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(54) LOCKABLE RECEPTACLE HOLDER FOR PERSONAL HYGIENE PRODUCTS

(57) The invention refers to a lockable receptacle holder for personal hygiene products. The holder according to the invention comprises a body (1) intended to be fixed to a wall, the body (1) comprising a horizontal upper portion (1a), a horizontal lower portion (1b) parallel to the upper portion (1a) and a main vertical portion, a locking mechanism for said receptacle being fitted beneath the horizontal upper portion (1a), which can be unlocked by means of a key inserted through a slot (13) provided in the upper portion (1a), the locking mechanism consists of a pair of receptacle securing components, each comprising, at the front side, an arched claw (3, 4) having an outer end and an inner end between which a circular sector is defined that secures the neck of the receptacle and, at the rear side, a profiled tab (20, 19) intended to interact with an actuating component (5) elastically tensioned by means of a leaf spring (6) compressed against the main vertical portion of the body (1), the actuating component (5) being provided with a recess positioned in correspondence with the slot (13) provided in the upper portion (1a) of the body (1), such that, upon insertion of the tip of the key through the slot (13) and the said recess, the tip of the key interacts with the actuating component (5), which in turn acts on the profiled tabs (20, 19), thereby causing the translation of the actuating component (5) and, automatically, the outward planar pivoting of the arched claws (3, 4) which release the neck of the receptacle and, simultaneously, the outward planar pivoting of tongues (21, 22) forming the inner ends of claws (3, 4), which automatically push the receptacle outside the holder.

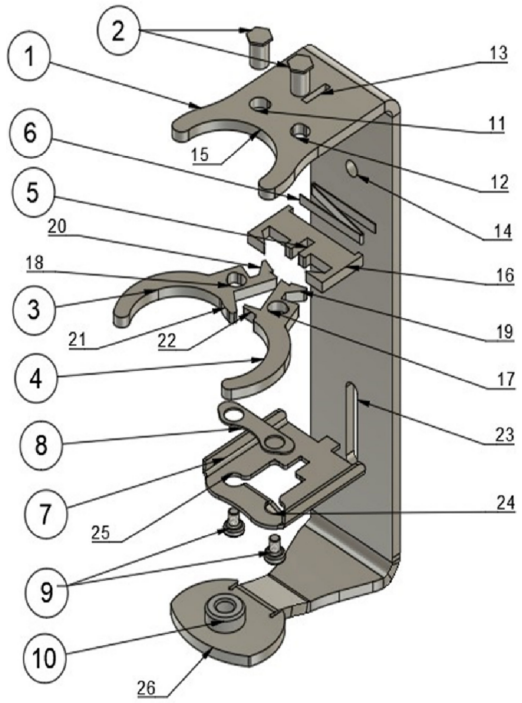

Fig. 1

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Description

[0001] The invention refers to a lockable receptacle holder for personal hygiene products.

[0002] The use of rechargeable receptacles for personal hygiene products, such as liquid soap, shower gel or shampoo, in general, in public toilets and, in particular, in hotels or guesthouses is nowadays common. Also known are holders supporting said receptacles.

[0003] Unfortunately, the theft of such receptacles is also extremely common, which is why holder solutions have been developed to limit or eliminate such undesirable practices.

[0004] Such a lockable receptacle holder for personal hygiene products is known from EP4114239, which reveals a lockable holder comprising a body intended to be fixed to a wall, the body comprising a horizontal upper portion provided at the free end with a fork intended to partially confine the neck of said receptacle, and a horizontal lower portion, parallel to the upper portion and intended to form a base for the bottom of said receptacle, the upper and lower portions being connected to each other by a main vertical portion which features means for attaching the body to said wall, the holder including a locking mechanism for the said receptacle, which can be unlocked by means of a key inserted through a slot provided in the upper portion. Said locking mechanism mainly consists of a hook-shaped piece which, upon unlocking by cooperation between a key and an elastic plate, can be manually pivoted to lock/unlock the neck of the receptacle. Similar solutions are also disclosed in EP4044889 and SE2251587.

[0005] The main disadvantage of the above-mentioned solution is that both the locking and the unlocking of the receptacle is done manually, resulting not only in a very time-consuming removal/insertion of receptacles, but also in the significant potential to damage the locking mechanism, due to haste, lack of care or of understanding the locking/unlocking principle.

[0006] Other solutions are known from CN117378951 and CN221153912, which disclose soap dispensers that comprise a support for securing the receptacle with a magnetic locking mechanism. Considering the humid environment of a bath and the oily nature of liquid soap, the use of a magnetic locking mechanism does not seem the most viable choice.

[0007] CN 219962711 U discloses a holder provided with anti-theft system for liquid bottles, according to the preamble of independent claim 1.

[0008] The main objective of this invention is to eliminate or limit the disadvantages associated with the prior art solutions.

[0009] Another objective of this invention is to provide a lockable receptacle holder for personal hygiene products, which will ensure a faster, automated and more intuitive closing/opening.

[0010] In accordance with this invention, the lockable receptacle holder for personal hygiene products comprises a body intended to be fixed to a wall, the body comprising a horizontal upper portion provided at the free end with a semicircular fork intended to partially confine the neck of said receptacle, and a horizontal lower portion, parallel to the upper portion and intended to form a base for the bottom of said receptacle, the upper and lower portions being connected to each other by a main vertical portion which features means for attaching the body to said wall, a locking mechanism for said receptacle being fitted beneath the horizontal upper portion, which can be unlocked by means of a key inserted through a slot provided in the upper portion, said locking mechanism consisting of a pair of receptacle securing components, each securing component comprising, at the front side, an arched claw having an outer end and an inner end between which a circular sector is defined that secures the neck of the receptacle and, at the rear side, a profiled tab, wherein the locking tabs interact with an actuating component elastically tensioned by means of a leaf spring compressed against the main vertical portion of the body, the actuating component being provided with a recess positioned in correspondence with the slot provided in the upper portion of the body, such that, upon insertion of the tip of the key through the slot and the said recess, the tip of the key interacts with the actuating component, which in turn acts on the profiled tabs, thereby causing the translation of the actuating component and, automatically, the outward planar pivoting of the arched claws which release the neck of the receptacle and, simultaneously, the outward planar pivoting of tongues forming the inner ends of the claws, which automatically push the receptacle (30) outside the holder.

[0011] According to an advantageous feature of the invention, locking the receptacle for personal hygiene products in the holder occurs automatically by pushing the receptacle between the arched claws that cause their inward planar pivoting and locking the profiled tabs with the actuating component compressing the lamellar spring on the main vertical portion of the body.

[0012] According to another advantageous feature of the invention, when locking the receptacle for personal hygiene products in the holder, the tongues cooperate to determine the closing limit position of the arched claws.

[0013] According to another advantageous feature of the invention, when unlocking the receptacle for personal hygiene products in the holder, the tongues cooperate to determine the opening limit position of the arched claws.

[0014] It is obvious from the above that the locking mechanism that equips the holder according to this invention ensures an automatic locking/unlocking of the receptacle, without the need for manual intervention upon the hook/claw that locks onto the neck of the receptacle and without the risk of damaging the hook/claw through excessive pivoting.

[0015] According to a preferred embodiment, the holder comprises a support plate covering the bottom and supporting the said locking mechanism, the support plate being fixed to the horizontal upper portion of the

body by means of screws mounted in crimp nuts.

[0016] Advantageously, said support plate features two raised lateral edges to guide the sides of the actuating component in its translation motion when unlocking/locking the arched claws.

[0017] According to a preferred embodiment, the support plate features a tab facing downwards from the plane of the support plate, which is intended to prevent involuntary rotation and to tighten the receptacle in the holder.

[0018] Advantageously, the crimp nuts have a head fixed in the horizontal upper portion of the body and a tubular body threaded on the inside, which extends through through-holes in the arched claws so as to allow the planar outward and, respectively, inward pivoting of said arched claws.

[0019] Preferably, an elastic element is fitted between the arched claws and the support plate, which compensates for the distance between the arched claws and the support plate and reduces the clearance between said components during the arched claws' pivoting motion.

[0020] Advantageously, the horizontal lower portion comprises on its upper face, intended to come into contact with the bottom of the receptacle for personal hygiene products, a protrusion which is adequately configured to fit into a cavity in the bottom surface of the receptacle, ensuring its solid fixation into the holder.

[0021] Preferably, the means for securing the body to said wall consist of circular and/or elongated holes for fitting suitable screws.

[0022] Advantageously, the body comprising the horizontal upper portion, the horizontal lower portion and the main vertical portion is made as one piece, of an elastically deformable material, for example, metal or plastic, which allows a slight deformation and taking over various dimensional deviations of the receptacles and securing them safely in the holder.

[0023] Preferably, the semicircular fork provided at the free end of the horizontal upper portion has the same diameter as that of the arched claws, in their locked position. Moreover, the semicircular fork provided at the free end of the horizontal upper portion has a circumference smaller than that of the arched claws, in their locked position.

[0024] Other objectives, characteristics and advantages of this invention will emerge more clearly from the following detailed description of a particular embodiment of the invention, made in relation to the figures attached, wherein:

Fig. 1 is a perspective exploded view of the lockable receptacle holder for personal hygiene products, according to this invention;

Fig. 2 is a perspective top view showing the holder according to this invention in the unlocked state;

Fig. 3 is a perspective top view showing the holder according to this invention in the locked state;

Fig. 4 is a perspective bottom view showing the support plate with the tab designed to prevent involuntary rotation and to fasten the receptacle into the holder.

Fig. 5 is a perspective bottom view illustrating the components of the locking mechanism.

Fig. 6 is a profile view of the lockable receptacle holder for personal hygiene products, according to this invention;

Fig. 7 is an overview of the lockable holder, according to the invention, showing the receptacle in the locked position in the holder and the key ready to unlock the receptacle.

[0025] By firstly referring to Fig. 1, the lockable holder receptacle for personal hygiene products according to this invention comprises a body 1 intended to be fixed to a wall, body 1 comprising a horizontal upper portion 1a, a horizontal lower portion 1b parallel to the upper portion 1a, the upper and lower portions 1a, 1b being connected to each other by a vertical main portion, so that, as a whole, body 1 has the shape of letter C, the space delineated by the three portions being intended for receiving said receptacle in a vertical position.

[0026] The horizontal upper portion 1a is provided at the free end with a semicircular fork 27 intended to partially cover the neck of the receptacle, and the horizontal lower portion 1b is intended to form a base for the bottom of said receptacle. The main vertical portion features means 14, 23 for fixing body 1 to a wall, in this case circular and/or elongated holes for mounting suitable screws.

[0027] A receptacle locking mechanism is fitted beneath the horizontal upper portion 1a, which can be unlocked by means of a key 29 inserted through a slot 13 provided in the upper portion 1a. Although schematically illustrated in Figure 7, one can understand that key 29 can have any shape and size as long as they are conjugated to the shape and size of slot 13, and contribute to obtaining the effect of unlocking receptacle 30 from the holder.

[0028] Said locking mechanism consists of a pair of receptacle securing components, each securing component comprising, at the front side, an arched claw 3, 4 having an outer end and an inner end between which a circular sector is defined that secures the neck of the receptacle, and, at the rear side, a profiled tab 20, 19 designed to interact with an actuating component 5 elastically tensioned by means of a leaf spring 6 compressed against the main vertical portion of body 1, the actuating component 5 being provided with a recess positioned in correspondence with slot 13 provided in the upper portion 1a of body 1, such that, when the tip of the key 29 is inserted through slot 13 and through said recess, the tip of the key 29 interacts with the actuating component 5,

which in turn acts on the profiled tabs 20, 19, thereby causing the translation of the actuating component 5 and automatically the planar outward pivoting of the arched claws 3, 4, which release the neck of receptacle 30, and, simultaneously, the planar outward pivoting of tongues 21, 22 forming the inner ends of claws 3, 4 and which automatically push the receptacle outside the holder.

[0029] Advantageously, locking the receptacle 30 for personal hygiene products in the holder occurs automatically by pushing receptacle 30 between the arched claws 3, 4, causing their inward planar pivoting and locking the profiled tabs 20, 19 with the actuating component 5 compressing the lamellar spring 6 on the main vertical portion of body 1. It is understood that said locking operation takes place with the key 29 removed from the holder's body 1.

[0030] Moreover, when locking the receptacle 30 for personal hygiene products in the holder, tongues 21, 22 cooperate to establish the limit closing position of the arched claws 3, 4.

[0031] Advantageously, when unlocking the receptacle 30 for personal hygiene products in the holder, tongues 21, 22 cooperate to establish the limit opening position of the arched claws 3, 4.

[0032] Referring to Fig. 4, the holder further comprises a support plate 7 which covers the bottom part and supports said locking mechanism, the support plate 7 being secured to the horizontal upper portion 1a of body 1 by means of screws 9 fitted in crimp nuts 2.

[0033] Back to Fig. 1, advantageously, the crimp nuts 2 have a head fixed in the horizontal upper portion 1a of body 1 and a tubular body threaded on the inside, which extends through through-holes 17, 18 in the arched claws 3, 4 so as to allow the planar outward and, respectively, inward pivoting of said arched claws 3, 4.

[0034] Preferably, said support plate 7 features two raised lateral edges to guide the sides 16 of the actuating component 5 in its translation motion when unlocking/locking the arched claws 3, 4.

[0035] Knowing that the liquid soap, shower gel or shampoo receptacles have a tolerance of +/- 1mm in height, the support plate 7 features a tab 28 made as a single piece with the plate and facing down from the plane of the support plate 7, which is designed to prevent involuntary rotation and to tighten the receptacle in the holder.

[0036] Advantageously, an elastic element 8 is fitted between the arched claws 3, 4 and the support plate 7, which compensates for the distance between the arched claws 3, 4 and the support plate 7 and reduces the clearance between said components during the pivoting motion of the arched claws 3, 4.

[0037] Also designed to take over any differences in the height of the receptacles, the horizontal lower portion 1b comprises on its upper face, intended to come into contact with the bottom of the receptacle 30 for personal hygiene products, a protrusion 10 which is adequately configured to fit into a cavity in the bottom surface of receptacle 30, ensuring its solid fixation into the holder. Protrusion 10 may be made as a single piece with the horizontal lower portion 1b, or may consist in a nut fixed removably or not to the horizontal lower portion 1b.

[0038] Advantageously, body 1 comprising the horizontal upper portion 1a, the horizontal lower portion 1b and the main vertical portion is made as one piece, of an elastically deformable material, for example, metal or plastic, which allows a slight deformation and taking over various dimensional deviations of the receptacles and securing them safely in the holder.

[0039] As can be seen in the attached figures, the semicircular fork 27 provided at the free end of the horizontal upper portion 1a has the same diameter as that of the arched claws 3, 4, in their locked position.

[0040] Advantageously, the semicircular fork 27 provided at the free end of the horizontal upper section 1a has a circumference 15 smaller than that of the arched claws 3, 4, in their locked position.

[0041] From the detailed description above, it clearly results that the invention solves the proposed objectives. The features of the locking mechanism with which the lockable receptacle holder for personal hygiene products is provided, according to this invention, ensure an automatic locking of the receptacle without manually handling a receptacle locking fork/claw. In addition, when unlocking the receptacle from the holder, the components of the locking mechanism ensure a slight push/pull out of the receptacle from the holder so that it can be extracted as easily as possible.

[0042] Although the above description and drawings present an embodiment of the invention, it will be understood that various additions, modifications and replacements can be brought hereto. In particular, it will be clear to those skilled in the art that the present invention can be implemented in other forms, structures, arrangements, proportions, dimensions and with other elements, materials and components, the subject for which protection is requested being defined by the attached claims. The embodiment disclosed herein must therefore be regarded in all respects as illustrative and not restrictive, the purpose of the invention being defined by the attached claims, and not limited to the description or embodiment above.

Claims

1. Lockable receptacle holder for personal hygiene products, the lockable holder comprising a body (1) intended to be fixed to a wall, the body (1) comprising a horizontal upper portion (1a) provided at the free end with a semicircular fork (27) intended to partially confine the neck of said receptacle (30), and a horizontal lower portion (1b) parallel to the upper portion (1a) and intended to form a base for the bottom of said receptacle, the upper and lower portions (1a, 1b) being connected to each other by a

main vertical portion which features means (14, 23) for attaching the body (1) to said wall, a locking mechanism for said receptacle (30) being fitted beneath the horizontal upper portion (1a), which can be unlocked by means of a key (29) inserted through a slot (13) provided in the upper portion (1a), said locking mechanism consists of a pair of receptacle securing components, each securing component comprising, at the front side, an arched claw (3, 4) having an outer end and an inner end between which a circular sector is defined that secures the neck of the receptacle and, at the rear side, a profiled tab (20, 19), **characterised in that** the locking tabs (20, 19) interact with an actuating component (5) elastically tensioned by means of a leaf spring (6) compressed against the main vertical portion of the body (1), the actuating component (5) being provided with a recess positioned in correspondence with the slot (13) provided in the upper portion (1a) of the body (1), such that, upon insertion of the tip of the key (29) through the slot (13) and the said recess, the tip of the key (29) interacts with the actuating component (5), which in turn acts on the profiled tabs (20, 19), thereby causing the translation of the actuating component (5) and, automatically, the outward planar pivoting of the arched claws (3, 4) which release the neck of the receptacle (30) and, simultaneously, the outward planar pivoting of tongues (21, 22) forming the inner ends of claws (3, 4), which automatically push the receptacle (30) outside the holder.

2. Holder according to claim 1, **characterized in that** the locking of the receptacle (30) for personal hygiene products in the holder occurs automatically by pushing receptacle (30) between the arched claws (3, 4), causing their inward planar pivoting and locking the profiled tabs (20, 19) with the actuating component (5) compressing the lamellar spring (6) on the main vertical portion of body (1).

3. Holder according to claim 2, **characterized in that** when locking the receptacle (30) for personal hygiene products in the holder, tongues (21, 22) cooperate to establish the limit closing position of the arched claws (3, 4).

4. Holder according to claim 1, **characterized in that** when unlocking the receptacle (30) for personal hygiene products in the holder, tongues (21, 22) cooperate to establish the limit opening position of the arched claws (3, 4).

5. Holder according to claim 1, **characterized in that** the holder further comprises a support plate (7) which covers the bottom part and supports said locking mechanism, the support plate (7) being secured to the horizontal upper portion (1a) of body (1) by means of screws (9) fitted in crimp nuts (2).

6. Holder according to claim 5, **characterized in that** the support plate (7) features two raised lateral edges to guide the sides (16) of the actuating component (5) in its translation motion when unlocking/locking the arched claws (3, 4).

7. Holder according to claim 6, **characterized in that** the support plate (7) features a tab (28) facing downwards from the plane of the support plate (7), which is intended to prevent involuntary rotation and to tighten the receptacle (30) in the holder.

8. Holder according to claim 5, **characterized in that** the crimp nuts (2) have a head fixed in the horizontal upper portion (1a) of body (1) and a tubular body threaded on the inside, which extends through through-holes (17, 18) in the arched claws (3, 4) so as to allow the planar outward and, respectively, inward pivoting of said arched claws (3, 4).

9. Holder according to any one of claims 1 to 8, **characterized in that** an elastic element (8) is fitted between the arched claws (3, 4) and the support plate (7), which compensates for the distance between the arched claws (3, 4) and the support plate (7) and reduces the clearance between said components during the pivoting motion of the arched claws (3, 4).

10. Holder according to claim 1, **characterized in that** the horizontal lower portion (1b) comprises on its upper face, intended to come into contact with the bottom of the receptacle for personal hygiene products, a protrusion (10) which is adequately configured to fit into a cavity in the bottom surface of the receptacle (30), ensuring its solid fixation into the holder.

11. Holder according to claim 1, **characterized in that** the means (14, 23) for securing the body (1) to said wall consist of circular and/or elongated holes for fitting suitable screws.

12. Holder according to claim 1, **characterized in that** body (1) comprising the horizontal upper portion (1a), the horizontal lower portion (1b) and the main vertical portion is made as one piece, of an elastically deformable material, for example, metal or plastic, which allows a slight deformation and taking over various dimensional deviations of the receptacles and securing them safely in the holder.

13. Holder according to claim 1, **characterized in that** the semicircular fork (27) provided at the free end of the horizontal upper portion (1a) has the same diameter as that of the arched claws (3, 4), in their locked position.

14. Holder according to claim 13, **characterized in that** the semicircular fork (27) provided at the free end of the horizontal upper portion (1a) has a circumference (15) smaller than that of the arched claws (3, 4), in their locked position.

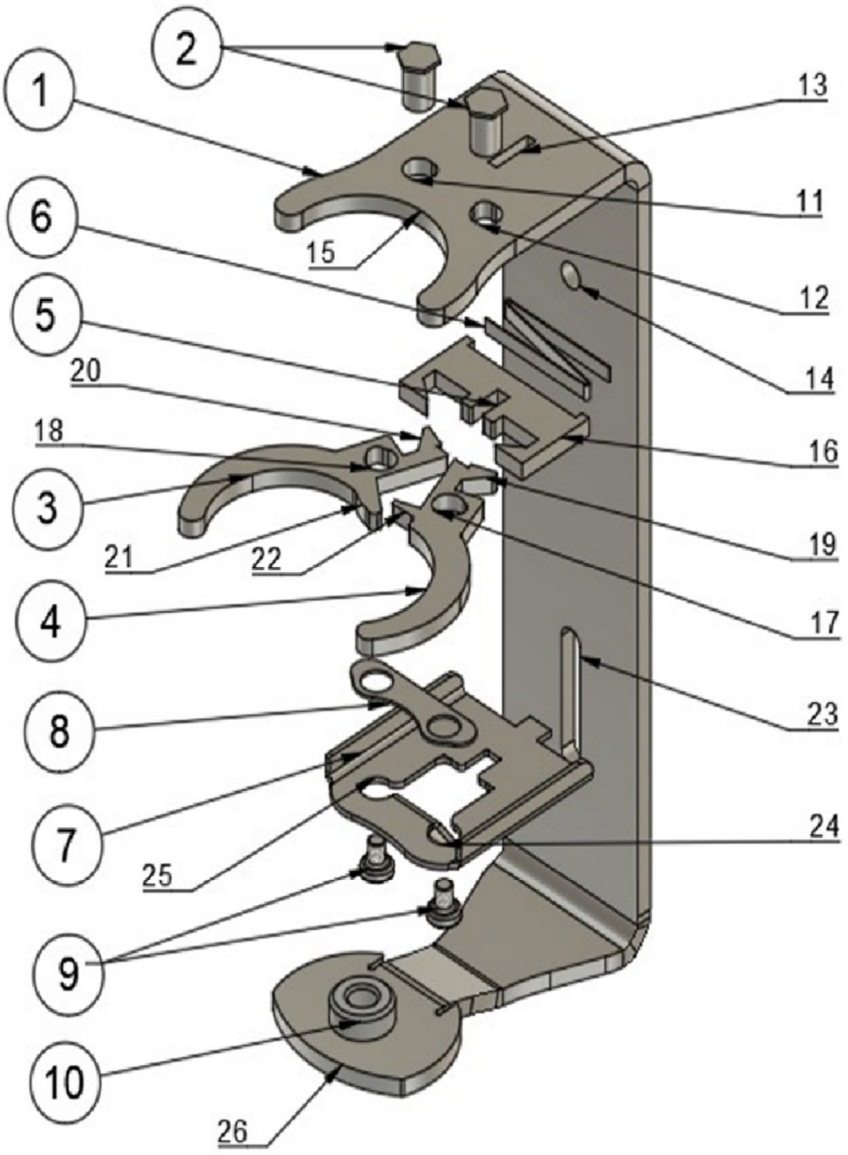

Fig. 1

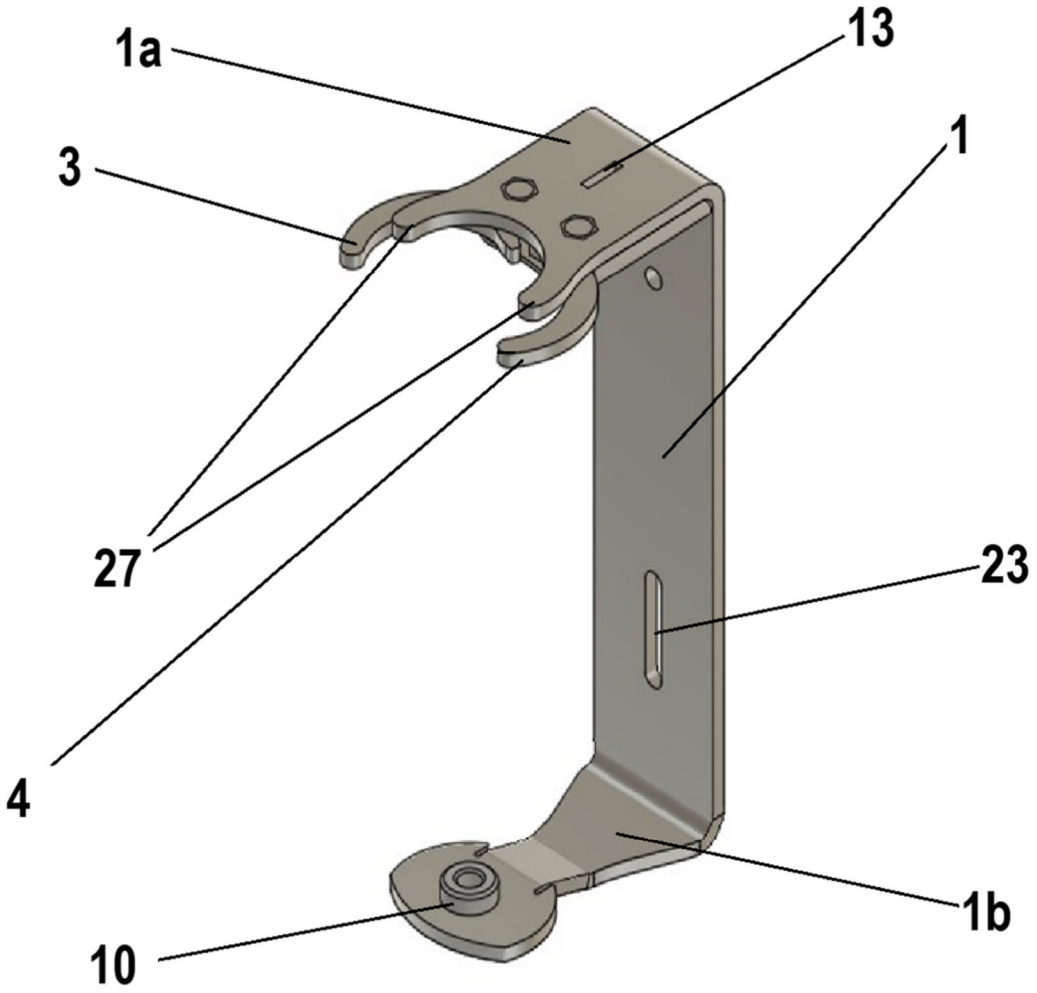

Fig. 2

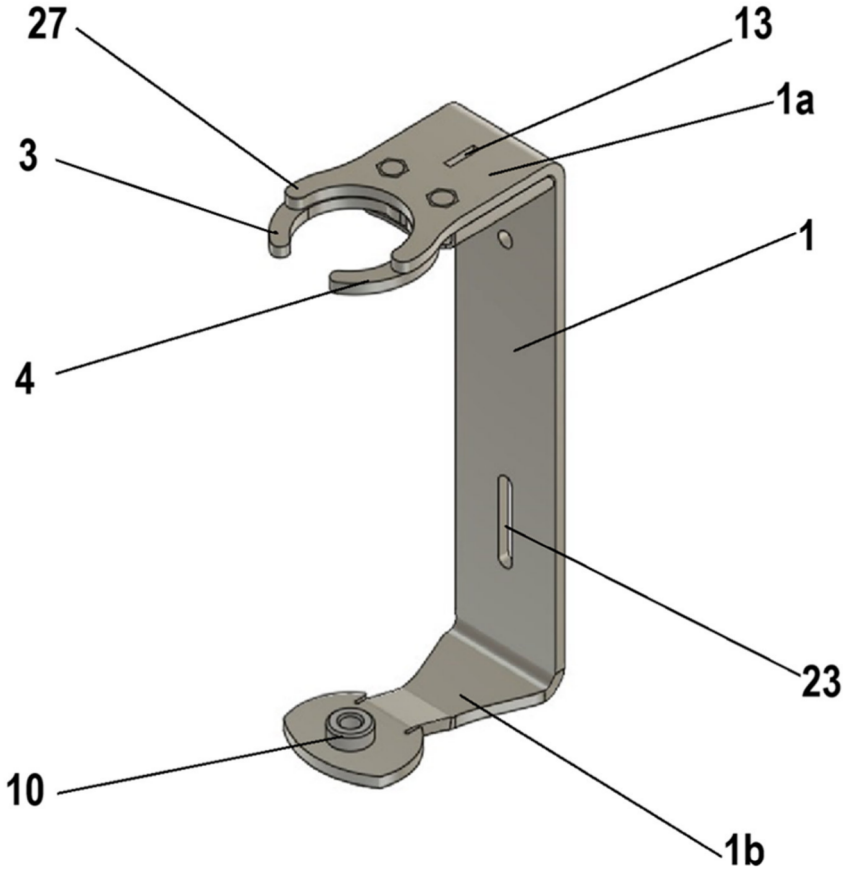

Fig. 3

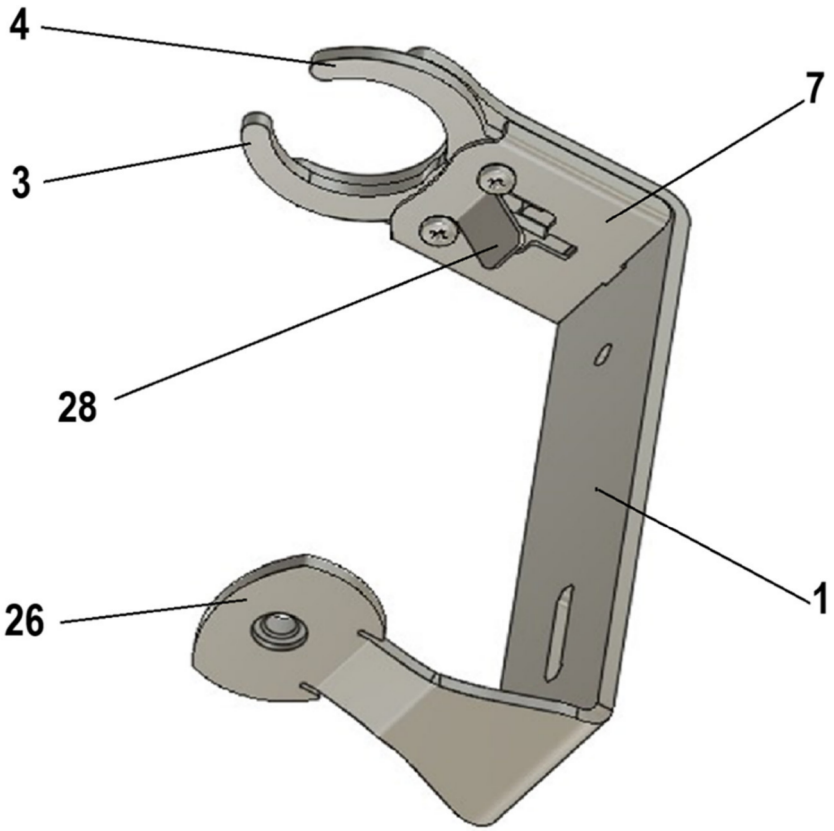

Fig. 4

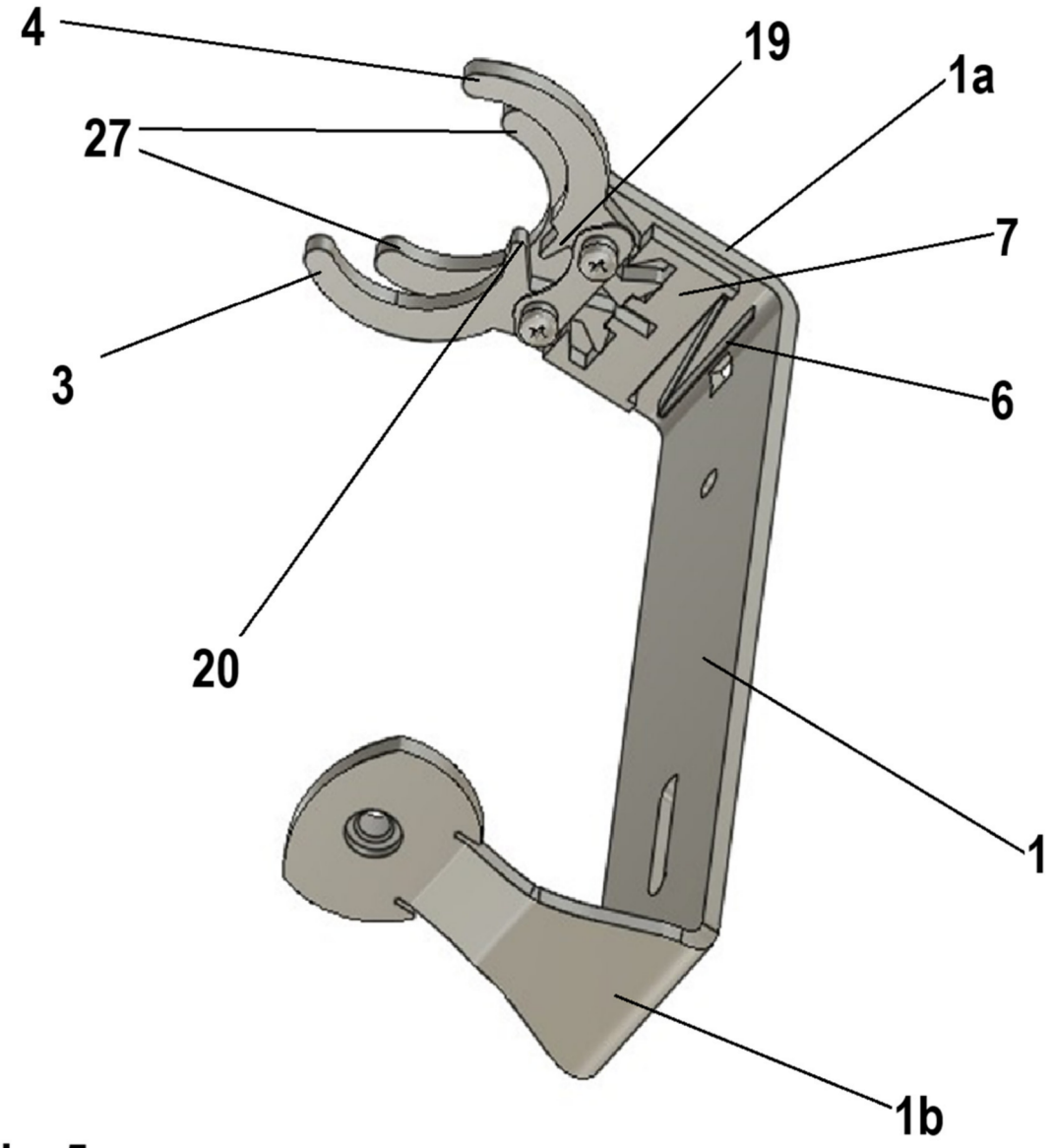

Fig. 5

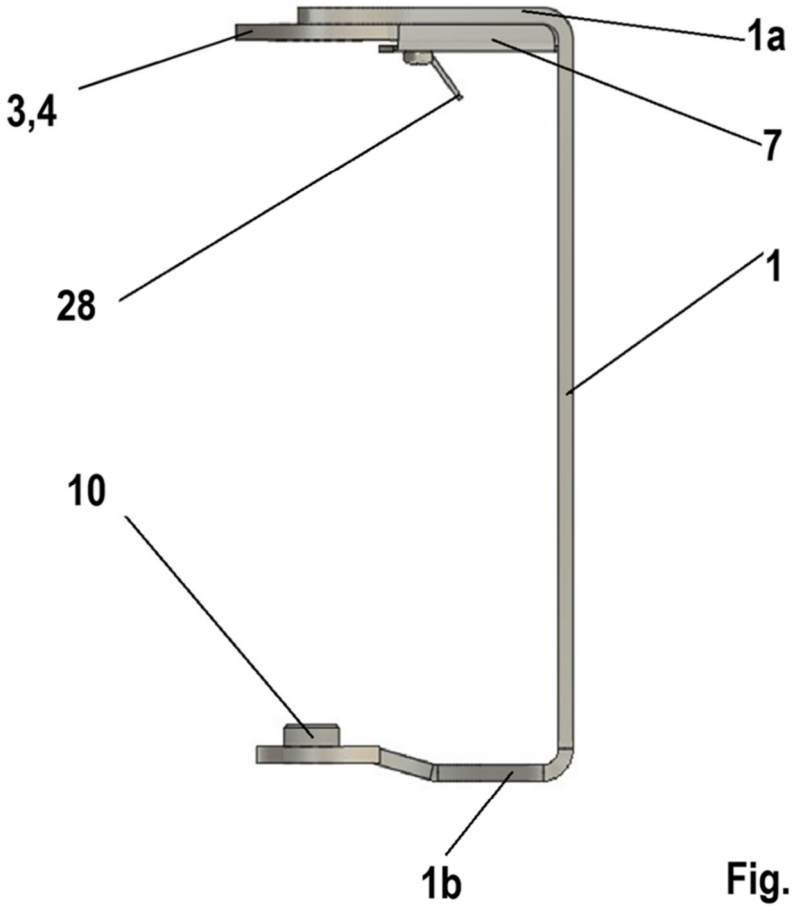

Fig. 6

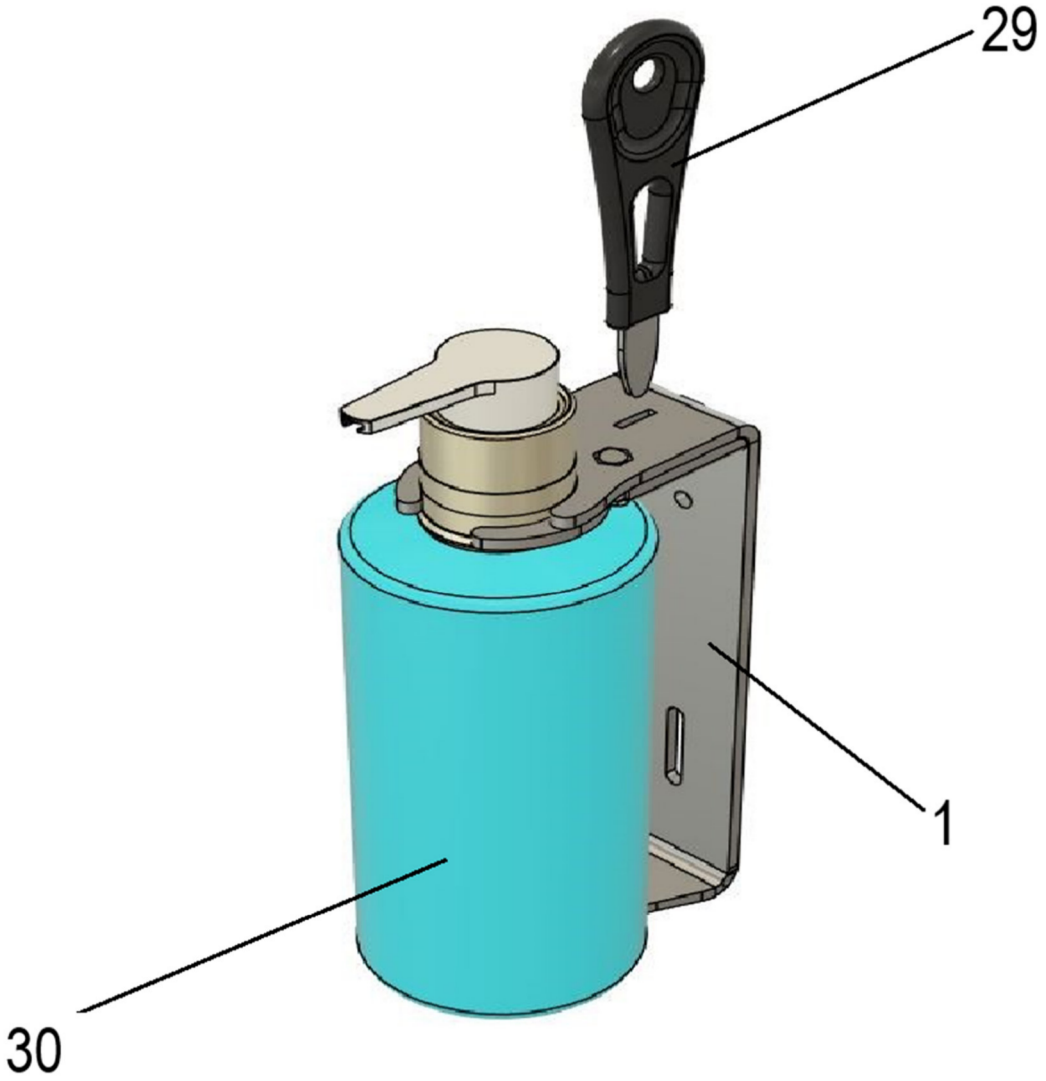

Fig. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 25 21 3602

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,D	EP 4 114 239 B1 (RUNIUS DESIGN AB [SE]) 7 August 2024 (2024-08-07) * paragraph [0030] - paragraph [0054]; figures 2-5b *	1-14	INV. A47K5/12

TECHNICAL FIELDS SEARCHED (IPC)

A47K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	25 February 2026	Zuurveld, Gerben

CATEGORY OF CITED DOCUMENTS

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