Comb for Sheep Shear

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Application Filed Apr. 3, 1916

Patented May 29, 1917

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Original Patent Document Image
UNITED STATES PATENT OFFICE.

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COMB FOR SHEEP-SHEAR.


To all whom it may concern:

Be it known that I, JOHN M. BODENE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Comb for Sheep-Shear, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide an improved comb for sheep shears, particularly adapted for shearing so as to leave a relatively long stable, and to avoid or diminish the retardation of the shearing process which usually attends long stable shearing, and to avoid or diminish the clogging of the comb by oil-and-wax-embedded bers or fragments of fiber. It consists in the elements and features of construction shown and described as indicated in the claims.

In the drawings:

Figure 1 is an inverted perspective view of a comb embodying this invention.

Fig. 2 is a section at the line 2—2 on Fig. 1 showing the comb placed in normal position—that is, not inverted.

Fig. 3 is a section at the line 3—3 on Fig. 1, also showing the comb in normal position.

The improved comb which constitutes this invention comprises a plate, A, having formed integrally at its forward edge the comb fingers, A¹, separated by the notches, A², forming the shearing edge, A³, at the upper surface of each comb finger, extending from the point, a², to the point, a³. The facing sides of proximate comb fingers are concavely curved toward each other, and are also slightly inclined away from each other from the upper side of the plate downward to the lower side, which results in the notches, A³, between the fingers, terminating at the rear or root of the fingers in an acute angle the line of which is sloped back downward from the upper to the lower side of the plate, as seen at a³, in Fig. 2.

For long stubble shearing it has been customary to provide a correspondingly thick comb plate of uniform thickness throughout,—that is, through the whole fore-and-aft extent of the fingers and sometimes through the whole fore-and-aft extent of the plate from the forward end of the comb fingers to the back edge of the plate. This causes the shear to be greatly retarded in operation because of the frictional resistance involved in forcing the thick comb through heavily matted wool which encounters great resistance due to friction and adhesion on the broad facing surfaces of the fingers between which the wool is crowded by the taper of the notches between the fingers. This defect in previous comb constructions is avoided in the present invention by making the comb plate only of such thickness as necessary for its proper rigidity and strength, except over a minor portion of the length of the fingers; that is to say, the shearing edge of the fingers having their dimensions in the direction of the thickness of the plate greater than the remainder of the plate for a minor portion of said length. This feature is clearly shown in Figs. 1 and 2 of the drawings, the forward portion of the fingers, A³, having their vertical dimension increased beyond the thickness of the plate, as seen at a³ in each finger. Preferably this increase in the vertical dimension of the finger is made opposite the forward portion of the shearing edge of the finger, and preferably it does not extend beyond a short distance back from the forward end of said shearing edge, preferably, as illustrated, rather less than half the length of the finger. The exact length, however, is a matter of minor detail which may be varied without departing from the substance of the invention. Preferably the lower edge of the finger at this vertically widened portion, a³, is substantially parallel with the upper edge, the fingers at the forward points being, as usual, slightly rounded at the lower side and slightly beveled off at the upper side forward of the shearing edge to ease the entrance of the comb into the wool.

The advance of the comb through the wool in shearing is often very much retarded or rendered difficult, and the shearing process impeded and deteriorated by the accumulation of oily or waxy matter from the wool with embedded fragments of fibers in the back portion of the notches between the teeth, and upon the surface of the comb, causing more or less adhesion of the comb to the wool stubble, tending to resist the passage of the comb through and over the same. In the comb shown in the drawings, this difficulty is diminished and substantially...
avoided by extending back from each of the notches between the fingers at the lower side of the comb a downwardly-concave furrow, $a^2$, said furrow being sloped so as to diminish in depth from front to rear, merging in the lower surface of the comb plate at a distance back from the end of the notch between the fingers. As shown in the drawings, the slope of this furrow is such as to cause it to run out or merge in the surface of the plate at a distance back from the end of the notch approximating one-half the finger length. This is to be distinguished from the short sloped inner end of the notches between the fingers which becomes sloped at $a^2$, as described, by reason of the fact that the finger surfaces facing each other at opposite sides of the notches between the fingers are inclined transversely of the fingers. This short slope is always necessarily present for the reason indicated; but it does not remove or prevent the difficulty above pointed out which is relieved by the long gradually sloped furrows, $a^2$, which extend back from the short slopes above mentioned in the under surface of the comb.

I claim:

1. A comb for sheep shears, comprising a plate having integrally-formed comb fingers at the forward edge tapered in width from their points backward, the proximate sides of adjacent fingers being curved concave toward each other and meeting at acute angles, and the plate having upwardly-concave furrows extending at considerable length from the rear ends of the notches between the fingers, said furrows sloping very gradually in depth diminishing back from the ends of the notches to the bottom surface of the plate.

2. A comb for sheep shears, comprising a plate having integrally-formed comb fingers at the forward edge, said fingers having their dimension in the direction of the thickness of the plate back from the shearing plane at a minor portion of the length of the shearing edge greater than the thickness of the remainder of the plate.

3. A comb for sheep shears, comprising a plate having integrally-formed comb fingers at the forward edge, said fingers having their dimension in the direction of the thickness of the plate back from the shearing plane at a minor forward portion of the length of the shearing edge greater than the thickness of the remainder of the plate.

In testimony whereof, I have hereunto set my hand at Chicago, Illinois, this 31st day of March, 1916.

JOHN M. BODENE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."