No. 893,464. PATENTED JULY 14, 1908.

W. B. DEWEES.

OBSTETRICAL FORCEPS.

APPLICATION FILED JULY 2, 1907.

Fig. 1.

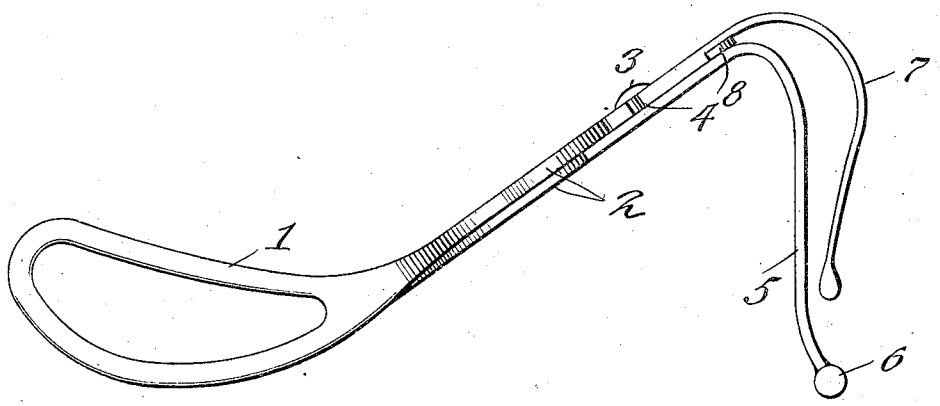


Fig. 2.

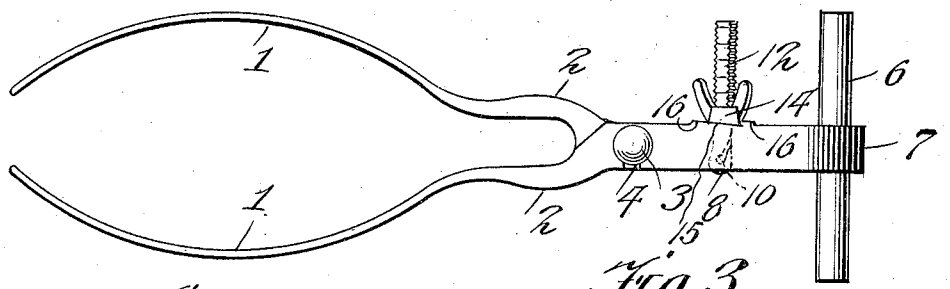
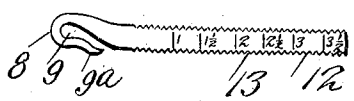
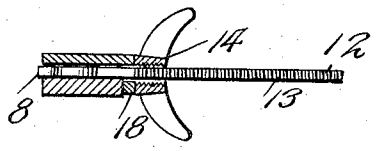


Fig. 4.

Fig. 3.





Witnesses

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OBSTETRICAL FORCEPS.

No. 893,464. Specification of Letters Patent. Patented July 14, 1908.

Application filed July 2, 1907. Serial No. 381,878.

To all whom it may concern:

Be it known that I, WILLIAM B. DEWEES, a citizen of the United States, residing at Salina, in the county of Saline and State of Kansas, have invented new and useful Improvements in Obstetrical Forceps, of which the following is a specification.

This invention relates to obstetrical forceps, and one object of the invention is to provide what I term an axis-traction and anti-craniotomy forceps, the construction of which provides for the ready cleansing of all parts of the forceps by any preferred antiseptic preparation.

A further object of the invention is the provision of means adapted to secure the blades or jaws of the forceps in proper relative position when in use, and by means of which the exact distance between the tips of the blades or jaws may be readily determined, said means permitting the operator to release the pressure of the blades or jaws so as to allow them to move apart to any desired but limited extent to allow for conditions which necessarily exist during the use of the instrument.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement hereinafter fully described, illustrated and claimed.

In the accompanying drawings, Figure 1 is a view in side elevation of the forceps complete, constructed in accordance with the present invention. Fig. 2 is a top plan view, showing the application of the clamping screw. Fig. 3 is a detail section showing the application of the clamping screw and nut and the relation of said parts to the handles of the forceps. Fig. 4 is a detail plan view of the clamping screw.

Similar numerals of reference designate corresponding parts in all the figures.

Referring to the drawings, 1 designates the blades or jaws of the forceps which are of the usual skeleton or open form and carried by the outer ends of the shanks 2 which, together with the blades, are given the proper curvature longitudinally to admit of the axis-traction properties well understood by physicians and others conversant with the art to which this invention appertains.

The lock for the blades and shanks consists of the headed stud 3 which projects from one of the shanks and is adapted to enter an open notch or slot 4 formed in the other shank. When the parts are arranged in the manner described, a pivotal connection is established between them while at the same time they may be readily disconnected for antiseptic cleaning. One of the shanks 2 is provided with a vertically depending extension 5 terminally provided with a cross head 6 forming a hand-grip by means of which the forceps may be manipulated. The other shank is provided with a curved extension 7 forming a handle which projects beyond and lies outside of the vertically depending extension 5, the parts 5 and 7 forming handles by means of which the shanks may be pivotally actuated relatively to each other for properly adjusting and positioning the blades or jaws 1.

In order to hold the blades in proper relation to the object engaged thereby, I provide a clamping screw 8 which, at one end, is enlarged and formed with a notch 9 and a spring tongue 9^a, said notch being adapted to laterally engage a stud 10 on one of the shanks 2 adjacent to the vertically depending extension 5. The spring tongue 9^a is adapted to secure the screw 8 on the stud 10 against accidental removal. The curved handle 7 or the shank with which said handle connects is recessed as shown at 11 to admit the notched end of the screw 8 between the two handles. The outer portion of the screw is provided with opposite flat sides 12 and the opposite edges thereof are screw-threaded as shown at 13, to receive a thumb-nut 14 which is adapted to be brought to bear against an inclined seat 15 formed by notching and off-setting one edge of the shank carrying the handle 7, the inclined seat being located and formed between spaced lips or projections 16. The upper shank which is formed with the seat 15, is also provided with an arm 18 extending parallel with seat 15 on a lower plane, so that a slot or passage is formed between the seat 15 on the shank and the arm through which the clamp-screw 8 passes. The arms 18 are provided with shoulders or projections similar to the projections 16 above referred to, and thus bearings are formed for the thumb-nut 14 at opposite sides of the slot or space through which the shank of the screw passes. Such arrangement prevents cramping and binding of the thumb-nut. One or both of the flat sides of the screw 8 are graduated or provided with a scale as shown at 17 which, in connection with the hub portion of the nut 14, which acts as an indicator, designates

the distance in inches or the like between the tips of the blades or jaws 1 and serves as a guide to the operator for partially opening the blades periodically to allow for expansion and contraction.

In applying the forceps, the clamping-screw may be detached therefrom as it will not be needed until the forceps have been properly adjusted. After the desired adjustment or positioning of the blades has been effected, the notched head of the clamping-screw is slipped over and brought into engagement with the stud 10 and the nut 14 manipulated until it bears against the seat 15 and holds the jaws in proper relation to the object held between the same. By means of the construction hereinabove described, axis-traction is made perfect, easy and simple. With the hand on the cross head it is impossible to do otherwise than make axis traction in a direct line with the head of the child in the grasp of the blades. The operator is enabled to seize the head more advantageously at the brim, and the facility with which it can be aided to descend in the axis of the superior strait, as well as to follow the axis of the pelvis, would seem scarcely possible to one accustomed only to the ordinary forceps. By means of the set-screw, with its scales, the blades can be definitely fixed upon the head and readily released at intervals. The forceps are easy of application and will be found safe and reliable in practice. The instrument is also economic and simple.

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

1. The herein-described forceps comprising a pair of blades detachably pivoted together, one of said blades being formed with a vertically depending extension provided with an end cross-bar, and the other blade being formed with a downwardly curved extension overlying the vertically depending extension of the other blade, and a graduating set screw between the shanks of the blades to set and hold the blades.

2. A forceps comprising a pair of blades pivotally connected together, one of said blades being formed with a vertically depending extension terminally provided with a cross bar and the other blade being provided with a curved extension forming a handle which projects beyond and lies outside of said vertically depending extension.

3. A forceps comprising a pair of blades pivotally connected together, a stud secured to one of the blades, a clamping screw provided with an open notch at one end to embrace the stud, said screw being provided with a spring tongue adapted to engage the stud to prevent the screw from becoming accidentally disengaged therefrom, and a nut adjustably mounted upon the shank of the screw.

4. A forceps comprising a pair of blades pivotally connected together, one of said blades being formed with a vertically depending extension, and the other blade being provided with a handle which projects beyond and lies outside of said vertically depending extension.

5. The combination with forceps provided with overlapping handles, of a screw secured to and projecting from one of the handles, the securing end of the screw being located between the handles, the other handle having one of its edges formed to provide a seat, an arm secured to said other handle parallel with the seat on a lower plane, said arm being formed to provide a seat, and a nut mounted upon the screw for engagement with the seat.

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

WILLIAM B. DEWEES.

Witnesses:

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FRANK STOUT.