J. A. CRANDALL.

Children's Carriages.

No. 168,458. Patented Oct. 5, 1875.

Fig: 1

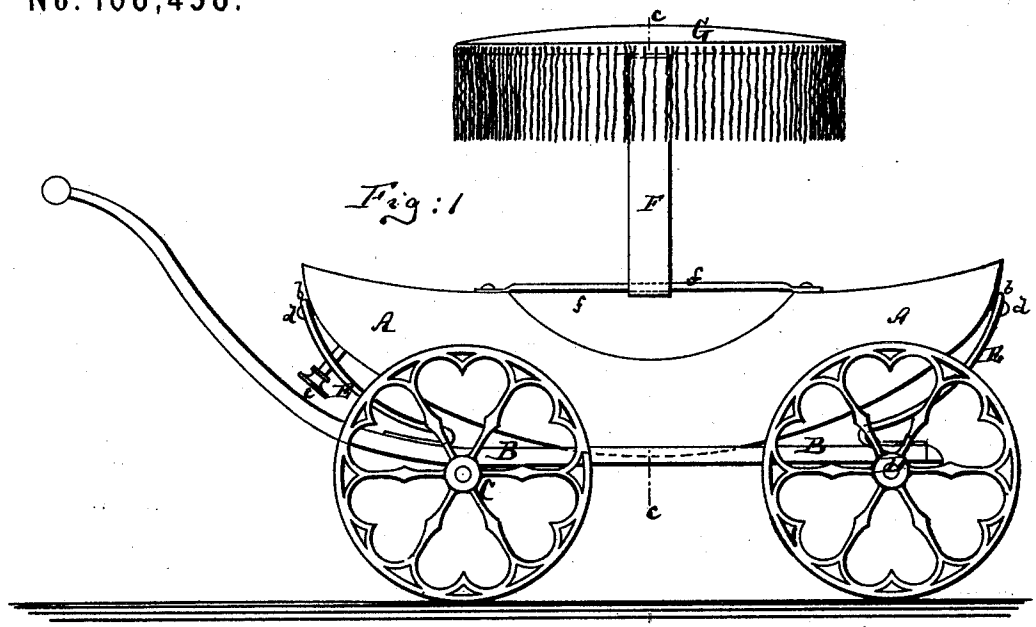



Fig: 2

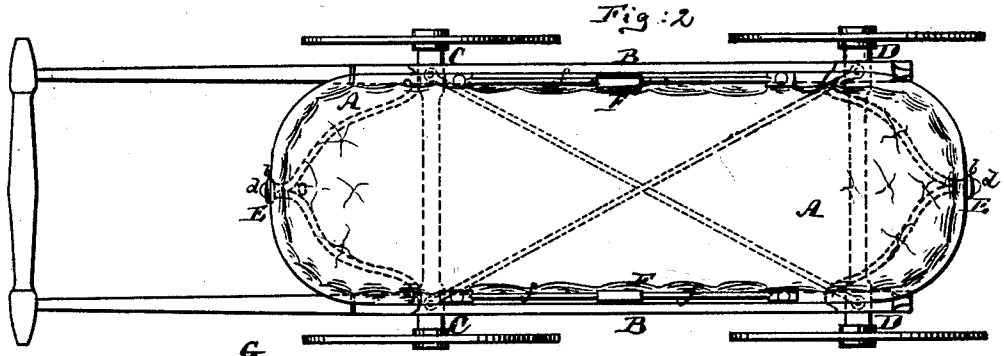



Fig: 3

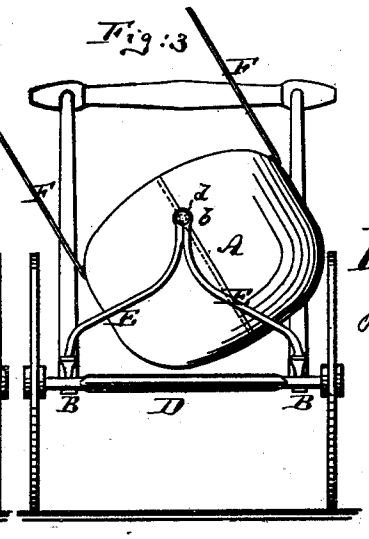
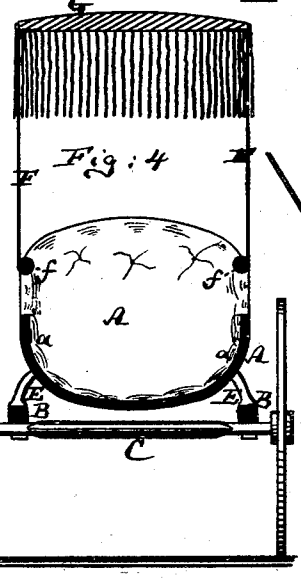



Fig: 4

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# UNITED STATES PATENT OFFICE.

JESSE A. CRANDALL, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN CHILDREN'S CARRIAGES.

Specification forming part of Letters Patent No. **168,458**, dated October 5, 1875; application filed May 31, 1875.

*To all whom it may concern:*

Be it known that I, JESSE A. CRANDALL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Child's Carriage, of which the following is a specification:

Figure 1 is a side view of my improved child's carriage; Fig. 2, a top view; Fig. 3, an end view; and Fig. 4 a vertical transverse section thereof, on the plane of the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to several improvements on child's carriages, whereby the same are rendered better adapted to the conveyance and reception of children of tender age than the carriages heretofore usually employed. The invention consists of the several features of improvement hereinafter more fully pointed out and specified.

The letter A in the drawing represents the carriage-body. The same is made half-egg shaped, so that its ends will be about alike, and so that its cross-section will be about half a circle, as in Fig. 4, while its longitudinal section will have the form of a half-oval, as in Fig. 1, its plan view approaching the shape of an oval, as in Fig. 2. In this way the child can be placed with its face to either end, as each rounded end will constitute a convenient seat, or two children can be placed in the carriage, facing each other, or the child can be laid into the carriage, as in a cradle. This carriage-body is made of leather or rawhide, which is stretched, as in Fig. 4, over the wooden or metallic frame-work *a* of the carriage-body, and which, besides producing a strong body, adds much to the beauty of its appearance. I propose to stretch or block the leather in a moist state over a form having the shape of the body, and to let it become dry on such form, so that it will afterward keep its shape, the leather being sufficiently thick to make a stiff body.

Heretofore carriage-bodies have generally been made of wood, which requires to be carefully polished and painted or varnished, in order to produce a smooth and beautiful surface. The leather, however, which I propose to use, may be merely varnished or slightly polished with a brush, and will yet be more durable and stronger than the wooden body. This feature of my invention is applicable to carriage-bodies of various sizes and shapes.

Another advantage of using the leather is that a rounded carriage-body can be cheaply produced, whereas, in using wood, it would be very costly to obtain a rounded body.

B B are the side bars or sills of the carriage, supported on the front and rear axles C and D, in suitable manner. The body A is supported on springs E E, which extend upward from the side bars or axles, and which are of peculiar construction and arrangement—that is to say, each spring E is made V-shaped, as in Fig. 3, and extends laterally across the carriage-frame, opposite and near one end of the body A. The arms of the said spring are, with their lower ends, firmly fastened to the side bars B B, respectively, or to the ends of an axle, while their converging upper ends terminate in and constitute an eye, *b*, through which a pin, *d*, is inserted into the end of the carriage-body. Thus the carriage-body hangs lengthwise between the two springs E E, as in Fig. 1, and can oscillate on the pins *d d*, which are in line with each other. When swung on the pins *d d* the carriage-body constitutes a regular cradle. But by inserting a pin, *e*, between the converging arms of one of the springs E into the carriage-body, as shown at the left-hand end of Fig. 1, or by other equivalent fastenings, the body can be locked so it will not rock. By withdrawing the pin *e* the cradle is produced. The springs E E, being placed transversely to straddle the carriage-body, allow the body to be hung lower than when the springs are put beneath the body, and constitute also very reliable supports for the body, and produce a light and graceful appearance.

The advantage of the semi egg-shaped carriage-body, when hung to oscillate in the end springs E E, will still more clearly appear when it is observed that by this form the body can freely rock without coming in contact with the running-gear, and without requiring the wheels to be placed farther apart than for a common flat-bottomed carriage.

The sides of the carriage-body A have recesses formed in them in the middle, and a

horizontal rail, *f*, fastened along the top of every such recess. The two rails *f f* on the two sides of the body are both horizontal and parallel with each other, and serve as hand-rails for the children, and also as supports for the standards F F of the carriage-top G. The lower end of each standard F is formed into a tube, which embraces one of the rails, the rails being round or prismatic in cross-section, and so the entire top can be slid lengthwise on the rails. This is a great advantage, as the top can, without being let down, be shifted into any suitable position to properly shade the child from the rays of the sun, and protect it against rain. Yet the standards F F may also be made jointed, so that the top will be capable of contraction and extension, and so that the same can be let down if desired.

The drawing represents the standards to be stiff. Instead of clasping the rails *f f* the lower ends of the standards may be inserted in grooves in the rails, or otherwise applied to be readily lengthwise adjustable, as described. In the latter case the top can be slid along the upper edge of the body A, even where the same does not have the rails *f f*, and a longer line for adjustment will be obtained.

I claim as my invention—

1. The end springs E E of a carriage-body, made each in form of an inverted letter, **V**, both springs being applied to the supporting-frame, to straddle the carriage-body lengthwise, the arms of each spring converging at their upper ends to constitute lateral braces, substantially as specified.

2. The combination of the **Λ**-shaped end springs E E, with the pivoted carriage-body A, hanging on pins *d d* that extend from the springs into the carriage-body, and with the locking device *e*, substantially as specified.

3. The carriage-body A, made with the rails *f f*, in the middle of its sides, to support the sliding carriage-top, substantially as herein shown and described.

The above description of my invention signed by me this 27th day of May, 1875.

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