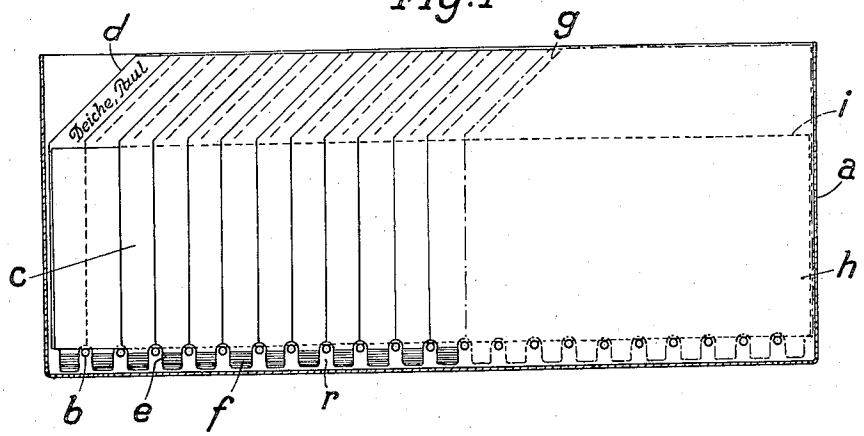
Oct. 2, 1934. R. BOSSE 1,975,566

CARD REGISTER WITH THE CARDS ARRANGED IN ECHELONS IN HORIZONTAL DIRECTION

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Fig. 1



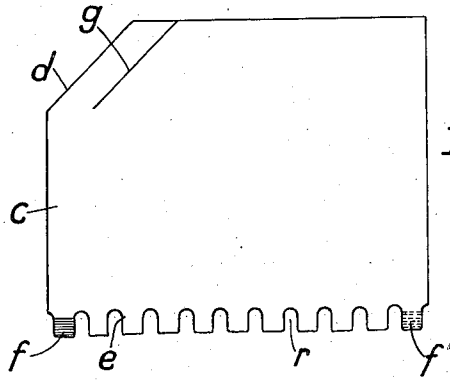


Fig. 2

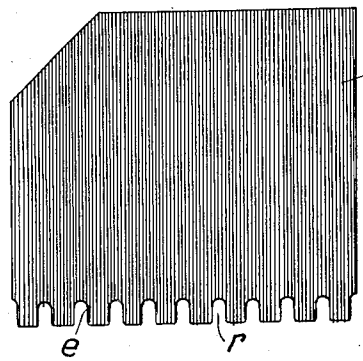


Fig. 3

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CARD REGISTER WITH THE CARDS ARRANGED IN ECHELONS IN HORIZONTAL DIRECTION

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Fig. 4

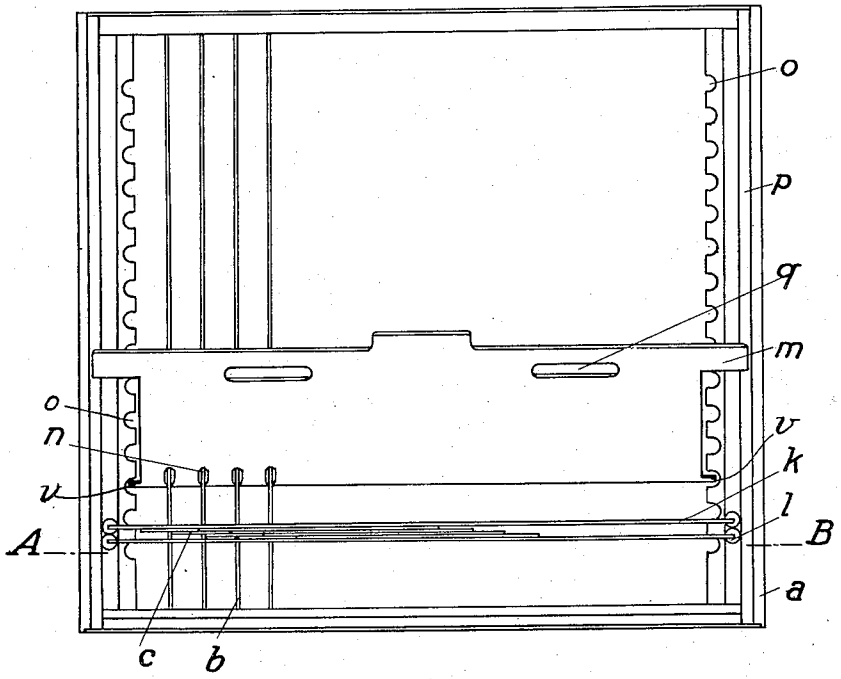
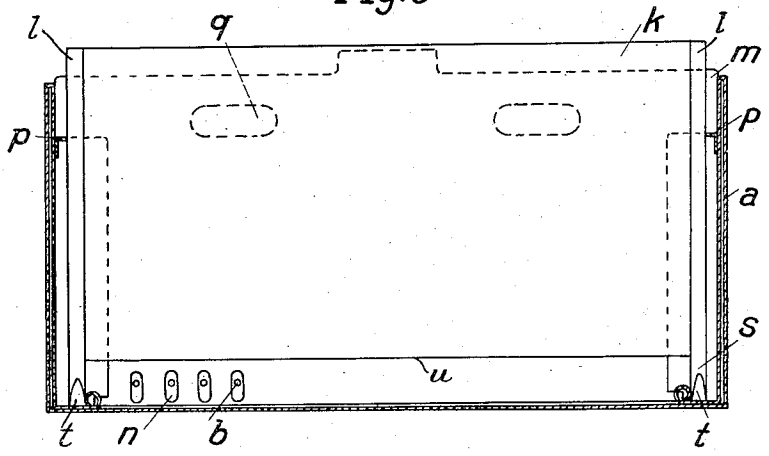


Fig. 5



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UNITED STATES PATENT OFFICE

1,975,566

CARD REGISTER WITH THE CARDS ARRANGED IN ECHELONS IN HORIZONTAL DIRECTION

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Application March 13, 1931, Serial No. 522,484
In Germany April, 1930

4 Claims. (Cl. 129—16)

This invention relates to a card register in which the cards or sheets are arranged visibly in echelons in a horizontal direction.

According to the invention the cards are marked in such a manner that the absence of one card in a pile or the erroneous placing of two cards one exactly behind the other is at once noticed by the observer.

It has already been proposed to provide the cards for this purpose with special projections.

According to the present invention the card itself is made the carrier of the mark so that the section of each single card, consisting of the part visible in the filled card index and another adjacent part of the same size, is provided with a mark. It suffices to mark either the visible part of the card or the adjacent part equal in size.

If the visible part of each card projecting beyond the superposed card is marked, the absence of a card is indicated by the interruption of a series of marks which is complete if the echelon of the card index is complete, whereas a single mark of the echelon attracts attention if the mark is on a part of the card adjacent to its visible part and of the same size, and that part is uncovered because the superposed card is missing.

As the projecting strips of the cards serve for inserting references to the subject matter, preferably, if it is desired to have the visible part of each card marked, and in case the cards engage distance pieces by means of projections provided at their lower edge, the mark may be carried by an end one of such projections.

If the part of the card not visible when the series of cards is complete is provided with the mark, the mark of the uppermost card will always be visible and will make the impression that one card is missing.

This may be prevented by putting a final card without marks upon the uppermost card of each series, the width of the final card being reduced by that of the visible strip. This "final" card then lays bare the inscription of the uppermost card which should be visible in the pile although covering the mark of the card.

A further object of my invention is to compensate for the wedge shaped space which, beginning in the middle of the echelon and extending towards the end of the same in the form of a wedge, is formed between two adjacent echelons, thereby causing considerable bending of the latter and slipping off of the cards from the distance pieces when turning the cards. These interstices may be compensated by thickening the side edges of the well-known separating cards inserted between two echelons.

In this case it is especially advantageous to provide ledges on the side edges of the separating cards to strengthen these edges, the said ledges being prolonged downwards to such an extent so as to touch the bottom of the box. These separating cards may reach the side walls of the box by which they are guided, and are supported outside the distance pieces by the bottom of the box so that it becomes possible to place the lower edge above the distance pieces. Hereby I avoid the projections, provided at the relatively thick separating cards and cooperating with the distance pieces, pressing against the projections of the cards and detaching them from the distance pieces when turning the echelon. This result is likewise, although to a smaller degree, attained by providing the separating cards, only at their ends, with projections overlapping the distance pieces.

When employing a great number of cards and several echelons of cards the distance pieces are sometimes pressed or bent towards the bottom even when the cards touch the bottom of the box with the lower end of the guiding lugs, as several cards in the pile sometimes are tilted and are held fast in this position by the cards lying over or under them when the pile slips down, so that a pressure is exerted towards the bottom upon the distance pieces, and thereby the cooperation of the cards inserted into the pile with the distance pieces is made uncertain.

This inconvenience may be avoided according to the present invention by providing the well-known supporting partition—by which boxes having a great breadth are subdivided—at their lower edge with recesses adapted to embrace the distance pieces and closed at their lower end so that the distance pieces are supported by the supporting partitions when the latter are locked.

To prevent the supporting partitions from slipping out of their temporary position, abutments may be provided at the bottom outside the distance pieces, viz. near the side walls of the card index by which the lower edges of the partitions are positioned.

The invention will now be more clearly explained with reference to the annexed drawings in which

Fig. 1 is a cross-section parallel to the cards through a card register the cards of which are provided with an oblique cut and projections formed by punching.

Fig. 2 shows a single card carrying the marks serving for indicating the missing of a card.

Fig. 3 represents a final card. In Fig. 4 a card registry is shown in which the echelons of cards are separated by auxiliary cards and a supporting wall is provided for supporting a number of echelons. Fig. 5 is a vertical cross-section along the line A—B through a card register according to Fig. 4.

In the figures *a* is the register box, *b* are the uniformly spaced distance pieces arranged at the bottom of the box, *c* are the cards. *d* are the oblique edges formed at an upper corner of each card and *e* the projections on the lower edge of the cards which pass between the distance pieces *b*. *r, r* are the slots formed between the projections or lugs *e*. *f* and *f'* are the marks of the first and the last of the projections *e* produced by punching. Marks *f* are placed on the front faces of the cards, and marks *f'* on the rear faces thereof. *g* in Fig. 2 is the mark to be covered by the slanting border of the next superposed card. *h* is the final card which may have a special color to distinguish it from the other cards. *i* is an account-sheet inserted between the second and the third card (counting from the left hand in Fig. 1). Any desired number of account-sheets may be inserted, a card *c* serving as an index for finding the corresponding account-card.

Reference letters *k, k* Figures 4 and 5 indicate separating cards provided at their vertical edges with reinforcements *l*. *m* is a supporting partition provided with elongated holes *n* through which the distance pieces are passed.

o, o indicate recesses in a pair of rack members on the bottom of the box spaced from the sides thereof in any opposite pair of which the ears *v* may be engaged to hold the partition in adjusted position. *p, p* are ledges forming a rest for ears at the upper edges of the partitions *m* when the latter is not held in vertical position by the cards. *q, q* are holes in the partition *m* for facilitating the lifting of the latter and placing the same into another pair of recesses. *r, r* are the slots between the projections or lugs *e*.

The legs *s* of the separating cards *k* which are extensions of the reinforcements *l* are beveled at their lower ends so that the edges *t* are parallel to the plane of the cards, whereby clamping or disarranging of the legs of the adjacent separating cards is avoided when the cards are turned. The same effect may be attained by sharpening the ends of the legs to points. These legs rest on the bottom of the box outside of the rack members and of the outermost distance pieces.

The lower edge *u* of the separating card *k* may be lower or higher than shown in the drawings. The higher it is, the greater is the hollow space formed between two echelons of cards on the one hand and between the distance pieces and the lower edge of the separating card on the other hand, and the better will be the play of the guiding lugs *e* and the lower edges of the cards of each echelon when turning the latter.

In Fig. 4 the echelon of cards *c* is only intimated by three cards which are drawn considerably thicker, as it would be impossible to show them with their real thickness.

In Fig. 5 the whole echelon of cards is omitted to clearly show the separating card *k* and the supporting partition *m*.

I claim:—

1. A card register comprising a box, a plurality of cards arranged in echelons in horizontal direction and provided with lugs on their lower edges leaving slots between them, a plurality of distance pieces parallelly disposed near the bottom of the box and engaging the said slots, and a mark upon that of the said lugs which is adjacent the visible edge of each card, the visible part of each card and the part covered by the visible part of the next card being differentiated by a mark located on one of these parts in a uniform position throughout all the cards.

2. A card register comprising a box, a plurality of cards arranged in echelons in horizontal direction and provided with lugs on their lower edges leaving slots between them, a plurality of distance pieces parallelly disposed near the bottom of the box and engaging the said slots, the visible part of each card and the part covered by the visible part of the next card being differentiated by a mark located on one of these parts in a uniform position throughout all the cards, and a mark on the rear side of that of the said lugs which is adjacent the covered edge of each card.

3. A card register comprising a plurality of cards of uniform width arranged in echelons in horizontal direction, the visible part of each card and the part covered by the visible part of the next card being differentiated by a mark located on one of these parts in a uniform position throughout all the cards, and a final card for each echelon the width of which is reduced so as to continue the echelon.

4. A card register comprising a plurality of cards arranged in echelons in horizontal direction, the visible part of each card and the part covered by the visible part of the next card being differentiated by a mark located on one of these parts in a uniform position throughout all the cards, and an especially colored final card.

RUDOLF BOSSE.