

1,083,103.

Patented Dec. 30, 1913

2 SHEETS-SHEET 1.

Fig. 1.

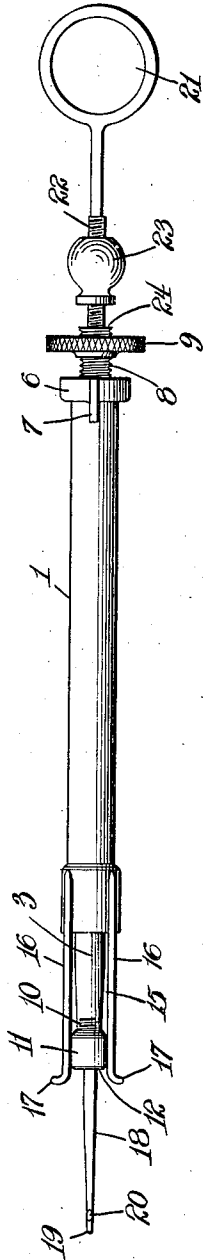


Fig. 6.

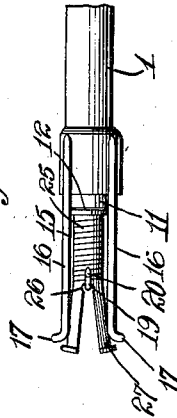
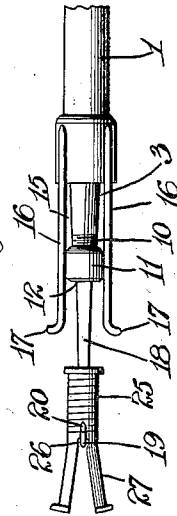


Fig. 5



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

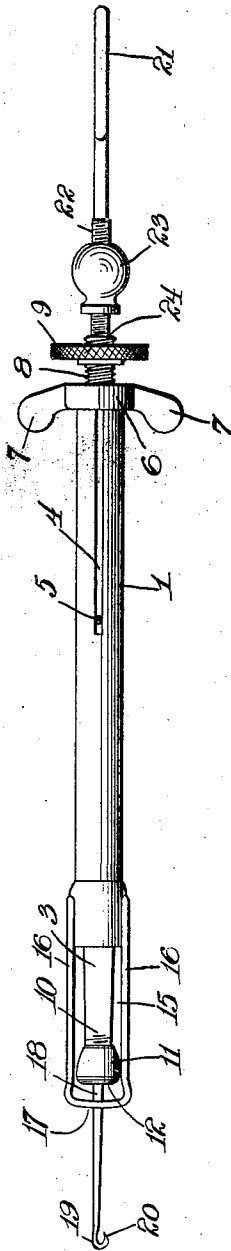
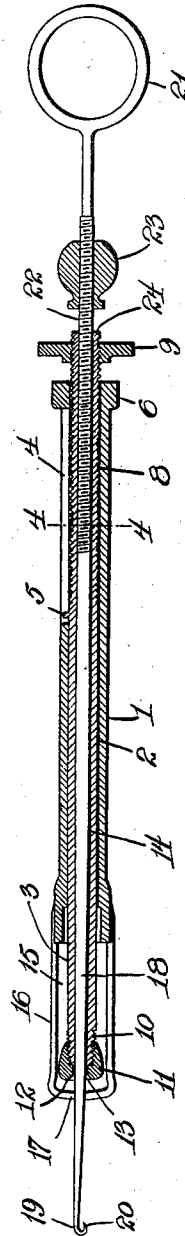


Fig. 4.



Fig. 3.



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UNITED STATES PATENT OFFICE.

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TUBE-EXTRACTOR.

1,083,103.

Specification of Letters Patent.

Patented Dec. 30, 1913.

Application filed April 22, 1913. Serial No. 762,865.

To all whom it may concern:

Be it known that I, RICHARD JENTZSCH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Tube-Extractors, of which the following is a specification.

My invention relates to an extractor adapted especially for use in extracting uterine tubes, such as disclosed in my prior Patent #1039,061, dated September 17, 1912, for a self retaining uterine tube. Upon reference to the above-named patent, it will be noted, when the tube is in applied position, its bifurcated inner end is expanded so as to retain the tube in position. When it is desired that this tube be extracted, it is necessary to use an extractor which will tend toward collapsing the expanded inner end thereof and will guard the same so as to prevent injury to the tissues of the uterus, during the withdrawal of the tube.

It is therefore the object of my invention to provide an extractor which will effectively serve to engage the tube for the purpose of extraction, and to envelop the bifurcated inner end thereof prior to the operation of the extraction.

A further object of the invention is the provision of a device of this character which is simple in construction, and whose parts may be readily detached for the purpose of sterilization thereof, and which may be readily assembled.

The invention consists in the features of construction, combination and arrangement of parts, hereinafter fully described, and claimed, reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation of the extractor; Fig. 2 is a top plan view of the same; Fig. 3 is a longitudinal sectional view taken horizontally therethrough; Fig. 4 is a transverse sectional view taken on line 4-4 of Fig. 3; Fig. 5 is a fragmentary side elevation of the device in use, during the act of securing the uterine tube to the head of the movable inner tube; and, Fig. 6 is a similar view, showing the tube completely enveloped by the basket carried by the body of the device and ready for the extraction of the tube.

Referring to the drawings, the numeral 1 designates the cylindrical body of the de-

vice which is provided with a longitudinal, cylindrical bore 2 for the slidable reception of the inner, tubular attaching member 3. The body 1 is provided with a longitudinal slot 4 opening through one end thereof for the reception of a lateral lug 5 provided upon the tube member 3, and is intended to prevent rotation of the tube member within the body during sliding movement thereof. A collar 6 is secured fixedly to this end of the body 1 and encircles the end portion of the slot 4, lateral wings 7 being provided upon the said collar to serve as means by which the body 1 may be held securely in its operative position, during manipulation of the movable parts of the device. The adjacent end of the tube member 3 is externally screw-threaded as at 8, and a knurled adjusting nut 9 is threaded onto its outer end and is adapted for engagement with the corresponding end of the body 1, during the operation of the said tube member outwardly through the body. The opposite end of the member 3 is externally threaded as at 10 for the reception of an internally threaded head 11, which latter is provided with a rounded outer face 12 and has a reduced bore 13 disposed in alinement with the central bore 14 of the member 3.

A basket 15 is provided upon the end of the body 1 adjacent the head 11 of the tube member, and is comprised of a pair of elongated loops 16 constructed preferably of slightly resilient wire, the outer ends of the said loops being bowed slightly as at 17.

A locking member 18 in the form of a cylindrical rod is slidably mounted within the bore 14 of the tube member 3, its end portion adjacent the basket 15 being tapered and formed with a terminal hook 19, the extremity of whose bill is exteriorly beveled as at 20 for a purpose which will be more fully described hereinafter. The opposite end of the member 18 is provided with a loop 21 forming an operating handle therefor, and it is externally threaded adjacent this handle, as at 22, a locking nut 23 being adjustably mounted on this threaded portion of the locking member for engagement with the adjacent end face 24 of the tube member 3. It is to be understood that the member 18 is rather loosely mounted in the bore of the tube member 3, so that its threaded portion is slightly enlarged, thus permitting the removal of the locking nut 23 over the

smooth portion of the said member, the hook 19 being small enough to permit the withdrawal of the said end.

In using the device to extract a tube of the character previously described, the basket 15 is inserted into the uterus so that its end is in engagement with the outer end of the uterine tube 25. Then, the locking member is forced inwardly so that the hook 19 will pass into the tube 25, wherein it may be brought into engagement within one of the circular openings 26 provided therein at the point of junction between the bifurcated arms 27 of the tube and its body portion, this being accomplished by skilled manipulation of the locking member. As the hook 19 is disposed in the plane of the handle 21, the correct angular disposition of the body 1 with respect to the locking member may be determined so as to cause the arms 27 of the tube to be brought into registration with the bowed ends 17 of the basket loops. After the locking nut 23 has been moved into tight locking engagement with the adjacent end of the tube member 3, thus bringing the head 11 provided upon the opposite end of the said tube into firm engagement with the outer end of the tube 25, the adjusting nut 9 is brought into engagement with the adjacent end of the body 1 and is rotated so as to force the body 1 inwardly, thus causing the basket 15 to creep over the tube 25 and completely inclose the same. The engagement of the bowed ends 17 of the basket loops with the arms 27 of the uterine tube will tend to collapse the same into unobstructing position, but irrespective of this function it shields the entire tube so as to permit withdrawal of the same by merely pulling the entire device outwardly without danger of injuring the delicate tissues of the uterus, as the end face of the bill of the hook 19 is beveled as at 20 so as to prevent the point of the said bill from tearing the said tissues during the extraction of the tube.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the profession to which this invention appertains that I have provided a simply constructed extractor comprised of few parts, which may be readily taken apart or assembled, and which is adapted to remove a uterine tube of the class described in an efficient and harmless manner. I desire to have it understood, however, that I may resort to minor changes in the construction of the device in carrying the same into practical use without departing from the scope of the invention.

Having thus described my invention, what I claim is:

1. A tube extractor of the class described comprising a body, an attaching member

carried by said body, means for securing the tube to be extracted to the said attaching member, and a shielding basket carried by said body and adapted to receive the said tube.

2. A tube extractor of the class described comprising a body, an attaching member movably mounted with respect to said body, means for attaching said body with respect to the attaching member, means for securing the tube to be extracted to said attaching member, and a shielding basket provided upon said body for the reception of the said tube.

3. A tube extractor of the class described comprising an attaching member, adjustable means for securing the tube to be extracted to said member, a body mounted upon said member, and a shielding basket provided upon said body for the reception of the tube.

4. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, and a shielding basket provided upon said body for the reception of the tube.

5. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, adjustable means for operating said body, and a shielding basket provided upon said body and adapted to inclose the said tube upon movement of the body into operative position.

6. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, adjustable means for operating said body, and a shielding basket provided upon said body and adapted to inclose the said tube upon movement of the body into operative position, said basket being formed by coextensive, elongated loops.

7. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, adjustable means for operating said body, and a shielding basket provided upon said body and adapted to inclose the said tube upon movement of the body into operative position, said basket being formed by coextensive, elongated loops, having outwardly bowed end portions for engagement with the expanded ends of the tube.

8. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, adjustable means for operating said body, and a shielding basket provided upon said body and adapted to inclose the said tube upon movement of the body into operative

position, said basket being formed by coextensive, elongated loops, of resilient material.

9. A tube extractor of the class described comprising an attaching member, means for securing the tube to be extracted to said member, a body movably mounted upon said member, adjustable means for operating said body, and a shielding basket provided upon said body and adapted to inclose the said tube upon movement of the body into operative position, said basket being formed by coextensive, elongated loops, of resilient material, having outwardly bowed ends for engagement with the expanded ends of the tube.

10. An extractor for tubes of the class described comprising an attaching member, means for securing the tube to be extracted to one end of said member, a tubular body slidably mounted upon said member, a shielding basket provided upon the corresponding end of the body for the reception of the tube, and means for preventing rotation of the said body with respect to the attaching member.

11. An extractor for tubes of the class described comprising an attaching member, means for securing the tube to be extracted

to one end of said member, a tubular body slidably mounted upon said member, a shielding basket provided upon the corresponding end of the body for the reception of the tube, and means for preventing rotation of the said body with respect to the attaching member, and means by which said body may be operated longitudinally with respect to the attaching member.

12. An extractor for tubes of the class described comprising an attaching member having a longitudinal bore, a locking member movably mounted within said bore, one end thereof being adapted to be inserted within the tube to be extracted, a hook provided upon the end of the said locking member for engagement within said tube, means by which said locking member may be adjusted with respect to the attaching member to bind the said tube to one end of the latter, and means mounted upon said attaching member for inclosing and shielding the said tube.

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

RICHARD JENTZSCH.

Witnesses:

W. H. OGDEN,
ADOLPHE ROY.