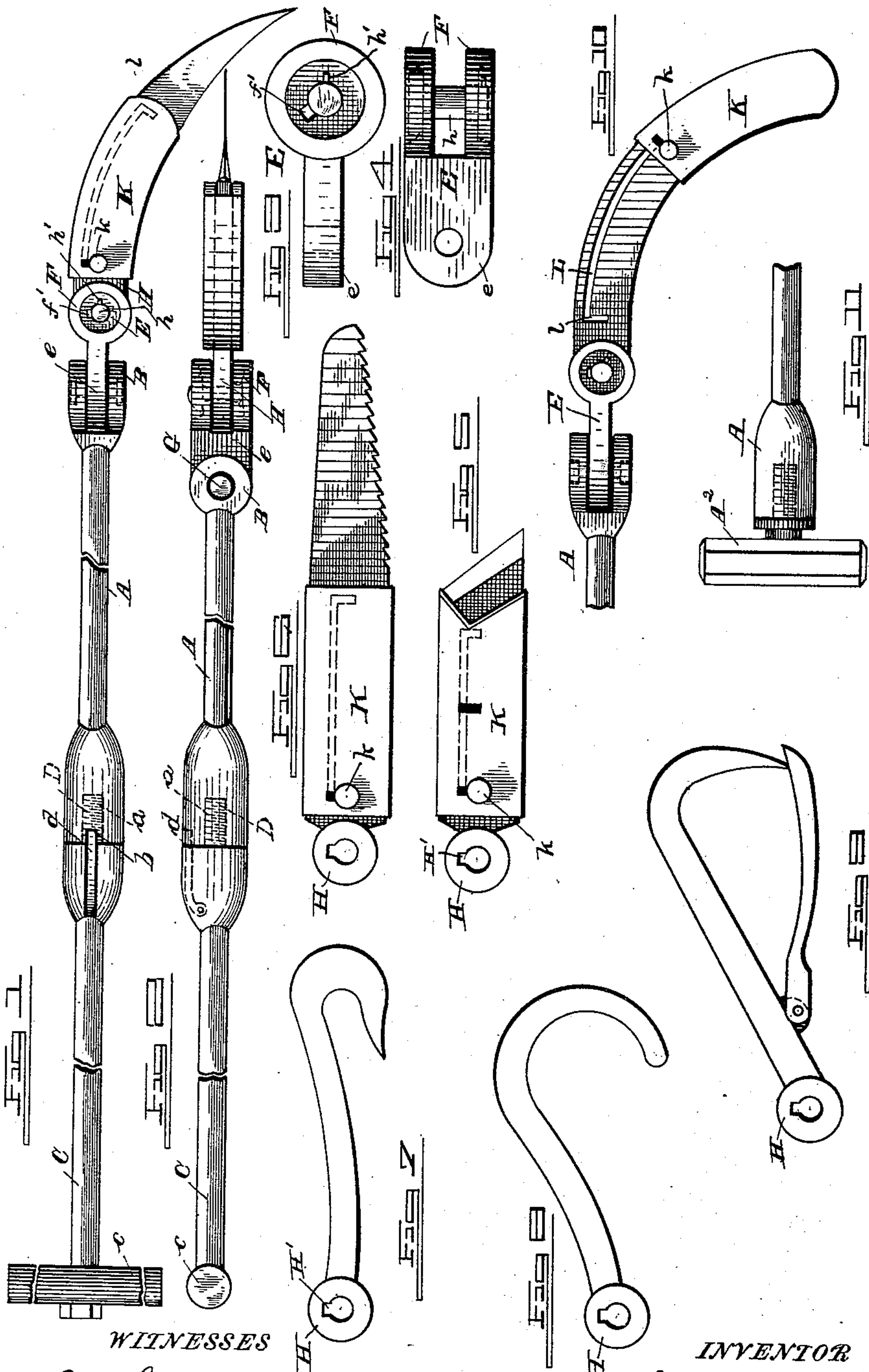


(No Model.)

J. W. MULLEN.
VETERINARY SURGICAL INSTRUMENT.

No. 450,086.

Patented Apr. 7, 1891.



WITNESSES

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JOHN W. MULLEN, OF LAFAYETTE, INDIANA.

VETERINARY SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 450,086, dated April 7, 1891.

Application filed December 19, 1890. Serial No. 375,241. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. MULLEN, of Lafayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Veterinary Surgical Instruments; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a top view of my improved veterinary surgical instrument. Fig. 2 is a side view thereof. Figs. 3 and 4 are detail views of the joint. Fig. 5 is a view of a bevel-edge knife embryotome; Fig. 6, a view of a saw-blade embryotome. Figs. 7, 8, and 9 are detail views of surgical hooks and cutters. Fig. 10 is a view showing an embryotome sheathed. Fig. 11 is a detail of a "short-hold" handle.

My present invention relates to improvements in veterinary surgical instruments, and it has special reference to obstetrics; and its object is to provide improved instruments, whereby the operations can be performed with greater safety to the operator and with less danger to the subject, and to improve the construction of the embryotomes, all of which will be clearly understood from the following description and claims.

Referring to the drawings by letter, A designates a section of the handle of the instrument, having a double or split eye B at one end and a threaded socket or bore *a* and notch *b* in its other end. In practice two or more sections A of different lengths can be provided.

C designates the pull-section of the handle, having a hand-piece *c* at one end and in its other end a pin D, adapted to enter socket *a*, and a latch *d*, that will engage notch *b* when the sections are screwed together and effectually prevent their accidental separation while in use.

The bodies of sections A C may be stiff or flexible.

When only a short handle is required, section A might have a hand-piece A² connected to its end instead of section C.

E designates a double joint or connection

for attaching the instruments to handle. This connection has a single eye *e* and a double or split eye F, which stands at right angles to eye *e*. Eye *e* is pivoted between the split eye B of handle A by a pin G, while the split eye F receives an eye H, formed on or attached to the shanks of the several instruments, and is pivotally connected thereto by a pin *h*. The eyes H are formed on the ends of the embryotomes, hooks, saws, &c., shown in the several figures, either of which can thus be readily connected to the handle, and when so connected it will be apparent that the instrument can be turned at any angle to the handle desired. Pin *h* has a stud *h'* on one end and a head on the other. The eyes F are formed with slots *f'* and the eyes H with slots H' to permit the pin *h* to be slipped there-through and then turned to prevent casual disengagement of the instruments from the handle. The head or end of pin *h* is concealed in recesses in eyes F, as shown, to prevent accidental catching thereof on the membranes or intestines when in use.

The embryotomes consist of a blade having an eye H on one end.

In Fig. 1 the embryotome is a curved knife-blade having its concave edge sharpened, and a sheath K is slid thereon, which can be slipped forward, so as to cover the cutting-edge, as indicated in Fig. 10, or drawn back toward the eye, disclosing the cutting-edge, and when the embryotome is disconnected from the handle A the sheath forms a handle for using the instrument as an ordinary lancet. In the shank of the blade is a longitudinal slot L, having key slots or bends *l l* at its ends, and the sheath has a loose pin *k*, which plays in said slot and is adapted to engage in either of the key-slots, so as to lock the sheath when adjusted to cover or disclose the cutting-edge.

In Fig. 5 the embryotome has a bevel edge; in Fig. 6, a serrated edge. The hooks shown in Figs. 7, 8, and 9 are useful in veterinary surgical operations and have eyes H for attachment to the handle.

By reason of the universal joint or adjustable connection between instruments and handle the operator is enabled to perform dif-

5 difficult surgical operations easily, as he can manipulate the instruments while on the handle as may be necessary, in order to bring them into operation where a stiff instrument would be useless or extremely dangerous.

10 In practical use the arm and hand grasping the instrument are inserted therewith to the point for operation. The joint being close to the wrist enables the operator to turn the instrument with the hand, while the handle lies close to the arm, and the power required to move the instrument can be applied by the other hand through the handle.

15 Having thus described my invention, I claim—

1. The combination, in a surgical instrument, of the handle-section having a threaded socket and notch with the handle-section having a threaded pin and latch, for the purpose
20 and substantially as described.

2. The combination, in a surgical instrument, of the handle-section having an eye at one end and the instrument having an eye on its shank with the connection having eyes at
25 right angles to each other and respectively

connected to the eye of the handle and eye of the instrument, substantially as and for the purpose specified.

3. The combination, in a surgical instrument, with the embryotome having a slot in its shank, of a movable sheath having a pin engaging said slot, for the purpose substantially as set forth. 30

4. The herein-described surgical instrument, consisting of the handle-sections, one having an eye-threaded socket and notch and the other a threaded pin and latch, and the connection having double eyes set at right angles to each other, with the embryotome having its shank formed with an eye and slotted, and a movable sheath thereon having a loose pin engaging said slot, for the purpose and substantially as set forth. 35 40

In testimony that I claim the foregoing as my own I affix my signature in presence of two
45 witnesses.

JOHN W. MULLEN.

Witnesses:

WILL W. BURROUGHS,
HENRY C. TUMEY.