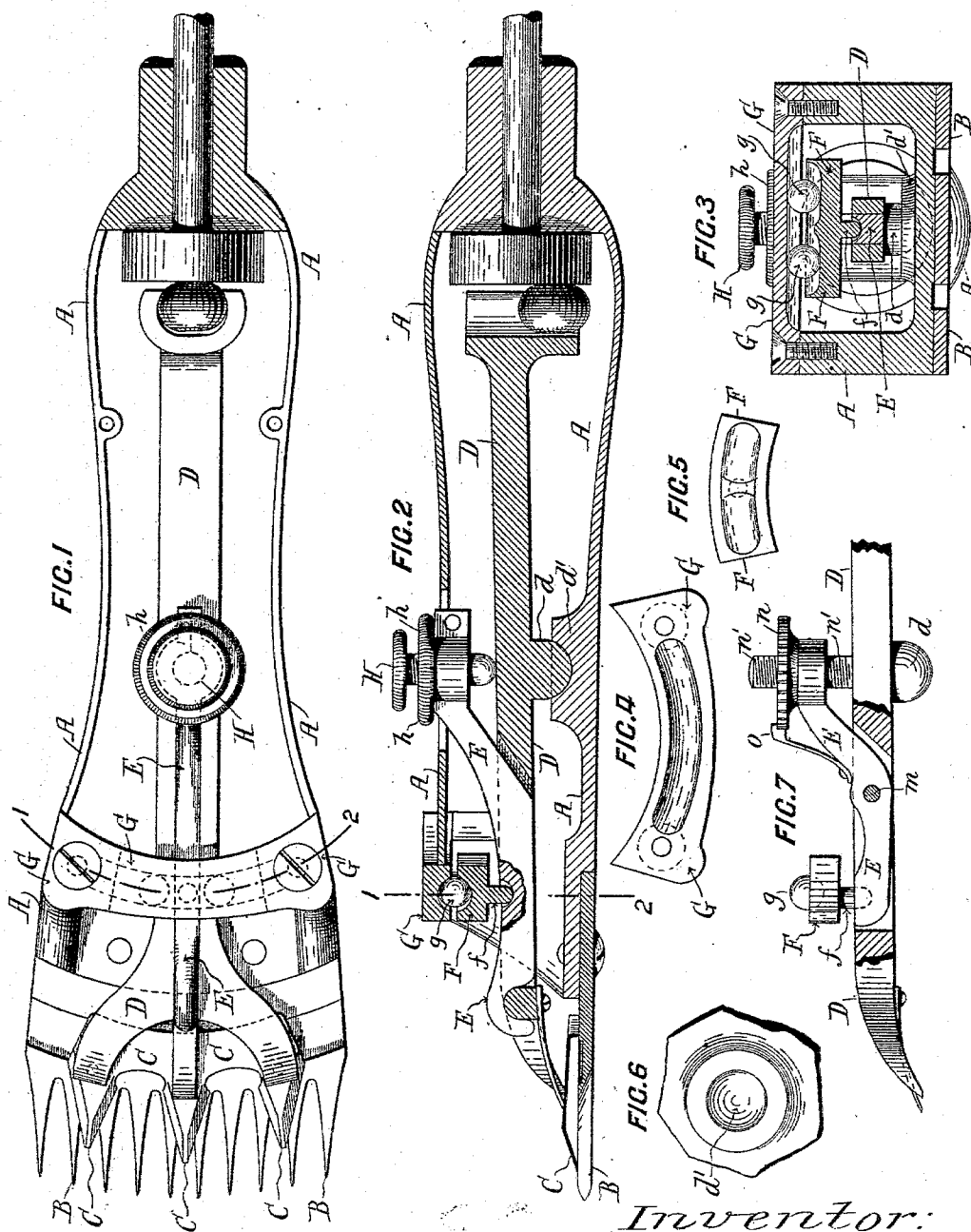


(No Model.)

T. O. BENNETT.
ANIMAL SHEARS.

No. 514,536.

Patented Feb. 13, 1894.



Witnesses:

E. K. Bolton

E. H. Sturtevant

By

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UNITED STATES PATENT OFFICE.

THOMAS OLDHAM BENNETT, OF SYDNEY, NEW SOUTH WALES, ASSIGNOR TO
JOHN HENRY GEDDES, THE MANAGING DIRECTOR OF THE PASTORALISTS
FINANCE ASSOCIATION, LIMITED, OF SAME PLACE.

ANIMAL-SHEARS.

SPECIFICATION forming part of Letters Patent No. 514,536, dated February 13, 1894.

Application filed June 15, 1893. Serial No. 477,707. (No model.) Patented in New South Wales December 19, 1891, No. 3,479,
and in Victoria January 7, 1892, No. 9,391.

To all whom it may concern:

Be it known that I, THOMAS OLDHAM BENNETT, a subject of the Queen of Great Britain, residing at Sydney, Colony of New South Wales, have invented certain new and useful Improvements in Machine Sheep-Shears, of which the following is a specification.

The invention has been patented in New South Wales, No. 3,479, dated December 19, 1891, and in Victoria, No. 9,391, dated January 7, 1892.

This invention consists in the combination of devices now to be described and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a plan view of the machine, with the cover removed. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same taken on the line 1—2 of Figs. 1 and 2. Fig. 4 is an under plan view of the tension race. Fig. 5 is a plan view of the tension slipper. Fig. 6 is a plan view of the hemi-spherical socket or bearing that forms the fulcrum socket of the major lever. Fig. 7 is a modification of the minor or tension lever.

A, is the casing. B, the comb. C, the cutter. D, the major or driving lever, the forward part of which engages with the cutter C, while the rear end is provided with cheeks to receive a crank, by which it is driven. The forward half of the major lever D, is slotted to receive the minor lever E, which, in the view shown in Fig. 2 is a lever of the first class, or one in which the fulcrum is between the weight and the power. The fulcrum, in this instance is the stud *f*, which is a projection upon the slipper F, and vibrates (in a horizontal plane) with the compound lever.

In the drawings the slipper F, is shown provided with a groove, in the form of an arc of a circle, of which the fulcrum of the lever D is the center. Above the slipper is fixed a curved race G, provided with a groove, corresponding to the groove in the slipper F, and in the grooves, between the slipper F, and the race G, antifriction rollers or balls *g*, are placed to reduce the friction.

In Fig. 2, the forward end *e*, of the minor lever E, engages with the forward end of the major

lever D at *e'*, while the rear end of the minor lever E, is provided with a thumb-screw H, the axis of which is preferably coincident with the axis of the fulcrum of the major lever D. It is by means of the thumb-screw H, that the minor lever receives its limited motion in a vertical plane, the action of the screw being to separate the rear end of the minor lever from the major lever thus depressing the forward end of the major lever, and secure the necessary intimacy of contact between the cutter C, and the comb B. The thumb or tension screw H, is retained in the desired position by any suitable mechanical device, that shown in the drawings at Fig. 2, being a locknut *h*.

The fulcrum of the major lever consists of a hemi-spherical stud or projection *d*, that seats in a corresponding hemi-spherical bearing *d'*, formed in the casing of the machine. It is not absolutely necessary that the fulcrum joint should be formed exactly in the manner shown in the drawings at Fig. 2, as, instead of the stud or projection *d*, being formed on the lever, a sphere may be introduced between the bearing *d'*, and the under side of the lever, the sphere seating in a corresponding bearing formed in the under side of the lever D. The object of the spherical bearing is to allow motion of the lever in the essential directions, thus: a vibratory motion in a horizontal plane, a motion in a vertical plane, whereby the requisite amount of tension between the comb and the cutter may be secured, and a lateral motion of the lever whereby unequal wear on the cutter may be compensated.

In Fig. 7, a modification of the minor lever is shown. This lever is of the second class, or one in which the weight is between the power and the fulcrum. D, is the major lever. E, is the minor lever, which in this instance is pivoted to the major lever at *m*. The forward end of the minor lever E, engages with the stud *f*, on the slipper F, and constitutes the fulcrum of the lever. In this instance, instead of the thumb-screw being used a thumb-nut is substituted for it, and by screwing down the nut upon a bolt *n'*, that is fixed to the major lever, the rear end of the minor lever is caused to approach the major lever,

and consequently depresses the forward end of the major lever D, as in the previous example.

It is obvious that a number of arrangements of, or variety of forms of the minor lever may be employed with advantage, without departing from the spirit of the invention.

An alternative mode of securing the thumb or tension nut in the desired position is illustrated in Fig. 7, where a spring *o*, engages with the serrated periphery of the thumb-nut.

Plain contact surfaces between the slipper F, and the race G, may be substituted for the anti-friction rollers or balls shown in the drawings.

Having now particularly described and ascertained the nature of my said invention and the manner in which the same is to be performed, I declare that what I claim is—

1. In combination, the comb, the cutter, the major or driving lever carrying the cutter, the minor lever pivotally connected to the major or driving lever and vibrating laterally with it, and the race fixed above the forward end of the driving lever and in connection with the fulcrum of the minor lever, substantially as described.

2. In combination the comb, the cutter the major lever carrying the same, the minor lever pivotally connected to the major or driv-

ing lever and vibrating with it, the race fixed above the forward end of the driving lever and in connection with the fulcrum of the minor lever and the adjusting screw whereby the vertical movement of the minor lever is regulated, substantially as described.

3. In combination, the comb, the cutter, the major lever carrying the same and having a spherical fulcrum, the fixed race above the forward end of the major lever and the minor lever pivotally connected to the major lever and carried thereby, the fulcrum of said minor lever being in connection with the fixed race, substantially as described.

4. In combination, the comb, the cutter, the major lever carrying said cutter, and having a spherical bearing, the fixed race above the forward end, the minor lever pivotally connected to the major lever, the means for adjusting said minor lever and the fulcrum to the minor lever comprising the slipper block and the anti-friction rollers interposed between the minor lever and the fixed race, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

THOMAS OLDHAM BENNETT.

Witnesses:

MANFIELD NEWTON,
T. ORMOND O'BRIEN.