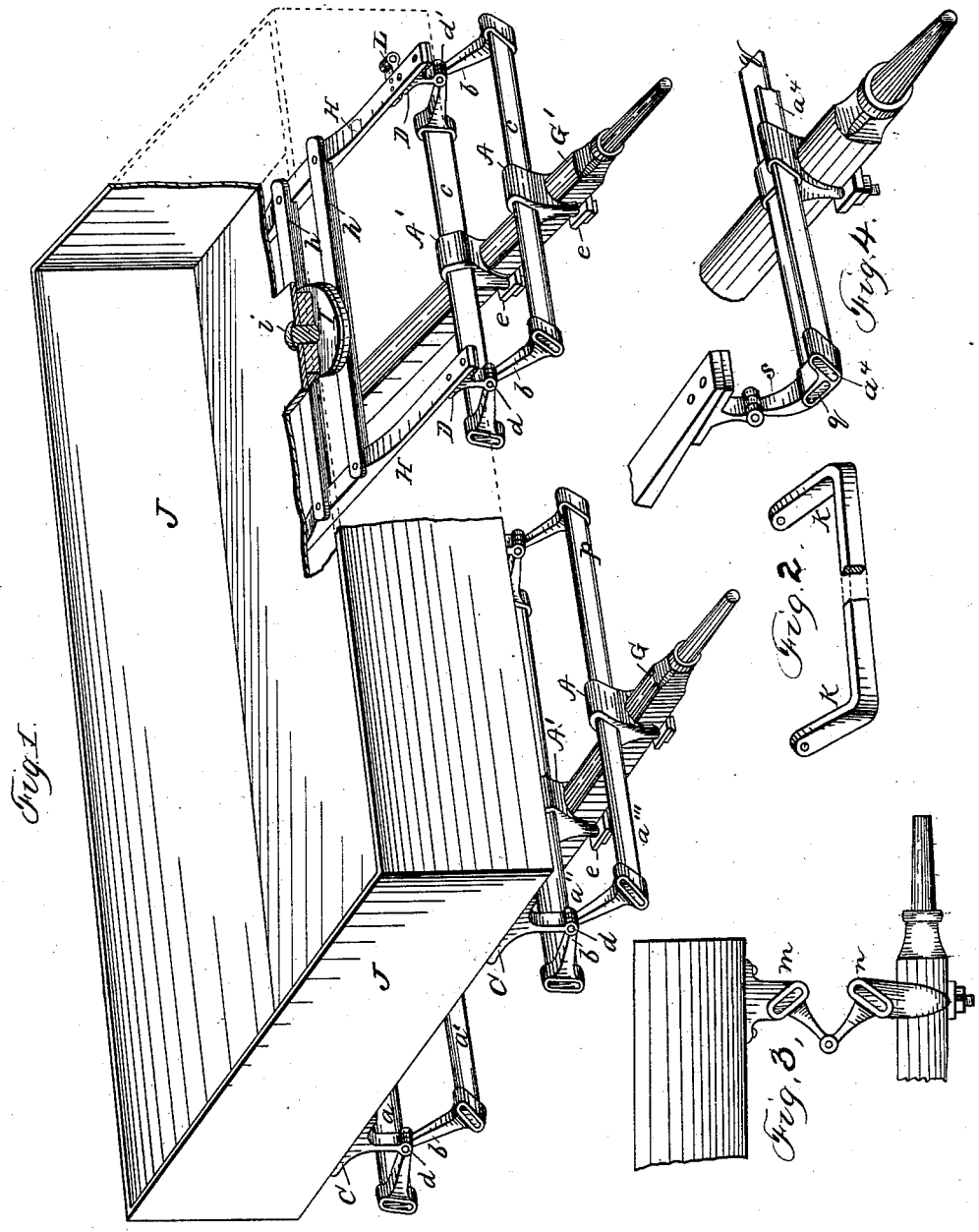
(No Model.)

J. W. WETMORE.

VEHICLE SPRING.

No. 265,899. Patented Oct. 10, 1882.



Witnesses.
W. R. Eddon.
Walter Scott

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UNITED STATES PATENT OFFICE.

JEROME W. WETMORE, OF ERIE, PENNSYLVANIA.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 265,899, dated October 10, 1882.

Application filed February 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, JEROME W. WETMORE, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Vehicle-Springs, of which the following is a specification.

My invention relates to torsion-springs when used as substitutes for elliptical springs. The breaking strain on the elliptical spring is so great that the short leaves are added to protect the long leaves.

The object of my invention is by placing a flat spring-bar nearly on its edge to protect against the breaking strain in the case of the application of the spring at right angles to the axle or other support. It is applied to carriages, light wagons, or railroad-cars. I attain this object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the improvement; Fig. 2, a modification of the construction of the spring by bending and upsetting the steel bar at K K; Figs. 3, 4, end views of a wagon, showing modifications of the invention, *s* representing the arm when *a* and *a'''* would be used alone without *a'* and *a''*, and *m n* representing the arrangement when *a* and *a'''*, without *a'* and *a''* and without supports C, would be used in connection with corresponding springs attached to the body of the vehicle and connected by arms at *d* and *d'*.

A is the support of the spring; *b*, the arms of the spring; C, the hanging supports through which the body of the vehicle presses down on the springs; *d*, the hinged joint of the arms *b* and supports C; *e*, the fastenings of the clip A; G, the axle; H *h i*, frame of the platform-wagon; J, body of the vehicle when applied to an ordinary Courtland wagon; L, hinge attachment for the tongue or thills. This may be at *d'* or on the axle; *q*, an auxiliary spring with its plane at right angles to the plane of the spring a^4 and its ends not fixed in the arms.

The torsion force of the springs resists the depression of the load, and their ends yield horizontally outward until joints *d* pass below the plane of the springs.

What I claim is—

The spring *a''' p*, when placed nearly on its edge, at right angles to the axle or other support, and sustained in the middle only with its ends connected by arms to the body of the vehicle, substantially as described.

JEROME W. WETMORE.

Witnesses:

WALTER SCOTT,

WM. P. HAYES.