-screw, *d*, for holding the same at the desired point. These plates are designed to protect the side bars from injury caused by contact therewith of the front wheels in turning the vehicle.

The head-bar *a'* has secured, by means of clips *e e*, to about its center the upper stationary section, *e'*, of a fifth-wheel, E, the lower section thereof being secured by nutted bolts *e<sup>2</sup>* to the front axle, *e<sup>3</sup>*, and is pivotally held in place by a king-bolt, *e<sup>4</sup>*, passed through central coincident apertures. The lower ends of each two oppositely-disposed bolts *e<sup>2</sup> e<sup>2</sup>* are passed through connecting-plates *e<sup>5</sup>*, against which bear the securing-nuts on said bolts.

F is a hollow reach or rod provided with right and left hand screw-threads at its opposite ends. The rear end of said reach or rod is screwed into an L-shaped rod, *f*, attached to the connecting-plate of a central clip on the rear axle, and the front end of said reach is screwed into the rearwardly-projecting portion of a T-joint, *f'*, attached to the connecting-plate of the front central bolts, *e<sup>2</sup>*.

From the foregoing description it will be seen that I have produced an improved running-gear embodying advantages in point of simplicity, durability, general efficiency, and inexpensiveness.

I claim as my invention—

1. As an improvement in running-gears for

vehicles, the combination of the hollow side bars, the front and rear axles, to which said side bars are secured, the clips or shackles having apertured portions on said side bars or rods, and the rings or collars secured on said bars or rods on either side of said clips and having bolster-boards attached thereto, substantially as shown and described.

2. As an improvement in running-gears for vehicles, having the hollow side bars or rods, the clips or shackles having apertured por-

tions on said side bars or rods, the rings or collars having set-screws and secured on said side bars or rods on either side of said clips, and the springs, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL STOVER SCHOFF.

Witnesses:

GEO. WATSON,  
JOHN H. GATREL.