May 18, 1926. 1,585,523

L. G. BARTON

OBSTETRICAL FORCEPS

Filed May 23, 1925

Fig. 1,

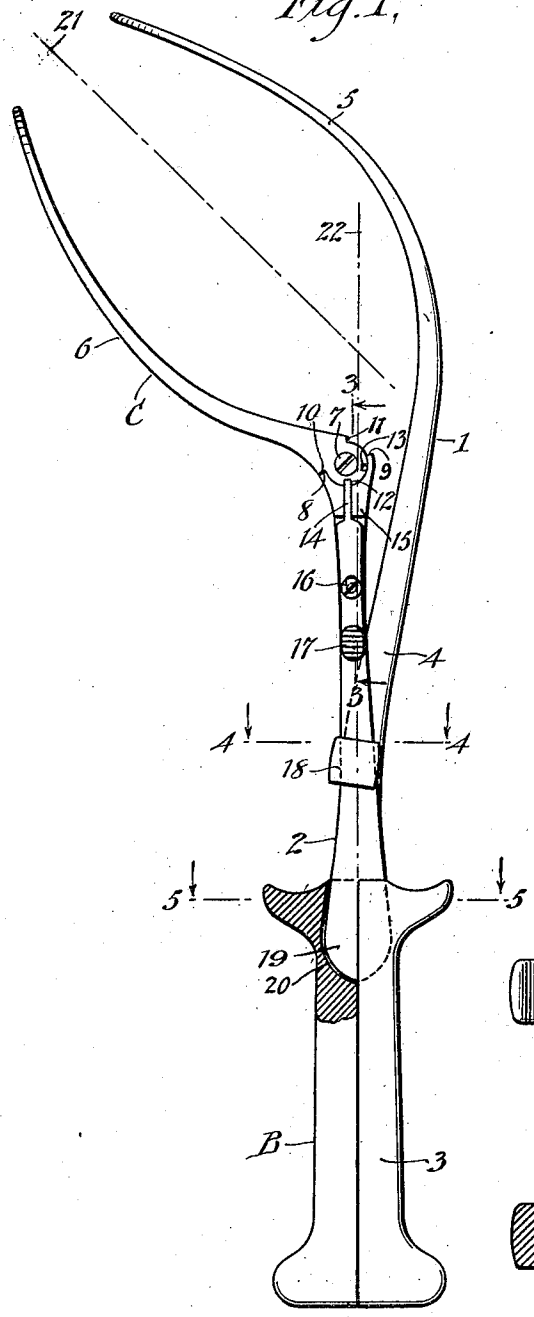


Fig. 2,

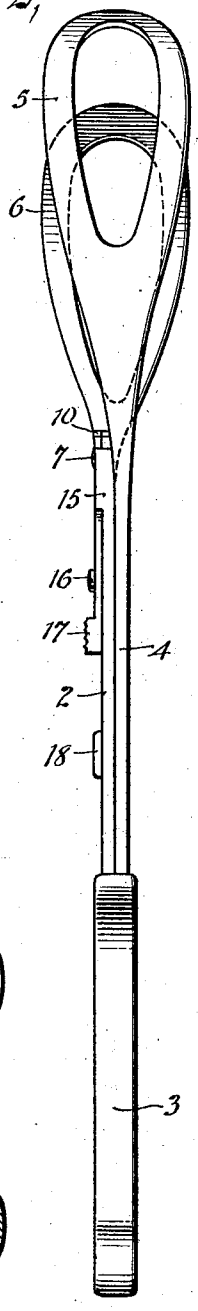


Fig. 3,

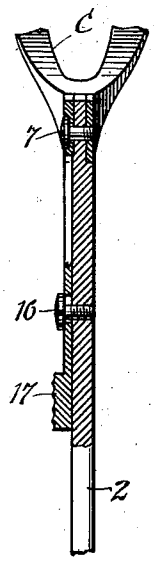


Fig. 4,

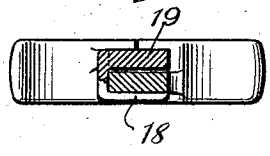
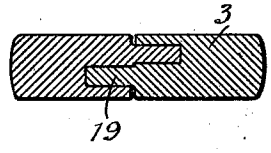


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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OBSTETRICAL FORCEPS.

Application filed May 23, 1925. Serial No. 32,485.

This invention relates to obstetrical forceps and has for an object to provide an improved construction wherein the parts are so formed as to permit an easy introduction.

Another object of the invention is to provide a construction wherein the blades are arranged in the same plane as the handle with a single connection between the blades which will permit an accurate application of the forcep blades to the side of the child's head and which will require a minimum amount of tractive force during the delivery period.

A still further object of the invention, more specifically, is to provide forceps wherein one of the blades is independently pivotally mounted.

In the accompanying drawing—

Figure 1 is a side view with certain parts in section, disclosing one embodiment of the invention.

Figure 2 is an edge view of the structure shown in Figure 1.

Figure 3 is an enlarged sectional view through Figure 1, approximately on line 3—3.

Figure 4 is an enlarged transverse sectional view through Figure 1 on line 4—4.

Figure 5 is an enlarged transverse sectional view through Figure 1 on line 5—5.

In constructing the forceps, they are formed as two principal members, namely, members 1 and 2, each member being provided with a handle 3 and a shank 4. The shank 4 of member 1 merges into a blade 5 which is rigid therewith while shank 2 in a certain sense merges into a blade 6 pivotally connected to the shank 2 by a suitable knuckle joint 7. By pivoting the blade 6 as described, it is permitted to swing through an arc of a circle to the straight position shown in dotted lines in Figure 1 for the purpose of introduction. The shank 2 is provided with shoulders 8 and 9 co-acting with the shoulders 10 and 11 on the blade 6 whereby the blade 6 is limited in its swinging movement. From Figure 2 it will be noted that the blades 5 and 6 are arranged in the same plane as the handles 3 which will allow a better manipulation or action during the time of delivery. In order to lock the blade 6 in either of its extreme positions, notches 12 and 13 are provided in the end of the blade, said notches co-acting with a latch or bolt 14 slidingly mounted on the shank 2 and held in proper position by a thickened portion 15 and by the screw 16. There is provided a slot in the thickened portion 15 for permitting the catch 14 to freely slide. A roughened thumb piece 17 is formed on the end of the catch 14 whereby the catch may be readily moved. It will also be noted that a hook-shaped member 18 is formed integral with the shank 4 and overlaps part of shank 2 whereby the same may be given a swinging action at this point as well as a sliding action. Each of the shanks is provided with a tenon member 19 fitting into a mortise opening 20 whereby a mortise and tenon connection is provided at the end of the handles 3 for aligning the respective members 1 and 2 while permitting a sliding movement until the instrument has been properly set whereupon the grasping of the handle 3 will firmly hold the parts in the desired position so that the downward arc-shaped pulling action may be produced without straining the instrument or injuring the patient. By providing a mortise and tenon structure, a sliding motion of one member on the other may be secured and the separation or opening between the blades 5 and 6 maintained symmetrical.

When the forceps are in a position that the blades are opened and closed in a vertical plane as shown in Figure 1, the axis of the blades, as represented by the dotted line 21, makes an angle with the axis of the shanks as represented by the dotted line 22, this angle being the same as the angle formed by the axis of the superior strait of the pelvis with the axis of the outlet. This construction permits an accurate application of the forcep blades to the side of the child's head when presented in either the transverse or oblique pelvic diameters without disturbing the normal relation of the head to the pelvic axis and by reason of this, the amount of tractive force required to effect delivery is reduced to a minimum.

What I claim is:

1. Obstetrical forceps, comprising a pair of members, each member being formed with a handle, a shank and a blade, said blades being in the same plane as the shanks and handles but extending at an angle therefrom

in the same plane, and a hook member extending from one of said shanks loosely overlapping the other shank whereby a sliding pivotal connection is secured between the two shanks.

2. In a pair of obstetrical forceps, a pair of members each having a shank formed with a handle, each handle being provided with a socket or mortise, and each shank being provided with a projecting tenon adapted to fit into the socket or mortise of the opposite handle.

3. A pair of obstetrical forceps, comprising a member formed with a handle, a shank, a blade, said parts being formed integral, a second member formed with a handle and shank which are integral, and a blade pivotally mounted to one end of one of the shanks, and means for locking said blade in either of its two extreme positions.

4. In obstetrical forceps a member formed with a handle, a swinging blade capable of moving with the handle and swinging independently thereof but swinging in the same plane in which the handle swings, and means for locking the blade in different positions in respect to the handle.

5. Obstetrical forceps comprising a pair of members hingedly connected together and each member formed with a handle, a shank and a blade, said blades being swingable in the same plane in which the shanks and handles swing but extending at a decided angle to the handles in the plane in which one of the handles swings.

LYMAN GUY BARTON.