2 Sheets—Sheet 1.

I. N. DANN & E. KELSEY.

Chair.

No. 205,059. Patented June 18, 1878.

fig. 1.

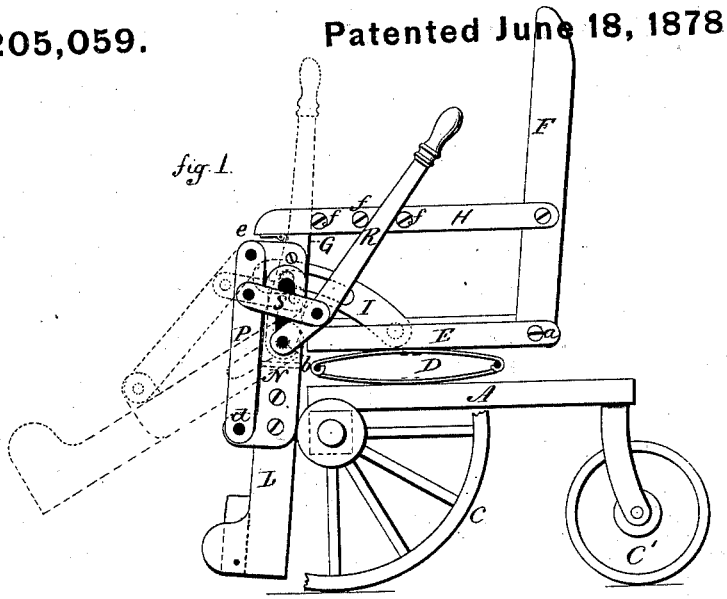
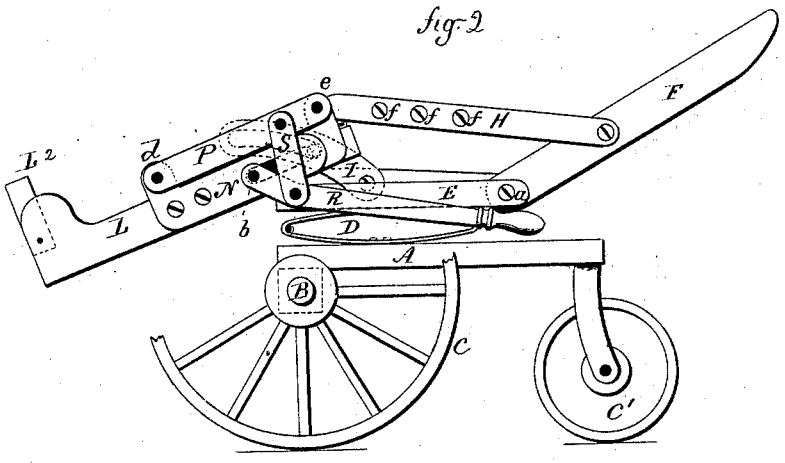


fig. 2



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2 Sheets—Sheet 2

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Chair.

No. 205,059. **Patented June 18, 1878.**

fig 3

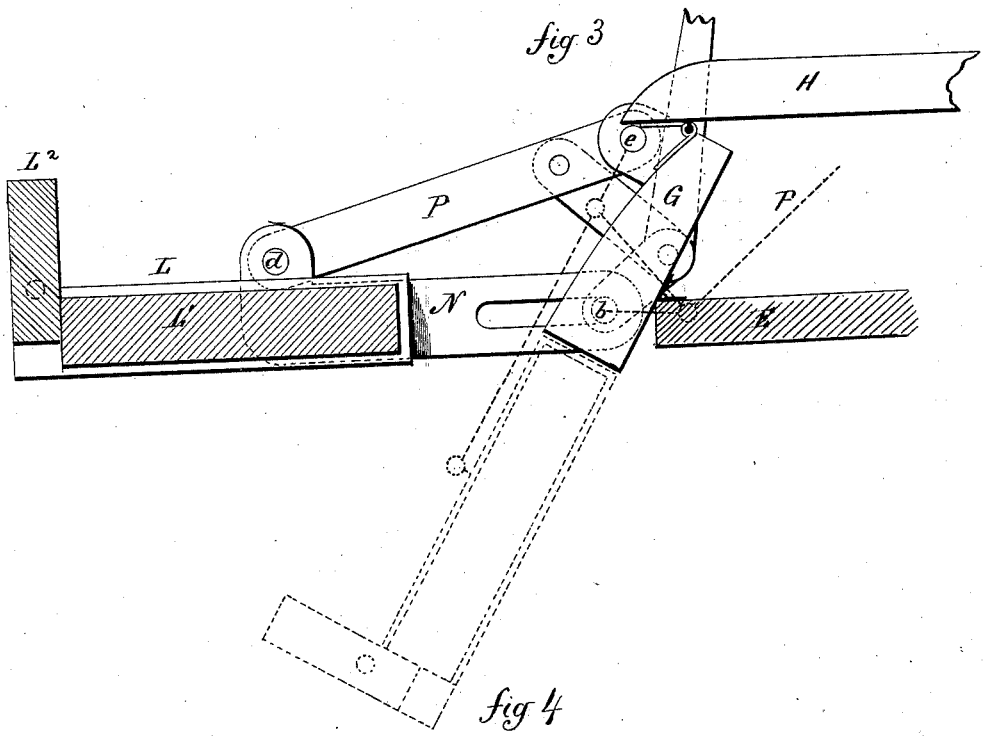
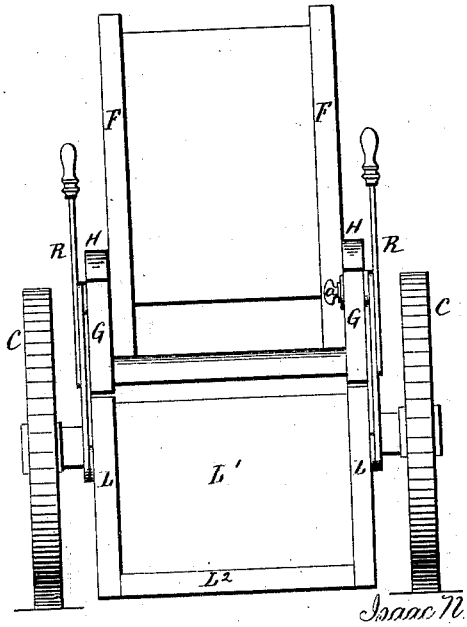


fig 4



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UNITED STATES PATENT OFFICE.

ISAAC N. DANN AND EDWIN KELSEY, OF NEW HAVEN, CONN., ASSIGNORS TO THE NEW HAVEN FOLDING CHAIR COMPANY, OF SAME PLACE.

IMPROVEMENT IN CHAIRS.

Specification forming part of Letters Patent No. **205,059**, dated June 18, 1878; application filed October 2, 1877.

To all whom it may concern:

Be it known that we, ISAAC N. DANN and EDWIN KELSEY, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Perambulators; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view in its upright condition, part of the wheel removed for the better illustration; Fig. 2, a side view with the parts thrown into reclining condition; Figs. 3 and 4, detached views, enlarged.

This invention relates to that class of perambulators which are in chair form, and constructed so that the chair may be adjusted to reclining positions, for the convenience or comfort of the occupant.

These chairs have usually been rigidly arranged upon the axles, depending upon the upholstering for elasticity; but such elasticity does not afford the comfort which a properly-arranged spring would do, as the whole chair would be affected by the spring, whereas only the seat would be affected with upholstering-springs.

The object of this invention is to provide the chair with springs, as well as to make the adjustment of the chair more convenient for the occupant; and the invention consists in the construction and combination of parts, as hereinafter described, and more particularly recited in the several claims.

A is a frame or body, supported on an axle, B, to which a wheel, C, is attached at each side in the usual manner, and at the rear of the frame a single wheel, C′. On this frame elliptic or similar springs, D, are placed, and on these springs the chair is arranged, so that the said springs between the chair and the running-gear afford elasticity alike to all parts of the chair. This part of the invention is applicable to chairs of various constructions, and not necessarily confined to the peculiar construction of the chair portion as herein described.

The chair consists of a seat-bar, E, at each side, which is rigidly attached to the spring; a back post, F, hinged to the seat-bar E, as at *a*, and so as to turn freely back and forward; and at the front of the seat, at each side, a short post, G, is hinged to the seat-bar E, as more clearly seen in Fig. 3; and to the top of the post G the arm H is hinged, and, extending back, is also hinged to the back F, so that as the back turns the post G turns correspondingly; and on one or both sides is a segmental stay, I, from the seat to the front post G, constructed with a slot, and provided with a thumb-screw, *a*, whereby the back may be adjusted to various inclinations.

The foot-rest is composed of a frame, two side bars, L L, apparently a continuation of the front posts G, filled between with any suitable upholstering or panel, L^1, and at the bottom with a hinged rest, L^2, in similar manner to other reclining-chairs; but in the usual construction the side pieces L have been placed outside the posts G, thereby making the frame as much broader as the combined thickness of the side pieces L, and which necessitates a corresponding spread of the wheels. Therefore, hanging the foot-rest frame L L in line with the post G G enables the making of the chair considerably narrower.

The foot-rest frame is hung to the chair at each side by a slotted metal arm, N, working on a stationary pivot, *b*, near the lower end of the posts G, the slot allowing the foot-rest to extend forward as the foot-rest rises, in order to carry it out a convenient distance from the chair, and so that when the rest is let down into its normal condition, as in Fig. 1, it will be contracted to the extent of the slot, and so as not to strike the floor, which it would do if the extended length were not contracted.

In order to force this extension and contraction, a connecting-lever, P, is hinged to the foot-rest frame, as at *d*, and to the stationary part of the chair above the pivot *b*, as at *e*. By this arrangement, (referring to Fig. 3,) when the foot-rest is raised the connecting-lever P turns with it; but because of its stationary condition on the pivot *e* and the stationary pivot *b*, to which the rest is directly attached through the slot in the part N, the

foot-rest will move outward on the pivot *b*, as from the position denoted in broken lines to that shown in full in Fig. 3, and as is also shown in Fig. 1, broken lines; but it will also be understood that if the back be tipped, the foot-rest will turn with it, as in Fig. 2, without this extension, because the supporting-pivots *b* and *e*, which are on the posts G, will move with the back; but when the back is adjusted to any position, if then the foot-rest be moved the same extension or contraction will occur.

In order that the occupant of the chair may conveniently make this adjustment of the foot-rest, a lever, R, is hung upon the pivot *b*, as a fulcrum, and extends up to form a handle convenient to the occupant. From this lever between the fulcrum and handle a connecting-rod, S, extends to the lever P, and is hinged to both. Hence, moving the lever forward—say as from the position in Fig. 1 to the position in broken lines, same figure—the connecting-rod S acts directly upon the lever P to raise that lever, and through it the foot-rest is raised and thrown forward, as also indicated in broken lines. Suitable stops *f* are arranged upon the side of the arm, or other convenient place, to engage the lever R at any desirable position when the foot-rest is adjusted.

Prior to this improvement, foot-rests have been arranged with a lever to be operated by the occupant; but the construction has been such that the occupant must move the lever toward himself. Such an arrangement requires an outlay of far more strength than does the pushing operation in this construction, and enables the occupant to adjust the chair to his own satisfaction, which by previous construction he could not do.

As the back is turned backward, as seen in Fig. 2, the foot-rest rises accordingly, and the lever turns downward, as shown. In this condition there is still the same advantage for the occupant, as the movement of the lever is a lifting one.

It will be readily understood that the foot-rest and adjusting devices are applicable to chairs not perambulators.

No claim is intended to be made, broadly, to combining a lever with the foot-rest, whereby the occupant may adjust the elevation of the foot-rest, as such is well known; but in all such prior constructions the lever arrangement has been such that the occupant must pull back upon the levers, his feet upon the rest serving largely as his own support while applying the power to the levers, and greatly increasing the power required.

We claim—

The combination, in a chair, of a foot-rest hinged to the frame near the seat by a slotted connection, and by a lever, P, hinged to the frame at a point above the seat and to the foot-rest below the said slotted connection, with a hand-lever, the fulcrum of which is the point of said slotted connection, and a hinged connection from said hand-lever R, at a point above its fulcrum, to the said hinged lever P, at a point below its connection with the chair, substantially as and for the purpose described.

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