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Walder et al.(10) **Pub. No.: US 2017/0121140 A1**(43) **Pub. Date: May 4, 2017**(54) **FILM/FOIL DISPENSER AND CONTAINER
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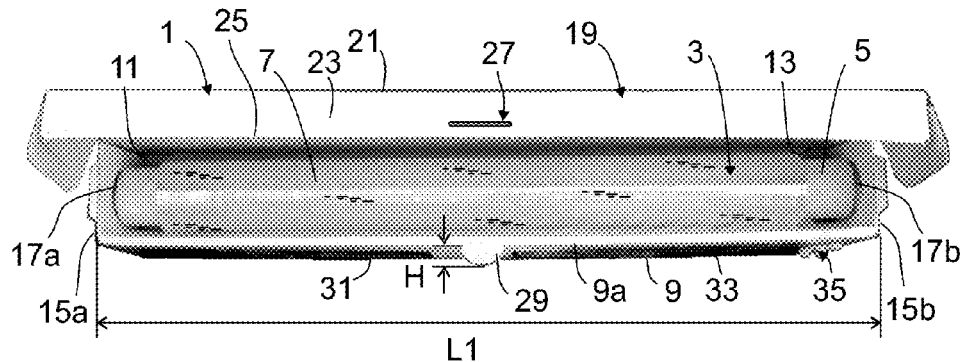
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ABSTRACT

A film/foil dispenser that includes a container (1) in which a rolled-up film/foil tape (7) is stored. A support element is disposed on the container (1) between a retrieval opening and a separating device for severing a portion of the film/foil tape (7) so as to be movable such that the projecting height (H) of the support element in relation to a contact face (31) is increased by way of the influence of force of an entrainment member (37) on a movable actuation element of the container (1). Due to this, the spacing between an end portion of the film/foil tape (7) and the contact face (31) is increased such that said end portion is more readily grippable.



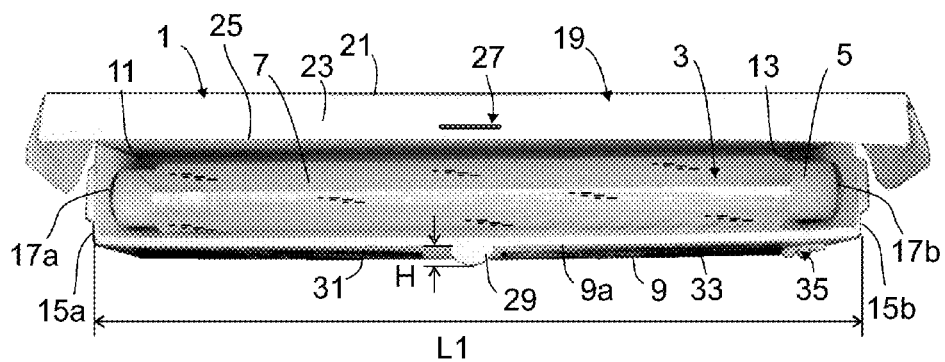


FIG. 1

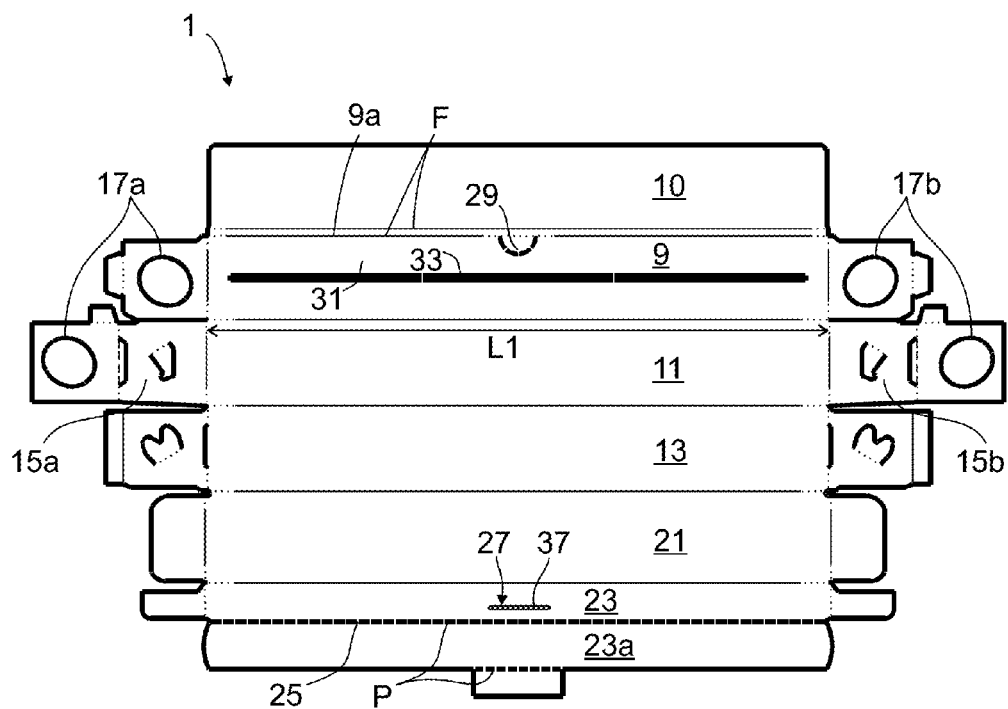


FIG. 2

FILM/FOIL DISPENSER AND CONTAINER FOR A FILM/FOIL DISPENSER

INCORPORATION BY REFERENCE

[0001] The following documents are incorporated herein by reference as if fully set forth: Swiss Patent Application No. 01601/15, filed Nov. 4, 2015.

BACKGROUND

[0002] The Invention is directed to a film/foil dispenser and a container for a film/foil dispenser, and a method for exposing the tape end of a film/foil in a film/foil dispenser.

[0003] It is known for film/foil tapes such as, for example, fresh-wrap films/foils to be rolled up to film/foil rolls and to be stored in packaging or containers, respectively, that simultaneously may be used as a dispenser for pulling out and severing film/foil portions. Such dispensers as widely used comprise folded boxes formed of cardboard or corrugated board. After an initial use protection feature has been removed, the outer end portion of the rolled-up film/foil tape is guided through a retrieval opening of the container. In order for a film/foil portion to be provided, the end portion is gripped, pulled out of the container up to the desired length, and is subsequently severed. For severing, the container typically comprises a separating device such as, for example, a serrated tear edge or a cutting blade that is displaceable along a guide in the longitudinal direction of the container. The separating device is typically disposed on the container such that the former at least when severing the pulled-out film/foil portion lies so as to be spaced apart from the retrieval opening. This causes the new end portion of the film/foil to protrude somewhat from the retrieval opening, once a film/foil portion has been severed. In this way, the end portion is prevented from being drawn back into the interior of the container again. When the film/foil dispenser is being used next, an exposed portion may be more readily gripped again. Depending on the configuration of the container, the retrieval opening may be an open access side of the container that is coverable by a flap lid, for example. Alternatively, the retrieval opening may also be configured as an elongate clearance on one of the container walls.

[0004] The separating device may be disposed on an edge of the flap lid, or on one of the container walls, for example. Alternatively, the separating device may also be disposed on another location on the container shell, for example between two longitudinal edges on the exterior of a side wall of the container.

[0005] In particular in the case of plastics films, adhesion forces may cause the film to adhere to the external side of the container. The adhesive properties depend on the respective film and on the surface finish of the container. This surface finish may have localized dissimilarities. In this way, the container surface may entirely or in regions be covered with a smooth lacquer layer, for example. In particular, thin films based on polyester (PET), polypropylene (PP), polyethylene (PE), or polyvinyl chloride (PVC) adhere strongly to such surfaces. As an alternative to lacquer or paint layers, the surface of the container may also comprise regions having a glue to which a film/foil may releasably adhere. In this way, for example end portions of films/foils, such as aluminum foils, for example, may also be releasably held on the

housing, in the case of which only very minor or no attractive forces would act between the container surface and the film/foil.

[0006] The attractive force, or adhesive force, respectively, is desirable on the one hand, since the end portion of the film/foil is prevented from being drawn into the interior of the container. Also, the film/foil during cutting using a cutting blade is held on the container such that the former is not entrained by the cutting blade during cutting.

[0007] On the other hand, this attractive force has the effect that the end portion of the film/foil cannot be readily gripped by the fingers when a portion of the film/foil is to be pulled off the roll.

[0008] A film/foil dispenser having a folded box is known from WO 2015/035526 A1, wherein this folded box on the front wall has a guide gap for a cutting blade, and wherein an adhesive zone to which the end portion of the film/foil releasably adheres is configured on either side of this guide gap. A support tongue which prevents an end portion of the film/foil that protrudes from the retrieval opening from bearing on the front wall of the folded box in the region of this support tongue and adhering thereto protrudes in the region of the upper edge of this front wall. Additionally, the region between the support tongue and the guide gap is configured as a non-adhesive zone. Moreover, the support tongue has the effect that the end portion of the film/foil bears thereon and thus may be more readily grippable.

[0009] The support tongue is configured as a portion that is separated from the contiguous part of the front wall along a semi-circular perforation. This portion in the non-stressed rest position thereof protrudes obliquely forward on the front wall. The support tongue is configured so as to be at least approximately an elastically resilient part of the folded box. Should a force act on the support force from the front, the latter is pivoted toward the front wall, counter to the elastic spring force. Should the externally acting compressive force be reduced, the support tongue, driven by the elastic spring force, is again pivoted towards the outside.

[0010] The restoring force of the support tongue depends on the material that is used for the folded box. Since cardboard or cardboard-like materials are typically used in the production of folded boxes, the restoring force that is available from the support tongue is comparatively minor. As the number of pivoting cycles increases, the restoring force is additionally reduced as a result of material fatigue.

[0011] Covering of the support tongue by a front tab of the flap lid leads to the support tongue being pushed inward toward the front wall in the case of a closed flap lid. This leads to the deflection angle of the support tongue also being decreased in the rest position in the absence of any external force acting on the support tongue. The support tongue also in the case of an opened flap lid thus is no longer able to push the end portion of the film/foil that bears thereon sufficiently far toward the outside, this complicating the gripping of this end portion. Adhesive zones which hold the film/foil to the external wall of the folded box and, on account thereof, also exert a compressive force on the support tongue have an analogous effect.

SUMMARY

[0012] It is an object of the present invention to achieve a film/foil dispenser and a container for a film/foil dispenser, which enable ready gripping of the end portion of the film/foil in order for a film/foil portion to be pulled out.

[0013] This object is achieved by a film/foil dispenser, by a container for a film/foil dispenser, and by a method for providing a grippable end portion of a film/foil, according to one or more features of invention as discussed below and in the claims.

[0014] A film/foil dispenser according to the invention comprises a container in which a rolled-up film/foil tape is stored. The container is preferably a folded box which is cost-effectively producible. An end portion of the film/foil tape is guided through a retrieval opening to the outside. This retrieval opening, in particular in the case of a folded box, may be the intermediate space between a flap lid and the housing body on which the flap lid is pivotably articulated. Spaced-apart from the retrieval opening, the container comprises a separating device, for example a serrated separating edge, or a cutting blade that is mounted so as to be displaceable along a guide device. Between the retrieval opening and the separating device, the container comprises a contact face on which a pulled-out film/foil portion bears when the latter is severed from the remaining film/foil reserve by use of the separating device. A support element is movably disposed in the region of this contact face such that the projecting height of said support element that projects beyond the contact face is variable. This projecting height acts as a spacer which in this region keeps the end portion of the film/foil spaced apart from the contact face. This spacing corresponds to the respective projecting height of the support element and has the purpose of making the film/foil more readily grippable at this location, in order for a film/foil portion to be pulled off from the film/foil roll.

[0015] According to the invention, the container comprises an actuation element by way of which a deflection force may be exerted on the support element so as to move the latter to a position having a larger projecting height. This is particularly advantageous when the elastic deflection force of the support element weakens or is too minor to keep the film/foil end portion at a sufficient spacing from the contact face. The projecting height may also be reduced by other effects such as, for example, the bearing force by way of which the film/foil and/or part of a flap lid pushes the support element in the direction of the contact face.

[0016] In one preferred embodiment of the invention, the container is configured as a folded box, wherein the support element is a support tongue which forwardly protrudes on the contact face, and wherein the actuation element comprises a clearance, corresponding with this support tongue, on a flap lid, and/or an offset that inwardly protrudes on this flap lid. In order for a film/foil portion to be pulled out of such a container, the flap lid is opened first. Since the support tongue and the lower edge of the clearance are engaged by mutual undercuts, the support tongue hooks onto this lower edge and is entrained when the flap lid is opened and is upwardly or outwardly pivoted, respectively. This applies in an analogous manner to actuation elements in the shape of offsets which inwardly protrude on a front tab of the flap lid.

[0017] Apart from folded boxes which are preferably made from cardboard or corrugated cardboard, the invention also comprises dispensers and/or containers which are made from other materials such as, for example, from plastics or from metal or from a composite material.

[0018] Alternatively, the container could also comprise two or a plurality of support elements which are disposed so as to be distributed across the length of the contact face, wherein each of these support elements is provided with a

corresponding actuation element. Support elements preferably have the shape of semi-circular support tongues, but may also have other shapes. In particular in the case of alternative embodiments, one or a plurality of support elements could also extend across comparatively long portions or across the entire length of the contact face.

[0019] The same applies in a corresponding manner to the associated actuation elements. Alternatively, one common actuation element, for example in the shape of a front tab that extends across the entire length of a folded box and comprises an inwardly folded-over lower edge, for a plurality of support elements could also be disposed on the container.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The invention will be described in more detail hereunder by means of some figures in which:

[0021] FIG. 1 shows a film/foil dispenser having an opened container and a film/foil roll stored therein; and

[0022] FIG. 2 shows a punched blank of the container of the film/foil dispenser of FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0023] FIG. 1 shows a film/foil dispenser which comprises an elongate container 1 in which a film/foil roll 3 having a film/foil tape 7 of plastic that is rolled up on a cylindrical core 5 is stored. The container 1, preferably as a cuboid folded box, is made of cardboard or corrugated cardboard, for example of cardboard having a wall thickness between approx. 0.5 mm and 1 mm. This container 1 comprises a box body having a front wall 9, a base 11, a rear wall 13, and two approximately cuboid end walls 15a, 15b, of which the edge lengths are between 35 mm and 70 mm, for example. The external length L1 of the box body is in the range from 20 cm to 52 cm, for example.

[0024] Bearing points 17a, 17b for rotatably mounting the core 5 are disposed on the internal sides of the end walls 15a, 15b. A flap lid 19 is pivotably articulated on the upper edge of the rear wall 13, wherein the rear longitudinal edge of a cover face 21 of the flap lid 19 is contiguous to the rear wall 13. This flap lid 19 in the case of the view onto the film/foil dispenser as illustrated in FIG. 1 is opened such that the interior is visible.

[0025] The flap lid 19, so as to be contiguous to the front longitudinal edge of the cover face 21, comprises a front tab 23 which in the case of the embodiment as illustrated in FIG. 1 extends across the entire length of the container 1 and in the case of a closed container 1 covers an upper portion of the front wall 9. The folded box in the original state preferably comprises an initial use protection feature. The latter may be configured as a strip 23a of the front tab 23 that is detachable along a perforation line P and that at the lower side is also connected in an analogous manner to the box body. In the case of the illustration of the folded box in FIG. 1, this strip is not visible as the latter has already been detached. The lower edge 25 of the front tab 23 that remains and is visible after the strip 23a has been detached corresponds to the perforation line P.

[0026] FIG. 2 shows a punched blank of the folded box of FIG. 1, in which the strip 23a has not yet been detached from the front tab 23. The punched edges are illustrated as thick lines, whereas fold lines are illustrated as comparatively thin

lines. Interrupted thick lines are perforation lines P for separating mutually contiguous regions of the folded box. A front internal wall 10 adjoins the upper edge 9a of the front wall 9. Said front internal wall by means of a fold F, preferably by means of two folds F that are configured so as to be mutually spaced apart by a minor spacing of 2 mm to 5 mm, for example, is articulated so as to be capable of being turned back on the front wall 9. The front internal wall 10 is folded over into the interior of the box body.

[0027] Close to the lower edge 25 the front tab 23 comprises a punched-out clearance 27 in the shape of a gap opening which extends in the longitudinal direction of the folded box. A support tongue 29 protrudes on the front wall 9 in the region of the upper edge 9a, approximately in the center of the box body. In the case of the embodiment of the folded box as illustrated in FIG. 1, the support tongue 29 is a portion of the front wall 9 that is punched along a semi-circular line and that is articulated on the upper edge 9a on the box body and that has been pivoted to the front. In the absence of any additional external force that acts on the support tongue 29, the support tongue remains in a rest position in which said support tongue on the front wall 9 protrudes to the front, or encloses a pivot angle of greater than 0° in relation to the latter. Elastic material properties and that region of the folded box that, contiguous to the upper edge 9a of the front wall 9, is bent backward contribute toward the support tongue 29 in the non-stressed rest position protruding to the front on the front wall 9. The support tongue 29, and/or the connection thereof to that portion of the container 1 that is contiguous to the former, preferably has an elasticity or at least a residual elasticity which in the case of the support tongue 29 being deflected from the rest position thereof causes a reversing force, or a reversing torque, respectively, in the direction of the rest position. This has the result of the support tongue 29, in the absence of external forces, assuming a rest position in which said support tongue 29 protrudes by a minimum projecting height H on a contact face 31 of the front wall 9. The contact face 31 is that region of the container 1 on which a film/foil portion bears when the latter, after having been pulled out through a retrieval opening of the container 1, is severed from the film/foil reserve by means of a separating device of the film/foil dispenser. In the case of a film/foil dispenser as is illustrated in FIG. 1, the retrieval opening is the intermediate space between the flap lid 19 and the front wall 9 of the folded box. The separating device comprises a guide gap 33 and a cutting blade 35 that is displaceable along this guide gap 33. The guide gap 33, at approximately mid-height of the box body, extends across a region of the front wall 9 that is somewhat shorter than the entire length L1 of the latter.

[0028] The clearance 27 is disposed and aligned on the front tab 23 such that the support tongue 29 in the case of a closed flap lid 19 protrudes into this clearance 27 in such a manner that the lower edge of the clearance 27 and the edge of the support tongue 29 engage by mutual undercuts. This should apply at least when the front tab 23 bears directly on the contact face 31 or on an end portion of the film/foil tape 7 that bears on the contact face 31. Thus, the lower edge of the clearance 27 is a stop or an entrainment member 37, respectively, that entrains the support tongue 29 in the case of the flap lid 19 being opened, and pivots said support tongue 29 outward and/or upward. On account thereof, the projecting height H of the support tongue is increased. The film/foil tape 7 in the region of the front terminal edge

thereof at the support tongue 29 is pulled away from the contact face 31 and may be readily gripped there.

[0029] The support tongue 29 that is configured so as to be pivotable on the container 1 is a special embodiment of a support element that is configured so as to be movable on the container 1. In the case of alternative embodiments, this support element may also comprise an element (not shown) that is displaceably mounted on the container, and/or an elastically deformable element such as a coil spring or a foam-material part, for example. That surface of the support element that comes into contact with the film/foil is preferably configured such that the former does not damage the film/foil. When the support element and/or the contact face 31 in the region of the support element is configured such that the film/foil adheres thereon to a lesser degree than to other regions of the contact face 31, the film/foil tape 7 can be more readily gripped there. This may be achieved, for example, in that the contact face 31 comprises regions that are covered with a lacquer layer or an adhesive layer, except however that region having the support tongue 29. If and when the support tongue 29 does not adhere to the film/foil well, the former may pivot back to the rest position thereof in an almost unimpeded manner when the flap lid 19 is opened further and the support tongue 29 is no longer held back by the lower edge of the clearance 27.

[0030] The lower edge of the clearance 29 is generally an actuation element which is disposed so as to be movable in a guided manner on the container 1, and is operatively connected to the support element. The actuation element generally comprises an entrainment member 27 which is configured and disposed such that the latter, in the case of the actuation element being moved in an effective direction, acts on the support element, or exerts a force in the effective direction on the support element, respectively, such that the projecting height H of the latter in relation to the contact face 31 is increased.

[0031] In the case of the embodiment of the film/foil dispenser illustrated in FIG. 1, the actuation element is the flap lid 19 per se, wherein the lower edge of the clearance 27 is the entrainment member 37, or acts as such, respectively. Alternatively or additionally to the lower edge of a clearance 27, the actuation element or the entrainment member 37, respectively, may also comprise an offset that protrudes on the internal side of the front tab 23, for example, which offset in the case of a closed flap lid 19 engages by undercut that periphery of the support tongue 29 that projects on the contact face 31 (not illustrated). In particular, the clearance 27 on the front tab 23 may comprise two incisions which are disposed so as to be T-shaped, or a corresponding punching, for example, in the case of which the two exposed triangular portions as entrainment members are folded back or turned back, respectively (not illustrated). Alternatively, the front tab 23 in the region of the lower edge 25 of the front tab 23 could comprise a strip that in the cross section is V-shaped and is folded back, and that in the case of a closed flap lid 19 engages by undercut the support tongue 29 in a hook-type manner (not illustrated).

[0032] Depending on the embodiment of the container 1, the front tab 23 may extend across the entire length L1 of the container 1, or alternatively may extend only across a portion of the front tab 23 that corresponds with the support tongue 29. Instead of only one support tongue 29, the container 1 may comprise a plurality of support elements that are disposed so as to be distributed across the length of

the container **1**. This of course also applies to the corresponding entrainment members **37** of the actuation element. **[0033]** In the case of alternative embodiments of the film/foil dispenser, the container **1** may also be configured in a different manner. In particular, the container **1** may also be embodied without a flap lid **19**, and/or comprise a separate retrieval opening for pulling out the film/foil tape **7**, for example an exit gap on the front wall **9**, the rear wall **13**, or the cover face **21**. The separating device may also be configured in a different manner, and may comprise a tear-off edge having cutting teeth, for example, or a cutting device having a guide rail (not illustrated) that is fastenable to the folded box, and a cutting blade **35** that is displaceable along this guide rail. The separating device may also be disposed in the region of a longitudinal edge of the container, for example, the separating device may also be plug-fitted onto an upper edge of a box body (not illustrated).

1. A film/foil dispenser comprising a container (**1**) in which a film/foil tape (**7**), rolled up on a core (**5**) to form a film/foil roll (**3**), is stored, the container (**1**) comprises a retrieval opening for pulling out an end portion of the film/foil tape (**7**), and a separating device, spaced apart from said retrieval opening, for severing a pulled-out end portion of the film/foil tape (**7**), a support element protrudes on a contact face (**31**) of the container (**1**), which is disposed between the retrieval opening and the separating device, said support element is movable such that a projecting height (**H**) thereof in relation to the contact face (**31**) is variable, and an actuation element which is movable in relation to the support element, interacts with the support element, and includes an entrainment member (**37**) and is configured for exerting a deflection force on the support element that moves the support element such that the projecting height (**H**) thereof in relation to the contact face (**31**) is increased.

2. The container (**1**) for a film/foil dispenser as claimed in claim **1**, wherein this container (**1**) is configured as a folded box having a flap lid (**19**), and the retrieval opening comprises an intermediate space between the flap lid (**19**) and a front wall (**9**) of the folded box, the support element com-

prises a support tongue (**29**) which is articulated so as to be pivotable on the front wall (**9**), and the entrainment member (**37**) of the actuation element is configured on a front tab (**23**) of the flap lid (**19**) that overlaps the support tongue (**29**) when the flap lid (**19**) is closed.

3. The container (**1**) as claimed in claim **2**, wherein the actuation element comprises a clearance (**27**) on the front tab (**23**), and the entrainment member (**37**) for the support tongue (**29**) comprises an edge portion of the front tab (**23**) that delimits the clearance (**27**).

4. The container (**1**) as claimed in claim **3**, wherein the entrainment member (**37**) comprises at least one offset that protrudes on an internal side of the front tab (**23**).

5. The container (**1**) as claimed in claim **4**, wherein the offset that protrudes on the internal side of the front tab (**23**) is a punched and folded-over lobe of the front tab (**23**).

6. The container (**1**) as claimed in claim **2**, wherein at least part of the contact face (**31**) is configured as an adhesive zone having an adhesive layer.

7. The container (**1**) as claimed in claim **6**, wherein at least one of the support tongue (**29**) or a region of the contact face (**31**) that is contiguous to the support tongue (**29**) is not configured as an adhesive zone.

8. The container (**1**) as claimed in claim **2**, wherein the support tongue (**29**) is configured to be elastically resilient and in a non-stressed rest position has a positive projecting height (**H**) in relation to the contact face (**31**).

9. A method for providing a grippable end portion of a film/foil tape (**7**) in a film/foil dispenser as claimed in claim **1**, comprising: upon moving the actuation element, bring the entrainment member (**37**) of the actuation element to bear on the support element to exert a deflection force on the support element, moving the support element by virtue of said deflection force such that the projecting height (**H**) of said support element in relation to the contact face (**31**) is increased, resulting in a spacing of the end portion of the film/foil tape (**7**) in relation to the contact face (**31**) in the region of the support element also increasing such that the film/foil tape (**7**) is more readily grippable.

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