

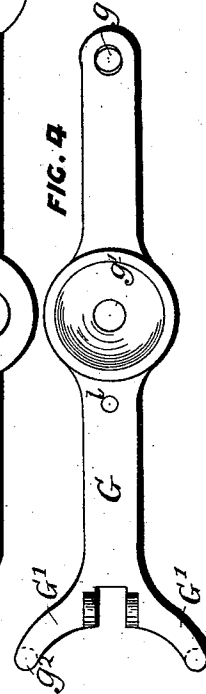
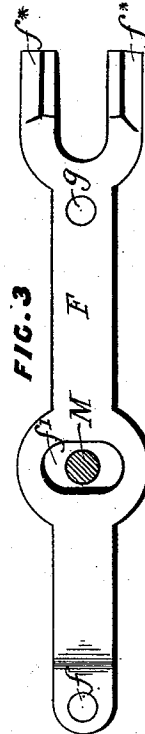
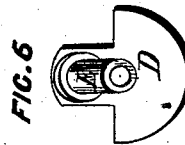
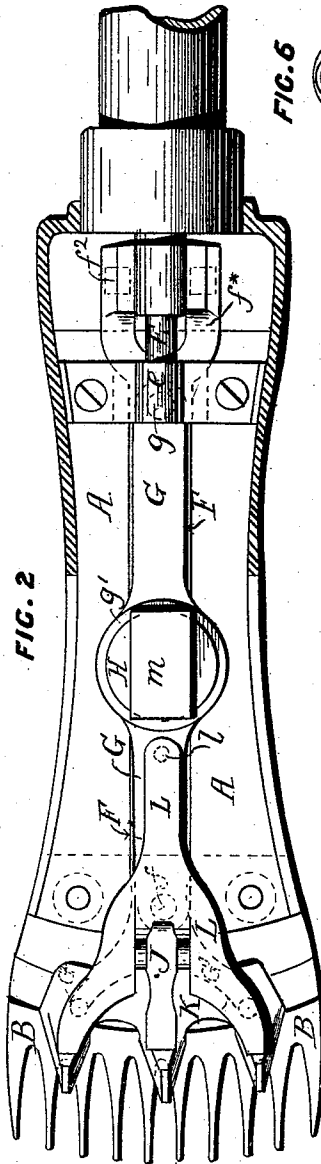
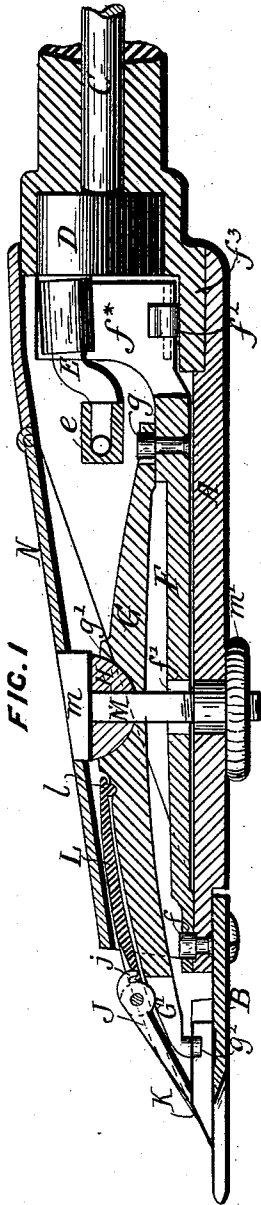
(No Model.)

2 Sheets—Sheet 1.

W. M. NOAKES & E. J. CLARKSON.
MACHINE SHEEP SHEARS.

No. 537,065.

Patented Apr. 9, 1895.



Witness.

E. H. Sturtevant
E. J. Shuster.

INVENTORS.

Walter Maplesden Noakes
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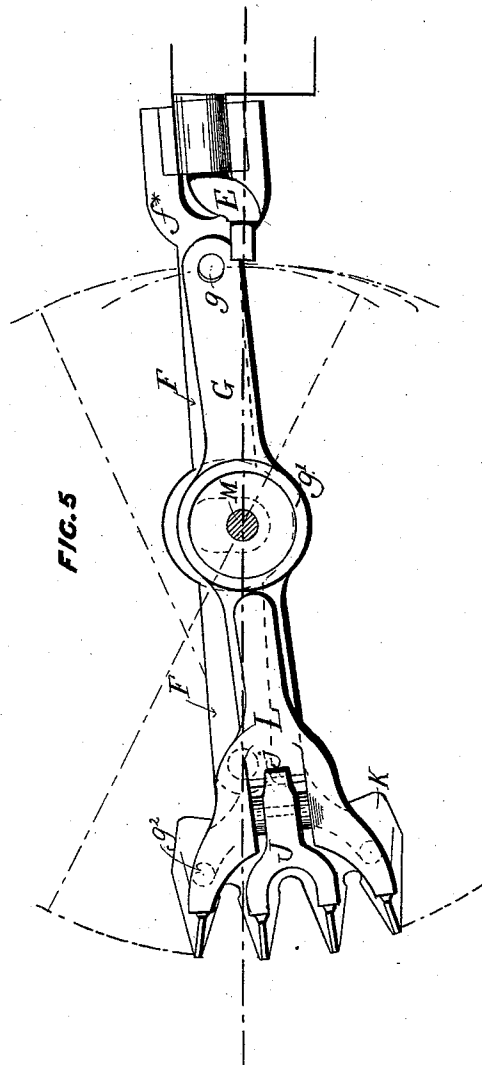
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UNITED STATES PATENT OFFICE.

WALTER MAPLES DEN NOAKES AND EDWARD JOSEPH CLARKSON, OF
SYDNEY, NEW SOUTH WALES.

MACHINE SHEEP-SHEARS.

SPECIFICATION forming part of Letters Patent No. 537,065, dated April 9, 1895.

Application filed September 6, 1894. Serial No. 522,263. (No model.)

To all whom it may concern:

Be it known that we, WALTER MAPLES DEN NOAKES and EDWARD JOSEPH CLARKSON, engineers, subjects of the Queen of Great Britain and Ireland, and residents of Sydney, in the Colony of New South Wales, have invented a certain new and useful Improvement in Machine Sheep-Shears, of which the following is a specification.

10 This invention consists of an improved machine for shearing sheep, clipping hair, or other analogous purposes, and is intended to be worked by any suitable mechanical power.

15 The machine comprises a base plate, a system of compound levers that are vibrated by a crank at the rear end of the machine, a tension appliance that is adjusted from beneath the machine, and a tension fork of peculiar construction, by means of which the tension
20 shall be evenly distributed upon the cutter. There is also a very simple appliance whereby the crank pin that communicates the vibratory motion to the levers is provided with a forward stay or thrust bearing.

25 In the accompanying drawings—Figure 1 is a longitudinal section of the complete machine; the section being taken on the longitudinal axis of the machine. Fig. 2 is a plan view of the same, the cover of the machine
30 being removed, the better to show the working parts. Fig. 3 is a plan of the lower lever. Fig. 4 is a plan of the upper lever. Fig. 5 shows the combined positions of the two levers at the point of greatest throw, and also
35 a form of the pivoted tongue so modified as to be applied to a cutter having four teeth. Fig. 6 is a front view of the elongated crank pin, the thrust bearing being removed.

40 A is the base plate of the machine to which the comb B is secured in any suitable manner.

C is the driving shaft.

D is the crank disk.

45 E is a crank pin that is provided with an anti-friction roller as shown in the drawings. The crank pin is, preferably, slightly inclined toward a continuation of the central axis of the shaft C, and is provided with a stay or thrust bearing e, which will materially assist in giving
50 the crank pin the necessary firmness or rigidity.

Immediately above the base plate A is placed the lower lever F which is pivoted to the base plate at f , and is centrally provided with a slot f' , shown in Figs. 1 and 3, to permit of
55 the vibration of the lever without it touching the tension pin. The rear end of the lever F is forked and provided with bearing cheeks f^* , f^* , between which the crank pin E will
60 work, and thereby impart the necessary vibratory motion to the lever F. Beneath each cheek is an anti-friction roller f^2 , which runs upon a race f^3 that is let into the base plate A. Immediately overlying the lever F is the
65 upper lever G, the rear extremity of which is loosely pivoted at g to the lever F. The center of this lever G is formed into a boss g' , which is hollowed out to receive a hemisphere H which will permit of a modified movement
70 of the lever G in almost every direction, and which will therefore constitute a universal joint. The forward end of the lever G is forked at G' , G' , and medially between the prongs
75 of the forks is loosely pivoted a loose piece or tongue J. The forks G' , G' are provided with the usual studs g^2 which take into recesses in the cutter K, but do not exert any
80 downward pressure upon the cutter, the forks G' being intended only to traverse the cutter over the comb. The loose piece J will overlie the central prong of the cutter and may
85 be caused to bear upon it in a manner to be hereinafter explained. The rear end of the tongue J is provided with a projection j . When it is desired to cause the tongue J to
90 bear upon the central tooth or teeth of the cutter K, a loose fork L is placed upon the lever G and is slid forward until the point of bifurcation of the fork will underlie the projection j of the pivoted piece or tongue J. In
95 order to prevent the loose fork L from shifting its position, its rear end is provided with a small projection l , which will take into a corresponding depression in the upper surface of the lever G.

The hemispherical piece H and the lever G are centrally bored out to permit the passage of a bolt M that is provided with a four-square head m , the top of which will lie flush with the upper surface of the cover N. The
100 bolt will pass downward through the hemisphere H, the lever G, the slot f' in the lever

F, and through the base plate A, and will project a short distance below A where it will be provided with a thumb screw *m'* which may be secured or locked by a spring or other suitable device.

When it is required to bring any desired amount of tension upon the cutter K the thumb screw *m'* will be screwed up, thereby bringing down the lever G. It will be remembered that the loose piece or tongue J will merely loosely overlie the central tooth or teeth of the cutter K, but the screwing up of the thumb screw *m'* will bring down the lever G and with it the tongue J, the forward end of which will be caused to press heavily upon the cutter, because, its rear end *j* being pushed up or supported by the loose fork L acting upon the projection *j*, and the whole being brought down together with the lever G, it is obvious that as the rear end *j* cannot give way, any desired amount of tension may be applied to the central tooth or teeth of the cutter K by the forward end of J pressing thereupon.

In the drawings at Fig. 2, the loose tongue J is shown unforked, and bearing upon the central one of three teeth of the cutter K, but by the plan shown in Fig. 5 a modification of the form of the loose tongue is shown whereby the tongue may be applied (by bifurcating its forward end) to the central two teeth of a cutter that is provided with four teeth.

Having now particularly described and ascertained the nature of our said invention and the manner of carrying the same into effect, we declare that what we claim is—

1. In combination in sheep shears, the base plate, the cutter, the under lever, the overlying lever, having its fulcrum at a point intermediate of its length, and pivotally connected with the under lever at its rear end, means for operating the under lever, said under lever extending forward past the fulcrum of the overlying lever and fulcrumed at its front end substantially as described.

2. In combination in sheep shears, the base plate, the cutter, the under lever the overlying lever connected thereto at its rear end and having the fulcrum pin M intermediate of its length, the hemisphere at the upper end of the pin engaging the overlying lever and means for operating the lower lever said lower lever being slotted to receive the bolt M and being pivoted at its front end substantially as described.

3. In machine sheep-shears, in combination, a vibrating lever, a central tongue that is loosely pivoted to the lever in the line of its longitudinal axis, the said tongue being provided with a rear projection that shall overlie the center of the point of bifurcation of a fork that is loosely placed above the lever to which the tongue is pivoted, the whole being so disposed and arranged that the vibrating lever, the pivoted piece or tongue, and the loose overlying fork shall act together as one piece when tension is brought to bear upon the cutter as herein specified.

4. In machine sheep-shears, the combination with a vibrating lever that is forked at the forward end, of a central loose piece or tongue that is centrally pivoted to the forward end of the lever, a loose fork that shall overlie the lever and underlie a projection at the rear end of the pivoted tongue, a central hemispherical fulcrum upon which the lever shall rock or vibrate, and a central or axial tension bolt, and thumb screw, that is manipulated from underneath the machine, whereby the adjustable tension is obtained to secure the necessary intimacy of contact between the comb and cutter, as herein set forth.

In witness whereof we have hereunto set our hands in presence of two witnesses.

WALTER MAPLEDEN NOAKES,
EDWARD JOSEPH CLARKSON,

Witnesses:

MANFIELD NEWTON,
PERCEVAL M. NEWTON.