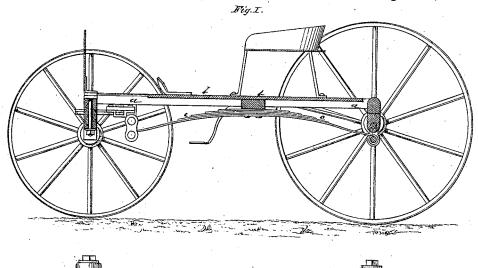
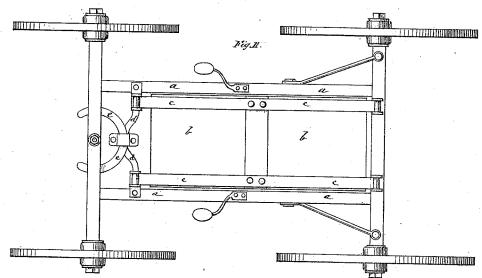
M. MILLER.

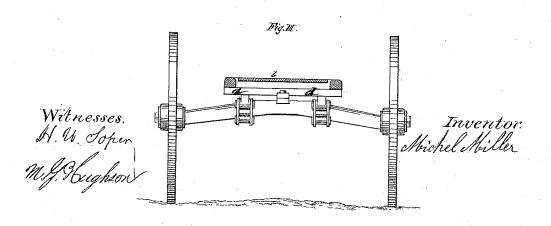
Wagon Spring.

No. 107,076.

Patented Sept. 6, 1870.







United States Patent Office.

MICHEL MILLER, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF AND WILLIAM HEWSON, OF SAME PLACE.

Letters Patent No. 107,076, dated September 6, 1870.

IMPROVEMENT IN BUCK-BOARD WAGONS.

The Schedule referred to in these Letters Patent and making part of the same.

I, MICHEL MILLER, of the city of Buffalo, in the county of Erie and State of New York, have invented an Improved Spring Buck-board Wagon, of which the following is a specification.

The object of my invention is to provide a wagon easy of access and egress, make it ride easy and turn

with facility, and be more durable.

In ordinary wagons with a buck-board, as it is usually termed, the board is placed upon the top of each of the axles and fastened, and riding upon it is very unpleasant, the motion of the wheels passing over obstacles, or even small irregularities in the surface, causing a very unpleasant sensation in the feet and limbs.

If springs are placed upon the top of the axles, and the buck-board above that, it is made too high and dif-

ficult to get in and out.

My invention has overcome most of these difficul-

ties, and has many advantages.

In the drawing, like letters answer for corresponding letters in different figures, and represent the same parts.

Figure I is an elevation of my wagon.

Figure II is a plan of the same from the under side.

Figure III is a cross-section of a portion of the front part.

a a a a a a are two reaches, connecting the two wheels, and

 $b\ b$ is the buck-board, placed between the two reaches, upon two springs $c\ c$, $c\ c$, which are attached to a cross-bar at the forward end, resting upon and fastened to the reaches, and connected with a fifth-wheel, so that the wagon may be readily turned.

By this arrangement of the springs and buck-board the buck-board is not raised higher than the axle, is convenient to get upon and off, and the wagon is readily turned.

The springs at the rear end are attached to two hangers fastened to the under side of the axle.

The buck-board may be placed on springs, so as to bring it higher than the axle, if desired; but I prefer to have it about on the same level, and the turning of the wagon is more readily effected by my arrangement than it is when the buck-board is fastened upon the axle at the forward end by a bolt, and is much safer and more comfortable.

The cross-bar d d is fastened at each end to and rests upon the two reaches, and the forward end of the springs are fastened thereto; and said cross-bar is arranged to operate with the fifth-wheel, and not to in-

terfere with its operation.

Having thus described my invention,

I claim—

1. The combination of buck-board b, cross-bar d, and reaches a, with two or more springs, arranged substantially as and for the purpose specified.

2. The combination and arrangement of buckboard b, reaches a, springs c, cross-bar d, and fifthwheel e, constructed and operating in the manner substantially as and for the purpose specified.

MICHEL MILLER.

Witnesses:

H. U. SOPER, M. G. HUGHSON.