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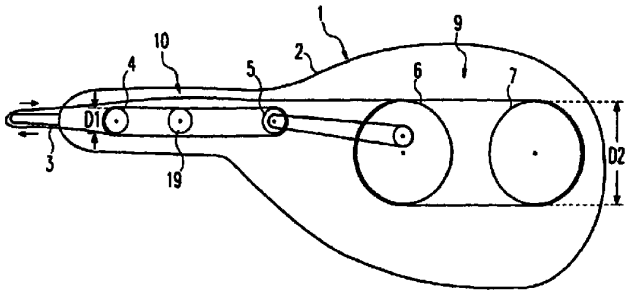

(57) Abstract: A hand-held dispenser for applying a tape (3) on a substrate surface comprises a housing (2) for a supply spool (10) for the tape (3), a take-up spool (9) and an application member (11) for applying the tape (3). The tape (3) is fed from the supply spool (10) to the application member (11) and then back to the take-up spool (9). The take-up spool (9) and the supply spool (10) are provided separately from each other. The supply spool (10) and the take-up spool (9) are elongated reels. The take-up spool (9) is wound around at least two spaced spool members (6, 7, 27, 28).

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Dispenser with conveyor coil

The present invention relates to a hand-held dispenser for applying a tape, particularly a correction tape, on a substrate surface.

Any discussion of the prior art throughout the specification should in no way be considered as an admission that such prior art is widely known or forms part of common general knowledge in the field.

Generally when using tape dispensers, a coating composition to be laid down onto a substrate surface is supplied carried on a ribbon. In use of the dispenser the coating composition is transferred onto the substrate surface as a continue strip while the carrier ribbon is retained by the dispenser.

In known tape dispensers, separate supply and take-up spools are provided within the casing of the dispenser, and the two spools are linked by a drive mechanism as well as a clutch mechanism. Due to the spools considerable space is required within the casing of the dispenser. This is in contrast to the general trend towards slim elongated pen shaped dispensers.

From WO 97/12827 a tape dispenser shown in figure 11 and 12 is known. According to this known dispenser the ends of the carrier ribbon are spliced together so that the ribbon is a continuous loop and the tape is wound in several super imposed layers around the pair of spaced equal diameter spool members thereby forming an oval reel of tape. The oval reel is accommodated in an elongate casing of general slim configuration. A section of tape between the inner and outermost windings of the reels is arranged to extend out of the casing and over an applicator head which is used to press the tape against the substrate surface when using the dispenser. Two spool members are respectively carried for independent rotation about respective axis. When the tape is pressed against the substrate surface by means of the tip edge and the tip is moved over the surface in a direction substantially perpendicular to the edge, the correction coating

is transferred to the surface from the carrier ribbon and becomes laid down as a continuos strip. Fresh tape is drawn from the supply reel. The fresh tape as shown is drawn from the innermost winding of the reel at the rearmost spool. To assist the separation of the tape from the reel the spool is preferably given a profile so that it acts to displace the innermost winding out of the plane of the reel. The separated tape passes over the forward most spool and to the guide rollers before travelling onto the applicator tip. As the tape is delivered from the innermost winding of the oval reel, the outer layers move inwardly and some slippage occurs between the adjacent layers. The friction between the slipping layers can be used to ensure the tension needed in the tape to control the portion extending to around the applicator head is obtained.

The known reel arrangement as shown in figure 11 and 12 has the advantage that the amount of tape held in the oval reel is substantially greater than would be stored in the same number of layers around a single cylindrical spool. However, this oval reel arrangement inherently has the disadvantage that the different layers on the reel are more and more squeezed together onto each other when using the dispenser. This is due to the fact that a certain rewound length of tape is always fed back on a diameter which is substantially larger than the diameter from which fresh tape is drawn to the applicator head. Due to the squeezing effect the different layers wound on the reel will be wound tighter and tighter on the reel, the thus resulting friction between the layers will be substantially increase and once the friction has exceeded a certain limit, it will no longer be possible to use the dispenser without breaking the tape.

From DE 40 39 683 a manual device for transferring a film onto a substrate is known, wherein the manual device has a casing with an elongated shape and the supply spool is pressed together into an elongated shape and the backing tape is drawn back into a space within the casing.

From DE 42 17 294 a hand-held device for transferring a film onto a substrate having a casing with an elongated shape is known. The supply reel is pressed together into an elongated shape and the backing tape is wound up onto a wind-up reel placed behind the supply reel.

It is an object of the present invention to overcome or ameliorate at least one of the disadvantages of the prior art, or to provide a useful alternative.

Advantageously, the present invention in its preferred form provides for a dispenser for applying a tape on a substrate surface, wherein the dimensions of the casing of the dispenser are reduced to an elongated shape without encountering the problems known from WO 97/12827.

According to the invention, there is provided a hand-held dispenser for applying a tape on a substrate surface, the dispenser comprising a housing for a stock of the tape in form of an elongated spool and a rewound length of the tape, the tape being fed from the spool to an application member for applying the tape on the surface and then back into the housing, wherein the refed length of the tape is wound on at least two deviation members distanced from each other and arranged separately of the spool.

Thus, a hand-held dispenser for applying a tape on a substrate surface is proposed. The dispenser comprises a housing for a stock in form of an essentially flattened spool of the tape and a rewound length of the tape. The tape is fed from the stock to an application member for applying the tape on a surface and then back into the housing around two deviation members. These deviation members are distant from each other and arranged separately of the supply spool.

At least one of the deviation members can be mounted fixedly on a base plate. Alternatively all of the deviation members can be mounted rotatably.

A carrier belt can be wound around the at least two deviation members such that the tape can be wound in successive layers on the carrier belt.

A drive-mechanism and a clutch can be provided between the one rotatable deviation member for the stock and one rotatable deviation member for the refed length of the tape.

The stock of the tape and the refed length of the tape can be aligned one behind the other in the housing.

At least one deviation member for the refed length of the tape and at least one deviation member for the stock of the tape can be arranged on a common axis.

The common axis can comprise the drive mechanism.

The diameter of the deviation member for the refed length of the tape can be different to the diameter of the deviation member for the stock of the tape.

The application member can be mounted on a base plate which carries the deviation members.

The application member can be an integral part of the base plate.

The application member can be rigid against torsion and flexion relative to the base plate.

The base plate can be mounted elastically in the housing such that the base plate (and the integrated application member) can perform a torsion and/or flexion movement relative to the housing.

The base plate can be mounted on the housing by means of mounting parts which are flexible due to the material they are made of and/or due to their shape.

The application member can be made out of a plastic material different to the plastic material of the base plate.

Both the take-up spool and supply spool can have at least two spool members, wherein the distance of the spool members of the take-up spool can be different to the distance of the spool members of the supply spool.

The diameter of the spool members of the take-up spool can be different to the diameter of the spool members of the supply spool.

Unless the context clearly requires otherwise, throughout the description and the claims, the words 'comprise', 'comprising', and the like are to be construed in an inclusive sense as opposed to an exclusive or exhaustive sense; that is to say, in the sense of "including, but not limited to".

Further features, objects and advantages of the present invention will become evident for the man skilled in the art when reading the following description of embodiments of the present invention taken in conjunction with the figures of the enclosed drawings in which:

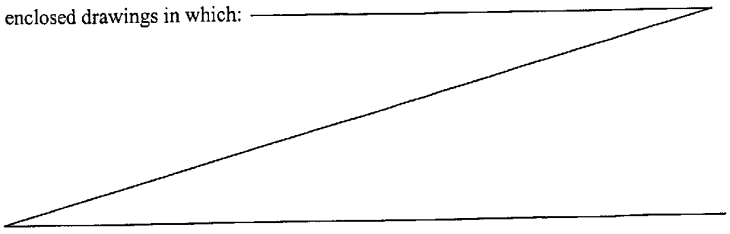


Figure 1 shows a first embodiment of the present invention,

Figure 2 shows a drive mechanism between two spools,

Figure 3 shows a further embodiment of the present invention, according to which the spools are arranged one aside the other,

Figure 4 shows a still further embodiment of the present invention,

Figure 5 shows an embodiment of the present invention according to which the spool members have different diameters and distances from each other,

Figures 6a to 6c show a detail of still another embodiment of the present invention according to which some of the tape deviation elements are mounted fixedly on a base plate,

Figure 7 shows a still further embodiment of the present invention,

Figure 8 shows a under view of the embodiment according to figure 7,

Figure 9 shows a top view of the embodiment according to figure 7,

Figure 10 shows the top view according to figure 9 supplemented with a tape, and

Figure 11 and figure 12 show a hand-held dispenser and an oval reel, respectively, according to the prior art.

With reference to figure 1 at first the general features of a hand-held dispenser 1 according to the present invention will be explained. The hand-held dispenser 1 comprises a casing 2 in which a take-up spool 9 and a supply spool 10 are housed.

Both the take-up spool 9 and the supply spool 10 comprise spaced and independently rotatable spool members 6, 7 and 4, 5, respectively. A tape 3, particularly a correction tape, is wound around the spool members 4, 5 of the supply spool 10 and then fed to an application head 11 extending from a aperture 2 of the casing. As usual the application head 11 serves for being pressed against an application surface in use of the device 1.

From the application head 11 the used tape 3 (usually the backing tape without the deposited coating) is fed to the take-up spool 9 where it is wound around the spool members 6, 7.

Between the take-up spool 9 and the supply spool 10 a drive and clutch mechanism 8 is provided designed such that the take-up spool has the tendency to take-up more length of tape 3 than it is supplied by the supply spool 10.

In the embodiment of figure 1 the drive and clutch mechanism 8 is schematically depicted as a elastic tape 8a consisting of rubber or synthetic material or plastic.

Figure 2 shows another possibility for a realisation of a drive and clutch mechanism 13. As usually, the drive and clutch mechanism 13 links the two spools 9, 10 so that tape is drawn for use from the supply spool 10 the take-up spool 9 is rotated to wind up the used carrier ribbon of the tape 3. As the rotation speeds of the spools are selected to be not the same, a sliding clutch mechanism is also integrated in the mechanism 13. As can be seen in figure 2, according to this embodiment one spool member 7 of the take-up coil 9 is linked to one spool member 4 of the supply spool 10 by the mechanism 13. The mechanism 13 can be as shown in figure 2. A friction disk engages with a fork like second friction disk, wherein the first friction disk 20 is fixed in rotation against the spool member 7 of the take-up spool 9 and the second, fork like spool member 21 is fixed in rotation with the spool member 4 of the supply spool 10. Such a clutch and drive mechanism is principally known from DE-A-198 16 925 and therefore for further details reference is made to said document.

Note that any other drive/clutch mechanism such as for example a gear mechanism and a clutch between the hub and the spool carrier can be used in connection with the present invention.

In the embodiment according to figure 2 the take-up spool 9 and the supply spool 10 are aligned one behind the other, wherein the take-up spool 9 is arranged more forwardly than the supply spool 10 in the casing 2.

In contrast thereto according to the embodiment of figure 3 the two spools 9 and 10 are arranged such they are essentially one beside the other. According to this embodiment the reel spool member 7 of the take-up coil 9 is arranged on the same axis 15 as the reel spool member 5 of the supply spool 10. The common axis 15 represents the drive mechanism for the two spools 9, 10. For example, the spool member 7 of the take-up spool 9 can be fixed in rotation against the axis 15, whereas between the common axis 15 and the spool member 5 of the supply spool 10 a sliding clutch 14 can be integrated.

Furthermore, it is to be noted from figure 3 that the distance between the spool members 6, 7 of the take-up spool 9 is larger than the distance between the spool members 4 and 5 of the supply spool 10.

Figure 4 shows a still further embodiment of the present invention. As in the embodiments of figure 2 and 3, also according to this embodiment of figure 4 all spool members 4, 5, 6 and 7 are mounted on one mounting structure 16.

The drive mechanism of figure 4 is build up by a first friction disk 20 an intermediate forked disk 17 and a second friction disk 21.

Figure 5 shows a still further embodiment of the present invention. According to this embodiment the take-up spool 9 comprises two independent spool members 6, 7 . The supply spool 10 comprises three independent spool members 4, 5, and 19. Furthermore, according to this embodiment not only the distance between the outer spool members 6 and 7 is different from the distance between the spool members 4, 5 of the supply spool 10, but also the diameter D2 of the spool members 6, 7 of the take-up spool 9 is

larger than the diameter D1 of the spool members 4, 5 of the supply spool 10. Therefore the take-up spool 9 has the tendency to take up more length of the tape 3 as it is supplied at the same time by the supply spool 10. This effect can be compensated for by a clutch mechanism provided anywhere between the supplied and the rewound length of the tape 3. For example a clutch function in its simplest realisation can be provided by a controlled slip of the tape relative to one of the spool members.

Due to the fact that the diameter D2 of the spool members 6, 7 of the take-up spool 9 is set to be larger than the diameter D1 of the spool members 4, 5, 19 of the supply spool 10 the outer shape of the casing 2 of the hand-held dispenser device 1 can be shaped pen like.

With reference to figures 6a, 6b and 6c further modifications of a embodiment will be explained.

As can be seen from figure 6a within the housing of the device a base plate 22 is provided carrying deviation elements 23, 24, 25, 27 and 28. The deviation elements can either be fixed in rotation (23, 24, 27) or they can be mounted rotatably on the base plate as it is the case for deviation elements 25 and 28. Note that the expression "deviation element" according to the present invention relates to any structural measure which can provide for a function of deviating the tape at least about 180°. Therefore any ridges, recesses, pins, extensions can be used for providing either the stock of the tape 3 to be fed to the application member (shown in figure 6a) or for the refed length of the tape 3. According to the embodiment of figure 6a the stock of the correction tape is wound in layers around two fixed pin like tape deviation elements 23, 24. The tape is guided around a rotating tape deviation element 25 and then to the application member which is only shown symbolically in figure 6a. To be more precise, the tape 3 is guided between the rotating tape deviation element 25 and a pinch roller 26. Therefore, when applying the tape 3 on a substrate surface, the rotating tape deviation element 25 will be driven due to the friction which is predetermined by the pinch force effected by the pinch roller 26. Therefore, by driving the rotating tape deviation element 25 a further rotating tape deviation element 28 provided on the other side of the base plate 22 is driven. The second rotating tape deviation element 28 is one of the tape deviation

elements for rewinding the applied length of correction tape. Therefore the drive mechanism according to the embodiment of figure 6a is constituted by the two rotating tape deviation elements 25, 28. Note that a clutch mechanism can be provided in the common axis connecting the two rotating tape deviation elements 25, 28. Alternatively the clutch mechanism can be omitted and the clutch effect can be present by providing a predetermined slip between the tape and the first rotating tape deviation element 25 (by adjusting the pinching force of the pinch roller 26) and/or a predetermined slip of the rewound tape on the circumference surface of the second rotating tape deviation element 28.

Therefore the drive mechanism comprising the clutch and coils can be constituted by only the three following parts:

- the base plate 22 with the fixed tape deviation elements 23, 24, 27,
- the first and the second rotating tape deviation element 25, 28.

Figure 6b shows a different view of the embodiment of figure 6a. Note that according to the modification of figure 6b the pinch roller 26 has been omitted.

Figure 6c shows a further modification of the principle of figures 6a and 6b. According to this modification the application member 29 is fixed to the base plate 22. For example the application member 29 can be an integral part of the base plate 22. Furthermore in figure 6c the fixed tape deviation elements 23, 24 and 27 as well as the rotating tape deviation elements 25 and 28 are shown.

The application tip 29 can either be moulded of the same plastic material as the rest of the base plate 22 or of a different plastic material. Particularly the application member 29 can be mounted rigidly regarding flexion and torsion to the base plate 22. A compensation effect for an inclined application of the application member 29 can be provided by mounting elastically the base plate 22 (comprising the entire clutch, drive, coil and application mechanism) inside the casing (not shown) of the hand-held correction device. This can for example be effected by flexible mounting parts 30, 31 as shown schematically in figure 6c.

According to this modification the whole internal mechanism of hand-held correction device is suspended elastically against rotation and/or flexion inside the casing of the hand-held correction device. Note that this modification can also be done by using coils known from the prior art instead of the deviation elements shown in figure 6c. The essential part of the modification of figure 6c is that, to summarise, the whole internal mechanism comprising the tape, the stock and the rewound length of the tape, the drive/catch mechanism and the application tip is mounted rigidly with each other and is suspended elastically within the casing of the hand-held correction device.

Therefore, according to the present invention an elongated and pen or marker like hand-held dispenser can be provided without encountering the problems of the prior art.

In all the exemplified embodiments described in the foregoing, it is an advantage to wound a carrier belt 18 around the preferably cylindrical or hollow-cylindrical deviation elements 6, 7 or 27, 28, as is suggested in Figures 1 to 5. The carrier belt 18 is wound around the appertaining deviation elements 4, 5; 27, 28 at a light but sufficient tension, so that in cases in which at least one of the preferably cylindrical or hollow-cylindrical deviation members 6, 7; 27, 28 is rotatably mounted and is driven by a drive mechanism, for example by the deviation member 25 driven by the tape 3 or on account of the frictional force effective between the deviation member 25 and the pinch roller 26, there is a drive connection between the driven deviation member, for example 25, and the carrier belt 18. Said belt is preferably a flat belt, for example made of a synthetic material such as plastic material or rubber. The at least one layer of the refed length of the tape 3 is provided at the preferably flat external side of the carrier belt 18 (Fig. 7) and fixedly connected with the carrier belt 18 by frictional force or a special connection. The rigid connection can be brought about, for example, by an adhesive connection between the free end portion of the refed length and the outer surface of the carrier belt 18. A frictional connection between the refed length and the carrier belt 18 is achieved if the refed length is wound around the carrier belt 18 more than once.

In the exemplified embodiment according to Figures 7 to 10, in which the same or similar parts are given the same reference numbers and the elongated or essentially

flattened spools 9, 10 are provided at both sides of the mounting structure 16 or a base plate 22, the supply spool 10 only consists of layers of the tape 3 wound one above the other, and it is positioned in the elongated form between first boundary surfaces 32 facing each other and extending parallel to the axes of rotation of the spools 9, 10 in their transverse direction. For positioning the flattened spool in its longitudinal direction, at least one boundary surface 33 extending transverse to the boundary surfaces 32 and transverse to the longitudinal direction of the elongated casing 2 can be provided, which is adjacent to the outer or inner curve 34 of the spool 10. In the modification according to Figures 7 to 10, the boundary surface 33 extending transversely is constituted by the deviation element 23, which is rounded at least on its front side and which, in the modification, is formed by a cylindrical bearing pin which is mounted fixedly or rotatably around its axis on the mounting structure 16 or the base plate 22. The deviation element 24 is missing. The cross-sectional dimensions of said deviation element 23 are large enough for the spool 10 having a ring width b to fit between the deviation element 23 and the first boundary surfaces 32. In this case, the outer curve of the deviation element 23 is adapted to the inner curve of the adjacent end of the spool, whereby an optimum deviation surface is formed. As can be gathered from Figure 9, the first boundary surfaces 32 can be arranged rearwards, i.e. towards the rear side looking away from the application member 29, in a somewhat divergent fashion; as a result thereof, the spool 10 is also given a somewhat rearwards divergent shape. The boundary surfaces 32 can be arranged at the sides of two strips 32a, 32b facing each other and projecting from the mounting structure 16 or 22 towards the side of the spool 10. As is depicted in Fig. 9, at least the lower strip 32b or both strips 32a, 32b can be shaped in the front end portion in a manner convergent enough to result in a rounded edge 32c extending forwards at the outer surface in a divergent fashion, said edge 32c improving the acute-angled course (Fig. 8) of the tape sections 3a, 3b.

When the tape 3 is pulled from the spool 10 to the back, a transversely directed second boundary surface 33 is not required in the rear end portion of the spool 10 for limitation of the spool 10, since this limitation function is fully complied with by the boundary surface 33 at the front end of the spool 10. This means a limitation of the spool 10 in its longitudinal direction is required only at that end of the spool that faces the direction looking away from the pulling direction, which will be described further below.

As already described in connection with the exemplified embodiments according to Figures 1 to 6, it is true also for the exemplified embodiment according to Figures 7 to 10 that the take-up spool 9 is formed by the carrier belt 18 which is wound around the preferably cylindrical deviation elements 27, 28, of which deviation element 28 or both deviation elements 27, 28 is/are rotatably mounted around their central axis at the mounting structure 16 or the base plate 22. In this modification, too, the cross-section of the deviation element 28 is dimensioned to be somewhat larger than the cross-section of the deviation element 25, which is rotatably mounted on the mounting structure 16 or 22 at the side facing the deviation element 28 and is rotatably connected with the deviation element 28, is arranged preferably co-axially therewith and can be connected by a common rotary shaft. The full spool 10 can extend to the vicinity of the deviation element 25.

In all the exemplified embodiments, the deviation elements which are rotatably mounted can be constituted by a hollow-cylindrical sleeve which is rotatably mounted on an associated cylindrical bearing pin.

As illustrated especially by Figures 6b, 6c and 8, the deviation elements 23, 27 are arranged co-axially at the opposing sides of the mounting structure 16 or 22 in the exemplified embodiments concerned. This is not absolutely necessary. The deviation elements 23, 27 can be transverse to their central axes or offset against each other in the longitudinal direction of the dispenser 1.

In Figures 7 and 10 the direction of motion of the tape 3 during operation is represented by a dash-dotted line. When placing the application member 11 or 29 on a substrate and moving the dispenser 1 in the direction illustrated by the arrow 35 when pressing the application member 11 against the substrate, the lower tape section 3a extending towards the application member 11 is moved in a direction towards the application member 11 and, in doing so, is pulled from the lower (in Fig. 10 upper) ring portion of the spool 10, wherein the tape section 3a is wound around the deviation member 25 by about 180° or more and thus causes the deviation member 28 to rotate, too. Thereby the deviation member 25, which is also in a rotatable connection, and the carrier belt 18

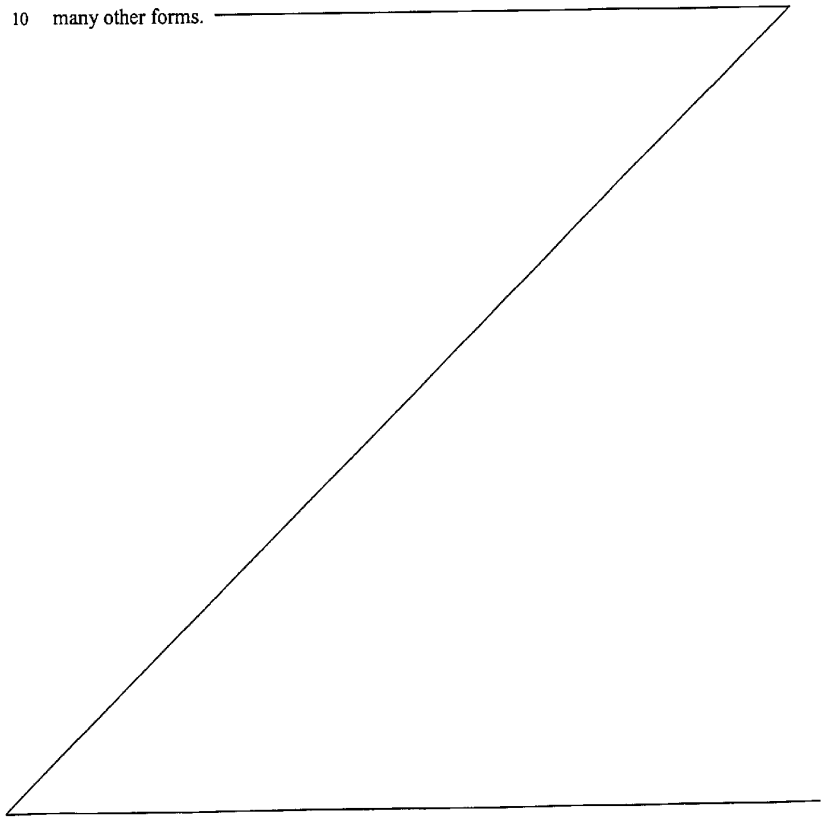
disposed thereon are caused to rotate, whereby the upper tape section 3b connected with the carrier belt 18 is wound on the carrier belt 18. Since the winding diameter of the carrier belt 18 is larger than the effective diameter of the deviation element 25, the thus generated drive mechanism for the tape-up spool 9 is tempted to move the tape section 3b at a higher speed than the speed of the tape section 3a. Since a sliding clutch 14 is integrated in this drive mechanism, for example, between the deviation elements 25, 28 or between the deviation element 25 and the tape 3, the higher drive speed does not have any effect, with the tape sections 3a, 3b always being subject to a certain tensile stress predetermined by the friction of the sliding clutch 14, whereby it is avoided that loops are produced. The tape section 3a extending from the deviation element 25 to the application member 29 is diverted around a rounded diverting pin 16a projecting from the mounting structure 16 or 22 and, as a result thereof, spaced apart from the spool 10 or relieved from any pressure. The tape sections 3a, 3b extend – in a top view as shown in Fig. 8 – at an acute angle from the one side to the other side of the base structure 16 or 22.

In comparison with the exemplified embodiment according to Figure 6a, the turning drive connection between the tape 3 and the deviation element 25 is improved in the exemplified embodiment according to Figure 10, because the wounding angle is larger, namely greater than 180°.

As illustrated by Figures 7 to 10, the mounting parts 30, 31 can be formed by a disk, whose peripheral shape conforms, e.g. to the round inner peripheral shape of the casing 2. The size of the disk can be adapted to the inner size of the casing 2 such that the mounting parts 30, 31 position the mounting structure 16 or 22 in the casing 2 in a radial fashion and preferably also in an axial fashion. The casing 2 can consist of two casing parts, for example two casing shells, whose divisional joint extends in or parallel to the longitudinal central axis of the mounting structure 16 or 22 or transversely thereto. In the latter case, it is an advantage to form the casing 2 by a sleeve-shaped part into which the mounting structure 16 can be inserted from the back with the spools 9, 10 as prefabricated component and which can be closed by the second part of the casing having the form of a lid.

As can be gathered particularly from Figure 7, the application member 29 preferably extends like a cross-web in its width to the front mounting part 30; it can be designed to be in one piece therewith. As a result thereof, stability is ensured for the application member 29. In the front end portion of the application member 29, guiding webs 29a project on both sides downwards and upwards in a manner known per se, said guiding webs limiting between themselves a lower and an upper guide groove 29b for the tape 3.

Although the invention has been described with reference to a specific example, it will be appreciated by those skilled in the art that the invention can be embodied in many other forms.



List of reference signs

1 hand-held device
2 casing
3 tape
3a tape section
3b tape section
4 rotating tape deviation element (spool member)
5 rotating tape deviation element (spool member)
6 rotating tape deviation element (spool member)
7 rotating tape deviation element (spool member)
8 drive mechanism
8a tape
9 first reel
10 second reel
11 application member
12 aperture
13 sliding clutch drive mechanism
14 sliding clutch
15 common axis drive mechanism
16 mounting structure (base plate)
16a diverting pin
17 intermediate wheel
18 carrier belt
19 third spool member
20 friction disc
21 forked friction disc
22 base plate
23 fixed tape deviation element
24 fixed tape deviation element
25 rotating tape deviation element
26 pinch roller
27 fixed tape deviation element
28 rotating tape deviation element
29 tip integrated in base plate 22
29a guiding web
29b guide groove
30 flexible mounting parts
31 flexible mounting parts
32 boundary surface
33 boundary surface
34 outer or inner curve
35 arrow

D1, D2 diameter of spool members

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. Hand-held dispenser for applying a tape on a substrate surface, the dispenser comprising a housing for a stock of the tape in form of an elongated spool and a rewound length of the tape, the tape being fed from the spool to an application member for applying the tape on the surface and then back into the housing, wherein the refed length of the tape is wound on at least two deviation members distanced from each other and arranged separately of the spool.

2. Hand-held dispenser according to claim 1, wherein the stock of the tape being wound on at least two deviation members.

3. Dispenser according to claim 1 or 2, wherein at least one of the deviation members is mounted fixedly on a base plate.

4. Dispenser according to claim 1 or 2, wherein all of the deviation members are mounted rotatably.

5. Dispenser according to anyone of claims 1 to 4, wherein a carrier belt is wound around the at least two deviation members, particularly around the deviation members of a take-up spool for the refed length of the tape.

6. Dispenser according to anyone of claims 1 to 5, wherein a drive-mechanism and a clutch are provided between one rotatable deviation member for the stock and one rotatable deviation member for the refed length of the tape.

7. Dispenser according to anyone of the preceding claims, wherein the stock of the tape and the refed length of the tape are aligned one behind the other in the housing.

8. Dispenser according to anyone of the preceding claims 1 to 6, wherein the stock of the tape and the refed length of the tape are arranged at opposing sides of a mounting structure.

9. Dispenser according to anyone of claims 1 to 8, wherein at least one deviation member for the refed length of the tape and at least one deviation member for the stock of the tape are arranged on a common axis.

10. Dispenser according to claim 9, wherein the common axis comprises the drive mechanism.

11. Dispenser according to anyone of the preceding claims, wherein the diameter of the deviation members for the refed length of the correction tape is different to the diameter of the deviation members for the stock of the tape.

12. Dispenser according to anyone of the preceding claims, wherein the application member is mounted on a base plate which carries the deviation members.

13. Dispenser according to claim 12, wherein the application member is an integral part of the base plate.

14. Dispenser according to claim 12 or 13, wherein the application member is rigid against torsion and flexion relative to the base plate.

15. Dispenser according to anyone of claims 10 to 12, wherein the base plate is mounted elastically in the housing such that the base plate can perform a torsion and/or flexion movement relative to the housing.

16. Dispenser according to anyone of claims 12 to 15, wherein the base plate is mounted in the housing by means of mounting parts which are flexible due to the material they are made of and/or due to their shape.

17. Dispenser according to anyone of claims 12 to 16, wherein the application member is made out of a plastic material different to the plastic material of the base plate.

18. Dispenser according to anyone of claims 12 to 17, wherein the elongated spool is mounted with its one end, preferably with its front end, on one deviation element only.

19. Hand-held dispenser for applying a tape on a substrate surface substantially as herein described with reference to any one of the embodiments of the invention illustrated in the accompanying drawings and/or examples.

DATED this 7th day of May, 2003
BALDWIN SHELSTON WATERS
Attorneys for: BIC DEUTSCHLAND GMBH & CO. AND SOCIETE BIC

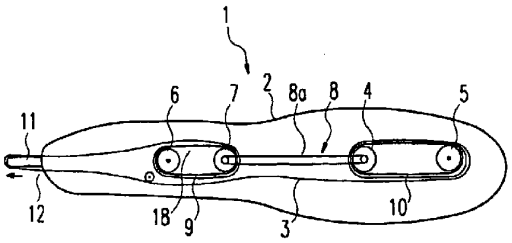


Fig. 1

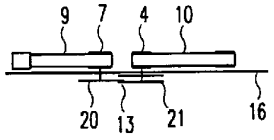


Fig. 2

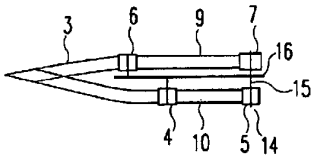


Fig. 3

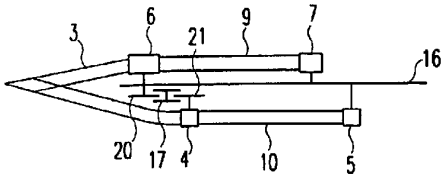


Fig. 4

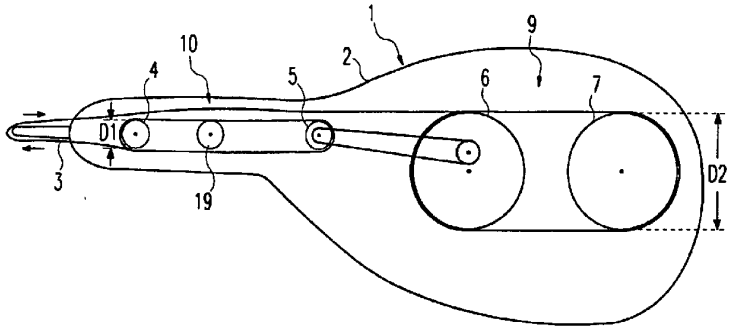


Fig. 5

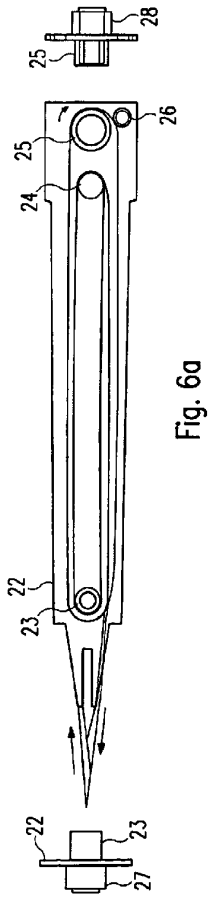


Fig. 6a

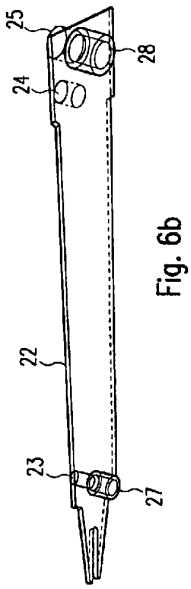


Fig. 6b

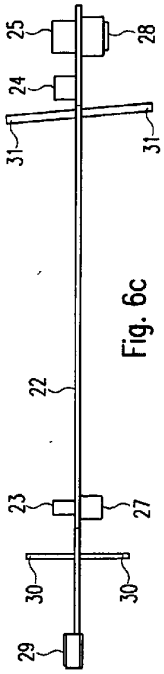


Fig. 6c

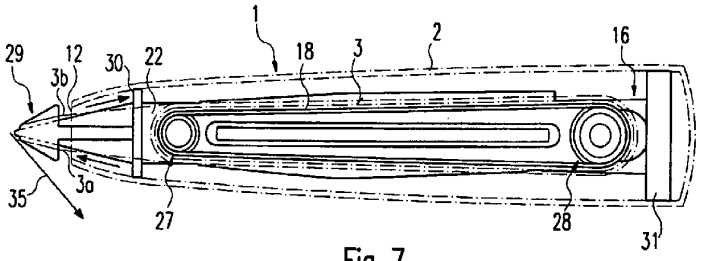


Fig. 7

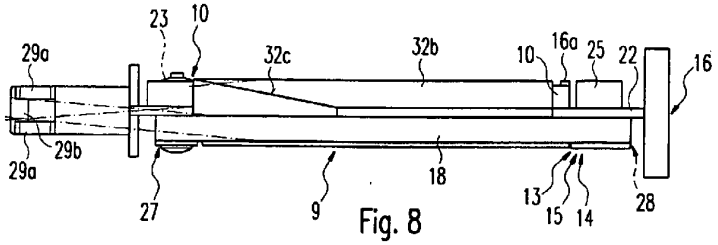


Fig. 8

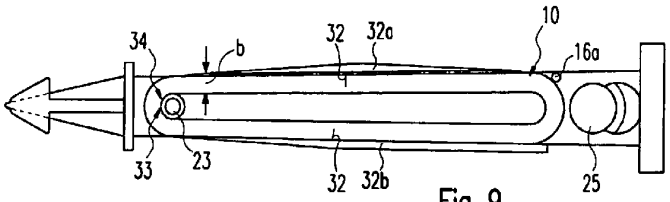


Fig. 9

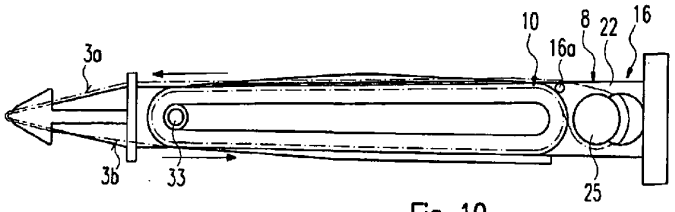


Fig. 10

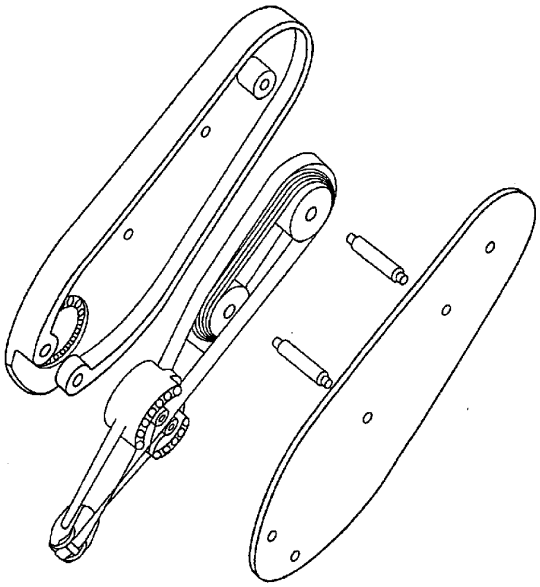


Fig. 11 Prior Art

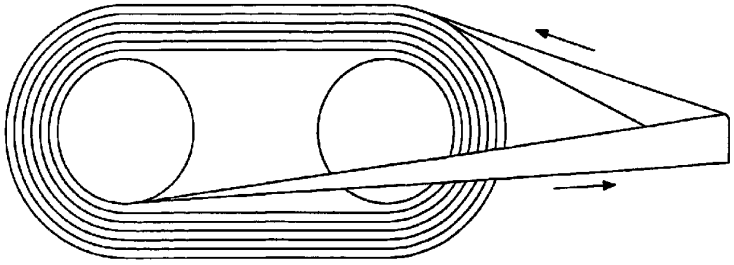


Fig. 12 Prior Art