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(54) **Improved writing instrument**

Verbessertes Schreibgerät

Instrument d'écriture amélioré

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Description**BACKGROUND OF THE INVENTION**

[0001] Marking pens have become a commonly used writing implement because of their versatility and unique marking characteristics. They are not only used by artists and students, they are commonly used in many businesses whenever a bold or highlighted entry is necessary. Improvements in the ink, writing tips, and manufacture have progressed steadily to produce low cost, high quality writing implements. A principal advantage of marking pens is their ability to employ porous felt tips having a variety of different colored inks.

[0002] Nevertheless, conventional marking pens have several inherent deficiencies. One of these deficiencies is the requirement that the pen's inked tip, generally porous felt impregnated with ink, must be kept covered when not in use. Because the inked porous tip of many marking pens has a tendency to dry out when left exposed to the atmosphere, these pens have a separate cap for covering the felt tip when not being used for writing. Quite often, users of the pen have a tendency to remove the cap carelessly and set it aside. When it is time to replace the cap, the user spends several irritating seconds searching for the cap. This is particularly annoying when the user is busy and concentrating on performing his or her duties.

[0003] Thus, the ink-impregnated porous tip of conventional marking pens has created a dilemma not encountered by other types of writing implements such as pencils, colored wax, and the like. Heretofore, a convenient method of keeping track of the cap used to cover this felt tip portion of marking pens has not been available.

[0004] WO-A-8200614 discloses a writing instrument comprising an elongated body having a first end, a second end, and a passage extending from said first end to said second end; a writing means disposed within said passage and extending outwardly from the first end; and a cap means having a body for covering the first end of said cylindrical body, an arm extending from said first side of said body portion, a projection disposed on the opposite side of said body portion to facilitate removal of the cap means from said cylindrical body, and a cap retaining means disposed on said first side for retaining the cap in an open position; said cap further having a pivot means for pivotably and slidably positioning the cap arm along the cylindrical body.

SUMMARY OF THE INVENTION

[0005] In accordance with the present invention there is provided a writing instrument comprising:

an elongated cylindrical body having a first end, a second end, and a passage extending from said first end to said second end;

a writing means disposed within said passage end extending outwardly from the first end; and

a cap means having a body for covering the first end of said cylindrical body, an arm extending from a first side of said body of the cap means, a projection disposed on the opposite side of said body of the cap means to facilitate removal of the cap means from said cylindrical body, and a cap retaining means disposed on said first side for retaining the cap in an open position;

said cap means further having a pivot means for pivotably and slidably positioning the cap arm along the cylindrical body;

characterised in that:

said cylindrical body has a continuous groove extending from the first end of said body to the second end of said body; said groove having channel portions disposed at said first end and extending longitudinally toward said second end adapted to receive said pivot means; and

a cap receiving area disposed adjacent the second end of the elongated cylindrical body, wherein said cap receiving area is adapted to engage said cap retaining means.

DESCRIPTION OF THE DRAWINGS**[0006]**

FIG 1 is a perspective view of the improved marking pen in accordance with present invention;

FIG 2 is a side elevational view of the improved marking pen having its cap removed in accordance with present invention;

FIG 3 is a side elevational view of the marking pen having its cap in place over the felt tip in accordance with the present invention;

FIG 4 is a side elevational view of the marking pen in accordance with the present invention showing the groove and cap-arm relationship;

FIG 5 shows the pen in accordance with the present invention with the cap means separated from the cylindrical body;

FIG 6 is a side view of the pen shown in FIG 5;

FIG 7 is a side elevational view of the cap used to cover the felt tip in accordance with the present invention;

FIG 8 is a side elevational view of the cap shown in FIG 7 from a different side;

FIG 9 is a cross sectional view of the pen in accord-

ance with the present invention along line 9-9 of FIG 5;

FIG 10 is a cross sectional view of the pen in accordance with the present invention along line 10-10 of FIG 4.

FIG 11 is a top plan view of the pen in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE PRESENT INVENTION

[0007] In accordance with a preferred embodiment of the present invention, disclosed is marking pen 10 having a substantially cylindrical elongated body portion 20. The cylindrical body portion can be made of any durable material and is preferably made of plastic material. The cylindrical body 20 has a first end 22, a second end 24, and a passageway 26 extending longitudinally from the first end 22 to the second end 24. A writing element 28, preferably one having a tendency to dry out when exposed to the atmosphere such as a porous ink impregnated felt strip, is generally disposed within this passageway 26 and extends outwardly from the first end 22 of the body 20. The tip of the writing element is generally beveled as clearly shown at 29 in FIGS 2,5,6 and 9 to facilitate writing.

[0008] Disposed on the first end of the cylindrical body 20 is a cap member 30 for making a closure over the writing element 28 when not in use. The cap has a body portion 32 which is generally complementary in shape to the first end 22 of the cylindrical body 20 of the pen. The cap member has a closed end 31 and an open end 33 for sliding over the first end 22 of the cylindrical body 20 when it is desired to cover the tip of the writing element 28.

[0009] Extending outwardly from the perimeter of the open end 33 of the cap member 30 is an elongated arm 34 which pivotably joins the cap member 30 with the elongated cylindrical body 20 of the pen. The arm 34 extends a distance from the open end 33 sufficient to permit the cap member 30 to be slidably removed from the end and pivoted downwardly to engage the cap receiving area adjacent the second end 24 of the cylindrical body 20 as shown in FIG 2.

[0010] The cylindrical body has a continuous groove 52 extending longitudinally from the first end 22 of the body to a position at or adjacent the second end 24 of the body.

[0011] The cap member 30 further includes a means for removing the cap from the pen body 20 with a person's finger. This cap removing means is a projection 36 designed to accommodate a finger as shown in FIG 2. It is understood that the projection 36 shown here is merely illustrative of the various configurations sufficient to facilitate removal of the cap from the pen while holding the pen in one's hand. Opposite the cap removing

means is at least one cap retaining means for retaining the cap in an open position after removal from the writing element. Preferably the cap retaining means are two ridges 46 and 47 which are adapted to engage grooves 62 and 64 disposed on the walls of channel 52 on the lower end of the cylindrical body 20 as shown in FIGS 2, 4 and 9.

[0012] The arm 34 extending from the cap 30 has a first and second projection 42 and 44 extending outwardly and in opposite directions from the terminal end 43 of the arm. These projections 42 and 44 are adapted to engage channels in the cylindrical body 20 and pivotably move the cap from a closed position to an open position as discussed in detail below.

[0013] Disposed adjacent the sides of the groove 52 is a pair of channels 54 and 56 which are adapted to engage projections 42 and 44 at the terminal end 43 of the cap arm 34. The length of the channels 54 and 56 can vary, and will be long enough to accommodate the cap arm as it is pivotably and slidably positioned between an open and closed position.

[0014] In operation, the cap can be removed from the end of the pen by pressing on the projection portion with one's finger. The cap is displaced upwardly from its seated position on the end of the cylindrical body until it clears the tip of the writing element. The cap is then pivoted downwardly along the side of the cylindrical body until it reaches the cap receiving area where it is secured in its open position. When it is desired to return the cap to its closed position, the cap is pivoted upwardly and slid along the groove until it can cover the writing element again.

Claims

1. A writing instrument (10) comprising:

an elongated cylindrical body (20) having a first end (22), a second end (24), and a passage (26) extending from said first end to said second end; a writing means (28) disposed within said passage and extending outwardly from the first end; and a cap means (30) having a body (32) for covering the first end of said cylindrical body, an arm (34) extending from a first side of said body of the cap means, a projection (36) disposed on the opposite side of said body of the cap means to facilitate removal of the cap means from said cylindrical body, and a cap retaining means (46,47) disposed on said first side for retaining the cap in an open position; said cap means further having a pivot means (42,44) for pivotably and slidably positioning the cap arm along the cylindrical body; characterised in that: said cylindrical body has a continuous groove

(52) extending from the first end of said body to the second end of said body; said groove having channel portions (54,56) disposed at said first end and extending longitudinally toward said second end adapted to receive said pivot means; and
 a cap receiving area (62,64) disposed adjacent the second end of the elongated cylindrical body, wherein said cap receiving area is adapted to engage said cap retaining means.

2. The writing instrument of Claim 1 wherein the cap retaining means is at least one ridge (46,47) disposed on the side of the cap means.
3. The writing instrument of Claim 2 wherein the cap receiving means is a cavity (52,62,64) in the side of the elongated cylindrical body.
4. The writing instrument of Claim 1 wherein the writing means is an ink impregnated felt material (28).
5. The writing instrument of Claim 4 wherein the cylindrical body and cap means are made of plastic material.
6. The writing instrument of Claim 5 wherein the cylindrical body includes a clip means.
7. The writing instrument of Claim 3 wherein the writing instrument is a felt tipped pen having an ink impregnated felt material (28) projecting outwardly from said passage and said outwardly projecting felt material is bevelled at its distal end (29).
8. The writing instrument of Claim 3 wherein the continuous groove is open at the first end of said elongated cylindrical body.
9. The writing instrument of Claim 2 wherein the cap retaining means is adapted to engage the continuous groove adjacent the second end of said elongated cylindrical body.

Patentansprüche

1. Schreibgerät (10), das folgendes umfaßt:

einen länglichen zylindrischen Körper (20) mit einem ersten Ende (22), einem zweiten Ende (24) und einem von dem ersten Ende zu dem zweiten Ende verlaufenden Durchlaß (26); ein Schreibmittel (28), das in dem Durchlaß angeordnet ist und sich von dem ersten Ende nach außen erstreckt; und
 ein Kappenmittel (30) mit einem Körper (32) zur Bedeckung des ersten Endes des zylindrischen Körpers, einem Arm (34) der sich von

einer ersten Seite des Körpers des Kappenmittels erstreckt, einem Vorsprung (36), der auf der gegenüberliegenden Seite des Körpers des Kappenmittels angeordnet ist, um ein Abziehen des Kappenmittels von dem zylindrischen Körper zu erleichtern, und einem Kappenhaltemittel (46, 47), das auf der ersten Seite zum Halten der Kappe in einer geöffneten Position angeordnet ist;

wobei das Kappenmittel weiterhin ein Schwenkmittel (42, 44) zum schwenkbaren und verschiebbaren Positionieren des Kappenarms entlang dem zylindrischen Körper aufweist;

dadurch gekennzeichnet, daß
 der zylindrische Körper eine durchgehende Nut (52) aufweist, die von dem ersten Ende des Körpers zu dem zweiten Ende des Körpers verläuft; wobei die Nut Kanalteile (54, 56), die an dem ersten Ende angeordnet sind und in Längsrichtung zu dem zur Aufnahme des Schwenkmittels ausgeführten zweiten Ende verlaufen; und
 einen Kappenaufnahmebereich (62, 64), der neben dem zweiten Ende des länglichen zylindrischen Körpers angeordnet und zur Ineingriffnahme des Kappenhaltemittels ausgeführt ist, aufweist.

2. Schreibgerät nach Anspruch 1, bei dem das Kappenhaltemittel mindestens ein Steg (46, 47) ist, der auf der Seite des Kappenmittels angeordnet ist.
3. Schreibgerät nach Anspruch 2, bei dem das Kappenaufnahmemittel ein Hohlraum (52, 62, 64) in der Seite des länglichen zylindrischen Körpers ist.
4. Schreibgerät nach Anspruch 1, bei dem das Schreibmittel ein mit Tinte imprägniertes Filzmaterial (28) ist.
5. Schreibgerät nach Anspruch 4, bei dem der zylindrische Körper und das Kappenmittel aus Kunststoff hergestellt sind.
6. Schreibgerät nach Anspruch 5, bei dem der zylindrische Körper ein Klemmittel enthält.
7. Schreibgerät nach Anspruch 3, bei dem das Schreibgerät ein Filzstift mit einem mit Tinte imprägnierten Filzmaterial (28), das aus dem Durchlaß nach außen ragt, ist und das nach außen ragende Filzmaterial an seinem distalen Ende (29) abgeschragt ist.
8. Schreibgerät nach Anspruch 3, bei dem die durchgehende Nut an dem ersten Ende des länglichen zylindrischen Körpers offen ist.

9. Schreibgerät nach Anspruch 2, bei dem das Kappenhaltemittel zur Ineingriffnahme der durchgehenden Nut neben dem zweiten Ende des länglichen zylindrischen Körpers ausgeführt ist.

Revendications

1. Instrument d'écriture (10) comprenant:

un corps cylindrique allongé (20) ayant une première extrémité (22),
 une deuxième extrémité (24) et un passage (26) s'étendant depuis ladite première extrémité jusqu'à ladite deuxième extrémité;
 un moyen d'écriture (28) disposé à l'intérieur dudit passage et s'étendant vers l'extérieur depuis la première extrémité; et
 un moyen de capuchon (30) ayant un corps (32) pour couvrir la première extrémité dudit corps cylindrique, un bras (34) s'étendant depuis un premier côté dudit corps du moyen de capuchon, une saillie (36) disposée du côté opposé dudit corps du moyen de capuchon pour faciliter le retrait du moyen de capuchon dudit corps cylindrique, et un moyen de retenue du capuchon (46, 47) disposé sur ledit premier côté pour retenir le capuchon dans une position ouverte;
 ledit moyen de capuchon ayant en outre un moyen de pivotement (42, 44) pour positionner le bras du capuchon par pivotement et coulissement le long du corps cylindrique;
 caractérisé en ce que:
 ledit corps cylindrique possède une rainure continue (52) s'étendant depuis la première extrémité dudit corps jusqu'à la deuxième extrémité dudit corps; ladite rainure ayant des portions de canal (54, 56) disposées au niveau de ladite première extrémité et s'étendant longitudinalement vers ladite deuxième extrémité, prévue pour recevoir ledit moyen de pivotement; et
 une zone de réception du capuchon (62, 64) adjacente à la deuxième extrémité du corps cylindrique allongé, ladite zone de réception du capuchon étant adaptée pour engager ledit moyen de retenue du capuchon.

2. Instrument d'écriture selon la revendication 1, dans lequel le moyen de retenue du capuchon est au moins une arête (46, 47) disposée sur le côté du moyen de capuchon.

3. Instrument d'écriture selon la revendication 2, dans lequel le moyen de réception du capuchon est une cavité (52, 62, 64) dans le côté du corps cylindrique allongé.

4. Instrument d'écriture selon la revendication 1, dans lequel le moyen d'écriture est un matériau en feutre imprégné d'encre (28).

5. Instrument d'écriture selon la revendication 4, dans lequel le corps cylindrique et le moyen de capuchon sont fabriqués en matière plastique.

6. Instrument d'écriture selon la revendication 5, dans lequel le corps cylindrique comporte un moyen de clipsage.

7. Instrument d'écriture selon la revendication 3, dans lequel l'instrument d'écriture est un feutre ayant un matériau en feutre imprégné d'encre (28) faisant saillie vers l'extérieur depuis ledit passage et ledit matériau en feutre faisant saillie vers l'extérieur est biseauté à son extrémité distale (29).

8. Instrument d'écriture selon la revendication 3, dans lequel la rainure continue est ouverte à la première extrémité dudit corps cylindrique allongé.

9. Instrument d'écriture selon la revendication 2, dans lequel le moyen de retenue du capuchon est adapté pour venir en prise avec la rainure continue à proximité de la deuxième extrémité dudit corps cylindrique allongé.

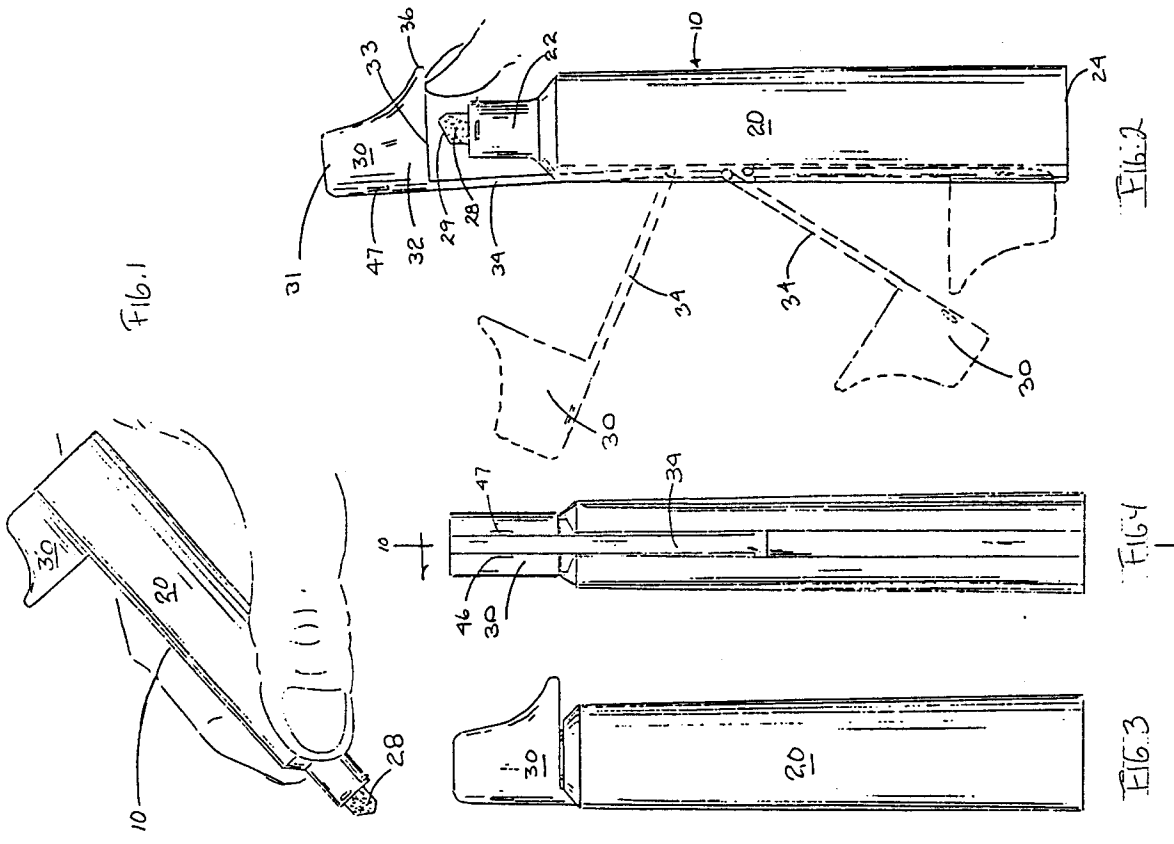


Fig. 1

Fig. 2

Fig. 4

Fig. 3

