

(No Model.)

G. T. CHAPMAN.
VEHICLE SPRING.

No. 512,502.

Patented Jan. 9, 1894.

Fig. 1.

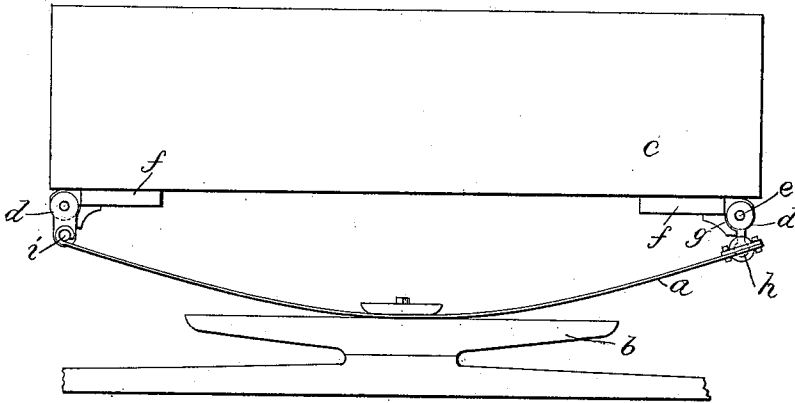


Fig. 2.

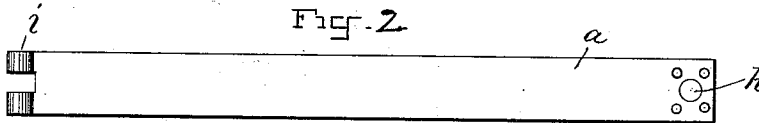


Fig. 3.

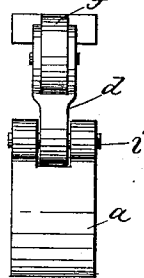
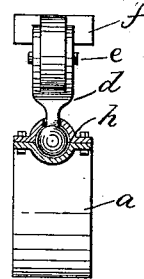


Fig. 4.



WITNESSES=

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UNITED STATES PATENT OFFICE.

GEORGE T. CHAPMAN, OF NEW YORK, N. Y., ASSIGNOR TO WILLIAM HARVEY MERRITT, OF SAME PLACE.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 512,502, dated January 9, 1894.

Application filed April 12, 1893. Serial No. 470,132. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. CHAPMAN, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is a specification.

My invention relates more particularly to semi-elliptic cross springs having their support at the middle, and supporting the bodies on their ends, but it is also applicable to side and other springs of like character, and it consists of improved means of mounting the bodies on the springs to allow free lengthwise extension of the springs under the increases and shocks of the load, and to check the reverse actions so as to maintain the normal central position of the body, and prevent undue up thrusts of the body all as hereinafter fully described reference being made to the accompanying drawings in which—

Figure 1, is a front elevation of a wagon body mounted on the spring in accordance with my invention. Fig. 2, is a plan view of the spring. Fig. 3, is an end elevation of the spring and devices employed for mounting the box thereon at one side, on a larger scale. Fig. 4, is an end elevation of the spring and slightly modified devices employed for mounting the box thereon at the other side, also on a larger scale.

The spring *a*, is mounted on the bolster *b*, in the usual way, but to mount the body *c* on the spring I provide short standards *d*, with the upper ends jointed at *e* to the end of an attaching cleat *f*, fastened to the body so that they may swing outward from the integral line freely to prevent free elongation of the springs, but having stops *g*, to prevent swinging inward beyond said line, said standards being seated on the springs and connected in any approved way that will prevent such swinging action, as by the ball and socket joint *h*, or the pivot connections *i*, or any approved equivalent device.

Thus I provide in a simple and substantial construction for free extension of the spring alike each way from the body while the body remains in its central position, and when in the up thrusts of the body the standards return against the stops they effectually check the further lengthwise contraction of the spring and prevent excessive up thrusts of the body.

I am aware of the Patents Nos. 169,808 and 323,525 in which there are pivoted standards for permitting elongation of the springs and stops to limit reverse movements, but in these cases the stops take effect on toes of the standards having such short radius that the thrusts of the springs on the long arms of the standards have powerful action tending to cut off the fulcrum pivots of the toes, whereas I have arranged the stops to take effect at such distance from the fulcrum pivots that they are not subject to undue strain.

I claim—

The combination with the semi-elliptic spring having its support at the middle of its crowning side and with the body, of the body supporting standards seated on and jointed to the ends of the spring, and also jointed to the body for free lengthwise extension of the springs, and the stops limiting the standards in the reverse movements, the stops being attached to the body and adapted for the standards to take effect on them between the pivots connecting the standards with the body, and the pivots connecting the standards with the spring substantially as described.

Signed at New York city, in the county and State of New York, this 28th day of February, A. D. 1893.

GEO. T. CHAPMAN.

Witnesses:

W. J. MORGAN,
A. P. THAYER.