A. K. STONE.

Carriage-Spring.

No. 63,669. Patented Apr 9. 1867.

Fig. 1.

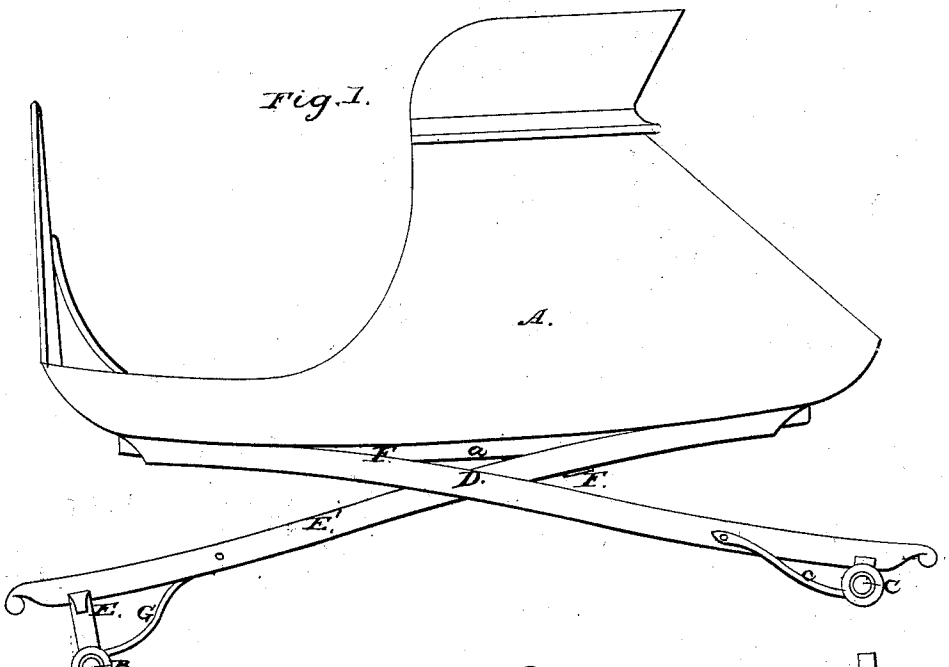
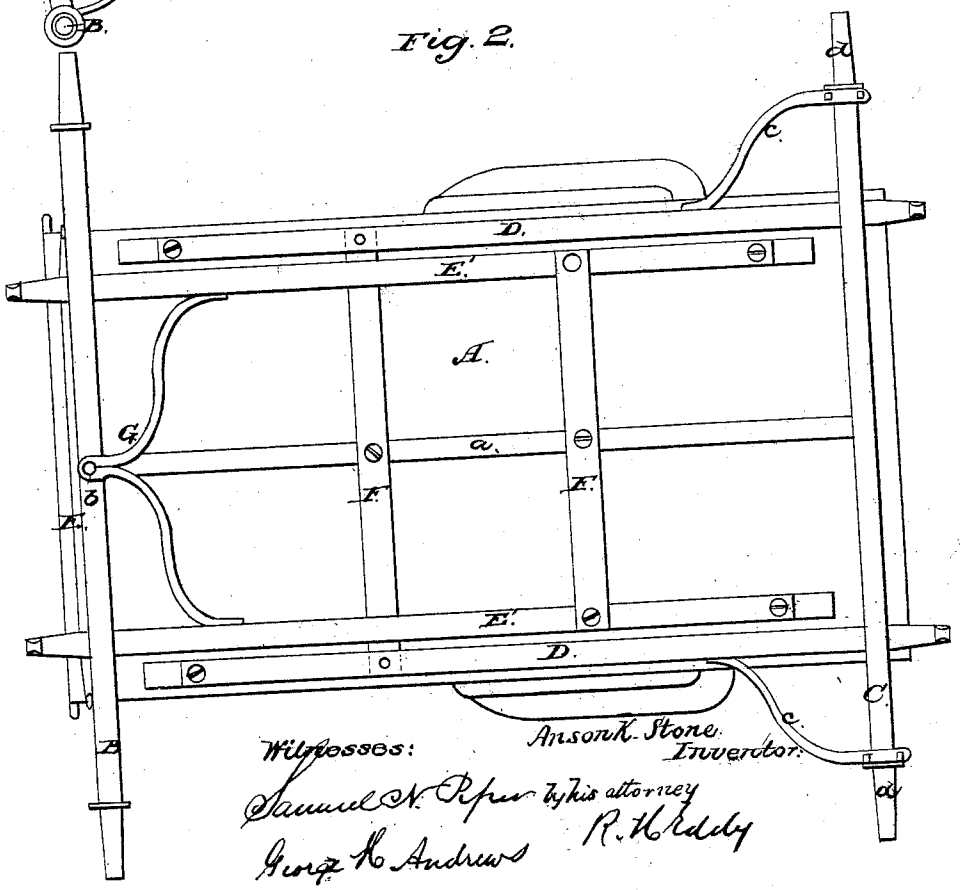



Fig. 2.




Witnesses:
Samuel N. Rowe
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by his attorney
R. H. Eddy

# UNITED STATES PATENT OFFICE.

ANSON K. STONE, OF ORONOCO, MINNESOTA.

## IMPROVEMENT IN WHEEL-CARRIAGES.

Specification forming part of Letters Patent No. **63,669**, dated April 9, 1867.

*To all persons to whom these presents shall come:*

Be it known that I, ANSON K. STONE, of Oronoco, in the county of Olmstead and State of Minnesota, have invented a new and useful Improvement in Wheel-Carriages; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a side elevation, and Fig. 2 an under-side view, of a carriage-body with my invention applied to it, such invention or improvement having reference to the application of the axles to the body of the carriage by means of springs.

In such drawings, A denotes the body of a common pleasure-wagon; B, the front axle, and C the rear axle, thereof. The rear axle, C, I connect with the body A by means of two wooden springs, D D, extending from the axle at right angles. These springs are bolted to the axle near one end of each of them. At or near their other ends the springs are bolted to the carriage-body. The sweep-bar E of the front axle is also connected to the body A by two other springs, E′ E′, the connection of such springs with the said bar and body being like that of the first two springs with the rear axle and the body. The two springs D D cross the two springs E′ E′, and are arranged in other respects with regard to them in manner as represented in the drawings. Furthermore, each pair of springs is connected to one of two auxiliary springs, F F, which, at their middles, are fastened to the carriage-body, or to a bar or brace, *a*, extending along and projecting from the bottom of such body. Each spring F, at its ends, is fastened to two of the main springs, and is arranged with respect to them in manner as shown in Fig. 2.

The king-bolt *b* of the front axle goes through the said axle, the sweep-bar, and a brace, G, extending from the said bolt in two directions, and being fastened to the two main springs D D.

The rear axle is further supported by screws *c c*, which go from it near its journals *d d* to and are fastened to the two springs E′ E′, the same being as exhibited in Figs. 1 and 2.

The auxiliary springs not only answer their purpose as springs to aid in supporting the axles, but serve as braces for the main springs, which are arranged and applied to the axles and the carriage-body in manner as specified, not only answer the purpose of springs, but as a perch, thus rendering unnecessary a perch as usually applied to the rear axle and sweep-bar of a carriage.

1. I claim the above-described arrangement of the four main springs D D E′ E′ with each other, the carriage-body, the rear axle, and the sweep-bar of the front axle.

2. I also claim the combination, as well as the arrangement, of the auxiliary or transverse brace-springs F F with the main springs D D and E′ E′, arranged and applied to the carriage-body, the rear axle, and the sweep-bar of the front axle substantially as specified.

ANSON K. STONE.

Witnesses:
C. M. START,
C. H. FOOT.