G. K. SMITH.

Carriage-Spring.

No. 200,580. Patented Feb. 19, 1878.

Fig. 1.

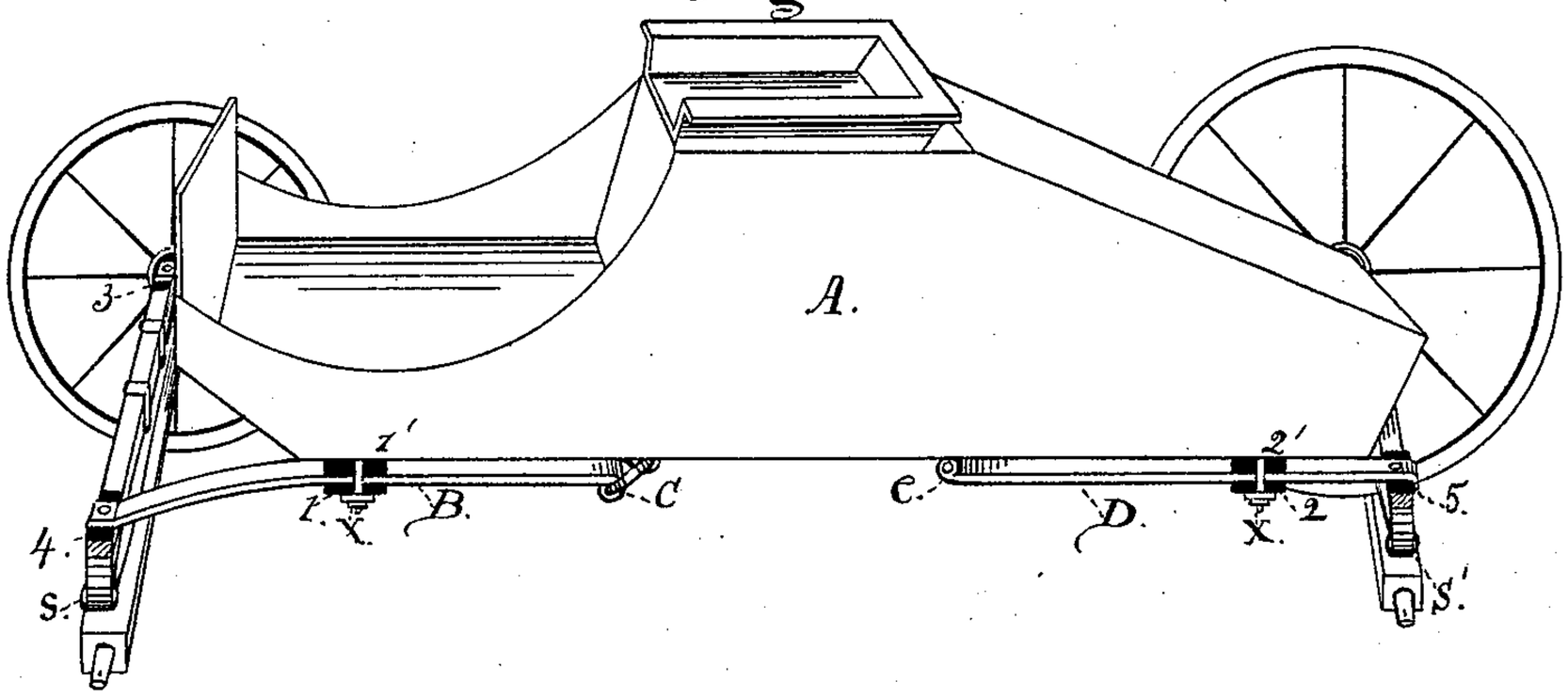
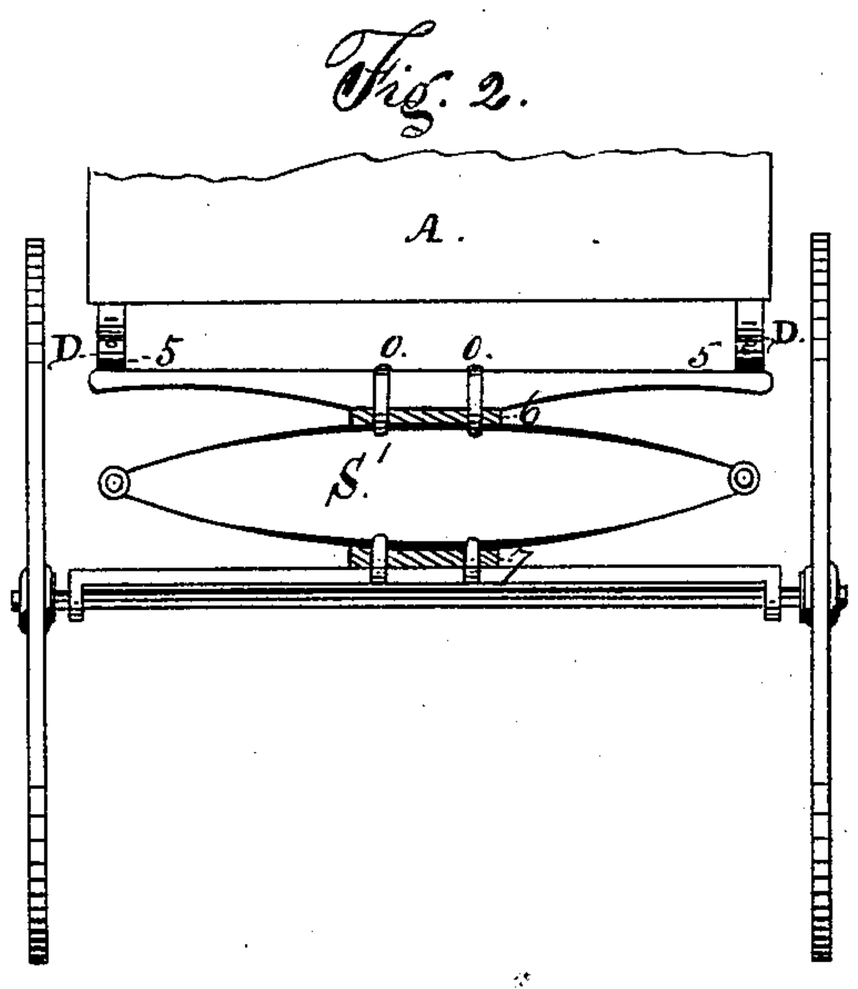


Fig. 2.



Witnesses

{ Chas. H. Boyd
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Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE K. SMITH, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CARRIAGE-SPRINGS.

Specification forming part of Letters Patent No. **200,580**, dated February 19, 1878; application filed September 8, 1877.

To all whom it may concern:

Be it known that I, GEORGE K. SMITH, of Brooklyn city, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Construction of Carriages or Wagons; and I do hereby declare that the following is a full, clear, and exact description of my invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Referring to the drawings, Figure 1 is a perspective view of an ordinary carriage, having the wheels removed on the front side in order to more clearly show the improvement set forth and claimed hereinafter, which consists in the manner of hanging the body A upon the flexible or rigid bars B D, each supported and held in position between two india-rubber pads, 1 1′ 2 2′, at or near the center thereof, while the outer ends of the springs or bars B D rest upon similar india-rubber pads 4 5, the same being secured to the cross-bars supporting the carriage by bolts or other suitable means. The inner ends of the springs B and D under the bottom of the body A are secured to the same by means of a loop, *c*, or hinge *e*, which allows the front spring B to slightly yield to any longitudinal jar in conjunction with the pads 1, 2, 4, and 5, which counteracts the vertical concussion caused by the wheels while passing over rough pavements or other undulations of the road-bed.

Fig. 2 represents the back part of the running-gear of the carriage, showing the cross-bar provided with flexible pads 5 5 at each end thereof, which support the back ends of the side springs D.

The cross-bar rests upon the india-rubber or other flexible pad 6, both being secured to the spring S′ by means of loops O O, or by other suitable fastening. The front and back springs S′ of the carriage may rest upon an india-rubber or other flexible pad, 7, if thought best, by which means I relieve the occupant of the vehicle, and the vehicle itself, from the serious results caused by riding over rough roads.

I disclaim the use of india-rubber between the lifts of springs of any kind. I also disclaim rigid levers hinged at the center of the body of the carriage, combined with adjustable rigid bars running transversely across the bottom of the body to support rubber or its equivalent pads. But the novelty of my invention consists in hanging the modern carriage-body now in common use upon double flexible bearings, consisting of spring-bars B and D, passing between two rubber pads, (shown at 1 1′ and 2 2′,) the same being secured directly to the bottom of the body A by means of bolts and straps X X, or their equivalent, while the outer ends of the bars B and D are bolted to the ends of cross-bars (secured to the top of the elliptic springs S S′) provided with pads 5 and 6.

I claim as novel and useful, and wish to protect by Letters Patent of the United States—

The carriage-body A, provided with spring-bars B and D, each bar being connected to the body by loops C, and arranged between two flexible pads, 1 1′ and 2 2′, secured to the bottom of the body by straps X X, independently of each other, in combination with the cross-bar provided with flexible pads 5 5 and springs S′, the several parts being arranged and combined, in relation to each other, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own invention I affix my signature hereto in presence of two witnesses.

GEO. K. SMITH.

Witnesses:

JOHN RITCHIE MCLEAN,

JAMES P. MCLEAN.