

(No Model.)

C. J. MILLER.  
BUGGY SPRING.

No. 307,566.

Patented Nov. 4, 1884.

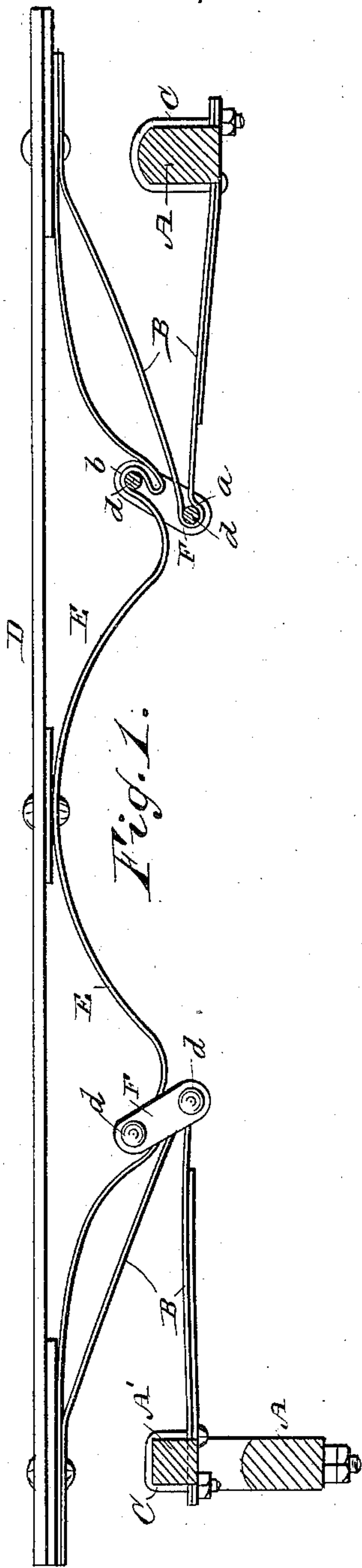
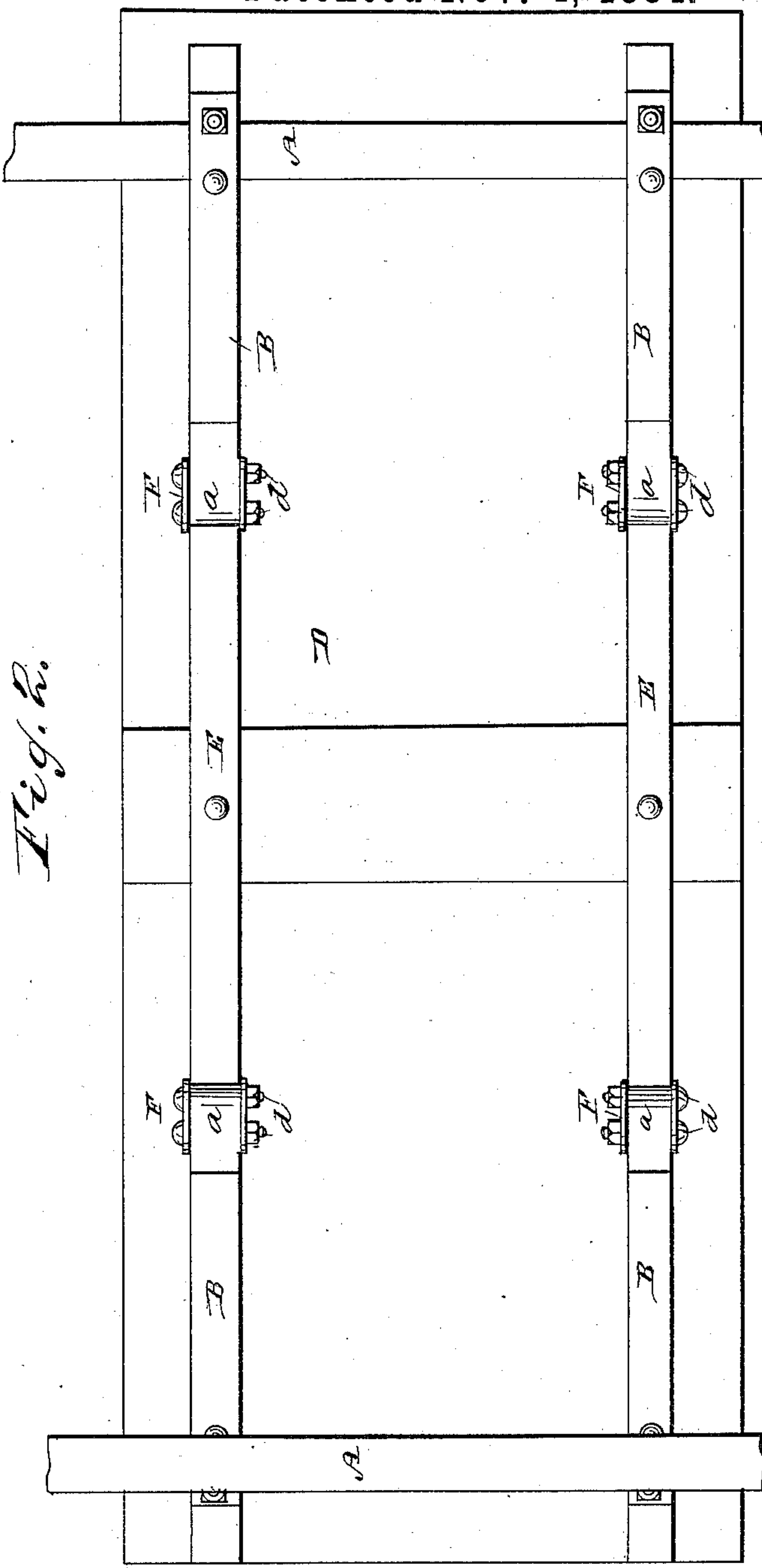


Fig. 1.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CARLOS J. MILLER, OF MOUNT KISCO, NEW YORK.

## BUGGY-SPRING.

SPECIFICATION forming part of Letters Patent No. 307,566, dated November 4, 1884.

Application filed August 30, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CARLOS J. MILLER, of Mount Kisco, in the county of Westchester and State of New York, have invented a new and Improved Buggy-Spring, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved buggy-spring especially adapted for buckboard buggies, which springs cause the vehicle to ride easily and prevent rumbling noises, and also prevent the buckboard from sagging at the middle.

The invention consists in the construction and arrangement of the springs, as will be hereinafter fully described, and specifically set forth in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal elevation of my improved buggy-spring. Fig. 2 is a plan view of the under side of a buckboard provided with the same.

At each end of each side axle, A, or fifth-wheel, A', a V-shaped spring, B, is held to the said axle or fifth-wheel by a clip, C, or by a shackle, or in any other suitable manner. The spring B is fastened to the axle at one end of the spring, and projects inward and forms a loop or pocket, *a*, and then extends upward and outward, and has the end of its other shank, which is about above the axle, secured to the buckboard D. If desired, the apex of the spring B can be united with the buckboard by a suitable shackle. The bottom shank of the spring is preferably made of two plates or strips of steel, to insure greater strength.

At each side of the buckboard D a side spring, E, is fastened to the under side parallel with the side edges. The ends of the springs E are secured to the bottom of the buckboard, together with one end of the springs B. From their ends the springs E are curved or inclined downward, and form a pocket, *b*, and are then curved upward toward the middle of the buckboard to form a bow-spring, the middle of which is secured to

the buckboard. The cross-pins *d* of shackles F pass through the pockets *a b*, thereby transmitting the weight on the springs E onto the springs B. The connecting side springs, E, support the buckboard at the ends, and also at the middle, and prevent sagging of the buckboard at the middle and make it more elastic and easy riding. The springs B E prevent rumbling noises, and also prevent the jarring of the feet. The above-described springs can also be used with side-bar buggies.

I do not abandon or dedicate to the public any patentable feature set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any patent that may be granted upon this application or in other applications for Letters Patent that I may make.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a vehicle-frame, of V-shaped springs attached at their outer free ends to the axle and frame, respectively, and connected at their inner bent portions to the side springs of the frame between the middle and outer ends of said side springs, substantially as set forth.

2. The combination, with a vehicle-frame, of the V-shaped springs attached at their outer free ends to the axle and frame respectively, and pivotally connected at their inner bent portions to the side springs on the under side of the vehicle-frame between the middle and outer ends of said springs, substantially as set forth.

3. The combination, with the vehicle-frame D, of the V-shaped springs B, attached at their outer free ends to the said frame and axle, respectively, and connected at their inner bent ends to the side springs, E, secured to the ends and middle of the under side of the vehicle-frame by means of the shackle F, whose cross-pieces rest in bearings *b a*, formed in the springs E B by bending the same, substantially as set forth.

CARLOS J. MILLER.

Witnesses:

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C. SEDGWICK.