March 13, 1928. 1,662,169

R. D. RODERICK

OBSTETRICAL FORCEPS

Filed Nov. 3 1926

Fig. 1.

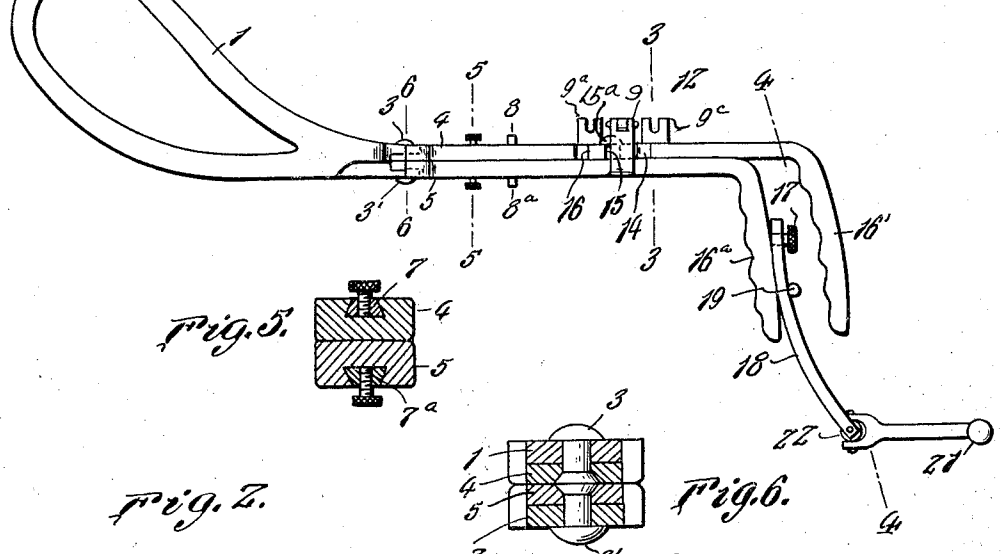


Fig. 5.

Fig. 6.

Fig. 2.

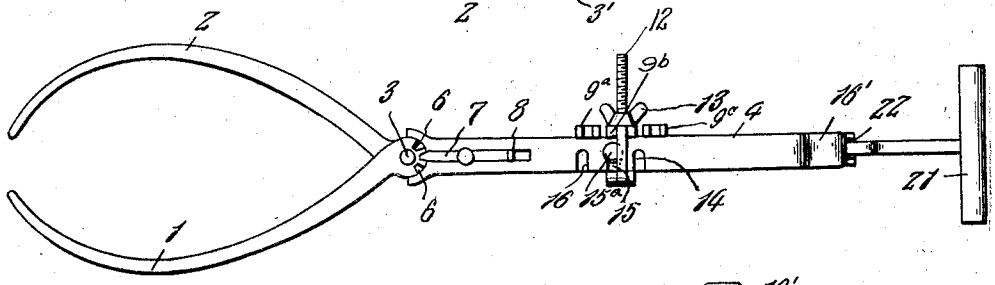


Fig. 4.

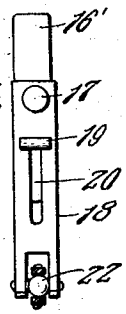
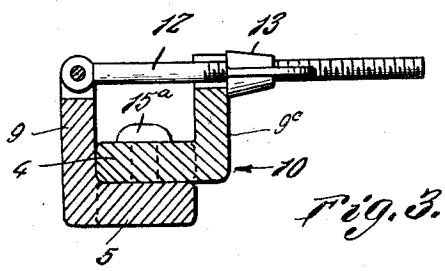


Fig. 3.



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UNITED STATES PATENT OFFICE.

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OBSTETRICAL FORCEPS.

Application filed November 3, 1926. Serial No. 146,026.

This invention relates to an obstetrical forceps. The object of the invention is to provide a more efficient instrument for the use of surgeons and physicians in accouchement cases. In carrying out my invention I provide a pair of blades or jaws of the usual form in such instruments and provide them with independently adjustable positions by a frictionally sliding device on the shank members, and provide a clamp for the shank members in a plurality of adjusted angular positions. My forceps also has an extension handle with a universal joint readily detachable from a secure fixed relation. I also provide a clamp with a pivotal jaw adapted to lock the shanks in their several adjusted positions.

My invention, therefore, consists of a number of improved features of great practical importance to a surgeon or physician, the several features of which will be hereinafter more fully described and definitely indicated in the appended claims.

In the drawings:

Figure 1 is a side view of an obstetrical forceps embodying my improvements.

Figure 2 is a side view of the instrument.

Figure 3 is a sectional view of a clamp for the shanks, on the plane 3—3 of Figure 1.

Figure 4 is a detached fragmentary view of an extension handle.

Figure 5 is a cross section on the plane 5—5 of Figure 1.

Figure 6 is a cross section of adjacent blades on the plane 6—6 of Figure 1.

Referring now to the drawings specifically, 1, 2 indicates a pair of blades or jaws each pivoted at 3, 3′ to a pair of shank members 4, 5. The jaws or blades are provided near their pivotal points on the under side of each with three notches 6, 6, 6 adapted to engage slides 7, 7^a, see Figure 5, which is mitered in the respective shanks 4, 5. A finger piece 8, 8^a permits the mortised bars 7, 7^a to be pushed into engagement on each blade, respectively, with one of the notches 6, by which angular adjustment of the two blades may be adjusted and locked in position. A set-screw on top of each bar permits the parts to be locked as between the bars and the shanks. This will be clearly seen from the enlarged section, Figure 5, taken on a plane 5—5 of Figure 1. The two shanks are capable of longitudinal adjustment into one of three positions by a stud 15^a engaging any one of three notches 14, 15, 16 on the lower member of Figure 1. As shown, this stud is placed in the middle position which corresponds to one stage of an obstetrical operation. In this position it may be locked by a pivoted screw 12 and clamp nut 13 pivotally mounted in a post 9 integral with the lower shank of Figure 1 and which may cooperate with any of three notches in posts 9^a, 9^b, 9^c. In Figure 2 the forceps is shown in a rightangular position with respect to that of Figure 1. As here seen the front shank is shown with its mortised slide engaging the middle notch of the upper blade and the stud 15^a is shown in a similar middle position to that of Figure 1. By swinging out the set-screw the separable clamp permits the two shanks to be opened and the shanks relatively shifted so that the stud 15^a may engage with another notch 14 on the companion shank, thus a relative adjustment of the two blades is accommodated and when the thumb nut is tightened the two shanks are relatively a single unit which may be manipulated by the surgeon. The handle end of the forceps 16′, 16^a has a downward gripping end and on this I secure by a set-screw 17 a slotted arm 18 on which is fixed a T-headed stud 19 engaged when the handle is in service in a slot 20 in the arcuate extension 18. A handle 21 is mounted on the extension by a universal joint 22.

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

1. An obstetrical forceps comprising a pair of shanks each with its own pivoted blade, notches near the blade pivot latched to lock either blade in any of a plurality of angular blade adjustments, the members of the forceps being relatively movable longitudinally, and a clamp to fix the members in any adjusted position.

2. An obstetrical forceps comprising a pair of angularly adjustable pivoted blades by which they may have variable angular adjustments, a plurality of notches near each pivot, independent shanks carrying the blades, mitered detents movable in the outer side of each shank with external adjusting thumb screw to facilitate locking the blades in adjusted position, a clamp lever pivoted

on one shank, and a series of notches in the other shank to engage the lever and clamp the shanks in a desired relative longitudinal adjustment.

3. An obstetrical forceps comprising a pair of pivoted blades, a pair of shanks mounted on the blade pivots, means for locking each blade in a plurality of angular positions, said shanks being relatively longitudinally adjustable, a clamp for locking the blades together in the several blade positions and a universal jointed extension handle with an arcuate slotted terminal adjustably connected to the forceps for directing their axis of movement.

4. An obstetrical forceps comprising a pair of independent pivoted blades, a plurality of notches to define their angular relations near the pivotal point, mortised slides on the outer side of the adjacent blade shanks, a clamp in one shank, and a series of notches in the cooperating shank adapted to lock the two together to form a unit in any adjusted position of the shanks, and right angled handles for manipulating the forceps, one of said handles being extensible and having a universal joint for directing any axis of movement desired by the operator.

In testimony whereof I affix my signature.

RICHARD D. RODERICK.