

(No Model.)

P. FREDIN.
TRUSS.

No. 504,158.

Patented Aug. 29, 1893.

Fig. 1.

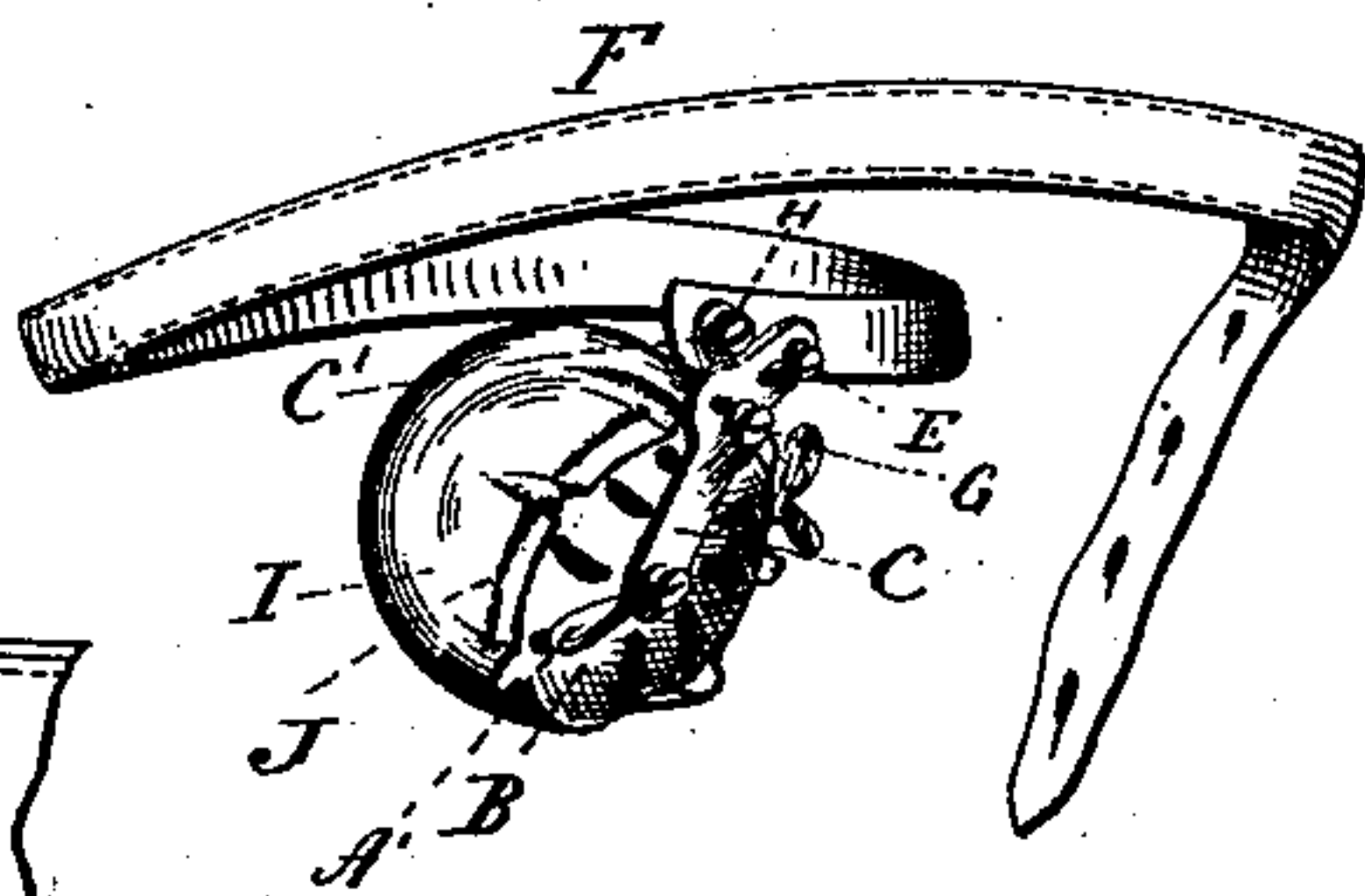


Fig. 2.

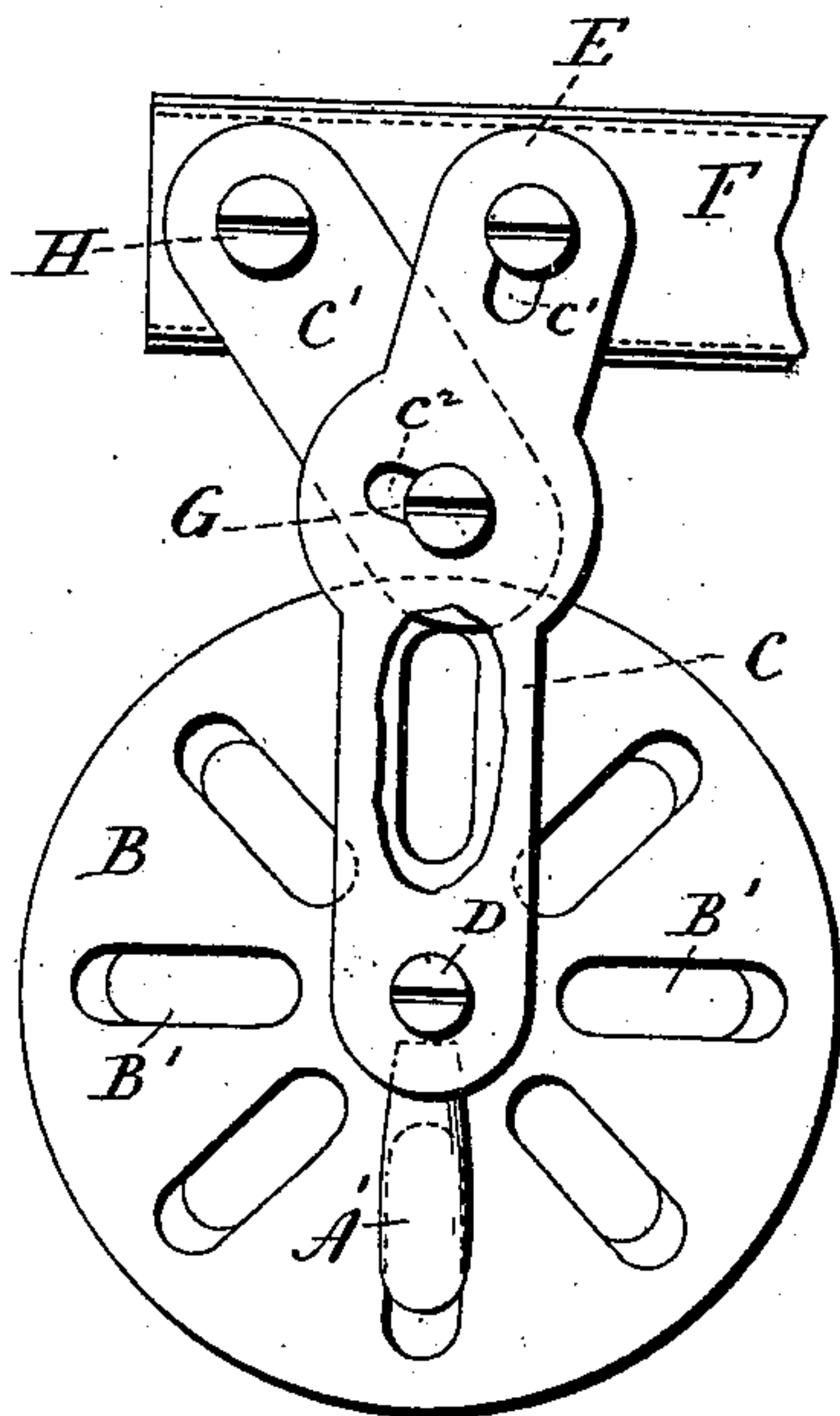


Fig. 3.

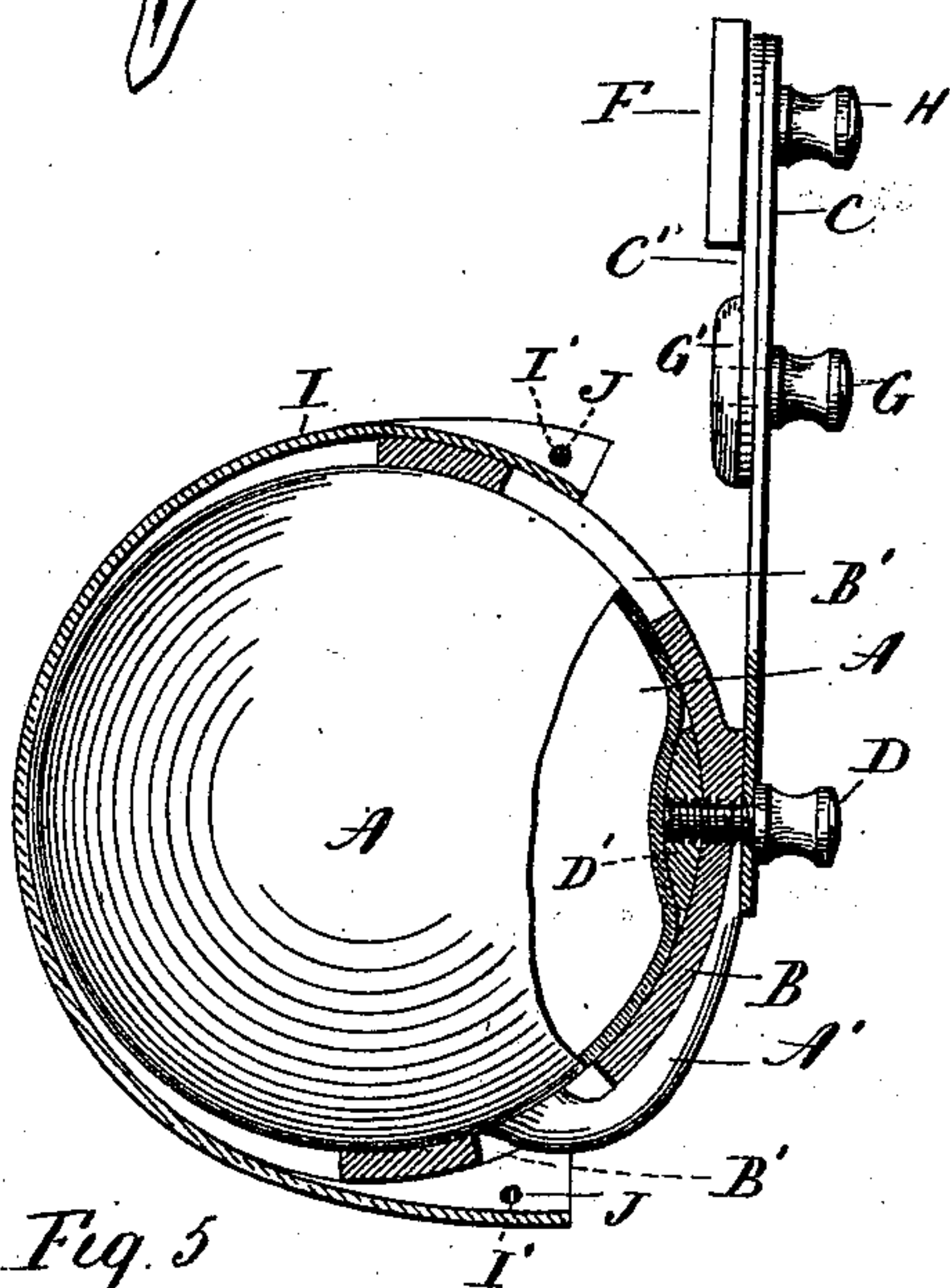


Fig. 4.

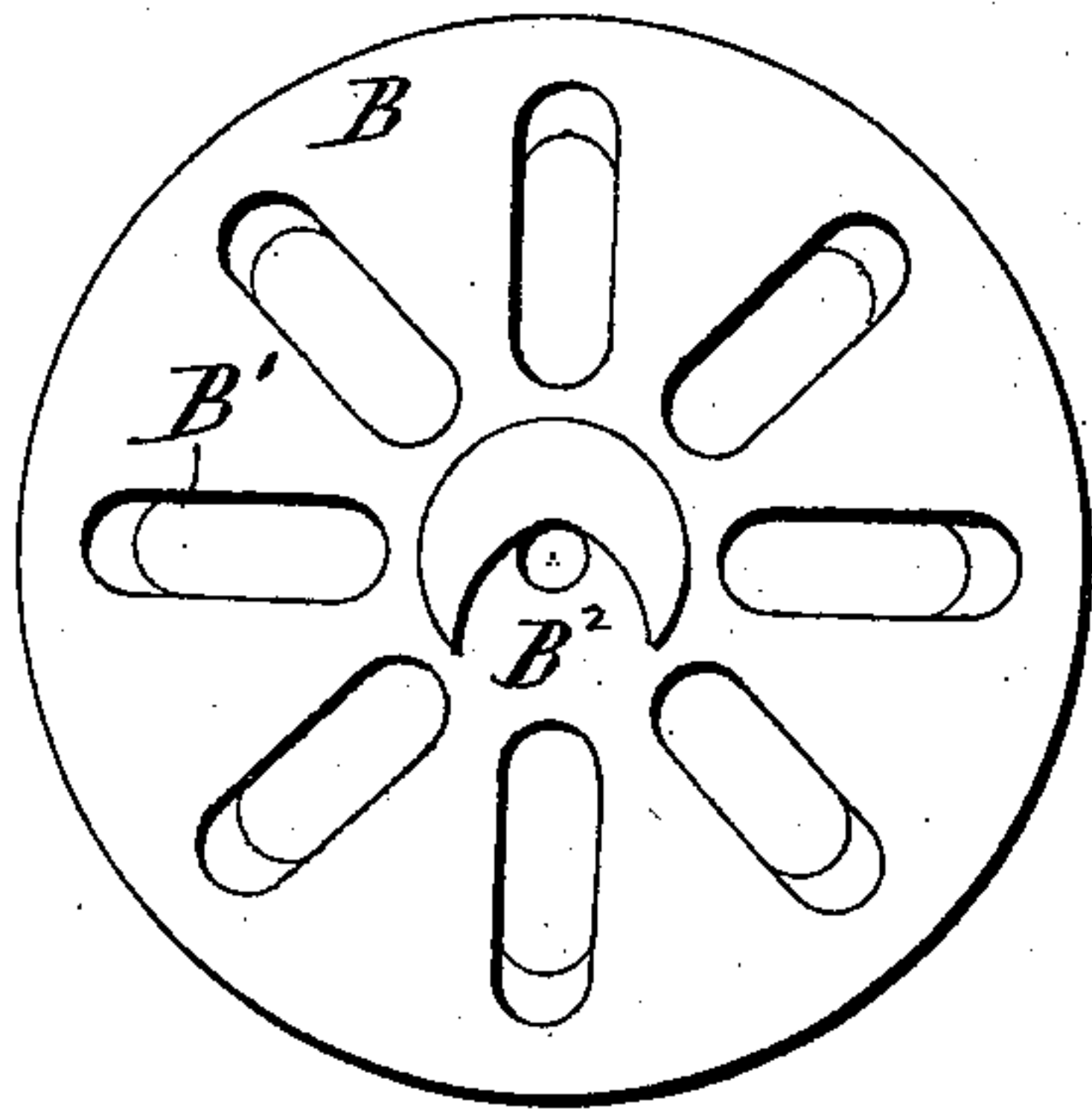
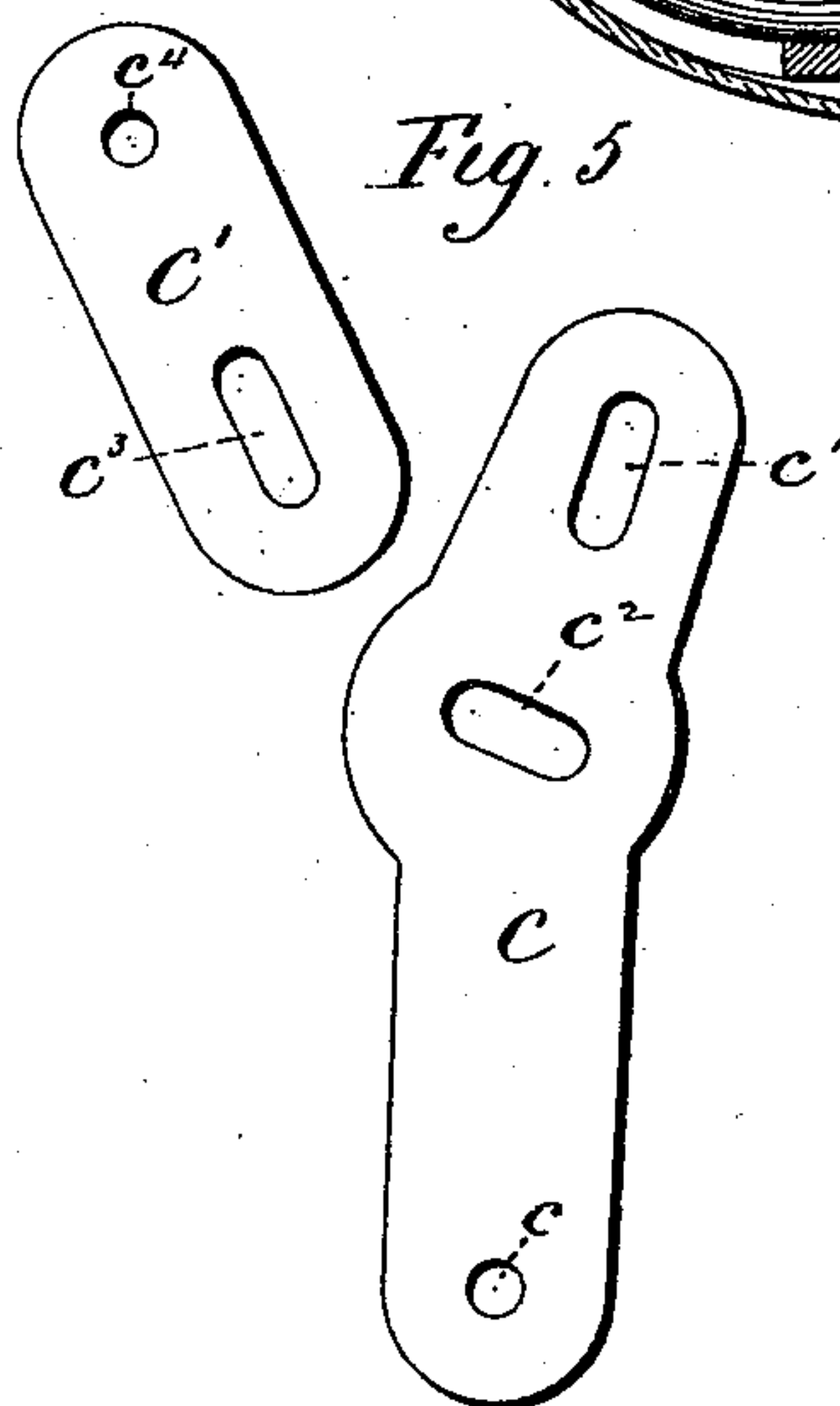


Fig. 5.



Witnesses.
J. H. Shumway.
C. P. Kellogg.

Per Johan Fredin
Inventor
By atty Earle Seymour

UNITED STATES PATENT OFFICE.

PERJOHAN FREDIN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO ELISHA HEWITT, OF SAME PLACE.

TRUSS.

SPECIFICATION forming part of Letters Patent No. 504,158, dated August 29, 1893.

Application filed February 24, 1893. Serial No. 463,542. (No model.)

To all whom it may concern:

Be it known that I, PERJOHAN FREDIN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Trusses; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and
10 which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a truss constructed in accordance with my invention; Fig. 2, a view in front elevation of the device
15 with the main portion of its strap or band broken away; Fig. 3, a view in vertical section on the line $x-x$ of Fig. 2; Fig. 4, a detached view of the cup-shaped frame showing the recess formed in it to receive the end
20 of the inflation tube of the ball-pad; Fig. 5, a view showing the two members of the frame support detached from each other.

My invention relates to an improvement in that class of trusses in which the pad consists
25 of an inflated ball, the object being to produce a simple, effective, and comfortable article, having provision for the ready inflation of the pad without its removal, for the circulation of air under the pad, and for a wide range
30 of adjustment in the position of the frame and hence the pad, with respect to the band or strap which passes around the body.

With these ends in view, my invention consists in a truss having certain details of construction and combinations of parts as will
35 be hereinafter described and pointed out in the claims.

In carrying out my invention, I employ a pad consisting of an inflated rubber ball A,
40 having a small inflation tube A', by means of which the ball is kept inflated to the required degree. This ball is set into a cup-shaped frame B, conforming to it in curvature, and nearly hemi-spherical in form as
45 herein shown. This frame may be of wood, or other suitable material, and is constructed with perforations B', to permit air to circulate around that portion of the ball which it incloses. As shown herein the said perforations
50 are arranged in a circular series, and each consists of a long narrow slot. The in-

flation tube A' of the ball is passed through one of the said openings, and hence to one side of the center of the frame, as shown in Figs. 2 and 3 of the drawings, whereby it is
55 got out of the way, or cleared from the inside of the frame, and whereby also it is brought into an accessible position for inflating the ball without removing the same from the frame.

As herein shown, the frame is constructed upon its outer face and near its center, with a recess B², which is designed to receive the end of the tube, the same to be subjected to compression in the said recess, and in that
60 way kept closed to prevent the escape of the compressed air within the ball. By locating the recess as described, the end of the tube will be compressed by the lower end of the long member C, of the two-part frame support of the device. This is clearly shown in
70 Fig. 3 of the drawings.

It is apparent that if desired, a special opening might be made in the frame for the inflation tube of the ball to pass through, and
75 also that special means might be provided for compressing the end of the tube in its recess. I do not therefore limit myself to the exact construction shown.

The two-part frame-support consists of the
80 long member C, before mentioned, and a short member C', which are made of heavy spring metal. The lower end of the member C, has a perforation c, which receives a screw D, passing also through the center of the frame,
85 and into a threaded nut D', located in the bottom of the same, whereby the frame is firmly secured to the said member of the frame-support. The upper end of the member C, is constructed with a longitudinal slot
90 c', which receives a screw E, by means of which the said member is adjustably attached to the band or strap F, which may be of any suitable construction, and which is designed to pass around the body of the wearer of the
95 truss. The said member C, is also provided with a substantially transverse slot c², located above its longitudinal center, and receiving an adjusting screw G, which also passes through a longitudinal slot c³, formed in the
100 lower end of the member C', and into a nut G', which bears against the inner face of the said

member C'. The upper end of the member C', is constructed with a small perforation c^4 , which receives a screw H, by means of which the said member is attached to the band or strap F, before mentioned. As thus arranged the member C', of the support reinforces the long member C, thereof, virtually forming a wide base for the attachment of the member C to the band or strap. By loosening either the screw G, or the screw F, or both, it is apparent that the member C, which carries the frame, and hence the pad, may be adjusted vertically or laterally within the range of the slots c^1 , c^2 and c^3 , the combined range of which enables the pad to be set in a great variety of positions with respect to the band or strap. It will be apparent that if it is designed to either raise or lower the compression of the air within the ball, it may readily be done by loosening the screw D, sufficiently to permit the end of the tube A', to be drawn out of the recess B², formed in the outer face of the frame. If it is desired, for instance, to increase the pressure of air within the ball, the mouth may be applied to the tube, and the ball blown into, after which the tube may be pinched at its inner end between the fingers, while its outer end is inserted into the recess and clamped therein by turning up the screw D, again. Or, the screw may simply be loosened until a portion of the air within the ball has been allowed to escape, after which it may be tightened again. By preference I shall employ a loose cover I, of soft wash-leather or other equivalent material, as a protection for the ball-pad. This cover will be fitted over the ball-pad and adapted in size to sufficiently extend over the frame to be firmly attached thereto by means of a pucker-string J, passing through holes I', formed in its edge. It is apparent that by tightening this string, the cover will be drawn down upon the frame, and thus secured in place. This cover I have found makes my improved truss more comfortable in use, as well as more cleanly, for it avoids discoloration of the rubber ball pad, and may readily be removed and washed. If preferred it may be extended so as to nearly cover the frame, but it will be sufficient to simply carry it over the edge of the same far enough for its attachment thereto.

In view of the suggestions made herein, I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to

make such changes and alterations therein as fairly fall within the spirit and scope of my invention.

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

1. A truss having a ball-pad furnished with an inflation tube, a cup-shaped frame adapted to receive the said pad, and constructed with an opening located at one side of its center to permit the tube to project through it for clearance and inflation, a frame-support attached to the center of the said cup-shaped frame, and a band or strap to which the said frame-support is attached, substantially as described.

2. A truss having a ball-pad furnished with an inflation tube, a cup-shaped frame adapted to receive the said pad and permit its tube to project through it at a point one side of its center, and constructed at its outer face with a recess to receive the end of the tube, and means for clamping the tube in the said recess, substantially as described.

3. A truss having a band or strap to pass around the body, a frame-support attached to the said band or strap, a ball-pad furnished with an inflation tube, and a cup-shaped frame adapted to be attached to the said support and to receive the said ball-pad, and permit the tube thereof to pass through it, and constructed with a recess to receive the end of the said tube, and located in position for the compression of the tube by the said support when the frame is attached thereto, substantially as described.

4. A truss having a ball-pad, a frame to receive the same, a band or strap to pass around the body, and a pad-support consisting of a long and a short member, both attached at their upper ends to the band, and the former having the frame attached to its lower end, and the upper end of the long member, and the lower end of the short member being longitudinally slotted, and the long member having a substantially transverse slot to receive a stud also passing through the slot in the lower end of the short member, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PERJOHAN FREDIN.

Witnesses:

FRED C. EARLE,
CHAS. P. KELLOGG.