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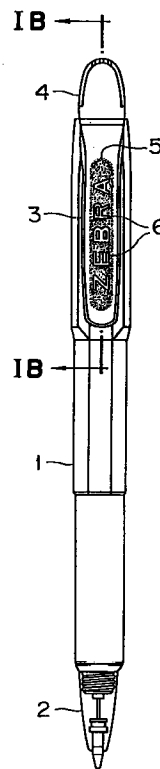
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(54) **WRITING MATERIALS**

(57) This invention is constructed in a writing tool such as a ball-point pen or a mechanical pencil or the like or a pen case, a part of a main body such as a cylinder barrel, a tip, a cap, a clip and the like made of transparent synthetic resin material is provided with a pear-skin, this part is provided with a display printing part (5), the display printing part (5) is printed with displays (6) such as a product name, a manufacturing date, a lot No. and a company name or the like to cause printing ink for the display to be entered into the concave part of the pear-skin pattern at the display printing part (5) while it is not peeled off and securely coated in it and then the displays appear clearly.

FIG. 1A



EP 0 805 052 A1

Description

TECHNICAL FIELD

This invention relates to a writing tool such as a ball-point pen or a mechanical pencil or a pen case or a scale or other stationaries, and more particularly, a general stationary and the like which is made of transparent synthetic resin material.

BACKGROUND ART

In recent years, there have been proposed various kinds of stationaries in which a transparency is intensified by molding a cylinder barrel, a tip end, a cap and a clip or the like of the writing tool such as a ball-point pen or a mechanical pencil with transparent synthetic resin material. That is, the stationary of which quality applied as a commodity by applying an ornamental effect and aesthetic feeling found in a transparent member is improved has been proposed and provided.

In this field, the surfaces of a cylinder barrel, a cap and a clip of the writing tool such as a ball-point pen or a mechanical pencil or the like are already printed with a name of the product, a manufacturing date, a lot No. and a company name or the like while being displayed. However, the portion having the displayed part printed thereon is transparent to cause the inner structure of the stationary to be seen from outside, resulting in that the displayed part is made vague, is not clearly seen and it is hardly seen from outside. In addition, the surface having the printed display is a mirror surface, so that there have been left some problems that a poor coating of printing ink against the surface may occur and it is easily peeled off.

Thus, it is an object of the present invention to provide a stationary made of transparent synthetic resin material in which a display may clearly appear.

It is another object of the present invention to prevent a printing ink from being peeled off.

DISCLOSURE OF THE INVENTION

The stationary of the present invention is constructed such that a part of the main body made of transparent synthetic resin material is applied with a pear-skin work and the portion is provided with a display printing part.

In addition, the aforesaid main body is a clip of the writing tool and the surface of the clip is provided with a display printing part.

In addition, the aforesaid main body is a cap of the writing tool and the surface of the cap is provided with a display printing part.

Further, the aforesaid display printing part formed with pear-skin is arranged at its part in concurrent with the molding of the main body.

According to these constructions, printing ink is printed while it is being entered into the concave part of

the display printing part comprised of pear-skin, the printed display is securely coated at the display printing part while it is not peeled off. Then, the display printing part appears in an opaque or a non-transparent state by the corrugated pear-skin pattern, thus the display printed appears clearly or in a floating-up manner, resulting in that the display may easily be seen.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1A is a front elevational view of a stationary of the present invention in which an example of a mechanical pencil is shown.

Fig. 1B is an enlarged sectional view taken along a line B-B of Fig. 1A.

Fig. 2 is a side elevational view of the stationary of the present invention in which an example of a ball-point pen is shown.

BEST MODE FOR CARRYING OUT THE INVENTION

Referring now to the drawings, the preferred embodiments of the present invention will be described in order to describe the present invention more minutely.

Fig. 1A shows an example of a stationary (a mechanical pencil), wherein a cylinder barrel 1, a tip 2, a clip 3 and a knock cap 4 are made of transparent synthetic resin material, its transparency is intensified so as to apply an ornamental effect as well as an aesthetic feeling to the stationary. Then, the surface of the clip 3 is applied with a pear-skin work and the part is provided with a display printing part 5 having irregular corrugated pattern.

The display printing part 5 is constructed to have such a sufficient area as one in which a display 6 for a product name, a manufacturing date, a lot No. and a company name or the like is printed at the surface of the clip 3 in concurrent with a molding of the cylinder barrel 1 having the clip 3 integrally formed with it, and the printing ink is securely coated at the display printing part 5 while being entered into a concave part of irregular corrugated pattern.

Thus, since the printing ink is printed at the display printing part 5 while being entered into the concave part of the display printing part 5 comprised of corrugated pattern, the display part 6 is strictly coated at the display printing part 5 while the display 6 is not peeled off. Then, the display printing part 5 appears as an opaque or a non-transparent state through the corrugated pattern, resulting in that the display part 6 appears clearly or in a floating-up manner and this is easily seen.

In the aforesaid preferred embodiment of the present invention, the form in which the surface of the clip 3 is provided with the display printing part 5 of pear-skin has been described in detail. However, the cylinder barrel 1, the tip 2 and a part of the surface of the knock cap 4 are similarly provided with the pear-skin. In addition, as the stationary, the example of the mechanical pencil has been described in detail. However, this may

be similarly applied to a ball-point pen and so the present invention aims at processing of a pen case, a scale or other well-known many stationaries made of transparent synthetic resin material as well.

Fig. 2 shows another preferred embodiment of the stationary (a ball-point pen), wherein the preferred embodiment is constructed such that the surface of the cap 8 removably fitted to the extreme end of the cylinder barrel 7 is provided with the display printing part 5 comprised of corrugated pattern in the same manner as that of the preferred embodiment described in detail, and the ink is securely coated under a state in which the display part 6 may not be peeled off.

Thus, according to the stationary of the present invention constructed as described above, printing ink is printed while it is being entered into the concave part of the display printing part 5 comprised of corrugated pattern applied to either the clip surface 3 or the cap surface 8 of the stationary. Thus, the printed display is securely coated at the display printing part 5 of the clip surface 3 or the cap surface 8 while it is not peeled off. Then, the display printing part 5 appears in an opaque or a non-transparent state by the corrugated pattern. Thus, the display printed at the clip surface 3 or the cap surface 5 appears clearly or in a floating-up manner, resulting in that the display may easily be seen.

Further, according to the stationary of the present invention, since the display printing part 5 comprised of a pear-skin is applied to a part of the main body, to the surface of the clip 3, for example, in concurrent with a molding of the cylinder barrel 1 integrally provided with the clip 3 of the stationary, it can be arranged in less-expensive manner as compared with that of working method for applying the display printing part comprised of a pear-skin by a post-processing after the cylinder barrel 1 is formed and further it can be positively and accurately arranged at a predetermined location. Thus, an effect of substantial practical arrangement can be expected in this type of stationary mainly applied for its mass production.

INDUSTRIAL APPLICABILITY

As described above, according to the stationary of the present invention made of transparent synthetic resin material, its transparency is intensified, a coating effect of the ink preventing a peeling-off of the printing ink can be expected without reducing an ornamental effect and aesthetic feeling found in the transparent member and further the display appears clearly to cause its easiness in seeing to be well expected. In addition, the present invention can be manufactured and provided in less-expensive cost. Accordingly, the present invention is applicably as the method for printing with a name of the product, a manufacturing date, a lot No. and a company name or the like on a writing tool such as a ball-point pen or a mechanical pencil or a pen case or a scale or other stationaries, and more particularly, a general stationary and the like which is made of

transparent synthetic resin material.

Claims

1. A stationary in which a part of a main body made of transparent synthetic resin material is provided with a pear-skin and said part is provided with a display printing part (5).
2. A stationary as set forth in Claim 1 in which the main body is a clip (3) of the writing tool and the surface of said clip (3) is provided with a display printing part (5).
3. A stationary as set forth in Claim 1 in which the main body is a cap (8) of the stationary and the surface of said cap (8) is provided with a display printing part (5).
4. A stationary as set forth in Claim 1 in which the display printing part (5) comprised of a pear-skin is arranged at a part of the main body in concurrent with a molding of the main body.

FIG. 1A

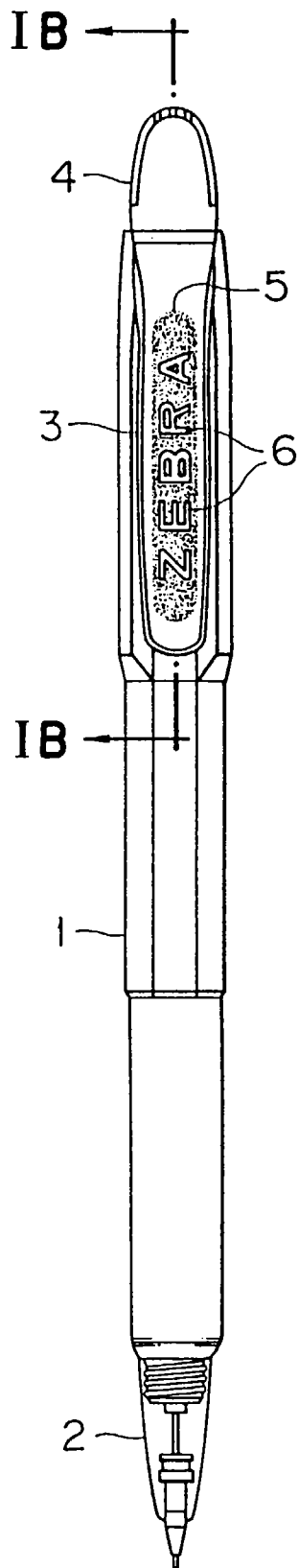


FIG. 1B

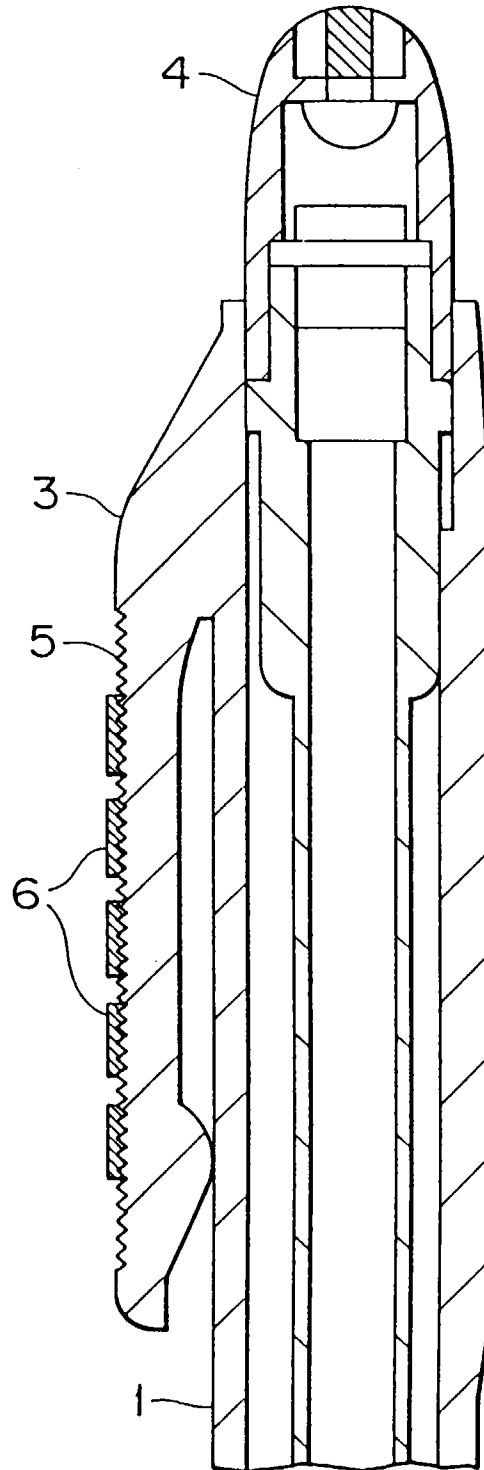
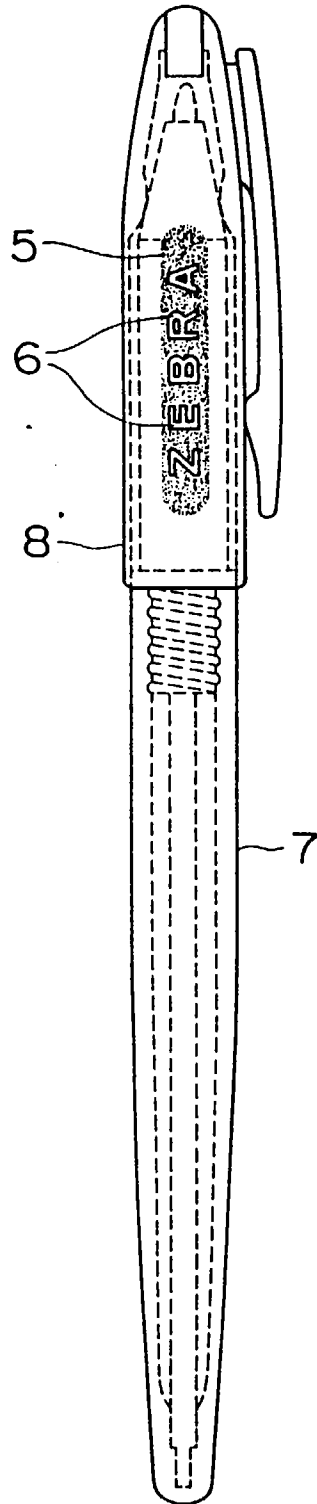


FIG. 2



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP96/03073

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl⁶ B43K29/00, B43K3/00, B43K9/00, B43K25/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int. Cl⁶ B43K29/00, B43K3/00, B43K9/00, B43K25/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922 - 1997
Kokai Jitsuyo Shinan Koho	1972 - 1997
Toroku Jitsuyo Shinan Koho	1994 - 1997

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP, 56-135883, U (K.K. Hanroku Group Honten), October 15, 1981 (15. 10. 81) (Family: none)	1 - 3
A	JP, 58-33279, U (Dainippon Printing Co., Ltd.), March 4, 1983 (04. 03. 83) (Family: none)	1 - 3
A	JP, 58-33282, U (Dainippon Printing Co., Ltd.), March 4, 1983 (04. 03. 83) (Family: none)	1 - 3
A	JP, 58-33284, U (Dainippon Printing Co., Ltd.), March 4, 1983 (04. 03. 83) (Family: none)	1 - 3
A	JP, 63-104084, U (Pentel K.K.), July 6, 1988 (06. 07. 88) (Family: none)	1 - 3
A	JP, 5-189928, A (Sony Corp.), July 30, 1993 (30. 07. 93) (Family: none)	1 - 3

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP96/03073

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 4
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Claim 4 recites "A cap as set forth in claim 1," but claim 1 does not recite the cap. Therefore, the invention as claimed in claim 4 dependent on claim 1 is indefinite.

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.