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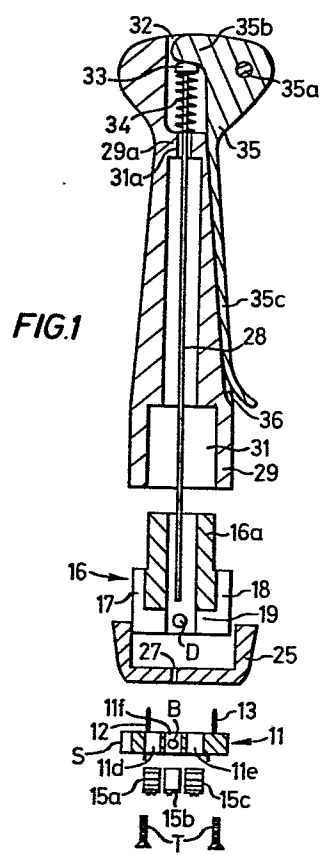
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(54) **Multiple-character-impressing stamps, and character-holding magazines for use with such stamps.**

(57) A multiple-character-impressing stamp of the individually-insertable-and-removable-character kind is hand-operated and is equipped with a mechanism which, when operated, will eject any selected one of the characters from the stamp without the need to dismantle the stamping head. The mechanism comprises a pushrod (28) which is slidable into and out of the character-holding head (11) of the stamp and which works in combination with a member (25) slidable or rotatable across the stamp body. The character-ejecting end of the pushrod (28) is constrained to move with said member (25) in linear or curving motion back and forth across the stamping head (11). A spring-loaded detent means (D, CS) locates and holds the movable member (25) in each of a plurality of selectable positions across the stamping head (11). When the member is so held, the end of the rod (28) is positioned behind a selected character-bearing block (15) and the rod can be operated to eject that character from the stamping head. A magazine is also disclosed which co-operates with the stamp in such a way that any selected character can be ejected from the magazine and into a character-receiving space in the stamping head without the need to handle the character-bearing blocks (15).

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MULTIPLE-CHARACTER-IMPRESSING STAMPS, AND CHARACTER-HOLDING MAGAZINES
FOR USE WITH SUCH STAMPS

FIELD OF THE INVENTION

The invention relates to multiple-character-impressing stamps, and to magazines for use with such stamps. It is particularly - though not exclusively - applicable to hand stamps for use in postal offices to impress a three-character (day-month-year) date onto a succession of documents.

REVIEW OF THE PRIOR ART

Known hand-operated date stamps can be classified broadly into two kinds.

The first kind is one in which successive characters each denoting a day of the month are formed in relief around the outer surface of an endless flexible belt. Other characters denoting respectively each month of a succession of months, and each year of a succession of years, are similarly formed around other respective belts. The belts run alongside one another over the stamping head, and can be moved independently around the head until a desired combination of characters is displayed on the head. The date is then impressed on a document by inking the characters on the stamping head and impressing the head against the document.

The second kind of known hand-operated date stamp is one in

which each character is formed on an individual metal type-face block which has to be separately inserted into and removed from the stamping head. To change the date displayed by the stamp, the head must be unscrewed from the body of the stamp; the individual blocks removed; new blocks inserted; and the head screwed back into place. The stamp can then be used, as in the previous case, by inking the characters on the stamping head and impressing the head against a document.

To change the date on the first kind of stamp, it is - theoretically - necessary only to push round one or more of the individual flexible belts until the newly desired combination of characters is displayed on the stamping head. However, it is found in practice that when the stamp has been in use for some time, the dried ink which accumulates on the belts tends to stick the belts to one another. Freeing the belts is a messy and irritating job, and in postal offices, where the stamps are heavily and repetitively used, it may frequently have to be carried out. Also, if this kind of stamp is stolen, it could be used for unauthorised franking of documents for many years because it carries a complete set of dates.

The individual-character kind of stamp is less of a security risk if stolen, as it carries only one date. However it is even more of a messy and irritating operation to change the date displayed by this stamp - a screwdriver may be needed to dismantle the head; one type-face block at a time has to be taken out and another inserted, both by hand; and the blocks are so small that it is easy to lose them and virtually impossible to avoid handling the inked type-face when dealing with them.

Other kinds of hand stamp have been proposed. In particular, UK patent specification number 683,935 describes and illustrates a hand stamp in which individual type-face blocks are held magnetically in a stamping head and can be ejected from the head without, in theory, having to be manually handled. However the stamp described and

illustrated in specification number 683,935 displays only a single character at a time. The specification contains no suggestion that this stamp might be modified to operate as a multiple-character stamp. Even the
5 illustrated single-character stamp is unsatisfactory, because the block-holding magnet would never withstand heavy use and would quickly lose its holding power when subject to the repeated vibration which postal office hand stamps experience. Although this patent applic-
10 ation was filed 30 years ago now, it has remained purely a paper proposal and has never achieved widespread commercial success. In particular, it has never, as far as is known, been used in postal offices.

SUMMARY OF THE INVENTION

15 Despite their disadvantages, the two broad kinds of date stamp first outlined above are widely used. In particular, the endless belt kind of stamp has never replaced the individual-character stamp in postal offices, because the latter stamp is less of a security risk and especially
20 because it stands up so much better to repeated heavy use.

The invention starts by acknowledging this fact. The first of a succession of inventive steps is the realisation that any new hand stamp will be more quickly accepted, evaluated, and ultimately improved, if it is
25 based, not on the belt stamp, but on the individual-character kind of stamp. The second inventive step, following on the first, is to select from amongst the many unsuccessful prior proposals the one shown in UK patent specification number 683,935 as the practical
30 starting point for a new design. The third step, building on the previous two, is to show how that prior design can successfully be altered to give a hand stamp which is of the individual-character kind; which can display a multiple-character date; and in which the characters can be
35 changed without excessive time being taken, without the present high risks of them being dropped or lost altogether, and without having to handle the previously inked type-faces.

According to one broad aspect of the invention, a multiple-character-impressing stamp is of the individually insertable-and-removable-character kind and is equipped with a mechanism which, when operated, will eject any
5 selected one of the characters from the stamp without the need to dismantle the stamping head. In practical embodiments the stamp is characterised in that said mechanism comprises a pushrod, known per se and slidable into and out of the character-holding head of the stamp, combined with
10 means to move the character-ejecting end of the pushrod selectively back and forth across the head and to hold it positively in position, behind a selected character, whilst operating the rod to eject that character from the head.

Said means may comprise a bar through which the rod passes,
15 the bar being movable linearly back and forth across the stamp (and hence across the line of character-ejecting sliding movement of the rod), and the character-ejecting end of the rod being constrained to move with the bar but being free to slide through the bar into and out of the
20 head once the bar is held in any of its selectable positions on the stamp. Such an arrangement enables the rod to eject any selected one of a line of characters held releasably in the stamping head.

Alternatively said means may comprise a member through
25 which the rod passes and with which the rod is constrained to move in a curve about the stamping head from one selected character to another, the rod again being free to slide through the member into and out of the head once the member is held in any of its selectable positions on the
30 stamp. Such an arrangement would move the rod from one character to another of a set of characters spaced in a curve, for example a circle, around the stamping head.

In either of these cases the bar, or the member, may engage a spring-loaded detent to hold the rod positively behind
35 the character which is to be ejected. Such detents are smooth in operation, engage positively yet are easily released, and need little or no maintenance.

The individual character-bearing blocks may themselves be releasably held in the stamping head by spring-loaded detents, for the advantageous reasons just outlined.

5 The character-ejecting movements of the rod may be controlled by a hand lever which, when operated, gives the operator a mechanical advantage. Any resistance to ejection is then more easily overcome.

10 Where the stamp is a hand stamp, said lever may advantageously project from the side rather than the end, of the stamp handle. There is then less risk of the lever inadvertently being operated when the operator presses down on the handle to stamp a document without intending to eject one of the characters from the stamping head.

15 The stamp can be used with a magazine adapted to receive the characters ejected from the stamping head. A simple tray form of magazine is shown in UK patent specification number 683, 935 but this constitutes nothing more than a receptacle for individual characters. According to a further broad aspect of the invention, a magazine adapted
20 for use with a stamp having any of the combinations of features outlined in the preceding paragraphs includes a mechanism which, when operated, will automatically eject any selected character, held in the magazine, from the magazine; and the stamp and magazine are constructed to co-operate in
25 in such a way that, if the stamp has a character missing, the stamp can be so positioned adjacent the magazine that a character ejected from the magazine will automatically be injected into the character-receiving space in the stamping head. This does away with the need to handle even new,
30 un-inked, character-bearing blocks.

The magazine may advantageously incorporate means which positively prevent all but the selected character from being ejected in a given operation. This minimises the risk of inadvertently losing several characters at a time
35 from the magazine.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

Figure 1 shows in sectioned side elevation the parts of a hand stamp embodying the invention;

5 Figure 2 shows the parts of Figure 1 in perspective;

Figure 3 shows the assembled stamp in end elevation;

Figure 4 shows a modified stamp, embodying the invention, in sectioned side elevation;

Figure 5 shows the stamp of Figure 4 in end elevation;

10 Figure 6 shows another stamp, embodying the invention, in sectioned side elevation;

Figure 7 is a view similar to Figure 6 of yet another stamp embodying the invention;

15 Figures 8 and 9 show in perspective the parts of a magazine for use with these stamps;

Figure 10 shows in perspective a modified magazine.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

20 The stamp of Figures 1, 2 and 3 consists of three major sub-assemblies - a stamping head; a selector mechanism and body; and a handle and ejector mechanism. These will now be described in detail and will be followed by a description of the way in which the stamp is assembled and the way in which the assembled stamp operates.

25 The stamping head is a circular cylindrical metal disc referenced 11. Two pins 12, 13 project from the non-stamping surface of this disc 11 to locate the disc, or head, 11 on one end face of the body 16 which carries the selector mechanism. The stamping surface 11a of the head 11 is slightly raised out of the plane of the
30 surrounding surface of the head end face. A rim R

surrounds the stamping surface 11a and is raised out of the plane of that surface. Circular bores 11b, 11c run through the stamping head 11 perpendicular to the stamping surface 11a. They are countersunk into the stamping surface 11a and are located diametrically opposite one another across that surface.

The stamp is a day-month-year date stamp which displays its date as an aligned set of three individual characters. Three square bores run parallel with one another through the stamping head 11, perpendicular to the stamping surface 11a, and are aligned with one another across the stamping surface. The two outer bores are referenced 11d, 11e, the centre bore is referenced 11f.

A respective one of three spherical steel balls B projects into each bore 11d, 11e, 11f. The balls are housed in channels drilled into the sides of the head 11. Each channel opens onto one of the bores 11d, 11e, 11f and the bore-opening ends of the channels are reduced in diameter so that each ball B is retained in the channel and projects partly into its associated bore. Coiled compression springs C follow the balls B into the channels and are themselves followed by grub screws G which close off the outer ends of the channels and compress the springs C against the balls B. The channels opening into the two outer bores 11d, 11e are both drilled from the same side of the stamping head 11. The channel opening into the central bore 11f is drilled from the opposite side of the head 11.

When the stamping head 11 is assembled, each ball B forms a spring-loaded detent for a respective one of three metal type-face blocks 15a, 15b, 15c. These blocks are each square in cross-section and fit closely within the bores 11d, 11e, 11f. One end face of each block carries a raised type-face character representing a day, month or year number. One side of each block is cut away in a V which, when the block is pushed into its accommodating

bore, engages the partly projecting spring-loaded steel ball B to retain the block releasably in the stamping head. The end faces of each block are radiused along the edge adjacent the V cut-out, so that the block will
5 depress its spring-loaded ball smoothly as it enters its accommodating bore.

A spigot S projects radially from the side of the stamping head 11. Its purpose will be explained later.

The circular cylindrical body 16 which carries the
10 selector mechanism of the stamp has a reduced-diameter portion 16a turned down so as to occupy approximately half the overall length of the body. The body 16 is bored out along its length and about its axis. It has
15 two diametrically opposed longitudinal slots 17, 18 cut into its larger-diameter portion. These slots 17, 18 are inter-connected by a further slot 19 which extends across the diameter of the body 16 and opens onto its larger-diameter end face 16a. This larger-diameter end face 16a of the body 16 contains two diametrically
20 opposite bores 21, 22 each of which accommodates a respective one of the pins 12, 13 of the stamping head 11. Two diametrically opposed screw-threaded bores 23, 24 each open onto the face 16a and accommodate a respective one of two countersunk-headed screws T. The pins 12, 13
25 locate the head 11 on the end face 16a of the body 16, and the screws T then pass through the bores 11b, 11c to secure the head 11 to the body 16. The bores 21, 22, 23 and 24 extend only a short distance axially into the body 16.

30 A U-shaped selector bar 25 is held between the head 11 and the body 16. The base of the bar 25 is a close sliding fit in the slot 19 cut into the end face 16a of the body 16. Each of the arms of the bar 25 is a similarly close fit in a respective one of the slots 17,
35 18. The dimensions of the bar 25 are such that it can effectively occupy any one of three distinct positions:

these are, respectively, a central intermediate position in which the arms of the bar each project from their respective accommodating slots 17, 18; an extreme position in which one of the arms of the bar is accommodated within its slot 17; and an opposite extreme position in which the other arm of the bar is accommodated within the other slot 18. A spherical steel ball D is housed in a channel which extends radially into the body 16 and which opens into the slot 19. The ball D is spring-loaded into its channel in the same way as the balls B in the head 11. Thus the ball D is followed into its channel by a compression spring CS and grub screw GS, and the bore-opening end of that channel is reduced in diameter so that part of the ball D projects into the slot 19. Three part-spherical indentations 26 are formed in-line along one side surface of the base of the bar 25. The bar can be moved, against the spring-loading of the ball D, along the slot 19; and as successive ones of the indentations 26 engage the ball D the bar 25 will be held, releasably, in each of its three positions.

A bore 27 extends centrally through the base of the U-shaped bar 25. When the stamp is assembled, this bore 27 accommodates in a sliding fit an elongate rod 28 which forms part of the ejector mechanism carried by the handle 29 of the stamp. The handle 29 itself is made of plastics material and is shaped externally for a convenient hand grip. It is bored internally about its axis for the greater part of its length, as indicated by the reference number 31. The reduced diameter portion 16b of the body 16 is a force fit in the open end of this bore 31. When the stamp is assembled the rod 28 extends along the bore 31, through the body 16, and through the bore 27.

The bore 31 stops some way short of the top end of the handle 29. The handle is radially cut away, as indicated at 32, so as to leave a rib 29a of material

between the cut-away portion and the end of the bore 31. A smaller bore 31a extends through this rib 29a to connect the bore 31 with the cut-away radial slot 32. The rod 28 slides in this bore 31a and ends in a headed
5 portion 33. A compression spring 34 is coiled about the rod 28 and is compressed between the rib 29a and the underside of the headed portion 33 of the rod. A lever 35 pivots about a pin 35a which pierces the top end of the handle 29. The lever 35 has two arms. One of
10 those arms 35b extends from the pivot 35a into the cut-out 32 to bear against the head 33 of the rod 28. The other arm 35c of the lever 35 is an elongate arm extending along the handle and housed within a slot 36 cut out of the body of the handle. When the coiled
15 compression spring 34 is extended, the elongate arm 35c of the lever 35 is largely housed within its accommodating slot 36. The tail of the arm 35c curves outward to project from the slot 36 adjacent the bar 25.

To complete the assembly of the stamp, the bar 25 is
20 inserted into the slot 19 of the body 16; the stamping head 11 is screwed to the larger-diameter end face 16a of the body 16 so that the bar 25 is slidably retained in the slot 19; and the smaller-diameter portion 16b of the body 16 is force-fitted into the bore 31 of the
25 handle 29 as the rod 28 is fitted into and through the bore 27 in the bar 25.

If the bar 25 of the assembled stamp is moved into any desired one of its three operating positions, it will carry with it the unheaded end portion of the rod 28.
30 The bores 27 and 31a, in which the rod 28 slides, are both large enough to allow this lateral movement of the rod 28 across the stamping head 11. In each operating position the end of the rod 28 will be opposite an end face of one of the metal type-face blocks 15. If the
35 lever arm 35c is pivoted out of its slot 36 against the action of the spring 34, the unheaded end of the rod 28 will eject a chosen one of the metal type-face blocks 15

from the stamping head 11. The spring automatically returns the rod 28, and with it the lever arm 35c, to its inoperative position afterwards. In that position the unheaded end of the rod 28 is still slidably housed within the bore 27 but does not project into the stamping head 11. New metal type-face blocks 15 can be pushed into their accommodating bores in the stamping head and will automatically be retained by the spring-loaded balls 8 as long as the lever arm 35c is not operated. By first moving the bar 25 and then operating the lever arm 35c, any or all of these metal type-face blocks can be individually ejected from the stamping pad and other blocks can replace them, to be ejected themselves when the date changes.

The stamp of Figures 4 and 5 is a modified version of that shown in Figures 1 to 3. Corresponding parts of the two stamps have been given the same references. The main differences in construction between the two stamps are found in the selector mechanism. In Figures 4 and 5 this mechanism has a rotary movement, as distinct from the linear sliding movement of the selector bar 25 of Figures 1 to 3. The stamping head 11 of Figures 4 and 5 is rotated relative to the body 16 of the stamp to bring individual type-face blocks 15 into line successively with the end of the ejector rod 28. This basic difference enables the modified stamp to hold its characters in a circular, rather than linear, display, as Figure 5 will illustrate when compared with Figure 3.

In Figures 4 and 5 the blocks 15 are again held in bores in the head 11 by spring-loaded detents. However the detents now comprise small leaf springs L which are trapped in undercut recesses in the sides of the bores 11d, 11e, 11f and which enable the components B, C and G (and the channels housing them) of Figures 1 to 3 to be dispensed with. The blocks 15 comprise three day-month-year blocks and a fourth block, marked with an asterisk in Figure 5B, which identifies the operator who normally

uses that particular stamp. The stamping head 11 is a rotary fit on the body 16 and is screw-threaded externally to co-operate with an internally screw-threaded ring 37. When the ring 37 is screwed firmly against the head 11, the underside of the ring bears against a surface 37a of the body 16 and holds the head 11 non-rotatably against the end face 16a of the body 16. If the ring 37 is slackened, the head 11 can be rotated about the body 16.

Four part-spherical indentations 26 are formed in the inner face of the ring 11 and are equally spaced about the ring. A single spring-loaded ball D projects partly from a cup 38. The cup 38 screws into a blind bore formed in the side of the body 16 and compresses a spring CS beneath the ball D. As the head 11 rotates, each of the recesses 26 engages the ball D to hold the head, releasably, in a respective one of four positions. In each such position one of the type-face blocks 15 is brought opposite the end of the rod 28. To rotate the head 11 between successive positions, the ring 37 must first be slackened off. Once the head 11 is in position and held by the spring-loaded detent D the lever arm 35c can be pulled away from the handle 29 to eject the block from the stamping head. A new block can be inserted if desired. The ring 37 can then be tightened to hold the head 11 non-rotatably in place against the end face 16a of the body 16 of the stamp.

In the stamp of Figure 6, metal type-face blocks 15 are again held releasably in a stamping head 11 by spring-loaded detents which can be of either of the kinds (D, CS, GS; or L) previously described and illustrated. A block-ejecting mechanism again comprises, as in the previous embodiments, a rod 28 sliding in a bore 31 against the action of a spring 34. In the Figure 6 embodiment the spring 34 is secured to the underside of the head 33 of the rod. There are four separate bores 31a, 31b, etc. each running through and down the handle 29

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to open opposite one of the type-face blocks 15 in the stamping head 11. The rod 28 is shown in one of these bores 31a in Figure 6. Having ejected one block from the head, the rod 28 can be withdrawn completely from its bore by the operator, carrying with it the spring 34, and can then be inserted successively into each of the other bores 31b, 31c to eject the other blocks.

In Figure 7 the block-ejecting end of the rod 28 is rounded to enter smoothly between pairs of opposed leaf springs 34 as it travels down the bores 31. The springs 34 again resist the movement of the rod, as in the previous embodiments.

In Figures 6 and 7 the rod 28 (with, in Figure 6, the spring 34) is stored separately from the rest of the stamp when the blocks 15 are not being changed and the stamp is being repeatedly used to impress the same date on a succession of documents. In each of these Figures the ends of the bores 31 opening onto the handle end 29 could be marked to distinguish the bores from one another. If the operator wanted to change only one of the blocks 15 he would then know at once which of the bores 31 to choose.

The stamps of Figures 6 and 7 can accommodate either a linear display (as in Figure 3) or a circular display (as in Figure 5) of characters.

Figures 8 and 9 show a magazine designed for use with the linear-character kind of stamp described and illustrated. The magazine consists essentially of a rotary wheel in which three circles of metal type-face blocks are carried; a socket into which the head of the stamp can be inserted; and a mechanism to push individual blocks automatically up into the stamping head of the stamp after an existing block has been ejected from the head as previously described.

The rotary wheel W of the magazine is a circular plastics

disc. Three circles of square-section bores extend around its periphery. Each bore of each circle is at the same radial distance from the centre of the disc as every other bore of that circle, and each bore extends
5 right through the disc W. The outer circle contains a complete set of 'day' type-face blocks. The inner circle contains a set of 'year' type-face blocks. The intermediate circle contains a set of 'month' blocks. A spring-loaded detent, of either of the kinds previously
10 described and illustrated as holding the individual metal type-face blocks in the square-section bores of the stamping heads 11, is housed within each of the bores in the wheel W. A single spring-loaded roller 38 is biased against the periphery of the wheel W, which is notched.
15 The wheel W can be rotated fully through 360 degrees against the action of the detent 38, but can be held by that detent in any one of the circumferential succession of positions defined by the peripheral notches.

The notches cut into the periphery of the wheel are so
20 spaced that each rotary movement of the wheel, from one notch to the next, brings a successive one of the outer circle 'day' blocks into position underneath a cut-out 39c formed in the top surface 39 of the magazine above the wheel W. Similar cut-outs 39a, 39b are formed
25 respectively above the 'month' and 'year' circles. A ring 39d rises from the surface 39 and its inner face forms a socket in which the stamping head 11 of the stamp first described (i.e. the stamp of Figures 1 to 3) is a tight but removable fit. Cut-outs 39e, 39f, 39g
30 within the ring 39d reproduce exactly the pattern of bores 11d, 11e, 11f in the head 11 of the stamp. These cut-outs 39e to 39g extend through the surface 39 above the respective circles of bores in the wheel W. A slot 39h in the ring 39d accommodates the spigot S of the
35 stamping head 11 to align the bores 11d, 11e, 11f of the stamp appropriately with the cut-outs 39e to 39g of the magazine.

Levers 41a, 41b, 41c are independently pivotally mounted inside the magazine. Respective pins 42a, 42b, 42c project from the inner ends of these levers and are spring-biased away from the underside of the wheel W. Press
5 buttons 43a, 43b, 43c at the outer ends of levers 41 project outside the magazines. Buttons 43 and cutouts 39a, 39b, 39c are marked with respective 'day', 'month' and 'year' indications. If any of the buttons 43 is pressed, the corresponding pin 42 enters whichever of the
10 block-holding bores in the wheel W is then above the pin. If buttons 43 remain unpressed, the spring-biasing of the pins 42 away from the underside of the wheel W will normally prevent the pins from interfering with the rotary movement of the wheel.

15 A lever 44a projects from the side of the magazine remote from buttons 43. Lever 44a forms an extension of a movable plate 44 which lies between wheel W and the underside of surface 39 and pivots about a spigot SP above wheel W. Plate 44 is so shaped that it can be pivoted, using
20 lever 44a, to blank-off any two of cutouts 39e, 39f, 39g whilst leaving the third cutout open. Surface 39 is marked adjacent lever 44a to indicate which of the 'day' (D) 'month' (M) or 'year' (Y) cutouts within socket 39d is open when lever 44a reaches each of its three pivotal
25 operating positions.

To change one of the characters carried by the stamping head 11, the head is inserted into the socket 39d, with spigot S entering slot 39h to align the blocks in the stamp with the cutouts 39e, 39f, 39g in the magazine.
30 Lever 44a is moved so that plate 44 leaves a selected one of these magazine cutouts open. Selector bar 25 of the stamp is moved to bring the end of rod 28 above the character which lies above the open magazine cutout. The character is ejected through the open cutout and into the
35 waiting initially empty character-receiving bore in the appropriate circle contained in wheel W. To automatically inject another character into the now-empty

bore in the stamping head 11, wheel W is moved until the appropriate one of the cut-outs 39a, 39b, 39c indicates the desired character (each of the three circles of block-holding bores in wheel W are marked with markings which automatically come under the appropriate one of the cut-outs 39a, 39b, 39c as the wheel rotates). Lever 44a is moved to cause plate 44 to blank-off all but the one of the cut-outs 39e, 39f, 39g which then lies above the block itself. The appropriate one of buttons 43 is pressed to cause the associated one of pins 42 to enter the block-holding bore in wheel W and push the new character block up through the open cut-out in surface 39 and into the waiting empty character-receiving bore in the head of the stamp.

These steps can be repeated until all the characters in the stamp have been replaced. Thus the stamp and magazine can be used together to change the dates in the stamp without the operator having to handle the individual metal type-face blocks at all. If the stamp is stolen without the magazine, only one specific date is stolen with it. It is a matter of simple security to ensure that the stamp and the magazine are never housed overnight in the same place.

In Figure 10 a linear slide replaces the wheel W. One longitudinal edge of the slide W is notched to engage the spring-loaded detent 38, and the cut-outs 39a, 39b, 39c and 39e, 39f, 39g have been repositioned appropriately.

In both magazines illustrated, spigot SP projects from the underside of surface 39 but does not project beyond the underside of plate 44.

Plate 44 could enable the spring-loaded detents in wheel W to be dispensed with if so desired. This would simplify the construction of the magazine considerably.

CLAIMS

1. A multiple-character-impressing stamp of the individually-insertable-and-removable-character kind, characterised in that the stamp is equipped with a mechanism which when operated will eject any selected one
5 of the characters from the stamp without the need to dismantle the stamping head, and in that said mechanism comprises a pushrod (28) which is known per se and is slidable into and out of the character-holding head (11) of the stamp and is combined with means (25) to move the
10 character-ejecting end of the pushrod (28) back and forth across the head (11) and to hold it positively in position, behind a selected character, whilst operating the rod (28) to eject that character (15) from the head (11).

2. A stamp according to claim 1 characterised in that said means (25) comprise a bar through which the rod (28) passes and which is movable linearly back and forth across the stamp (and hence across the line of character-ejecting movement of the rod) and in that the character-ejecting end of the rod (28) is constrained to move with the bar (25)
20 but is free to slide through the bar into and out of the stamping head (11) once the bar (25) is held in any of its selectable positions on the stamp.

3. A stamp according to claim 1 characterised in that said means comprises a member (16) through which the rod (28) passes and with which member (16) the rod (28) is
25 constrained to move in a curve about the stamping head (11) from one selected character (15) to another, the rod (28) being free to slide through the member (16) into and out of the head (11) once the member (16) is held in any of its
30 selectable positions on the stamp.

4. A stamp according to claim 2 or claim 3 characterised in that the bar (25) or the member (16) engages a spring-loaded detent (D, GS) which holds the rod (28) positively behind the character (15) which is to be ejected.

5. A stamp according to any of the preceding claims characterised in that the individual-character-bearing blocks (15) are releasably held in the stamping head (11) by spring-loaded detents (8, C; L).

5 6. A stamp according to any of the preceding claims characterised in that the character-ejecting movements of the rod (28) are controlled by a hand lever (35); in that said lever (35) when operated gives the operator a mechanical advantage; and in that the lever (35) projects
10 from the side rather than the end of the stamp handle (29).

7. A magazine for use with a stamp according to any of the preceding claims and having a mechanism which when operated will automatically eject from the magazine any selected character held in the magazine, characterised in
15 that the magazine also has means (39d, 39h) to receive and locate the character-holding head (11) of the stamp in such a way that if the stamp (11) has a character (15) missing, and the stamp is received and located by said means (39d, 39h), a selected character (15) can be ejected
20 from the magazine (W) into the character-receiving space (11d, 11e, 11f) in the stamping head (11).

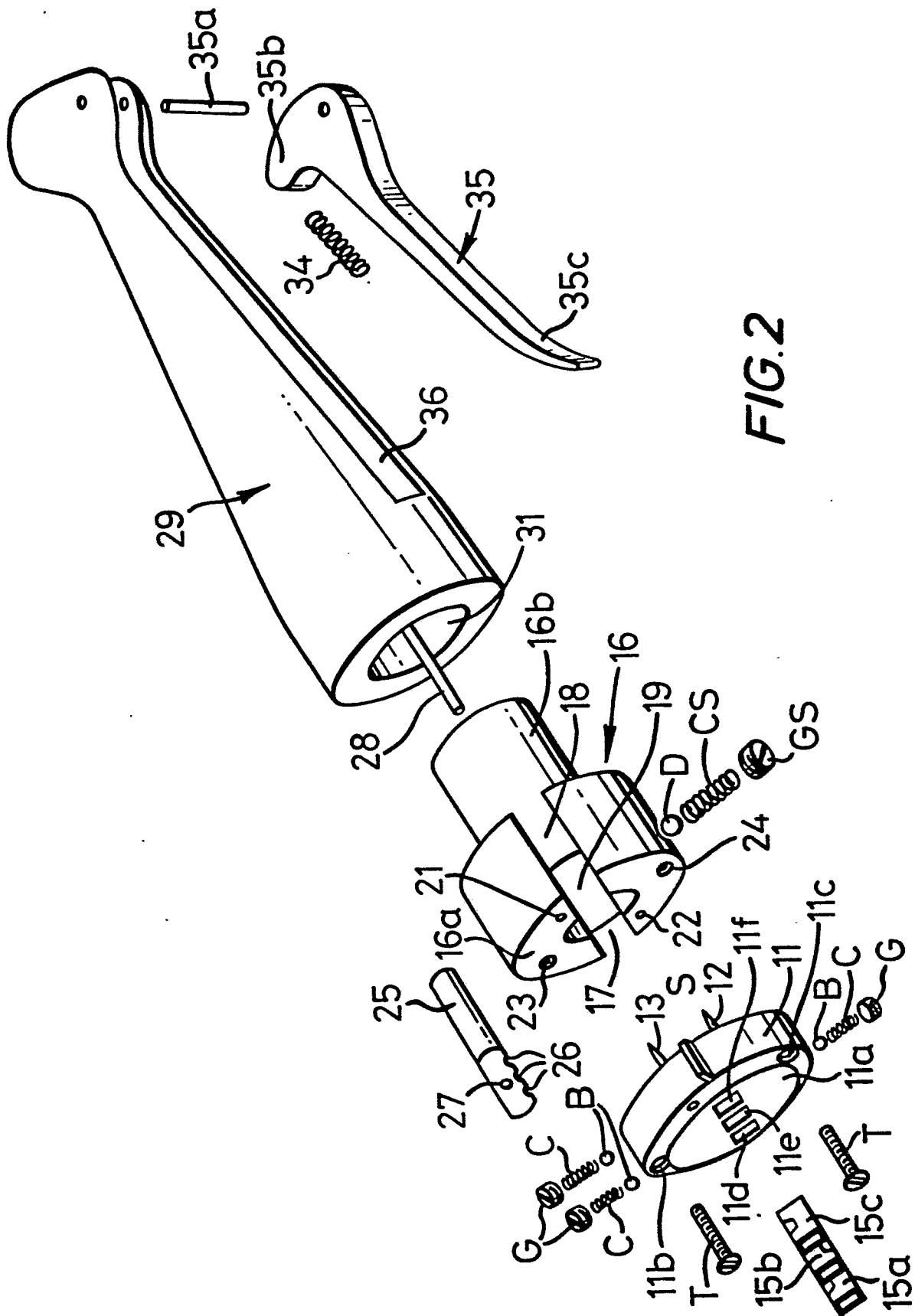
8. A magazine according to claim 7 characterised in that that part (W) of the magazine holding the characters (15) is so movable relative to the stamp-receiving socket (39d, 39h) that every character (15) in the magazine (W) can be
25 brought selectively into and out of a position in which it lies within the socket (39d, 39h) and in which, with the stamp received and located in the socket, said character (15) lies directly beneath a character-receiving space in
30 the stamping head (11) and has an uninterrupted path of ejection from the magazine (W) into said space (11d, 11e, 11f).

9. A magazine according to claim 7 or claim 8 characterised in that the magazine incorporates means (39, 44)
35 which positively prevent all but a selected character (15)

from being ejected in a given operation.

10. A magazine according to claim 9 characterised in that
said means (39, 44) comprise a surface (39) blanking-off
the path of ejection of all but the characters (15) within
5 said socket (39d, 39h) in combination with a plate (44)
movable across said surface (39) in such a way as to blank-
off the ejection path of any character (15), other than the
selected character (15), within the socket (39d, 39h).





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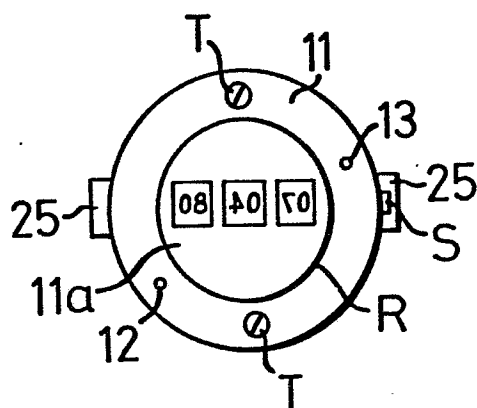


FIG. 3

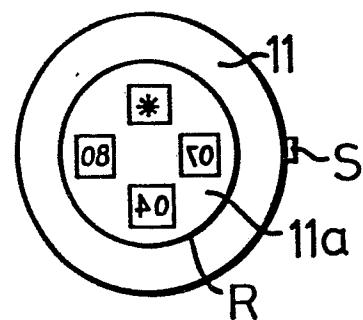


FIG. 5

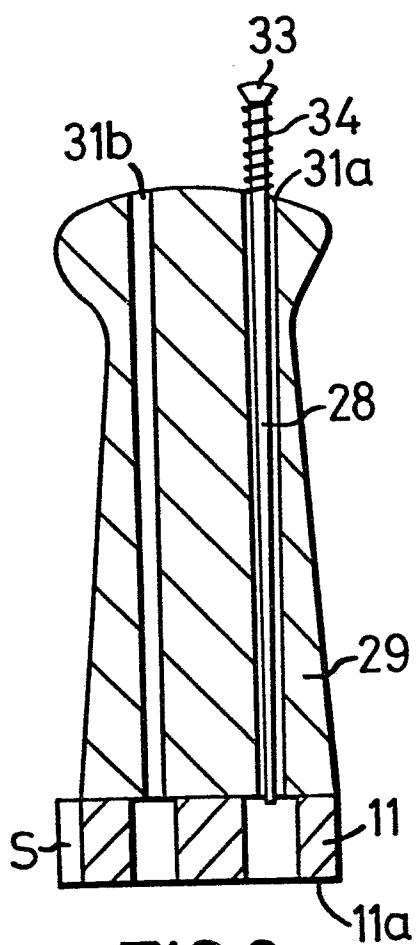


FIG. 6

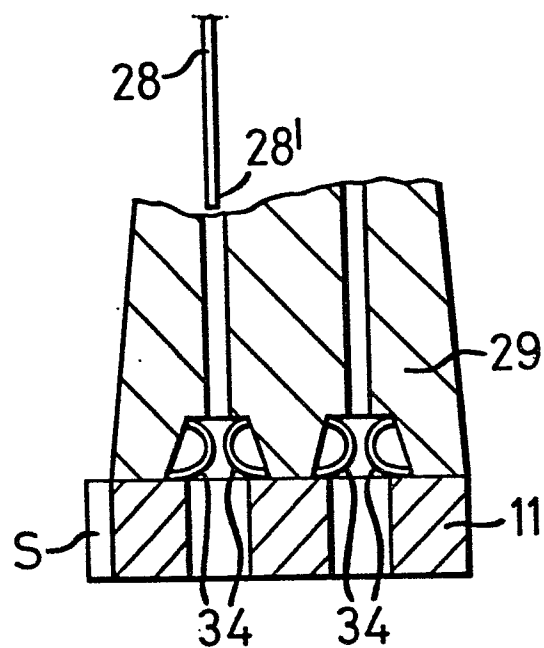
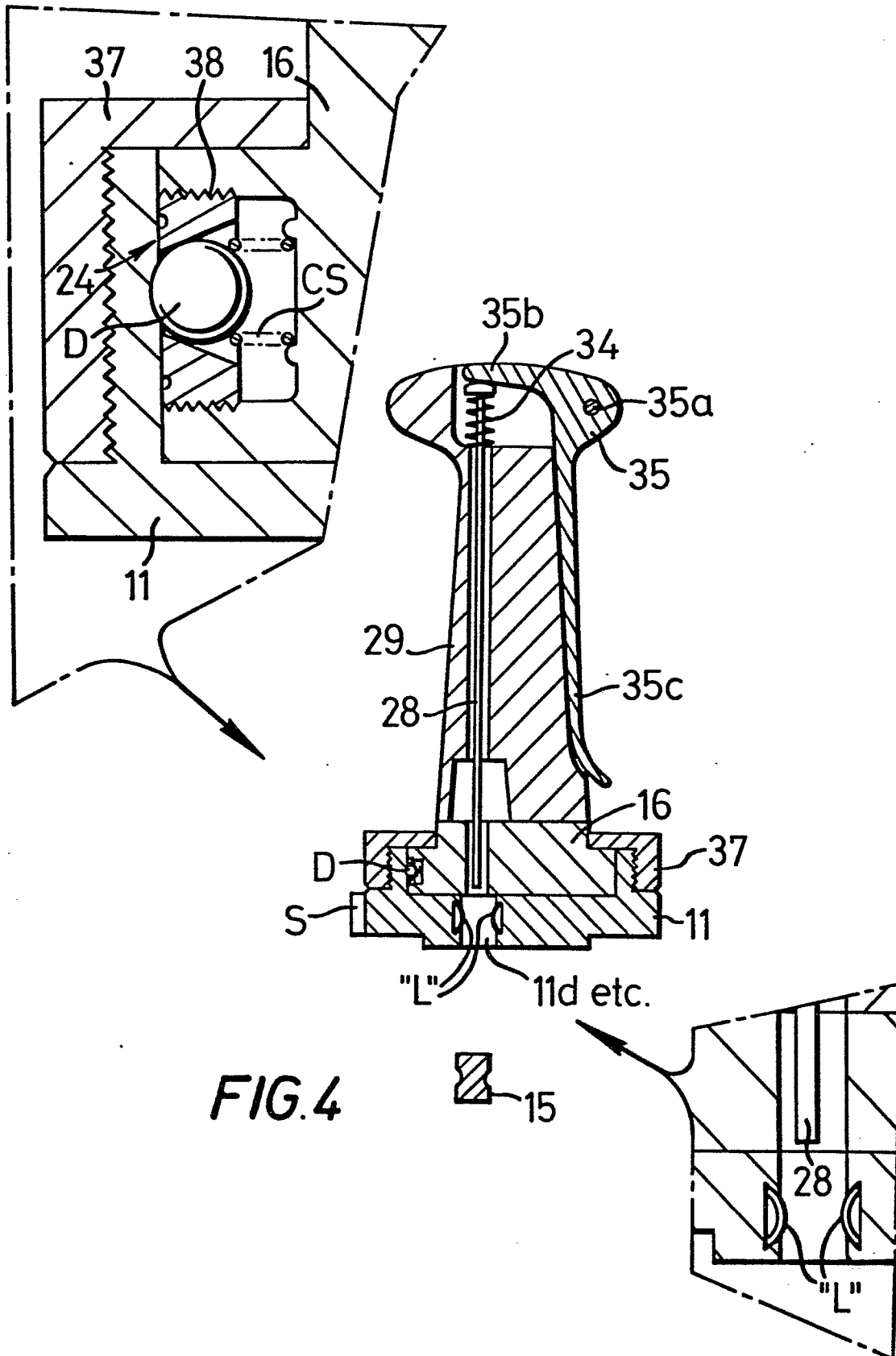


FIG. 7

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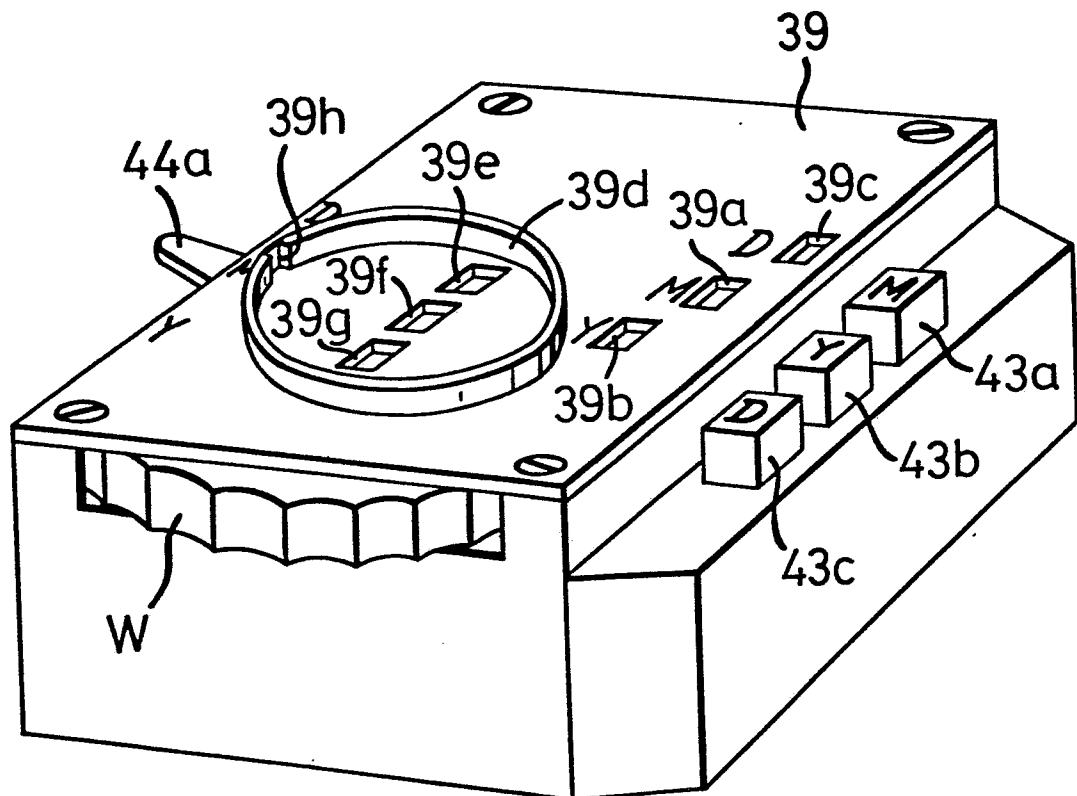


FIG. 8

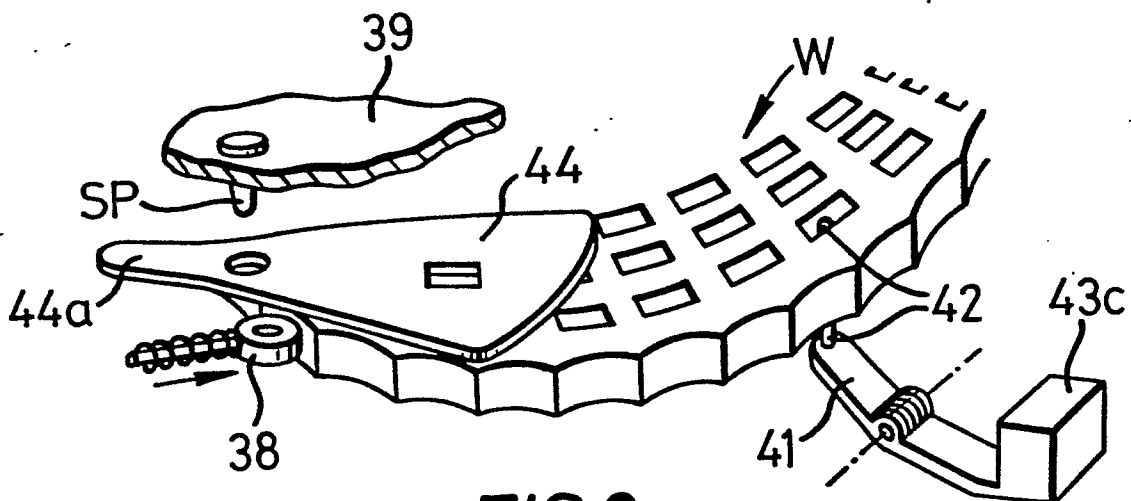
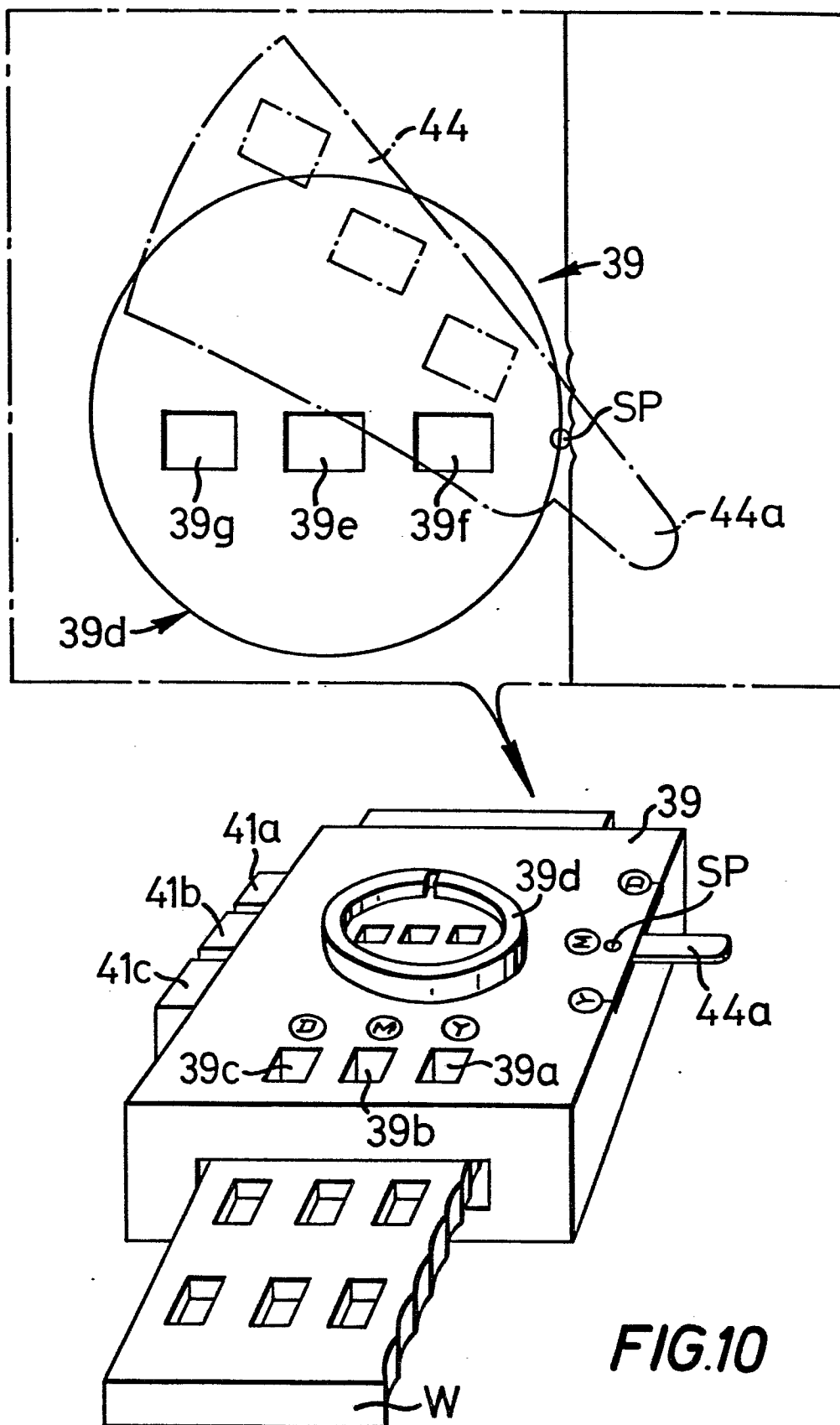


FIG. 9



0047156



European Patent
Office

EUROPEAN SEARCH REPORT

Application number

EP 81 30 3954

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
D	<u>US - A - 2 664 820 (BROWN)</u> * the entire document * ---	1,5	B 41 K 1/08
	<u>US - A - 2 646 748 (BROWN)</u> * the entire document * ---	1,7-10	
	<u>US - A - 2 673 518 (ARDIZZONE)</u> * the entire document * ---	1	
	<u>GB - A - 683 935 (NATIONAL CASH REGISTER)</u> * the entire document * -----	1	TECHNICAL FIELDS SEARCHED (Int. Cl. ³) B 41 K
			CATEGORY OF CITED DOCUMENTS X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
The present search report has been drawn up for all claims			& member of the same patent family, corresponding document
Place of search The Hague		Date of completion of the search 12-11-1981	Examiner MEULEMANS