

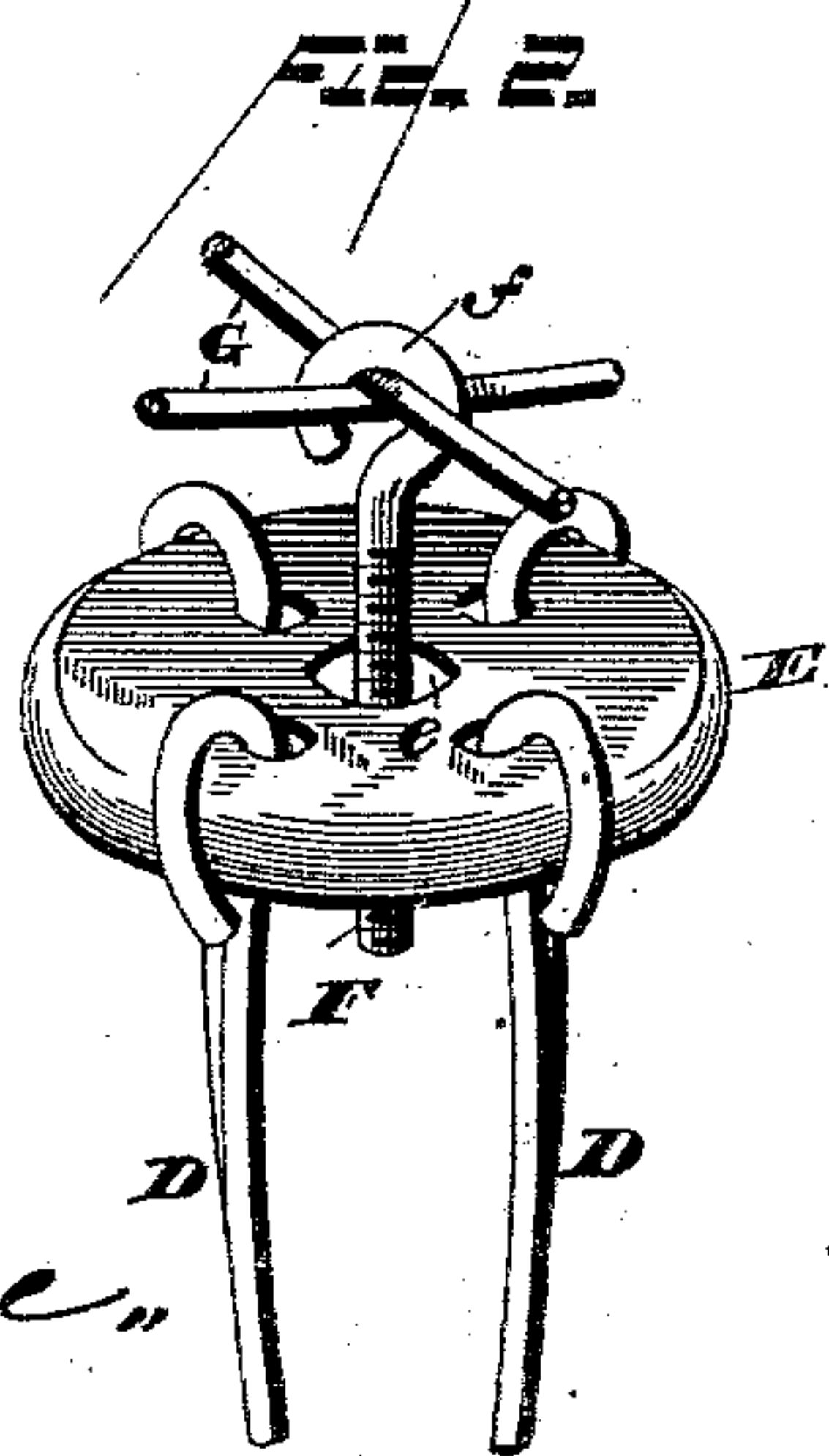
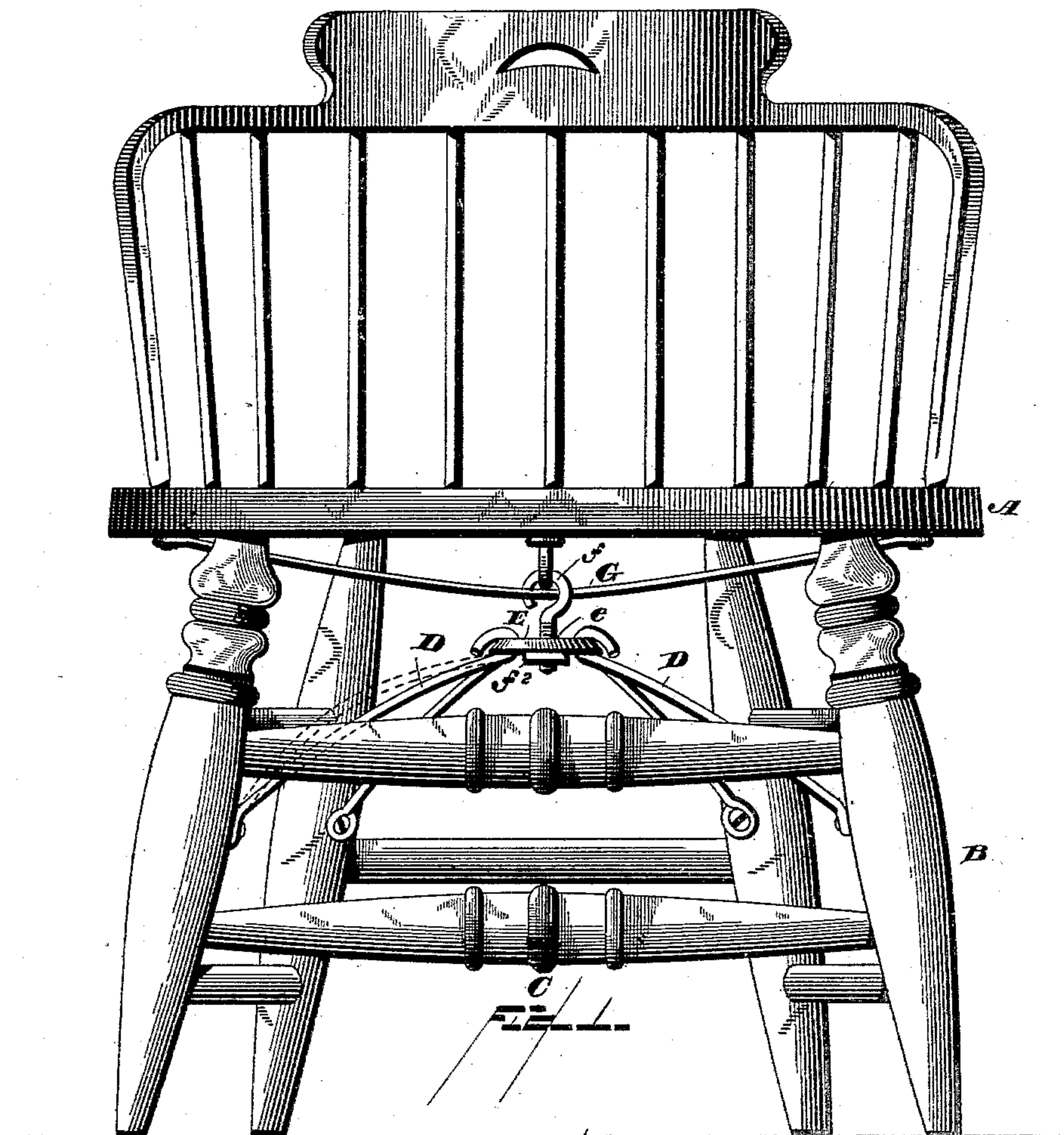
(No Model.)

3 Sheets—Sheet 1.

J. F. SARGENT.  
CHAIR BRACE.

No. 359,891.

Patented Mar. 22, 1887.



Witnesses:-

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*S. O. Edmunds*

Inventor:-

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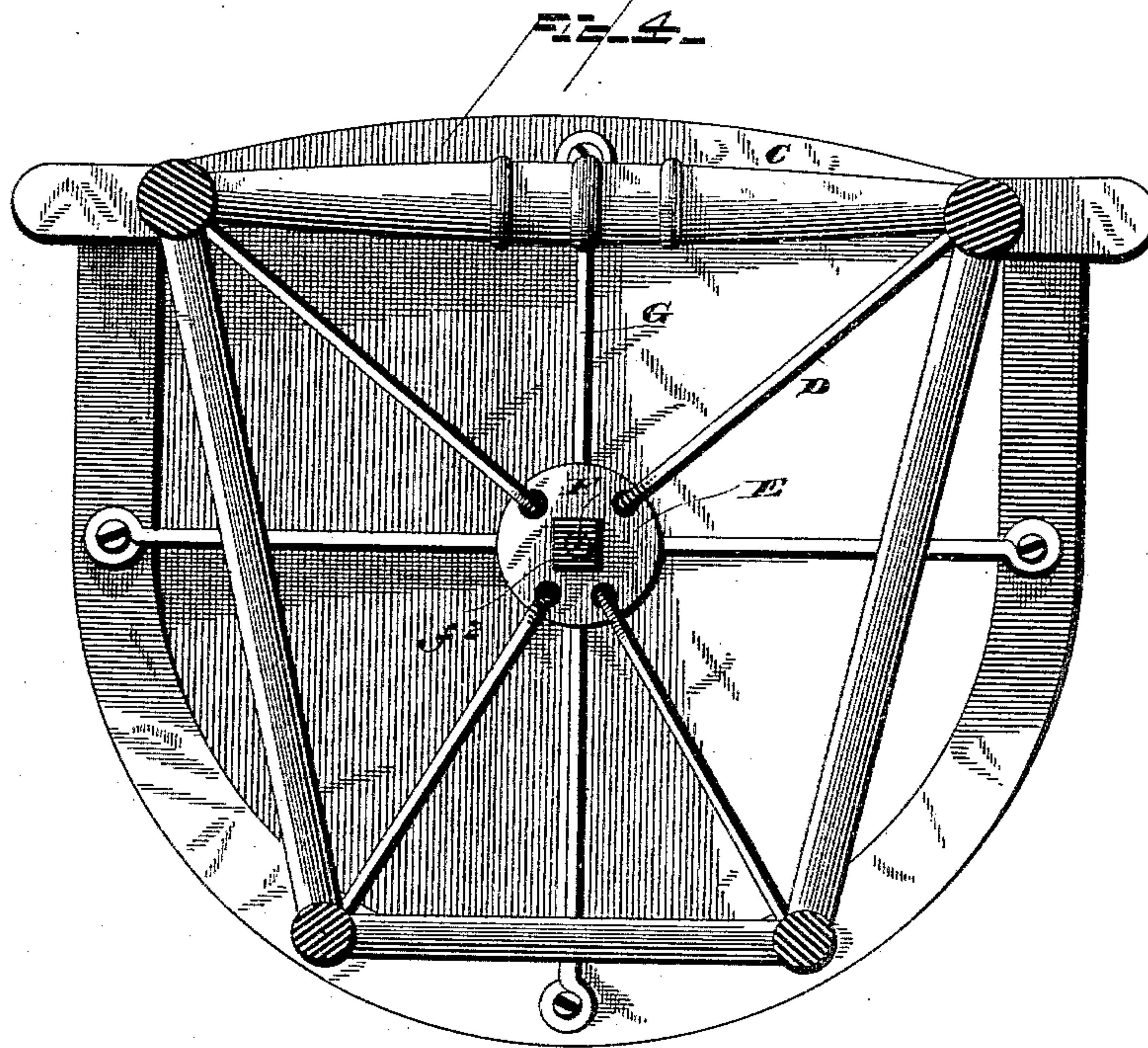
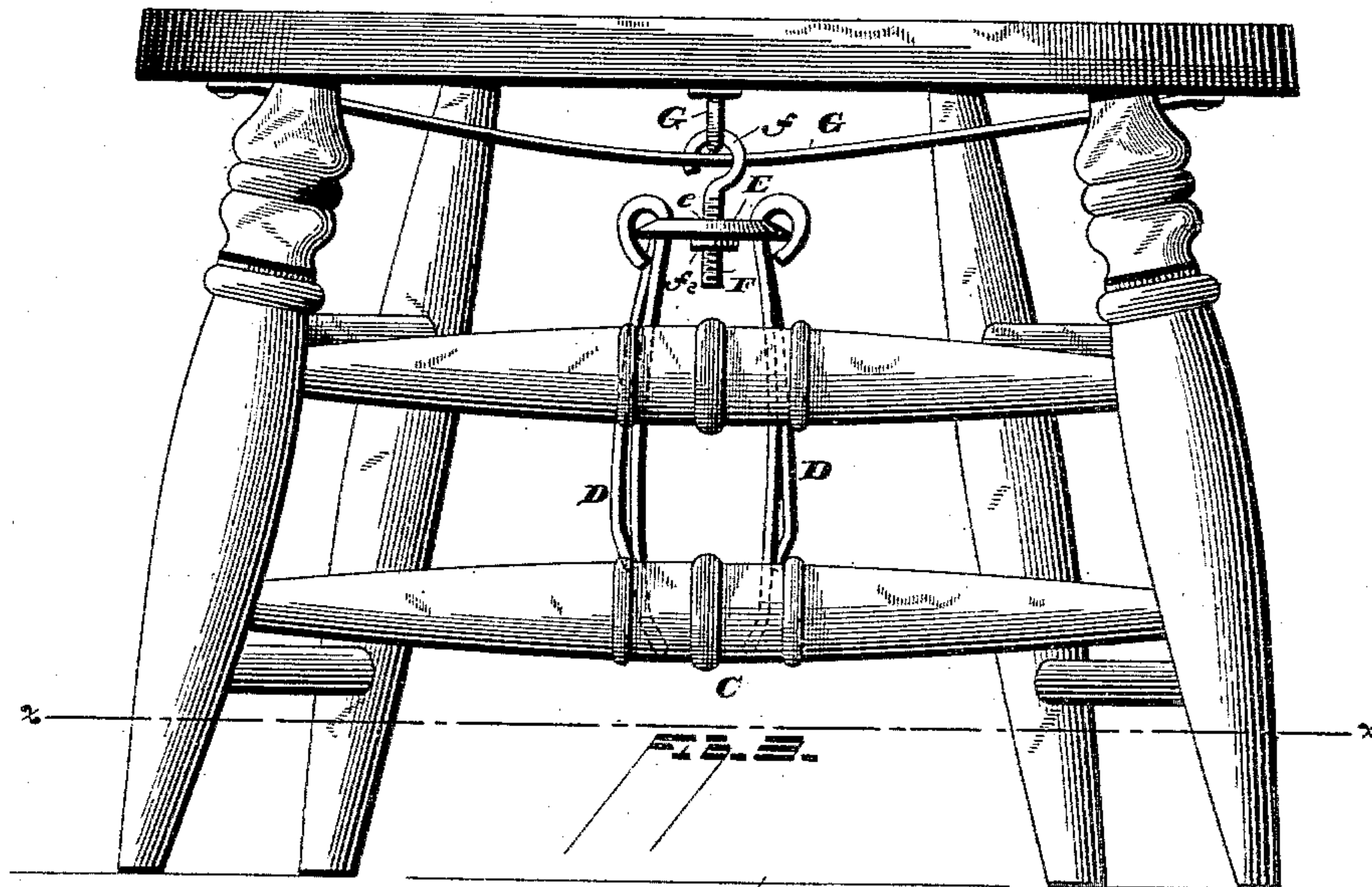
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3 Sheets—Sheet 2.

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Witnesses:

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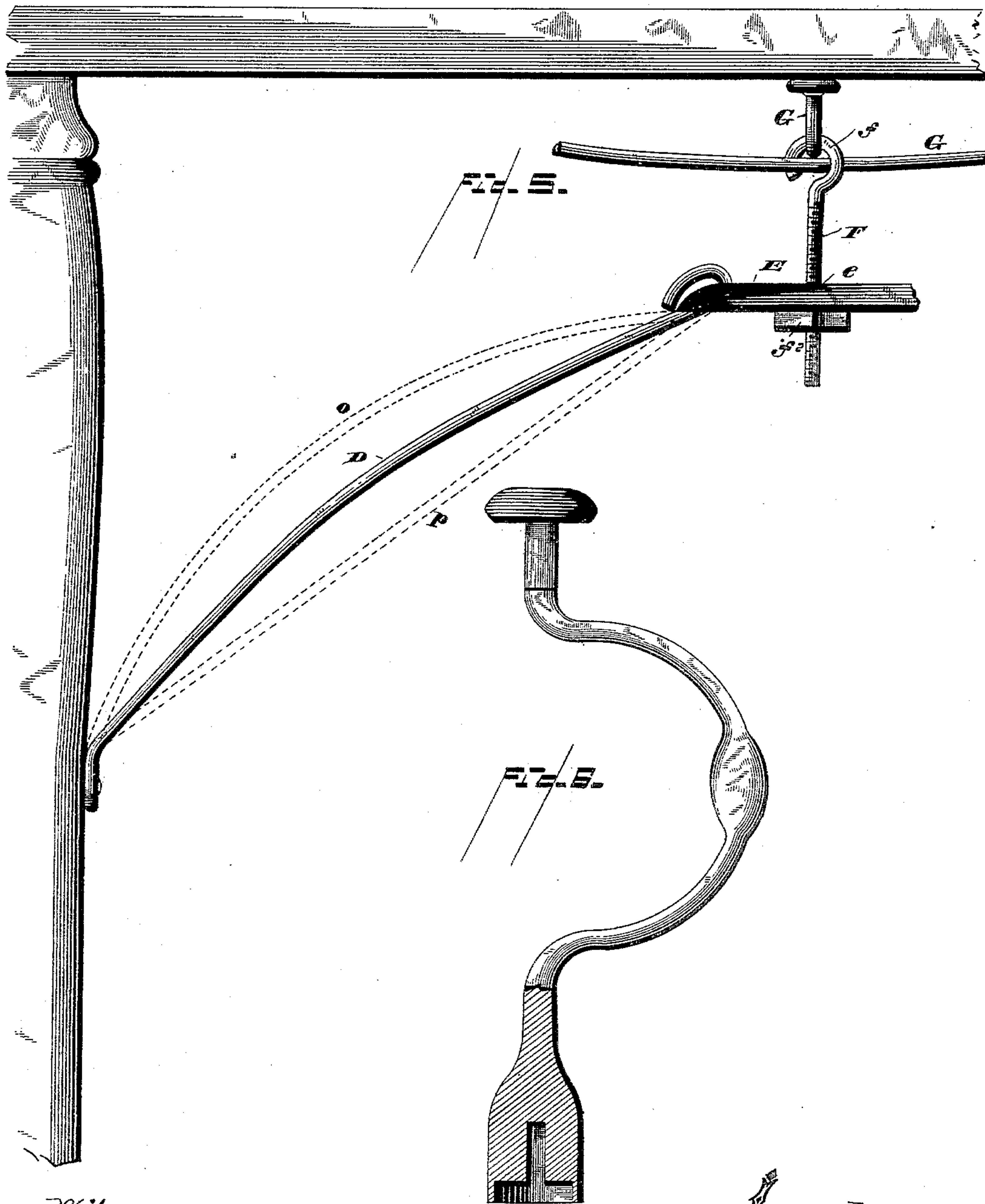
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3 Sheets—Sheet 3.

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# UNITED STATES PATENT OFFICE.

JAMES F. SARGENT, OF MANCHESTER, NEW HAMPSHIRE.

## CHAIR-BRACE.

SPECIFICATION forming part of Letters Patent No. 359,891, dated March 22, 1897.

Application filed July 23, 1886. Serial No. 208,868. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. SARGENT, a citizen of the United States, residing at Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Chair-Braces, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to chair-braces which are designed to firmly hold the rounds and legs in their respective sockets.

15 The object of the present invention is to provide a brace which shall be simple in construction, cheap of manufacture, readily applied to either old or new chairs or stools, and durable in use, and also to prevent the rounds and legs from becoming loose by reason of shrinkage of the wood.

20 The invention consists of a series of spring-braces, the upper and lower ends of which are respectively secured to a center plate and the legs, the plate being adjustable upon a threaded rod, which is hooked over two wire rods which cross each other at right angles and are suitably secured to the lower face of the chair seat or frame, all as will be hereinafter described, and more particularly pointed out in the claims.

30 In the drawings, Figure 1 is an elevation of a chair having my improvement attached thereto. Fig. 2 is a detail view showing the manner in which the hook which supports the plate passes over the transverse bars. Fig. 3 is an elevation of a stool with the spring-braces hanging from their supporting-plate. Fig. 4 is a bottom plan view. Fig. 5 is a detail view; and Fig. 6 is an elevation of a bit-stock, partly in section, employed by me in  
40 tightening the nut on the brace-supporting plate.

Referring to the drawings, in which like letters of reference refer to like parts, A designates the seat of a chair or stool having legs  
45 B and rounds C, which are socketed, respectively, in the chair seat and legs in the usual manner, with this exception, that when my brace is employed it is not necessary to use glue in the joints.

50 D is a series of spring-braces, which are secured at their lower ends to the chair-legs, preferably by means of screws, while their

upper ends have hooks, which pass through perforations in the rim of the metal supporting-plate E, that has a central aperture, e, 55 through which passes a threaded rod, F, having a hook, f, that passes obliquely over the two rods secured to the lower face of the seat or frame at the point where they intersect, as clearly shown in Fig. 2.

60 The rods G have been secured to the seat and the hook f placed thereon, as shown and described. The plate E is placed over the rod F, when the nut f<sup>2</sup> is given two or three turns in order to support the plate upon said 65 rod while the lower ends of the spring-braces D are being secured to the legs, after which said nut is forced upwardly upon the rod by means of a bit-stock, substantially such as I have shown in Fig. 6, having a socket which 70 fits upon the nut, but permits the threaded rod to pass upwardly therein as far as may be necessary to draw the braces from the position indicated by dotted lines o in Fig. 6 to the position indicated by full lines. The dotted lines 75 p indicate the position that an ordinary straight brace would occupy.

After the springs of the braces have been partially drawn out by forcing the nut f<sup>2</sup> upwardly upon the rod F, that portion of the 80 lower end of the latter which projects below the nut is cut off with a pair of pinchers. The effect of the spring-braces, after they have been secured in the manner described, is to exert a constant contracting force upon the 85 legs of the chair, thereby serving to draw them in upon the rounds in case of shrinkage of the wood, which takes place more or less in all wooden structures, and which it is essentially necessary to provide against in chairs and 90 stools.

I have found, after applying my brace to a large number of chairs, &c., during the past year, that the legs and rounds never become loose, and therefore never require any further tension to be put upon the braces by adjusting the securing-nut.

I do not limit myself to the exact form and proportion of parts herein shown as an embodiment of my invention, the essential features of which will be understood from the foregoing description in connection with the drawings.

I am aware that it is old to secure a se-



ries of wires at one end to the seat of the chair and at the other end to the legs, and to provide a straining device for securing tension on said wires, and I do not desire to claim such construction.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with a perforated plate having means for supporting it from the lower face of the chair, of a series of spring-braces secured to the said plate and to the legs of the chair, as and for the purpose set forth.

2. The combination, with a perforated plate supported from the lower face of the stool or chair by means of a nut and threaded rod having a hook at its upper end, which passes over two rods connected at their ends to the seat at the point where they intersect, of a series of

spring-braces which are hooked to the periphery of said plate and secured to the legs of the chair, as and for the purpose set forth.

3. In combination with the transverse rods secured at each end to the seat, the threaded rod having a hook which passes diagonally over said rods at the point where they intersect, a perforated plate on said rod, a series of braces secured thereto and to the chair-legs, and a nut for partially overcoming the tension of the braces by being tightened upon the supporting-plate, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

J. F. SARGENT.

Witnesses:

S. T. EDMONDS.

JOS. FORREST.