June 5, 1951 D. H. YOUNG 2,555,666

CARD SORTING DEVICE

Filed June 18, 1945

Fig. 1.

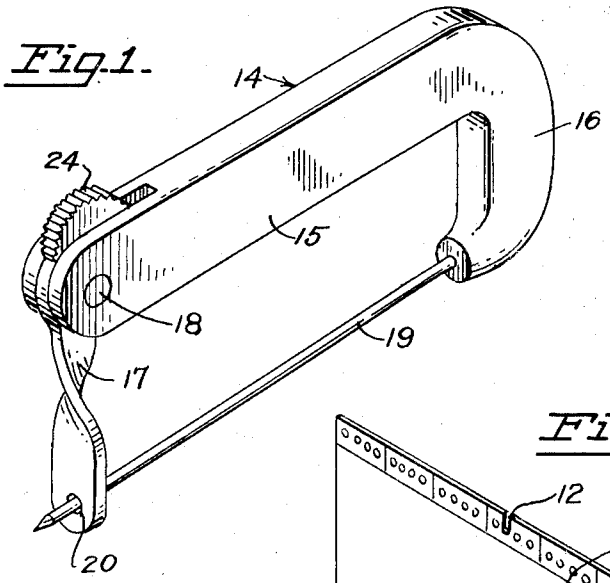


Fig. 2.

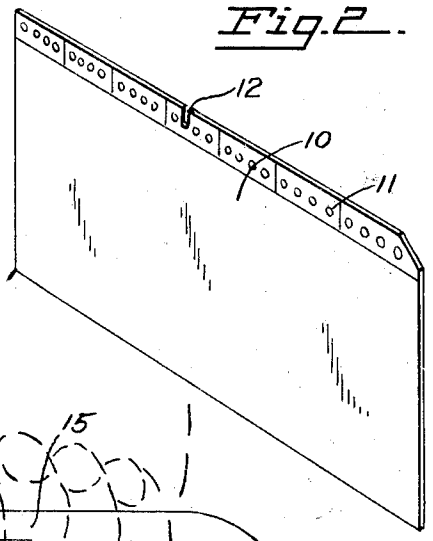
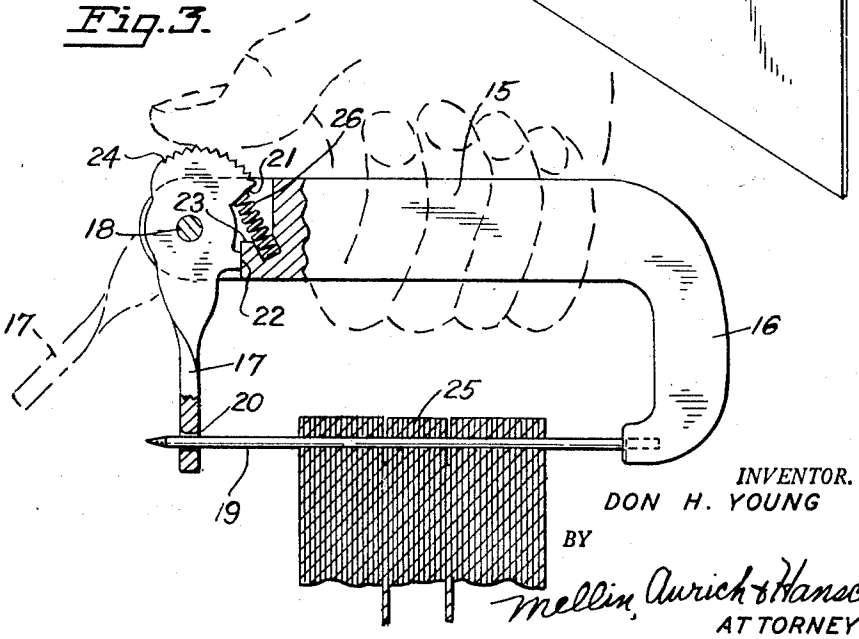


Fig. 3.



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CARD SORTING DEVICE

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1 Claim. (Cl. 129—16.1)

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This invention relates to devices for sorting marginally punched record cards, checks and the like.

One of the commonly used devices for sequence sorting of marginally punched cards of the type shown in Letters Patent of the United States No. 1,544,172, issued to A. Perkins on June 30, 1925, is a long sorting rod or needle, which is provided at one end with a handle. The latter is grasped in the hand of the operator and the other end of the needle or rod is projected through the selected punched hole of a stack of cards, which are then upraised by means of the needle and held suspended thereon. The needle is then jarred up and down to insure that the cards which are notched in register with the needle will separate and drop from the stack. Particularly in the case of comparatively large cards, the ordinary number thereof placed in a stack for sorting is of considerable weight and such a sorting operation requires muscular strength and is excessively fatiguing, due to the fact that the weight of the cards bears on the needle at a point laterally offset relative to the handle. Further, the fact that the needle is supported only at one end causes it to flex during the sorting which detracts from the separating effect of the needle while shaking the stack when the latter is suspended on the needle.

It is the principal object of my present invention to provide an improved device of simple construction which is efficient in operation and which overcomes the disadvantages of handled sorting rods and needles of the type hitherto employed as above set forth.

One form which the invention may assume is exemplified in the following description and illustrated by way of example in the accompanying drawings, in which:

Fig. 1 is a perspective view of a device embodying the preferred form of my invention.

Fig. 2 is a perspective view of one type of marginally punched card in connection with which my improved device may be employed.

Fig. 3 is a side elevation of my improved device with a part thereof broken away and in section to more fully disclose certain details of construction, and in which figure the manner of use of my improved device is disclosed.

Referring more particularly to the accompanying drawings, 10 indicates a record card of the type commonly known as "Keysort" card which is used for record keeping and other purposes. This card is generally of the type shown in the patent to A. Perkins No. 1,544,172. It is in connection

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with cards of this character that my present device is to be used. It will be obvious, however, to those skilled in the art that various other types of marginally punched cards can be sorted by means of my improved device.

In general, cards of this character are provided with marginally punched holes 11, which holes may be notched out to the edge of the card to indicate a selected classification, such notching being shown at 12. It is unnecessary to more particularly describe the construction and use of cards of this character because, as before stated, they are widely used and well known.

My present invention is concerned with a device 14 for sorting marginally punched cards. As shown in the drawings, this device is generally bail-shaped in form and composed of a rigid gripping section 15, from one end of which depends a rigid fixed leg 16. From the other end of the gripping section 15 depends a pivotal leg 17, which may be termed a latching leg. This latching leg 17 is pivotally connected at its upper end to the end of the gripping section 15 opposite the leg 16 by means of a pivot pin or pintle 18. The pivotal connection between the gripping section 15 and the latching leg 17 enables the latter to swing longitudinally of the device toward and away from the leg 16. The length of the gripping section 15 may be as desired, so long that it is of sufficient length to enable it to be grasped in the hand of the operator as shown in Fig. 3.

A sorting rod or needle 19 is provided which is fixed at one end in the terminal of the fixed leg 16 and extends substantially parallel to the gripping section 15 so that it may be projected through an opening 20 in the free end of the latching leg 17. The length of the sorting rod or needle 19 is such that the latching leg 17 may be disengaged therefrom by pivotal movement, as shown in Fig. 3, but will be engaged therewith, as shown in full lines in Fig. 3, when the latching leg 17 depends substantially in parallelism with the fixed leg 16.

It is seen that at the point where the latching leg 17 is connected with the handle section 15 of the device, the handle section 15 is bifurcated so as to receive the upper end of the latching leg 17. Cooperating shoulders 21, 22 and 23 are provided on the latching leg 17 and within the bifurcated portion of the handle section 15 so as to limit the movement of the latching leg 17 about its pivot pin 18.

At the end of the latching leg opposite the end thereof which engages the rod or needle 19, the

latching leg is formed with an arcuate knurled portion **24** which projects beyond the handle section **15** so that it may be engaged by the thumb of the hand which grasps the handle section **15**. That is to say, when the device is grasped in the hand of the user, the thumb of the hand may be placed on the arcuate section **24** of the latching leg **17** and may be utilized to pivot the leg **17** and disengage the latching leg **17** from the end of the sorting rod or needle **19** to enable the same to be projected through a stack of cards **25**. Upon the release of the latching leg **17**, a spring **26** will return the latching leg **17** to its normal position, engaging the selector rod or needle **19**, all as shown in Fig. 3.

In use, the device is constructed substantially as shown in the drawings and it is grasped in the hand of the user as shown in Fig. 3. The latching leg **17** is then swung about its pivotal point to an ineffective position, as shown in dotted lines in Fig. 3, and the sorting rod or needle **19** is projected through the selected hole of a stack of cards **25**. The latching leg **17** is then released and the spring **26** causes it to swing to an effective position, engaging the end of the selector rod or needle **19**. The operator may then jog the stack of cards up and down to effect separation of the notched cards. During this operation it is seen that the needle or rod **19** is supported at both ends so as to give a maximum jarring motion to the stack during the separating operation. Also, it is seen that the weight of the cards will be disposed directly under the hand of the user so that the effort required will not be increased by leverage. After the stack has been sorted, the latching leg **17** is again moved to an ineffective position and the needle can then be withdrawn from the stack for a subsequent sort.

From the foregoing it is obvious that I have provided a very simple and effective device which has none of the shortcomings of prior devices of the same character, and which can be made economically and which will materially decrease the amount of effort required in simple sorting operations.

While I have shown the preferred form of my invention, it is to be understood that various changes may be made in its construction by those skilled in the art without departing from the spirit of the invention as defined in the appended claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

In a device of the character described a substantially L-shaped portable body member including a shank portion constituting a handle and a right angularly disposed leg portion, a rigid elongated straight sorting needle carried at the extremity of said leg portion and lying parallel with said handle, a pivotally mounted keeper pivotally secured to the free end of said handle and movable to and from said needle for retaining and releasing cards empaled thereby, an actuator for said keeper formed as an extension thereof protruding beyond said handle and resilient means for normally urging said keeper in engagement with said needle, the end of said handle being bifurcated and said keeper being pivotally mounted between the furcations thereof, said resilient means comprising a spring, one end of which is seated within the handle while the opposite end thereof abuts the protruding actuating portion of said keeper.

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