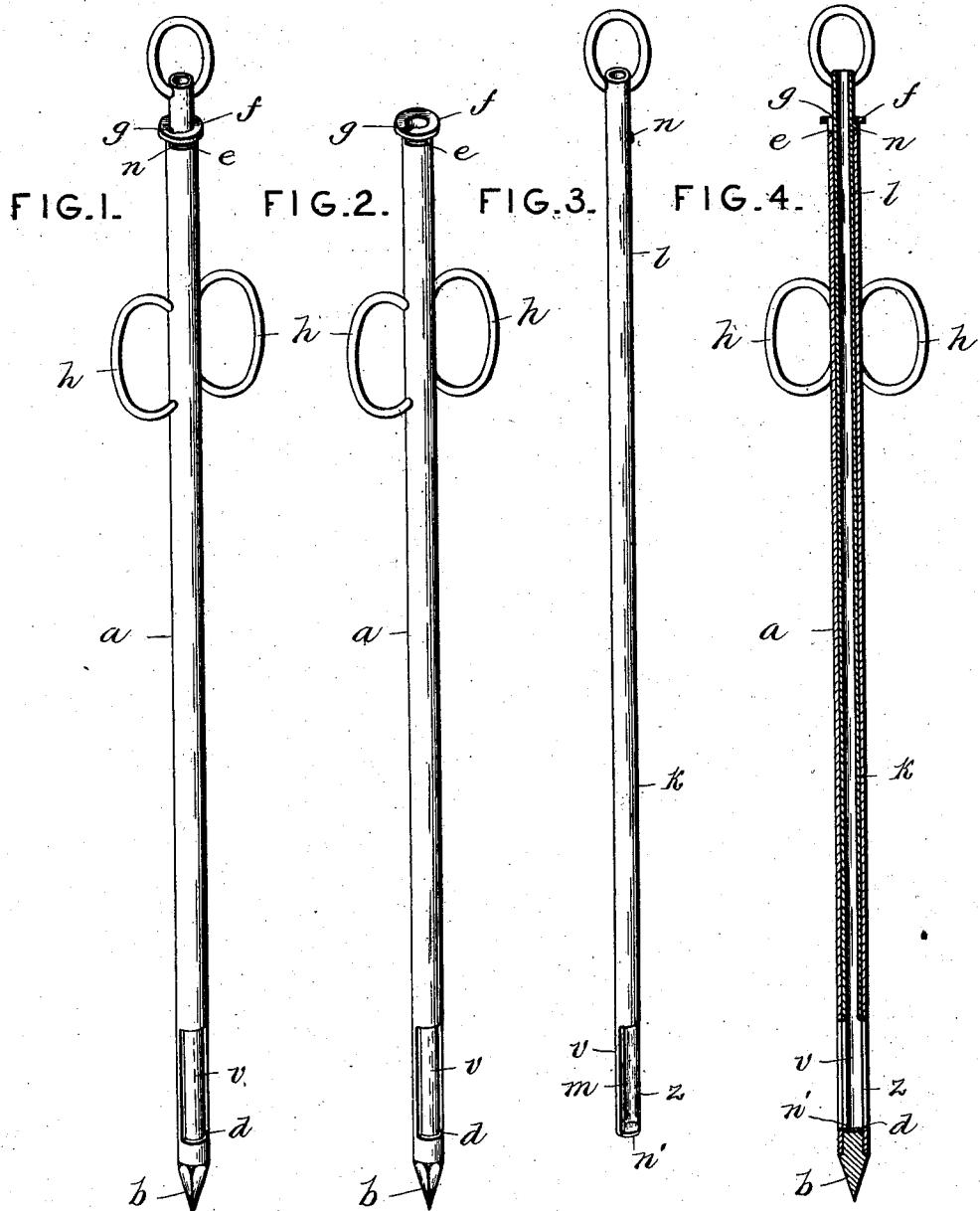


No. 737,293.

PATENTED AUG. 25, 1903.

G. H. SUMMERFELDT,
VETERINARY SURGICAL INSTRUMENT.
APPLICATION FILED NOV. 1, 1900.

NO MODEL.

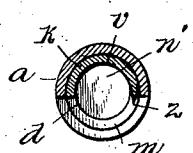


ATTEST.

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UNITED STATES PATENT OFFICE.

GEORGE H. SUMMERFELDT, OF GOUVERNEUR, NEW YORK.

VETERINARY SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 737,293, dated August 25, 1903.

Application filed November 1, 1900. Serial No. 35,104. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. SUMMERFELDT, a citizen of the United States, and a resident of Gouverneur, in the county of St. Lawrence and State of New York, have made a certain new and useful Invention in Veterinary Surgical Instruments; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of my invention. Figs. 2 and 3 are detail views of separate parts thereof. Fig. 4 is a longitudinal section of my invention. Fig. 5 is a detail cross-section of the invention.

The invention relates to veterinary surgical instruments; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

The object of the invention is to provide an instrument which will serve not only as a milk-tube, but also as a rotary bistoury for cutting a bunch in the teat of a cow and taking the core out of the same without injuring the teat.

The instrument consists of an outer pointed tube and an inner knife-tube. The outer tube *a* is formed with a pointed end *b*, and near said pointed end is an elongated opening *c* in one side of said tube. The pointed end is usually made angular in such a manner that the point can be made to cut its way through the obstruction or bunch in the teat. At the back of the point and between the same and the slot or opening *c* the tubular portion is provided with a journal recess or seat *d* to receive the end of the rotary knife device. The opposite or outer end of the tube *a* is provided with a small guard-slot *e* next the marginal rim or flange *f*, which is notched at *g* to communicate with the slot *e* at one end thereof, as shown. The outer end portion of the tube *a* is provided with bows or finger-purchases *h*, whereby the operator is enabled to handle the instrument in a firm and safe manner.

k represents the inner knife-tube or hollow rotary bistoury. This consists of the shank

portion *l*, having a purchase-ring at its outer end, and near said outer end a small stud *n*, adapted to pass the rim-notch *g* of the outer tube into the slot *e*. The inner end of this hollow shank is provided with an elongated slot or opening *m*, which corresponds in position to that of the outer tube and terminates at the end of the tube. This end is closed, as indicated at *n'*, to form a combined journal and cleaner flange, which engages the recess or seat *d* at the back of the point of the outer tube when the knife-tube is pushed home therein. The slot *m* is provided at one side, corresponding to that of the stud *n*, with an elongated edge knife *z*, said edge knife serving to form the edge of the slot *m* and lying flush, or nearly so, therewith, so that there is no projection of the cutting edge, which is designed to operate by rotation only.

When the knife-tube is pushed into the outer or pointed tube in such a manner that its stud will pass through the rim-notch *g* into the end of the arc-slot *e*, the elongated slot *c* of said outer tube will be closed by the cylindrical back *v* of the knife-opening *m*, and when the knife tube or shank is in this position the knife-edge is concealed and guarded and the pointed tube is in smooth and proper shape to be pushed into the milk-duct of the teat and through or by any bunch or interior excrescence thereof, the location whereof is readily ascertained by feeling. Then having brought the slotted portion of the tube in proper position with relation to the bunch or excrescence the knife-tube is turned in the outer tube, which is held steady, thus opening the slot of said outer tube, into which the bunch or excrescence at once extends, when by turning the outer tube upon the inner or knife tube the knife-edge will cut out the core or main portion of the bunch and inclose the same in the tube, whereby it can be drawn out through the outer tube. The latter tube can remain to provide a free outlet for the milk. When the outer tube is to be removed, the inner tube should be pushed home therein in closed position in order to avoid excoriating the interior of the milk-duct. It will be observed that the position of the knife with relation to the stud *n* is such that the inner tube or hollow bistoury cannot be removed from the outer tube until

the knife-edge is turned to concealed and guarded position and the elongated opening closed.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combined milk-tube and rotary knife, consisting of the outer pointed tube, having an elongated slot at its inner end portion, and a journal-recess between said slot and the point of the tube, said tube having a guard-slot at its outer end portion, and the inner

hollow tube having an elongated slot provided with a knife-edge at its inner end portion, a circular combined journal and cleaner 15 flange at its inner extremity, and a stud near its outer end fitting in said guard-slot, substantially as specified.

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

G. H. SUMMERFELDT.

Witnesses:

GILBERT E. HUTTON,
THOS. L. RUTHERFORD.