

No. 799,107.

PATENTED SEPT. 12, 1905.

J. K. STEWART.  
ANIMAL SHEARS.  
APPLICATION FILED JAN. 16, 1905.

Fig. 1.

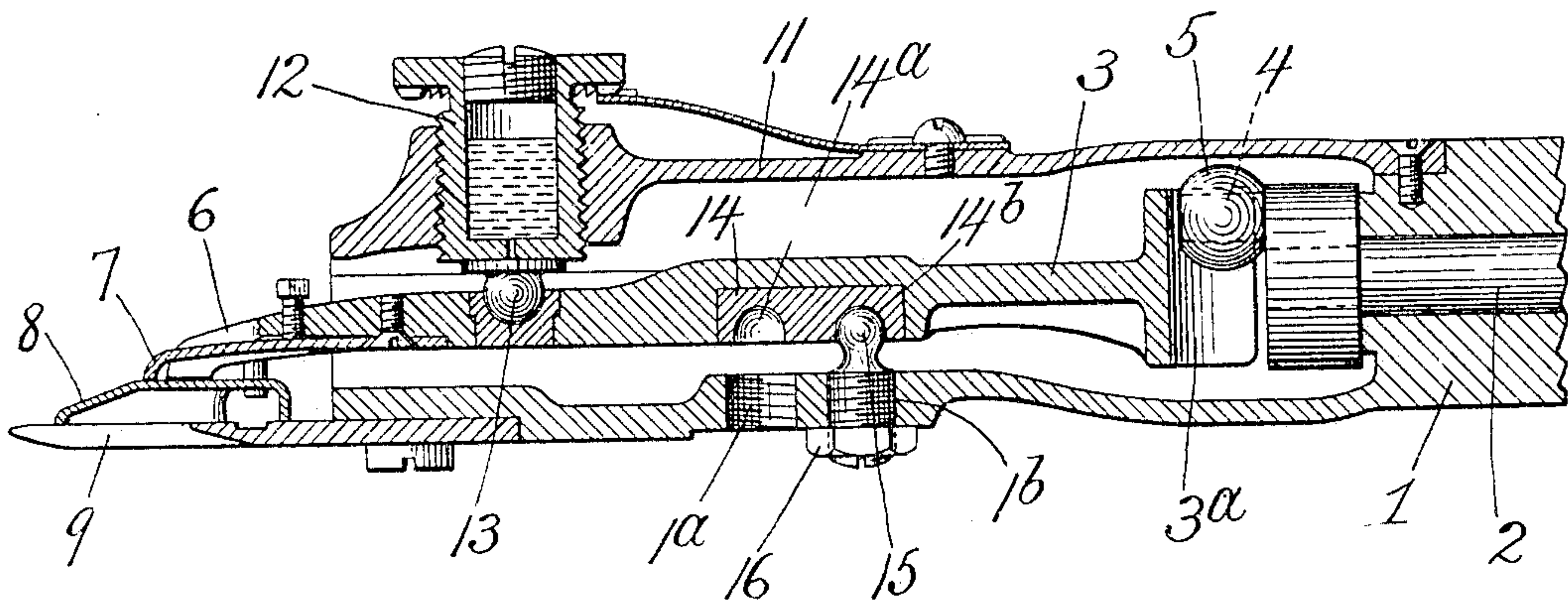


Fig. 2

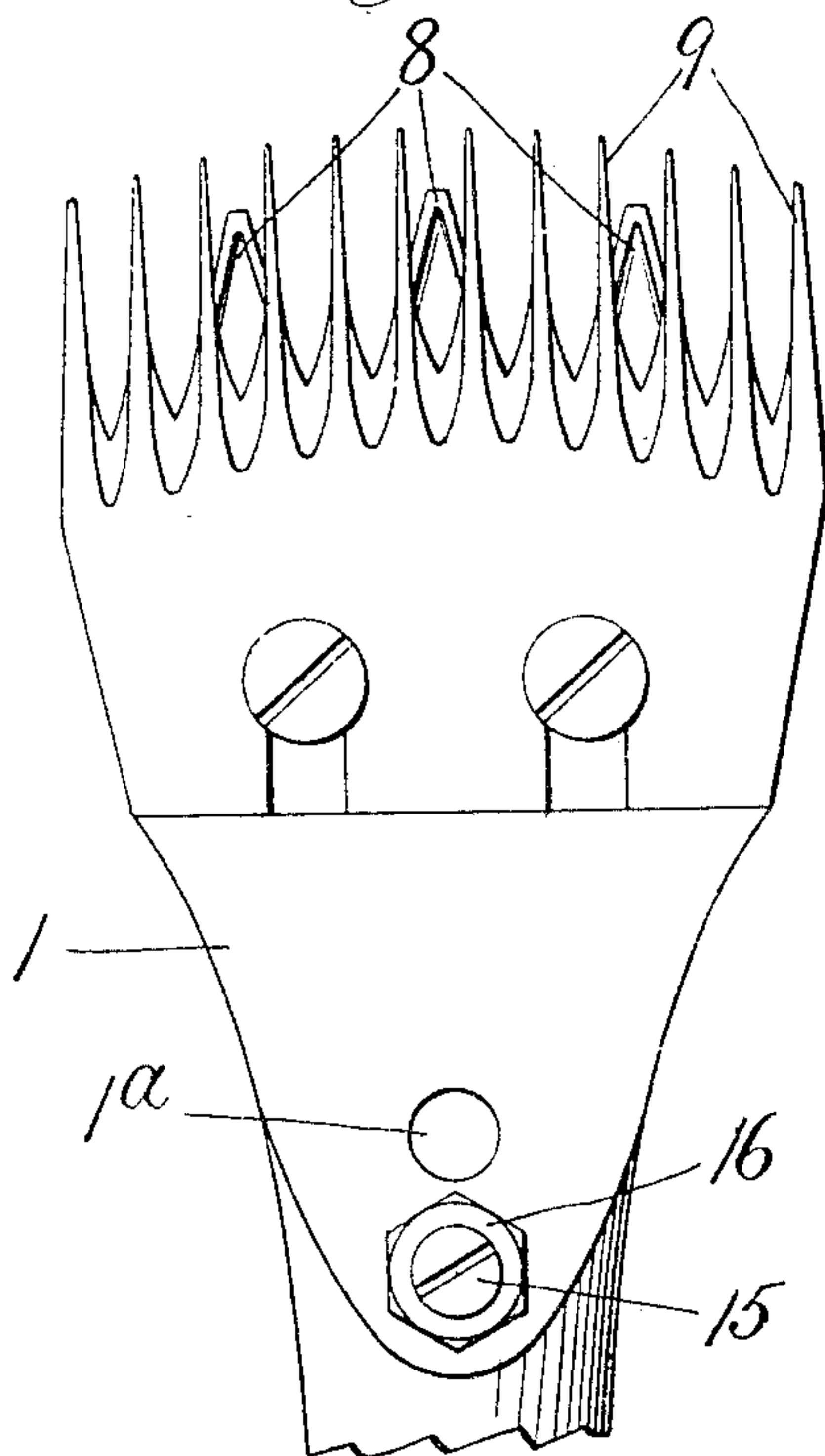
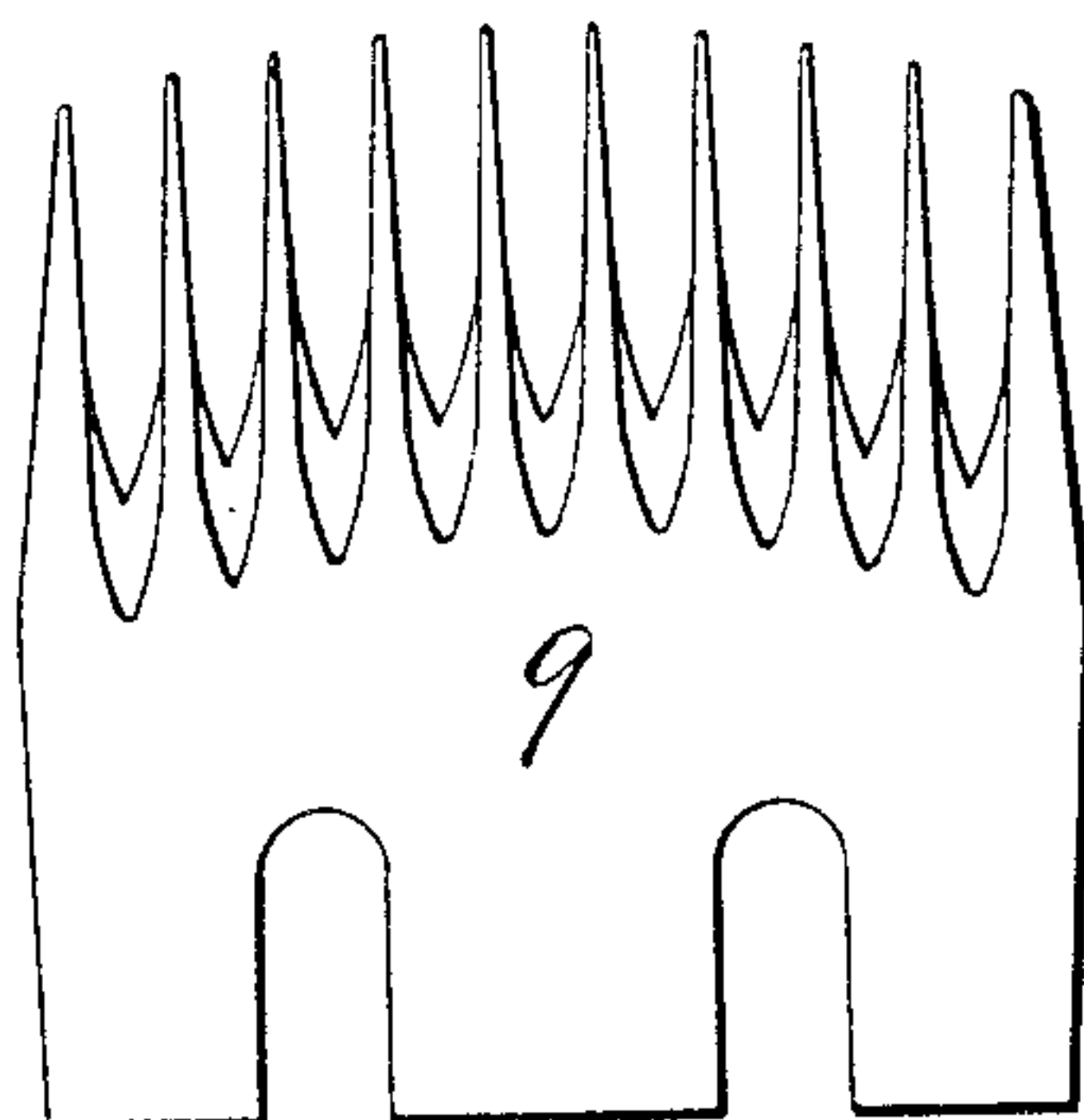


Fig. 3.



Witnesses,  
Edward J. Wray  
Fred' G. Fischer.

Inventor.  
John K. Stewart  
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his Atty's.



# UNITED STATES PATENT OFFICE.

JOHN K. STEWART, OF CHICAGO, ILLINOIS.

## ANIMAL-SHEARS.

No. 799,107.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed January 16, 1905. Serial No. 241,402.

*To all whom it may concern:*

Be it known that I, JOHN K. STEWART, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Animal-Shears, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

10 This invention relates to shears and clippers, and particularly such as are adapted to be operated by power communicated through a flexible or jointed shaft while the tool is held and directed by the hand of the operator.

15 The purpose of the invention is to adapt the tool to a longer or shorter comb or fixed cutter by making provision for varying the range of oscillation of the vibrating cutter.

It consists of the features of construction 20 set out in the claims.

In the drawings, Figure 1 is a vertical longitudinal section made axially through the driving-shaft and fulcrum of the operating-lever. Fig. 2 is a bottom plan view of the forward portion of the tool. Fig. 3 is a plan 25 view of a smaller comb than that shown in the other figures.

This invention is here shown applied to shears of existing construction in all respects 30 excepting the one which involves the particular improvement in question. It comprises the handle and housing 1, in which is journaled the rotating shaft 2, through which the power is communicated. An oscillating lever 3 is fulcrumed in this housing and engaged for oscillation by the crank-stud 4 at 35 the forward end of the shaft 2, said stud being provided with the customary spherical roll 5, operating in the vertical channel 3<sup>a</sup> at the rear end of the operating-lever 3. The lever 40 3 has the customary fingers 6, rigid with it at the forward end, (one only appearing in the drawings,) and between them an adjustable or spring finger 7 for engaging and pressing upon the vibrating cutter 8, which plays 45 over the fixed cutter or comb 9, the latter being mounted rigidly upon the forward end and under side of the handle and housing 1. The customary inclosing-cap 11 has familiar 50 means for exerting the necessary pressure upon the operating-lever through the medium of the tension-screw 12 and rocker 13.

Under different conditions different widths of cut can be made with efficiency in operat-

ing with shearing-tools of this class, and it is 55 desirable, therefore, to be able to adapt the same tool to use with a wider or narrower comb or fixed cutter—that is, one having a greater or less number of teeth—and to correspondingly modify the range of vibration 60 of the vibrating cutter. For this purpose, so far as the comb or fixed cutter is concerned, it is only necessary to remove the one and apply the other of different width; but such change would be ineffective and render the 65 tool practically inoperative unless accompanied by a corresponding change in the stroke or range of vibration of the vibrating cutter. In order to effect this latter change or adaptation without substitution of moving parts 70 or change of the action in any respect except as to range of stroke, I provide the operating-lever 3 with two pivot-seats or fulcrum-sockets 14<sup>a</sup> and 14<sup>b</sup>, preferably both formed in the same hardened-steel block 14, which 75 is set permanently into the lever 3, these fulcrum seats or pivots being both in direct fore-and-aft line with the axis of the crank-pin engagement of the lever at the rear end and having their distances from such axial 80 line such relatively as to cause the range of movement of the forward end of the lever produced by the unchanged range of sweep of the crank-stud to differ as desired to 85 adapt the stroke to the two combs of two widths which are to be interchangeably used in the tool. The fulcrum-stud 15 for the operating-lever 3 is set into the housing by being screwed through the bottom thereof, so as to protrude up in the housing into the ful- 90 crum seat or socket of the lever, and for the purpose of the adaptation desired the housing is provided with two threaded holes 1<sup>a</sup> 1<sup>b</sup> in direct fore-and-aft line and distant from each other as far apart as the two sockets or 95 fulcrum-seats 14<sup>a</sup> 14<sup>b</sup> in the lever 3. When the operator desires to vary the breadth of cut in addition to substituting the comb or fixed cutter of desired width for the one which may have been previously employed, 100 he will unscrew the fulcrum-stud 15 from the hole in the housing in which it has been secured and insert it in the other hole, bringing it into the other fulcrum seat or socket, and thereby the sweep of the vibrating cut- 105 ter will be changed to correspond to the breadth of the substituted comb or fixed cutter. The fulcrum-stud is rendered se-



cure in its attachment to the housing by means of a jam-nut 16 on the lower or outer end.

I claim—

5 1. In animal-shears, in combination with the housing or handle, the comb or fixed cutter thereon; a vibrating cutter, an operating-lever for the same and means for communicating vibratory motion to the lever, the lever having a plurality of fulcrum-seats, and  
10 a fulcrum for the lever mounted on the housing, the housing being adapted for mounting the fulcrum at a plurality of positions corresponding to the several fulcrum-seats on  
15 the lever.

2. In animal-shears, in combination with the housing, a removable comb or fixed cutter thereon; a vibrating cutter, a lever for operating it and means for giving the lever vibratory motion; a fulcrum-stud for the lever,  
20 the housing having, in fore-and-aft line, a plurality of holes for lodging and securing such fulcrum-stud, and the lever having a

corresponding plurality of fulcrum seats or sockets for the stud. 25

3. In animal-shears, in combination with the housing, a comb or fixed cutter removably or interchangeably secured to the housing; a vibrating cutter; a lever for operating such vibrating cutter having a plurality of  
30 fulcrum-seats in fore-and-aft line, the housing having a plurality of threaded apertures in corresponding fore-and-aft line, and a fulcrum-stud adapted to be screwed interchangeably into any one of said threaded  
35 apertures for engaging interchangeably any one of the fulcrum-sockets of the lever.

In testimony whereof I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 19th day of December, 1904. 40

JOHN K. STEWART.

In presence of—

CHAS. S. BURTON,  
FRED G. FISCHER.