This invention relates to punched or perforated record cards such as are used in standard electrical card sorting, cataloguing and classifying systems, and it has for its object to provide a novel and improved card of this type for use in cataloguing or classifying microfilm, motion picture film or the like.

Another object of the invention is to simplify the construction of preformed or partly preformed record cards of the above type and thus reduce their initial cost of manufacture, and, as a corollary, simplify and expedite the application of films to such cards by the user.

Still another object is to provide a record card of the type specified which is preformed in a novel manner to serve equally well as a mount for a single film or a plurality of films, thus reducing to an absolute minimum the variety of preformed record cards required in a given card classification system.

Various other objects and advantages will be apparent as the nature of the invention is more fully disclosed.

Punched or perforated classification cards used in standard punched-card sorting or classifying machines usually have column headings or indicia printed across the top, and other indicia or numbers printed along a vertical edge representing horizontal rows. The intersections between the columns and rows are punched out or perforated according to a predetermined code, so that, when a quantity of such cards are run through the sorting machine, only the card or cards conforming with a specified code will be selected and ejected. As is well known, it is a common practice to mount microfilms and the like on record cards of this type.

If a user such as a library, business house, police department or the like made it a practice always to mount only a single transparent film on each of the above-mentioned cards, the manufacturer of the printed cards could simply blank out a square hole or window in each card, and the user, in addition to punching each card according to its desired code, could simply secure the proper film in the blanked-out window in the card. However, in the case of most users, who mount a single film on some cards and two or more films on other cards, it would be impossible to use a single "all-purpose" card containing a plurality of blanked-out windows because the existence of any window hole not occupied by a film would render the card unsuitable in the classifying machine.

For the foregoing reason, manufacturers of record cards of the above type have supplied users with separate cards containing different numbers of blanked-out square holes according to the number of films to be mounted. This practice not only requires the user to stock as many as four or more different kinds of cards, but furthermore, the cost to the user increases with the number of holes in the card. In addition to these disadvantages, previous methods of forming windows in record cards of this type, and of mounting the films in the windows, have been unduly expensive regardless of the number of windows and films involved.

My invention avoids these and other disadvantages of the prior art by (1) embossing on record cards of the above type a plurality of rectangular depressions of a size which will depend upon the size of the film to be mounted on the card, and of a depth depending upon the thickness of the film, and (2) applying a suitable adhesive to the perimeter of each such rectangular depression. Then, since every user of such cards will always want to mount at least one film on each card, I may, if the user so desires, make one window in each card by punching out the rectangular area which is surrounded by the adhesive-coated perimeter of one of the above-mentioned embossed rectangular depressions. This single punched-out rectangular window is thus surrounded by a narrow depressed adhesive-coated ledge. The user simply sets the rectangular film on said ledge, and, usually with the brief application of heat, seals the film in place at the window.

If the user of the record cards desires to mount more than one film on a card, he simply punches out the necessary number of additional windows in the preformed depressed areas described above, and seals the films on the adhesive-coated ledges in the manner described. While the number of films so mounted is limited only by the capacity of the card, the maximum number of films required in most classification systems is four, as in the case of the card hereinafter disclosed for purposes of illustration. Within such limit, since the same preformed or partly preformed card may be used regardless of the number of films employed, the cards may be supplied most economically on a quantity production basis, and completed with films affixed without difficulty by the user.

The invention is described more in detail in connection with a preferred embodiment illustrated in the accompanying drawing, in which:

Fig. 1 is a plan view of a record card showing the spaced depressions formed therein according of the initial preforming step of the present invention;
Fig. 2 is a longitudinal section taken on line 2—2 of Fig. 1;
Fig. 3 is a diagrammatic sectional view illustrating the step of blanking out a window in the card;
Fig. 4 is a detail section through such a window before a film is mounted therein;
Fig. 5 is a diagrammatic sectional view illustrating the step of mounting a film in the preformed card;
Fig. 6 is a detail sectional view of a card having a film mounted therein; and
Fig. 7 is a broken plan view of a record card, similar to Fig. 1 but with a window therein containing a film.

The drawing shows a thin flexible record card 1 for use in standard card classification systems, having any desired column headings or indicia 2, and having numbers 3 along one edge representing horizontal rows. According to the usual practice, users of record cards of this type punch holes or perforations 4 at certain intersections between the columns 2 and rows 3 according to a predetermined code, as is well understood in the art.

In carrying out the invention, I form a plurality of spaced aligned rectangular depressions 5 in the card 1 (Figs. 1 and 2) each corresponding in area and depth with the area and thickness of a film to be mounted on the card. That is, the length, width and thickness of each of said depressions are such as to readily but snugly receive a frame of film. In the embodiment illustrated the card 1 contains four such aligned depressions 5 which may be sunk or embossed in the card by any suitable die.

A heat-sensitive adhesive coating 6, preferably of gelatin, is next applied to a narrow perimetral portion
of each of the depressions 5 of the card, as illustrated in Figs. 1 and 2. Fig. 3 illustrates diagrammatically the step of blanking out the rectangular area surrounded by the adhesive-coated perimeter of one of the depressions 5 in the card. This operation may be performed simply and instantaneously by means of any suitable die 7 and cooperating vertically movable cutting plunger 8. Fig. 3 shows the plunger 8 descending and cutting out the rectangular blank 9 which is discarded as waste, and leaving a narrow perimetal ledge 10 containing the previously applied adhesive coating 6 surrounding the resulting rectangular aperture or window 12 as shown in Fig. 4.

Fig. 5 illustrates diagrammatically the step of mounting a rectangular film 13 on the perimetal ledge 10 surrounding the blanked-out window 12. The said film 13 is simply placed on the adhesive-coated ledge 10, with the card resting on a suitable support 14, and is pressed upon said ledge by a plunger 15 having suitable heating means 16, the marginal edge of the film thus being sealed upon the ledge 10, as illustrated in Fig. 6.

In the case of the record card 1 shown in Fig. 7, a film 13 is mounted in the manner described above in a single window adjacent the right-hand end of the card as viewed in Fig. 7, while the other three film-mounting positions remain in the partially preformed state shown in Fig. 1. If the user desires to mount more than one film 13 on the card 1, he simply completes the forming and film-mounting operations described above.

While a specific embodiment has been shown and described herein for purposes of illustration, it will be evident to those skilled in the art that the invention is capable of various modifications and adaptations within the scope of the appended claims.

The invention claimed is:

1. Method of preforming a record card for mounting films for use in card classification systems, which comprises forming a plurality of spaced depressions in said card each of an area and depth depending upon the area and thickness of a film to be mounted, applying an adhesive coating to the perimeters of said depressions, and blanking out the area surrounded by the perimeter of a depression as required to form a window for viewing a film seated on the resulting adhesive-coated perimetal depression.

2. Method of preforming a record card for mounting rectangular films for use in card classification systems, which comprises forming a plurality of spaced aligned rectangular depressions in said card each of an area and depth depending upon the area and thickness of a film to be mounted, applying a heat-sensitive coating to a narrow perimetal portion of each of said depressions, blanking out the rectangular area surrounded by the adhesive-coated perimeter of a depression as required to leave a narrow adhesive-coated depressed perimetal ledge surrounding the resulting rectangular aperture, mounting a rectangular film on said perimetal ledge, and applying heat and pressure to seal the edge of said film upon said ledge.

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