

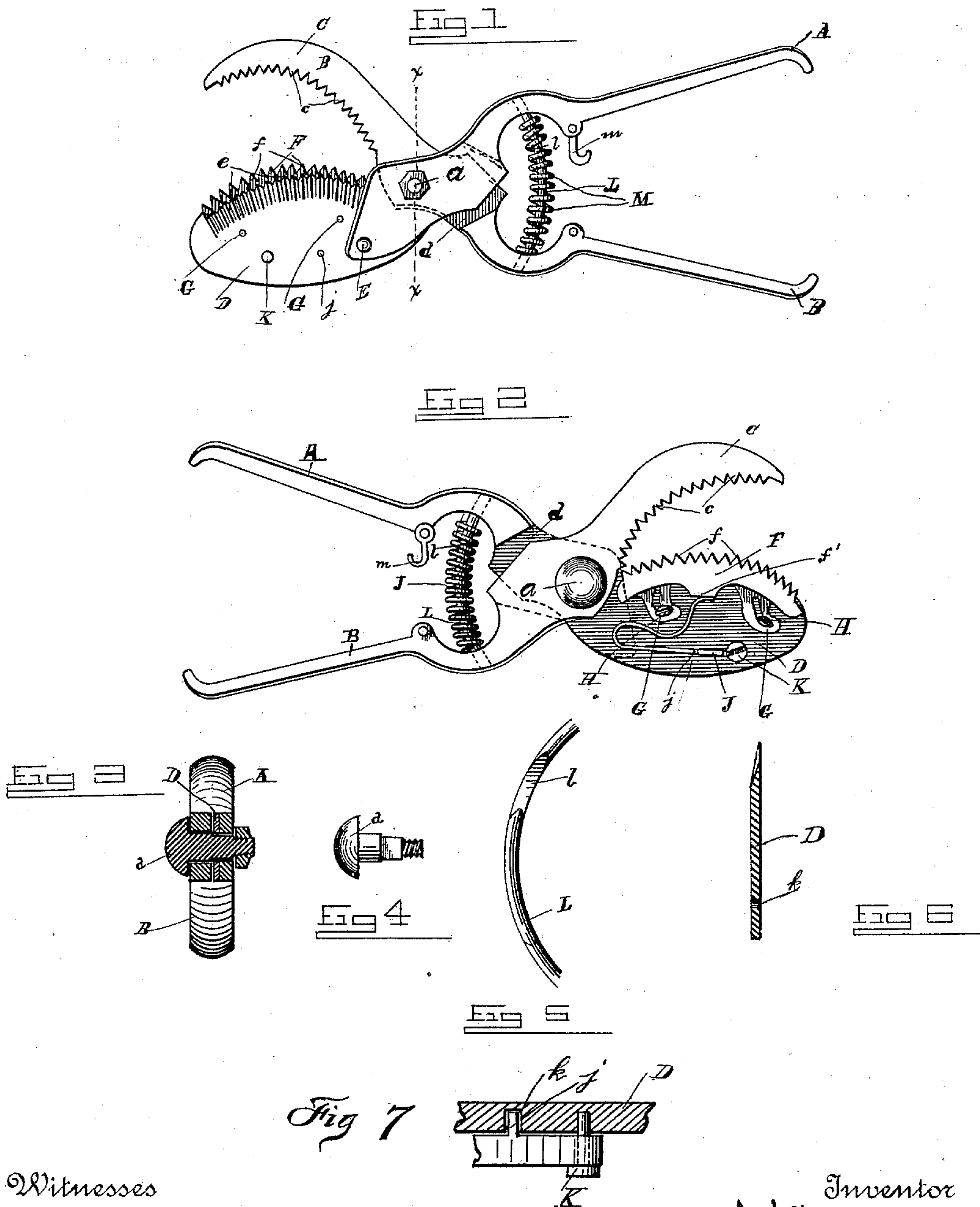
(No Model.)

I. N. WOODLE.

VETERINARY SURGICAL INSTRUMENT.

No. 405,642.

Patented June 18, 1889.



Witnesses

A. E. Sowell

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Inventor

I. N. Woodle

By his

Attorney

W. Alexander

UNITED STATES PATENT OFFICE.

ISAAC N. WOODLE, OF ALBANY, OREGON.

VETERINARY SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 405,642, dated June 18, 1889.

Application filed May 1, 1889. Serial No. 309,219. (No model.)

To all whom it may concern:

Be it known that I, ISAAC N. WOODLE, of Albany, in the county of Linn and State of Oregon, 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 side view of an improved castrating-shears; Fig. 2, a similar view of the opposite side thereof; Fig. 3, a sectional view on line *x x*, Fig. 1. Figs. 4, 5, and 6 are details. Fig. 7 is a detail view of the manner of attaching the spring to the blade.

This invention is an improvement in instruments for gelding animals; and it consists in providing a shears with an adjustable spring-controlled crushing-jaw, whereby the animal ligatures and tissues are mashed simultaneously with the cutting, and hemorrhage and bleeding prevented without the use of a cautery.

Referring by letters to the drawings, A and B designate the handle of the shears, which are pivotally united by a bolt and nut *a*, said bolt having a cylindrical portion near its head, on which is pivoted handle B, and near its end an angular portion engaging an angular opening in handle A, as shown in the drawings. Handle B has a curved jaw C, provided with a series of coarse serrations *c* on its inner edge.

D designates a blade having an angular shank *d* engaging an angular shoulder on handle A and perforated for the passage of bolt *a*, and secured additionally to the handle by a rivet or screw E, as shown. The inner edge of blade D is curved similarly but oppositely to jaw C, and is finely serrated on its inner edge *e*, which forms the cutting-edge of the tool.

F designates a metal segment curved on its upper edge similarly to the curvature of edge *e* of the blade and coarsely serrated on this edge, as at *f*.

G G are two inclined and slotted lugs depending from segment F, by which the segment is attached to the inner face of blade D by the assistance of two screw-pins H H, which

pass through the slots in lugs G G, and are so arranged that when the segment is lifted or forced upward until the pins are at the bottom of the slots the serrated edge of the segment will preferably stand above the edge *e* of the blade. The slots in lugs G are curved downward and forwardly, so that as the segment is depressed it will move slightly forward and downward and is permitted a slight rocking movement.

J designates a flat curved spring-bar attached at one end to the inner side and near the lower edge of blade D by a screw K, and is kept from turning by a projection *j* on its side, near its fixed end, which engages a corresponding recess *k* in the blade. The other end of the bar is bent, substantially as shown, so that its extremity bears against the under surface of segment F, preferably on a dressed lug *f'*, as shown, so that normally the spring forces segment F upward.

The handles A B are provided with inwardly-standing pins L L, respectively, said pins being beveled on their adjoining faces and overlapping as the handles are closed; and M is a coiled spring attached to the handles over said pins, and adapted to keep the shears open.

m is a hook pivoted on one handle and arranged to engage a pin on the opposite handle to lock the shears when closed.

In operation, the ligaments to be severed are caught between the open jaws of the shears, then by firmly closing the handles the ligaments are firmly caught between the segment and jaw C and simultaneously severed by edge *e*, and the coarse serrations of the jaw and segment mash the flesh sufficiently to stop any effusion of blood. As the segment is yielding, there is less danger of the ligaments being so crushed that they will break and admit bleeding, and the rocking motion permitted the segment insures an equal crushing on the tissues across the entire cut. The segment and spring can be readily removed for cleaning or repairing.

Having shown and described my invention, what I claim is—

1. The combination of the handles, curved serrated jaw, and cutting-blade, with the spring-controlled and serrated segment, substantially as described.

2. The combination of the shears, constructed substantially as described, with a curved serrated rocking segment mounted on the cutting-blade of the shears having downwardly and forwardly inclined slotted lugs and engaging serrations in the jaw thereof, substantially as described.

3. The combination of the handles, beveled pins and spring thereon, the serrated jaw and cutting-blade, with the serrated rocking segment mounted on said blade, and the spring secured to said blade and engaging the segment, substantially as and for the purpose described.

4. The combination of the handles, serrated jaw, the curved and serrated cutting-blade attached to one of said handles, the serrated rocking segment and its slotted lugs, the pins

attaching said segment to the blade, and the spring engaging said segment, substantially as and for the purpose described.

5. The combination of the handles A B, the beveled pins L l, and spring M, the curved serrated jaw C, and the cutting-blade D, with the serrated segment F, having depending slotted lugs G G, the pins engaging said slots and securing the segment to the blade, and the spring J, all substantially as and for the purpose described.

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

ISAAC N. WOODLE.

Witnesses:

L. H. MONTAUGE,

C. C. KELLY.