(No Model.)

R. B. DONALDSON.

SURGICAL INSTRUMENT TO CURE GAPES IN FOWLS.

No. 506,676. Patented Oct. 17, 1893.

Fig 1

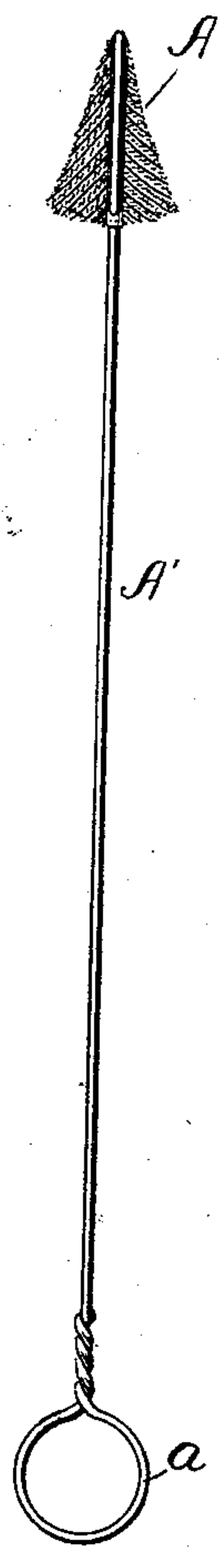


Fig 2

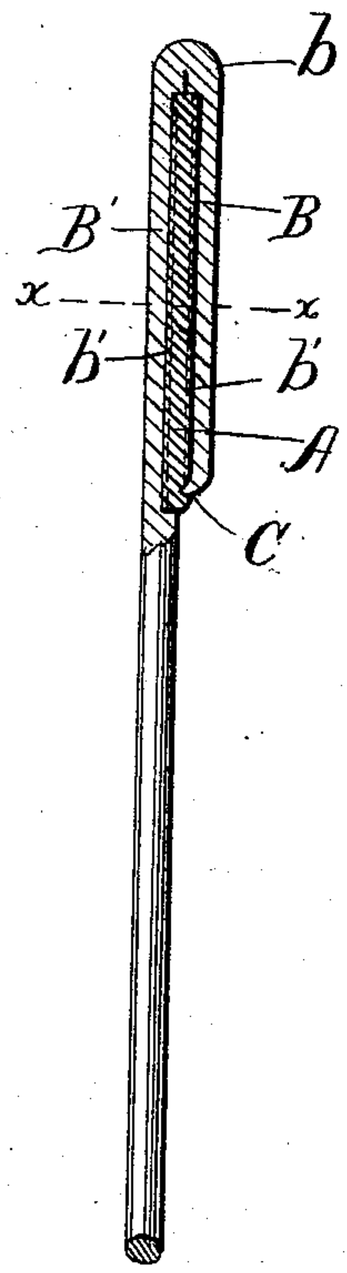


Fig 3

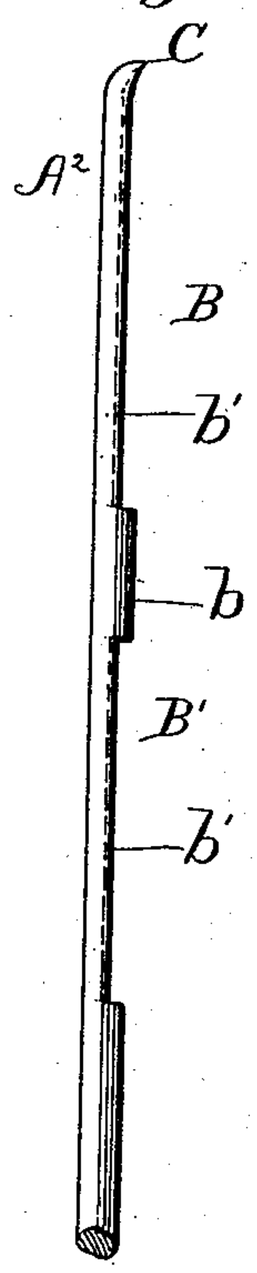


Fig 4

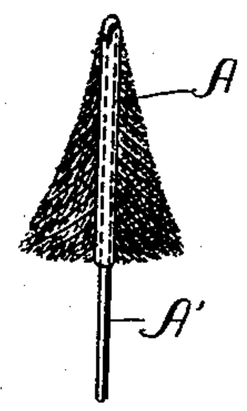
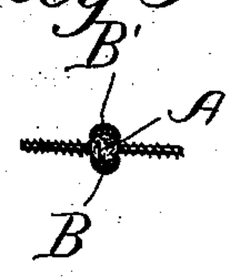


Fig 5



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SURGICAL INSTRUMENT TO CURE GAPES IN FOWLS.

SPECIFICATION forming part of Letters Patent No. 506,676, dated October 17, 1893.

Application filed July 22, 1893. Serial No. 481,213. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BRUCE DONALDSON, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Surgical Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved surgical instrument for extracting or removing the parasites known as "gape worms" from the trachea or wind pipe of fowls, and it consists in the construction and arrangement of parts hereinafter described and definitely pointed out in the claims.

The aim and purpose of the invention are the provision of an implement of the nature above indicated, which will be effective and harmless in its operation, strong and durable, simple in its construction and cheaply manufactured. This object is attained by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views and in which—

Figure 1 is an elevation of the device. Fig. 2 is an enlarged vertical section of the head portion. Fig. 3 is a detail view of the blank. Fig. 4 is a view of a modified form of head, and Fig. 5 is a cross-section on line *x x*, Fig. 2.

In the drawings A represents the head and A′ a flexible shank of wire or other suitable material having a twisted loop *a* at one end forming a handle. The end portion A^2 of the shank opposite the loop, is flattened or cut away on one side as at B and B′, having a flat space with an intervening or central portion *b* between. The flat surfaces B B′ are of substantially uniform length and have longitudinal grooves *b′* in their centers, for purposes hereinafter mentioned. The end C of the portion A^2 is tapered to a point, and bent down at an angle in the direction of the flat portion. In securing the head the wire is bent back onto itself at the center of the portion *b*, so that the flat faces B B′ will be directly opposite and parallel, leaving a space between, the outer or end wall of which is formed by the ends of the part *b*. The end of the loop thus formed constitutes a rounded blunt point which permits the instrument to be inserted without injury to the membrane. Between the flat portions B B′ is secured the head A which consists of an inverted section of feather, the shaft of which is tightly compressed into the groove *b′* and between the flat portion B B′ and the end C of the wire is forced into the shaft, thereby firmly holding the feather section in place. The end C is constructed to form a smooth incline termination of the exposed portion of the end to avoid injury during withdrawal. The vanes of the feather are arranged to incline outwardly in the direction of the handle end of the shank and are cut away at an incline and forms substantially a "V" or conical shaped head with the apex of the cone presented outwardly. The inclination of the sides of the feather is in the direction of the natural inclination of the vanes, so that the head is composed of a series of inclined vanes or branches of varying length, decreasing in length toward the outer end, and acting as flexible barbs all of which incline toward the handle end of the shank.

The peculiar formation of the head, the flexible shank and flexible nature of the barbs premit of an easy insertion of the same without changing the position of the parasites, and owing to the diversity in the length of the barbs, a slight twist or turning of the head will carry the barbs into contact with the adjacent sides of the trachea at all points, so that the parasites will invariably be engaged by members of the barbs and drawn out thereby as the instrument is withdrawn.

In Fig. 4 I have shown a modified form of head wherein the wire shank is sharpened and passes longitudinally through the shaft of the feather section, the outer or pointed end being looped to secure the head in place and to form retaining means and a rounded blunt end to prevent injury during insertion.

It is evident that minor changes in the construction and arrangement of the parts can be made and substituted for those shown and described without in the least departing from the nature and principle of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A surgical instrument consisting of a flexible shank having a looped end, and a head composed of an inverted section of feather secured in place by the loop, substantially as described.

2. A surgical instrument consisting of a flexible shank having one end bent back onto itself and a head composed of a section of feather interposed between the bent portion and the shank, and tightly held between the same throughout its length, substantially as described.

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

ROBERT BRUCE DONALDSON.

Witnesses:
M. A. RUSH,
L. L. BACON.