No. 697,824. Patented Apr. 15, 1902.

W. H. EYRES.

MACHINE FOR SHEARING AND CLIPPING WOOL OR HAIR.

(Application filed Apr. 18, 1901.)

(No Model.)

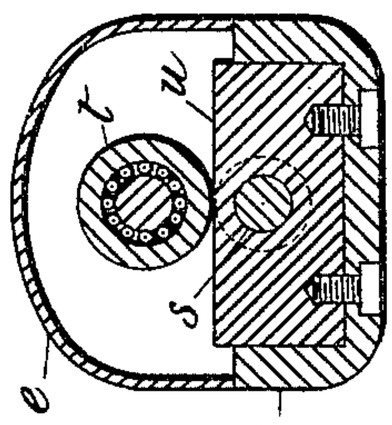

Fig. 3.

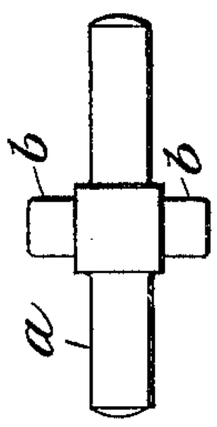

Fig. 4.

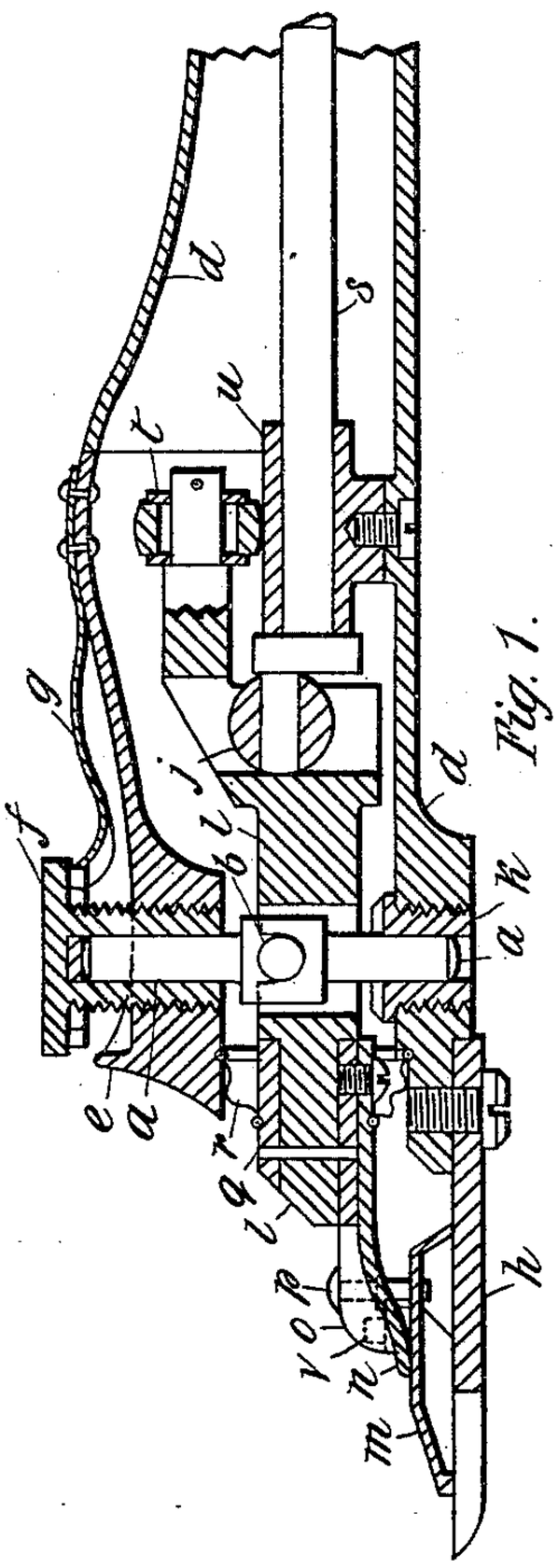

Fig. 1.

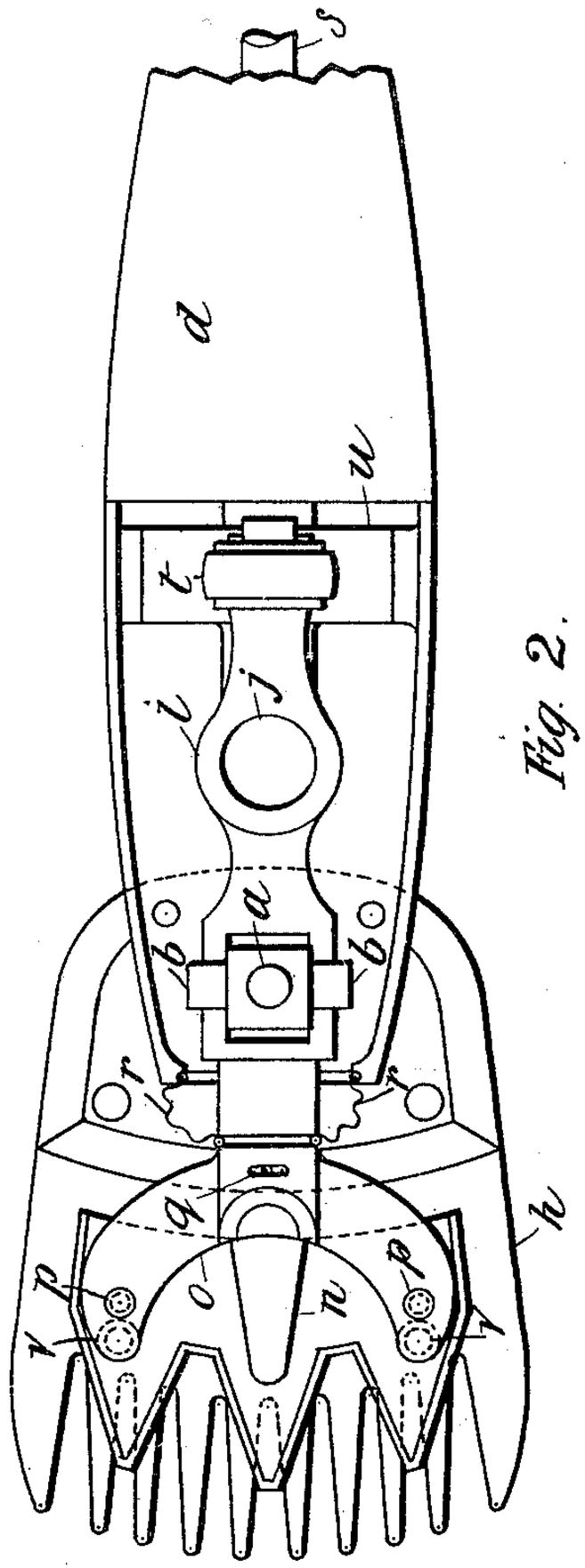

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM HENRY EYRES, OF SYDNEY, NEW SOUTH WALES, AUSTRALIA, ASSIGNOR TO BURGON AND BALL, LIMITED, OF SHEFFIELD, ENGLAND, A CORPORATION, A CORPORATION OF ENGLAND.

MACHINE FOR SHEARING AND CLIPPING WOOL OR HAIR.

SPECIFICATION forming part of Letters Patent No. 697,824, dated April 15, 1902

Application filed April 18, 1901. Serial No. 56,423. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY EYRES, manager in the Commonwealth of Australia of Messrs. Burgon & Ball, Limited, of Sheffield, England, sheep-shears manufacturers, a citizen of the State of New South Wales, residing at No. 9 Hamilton street, Sydney, State of New South Wales, Commonwealth of Australia, have invented new and useful Improvements in Machines for Shearing and Clipping Wool or Hair, of which the following is a specification.

This invention relates to mechanically-driven animal-shears, and has for its object to obtain a more uniform contact between the cutter and comb, also the reduction in friction of the working parts.

My invention is carried out in part by an alteration in the construction of the rocker-bar, which is of the type centrally pivoted. This rocker-bar has a U-shaped recess constructed in the top thereof to receive the rocker tension-spindle. To give vertical adjustment, the rocker tension-spindle has a cross-head with pins resting on the top edges of the rocker-bar through which it passes. It is provided with a bearing top and bottom. The tension is regulated by the top bearing, which is screwed into the top half of the cover and can be raised or lowered as required. To allow for horizontal adjustment of the cutter against the comb, the fork is pivoted onto the end of the rocker-bar, being held in place by a through-pin, the holes in the fork being slotted to allow for movement. For the purpose of reducing friction a roller-bearing is introduced to support the inner end of the rocker-bar. The disk forming the periphery is crowned or rounded, so as to equalize the adjustment of the cutter. This disk revolves on rollers interposed between it and the pin, the rollers being held in position by two washers. These improvements are applicable to any sheep-shearing machine having a centrally-pivoted rocker-bar and may be used in such machine worked by any motive power, including pneumatic or electrical working.

To prevent the dust entering the front of the machine through the opening in casing through which the rocker-bar passes, a dust guard or screen is provided and is secured to the casing and rocker-bar by wire or other suitable means. The screen is made of leather, cloth, or other suitable material.

Another improvement consists in constructing the feet or points bearing on the cutter so as to be adjustable and detachable, the same being fixed in any appropriate way to the rocker and detachable fork. By so constructing these feet or points the same can be replaced when worn down without replacing the whole of the rocker-fork.

In the accompanying drawings, Figure 1 shows a vertical section through center of machine. Fig. 2 is a plan with top cover removed. Fig. 3 is a cross-section through center of roller-bearing. Fig. 4 shows a side elevation of cross-head tension-pivot.

The like letters describe like parts in the different figures.

a is the cross-head tension-pivot; *b*, the cross-head pins, which bear on rocker-bar *l*; *t*, the roller-bearing; *d*, the main casing; *e*, the removable portion of casing; *f*, the tension-regulating bearing; *g*, the spring to prevent it from revolving; *k*, the lower bearing; *h*, the comb; *m*, the cutter; *o*, the fork; *n*, the spring secured to fork; *p p*, the projecting pins which engage cutter; *v v*, the detachable feet of fork; *q*, slot-hole for horizontal adjustment of fork.

r is a dust-screen, and *s* is the shaft, *j* the ball-crank, and *u* the bearing by which motion is given to rocker.

The principal feature of my invention consists in having the vertical adjustment of the cutter on the comb regulated by means of the cross-head pins of the tension-pivot, combined with the horizontal adjustment by means of the pivoted fork or rocker-bar.

In the drawings referred to, *a* represents the rocker tension-spindle, and *b b* the cross-head pins resting on the top edge of the rocker-bar through which it passes. The tension is regulated by the top bearing *f*, which is screwed into the top half of the cover *e* and can be raised or lowered, as required.

The top bearing *f* is held in position when once set by the spring-catch *g*. The horizontal adjustment is provided for by the fork *o* being pivoted onto the end of the rocker-bar *l* and held in place by the through-pin *q*, the holes in the fork being slotted to allow for movement. In reduction of friction the back end of the rocker-bar *l* is carried in a roller-bearing *t*. The disk forming the periphery of the bearing *t* is rounded, so as to equalize the adjustment of the cutter *m*. The disk revolves on rollers interposed between it and the rocker-pin, the rollers being held in position by two washers or any other known construction of roller-type bearing.

The improvements hereinbefore described are available for and I claim to use the same in a sheep-shearing machine worked by any motive power, including pneumatic and electrical working.

To prevent dust from entering the front of the machine, a screen *r* is provided, made of some flexible material, such as cloth or leather, and secured by means of wire or other suitable means to the front end of casing and the rocker-bar. The means adopted, as shown in the drawings, is the construction of a rectangular wire frame let into a groove in the front of the casing *d* and held in position by the removable cover *e*. The rocker-bar passes through the screen, to which it is secured by means of a wire or string, a groove in the rocker-bar being preferably provided for the purpose. The screen is left sufficiently loose to allow for the movement of the cutter-bar in working.

The feet or points *v v* of the fork bearing on the cutter are made adjustable and detachable, being screwed into the under side of the fork or secured by other suitable means. The said feet or points are adjustable either by means of the screws or by constructing the same of the gage required.

Having thus particularly described and ascertained the nature of my said invention and how the same is to be performed and carried into effect, I declare that what I claim is—

1. In combination in a sheep-shearing apparatus, a rocker-bar and a rocker tension-spindle having cross-head pins and passing through the rocker-bar, said rocker-bar having a U-shaped recess constructed in the top thereof to receive the cross-head pins and means for adjusting the spindle, substantially as described.

2. In combination, the rocker-bar, the tension-spindle passing through the same and having laterally-extending pins resting on the top edges of the rocker-bar, the cutters and the roller-bearing for the rear end of the rocker-bar, said spindle having a bearing above and below in the frame, substantially as described.

3. In combination in a sheep-shearing machine, a casing, a rocker-bar, a dust-screen of flexible material and suitable means for securing it to the front end of the casing and rocker-bar, substantially as described.

4. In combination with the cutters, a fork to press said cutters together and feet or points inserted in the lower face of the fork and bearing upon the upper cutter, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM HENRY EYRES.

Witnesses:

ALFRED DE LEON,

ARTHUR EDWARD GOODIN.