July 14, 1953 K. G. E. ALFREDSSON ET AL 2,645,007

APPARATUS FOR OPENING CIGARETTE PACKETS

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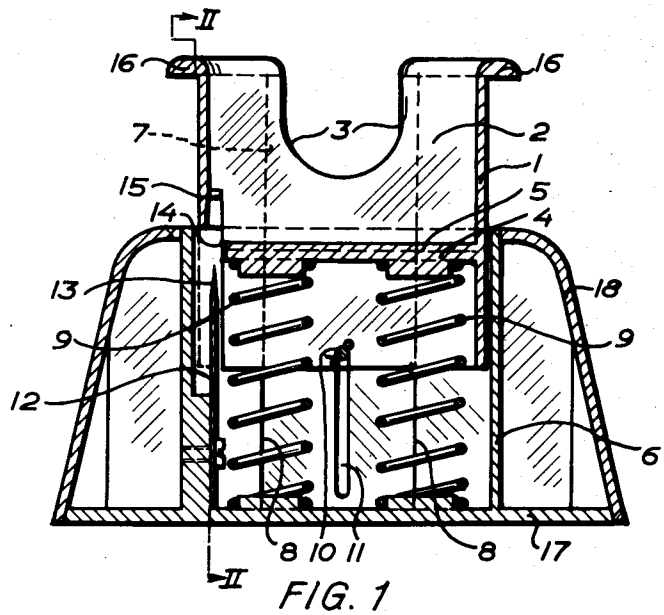


FIG. 1

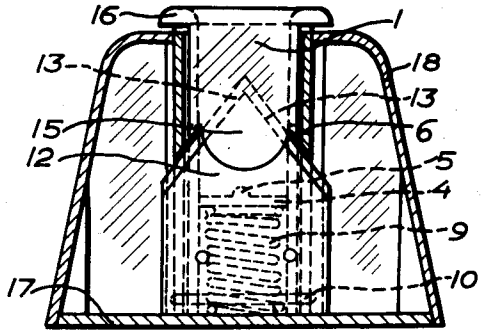


FIG. 2

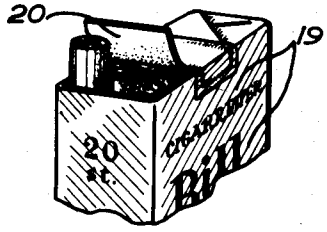


FIG. 6

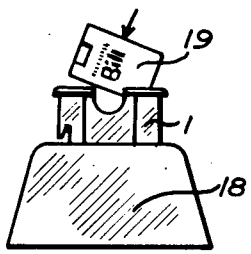


FIG. 3

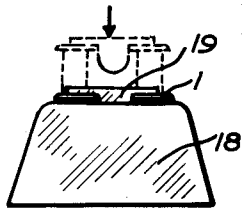


FIG. 4

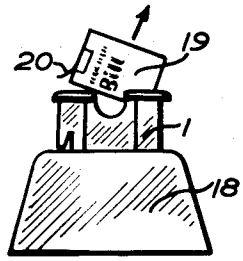


FIG. 5

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APPARATUS FOR OPENING CIGARETTE PACKETS

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7 Claims. (Cl. 30—2)

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A very common type of cigarette packings, usually containing 20 cigarettes, consists of tinfoil forming one or more courses about the cigarettes, ordinary paper of different qualities and, in addition thereto, mostly cellophane, and this cigarette packing or packet is usually sealed in such a manner that it must be torn up completely at one end to allow removal of the cigarettes. For certain brand cigarettes the outer course or wrapping, preferably consisting of cellophane, is provided with means for facilitating the removal of one end part thereof, but the opening of the packet for taking out single cigarettes is thereby only facilitated to a very small degree, because at all events the inner course must be torn up.

A complete tearing up of one end of the cigarette packet involves the drawbacks that the cigarettes remaining therein will easily fall out into the pocket, while dust and things have free admittance to the packet. To avoid such a tearing-up, therefore many tobacconists and consumers have applied a method of opening the packets by manually cutting free only a lap of one end of the packet. The cigarettes are easily shaken out through the opening thus made in the cigarette packet, and the contents of the packet is protected by the free lap without any real folding together of the opened packet. Besides, due to the relatively small dimensions of the opening, the tendency of the cigarettes towards falling out of the packet is very small.

Although the cutting method described above involves many advantages, it cannot always be used because of the relatively great amount of time required to perform it, and during rush hours the tobacconists can hardly afford time to offer the buyers the desirable service in this respect.

The main object of the present invention is to simplify the said cutting operation and to provide an apparatus for opening cigarette packets by such simple operations which may be carried out by anyone, so that the tobacconists can deliver, without appreciable time loss, fresh-opened cigarette packets to the buyers, or the buyers can open the bought cigarette packets themselves by means of the apparatus without risk of damaging the cigarettes in the packet through improper behavior.

A preferred form of the apparatus according to the invention is illustrated in the accompanying drawing, in which Fig. 1 is a longitudinal section of the apparatus and Fig. 2 a cross section along the line II—II in Fig. 1. Figs. 3, 4 and 5 show diagrammatically the apparatus in function, while Fig. 6 shows the upper end of a cigarette packet which has been opened in the apparatus and from which one cigarette is pulled up. Of course, the embodiment shown in the drawing, is not intended to confine the inventional scope.

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Referring now to the drawing, the numeral 1 designates a holder intended to receive a cigarette packet, said holder consisting of a substantially box-shaped, open casing, into which a cigarette packet may be placed on edge. The side walls 2 of the holder are provided with recesses 3, so that the cigarette packet inserted therein is easily removable after the opening operation, and the holder has a bottom 4 with a central, longitudinally extending bulge or elevated portion 5, the function of which will be explained later on in the text. The holder is extended below the bottom in order to be well guided in a frame 6 in which the holder is vertically slidable. The side walls 2 of the holder are provided with guides 7, which are arranged to co-operate with corresponding edges 8 of the frame 6, so that, when vertically displaced, the holder will always move in the same path, even if the displacing force should be applied unsymmetrically. Two compression springs 9 are located under the holder and between the bottom thereof and the frame 6. Said springs 9 are striving permanently to lift the holder up of the frame, a transversal peg 10 in the lower part of the holder being provided to co-operate with a slot 11 in the frame for limiting the vertical movements thereof.

Rigidly mounted in the frame 6 there is an exchangeable cutting tool 12, which is substantially parallel with one end wall of the holder 1, and said cutting tool is provided with two angularly converging edges 13 which are directed upwards so that the point thereof is positioned substantially centrally to the cross section of the holder 1. The end of the holder 1 corresponding to the cutting tool 12 is recessed at 14, so that a depression of the holder in the frame will cause the cutting tool 12 extend above the bottom 4 of the holder 1 to such a height, which at the inner side edges of the holder corresponds to the desired cut in the side of the cigarette packet. At its lower part the end wall of the holder 1 located immediately adjacent the cutting tool is formed to a tongue 15 projecting downwards on the outside of the cutting tool. To facilitate the operation of the holder 1, its upper edges are bent outwardly at 16 and are bevelled at the inside to facilitate the insertion of the cigarette packet. The frame 6 is provided with a bottom

plate 17 and enveloped by a preferably removable shell 18.

In use, the apparatus shown is operated in the following manner (see Figs. 3, 4 and 5): A cigarette packet 19 is inserted edgewise into the holder 1, so that the cigarettes contained in the packet are parallel with the bottom 4 of the holder. Then the packet is firmly pressed down into the holder so that the longitudinally extending central bulge 5 enters or dents the edge of the packing contacting the bottom. Thereby the end portion of the packet joining the said edge will be deformed in such a manner that the top of the packet is spaced from the cigarette ends. The pressure on the packet as well as on the upper edges of the holder is then continued—said holder edges being slightly lower than the packet—whereby the point of the cutting tool is caused to cut through the packing and penetrate between the said deformed portion thereof at the top of the packet and the ends of the cigarettes contained therein, and consequently the cutting tool cuts free a cover lap 20 of pre-determined free length. When the pressure ceases, the springs 9 restore the holder to the initial position, and the packet is lifted out of the same, which operation is facilitated by the recesses 3 in the side walls of the holder. Now the cigarettes are easily shaken out of the packet through the opening covered by the lap, which may be performed either by tapping the upper end of the packet against the hand or by pressing up the cigarettes from the bottom. The appearance of the open packet is clearly seen from Fig. 6. Of course there is nothing to keep one from more extensively cutting or tearing the covering lap, and if desired, the apparatus may even be provided with means for cutting open one edge adjacent the opening in order to render cigarettes more easily removable from the packet.

Of course, several modifications of the apparatus are thinkable within the scope of the invention. By way of example, the cutting tool may be movable instead of the holder, and it is even possible to construct the apparatus with both movable, exchangeable cutting tool and movable holder.

We claim:

1. An apparatus for opening cigarette packets comprising a holder to receive said cigarette packet to be opened, a cutting tool adapted to penetrate into said packet adjacent one short end thereof, when said holder and said tool are moved relatively to each other, and a frame carrying said holder and said cutting tool, said holder comprising a box-like open casing having a bottom parallel to the cigarettes in the packet to be opened and substantially perpendicular to the plane of said cutting tool, said bottom being provided with an internal central bulge extending longitudinally to said packet and the cigarettes therein.

2. An apparatus according to claim 1, in which said cutting tool is rigidly mounted to said frame.

3. An apparatus according to claim 1, in which said cutting tool is provided with two edges angularly arranged relatively to each other.

4. An apparatus according to claim 1, in which said cutting tool is provided with two edges angularly arranged relatively to each other, the point of said cutting tool being directed substantially towards the centre line of one side of the cigarette packet inserted into the holder.

5. In an apparatus for opening wrapped cigarette packets the combination of means for receiving the packet to be opened, means for deforming said packet by applying external pressure centrally on one of the lateral sides thereof to cause the wrapping to rise at the top of said packet, cutting means for penetrating the wrapping of said packet adjacent the top thereof and means for relatively guiding said deformed packet and said cutting means to cause said cutting means to open said packet, when said packet and said cutting means are moved towards each other.

6. An apparatus for opening cigarette packets comprising in combination a holder to receive said cigarette packet to be opened, said holder comprising a box-like receptacle, a pointed cutting blade adapted to penetrate into said packet adjacent one short end thereof, when said holder and said blade are moved relatively to each other, a frame carrying said holder and said cutting blade, means for guiding said holder and said cutting blade relatively to each other in said frame, deformating means in said holder for applying a localized pressure to one lateral side of said packet to deform said packet and means for actuating said deformating means before the realization of said relative movement between said holder and said cutting blade.

7. In an apparatus for opening cigarette packets the combination of a movable holder for the packet to be opened, said holder comprising an open, box-like casing having an opening substantially corresponding in size to the lateral side of said packet so as to permit insertion of the packet edgewise therein and having a bottom parallel to the cigarettes in said packet, means at the bottom of said casing for deforming said packet by applying a central pressure to the lateral side thereof facing the bottom of the casing when said packet is forced into said holder, a frame carrying said movable holder, means in said frame for guiding said movable holder in a predetermined path, a pointed cutting blade having cutting edges uniformly converging towards its point, said cutting blade being rigidly mounted in said frame in the path of said holder and perpendicularly to the longitudinal direction of the cigarettes in said packet to be opened, the point of said cutting blade being adapted to enter said holder and to penetrate said packet adjacent one short end thereof when said holder is caused to move against said blade, and springy means actuating said holder to prevent it from being moved until said packet is sufficiently deformed by said deformating means in said packet receiving holder casing.

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