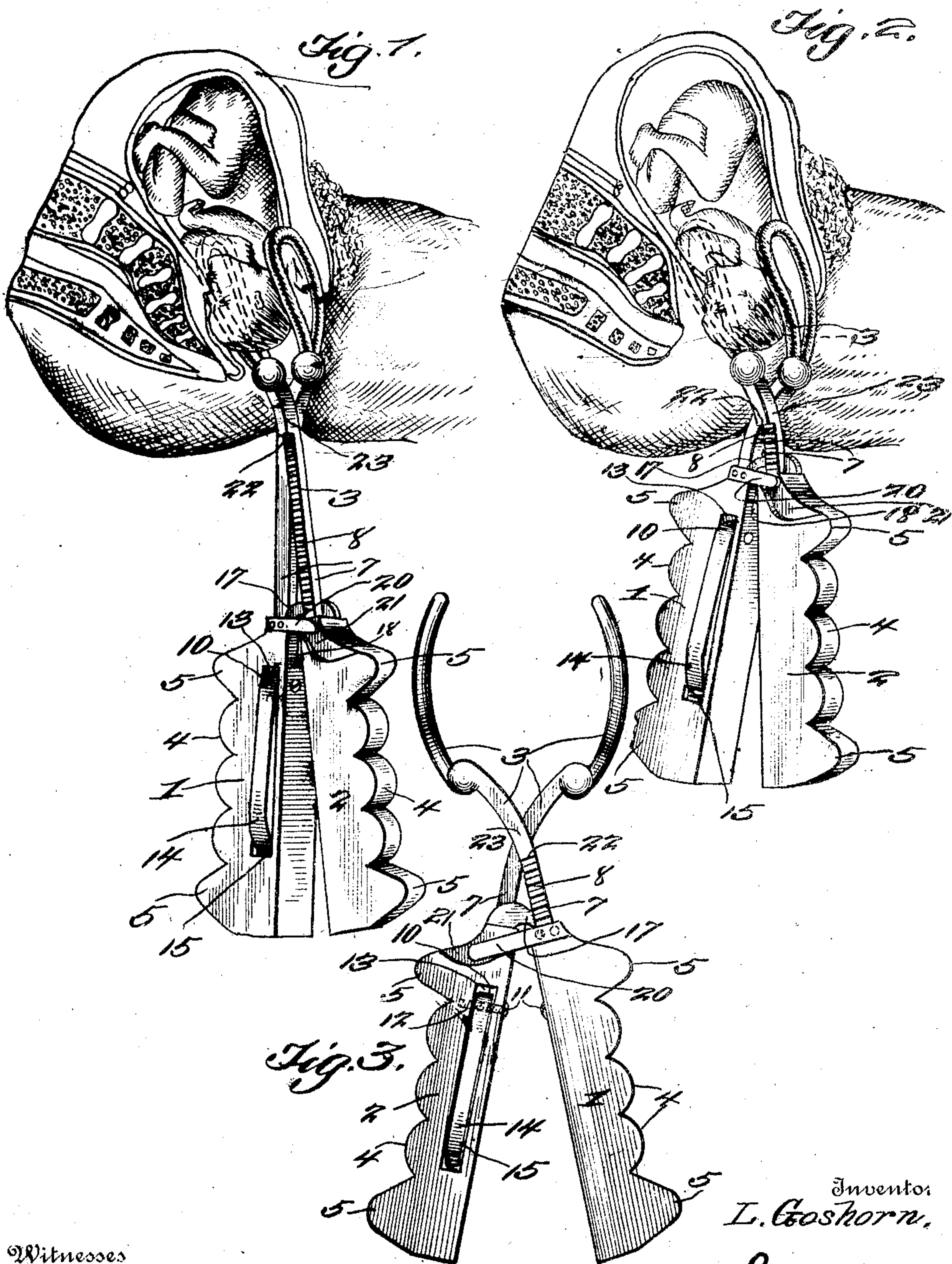


L. GOSHORN.  
EXTENSION OBSTETRICAL INSTRUMENT.  
APPLICATION FILED FEB. 16, 1910.

962,952.

Patented June 28, 1910.  
2 SHEETS—SHEET 1.



Witnesses

*Francis C. Russell*  
*M. M. Miller*

Inventor  
*L. Goshorn.*

By *D. Swift & Co.*

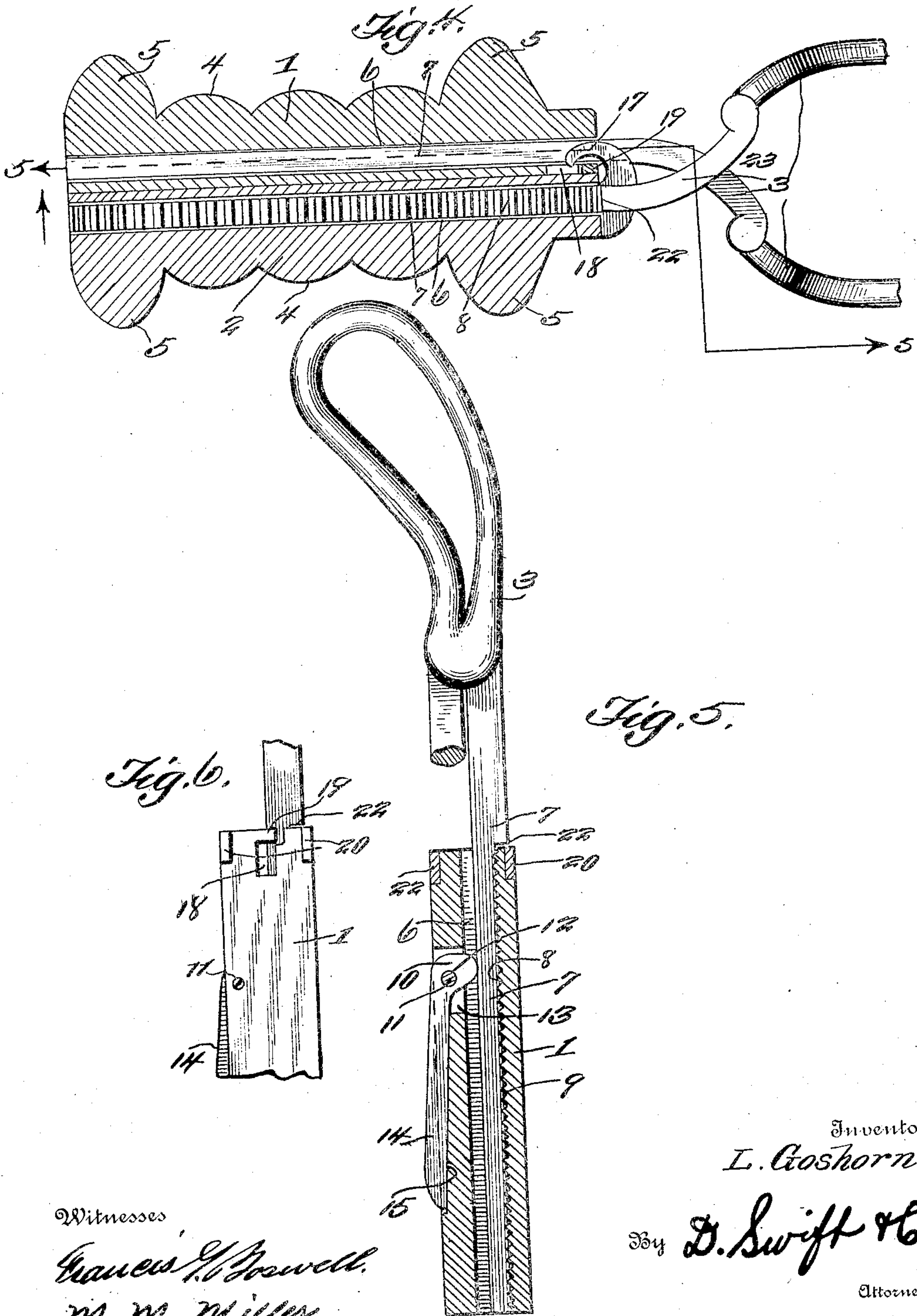
Attorneys

L. GOSHORN.  
EXTENSION OBSTETRICAL INSTRUMENT.  
APPLICATION FILED FEB. 16, 1910.

Patented June 28, 1910.

2 SHEETS—SHEET 2.

962,952.



Witnesses  
Francis G. Boswell.  
M. M. Miller.

Inventor  
L. Goshorn.  
By D. Swift & Co.  
Attorneys



# UNITED STATES PATENT OFFICE.

LEONARD GOSHORN, OF WACO, TEXAS.

EXTENSION OBSTETRICAL INSTRUMENT.

962,952.

Specification of Letters Patent. Patented June 28, 1910.

Application filed February 16, 1910. Serial No. 544,205.

*To all whom it may concern:*

Be it known that I, LEONARD GOSHORN, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented a new and useful Extension Obstetrical Instrument; 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.

The invention about to be set forth and claimed belongs to the art of surgical instruments or appliances, and particularly pertains to an extensible obstetrical instrument, adapted for use in performing various operations.

The primary object of the invention is to provide an instrument of this character, which is made extensible, in order that the surgeon may obviate the use of one or more non-extensible obstetrical instruments (which are necessary in all operations at the present time). By the use of this improved extensible instrument, a surgeon, at certain periods, may perform his operations with greater efficiency than heretofore, by readily and easily adjusting the handles, with regard to the oscillating jaws of the device.

In this specification and the drawings annexed hereto, a particular design of device is adhered to, but the invention is not to be confined to this particular design.

The device in its actual reduction to practice may require changes and variations; the right thereto belongs to the applicant, provided such changes and variations are comprehended by the appended claims.

Further objects and combinations and arrangement of parts will be hereinafter more fully set forth and pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of the extensible instrument, showing the manner of application. Fig. 2 is a plan view of the instrument showing the jaws partially open. Fig. 3 is a sectional view through the instrument, in order to show the connection between the two jaws, and to further disclose the manner of adjustability or the extension of the jaws. Fig. 4 is a longitudinal sectional view through the members 1 and 2. Fig. 5 is also a longitudinal

sectional view taken on line 5—5 of Fig. 4. Fig. 6 is a detail view of a portion of the instrument showing the opening 18 and the lug 19.

Referring more essentially to the annexed illustrations, 1 and 2 denote the handles (which are adjustable) of the extensible jaws 3 of the device. These handles are provided with various corrugations 4, in order to permit the surgeon to secure a firm grip thereupon, and at each end of the handles shoulders or enlargements 5 are provided, in order to prevent slipping of the surgeon's hands with regard to the handles, if such may be the case, but which, to a certain extent, is prevented by the corrugations.

The handles 1 and 2 are provided with elongated bores 6 (which are rectangular in cross section). Received by these bores are the rear extensions 7 of the jaws 3, said rear extensions are provided with ratchet teeth or corrugations 8, which are designed to cooperate with similar corrugations or ratchet teeth 9 upon a portion of the inner circumference of the said bores 6, in order to prevent rearward or forward displacement of the said jaws, after the handles or jaws have once been adjusted. The adjustment of the handles or jaws may be necessary during one or more periods of the operation, in order that the surgeon may perform such operations with greater efficiency.

After the jaws or handles are adjusted with regard to one another, they are held in their adjusted position by cam devices or holding members 10. These cam devices or holding members are arranged on opposite sides of the handles, and pivotally mounted upon threaded pins 11, which penetrate the handles as shown at 12. The cam devices or holding members operate in recesses 13, across which the pivotal pins extend. To operate the cam devices or holding members, the same are provided with integral levers or handles 14, which seat in recesses 15, when the cam devices or holding members are in close contact with the rear extensions of the jaws. The upper or outer faces of the levers of the cam devices, when seated in said recesses 15, are disposed flush with the outer faces of the adjustable handles, in order to lend no obstructions to the surgeon's hand, when manipulating the instrument.



The handles are so connected with regard to one another that the same may be disconnected, by a forward movement of one of the handles or a rearward movement of the other handle. This connection comprises a hook 17 carried by the handle 2, the hook portion of which is designed to penetrate a portion of the elongated bore of the opposite handle at the end portion thereof, and as the jaws are oscillated with regard to one another, the extremity of the hook portion of the hook extends into a recess or opening 18, there being a suitable lug 19 to prevent disconnection of the handles, during the manipulation of the instrument. This lug 19 extends across the mouth of the recess 18, in order to perform its proper function, which was above stated.

In order to hold the jaws and the handles in their proper parallel relation during an operation, each handle is provided with a lateral extension 20. These extensions 20 extend in opposite directions, and in such wise as to engage the opposite handles, there being recesses or cut-away portions 21 upon each handle, opposite that portion of the handles from which the lateral extensions project, in order to receive said extensions, so as to prevent displacement of the jaws during their oscillation. These recesses or cut-away portions 21 are of sufficient size as to allow free movement of the said lateral extensions.

By connecting the handles together in the manner above described and shown in the drawing, it renders the pivotal action between the jaws adjustable, which is essentially necessary during certain periods of a surgical operation, namely, as the operation reaches the lower ring of the pelvis, the handles may be moved forward of the jaws, thereby allowing the surgeon to more efficiently complete the operation.

The rear extensions (which penetrate the rectangular bores of the handles) are provided with shoulders 22 to engage or be engaged by the forward ends of the handles, in order to limit the forward movement of the handles or the rearward movement of the jaws.

The forward portions of the jaws cross at a point indicated by the character 23, there being curved portions at this junction, and the portions of the jaws beyond their intersection are formed into curves in directions opposite to those previously mentioned, thereby approximately providing compound curved jaws. The last-mentioned curved portions of the jaws are very essential in properly performing the necessary operations, in order to render firmer hold. These curved portions are also formed into loops, which assist materially in the completion and the performance of the operation.

From the foregoing, the essential features,

elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

Having thus fully described the invention, what is claimed as new and useful is:—

1. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having means to engage said teeth, means pivotally carried by the handles to cause said extensions to closely engage the first-named means to hold the handles in adjusted positions.

2. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having means to engage said teeth, means pivotally carried by the handles to cause said extensions to closely engage the first-named means to hold the handles in adjusted positions, said handles having lateral extensions extending toward one another to engage the sides of the handles to hold the jaws in parallel relation and provided with recesses to receive said extensions.

3. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having bores provided with teeth to engage the first-named teeth, said handles having recesses or openings, lever-operated cam holding members to engage the said extensions to cause a thorough co-action between the teeth mounted in said recesses or openings.

4. In an obstetrical instrument, a pair of intersecting gripping jaws having rear extensions provided with teeth, a pair of hooked or connected handles adjustably carried by the extensions having bores provided with teeth to engage the first-named teeth, said handles having recesses or openings, lever-operated cam holding members to engage the said extensions to cause a thorough co-action between the teeth mounted in said recesses or openings, and means carried by each handle to engage the opposite handle to hold the jaws and handles in parallel relation.

5. In an obstetrical instrument, a pair of intersecting jaws having adjustable handles, one of said handles having a hook, while the other handle is provided with a recess or opening having a lug extending across its mouth to receive said hook, said lug being designed to prevent displacement or disconnection of the hook with the recess or opening.

6. In an obstetrical instrument, a pair of intersecting jaws having adjustable handles, one of said handles having a hook, while the

other handle is provided with a recess or opening having a lug extending across its mouth to receive said hook, said lug being designed to prevent displacement or disconnection of the hook with the recess or opening, and means carried by each handle to engage the opposite handle to hold the jaws and handles in parallel relation.

In testimony whereof I have signed my name to this specification in the presence of 10 two subscribing witnesses.

LEONARD GOSHORN.

Witnesses:

E. G. VAN ZANDT,  
T. J. LOWE.