

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 803 372 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
02.12.1998 Bulletin 1998/49

(51) Int. Cl.⁶: **B41K 1/40**

(21) Application number: **96106282.5**

(22) Date of filing: **22.04.1996**

(54) Self-inking stamp

Selbstfärbestempel

Tampon auto-encreur

(84) Designated Contracting States:
AT DE DK ES FI FR GB GR IE IT NL SE

(43) Date of publication of application:
29.10.1997 Bulletin 1997/44

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Description

The present invention relates to self-inking stamps. The present invention also relates to a method of reinking a self-inking stamp. More particularly, the present invention relates to self-inking hand stamping devices which include operatively associated frame members and operating members. Still more particularly, the present invention relates to self-inking hand stamping devices of this nature which include an invertible stamp carrying platen and an ink pad holder relative to the frame member in which constant and reliable stamping can be continuously provided with ink being continuously applied to the stamp die in relatively constant amounts during each stamping operation.

Self-inking hand stamping devices of the general type described above have been known for many years. Many of these devices are discussed in the background section of U.S. Patent Nos. 4,432,281 and 4,852,489, which were issued to the assignee of the present application in 1984 and 1989, respectively.

The devices shown in the '281 and '489 patents have provided important commercial improvements in self-inking hand stamping devices as compared to the prior art discussed in the background section of those patents for many of the reasons discussed therein. These include the ability to grasp the device in a person's hand from any direction about the device, and then easily being placed for use and operation by the same hand position; the ability to display indicia or information of a stamp to be impressed by the device, with the indicia being legible in more than one direction; the ability to accommodate indicia covering the width of the stamp carrying platen of the device so that the full imprint of the stamp as wide as the platen can be displayed; and the ability to replenish the ink supply of the pad when it becomes dry without soiling one's fingers with ink.

These and other objects were accomplished by the device shown, for example, in the '281 patent by providing a self-inking stamping device which is easily grasped and operated by the user engaging opposite sides of an operating upper member from any direction at any location about the device; by providing an operating member with a closure over the top sloped outwardly in the upward direction from the bottom to the top and merging with the closure; providing for presentation of a flat upwardly facing top surface which has approximately the same width and length as the open area of the device where the stamp platen operates, and having a sloped surface defining a front of the device which becomes readily apparent to the user for orientation purposes; and by providing accessibility to the ink pad holder from the top of the operating member for re-inking without removal of the ink pad or for removal of the entire ink pad for replacement through the top closure.

While these devices have thus proven to be extremely successful on a commercial basis, the need

has continued for more improved self-inking hand stamping devices of this type. For example, in the device shown in the '281 patent the springs which activate the device are compressed between the ink pad and a bridge affixed to a rim at the top of the operating member. In this manner, when the cover is removed the springs remain active, and impinge directly upon the ink pad itself. While this has some advantages, it has the disadvantage of requiring that, in order to replace the ink pad, the bridge member must be detached from the rim, and lifted out of the encasement. Then, a used ink pad holder which is to be removed must be flicked off the gripping spring coils with a pencil or other such instrument and replaced with a new ink pad holder, such as to change colors of the imprints and the like.

There also exist prior art self-inking stamps which include removable ink pads. For example, in prior art devices such as those shown in U.S. Patent Nos. 1,345,255 and 1,042,766, as well as in commercially available devices such as a metal self-inking stamp manufactured by Colop, the ink pads are removable for replacement purposes. The latter device is also represented by U.S. Patent Nos. 5,058,501 and 4,823,696. In addition, a plastic self-inking stamp with a removable ink pad is sold under the name Printy, by Trodat. However, in each of these prior art devices, it is possible to inadvertently remove the ink pad during use, and in these devices it is difficult to handle these ink pads without risking the soiling of the user's fingers. Furthermore, many of these devices do not provide the option of re-inking either with or without removal of the ink pad from the device itself.

Thus, the search has continued for a self-inking device in which the springs do not necessarily remain active upon removal of the cover, and which at the same time preferably do not rest on the ink pad itself, which can thus be readily removed, either for replacement or reinking.

In addition, while in some instances it may be desirable to include a spring mechanism in these devices which is affixed to a portion of the frame member upon removal of the cover, so that they are rendered inactive thereupon, at the same time, this must be done in a manner which makes it easy to replace the cover and put the device back into its active configuration.

Furthermore, since the development of the device shown in the '281 patent, further improved ink pads have been devised, and these ink pads no longer require use of the type of pockets 24 shown in the '281 patent enclosing ink receptive material, such as disks or pads of felt, to aid in distribution of the ink from the pockets into the main body of the ink pad as shown therein.

It is also desirable to provide such self-inking stamp devices utilizing these ink pads which are cleaner and more reliable for removal, and which cannot be inadvertently removed from the device.

These and other objects have now been realized by the invention of a self-inking stamp which includes the

features defined in claims 1 and 25, and of a method of reinking a self-inking stamp as defined in claim 31; preferred features of the invention being defined in the dependent claims.

In accordance with one embodiment of the self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member, and in which the spring means is normally compressed between the cover member and the ink pad means, whereby upon removal of the cover means the spring means remains affixed to the ink pad means and is rendered inactive.

In accordance with a preferred embodiment of the self-inking stamp of the present invention, the ink pad is carried by a removable tray, and the ink pad means includes enclosure means including a wall portion separating the removable tray from the upper end of the operating member, the removable tray being slidably engaged with the upper end of the frame member below the wall portion of the enclosure means, the upper end of the frame member further including slot means through which the removable tray can be removed from the frame member, the spring means being affixed to the wall portion of the enclosure means.

In a preferred embodiment, the wall portion of the enclosure means extends from the frame member, and is preferably integral therewith.

In accordance with another embodiment of the self-inking stamp of the present invention, the removable tray includes handle means for grasping the removable tray for removal through the slot means. In another embodiment, the slot means comprises first and second slot members on either side of the frame member whereby the removable tray can be removed through the first slot member by applying pressure through the second slot member.

In accordance with another embodiment of the self-inking stamp of the present invention, the enclosure means further includes temporary locking means for temporarily locking the removable tray in the upper end of the frame member whereby the removable tray must be unlocked before it can be removed from the frame member through the slot means. In a preferred embodiment, the temporary locking means comprises downwardly extending wall means preventing horizontal sliding of the removable tray through the slot means. In a more preferred embodiment, the temporary locking means further includes interlocking means disposed on the downwardly extending wall means and the removable tray.

In accordance with a preferred embodiment of the self-inking stamp of the present invention, the slot means is a first slot and the operating member includes a first wall portion which extends below the first slot in the upper portion of the frame member, thereby blocking the first slot when the operating member is in the upper position with respect to the frame means, and the operating member further includes a second slot,

whereby the removable tray can be removed from the frame member only when the first and second slots are in alignment with each other.

In accordance with another embodiment of the self-inking stamp of the present invention in which the operating member includes a cover member removably fitted to its upper end, the ink pad includes a front surface for contact with the stamp die, and a rear surface, and the removable tray includes inking means on the rear surface of the ink pad for receiving ink and distributing the ink into the ink pad, whereby the inking means may be accessed so that ink may be supplied to the ink pad upon removal of the cover member.

In accordance with another embodiment in which the operating member includes a cover member removably fitted at the upper end of the operating member, the device further includes bridge means affixed to and spanning the upper end of the operating member, whereby the spring means is normally compressed between the bridge means and the ink pad means, whereby upon removal of the cover member the spring means remains active.

In accordance with another embodiment, the self-inking stamp of the present invention includes a frame member having a lower end for contacting a support surface and an upper end, an operating member operatively associated with and vertically displaceable with respect to the frame member between upper and lower positions with respect to the frame member, the operating member including an upper end and a cover member removably fitted at the upper end of the operating member, ink pad means for removably supporting an ink pad at the upper end of the frame member, stamp die means for displaceably mounting a stamp die within the frame member, turnover means for causing the stamp die means to be displaced between a first position in which the stamp die is in contact with the ink pad and the operating member is in its upper position with respect to the frame member, and a second position in which the stamp die is in a stamping position at the support surface when the operating member is in the lower position with respect to the frame member, and spring means affixed to the ink pad means and normally compressed between the cover member and the ink pad means whereby the spring means holds the operating member in its upper position from which the operating member can be pressed downwardly against the spring means relative to the frame member into the lower position in order to effect stamping therewith, and upon removal of the cover member the spring means remains affixed to the ink pad means and is rendered inactive.

In accordance with a preferred embodiment of this embodiment of the self-inking stamp of the present invention, the ink pad is carried by a removable tray, and the ink pad means includes enclosure means including a wall portion separating the removable tray from the upper end of the operating member, the removable tray being slidably engaged with the upper end of the frame

member below the wall portion of the enclosure means, the upper end of the frame member further including slot means for removing the removable tray from the frame member, the spring means being affixed to the wall portion of the enclosure means.

In a preferred embodiment, the wall portion of the enclosure means extends from the frame member, and is preferably integral therewith.

In accordance with another embodiment of the present invention, a self-inking stamp has been devised which includes a frame member having a lower end for contacting a support surface and an upper end, an operating member operatively associated with and vertically displaceable with respect to the frame member between upper and lower positions with respect to the frame member, the operating member including an upper end, ink pad means for supporting an ink pad at the upper end of the frame member, the ink pad means characterized by a removable tray for carrying the ink pad, and enclosure means including a wall portion separating the removable tray from the upper end of the operating member, the removable tray being slidably engaged with the upper end of the frame member below the wall portion of the enclosure means, the upper end of the frame member further including slot means for removing the removable tray from the frame member, stamp die means for displaceably mounting a stamp die within the frame member, turnover means for causing the stamp die means to be placed between a first position in which the stamp die is in contact with the ink pad when the operating member is in the upper position with respect to the frame member and a second position in which the stamp die is in a stamping position at the support surface when the operating member is in the lower position with respect to the frame member, and spring means affixed to the wall portion of the ink pad means and normally compressed between the operating member and the wall portion of the ink pad means, whereby the spring means holds the operating member in its upper position from which the operating member can be pressed downwardly against the spring means relative to the frame member into the lower position to effect stamping therewith.

In accordance with another embodiment of the present invention, a self-inking stamp has been devised which includes a frame member having a lower end for contacting a support surface and an upper end and having a first wall including first slot means, an operating member operatively associated with and vertically displaceable with respect to the frame member between upper and lower positions with respect to the frame member, the operating member including a downwardly depending first wall portion corresponding to the first wall portion of the frame member and including second slot means, ink pad means for supporting an ink pad at the upper end of the frame member, the ink pad means characterized by a removable tray for carrying the ink pad, the removable tray being slidably engaged with the

upper end of the frame member for removal through the first and second slot means, stamp die means for displaceably mounting a stamp die within the frame member, turnover means for causing the stamp die means to be displaced between a first position in which the stamp die is in contact with the ink pad and the operating member is in an upper position with respect to the frame member and a second position in which the stamp die is in a stamping position at the support surface when the operating member is in its lower position with respect to the frame member, and spring means normally compressed between the operating member and the ink pad means whereby the spring means holds the operating member in its upper position from which the operating member can be pressed downwardly against the spring means relative to the frame member into its lower position in order to effect stamping therewith, the operating member including barrier means for preventing the removable tray from being removed through the second slot means when the operating member is in its upper position.

In accordance with one embodiment of this self-inking stamp of the present invention, the barrier means is a portion of the downwardly depending first wall portion of the operating members which normally covers the first slot means when the operating member is in its upper position, whereby the removable tray can be removed through the first and second slot means upon depression of the operating member to a predetermined position in which the first slot means is in alignment with the second slot means and out of alignment with the barrier means.

In accordance with another preferred embodiment of this self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member, and the barrier means comprises a portion of the cover member which normally covers the second slot means whereby the removable tray can be removed through the first and second slot means by removing the cover member.

In accordance with another embodiment of this self-inking stamp of the present invention, the removable tray includes handle means for grasping the removable tray for removal through the first and second slot means.

In accordance with another embodiment of this self-inking stamp of the present invention, the spring means is affixed to the ink pad means.

In accordance with another embodiment of this self-inking stamp of the present invention, the frame member includes a second wall opposite the first wall and includes second slot means, and the operating member includes a second wall portion corresponding to the second wall portion of the frame member and includes second slot means, whereby the removable tray may be removed through the first slot members by applying pressure through the second slot members.

In accordance with another embodiment of this self-inking stamp of the present invention, the frame means

further includes locking means for locking the removable tray in the upper end of the frame member whereby the removable tray must unlock before it can be removed from the frame member through the first and second slot means. In a preferred embodiment, the locking means comprises downwardly extending wall means preventing horizontal sliding of the removable tray through the first and second slot means. In a highly preferred embodiment, the locking means further includes interlocking means disposed on the downwardly extending wall means and the removable tray.

In accordance with another embodiment of this self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member, and in which the spring means is affixed to the ink pad means and is normally compressed between the cover member and the ink pad means, whereby upon removal of the cover member the spring means remains affixed to the ink pad means and is rendered inactive.

In accordance with another embodiment of this self-inking stamp of the present invention, the ink pad means further comprises enclosure means including a wall portion separating the removable tray from the upper end of the operating member, the removable tray being slidably engaged with the upper end of the frame member below the wall portion of the enclosure means, and the spring means is affixed to the wall portion of the enclosure means. In a preferred embodiment, the wall portion of the enclosure means extends from the frame member and is integral therewith.

In accordance with another embodiment of this self-inking stamp of the present invention, the ink pad includes a front surface for contact with the stamp die and a rear surface, and the removable tray includes inking means on the rear surface of the ink pad for receiving ink and distributing the ink into the ink pad whereby the inking means may be accessed so that ink may be supplied to the ink pad upon removal of the cover member.

In accordance with yet another embodiment of the self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member, and bridge means affixed to and spanning the upper end of the operating member whereby the spring means is normally compressed between the bridge means and the ink pad means, whereby upon removal of the cover member the spring means remains active.

In accordance with another embodiment of the present invention, a self-inking stamp has been devised which includes a frame member having a lower end for contacting a support surface and an upper end, an operating member operatively associated with and vertically displaceable with respect to the frame member between upper and lower positions with respect to the frame member, the operating member including an upper end, ink pad means for removably supporting an

ink pad at the upper end of the frame member, the ink pad including a front surface and a rear surface and being carried by a removable tray slidably engaged with the upper end of the frame member, the upper end of the frame member including slot means for removing the removable tray from the frame member, the removable tray including inking means on the rear surface of the ink pad for receiving ink and distributing the ink into the ink pad, stamp die means for displaceably mounting a stamp die within the frame member, turnover means for causing the stamp die means to be displaced between a first position in which the stamp die is in contact with the front surface of the ink pad when the operating member is in its upper position with respect to the frame member and a second position in which the stamp die is in a stamping position at the support surface when the operating member is in its lower position with respect to the frame member, and spring means normally compressed between the operating member and the ink pad means whereby the ink pad can be removed from the frame member without removing the ink pad means and the spring means holds the operating member in its upper position from which the operating member can be pressed downwardly against the spring means relative to the frame member into its lower position in order to effect stamping therewith.

In accordance with a preferred embodiment of this self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member, and the spring means is normally compressed between the cover member and the ink pad means.

In accordance with another embodiment of this self-inking stamp of the present invention, the operating member includes a cover member removably fitted at the upper end of the operating member and bridge means affixed to and spanning the upper end of the operating member characterized in that the spring means is normally compressed between the bridge means and the ink pad means.

In accordance with a preferred embodiment of this self-inking stamp of the present invention, the ink pad means includes enclosure means including a wall portion separating the removable tray from the upper end of the operating member, the removable tray being slidably engaged with the upper end of the frame member below the wall portion of the enclosure means.

In accordance with another embodiment of this self-inking stamp of the present invention, the spring means is affixed to the ink pad means. Preferably, the operating member includes a cover member removably fitted at the upper end of the operating member, and the spring means is normally compressed between the cover member and the ink pad means, whereby upon removal of the cover member the spring means remains affixed to the ink pad means and is rendered inactive.

In accordance with one embodiment of this self-inking stamp of the present invention, the slot means com-

prises a first slot and the operating member includes a first wall portion which extends below the first slot in the upper portion of the frame member thereby blocking the first slot when the operating member is in its upper position with respect to the frame means, the operating member further including a second slot whereby the removable tray can be removed from the frame member only when the first and second slots are in alignment with each other.

In a preferred embodiment of the self-inking stamp of the present invention, the operating member includes barrier means for preventing the removable tray from being removed through the second slot means when the operating member is in its upper position. In another embodiment of this self-inking stamp of the present invention, the barrier means comprises a portion of the first wall portion of the operating member which normally covers the first slot when the operating member is in its upper position, whereby the removable tray can only be removed through the first and second slots upon depression of the operating member to a predetermined position in which the first slot is in alignment with the second slot and out of alignment with the barrier means. In another embodiment, the operating member includes a cover member removably fitted at the upper end of the operating member, and the barrier means comprises a portion of the cover member which normally covers the slot, whereby the removable tray can only be removed through the first and second slots by removing the cover member.

The self-inking stamp devices of the present invention may be more readily understood with reference to the following detailed description, in which reference is made to the Figures, characterized in that:

FIG. 1 is a front perspective view of a self-inking stamp in accordance with the present invention;

FIG. 2 is a front perspective, exploded view of the self-inking stamp shown in FIG. 1;

FIG. 3 is a front perspective, partially cut-away view of the self-inking stamp shown in FIG. 1;

FIG. 4 is a rear perspective, exploded view of the self-inking stamp shown in FIG. 2;

FIG. 5 is a front cross-sectional view of another embodiment of the self-inking stamp of the present invention;

FIG. 6 is a side cross-sectional view of the self-inking stamp shown in FIG. 5, with the stamp die in its upper position;

FIG. 7 is a side cross-sectional view of the self-inking stamp shown in FIG. 6, with the stamp die shown in two intermediate positions between its upper and lower positions, the second position shown in phantom thereon;

FIG. 8 is a rear perspective, exploded, partially cut-away view of another embodiment of the self-inking stamp of the present invention;

FIG. 9 is a rear perspective, exploded view of

another embodiment of the self-inking stamp of the present invention;

FIG. 10 is a rear perspective, exploded, partially cut-away view of another embodiment of the self-inking stamp of the present invention;

FIG. 11 is a rear perspective, exploded, partially cut-away view of the self-inking stamp shown in FIG. 10 with the operating member depressed for removal of the removable tray with the ink pad thereon; and

FIG. 12 is a partial front perspective view of another embodiment of the self-inking stamp of the present invention.

Referring to the Figures, in which like numerals refer to like elements thereof, FIG. 1 shows a self-inking stamp of the present invention including a frame member 1 which is preferably an upright hollow rectangular member which has a lower end 3. The frame member 1 is hollow and includes a front wall 2a, a rear wall 2b, and side walls 2c and 2d, providing an overall rectangular configuration. The lower end 3 is intended to bear against a supporting surface. An operating member 5 is operatively associated with the frame member 1, and interfits with the frame member 1 so as to be vertically displaceable relative thereto. In the embodiment shown in FIG. 1, the operating member 5 includes a two-piece structure including a hollow encasement 6a, which surrounds the frame member 1, and a closure 6b, which is removably fitted over the top of the encasement 6a. The hollow encasement 6a also has a generally rectangular configuration, including a front wall 7a, a rear wall 7b, and side walls 7c and 7d. Each of parts 6a and 6b of operating member 5 is preferably made of a one-piece construction of a suitably rigid and durable molding of any suitable plastic material, for example, of an acrylonitrile-butadiene-styrene resin known as ABS.

As can be seen in FIGS. 3 and 5, for example, the operating member 5 is normally held in an upward position with respect to the frame member 1 by means of spring means 8. From this configuration it is thus possible to actuate the self-inking stamp of the present invention by thrusting downwardly by one's hand against the operating member 5 relative to the frame member 1 to a stamping position, such as that shown by the phantom lines representing the lower location of the operating member in FIG. 7.

In prior art devices, such as those shown in the '281 patent, an ink pad holder containing an ink pad is supported by the frame member 1 at a distance above the lower end thereof. In the self-inking stamps of the present invention, the ink pad shown in the drawings is indicated by reference numeral 10, and is carried by a removable tray 12. The removable tray 12 carrying the ink pad 10 is removably supported at the upper end of the frame member 1. The removable tray 12 preferably encloses the ink pad 10 on five of its six sides; i.e., all sides except for its flat inking surface 10a (see FIG. 5).

Removable tray 12 thus includes an upper surface 12a, depending front and rear side walls 12b and 12c, and depending left and right side walls 12d and 12e, as can best be seen in FIG. 4. This removable tray 12, along with its ink pad 10, is removably supported at the upper end of frame member 1 by means of a pair of side flanges 14a and 14b as shown in FIG. 5, extending from the inside surface of side walls 2c and 2d of the frame member 1. The removable tray 12 is further maintained in its position at the upper end of frame member 1 by means of front flange 16a and rear flange 16b extending from front wall 2a and the rear wall 2b of the frame member 1, respectively. In this manner, the removable tray 12 can be slidably removed from its position at the upper end of frame member 1 through rear slot 18 therein.

The removable tray 12 is further contained within an extending top wall 20 which extends from the front wall 2a of the frame member 1, and is preferably integral therewith.

The basic mechanism for the stamp die carrying platen used in the various embodiments of the present invention shown in the drawings is the same as that used in the '281 patent. Thus, referring specifically to FIGS. 6 and 7, a displaceable stamp die carrying platen 22 is located inside frame member 1 in the space between its lower end and the inking face 10a of ink pad 10. Furthermore, coacting means 24 of a generally known nature, having parts connected respectively with the stamp die carrying platen 22, the frame member 1, and the operating member 5 are provided for disposing the platen in an inking position at the ink pad 10 when the operating member 5 is in its normal, upward position, and disposing the platen in an inverted position to impress a surface at the lower end 3 of the frame member 1 when the operating member is depressed to its stamping position. It is contemplated, however, that other mechanisms can be devised and utilized for accomplishing the same result in place of this mechanism which is specifically shown in the '281 patent.

The removable tray 12 holding the ink pad 10 in its downwardly facing position seated on flanges 14a, 14b, 16a, and 16b, again includes a top wall portion 12a. This top wall portion 12a is formed with at least one and preferably two upwardly facing open cup formations 28a and 28b, as can best be seen in FIG. 5. In prior art such as the devices shown in the '281 patent, it was thus necessary to include additional pockets between the ink pad itself and these open cup formations, and include in these pockets ink receptive material, such as disks or pads of felt, to aid in distribution of the ink from the pockets into the main body of the ink pad itself. However, in view of the nature of the ink pads which have now been developed, such as reticulated foam pads, it is now possible to entirely eliminate these pockets so that the ink will flow directly from these open cup formations 28a and 28b into the ink pad 10 itself. Each of these open cup formations 28a and 28b can thus receive a limited

quantity of ink for dissemination into the ink pad 10. Each of these cup formations is provided in order to hold a few drops of ink as required for the ink pad of the stamp. When the ink pad 10 thus needs to be re-inked, whether this is by removal of removable tray 12 itself from the frame member 1, or by removal of the cover member 6b for re-inking of the removable tray 12 in place through the top of the device, one can merely drop ink into each of the cups 28a and 28b until the cup is nearly full, and the ink will then be drawn through the openings 30a and 30b in the top surface 12a of the removable tray 12 into the ink pad 10.

As discussed above, operation of the stamp die carrying platen 22 and its displacement from an upper inking position at the face of the ink pad 10 to the inverted stamping position at the lower end 3 of the frame member 1 where the stamp indicia on the stamp die will impress against a surface at that lower end, by the action of the mechanism generally indicated at 24, which is, in turn, operated by downward movement of the operating member 5 relative to the frame member 1 against the force of the spring means 8, is a conventional mechanism, and is specifically shown in the '281 patent. The operation of this turnover mechanism is thus specifically described in the '281 patent, beginning at column 4, line 14 and extending through column 5, line 28 of the '281 patent.

The particular reference numerals for the elements of this turnover mechanism are shown in the Figures in the present application with dotted lead lines using the same reference numerals as those used in the '281 patent.

As can be seen in FIGS. 2 and 5, the hollow encasement 6a surrounding the frame member 1 and the elongated slots 17 are vertically deep enough so that the encasement 6a of the operating member 5 encompasses substantially the entirety of the frame member 1 when depressed to its stamping position. Operation of the device, as in the past, is thus readily accomplished by grasping the device by fingers engaging opposite sides of the encasement at any location about the device, or even in the palm of the hand, and then with the same grasp, without changing position, pressing the device at the desired imprint location and operating the device in the manner discussed above.

The encasement 6a of the operating member 5 includes walls which are molded with substantially uniform thickness, and which include inward protrusions such as vertically extending ribs 50 which deepen in the upward direction and are provided along the inner sides of these walls of the operating member 5. Preferably, these ribs are included on both the end and side walls thereof, and therefore completely contain and control the slidable displacement between the frame member 1 and the operating member 5.

In the embodiment of the invention shown in FIGS. 2 through 4, the operating member 5 includes at its top end a rim portion 52 having a reduced thickness as

compared to the walls of encasement 6a, and which fits inside and holds in place the cover member 6b so that the cover member is removably engaged onto the upper end of the encasement 6a.

A highly important element of the present invention relates to the application, use and connection of the spring means 8 previously discussed. In particular, the two spring member 54a and 54b shown in FIG. 2, for example, are affixed in a permanent manner to the upper wall 20 of the frame member 1. In particular, coil springs 54a and 54b include a free upper end and a lower end which preferably surrounds central locating disks 56a and 56b and is affixed to the upper surface 20 of the frame member 1 by means of outwardly extending fingers 57 extending from the central locating disks 56a and 56b to the upper surface of the lowest coil of coil springs 54a and 54b to permanently affix this end of the coils to the upper wall 20 of the frame member 1. As can again be seen in FIG. 2, upon removal of the cover member 6b from the operating member 5, the coil springs 54a and 54b are now rendered inactive. Thus, where they previously were compressed between the upper wall portion 20 of the frame member 1 and the inner surface of the cover member 6b, they are no longer compressed, but at the same time remain affixed to the upper wall surface 20 of the frame member 1 in the manner discussed herein.

Further in this manner, the location and operation of the coil springs 54a and 54b do not interfere with the removal of the ink pad 10 in its removable tray 12 from its position at the upper end of the frame member 1 below upper wall portion 20 thereof.

This can be contrasted again, for example, to the arrangement shown in the '281 patent, in which the lowermost coils of the springs are connected with the ink pad holder 6 shown therein, such as by being fitted onto and gripping the upwardly protruding backing portions shown in that patent. Therefore, in accordance with that device, in order to remove the ink pad, it is necessary to remove the closure from the operating member, remove the bridge member 60 shown therein from the rim 55, and then remove the springs and the ink pad holder thereof as a unit. Quite significantly, however, in accordance with the present invention, none of this is any longer necessary.

It is further noted that whether or not the coil springs 54a and 54b are rendered inactive upon removal of the closure 6b, the advantages of the present invention, in terms of the ability to remove the ink pad 10 with its removable tray 12 independently of the springs, is also achieved. Thus, in another embodiment of the present invention as shown in FIG. 8, the springs therein, 154a and 154b, are affixed to both the top wall portion 120 of the frame member 11 and a pair of bridges 160a and 160b shown therein. This embodiment of the present invention will be discussed in more detail below.

Returning to the embodiment of FIGS. 1 through 4,

in this embodiment removal of the ink pad 10 carried by removable tray 12 is facilitated by grasping handle 60 on the forward edge of removable tray 12 in the user's finger and pulling the removable tray 12 horizontally outwardly through slot 18. The combination of handle 60 on a slidably removable ink pad holder, such as removable tray 12, is another feature of the present invention that results in an advantage over prior art devices. In this regard, handle 60 facilitates efficient removal of removable tray 12 to minimize the risk of soiling one's fingers.

As can be seen in FIGS. 2 through 4, slot 18 in the rear wall 7b of encasement member 6a is defined by depressed top wall portion 62 of the rear wall 7b, and by side wall portions 62a and 62b extending through an area corresponding to a portion of the rim 52 at the upper end of the operating member 5. A corresponding slot 64 is provided in the frame member 1 so that when these slots 18 and 64 are aligned, the removable tray 12 can be removed therethrough. Furthermore, in this embodiment the cover member 6b is removed, the springs 54a and 54b are rendered inactive, and the operating member 5 thus falls to its lowest position with respect to the frame member 1. It is noted, however, that in this lowermost position, the bottom ends of the frame member and operating member may not be precisely in alignment. Indeed, it is expected that with the stamp die being present in the device, the bottom of the operating member when the stamp die is at its lowest, stamping position will be slightly above the bottom of the frame member, which is resting on the support surface itself. In this configuration, the slot 64 in frame member 1 is in alignment with the slot 18 in the operating member 5 and the ink pad removable tray 12 can be readily removed by being slid horizontally therefrom. In the case of the device shown in FIGS. 2 through 4, it is also required that the cover member 6b be initially removed. In this case, the reason for this is that the cover member 6b includes a depending skirt portion 68 which at least partially closes the slot 18 in the operating member 5 when the cover member 6b is in its locked position on rim portion 52. Thus, even where the slots in the frame member 1 and the operating member 5 are in alignment, in this embodiment, the removable tray 12 cannot be withdrawn until the cover member 6b has been removed, thus opening slot 18. In other embodiments of the present invention, however, this is not the case. This, again, will be discussed in more detail with respect to those embodiments below.

It can also be seen in the Figures, such as FIG. 4, that removal of the removable tray 12 is facilitated in the case where the removable tray 12 includes the open cup members 28a and 28b discussed above, by the inclusion of corresponding slots 29a and 29b in the top wall portion 20 of the frame member 1. Thus, the open cup members 28a and 28b can readily slide between a position where the removable tray 12 is fully contained within the frame member 1, as shown in FIG. 3, and a position where the tray is being removed therefrom, as

shown in FIG. 4.

Turning to the embodiment shown in FIG. 8, in this embodiment, which also includes removable tray 112 for an ink pad 110, an arrangement is shown in which the spring members 154a and 154b remain active upon removal of the cover member 106b of operating member 105. Thus, in this case, bridge members 160a and 160b are provided to restrain the upper end of the spring members 154a and 154b. The bridge members 160a and 160b are specifically designed to compress the spring mechanism against the top wall portion 120 of the frame member 101, and to do so in a manner in which the removable tray 112 can not only be removed, but in which the open cup formations 128a and 128b thereon are accessible through the top of the operating member 105 when the cover member 106b has been removed, for purposes of re-inking without removal of the removable tray 112. Thus, this device can be re-inked in either manner, and the ink pad 110 can be removed with removable tray 112 for replacement if desired. This is accomplished in part by the bridge members 160a and 160b, and their respective spring members 154a and 154b being displaced to the side of the top wall portion 120 as compared to the location of open cup formations 128a and 128b.

Bridge members 160a and 160b are fixed across the upper end of the operating member 105. These bridge members extend between and are preferably integral with ribs 150 running vertically along the inner walls of the operating member 105. In this case, the bridge member 160a runs between a vertical rib member 150a on the inner surface of rear wall 107b of the operating member 105 and vertical rib member 150b on the inner surface at the front end of the side wall 107d of the operating member 105. Correspondingly, bridge member 160b runs between a vertical rib member 150c on the other side of the rear wall 107b of the operating member 105 from the rib member 150a, and rib member 150d on the inner surface at the front end of side wall 107c of the operating member 105. In each case, the bridge members 160a and 160b include a central elevated portion 161a and 161b, respectively, which act as a seat for the upper end of the spring members 154a and 154b. Thus, the central raised portions 161a and 161b include vertically extending side walls 162a and 162b and top wall 163a in the case of bridge member 160a, and corresponding vertically extending side walls 162c and 162d and horizontal top wall 163b in the case of bridge member 160b. Depending downwardly from the lower surface of the top walls 163a and 163b are pegs 165a and 165b, respectively, upon which the spring members 154a and 154b are located at their upper end. At the lower end of the spring members 154a and 154b, they can be located at the desired position on the top wall portion 120 of the frame member 101 by means of recessed portions 121a and 121b thereon, with centering raised portions 122a and 122b concentrically disposed within recessed portions 121a and

121b, so that the lower end of the spring members 154a and 154b can be snap fitted into depressed portions 121a and 121b for proper alignment and retention.

In this embodiment, in order to remove the removable tray 112 with the ink pad 110 therein, it is necessary to remove the cover member 106b, since its depending skirt portion 168 once again blocks the slot 118 in the rear wall 102a of the operating member 105, and to then press downwardly on the operating member 105 against the resistance pressure of the spring members 154a and 154b until the bottom ends of the operating member 105 and the frame member 101 are at the lowest positions, so that the slot 118 is now in alignment with the corresponding slot 164 in the frame member 101, whereby while holding the operating member in this lower configuration, the removable tray 112 can readily slide out through these corresponding slots.

In connection with the device shown in the '281 patent, the upper ends of the spring members are retained by a particular type of bridge member which spans the upper end of the rim of the operating member thereof, such as that shown in FIG. 10 hereof and discussed more fully below. Thus, in the case of this stamp die of the '281 patent, access to the open cups is through the center of the springs, as can be seen in FIG. 1 thereof, and through openings in the bridge member itself aligned therewith. In the present invention, however, the unique bridge members 160a and 160b hereof are arranged so as to leave ready access to the open cup members 128a and 128b in the central portion of the operating member 105, separate and apart from the spring members 154a and 154b, which are displaced to the side of open cup members 128a and 128b. This permits the removable tray 112 to be removed from the device while the spring members 154a and 154b remain active, in this case between the top wall member 120 of the frame member 101 and the bridge members 160a and 160b.

Turning next to FIG. 9, a device which corresponds in many respects to the device shown in FIGS. 2 through 4 and discussed above is shown. However, in this case, the mechanism for retention of the removable tray 212 within the device is somewhat different. Here, when the removable tray 212 is in its closed position, below the upper wall portion 220 of the frame member 201, temporary locking means is provided to temporarily lock the removable tray 212 in that position. In this case, the upper wall portion 220 includes depending skirt portions 220a and 220b on either side of the front portions thereof, blocking portions of the slot 264 in the frame member 101. Furthermore, the front end 212b of the removable tray 212 includes a pair of raised tabs 213a and 213b extending therefrom. Correspondingly, the inner walls of the depending skirt portions 220a and 220b include correspondingly shaped indented portions 215a and 215b for receiving the extending tabs 213a and 213b in a snap-fit configuration. When it is therefore desired to remove the removable tray 212 from this self-

inking stamp, the cover member 206b is removed, thus deactivating the spring members 254a and 254b, therefore also permitting the lower end of the operating member 205 to drop downwardly towards the lower end of the frame member 201, therefore aligning the slot 218 in the operating member 205 with the slot 264 in the frame member 201.

Furthermore, in this case the slot 218 in the operating member 205 must be a deeper slot, since it must be adequate to provide room for the removable tray 212 to exit therefrom; i.e., apart from the necessity to provide access for the total thickness of the removable tray 212 itself, it additionally requires further room to compensate for the distance of the length of the depending skirts 220a and 220b, so that the removable tray 212 can clear the bottom edge of these skirts and still fit within the slot 218 for removal therefrom. Removal of the removable tray 212 can then be effected by using roughened portion 230 as a grip for a thumb, as shown in FIG. 9, to initially push downwardly so as to unlock the temporary locking mechanism as between tabs 213a and 213b and recesses 215a and 215b, and to then pull outwardly to slide the removable tray 212 out of the opening provided by corresponding slots 264 and 218.

Another embodiment of the self-inking stamp of the present invention is shown in FIG. 10. In this embodiment, a bridge member 360 is employed which is similar to the bridge member given reference numeral 60 in the '281 patent, and specifically shown in FIGS. 1 through 3 thereof. In this case, the spring members 354a and 354b are compressed between bridge member 360 and the upper wall portion 320 of the frame member 301. The details of bridge member 360, and the way in which it is removably affixed to the rim portion 352 of the operating member 305, are disclosed in the '281 patent at column 6, lines 18 through 46.

As contrasted to the device shown in the '281 patent, however, in the case of the embodiment in FIG. 10, it is still possible to remove the removable tray 312 while the spring members 354a and 354b remain active; i.e., in a compressed state, once again in this case by pressing downwardly on the operating member 305 until the slot 364 in the rear wall of the frame member 301 is in alignment with the slot 318 in the rear wall of the operating member 305, i.e., again in this case when the bottom ends of the frame member 301 and the operating member 305 are at their lowermost respective positions. In this case, that configuration is shown in FIG. 11, with the removable tray 312 now partially removed from the device though these corresponding slots, which are now in alignment as shown therein.

It is also noted that in the configuration shown in FIGS. 10 and 11, removal of the removable tray 312 is facilitated by slots not only in the rear walls 302b and 307b of the frame member 301 and the operating member 305, respectively, but also in the front walls 302a and 307a of the frame member 301 and the operating

member 305, respectively. Thus, additional slot 318a is included in the front wall 307a of the operating member 305, at a location corresponding to the slot 318 in the front wall thereof. Similarly, a further slot 364a is located in the front wall 302a of the frame member 301 at a location corresponding to the slot 364 in the front wall thereof. In this manner, removal of the removable tray 312 is facilitated by being able to push the tray through the aligned slots 318a and 364a until it extends out of the front slots 318 and 364, so that it can be readily pulled therefrom, again into the configuration shown in FIG. 11.

Turning to FIG. 12, a similar device is shown, but in this case it is noted that, unlike a number of the devices discussed above, the location of the slots in the frame members and operating members are below the location of the cover, i.e., at a location lower along the front and rear walls of the frame members and operating members from those shown in these other embodiments, so that it is not necessary to remove the cover member 406b from this configuration in order to align the slots and remove the removable tray therefrom. Thus, in these devices it is not necessary to have a removable cover at all, and a single continuous operating member 405 could be used, with an integral cover 406b that is not removable therefrom. In such a configuration, the removable tray 412 as seen in FIG. 12 can be removed by lowering the operating member 405 by pushing downwardly a partial distance; i.e., only until the corresponding slots 464 in the rear wall 402b in frame members 401 and 418 in the rear wall 407b in operating member 405 are in alignment, and where applicable similar corresponding slots 464a in the front wall 402a of the frame members 401 and slot 418a in the front wall 407a of the operating member 405 are in alignment, so that the removable tray 412 can be removed in a similar manner to that described in connection with the embodiment set forth in FIGS. 10 and 11 and discussed above.

Although the invention herein has been described with reference to particular embodiments, it is to be understood that these embodiments are merely illustrative of the principles and applications of the present invention. It is therefore to be understood that numerous modifications may be made to the illustrative embodiments and that other arrangements may be devised without departing from the scope of the present invention as defined by the appended claims.

Claims

1. A self-inking stamp comprising:

a frame member (1) having a lower end (3) for contacting a support surface and an upper end, an operating member (5) operatively associated with and vertically displaceable with respect to said frame member (1) between

upper and lower positions with respect to said frame member (1), said operating member (5) including an upper end,

ink pad means (14a, 14b, 16a, 16b, 20) for removably supporting an ink pad (10) at said upper end of said frame member (1), said ink pad (10) including a front surface (10a) and a rear surface and being carried by a removable tray (12) slidably engaged with said upper end of said frame member (1), said upper end of said frame member (1) including slot means (64) for removing said removable tray (12) from said frame member, said removable tray (12) including inking means (28a, 28b, 30a, 30b) on said rear surface of said ink pad (10) for receiving ink and distributing said ink onto said ink pad (10),

stamp die means (22) for displaceably mounting a stamp die within said frame member (1), turnover means (24) for causing said stamp die means (22) to be displaced between a first position, wherein said stamp die is in contact with said front surface (10a) of said ink pad (10) when said operating member (5) is in said upper position with respect to said frame member (1) and a second position, and wherein said stamp die is in a stamping position at said support surface when said operating member (5) is in said lower position with respect to said frame member (1), and spring means (8) normally compressed between said operating member (5) and said ink pad means (14a, 14b, 16a, 16b, 20),

whereby said ink pad (10) can be removed from said frame member (1) without removing said ink pad means (14a, 14b, 16a, 16b, 20), and said spring means (8) holds said operating member (5) in said upper position from which said operating member (5) can be pressed downwardly against said spring means (8) relative to said frame member (1) into said lower position in order to effect stamping.

2. The self-inking stamp of claim 1 characterized in that said operating member (5) includes a cover member (6b) removably fitted at said upper end of said operating member, and said spring means (8) is normally compressed between said cover member (6b) and said ink pad means (14a, 14b, 16a, 16b, 20).
3. The self-inking stamp of claim 1 characterized in that said operating member (5) includes a cover member (6b) removably fitted at said upper end of said operating member (5), and bridge means (160a, 160b, 161a, 161b, 360) affixed to and spanning said upper end of said operating member (5), and in that said spring means (8) is normally com-

pressed between said bridge means (160a, 160b, 161a, 161b, 360) and said ink pad means (20, 120, 220).

4. The self-inking stamp of claim 1 characterized in that said ink pad means (14a, 14b, 16a, 16b, 20) includes enclosure means (20) including a wall portion separating said removable tray (12) from said upper end of said operating member (5), said removable tray (12) being slidably engaged with said upper end of said frame member (1) below said wall portion of said enclosure means (20).
5. The self-inking stamp of claim 4 characterized in that said enclosure means (220) further includes temporary locking means (220a, 220b, 215a, 215b) for temporarily locking said removable tray (212) in said upper end of said frame member (201), whereby said removable tray (212) must be unlocked before it can be removed from said frame member (201) through said slot means (264).
6. The self-inking stamp of claim 5 characterized in that said temporary locking means (220a, 220b, 215a, 215b) comprises downwardly extending wall means (220a, 220b) preventing horizontal sliding of said removable tray (212) through said slot means (264).
7. The self-inking stamp of claim 6 characterized in that said temporary locking means further includes interlocking means (215a, 215b, 213a, 213b) disposed on said downwardly extending wall means (220a, 220b) and said removable tray (212).
8. The self-inking stamp of claim 1 characterized in that said slot means comprises a first slot (64) and said operating member (5) includes a first wall portion which extends below said first slot (64) in said upper portion of said frame member (1), thereby blocking said first slot (64) when said operating member (5) is in said upper position with respect to said frame means (1), said operating member (5) further including a second slot (18), whereby said removable tray (12) can be removed from said frame member (1) only when said first and second slots (64, 18) are in alignment with each other.
9. The self-inking stamp of claim 1 characterized in that said removable tray (12) includes handle means (60) for grasping said removable tray (12) for removal through said slot means (64, 18).
10. The self-inking stamp of claim 1 characterized in that said slot means comprises first and second slot members on either side of said frame member whereby said removable tray may be removed through said first slot (64) member by applying

pressure onto said removable tray (12) through said second slot member (18).

11. The self-inking stamp of claim 1 characterized in that said spring means (8) is affixed to said ink pad means (14a, 14b, 16a, 16b, 20). 5
12. The self-inking stamp of claim 11 characterized in that said operating member (5) includes a cover member (6b) removably fitted at said upper end of said operating member, and said spring means (8) is normally compressed between said cover member and said ink pad means (14a, 14b, 16a, 16b, 20), whereby upon removal of said cover member (6b) said spring means (8) remains affixed to said ink pad means (20) and is rendered inactive. 10 15
13. The self-inking stamp of claim 12 including spring affixing means (57) for affixing said spring means (8) to said ink pad means (14a, 14b, 16a, 16b, 20), said spring affixing means comprising a plurality of finger members (57). 20
14. The self-inking stamp of claim 13 characterized in that said ink pad means (14a, 14b, 16a, 16b, 20) includes enclosure means (20) including a wall portion separating said removable tray (12) from said upper end of said operating member (5), said removable tray (12) being slidably engaged with said upper end of said frame member (1) below said wall portion of said enclosure means (20), said spring means (8) being affixed to said wall portion of said enclosure means (20). 25 30
15. The self-inking stamp of claim 14 characterized in that said wall portion of said enclosure means (20) extends from said frame member (1) and is integral therewith. 35
16. The self-inking stamp of claim 8 characterized in that said operating member (5) includes barrier means for preventing said removable tray (12) from being removed through said second slot means (18) when said operating member (5) is in said upper position. 40 45
17. The self-inking stamp of claim 16 characterized in that said barrier means comprises a portion (7b) of said first wall portion of said operating member (5) which normally covers said first slot (64) when said operating member (5) is in said upper position, whereby said removable tray (12) can only be removed through said first and second slots (64, 18) upon depression of said operating member (5) to a predetermined position in which said first slot (64) is in alignment with said second slot (18) and out of alignment with said barrier means. 50 55

18. The self-inking stamp of claim 16 characterized in that said operating member (5) includes a cover member (6b) removably fitted at said upper end of said operating member (5), said barrier means comprising a portion (64) of said cover member (6b) which normally covers said second slot (18), whereby said removable tray (12) can only be removed through said first and second slots (64, 18) by removing said cover member (6b).
19. The self-inking stamp of claim 2, said removable tray (12) including a rear surface (12b) for insertion into said slot means (64) and a front surface (12a) including handle means (60) for grasping said removable tray (12) for removal through said slot means (64).
20. The self-inking stamp of claim 19 characterized in that said removable tray (12) can only be inserted into said slot means (64) at a predetermined configuration and in that said rear surface (12b) initially enters said slot means (64).
21. The self-inking stamp of claim 2 including bridge means (160a, 160b, 161a, 161b, 360) affixed to and spanning said upper end of said operating member, characterized in that said spring means (154a, 154b, 354a, 354b) is normally compressed between said bridge means (160a, 160b, 161a, 161b, 360) and said ink pad means (120, 320) whereby said ink pad can be removed from said frame member (101, 301) without removing said ink pad means, and upon removal of said cover member (106b, 306b) said spring means (154a, 154b, 354a, 354b) remains active.
22. The self-inking stamp of claim 8 characterized in that said ink pad means (14a, 14b, 16a, 16b, 20) includes enclosure means including a wall portion (20) separating said removable tray (12) from said upper end of said operating member (5), and in that said spring means (8) is affixed to said wall portion (20) of said enclosure means.
23. The self-inking stamp of claim 2 characterized in that said ink pad means (14a, 14b, 16a, 16b, 20) includes enclosure means including a wall portion (20) separating said removable tray (12) from said upper end of said operating member (5), and in that said spring means (8) is affixed to said wall portion (20) of said enclosure means.
24. The self-inking stamp of claim 22 characterized in that said spring means (8) is laterally displaced from said inking means (28a, 28b, 30a, 30b) on said rear surface of said ink pad (10).
25. A self-inking stamp comprising a frame (1) and an

operating member (5) slidably mounted relative to said frame (1), and a spring means (54a, 54b) arranged between said operating member (5) and said frame (1); a removable ink pad holder (12) releasably mounted on said frame (1); an ink pad (10) retained by said removable ink pad holder (12) for providing ink impressions during operation of said self-inking stamp, said removable ink pad holder including inking means (28a, 28b, 30a, 30b) for receiving and facilitating the distribution of ink to said ink pad (10), wherein means (64) are provided for allowing removal of the ink pad holder (12) from said frame (1), and wherein the location and operation of the spring means (54a, 54b) do not interfere with the removal of the ink pad holder (12).

26. The self-inking stamp of claim 25, characterized in that ink pad means (14a, 14b, 16a, 16b, 20) are provided for supporting the ink pad holder (12) at an upper end of said frame member (1), said ink pad means being formed so as to allow at least partial removal of said ink pad holder (12) therefrom.

27. The self-inking stamp of claim 25 or claim 26, characterized in that ink pad means (14a, 14b, 16a, 16b, 20) are provided for supporting an ink pad holder (12) at said upper end of said frame member (1), said ink pad means (14a, 14b, 16a, 16b, 20) being formed in such a way as to allow access to said inking means (28a, 28b, 30a, 30b) through the top of said ink pad means (14a, 14b, 16a, 16b, 20).

28. The self-inking stamp of any one of claims 25 to 27, characterized in that said inking means (28a, 28b, 30a, 30b) comprises at least one open cup member (28a, 28b) arranged on said removable ink pad holder (12).

29. The self-inking stamp of any one of claims 25 to 28, characterized in that said removable ink pad holder (12) comprises a tray defining a cavity, said ink pad (10) being secured to said tray within said cavity thereof.

30. The self-inking stamp of any one of claims 25 to 29, characterized in that said removable ink pad holder (12) includes handle means (60) for facilitating removal of said ink pad holder (12) from said frame (1).

31. A method of reinking a self-inking stamp comprising a frame (1) and an operating member (5) slidably mounted relative to said frame (1), and a spring means (54a, 54b) arranged between said operating member (5) and said frame (1), and further comprising an ink pad holder (12) having inking means (28a, 28b, 30a, 30b) thereon and an ink pad (10), comprising the steps of at least partially removing

the ink pad holder (12) from the frame (1) without removing the spring means, and by placing ink through said inking means (28a, 28b, 30a, 30b) to be absorbed by said ink pad (10).

32. The method of claim 31, farther comprising the step of removing said ink pad holder (12) from said frame (1) by sliding said ink pad holder (12) with respect to said frame (1).

33. The method of claim 31 or claim 32, characterized in that said inking means (28a, 28b, 30a, 30b) comprises at least one open cup member (28a, 28b), through which cup member (28a, 28b) the ink is placed.

34. The method of any one of claims 31 to 33, characterized in that said ink pad holder (12) comprises handle means (60), wherein the step of removing said ink pad holder (12) from said frame (1) is achieved by grasping said handle means (60) and sliding said ink pad holder (12) from said frame (1).

Patentansprüche

1. Selbstfärbestempel, umfassend:

ein Rahmenelement (1), das ein unteres Ende (3) zum Kontaktieren einer Stützfläche und ein oberes Ende aufweist,
ein Betätigungselement (5), das mit dem Rahmenelement (1) funktionell verbunden und bezüglich dem Rahmenelement (1) zwischen oberen und unteren Stellungen senkrecht verschiebbar ist, wobei das Betätigungselement (5) ein oberes Ende hat,
ein Stempelkissentragemittel (14a, 14b, 16a, 16b, 20) zum lösbaeren Tragen eines Stempelkissens (10) an dem oberen Ende des Rahmenelementes (1), wobei das Stempelkissen (10) eine Vorderseite (10a) und eine Rückseite (10b) besitzt und durch eine herausnehmbare Schale (12) gehalten wird, die mit dem oberen Ende des Rahmenelementes (1) verschiebbar in Eingriff ist, wobei das obere Ende des Rahmenelementes (1) Schlitzmittel (64) zum Herausnehmen der herausnehmbaren Schale (12) aus dem Rahmenelement hat und die herausnehmbare Schale (12) Stempelfärbemittel (28a, 28b, 30a, 30b) auf der Rückseite des Stempelkissens (10) zum Aufnehmen und Verteilen der Stempelfarbe auf dem Stempelkissen (10) beinhaltet,
ein Stempelbefestigungsmittel (22) zum lösbaeren Befestigen eines Stempels in dem Rahmenelement (1)
ein Wendemittel (24), das bewirkt, daß das Stempelbefestigungsmittel (22) zwischen einer

ersten Stellung, in der der Stempel mit der Vorderseite (10a) des Stempelkissens (10) in Kontakt ist, wenn das Betätigungsmittel (5) sich bezüglich dem Rahmenelement (1) in der oberen Stellung befindet, und einer zweiten Stellung verschoben wird, und wobei der Stempel in einer Stempelposition an der Stützfläche ist, wenn das Betätigungselement (5) in der bezüglich dem Rahmenelement (1) unteren Stellung ist, und Federmittel (8) senkrecht zwischen dem Betätigungselement (5) und den Stempelkissenmittel (14a, 14b, 16a, 16b, 20) zusammengepreßt sind,

wobei das Stempelkissen (10) vom Rahmenelement (1) abgenommen werden kann, ohne das Stempelkissentragemittel (14a, 14b, 16a, 16b, 20) abzunehmen, und das Federmittel (8) das Betätigungselement (5) in der oberen Stellung hält, von der aus das Betätigungselement (5) gegen das Federmittel (8) relativ zu dem Rahmenelement (1) in die untere Stellung abwärts gedrückt werden kann, um einen Stempelvorgang zu bewirken.

2. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Betätigungselement (5) ein Abdeckteil (6b) beinhaltet, das an dem oberen Ende des Betätigungselements lösbar angebracht ist, und daß das Federmittel (8) senkrecht zwischen dem Abdeckteil (6b) und dem Stempelkissenmittel (14a, 14b, 16a, 16b, 20) zusammengedrückt ist.
3. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Betätigungselement (5) ein an dem oberen Ende des Betätigungselements lösbar angebrachtes Abdeckteil (6b) und ein Überbrückungsteil (160a, 160b, 161a, 161b, 360) beinhaltet, das an dem oberen Ende des Betätigungselements (5) angebracht ist und dieses überspannt, und daß das Federmittel (8) senkrecht zwischen dem Abdeckteil (6b) und dem Stempelkissenmittel (14a, 14b, 16a, 16b, 20) zusammengedrückt ist.
4. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Stempelkissenmittel (14a, 14b, 16a, 16b, 20) ein Umschließungsmittel (20) beinhaltet, das einen die herausnehmbare Schale (12) von dem oberen Ende des Betätigungsmittels (5) trennenden Wandabschnitt aufweist, wobei die herausnehmbare Schale (12) unter dem Wandabschnitt des Umschließungsmittels (20) mit dem oberen Ende des Rahmenelements (1) verschiebbar in Eingriff ist.
5. Selbstfärbestempel nach Anspruch 4, dadurch gekennzeichnet, daß das Umschließungsmittel (220) des Weiteren ein zeitweiliges Sperrmittel

(220a, 220b, 215a, 215b) zum vorübergehenden Verriegeln der herausnehmbaren Schale (212) in dem oberen Ende des Rahmenelements (201), wobei die herausnehmbare Schale (212) freigegeben werden muß, bevor sie mittels des Schlitzmittels (264) aus dem Rahmenelement (201) herausgenommen werden kann,

6. Selbstfärbestempel nach Anspruch 5, dadurch gekennzeichnet, daß das zeitweilige Sperrmittel (220a, 220b, 215a, 215b) ein sich abwärts erstreckendes Wandteil (220a, 220b) umfaßt, das ein horizontales Verschieben des herausnehmbaren Schale (212) durch das Schlitzmittel (264) verhindert.
7. Selbstfärbestempel nach Anspruch 6, dadurch gekennzeichnet, daß das zeitweilige Sperrmittel (220a, 220b, 215a, 215b) des Weiteren ein Zwischensperrmittel (215a, 215b, 213a, 213b) beinhaltet, das auf dem sich abwärts erstreckenden Wandteil (220a, 220b) und der herausnehmbaren Schale (212) angeordnet ist.
8. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Schlitzmittel einen ersten Schlitz (64) umfaßt und das Betätigungselement (5) einen ersten Wandabschnitt beinhaltet, der sich in dem oberen Abschnitt des Rahmenelements (1) unter den ersten Schlitz (64) erstreckt, wodurch der erste Schlitz (64) gesperrt wird, wenn sich das Betätigungselement (5) bezüglich dem Rahmenelement (1) in der oberen Stellung befindet, wobei das Betätigungselement (5) ferner einen zweiten Schlitz (18) aufweist und die herausnehmbare Schale (12) aus dem Rahmenelement (1) nur herausgenommen werden kann, wenn der erste und der zweite Schlitz (64, 18) zueinander ausgerichtet sind.
9. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß die herausnehmbare Schale (12) Handhabungsmittel (60) zum Ergreifen der herausnehmbaren Schale (12) zum Herausnehmen durch die Schlitzmittel (64, 18) hat.
10. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Schlitzmittel auf jeder Seite des Rahmenelements erste und zweite Schlitzelemente umfaßt, wobei die herausnehmbare Schale durch den ersten Schlitz (64) entnommen werden kann, indem durch den zweiten Schlitz (18) Druck auf die herausnehmbare Schale (12) aufgebracht wird.
11. Selbstfärbestempel nach Anspruch 1, dadurch gekennzeichnet, daß das Federmittel (8) an dem Stempelkissenmittel (14a, 14b, 16a, 16b, 20) ange-

bracht ist.

12. Selbstfärbestempel nach Anspruch 11, dadurch gekennzeichnet, daß das Betätigungselement (5) ein Abdeckteil (6b) beinhaltet, das an dem oberen Ende des Betätigungselements lösbar angebracht ist, und daß das Federmittel (8) senkrecht zwischen dem Abdeckteil (6b) und dem Stempelkissenmittel (14a, 14b, 16a, 16b, 20) zusammengedrückt ist, wobei nach dem Entfernen des Abdeckteils (6b) das Federmittel (8) an dem Stempelkissenmittel (20) angebracht bleibt und inaktiv gemacht wird. 5
13. Selbstfärbestempel nach Anspruch 12, beinhaltend Federhaltemittel (57) zum Halten des Federmittels (8) an dem Stempelkissenmittel (14a, 14b, 16a, 16b, 20), wobei das Federhaltemittel mehrere Fin- gerelemente (57) umfaßt. 10
14. Selbstfärbestempel nach Anspruch 13, dadurch gekennzeichnet, daß das Stempelkissenmittel (14a, 14b, 16a, 16b, 20) ein Umschließungsmittel (20) beinhaltet, das einen die herausnehmbare Schale (12) von dem oberen Ende des Betäti- gungsmittels (5) trennenden Wandabschnitt auf- weist, wobei die herausnehmbare Schale (12) unter dem Wandabschnitt des Umschließungsmittels (20) mit dem oberen Ende des Rahmenelements (1) verschiebbar in Eingriff ist und das Federmittel (8) an dem Wandabschnitt des Umschließungsmit- tels (20) angebracht ist. 20
15. Selbstfärbestempel nach Anspruch 14, dadurch gekennzeichnet, daß sich der Wandabschnitt des Umschließungsmittels (20) von dem Rahmenele- ment (1) aus erstreckt und einteilig hiermit ausge- bildet ist. 25
16. Selbstfärbestempel nach Anspruch 8, dadurch gekennzeichnet, daß das Betätigungsmittel (5) ein Sperrelement beinhaltet, das verhindert, daß die herausnehmbare Schale (12) durch das zweite Schlitzmittel (18) herausgenommen werden kann, wenn sich das Betätigungselement (5) in der obern Stellung befindet. 30
17. Selbstfärbestempel nach Anspruch 16, dadurch gekennzeichnet, daß das Sperrelement einen Abschnitt (7b) des ersten Wandabschnitts des Betätigungselements (5) umfaßt, das normaler- weise den ersten Schlitz bedeckt, wenn sich das Betätigungselement (5) in der oberen Stellung befindet, wobei die herausnehmbare Schale (12) nur durch die ersten und zweiten Schlitze (64, 18) entnommen werden kann, nachdem das Betäti- gungselement (5) in eine vorbestimmte Stellung gedrückt wurde, in der der erste Schlitz (64) mit dem zweiten Schlitz (18) ausgerichtet ist und nicht 35

mit dem Sperrelement übereinstimmt.

18. Selbstfärbestempel nach Anspruch 16, dadurch gekennzeichnet, daß das Betätigungsmittel (5) ein Sperrelement beinhaltet, das an dem oberen Ende des Betätigungselements (5) entferntbar ange- bracht ist, wobei das Sperrelement einen Abschnitt (64) des Abdeckteils (6b) umfaßt, das normaler- weise den zweiten Schlitz (18) bedeckt und wobei die herausnehmbare Schale (12) nur durch den ersten und zweiten Schlitz (64, 18) entnommen wer- den kann, indem das Abdeckteil (6b) weggenom- men wird.
19. Selbstfärbestempel nach Anspruch 2, dadurch gekennzeichnet, daß die herausnehmbare Schale (12) eine Rückseite (12b) zum Einsetzen in das Schlitzelement (64) und eine Vorderseite (12a) beinhaltet, die Handhabungsmittel (60) zum Ergrei- fen der herausnehmbaren Schale (12) zum Heraus- nehmen durch das Schlitzteil (64) beinhaltet.
20. Selbstfärbestempel nach Anspruch 19, dadurch gekennzeichnet, daß die herausnehmbare Schale (12) nur in einer vorbestimmten Konfiguration in das Schlitzteil (64) eingesetzt werden kann, und daß zu Beginn die Rückseite (12b) in das Schlitzteil (64) eindringt.
21. Selbstfärbestempel nach Anspruch 2, beinhaltend ein Überbrückungsteil (160a, 160b, 161a, 161b, 360), das an dem oberen Ende des Betätigungsele- ments (5) angebracht ist und dieses überspannt, dadurch gekennzeichnet, daß das Federmittel (8) senkrecht zwischen dem Überbrückungsteil (160a, 160b, 161a, 161b, 360) und dem Stempelkissen- mittel (120, 320) zusammengedrückt ist, wobei das Stempelkissen von dem Rahmenelement (101, 301) weggenommen werden kann, ohne das Stem- pelkissenmittel zu entfernen und nach dem Weg- nehmen des Abdeckteils (106b, 306b) das Federmittel (154a, 154b, 354a, 354b) aktiv bleibt.
22. Selbstfärbestempel nach Anspruch 8, dadurch gekennzeichnet, daß das Stempelkissenmittel (14a, 14b, 16a, 16b, 20) ein Umschließungsmittel (20) beinhaltet, das einen die herausnehmbare Schale (12) von dem oberen Ende des Betäti- gungsmittels (5) trennenden Wandabschnitt auf- weist, und daß das Federmittel (8) an dem Wandabschnitt des Umschließungsmittels (20) angebracht ist.
23. Selbstfärbestempel nach Anspruch 2, dadurch gekennzeichnet, daß das Stempelkissenmittel (14a, 14b, 16a, 16b, 20) ein Umschließungsmittel (20) beinhaltet, das einen die herausnehmbare Schale (12) von dem oberen Ende des Betäti- 40

gungsmittels (5) trennenden Wandabschnitt aufweist, und daß das Federmittel (8) an dem Wandabschnitt des Umschließungsmittels (20) angebracht ist.

24. Selbstfärbestempel nach Anspruch 22, dadurch gekennzeichnet, daß das Federmittel (8) von dem Stempelfärbemittel (28a, 28b, 30a, 30b) auf der Rückseite des Stempelkissens (10) seitlich verrückt ist.

25. Selbstfärbestempel, umfassend einen Rahmen (1) und ein Betätigungselement (5), das relativ zu dem Rahmenelement (1) verschiebbar ist, einen wegnehmbaren Stempelkissenhalter (12), der abnehmbar an dem Rahmen (1) angebracht ist, ein Stempelkissen (10), das durch den lösbaren Stempelkissenhalter (12) gehalten wird, um beim Betrieb des Selbstfärbestempels Stempelfarbabdrücke zu erbringen, wobei der abnehmbare Stempelkissenhalter Stempelfärbemittel (28a, 28b, 30a, 30b) zum Aufnehmen und Verteilen von Stempelfarbe auf dem Stempelkissen (10) beinhaltet, wobei Mittel (64) vorhanden sind, um ein Wegnehmen des Stempelkissenhalters (12) von dem Rahmen (1) zu gestatten, und wobei die Lage und der Betrieb der Federmittel (54a, 54b) nicht mit dem Wegnehmen des Stempelkissenhalters in Konflikt kommt.

26. Selbstfärbestempel nach Anspruch 25, dadurch gekennzeichnet, daß Stempelkissentragemittel (14a, 14b, 16a, 16b, 20) zum Tragen des Stempelkissenhalters (12) an einem oberen Ende des Rahmenelements (1) vorhanden sind, wobei die Stempelkissentragemittel so geformt sind, daß zumindest ein teilweises Herausnehmen des Stempelkissenhalters (12) hieraus gestattet ist.

27. Selbstfärbestempel nach Anspruch 25 oder 26, dadurch gekennzeichnet, daß Stempelkissentragemittel (14a, 14b, 16a, 16b, 20) zum Tragen eines Stempelkissenhalters (12) an dem oberen Ende des Rahmenelements (1) vorhanden sind, wobei die Stempelkissentragemittel derart geformt sind, daß durch die Oberseite der Stempelkissentragemittel (14a, 14b, 16a, 16b, 20) ein Zugang zu den Stempelfärbemitteln (28a, 28b, 30a, 30b) ermöglicht ist.

28. Selbstfärbestempel nach einem der Ansprüche 25 bis 27, dadurch gekennzeichnet, daß die Stempelfärbemittel (28a, 28b, 30a, 30b) zumindest ein offenes Becherteil (28a, 28b) umfassen, das auf dem lösbaren Stempelkissenhalter angeordnet ist.

29. Selbstfärbestempel nach einem der Ansprüche 25 bis 28, dadurch gekennzeichnet, daß der lösbare Stempelkissenhalter (12) eine Schale umfaßt, die

eine Vertiefung begrenzt, wobei das Stempelkissen (10) an der Schale in deren Vertiefung befestigt ist.

30. Selbstfärbestempel nach einem der Ansprüche 25 bis 29, dadurch gekennzeichnet, daß der lösbare Stempelkissenhalter (12) Handhabungsmittel (60) zum Erleichtern des Herausnehmens des Stempelkissenhalters (12) aus dem Rahmen (1).

31. Verfahren zum Wiedereinfärben eines Selbstfärbestempels, der einen Rahmen (1) und ein relativ zu dem Rahmenelement (1) verschiebbar angebrachtes Betätigungselement (5) und ein zwischen dem Betätigungselement (5) und dem Rahmen (1) angeordnetes Federmittel (54a, 54b) umfaßt, und ferner einen Stempelkissenhalter (12) umfaßt, der hierauf Stempelfärbemittel (28a, 28b, 30a, 30b) und ein Stempelkissen (10) hat, umfassend die Schritte zumindest teilweises Herausnehmen des Stempelkissenhalters (12) aus dem Rahmen (1) ohne das Federmittel wegzunehmen, und Einbringen von durch das Stempelkissen aufzunehmende Stempelfarbe durch das Stempelfärbemittel (28a, 28b, 30a, 30b) hindurch.

32. Verfahren nach Anspruch 31, des Weiteren umfassend die Schritte Herausnehmen des Stempelkissenhalters (12) aus dem Rahmen durch Verschieben des Stempelkissenhalters (12) gegenüber dem Rahmen (1).

33. Verfahren nach Anspruch 31 oder 32, dadurch gekennzeichnet, daß das Stempelfärbemittel (28a, 28b, 30a, 30b) zumindest ein offenes Becherelement (28a, 28b) umfaßt, durch das die Stempelfarbe aufgegeben wird.

34. Verfahren nach einem der Ansprüche 31 bis 33, dadurch gekennzeichnet, daß der Stempelkissenhalter (12) Handhabungsmittel (60) umfaßt, wobei der Schritt des Herausnehmens des Stempelkissenhalters (12) aus dem Rahmen (1) dadurch erzielt wird, daß das Handhabungsmittel (60) ergriffen wird und der Stempelkissenhalter (12) aus dem Rahmen (1) herausgezogen wird.

Revendications

1. Tampon auto-encreur comprenant :

- un élément d'ossature (1) comportant une extrémité inférieure (3) destinée à venir en contact avec une surface de support et une extrémité supérieure,
- un élément d'actionnement (5) opérationnellement associé audit élément d'ossature (1) et pouvant être déplacé verticalement par rapport à lui entre des positions haute et basse par rap-

port audit élément d'ossature (1), ledit élément d'actionnement (5) comportant une extrémité supérieure,

- des moyens (14a, 14b, 16a, 16b, 20) de montage de coussin encreur destinés à supporter de manière amovible un coussin encreur (10) en ladite extrémité supérieure dudit élément d'ossature (1), ledit coussin encreur (10) comportant une face avant (10a) et une face arrière et étant porté par un plateau amovible (12) qui se met en prise par coulissement avec ladite extrémité supérieure dudit élément d'ossature (1), ladite extrémité supérieure dudit élément d'ossature (1) comportant un moyen à fente (64) pour retirer ledit plateau amovible (12) dudit élément d'ossature, ledit plateau amovible (12) comportant un moyen d'encrage (28a, 28b, 30a, 30b) sur ladite face arrière dudit coussin encreur (10), servant à recevoir de l'encre et à répartir ladite encre sur ledit coussin encreur (10),
- un moyen (22) de montage de poinçon de tamponnage servant à monter de manière déplaçable un poinçon de tamponnage à l'intérieur dudit élément d'ossature (1),
- un moyen de retournement (24) servant à déplacer ledit moyen (22) de montage de poinçon de tamponnage entre une première position dans laquelle ledit poinçon de tamponnage est en contact avec ladite face avant (10a) dudit coussin encreur (10) lorsque ledit élément d'actionnement (5) est dans ladite position haute par rapport audit élément d'ossature (1), et une deuxième position dans laquelle ledit poinçon de tamponnage est dans une position d'impression sur ladite surface de support quand ledit élément d'actionnement (5) est dans ladite position basse par rapport audit élément d'ossature (1), et
- un moyen formant ressort (8) normalement comprimé entre ledit élément d'actionnement (5) et ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur,

si bien que l'on peut retirer ledit coussin encreur (10) dudit élément d'ossature (1) sans retirer ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur et que ledit moyen formant ressort (8) retient ledit élément d'actionnement (5) dans ladite position haute à partir de laquelle ledit élément d'actionnement (5) peut être poussé vers le bas par rapport audit élément d'ossature (1), à l'encontre dudit moyen formant ressort (8), pour venir dans ladite position basse afin d'effectuer l'impression.

2. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit élément d'actionnement

(5) comporte un moyen de couverture (6b) placé de manière amovible en ladite extrémité supérieure dudit élément d'actionnement, et ledit moyen formant ressort (8) est normalement comprimé entre ledit moyen de couverture (6b) et ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur.

3. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit élément d'actionnement (5) comporte un moyen de couverture (6b) placé de manière amovible en ladite extrémité supérieure dudit élément d'actionnement (5) et des moyens formant pontets (160a, 160b, 161a, 161b, 360) sont fixés de manière traversante à ladite extrémité supérieure dudit élément d'actionnement (5), et en ce que ledit moyen formant ressort (8) est normalement comprimé entre lesdits moyens formant pontets (160a, 160b, 161a, 161b, 360) et ledit moyen (20, 120, 220) de montage de coussin encreur.
4. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur comprend une enceinte (20) comportant une partie de paroi qui sépare ledit plateau amovible (12) de ladite extrémité supérieure dudit élément d'actionnement (5), ledit plateau amovible (12) se mettant en prise coulissante avec ladite extrémité supérieure dudit élément d'ossature (1), en-dessous de ladite partie de paroi de ladite enceinte (20).
5. Tampon auto-encreur selon la revendication 4, caractérisé en ce que ladite enceinte (220) comprend en outre des moyens (220a, 220b, 215a, 215b) de verrouillage temporaire servant à bloquer temporairement ledit plateau amovible (212) dans ladite extrémité supérieure de l'élément d'ossature (201), si bien qu'on doit déverrouiller ledit plateau amovible (212) avant de pouvoir le retirer dudit élément d'ossature (1) à travers ledit moyen à fente (264).
6. Tampon auto-encreur selon la revendication 5, caractérisé en ce que ledit moyen (220a, 220b, 215a, 215b) de verrouillage temporaire comprend une paroi (220a, 220b) s'étendant vers le bas, qui empêche le glissement horizontal dudit plateau amovible (212) à travers ledit moyen à fente (264).
7. Tampon auto-encreur selon la revendication 6, caractérisé en ce que ledit moyen de verrouillage temporaire comprend en outre un moyen d'interverrouillage (215a, 215b, 213a, 213b) placé sur ladite paroi (220a, 220b) s'étendant vers le bas et sur ledit plateau amovible (212).
8. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit moyen à fente comprend

une première fente (64) et ledit moyen d'actionnement (5) comprend une première partie de paroi qui s'étend sous ladite première fente (64) dans ladite partie supérieure dudit élément d'ossature (1), bloquant ainsi ladite première fente (64) quand ledit élément d'actionnement (5) est dans ladite position haute par rapport audit élément d'ossature (1), ledit élément d'actionnement (5) comprenant en outre une deuxième fente (18) si bien que ledit plateau amovible (12) ne peut être retiré dudit élément d'ossature (1) que lorsque lesdites première et deuxième fentes (64, 18) sont alignées l'une par rapport à l'autre.

9. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit plateau amovible (12) comporte une poignée (60) permettant de saisir ledit plateau amovible (12) pour le retirer par ledit moyen à fente (64, 18).

10. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit moyen à fente comprend des première et deuxième lentes formées de chaque côté dudit élément d'ossature, si bien que ledit plateau amovible peut être retiré par ladite première fente (64) par application d'une pression sur ledit plateau amovible (12) à travers ladite deuxième fente (18).

11. Tampon auto-encreur selon la revendication 1, caractérisé en ce que ledit moyen formant ressort (8) est fixé audit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur.

12. Tampon auto-encreur selon la revendication 11, caractérisé en ce que ledit élément d'actionnement (5) comporte un moyen de couverture (6b) monté de manière amovible en ladite extrémité supérieure dudit élément d'actionnement et ledit moyen formant ressort (8) est normalement comprimé entre ledit moyen de couverture et ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur, si bien que lorsqu'on retire ledit moyen de couverture (6b), ledit moyen formant ressort (8) reste fixé audit moyen (20) de montage de coussin encreur et devient inactif.

13. Tampon auto-encreur selon la revendication 12, comprenant un moyen (57) de fixation de ressort servant à fixer ledit moyen formant ressort (8) audit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur, ledit moyen de fixation de ressort comprenant une pluralité de doigts (57).

14. Tampon auto-encreur selon la revendication 13, caractérisé en ce que ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur comprend une enceinte (20) avec une partie de paroi qui

sépare ledit plateau amovible (12) de ladite extrémité supérieure dudit élément d'actionnement (5), ledit plateau amovible (12) étant en prise par coulissement avec ladite extrémité supérieure dudit élément d'ossature (1), sous ladite partie de paroi de ladite enceinte (20), ledit moyen formant ressort (8) étant fixé à ladite partie de paroi de ladite enceinte (20).

15. Tampon auto-encreur selon la revendication 14, caractérisé en ce que ladite partie de paroi de ladite enceinte (20) part dudit élément d'ossature (1) avec lequel elle fait corps.

16. Tampon auto-encreur selon la revendication 8, caractérisé en ce que ledit élément d'actionnement (5) comporte un moyen formant barrière qui empêche de retirer ledit plateau amovible (12) par ladite deuxième fente (18) quand ledit élément d'actionnement (5) est dans ladite position haute.

17. Tampon auto-encreur selon la revendication 16, caractérisé en ce que ledit moyen formant barrière comprend une partie (7b) de ladite première paroi dudit élément d'actionnement (5) qui recouvre normalement ladite première fente (64) quand ledit élément d'actionnement (5) est dans ladite position haute, si bien que ledit plateau amovible (12) ne peut être retiré par lesdites première et deuxième fentes (64, 18) que lorsqu'on enfonce ledit élément d'actionnement (5) vers une position prédéterminée dans laquelle ladite première fente (64) est alignée avec ladite deuxième fente (18) mais n'est pas alignée avec ledit moyen formant barrière.

18. Tampon auto-encreur selon la revendication 16, caractérisé en ce que ledit élément d'actionnement (5) comporte un moyen de couverture (6b) monté de manière amovible en ladite extrémité supérieure dudit élément d'actionnement (5), ledit moyen formant barrière comprenant une partie (64) dudit moyen de couverture (6b) qui recouvre normalement ladite deuxième fente (18), si bien que ledit plateau amovible (12) ne peut être retiré par lesdites première et deuxième fentes (64, 18) que si on retire ledit moyen de couverture (6b).

19. Tampon auto-encreur selon la revendication 2, ledit plateau amovible (12) comportant une face arrière (12b) destinée à être insérée dans ledit moyen à fente (64) et une face avant (12a) qui comporte une poignée (60) servant à saisir ledit plateau amovible (12) pour le retirer par ledit moyen à fente (64).

20. Tampon auto-encreur selon la revendication 19, caractérisé en ce que ledit plateau amovible (12) ne peut être introduit dans ledit moyen à fente (64) que dans une configuration prédéterminée et en ce que

ladite face arrière (12b) pénètre initialement dans ledit moyen à fente (64).

21. Tampon auto-encreur selon la revendication 2, comprenant des moyens formant pontets (160a, 160b, 161a, 161b, 360) fixés de manière traversante à ladite extrémité supérieure dudit élément d'actionnement, caractérisé en ce que ledit moyen formant ressort (154a, 154b, 354a, 354b) est normalement comprimé entre lesdits moyens formant pontets (160a, 160b, 161a, 161b, 360) et ledit moyen (120, 320) de montage de coussin encreur, si bien qu'on peut retirer ledit coussin encreur dudit élément d'ossature (101, 301) sans retirer ledit moyen de montage de coussin encreur et que ledit moyen formant ressort (154a, 154b, 354a, 354b) reste actif lors du retrait dudit moyen de couverture (106b, 306b). 5 10 15
22. Tampon auto-encreur selon la revendication 8, caractérisé en ce que ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur comprend une enceinte avec une partie de paroi (20) qui sépare ledit plateau amovible (12) de ladite extrémité supérieure dudit élément d'actionnement (5) et en ce que ledit moyen formant ressort (8) est fixé à ladite partie de paroi (20) de ladite enceinte. 20 25
23. Tampon auto-encreur selon la revendication 2, caractérisé en ce que ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur comprend une enceinte avec une partie de paroi (20) qui sépare ledit plateau amovible (12) de ladite extrémité supérieure dudit élément d'actionnement (5) et en ce que ledit moyen formant ressort (8) est fixé à ladite partie de paroi (20) de ladite enceinte. 30 35
24. Tampon auto-encreur selon la revendication 22, caractérisé en ce que ledit moyen formant ressort (8) est décalé latéralement par rapport audit moyen d'encrage (28a, 28b, 30a, 30b) sur ladite face arrière dudit coussin encreur (10). 40
25. Tampon auto-encreur comprenant une ossature (1) et un élément d'actionnement (5) monté de manière coulissante par rapport à ladite ossature (1), un moyen formant ressort (54a, 54b) disposé entre ledit élément d'actionnement (5) et ladite ossature (1), un support amovible (12) de coussin encreur monté de manière amovible sur ladite ossature (1), un coussin encreur (10) retenu par ledit support amovible (12) de coussin encreur afin de réaliser des impressions d'encre lors de l'utilisation dudit tampon auto-encreur, ledit support amovible de coussin encreur comprenant un moyen d'encrage (28a, 28b, 30a, 30b) destiné à recevoir l'encre et à en faciliter la distribution audit coussin encreur (10), dans lequel des moyens (64) existent 45 50 55
- pour permettre de retirer le support amovible (12) de coussin encreur de ladite ossature (1), et dans lequel la position et le fonctionnement du moyen formant ressort (54a, 54b) ne gêne pas le retrait du support (12) de coussin encreur.
26. Tampon auto-encreur selon la revendication 25, caractérisé en ce qu'il existe un moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur servant à retenir le support (12) de coussin encreur en, une extrémité supérieure de ladite ossature (1), ledit moyen de montage de coussin encreur étant formé de manière à permettre un, retrait au moins partiel dudit support (12) de coussin encreur.
27. Tampon auto-encreur selon la revendication 25 ou la revendication 26, caractérisé en ce qu'il existe un moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur servant à retenir le support (12) de coussin encreur en ladite extrémité supérieure de ladite ossature (1), ledit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur étant formé de manière à permettre l'accès audit moyen d'encrage (28a, 28b, 30a, 30b) par le dessus dudit moyen (14a, 14b, 16a, 16b, 20) de montage de coussin encreur.
28. Tampon auto-encreur selon l'une quelconque des revendications 25 à 27, caractérisé en ce que ledit moyen d'encrage (28a, 28b, 30a, 30b) comprend au moins une coupelle ouverte (28a, 28b) placée sur ledit support amovible (12) de coussin encreur.
29. Tampon auto-encreur selon l'une quelconque des revendications 25 à 28, caractérisé en ce que ledit support amovible (12) de coussin encreur comprend un plateau définissant une cavité, ledit coussin encreur (10) étant fixé audit plateau à l'intérieur de ladite cavité.
30. Tampon auto-encreur selon l'une quelconque des revendications 25 à 29, caractérisé en ce que ledit support amovible (12) de coussin encreur comporte une poignée (60) servant à faciliter le retrait dudit support (12) de coussin encreur de ladite ossature (1).
31. Procédé de ré-encrage d'un tampon auto-encreur comprenant une ossature (1) et un élément d'actionnement (5) monté de manière coulissante par rapport à ladite ossature (1), et un moyen formant ressort (54a, 54b) disposé entre ledit élément d'actionnement (5) et ladite ossature (1), et comprenant en outre un support (12) de coussin encreur sur lequel se trouve un moyen d'encrage (28a, 28b, 30a, 30b) et un coussin encreur (10), comprenant les étapes consistant à retirer au moins partiellement le support (12) de coussin

encreur de ladite ossature (1) sans retirer le moyen formant ressort, et à placer de l'encre à l'aide dudit moyen d'encrage (28a, 28b, 30a, 30b) afin qu'elle soit absorbée par ledit coussin encreur (10).

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32. Procédé selon la revendication 31, comprenant en outre l'étape qui consiste à retirer ledit support (12) de coussin encreur de ladite ossature (1) en faisant coulisser ledit support (12) de coussin encreur par rapport à ladite ossature (1).

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33. Procédé selon la revendication 31 ou la revendication 32, caractérisé en ce que ledit moyen d'encrage (28a, 28b, 30a, 30b) comprend au moins une coupelle ouverte (28a, 28b) à travers laquelle l'encre peut être mise en place.

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34. Procédé selon l'une quelconque des revendications 31 à 33, caractérisé en ce que ledit support (12) de coussin encreur comporte une poignée (60) et dans lequel on procède à l'étape de retrait dudit support (12) de coussin encreur de ladite ossature (1) en saisissant ladite poignée (60) et en faisant coulisser ledit support (12) de coussin encreur hors de ladite ossature (1).

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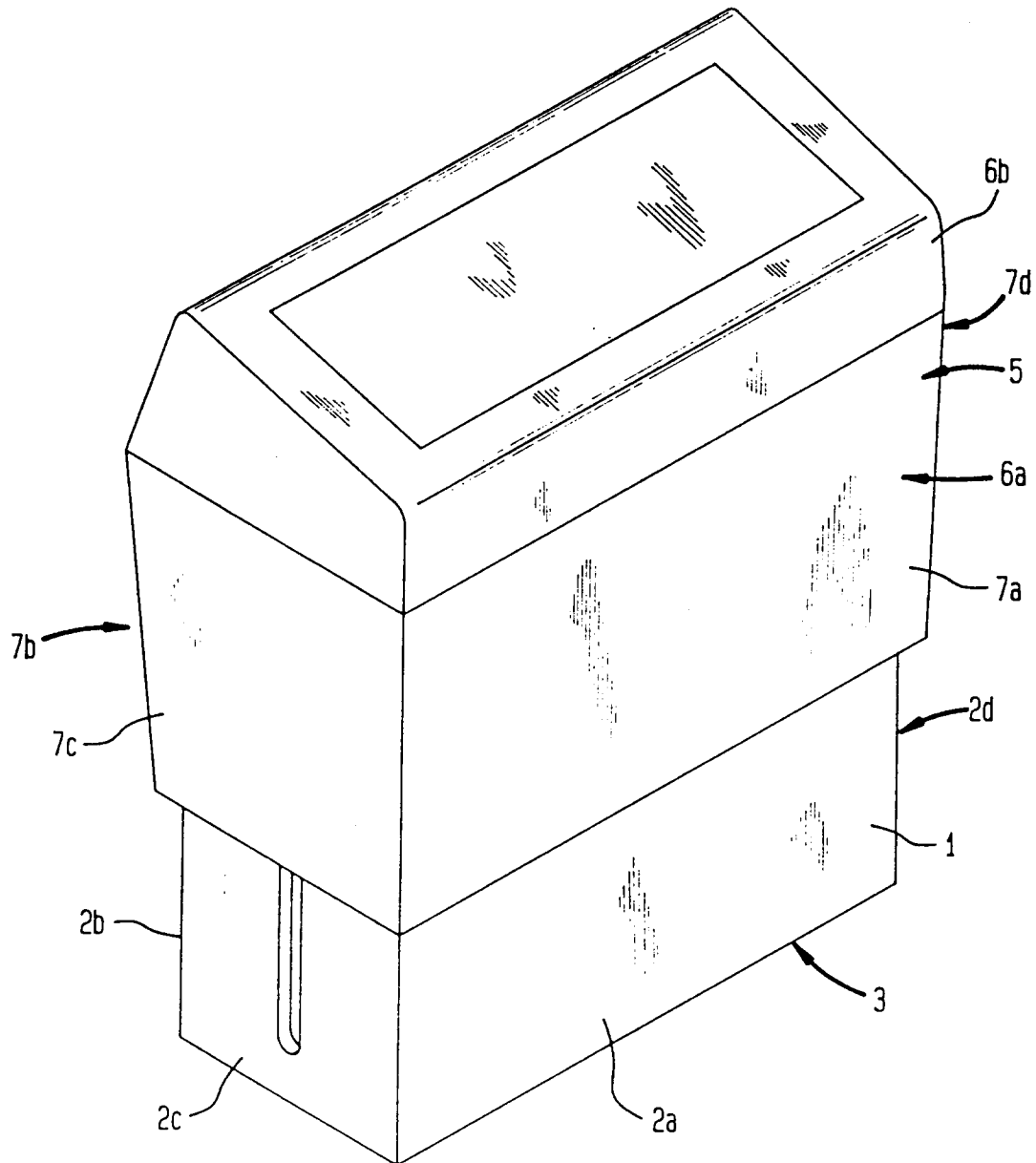
40

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50

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FIG. 1



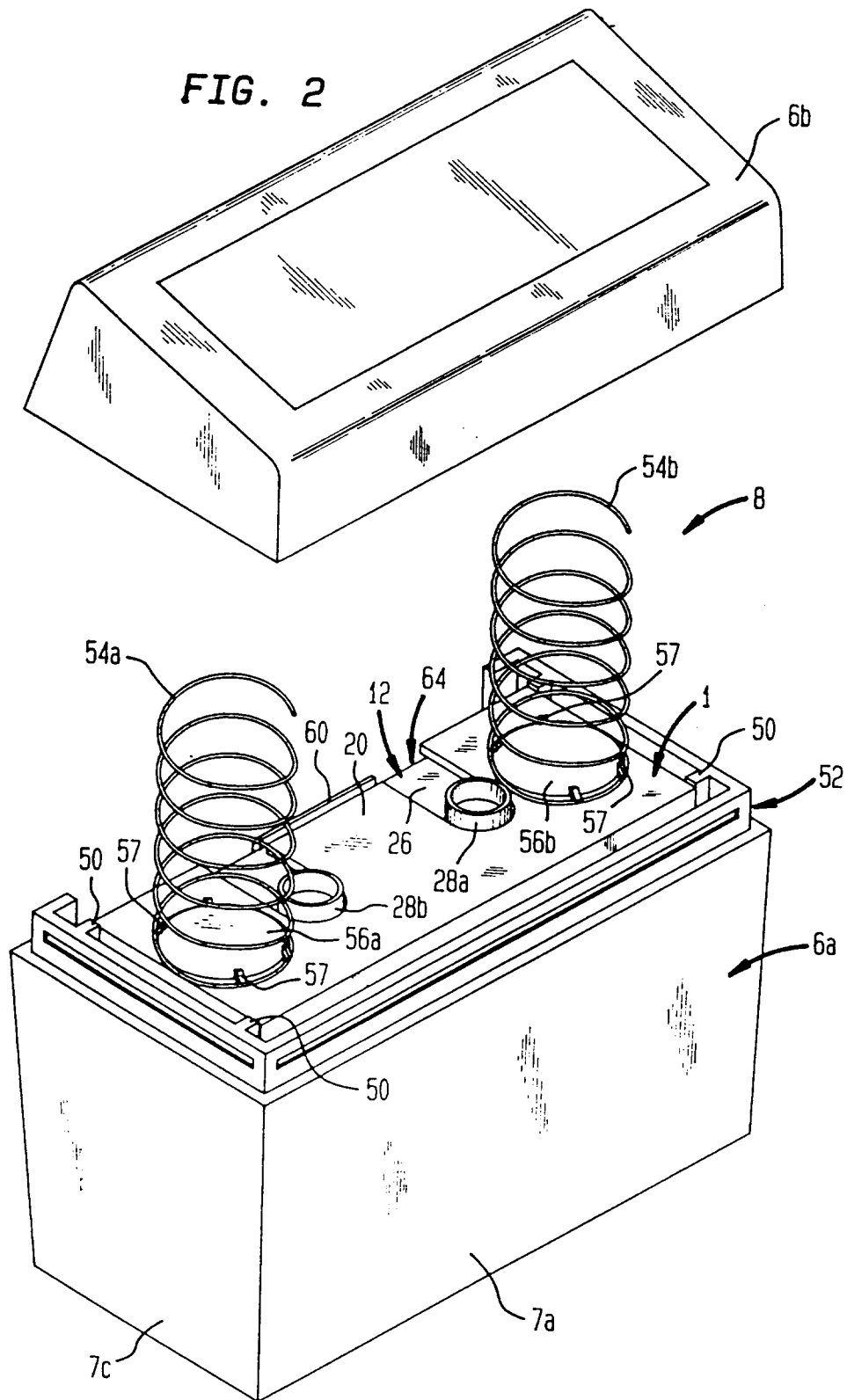


FIG. 3

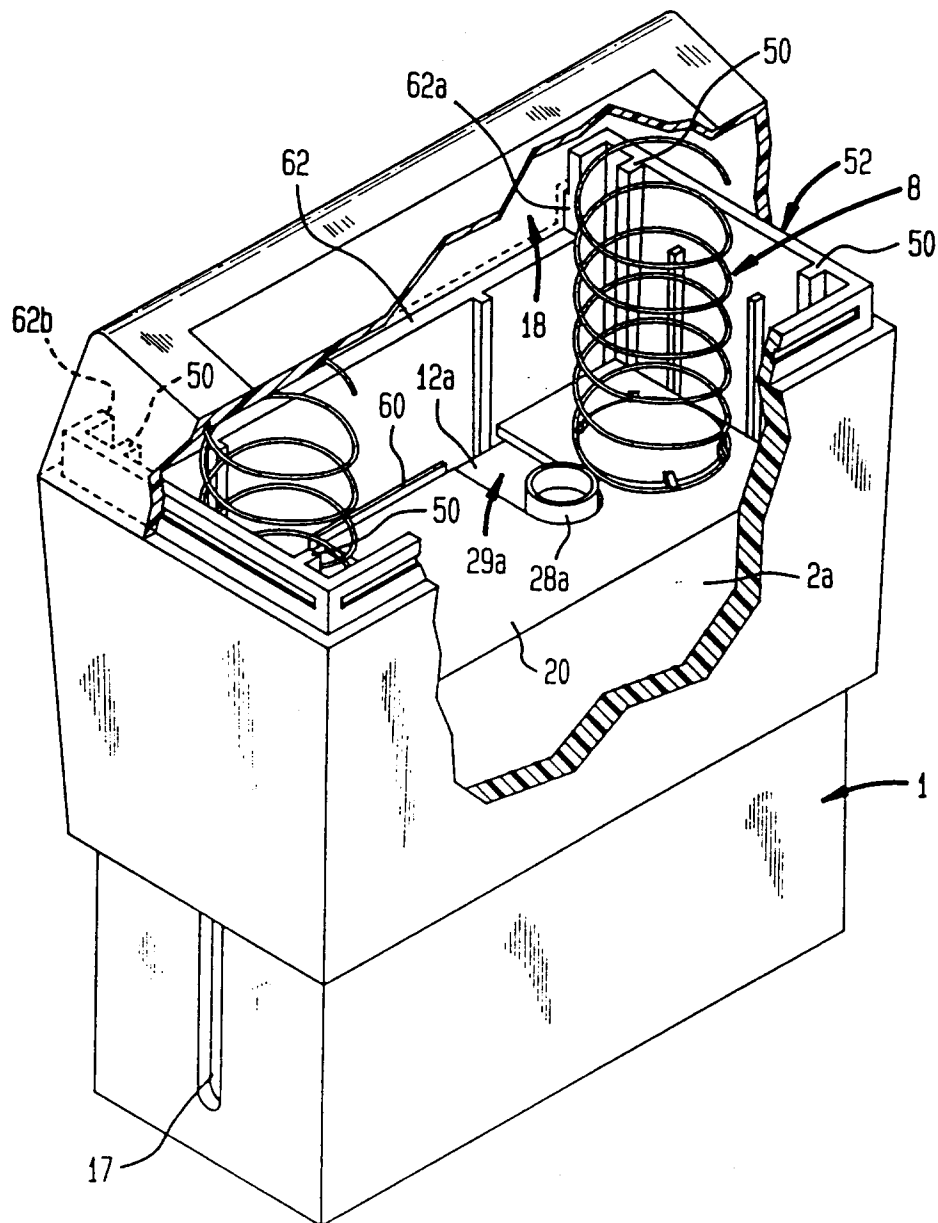


FIG. 4

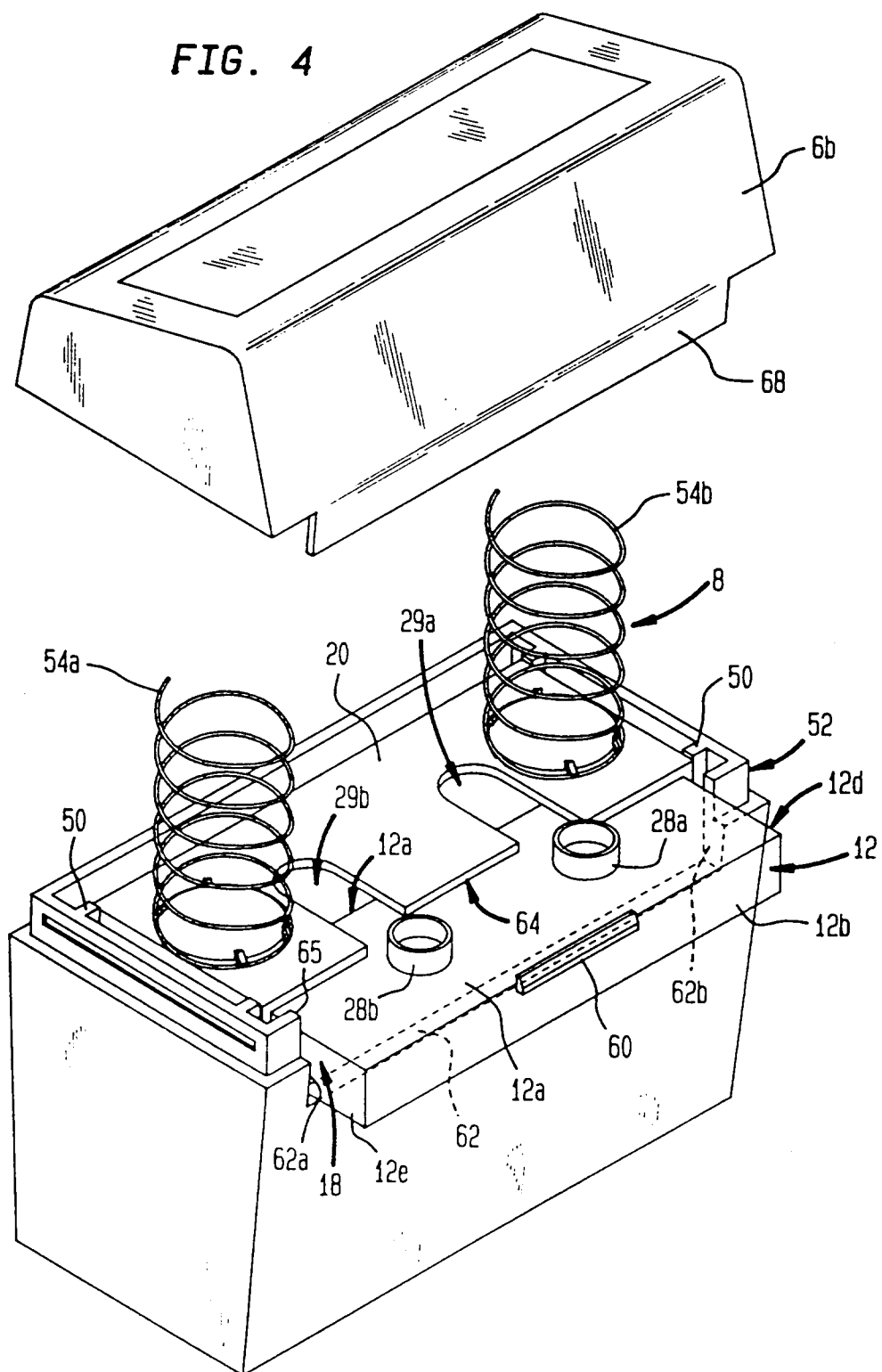


FIG. 5

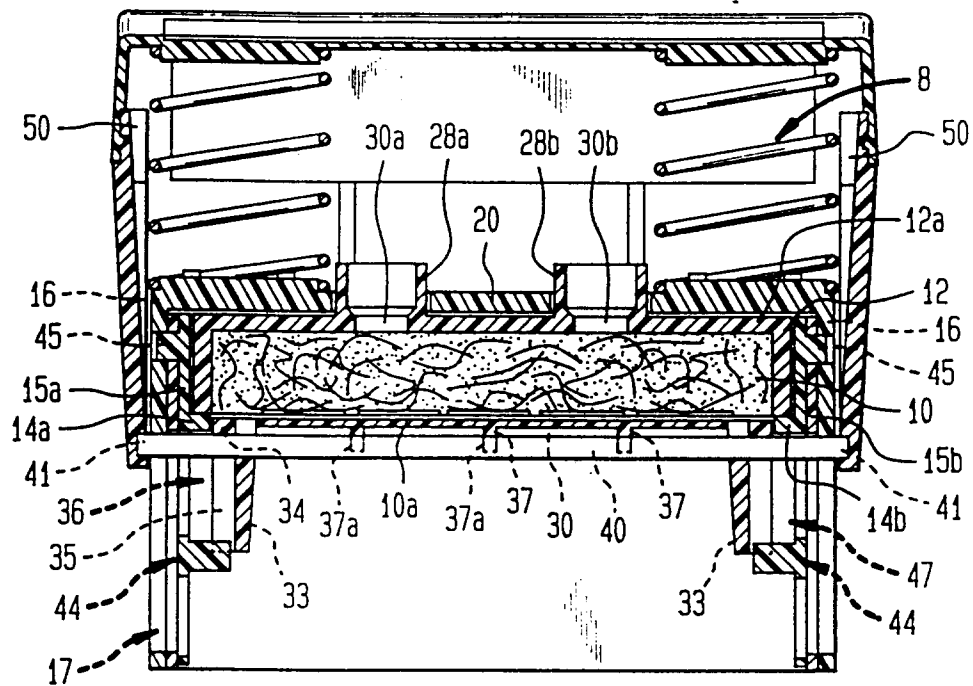


FIG. 6

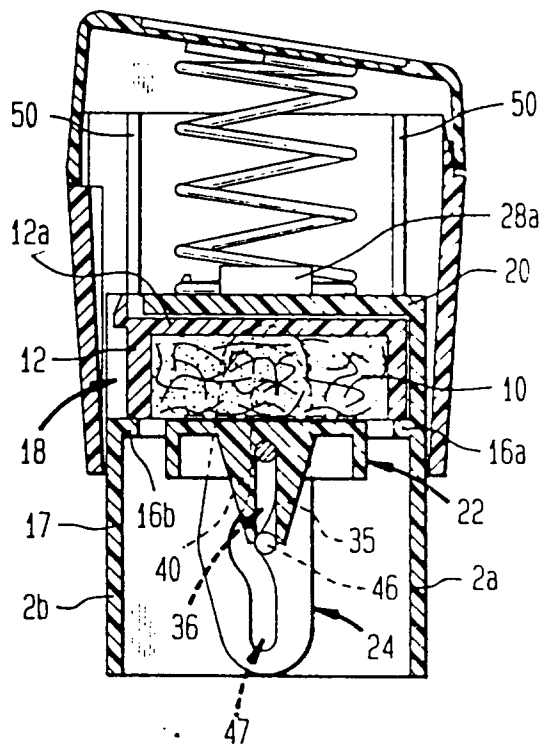


FIG. 7

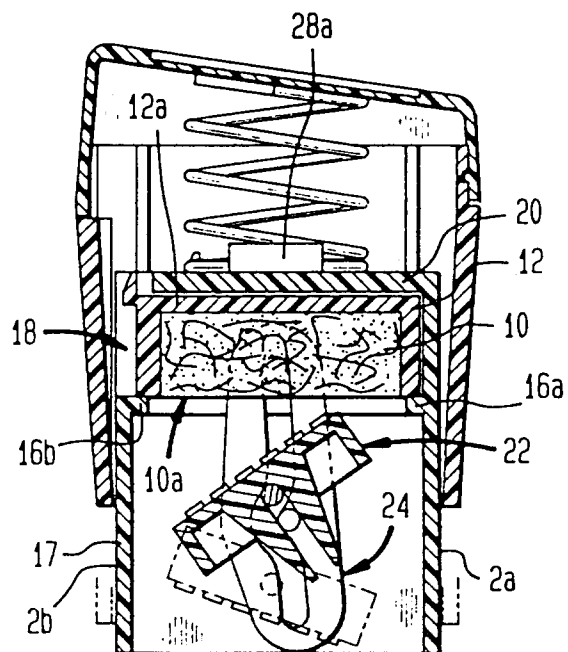


FIG. 8

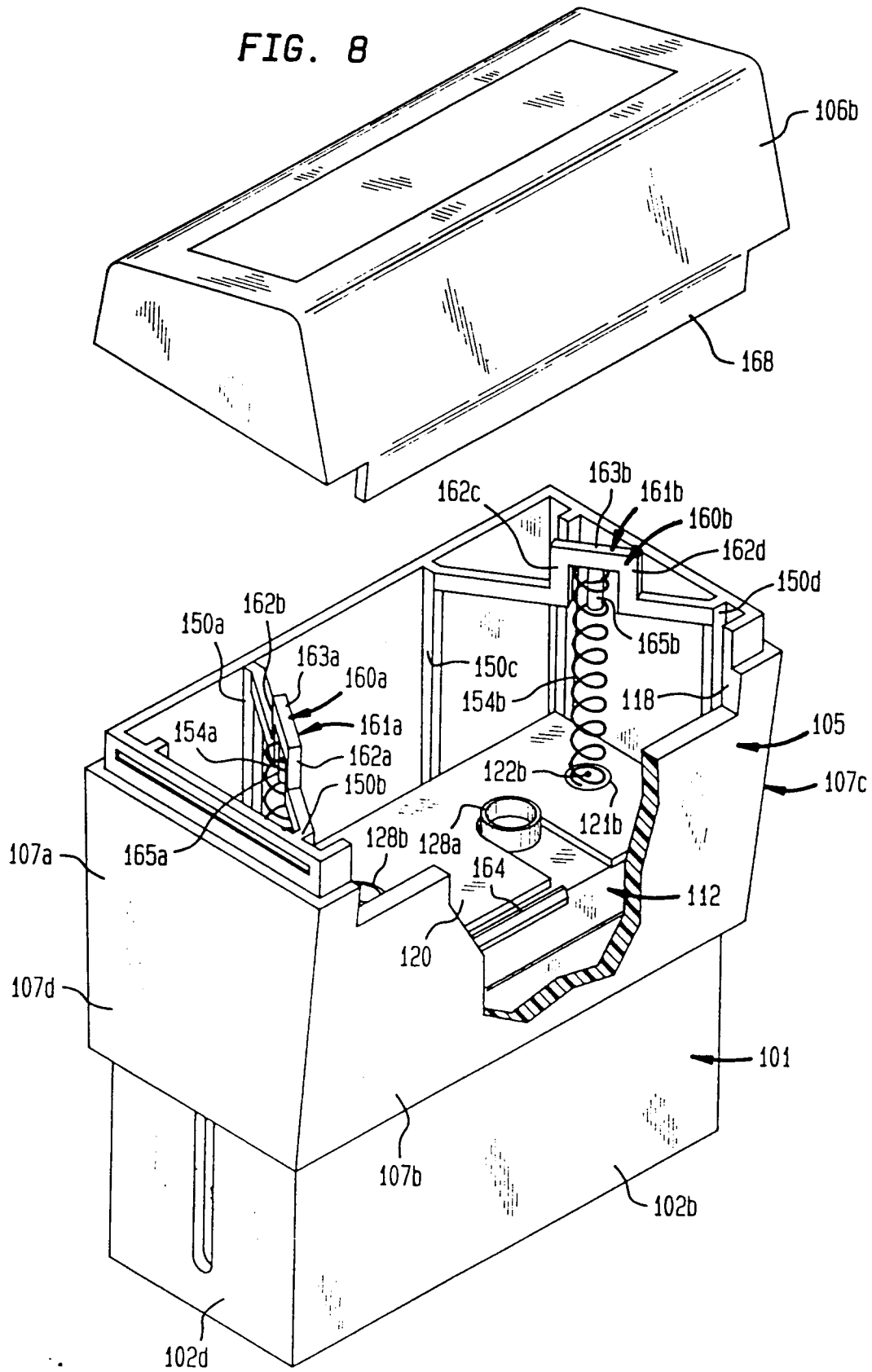


FIG. 9

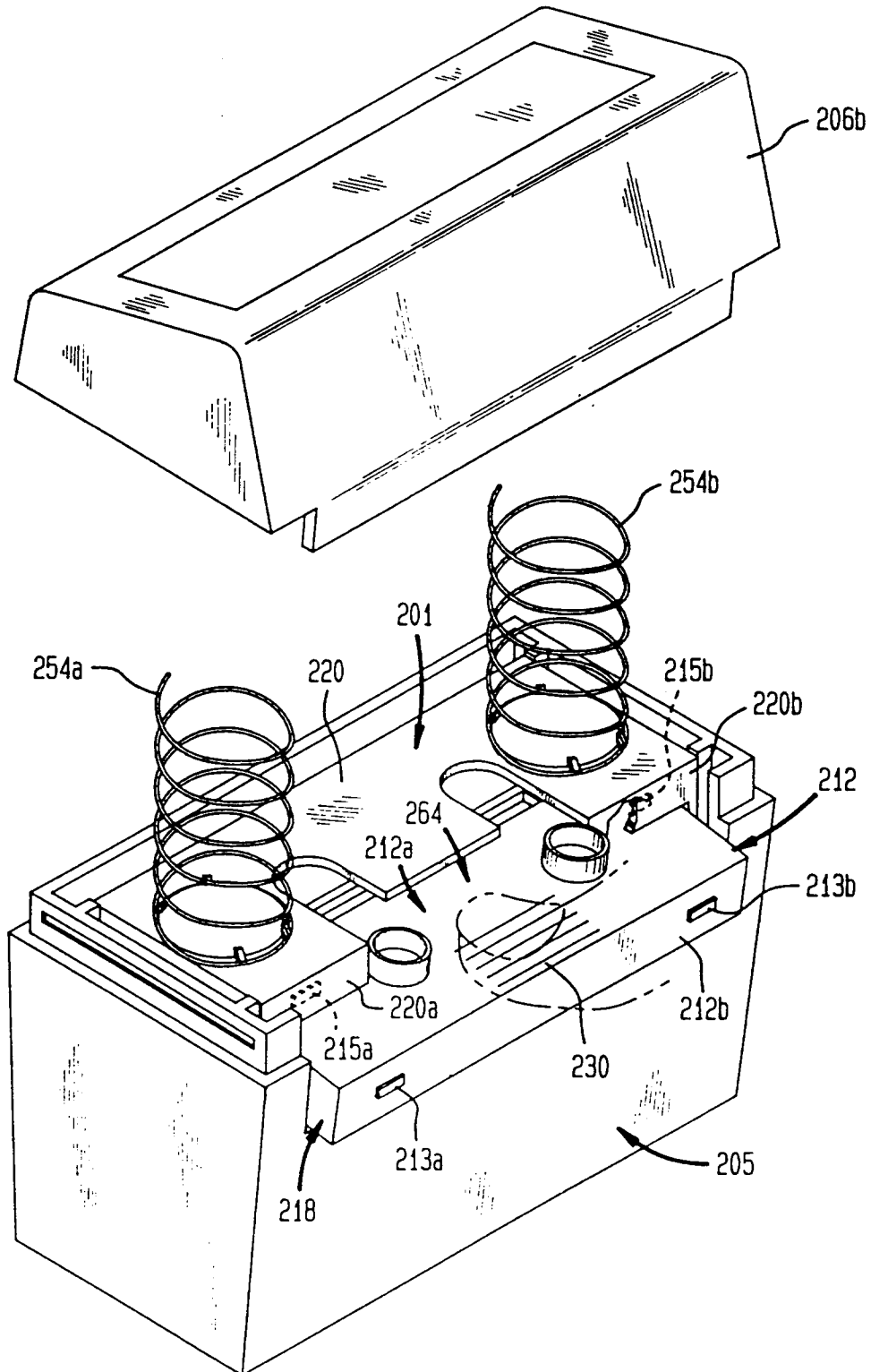


FIG. 10

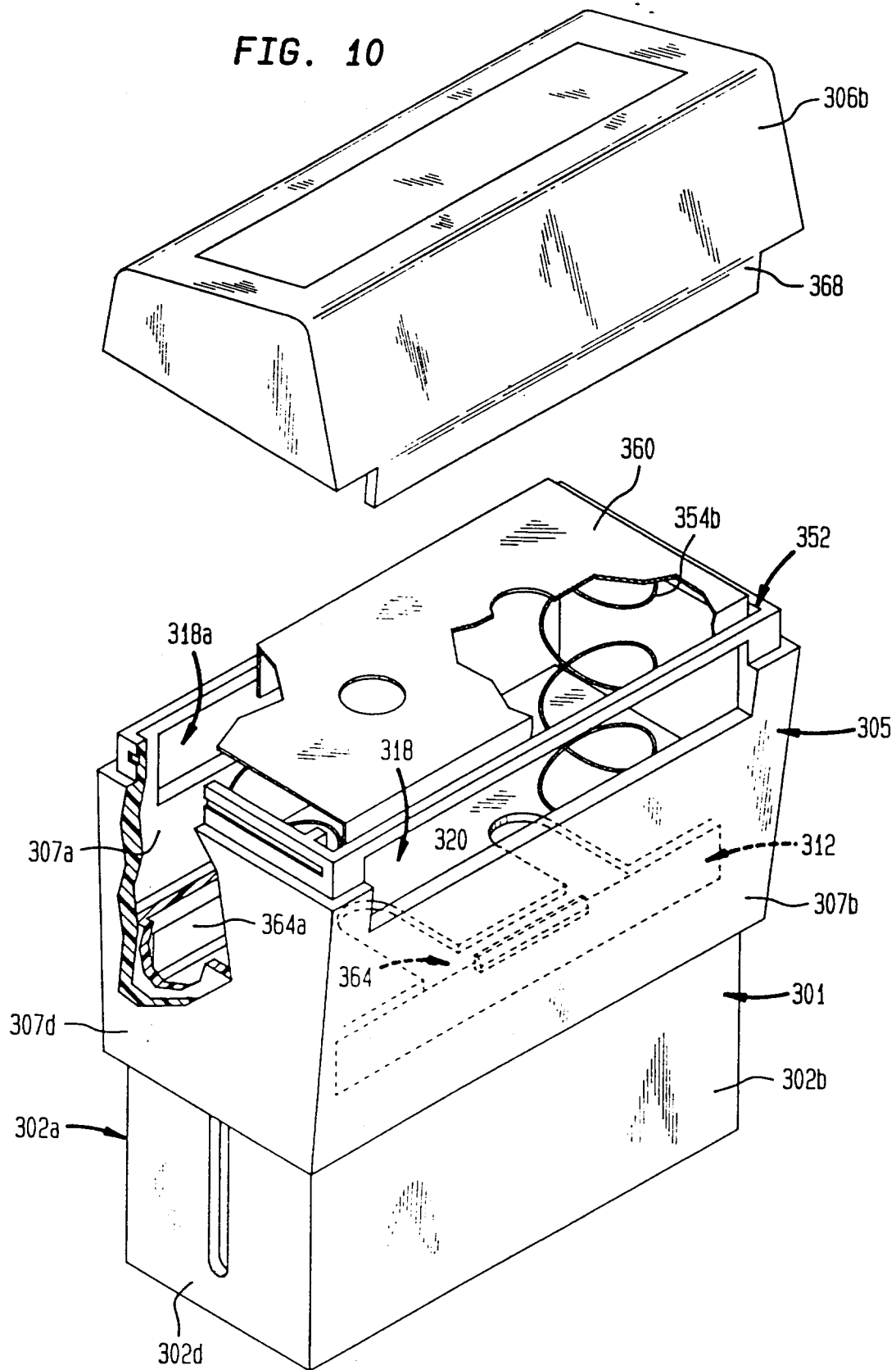


FIG. 11

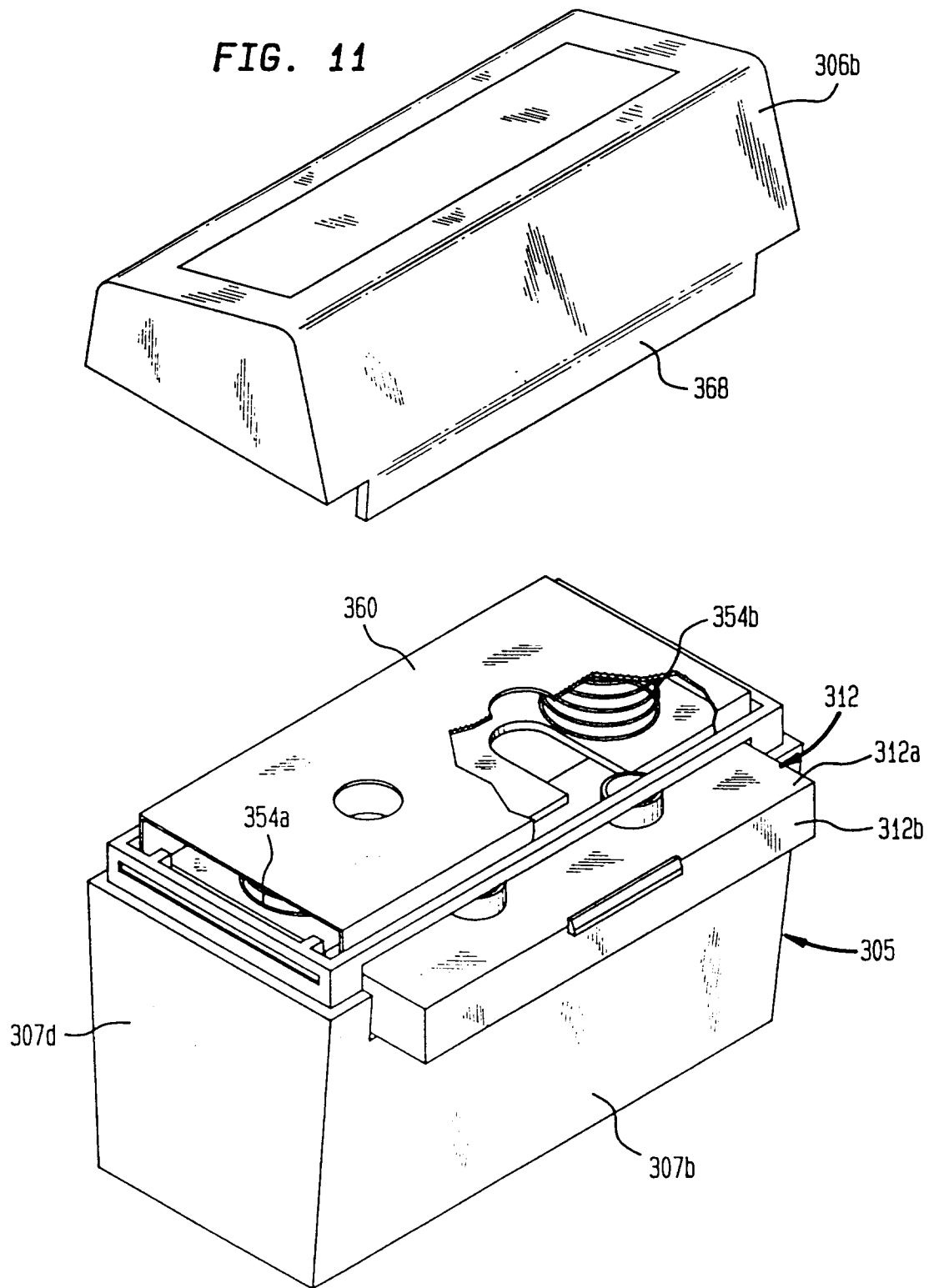


FIG. 12

