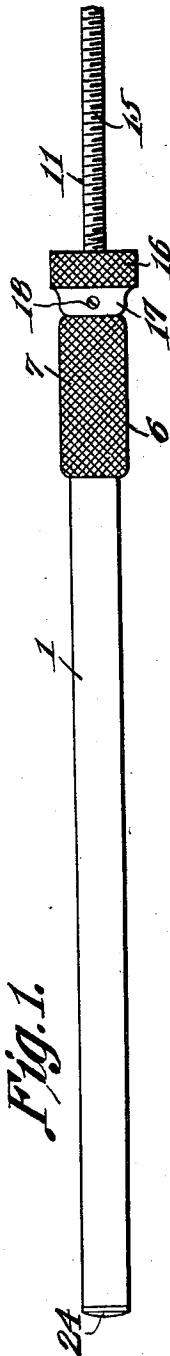


A. W. JONES.
CURETTE.

APPLICATION FILED APR. 7, 1913.

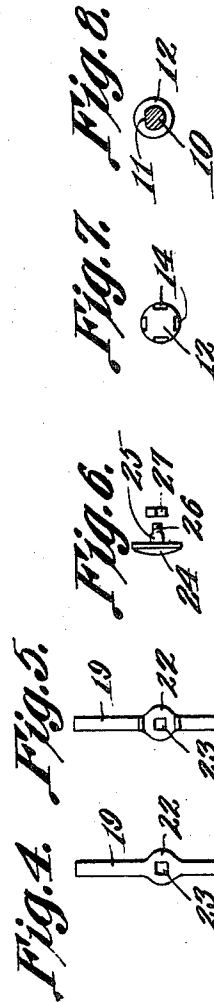
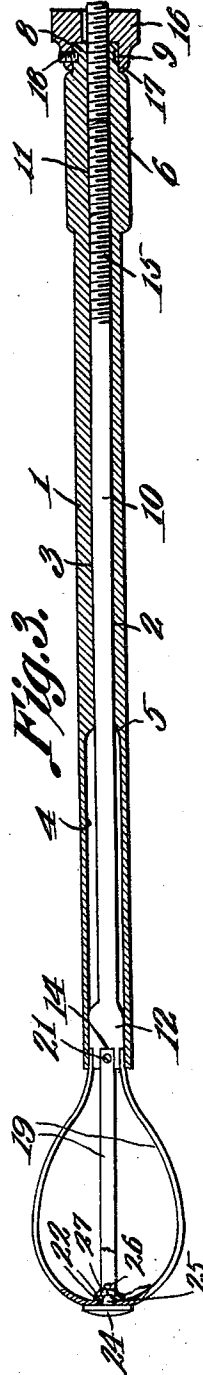
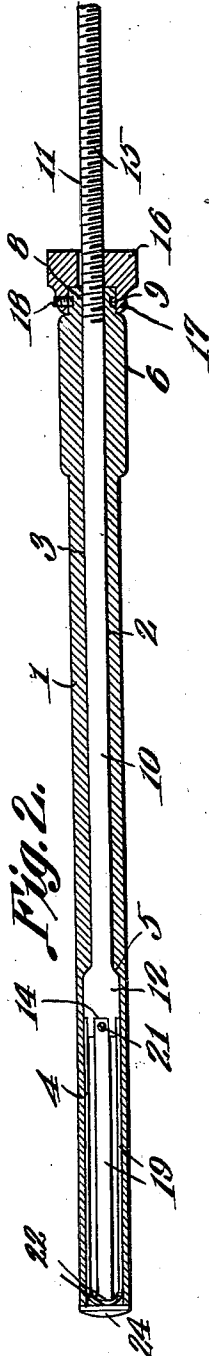
1,092,914.

Patented Apr. 14, 1914.



Witnesses

J. P. Conner
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UNITED STATES PATENT OFFICE.

AMBROSE W. JONES, OF OWINGSVILLE, KENTUCKY.

CURETTE.

1,092,914.

Specification of Letters Patent.

Patented Apr. 14, 1914.

Application filed April 7, 1913. Serial No. 759,508.

To all whom it may concern:

Be it known that I, AMBROSE W. JONES, a citizen of the United States, residing at Owingsville, in the county of Bath and State of Kentucky, have invented a new and useful Curette, of which the following is a specification.

One object of the present invention is to provide novel means for actuating and controlling the movement of the spring arms in a device of the type hereinafter described.

Another object of the invention is to provide novel means for uniting the arms at their point of intersection.

Another object of the invention is to provide novel means for actuating the rod whereby the arms are controlled.

It is within the scope of the invention to improve generally and to enhance the utility of, devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—Figure 1 is an elevation, the spring arms being retracted; Fig. 2 is a longitudinal section, the arms being retracted; Fig. 3 is a longitudinal section, the arms being advanced; Fig. 4 is an elevation of one arm, viewed from one end; Fig. 5 is an elevation of one arm, viewed from the opposite end; Fig. 6 is a side elevation of the connecting nut and bolt; Fig. 7 is an end elevation of the actuating rod; and Fig. 8 is an end view of the rod, the same being sectioned.

In carrying out the invention there is provided a tubular casing 1 having a bore 2, one side of which is flattened as indicated at 3. Adjacent one end of the casing 1, the bore 2 is enlarged in diameter as shown at 4 to define a shoulder 5. Adjacent the opposite end of the casing, the same is thickened and enlarged in diameter, to form a handle 6 which, upon its outer surface may be milled as indicated at 7. The handle 6 terminates in a reduced neck 8 having a circumscribing groove 9.

Mounted to slide in the bore 2 is a rod 10

having a flattened side 11, cooperating with the flattened portions of the bore 2 to prevent the rod 10 from rotating in the casing. The rod 10 at one end is equipped with an enlarged head 12, adapted to cooperate with the shoulder 5, to limit the inward sliding movement of the rod. In the enlarged head 12 there are longitudinal grooves 14. The opposite end of the rod 10 is threaded as indicated at 15.

The invention includes a nut 16 having a flange 17 which is journaled for rotation on the neck 8, the threaded portion 15 of the rod 10 cooperating with the threads of the nut 16. Mounted radially in the nut 16 is a securing device 18 which may be a screw, the inner end of the screw 18 registering in the circumscribing groove 9 of the neck 8.

The invention further includes loop shaped spring arms 19, disposed in intersecting relation, the ends of the arms being received in the grooves 14 of the head 12 and being held therein detachably by screws 21 or other elements adapted to a like end. At their point of intersection, the spring arms 19 are broadened as indicated at 22. In the broadened portion 22 of the arms 19 there are registering polygonal openings 23.

A cap 24 is provided, the cap 24 bearing against the outer portion of one arm 19 at the point of intersection of the arms, the cap 24 being provided with a polygonal stud 25 fitting in the openings 23 formed in the enlarged portions 22 of the arms 19. The stud 25 terminates in a reduced, threaded tip 26, adapted to receive a nut 27 bearing against the inner face of one of the arms 19, to hold the arms together at their point of crossing.

In practical operation, the parts appear as shown in Fig. 1, the arms 19 being contracted and being housed within the enlarged part of the bore 2 of the casing 1, the cap 24 constituting a closure for the forward end of the casing. The instrument, positioned as shown in Fig. 1, is inserted into the womb, and by rotating the nut 16, the rod 10 will be advanced until the arms 19 lie beyond the forward end of the casing 1, whereupon the arms will automatically extend, as shown in Fig. 3. Then, by rotating the nut 16 in a reverse direction, the arms 19 may be drawn to a greater or less extent into the forward end of the casing 1, causing the arms 19 to contract about the placenta. The placenta may then be withdrawn.

The construction of the device is such that

it may be readily taken down and cleaned. By removing the screw 18, the nut 16 may be detached from the casing 1 and from the rod 10, the rod 10 being thereupon withdrawn from the casing. The screws 21 may be removed, setting the arms 19 free from the rod 10, and the arms may be separated from each other by detaching the nut 27 and removing the cap 24. All parts of the instrument therefore, may readily be cleaned when required.

It is to be noted that the entire movement of the rod 10 and the arms 19 is procured through the medium of the nut 16. Therefore, a gradual and fine adjustment may be effected, and an abrupt sliding movement cannot by any possibility take place.

Curettes of that general type disclosed in this application may be divided roughly into two classes; first, those in which the spring arms 19 at their point of crossing are free to move with respect to each other, and at their point of crossing are independent of the actuating rod 10; second, those in which the spring arms 19 at their point of crossing are connected together by a device of some sort which, in its turn, is united with the end of the rod 10, the latter being elongated so that it extends to the point of crossing of the arms 19.

When an instrument of this type is expanded in the uterus, the instrument must be rotated in order that the placenta may be disposed within the contour of the arms. The uterus not infrequently grips one set of arms more closely than the other set, the consequence being that the more closely gripped set remains comparatively stationary, the other set participating in the rotation of the instrument. This operation, obviously, causes a shearing action near the point where the arms cross, provided that the arms are free to have relative movement at their point of crossing, as pointed out in defining the first class above referred to. If the placenta is to pass within the contour of the arms when the instrument is rotated, the axis of the space within the arms should be open and unencumbered, which condition

does not prevail if the rod is extended and is connected with the arms at their point of crossing, as is the case in instruments of the second class hereinbefore mentioned.

In view of the foregoing, so far as I am advised as to the state of the art, it is novel to connect the loop-shaped arms of a curette at their point of crossing and independently of the actuating rod, to the end that the arms may not shear with respect to each other and lacerate the uterus, and to the end that the space within the arms may be open and unencumbered to receive the placenta.

Having thus described the invention, what is claimed is:—

1. A curette comprising a casing; a rod mounted to slide in the casing; intersecting loop-shaped spring arms secured to the rod and adapted to enter the casing; and means for connecting the arms at their point of intersection, whereby the arms will be prevented from having a mutual shearing action when the curette is rotated to dispose the placenta within the contour of the arms, the connecting means being independent of the rod and the rod terminating adjacent the end of the casing, thus leaving the space within the arms open and unencumbered to receive the placenta.

2. A device of the class described comprising a casing; a rod mounted to reciprocate in the casing; looped shaped spring arms secured at their ends to the rod and disposed in intersecting relation, the arms at their points of intersection being provided with registering polygonal openings; a cap bearing against the outer ends of the arms and provided with a polygonal stud registering in the openings, the stud terminating in a reduced, threaded tip; and a nut upon the tip bearing against the inner faces of the arms at their point of intersection.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

AMBROSE W. JONES.

Witnesses:

JEFF. L. ATCHISON,
WILLIAM HART.