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D. A. NEVIN

2,289,380

CARD AND THE LIKE FOR SEQUENCE SORTING

Filed Aug. 30, 1939

FIG. 1

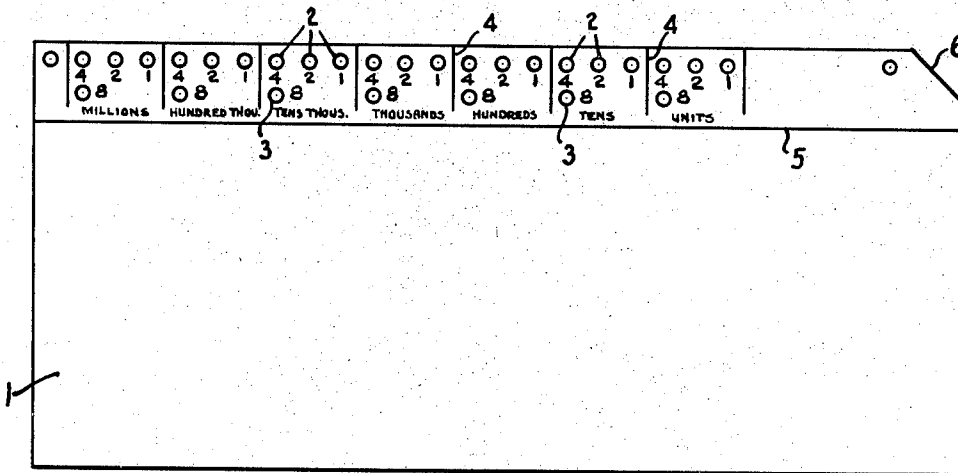


FIG. 2

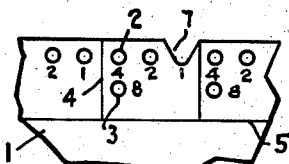


FIG. 3

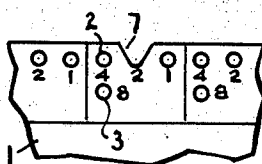


FIG. 4

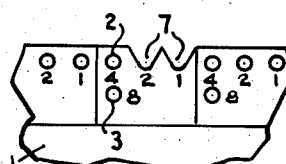


FIG. 5

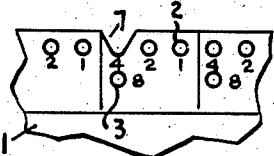


FIG. 6

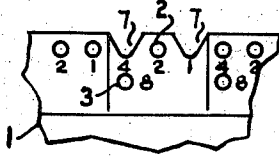


FIG. 7

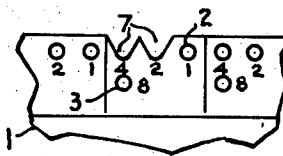


FIG. 8

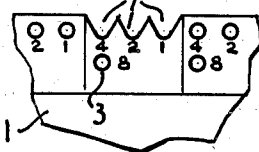


FIG. 9

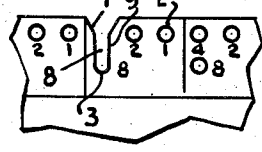


FIG. 10

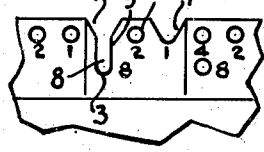
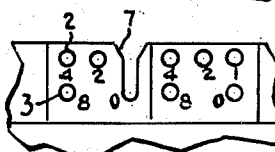


FIG. 11



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2,289,380

CARD AND THE LIKE FOR SEQUENCE
SORTINGDonald A. Nevin, Athens, Ohio, assignor to The
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Application August 30, 1939, Serial No. 292,561

4 Claims. (Cl. 129—16.1)

The present invention relates to cards or other bodies of sheet material intended for sorting purposes, and particularly those adapted for sequence sorting.

Perforated, notched and otherwise mutilated sheets and cards have been known in the art for years and have enjoyed a widespread use for sorting, separating and classifying statistics, accounts and records of all kinds. The classification limits to which a perforated card or sheet is restricted, depends greatly upon the working area of such card or sheet available for the reception of perforations or notches.

In accordance with the United States Letters Patent to Perkins No. 1,544,172, dated June 30, 1925, a card and system were first disclosed whereby sequence sorting could be accomplished simply and quickly, without the need for expensive and complex machines. In this Perkins patent, ten perforations were provided for each digit of the classification proposed.

A later patent to Perkins, United States Letters Patent No. 1,739,087, dated December 10, 1929, proposed certain improvements over the earlier patent, whereby with a card or sheet of given length or width, a greater number of digits or separate classifications could be represented. This was accomplished by providing a double row of staggered perforations capable of being notched to an edge of the card or sheet. Because of the staggered arrangement, certain notches were made appreciably wider than others, and the result while valuable, is subject to certain disadvantages.

One of the disadvantages pertains to construction of mechanical means for notching the card to the edge. Those skilled in the art will recognize the fact that design of the various types of notching-punching machines would involve complex and difficult constructions and that such machines would be costly to build and expensive to maintain. This would materially limit general adoption and use of the card described in this later Perkins patent.

It is the object of the present invention to overcome the faults and limitations inherent to the prior art, and to improve upon the arrangements proposed by the already successful Perkins patents.

In accordance with the present invention, a card or other body of sheet material is provided along one or more of its edges with an outer row of perforations relating to a particular classification in parallel adjacency to the edge or edges, 55

an inner row of perforations relating to the same classification as do those in the outer row, in parallel adjacency to the outer row. The perforations in both rows are preferably similar in size and shape, and they are arranged so that the perforations in the inner row or rows are aligned with perforations in the outer row or rows respectively, in a direction perpendicular to the adjacent edge of the body. By virtue of this arrangement, perforations of the outer row alone, or aligned perforations of both rows may be notched to their respective adjacent edges, thereby forming a pattern of notches relating to a single classification.

The perforations are preferably grouped so as to include in each group, three perforations in the outer row, and a fewer number, say one or two, in the inner row. Hence, for some representations, a group may be provided with only a shallow notch or notches extending from the outer row to the adjacent edge; for other representations, a group may receive only a deep notch or notches so that perforations of both rows are brought into communication and opened to the adjacent edge; and finally, a group may receive notches of both shallow and deep types for still other representations.

Whereas the notches utilized are preferably somewhat divergent at the edge of the card or body, at no point is the notch wide enough to open more than a single perforation of a single row to the edge. Of course, by making the notch deeper, a perforation in each row may be slotted so that they communicate with one another and open upon the edge. Hence, for practical purposes, and except for the slight divergency at the edge, the notches formed, whether they be deep or shallow, are of substantially equal width.

My means of accomplishing the foregoing objects may be more readily understood by reference to the accompanying drawing which is hereunto annexed and forms a part of this specification, in which:

Fig. 1 is an illustration of my invention, having two rows of coded perforations adjacent the edge of the card and divided into groups by printed lines;

Figs. 2 to 10 are fragmentary views of a card showing successive representation of such card after it has been notched to indicate the numbers "1" to "9," only one group in each view being so depicted; and

Fig. 11 is a fragmentary view of a card showing a modification in which an additional num-

ber or letter may be added to the code in each group without adding to the length of the card.

Similar reference numerals refer to similar parts throughout the entire specification.

Referring to Fig. 1 of the drawing, a card or other body 1 of paper, cardboard, or the like is provided with an outer row of perforations 2 in parallel adjacency to an edge of the body, and an inner row of perforations 3 in parallel adjacency to the outer row. It will be noted that the perforations in the two rows have been shown as similar in size and shape, although some variation may be made without departing from the present invention. It is important in accordance with the present discovery however that the perforations 3 in the inner row be aligned with perforations in the outer row in a direction perpendicular to the adjacent edge of the body.

The perforations 2 and 3 in the two rows have been depicted as divided into groups, by means of lines 4 extending perpendicular to the rows of perforations and a line 5 running parallel to the rows. In the embodiment shown in Fig. 1, the arrangement of the groups of perforations adapts the sheet to sequence sorting, classifying or separating in accordance with values ranging from 1 to 10,000,000, as will be observed from the indicia printed upon the sheet. The beveled corner 6 providing on the sheet facilitates arranging the cards with their corresponding faces and edges in the same direction.

The two rows of perforations may be confined to a single edge of the sheet or card as shown, or they may be applied to any additional number of edges if so desired, thereby increasing the range of a single classification, or permitting the addition of other classifications.

Referring to Figs. 2 to 10, the notching as applied to one group of perforations, illustrates the manner in which the numerals "1" to "9" are represented. In Fig. 2, a single notch to a perforation of the outer row marked "1" represents the numeral "1." In Fig. 3, a notch to a perforation of the outer row marked "2" represents numeral "2." The numeral "3" is represented in Fig. 4, by notching two perforations of the outer row marked "1," and "2." Similarly, the notching in Figs. 5, 6, 7 and 8 depicts numerals "4," "5," "6" and "7" respectively. In the figures thus far described, only shallow notches have been used.

The numeral "8" (or other numeric codes might be assigned in each digit. Also the perforations might be identified by other indicia, i. e., letters, names or symbols) is represented by the deep notch in Fig. 9 which extends from a perforation in the inner row, through a perforation in the outer row, to the edge of the body.

The numeral "9" is represented in Fig. 10 by a shallow notch and a deep notch, combining notches like those of Figs. 2 and 9.

In Fig. 11 a modification is shown wherein the inner row of each group is provided with two perforations, each aligned with a perforation in the outer row in a direction perpendicular to the adjacent edge.

In view of the fact that the notching utilized in accordance with the present invention contem-

plates no notch or slot wide enough to interconnect two perforations of a single row, the notches whether deep or shallow, are for all practical purposes, substantially equal in width, despite the slight flare or divergency formed immediately adjacent the edge.

Having described my invention, what I regard as new and desire to secure by Letters Patent is:

1. A sheet for classification purposes having a row of perforations closely adjacent one edge thereof, a second row of perforations closely adjacent the first row, there being fewer perforations in the second row than the first row, each of the perforations of the second row being aligned with each third hole of the first row, in a direction perpendicular to the edge, said perforations being so disposed as to form groups of four only, each group comprising only three perforations in the first said row and only one perforation in the second row.

2. A sheet for classification purposes having a row of perforations closely adjacent an edge thereof, a second row of perforations closely adjacent the first said row, there being fewer perforations in the second row than the first row, all of the perforations in the second row being aligned with perforations in the first row in a direction perpendicular to said edge, said perforations being disposed in groups of four only, each of said groups comprising only three perforations in the first said row and only one perforation in said second row.

3. A sheet for classification purposes having a row of perforations closely adjacent one edge thereof, a second row of perforations closely adjacent the first row, there being fewer perforations in the second row than the first row, each of the perforations of the second row being aligned with each third hole of the first row, in a direction perpendicular to the edge, said perforations being so disposed as to form groups of four only, each group comprising only three perforations in the first said row and only one perforation in the second row, the perforations of each group considered collectively being unsymmetrically arranged and only two of the perforations being adapted to be connected by a slot extending from the edge of said sheet.

4. A sheet for classification purposes having a row of perforations closely adjacent an edge thereof, a second row of perforations closely adjacent the first row, there being fewer perforations in the second row than the first row, all of the perforations in the second row being aligned with perforations in the first row in a direction perpendicular to said edge, said perforations being disposed in groups of four only, each of said groups comprising only three perforations in the first said row and only one perforation in the said second row, the sheet adjacent the perforations of each group of three in the outer row running from right to left bearing numerical indicia one, two and four respectively, the sheet adjacent the perforations in the second row bearing the numerical indicia eight.

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