ILLUMINATED BOOK HOLDER

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[57] ABSTRACT

Illuminated book holder providing convenient storage for large books such as telephone directories and providing support of books with illumination of pages thereof. Holder has flat base, upper surface of the base with guide means extending normally across inner to outer edges. Pillar member extends normally upwards from base, upper portion of pillar means provided with lamp. Cover member has inner edge hinged to base and has upper surface having guide means which are aligned with guide means of base when cover member is swung downwards so that upper surfaces of guide means and cover member are coplanar. Spine portion is adapted to retain book thereagainst, and has guide extending normally across spine portion lower surface, spine portion guide being complementary to base and cover guides so that when cover portion is folded outwards guides permit transverse sliding of cover member across base to permit opening of covers enclosing book so as to permit book to be opened for reading.

11 Claims, 10 Drawing Figures
ILLUMINATED BOOK HOLDER

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a book holder or stand provided with a lamp for reading a book retained therein, the holder being particularly adapted for, but not limited to, holding telephone directories in open and closed positions.

2. Prior Art

Telephone directory holders or stands have been available for many years, particularly in public telephone booths. The holders are usually adapted to hold several directories and generally are secured to a vertical wall and extend therefrom. As most of these devices are built for commercial use there is little attempt to produce a stand of pleasing appearance for use in the home. Thus most of the designs are characterized by external supporting brackets, hinges and stays and have little eye appeal. Some directory holders permit the book to be hinged outwards or upwards to a generally horizontal position for opening. However, often clearance between book covers and supports is such that the book covers cannot be opened fully to a flat position, and thus difficulties are experienced when trying to read close to spine of the book. Further, most of the holders are not provided with individual illumination for reading but rely on ambient illumination which, in most public telephone booths, is poor for reading the fine print of directories. Difficulties due to restricted opening of the book covers are often compounded by the poor ambient illumination which often does not reach portions of pages adjacent the binding, thus further increasing difficulties due to shadows. Further, in some of the devices designed to support one directory only, the supporting device occupies a considerably larger volume than the directory itself and thus would likely consume too much space in a typical house, and often such devices are not easily adaptable to support more than one directory.

SUMMARY OF THE INVENTION

The invention provides a directory or book holder which reduces difficulties and disadvantages of the prior art holders. A book holder according to the invention provides storage for usually one or two directories and is an aesthetically pleasing assembly, and further provides illumination independently of ambient and of sufficient intensity to illuminate both pages of the book when opened. The present holder further does not restrict opening of the book covers and thus permits the book or directory to be opened to a flat or fully opened position, thus facilitating reading adjacent the book spine. Further the holder is an easily portable unit adapted for placing on a horizontal surface and is supported on swivellable casters which permit the holder to be moved to a convenient location on the surface without supporting weight of the book or holder.

The book adapted to be held by the holder according to the invention has a length, a width, and a thickness. The holder has a generally plane base having spaced parallel inner and outer side edges and spaced parallel end edges. Space between the side edges in no less than book thickness and space between the end edges is no less than book length. The base has an upper surface having a base guide extending normally across from the inner to the outer edges. A pillar member extends normally upwards from the base and has spaced upper and lower edges and spaced end faces, space between the edges being no less than the book width and space between the end faces being no less than the book length. A cover member has spaced parallel inner and outer side edges and spaced parallel end edges, space between the side edges thereof being no less than the book thickness and space between the end edges thereof being no less than the book length. The spine portion has book retaining means to retain the book so that the spine of the book is held against the spine portion. The spine portion has a lower surface having a spine portion guide extending thereacross normal to the spine portion side edges. The spine portion guide is complementary to the base and cover member guides so as to form a cooperating guide means when the cover member is folded outwards about the hinge. When so folded the upper surfaces of the cover member and the base are coplanar, and the spine portion and the closed book can slide transversely across the base onto the cover member, concurrently being maintained generally normal to the side edges thereof by the guide means. This provides clearance between the book and the pillar to permit the book to be opened to a generally fully opened condition to permit reading of portions of the pages adjacent the book spine. A lamp is also provided on the pillar member and has a reflector adapted to reflect light generally downwards to illuminate pages of the open book.

A detailed disclosure following, related to drawings, describes preferred embodiment of the invention, which however, is capable of expression and structure other than that particularly described and illustrated.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective of the holder according to the invention for holding two books, one book being shown open, the remaining book being held closed.

FIG. 2 is an end elevation of the holder of FIG. 1 wherein both books are held closed some portions being omitted.

FIG. 3 is a fragmented section of the holder as seen from 3—3 of FIG. 2, some portions being removed.

FIG. 4 is a fragmented perspective of portions of cooperating guide means, shown disassembled.

FIG. 5 is a fragmented side elevation, some portions being sectioned, showing guides of the guide means.

FIG. 6 is a simplified section on 6—6 of FIG. 5.

FIG. 7 is a fragmented section through a portion of a base showing swivellable caster mounts.

FIG. 8 is a simplified section on 8—8 of FIG. 7.

FIG. 9 is a bottom plan view of the caster mounts of FIG. 7.

FIG. 10 is a perspective of a portion of a writing instrument receptacle, and is shown on sheet 4 of drawings.
DETAILED DISCLOSURE

FIGS. 1 and 2

In FIG. 1 a book holder 10 according to the invention is shown supporting a book 12 closed and a book 13 open, and in FIG. 2 the books 12 and 13 are both closed. The books have generally similar dimensions, the book 12 having a length 16, a width 17 and a thickness 18. The holder has a generally flat base 20 and a pillar member 21 extending normally upwards from the base. The holder 10 is generally symmetrical about a central vertical plane 22 passing through the pillar and thus generally one-half only of the holder will be described in detail, namely a right hand portion 25.

The pillar member has spaced upper and lower edges 23 and 24 and spaced end faces 26 and 27, space between the edges being no less than the book width 17 and space between the end faces being no less than the book length 16. A right hand portion 29 of the base has spaced parallel inner and outer side edges 31 and 32 and spaced parallel end edges 34 and 35, some of which are shown in broken line. Space between the side edges of the base is no less than the book thickness 18 and space between the end edges of the base is no less than the book length 16.

A cover member 38 has spaced inner and outer side edges 40 and 41, and spaced parallel end edges 43 and 44, some of which are also shown in broken outline. Space between the side edges is no less than the book width 17 and space between the end edges is no less than the book length 16. This provides cover members which are generally larger than covers of the book, not shown, which in a common telephone directory are generally thin and flexible and of the same size as pages. A hinge 47 extends between the outer side edge 32 of the base and the inner side edge 40 of the cover member and hinges the cover member to the base for swinging thereabout. A spine portion 50 has spaced parallel side edges 53 and 54 and spaced parallel end edges 56 and 57. Space between the side edges, which defines spine width, is no less than the book thickness 18, and space between the end edges is no less than the book length 16.

The spine portion has a book retaining means 60 to retain the book 12 so that spine of the book 12 is held against the spine portion. The book retaining means 60 has an end bracket provided at each end of the spine portion, two similar brackets 61 and 62 being shown. The brackets extend upwards from the spine portion and are spaced sufficiently to retain a book therein between. The end brackets have aligned openings, one opening 63 in the bracket 61 only being shown. The means 60 includes a strap 59 adapted to fit between pages of the book adjacent the spine thereof, which strap has spaced opposite ends retained in the openings in the brackets, one end 64 being shown. The ends are releasably restricted from passing through the openings and clearance is such that the strap retains the book securely against the spine portion. The strap is preferably a relatively thin steel strip, but can be an elastomeric strip. The strap has sufficient strength to retain a relatively heavy book such as a telephone directory between the end brackets.

As will be described with reference to FIGS. 3 through 6, upper surfaces of the base and the cover member and a lower surface of the spine portion have guides forming cooperating guide means which permit the book and the spine portion to be slid transversely in the direction of an arrow 52 across the base and the cover member, concurrently maintaining the spine portion generally normal to the side edges of the base and cover portion. This provides clearance between an inner cover of the book and the pillar to permit the book to be opened to a generally fully opened condition as shown in FIG. 1.

An elongated lamp 66, controlled by a switch 65, extends adjacent and parallel to the upper edge 23 of the pillar member and is disposed so that a longitudinal axis thereof is parallel to the strap 59, i.e. to length of the pages. The pillar member has a capping plate 67 extending above the lamp 66, the plate having a silvered lower surface 68 to serve as an elongated reflector adapted to reflect light downwards onto pages of the book when opened as seen in FIG. 1. The lamp is preferably a discharge type, although an incandescent filament type can be substituted. A fluorescent No. F6/5/CW, 6 watt, miniature bipin produces approximately 90 candlepower which is adequate for a normal directory reading.

The holder includes a pair of inner covers 70 and 71. The inner cover 71 has spaced parallel inner and outer side edges 73 and 74 and spaced parallel end edges 76 and 77. Space between the side edges in no less than the book width 17 and space between the end edges is no less than book length 16. The inner covers are smaller than the cover portion so that edges 74, 76 and 77 of the covers do not protrude beyond edges 41, 43 and 44 respectively of the cover portion. A hinge 79 extends along the side edge 64 and 73 of the spine portion and inner cover respectively so as to hinge the inner cover to the spine portion. A similar hinge 80 hinges the inner cover 70, thus providing a pair of additional covers to protect the book. Whilst the inner covers are of considerable value in protecting a soft cover book such as a telephone directory, the inner covers can be eliminated if a hard cover book is fitted in the holder.

Further, when the books are not in use, the inner covers sandwich the lamp and reflector thus protecting the lamp from damage. As stated previously the holder is adapted to retain two books and thus has a left hand holder portion 82 generally similar to the right hand portion 25. The portion 82 has a second base 83 on a side of the pillar remote from the first base and has similarly spaced undesignated inner and outer side edges and end edges. The holder has a second cover member 84 and a second hinge 85 extending similarly between the side edges of the second base to hinge the second cover member thereto. A second spine portion 86 functions similarly to the spine portion 60 and is not described in detail. Clearly both books can be maintained open concurrently which contrasts with some prior art devices, which, due to proximity of adjacent books, do not permit more than one book to be open at any given time. This has particular advantages when searching in telephone directories.

A cover member securing means 89 cooperates with the cover member 84 and the pillar member 21 so that when the spine portion 86 is adjacent the pillar member, the cover member 84 can be held in an upright position generally parallel to the pillar to retain the closed book 12 therebetween. The securing means is releasable to permit the cover member to swing downwards for opening the book. The means 89 is a light extensible
link 91 having opposite ends 93 and 94 retained on pins 95 and 96 extending from the pillar member and cover member respectively. A similar pin 97 is shown on the pillar for retaining the cover member 38 similarly. In FIG. 2 a similar link 99 is shown extending between inner covers 70 and 71 so as to retain the inner covers generally parallel to each other with the book 13 closed and retained therebetween.

The pillar member includes receptacles for items of convenience commonly associated with telephone directories. Adjacent a base of the pillar member openings 102 and 103 accept a telephone index 105 and a note pad 106. A writing instrument receptacle 108 is also provided in the pillar member and has an elongated opening 109 to accept a sliding member 111 carrying a pencil 110, which is described in greater detail with reference to FIG. 10. There is sufficient space at a lower portion of the pillar to accommodate electrical components of a telephone, in particular a telephone of the type in which the dial is in the handset. The capping plate can be adapted to retain such a telephone headset thereon.

The base has a lower surface 113 having a plurality of swivellable casters several 115 to support the holder on a flat surface (not shown) to permit rolling therealong. Such a mounting permits the holder to be supported on a table in a convenient location when not in use and when required, can be rolled towards the user. Hemi-spherical resilient pads 117 and 118 are provided adjacent outer edges of the cover members 38 and 39 respectively and serve to restrain the holder from undesirable rolling when the book is opened and the opened cover member is folded outwards as shown. Similar resilient pads 121 and 122 are provided adjacent outer edges of the inner covers adjacent the pillar member. The pads 121 and 122 are accepted in a recess adjacent the lamp when the books are stored as in FIG. 2, and contact the upper surface of the base when the books are open.

FIGS. 3 through 6

As previously stated the spine portion is mounted on guide means that permit transverse sliding of the spine portion relative to the pillar to maintain the spine portion normal to end edges of the base and a cover member. As seen in FIG. 3, a guide means 125 is shown supporting the spine portion 50 on the base 20 in conjunction with a similar spaced parallel guide means 126. As seen in FIG. 4 the base 20 and cover member 38 have upper surfaces 130 and 131 respectively, which surfaces are coplanar when the cover portion is hinged downwards and is supported as seen in FIG. 1. A base guide 133 extends normally across the surface 130 from the inner to the outer edge sides 31 and 32 respectively. The upper surface 131 has a cover member guide 136 extending normally from the inner side edge 40 towards the outer side edge to a position spaced from the pillar member sufficiently to permit the book to be opened to the generally fully opened condition. The guides are positioned so that when the cover member is swung downwards to the lowered or open position, the cover member guide is aligned with the base guide to permit sliding of the spine portion as will be described. As can be seen, the hinge 47 is similar to a piano hinge and accepts hinge pins to secure complementary hinge portions together, the hinge pin being omitted where the guides extend across the hinge, so as to provide clearance. The spine portion 50 has a lower surface 138 having a spine portion guide 139 extending thereacross and normal to the spine portion side edges, position of the guide being shown in broken lines in FIG. 4. Thus the base and cover member guides are female portions of the guide means so as to be recessed below the upper surfaces of the base and cover members respectively. The spine portion guide 139 is a male portion and extends transversely from the inner side edge 53 of the spine portion as an extension 141, which increases spine portion base dimensions so as to reduce rocking of the spine portion relative to the base. As seen in FIG. 4 only the pillar member 21 has a clearance 143 aligned with the guide 133 to accept the extension 141 so as to permit the spine portion and inner cover 70 to be slid into contact with the pillar member prior to upwards hinging of the cover member 38.

As seen in FIGS. 5 and 6 the guide 136 of the cover member 20 is a relatively deep groove 145 defined by spaced parallel side walls 146 and 147 and a bottom wall 148 having an axial groove 150 extending therealong. Each side wall has a lip extending inwards into the groove adjacent an upper portion of the side wall, the side walls 146 and 147 having lips 152 and 153 respectively spaced at a transverse spacing 154. The spine portion guide 139 includes an elongated roller support 155 secured by screws 157 to the lower surface 138 of the spine portion. The roller support has a lower surface 156 having a recess 158 containing spaced rollers 159 through 162, the rollers being journaled for rotation within a plane 163 normal to the lower surface 138 of the spine portion and normal to side edges of the spine portion. As seen in FIG. 6, the roller 161 has a periphery generally complementary to the axial groove 150 in the bottom wall of the guide means so as to be accepted therein. The support has generally parallel side walls 165 and 166 spaced at a distance less than the transverse spacing 154 between the lips. Axial flanges 168 and 169 extend outwards from the side walls 165 and 166 to a spacing greater than the transverse spacing 154 but less than spacing between the groove side walls so as to permit sliding of the roller support along the groove but to prevent appreciable upward movement of the roller support relative to the groove. Such an arrangement provides free sliding of the spine portion transversely outwards from the pillar member to a position where, upon releasing of the link 99 extending between the inner covers, the inner covers can swing downwards, clearing the pillar to permit easy opening of the book. As seen in FIG. 5 each end of the spine portion guide means has a pair of closely spaced rollers, thus facilitating rolling of the spine portion over a gap in the groove 145 between the cover member and base adjacent the hinge. As shown in FIG. 3 each spine portion has at least a pair of guide means, and grooves of cover member guides extend sufficiently far across the cover portion to permit full opening of the book. Thus outer edges of the cover members are not provided with the guides.

FIGS. 7 through 9

The swivellable caster 115 provided adjacent the lower surface 113 of the base 20 has a roller 175 journaled on a spindle 176. The spindle is carried in undesigned V-slots at ends of a pair of spaced arms 179 and 180 which straddle the roller, the arms having upper ends mounted on a recessed disc member 182. The disc member is journaled on a screw 184 secured to the base, and forms a portion of a thrust bearing 185 which
carries upwards thrust from the roller. A complementary portion of the thrust bearing 187 is secured adjacent the base, a plurality of balls 188 extending peripherally around the bearing. Other means of swivelably mounting the casters can be devised.

FIG. 10

The writing instrument receptacle 108 retains the pencil 110 on the sliding member 111 as previously described. The sliding member has an elongated base portion 190 having spaced parallel side edges 191 and 192 and inner and outer ends 193 and 194. A rear stop 196 extends upwards from the inner end, and a grip portion 198 extends downwards from the outer end. As seen in FIG. 1 the lower wall of the opening has clearance means to accept the grip portion 198 and to provide a clearance for gripping with a finger and thumb. Such an arrangement permits easy retrieval of a writing instrument having a length shorter than the receptacle, thus eliminating the usual difficulty of retrieval of short pencils and pens.

OPERATION

As shown in FIG. 2, two books are stored in the device with respective inner covers secured together by the link 99 to sandwich the book there between. Each spine portion is adjacent the pillar member and each cover member is hinged upwards so as to be adjacent to the inner cover and held thereagainst by the cover member securing means extending between the cover member and the pillar. When the cover members are held as above and the lamp 66 is operating, sufficient light passes between the inner covers and the pillar member to provide a soft light, such as in a night light. As the upper surface 68 of the plate 67 is silvered for reflection, little or no direct light escapes upwards.

In use, the cover member retaining means is released and the cover member folded down so that the upper surface 131 is coplanar with the upper surface 130 of the base. The inner covers remain together as the link 91 extends therebetween. The inner covers are gripped by the hand and moved transversely across the base and the cover member to the limit of the cover member guides, at which point the link 91 is released permitting the inner covers to fold downwards, and the book to be opened where required. The lamp and reflector are positioned such that sufficient light illuminates outer portions of the pages furthest from the lamp.

ALTERNATIVES AND EQUIVALENTS

The holder 10 is shown to hold two books 12 and 13 of similar sizes. This would be the situation for two telephone directories in a typical large North American city. If required the device can be modified to accept only one directory, in which case one portion of the base means and associated cover member and the spine portion would be eliminated. In circumstances where more than two directories are required the base could be lengthened and additional spine portions provided so that two or more directories could be provided on either side of the pillar. This alternative is not illustrated.

As previously stated, if the book or books have hard covers the inner covers 70 and 71 and link 99 can be eliminated, in which case when the cover member retaining means is released the book hard covers are gripped in the hand when sliding the spine portion across the base.

I claim:

1. An illuminated book holder for holding a book, the book having a length, a width and a thickness, the holder having:
   a. a generally plane base having spaced parallel inner and outer side edges and spaced parallel end edges, space between the side edges being no less than book thickness and space between the end edges being no less than the book length, the base having an upper surface having a base guide extending normally across from the inner side edge to the outer side edge,
   b. a pillar member extending normally upwards from the base, the pillar member having spaced upper and lower edges and spaced end faces, space between the upper and lower edges of the pillar being no less than the book width and the space between the end faces being no less than the book length,
   c. a cover member having spaced parallel inner and outer side edges and spaced parallel end edges, space between the side edges being no less than book width and space between the end edges being no less than the book length, the cover member having an upper surface having a cover member guide similar to the base guide and extending normally from the inner side edges across the cover member towards the outer side edges of the cover member to a position spaced sufficiently from the pillar member to permit the book to be opened to a generally fully opened condition, the cover member guide being adapted to be aligned with the base guide,
   d. a hinge extending between the outer side edge of the base and the inner side edge of the cover member, the hinge hinging the cover member to the base for swinging thereabout,
   e. a spine portion having spaced parallel side edges and spaced parallel end edges, space between the side edges being no less than book thickness and space between the end edges being no less than the book length, the spine portion having book retaining means to retain the book so that spine of the book is held against the spine portion, the spine portion further having a lower surface having a spine portion guide extending thereacross normal to the spine portion side edges, the spine portion guide being complementary to the base and cover member guides so as to form cooperating male and female portions of guide means when the cover member is folded outwards about the hinge so that the upper surfaces of the cover member and the base are coplanar, thus permitting the spine portion and the closed book to slide transversely across the base and cover member and concurrently being maintained generally normal to the side edges thereof by the guide means, to provide clearance between the book and pillar member to permit the book to be opened to the generally fully opened condition,
   f. cover member securing means cooperating with the cover member and the pillar member, so that when the spine portion is adjacent the pillar member the cover member can be held upright in a position generally parallel to the pillar member to retain the closed book therebetween, the securing means being releasable to permit the cover mem-
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9. A holder as claimed in claim 3 in which:
   i. the female portions of the guide means includes grooves in the upper surfaces of the base and cover member, each groove being defined by spaced parallel side walls and a bottom wall, the bottom wall having an axial groove extending therealong, each side wall having a lip extending inwards into the groove adjacent an upper portion of the side wall,
   ii. the male portion of the guide means includes an elongated roller support secured to the lower surface of the spine portion, the roller supports having a lower surface having a recess containing spaced rollers journalled for rotation within a plane normal to the lower surface of the spine portion and normal to the side edges of the spine portion, each roller having a periphery generally complementary to the axial groove in the bottom wall of the female portion of the guide means so as to be accepted therein, the support having parallel side walls and axial flanges extending outwards from the side walls, the side walls spaced at a distance less than transverse spacing between lips of the groove, and the flanges extending outwards to a spacing greater than the lip spacing, but less than the spacing between the groove side walls, so as to permit sliding of the roller support along the groove but to prevent appreciable upwards movement of the roller support relative to the groove.

10. A holder as claimed in claim 1 further including:
   i. a sliding member having an elongated base portion having spaced parallel side edges and inner and outer ends, a rear stop extending upwards from the inner end, a grip portion extending downwards from the outer end,
   ii. the pillar member having an elongated opening therein to accept the sliding member, the opening having a lower wall at an open end thereof, the lower wall having clearance means to accept the grip portion and to provide clearance for gripping with the finger and the thumb.

11. A holder as claimed in claim 1 in which:
   i. the base has a lower surface having a plurality of swivellable casters to support the holder on a flat surface and permit rolling therealong,
   ii. the cover member has a lower surface having a resilient pad adapted to contact the flat surface when the cover member is folded downwards to restrain the holder from undesirable rolling along the flat surface.

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