(No Model.)

E. J. HOWE.

COMBINED FORCEPS AND TRACTOR.

No. 485,039. Patented Oct. 25, 1892.

Fig. 1.

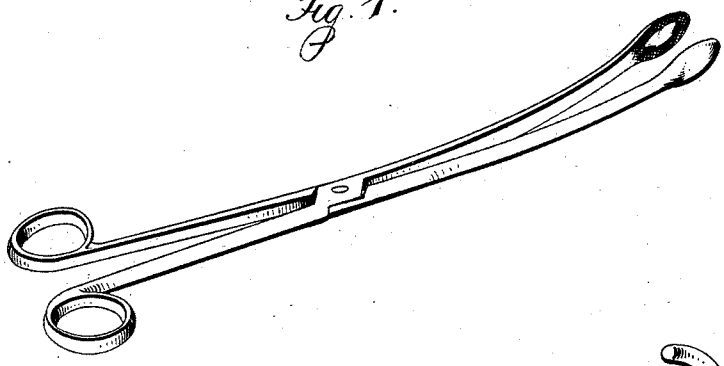


Fig. 2.

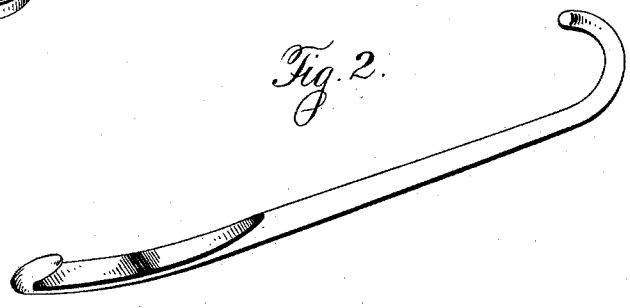
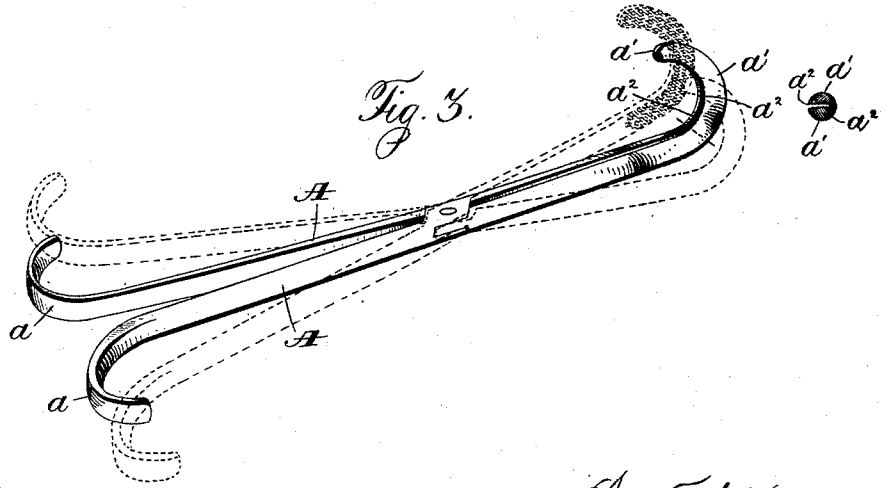


Fig. 3.



Witnesses:
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Henry C. Hazard.

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Edwin J. Howe by
Prindle and Russell his Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWIN J. HOWE, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO FRANKLIN CONKLIN, OF SAME PLACE.

COMBINED FORCEPS AND TRACTOR.

SPECIFICATION forming part of Letters Patent No. 485,039, dated October 25, 1892.

Application filed March 11, 1892. Serial No. 424,570. (No model.)

To all whom it may concern:

Be it known that I, EDWIN J. HOWE, a citizen of the United States, residing at Newark, in the county of Essex, and in the State of New Jersey, have invented certain new and useful Improvements in Combined Forceps and Tractors; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the usual form of placental forceps. Fig. 2 is a like view of the blunt hook commonly used; and Fig. 3 is a perspective view of my combined forceps and hook, the full lines showing the instrument arranged for use as a single hook and the dotted lines showing the same arranged as a double hook.

Letters of like name and kind refer to like parts in each of the figures.

In obstetrical cases where the employment of instruments becomes necessary the instruments most commonly used are the placental forceps and the blunt hook, each of which is capable of a certain definite use, and under the changing conditions attendant upon and inseparable from child-birth it frequently becomes necessary to suspend operations with and to remove one instrument and use the other instrument in its stead.

The object of my invention is to combine in one instrument all of the advantages that are found in the placental forceps and blunt hook; and to such end my said invention consists in a combined instrument constructed and adapted for use in the manner and for the purpose substantially as hereinafter specified.

In the carrying of my invention into practice I employ an instrument composed of two members A and A, which are pivoted together at or near their longitudinal centers, so that when their corresponding ends are moved from or toward each other their opposite ends will be moved in the same directions, as in case of shears, forceps, and other like instruments. The rear ends or handles a and a of the members A and A are preferably curved outward and forward, while their front ends a' and a' have a forward, upward, and rearward curve, and their contiguous sides are cut away, so that when closed together, as shown by the full lines of Fig. 3, such curved portions will as a whole have the form in cross-section of a round bar or hook. The contiguous plane faces a^2 a^2 of said hook-shaped ends a' and a' are serrated and enable an interposed object to be firmly grasped with an inward pressure, which may be regulated by the hand of the operator, and as the serrated surfaces are quite extensive the instrument possesses marked advantages for use as forceps.

When used as tractors, the closed instrument is passed above the object to be removed and the sections then opened as far as necessary, when, as the engagement is at two points, traction can be made without fear that the instrument will slip. In some instances said instrument may be required for use both as forceps and tractors, in which event the serrated faces a^2 a^2 may be caused to grasp the object around which the curved portions are hooked.

Having thus described my invention, what I claim is—

1. As an improvement in surgical instruments, a tractor which is composed of two sections pivoted together, that when closed constitute at one end a single hook and when spread apart at such end two separate hooks, and said sections having handle portions, which when brought toward each other move the sections to form the single hook and when spread apart to form the two hooks, substantially as and for the purpose specified.

2. As an improvement in surgical instruments, a combined forceps and tractor consisting of two sections, which are pivoted together and at one end of each are adapted to be grasped by the hand and at their opposite ends are curved and have their contiguous faces serrated, substantially as and for the purpose set forth.

3. As an improvement in surgical instruments, a tractor composed of two pivoted sec-

tions, each of which has a hook at its end having a plane and a convex face, the plane faces of the two sections being adjacent to each other to enable the two hooks to be brought together to form a single hook, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of February, A. D. 1892.

EDWIN J. HOWE.

Witnesses:
FRED. H. LUM,
WM. HEMMERMANN.