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Pipette

Abstract

A pipette comprising an ampule closed on all sides, the ampule having a reservoir space in which a liquid is held and which is delimited by an at least essentially cylindrical circumferential wall of the ampule. The ampule has at least one break-off end area, in which breaking off of the end area opens an outlet opening for the liquid. A pipette member being provided in which the pipetting member is formed by an elastically deformable element and is plugged onto the ampule in such a manner that it circumferentially delimits the cylindrical circumferential wall and the ampule, which is closed on all sides and filled with the liquid, is partially exposed.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority to European patent application no. 24156730.4 filed Feb. 9, 2024, and European patent application no. 25152236.3 filed Jan. 16, 2025, the disclosure of which are incorporated herein by reference in their entirety for all purposes.

TECHNICAL FIELD

[0002] The invention relates to a pipette.

BACKGROUND

[0003] Pipettes are known from practice and typically comprise a tubular reservoir body, which can be made of glass or plastic. The reservoir body is provided with a discharge opening at one end. At the end facing away from the discharge opening, the reservoir body is provided with an operating element, which is formed by a balloon-like, rubber-elastic element, operation of which allows a liquid to be drawn into the reservoir body via the discharge opening and a liquid then held in the reservoir body to be applied in a suitable manner. Pipettes of this kind are used in the medical field and also in chemical laboratories.

SUMMARY

[0004] The object of the disclosure is to provide a pipette that is characterized by simple use and suitable for applying specific liquids.

[0005] So the disclosure proposes a pipette comprising an ampule closed on all sides, the ampule having a reservoir space in which a liquid is held and which is limited by an at least essentially cylindrical circumferential wall of the ampule. The ampule has at least one break-off end area, breaking off of which opens an outlet opening for the liquid. Moreover, the pipette has a pipetting member which is made of an elastically deformable element and which is plugged onto the ampule in such a manner that it circumferentially limits the cylindrical circumferential wall and the ampule, which is closed on all sides and filled with the liquid, is partially exposed.

[0006] In the form of the pipette according to the disclosure, a prefilled pipette is provided in which the liquid, e.g., a chemical substance, a cosmetic substance or a medical substance, to be applied to a substrate is already present and in which part of the ampule is always uncovered by the material of the elastically deformable element. The liquid can be applied by means of the pipetting member immediately after breaking off the break-off end area of the ampule. Further intermediate steps, such as a transfer into an empty pipette, can be dispensed with. The application of the liquid is thus considerably facilitated compared to previous solutions.

[0007] The elastically deformable element is preferably made of plastic or a paper material or of a composite material comprising plastic and/or paper or paperboard. It is also contemplated that the material of the elastically deformable element may comprise wadding. The pipetting member, which is made of a paper or paperboard material, has advantages in particular with regard to sustainability.

[0008] In a specific embodiment of the pipette according to the disclosure, the pipetting member comprises a collar through which the break-off end area of the ampule extends. In this case, the pipetting member is open on the side of the outlet opening resulting from the breaking off of the end area. After breaking off the break-off area, the liquid held in the reservoir space of the ampule can flow into the volume formed by the collar and be applied to the surface in question via the discharge opening formed by the collar by exerting lateral pressure.

[0009] The collar, which can extend partially or entirely across the cylindrical circumferential wall of the ampule, is preferably made of an elastic plastic material, such as silicone. In the as-delivered state, the discharge opening is stretched open by the break-off end area of the ampule. After the end area has been broken off, the material of the collar contracts in such a manner that the discharge

opening has a diameter that is greatly reduced compared to the as-delivered state and the liquid that has flowed out of the ampule into the volume of the collar can be applied dropwise by exerting suitable lateral pressure.

[0010] In order to unambiguously define the position of the collar in the as-delivered state of the pipette, it is advantageous if the ampule has a neck in an area of transition between the break-off end area, which represents a shapeable ampule tip, and the cylindrical circumferential wall, an edge area of the pipetting member being in circumferential contact with the neck. In the region of the neck, the ampule preferably has an annular predetermined breaking point or zone, along which the break-off end area is designed to break off from the area of the ampule defining the reservoir space.

[0011] In order to further facilitate the use of the pipette according to the disclosure, it is advantageous if the edge area, which is in circumferential contact with the neck of the ampule, is part of a portion of the collar that is folded over inward and that is externally surrounded by a central area of the collar. In the as-delivered state, the collar is thus double-layered in the area in question, the collar forming a collar of the pipette according to the disclosure that extends from the neck of the ampule.

[0012] In a specific embodiment, a material strip which forms a fluid conduit when the end area of the ampule is broken off, is disposed between the folded-over portion and the central area of the collar in order to be able to transfer the liquid in a targeted manner into the volume defined by the collar or the pipetting member after opening the ampule, i.e., after breaking off the end area. The material strip is preferably inserted circumferentially in the intermediate space between the folded-over portion and the central area and is formed by a plastic film or a paper strip, for example.

[0013] In another advantageous embodiment of the prefilled pipette according to the disclosure, the collar, when the end area has been broken off, forms a balloon-like pipetting portion which has the discharge opening on its side facing away from the ampule. The pipetting portion is formed by breaking off the end area and removing it by pulling the edge area of the collar, which is in contact with the end area, away from the reservoir space of the ampule. When the broken-off end area is then pulled out of the collar, the collar, which is made in particular of silicone or a similar material, contracts in such a manner that only a small-diameter discharge opening remains, via which the liquid can be applied in a targeted manner.

[0014] In another specific embodiment of the pipette according to the disclosure, the ampule has two break-off end areas, which are shapeable ampule tips and which can be broken off in particular along respective annular predetermined breaking points or zones, one of the tip-like break-off end areas being accommodated by the pipetting member. The pipetting member in particular encloses a volume filled only with air and is configured to be compressible, so that the end area in question can be broken off by manual operation via the pipetting member. When both end areas of the ampule have been broken off, the pipetting member can be compressed by exerting lateral and/or axial pressure, allowing the liquid held in the ampule to be displaced out of the ampule and applied. The outlet opening is created on the side of one of the end areas at the predetermined breaking point in question by breaking off this end area.

[0015] In a particular embodiment of the pipette according to the disclosure, the tip-like end area of the ampule not accommodated by the pipetting member is exposed. This means that the liquid is applied directly via the outlet opening, which is created by breaking off the exposed end area of the ampule.

[0016] In an alternative embodiment of the pipette according to the disclosure, an applicator member can be plugged on the ampule in such a manner that the end area not accommodated by the pipetting member is covered.

[0017] Furthermore, it is contemplated that the pipetting member may be disposed on the side of the outlet opening of the ampule. In this case, the liquid flows out of the ampule into the pipetting member, which defines a volume, after the two tip-like break-off end areas have been broken off. By applying lateral pressure, the liquid can then be applied through a discharge opening disposed

on the pipetting member.

[0018] In another specific embodiment of the pipette according to the disclosure, the applicator member and the pipetting member are each press-fit directly to the ampule independently of each another, the ampule being circumferentially exposed in an area disposed between the applicator member and the pipetting member.

[0019] Further advantages and advantageous embodiments of the subject matter of the invention can be found in the description, the drawings and the claims. All combinations of at least two features disclosed in the description, the claims and/or the figures fall within the scope of the invention; i.e., any feature disclosed in the description can be part of the claimed subject matter independently of the other features and/or specifications disclosed in the context in question.

Description

BRIEF DESCRIPTION OF THE FIGURES

[0020] Exemplary embodiments of the subject matter of the invention are shown in a schematically simplified manner in the drawings and will be explained in more detail in the following description.

[0021] FIG. 1 is a perspective view of a pipette in the as-delivered state.

[0022] FIG. 2 shows the pipette according to FIG. 1 in the activated state.

[0023] FIG. 3 is a longitudinal section through the pipette according to FIG. 1 in the as-delivered state.

[0024] FIG. 4 is a longitudinal section through the pipette according to FIG. 1 in the activated state.

[0025] FIG. 5 shows the pipette according to FIG. 1 in the disassembled state.

[0026] FIG. 6 is a longitudinal section through a second embodiment of a pipette in its as-delivered state.

[0027] FIG. 7 is a longitudinal section of the pipette according to FIG. 6 in its activated state.

[0028] FIG. 8 is a perspective view of the pipette according to FIG. 6 in the disassembled state.

[0029] FIG. 9 is a perspective view of a third embodiment of a pipette in the as-delivered state.

[0030] FIG. 10 is the pipette according to FIG. 9 in the activated state.

[0031] FIG. 11 is a longitudinal section through the pipette according to FIG. 9 in the as-delivered state.

[0032] FIG. 12 is a longitudinal section through the pipette according to FIG. 9 in the activated state.

[0033] FIG. 13 is a longitudinal section through a fourth embodiment of a pipette in the as-delivered state.

[0034] FIG. 14 is a longitudinal section through the pipette according to FIG. 13 in the activated state.

[0035] FIG. 15 shows the pipette according to FIG. 13 in the disassembled state.

[0036] FIG. 16 is a perspective view of a fifth embodiment of a pipette.

[0037] FIG. 17 is a longitudinal section through the pipette according to FIG. 16.

[0038] FIG. 18 is a perspective view of a sixth embodiment of a pipette.

[0039] FIG. 19 is a longitudinal section through the pipette of FIG. 18.

[0040] FIG. 20 is a perspective view of a seventh embodiment of a pipette.

[0041] FIG. 21 is a longitudinal section through the pipette according to FIG. 20.

[0042] FIG. 22 is a perspective view of an eighth embodiment of a pipette.

[0043] FIG. 23 is a longitudinal section through the pipette according to FIG. 22.

[0044] FIG. 24 is a perspective view of a ninth embodiment of a pipette.

[0045] FIG. 25 is a longitudinal section through the pipette according to FIG. 24.

[0046] FIG. 26 is a perspective view of a tenth embodiment of a pipette.

[0047] FIG. **27** is a longitudinal section through the pipette according to FIG. **26**.
[0048] FIG. **28** is a perspective view of an eleventh embodiment of a pipette.
[0049] FIG. **29** is a longitudinal section through the pipette of FIG. **28**.
[0050] FIG. **30** is a perspective view of a twelfth embodiment of a pipette.
[0051] FIG. **31** is a longitudinal section through the pipette of FIG. **30**.
[0052] FIG. **32** is a perspective view of a thirteenth embodiment of a pipette.
[0053] FIG. **33** is a longitudinal section through the pipette according to FIG. **32**.
[0054] FIG. **34** is a perspective view of a fourteenth embodiment of a pipette.
[0055] FIG. **35** is a longitudinal section through the pipette according to FIG. **34**.
[0056] FIG. **36** is a perspective view of a fifteenth embodiment of a pipette.
[0057] FIG. **37** is a longitudinal section through the pipette according to FIG. **36**.
[0058] FIG. **38** is a perspective view of a sixteenth embodiment of a pipette.
[0059] FIG. **39** is a longitudinal section through the pipette of FIG. **38**.
[0060] FIG. **40** is a perspective view of a seventeenth embodiment of a pipette.
[0061] FIG. **41** is a longitudinal section through the pipette of FIG. **40**.

DETAILED DESCRIPTION

[0062] FIGS. **1** to **5** illustrate an applicator **10** that forms a prefilled pipette according to the disclosure and that comprises an ampule **12** which, in the closed state, holds a liquid to be applied in a reservoir space **14**. The ampule **12** comprises an ampule body **16** which has a cylindrical circumferential wall **18** and a bottom **20**. On the side facing away from the bottom **20**, the ampule body **16** is adjoined by a break-off end area **22** which forms what is referred to as an ampule tip and which is connected to the ampule body **16** via a neck **24**. In the area of the neck **24**, the ampule **12** has a predetermined breaking point **26** designed as a ring line along which the break-off end area **22** of the ampule body **16** can be broken off in a defined manner.

[0063] The applicator **10** comprises a pipetting member **28**, which is formed as a collar or sleeve of the ampule **12** and circumferentially delimits the cylindrical circumferential wall **18** up to the area of the bottom **20**. In the area of the bottom **20**, the pipetting member **28** forms a foot area formed by an annular collar **30**.

[0064] As can be seen in FIGS. **1** and **3** in particular, the break-off end area **22** extends through the pipetting member **28**, which is designed as a collar, in the as-delivered state of the applicator **10**, an edge area **32** of the pipetting member **28**, which is made of a silicone material or another suitable elastically deformable plastic material, is in contact with the ampule **12** in the area of the neck **24**. The edge area **32** is part of a portion **34** of the pipetting member **28** that is folded over in the direction of the ampule **12** and that is surrounded by a central area **36** of the pipetting member **28** on the outside in relation to the ampule **12**. So the pipetting member **28** is of a double-wall design in the area surrounding the end area **22** in the as-delivered state. Starting from the neck **24** of the ampule **12**, this double-walled portion forms a collar or skirt, which surrounds the end area **22** of the ampule **12**.

[0065] When the applicator **10** is to be activated, the break-off end area **22** is broken off from the ampule body **16** along the predetermined breaking point **26** and pulled out of the collar-like pipetting member **28** in the direction away from the ampule body **16**. In this process, the inwardly folded portion **34** of the pipetting member is also pulled in the direction away from the ampule body **16**, causing a pipetting portion **36** to be formed, which is shown in detail in FIGS. **2** and **4**, the pipetting portion **36** being balloon-like and having a discharge opening **38**. The liquid held in the reservoir space **14** of the ampule **12** can flow into the pipetting portion **36** through an outlet opening **40** of the ampule **12**, which is formed after the end area **22** has been broken off. By exerting manual lateral pressure to the pipetting portion **36**, the liquid can then be applied, in particular dropwise, through the discharge opening **38**.

[0066] FIGS. **6** to **8** show an applicator **50** which essentially corresponds to that shown in FIGS. **1** to **5**, but differs from it in that it additionally comprises a material strip **52**, which may be formed

by a plastic film and is disposed between the inwardly folded-over portion **34** and the central portion **35** of the pipetting member **28** in a funnel-like manner or following a conical surface in the as-delivered state shown in FIG. **6**. When breaking off and removing the end area **22** of the ampule **12** and deforming the pipetting member **28** as described in the exemplary embodiment above, the material strip **52** is also deformed to the effect that it connects cylindrically to the outlet opening **40** and forms a fluid conduit via which the liquid is guided out of the reservoir space **14** of the ampule **12** into the pipetting portion **36** of the pipetting member **28**.

[0067] Otherwise, the applicator **50** corresponds to that shown in FIGS. **1** to **5**, which is why, in order to avoid repetition, reference is made to the related embodiment.

[0068] FIGS. **9** to **12** show an applicator **60** which largely corresponds to that shown in FIGS. **1** to **5**, but differs from it in that it has a pipetting member **28** which does not extend as far as to the bottom **20** of the ampule **12**, but only over a partial area of the circumferential wall **18** of the ampule body **16**. Otherwise, the applicator **60** corresponds to that shown in FIGS. **1** to **5**, which is why, in order to avoid repetition, reference is made to the description relating thereto.

[0069] FIGS. **13** to **15** show an applicator **70** which again largely corresponds to that shown in FIGS. **1** to **5**, but differs from it in that, in accordance with the embodiment shown in FIGS. **6** to **8**, it comprises a material strip **52** for forming a fluid conduit and, in accordance with the embodiment shown in FIGS. **9** to **12**, it is provided with a pipetting member **28** which extends only across part of the cylindrical circumferential wall **18** of the ampule **12**. Otherwise, the applicator **70** according to FIGS. **13** to **15** corresponds to the embodiments described above, which is why reference is made to the description relating thereto.

[0070] FIGS. **16** and **17** show an applicator **80** which is a prefilled pipette and has an ampule **82** in the form of what is referred to as a bitip, the ampule **82** having a cylindrical circumferential wall **18** which delimits a reservoir space **14** in which a liquid to be applied is held. The ampule **82** has two break-off end areas **84** and **86**, which are each designed as an ampule tip and which are designed to break off from the ampule body **16** formed by the circumferential wall **18** along an annular predetermined breaking point **26**. By breaking off the end area **84**, which is at the front in relation to the direction of application, an outlet opening with a small diameter forms on the ampule **18**. By breaking off the rear end area **86**, a rear opening of the ampule **82** is formed, via which air pressure can be exerted on the liquid held in the reservoir space **14**.

[0071] The applicator **80** further comprises a pipetting member **28**, which comprises an essentially cylindrical fixation area **88** which encloses the circumferential wall **18** of the ampule **82** and which is thus connected to the ampule **82** in a press fit. Starting from the fixation area **88**, the pipetting member **28** extends towards the rear in the direction away from the end area **84**, namely via a neck **89** into a balloon-like pipetting portion **36**, which is designed in the manner of a corrugated bellows or a folding bellows and is compressible in the axial direction of the applicator **80**. The predetermined breaking point **26** of the end portion **86** is disposed in the area of the neck **89**, so liquid which inadvertently enters the balloon-like pipetting portion **36** after the end area **86** has been broken off can flow back into the ampule **82**. Instead of a neck, the pipetting member **28** can also have an inner geometry with which the ampule **82** is in contact in the area of the predetermined breaking point **26** of the end area **86** and which ensures that the liquid flows back into the ampule **82** when the end area **86** has been broken off.

[0072] To activate the applicator **80**, the two tip-like end areas **84** and **86** of the ampule **82** are broken off, during which the rear end area **86** can be grasped via the pipetting member **28**, which is made of a flexible plastic material or flexible paper-containing material. By exerting axial pressure on the pipetting portion **36** of the pipetting member **28**, the liquid can subsequently be applied from the reservoir space **14** through the front outlet opening of the ampule **82**, which has been formed by breaking off the front end portion **84** along its predetermined breaking point.

[0073] FIGS. **18** and **19** show an applicator **90**, which essentially corresponds to that shown in FIGS. **16** and **17**, but differs from it in that, instead of a bellows-like pipetting portion, it has a

balloon-like pipetting portion **36** which can be compressed in particular by lateral pressure. When the end areas **84** and **86** of the ampule **82** have been broken off, the liquid held in the reservoir space **14** of the ampule **82** can be applied by means of the lateral pressure. Otherwise, the applicator **90** corresponds to that shown in FIGS. **16** and **17**, which is why, in order to avoid repetition, reference is made to the description relating thereto.

[0074] FIGS. **20** and **21** show an applicator **100**, which also largely corresponds to that shown in FIGS. **16** and **17**, but differs from it in the design of the pipetting member **28**. The pipetting member **28** has a short fixation area **88**, which is in contact with the cylindrical circumferential wall **18** of the ampule **82** in a press fit. The fixation area **88** is followed by a balloon-like, widened pipetting portion **36**, which transitions into a tongue-like, tapered activating portion **102**, in which the rear break-off end area **86** of the ampule **82** engages. To activate the applicator **100**, the rear tip-like end area **86** is broken off by manually gripping the activating portion **102** of the pipetting member **28**. After the front end area **84** has been broken off, the liquid held in the ampule **12** can be applied via the outlet opening created on the side of the end area **84** by exerting manual lateral pressure on the balloon-like pipetting portion **36**.

[0075] Since the applicator **100** is otherwise the same as that shown in FIGS. **16** and **17**, reference is made to the description relating thereto.

[0076] FIGS. **22** and **23** show an applicator **110**, which again largely corresponds to that shown in FIGS. **16** and **17**, but differs from it in that, in addition to the identically designed ampule **82**, it comprises a pipetting member **28** which is made of a plastic and/or paper material and which is tubular in shape and engages around the cylindrical circumferential wall **18** of the ampule **82** with a front fixation area **88** and forms a pipetting portion **36** with a rear closed area, in which the rear end area **86** of the ampule **82** is also disposed. Since it is made of elastically deformable plastic and/or paper, the pipetting portion **36** can be deformed both to break off the end area **86** and to pipette or apply the liquid held in the ampule **82** when the tip-like end areas **84** and **86** have been broken off. Furthermore, the pipetting member **28** has a cap **114** which is molded on via a string-like connecting area **112** and by means of which the ampule **82** can be resealed after activation on the side of the end area **84** after it has been broken off.

[0077] FIGS. **24** and **25** show an applicator **120**, which comprises an ampule **82** of the type shown in FIGS. **16** and **17**. Furthermore, the applicator comprises a pipetting member **28** which is made of a plastic and/or paper material and which is placed on the front end of the ampule **82**, which comprises the break-off end area **84**, the breaking off of which forms an outlet opening of the ampule **82**. The pipetting member **28** is simultaneously an applicator member and comprises a fixation area **88**, which is press-fitted onto the cylindrical circumferential wall **18** of the ampule **82**. At the end facing away from the fixation area **88**, the tubular pipetting member **28** comprises a discharge opening **38**, via which the liquid held in the ampule **82** can be applied. For activation, the two tip-like end areas **84** and **86** of the ampule **82** are each broken off along the respective predetermined breaking points. This allows the liquid to flow out of the reservoir space **14** of the ampule **82** into a pipetting portion **36** of the pipetting member **28**. By exerting lateral pressure on the pipetting portion **36**, the liquid can then be applied via the discharge opening **38**.

[0078] FIGS. **26** and **27** show an applicator **130**, which essentially corresponds to that shown in FIGS. **24** and **25**, but differs from it in that it has a pipetting member **28** which does not form a funnel-like tube but a cylindrical tube, which is provided with an end-face wall **122** that is inclined with respect to the axis of the applicator **130** and on which a discharge opening **38** is formed. Otherwise, the applicator **130** corresponds to that shown in FIGS. **24** and **25**, which is why reference is made to the description relating thereto.

[0079] FIGS. **28** and **29** show an applicator **140**, which again largely corresponds to that shown in FIGS. **24** and **25**, but differs from it in that it again has a pipetting member **28** which is made of a plastic and/or paper material and which is designed as a cylindrical tube which is plugged onto the ampule **82** and which is formed from an elastically deformable plastic. The pipetting member **28** in

turn comprises an end-face wall **122**, on which a Luer cone **142** and a fixing portion **144** provided with an internal thread are formed, so that an application aid, such as a cannula or the like, can be fixed to the pipetting member **28**. Otherwise, the applicator **140** corresponds to that shown in FIGS. **24** and **25**, which is why, in order to avoid repetition, reference is made to the related embodiment. [0080] FIGS. **30** and **31** show an applicator **150** which largely corresponds to that shown in FIGS. **24** and **25**, but differs from it in that it also has a cap **114** which is molded onto the pipetting member **28**, made of a plastic and/or paper material, via a string-like connecting area **112**. By means of the cap **114**, the ampule **82** can be closed again at the rear, i.e., on the side of the broken-off end area **86**, after activation. Otherwise, the applicator **150** corresponds to that shown in FIGS. **24** and **25**, which is why reference is made to the description relating thereto.

[0081] FIGS. **32** and **33** show an applicator **170** comprising an applicator member **162** at the front and a pipetting member **28** at the rear, which is designed according to the bellows-like pipetting member according to FIGS. **16** and **17**, reference being made to the description. The applicator member **162** is placed onto the ampule **82** from the front, the ampule **82** being designed according to the embodiment of FIGS. **20** and **21**, so it covers the front break-off end area **84** of the ampule **82**. The pipetting member **28**, which is made of a plastic and/or paper material, and the applicator member **162**, which is made of a plastic and/or paper material, are each press-fit directly to the ampule **82** independently of each other. The applicator **160** is activated by manually breaking off the tip-like end areas **84** and **86** via the pipetting member **28** and the applicator member **162**. Subsequently, the liquid can be applied from the ampule **82** through the discharge opening **38** of the applicator member **162** by exerting lateral pressure on the pipetting member **28**.

[0082] A ring-like area of the ampule **82** which is disposed between the pipetting member **28** and the applicator member **162** is exposed, meaning the applicator member **162** and the pipetting member **28** are not in contact with each other.

[0083] FIGS. **34** and **35** show an applicator **180** that largely corresponds to that shown in FIGS. **33** and **34**, but differs from it in the design of the pipetting member **28**, which is made of a plastic and/or paper material and has a balloon-like pipetting portion **36** instead of a bellows-like pipetting portion. Otherwise, the applicator **180** corresponds to that shown in FIGS. **34** and **35**, which is why reference is made to the description relating thereto.

[0084] FIGS. **36** and **37** show an applicator **190** which, in turn, largely corresponds to that shown in FIGS. **32** and **33**, but differs from it in that it has a tube-like pipetting member **28** which is made of a plastic and/or paper material and which has a gripping notch **192** on one side.

[0085] FIGS. **38** and **39** show an applicator **200** that largely corresponds to that shown in FIGS. **36** and **37**, but differs from it in that it comprises an applicator member **162** whose design corresponds to that of the pipetting member of the embodiment shown in FIGS. **30** and **31**, which is why reference is made to the description relating thereto. In addition, the applicator **200** has a pipetting member **28** which is made of a plastic and/or paper material and which is designed in the manner of a tube corresponding to the pipetting member of the embodiment according to FIGS. **22** and **23**, but, in deviation therefrom, has no cap, since the cap **114** is molded onto the applicator member **162**.

[0086] FIGS. **40** and **41** show an applicator **210** which, as an applicator member **162**, comprises a tubular attachment of the ampule **82**, which corresponds to the applicator shown in FIGS. **28** and **29**, i.e., the one provided with a Luer cone **142** and a fixing portion **144** equipped with an internal thread. As a pipetting member **28**, the applicator **210** comprises the pipetting member of the embodiment according to FIGS. **16** and **17**, which is designed in the manner of a corrugated bellows and to whose description reference is made.

REFERENCE SIGNS

[0087] **10** applicator [0088] **12** ampule [0089] **14** reservoir space [0090] **16** ampule body [0091] **18** circumferential wall [0092] **20** bottom [0093] **22** end area [0094] **24** neck [0095] **26** predetermined breaking point [0096] **28** pipetting member [0097] **30** annular collar [0098] **32** edge area [0099] **34**

portion [0100] **36** pipetting portion [0101] **38** discharge opening [0102] **40** outlet opening [0103] **50** applicator [0104] **52** material strip [0105] **60** applicator [0106] **70** applicator [0107] **80** applicator [0108] **82** ampule [0109] **84** end area [0110] **86** end area [0111] **88** fixation area [0112] **89** neck [0113] **90** applicator [0114] **100** applicator [0115] **102** activating portion [0116] **110** applicator [0117] **112** connecting area [0118] **114** cap [0119] **120** applicator [0120] **122** end-face wall [0121] **130** applicator [0122] **140** applicator [0123] **142** Luer cone [0124] **144** fixing portion [0125] **150** applicator [0126] **162** applicator member [0127] **170** applicator [0128] **180** applicator [0129] **190** applicator [0130] **192** gripping notch [0131] **200** applicator [0132] **210** applicator

Claims

1. A pipette comprising an ampule closed on all sides, the ampule having a reservoir space in which a liquid is held and which is delimited by an at least essentially cylindrical circumferential wall of the ampule, the ampule having at least one break-off end area, breaking off of the end area opening an outlet opening for the liquid, a pipetting member being provided, the pipetting member being formed by an elastically deformable element and being plugged onto the ampule in such a manner that it circumferentially delimits the cylindrical circumferential wall and the ampule, which is closed on all sides and filled with the liquid, is partially exposed.
 2. The pipette according to claim 1, wherein the pipetting member comprises a collar through which the break-off end area of the ampule extends.
 3. The pipette according to claim 2, wherein the ampule has a neck in an area of transition between the break-off end area and the cylindrical circumferential wall, an edge area of the pipetting member being in circumferential contact with the neck.
 4. The pipette according to claim 3, wherein the edge area is part of a portion of the collar that is folded over inward and that is externally surrounded by a central area of the collar.
 5. The pipette according to claim 4, wherein a material strip forming a fluid conduit when the end area of the ampule has been broken off is disposed between the folded-over portion and the central area of the collar.
 6. The pipette according to claim 2, wherein, when the end area of the ampule has been broken off, the collar forms a balloon-like pipetting portion having a discharge opening on its side facing away from the ampule.
 7. The pipette according to claim 1, wherein the ampule has two break-off end areas and one of the break-off end areas is accommodated in the pipetting member.
 8. The pipette according to claim 7, wherein the other one of the break-off end areas is exposed.
 9. The pipette according to claim 7, wherein an applicator member is plugged onto the ampule in such a manner that the other break-off end area is covered.
 10. The pipette according to claim 9, wherein the applicator member and the pipetting member are each press-fit directly to the ampule independently of each other and the ampule is circumferentially exposed in an area disposed between the applicator member and the pipetting member.
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