

Oct. 5, 1943.

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2,331,175

CARD SUPPORT

Filed Feb. 25, 1942

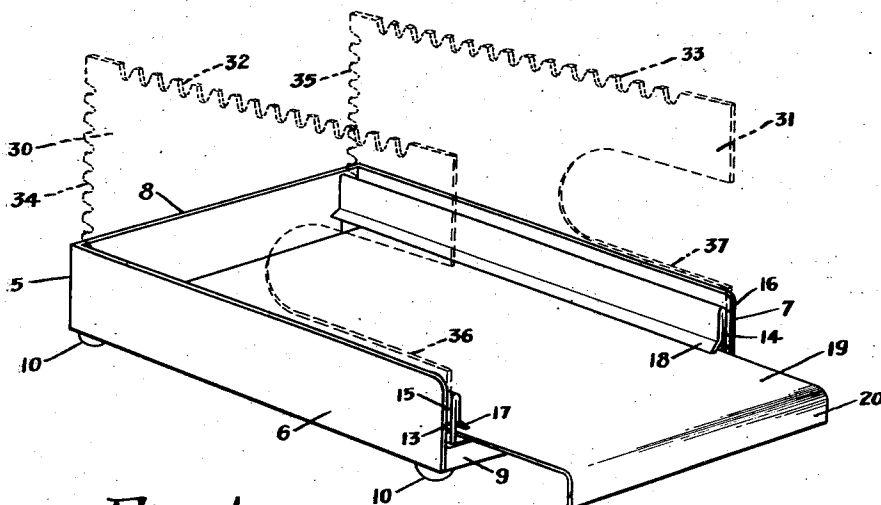


Fig. 1

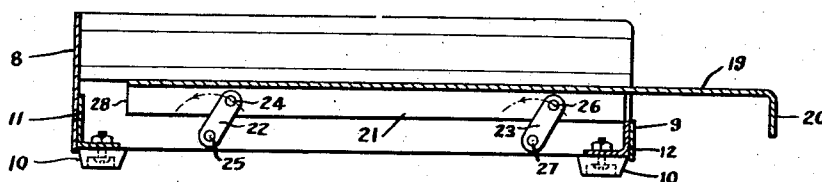


Fig. 2

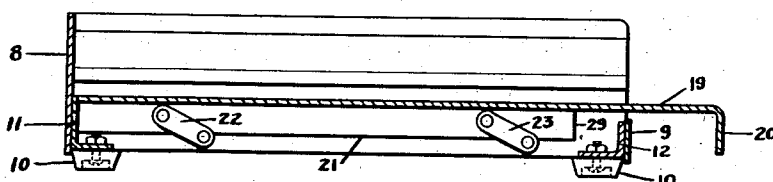


Fig. 3

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2,331,175

CARD SUPPORT

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Application February 25, 1942, Serial No. 432,254

7 Claims. (Cl. 129—16.1)

This invention relates in general to card supports. More particularly the invention relates to the class of card supports described in our co-pending patent application, Serial No. 384,363 filed March 20, 1941, now Patent No. 2,299,566.

That application discloses a device designed to support a stack of cards such as are known to the trade as "Keysort" and which are an embodiment of the cards described and illustrated in United States Letters Patent No. 1,544,172 issued June 30, 1925, to Alfred Perkins. Cards of this type are provided with a plurality of perforations adjacent to one or more edges. They are then notched or slotted to cut away that portion of the card intermediate a perforation and the edge of the card to form a pattern of notches which refers to a single classification within a certain field. When this has been done a stack of mixed cards can be sorted into numerical or other desired sequence in the manner set forth in the above said Perkins patent.

In making either a sequence or a selective sort of the cards it is customary for the operator to grasp as many cards as can be conveniently held in one hand. This stack or group of cards is then evened up by jogging them against a table or desk top. A sorting needle can then be passed through the various perforations, which have been brought into proper alignment by means of the jogging, for the purpose of separating the desired cards.

It will be readily understood that the operator must not only grasp the stack of cards firmly but must also hold them so that the perforations and notches will be in correct alignment if the desired results are to be obtained. Further than this, when a multiple needle sorting device, such as shown and described in our United States Letters Patent No. 2,261,719 issued on November 4, 1941, is used some means must be provided whereby alignment of the several needles may be readily secured and removal of the cards selected easily made.

One of the objects of this invention is to provide a card support which can be easily manipulated with a slight pushing or pulling by the operator at one side or edge thereof.

Another object of the invention resides in the means used for supporting the bottom member of the card support and which so operates as to elevate the bottom from a stable lowered position to a stable upper position or vice versa. In this way the operator after having made a sort can shift or drop the bottom of the support permit-

ting certain predetermined cards of the group being sorted to drop below the remainder.

A further advantage from the construction of the embodiment herein disclosed resides in the elimination of the heretofore used double bottom construction. This results in a much lighter in weight card support which can easily be moved and operated by women operators.

Other objects and advantages of this invention will be readily apparent to those skilled in the art from the following description, the appended claims, and the accompanying drawing.

In the drawing, in which a preferred embodiment only of this invention has been chosen as the one to be illustrated,

Fig. 1 is an isometric perspective view of the card support embodying the present invention and illustrating the sorting plates in position and the bottom in the extended or elevated position.

Fig. 2 is a vertical sectional view through the lower part of the card support with the sorting plates removed showing the bottom in the extended or elevated position; and

Fig. 3 is a similar view showing the bottom in closed or lowered position.

Similar reference numerals refer to similar parts throughout the specification and drawing. Referring now more particularly to the figures by reference numerals, the card support comprises a box structure generally indicated by the numeral 5. This structure has two upwardly extending side walls 6 and 7, an end wall 8 and a front wall 9 which are joined together by means of rivets or welding if preferred. Supporting this structure 5 at each of the four corners is a foot piece or pedestal 10 bolted to an angle member. As shown in Figs. 2 and 3 angle member 11 is rigidly connected to and forms a part of end wall 8 while angle member 12 similarly forms a part of end wall 9.

Side walls 6 and 7 are preferably provided with inner wall members 13 and 14. These are cast or formed as a part of the side walls so that the upper edges are spaced away from the sides and thereby provide longitudinal slots 15 and 16 extending the entire length of the side walls. Inner wall members 13 and 14 have their upper edges folded over, as illustrated in Fig. 1, and bent out away from the wall to form shoulders 17 and 18.

Mounted within box 5 is a flat sheet 19 which forms the bottom member and supports the cards as hereafter described. Outer edge 20 of bottom 19 is curved or bent downward to provide a convenient means for the operator to push or pull

the bottom into the positions shown in Figs. 2 and 3. Also forming a part of bottom 19 and extending down on each side thereof within the side and end walls of box 5 are short flat side pieces, one of which is illustrated in Figs. 2 and 3 and designated by the numeral 21. It will be readily understood at this point that the other piece, similar to piece 21, being identical is not further described nor shown.

Means for supporting bottom 19 and operable to elevate it from a stable lowered position to a stable upper position at a slight pull on edge 20 of the bottom are also provided. This means comprises preferably a pair of links pivotally connected to each side of the bottom and to the inner wall members 13 and 14. A pair of these links generally indicated at 22 and 23 and on one side of the bottom only can be clearly seen in Figs. 2 and 3. In the preferred embodiment of this invention a second pair of these links positioned similar to those shown in Figs. 2 and 3 but on the opposite side of the bottom is also provided.

Link 22 is pivotally connected at each end thereof, as at 24 and 25, to bottom piece 21 and to the inner wall 14. Similarly link 23 is also pivotally connected at each end, as at 26 and 27 to piece 21 and the inner wall 14. Preferably links 22 and 23 are positioned with respect to the stop edges 28 and 29 so that the weight of bottom 19 when it is in a stable position will be carried by the links at a point to one side of the lower link connections 25 and 27. In this way the links in swinging through their arc do not stop at the top of their arc but go past the upper dead center position to a stable upper position. The lower position is also stable, the links being stopped before the lower dead center position is reached. It will be readily seen that in this way a slight push on edge 20, Fig. 2, will be sufficient to cause bottom 19 to move from its stable upper position to a stable lower position with end edge 28 of side 21 flush against angle member 11. In the same manner a slight pull by the operator on edge 20 of the bottom causes it to raise until end edge 29 of side 21 comes up against angle member 12. In this position the upper surface of bottom 19 rests just below the shoulders 17 and 18.

A pair of plates or templets 30 and 31 is provided which have a series of notches 32 and 33 on one side adapted to correspond and to register with the notches and perforations in the cards to be sorted. These plates may also have a series of notches 34 and 35 on the ends which should also be adapted to correspond and register with the perforations or notches on the ends of the cards being sorted, should it be desired to make use of that portion of the cards. Slots 36 and 37 may also be provided in one end of the plates to enable the operator to readily grasp the stack of cards to be sorted. In operation these plates are inserted in the slots 15 and 16 formed between the side walls and the inner wall members and serve to align the sorting needle or needles used by the operator and to facilitate the insertion thereof into a stack of cards.

The operation of this card support is as follows: first the plates 30 and 31 are inserted and bottom 19 is raised to the upper position shown in Fig. 2. A stack of cards to be sorted is then placed in position resting on bottom 19 and the sorting needle or needles are passed through the desired perforations. After the desired cards are impaled on the needles, bottom 19 is dropped to

the position shown in Fig. 3. This drop causes those cards which are held by the needle or needles to remain elevated above the rest. The needle or needles can then be removed and the desired cards grasped manually.

Having thus described our invention, we claim:

1. A support to hold cards to be sorted comprising a base formed by upwardly extending side walls and end walls integrally joined; each said side wall formed to provide a slot extending along the upper edge thereof; a movable bottom mounted between the side walls; and means for supporting the bottom and operable to elevate said bottom from a stable lowered position to a stable upper position comprising links positioned so that the weight of the bottom when in said stable lowered position is carried thereby at a point to one side of the lower link connections, whereby a slight movement of the bottom is sufficient to raise it from said lower to said upper position.

2. A support to hold cards to be sorted comprising a base having upwardly extending side and end walls joined to form a box like structure; each said side wall formed of an inner and outer member joined so that the upper edges thereof are spaced apart and provide a slot extending along the top; a single flat sheet movably mounted between the side walls forming the bottom and said bottom being connected to the side walls by links operably positioned so that the weight of the bottom when in a stable upper position is carried thereby at a point to one side of the lower link connections, whereby a slight movement of the bottom is sufficient to drop said bottom from a stable upper position to a stable lower position.

3. A support to hold cards to be sorted comprising a base formed by upwardly extending side walls and end walls integrally joined; each said side wall formed to provide a slot extending along the upper edge thereof; a single flat sheet movably mounted between the side walls forming the bottom; and said bottom being connected to the side walls by links operably positioned to maintain the bottom in a horizontal position when it is raised, said links carrying the weight of the bottom when it is in a stable upper or lower position at a point to one side of the lower link connections whereby a slight movement of said bottom is sufficient to raise said bottom from a stable lowered position to a stable upper position and to lower said bottom from a stable upper position to a stable lower position.

4. A support to hold cards to be sorted comprising a base formed by upwardly extending side walls and end walls integrally joined; each said side wall formed to provide a slot extending along the upper edge thereof; a single flat movable bottom mounted between the side walls; and a pair of links pivotally connected to the bottom at each side thereof and to the side walls operable together to raise and lower said bottom said links carrying the weight of the bottom when it is in a stable upper position at a point to one side of the lower link connections whereby a slight movement of the bottom is sufficient to lower it from a stable upper position to a stable lower position.

5. A support to hold cards to be sorted comprising a base, connected upwardly extending walls on two sides of said base, pivotal means carried by said base, a single flat bottom plate connected on the under side thereof to said pivotal means and adapted to be raised and

lowered, the weight of said bottom plate when in stable upper position being carried at a point to one side of the pivotal connection of said means on the base so that a small movement of the bottom plate is sufficient to carry it past upper dead center and to drop it from an upper to a lower stable position.

6. A support to hold cards to be sorted comprising a base, removably mounted upwardly extending walls on two sides of said base, pivoted means in said base, a single flat bottom plate, said plate attached on the underside thereof by a pivotal connection with said pivoted means whereby said plate is elevated and lowered by reciprocating movement of the plate, the weight of said plate when in a stable upper or lower position being carried by said pivoted means at a point to one side of the pivotal connection of said means on the base.

7. In a support to hold cards to be sorted having a base, a single flat movable bottom plate, connected upwardly extending walls on two sides of said base, one of said walls being spaced from the base and forming a slot therewith, and a master plate having a series of notches in more than one of its edges, mounted in said space; the improvement comprising means pivotally connected to the base and to the bottom plate and carrying the weight of said bottom plate when it is in a stable position at a point to one side of the pivotal connection of said means to the base whereby a slight movement of the bottom plate is sufficient to carry it past upper dead center from a stable upper position and to drop it to a stable lower position.

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