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(54) **Clothing pin for fastening an object such as a name plate or brooch, to clothing material or similar material.**

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Description

A. BACKGROUND OF THE INVENTION

1. Field of the invention

The invention relates to a clothing pin for fastening an object, such as a name plate or brooch, to clothing material or similar material comprising a first sliding member and a second sliding member which are mounted so as to be able to slide with respect to each other along a defined slide path at least one hook comprising a free first end and a second end, wherein said hook is pivotable with respect to said sliding members around an axis which is essentially transverse to the direction of said slide path.

2. Discussion of background

Clothing pins as referred to above and as specified therein are intended for affixing information carriers such as name badges, distinguishing symbols and the like, in which case they are usually referred to as "badges", or for affixing decorative objects to clothing, in which case they are usually referred to as "brooches". Especially for the first category of clothing pins, the badges, it is a requirement that they have to be capable of being affixed in a simple and expedient manner to various types of clothing materials but without damaging the latter.

Badges may take the form of a small plate or small sleeve on which or in which, respectively, a name badge or identification card can be affixed and to which a type of safety pin is attached at the back. Since the safety pins are fairly small and are located at the back of the badge, these badges are usually somewhat troublesome for the users, especially male users, to attach to their clothing. Other badges are provided with a clip, with the aid of which the badge can be attached to, for example, the lapel of a suit jacket. A disadvantage of this is that not all items of clothing - namely those without lapel or something similar - lend themselves to a satisfactory attachment of the badge, all the more so since a badge normally has to be capable of being attached at a readily visible place (breast height).

It is noted that from french patent FR-A-948,382, disclosed in 1949, there is known a clothing pin comprising tubular sliding devices being able to slide with respect to each other along a slide path parallel to the common axis of said tubular sliding devices and one hook comprising a free first end and a second end, said hook being pivotable around an axis which is transverse to said common axis. Said sliding devices are spring loaded with respect to each other by means of a helical spring. The junction point of the second sliding device and the hook are formed by a spindle and a slot hole. Further, in the attached position, the

hook is not really blocked, but only forced by the (released) spring. Finally, it is not possible to control more than one hook by one pair of sliding devices, essential for attaching to clothes, larger objects like badges etc.

B. SUMMARY OF THE INVENTION

The object of the invention is to eliminate the disadvantages of the known badges and similar clothing pins by providing a clothing pin for attaching an object, such as a name badge or brooch, to clothing material or similar material, in which clothing pin according to the invention, the first sliding device is formed by a first small plate and the second sliding device by a second small plate while, in the unattached position of the clothing pin, the free end of the hook extends outside the first small plate at the side facing away from the second small plate and the second end of the hook extends outside the first small plate at the side facing the second small plate so that the second end is located within the slide path. By these measures a clothing pin is provided which is very flat and wear-resistant; the latter because the lack of a spindle - guiding hole construction as known from FR-A-948,382. Further, said pair of sliding plates is able to actuate more than one hook (preferably two) and, finally, in the attached position, the each hook is blocked in its closed position by the position of the second plate ('form locking'), independent of the spring load. Contrary to the known pin, in which the spring force is directed to the closed position of the hook and is keeping it in that position ('force locking'), in the pin according to the invention the spring force is directed to the open hook position and serves only for 'resetting' it. In the pin according to the invention, the spring force thus can be relative little. According to a preferred embodiment, the clothing pin is provided with at least one spring which is joined, on the one hand, to the said first small plate and, on the other hand, is joined to the said hook, which spring exerts its spring force on the hook in the direction of the second end. A further preferred embodiment provides that the hook and the spring joined to said hook are formed from resilient wire or strip material as a single whole. As already indicated in the discussion of the background art, depending on the application, it is possible either that the second small plate is joined to, or forms part of, a holder for receiving or retaining a name badge or identification card or something similar, or that the second small plate is joined to, or forms part of, a holder for receiving or retaining a decorative object.

C. EXEMPLARY EMBODIMENTS

1. Description of the figures

Figure 1 shows a plan view of an exemplary embodiment of the clothing pin according to the invention. The left-hand section of this figure shows a first small plate 1 and a component which is mounted thereon, shown, inter alia, by dotted lines in the left-hand section of the figure and formed from spring steel wire and which comprises, inter alia, a hook 3(a) visible in the left-hand section of this figure and a hook 3(b) visible in the right-hand section of the figure; these hooks are each joined to the small plate 1 by means of a bridge 7 which forms a single whole with the first small plate 1. In the right-hand section of the figure, a second small plate 2 is visible which is slid over the small plate 1. Because both small plates are to some extent hollow in the direction of each other, sufficient space is left between the two small plates 1 and 2 for the bridges 7 and the hooks 3 received therein.

Figure 2 shows the same clothing pin as Figure 1, but the front elevation thereof: the left-hand section of the figure is shown without small plate 2, the right-hand section of the figure with small plate 2. In this figure, in particular, the attachment of the hook 3(a) to the first small plate 1 is also visible. Like the other hook 3(b), said hook 3(a) is joined to the first small plate 1 by means of the bridge 7 already mentioned. Each of the wire-type hooks 3 is provided with a transverse section 10 which extends through the two bridges 7 (of which only the left-hand one 7(a) is visible in this figure), as a result of which both hooks 3 are able to rotate around the axis of their respective transverse section 10. The hooks 3 are spring-loaded by means of springs 6 which form a single unit with the hooks 3 and extend at the side of the transverse sections 10 facing away from the hooks 3; the ends of the springs 6 are joined to the small plate 1 by means of a hook 11 forming, like the bridge 7, a single unit with the small plate 1. The end of the left-hand hook 3(a) is thus located at the right-hand side, and the end of the right-hand hook is located at the left-hand side, viz. under hook 11(a).

Figure 3 shows a cross section through the left-hand hook 3(a). In this Figure 3, the two small plates 1 and 2 which can be slid with respect to each other, the left-hand hook 3(a), i.e. the actual hook 3(a) and the axis of its transverse section 10(a) and also the axis of the transverse section 10(b) of the right-hand hook 3(b) and its spring section 6(b) can be seen. The two transverse sections 10(a) and 10(b) are trapped by the bridge 7(a) visible in the figure (and also by the right-hand bridge which is not visible in the figure). The end of the spring 6(b) is trapped in the hook 11(a). The actual hooks 3 each comprise, on the one hand, a sharp free end 4 and, on the other hand, a some-

what cam-shaped second end 5. The actual hooks 3 are able to move through a slot 12, cut out in the first small plate 1, by rotating around their transverse sections 10. In the figure, two quasi-stationary positions are shown: a first position in which the movable parts are shown with broken lines and a second position in which the parts are drawn with continuous lines. The parts 4 and 5 of the actual hook 3 are indicated in the first ("broken-line") position by 4' and 5' respectively; equally, the second small plate 2 is indicated in said position by 2'. In the second position, the hook ends 4 are received in a U-shaped receiving section 9 on the first small plate 1.

Figure 4 is completely identical to Figure 3, except that the receiving section 9 is not joined - as in Figure 3 - to the first small plate 1, but, instead thereof, to the second small plate 2 via a slot 13 cut out in the second small plate 2.

2. Operation:

The working can best be seen with reference to Figure 3.

In the first position, the second small plate 2 is in the lowermost position (indicated by dotted lines). The spring force of the hook 3 - largely the torsional spring force of the respective transverse sections 10 - forces the actual hooks 3 in the direction of the second ends 5, as a result of which said second ends 5 are pressed against the top edge of the second small plate 2. In this first position - which is quasi-stationary under the influence of the spring force - the free first end 4 of the hook 3 is detached from the surface of the first small plate 1: the end 4 is located in the open position 4'.

To reach the second position, the second small plate 2 is pushed upwards, as a result of which the top of said small plate 2 presses against the cam-shaped second end 5 (which is in the position 5') of the hooks 3 and these hooks 3 move - against the spring force - in the direction of the free end 4' (rotating around their axes 10) as a result of which the free ends 4 of the hooks 3 close with respect to the first small plate 1. Prior to the closing of the hooks 3, the clothing material (or other material) (not shown in the figures) is placed between the free ends 4 and the surface of the first small plate 1. During the closing of the hooks 3, the material is pierced by the free ends 4 and, after the closure of the hooks 3 is complete, the clothing pin remains attached to the material. Because the second small plate 2 is still pushed further over a certain distance after the cam-shaped second end 5 of the hooks 3 has been completely "pushed aside", this second position is also quasi-stationary: the hooks 3 cannot any longer return because they are impeded in that returning movement by the second small plate 2 which has been slid in front of the second end 5 and which is safeguarded in its turn against being slid

back because the second end 5 presses against said second small plate 2 under the influence of the (torsional) spring force of the hooks 3 (i.e. of the transverse sections 10 and the spring ends 6), as a result of which it remains completely secured by the frictional force.

In order to prevent the (sharp) first end 4 of the hooks 3 projecting outside the first small plate 1 in the first, open position, the slot 12 is provided with a U-shaped receiving section 8 at said position. In order to prevent the (clothing) material slipping out under certain circumstances between the (resilient) free end 4 and the surface of the first small plate 1 in the second, closed position, the slot 12 is also provided with a (second) U-shaped receiving section 9 at said position. As shown in Figure 3, said receiving section 9 can be joined to the first small plate 1, or, as shown in Figure 4, to the second small plate 2. The first option is constructionally the simplest. The second option, however, offers a (still) more reliable operation of the clothing pin. In the first quasi-stationary position of the clothing pin ("open"), the receiving section 9 is at the bottom of the slot 13. On "closing" the clothing pin, the receiving section 9 is moved upwards with the second small plate 2 (with respect to the first small plate 1), as a result of which the end 4 rotates around its axis 10 and finally moves in the direction of the first small plate 1. At the same time, the receiving section 9 moves upwards, as a result of which the end 4 closes in a U-shaped fashion. The advantage of this option is that the hook end 4 can be closed, after sliding the receiving section 9 upwards, much more accurately - even tightly - than in the first option. In the first option, allowance has, after all, always to be made for relatively large dimensional tolerances of the hook 3, while if - according to the second option - the receiving section 9 is joined to the second small plate 2, all of them can be - and in practice are in fact - dimensioned so that the receiving section 9 firmly clamps the hook end 4 over the last section of its sliding path, as a result of which it is virtually impossible for the clothing pin to slip loose.

The clothing pin is of course intended for (detachably) attaching something or other to clothing. If the clothing pin is used as (a component of a) badge, the name badge or something similar can be stuck to the front of the second small plate 2 or to the back if the second small plate is transparent; in the last case, the sticking may be omitted if the name badge is adequately trapped by the (to a certain extent hollow) second small plate 2. It is also possible for the second small plate 2 to be joined, or even to form part of, a small name badge holder. If the clothing pin is intended for attaching a decorative object such as a brooch or something similar to clothing, such a decorative object is also attached to the second small plate 2.

The advantage of the clothing pin according to the invention is that it can be attached to clothing and

detached therefrom by simply sliding the two small plates 1 and 2 with respect to each other. At the same time it is completely unimportant in practice which position the clothing pin is affixed to and what the nature of the clothing material is (waterproof rainwear, of course, excepted therefrom).

Claims

1. Clothing pin for attaching an object, such as a name badge or brooch, to clothing material or similar material comprising a first sliding member and a second sliding member which are mounted so as to be able to slide with respect to each other along a defined slide path, at least one hook (3) comprising a free first end (4) and a second end (5), wherein said hook is pivotable with respect to said sliding members around an axis which is essentially transverse to the direction of said slide path, characterized in that said first sliding member is formed by a first small plate (1) and said second sliding member by a second small plate (2) and in that, in the unattached position of the clothing pin, said free end (4) of the hook (3) extends outside the first small plate at the side facing away from the second small plate and said second end (5) of the hook extends outside the first small plate at the side facing the second small plate so that the second end is located within said slide path.
2. Clothing pin according to Claim 1, characterised by at least one spring (6) which is joined, on the one hand, to the said first small plate (1) and, on the other hand, is joined to the said hook (3), which spring exerts its spring force on the hook in the direction of the second end (5).
3. Clothing pin according to Claim 2, characterised in that the hook (3) and the spring (6) joined to said hook are formed from resilient wire or strip material as a single whole.
4. Clothing pin according to Claim 1, characterised in that the second small plate (2) is joined to, or forms part of, a holder for receiving or retaining a name badge or identification card or something similar.
5. Clothing pin according to Claim 1, characterised in that the second small plate (2) is joined to, or forms part of, a holder for receiving or retaining a decorative object.
6. Clothing pin according to Claim 1, characterised by a receiving section (9) for receiving the said free end (4) of the hook (3) in the said second

quasi-stationary state, which receiving section is joined to the said first small plate (1).

7. Clothing pin according to Claim 1, characterised by a receiving section (5) for receiving the said free end (4) of the hook (3) in the said second quasi-stationary state, which receiving section is joined to the said second small plate (2).

Patentansprüche

1. Sicherheitsnadel zum Befestigen eines Gegenstandes wie zum Beispiel eines Namensschildes oder einer Brosche an einem Bekleidungsmaterial oder etwas ähnlichem, umfassend ein erstes Schiebeglied (1) und ein zweites Schiebeglied (2), die derart montiert sind, dass sie in bezug zueinander entlang einer definierten Gleitbahn verschiebbar sind, mindestens einen Haken (3) umfassend ein freies erstes Ende (4) und ein zweites Ende (5), wobei der Haken (3) in bezug auf die Schiebeglieder (1, 2) um eine Achse drehbar ist, die im wesentlichen quer zur Richtung der Gleitbahn verläuft, **dadurch gekennzeichnet, dass** das erste Schiebeglied von einem ersten Plättchen (1) und das zweite Schiebeglied (2) von einem zweiten Plättchen (2) gebildet ist, und dass sich das freie Ende (4) des Hakens (3) in der unbefestigten Stellung der Sicherheitsnadel ausserhalb des ersten Plättchens (1) auf der dem zweiten Plättchen (2) abgewandten Seite und das zweite Ende (5) des Hakens ausserhalb des ersten Plättchens (1) auf der dem zweiten Plättchen (2) zugewandten Seite erstreckt, so dass sich das zweite Ende (5) innerhalb der Gleitbahn befindet.
2. Sicherheitsnadel nach Anspruch 1, **gekennzeichnet durch** mindestens eine Feder (6), die einerseits mit dem ersten Plättchen (1) und andererseits mit dem Haken (3) in Verbindung steht, wobei die Feder (6) ihre Federkraft auf den Haken (3) in der Richtung des zweiten Endes (5) ausübt.
3. Sicherheitsnadel nach Anspruch 2, **dadurch gekennzeichnet, dass** der Haken (3) und die mit dem Haken (3) in Verbindung stehende Feder (6) aus elastischem Draht oder Streifenmaterial als ein Ganzes ausgebildet sind.
4. Sicherheitsnadel nach Anspruch 1, **dadurch gekennzeichnet, dass** das zweite Plättchen (2) mit einem Halter zum Aufnehmen oder Festhalten eines Namensschildes oder einer Identifikationskarte oder etwas ähnlichem verbunden ist oder einen Teil davon bildet.

5. Sicherheitsnadel nach Anspruch 1, **dadurch gekennzeichnet, dass** das zweite Plättchen (2) mit einem Halter zum Aufnehmen oder Festhalten eines Schmuckgegenstandes verbunden ist oder einen Teil davon bildet.

6. Sicherheitsnadel nach Anspruch 1, **gekennzeichnet durch** einen Aufnahmeteil (9) zum Aufnehmen des freien Endes (4) des Hakens (3) in der zweiten quasi-stationären Stellung, wobei der Aufnahmeteil (9) mit dem ersten Plättchen (1) verbunden ist.

7. Sicherheitsnadel nach Anspruch 1, **gekennzeichnet durch** einen Aufnahmeteil (9) zum Aufnehmen des freien Endes (4) des Hakens (3) in der zweiten quasi-stationären Stellung, wobei der Aufnahmeteil (9) mit dem zweiten Plättchen (2) verbunden ist.

Revendications

1. Epingle à vêtement destinée à la fixation d'un objet, tel qu'un badge ou une broche, sur un vêtement, comprenant un premier organe coulissant et un second organe coulissant qui sont montés afin qu'ils puissent coulisser l'un par rapport à l'autre suivant un trajet déterminé de coulissement, au moins un crochet (3) comportant une première extrémité libre (4) et une seconde extrémité (5), et dans laquelle le crochet peut pivoter, par rapport aux organes coulissants, autour d'un axe qui est pratiquement transversal à la direction du trajet de coulissement, caractérisée en ce que le premier organe coulissant est formé une première petite plaque (1) et le second organe coulissant est formé par une seconde petite plaque (2), et en ce que, dans la position non fixée de l'épingle à vêtement, l'extrémité libre (4) du crochet (3) dépasse à l'extérieur de la première petite plaque du côté opposé à la seconde petite plaque et la seconde extrémité (5) du crochet dépasse à l'extérieur de la première petite plaque du côté de la seconde petite plaque si bien que la seconde extrémité est placée sur le trajet de coulissement.
2. Epingle à vêtement selon la revendication 1, caractérisée par au moins un ressort (6) qui est raccordé d'une part à la première petite plaque (1) et d'autre part au crochet (3), ce ressort appliquant sa force d'élasticité sur le crochet vers la seconde extrémité (5).
3. Epingle à vêtement selon la revendication 2, caractérisée en ce que le crochet (3) et le ressort (6) raccordé au crochet sont formés d'un matériau

élastique en fil ou bande en une seule pièce.

4. Epingle à vêtement selon la revendication 1, caractérisée en ce que la seconde petite plaque (2) est raccordée à un support destiné à loger ou retenir un badge ou une carte d'identification ou un organe analogue ou fait partie d'un tel support. 5
5. Epingle à vêtement selon la revendication 1, caractérisée en ce que la seconde petite plaque (2) est raccordée à un support destiné à loger ou retenir un objet décoratif ou fait partie d'un tel support. 10
6. Epingle à vêtement selon la revendication 1, caractérisée par un tronçon de logement (9) destiné à loger l'extrémité libre (4) du crochet (3) au second état pratiquement stationnaire, le tronçon de logement étant raccordé à la première petite plaque (1). 15 20
7. Epingle à vêtement selon la revendication 1, caractérisée par un tronçon de logement (9) destiné à loger l'extrémité libre (4) du crochet (3) dans le second état pratiquement stationnaire, le tronçon de logement étant raccordé à la seconde petite plaque (2). 25

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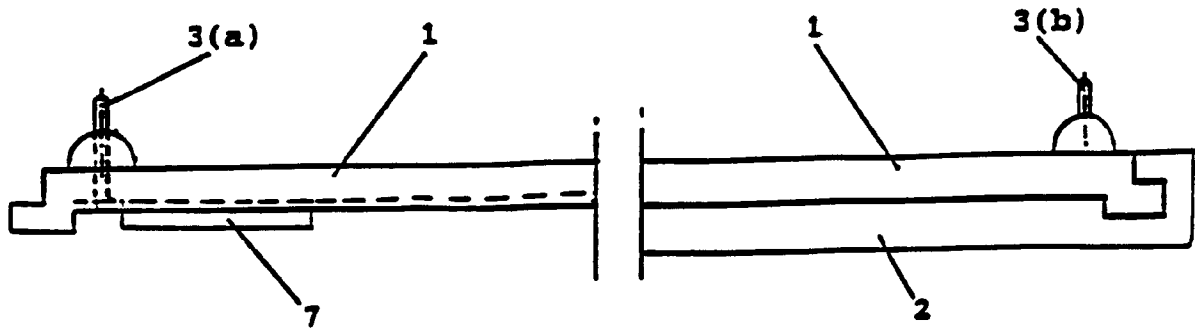


FIG. 1

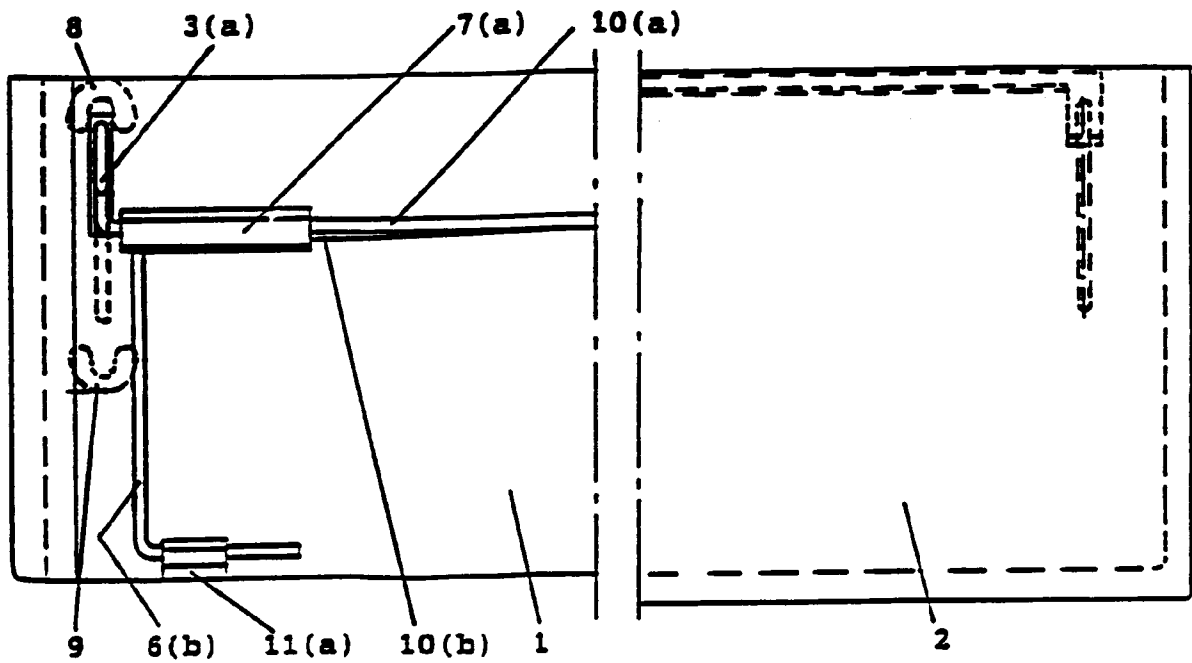


FIG. 2

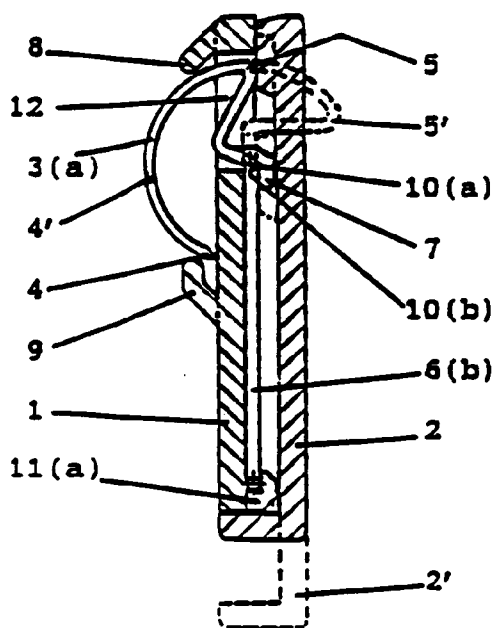


FIG. 3

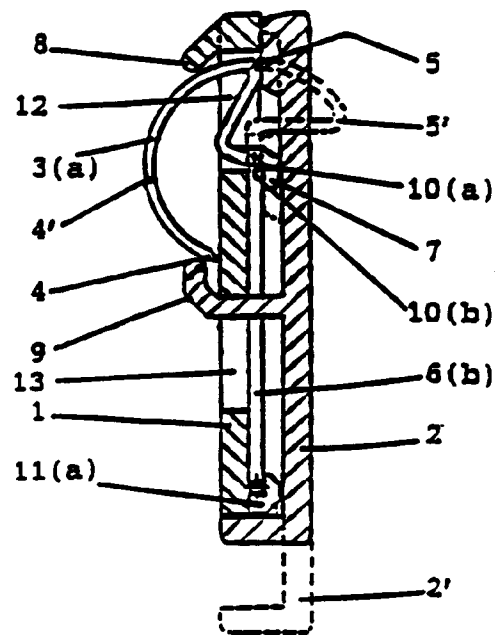


FIG. 4