

T. E. McNEILL.  
Car Seat and Couch.

No. 22,568.

Patented Jan. 11, 1859.

Fig. 1.

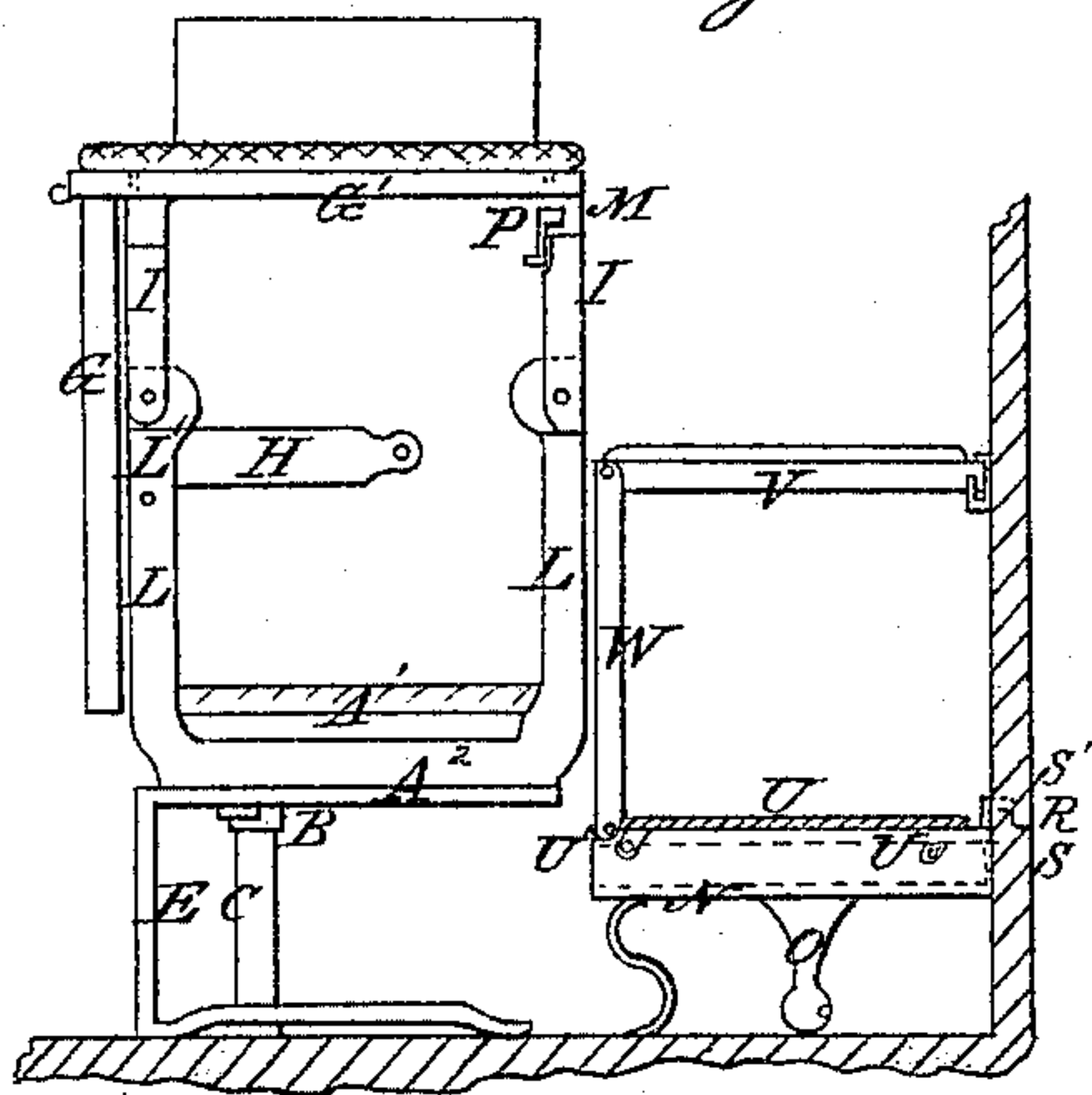


Fig. 3.

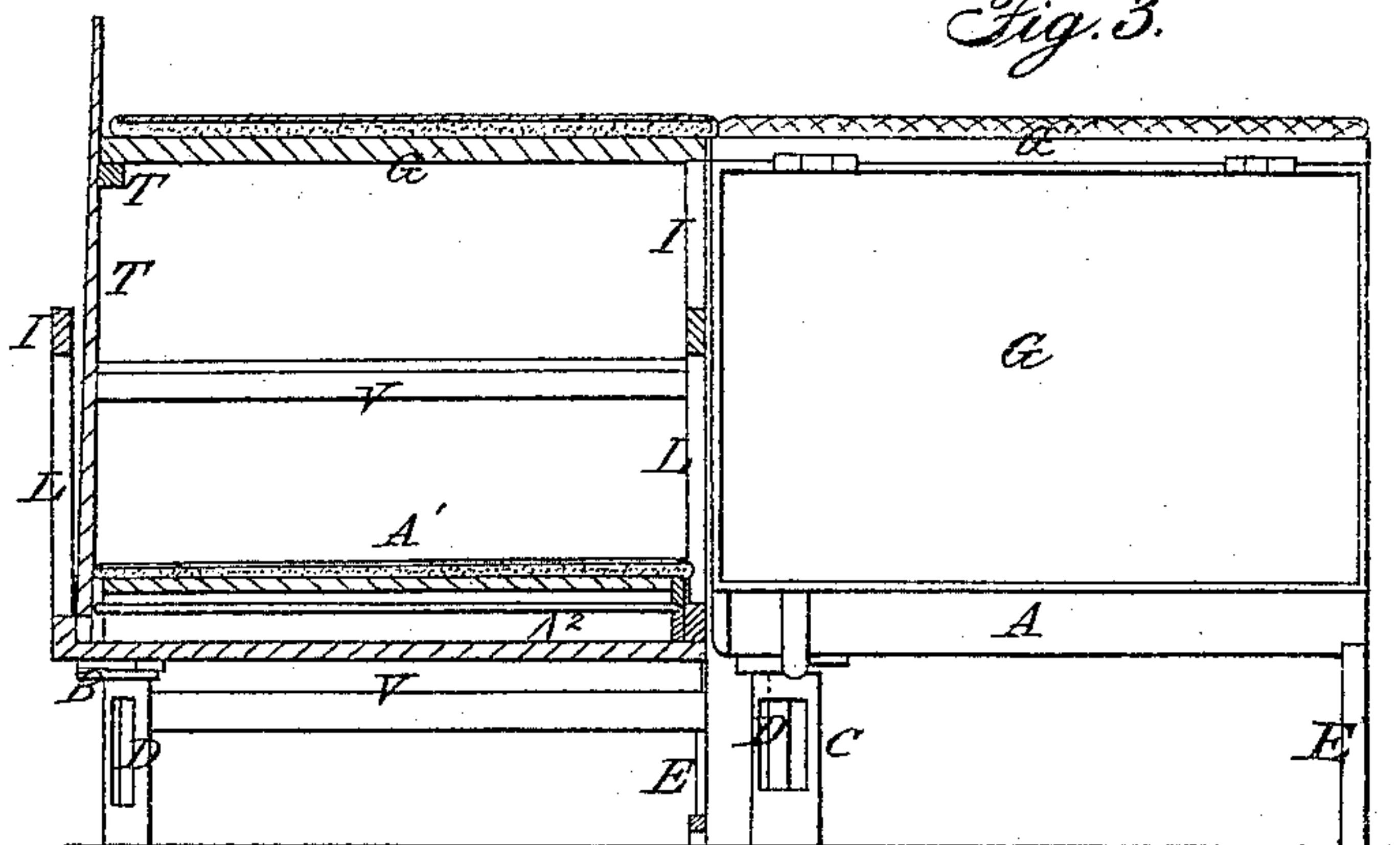


Fig. 2.

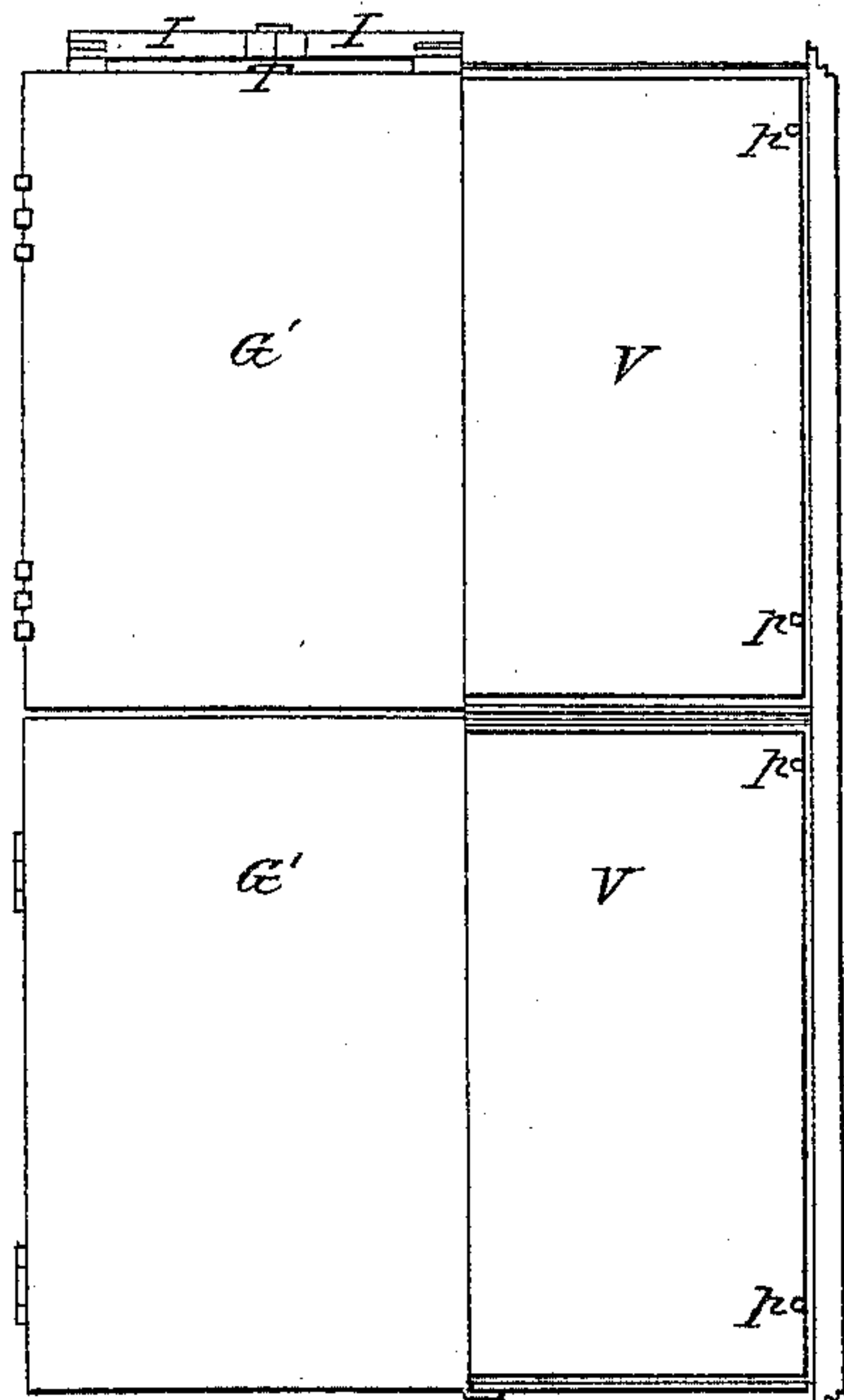


Fig. 4.

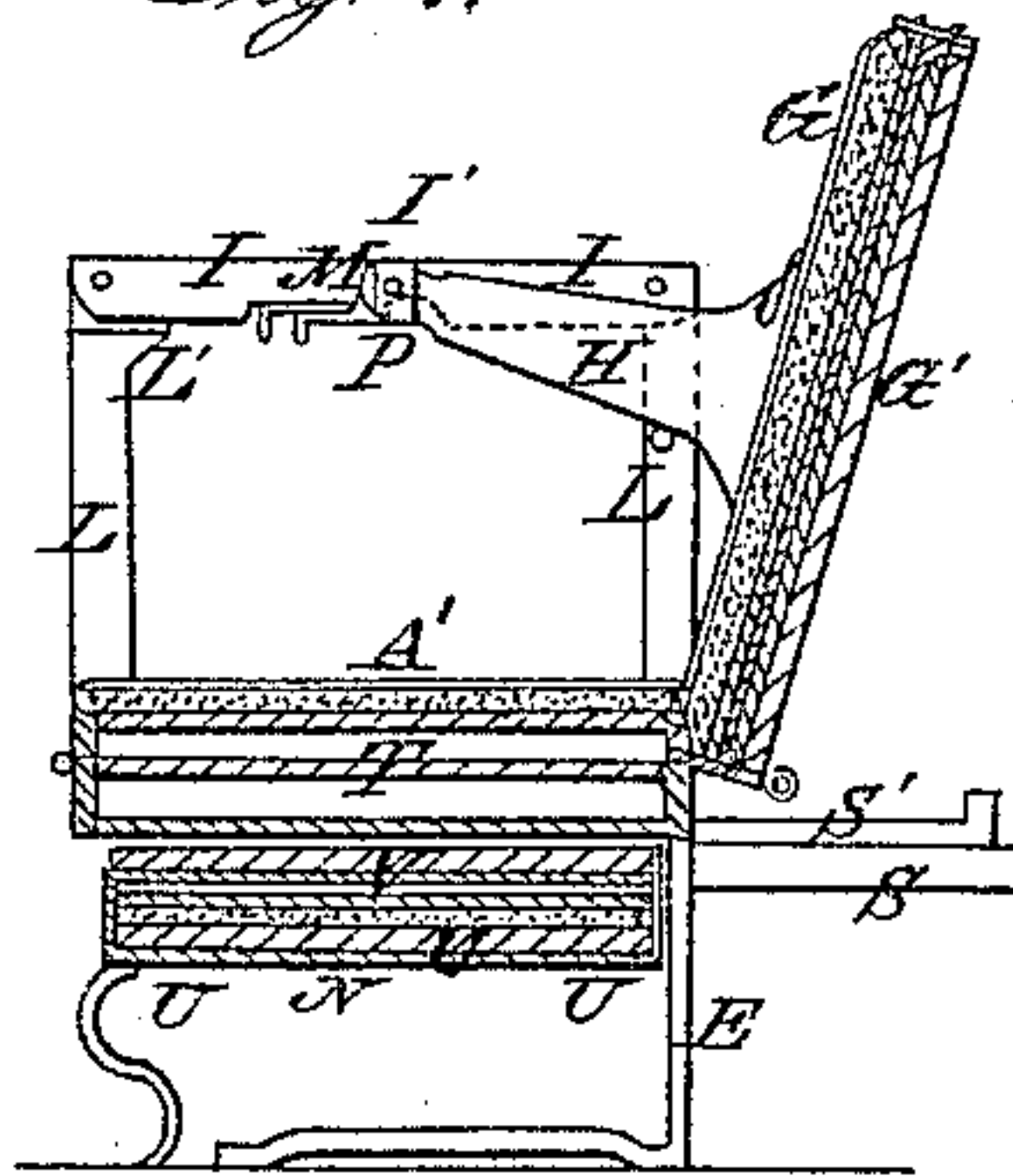


Fig. 5.

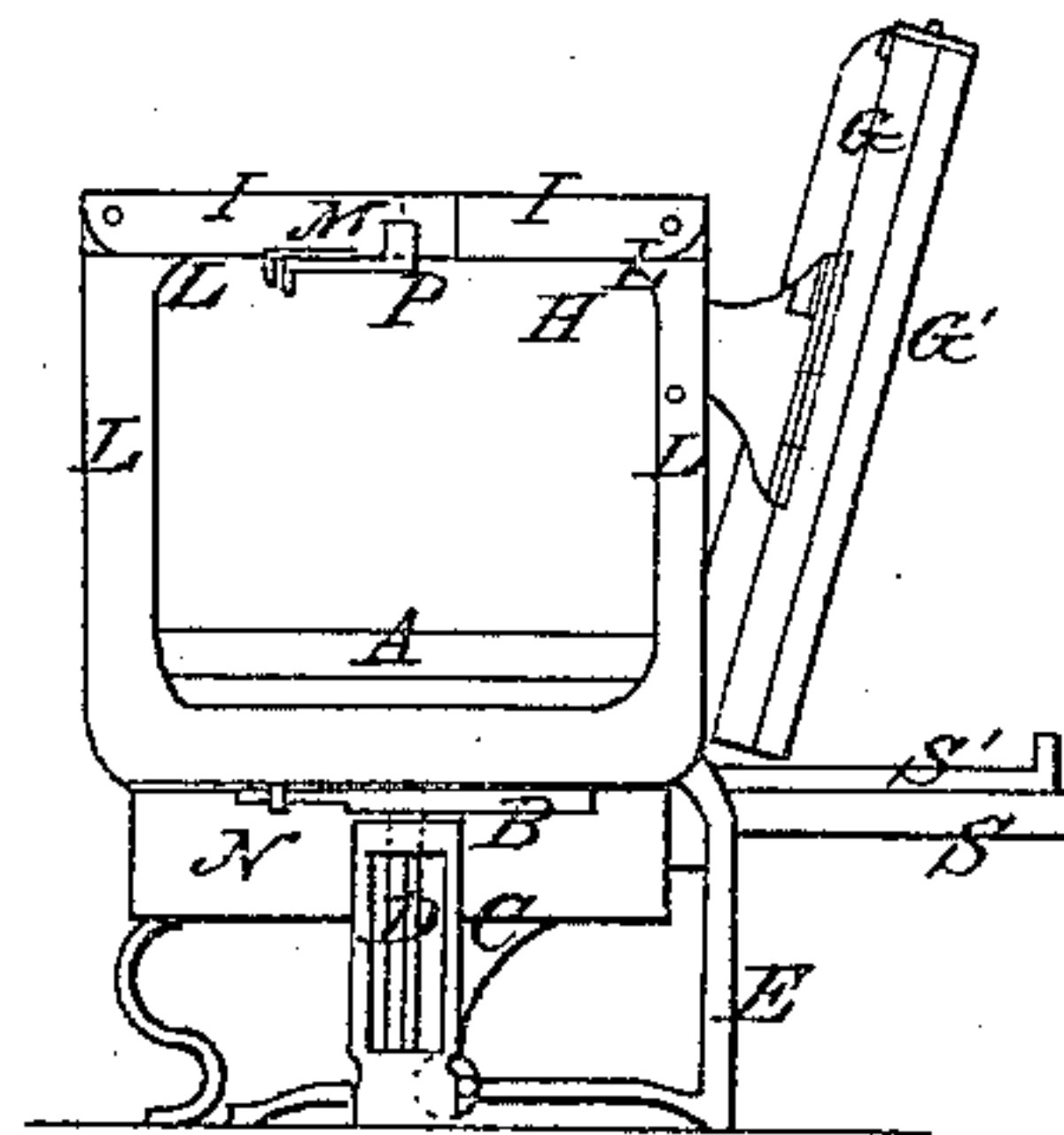


Fig. 7.

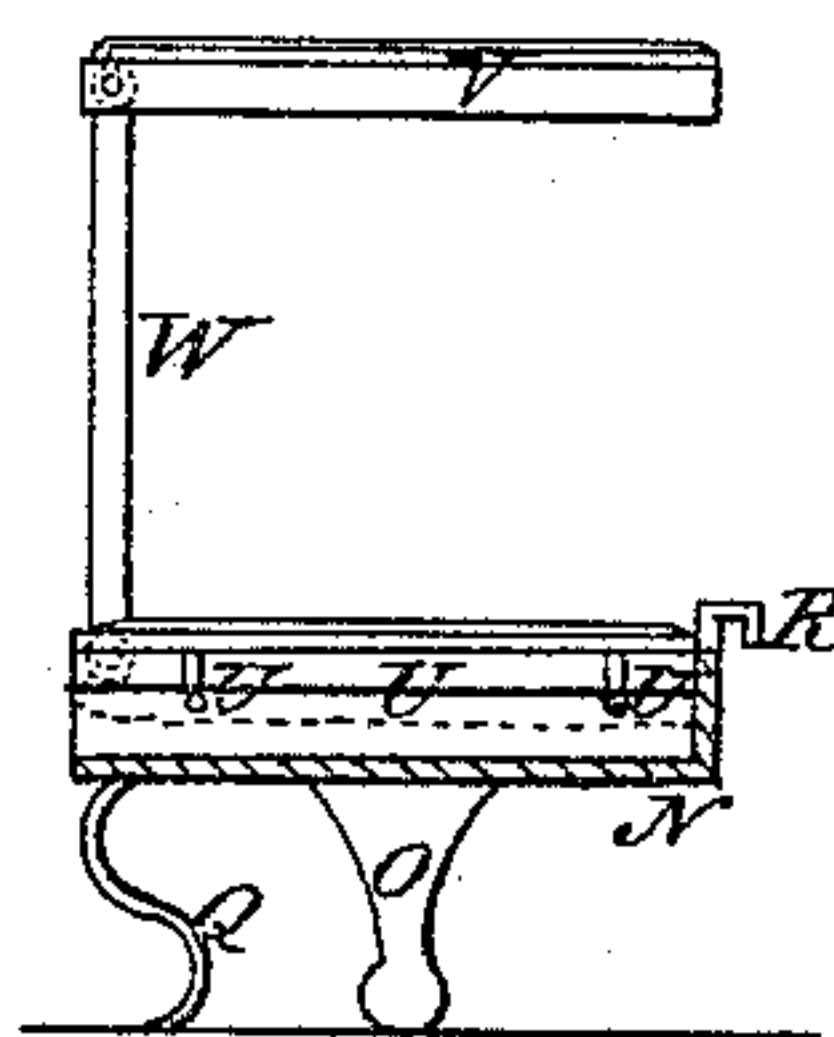
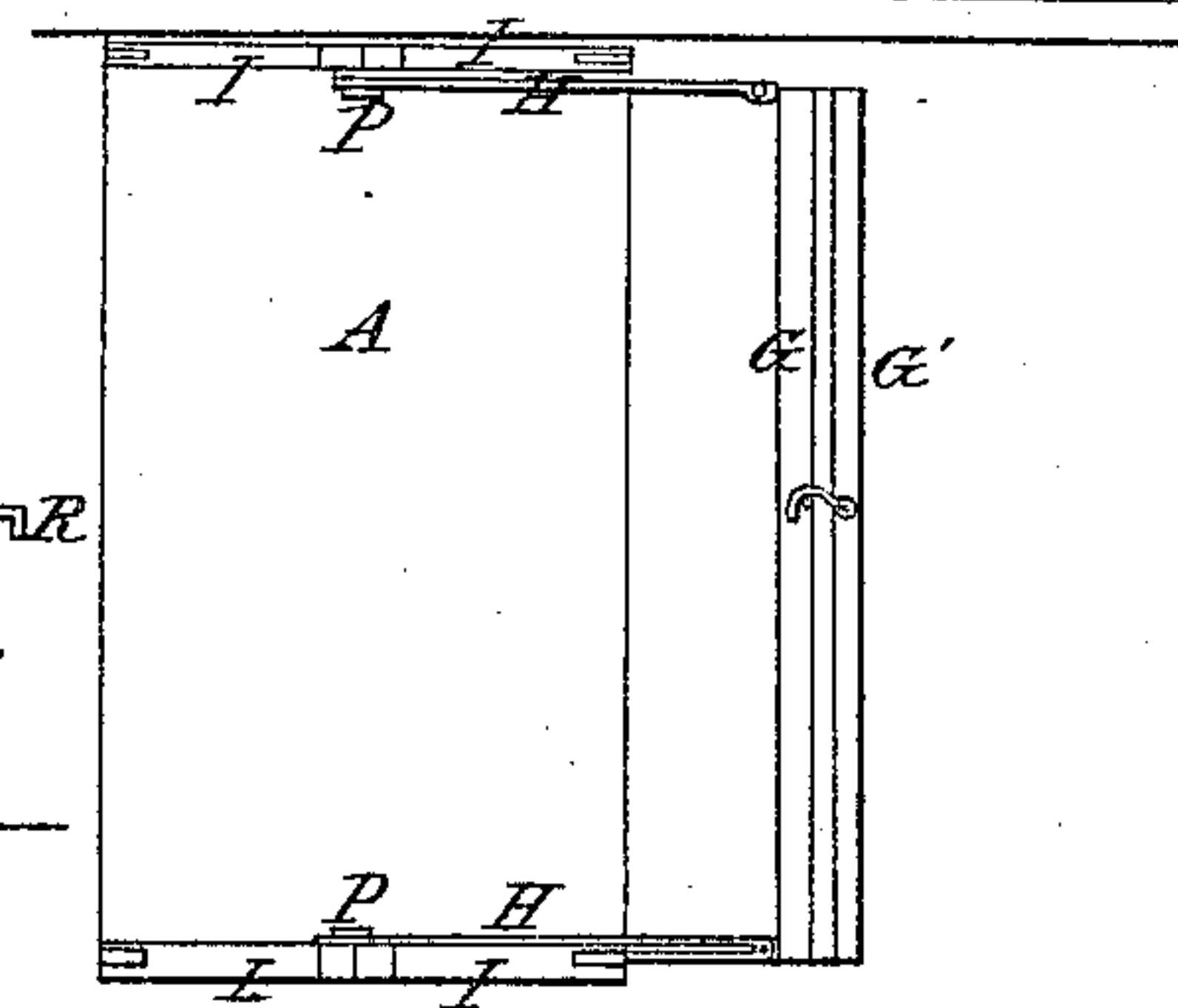


Fig. 6.





# UNITED STATES PATENT OFFICE.

THOMAS E. McNEILL, OF PHILADELPHIA, PENNSYLVANIA.

## RAILROAD-CAR SEAT.

Specification of Letters Patent No. 22,568, dated January 11, 1859.

*To all whom it may concern:*

Be it known that I, THOMAS E. McNEILL, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Car Seats by Which They Are Enabled to be Readily Converted into Comfortable Sleeping-Couches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

Figure 1, is a transverse section through one side of a rail road car, representing an end elevation of the seats when converted into sleeping couches. Fig. 2, is a stop or bird's eye view of ditto. Fig. 3, is a side elevation of one of the seats and a vertical section of the one next in succession, when arranged together to form a sleeping couch. Fig. 4, is a vertical section of one of the seats when arranged to be occupied in a sitting posture. Fig. 5, is an end elevation of ditto. Fig. 6, is a top or bird's eye view of the same. Fig. 7, is a transverse section of the box-like swinging frame and the couch platforms attached thereto.

Similar letters in the figures refer to corresponding parts.

The nature of this invention and improvement consists in so constructing the seats as to enable them to be swung around on pivots at one of their ends, parallel with and immediately next the longitudinal passage way through the car and in immediate connection with each other, and their backs to be detached and elevated on standards rising from the corners of the seats in such a manner as to form two single sleeping couches, one above the other, and in arranging under the seats when in the transverse position to be sat upon, horizontal box like frames capable of being turned parallel with and next the sides of the car in which are packed cushioned platforms that can be elevated and sustained in continuation with each other so as to form two additional single berths one above the other similar to and beside the berths next the passage way but independent of them.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The bottoms A, of the seats are supported at their ends next the passage way through the center of the car, on horizontal crank

bars B, which rest near their centers on upright standards C, through openings in which pass vertical pivot rods D, which project downward from them at this part, one of their ends being pivoted to the under end part of the bottom of the seat, while the opposite ends project beyond the pivot rods D, so as to form a rest for this end of the seat on both sides of the rods D. The opposite ends of the seats are supported by right angled bars E, extending downward from one of their corners, and extending at right angles along the floor of the car upon which they rest, although they may be, if desired, provided with castors to admit of their easy movement over the same.

The backs G, of the seats are jointed by bars H, hinged and secured to their ends, to the arm rests I. These arm rests consist of horizontal bars I, I, jointed at one of their ends to the upper ends of uprights L, at the corners of the seats, in such a manner as to enable them, when in a horizontal position to be supported by projections L', near the tops of the uprights L. The opposite ends of the arm rests are provided with dowel pins and openings in which they are inserted, when brought together, and with sliding bolts or bars M, which move in an opening between a casting on one end of the arms and the lower part of the same, and each of which enters a corresponding opening in the end of the arm I, which forms a continuation of the same. To these sliding bolts or bars M, are attached right angled plates P, which extend under and up beside the ends of the arm rests I, the right angled portions of which, next the bars H, are outside the said bars in such a manner as to enable their surfaces to press against the end of the pins I, to which the bars H, are jointed, one half of the said pins being formed on the ends of the castings, with which the ends of the arm rest next each other, are bound.

The bottom A', of the seat, next the side of the car, is made of box form, the cushioned part being hinged thereto to form a cover, and a jointed board T, being hinged to the interior end of the same, which board can be either raised to an upright position when it is desired to convert the seat into a sleeping couch as represented in Figs. 2 and 3, or inclosed within the box, below the seat bottom as represented in Fig. 4, when otherwise used.



Immediately below each bottom A, of the seats when arranged transversely, are situated horizontal box frames N, one end of which is supported by a vertical standard O, midway between their sides on which may be affixed a caster wheel if desired, and the opposite end by a leg Q, (also provided with a caster wheel if desired) at one corner of its end, and by a hook R, attached to the opposite corner, which hook extends diagonally from the corner, and rests upon the upper edge of a horizontal bar S, secured to the inside of the car, and having a slot S', formed in the side of the car next its upper edge in such a manner as to admit of the ready movement of the said box frame N, and its contents hereafter described, to the positions hereafter stated.

When it is intended to occupy the seats in a sitting posture, they are placed in the positions represented in Figs. 4, 5, and 6, so as to occupy the same space, and otherwise have the same relation to each other as the ordinary car seats, and their backs G, are capable of being swung or reversed to either side, to admit of the passengers sitting with their faces to either end of the car. In case it is desired to convert the seats into sleeping couches, to accommodate the same number of passengers in this capacity, that they are designed for, they are first moved from the sides of the car, the ends of the crank bars B, moving on their pivot rods D, with the ends of the seats toward the passage way in the center of the car, so as to bring said crank bars B, transversely to said passage way. The ends of the seats next the sides of the car are then successively swung or turned around on the pivots at the ends of the crank bars B, so as to bring them parallel with the sides of the car, and on a longitudinal line with each other throughout the entire length of the car. The box frames N, below the bottoms A, of the seats, are then moved successively longitudinally in the car, on the supports O, Q, R, at their ends, in the direction in which the ends of the seats were swung or turned, until their ends next the passage way are entirely clear of the standards C, when said last mentioned ends are turned from under the seats, and their opposite ends are moved in an opposite direction until the hook R, at these ends have slid over the edges of the bars S, to their extreme ends, and the sides of the box frames N, are brought parallel with the sides of the car. These box frames N, are open at top, and one of their sides, and each of them contains a cushioned platform or frame U, which is attached to the end pieces of the box by cranks U', near its corners, two being at each end, in such a manner as to enable it to be lowered in the box frame N, with its bottom resting on the

bottom of the same and thus admit an additional cushioned frame V, being placed above them, within the ends and side of the box frame N', or to be raised and held suspended by the cranks U', (when the cushioned frame V, is removed) with its cushioned surface a short distance above the edges of the side and end of the said box frame as represented in Fig. 7, in which position it is held by a hook, at its edges, next the side of the car, which is attached to a hasp or staple projecting from the side of the car or to the box frame N. The end of the cushioned frame V, is jointed by pins near its corners, next the side of the car, (when packed on top of the lower cushioned frame U,) to the ends of metallic bars W, the opposite ends of which are jointed by corresponding pins to the ends, near the opposite edge of the lower cushioned frame or platform U. By turning or raising the ends of the metallic bars W, to a vertical position and then turning the cushioned platform or frame V, to a horizontal position, on the pivots near its edge, and resting its opposite edge on right angled projecting pins p, which enter openings in its lower surface, a series of horizontal longitudinal platforms V, are formed throughout the entire length of the car corresponding in every respect with those formed immediately below by the other cushioned platforms U.

After three tiers of berths A, U, V, are thus formed, the backs G, are then detached from the seats by sliding the right angled plates P, along the end portion of the arm rests I, from over the ends of the divided pins or pivots I', and the ends of the bars H, attached to the same, so as to readily admit of such detachment, and at the same time to withdraw the sliding bolt or bar M, at the end of one portion of the arm rest I, from the opening in the portion next the same, to disengage the two. These arm rests I, are then raised to a vertical position on the joint pins at their ends on a line with the corner standards L, of the seats, and the hinged and cushioned cover A', of the box like frame A, of the seat, next the end of the car, and which forms the bottom of said seat, when in a horizontal position, is raised on its hinges, to a vertical position. After this, the hinged board T, is also raised to a vertical position on its hinges, and the hinged and cushioned cover or frame A', is again lowered, to again establish the continuation of the tier A, formed by the bottoms of the seats. The hinged portions G', of the backs G, of the seats, on the rear of the same which are cushioned on their inner surfaces are then opened at right angles to the back frames proper G, and are placed on the raised ends of the arm rests I, the dowel pins projecting from the ends of these



latter, entering corresponding openings at the corners of the said hinged portions G', the end of the one next the end of the car, being supported on a ledge or projection T, on the under surface of the hinged board or frame T, and the remainder being sustained on the tops of the arm rests I, so as to form a fourth tier G', of horizontal platforms on each side of the car the entire length of the same. In this manner, each pair of seats next in succession, is made to form four distinct single sleeping berths or couches, the distinctive difference between them being, that the two lower couches A', U, and the two upper ones, G', V, are on different horizontal planes or elevations, the lower ones (A,) of which, next the longitudinal passage way in the car being guarded or protected from inconveniences arising from the constant travel of passengers through the said passage way, by the right angled portions G of the backs G, which are hung on their hinges in a suspended state outside the same, the one next the end of the car having a slight longitudinal movement on its hinges to admit the end of the portion above to rest on the projecting ledge T', on the hinged board T. When it is again desired to convert the couches into the usual form of seats, the platforms of the couches U, V, or berths next the sides of the car are first lowered and packed, in the rectangular box like frames N, which are swung around and slid to the transverse positions they previously occupied, the backs G, are then detached and folded and their bars H, are attached to the divided pivots or pins I', on the ends of the arm rests I, after they are again brought to-

gether, and secured by the sliding bolts or bars M, and right angled plates P. The seats, thus formed, are then swung around on the pivots at the ends of the crank bars B, and the pivot rods D, near the center of the same, to the proper transverse position over the box like frames N, and their contents.

What I claim as my invention and desire to secure by Letters Patent, is,

1. Jointing the ends of the arm rests I, to the ends of the upright standards L, at the corners of the seats, and providing their opposite ends with sliding bolts or bars M, and right angled plates P, and half pivots or pins I', for enabling their ready attachment, when in a horizontal position by the bars H, and their upright elevation to form a support for the hinged portions G', of the backs G, when the seats are swung around upon the crank bars B, substantially in the manner and for the purpose before described.

2. I claim the combination of the hinged board T, with the projecting ledges T', on its surface, with the box like frame A', forming the rest for the bottom A', of the seat next the end of the car, in which it can be inclosed, as before described.

3. In combination with the swinging seats, I claim the box like frames N, and the platforms U, V, attached to the same by the cranks U', and jointed bars W, arranged and operating in the manner and for the purpose herein set forth.

THOMAS E. McNEILL.

Witnesses:

JNO. B. KENNEY,  
FRANK H. WYETH.