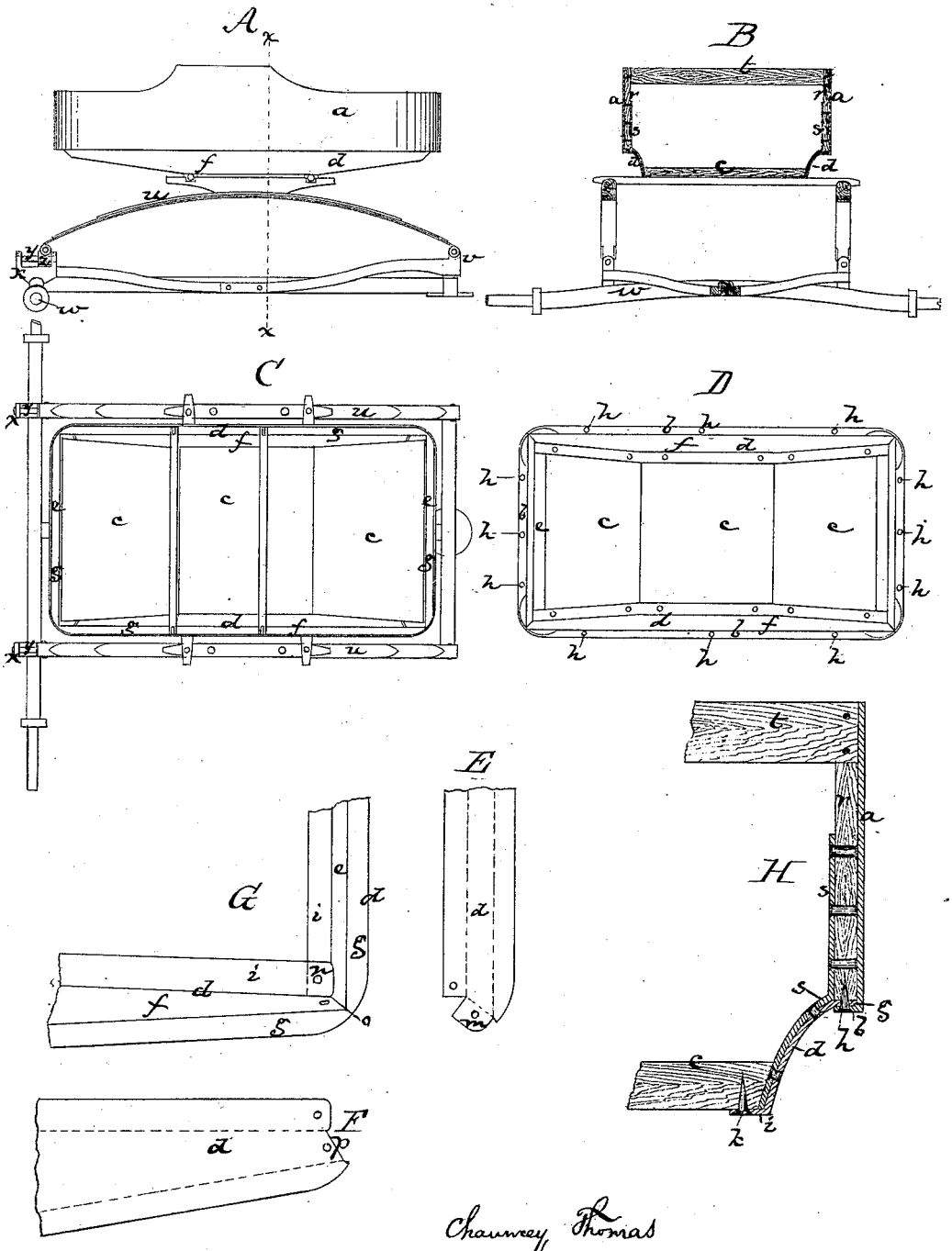
C. THOMAS.

Carriage Irons.

No. 113,705. Patented Apr. 11, 1871.



Witnesses
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CHAUNCEY THOMAS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 113,705, dated April 11, 1871.

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 to the construction and arrangement of the carriage-body and spring-supporting mechanism of four-wheeled vehicles, the invention as relates to the body having particular reference to the manner of uniting a metal body to a sunken wood bottom, and as relates to the springs, having particular reference to a provision for end movement of the rear parts of the springs of side-spring carriages.

The invention consists in mounting or supporting a carriage or wagon-body upon side springs, the rear end of each of which is provided with an eye or runner that rests and slides upon a short rod, mounted in a stand, fixed upon the top of the rear axle or axle-bed.

The invention also consists in a sheet-metal body, having a sunken wood bottom united to the bottom of the body sides by a flanged connecting-plate, the upper flange of which extends over and rests upon an inwardly-turned flange at the bottom of the body sides, (the edge of the plate-flange abutting against the inner surface of the body sides,) and the bottom flange of which extends inward and forms a support for the wagon-bottom, the flange-plate being inclined or curved between its top and bottom flanges.

The invention further consists in uprights for supporting the cross pieces for the seat, fastened to the body by metal-strap pieces, which are riveted upon the inner surfaces of the base-plate and to the inner surfaces of the uprights, so that the seat is supported without extending fastenings through the metal body sides.

The invention furthier consists in the manner of making the corners of the flange-plate where the end and side pieces are joined.

The drawing represents a carriage-body and springs embodying my improvements.

A shows the body and springs in side elevation;

B is a section on the line *x x;*

C is a plan of the body and springs; and

D, a reversed plan of the body.

E F and G are details illustrating the manner of forming the corners of the bottom sides.

H is a section (enlarged) showing the manner of connecting the vertical body sides and the wood bottom by the bottom side or flanged plate.

a denotes the body or body sides, preferably formed of one sheet of metal, bent to proper shape, or into box form, and having at the bottom of each side an inwardly-turned lip or flange, *b*.

c denotes the bottom, made of wood, and deepening from the ends toward the center to form ample leg and foot room.

d denotes the bottom sides or the metal flange-plate that connects and unites the body sides *a* and bottom *b*.

This bottom side piece is composed of end pieces *e* and side pieces *f*, connected together to form one frame.

At the top of this bottom side or frame, and all around it, is an outwardly-projecting flange, *g*, the edge of which fits against the inner surface of the body sides, this flange resting directly upon the body flange or lip *b*, the two being fastened together by suitable rivets or bolts *h*.

From this flange *g* the bottom side or flange-plate inclines down inwardly, (being preferably made with a swelling-curved inner surface,) and at its bottom it has another and inwardly-projecting horizontal flange, *i*, extending all around its four sides, and upon this flange rests the bottom pieces *b*, each piece *b* being chamfered or beveled at its edge, so that the upper surface of the bottom touches the bottom side plate all around and makes a good finish.

The pieces *c* are fastened to the flange by bolts or rivets *k*.

It will thus be seen that not only is the wood bottom securely connected to the metal body sides, but that the method of connection is such as to leave no open joints or prominences or uneven edges.

To effect a neat and substantial connection of the side and end pieces of the bottom side frame, I cut out the abutting ends of the strips before bending them, as seen at E F, forming on one piece a tongue-piece, *m*, that laps over and fits against and is riveted to the inclined side of the other piece, the bottom edge of this tongue and the adjacent end of the flange of the same strip butting when bent, the flange of the other piece extending under and being riveted to the first flange by a rivet, *n*.

The top flanges abut as seen at *o*, and the angle of the tongue *m* and the side piece from which it springs is in line with the end *p* of the incline behind it.

To obviate the necessity of bolting through the body sides (which would mar the finish of the body) to secure the seat-supports, I place each vertical seat-post *r* against the inner surface of the body side, as seen at B, and bolt them to metal-strap pieces *s*, which are bolted to and extend up from the bottom

side, as seen at B, and also at H, (which represents a section through one of the posts,) the seat being directly supported on the cross-ties or studs *t* that connect the tops of the opposite posts.

The body is shown as supported upon side springs *u*, extending from the fore transom-bar *v* and hind axle or axle-bed *w*.

On the hind axle or axle-bed, under the rear end of each spring, is a head or plate, *x*, between end uprights of which extends a rod, *y*, upon which slides an eye-piece or runner, *z*, on the end of the spring.

Claims.

1. In combination with a metal body, *a*, and wood bottom *b*, a connecting bottom side or frame, *d*, having a top flange, G, supported upon a flange or flanges, *b*, projecting inwardly from the bottom of the body sides *a*, and a bottom flange, *i*, upon which the bottom strips are supported, substantially as shown and described.

2. In combination with the metal body *a*, the seat-posts placed against the inner surface of the opposite body sides, and riveted or bolted to vertical metal-strap pieces *s*, whose lower ends are fastened to the bottom-sides frame *d*, substantially as shown and described.

3. The method of forming the joints at the corners of the bottom side pieces *d*, substantially as shown and described.

4. Side springs, the rear ends of which have eye-pieces or runners *z* sliding upon rods *y*, fixed in heads or plates *x*, on the rear axle or axle-bed, substantially as shown and described.

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Witnesses:
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