United States Patent [19]

Neilsen

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[54] **CARD HOLDING DEVICE**

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[52] **U.S. Cl.** **211/50,** 248/371, 312/183

[51] **Int. Cl.** **A47b 63/06**

[58] **Field of Search** 211/50, 53, 57, 58, 51, 211/52, 54, 56, 11; 40/68, 68.6, 72, 73.4, 74; 312/183, 185, 186, 187, 189; 220/69; 248/185, 331, 395

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[57] **ABSTRACT**

A card holding device has arcuate slide means enabling an open card holding body element to slide back and forth arcuately on a base element to facilitate reference to the cards. The slide means comprise intimately opposed, cylindrical, upwardly arcing, slideably coacting surfaces of substantial length and of relatively large radii, enabling the body element both to tilt and to be bodily displaced forwardly and rearwardly.

9 Claims, 6 Drawing Figures

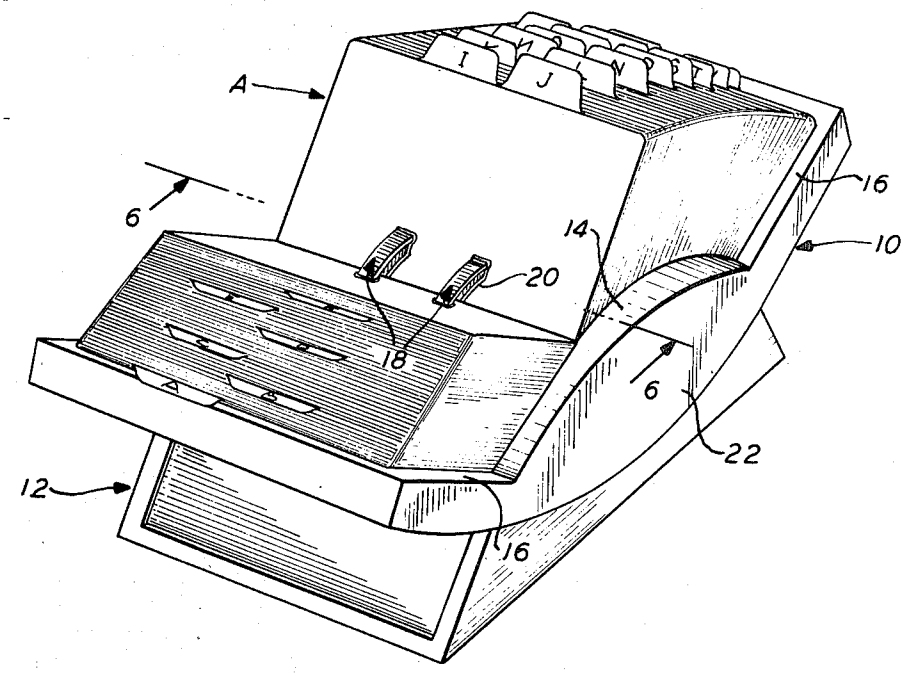


FIG. 1

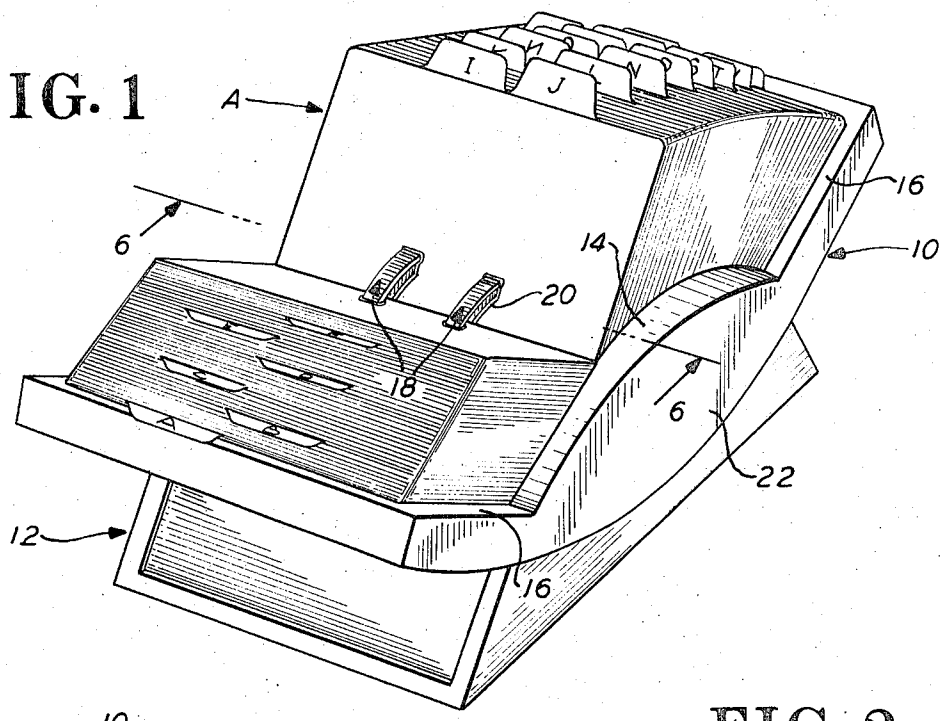


FIG. 2

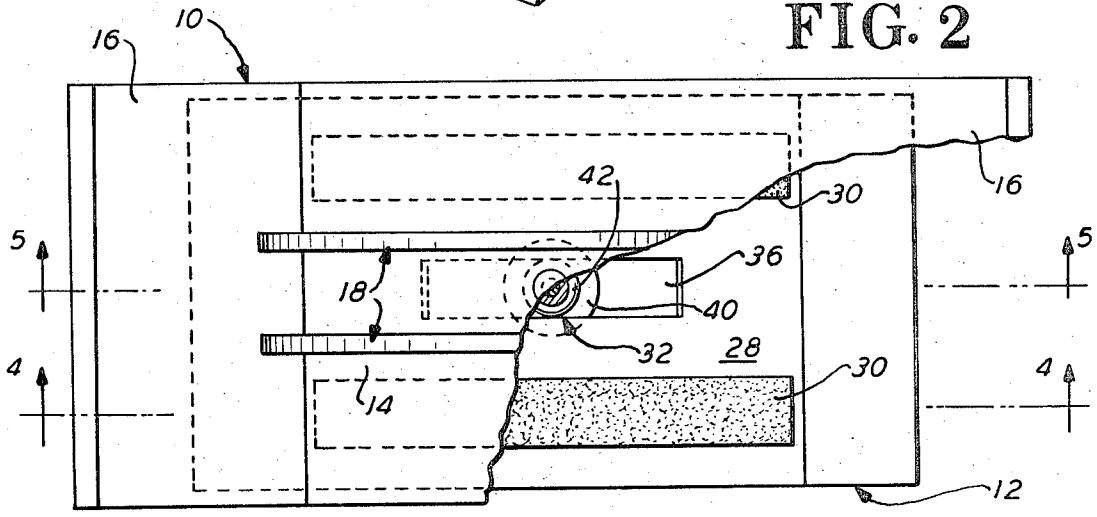


FIG. 3

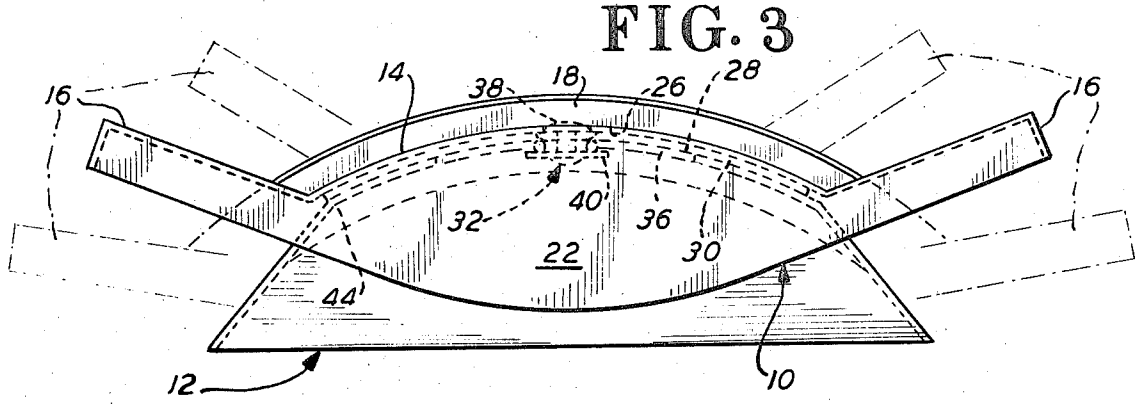


FIG. 4

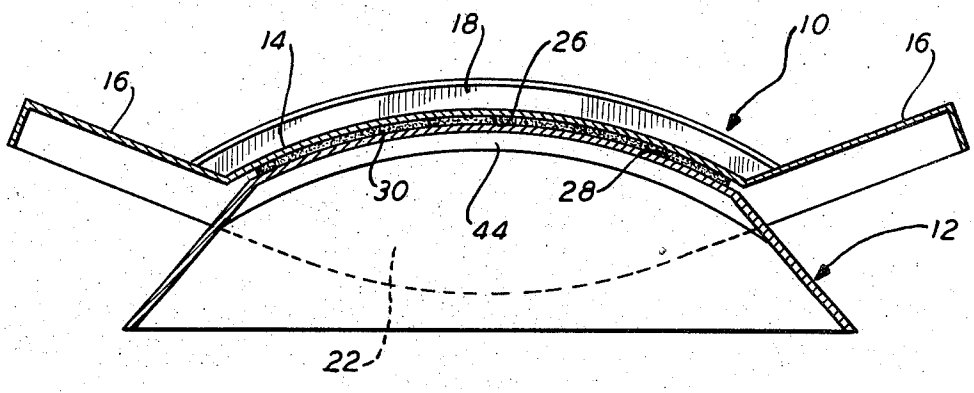


FIG. 5

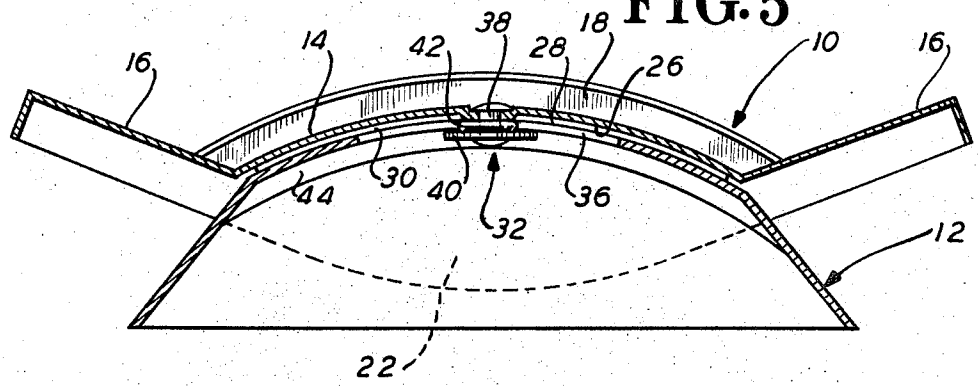
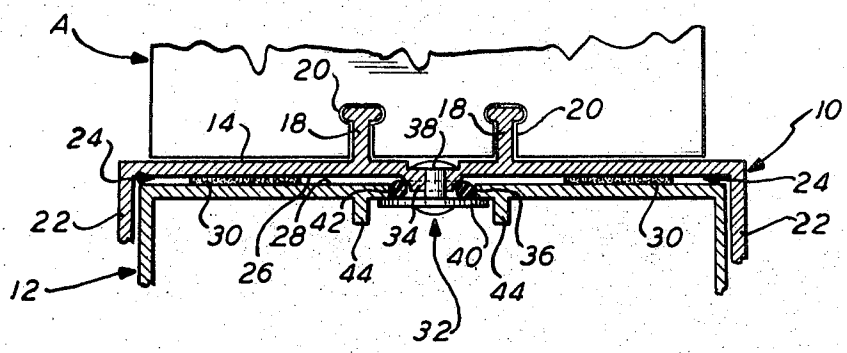


FIG. 6



CARD HOLDING DEVICE

BACKGROUND OF THE INVENTION

Open card carrying trays have hitherto been produced with an upper surface for holding a stack of cards; and such trays have included end wings for supporting the ends of the stack and for limiting sliding movement of the cards on said surface. Such trays, also, have been pivotally mounted upon a base at a fixed, minute-radius pivot point so that the tray was capable of being rocked about said pivot point, ostensibly to improve the visibility and accessibility of the cards to a user.

The latter purpose, however, was not fully achieved by such prior devices for, while the card trays could tilt to some extent, such tilting was not accompanied by any forward movement of the cards toward the user to facilitate reference to the cards.

Applicant, by providing features in his device according to the foregoing abstract and the following description, has provided a card tray arrangement wherein the tray automatically shifts materially forwardly, closer to the user, as a direct result of tilting of the tray, thus affording improved operation to the user.

Applicant's device, also, may be more economically produced than prior devices intended for similar use.

THE ACCOMPANYING DRAWINGS

FIG. **1** is a perspective view of a preferred embodiment of applicant's improved card tray device, including a showing of cards such as may be used therein. In following FIGS. **2–5,** the cards have been omitted to facilitate illustration of the card tray device itself.

FIG. **2** is a top plan view of said device; a substantial portion of a card holding body element being broken away to more clearly illustrate an underlying base element which slideably supports said body element.

FIG. **3** is a side elevational view of said device; the body element being shown in full lines in its mid-sliding position and its wings being indicated in chain lines indicative of opposite extreme positions to which the body element may be slid.

FIG. **4** is a vertical, front to back, sectional view of said device, substantially on the line **4—4** of FIG. **2.**

FIG. **5** is a vertical, front to back, sectional view of said device, substantially on the line **5—5** of FIG. **2.**

FIG. **6** is a fragmentary, detail view, substantially on the line **6—6** of FIG. **1.**

DETAILED SPECIFICATION

This improved card holding device has two main parts; a card holding body element **10** and a base element **12** upon which the body element is supported for arcuate sliding back and forth between leftward and rightward positions as indicated in FIG. **3.**

The body element **10,** as illustrated, is formed with a convexly upwardly facing, partially cylindrical card supporting surface **14,** for approximately horizontally supporting an arcuate stack A of data and indexing cards. Wings **16,** adjoining the back and front ends of the surface **14** serve to support the ends of the card stack A and to limit spreading of said stack in opposite directions.

Carried in parallel, front to back, generally median positions on the surface **14,** is a pair of card retaining rails **18** which may be solidly integrated at their ends to the wings **16** to enhance the rigidity of both said rails and said wings. The rails **18** are cross-sectionally shaped as illustrated in FIG. **6,** and releasably lock into somewhat complementally shaped notches **20** in the cards of the stack A to hold said cards against unintended separation from said rails.

The body element **10** is formed with similar skirts **22** depending from opposite sides thereof, thereby forming a bottom cavity **24** (see FIG. **6**) into which an upper portion of the base element **12** fits quite accurately but loosely enough to permit the body element **10** to rock and slide freely upon the base element.

Within the cavity **24,** the body element is formed with a concave, downwardly facing arcuate surface **26** which is parallel to the card supporting surface **14** and extends between the wings **16.** The base element is formed with a top, convex, upwardly facing, arcuate surface **28** of the same curvature as the surface **26** and of approximately similar shape and overall dimensions as the latter surface.

It may be noted by reference particularly to FIGS. **4** and **5,** that the lengths of the opposed partially cylindrical, slideable surfaces **26** and **28** of the body element **10** and the base element **12** are less than one-fourth the circumference of a cylinder of the same curvature as the surfaces **26** and **28,** and that said lengths are quite substantial, being at least equal to a major part of the length of the card supporting surface **14.** These characteristics are important for providing good operation of the device.

The body element **10** may rock and slide directly upon the base element's surface **28.** However, for smoothe and quiet rocking-sliding operation, a pair of strips **30** of suitable cushioning sheet material is preferably adherently fixed to one or the other of the surfaces **26, 28,** toward opposite sides thereof and, preferably, these strips should extend substantially throughout the length of the surface to which it is fixed.

As a practical matter, the rocking-sliding of the body element **10** should be of limited degree. For that purpose, a stop assembly **32** is fixed into a boss **34** formed at a central point of the card supporting area of the body element **10** and extends downwardly through a slot **36** which extends forwardly and rearwardly in the surface **28** portion of the base element **12.**

The stop assembly **32,** best illustrated in FIG. **6,** comprises a rivet **38** which extends downwardly through the boss **34** and into and through the slot **36.** The upper head of the rivet **38** seats in a suitable recess in the card supporting surface **14** of the body element **10,** and its lower head retains a washer **40** which supports an "O" ring **42,** of rubber or other somewhat resilient material, in linear alignment with the edges of material which define the slot **36.**

As may best be understood from FIG. **5,** the body element **10,** when rocked by manual raising or lowering of either of the wings **16,** carries the stop assembly **32,** particularly its "O" ring **42,** into cushioned stopping engagement with an end edge of the slot **36** to limit the degree of rocking-sliding of the body element.

It will also be observed that the washer **40** is of large enough diameter to overlie the side edges of the slot **36,** and thereby serves to hold the device in its assembled relationship.

The base element **12** is preferably reinforced by solidly integral, arcuate ribs **44** on the underside thereof at opposite sides of the slot **36.**

As hereinbefore indicated, an important characteristic of this invention resides in the relatively slideable surfaces **26** and **28** being long and of relatively large radii.

It should be apparent that the characteristics and relationships of the parts of a device of the general character illustrated herein may be varied without, however, departing from the inventive concept as set forth in the following claims.

I claim:

1. A card holding device comprising a body element provided with an upwardly facing card supporting surface of a length substantially corresponding to the combined thicknesses of a plurality of cards to be supported by said element, a base element upon which said body element rests, and slide means enabling said body element to slide back and forth arcuately upon said base element about a horizontal axis located below said slide means and extending transversely of the direction of sliding movement of said body element; said slide means comprising intimately opposed, partially cylindrical, relatively slideable surfaces of said body and base elements, and the lengths of said slideable surfaces being less than one fourth the circumference of a cylinder of the same curvature as said slideable surfaces and equal to a major part of the length of said card supporting surface.

2. A card holding device according to claim **1,** said card supporting surface being arcuate and approximately parallel to said relatively slideable surfaces.

3. A card holding device according to claim **2,** said body element including card supporting wings integral with and projecting upwardly from opposite ends of said card supporting surface.

4. A card holding device according to claim **1,** said body element being formed with a downwardly opening cavity of which an upper area is defined by one of said relatively slideable surfaces, said base element having an upper portion with the other of said slideable surfaces at the top thereof, and said base element complementally extending into said cavity with said slideable surfaces in slideable interrelationship.

5. A card holding device according to claim **1,** further including stop means for limiting relative rocking and sliding movement of said elements.

6. A card holding device according to claim **1,** one of said slideable surfaces being formed with an arcuately extending slot therein, and the other of said sliding surfaces having a stop element fixed thereto and extending within said slot to limit relative rocking and sliding movement of said elements.

7. A card holding device according to claim **6,** said stop element comprising a resilient ring.

8. A card holding device according to claim **1,** further including cushioning means interposed between said relatively slideable surfaces and fixed to one of the latter surfaces.

9. A card holding device according to claim **8,** said cushioning means comprising strips of cushioning sheet material extending forwardly and rearwardly of said relatively slideable surfaces.

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