

E. QUESTER.
 DEVICE FOR PROVIDING CIGARETTE PAPER WITH MOUTHPIECE MATERIALS.
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1,046,643.

Fig. 1

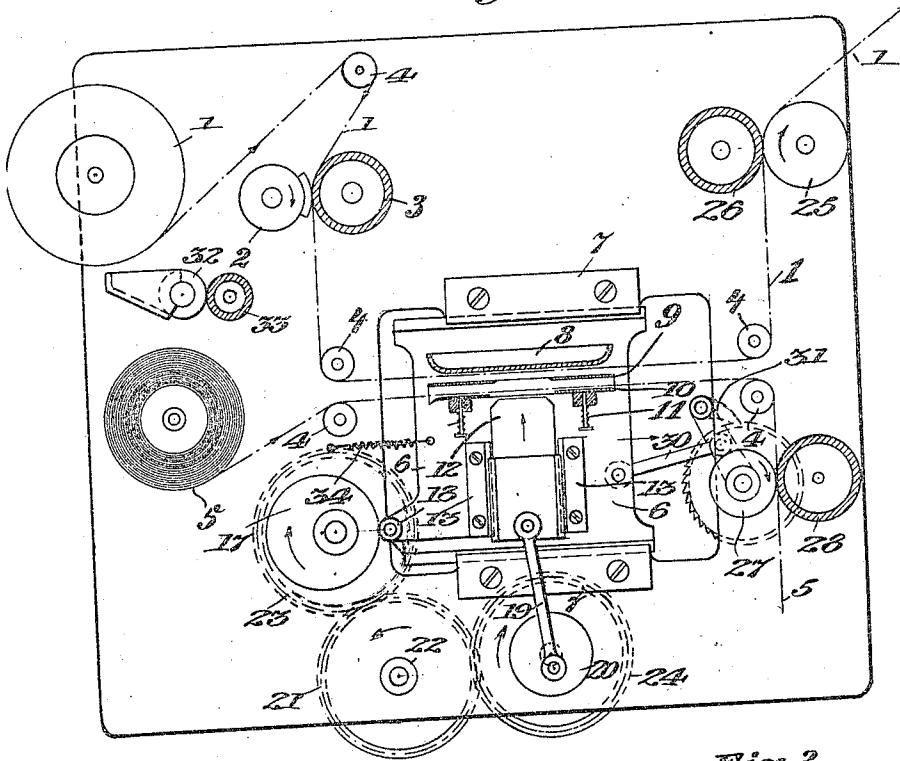


Fig. 2.

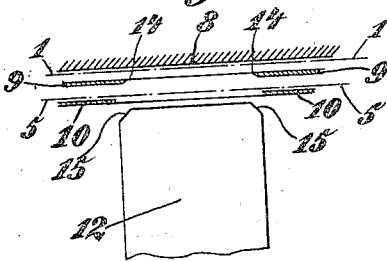
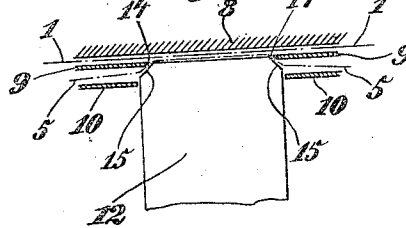


Fig. 3.



WITNESSES

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DEVICE FOR PROVIDING CIGARETTE-PAPER WITH MOUTHPIECE MATERIALS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDUARD QUESTER, a citizen of the German Empire, and resident of 16 Uhlandstrasse, Cologne-Lindenthal, Germany, have invented certain new and useful Improvements in Devices for Providing Cigarette-Paper with Mouthpiece Materials, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a device for providing a band of cigarette paper with material for mouth-pieces in which such material is arranged upon a supporting strip or band and led to the working place where it is pressed against a part of the cigarette paper which has been previously provided with the necessary adhesive, after which a cutting device detaches the now adhering mouth-piece leaf from the remaining material upon the carrying strip. The known devices of this type operate in such a manner that the traveling of the cigarette paper as well as of the mouth piece material, which runs at right angles to or is parallel with the paper, are interrupted in their travel each time a piece of material is pressed against the cigarette paper. After the cigarette paper has moved again the strip carrying the mouth piece material is still retained by a blunt die and that piece of material which has been pressed against the paper is thereby torn off.

According to my invention the device works in such a manner, that the band of cigarette paper can continue its travel without interruption even during the pressing on of the material and also when the same is detached. The pressing on action is effected by means of a die which moves exactly between the sharp edges of a movable cutting frame the employment of which allows of using at a time just as much material as is wanted while the remaining material is covered and protected by the frame. The cutting frame and the die leave the cigarette paper simultaneously and thereby cut the mouth piece sharply and neatly from the remaining materials. By my invention it is therefore possible to obtain the advantage that the formation of an uneven cutting edge of the mouth piece material is prevented, and also the travel of the cigarette paper is uninterrupted during the pressing and detaching action which permits of

a much more exact covering of the paper with materials at the requisite intervals, as an irregular tension and displacement of the thin cigarette paper which can easily take place if such thin paper is detached step by step, is entirely avoided.

The accompanying drawings illustrate one form of carrying out my invention by way of example.

Figure 1 is an elevation of the device, while Figs. 2 and 3 separately show on enlarged scale a main portion of the same in two different operative positions.

After the cigarette paper 1 (Fig. 1) has been provided with adhesive at the requisite places in known manner by means of a segmental portion of a roller 2 rotating in front of another roller 3, it is led with constant velocity over one of the guide rollers 4 between which the covering device is arranged. The strip 5 carrying the mouth piece material is led over the guide roller 4 with equal velocity but with interruptions at certain intervals. The main parts of the covering device are arranged upon a slide 6 adapted to move to and fro in guides 7. A plate 8 serving as an abutment and which is covered with india rubber or other resilient material is also arranged upon the slide 6 in a position which allows the cigarette paper to pass underneath. Below the paper strip 1 a reciprocating cutting frame 9, 10, is provided upon the said slide which frame is drawn downwardly so as to rest upon stops, by means of spring 11. The carrying strip 5 is passed through the frame 9, 10. The upper portion 9 of the frame is provided with an opening, the edges of which are sharpened and the measurements of the opening itself exactly corresponds with the desired size of the mouth piece. The upper wall 9 therefore forms the cutting device proper, while the bottom portion of the frame 10 is provided with an opening which is somewhat larger than the opening in 9 and which is adapted to receive the die 12. This die is also arranged upon the slide 6 and adapted to move in a vertical direction within guides 13. The pressing surface of the die lies between its edges 15 and corresponds exactly with the opening between the knife edges 14 (Figs. 2 and 3). The edges 15 of the die 12 are simply formed by slanting its upper portion.

The entire machine is driven by means of shaft 22 (Fig. 2) in any desired manner,

whether the machine is operated by itself or is to be combined with a cigarette machine. On shaft 22 is provided a spur wheel 21 which drives the wheels 23 and 24. The eccentric 17 is placed rigid with spur wheel 23 on a common shaft and in rotating effects, by means of the roller 18 attached to the slide 6, the horizontal forward movement of the slide 6, the backward movement of which is effected by a powerful spring 34. The upward and downward movement of the stamp 12 is effected by the crank disk 20, and the connecting rod 19, situated with spur wheel 24 upon a common shaft.

Cylinder 27 and counter cylinder 28 serve to remove the supporting strip carrying the coating material, and cylinder 27 is preferably driven intermittently by a connecting rod 30 which actuates a pawl 31 engaging the ratchet 29. The other working portions of the device such as the cylinder 25 (so-called counter cylinder) carrying away the coated cigarette paper, and the cylinders 2 and 32 conveying the adhesive material are driven from the shaft 22 by tooth or chain gears in suitable manner.

When moving in an upward direction, the die 12 lifts the cutting frame against the action of the springs 11 and presses the carrying strip and the corresponding portion of mouth piece material between the sharp edges of frame 9 against the cigarette papers 1 which at this place has been previously provided with adhesive. During the whole of this operation the abutment plate 8, frame 9, 10, as well as strip 5 and the die 12 move together and with the same speed as the cigarette paper 1, the carrying strip 5 being clamped between the knife edges 14 of the frame portion 9 and the edges 15. The die 12 and the cutting frame 9 now cause the carrying strip to travel with them for a short distance which previously is a little over the length of one mouth piece. After this the die descends and the frame 9, 10, follows under the action of springs 11 leaving the thin mouth piece material (usually leaf gold) neatly cut along the edges 14. The portion which has been pressed through the opening will remain upon the cigarette paper while that portion which has been covered by the frame remains untouched upon the carrying strip and is ready for the next operation in the frame 9, 10, while the die 12 descends still farther. As said before, the slide together with all its members follows the advance of the cigarette paper during the whole covering operation, and after the descent of the cutting frame, is moved quickly into its starting position and the opening in the frame portion 9 takes its place underneath the next place of the cigarette paper which has been provided with adhesive. The released carrying strip 5 is not affected by

the backward motion of the slide and the die 12 takes again its position underneath the supply of mouthpiece material, and very little behind the edge along which the preceding mouth piece has been cut, so that only a very small strip of material is wasted.

The construction of the cutting frame may be of any suitable kind, and it is preferred to have its parts exchangeable and the knives adjustable to suit the various sizes of the cigarette mouth piece.

What I claim and desire to secure by Letters Patent is:—

1. In a device of the character described, the combination of means for simultaneously passing a pair of superposed strips substantially at the same speed and in the same direction; a single die for cutting pieces from one strip and pressing said pieces against the other strip; and means for moving the die in the direction of the movement of the strip during the pressing and cutting operation.

2. In a device for providing bands of cigarette paper with mouth-piece material, the combination of an abutment means; means for passing a strip of cigarette paper and a piece of mouth-piece material both substantially uniformly in the same direction; means for cutting a piece of material from said mouth-piece material and pressing the same against the cigarette paper and the paper against the abutment means; and means for moving said abutment means and the cutting means in the direction of the movement of the paper and material during the cutting and pressing operation.

3. In a device for providing bands of cigarette paper with mouth-piece material, the combination of a movable slide; an abutment plate thereon; a cutting frame under the plate and having a cutting opening; a die slidable on the slide and adapted to be moved into or out of said opening; means for passing cigarette paper between said plate and free means for passing mouth-piece material between said die and frame; means for moving said die to cause the die to press a portion of the mouth-piece material through said opening against the paper; and means for moving the slide in the direction of the movement of the paper and material while the material is being pressed against the paper.

4. In a device for providing bands of cigarette paper with mouth piece material, the combination of a horizontally movable slide; an abutment plate fixed thereon; a cutting frame yieldably held below and parallel to said plate and comprising upper and lower parts, the upper part being provided with a cutting opening having cutting edges, the lower part being provided with a larger opening; a die vertically slidable upon said slide and adapted to pass

into said opening, and against said edges; means for passing a strip of cigarette paper between said plate and frame; means for passing a strip of mouthpiece material between said parts of the cutting frame; means for periodically moving said die upwardly into said openings, and means for moving said slide in the direction of the movement of the paper and material while said die is in uppermost position.

5. In a device for providing bands of cigarette paper with mouth-piece material, the combination of a support; a pair of guides fixed thereon; a side arranged between said guides; a rubber covered abutment plate fixed on said slide; a pair of stops on said slide beneath said plate; a reciprocating cutting frame yieldably held on said stops comprising an upper wall having an opening having sharpened edges, and a lower part parallel to the upper wall and having an opening larger than the opening of the upper wall; a die slidable upon

the slide and adapted to be moved through said openings and against said sharpened edges; means for directing and moving a strip of cigarette paper between the abutment plate and the cutting frame; means for directing and moving a strip of mouth-piece material between said upper wall and said lower part; means for moving said die upwardly to cause the same to press the mouth-piece material through said opening of said upper wall and cut a piece from said material and press the same against the cigarette paper; and means for moving said slide and the parts carried thereby, in the direction of the movement of the paper and material, during the pressing and cutting operation.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EDUARD QUESTER.

Witnesses:

HANS DUMONT,
SELÓ SELOTY.