B. HERSHEY.

Wagon-Spring.

No. 69,094. Patented Sept. 24, 1867.

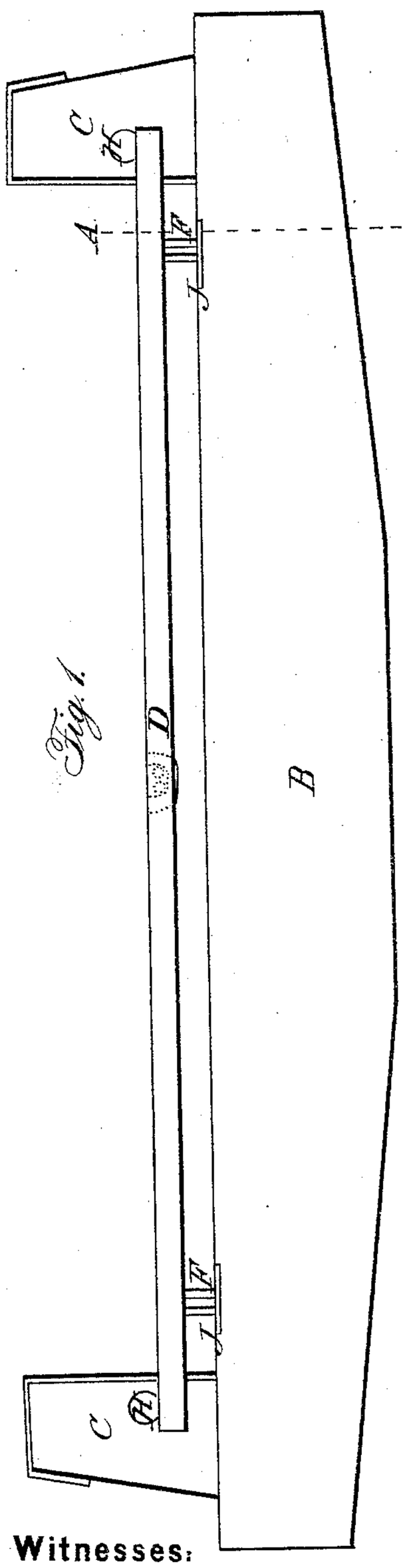


Fig. 1.

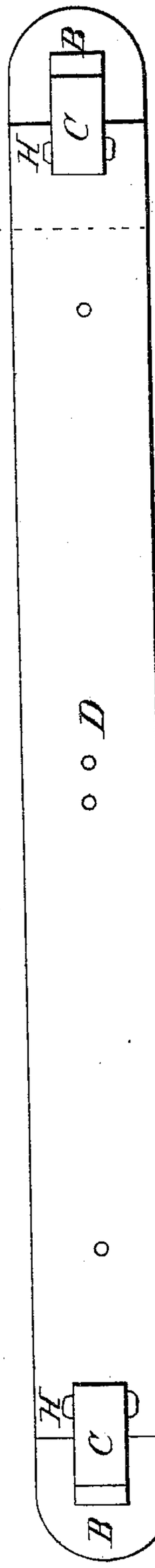


Fig. 2.

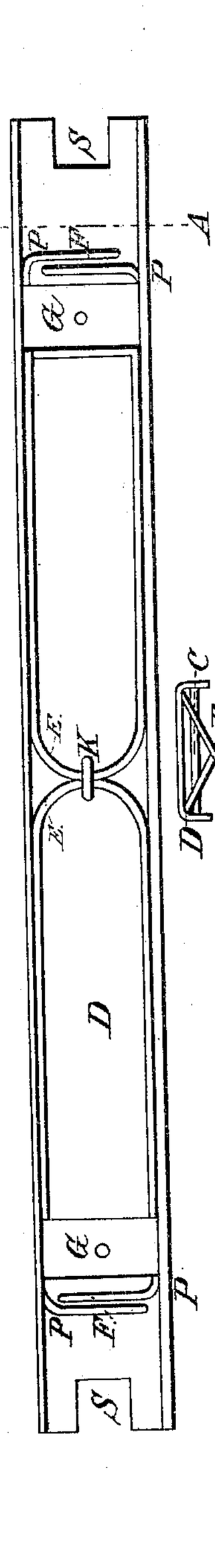


Fig. 3.

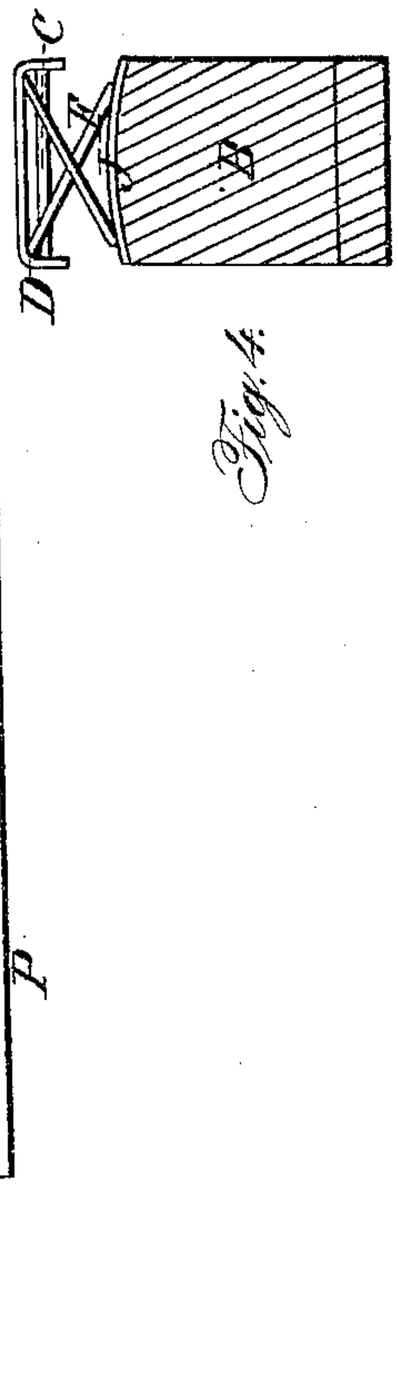


Fig. 4.

Witnesses:

John H. Dale

H. Brotten

Inventor:

B. Hershey

# UNITED STATES PATENT OFFICE.

B. HERSHEY, OF ERIE, PENNSYLVANIA.

## IMPROVEMENT IN WAGON-SPRINGS.

Specification forming part of Letters Patent No. **69,094,** dated September 24, 1867.

*To all whom it may concern:*

Be it known that I, BENJ. HERSHEY, of the city of Erie, county of Erie, and State of Pennsylvania, have invented an Improvement in Wagon-Springs; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal elevation of the bolster with the spring attached; Fig. 2, a perpendicular view, showing the upper side of spring-plate; Fig. 3, an inverted view of spring-plate, showing the lower side of the plate with the springs and their attachments or fastenings, and Fig. 4 being a cross-section of Figs. 1, 2, and 3 at the line A A.

B represents the bolster; C, the stakes; D, the spring-plate; E, curvature of spring; F, lever or arm of spring; G, clasp; H, pin or stop; J, rubber or friction plate.

B and C C represent the ordinary wagon-bolster and stakes. D is a plate of double angle-iron, slotted, as at *s s*, Fig. 3, for receiving the stakes C C, and having the flanges of sufficient depth to hide the body of the spring and afford sufficient strength for holding the load. The spring itself is formed by bending a bar of steel, as at E, leaving the curve of sufficient width to fill up or lie between the flanges on D, and of such length as the width of the wagon may require, then bending a short lever at each end at right angles, one within the other, as at *h h*, Fig. 3, and dropping or depressing the points of the levers so as to form the crucial appearance, as shown at F, Fig. 4, the points of such levers to rest on upper side of rubber plate J.

G G are clasps riveted to D, and by their ends holding the outer ends of the springs in their places. K is a staple holding curved ends of the springs to plate D.

H H are stops or pins passing through the stakes for keeping the spring in place when load or box is removed.

It will be noticed that the plate J is convex on its upper surface. The object of this is to allow the strength of the spring and amount of vibrations to adapt themselves to the load to be carried. When the load is light the lever will, with its end, rest on J. As the load increases the lever will become depressed, and the point of contact will recede toward *h*, thus shortening the lever, and rendering the spring less liable to break than if the same load were resting on the extreme end of the lever. The same end may be attained by using a flat plate and curving the levers. The vibration is obtained by the torsion of the spring between the points *h* and E.

What I claim as my invention, and desire to secure by Letters Patent, is—

The use of the torsion-spring with its attachments above described as applied to freight wagons or carriages of whatever kind to which they may be properly attached.

B. HERSHEY.

Witnesses:

GEO. W. GUNNISON,

EDWD. J. COWELL.