

No. 735,400.

PATENTED AUG. 4, 1903.

R. P. McCULLY.  
SURGICAL INSTRUMENT.  
APPLICATION FILED APR. 22, 1903.

NO MODEL.

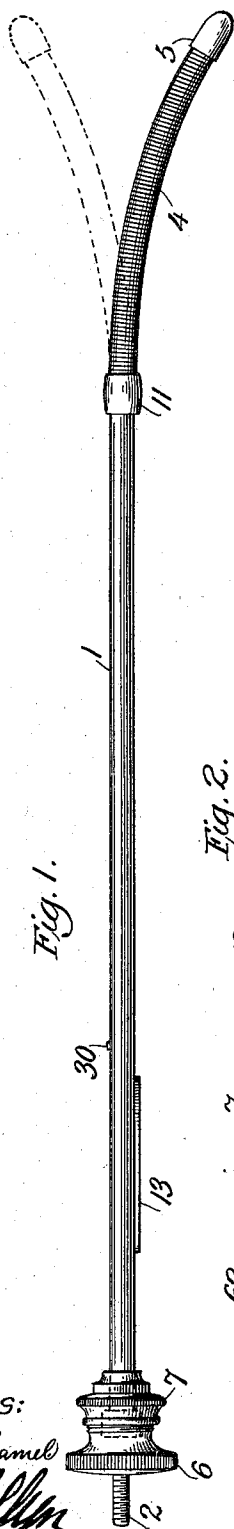


Fig. 1.

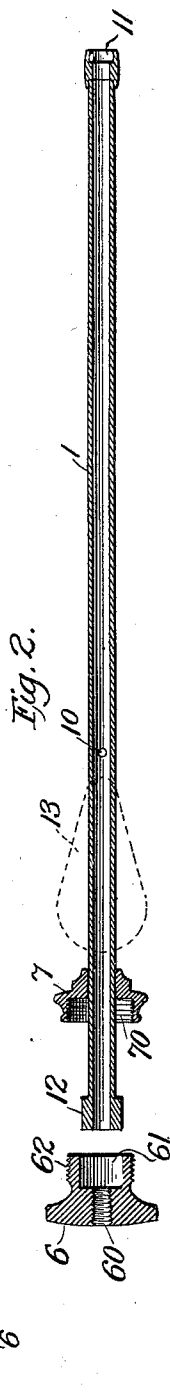


Fig. 2.

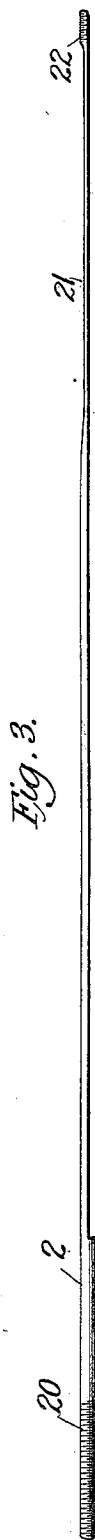


Fig. 3.

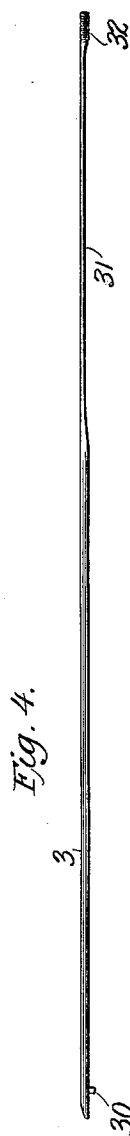


Fig. 4.

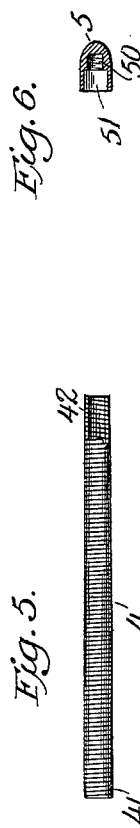


Fig. 5.



Fig. 6.

Witnesses:  
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Inventor,  
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# UNITED STATES PATENT OFFICE.

RICHARD P. McCULLY, OF BROOKLYN, NEW YORK.

## SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 735,400, dated August 4, 1903.

Application filed April 22, 1903. Serial No. 153,737. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD P. McCULLY, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Surgical Instruments, of which the following is a full, clear, and exact description.

My invention relates to improvements in surgical instruments, and particularly to the construction of what is termed a "uterine replacer."

The object of my invention is to so construct an instrument of this character that the various parts may be of a suitable adjustment relatively to one another and yet may be taken apart and put together again readily when desired. The importance of making an instrument of this character in parts, which may be dismembered, will be particularly well understood by those who are familiar with the art.

It is absolutely essential that an instrument which is to be used for surgical purposes more than once shall be adapted to cleansing in hot water and in chemicals which will render the instrument perfectly antiseptic. It is therefore important that the parts should be able to withstand a high temperature and withstand the action of chemicals. It is also important that all the parts of the instrument be accessible for the purpose of cleansing them with force when necessary.

With these objects in view my invention consists in employing a main tubular portion of the instrument which surrounds the shanks of two members which are capable of relative longitudinal movement and in incasing the outer ends of these two members in a suitable manner. The ends of the members are so held that they may be moved longitudinally relatively to each other for the purpose of causing a curvature of the ends. The construction will be more clearly seen on an inspection of the accompanying drawings, in which—

Figure 1 is a side elevation of an instrument embodying my invention with the adjustment so effected that the end is curved. Fig. 2 shows a longitudinal cross-section of

the main body or tube portion of the instrument, together with the adjusting mechanism. Fig. 3 is a side elevation of the main operating member or rod. Fig. 4 is a side elevation of its shorter companion member or controller-rod. Fig. 5 is a side elevation, partly in section, of the covering for the flexible ends of the instrument. Fig. 6 is a longitudinal cross-section of the tip employed to hold the flexible ends in position.

1 is a tubular member, which constitutes the main body portion and handle of the instrument.

2 is the operating-rod, which is provided with a screw-threaded portion 20 at the left-hand end, as shown in Fig. 3, and which is semicylindrical at its central portion. A portion at the right is thinned down, so as to be very flexible and spring-like. 22 is a screw-threaded portion at the extreme end, which is semicylindrical. In Fig. 4 is shown the companion member or controller-rod 3, which is preferably semicylindrical to correspond with the semicylindrical portion of the operating-rod 2.

30 is a pin carried by the controller member, which is adapted to coact with the perforation 10 in the tube when the parts are assembled.

31 is a flattened flexible or spring-like portion of the controller-rod.

32 is the semicylindrical end which is provided with screw-threads corresponding to the screw-threads 22. The combined ends 22 and 32 of the operating and controller rods form a complete screw-thread.

Fig. 5 shows the flexible covering, preferably a coiled spring, which fits into the end 11 of the tube 1 and covers the flexible portions of the controller and operating members. The end 42 of the covering fits into a recess 51 in the tip 5 when the tip 5 is screwed onto the ends of the controller and operating members, it being provided with screw-threads 50 for coacting with the screw-threads 22 and 32.

The parts thus far described are assembled by first inserting the controller member 3 in the tube 1, so that the pin 30 projects into the hole or recess 10 in the tube. This prevents

the rod 3 from having a longitudinal or rotary movement relatively to the tube. The operating member 2 is then inserted in the tube 1 until the screw-threads on the two ends 22 and 32 correspond. The flexible cover 4 is then slipped on in place over the ends and held in place by the attaching-tip 5.

6 is an adjusting-nut which has a screw-threaded interior 60, adapted to coact with the screw-threads 20 on the operating-rod. This nut 6 is provided with a recessed portion 61 of a slightly greater length than the shouldered extension 12 of the tube 1.

It will be seen on inspection of the drawings that a change in the relative longitudinal positions of the operating and controller rods 2 and 3 will cause the flexible ends 21 and 31 to be curved to the one side or the other, depending on whether the operating-rod is forced outward or drawn back. This adjustment of the longitudinal position of the operating-rod 2 is effected by means of the adjusting-nut 6. To prevent the adjusting-nut from having a longitudinal movement relatively to the tube 1 and to force the operating-rod 2 to move longitudinally, no matter in which direction the nut 6 is revolved, I have provided the guide member 7, which in this preferred form consists of an annular member free to move upon the tube 1 and provided with a screw-threaded portion 70 for coacting with the screw-threads 62 of the adjusting-nut 6. When the parts are in the position shown in Fig. 1, it will be seen that the combined adjusting-nut 6 and guide member 7 cannot have a longitudinal movement relatively to the tube 1, but that the rotation of the nut 6 will cause the operating-rod 2 to move in or out, and thus to curve the opposite end of the instrument.

13 is a plate attached to the tube 1, forming a convenient gripping means for the hand.

The construction of the instrument will therefore be seen to be simple and of economical manufacture. All the parts are preferably of metal. The operation is effective and thoroughly reliable, and the instrument is so dismemberable that it may be readily cleansed in all of its parts, so as to make the instrument perfectly antiseptic.

What I claim is—

1. An instrument of the character described including a tubular member, a controller-rod mounted therein, an operating-rod coacting with the controller-rod and with the tubular member, said rods having flexible portions, a removable covering for the flexible portions, a tip for removably connecting the extreme ends of the rods and means for moving the operating-rod relatively to the controller-rod, for the purpose specified.

2. An instrument of the character described, including an operating-rod and a controller-rod movable longitudinally rela-

tive to one another and having flexible and spring-like portions, a spring-like covering for the flexible portions and a removable tip securing the ends of said rods together and holding in place one end of the covering, and means for causing a relative longitudinal movement between said rods in order to cause a curvature of the flexible portions of the rods.

3. An instrument of the character described including a tubular body member having a shouldered end portion, operating and controller rods mounted in said tube, one end of the operating-rod having a screw-threaded portion, a nut mounted to coact with the screw-threaded portion and having a recess to hold the shouldered portion of the tubular member, and a guide member coacting with the adjusting-nut and the shouldered portion to prevent the nut from having longitudinal movement relatively to the tubular member, and a removable covering for the flexible ends of said rods.

4. An instrument of the character described including a tubular member having a recess therein, a controller-rod having a flexible portion, a projection carried by the controller-rod and engaging the recess in the tubular member, an operating-rod having a flexible portion and mounted in said tubular member and adapted to coact with the controller-rod, said rods being removable from said tubular member and means for securing the ends of the rods together.

5. An instrument of the character described including a pair of rods having flexible portions, means for moving said rods to cause a curvature of the flexible portions, a removable covering for said rods and a tip for securing said rods together at one end.

6. An instrument of the character described, including an operating-rod and a controller-rod movable longitudinally relative to one another and having flexible and spring-like portions, a covering for the flexible portions and a removable tip securing the ends of said rods together, and means for causing a relative longitudinal movement between said rods in order to cause a curvature of the flexible portions of the rods.

7. An instrument of the character described including a pair of rods, a tubular member, an adjusting-nut for one of said rods, a guide member freely mounted on said tubular member and coacting with the adjusting-nut to prevent its longitudinal movement and a curvable portion operated by the adjusting-nut and said rods.

8. A uterine replacer including a relatively stationary tubular member, an operating-rod having a flexible end portion, a controller-rod having a corresponding flexible end portion, both of said rods being surrounded through part of their lengths by said tubular member

and removably secured therein, a removable  
tip for securing the flexible ends of the rods to-  
gether and means coacting with the tubular  
member and the operating-rod whereby the  
5 rods may be made to curve to one side or the  
other as desired, all the parts being so con-  
structed that the operating-rod and the con-

troller-rod may be removed and disassembled  
for the purpose of cleansing.

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Witnesses:

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