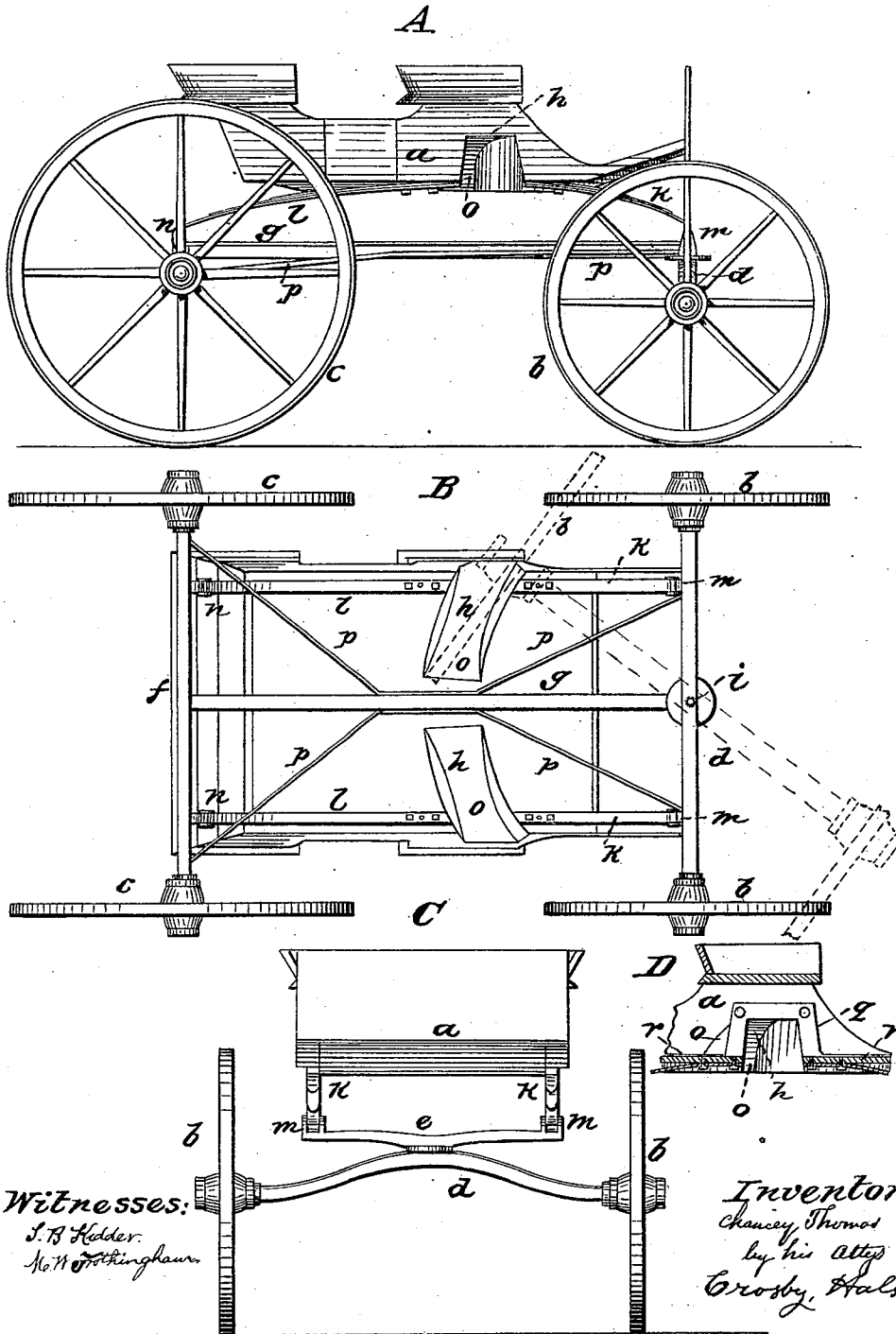


C. THOMAS.
Carriage Spring.

No. 110,606.

Patented Dec. 27, 1870.



Witnesses:
J. B. Hedder.
No. 110,606, Nottingham.

Inventor:
Chancy Thomas
by his attys.
Crosby, Halsted & Gould.

United States Patent Office.

CHAUNCEY THOMAS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 110,606, dated December 27, 1870.

IMPROVEMENT IN CARRIAGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHAUNCEY THOMAS, of Boston, in the county of Suffolk and State of Massachusetts, have invented Improvements in Carriages; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates particularly to the construction of the bodies and irons of one-horse four-wheel carriages with reference to provision for under-cutting of the forward wheels in turning, the construction being such as not only to permit the wheels to run under the body, but also to permit the body to be set lower down, thus facilitating ingress and egress with safety.

The invention consists, primarily, in mounting the body upon side springs, which are divided so as to leave a wheel-entering space between the adjacent ends of the springs of each side, the under side of the body being recessed between the springs, for the entrance of the fore wheels.

The invention also consists in combining side springs with a center perch, the ends of the springs resting upon shackles and forks on the rear axle, and at the ends of the fore transom-bar, there being an open space between the forks in the horizontal plane of the perch, and there being also a brace running from each end of the rear axle, and from the fore transom-bar, (near each fork,) to the center perch.

The invention also consists in forming the body with a metal cut-under box on each side, in making the body with a bottom or floor which extends from front to rear between these boxes, and in connecting the adjacent ends of the springs on each side by a metal or plate-iron strap, fastened to the bottom rails on each side of the box, and running up, by and over the boxes, with fastenings to the side of the body.

The drawing represents a two-seated buggy or carriage embodying my invention.

A shows the vehicle in side elevation.

B is an under-side view of it.

C, a front-end elevation.

D, a sectional elevation through one of the cut-under boxes.

a denotes the body.

b b, the front wheels.

c c, the rear wheels.

d, the front axle.

e, the fore transom-bar.

f, the rear axle.

g, the center perch.

In each side of the bottom part of the body a recess, *h*, is formed, extending into the body, and in a curve struck from the lynch-pin *i*, and at a distance therefrom equal to the distance from the pin to the

center of each fore wheel, the two recesses extending only partially across the body, leaving the floor unbroken at the center, as seen at B; and to permit these recesses, in connection with side springs, I make each side spring in the two parts *kl*, each front spring *k* extending from a fork, *m*, at the end of the fore transom-bar to the bottom of the body on one side of the cut-under recess *h*, and each rear spring *l* from a shackle, *n*, on the rear axle, to the bottom of the body on the opposite side of the recess, the space left between the springs enabling the cut-under recess to be formed in connection with the side springs.

Each recess *h* is covered by a metal box, *o*, made of such curved form vertically as to permit considerable deflection of the body upon the springs when either wheel runs under the body.

Side perches have heretofore been employed in connection with side springs, the springs resting upon the hind axle-bed and fore transom-bar; but I employ, in connection with the divided spring, a center perch only, running a brace, *p*, from each end of the transom-bar to the center perch, and from the perch to the rear axle, as seen at B, thus leaving a clear space under each side of the body for the fore wheel to run under.

To strengthen the body between the adjacent ends of the side springs, I bolt the ends of each two side springs to the opposite ends of a metal yoke or strap, *q*, on the inside of the body, each strap having two arms, *r*, that lie against the bottom bars *s* of the body, and a bow, *t*, that passes around the cut-under box, and rests against the side, the arms *r* being bolted through the body and to the springs, and the bows *t* being bolted to the side of the body.

A carriage having its body thus hung is very enduring, its cost is not increased, and it possesses important advantages not attainable in the ordinary constructions.

I claim—

1. The divided side springs *l*, each formed as a plain leaf-spring, fastened at one end to the bottom of the carriage-body, and at their other ends to the rear axle and to a transom-bar, by means of joints and cut-under recesses *h*, when combined and arranged substantially as shown and described.

2. The cut-under metal boxes, and the body-bottom running unbroken between them, substantially as shown and described.

3. The divided side springs *l*, (forming the support for the body,) combined with a center perch, *g*, and braces, *p*, running from the perch, substantially as shown and described.

4. In combination with the divided side springs and cut-under spaces, the connecting-yoke straps *q*, substantially as described.

Witnesses: CHAUNCEY THOMAS.

J. B. CROSBY,

FRANCIS GOULD.