PRINTING AND RETAINING DEVICE

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1 Claim. (Cl. 101—368)

This invention relates to a device for printing information upon a plurality of different forms and for affording a means for storing a number of those forms at a common location.

In many modern hospitals and clinics, as a patient is passed from one department to another for examination and treatment, a number of different forms or record instruments are made out relating to the patient, a significant part of the information on the forms being common to all the records for one patient. Customarily, the records are individually written by hand or on a typewriter; this procedure is not only time-consuming but frequently gives rise to numerous errors caused by human failure in accuracy of copying. For example, each of the individual forms filled out at a variety of different laboratories or departments within the hospital may require information relating to the name, address, sex, age, religion, type of admission (emergency or otherwise), date of admission, occupation of the patient, and/or other pertinent data, together with the name of the physician in charge of the patient's treatment. All of this information has heretofore been copied by hand onto each of the forms made out during the examination and treatment of the patient in the hospital and, as can be readily appreciated, an error on any of the forms may lead to confusion in the patient's record and represents a potential source of danger to the patient as well as confusion to the hospital clerical staff.

There are other similar record-keeping systems in which an initially indeterminate number of different forms or other record instruments each including some information common to all of the forms and individually including further information different from that on the other instruments must be maintained. For example, in some stock-control systems, in which the stock is classified for individual identification, groups of the stock control forms may include a substantial amount of information which is repetitive in nature in addition to the individual item identification required for each record. In these instances, as in the case of hospital records, human error in copying the repetitive information onto the forms may result in confusion of the records and may substantially lessen their value.

A principal object of the invention, therefore, is a new and improved printing and record holding device which assures accurate reproduction of information on a plurality of record instruments and at the same time affords a convenient means for filing those instruments.

It is another object of the invention to combine recording and filing functions in a single device in a manner which inherently reduces the possibility of error in the records.

A further object of the invention is a printing and record holding device and system which are inherently economical and susceptible to use by relatively untrained personnel.

Accordingly, the invention is directed to a printing and record-holding device for use in a record-keeping system in which an initially indeterminate number of different record instruments, each bearing similar information relating to a given subject and each bearing additional dissimilar information relating to the same two portions, are maintained. The inventive device comprises a folder, envelope, or the like having front and rear covers between which the record instruments may be inserted to afford means for keeping the records together during processing and/or for subsequently filing those instruments. The device further includes means, comprising a series of type characters indicative of the aforesaid information common to each of the instruments and projecting externally of one of the covers, for printing the repetitive information in substantially identical form upon each record instrument as required.

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings which, by way of illustration, show a preferred embodiment of the present invention and the principles thereof and what I now consider to be the best mode in which I have contemplated applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

In the drawings:

Fig. 1 is a perspective view of a record-holding and printing device constructed in accordance with one embodiment of the invention;

Fig. 2 is a plan view of the device of Fig. 1 in fully open condition;

Fig. 3 is a plan view, on an enlarged scale, of a printing plate which comprises a part of the device of Fig. 1;

Fig. 4 is a perspective view of a printing machine which may be incorporated in a record-keeping system which utilizes the device of Fig. 1;

Fig. 5 is a perspective view of the record-holding and printing device of Figs. 1 and 2 at an intermediate stage of construction.

The illustrative embodiment of the invention shown in Fig. 1 includes a folder 1 which comprises a sheet of cardboard or similar material folded into two portions of approximately equal size, the fold line 2 forming the hinge of the folder. One of these portions comprises a front cover 3 and the other portion forms a back cover 4 for the folder. The front cover 3 of the folder 1 has a rectangular portion 3A at the top left hand corner cut away from the remainder of the front cover. The rectangular portion 3A is formed by making a first cut along the dotted line 5 extending from the top edge 6 of the front cover 3 perpendicularly thereto and a second cut along the line 7 extending perpendicularly from the first cut 5 to the fold line 2 (see Fig. 2). Preferably, no cut is made along the fold line 2 to sever the rectangular part 3A from the folder 1 and the rectangular part 3A is, in fact, during use of the device, secured flat against the corresponding portion of back cover 4. The cut-away portion thus formed in the front cover 3 is preferably enlarged by removal of an additional portion 9 from the folder cover 3 to afford a slot or aperture adjacent the rectangular corner portion 3A when the folder is in folded position, as indicated in Fig. 1. A complete control slot 10 is preferably formed in the back cover 4 and, as shown in Fig. 1, is in alignment with the cut-away area 9 when the folder 1 is closed.

A printing plate 11, preferably of rectangular form and substantially similar to printing plates employed in the printing of addresses and in credit-verification systems, is secured to the rear portion 3A of the folder. Printing plate 11 may, for example, be fabricated from thin sheet metal,
The printing plate, which is best shown in Fig. 3, includes a pair of short tongues 12 which extend perpendicularly from the central portions of the shorter sides 14 of the plate, the opposite sides 13 of the two tongues being approximately parallel to each other and to the longer sides of the printing plate. Preferably, the free ends 15 of tongues 12 extend parallel to the shorter sides 14 of the plate. A hole 17 may be drilled or punched through one of the tongues 12 for a purpose set forth hereinafter. The plate 11 is embossed with typewriter characters and arranged in the required repetitive information common to a series of record instruments, as indicated generally by reference numeral 40 in Fig. 3.

After the desired information has been embossed in the printing plate, the plate is secured to the rectangular portion 3A of folder 1 with the top edge 18 of the plate preferably aligned with the top free edge 3E of the folder section 3A. The folder section 3A has two apertures formed therein at the locations indicated by reference numerals 19 and 20 in Fig. 3; preferably, apertures 19 and 20 are spaced from each other by a distance slightly larger than the distance separating the shorter sides 14 of printing plate 11 but slightly smaller than the distance between the free ends 15 of printing plate tongues 12. Two corresponding apertures 19A and 20A (Fig. 5) are formed in the portion of back cover 4 of the folder corresponding to folder section 3A. In mounting plate 11 on folder 1, one tongue 12 is passed through the aperture 19 and through the corresponding aperture 19A in back cover 4, whereas the other tongue 12 is passed through aperture 20 and the corresponding aperture 20A in the back cover 4. In order to pass the tongues 12 through these apertures it may be necessary to bow plate 11 slightly. Once the tongues of the printing plate have been passed through the apertures the plate 11 is straightened and remains secured to the folder 1. The printing plate can, of course, be easily removed from the folder 1 simply by bending the printing plate slightly to permit removal of the tongues 12 from the apertures.

For printing purposes, the record-holding and printing device described above is used in conjunction with a conventional hand-operated printing machine such as that shown in Fig. 4. The particular hand printer illustrated in Fig. 4 includes a platform 16 and is supported upon a base 21. A platen 22 is pivotally mounted on base 21 and includes the usual operating knob 23. Platen 22 cooperates with an inked ribbon 19A that is passed over an anvil (not shown) supported by the base 21. The ribbon extends between a roller mounted at one side of the anvil and a holder disposed at the opposite side of the anvil in accordance with conventional practice, the reel and bobbin not being shown in the drawing. During use of the printing machine, pivotal movement of the platen 22 advances the ribbon from the reel onto the bobbin in the usual manner, the ribbon-advancing mechanism not being illustrated in the drawing inasmuch as it forms no part of the present invention. A frame 24 of sheet material covers the edges of the ribbon 19A; frame 24 is supported by spring strip lugs 25 which slope downwardly from the frame 24 at the sides of the front ends of the spring lugs 25 being engaged in a pair of grooved members 26 supported upon the base 21. The printing machine further includes a pair of horizontal guideways 27 and 28 which may be utilized to guide the two free side edges 3B and 3C of section 3A of the folder cover and the corresponding edges of the related section of back cover 4 into position in the printing machine between the ribbon 19A and the anvil of the machine. A pair of positioning bars 29 are supported on the machine adjacent frame 24, the positioning bars being mounted on a pair of rods 30 which are adjacently secured in mounting blocks 31 which are utilized for positioning the edges of a record instrument 32 upon the machine during the printing operation.

When a record instrument or form 32 is printed with the information carried by printing plate 11, the plate 11 along with folder section 3A and the corresponding sections of the back cover 4 that is to the left of slot 10 (Figs. 1 and 2), is inserted between the ribbon 19A and the anvil of the printing machine with the printing plate 11 uppermost, the position of folder 1 during the printing operation being generally indicated in Fig. 4 by phantom outline 1A.

At one side of frame 24, the ribbon 19 passes downwardly over the left hand side 3C of the section of the folder upon which the printing plate is mounted. At the other side of frame 24, the ribbon passes downwardly over the right hand side 3B of the section of the folder, the surface thereof being recorded by slots 9 and 10 in the record folder. The form 32 is then appropriately placed face down over the frame 24 with two of its edges contacting the positioning bars 29. The operating knob 23 is then pressed downwardly to bring the platen 22 into contact with the back of the form 32 and to press the latter, together with the frame 24, downwardly against the spring action of the lugs 25. This downward movement brings the record instrument into contact with the ribbon 19A and, upon further movement of the operating knob, the ribbon and form are pressed against the printing plate 11 to make an impression of the information carried by the printing plate upon the form.

Preferably, that part 3D of the front cover 3 which is located to the right of section 3A is imprinted with the identification information carried by printing plate 11. For example, a strip 33 of paper may be imprinted with the requisite information and may then be glued otherwise bonded to the front cover 3, the position indicated in Fig. 1.

The inventive concept is not restricted to use of a folder structure as described above in connection with Figs. 1 and 2. It is equally applicable to other convenient means for retaining the completed forms 32 together as the patient progresses through a series of hospital tests and for subsequently filing the records at a common location. For example, the edges 3F and 4F may be secured to each other and the edges 3G and 4G may be similarly secured to each other by gluing, tape, or other suitable means to afford a file envelope instead of the folder structure shown in Figs. 1 and 2.

The record-printing and retaining device described above is of particularly useful application in hospitals. In an individual hospital, of course, one central mechanism for embossing the plates 11 is provided and each laboratory or other department is provided with a printing machine such as that shown in Fig. 4. As a patient is transferred from one department to another for examination and treatment, the repetitive information carried by printing plate 11 is imprinted upon each of the many different record instruments maintained by the various departments, thereby preventing human error in this portion of the recording operation to the greatest extent possible. The embossing and printing apparatus required for operation of the system is relatively simple and economical and may be readily amortized out of savings effected in the time otherwise required for hospital personnel to fill out the individual record forms. In addition, where a metal printing plate of the type described above is utilized as the printing element in the device, in the event of death of the patient the plate 11 may be removed from the folder and attached to the patient for identification purposes or for string passed through the hole 17 in the plate. As indicated above, the invention is not restricted to use in hospitals, but may be advantageously employed in any record-keeping system in which an initially indeterminate number of different record instruments each including some common information must be maintained.

Hence, while I have illustrated and described the preferred embodiments of my invention, it is to be understood that these are capable of variation and modification, and I therefore do not wish to be limited to the precise details set forth, but desire to avow myself of such changes and alterations as full within the purview of the following claim:
I claim:

In a record-keeping system in which an initially indeterminate number of different record instruments, each bearing similar information relating to a given subject and additional dissimilar information relating to the same subject, are to be maintained, a printing and record-holding device comprising a relatively thin, flexible folder, envelope, or the like having front and rear covers between which said record instruments may be inserted to afford a means for filing said instruments at a common location, said front and rear covers having com-plemental slots formed therein at a predetermined loca-tion with respect to one corner of said covers to afford a pair of complemen-tal printing sections each having three free edges, one of said edges being common to said two printing sections and comprising a fold edge of said covers, and means, comprising a printing plate embossed to form a series of type characters indicative of the afore-said information common to each of said instruments for printing that information in substantially identical form upon each said record instrument as required, said printing plate including a pair of mounting tongues extending from opposite sides thereof through complemen-tal aper-tures in said two printing sections of said covers to fasten said two printing sections to each other and releasably affix said printing plate to said folder.

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