

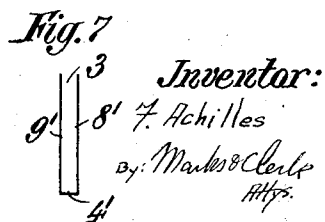
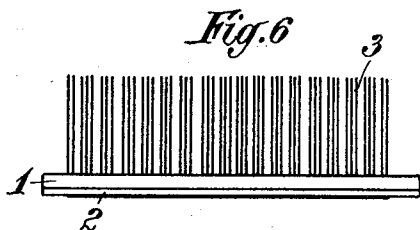
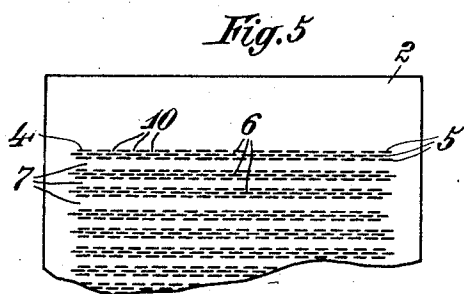
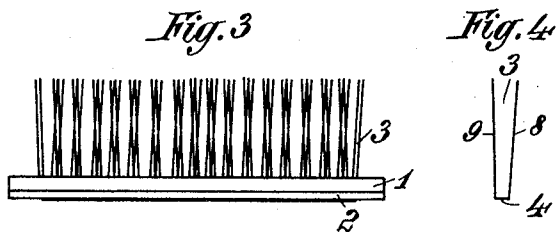
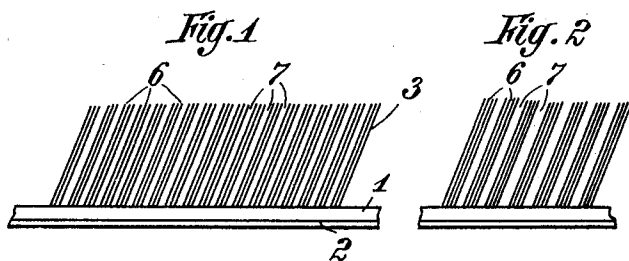
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F. ACHILLES

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CARD CLOTHING

Filed March 23, 1927



UNITED STATES PATENT OFFICE

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CARD CLOTHING

Application filed March 23, 1927, Serial No. 177,690, and in Germany March 27, 1926.

My invention relates to improvements in card-clothing, and more particularly in card-clothing designed for use as a covering for the small cylinders cooperating with the main cylinders of carding machines. One of the objects of the improvements is to provide a card-clothing by means of which the card-clothing of the main cylinder is kept clean, and with this object in view my invention consists in combining the wire teeth of the card-clothing into elongated bundles which when placing the card-clothing on the cylinder are spaced from each other in circumferential direction thus producing gaps the breadth of which is such that the teeth of the successive bundles are capable of being bent in circumferential direction independently of the adjacent bundles. Thus the teeth of the card-clothing which operate at a time have sufficient space to swing back into normal position, so that the smallest fibres are collected within the spaces provided between the bundles of teeth before the next bundle of teeth begins its operation. The fibres which have thus been collected within the spaces are readily returned to the main cylinder, so that they are not lost.

For the purpose of explaining the invention several examples embodying the same have been shown in the accompanying drawing, in which the same reference characters have been used in all the views to indicate corresponding parts. In said drawing,

Fig. 1, is an elevation showing a part of the card-clothing, each bundle being composed of three rows of wire teeth,

Fig. 2, is a similar elevation showing a card-clothing in which each bundle is composed of four rows of wire teeth,

Fig. 3, is a similar elevation showing a card-clothing in which in the adjacent bundles the wire teeth are inclined in opposite directions,

Fig. 4, is a detail view showing a pair of wire teeth,

Fig. 5, is a bottom view of Fig. 1,

Fig. 6, is an elevation similar to the one shown in Fig. 3 and showing card-clothing in which the wire teeth are parallel to one another, and

Fig. 7, is a detail view showing one of the pairs of wire teeth used in the card-clothing illustrated in Fig. 6.

In Fig. 1 have shown an end view of a part of the card-clothing as it appears when looking in the direction of the cylinder or roller to be covered thereby. As shown, the card-clothing consists of a band of leather 1 having a band 2 of felt fixed to its bottom, and to the said clothing wire teeth 3 are fixed. The said wire teeth are made in pairs shown by way of example in Figs. 4 and 7, the shanks 8 and 9 and 8' and 9' being connected at their bottom ends by a knee 4 and 4' respectively, and the said knees 4 and 4' are disposed parallel to the axis of the cylinder or roller. The wire teeth 3 are combined into elongated bundles 6 each composed of a plurality of rows 5, Figs. 1 and 5 showing bundles composed of three rows 5, while Fig. 2 shows bundles composed of four rows 5. As appears from Fig. 5, the knees 4, 4' of the pairs of wire teeth are displaced relatively to each other in the adjacent rows 5 of each bundle 6, and the spaces between knees 4 provided in the same row 5 are smaller than the length of the said knees. Thus each elongated bundle comprising three rows is composed of sectional bundles each comprising six wire teeth.

Between the adjacent elongated bundles 6 there are broad spaces or gaps 7 which are not provided with teeth, the said spaces permitting the bundles to swing circumferentially of the cylinder independently of one another. The breadth of the said gaps depends on the character of the material to be spun, the number of the rows of wires contained in each bundle, and the thickness and elasticity of

the teeth. Ordinarily the gaps 7 are broader than the bundles.

In Fig. 4 I have shown an elevation of an elongated bundle as it appears when looking in a direction perpendicular to the axis of the cylinder or roller. As shown in the said figure, the wire teeth of each bundle are slightly inclined in opposite directions, the wire teeth 8 and 9 of each pair being bent outwardly from their knees 4, as is shown in Fig. 4. The shanks 8 and 9 may be parallel to each other, or they may be inclined alternately to the right and to the left. Further, all the teeth of one elongated bundle 6 may be inclined in one direction, while the next bundle is inclined in the opposite direction. In the modification shown in Figs. 6 and 7 the teeth 3 of the bundles are parallel to one another.

I claim:

1. Card-clothing for fancy rollers of fiber working machines, comprising a foundation, elongated bundles of teeth, each bundle comprising a plurality of rows of teeth and each bundle being spaced longitudinally and transversely from the adjacent bundles to permit the wires of each bundle to swing independently of the adjacent bundles when in use on the roller, the wires of each bundle being closely arranged whereby they are moved and operate simultaneously.

2. Card-clothing for fancy rollers of fiber working machines, comprising a foundation, elongated bundles of teeth, each bundle comprising a plurality of rows of teeth and each bundle being spaced longitudinally and transversely from adjacent bundles to permit the wires of each bundle to swing independently of the adjacent bundles when in use on the roller, and the teeth of the rows of each bundle being displaced relatively to each other, the wires of each bundle being closely arranged whereby they are moved and operate simultaneously.

3. Card-clothing for fancy rollers of fiber working machines comprising a foundation, elongated bundles of teeth, each bundle comprising a plurality of rows of teeth with teeth of each row inclined and each bundle being spaced longitudinally and transversely from the adjacent bundles to permit the wires of each bundle to swing independently of the adjacent bundles when in use on the roller, the wires of each bundle being closely arranged whereby they are moved and operate simultaneously.

4. Card-clothing for cylindrical elements of fiber working machines comprising a foundation, elongated bundles of teeth, each bundle comprising a plurality of rows of teeth with the teeth inclined in opposite directions and each bundle being spaced from the adjacent bundles to permit the wires of each bundle to swing independently of the

adjacent bundles when in use on the cylindrical element.

5. In a carding machine, the combination, with a fancy roller, of a cylindrical element adapted to press the sliver into the teeth of said fancy roller, a card-clothing for said fancy roller comprising a foundation, elongated bundles of teeth, each bundle comprising a plurality of rows of teeth and each bundle being spaced longitudinally and transversely from the adjacent bundles circumferentially of the roller to permit the wires of each bundle to swing independently of adjacent bundles, the wires of each bundle being closely arranged whereby they are moved and operate simultaneously.

In testimony whereof I affix my signature.

FRIEDRICH ACHILLES.