No. 669,418. Patented Mar. 5, 1901.

G. A. LANCIAUX & O. F. SMITH.

BABY CARRIAGE.

(Application filed June 16, 1900.)

(No Model.)

Fig. 1.

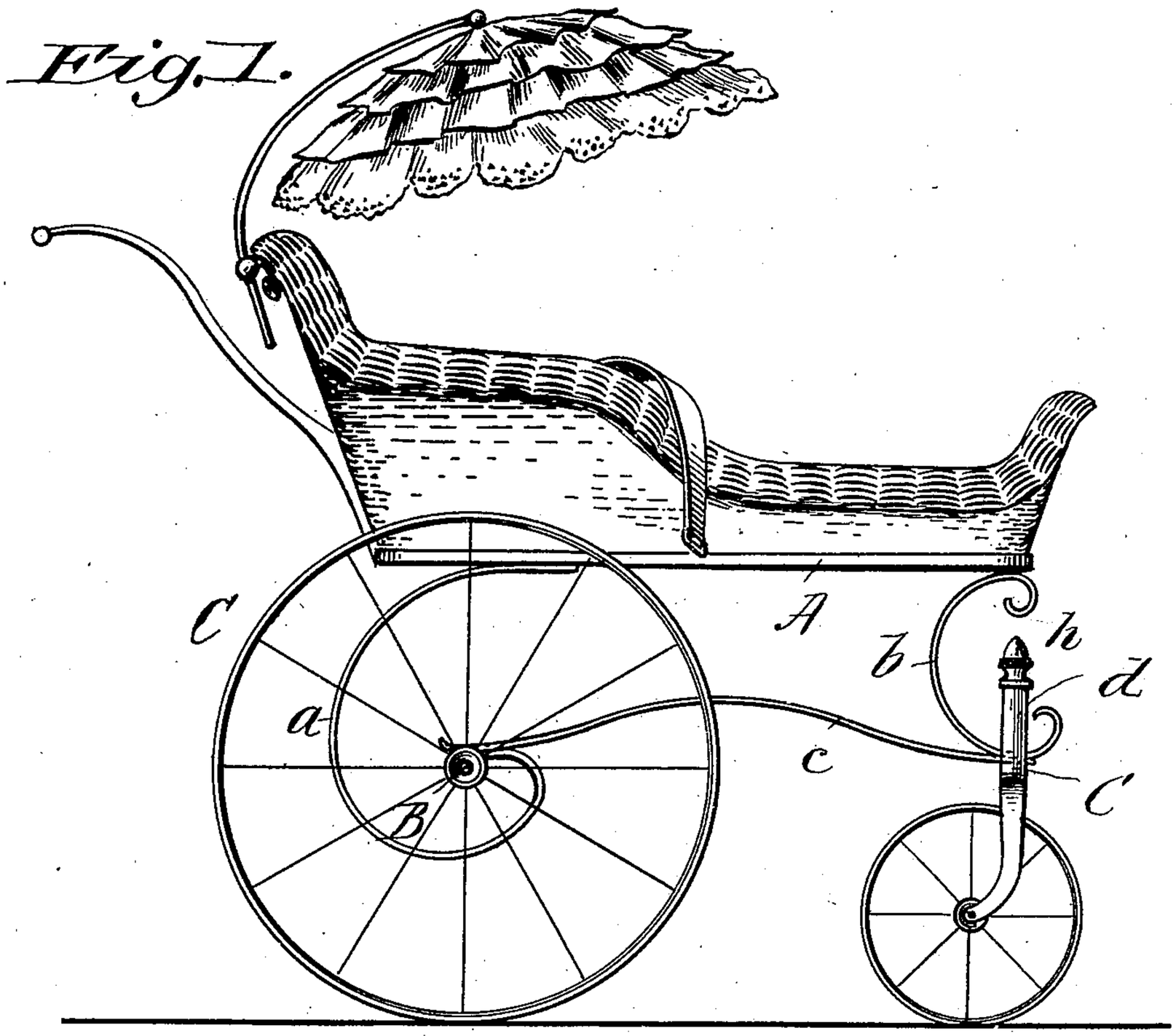


Fig. 2.

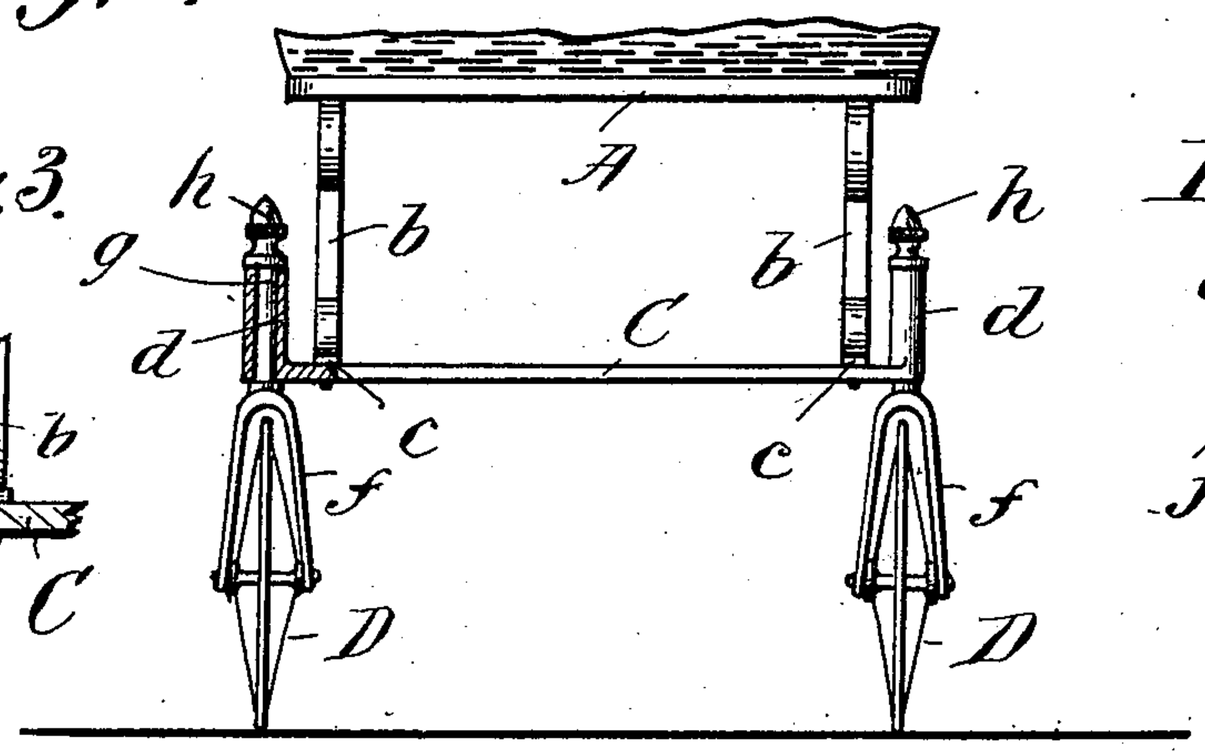


Fig. 3.

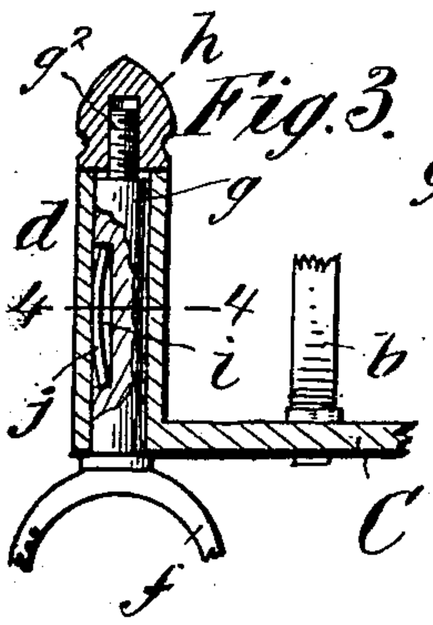
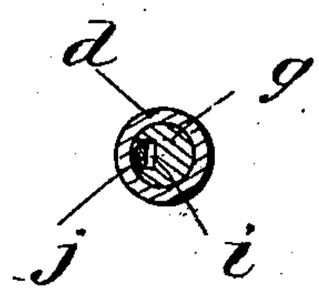


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE A. LANCIAUX AND OLIVER F. SMITH, OF SPRINGFIELD, MASSACHUSETTS.

BABY-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 669,418, dated March 5, 1901.

Application filed June 16, 1900. Serial No. 20,548. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. LANCIAUX and OLIVER F. SMITH, citizens of the United States of America, and residents of Indian Orchard, Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Baby-Carriages, of which the following is a full, clear, and exact description.

This invention relates to improvements in that class of baby-carriages wherein the forward wheels of the carriage have the arrangement and manner of operation of caster-wheels, the advantage of which consists in the ability to turn the carriage completely or partially by sidewise pressure on the push-handle without the necessity of forcing downwardly upon the push-handle, so as to tilt the vehicle to raise the front wheels clear of the ground, as most commonly practiced where the front wheels are journaled axially horizontally.

This invention particularly relates to certain specific constructions and combinations or arrangements of parts comprised in the running-gear of the vehicle to the end of rendering the same cheap and simple of construction, involving but few parts, which while not necessarily nicely or finely finished fulfil their requirements adequately and so that the carriage will in protracted use be found convenient and satisfactory.

The invention consists in the constructions and combination of parts, as hereinafter particularly described in conjunction with the accompanying drawings and as set forth specifically in the claims.

In the drawings, Figure 1 is a side elevation of the baby-carriage in the running-gear of which the subject-matter of this invention is comprised. Fig. 2 is a front elevation of the same with a part in section for the purposes of clearer illustration. Fig. 3 is a sectional view of certain parts shown in Fig. 2, but drawn on a larger scale and illustrative of structural features and appliances to be particularly mentioned hereinafter. Fig. 4 is a cross-section on line 4 4, Fig. 3.

Similar letters of reference indicate corresponding in all of the views.

In the drawings, A represents the body of the carriage, and B the axle for the rear wheels C, which are journaled on the ends thereof, as usual. The flat curved springs *a* support the rear portion of the carriage-body above the axle for the rear wheels. The forward portion of the carriage-body is supported by the duplicated flat C-shaped springs *b b*, which are provided between the lower forward portion of the body and the horizontal cross-bar C, which in the present arrangement is substituted for the usual front-wheel axle. The extremities of the said horizontal cross-bar are constructed with integrally-formed upstanding axially-vertical tubular hubs *d d*, open from their lower to their upper ends. The front wheels D D of the vehicle, which are considerably smaller than the rear wheels, are mounted to turn in the forks *f f*, each of which has an upwardly-extended stem or spindle *g*, fitted through and adapted to turn in the bore of the hub *d*, and the upper end of each spindle is necked down and screw-threaded, as indicated at g^2, receiving with a screw engagement the retainer *h*, which is in substance a nut, although it is preferably made of an ornamental shape. It is immaterial, however, if the retainer *h* be constructed with a downwardly-extending screw-threaded stem, which screw engages in a tapped socket formed axially within the upper end of the upwardly-extending spindle *g* of the front-wheel fork.

Inasmuch as it is not expected to secure a nice and close fitting of the spindle of the fork within the bore or socket in the upstanding hub, which is divided at the end of the horizontal cross-bar C, yet in order to provide against the parts being shackly, we construct each fork-spindle between its upper and lower ends with a vertical or longitudinally-arranged depression or groove *i*, and in this groove is placed a spring *j*, bowed as to its length and preferably having its one side rounded, while its other side is flat, the same being cross-sectionally somewhat less than semicircular in form. The extremities of this bowed spring will bear at the opposite ends of the base of the groove, while its rounded back will have bearing on the internal peripheral wall of the bored hub. In the assemblage of these parts the bowed spring

is placed in the groove before the spindle is inserted through the tubular hub, and in the insertion of the spindle through the hub the spring is compressed to permit of such, the reaction of the spring serving for an indefinite period to take up any looseness in the bearing, preventing vibration, and insuring that the front-wheel forks will not turn in their vertical journal more freely than is desirable.

In the running-gear shown reach-springs are provided, as indicated at *c*, the same extending from the rear-wheel axle forwardly to connection with the forward cross-bar C.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a baby-carriage in combination, the carriage-body, the metallic cross-bar C extending below the body and at the ends thereof provided with the upstanding integral hubs *d d* each having a bore vertically from end to end therethrough, springs supported by said bar, and supporting the body, the front wheels, D D, the forks *f f* therefor each having an upwardly-extending spindle journaled through the said vertically-bored hubs and the retainers *h h* substantially as described and shown.

2. In a baby-carriage, in combination, the body A the rear-wheel axle B and the cross-bar C under the forward part of the body, said bar having at its ends the integrally-cast upstanding tubular hubs *d d* supporting-springs between said rear axle and said bar C and the body, the front wheels D D and the forks *f f* therefor each having an upwardly-extending spindle fitting through the bores of said tubular hubs and each having a longitudinal groove *i*, the bowed spring *j* having its extremities in bearing at the ends of the base of the groove and having its back reacting against the internal peripheral wall in the hub, and the retainers *h h* substantially as described and shown.

Signed by us at Springfield, Massachusetts, this 15th day of June, 1900.

GEORGE A. LANCIAUX.
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Witnesses:
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