

(No Model.)

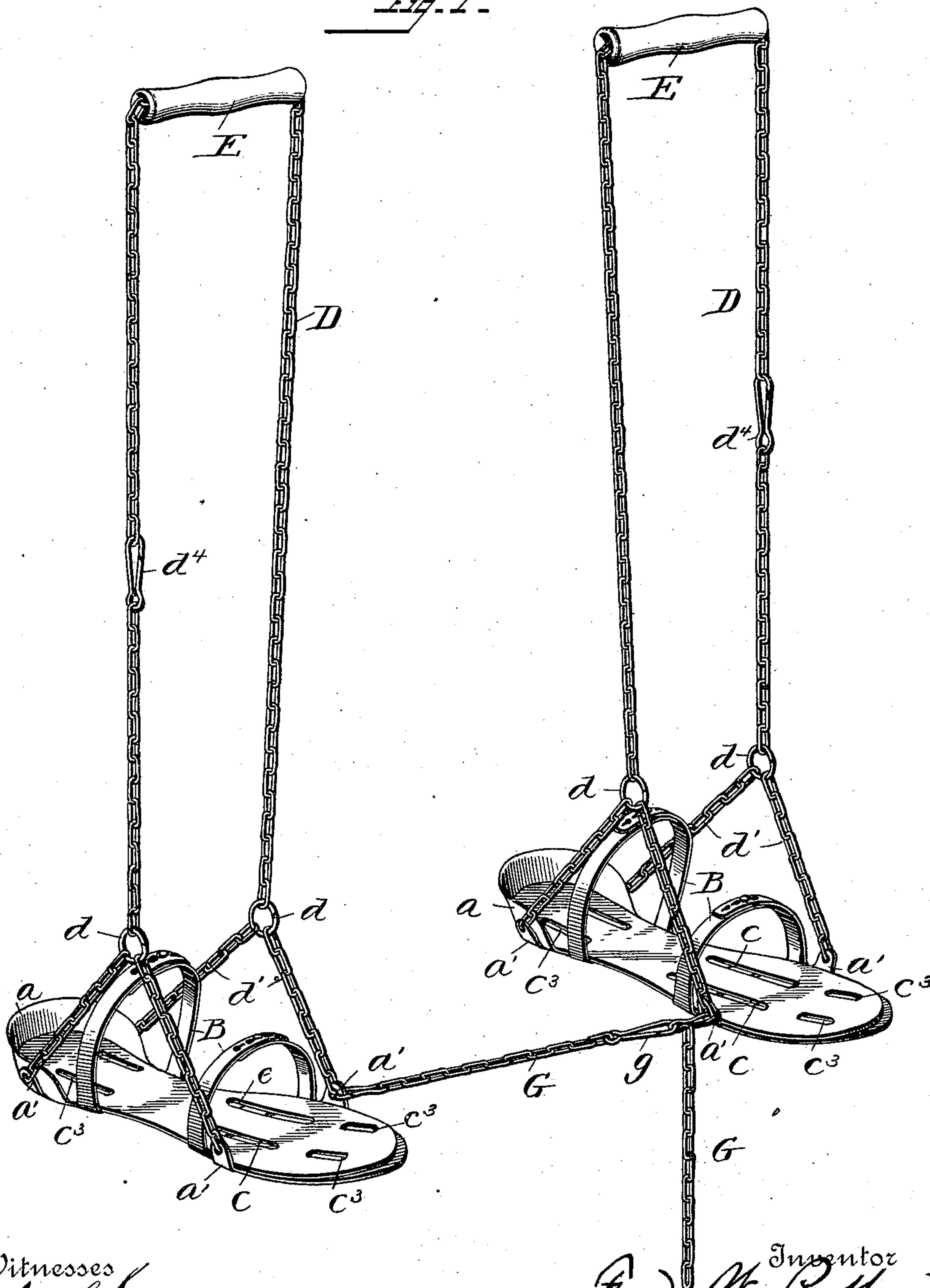
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F. W. PATTON.
OBSTETRICAL APPARATUS.

No. 456,259.

Patented July 21, 1891.

Fig. 1.



Witnesses

Wm. H. Hendon
D. E. Hunt

Inventor

Fred W. Patton
By *W. H. Hendon*, and
Chas. H. Patton
Attorneys.

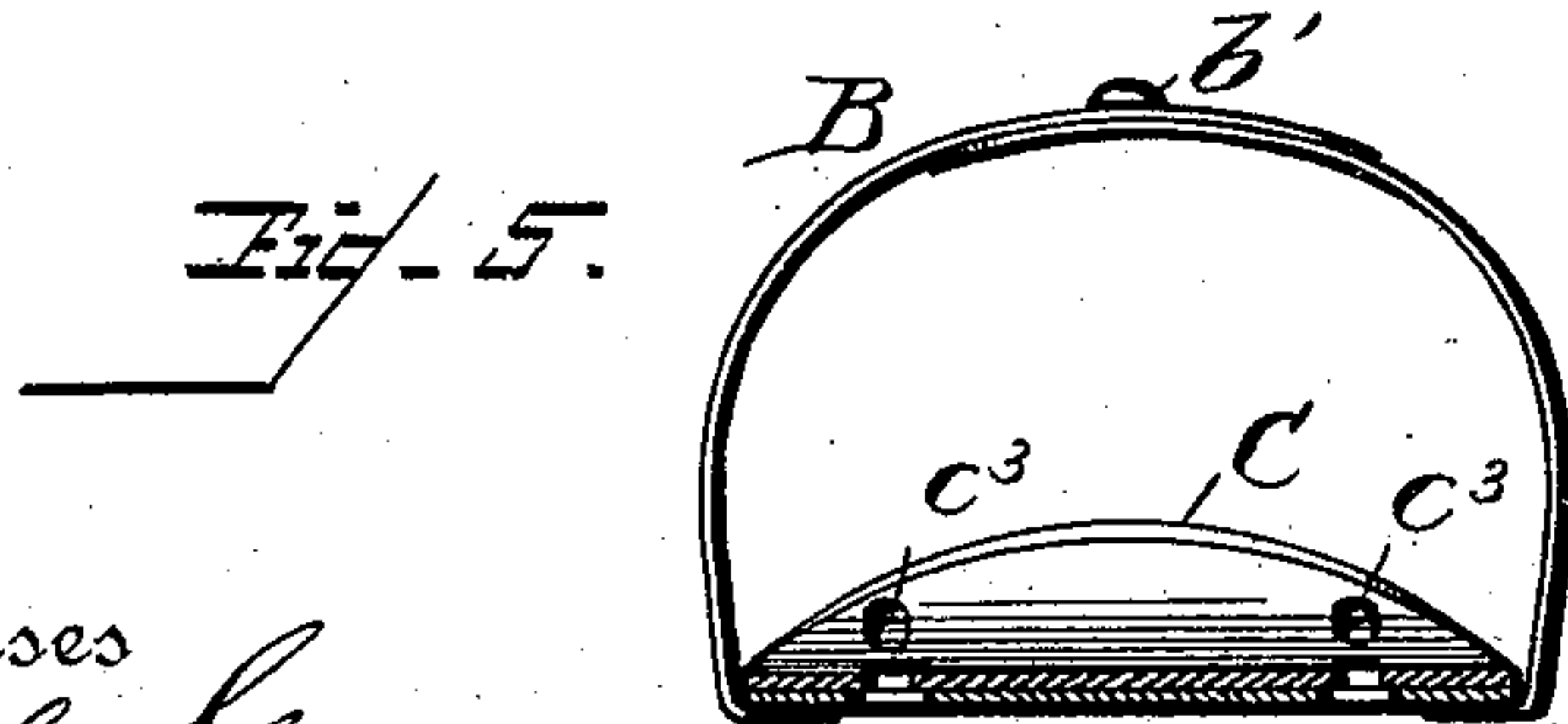
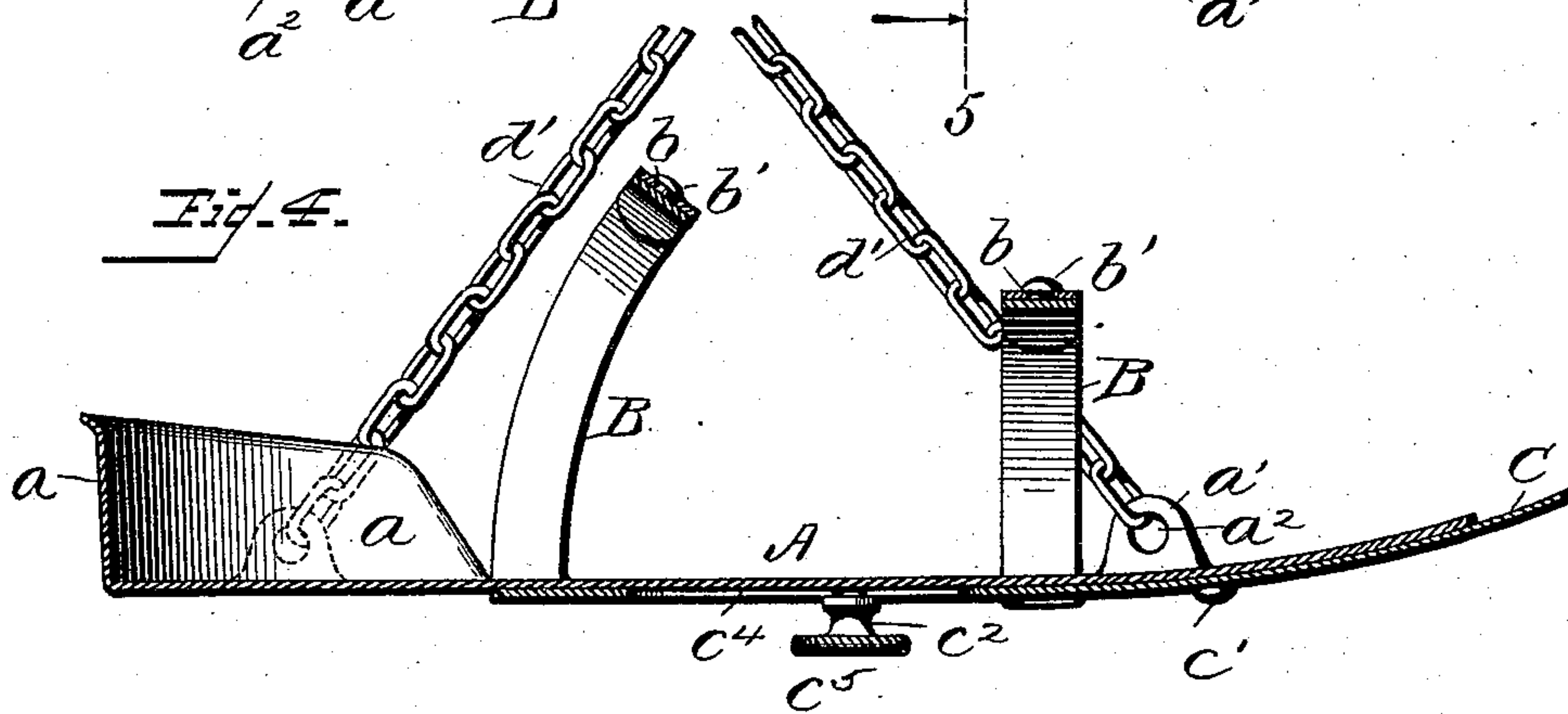
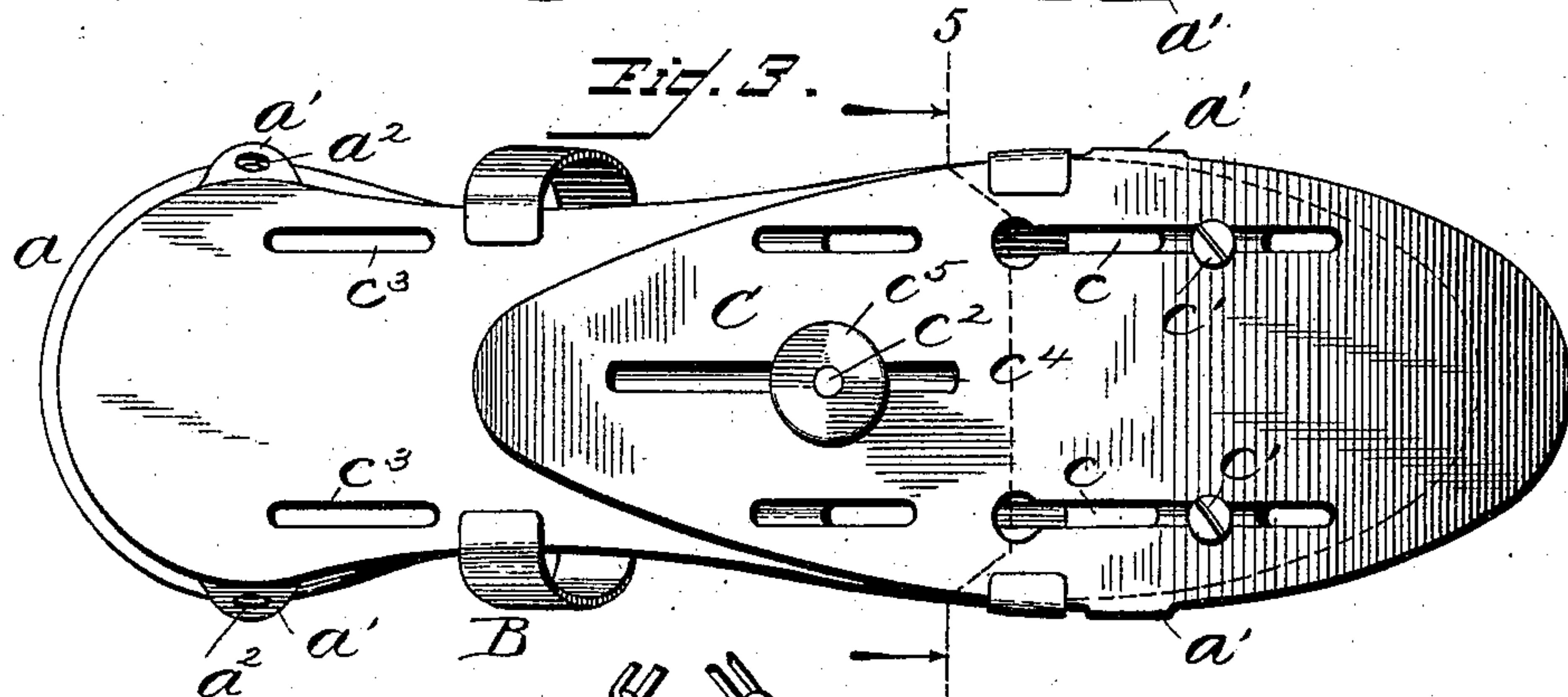
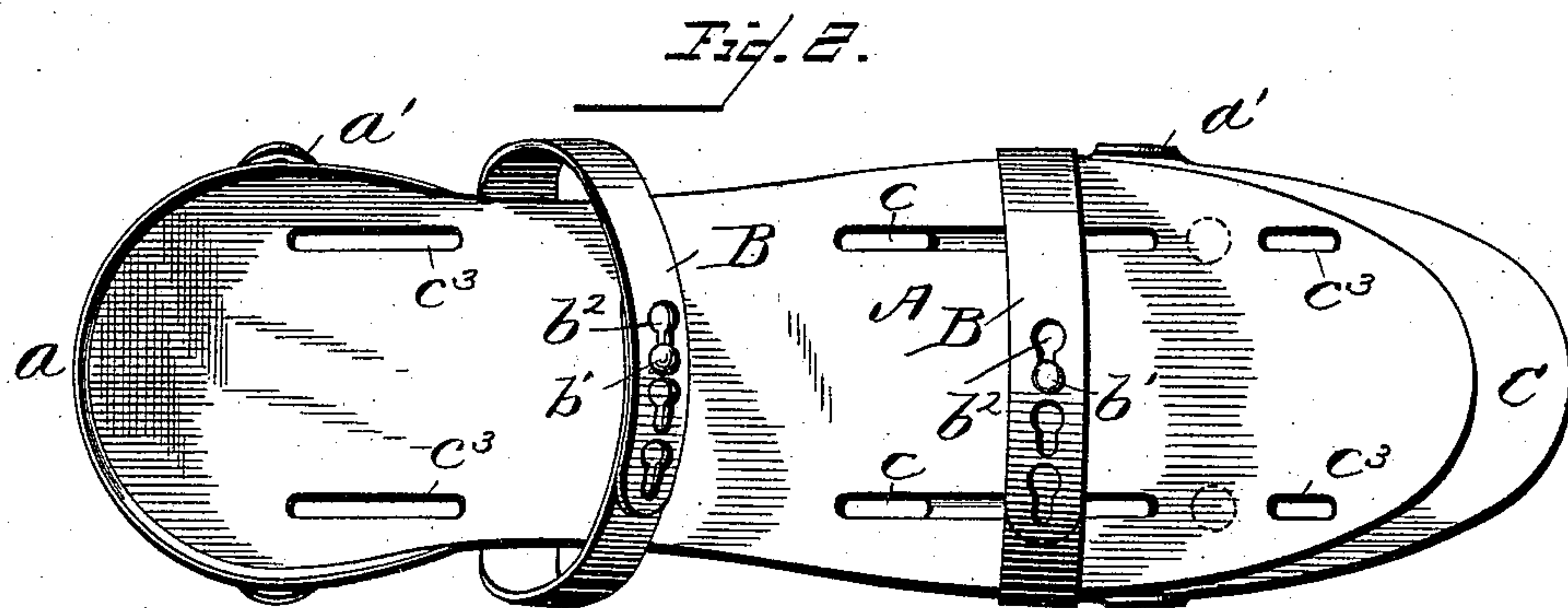
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No. 456,259.

Patented July 21, 1891.



Witnesses
"Wm. L. Shiden.
D. E. Hunt.

Inventor
Fred W. Patton,
By W. L. Shiden, and
Chas. H. Patton,
Attorneys.

UNITED STATES PATENT OFFICE.

FRED W. PATTON, OF MOUNT VERNON, ILLINOIS.

OBSTETRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 456,259, dated July 21, 1891.

Application filed June 8, 1891. Serial No. 395,549. (No model.)

To all whom it may concern:

Be it known that I, FRED W. PATTON, a citizen of the United States, residing at Mount Vernon, in the county of Jefferson and State of Illinois, have invented certain new and useful Improvements in Obstetrical Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of surgical apparatus especially adapted to the requirements of obstetrical practice.

It is my purpose to provide an apparatus for the use of a patient during labor, whereby the muscular effort will be aided, the proper position secured, and unequal strain and fatigue of the lower extremities or parts thereof shall be avoided.

It is a further object of my invention to provide an apparatus of this type in which an unnatural and unnecessary separation of the feet shall be prevented, and whereby the waste strength caused by the efforts of the patient to resist this tendency to separation, which is produced by the side draft, shall be wholly obviated.

It is my further purpose to provide an obstetrical apparatus having slippers which are adjustable to the feet of different patients, and which are provided with adjustable means for positively connecting or attaching the slipper-sole to the foot without using a continuous vamp, which always is liable to cause heat and discomfort.

It is my object, also, to counteract the tendency which is found to exist in certain cases to turn or roll the foot over outwardly, by which an abnormal strain of the ankle is produced, which is always liable to result in injury, while the foot and ankle are so far removed from the direct line of draft that the effort of the patient is exerted at a serious disadvantage. A similar tendency is also to be observed, though less frequently, to turn the feet inward, or in the opposite direction; and it is the object of my invention to provide simple means whereby the same may be entirely counteracted, and whereby, also, the strain upon the foot shall be distributed over its surface, instead of being concentrated upon

one part thereof, such distribution being proportioned, as it is by nature, by throwing the greater strain upon the heel.

It is a further purpose of my invention to provide an obstetrical apparatus having slippers capable of extension and contraction in length and having for this purpose such construction that they are also adapted to use as splints in treating a crushed or injured foot.

It is my purpose also to provide an obstetrical apparatus which can be readily and thoroughly cleansed antiseptically, which is essentially aseptic from the nature of the material of which it is composed, and which is capable of receiving a highly-ornamental finish.

The invention consists to these ends in the several novel features of construction and new combination of parts hereinafter fully described, and then more particularly pointed out and defined in the claims concluding this specification.

To enable others skilled in the art to make, construct, and use my said invention, I will proceed to describe the same in detail, reference being had for such purpose to the accompanying drawings, in which—

Figure 1 is a perspective view, on an enlarged scale, illustrating an apparatus embodying my invention. Fig. 2 is a top plan view of one slipper on an enlarged scale as compared with Fig. 1. Fig. 3 is a bottom plan view of one of the slippers, showing the construction by which longitudinal adjustment is obtained. Fig. 4 is a longitudinal section through one slipper with a portion of the chain broken away. Fig. 5 is a section on the line 5 5 of Fig. 3, looking in the direction of the arrows.

The reference-letter A in said drawings indicates the slipper-sole of the apparatus, which is preferably made of thin sheet metal—such as steel—having the necessary strength. I usually stamp the sole from a single piece of metal, a heel-flange a being formed thereon or attached thereto. At two points upon each side of the sole, one about in the middle transverse line of the heel and the other at a corresponding portion of the ball of the foot, are formed laterally-projecting lugs a' , having eyes or apertures a^2 for the attachment of the draft-chains. These lugs are bent into the

line of draft or approximating the same, and as the apparatus, when used, will be applied to limbs of varying length and size I may, if the lugs are formed upon the sole, form two
5 or more of said lugs upon each side of the ball of the sole to enable the surgeon to shift the chains, if necessary.

Upon each side of the instep portion and in rear of the lugs a' are attached thin elastic metallic strips B, one of which is provided with a stud b , having a head b' , while in the other strip are formed at suitable intervals a series of slots b^2 , having enlarged ends to permit the passage of the head b' of the stud
15 b , which, when moved back into the narrow portion, holds the two strips together.

Upon the under surface of the sole A is laid an extension-plate C, substantially coinciding with the width and shape of the sole A
20 from a point in the ball thereof, and from said point tapered at a less width to a point beneath the breast of the heel or thereabout. Slots c are formed near the margin of these soles at suitable points, those in part A coinciding with those in the extension-piece. In these slots lie short bolts or guide-pins c' , having heads lying upon the sides of the slots and bearing against the face of the extension piece or plate C. In addition to the slots
25 c , I propose to form other and additional slots c^2 , located at suitable intervals and near the margin of the sole A, in order to adapt the latter to be used as a splint in treating a crushed or otherwise injured foot, the slots c and c^2 being so placed as to receive and retain the bandages used in dressing the foot and supporting the parts thereof. By making the slots c of proper length and locating them as near the margin of the sole as the
40 necessary parallelism will permit, the extension-plate may be used to fit the splint-sole to different feet without in any manner affecting the longitudinal adjustment. A threaded bolt c^3 projects from the bottom of the sole-plate A and passes through a slot c^4 in the plate C, and is provided with a nut c^5 , so as to positively secure the two plates together and prevent the heel portion of the plate C being forced out from plate A when strain is
50 on the slipper.

The letter D denotes the draft-chains, which are preferably made with short round or short oval links, having as little weight as is consistent with the requisite strength. At a distance of a few inches from the edge of the sole these chains are attached to eyes or rings
55 d , which are preferably split rings, from each of which two short lengths of chain d' diverge to the lugs a' , whose ends may be provided with small snap-hooks to enable them to be readily connected to and disconnected from the said lugs, or they may be attached directly to the eyes, as illustrated. The short chains d' may be of the same or of different
65 lengths; but I prefer to so adjust them in this respect that the relative strain imposed upon the ball of the foot shall be less than that

upon the heel, the object being to conform in this respect to nature and avoid all unnecessary strain and fatigue of any one of the muscles. The draft-chains D may be divided between their ends and provided at such points with suitable means for lengthening or shortening the chains by taking them up or letting them out—for instance, 75 by snap-hooks d^4 .

The chains are provided with handles, which are preferably hollow round centrally-swelled pieces E, constructed from metal or other suitable material. By making the handles hollow the chains are free to slide through them, so that the handles are quickly adjusted to the length of the chain. 80

To the lug a' , upon the inner margin of the ball of each sole A, is connected the end of a chain G, of suitable length, said chains being united by a detachable and attachable snap-hook g , capable of being connected with any one of the links upon one of said chains. This construction permits the adjustment in length of the chain, in order to limit the distance to which the feet of the patient may be separated and adapt the apparatus in this particular to all classes of patients and to the different circumstances of each case. To prevent the foot and ankle from turning outward, and to counteract the tendency to so turn which is to be observed in some cases, the connecting-chain G may be passed beneath the sole and extension-plate and carried over the top of the foot; or, if preferred, its end may be detached from the lug a' upon the inside margin of the sole and passed beneath the latter and hooked to the opposite or outer lug. This arrangement may be applied to either one or both feet, as may be necessary, or the chain may be passed over one foot in the manner first described above and its other end passed beneath the sole and connected to the outer lug a' of the other. This change may be desirable in cases where one ankle is weaker than the other or when the tendency to turn is greatest upon one side, as the counteracting force is varied by the method of placing the chain. 100 105 110 115

Any tendency to turn inward may be counteracted by an arrangement apposite of that described.

I have mentioned that the lugs a' on the balls of the sole may be duplicated upon each side to adapt the apparatus to considerable variations in size or length of the patient's feet. I prefer, however, to form these lugs upon the edges of the extension-plates, and thereby render them adjustable with said plates. 120 125

The several parts of the apparatus are preferably made of metal, which may be plated with nickel or otherwise ornamented. This material is incapable of absorbing or retaining any germs of disease or septic matter of any kind, and may be subjected, also, to any desired process of cleansing by antiseptic materials without injury. The several parts 130

being capable of ready detachment and separation from each other, the process of cleansing is rendered easy, rapid, and thorough.

By this invention I provide an obstetrical apparatus for the use of the accoucheur which is wholly incapable of absorbing and communicating septicæmic germs, which may be at any time taken apart, adjusted to all varieties of size and form occurring in different patients, and in which the task imposed upon the muscles is proportioned naturally. I also provide a construction whereby any tendency to unduly separate the feet and lower extremities may be prevented and the patient relieved from the exertion of resisting this tendency, by which the liability or tendency to turn the feet and ankles outward or inward may be counteracted, the powers of the patient applied to the best advantage, and by which the slippers are comfortably secured to the feet and are rendered useful, also, as splints for injured feet by the same construction in part by which their longitudinal adjustment is effected to adapt them to different patients.

Having described my invention and set forth its merits, what I claim is—

1. An obstetrical apparatus for the use of the accoucheur, consisting of slippers having extension-plates and provided with strips for attachment to the foot, draft-chains, handles, and a chain connecting the slippers to each other, the whole being formed of metal, whereby septicæmic infection is avoided, substantially as described.

2. In an obstetrical apparatus, the combi-

nation, with slippers and with draft devices connected thereto, of means for connecting said slippers to each other to limit the distance to which they may be separated, substantially as described.

3. In an obstetrical apparatus, the combination, with slippers consisting of soles having lugs upon the margins between the heels and the instep portions, of extension-plates having lugs upon their sides, and draft devices connected to said lugs, substantially as described.

4. In an obstetrical apparatus, the combination, with slippers consisting of soles having two lugs upon each side, of draft-chains connected to the ends of flexible chains secured to the lugs, and handles which are adjustable upon the double draft-chains, substantially as described.

5. A slipper for an obstetrical apparatus, consisting of a plate or sole having an extension-plate connected thereto by bolts arranged in parallel slots in both plates, said slots being formed near the margin of the sole and the latter being provided with a series of marginal slots which adapt it to be used in conjunction with the extension-plates, and the slots holding the bolts either as a part of said obstetrical apparatus or as a splint for the foot, substantially as described.

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

FRED W. PATTON.

Witnesses:

GEORGE M. LEWIS,
ROBT. M. FASTLING.