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(54) Handheld stamp assembly

(57) A handheld stamp assembly has a handle (202) and a stamp mount (204,300). The handle (202) may be detachably coupled to the stamp mount (204), and the stamp mount (300) may be composed of atop member (302) and a bottom member (322) detachably combined with each other. Accordingly, the handheld stamp assembly is convenient to be carried and manufactured and has a lowered manufacturing cost.

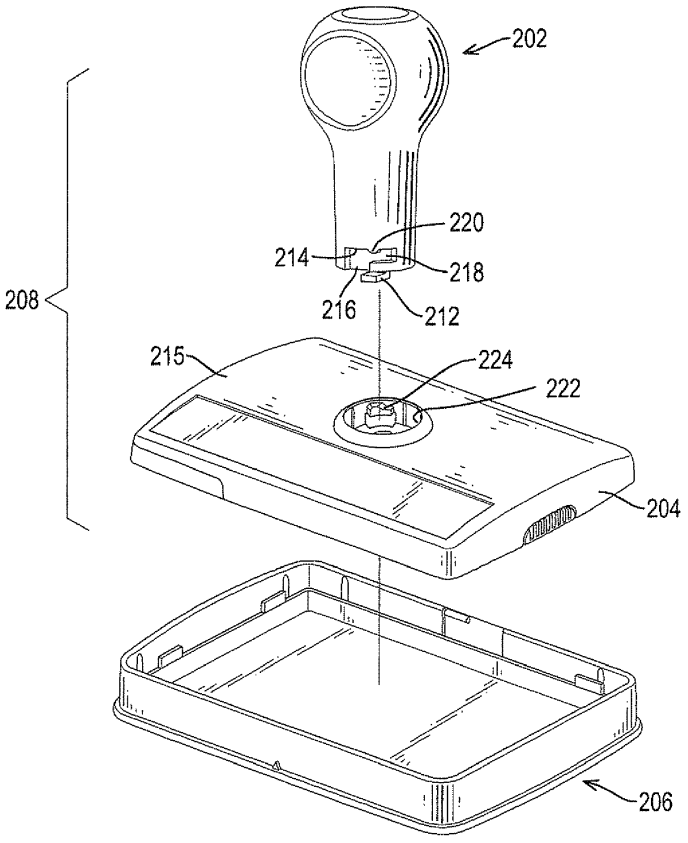

FIG.2

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Description

[0001] Handheld stamps have long been used as marking tools. Fig. 10 shows a typical handheld stamp (100) comprises a handle (102), a stamp mount (104) and a bottom cover (106). The handle (102) is securely disposed on and extends out of the top of the stamp mount (104). The bottom cover (106) is removably attached to the bottom of the stamp mount (104). A die face (108) is attached to the bottom of the stamp mount (104) and is configured to be covered by the bottom cover (106).

[0002] To use the handheld stamp (100), the bottom cover (106) is detached from the bottom of the stamp mount (104). A user may hold the handle (102) and apply pressure downward onto the stamp mount (104), so that the die face (108) is pressed against a surface to leave an image or pattern on the surface. When the handheld stamp (100) is not in use, the bottom cover (106) may be coupled to the stamp mount (104) to prevent the die face (108) from possibly staining the surroundings of the handheld stamp (100).

[0003] The typical handheld stamp (100) is associated with a single image or pattern. To stamp a different image or pattern, another handheld stamp may be required. In other words, if multiple images or patterns are desired, then multiple handheld stamps with each stamp engraved with a unique image or pattern may be required. Having multiple handheld stamps not only increases cost but also makes storage burdensome. For a manufacturer, multiple elements and molds in different scales and sizes have to be designed and prepared for forming different stamps with different images or patterns, so the manufacturing cost is high.

[0004] What is needed in the art is thus a cost effective way to manufacture the handheld stamp and address at least the problems set forth above.

[0005] The main objective of the invention is to provide a handheld stamp assembly that is convenient to be carried and manufactured and has a lowered manufacturing cost.

[0006] To achieve the above objective, the present invention provides a handheld stamp assembly comprising a handle and a stamp mount. The handle has a cavity with an open end and a closed end, and the stamp mount is configured to be coupled to the handle and comprises a substantially circular opening. The substantially circular opening is disposed at a first surface of the stamp mount for receiving the handle and defines a protrusion disposed within the substantially circular opening for locking with the cavity.

[0007] The present invention also provides a handheld stamp assembly comprising a handle and a stamp mount having a top member and a bottom member. The top member is coupled to the handle and is slidably engaged the bottom member to form an enclosed space. The bottom member comprises a first surface to be attached to a die face and a second surface having at least one ink reservoir and at least one hole.

[0008] Other objects, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

Fig. 1 is a perspective view of a first embodiment of a handheld stamp in accordance with the present invention;

Fig. 2 is an exploded perspective view of the handheld stamp in Fig. 1;

Fig. 3 is an enlarged side view of the handle of the handheld stamp in Fig. 1;

Fig. 4 shows enlarged operational perspective view of the handle and the stamp mount of the handheld stamp in Fig. 1;

Fig. 5 is an exploded perspective view of a second embodiment of a handheld stamp in accordance with the present invention;

Fig. 6 is an exploded perspective view of a stamp mount of the handheld stamp in Fig. 1;

Fig. 7 is another exploded perspective view of the stamp mount and a bottom cover of the handheld stamp in Fig. 1;

Fig. 8 is a perspective view of a substantially circular shaped handheld stamp in accordance with the present invention;

Fig. 9 is an exploded perspective view of a stamp mount of the substantially circular shaped handheld stamp in Fig. 8; and

Fig. 10 is an exploded perspective view of a typical handheld stamp.

[0009] With reference to Figs. 1 and 2, a handheld stamp (200) in accordance with the present invention comprises a handle (202), a stamp mount (204), and a bottom cover (206). The handle (202) is designed to be grasped by a user. The handle (202) is coupled to the stamp mount (204) via a locking mechanism (208). The locking mechanism (208) will be discussed in detail in the subsequent paragraphs. Although the stamp mount (204) is illustrated to be rectangular, the stamp mount (204) can be in many other geometric shapes. Some example geometric shapes include, without limitation, square, circular, and elliptical. In addition, the geometric shape of the bottom cover (206) may also vary to complement the stamp mount (204). The locking mechanism (208) enables the handle (202) to be flexibly attached to or detached from the stamp mount (204). In other words, the handle (202) may be used with different stamp mounts.

[0010] With further reference to Fig. 3, the handle (200) comprises a substantially L-shaped cavity (214). The substantially L-shaped cavity (214) comprises an open end (216), a closed end (218), and a projection (220). The handle (202) is configured to couple to a substantially circular opening (222) at the top surface (215) of the stamp mount (204). At the bottom of the handle (202) is

a substantially rectangular shape knob (212) configured to couple to a substantially rectangular receiving opening (226) disposed within the substantially circular opening (222). Two engaging tabs (227) are formed on and protrude from the inner surface of the receiving opening (226). One side of the substantial rectangular shape knob (212) or the substantial rectangular receiving opening (226) may be curved. The substantially circular opening (222) further comprises a protrusion (224) at the inner side of the substantially circular opening (222). In some implementations, for ease of portability, the geometric shape of the handle (202) may vary. For example, the shape of an illustrated handle (242') in Fig. 5 differs from the handle (202). However, like the handle (202), the handle (202') may also include the substantially L-shaped cavity (2 i4), the open end (216), the closed end (218), the projection (220), and the substantial rectangular shape knob (212) of the handle (202).

[0011] As mentioned above, the locking mechanism (208) is configured to secure the handle (202) onto the stamp mount (204). First, the handle (202) is inserted into the substantially circular opening (222) by aligning the substantially rectangular shape knob (212) at the bottom of the handle (202) to the substantially rectangular receiving opening (226) within the substantially circular opening (222). In addition, the open end (21b) of the substantially L-shaped cavity (214) is also aligned to the protrusion (224) for the insertion. Then, the handle (202) is rotated so that the protrusion (224) moves from the open end (216) to the closed end (218) of the substantially L-shaped cavity (214). At this time, the knob (212) will abut with and engage the engaging tabs (227) in the receiving opening (226). When the protrusion (224) engages the projection (220), the protrusion (224) and the projection (220) may be joined together to form a hook and a lock because of the shape designs of the protrusion (224) and the projection (220), therefore securely coupling the handle (202) with the stamp mount (204).

[0012] The stamp mount (300) may be detachable as shown in Figs. 6 and 7 and comprises a top member (302) and a bottom member (322). The top member (302) has a sidewall (304). The bottom member (322) is slidably engaged the top member (302) to form an enclosed space. In one implementation, the sidewall (304) may be cut at an angle to form an enlarged entrance for the bottom member (322) to slide into the top member (302). A top surface (307) of the top member (302) includes a substantially circular opening (306) with a protrusion (308), and the top member (302) also includes a substantially rectangular receiving opening (309), which is located within the substantially circular opening (306). This substantially circular opening (306), as discussed above, is configured to receive the handle (202). Multiple support ribs (303) formed on the inner surface or the top member (302) provide structural support to the top member (302). The top member (302) further comprises multiple ribs (312), multiple position blocks (314), multiple clip opens (316), and two blocks (318). The ribs (312) are formed on the outer surface of the sidewall (304) and transversely off-center of the top member (302). The position blocks (314) provide a sliding track for the bottom member (322). The blocks (318) are in connection with the bottom member (322) and is configured to provide stabilization between the bottom member (322) and the top member (302). The clip opens (316) provide alignment for the stamp mount (300) to engage the bottom cover (350). The subsequent paragraphs will further explain the mechanism to engage with the bottom cover (350).

[0013] The bottom member (322) comprises a top surface (321) and a bottom surface (323). The bottom surface (323) may be configured to be attached to a die face. The top surface (321) further comprises at least one ink reservoir (327) and at least one hole (328) corresponding to the at least one ink reservoir (327) for the ink to flow through to the die face, if one is attached to the bottom surface (323). The bottom member (322) further comprises a ledge (324) formed around the top surface (321). One end of the ledge (324) is a door (326) with a groove (329). On another end of the ledge (324) is a pushing block (330). The door (326), the groove (329), and the pushing block (330) allow the bottom member (322) to be pulled, pushed, and/or detached from the top member (302). The pushing block (330) is further configured to be inserted into an aligning slot (310) in the sidewall (304) of the top member (302) to ensure proper alignment of the bottom member (322) to the top member (302). The door (326) is mounted in the entrance in the sidewall (304) of the top member (302). Sliding tracks (325) are formed on opposite sidewalls (336) and (338) of the bottom member (322). The sliding tracks (325) are configured to be aligned with the position blocks (314). A protrusion (332) is placed on one end of each sliding track (325). When the bottom member (322) slidably engages the top member (302), and the protrusions (332) engage the blocks (318), the bottom member (322) is securely coupled to the top member (302).

[0014] The bottom cover (350) comprises a cavity for holding the stamp mount (300) inside, a bottom (352), a sidewall (353), multiple alignment retainers (354) and ribs (355). The bottom (352) has an inner top surface and an outer edge. In one implementation, the inner top surface of the bottom (352) of the bottom cover (350) may further comprise an ink pad for a die face that may be attached to the bottom member (322) to provide ink onto the die face. The sidewall (353) is formed on and extends up from the outer edge and the inner top surface of the bottom (352). The alignment retainers (354) are formed on and extend up from the inner surface of the bottom (352) near the sidewall (353). The ribs (355) are formed on the inner surface of the sidewall (353) and are in alignment with one another and transversely off-center. The ribs (355) selectively align and engage the ribs (312) on the outer surface of the sidewall (304) of the top member (302) to make the bottom cover (350) combining securely with the stamp mount (300). Thus, the handheld stamp

can be carried to any desired place for use. One or more of the alignment retainers (354) may also align and engage the clip opens (316).

[0015] With further reference to Fig. 2, when the handheld stamp is in use, with the transversely off-center arrangement af the ribs (312,355), the stamp mount (300) oriented substantial 180 degrees relative to the bottom cover (350) to misalign the ribs (312,355). Consequently, the bottom cover (350) may be used as a cover for the stamp mount (300) so that the die face with ink may not stain the surface that it comes in contact with.

[0016] Because the handle (202) is detachably from the stamp mount (204), a handle (202) can combined with different stamp mounts (204) with die faces having different images or patterns. Alternatively, with a detachable stamp mount (300) composed of a top member (302) and a bottom member (322), the stamp mount (300) is allow to combined with the die faces with different images or patterns. This is convenient to stamp different images or patterns and to carry the handle (202) or the stamp mount (300) without a die face, so the handheld stamp is easily carried and stored. Furthermore, to manufacture multiple stamps with different images or patterns, the elements can be selectively combined such that the amount of the elements and molds therefor can be reduced and the cost for manufacturing the stamps can also be reduced.

[0017] With reference to Fig. 8, the substantially circular shaped handheld stamp (400) comprises a handle (402), a circular shaped stamp mount (404), and a matching bottom cover (406). As discussed previously, the handle (402) may be attached to a stamp mount of varying shapes using the same locking mechanism.

[0018] With reference to Fig. 9, a circular shaped stamp mount (500) of the circular shaped handheld stamp comprises the same basic features as shown in Figs. 6 and 7, such as a top member (502) with a sidewall (504) and a bottom member (522). The bottom member (522) is slidably engaged the inner side of the top member (502) to form an enclosed space (505). The sidewall (504) of the top member (502) is cut at an angle to form an opening (506). The corresponding position for the bottom member (522) is also cut at an angle to form an edge (526) which also fits with the opening (506). The opening (506) provides the bottom member (522) a larger entry space for easier entrance. The edge (526) allows the bottom member (522) to engage the top member (502) to form a secured substantially circular shaped stamp mount (500).

Claims

1. A hand held stamp assembly, **characterized in that** the handheld stamp assembly comprises:

   a handle (202) having a cavity (214) with an open end (216) and a closed end (218), and a stamp mount (204) configured to be coupled to the handle (202), wherein
   the stamp mount (204) comprises a substantially circular opening (222) disposed at a first surface of the stamp mount (204) for receiving the handle (202) and defining a protrusion (224) disposed within the substantially circular opening (222) for locking with the cavity (214).

2. The handheld stamp assembly of claim 1, wherein the cavity (214) is a substantially L-shaped cavity.

3. The handheld stamp assembly of claim 2, wherein the substantially L-shaped cavity (214) further comprises a projection (220) engaging the protrusion (224) on the stamp mount (204) to form a hook and a lock for securely coupling the handle (202) with the stamp mount (204).

4. The handheld stamp assembly of claim 1, 2 or 3, wherein the stamp mount (204) further has a substantially rectangular opening (226) defined within the cavity (222); and
   the handle (202) further comprises a substantially rectangular shape knob (212) at the bottom of the handle (202) to insert into and engage the substantially rectangular opening (226).

5. A handheld stamp assembly, **characterized in that** the handheld stamp assembly comprises:

   a handle (202); and
   a stamp mount (300) having a top member (302) and a bottom member (322), wherein the top member (302) is coupled to the handle (202) and is slidably engaged the bottom member (322) to form an enclosed space, and
   the bottom member (322) comprises a first surface to be attached to a die face and a second surface having at least one ink reservoir (327) and at least one hole (328).

6. The handheld stamp assembly of claim 5, wherein the top member (302) is detachably coupled to the handle (202).

7. The handheld stamp assembly of claim 6, wherein the top member (302) further comprises a substantially circular opening (306) disposed at a top surface of the top member (302) for receiving the handle (202), and a protrusion (308) disposed in the substantially circular opening (306) for engaging the stamp mount (300) with the handle (202).

8. The handheld stamp assembly of claim 7, wherein the top member (302) is cut at an angle to form an opening, and a corresponding position on the bottom member (322) is cut at an angle to fit with the opening

in the top member (302).

9. The handheld stamp assembly of claim 8, wherein the top member (302) has a sidewall (304) with an end in which the opening is defined, an aligning slot (310) is defined in the other end of the sidewall (304) in the top member (302); and
the bottom member (322) further comprises a ledge (324) formed around the bottom member (322) and having
a door (326) disposed on one end of the ledge (324) and mounted in the opening in the sidewall (304) of the top member (302); and
a pushing block (330) disposed on the ledge (324) at an opposite end of the door (326) and mounted in the aligning slot (310) in the top member (302).

10. The handheld stamp assembly of claim 9, wherein the top member (302) further comprises multiple position blocks (314) configured to define a path; and the bottom member (322) further comprises one or more sliding tracks (325) disposed on the sides of the ledge (324) and mounted slidably in the path defined by the position blocks (314) in the top member (302).

11. The handheld stamp assembly of claim 10, wherein the top member (302) and the bottom member (322) respectively comprise multiple protrusions (318) and blocks (332) engaging each other to securely couple the top member (302) with the bottom member (322).

12. The handheld stamp assembly of one of claims 6 to 10, wherein the stamp mount (300) further has a substantially rectangular opening (309) defined within the cavity (306); and
the handle (202) further comprises a substantially rectangular shape knob (212) at the bottom of the handle (202) to insert into and engage the substantially rectangular opening (309).

13. The handheld stamp assembly of claim 12 further comprising a bottom cover (350) having a cavity to hold the stamp mount (300) inside.

14. The handheld stamp assembly of claim 13, wherein the bottom cover (350) comprises a bottom (352) having an inner top surface, an outer edge and multiple alignment retainers (354) formed on and extend up from the inner surface of the bottom (352); and
the top member (302) of the stamp mount (300) further comprises multiple clip opens (316) engaging respectively the alignment retainers (354) on the bottom cover (350).

15. The handheld stamp assembly of claim 14, wherein the bottom cover (350) has a sidewall (353) formed on and extending up from the outer edge and the inner top surface of the bottom (352) and having at least one rib (355) formed on an inner surface of the sidewall (353); and
the sidewall (304) of the top member (302) further has at least one rib (312) selectively and respectively engaging the at least one rib (355) on the bottom cover (350), wherein the ribs (312,355) on the top member (302) and the bottom cover (350) are transversely off-center.

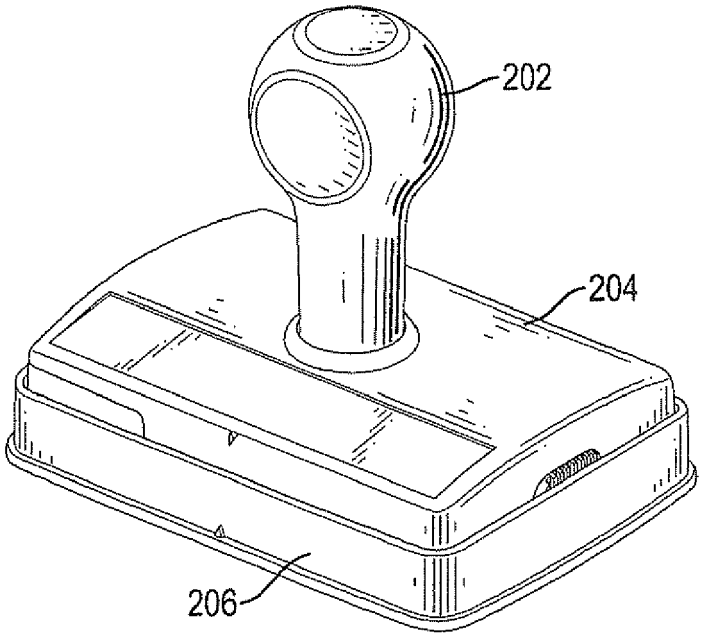

FIG.1

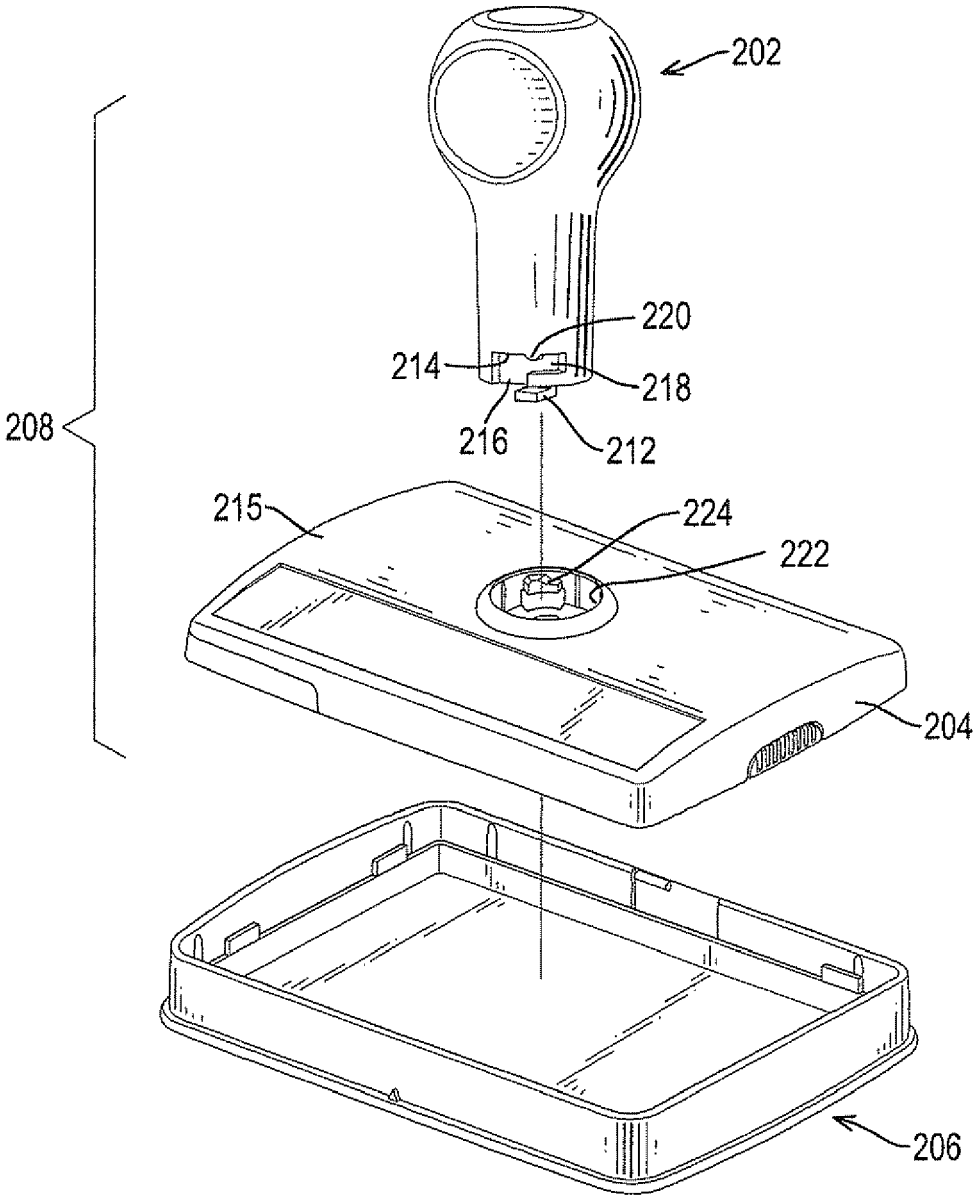

FIG.2

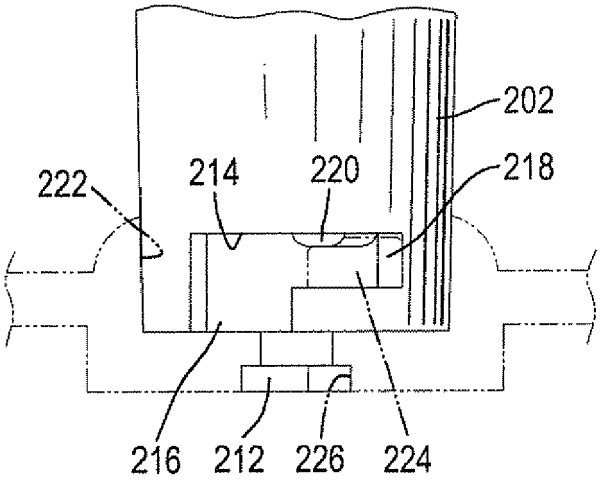

FIG.3

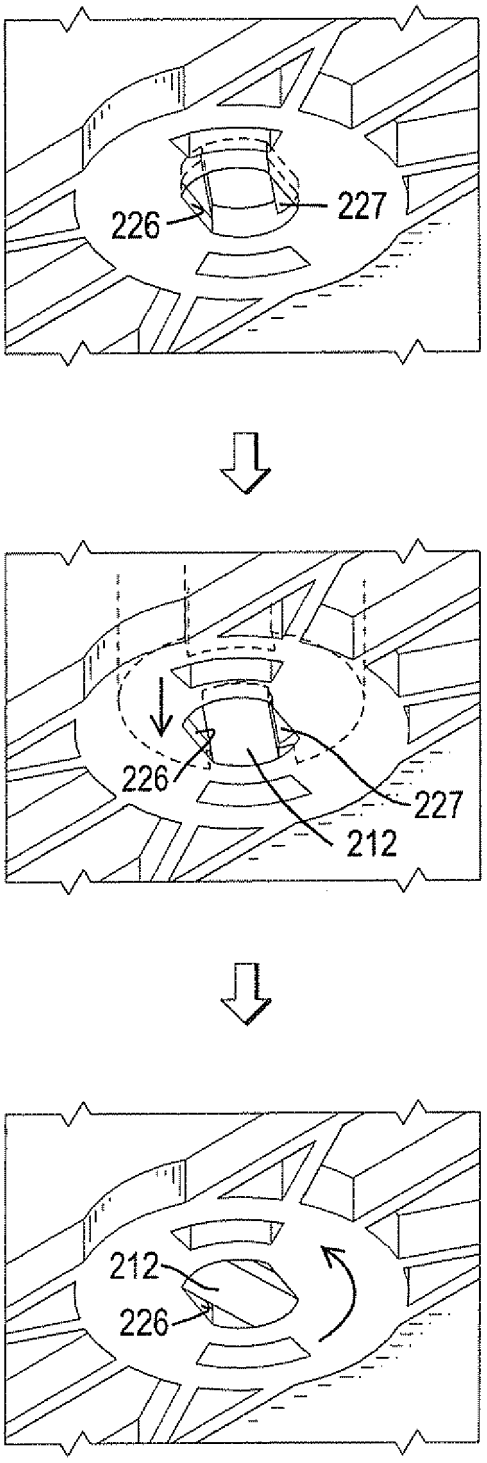

FIG.4

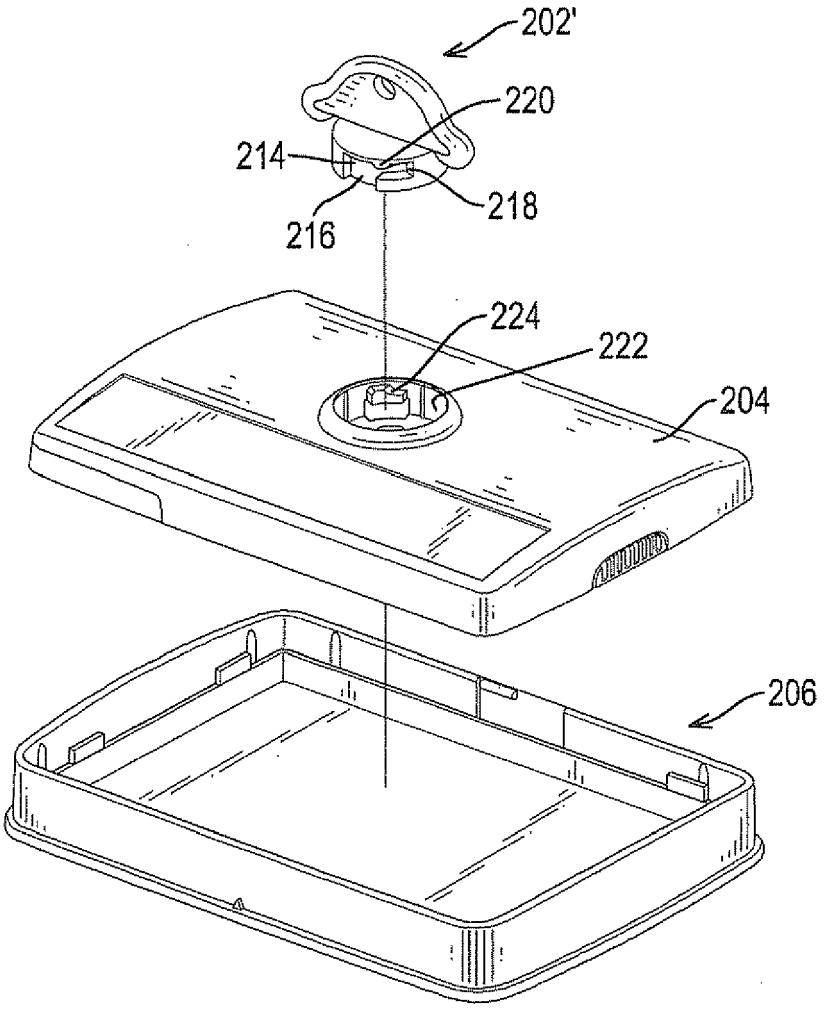

FIG.5

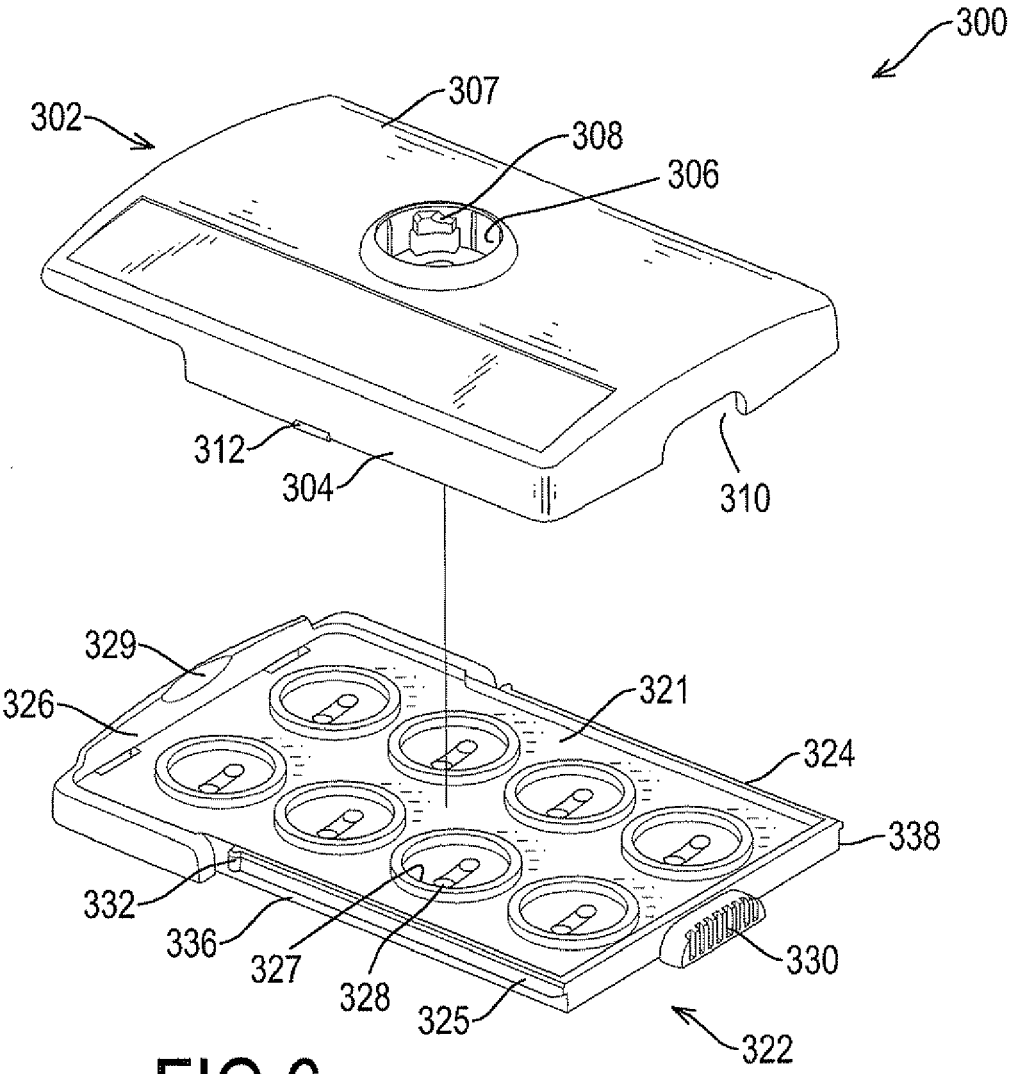
300
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FIG.6

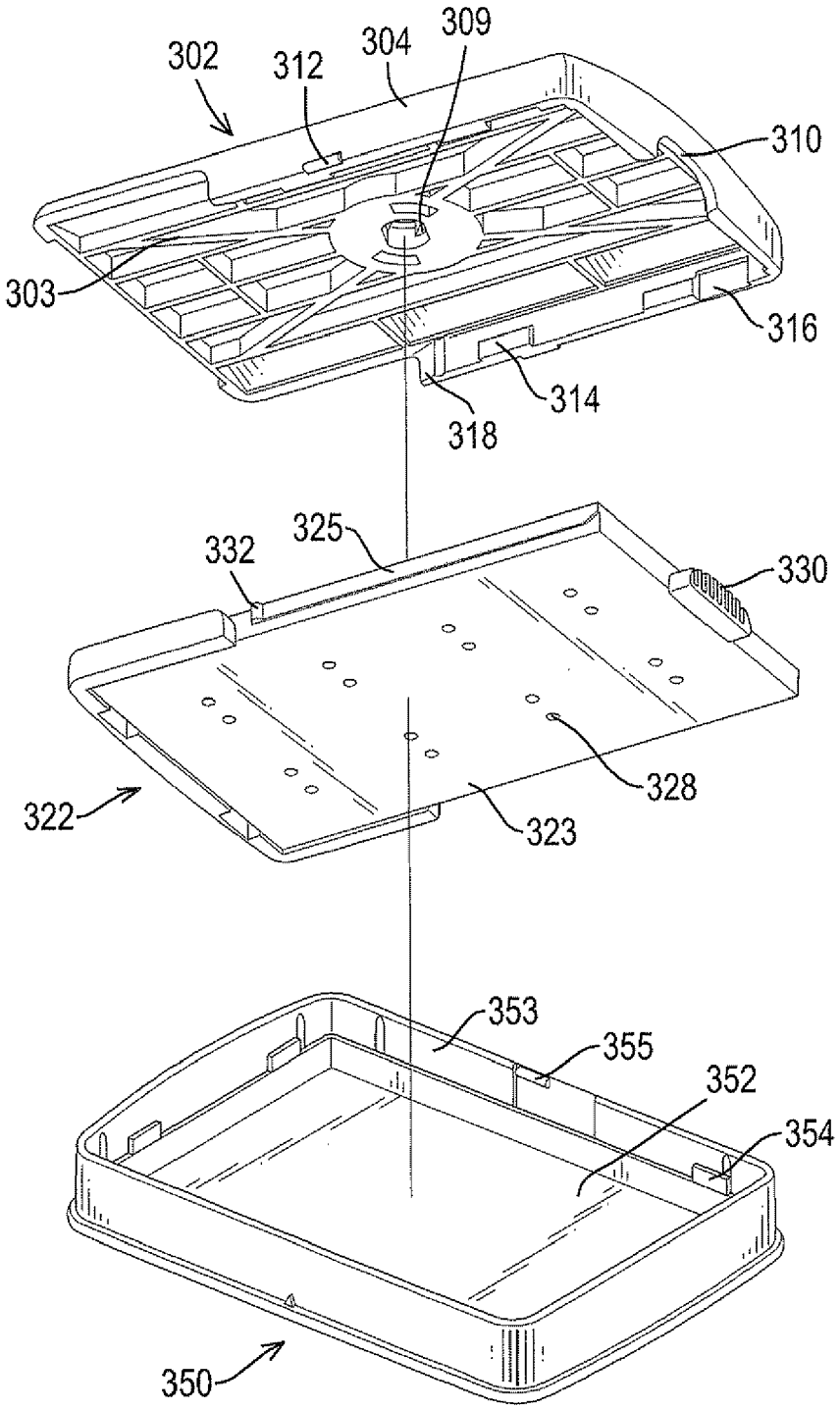
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FIG.7

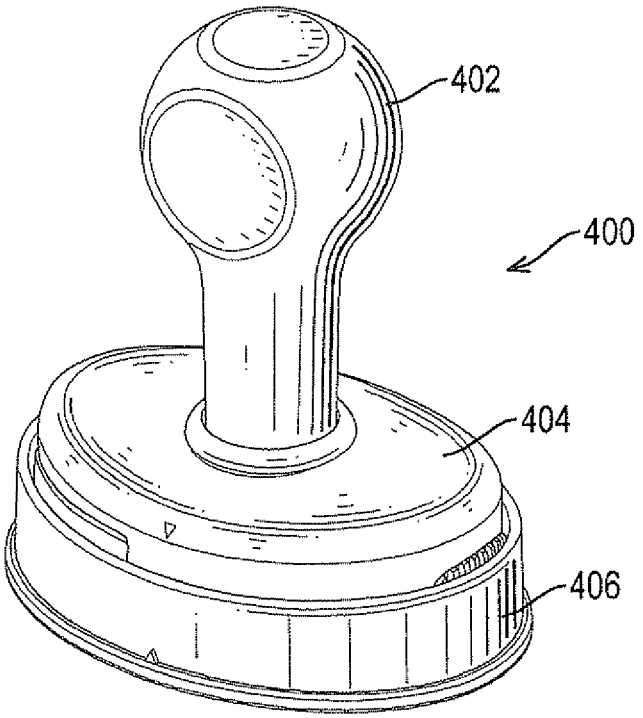

FIG.8

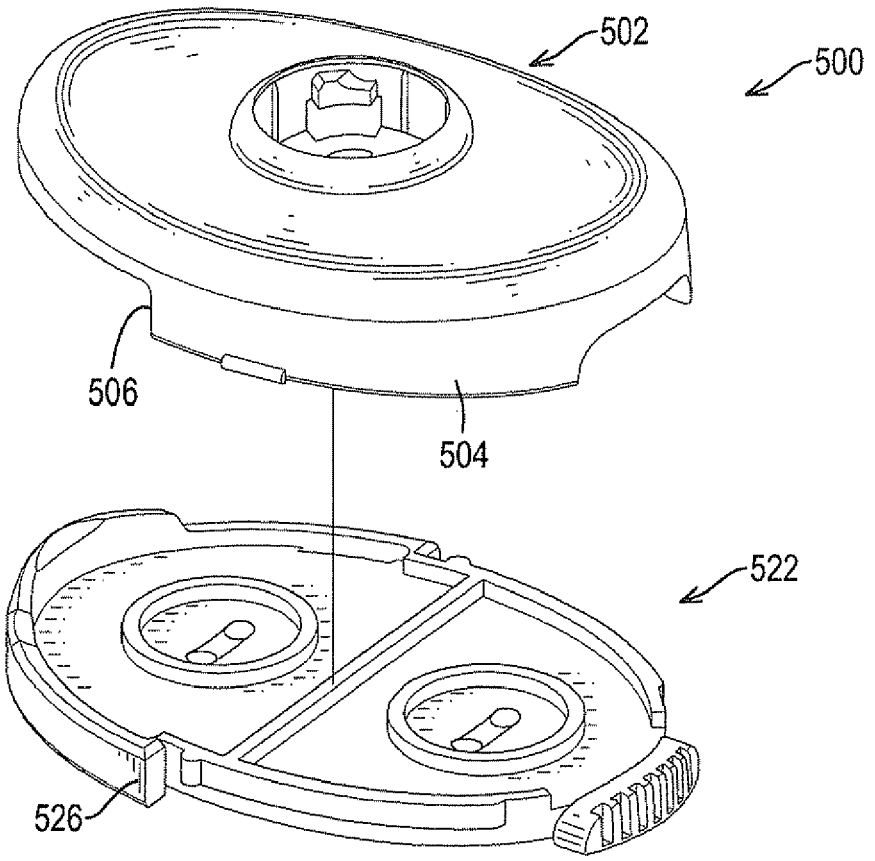

FIG.9

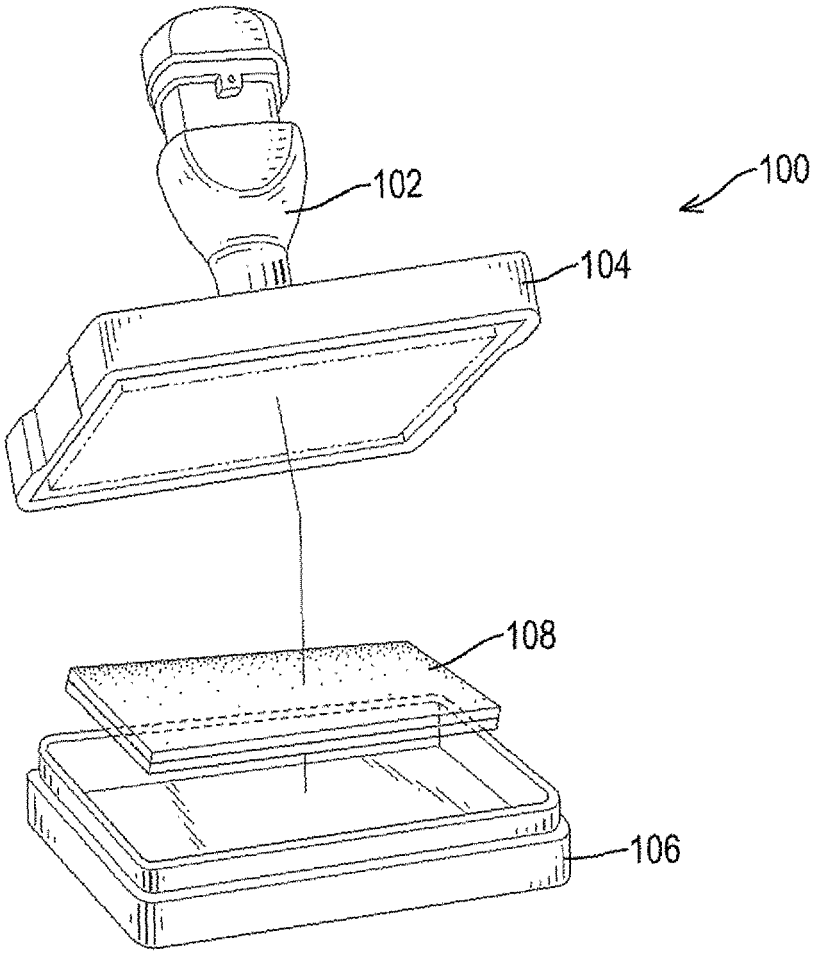

FIG.10
PRIOR ART

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EUROPEAN SEARCH REPORT

Application Number
EP 09 17 5476

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	US 3 388 662 A (RAVREBY FRED A) 18 June 1968 (1968-06-18) * the whole document *	1	
X	US 6 047 639 A (SHIH SHINY [TW]) 11 April 2000 (2000-04-11)	5,6	
A	* column 2, line 65 - column 3, line 35; claims 1,2; figures 1,2,9 *	7-15	
A	US 5 048 415 A (SHIH SHINY [TW]) 17 September 1991 (1991-09-17) * abstract; figures *	5-15	
A	US 7 073 437 B2 (PETERSEN CRAIG J [US]) 11 July 2006 (2006-07-11) * abstract; figures *	1-15	TECHNICAL FIELDS SEARCHED (IPC) B41K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	17 August 2010	Madsen, Peter

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

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Application Number
EP 09 17 5476

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 09 17 5476

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-4

   Handle for a hand held stamp assembly

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2. claims: 5-15

   Inking device for a hand held stamp assembly

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 17 5476

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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17-08-2010

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82