

No. 876,888.

PATENTED JAN. 14, 1908.

M. E. STOCKWELL.
METAL FURNITURE.

APPLICATION FILED JAN. 18, 1904. RENEWED JUNE 3, 1907.

2 SHEETS—SHEET 1.



Fig. 3.

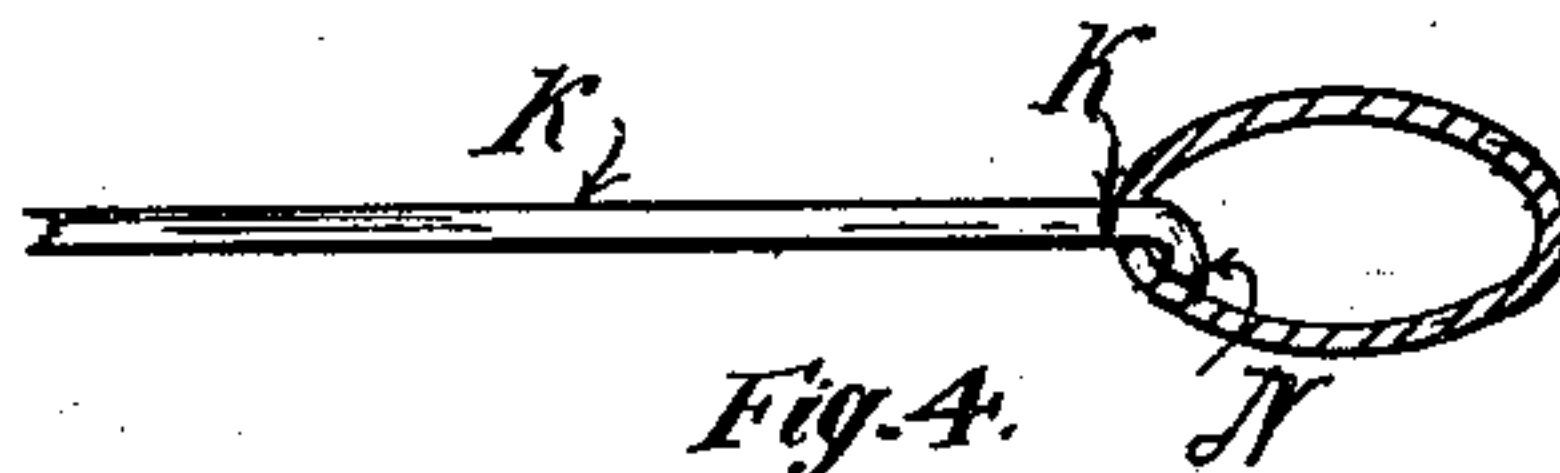


Fig. 4.

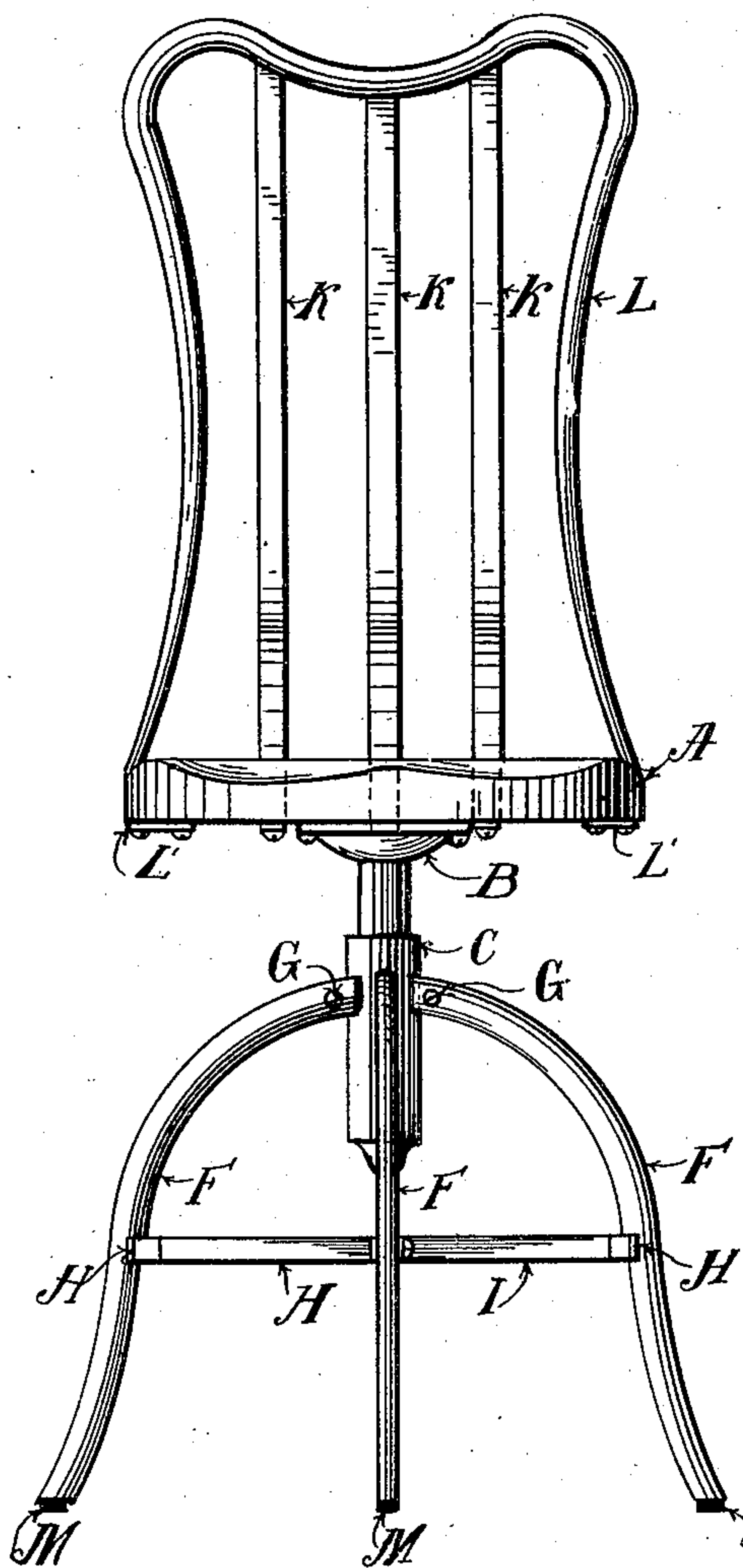


Fig. 1.

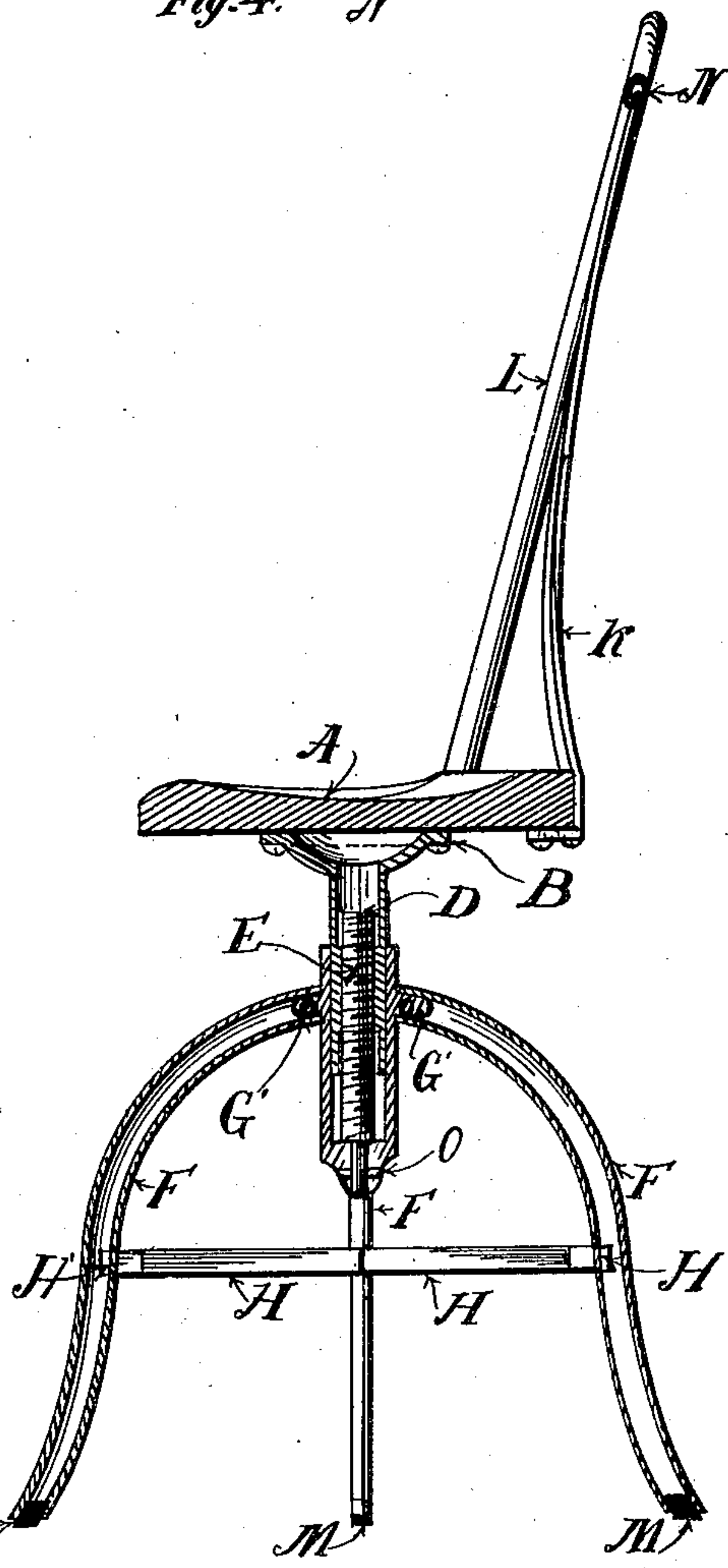


Fig. 2.

Witnesses
Edward R. Monro.
Mary S. Tooker

Inventor
Millard E. Stockwell
By Edmund Taggart
Attorney

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2 SHEETS—SHEET 2.

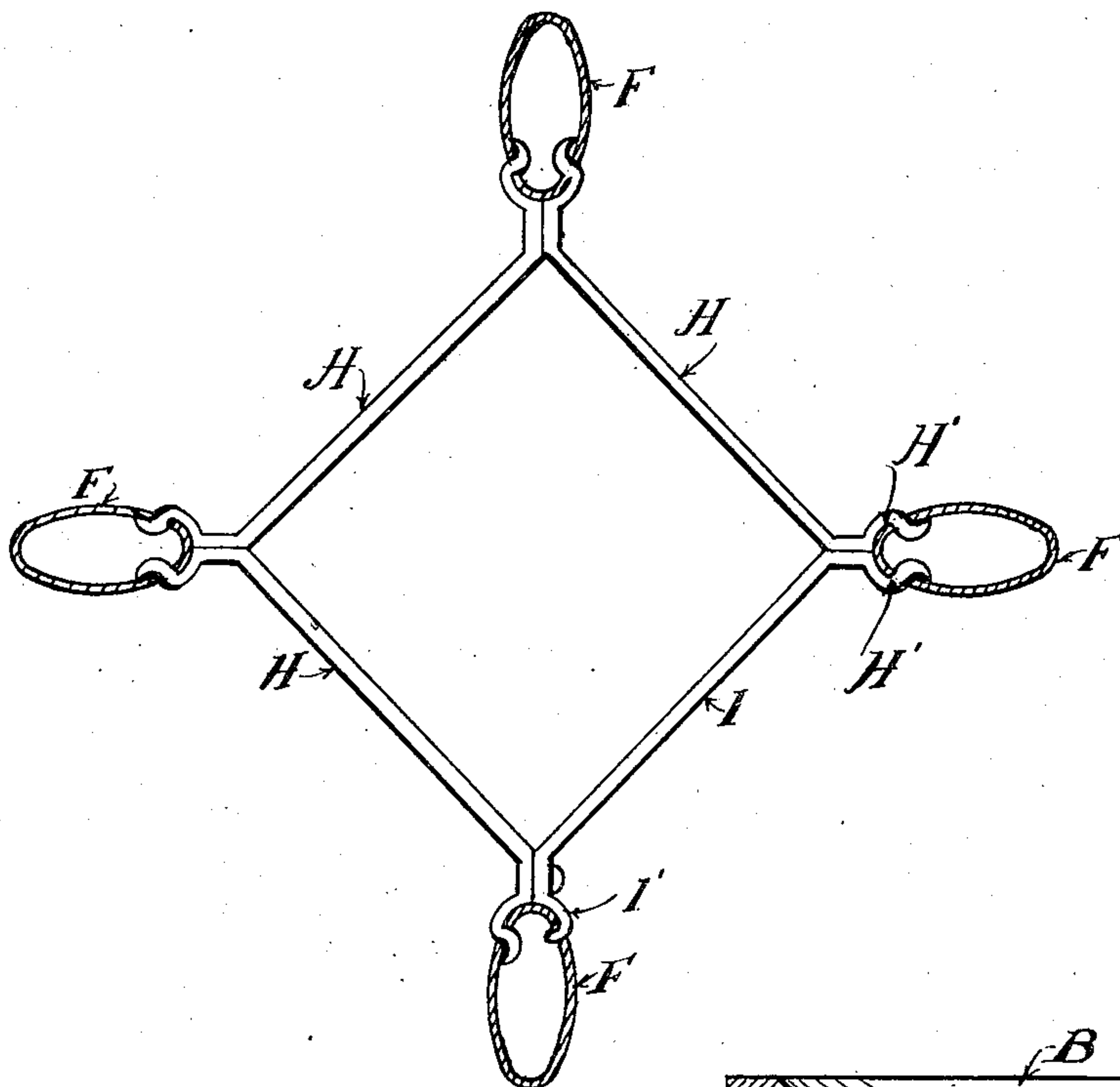


Fig. 5.

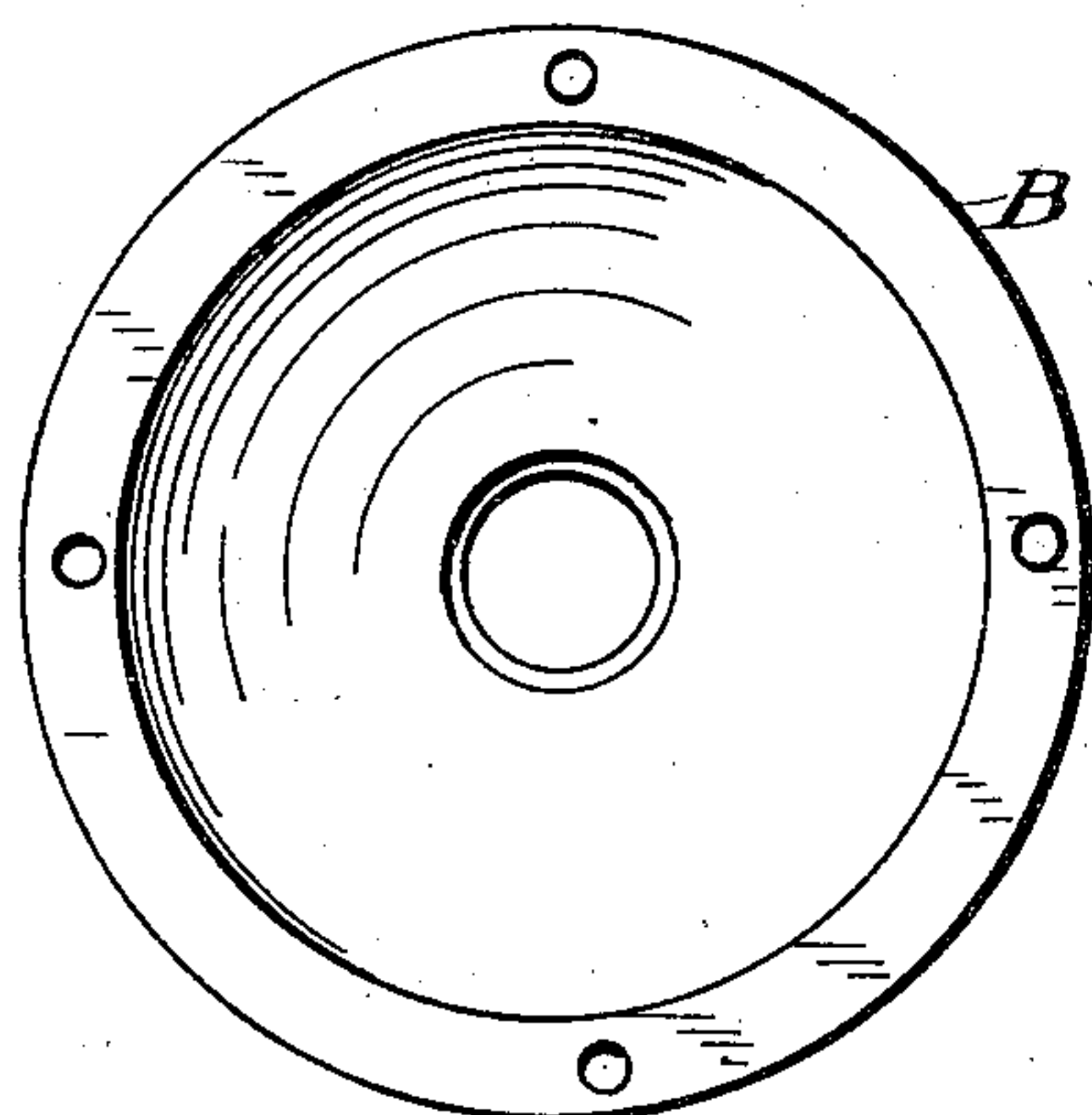


Fig. 6.

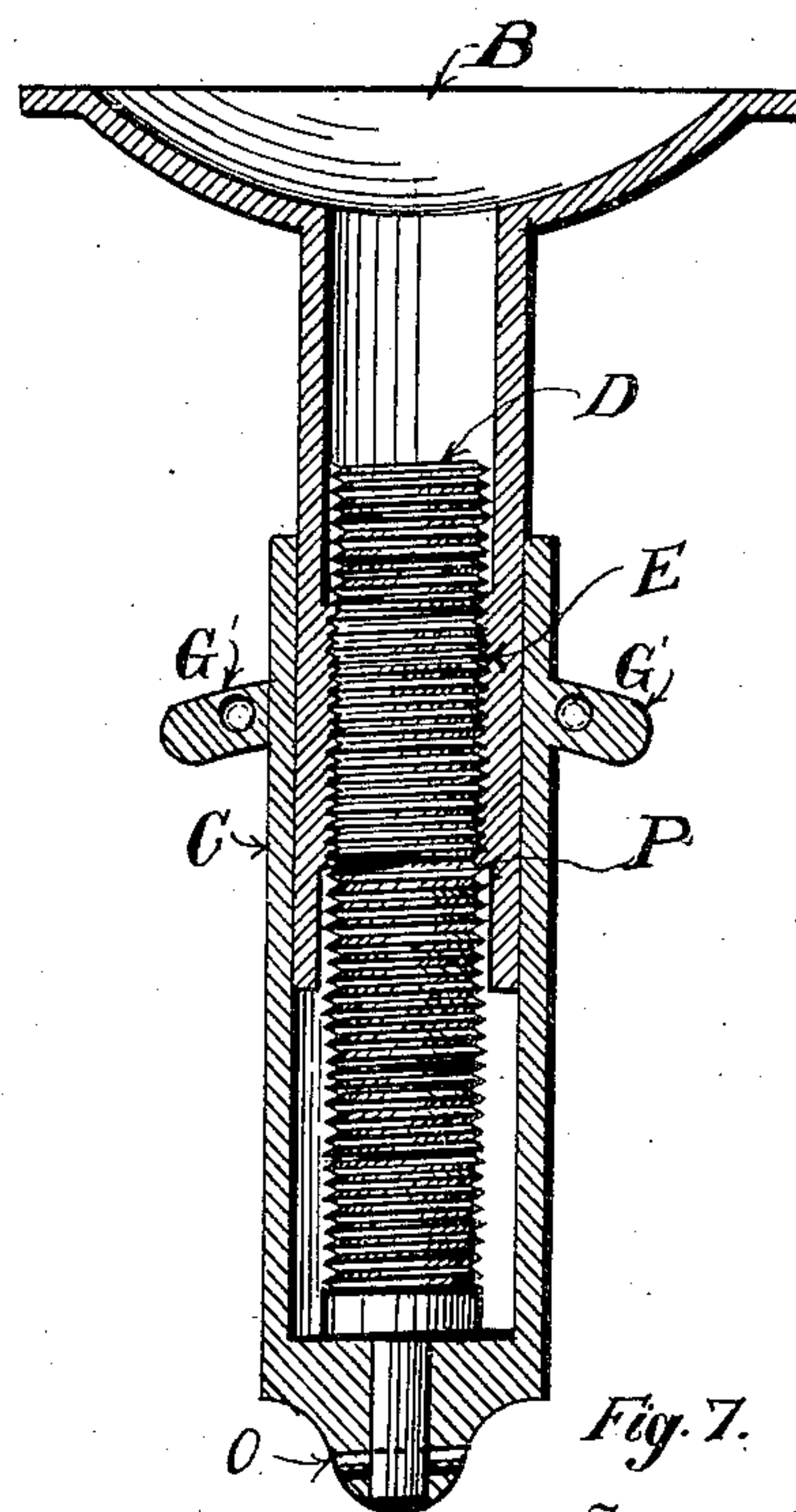


Fig. 7.

Witnesses
Edward R. Monroe.
Mary S. Tucker

Inventor
Millard E. Stockwell
By
Edward J. Tappan
Attorney

UNITED STATES PATENT OFFICE.

MILLARD E. STOCKWELL, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO ACME DOOR AND GLASS COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

METAL FURNITURE.

No. 876,888.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed January 18, 1904, Serial No. 189,468. Renewed June 3, 1907. Serial No. 377,044.

To all whom it may concern:

Be it known that I, MILLARD E. STOCKWELL, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Metal Furniture, of which the following is a specification.

This invention relates to certain new and useful improvements in metal furniture, the improvements being particularly directed to chairs, stools, and analogous pieces of furniture which are supported by four legs, and the invention relates, among other things, to that class of furniture provided with detachable legs; also to knock-down constructions.

The objects of the invention are—(1) To furnish light, cheap and durable legs for supporting the chair or stool. (2) To furnish a method for securing the detachable braces to the legs so that the same can be readily detached. (3) To furnish a new and improved method of bracing the chair back by means of slats secured to the framework of the chair back detachably, and having a pulling or straining effect upon the back in order to retain rigidity. (4) Other objects hereinafter described in the specification and pointed out in the claims. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows a front elevation of a chair constructed in accordance with my invention, and containing the objects above set forth. Fig. 2 shows a transverse sectional view upon the line through the center of the support. Fig. 3 shows a detached view of one of the back slats, illustrating the peculiar hooked arrangement which engages with the frame of the chair back. Fig. 4 is an edge view of one of the back slats, and a section of the back frame illustrating the detachable engagement between the slat and the frame. Fig. 5 shows a horizontal sectional view just above the braces which support the legs of the chair or stool, the tubular legs being shown in cross-section and the ends of the slats showing their engagement with the chair legs. Fig. 6 is an enlarged view of the upper end of the seat support, which seat support is cylindrical in form and adapted to engage with a screw-threaded bolt, as hereinafter described, the upper portion being attached to the bottom of the chair seat; and Fig. 7 is a vertical sectional view through the center of the seat support and the adjusting

sleeve, showing the position of the adjusting bolt, the seat support and the adjusting sleeves; also showing the lugs or projections to which the legs are attached.

Similar letters refer to similar parts throughout the several views.

A represents the chair or stool seat constructed in any suitable manner and supported on the upper end of the chair support B, the upper end of the support B being enlarged and secured by bolts or screws to the bottom of the seat.

C is what I term the leg support, the same being cylindrical in form and of sufficient size to receive within it the cylindrical portion of the chair support B, said cylindrical support B inclosing the threaded bolt D and entirely concealing the same, at the upper end, from view, and the leg support C carrying the threaded bolt D and inclosing the cylindrical portion of the seat support. The seat support B is threaded at E, which thread does not reach to the upper end of the leg support, but has the central portion threaded at E, which serves as a nut which engages with the screw threads of the screw-bolt D. The lower end of the cylindrical portion B is not threaded as shown by P, the object being to prevent the seat support from tipping over when the same is raised beyond a connection with the bolt D. Thus, the seat support enters the cylindrical leg support and is held in an upright position, even when the threaded portion E is raised above the screw-thread on D. The screw-bolt D is secured to the lower end of the leg support by the bolt O, or any other suitable means, as shown in Fig. 7.

F F F are the chair legs, which engage with the lugs G' etc on the leg support C, and are fastened by means of bolts G, which bolts G may be removed for the purpose of detaching the legs. The legs F F F are made of tubular metal, preferably drawn steel, and preferably oval in cross-section, as shown in Fig. 5. These legs are supported by means of the braces H H H and I, the braces being all constructed precisely alike with the exception of the brace I, which is provided with a different hook at I', as shown in Fig. 5. The legs are provided with openings or slots for the reception of the hooked ends H' H', etc. of the braces. These braces may be of any suitable shape, but in the example of my invention shown in the drawings, I have shown them arranged to form a square, as seen in

Fig. 5. The hooks H' H' enter into the tubular legs and are secured therein by means of the position of the braces and legs. The hook I' has only one bend and merely hooks through an opening in the leg F, as shown in Fig. 5. At this end of the brace I a bolt passes through and secures this end of the brace I to one of the braces H. By removing the bolt, the brace I can be removed, and with it all the braces H H H; and by removing the bolts G, the legs may be taken from the leg support so that this part of the stool or chair is a knock-down stool or chair and can be readily and quickly put up, and readily and quickly taken down, and by the arrangement of the hooks and a single bolt can be made very rigid and strong, even when the chair is made of light material.

The bottoms of the legs are provided with lugs, constructed of wood or any suitable material for the purpose of strengthening the legs at the bottom, and also for the purpose of forming a support preventing the legs from marring the carpet or floor.

The back of the seat is composed of a back frame L of tubing, preferably oval in cross section, the lower ends of the said back frame L being bent under, as shown by L' L', and secured to the under side of the chair seat. In the example of my invention I show three back slats which are designated by K K K. These back slats may vary in number, each slat being provided with a hook at the upper end, as shown in Fig. 4 by N, which engages with an opening in the rear portion of the back frame L and is secured to the bottom of the chair by means of bolts, as shown in Fig. 2. These back slats are preferably curved in form, and are made preferably flat and are attached to the chair by means of hooking the same in the back slat and springing them forward so as to engage on the under side of the seat, giving a straining or pulling effect upon the chair back so as to retain the slats always firmly in position. By this construction the back of the chair may be readily separated by merely removing the screws which secure the back of the chair to the seat and by unhooking the slats K K K from the chair back, as above described.

The advantages of my construction consist in the use of tubular legs for the chair, which are preferably made of drawn steel tubing which gives great strength with the least amount of weight. Also in the peculiar arrangement of bracing the legs, which forms a very rigid brace and yet one that can be readily detached and packed; also in the device for raising and lowering the seat wherein the screw threaded bolt is entirely concealed from view by means of the cylindrical support B and the cylindrical leg support C. It also consists in the peculiar ar-

rangement of the chair back, whereby the slats K K K are made to draw downwardly upon the back frame L, thereby retaining the back firmly in position and securing a certain amount of elasticity or flexibility in the back slats K K K. It will be seen that each slat K has a hook N at its upper end, fitted within the back frame L, and a shouldered portion K' below said hook. The several hooks, it will be obvious, prevent the slats K from pulling downward, while the shoulders K' prevent the slats from being driven too far into said back frame.

A chair or stool constructed in accordance with my invention is strong, neat, durable; can be readily taken to pieces and packed, and readily and quickly set up for use.

While I have referred to the device as an improvement in chairs, it will be evident that the arrangement of legs may be used in connection with any article of furniture where it is desirable to have light, cheap and durable legs to support the same.

Having thus described my invention, what I claim to have invented and desire to secure by Letters Patent of the United States, is—

1. An article of furniture including a seat provided with four legs, three braces having a detachable interlocking connection with three of the legs, and a fourth brace having a detachable connection with two legs and a positive and direct connection with one of the other braces and outside the legs.

2. In combination with the tubular legs F F F, cross braces H H H provided with hooks engaging with the said legs, a brace I provided with a hook which may be removed readily from the legs, and suitable means for bolting the brace I to one of the braces H, substantially as described.

3. In combination with the legs F F F, made of tubular material, the braces H provided with the hooks H' bent in the form described, the braces I provided with the hook I', and a suitable bolt for attaching the brace I to one of the braces H whereby the same may be readily removed therefrom, substantially as described.

4. In combination with the legs F, the braces H, the brace I, the braces H and I provided with hooks, substantially as described, the leg support C provided with lugs, whereby the upper ends of the legs are secured to the said lugs, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MILLARD E. STOCKWELL.

Witnesses:

EDWARD TAGGART,
MARY S. TOOKER.