A NEW AXIS-TRACTION AND ANTI-CRANIOTOMY FORCEPS.

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The advantages claimed for the use of this instrument are:

1. That axis-traction is made perfect, easy, and simple.

2. That axis-traction at the superior strait is perfect and continues so, following the curve of Carus from the brim to the outlet.

3. That the axis of the blades is constantly parallel with the axis of the parturient canal as the head descends. Thus the accoucheur is enabled to fulfil a most important aim in forceps operations, namely, to deliver with the minimum amount of force.

Fig. 1.

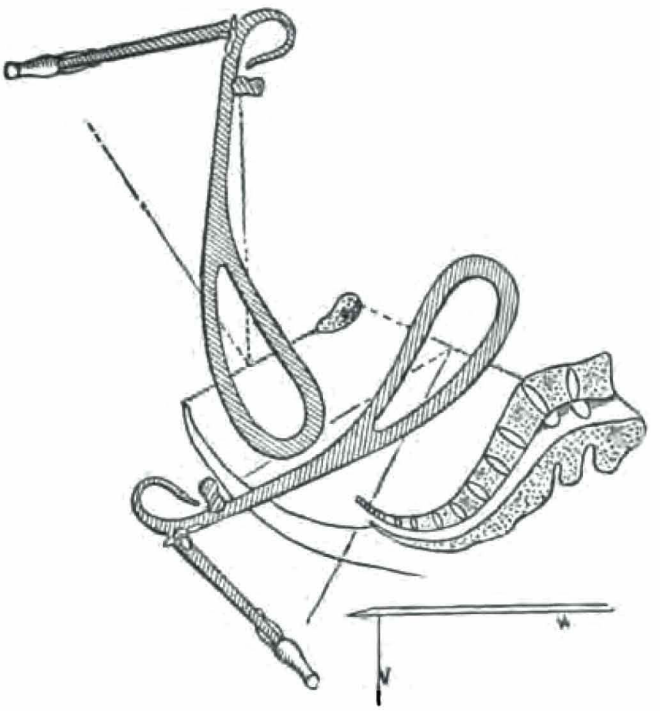
The Axis-traction and Anti-craniotomy Forceps (side view). Dimensions: Length, 11 inches; length from lock to tip of blades, 9 inches; length of perineal curve, 5 inches; length of handle, 4 inches; greatest width between blades when closed, 2¾ inches; width between tips of blades when closed, ¾ inches; weight, 16 ounces.

4. That 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.

5. That by means of the set-screw, with its scales, the blades can be definitely fixed upon the child's head during the period of uterine contraction and as readily released during the interims, thus intelligently simulating nature and allowing free internal rotation of the head, while the danger of slipping—which is almost always due in the use of the ordinary forceps to a tiring of the muscles of the hand of the operator—is reduced to the minimum.

6. That it is easy of application, and in its dual character it is a conservative life-saving instrument to both mother and child. It is an effectual tractor and compressor. The blades are sufficiently

FIG. 2.



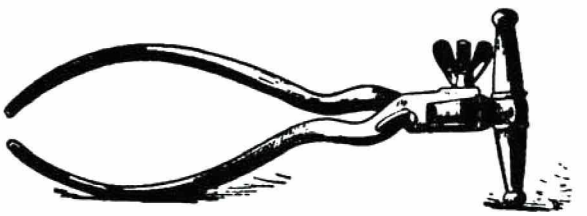
Illustrating axis-traction with the forceps.

strong to prevent slipping and readily secure moderate transient compression of the flexible infantile cranium in its upper portion without pressing too strongly at its base with the tips. Thus, it is a safe and efficient substitute for delivery by craniotomy or version in cases of even considerable pelvic contraction. It has all the advantages of ideal axis-traction and anti-craniotomy, as well as of the long and the short forceps, with ample power and perfect control, and with even more simplicity than the ordinary forceps,

while it saves the expense of three or more instruments where one will serve the purpose.

7. That it is an aseptic, economic, safe, efficient, and uncomplicated instrument, occupying a position between the ordinary forceps and the cephalotribe or cranioclast, with the greatest possible safety to both mother and child. The forceps has an undoubted place as a compressor in certain cases, and if properly used there is no harm. Statistics prove (Winter, in *American System of Obstetrics*) that the ordinary forceps has caused less than 15 per cent. mortality in contracted pelves. It remains to be shown how much less the mortality will be by the use of this ideal instrument, which is constructed upon a sound scientific theory and definite mathematical drawings based upon accurate measurements of the average female pelvis. The conclusion is warranted that when it becomes impossible to deliver a living child with the use of this forceps

FIG. 3.



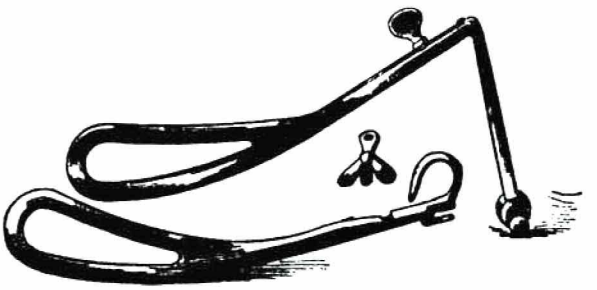
The same forceps, reduced scale (upper view).

there is no other operative alternative but Cesarean section. The fact remains that obstetrics as an art, and the technique of Cesarean section as an operation, have advanced to such a stage of perfection that the revolting operation of craniotomy on the living fetus is never justifiable.

A careful, timely study and practical test of the axis-traction principle in obstetric practice will bring the conviction that it is rational and correct. Much attention has been given of late years by the leading obstetric authorities throughout the world to the designing of an ideal instrument for its proper production; but partial or total failure has come in all instances. This is evidently due to the fact that these endeavors were chiefly based upon such fallacious ideas as, first, that correct axis-traction can only be obtained by having rods attached to the blades by movable joints, and, second, that traction, whether with pulleys, tapes, or rods, must in no wise be connected with the handles.

The fact is, that these ideas are not only erroneous, but actually detrimental to the production of proper axis-traction, which can be made correctly and effectually without any such complicated and cumbersome attachments to the ordinary forceps. This has been recognized by high authority for many years, among whom may be cited Aveling, Merales, Hubert, Robert and Fancourt Barnes, Allen H. Smith, Barton Cooke Hirst, and others.

FIG. 4.



The same forceps, reduced scale, showing all the parts separated.

Timely observation and experience established the fact that the desideratum to fulfil the rationale of the axis-traction principle was still wanting. The writer, endeavoring to supply the same, presented the consummation of his first idea to the Section on Obstetrics and Diseases of Women of the American Medical Association at Detroit, Michigan, June 7, 1892. But a riper experience and more extended study have eventually brought about the idealization of what has proven to be a more perfect instrument for the purpose desired than any that has yet been brought to the notice of the profession. This instrument was made for me by the A. E. Yarnell Co., Philadelphia, Pa.