United States Patent

Wanous

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[54] **APPARATUS FOR SORTING AND RETRIEVING CARDS**

[72] Inventor: **Wayne L. Wanous,** 34 12th Ave. N., Hopkins, Minn. 55343

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[51] **Int. Cl.** **B07c 5/34**

[58] **Field of Search** 209/80.5, 110.5

[56] **References Cited**

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Primary Examiner—Allen N. Knowles
Assistant Examiner—Gene A. Church
Attorney—Paul L. Sjoquist

[57] **ABSTRACT**

Apparatus for sorting and retrieving information printed on cards is disclosed, where the information is classified into predetermined categories and the classifications are arranged to correlate with edge-punched holes and notches, and the entire apparatus is compactly structured for use on a desk or table top.

6 Claims, 4 Drawing Figures

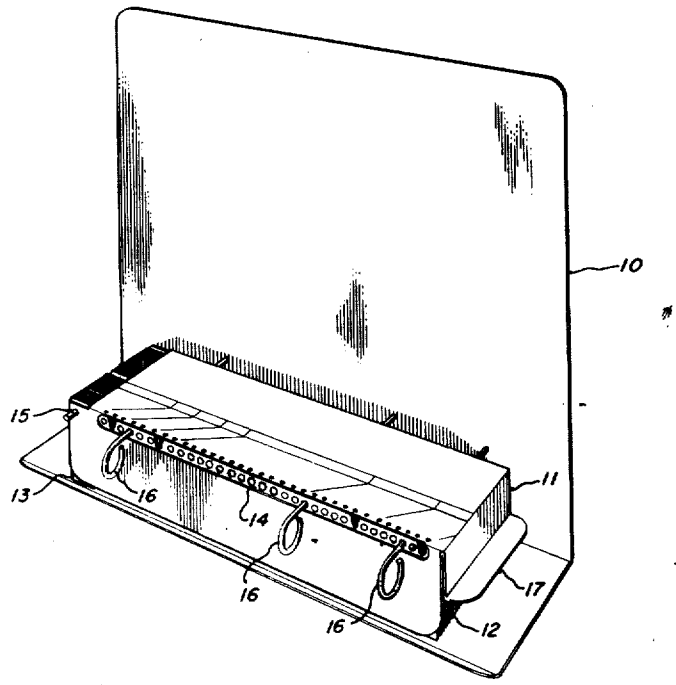
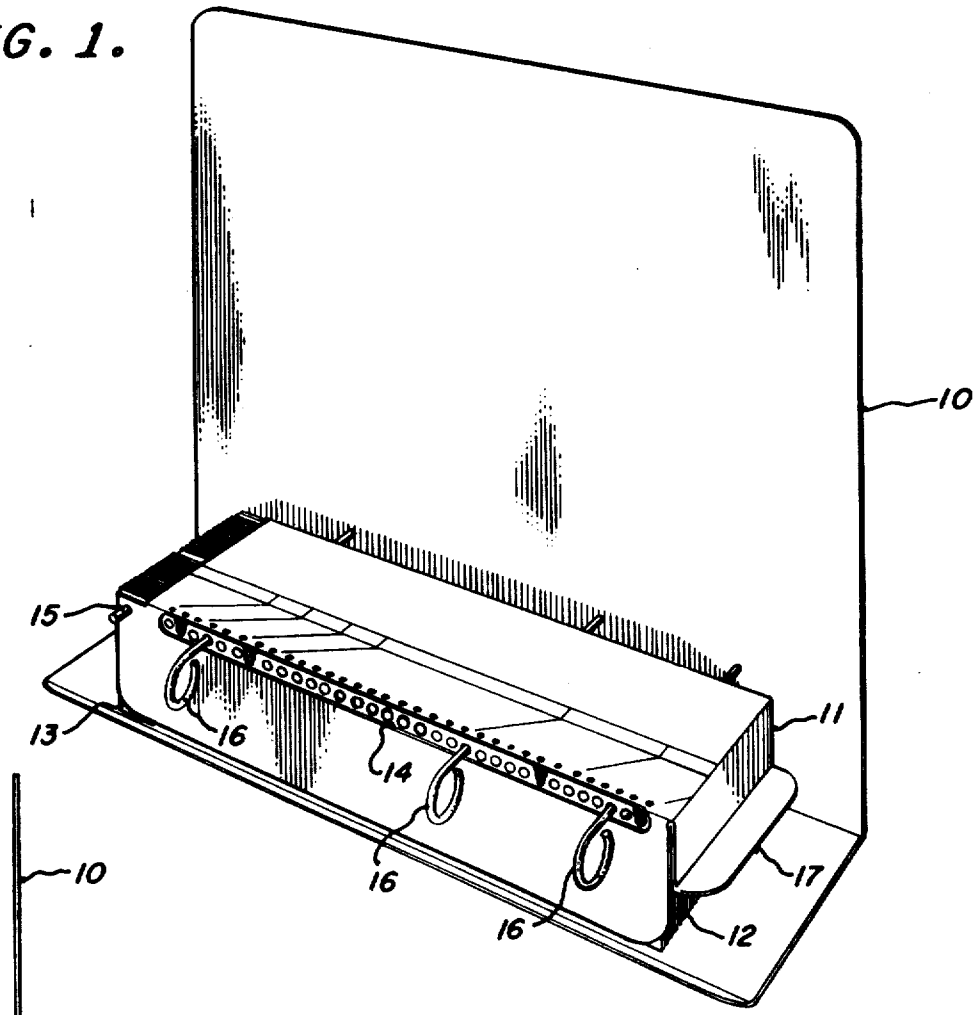


FIG. 1.



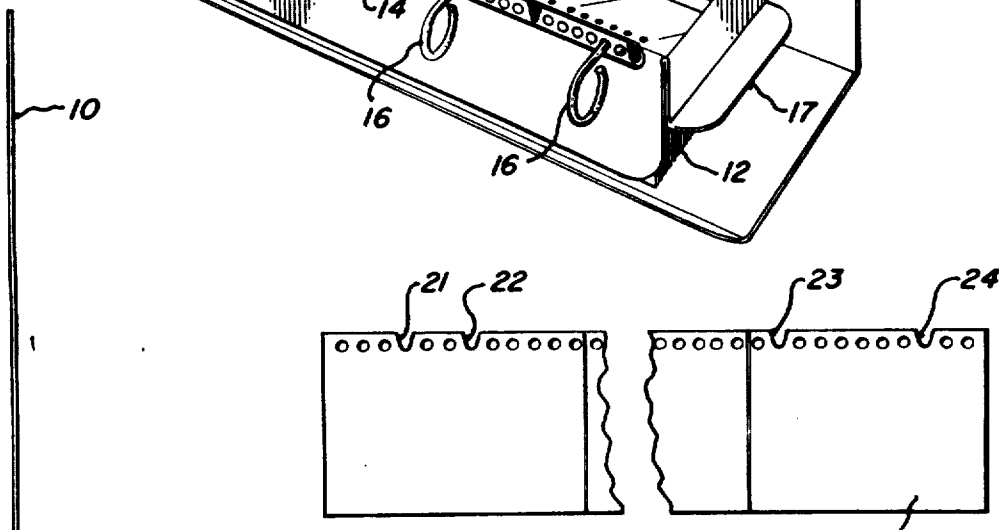
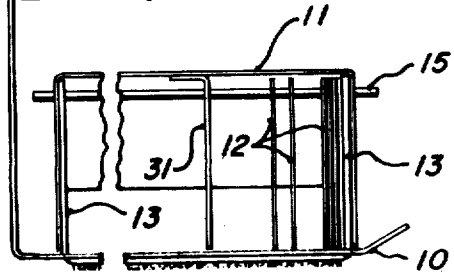


FIG. 3.

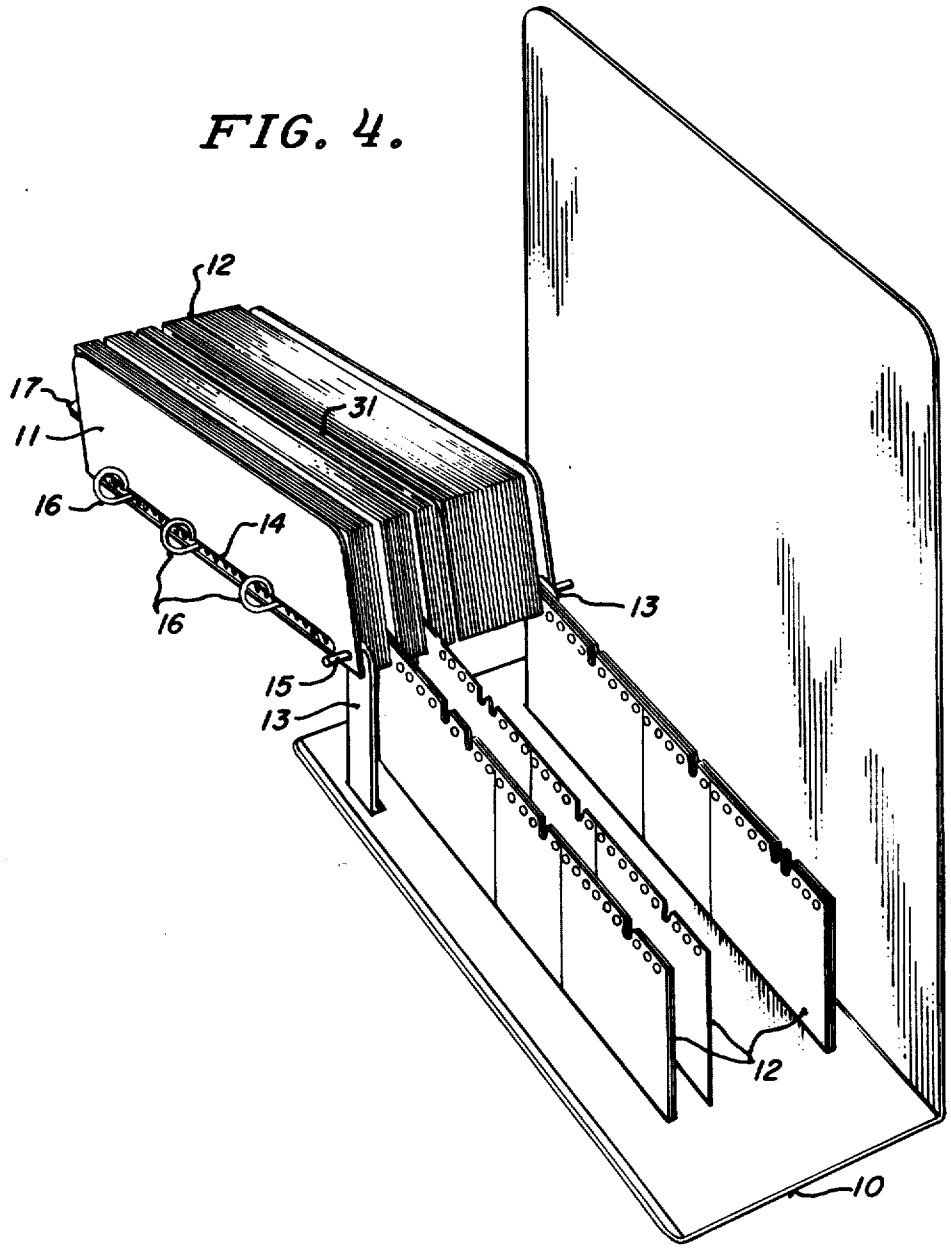
FIG. 2.



INVENTOR
Wayne L. Wanous
BY Paul L. Lyjuist

ATTORNEY

FIG. 4.



INVENTOR
Wayne L. Wanous
BY Paul L. Sjoquist
ATTORNEY

APPARATUS FOR SORTING AND RETRIEVING CARDS

This invention relates to devices for selectively sorting cards and retrieving information printed thereon, and for quickly returning the sorted cards back to their original positions, and more particularly to devices of this type which are of a compact construction for convenient use on a desk or table top.

The invention includes cards formed of a semi-rigid material, such as plastic or heavy paper, which are provided with perforations along one of the card edges, the perforations being representative of particular information or data classifications.

In operation and use, each card associated with this invention has one or more notches cut from the card edge into preselected perforations so as to expose the perforated hole outward to the edge of the card. The notches indicate the presence or absence of particular information classifications, as represented by the information printed on the card. The cards are enclosed under an apertured cover, and the cards and cover are pivotally mounted on a common pivot rod so that they may be easily lifted from a rest position upward about the pivot rod. By selectively inserting pins through the cover aperture and through all cards, at one or more perforation locations, all cards containing a particular classification or classifications of information may be selected. After the pins have been inserted the cover apparatus may be lifted about its pivot rod, and all cards containing the desired information will remain in their rest positions, while all other cards will be lifted with the cover. The selected cards are easily readable from their rest positions once the rest of the apparatus has been lifted. To restore the apparatus to its initial state it is only necessary to lower the cover back to its rest position.

It is therefore an object of this invention to provide an apparatus for retrieving cards containing information according to a preferred classification system.

It is another object of this invention to provide a card retrieval apparatus wherein the cards are held in their relative positions and cannot be inadvertently removed from the apparatus.

It is another object of this invention to provide a card retrieval device wherein information printed on cards may be selected and viewed by means of a relatively few simple operations, and wherein the apparatus may be quickly returned to its rest position.

It is still another object of this invention to provide a retrieval apparatus wherein cards may be automatically returned to respective positions after they have been retrieved and inspected.

It is yet another object of the invention to provide a card sorting device of compact and economical construction so that it may be used in sorting and retrieval applications where a more complex apparatus cannot be justified.

One form and embodiment of the invention is explained in the following description and illustrated by way of example in the accompanying drawings, in which:

FIG. 1 is a perspective view of the invention in an operative form;

FIG. 2 is a view of a typical card used in the device;

FIG. 3 is an end view of the device;

FIG. 4 is a perspective view of the invention in its open position, showing several selected cards.

Briefly, the invention comprises a hand-operated card sorting device having an advantageous feature that enables sorted cards to be automatically returned to their index or rest positions after the sorting and information retrieval operations are completed. The cards may be sorted according to any number of predetermined sorting classifications or criteria, and the apparatus will enable a quick and convenient sort of all cards having all characteristics demanded by the sorting selection. Cards may be of any convenient dimensions, for example, 3 by 8 inches. The sorting apparatus is intended to hold a relatively few number of cards, i.e., less than about one hundred, for it is intended as a convenient desk-top reference source.

In one embodiment of the invention the cards are preprinted with entertainment and dining information of various restaurants in a locality, and the card edge notches are arranged to enable selection of cards identifying restaurants according to a number of classifications of food specialty, neighborhood location, beverages available, and types of entertainment available.

In another embodiment of the invention the cards are preprinted with information relating to components, parts, and materials used in a manufacturing operation, and the card notches are arranged so that one can quickly locate a supplier or vendor source for any combination of needed parts and materials. In this way a buyer can locate a preferred supplier according to any of the factors of cost, delivery, distance, etc., that may be important in such a manufacturing operation.

In yet another embodiment of the invention, for use in a retail sales operation such as an automobile sales company, the cards are preprinted with information relating to the price, model, equipment options, color, etc., of the stock that the company has in inventory. The card holes are indicative of these classifications, with notches at appropriate hole locations. A customer may select the features he desires by inserting pins in the proper holes, and the apparatus can instantly provide information as to whether the inventory stock contains a product having all the desired features.

FIG. 1 illustrates, in perspective view, an embodiment of the invention. A cover **11** is fitted over a plurality of cards **12** and is pivotally mounted to a base or mounting stand **10** by means of a support member **13** and a pivot pin **15**. Pivot pin **15** passes through cover **11** and all of the plurality of cards **12**. Cover **11** has an elongated aperature **14** which exposes one edge of the cards **12**. The exposed card edges contain holes and notches, to be explained hereinafter. A number of pins **16** may be inserted through cover aperture **14** and through any of the card holes or notches which are exposed. It is to be assumed that the card holes are positioned so as to be in alignment with corresponding holes of all other cards when the cards are stacked as shown in FIG. 1. Cover **11** is designed to have an extension **17** which is operable as a handle to enable lifting of the cover **11** about the pivot pin or rod **15**. In this way, cover **11** may be lifted away from the cards which it encloses, and the cards will come into view for reading by the operator. The vertical face of mounting stand **10**

may be used to print simple instructions regarding the operation of the invention, or may also be used for advertising and promotional display space. The physical size of the invention shown in FIG. 1 may be of any convenient dimensions, but is preferably relatively small, i.e., 12 inches long by 8 inches high by 4 inches in depth. The size is somewhat determined by the number of cards which must be sorted.

FIG. 2 illustrates a typical card which may be used in the invention. A plurality of holes are prepunched along the upper edge of the card, and the face of the card is preprinted with any type of desirable information, depending of the specific use of the invention. The hole locations are chosen to represent particular classifications of information, and if the information printed on the face of a particular card contains or corresponds in some desired fashion with the hole classifications, the corresponding holes are notched out to indicate that the card contains information of the related type. For example, the card illustrated in FIG. 2 contains four notches 21, 22, 23, and 24. The information printed on the face of the card would correspond to the classifications of information represented by the notch positions. If the card contained information relating to local restaurants, notch 21 may indicate that the restaurant whose identity is printed on the face of the card provides live entertainment. Similarly, notch 22 may indicate that the restaurant specializes in the serving of French cuisine. Similarly, notch 23 may indicate that the restaurant is located in a particular section of the city, and notch 24 may indicate some other pertinent information about the particular restaurant identified on the face of the card. Information of the type described would be of great assistance and value to travelers and others unfamiliar with the locality, and the apparatus containing such information would be invaluable if placed where people of this class could conveniently have access to it, such as in a hotel lobby or travel information bureau.

FIG. 3 illustrates an end view of the apparatus, as viewed from the pivot rod end of the structure. Pivot rod 15 is shown passing through cover 11 and a plurality of cards 12. Pivot rod 15 also passes through support members 13 which are securely attached to mounting base 10. Cover 11 has a central supporting wall 31 for purposes of providing extra strength and rigidity to the apparatus. Pivot rod 15, as shown in FIG. 3, may be removed for replacement of any of cards 12.

FIG. 4 illustrates, in perspective view, the apparatus of this invention in its opened position. It can be seen that the cover 11 and a plurality of cards 12 are pivoted about pivot rod 15 so as to be removed from the rest position of the apparatus, shown in FIG. 1. Several cards are shown remaining in their rest positions. As illustrated in FIG. 4, these cards are selected cards as determined by the hole positions in which pins 16 are inserted. All of the selected cards have notches corresponding to the hole positions where the pins 16 are inserted. It should be noted that the selected cards each have one of their corners still inserted into the stack of cards 12, to hold the card's relative position in the stack. Therefore, when cover 11 and cards 12 are returned to their rest positions the selected cards will automatically fit back into place in the card stack. The pins 16 may then be removed and re-inserted for another selection conveniently and speedily. It should also be noted that even though selected cards may adjacent one another they may still be conveniently read by merely separating them or by raising one of them while allowing the adjacent card to remain in its rest position.

What is claimed is:

1. Apparatus for sorting and retrieving information-bearing cards comprising:
   a. a base;
   b. a support and pivot member attached to said base and having at least two projections extending from said base with pivot holes near their extremeties in spatial alignment;
   c. a plurality of cards, each card having a pivot hole near one of its corners and having a pattern of holes and notches extending along at least one edge;
   d. a cover member partially enclosing the plurality of cards and having aligned pivot holes near one of its corners, said pivot holes being in alignment with the card pivot holes, said cover member having an elongated aperture extending in alignment with the cards' pattern of holes and notches;
   e. a pivot rod extending through the pivot holes of the support and pivot member, the plurality of cards, and the cover member; and
   f. a plurality of sorting pins for insertion through said cover member aperture and all of said plurality of cards.

2. Apparatus for sorting and retrieving information-bearing cards as claimed in claim 1, wherein the cover member further comprises:
   a. a handle projection extending from its end opposite said pivot holes;
   b. a classification index imprinted along an edge adjacent said elongated aperture.

3. An apparatus as claimed in claim 2 wherein the base further comprises a vertical panel member.

4. An apparatus as claimed in claim 3 wherein the cards are constructed of plastic material having a thickness sufficient to support the cards when standing on their edge surfaces.

5. An apparatus as claimed in claim 2 wherein the cover member further comprises:
   a. a top surface extending over and covering one edge of all of the plurality of cards;
   b. two side surfaces extending perpendicularly from said top surface, each having an elongated aperture near the edge joining the top surface and each having a pivot hole near one of its corners; and
   c. a third side surface joining said two side surfaces and said top surfaces at the ends opposite said pivot holes.

6. An apparatus as claimed in claim 5 wherein said pivot rod is adapted to be removable from said pivot holes.

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