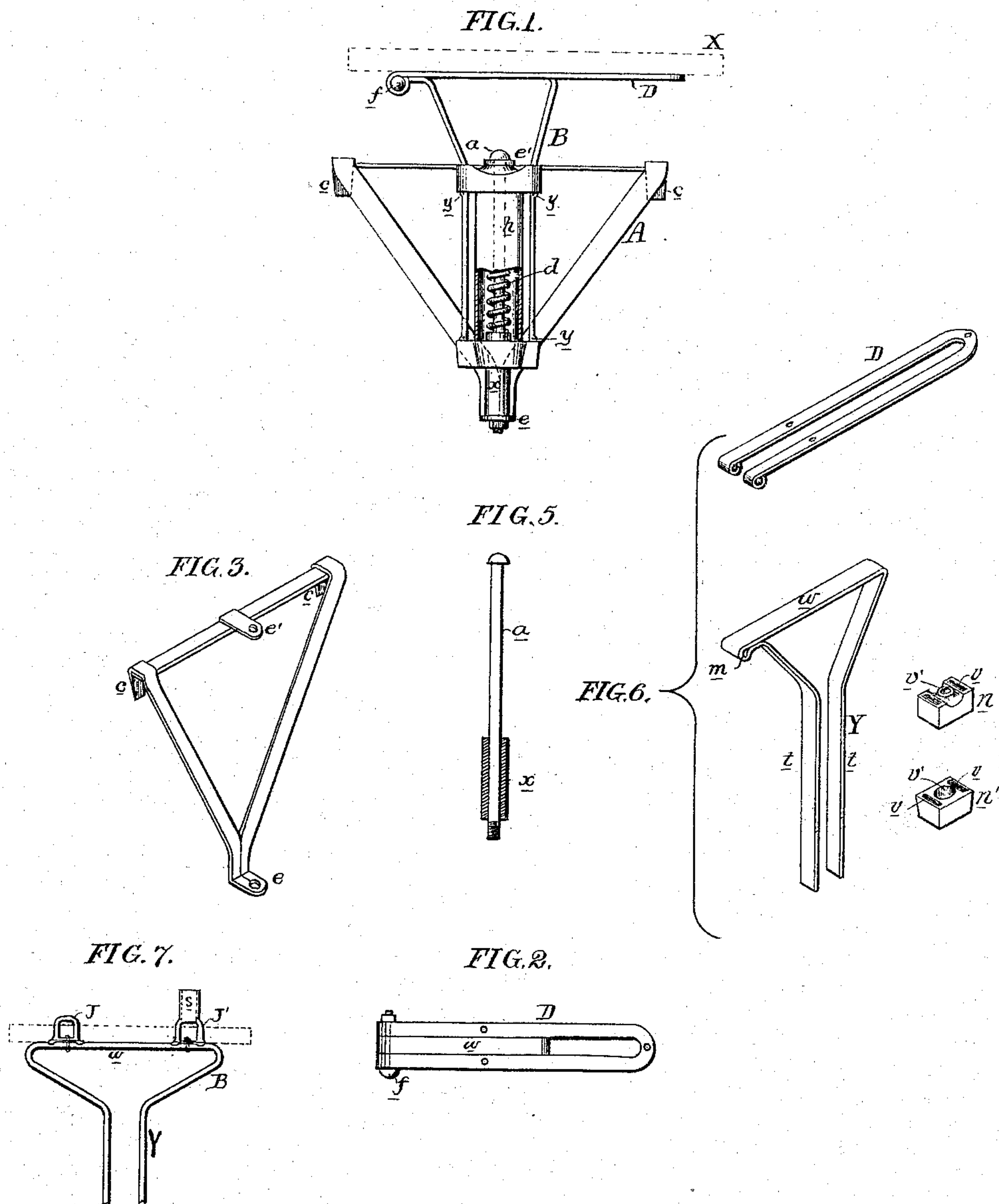


G. H. SPENCER.
Spring-Wagon Seats.

No. 156,861.

Patented Nov. 17, 1874.



WITNESSES:

Fred Benjamin
John L. Wildman

G. H. Spencer
By his attys
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UNITED STATES PATENT OFFICE.

GEORGE H. SPENCER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO
HENRIETTA SPENCER, OF SAME PLACE.

IMPROVEMENT IN SPRING WAGON-SEATS.

Specification forming part of Letters Patent No. **156,861**, dated November 17, 1874; application filed
April 15, 1874.

To all whom it may concern:

Be it known that I, GEORGE HARRISON SPENCER, of Jersey City, Hudson county, New Jersey, have invented Improvements in Spring Seat-Supports for Vehicles, of which the following is a specification:

My invention relates to improvements in the spring seat-support for vehicles for which Letters Patent were granted to me on the 24th day of September, 1872; and my improvements consist in constructing the different parts of the support, as fully described hereafter, so as to reduce the cost of manufacture and render the device stronger and more durable.

The support consists of a bracket, A, a frame, B, sliding on a guide-rod, *a*, secured to the bracket, and a spring, *d*, coiled around the rod, resting on a shoulder on the latter, and sustaining the weight of the frame. Two of these supports, secured at opposite sides of a vehicle, support a seat, X, the springs *d* absorbing the shocks, which would otherwise be communicated to the seat.

The bracket A may be constructed, as described in my aforesaid patent, so as to be bolted to the side or bottom of the vehicle. I prefer, however, to provide it with hooked projections *c c*, which retain the support in its position at the side of a vehicle without interfering with its adjustment or removal.

Instead of constructing the sliding frame, as heretofore, by bolting a series of bars to a horizontal piece and connecting them to a tubular case sliding on the rod *a*, I bend a flat bar, Y, Figs. 6 and 7, so as to form a cross-piece, *w*, and two legs, *t t*, which are parallel at their lower ends, and upon which I slide two malleable cast-iron blocks, *n n'*, having openings *v v'*, the former to receive the legs, and the latter the rod *a*. After being properly adjusted, the blocks are secured by riveting the legs at their lower ends and spreading them at the points *y* by means of a pointed tool. The frame is thus formed of three pieces without the use of bolts or rivets, and without forging.

When the seat is to rest permanently on the cross-piece the bar Y is bent to form a frame

of the shape illustrated in Fig. 7; but when the seat is to be hinged the bar is bent round a former to produce an eye, *m*, for the reception of a pin or bolt, *f*, which connects the frame to a yoke, D, secured to the lower side of the seat, the cross-piece *w* fitting between the legs of the yoke, as shown in Fig. 2, and preventing all lateral strain upon the bolt.

The enlargement *x* at the lower end of the rod *a* for supporting the spring *d* is formed of babbitt or other soft metal cast on the rod, thereby avoiding the loss of time and expense which results from forging, and at the same time reducing the friction and rapid wear of the sliding frame resulting when it bears upon a metal as hard as itself.

When the rod is secured in a fixed position to the bracket, as described in my former patent, the bearing-surfaces are not changed, and the rod speedily wears out at one side. I prevent this by securing it to the bracket, so as to be turned freely by the jolting of the vehicle to constantly present new surfaces at the bearing-points.

To prevent the access of dust to the spring *d*, it may be inclosed by a thin metal case, *h*, extending between the blocks.

The rod *a* rests at its lower end on a lug, *e*, of the bracket, but is additionally supported by the upper lug *e'*, on which bears a head or nut at the upper end of the rod, the weight of the seat and its contents being thus distributed over the entire bracket, instead of being supported wholly by the lug *e*, as formerly.

When a hinged seat is not required, cast-metal staples J J' are riveted to the cross-bar *w*, as shown in Fig. 7, the seat being recessed to receive the staples, between which and the upper face of the seat keys or thongs of leather are passed to secure the seat in its place. One of the staples may have a tubular projection, *s*, forming a socket to receive a whip, the shaft of an umbrella, or an awning-support.

Without confining myself to the use of brackets or frames of any special form,

I claim as my invention—

1. The combination of the bracket A, sliding frame B, and guiding-rod *a*, bearing on legs *e e'*, as and for the purpose set forth.

2. The combination of the bracket and the rod *a*, secured so as to turn freely, as and for the purpose specified.

3. The combination of the sliding frame and the rod *a*, having an enlargement, *x*, of soft metal, as and for the purpose set forth.

4. A frame consisting of one or more bent strips, combined with cast-metal blocks *n n'*, through which the strips extend, and to which they are secured, substantially as described.

5. The frame B, bent to form the eye *m*, in

combination with the yoke D secured to the seat, as specified.

6. The bracket A, provided with hooked projections *c c*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE HARRISON SPENCER.

Witnesses:

JOHN B. HAIGHT,

JOHN H. GORMAN.