

E. GRAF.
CARD CLOTHING.
APPLICATION FILED MAY 7, 1914.

1,154,856.

Patented Sept. 28, 1915.

Fig. 1

Fig. 2

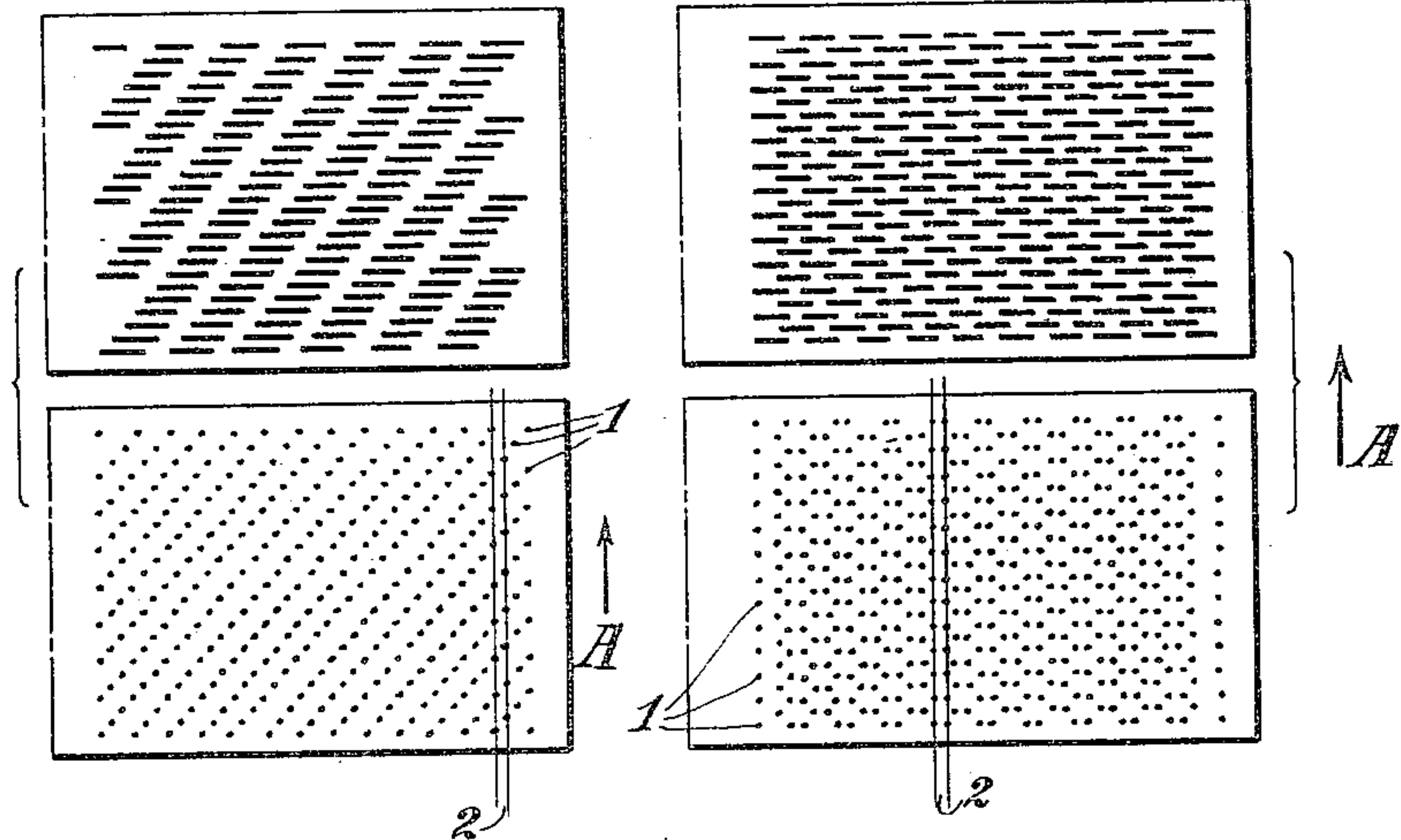
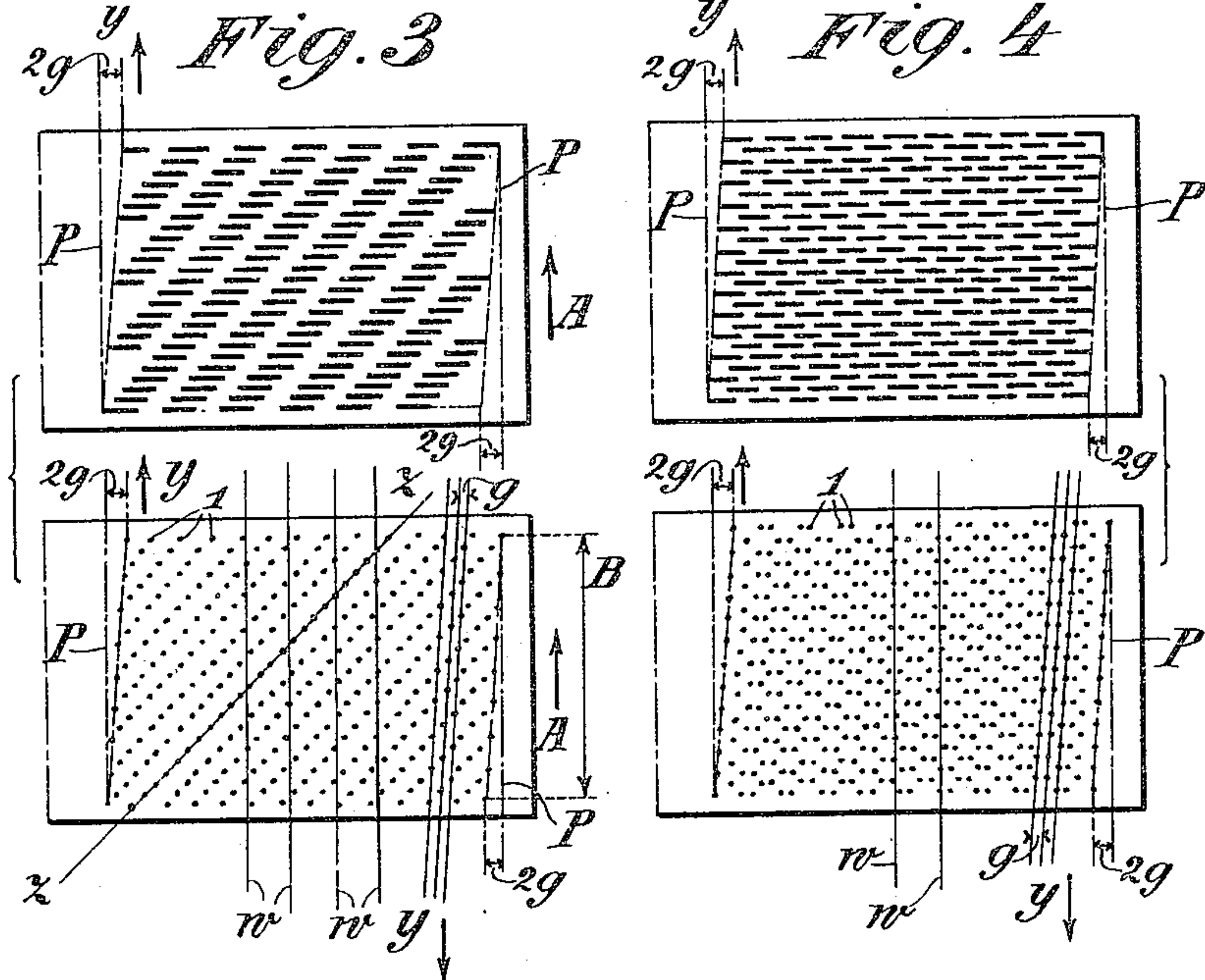


Fig. 3

Fig. 4



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN GRAF, OF RÜTI, SWITZERLAND.

CARD-CLOTHING.

1,154,856.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN GRAF, a citizen of the Republic of Switzerland, residing at Rüti, in the Canton of Zurich, Republic of Switzerland, have invented certain new and useful Improvements in Card-Clothing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in card clothing.

In order to prevent the formation of gaps in the direction of working, the so-called "full set" has been proposed for card clothing, each ridge being composed of two or more rows of pins staggered in the direction of the backs of the wires. This arrangement, however, has the drawback that owing to the pins being set too closely together it is impossible to clothe all the flats of a carding machine with flat pointed wires: and consequently at least two sets of card clothing of different count have to be used on one machine. Moreover, in the case of staggered "full set" clothing, the closeness of the setting renders lateral grinding of the pins impossible.

In the card clothing which forms the subject of the present invention, the defects mentioned above are obviated, and at the same time the formation of gaps in working, is prevented.

To this end the direction of each row of pins formed by the various diagonal or horizontal rows deviates in the present card clothing,—which may be diagonal, open, or any other class of setting—from that of a line drawn through an end pin of such row in a direction parallel to the working direction by the width of one or more gaps. In this card clothing the points of the pins are distributed at equal distances, that is to say uniformly, over the working surface so that vacant places are entirely prevented.

Since the gaps are closed in the direction of working, the lateral grinding of the pins is effected along the diagonal gaps. All the flats of a carding machine can be fitted with this clothing, a circumstance which greatly simplifies the work of attaching the clothing to the cast metal flats, and also facilitates

the work of the spinner in mounting the flats on the carding machine, owing to the uniform character of the clothing.

The carding process as effected by the aid of this card clothing is far more thorough than was hitherto possible, inasmuch as the more uniform distribution of the points over the whole surface, causes the wool to be combed in a more regular manner. This more even arrangement of the pins also enables the flats to remove small impurities which were, hitherto, left in the lap.

In the drawing, Figures 1 and 2 give views of a known type of card clothing—one with rib setting and one with open setting—seen from below and above, while Figs. 3 and 4 show corresponding views of the new clothing with rib setting and open setting respectively.

Both in rib set clothing (Fig. 1) and open set clothing (Fig. 2), pins, which are situated one behind the other form gaps 2 parallel to the direction of working A, and in which the fibers are left unacted on by any of the pins.

In the improved card clothing, with rib setting (Fig. 3) or open setting (Fig. 4), the direction y of each row of pins formed by pins of the various diagonal (or horizontal) rows z (or z') differs, by the width of two gaps g from that of line P drawn across the width B of the clothing, and parallel to the working direction A, through an end pin of the row of pins in question. As shown by the lines w (Figs. 3 and 4) gaps in the working direction are prevented by this arrangement: so that all parts of the ribbon of fibers are encountered by pins, and in this way an unimpeachable, uniform carding of the cotton is obtained. The clothing can be subjected to lateral grinding in the diagonal gaps between each two rows of pins of this kind. The deviation in the direction of each row of pins from that of lines drawn, parallel to the working direction, through an end pin of such row, may also be equal only to the width of one gap or may be equal to that of more than two gaps.

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

1. Card clothing for top flats with rib, open or other setting, in which the first pins of the rows running perpendicularly to the lateral edge of the fabric are arranged along

a line oblique to the said edge of the fabric whereby the formation of gaps in the direction of working is prevented.

2. Card clothing for top flats, in which
5 the end pins of the rows running perpendicularly to the lateral edge of the fabric are arranged along a pair of parallel lines oblique to the said edge of the fabric and
10 the remainder of the pins are arranged on a series of spaced lines parallel to said pair of oblique lines.

3. Card clothing for top flats, in which
15 the end pins of the rows running perpendicularly to the lateral edge of the fabric are arranged along a pair of parallel lines

oblique to the said edge of the fabric and the remainder of the pins are arranged on a series of spaced lines parallel to said pair of oblique lines, the lateral displacement between one end of each of such lines and the other being a distance equal to an integral number of times the space between said series of lines.

In testimony whereof, I have signed my name to this specification in the presence of
25 two subscribing witnesses, April 24th, 1914.
EDWIN GRAF.

Witnesses:

HERMANN HUBER,
CARL GUBLER.

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