

Description

The present invention relates to an apparatus for severing an elongate product such as a surface fastener, a slide fastener chain, an ornamental tape, an elongate piece of cloth, or a sheet of paper, for example, to desired lengths.

Known apparatus for cutting elongate products as described in DE-A-2902671 are generally composed of a vertically movable upper cutter blade, a fixed lower cutter blade positioned for coaction with the upper cutter blade, and a vertically movable pressure pad for pressing an elongate product to be severed, the pressure pad being disposed upstream of the upper and lower cutter blades with respect to the direction in which the elongate product is delivered. The elongate product is cut on the lower cutter blade by the upper cutter blade as it is moved downwardly past the lower cutter blade in contact therewith, while the elongate product is being immovably held by the pressure pad.

EP-A-0077942 discloses an apparatus for cutting elongate products, comprising a vertically movable upper blade for cutting a strip against the anvil from which the severed piece is horizontally moved out of the apparatus by being drivingly gripped between two delivery rollers.

Some elongate products have a pressure-sensitive adhesive layer coated on one surface thereof and a peel-off strip of paper applied to the pressure-sensitive adhesive layer. When such an elongate product is severed, the pressure-sensitive adhesive layer is squeezed out of the cut edge under the force applied by the upper and lower cutter blades in DE-A-2 902 671, or by the upper blade against the anvil in EP-A-0 077 942. The squeezed mass of adhesive sticks to the cutter blades and prevents the severed piece from being separated from the cutter blades or from the upper cutter blade and the anvil for being discharged out of the apparatus. When this happens, the severed piece tends to be cut again or damaged by the cutter blades.

In DE-A-2,902 671, the upper cutter blade is held in sliding contact with the lower cutter blade during the severing of the product, and static electricity is developed in the cutter blades and the product being cut thereby. Therefore, the severed piece tends to be triboelectrically attracted to the cutter blades, and may not be smoothly discharged from the apparatus. During continued operation of the apparatus, the severed piece which sticks to the cutter blades is highly likely to be cut again or damaged by the cutter blades. To solve this problem, the apparatus also includes a static electricity remover for removing static electricity generated when cutting the product by applying a voltage. However, the static electricity remover of this type

is expensive and is required to be installed as a separate unit on the apparatus.

The present invention seeks to provide an apparatus for severing an elongate product, having means for accurately cutting the product and positively discharging a severed piece without damaging the same.

The present invention further seeks to provide an apparatus for severing an elongate product, having simple means for removing static electricity which is generated at the time the product is cut.

The apparatus for severing an elongate product, as claimed comprises: a base board for supporting the elongate product; means for feeding the elongate product in a direction on said base board; a first cutter blade fixedly disposed on an end of said base board; a second cutter blade movable toward said first cutter blade for coaction therewith to cut the elongate product into a severed piece; a first pressure pad movably disposed adjacent to and upstream of said first and second cutter blades with respect to said direction for pressing the elongate product against said base board. According to the present invention a second pressure pad is movably disposed adjacent to and downstream of said first and second cutter blades with respect to said direction for positively pushing downwardly the severed piece off said first and second cutter blades.

Many other advantages and features of the present invention will become manifest to those versed in the art upon making reference to the detailed description and the accompanying sheets of drawings in which two preferred structural embodiments incorporating the principles of the present invention are shown by way of illustrative example.

Figure 1 is a perspective view, partly broken away, of an apparatus for severing an elongate product according to an embodiment of the present invention;

Figures 2A through 2D are fragmentary vertical cross-sectional views showing progressive procedural steps of cutting an elongate product on the apparatus shown in Figure 1;

Figure 3 is a perspective view, partly broken away, of an apparatus for severing an elongate product according to another embodiment of the present invention;

Figures 4A through 4D are fragmentary vertical cross-sectional views showing progressive procedural steps of cutting an elongate product on the apparatus illustrated in Figure 3;

Figure 5 is a fragmentary plan view of a surface fastener which can be severed by the apparatus of the present invention;

Figure 6 is an enlarged cross-sectional view taken along line VI - VI of Figure 5;

Figure 7 is a fragmentary plan view of a slide fastener chain which can be severed by the apparatus of the present invention; and

Figure 8 is an enlarged cross-sectional view taken along line VIII - VIII of Figure 7.

Similar or corresponding parts are denoted by like reference numerals throughout the several views.

The principles of the present invention are particularly useful when embodied in an apparatus such as shown in Figure 1, generally designated by the reference numeral 10.

The apparatus 10 includes a horizontal base board 11 for supporting an elongate product L (Figure 2A) thereon, the base board 11 having a transverse slot 12 near a front end thereof. A pair of upper and lower feed rollers 13, 14 is disposed across the base board 11 for feeding the elongate product L while sandwiching the same therebetween, the upper feed roller 13 being positioned over the base board 11 and the lower feed roller 14 underneath the base board 11. The lower feed roller 14 is partly received in the slot 12 and held in contact with the upper feed roller 13. The upper and lower feed rollers 13, 14 are mounted on respective shafts 15, 16 which can be driven by a stepping motor (not shown), for example, to rotate the feed rollers 13, 14 intermittently so that the elongate product L can be fed over a certain interval and then stopped.

The apparatus 10 also includes a vertically movable upper cutter blade 17 and a fixed lower cutter blade 18 coacting the upper cutter blade 17 for cutting the elongate product L, the upper and lower cutter blades 17, 18 being positioned near the front end of the base board 11. The upper cutter blade 17 is mounted on an upper cutter blade holder 19 which extends transversely of the base board 11. The upper cutter blade holder 19 has a pair of swivel bearings 20 on opposite ends thereof, respectively, with rods 21 being connected at upper ends to the swivel bearings 20, respectively. The rods 21 have lower ends connected to upper portions of outer rings 22 (one shown in Figure 1) slidably mounted on respective eccentric rings 23 fixedly mounted on a rotatable shaft 24 lying below and extending transversely of the base board 11. The shaft 24 can be rotated about its own axis by a motor (not shown) to move the rods 21 and hence the upper cutter blade holder 19 vertically back and forth.

The upper cutter blade holder 19 is received at its opposite ends in vertical grooves 25 defined respectively in two guides 26 joined to a frame 27 and spaced from each other in the transverse direction of the base board 11. Therefore, the upper cutter blade holder 19 is guided by the vertical grooves 25 while it is being vertically moved by the

rods 21. A vertical holder presser 28 is disposed in each of the vertical grooves 25 and is normally urged by compression coil springs (not shown) on screws 29 to resiliently press the upper cutter blade holder 19 toward the upper feed roller 13. Therefore, when the upper and lower cutter blades 17, 18 engage each other, the upper cutter blade 17 is resiliently held against the lower cutter blade 18 to provide intimate sliding engagement therebetween for sharply cutting the product L. The forces with which the upper cutter blade 17 is pressed against the lower cutter blade 18 can be adjusted by turning the screws 29.

The upper cutter blade 17 has a lower cutting edge 30 inclined longitudinally with respect to the lower cutting blade 18 which extends horizontally parallel to the base board 11. Therefore, the elongate product L can be progressively severed transversely from one edge to the other by the upper cutter blade 17, and the downward force applied by the rods 21 to the upper cutter blade holder 19 may be relatively small.

The upper cutter blade holder 19 may be vertically moved by any other device such as a pneumatic cylinder, a hydraulic cylinder, an electromagnetic solenoid, instead of the illustrated eccentric driver mechanism.

As shown in Figures 1 and 2A, the lower cutter blade 18 is fixed to the front end of the base board 11 transversely therealong in vertical alignment with the upper cutter blade 17 for sliding engagement therewith to cut the elongate product L.

As better illustrated in Figure 2A, a first pressure pad 31 is vertically movably supported on the upper cutter blade holder 19 for pressing the elongate product L downwardly against the base board 11. The first pressure pad 31 is positioned immediately upstream of the upper cutter blade 17 with respect to the direction in which the elongate product L is moved by the feed rollers 13, 14 across the upper and lower cutter blades 17, 18. The first pressure pad 31 comprises a pair of spaced vertical rods 32 slidably extending through the upper cutter blade holder 19 and a presser foot 33 attached to the lower ends of the vertical rods 32 and extending along the cutter blades 17, 18. The presser foot 33 is normally urged to move downwardly toward the base board 11 by compression coil springs 34 disposed around the vertical rods 32 and acting between the presser foot 33 and the upper cutter blade holder 19. Ring-shaped stoppers 35 are adjustably mounted on the upper ends of the vertical rods 32 which project upwardly from the upper cutter blade holder 19. The forces with which the presser foot 33 is pressed downwardly are therefore adjustable by the ring-shaped stoppers 35. The presser foot 33 is positioned below the lower cutting edge of the upper cutter blade 17

so that the presser foot 33 can hold the elongate product L prior to severing the latter by the upper cutter blade 17. When the elongate product L is cut by the upper and lower cutter blades 17, 18, it tends to be displaced transversely since it is severed progressively transversely. Therefore, the presser pad 31 should be pressed downwardly by the compression coil springs 34 in order to prevent such transverse displacement of the elongate product L while it is being severed by the upper and lower cutter blades 17, 18.

A second pressure pad 36 is vertically movably supported on the upper cutter blade holder 19 for positively discharging a severed piece S (Figure 2D) onto a discharge chute 37 disposed downstream of the upper and lower cutter blades 17, 18. The second pressure pad 36 is positioned immediately downstream of the upper cutter blade 17. The second pressure pad 36 comprises a pair of spaced vertical rods 38 slidably extending through the upper cutter blade holder 19 and a presser foot 39 attached to the lower ends of the vertical rods 38 and extending along the cutter blades 17, 18. The presser foot 39 is normally urged to move downwardly toward the discharge chute 37 by compression coil springs 40 disposed around the vertical rods 38 and acting between the presser foot 39 and the upper cutter blade holder 19. Ring-shaped stoppers 41 are adjustably mounted on the upper ends of the vertical rods 38 which project upwardly from the upper cutter blade holder 19. The ring-shaped stoppers 41 can adjust the forces with which the presser foot 39 is pressed downwardly. The presser foot 39 is positioned below the lower cutting edge of the upper cutter blade 17 so that the presser foot 39 can engage the elongate product L prior to severing the latter by the upper cutter blade 17. As shown in Figures 2A and 2B, the presser foot 33, 39 are normally positioned at substantially the same level. The presser foot 39 should be pressed downwardly by the compression springs 40 in order not to displace the elongate product L excessively downwardly and in order to positively discharge the severed piece S (Figure 2D) downwardly off the upper and lower cutter blades 17, 18.

Operation of the apparatus shown in Figure 1 will be described with reference to Figures 2A through 2D.

As shown in Figure 2A, the elongate product L is fed by the feed rollers 13, 14 until its front end projects beyond the base board 11 for a desired interval. Then, the upper cutter blade holder 19 is lowered to cause the first pressure pad 31 to press the elongate product L against the base board 11, as illustrated in Figure 2B. The upper cutter blade holder 19 is continuously moved downwardly to bring the upper cutter blade 17 into engagement

with the lower cutter blade 18, as shown in Figure 2C. By fully lowering the upper cutter blade holder 19 as shown in Figure 2D, the elongate product L which is being held in position by the first pressure pad 31 is cut by the upper and lower cutter blades 17, 18, and a severed piece S is positively pushed downwardly by the second pressure pad 36 until the severed piece S is completely separated off the upper and lower cutter blades 17, 18 and discharged onto the discharge chute 37. Therefore, the severed piece S will not be cut again or damaged by repeated operation of the upper and lower cutter blades 17, 18.

Figure 3 shows an apparatus for severing an elongate product according to another embodiment of the present invention. The apparatus, generally denoted by the reference numeral 50 in Figure 3, is similar to the apparatus 10 shown in Figure 1, except that a second pressure pad 36a includes a brush 51 attached to and extending along a downstream edge of the presser foot 39, the brush 51 projecting downwardly toward the discharge chute 37. The brush 51 is composed of carbon or stainless steel bristles of small diameter for removing static electricity from a severed piece in contact with the brush 51. The length of the brush 51 along the presser foot 39 is substantially the same as the width of the elongate product L to be cut. The brush 51 is mounted on the presser foot 39 so that it can be adjusted in vertical position.

In operation, as shown in Figure 4B, the brush 51 moves downwardly with the upper cutter blade holder 19 toward the front end portion of the elongate product L as it is fed beyond the front end of the base board 11, immediately before the elongate product L is severed by the upper and lower cutter blades 17, 18. When the brush 51 is positioned closely to the elongate product L, the brush 51 causes the elongate product L to self-discharge static electricity developed thereon through the brush 51. After the elongate product L has been cut to produce a severed piece S, the brush 51 descending with the upper cutter blade holder 19 positively forces the severed piece S off the upper and lower cutter blades 17, 18, as illustrated in Figure 4C. Upon continued downward movement of the upper cutter blade holder 19, as shown in Figure 4D, the brush 51 is positioned near the severed piece S on the discharge chute 37 to cause the severed piece S to self-discharge static electricity which has subsequently been developed on the severed piece S. Therefore, the severed piece S can be discharged smoothly on the discharge chute 37 without electrostatically sticking to the upper and lower cutter blades 17, 18 and the discharge chute 37.

As shown in Figure 4A, before the upper cutter blade holder 19 starts descending, the lower end of

the brush 51 is positioned substantially at the same level as or slightly higher than the presser foot 33 of the first pressure pad 31. When the upper cutter blade holder 19 is in its lowermost position, as shown in Figure 4D, the lower end of the brush 51 is located in the vicinity of the severed piece S on the discharge chute 37 to remove static electricity from the severed piece S.

The optimum distance between the lower end of the brush 51 and the elongate product L or the severed piece S for enabling the elongate product L or the severed piece S to self-discharge static electricity through the brush 51 can be achieved by adjusting the vertical position of the brush 51 on the presser foot 39 or the vertical position of the stopper 41 on the rod 38.

Figure 5 shows a surface fastener 52 as one example of elongate product L that can be cut by the apparatus of the invention along a transverse line 53. As illustrated in Figure 6, the surface fastener 52 comprises a base fabric piece 54 having a multiplicity of loops 55 for engaging hooks on a companion surface fastener (not shown), a pressure-sensitive adhesive layer 56 coated on the back surface of the base fabric piece 54, and a peel-off strip 57 of paper applied to the pressure-sensitive adhesive layer 56.

Figure 7 shows a slide fastener chain 58 as another example of elongate product L which can be severed by the apparatus of the invention along a transverse line 59. The slide fastener chain 58 is composed of a stringer tape 60, a pressure-sensitive adhesive layer 61 coated on the back surface of the stringer tape 60, and a peel-off strip 62 of paper applied to the pressure-sensitive adhesive layer 56. The severed piece separated from the slide fastener chain 58 along the line 59 serves as an individual slide fastener.

When the surface fastener 52 or the slide fastener chain 58 is cut by the apparatus of the invention, the severed piece can be separated off the upper and lower cutter blades 17, 18 smoothly and discharged downwardly the discharge chute 37 by the second pressure pad 36, 36a even if some adhesive is squeezed out from the adhesive layer 56, 61, tending to stick to the upper and lower cutter blades 17, 18.

Claims

1. An apparatus for severing an elongate product (L), comprising: a base board (11) for supporting the elongate product (L); means (13, 14) for feeding the elongate product (L) in a direction on said base board (11); a first cutter blade (18) fixedly disposed on an end of said base board (11); a second cutter blade (17) movable toward said first cutter blade (18) for coaction therewith to cut the elongate product (L) into a severed piece (S); a first pressure pad (31) movably disposed adjacent to and upstream of said first and second cutter blades (18, 17) with respect to said direction for pressing the elongate product (L) against said base board (11), characterized in that it further comprises a second pressure pad (36) movably disposed adjacent to and downstream of said first and second cutter blades (18, 17) with respect to said direction for positively pushing downwardly the severed piece (S) off said first and second cutter blades (18, 17).
2. An apparatus according to claim 1, characterized in that it includes a movable holder (19) supporting said second cutter blade (17), said first and second pressure pads (31, 36) being movably mounted on said movable holder (19).
3. An apparatus according to claim 1 or 2 characterized in that it includes a discharge tray (37) disposed downstream of said first and second cutter blades (18, 17) for receiving the severed piece (S), said first pressure pad (31) comprising at least one first rod (32) slidably supported on said movable holder (19), a first presser foot (33), and a first spring (34) disposed around said first rod (32) for normally urging said presser foot (33) toward said base board (11), said second pressure pad (36) comprising at least one second rod (38) slidably supported on said movable holder (19), a presser foot (39), and a second spring (40) disposed around said second rod (38) for normally urging said second presser foot (39) toward said discharge tray (37).
4. An apparatus according to any one of the preceding claims, characterized in that it further includes a brush (51) mounted on and extending along a downstream edge of said second presser foot (39) for removing static electricity from the elongate product (L) and the severed piece (S).
5. An apparatus according to claim 4, characterized in that said brush (51) comprises a plurality of electrically conductive bristles directed toward said discharge chute (37).
6. An apparatus according to claim 5, characterized in that said bristles are made of carbon.
7. An apparatus according to claim 5, characterized in that said bristles are made of stainless steel.

the brush 51 is positioned substantially at the same level as or slightly higher than the presser foot 33 of the first pressure pad 31. When the upper cutter blade holder 19 is in its lowermost position, as shown in Figure 4D, the lower end of the brush 51 is located in the vicinity of the severed piece S on the discharge chute 37 to remove static electricity from the severed piece S.

The optimum distance between the lower end of the brush 51 and the elongate product L or the severed piece S for enabling the elongate product L or the severed piece S to self-discharge static electricity through the brush 51 can be achieved by adjusting the vertical position of the brush 51 on the presser foot 39 or the vertical position of the stopper 41 on the rod 38.

Figure 5 shows a surface fastener 52 as one example of elongate product L that can be cut by the apparatus of the invention along a transverse line 53. As illustrated in Figure 6, the surface fastener 52 comprises a base fabric piece 54 having a multiplicity of loops 55 for engaging hooks on a companion surface fastener (not shown), a pressure-sensitive adhesive layer 56 coated on the back surface of the base fabric piece 54, and a peel-off strip 57 of paper applied to the pressure-sensitive adhesive layer 56.

Figure 7 shows a slide fastener chain 58 as another example of elongate product L which can be severed by the apparatus of the invention along a transverse line 59. The slide fastener chain 58 is composed of a stringer tape 60, a pressure-sensitive adhesive layer 61 coated on the back surface of the stringer tape 60, and a peel-off strip 62 of paper applied to the pressure-sensitive adhesive layer 56. The severed piece separated from the slide fastener chain 58 along the line 59 serves as an individual slide fastener.

When the surface fastener 52 or the slide fastener chain 58 is cut by the apparatus of the invention, the severed piece can be separated off the upper and lower cutter blades 17, 18 smoothly and discharged downwardly the discharge chute 37 by the second pressure pad 36, 36a even if some adhesive is squeezed out from the adhesive layer 56, 61, tending to stick to the upper and lower cutter blades 17, 18.

Claims

1. An apparatus for severing an elongate product (L), comprising: a base board (11) for supporting the elongate product (L); means (13, 14) for feeding the elongate product (L) in a direction on said base board (11); a first cutter blade (18) fixedly disposed on an end of said base board (11); a second cutter blade (17) movable toward said first cutter blade (18) for

coaction therewith to cut the elongate product (L) into a severed piece (S); a first pressure pad (31) movably disposed adjacent to and upstream of said first and second cutter blades (18, 17) with respect to said direction for pressing the elongate product (L) against said base board (11), characterized in that it further comprises a second pressure pad (36) movably disposed adjacent to and downstream of said first and second cutter blades (18, 17) with respect to said direction for positively pushing downwardly the severed piece (S) off said first and second cutter blades (18, 17).

2. An apparatus according to claim 1, characterized in that it includes a movable holder (19) supporting said second cutter blade (17), said first and second pressure pads (31, 36) being movably mounted on said movable holder (19).
3. An apparatus according to claim 1 or 2 characterized in that it includes a discharge tray (37) disposed downstream of said first and second cutter blades (18, 17) for receiving the severed piece (S), said first pressure pad (31) comprising at least one first rod (32) slidably supported on said movable holder (19), a first presser foot (33), and a first spring (34) disposed around said first rod (32) for normally urging said presser foot (33) toward said base board (11), said second pressure pad (36) comprising at least one second rod (38) slidably supported on said movable holder (19), a presser foot (39), and a second spring (40) disposed around said second rod (38) for normally urging said second presser foot (39) toward said discharge tray (37).
4. An apparatus according to any one of the preceding claims, characterized in that it further includes a brush (51) mounted on and extending along a downstream edge of said second presser foot (39) for removing static electricity from the elongate product (L) and the severed piece (S).
5. An apparatus according to claim 4, characterized in that said brush (51) comprises a plurality of electrically conductive bristles directed toward said discharge chute (37).
6. An apparatus according to claim 5, characterized in that said bristles are made of carbon.
7. An apparatus according to claim 5, characterized in that said bristles are made of stainless steel.



Revendications

1. Appareil pour sectionner un produit (L) de forme allongée comprenant : une plaque de base (11) pour supporter le produit (L) de forme allongée; des moyens (13, 14) pour avancer le produit (L) de forme allongée dans une direction sur ladite plaque de base (11) ; une première lame de coupe (18) disposée de façon fixe sur une extrémité de la plaque de base (11) ; une seconde lame de coupe (17) pouvant être déplacée en direction de ladite première lame de coupe (18) pour coopérer avec cette dernière afin de découper le produit (L) de forme allongée en morceaux ou tronçons sectionnés (S) ; un premier patin presseur (31) disposé de façon mobile au voisinage des première et seconde lames de coupe (18, 17) et en amont de ces lames par rapport à ladite direction pour presser le produit (L) de forme allongée contre la plaque de base (11), caractérisé en ce qu'il comprend en outre, un second patin presseur (36) disposé de façon mobile au voisinage des première et seconde lames de coupe (18, 17) et en aval de ces lames par rapport à ladite direction pour pousser positivement vers le bas le morceau ou tronçon sectionné (S) hors des première et seconde lames de coupe (18, 17).
2. Appareil selon la revendication 1, caractérisé en ce qu'il comprend un support mobile (19) supportant la seconde lame de coupe (17), les premier et second patins presseurs (31, 36) étant montés de façon mobile sur le support mobile (19).
3. Appareil selon la revendication 1 ou 2, caractérisé en ce qu'il comprend un plateau de décharge (37) disposé en aval des première et seconde lames de coupe (18, 17) pour recevoir les morceaux ou tronçons sectionnés (S), le premier patin presseur (31) comprenant au moins une première tige (32) supportée de façon coulissante sur le support mobile (19), un premier pied presseur (33), et un premier ressort (34) disposé autour de la première tige (32) pour pousser normalement le pied presseur (33) en direction de la plaque de base (11), le second patin presseur (36) comprenant au moins une seconde tige (38) supportée de façon coulissante par le support mobile (19), un pied presseur (39) et un second ressort (40) disposé autour de la seconde tige (38) pour pousser normalement le second pied presseur (39) en direction du plateau de décharge (37).
4. Appareil selon l'une quelconque des revendications

précédentes, caractérisé en ce qu'il comprend, en outre, une brosse (51) montée sur le bord aval du second pied presseur et s'étendant le long de ce bord pour éliminer l'électricité statique du produit (L) de forme allongée et des pièces ou tronçons sectionnés (S).

5. Appareil selon la revendication 4, caractérisé en ce que la brosse (51) comprend une pluralité de soies conductrices de l'électricité et dirigées en direction de la goulotte ou plateau de décharge (37).

6. Appareil selon la revendication 5, caractérisé en ce que les soies sont en carbone.

7. Appareil selon la revendication 5, caractérisé en ce que les soies sont en acier inoxydable.

Patentansprüche

1. Vorrichtung zum Zerteilen eines länglichen Produktes (L), umfassend: einen Tisch (11) zum Abstützen des länglichen Produktes (L) Mittel (13,14) zum Zuführen des länglichen Produktes (L) in einer Richtung auf dem Tisch (11); eine erste Messerklinge (18), die an einem Ende des Tisches (11) ortsfest angeordnet ist; eine zweite Messerklinge (17), die zu der ersten Messerklinge (18) hin bewegbar ist, um mit dieser zusammenzuwirken zum Zerschneiden des länglichen Produktes (L) in ein abgetrenntes Stück (5); ein erstes Druckpolster (31), das bezogen auf die besagte Richtung stromaufwärts neben der ersten und zweiten Messerklinge (18,17) bewegbar angeordnet ist, um das längliche Produkt (L) an den Tisch (11) anzupressen, dadurch gekennzeichnet, daß sie ferner umfaßt ein zweites Druckpolster (36), das bezogen auf die besagte Richtung stromabwärts neben der ersten und zweiten Messerklinge (18,17) bewegbar angeordnet ist, um das abgetrennte Stück (5) zwangsweise von der ersten und zweiten Messerklinge (18,17) weg nach unten zu drücken.
2. Vorrichtung nach Anspruch 1, dadurch gekennzeichnet, daß sie einen die zweite Messerklinge (17) abstützenden beweglichen Halter (19) umfaßt, wobei das erste und zweite Druckpolster (31,36) an diesem beweglichen Halter (19) beweglich gelagert sind.
3. Vorrichtung nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß sie eine Austragrutsche (37) umfaßt, die stromabwärts von der ersten und zweiten Messerklinge (18,17) angeordnet



ist, um das abgetrennte Stück (5) zu empfangen, wobei das erste Druckpolster (31) mindestens eine auf dem beweglichen Halter (19) verschiebbar abgestützte erste Stange (32), einen ersten Andrückfuß (33) und eine erste Feder (34) umfaßt, die auf der ersten Stange (32) angeordnet ist und diese umgibt, um den Andrückfuß (33) normalerweise gegen den Tisch (11) vorzuspannen, wobei das zweite Druckpolster (36) mindestens eine in dem beweglichen Halter (19) verschiebbar abgestützte zweite Stange (38), einen Andrückfuß (39) und eine zweite Feder (40) umfaßt, die auf der zweiten Stange (38) angeordnet ist und diese umgibt, um den zweiten Andrückfuß (39) normalerweise gegen die Austragrutsche (37) vorzuspannen.

4. Vorrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß sie ferner eine Bürste (51) umfaßt, die an einer stromabwärts liegenden Kante des zweiten Andrückfußes (39) angeordnet ist und sich längs derselben erstreckt, um statische Aufladungen von dem länglichen Produkt (L) und von dem abgetrennten Stück (S) zu beseitigen.
5. Vorrichtung nach Anspruch 4, dadurch gekennzeichnet, daß die besagte Bürste (51) eine Vielzahl elektrisch leitfähiger Borsten umfaßt, die der Austragrutsche (37) zugekehrt sind.
6. Vorrichtung nach Anspruch 5, dadurch gekennzeichnet, daß die Borsten aus Kohlenstoff bestehen.
7. Vorrichtung nach Anspruch 5, dadurch gekennzeichnet, daß die Borsten aus rostfreiem Stahl bestehen.

