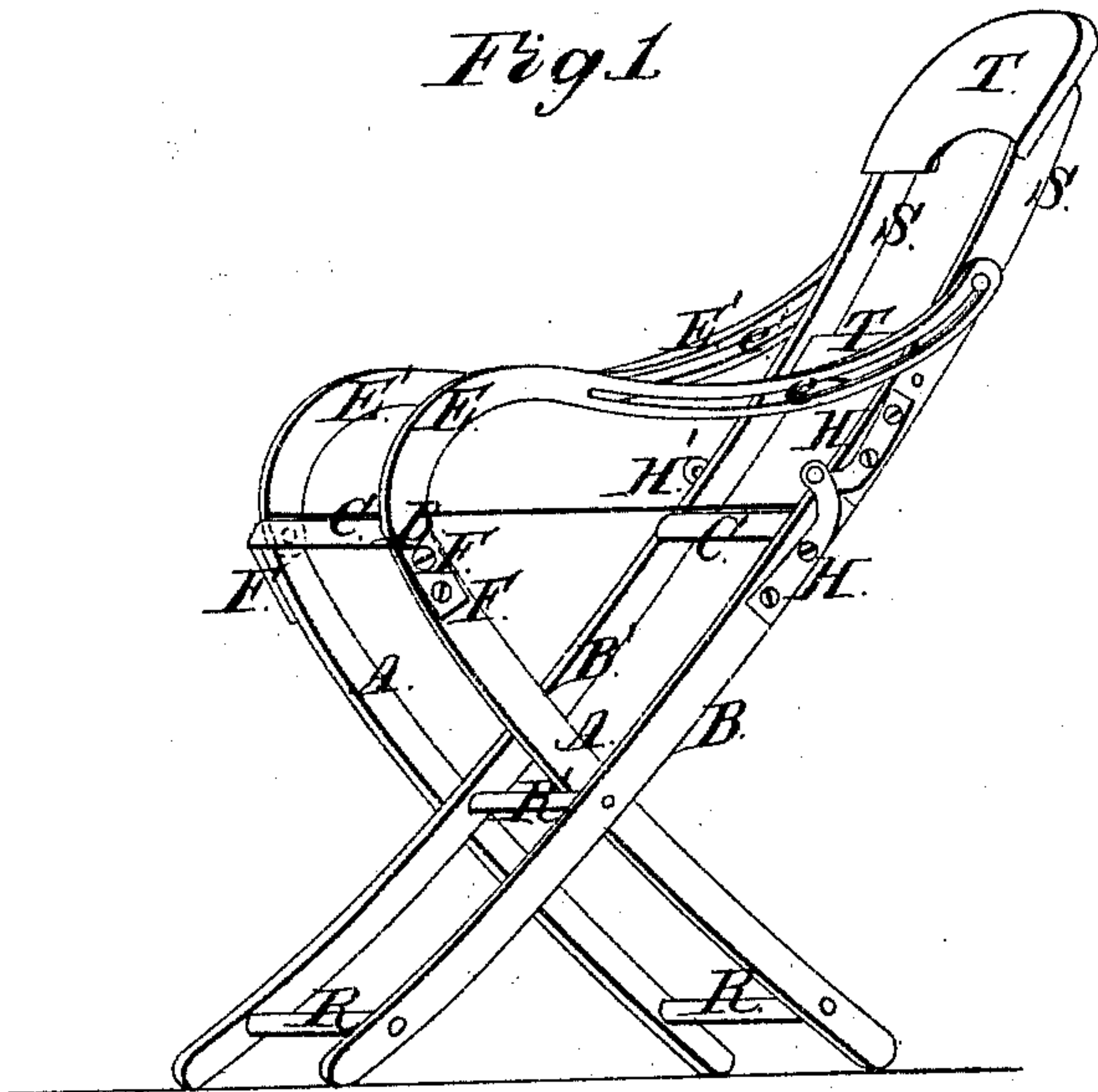


*E. W. Vaill,*  
*Folding Chair.*

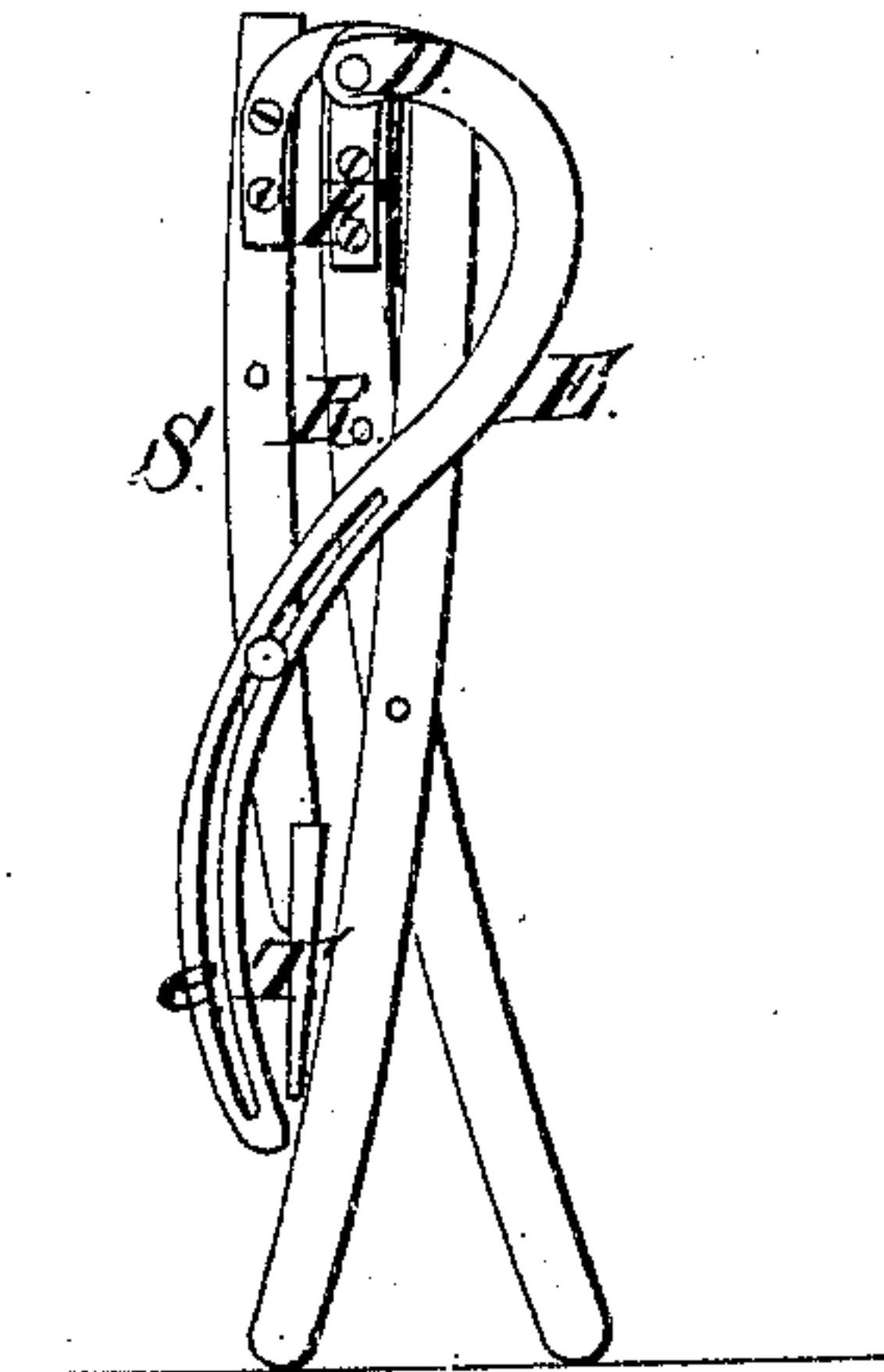
*N<sup>o</sup> 69,145.*

*Patented Sep. 24, 1867.*

*Fig 1*



*Fig. 2.*



*Witnesses,*

*S. C. Kemper*  
*Jr. & Ellsworth*

*Inventor.*

*E. W. Vaill*

*By Munroe & Co.*  
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# United States Patent Office.

E. W. VAILL, OF WORCESTER, MASSACHUSETTS.

*Letters Patent No. 69,145, dated September 24, 1867.*

## IMPROVED FOLDING CHAIR.

*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, E. W. VAILL, of the city and county of Worcester, and State of Massachusetts, have invented a new and improved Folding Chair; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view of my chair when expanded or ready for use, and

Figure 2 is a similar view of the same when closed.

This invention relates to that class of folding chairs in which the seat is supported on crossed legs which fold together, and consists in a new method of constructing and hinging the arms and back of such chairs, by which the chair is more neatly and compactly folded together, the back folding forward over the seat and hanging in front of the legs.

In the drawings, A A' are the legs which support the forward edge of the seat, and B B' are the legs upon which rests the rear edge of the seat, the legs A B crossing each other and pivoting in their centre, and the legs A' B' being similarly crossed and pivoted, so that each pair folds together like a pair of shears. The tops of the legs B B' are united by a cross-bar, C', and the tops of the legs A A' by a similar cross-bar, C, which supports the front edge of the seat. The pair of legs on each side is connected with the pair on the opposite side by rounds R R R'. The central round may be omitted and the legs pivoted together upon bolts or pins. The legs A A' may cross the other pair on the inside or outside, but, preferably, I place the pair A A' on the outside in order to give increased width to the chair seat. The back of the chair consists of standards S S connected by suitable traverses T T. The lower ends of the standards S S rest fairly on the upper ends of the legs B B', so that each standard, with the leg which it rests upon, will, when the chair is expanded, form a finely curved post for the support of the rear side of the chair and arms. The standards thus resting on the legs B B' are hinged to the latter by curved hinges H H', which are made in the form of runners, connected together at the extremity of their bent-up portions, and attached to the side of the standard and leg in the position shown in the drawings. The arms E E' are curved, as shown in the drawings, and at their forward extremities are pivoted to the top of the legs A A' when the latter are placed outside of the legs B B'. When the legs B B' are on the outside the arms will be pivoted either to blocks F F, attached to the upper part of the legs, or to the projecting extremities of the cross-bar C, or to an ear, D, of metal or other suitable material. This construction will preserve the parallelism of the arms and the symmetry of the chair. From a point near their centre to a point close to their extremity the arms E E' are transversely slotted, as shown at e e', and they are connected with the standards S S only by a pin projecting from the side of the standards through the slots e e', and provided with a head to prevent the arm from becoming detached from the pin. This completes the construction of my improved chair.

The operation of such a chair is clearly shown in figs. 1 and 2, in the former of which it is expanded and in the latter closed. The work of opening and closing the chair is but momentary. In order to close it is only necessary to bring the legs together and then throw the back forward, and a reversal of the operation opens the chair and makes it ready for use again. In other folding chairs the back folds backward; in mine, by the peculiar shape and operation of the curved hinges H H', the back can be thrown forward over the seat, in which position it will neatly occupy the concavity formed by the curve of the legs, and will bind the whole firmly together in such a manner that it cannot be opened or moved until the back is again lifted to its position when the chair is in use. By folding the back forward, too, the ends of the arms E E', instead of projecting outward, as is the case with other folding chairs, bend inward towards the legs, so as not to be in the way, and to occupy far less room. The legs are to be made curved, as shown in the drawings. The seat is designed to be flexible. The chair thus constructed will stand alone, whether extended or closed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The curved hinge H H', in combination with the legs B B', arms E E', and the standards S S of a folding chair, substantially as and for the purpose described.
2. The chair above described, consisting of the curved legs A A' B B', rounds R R R', curved and slotted arms E E', curved hinges H H', cross-bars C C', traverses T T, and standards S S, all constructed, combined, arranged, and operated substantially in the manner and for the purposes specified.

E. W. VAILL.

Witnesses:

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