

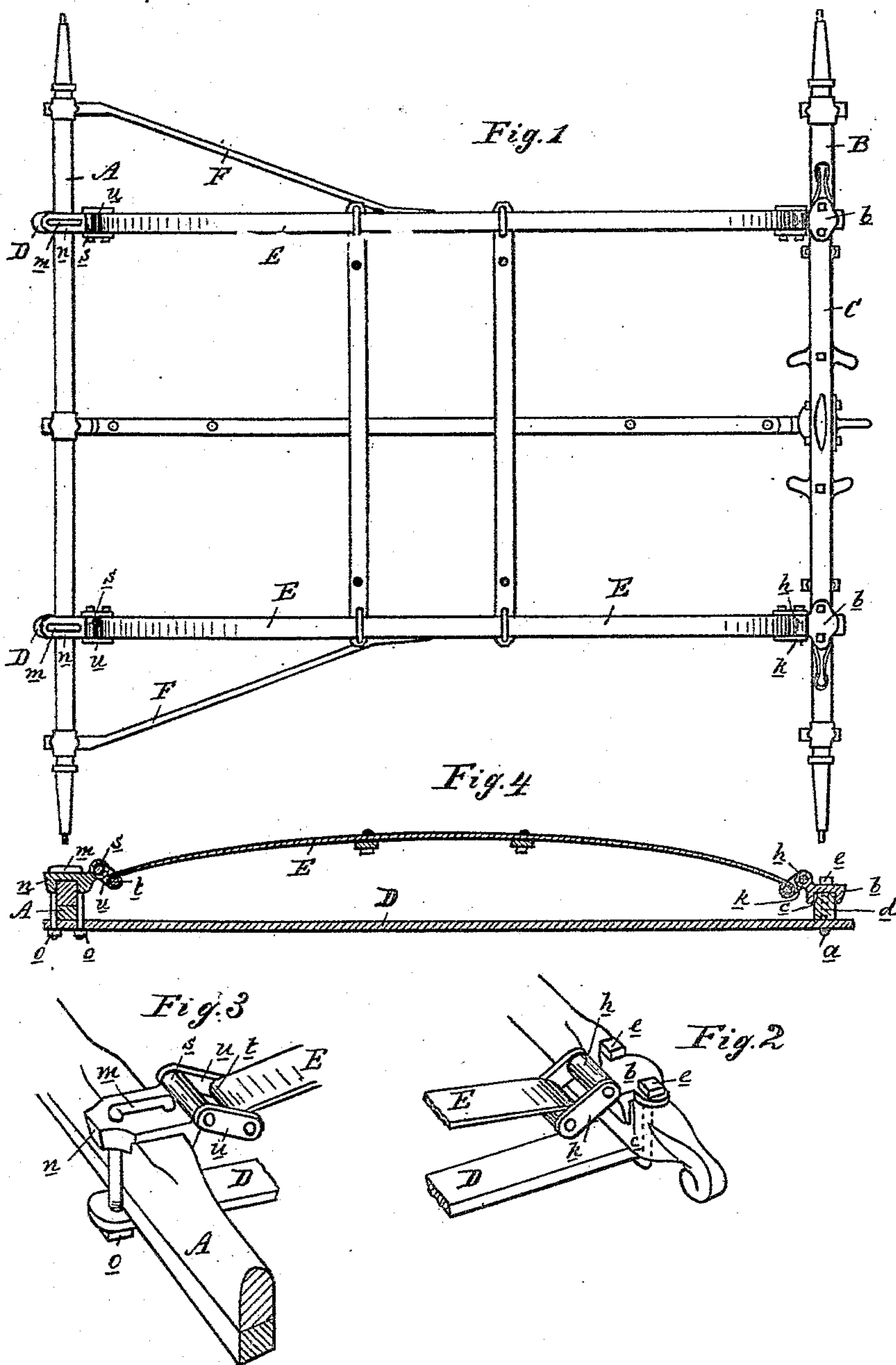
(No Model.)

W. A. PATERSON.

SIDE SPRING VEHICLE.

No. 356,954.

Patented Feb. 1, 1887.



Attest:

John Schuman.

[Signature]

Inventor:

William A. Paterson.

by his Atty

[Signature]

UNITED STATES PATENT OFFICE.

WILLIAM A. PATERSON, OF FLINT, MICHIGAN.

SIDE-SPRING VEHICLE.

SPECIFICATION forming part of Letters Patent No. 356,954, dated February 1, 1887.

Application filed November 11, 1886. Serial No. 218,572. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. PATERSON, of Flint, in the county of Genesee and State of Michigan, have invented new and useful Improvements in Side-Spring Side-Bar Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in what are usually known as "side-spring side-bar wagons."

In vehicles of this class it is usual to connect the head-block and rear axle together by means of wooden side bars secured to the top of such axle and head-block outside the vertical plane of the springs, the ends of which are attached also to the top of such axle and head-block inside the vertical plane of the side bars, such arrangement being necessary to allow of the vertical action of the springs without being impeded in such movement by impingement against the side bars.

My improvement consists, first, in substituting flat steel bars for the wooden side bars, and securing them to the under side of the rear axle and head-block in the same vertical plane with the side springs, and in the means for so securing them in place that the free movement of the springs will not throw them into contact with the side bars, as more fully hereinafter described.

Figure 1 is a plan view of my improvement. Fig. 2 are details showing the construction of the clip and jack or hanger for securing the front ends of the steel side bar and spring to the head-block. Fig. 3 is a detail showing the construction of the clip and jack for securing the steel side bars and springs to the rear axle. Fig. 4 is a vertical central longitudinal section through one of the springs, side bars, and their attachments.

In the accompanying drawings, which form a part of this specification, A is the rear axle, B the front axle, and C the head-block, all of the known and usual construction.

D represents a side bar, preferably made of tempered steel, and secured at one end to the under side of the rear axle, A, and at the other end to the under side of the head-block C, each end being thus secured by the means

hereinafter described, and which are also employed to secure the steel springs E at one end to the upper side of such rear axle, and at the other to the upper side of the said head-block immediately above and in the same vertical plane with the steel side bars.

F is a brace, clipped at one end to the under side of the rear axle, A, near the shoulder, and secured at its other end to the side bar, D, to prevent lateral swaying.

In order to enable me to secure the parts together, and at the same time to not interrupt the free vertical and straightening action of the springs when the vehicle is in use, and to enable me to make the work stronger, durable, and cheap, I employ fastenings constructed as follows: A clip, *a*, embraces the front end of the steel side bar, D, the ends of such clip passing up through the head-block C, and are threaded. *b* is a plate having a recess, *c*, in its under face to embrace the head-block C, and holes *d* to engage it with the arms of the clip, where it is secured by the nuts *e*. This plate *b* has a loop, *h*, formed upon it, through which a link, *k*, passes, which also connects with the front end of the spring E, thereby suspending the front end of the spring to and in rear of the upper side of the head-block and immediately over the side bar. The rear ends of the side bar and spring are secured to the rear axle, A, by a clip, *m*, passing through a plate, *n*, embracing the said axle, and through the side bar, D, where it is secured by nuts *o*. The plate *n* has a loop, *s*, formed thereon, through which and a similar loop, *t*, in the end of the spring E engages the link *u*, so that the spring and side bar are secured to the rear axle by this device.

What I claim as my invention is—

1. In a side-spring side-bar vehicle, the combination of a side bar, secured at one end to the under side of the rear axle and at the other end to the under side of the head-block, with a spring located on the same vertical plane with said side bar and secured at one end to the upper side of the head-block, independent of said bar, and by the same clip that secures the side bar to the head-block, substantially as specified.

2. In a side-spring side-bar vehicle, the combination, with the head-block, side bar,

and side spring, of a clip embracing said head-
block and side bar and formed with a recess
to receive the former, and a loop, *h*, and the
links pivotally connecting said loops and side
5 springs, substantially as described.

3. The combination, with the side bar and
head-block, of the clip *a*, having threaded
ends, plate *b*, having holes *d*, to receive the

ends of said clip, and a recess, *c*, in its under
face to embrace the head-block, said plate be- 10
ing also formed with a loop, *h*, substantially
as and for the purpose specified.

WILLIAM A. PATERSON.

Witnesses:

H. S. SPRAGUE,

E. SCULLY.