UNITED STATES PATENT OFFICE.

MAX CLEMENS GRAHL, OF DRESDEN-LÖBTAU, GERMANY, ASSIGNEE TO "UNIVERSSELL" ZIGARETTEN-MASCHINEN-INDUSTRIE SYSTEM OTTO BERGSTÄRTER-AKTENTGESELLSCHAFT, OF DRESDEN, GERMANY, A CORPORATION OF GERMANY.

METHOD FOR TREATING PAPER FOR SPIRAL MOUTHPIECES OF CIGARETTES.

1,114,468.

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To all whom it may concern:

Be it known that I, MAX CLEMENS GRAHL, a subject of the King of Saxony, residing in Dresden-Löbtau, in the Kingdom of Saxony, in the German Empire, have invented certain new and useful Improvements in Methods for Treating Paper for Spiral Mouthpieces of Cigarettes, of which the following is a specification.

This invention relates to an improved device or apparatus for treating paper preparatory for using the same for the manufacture of spiral mouthpieces for cigarettes.

In the manufacture of spiral mouthpieces for cigarettes a paper-strip was heretofore fed into the cigarette-machine from which the special blanks required for the mouthpiece-spirals were separated. The blank is then wound closely in the form of a spiral.

It has been found by practical experience, especially with cheaper kinds of paper, that in winding up the blank folds or wrinkles are formed in the same mainly in the longitudinal direction of the spiral mouthpiece.

When these folds or wrinkles are formed on the exterior convolution of the spiral, which is placed directly under the delicate paper of the cigarette-sleeve, then these unevennesses are most objectionable. A cigarette made with such a spiral does not show a smooth mouthpiece for the reason that the folds or wrinkles appear on the same. This is especially the case with the cheaper kinds of cigarettes in which a less expensive paper is selected for the spirals and shows this objectionable feature in a more pronounced manner.

The object of this invention therefore is to prevent the formation of folds or wrinkles in the spiral mouthpieces, so that with all kinds of paper a smooth surface is obtained in the body as well as on spirals.

For this purpose the invention consists in drawing the paper-strip, before the individual blanks are cut off from the same and rolled into a spiral, over a sharp edge while properly bending the same. This drawing of the paper-strip around a sharp edge imparts a certain degree of flexibility to the paper and prepares it thereby for the subsequent rolling into a smooth spiral. The pressure which is exerted on the strip during its passage around the sharp edge prevents the formation of folds or wrinkles on the spirals at the time when they are formed.

The accompanying drawing represents in Figure 1 a vertical longitudinal section of an apparatus or device for preparing a paper-strip for the spiral mouthpieces of cigarettes, and Fig. 2 is a plan-view of the same.

Similar letters of reference indicate corresponding parts throughout the figures of the drawing.

The paper-strip a, which is used in the manufacture of spirals for cigarette-mouthpieces, is unwound from the roll b and conducted primarily over a roller c, the shaft of which is supported in suitable bearings of upright standards d, which are attached by means of screw-bolts e to the bedplate A, which forms a part of the supporting frame of the cigarette-machine. The two side-standards d are firmly connected with each other by a transverse bar f.

In each of the side-standards d is arranged a rectangular opening g. The openings g serve for supporting a triangular stretching block h. The block h extends across the entire width of the device between the side-standards. The lower edges of the openings g are so arranged that the block h is located below the center of the roller c and sidewise of the same, as shown in Fig. 1. The paper-strip a is conducted from the roller c over the adjacent edge of the triangular block h, and then conducted in a horizontal direction along the underside of the same, so that a sharp bending action is imparted thereto by the edge of the block. From the block the paper is fed into the cigarette-machine or cigarette-sleeve machine for the subsequent steps, namely, the cutting off of the blanks of the required size and the bending of the same into the form of spirals. The edges of the triangular block may be slightly rounded off.

The block h can be shifted so as to be placed in the opening g closer to or farther away from the roller c. The shifting or 100 clamping in position of the block h is accomplished by horizontal set-screws l and by inclined set-screws k which are passed through threaded holes in the side-standards d, and which engage the block at its opposite inclined sides. As the sides of the block...
A process for rendering elastic the paper out of which the spiral mouthpieces for cigarettes are made, consisting in drawing the entire paper strips under continuous tension over a sharp edge, said entire paper strips being bent while being drawn over said sharp edge.

A process for rendering elastic the paper out of which spiral mouthpieces for cigarettes are made, which consists in drawing the entire paper strip from which the mouthpieces are cut, over a sharp edge, said entire paper strip being bent while being drawn over said sharp edge, said entire paper strip being bent while being drawn over said sharp edge, said entire paper over a sharp edge, said entire paper being bent while being drawn over said sharp edge, said paper being prevented from curling until it is rolled into a spiral.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

MAX CLEMENS GRAHL.

Witnesses:
RICHARD TFFERTZ,
GUSTAV MÜLLER.

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