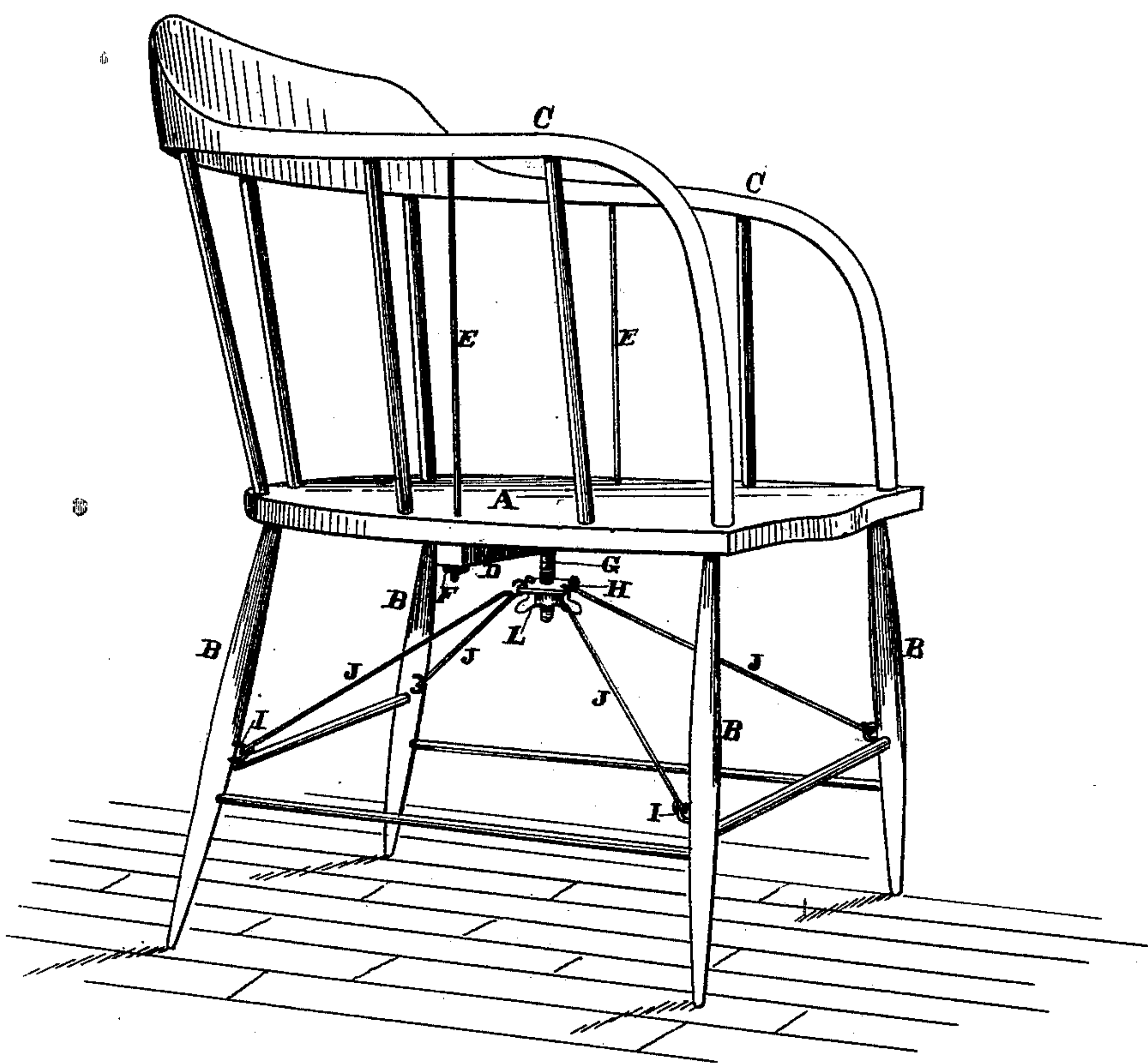


S. P. SORENSON.
Chair-Brace.

No. 208,768.

Patented Oct. 8, 1878.



Witnesses

Geo. H. Strong.

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UNITED STATES PATENT OFFICE.

SOREN P. SORENSON, OF RIO VISTA, CALIFORNIA.

IMPROVEMENT IN CHAIR-BRACES.

Specification forming part of Letters Patent No. **208,768**, dated October 8, 1878; application filed September 2, 1878.

To all whom it may concern:

Be it known that I, SOREN P. SORENSON, of Rio Vista, county of Solano, and State of California, have invented an Improved Chair-Brace; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing.

My invention relates to an improvement in chairs; and my improvement consists in providing peculiar braces to bind the legs, seat, and arms together firmly, so as to strengthen the chair. A binding-rod is secured to each leg, the opposite ends of said rod meeting in a common plate mounted on a bolt in the center of the chair, under the seat. A thumb-screw on this plate holds the plate in position, and admits of its being moved up the bolt to tighten the rods, thus keeping the legs firmly in position. The brace under the seat, on which the bolt carrying the center plate is secured, is held in place by rods running from the arms of the chair, so that these rods are drawn tight by the same action of the screw that tightens the rods connecting with the legs. By this means the whole chair is firmly bound together.

Referring to the accompanying drawing, which is a perspective view of my invention, let A represent the seat, B the legs, and C the arms, of an ordinary arm-chair. Across under the seat of the chair passes a brace, D, which is held in position by the rods E. These rods E pass down through the arms C, the rim or edge of the chair-seat, and through the brace D at its ends, as shown. The upper end of the rod has a head upon it, which is countersunk in the arm, and at the lower end screw-threads are formed, and a nut, F, is screwed upon these threads. When this nut is set up the arms are firmly stayed to the seat and brace, and the upright rounds cannot become loose or the arms fall off.

In the center of the brace D, which is secured under the chair-seat, as described, is a downward-projecting screw-bolt, G, the head of which is countersunk in the upper side of the brace, and the threads are formed on the lower portion of the bolt which projects

through the brace. On this bolt is slipped a sliding plate, H, having holes at each corner, as shown, for the purpose hereinafter described.

At a suitable distance from the lower end of each of the four legs I insert on each leg a screw-eye or staple, I. A binding-rod or diagonal brace, J, having hooks at each end, is then hooked into each of the eyes on the legs, and the other ends of said rod hooked into the hole at each corner of the binding-plate H, as shown. A thumb-screw, L, is screwed onto the bolt G under the plate H, and as this thumb screw or nut is turned up the plate is slid up the bolt, and all the binding rods or wires are tightened simultaneously, drawing the legs firmly against the rounds.

It will be seen from this construction that the rounds between the legs need not be glued in unless desired, as the binding-rods draw tightly on each separate leg, and a uniform system of bracing is provided.

In case the legs should become loosened from shrinkage of the wood, a turn on the thumb-screw will tighten them all up.

As the upper rods from the arms hold the brace in which the center-bolt is placed, any downward strain on said center-bolt like that produced by setting up the thumb-screw tends to tighten the arms down also, so that the legs, arms, and seat are all strengthened by the system of binding-rods herein described.

The ends of the rods might be passed through the legs and beaded or riveted up so as to be secured to said legs. The rods might have eyes on their ends to hook over hooks on the legs and sliding plate; but I prefer the system shown in the drawings.

This arrangement may be applied to chairs and stools of any kind. The binding-rods, with their tightening appliances, may be put on chairs already constructed at slight expense, and in making new chairs the addition of my system of bracing adds little to the cost. It does away with the present unsightly system of wiring chairs, as the rods are smooth and neat, and are entirely under the seat and between the legs. With these rods screwed up as described, the whole chair

is made firm and strong, and will last longer than those of ordinary construction.

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

The diagonal braces J, extending from the legs of the chair to the central plate, H, and having their length made adjustable, as shown, in combination with the bottom brace, D, and

the side or arm braces, E, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

SOREN P. SORENSON.

Witnesses:

FRANK A. BROOKS,
WALTER C. BEATIE.