

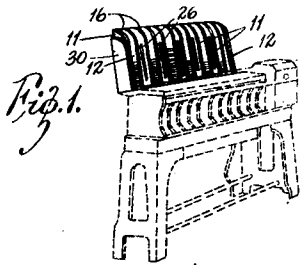
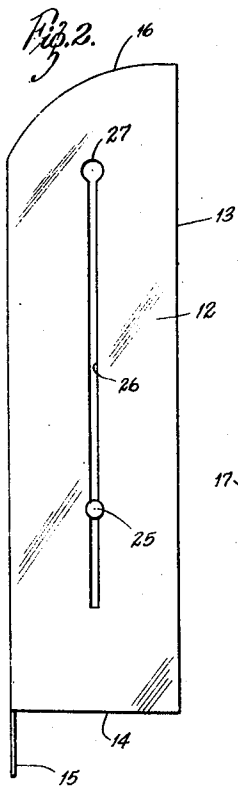
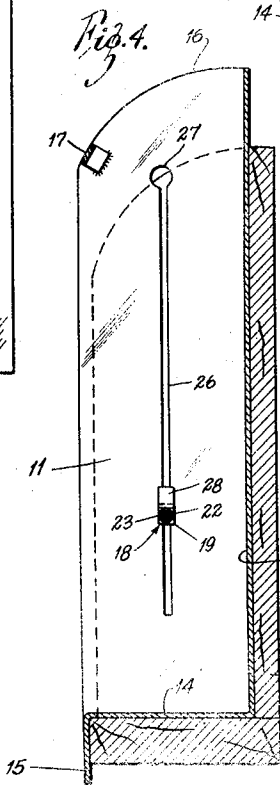
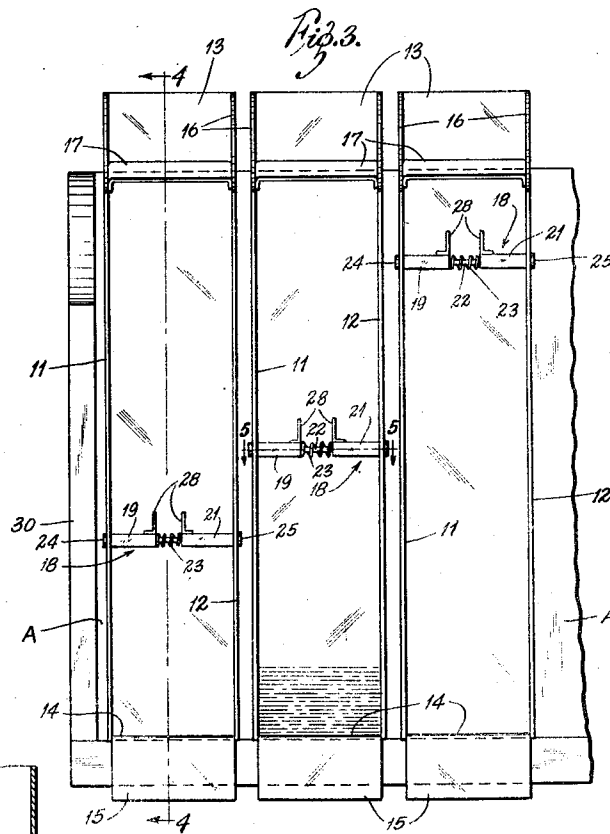
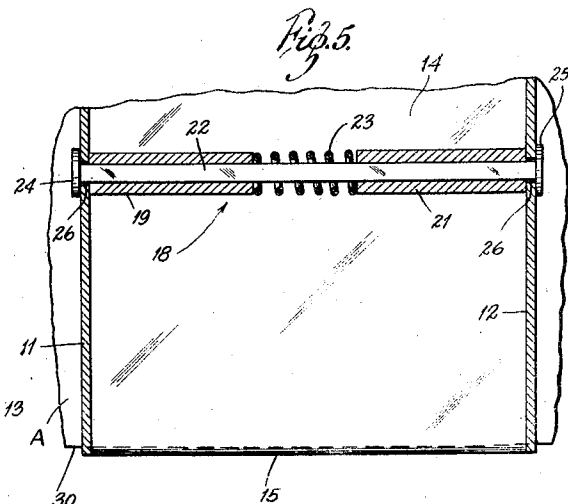
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2,494,030

REMOVABLE SORTING RACK

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REMOVABLE SORTING RACK

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3 Claims. (Cl. 211-11)

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This invention pertains to a card holding rack adaptable for use with a card sorting machine such as is used with electrically operated business machines.

As is well known, the tabulating card forms the basis of operation of the modern electrically operated business machine. Upon this card is carried the required intelligence, which is registered thereon in the form of punched holes occupying predetermined positions on the card. Usually these cards are punched in miscellaneous order and require sorting prior to their use in the business machine. For this purpose, a card sorting machine is provided which is used to separate the cards into their various classifications. The card sorting machine has provisions for separating the cards into some thirteen classifications or stacks. As a convenient adjunct to this sorting machine, a rack is provided which has a like number of compartments for holding the sorted cards. Since the machine is capable of sorting only one classification at a time, it is necessary to rerun the sorted cards for subclassifications or other column information. During the operation in which the cards are being separated and classified, the operator removes the cards from the racks in the machine and places them in their sequential order in the storage rack provided. After one run is made, the entire storage rack may be removed and taken to another sorting machine or moved to a position with respect to the same sorting machine from which the cards may be fed to that machine for an additional run. It frequently occurs, however, that the compartments of the storage rack are not adequate in size to retain all the cards of a given classification sorted for a given run, and, in order to retain the cards in the sorted sequence, it is necessary to remove some of the cards from the particular compartment and place them for storage elsewhere. This procedure requires additional handling of the cards and also is subject to disadvantages resulting from dropping the cards during the handling and also in disturbing the sequence of the cards.

To obviate the above difficulties encountered with the use of the conventional storage rack is the purpose of the instant invention. It contemplates the provision of an individual removable overflowing container or liner which is adaptable to the compartments of present equipment and which may be removed when full, allowing the original rack to be clear for future storage of cards.

It is a further object of the invention to pro-

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vide a removable overflowing container which will allow the ready transfer of sorted cards without an intervening handling operation.

Yet another object of the invention is to provide an individual removable overflowing sorting container with a built-in handle cooperating with the other elements of the rack in a manner such that the handling thereof by this handle places the container in an attitude which will prevent cards from falling out of the rack.

It is a further object of the invention to provide a container having a follow block or locking device capable of compressing the cards within the container to contain them therein.

Still another object of the invention is to provide a sorting container which is adaptable to a standard storage rack or which may be used by itself on the frame provided for the standard rack.

Other objects and advantages will be compared as the description proceeds, and a more comprehensive understanding of the invention will be afforded from the following detailed description when considered in conjunction with the accompanying drawing in which:

Fig. 1 is a perspective view of a card sorting machine showing the conventional storage rack therefor and individual removable overflowing containers embodying the invention adapted thereto;

Fig. 2 is a side view of the card container embodying the invention;

Fig. 3 is a front elevational view showing a plurality of the containers embodying the instant invention as adaptable to the compartments of a conventional sorting rack;

Fig. 4 is a cross-sectional view taken along the line 4-4 of Fig. 3 showing the position of the removable container within the compartment of a conventional sorting rack; and

Fig. 5 is a sectional detail of the follow block employed for holding the cards in the container and taken along the line 5-5 of Fig. 3.

As illustrated in its preferred form, the individual removable container comprises two rectangularly shaped sides 11 and 12 which are attached to a rectangularly shaped back piece 13. The two sides and the back, together with a bottom 14, form an elongated compartment in which the sorted cards may be placed. Attached to the front side of the bottom member of the container is an apron 15 which holds the container in place when mounted either in a compartment of a conventional sorting rack or on the frame supporting this container. In the

former instance, the removable container acts as a liner for the compartment of the conventional sorting rack. The tops of the sides 11 and 12 are rounded at 16, as shown in Fig. 2, and enhance the container's utility and appearance. A handle 17 is fixed to the sides of the rack and is so located with respect to the entire rack assembly that when carried by this handle the center of gravity of the suspension will be at a point such as to shift the bottom of the rack forward to prevent cards from falling out of it.

A further holding means is provided in the form of a follow block 18 which is so arranged within the rack as to be movable against the top of a stack of cards contained therein and clamp them between it and the bottom of the rack. This follow block, which is shown in detail in Fig. 5, may take the form of two rectangularly shaped blocks 19 and 21 through which a headed rod 22 is passed. Surrounding this rod and in the central portion thereof is a compression spring 23 which acts against internally disposed ends of the blocks 19 and 21 to force them outwardly against the sides 11 and 12, respectively. The rod 22 is headed at both ends with heads 24 and 25. An elongated slot 26 is provided in each of the sides 11 and 12 which terminate at the upper end thereof in an enlarged portion 27 and into which the heads 24 and 25 of the rod 22 may be inserted. A pair of clamping handles 28 are attached to the blocks 19 and 21 for moving these blocks inwardly against the forces of the compression spring 23 when the follow block is inserted in the openings 27. When the handles are retained in this initial position, the follow block may be moved vertically in the slots 26, and can thus be positioned against the top of a stack of cards. By releasing the handles, the block is clamped in this position and holds the cards between it and the bottom 14 of the rack.

In use, the individual rack provides a number of distinctly unique advantages. It may be placed in a compartment of a conventional sorting rack, and any number used to receive and retain in sequence an exceptionally voluminous classification. For example, the number of cards in a certain classification which would normally occupy the compartment A of the conventional sorting rack 30 may be extensive enough to fill this compartment three times over. Any excess or overflow of the compartment A would have to be handled by the operator and placed in a separate storing means until the sorting operation for the specific classification was completed. With the use of the instant invention, a removable container is placed in this compartment and the cards placed in it until its capacity is reached. They are then clamped by means of the follow block 18 and the entire container is removed and an empty one placed in the compartment to receive the remainder of the classification, any number of containers being used as required. When removed, the filled container acts as a file for its contents and may be conveniently stored or moved to another sorting machine without any additional operations in the handling of the cards.

It will be apparent, also, that such use eliminates the manual handling and arranging of cards for re-sorting, since any number of the cards may be contained in the removable container, or containers, in their proper sequence until the re-sorting operation is instituted.

Furthermore, the use of the container eliminates the turning of the cards in mid-air by

handling them for a subsequent re-sorting operation. In this regard, the container may be placed on its back in a manner such that its open end is presented to the sorting machine's hopper, and the cards can be fed directly into the machine for re-sorting.

Since the invention is susceptible of many changes and modifications which could be made to the illustrated embodiment without departing from the scope of the invention, it is intended that the representations and illustrations herein made are to be considered as illustrative only, and not in a limiting sense.

What is claimed is:

1. In combination with a card container having sides, a back, and a bottom and having an elongated slot in each of the sides thereof, said slots terminating at one end in an enlarged section, a clamping device comprising a rod having a diameter substantially equivalent to the width of each of said slots and extending therethrough, a head supported on each end of said rod and insertable in the enlarged section of one of the slots to position the head outside of said side, two rectangularly shaped blocks through which said rod extends, a compression spring surrounding said rod and situated between said blocks so as to act against an end of each block and urge its opposite end against a side of said container, and a handle supported on each of said blocks for moving them along said rod against the forces of said spring.

2. An individually movable card-receiving container for use in multiple in a card sorting rack of a business machine to form columns for receiving business machine cards; the container being an elongated box-like structure having an elongated back wall, two elongated side walls and a bottom wall, the front of the container being open, a handle comprising a narrow rigid member rigidly attached to and between the side walls adjacent their upper ends and adjacent thin front edges, the side and back walls being at right angles and the front opening being of the same size as the back wall, the handle being above and in front of the center of gravity of the container so that the container bottom will swing forwardly to bias the cards rearwardly in the container to prevent them from falling out when the container is lifted by the handle.

3. The combination of claim 2, plus a rigid, flange-like apron depending from the front of the bottom wall of the container.

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