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3,383,786

ONE-PIECE CALENDAR PAD STAND

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2 Sheets-Sheet 1

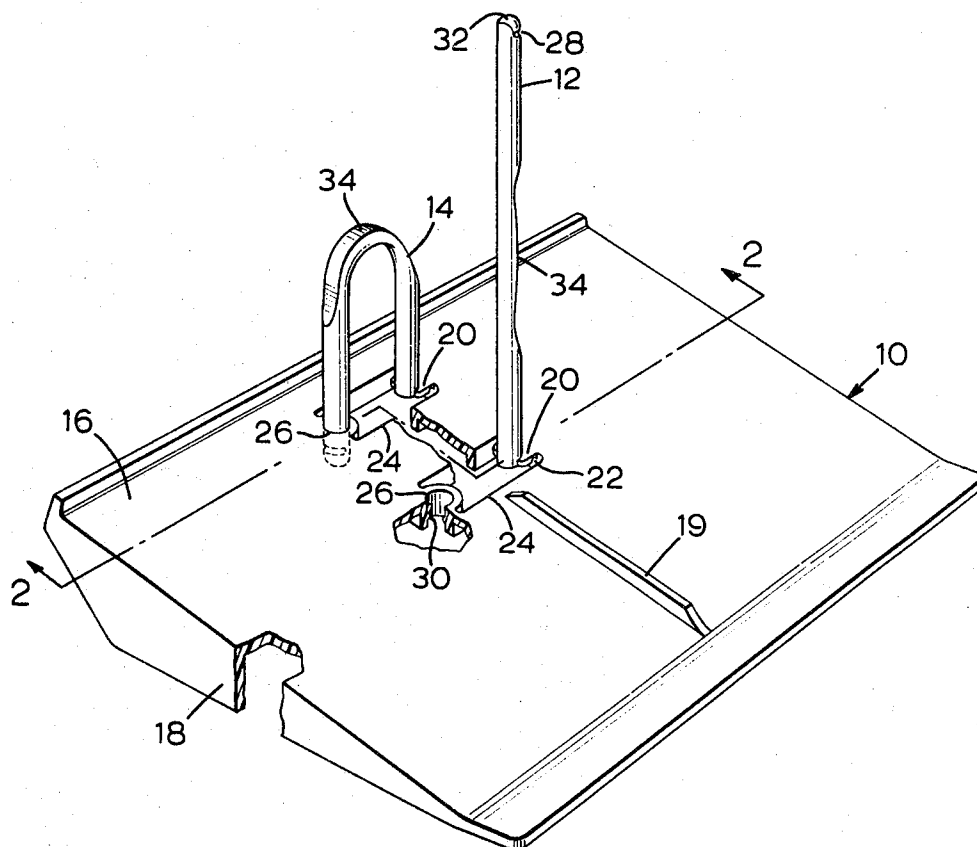


FIG. 1

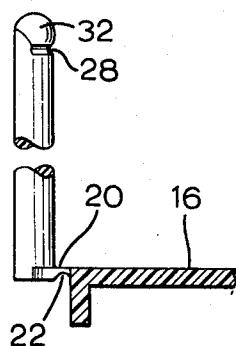


FIG. 4

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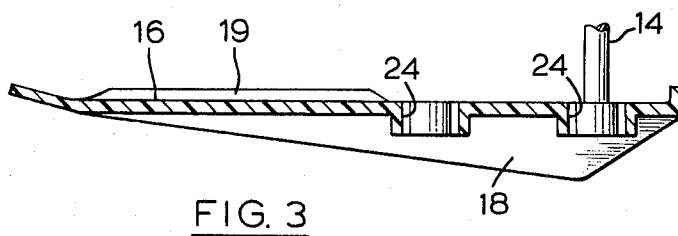
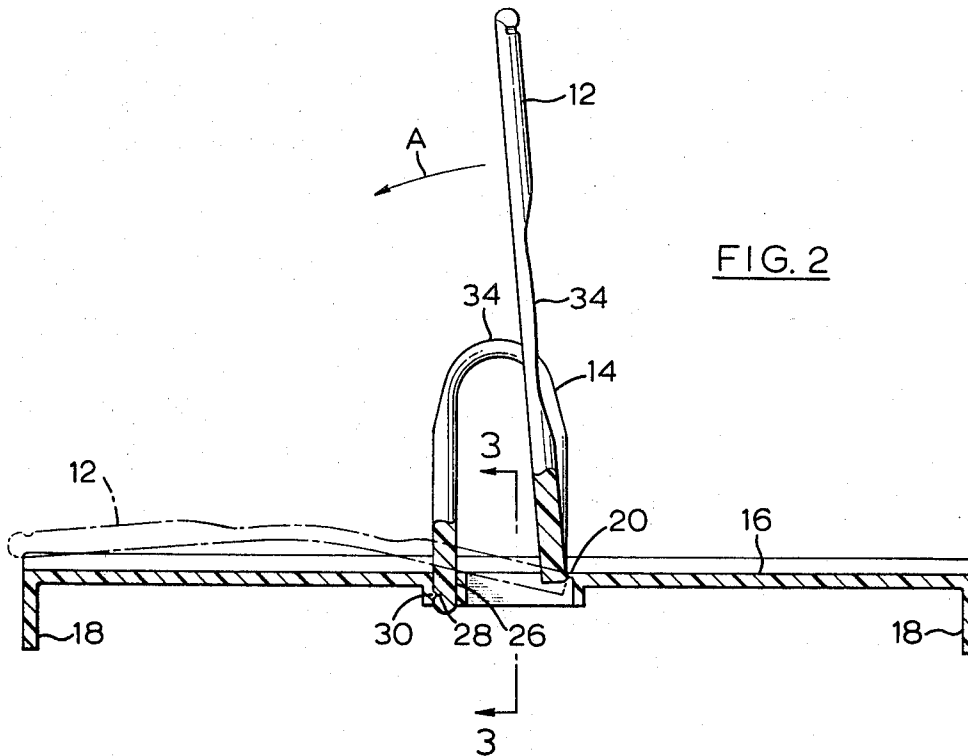
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## ONE-PIECE CALENDAR PAD STAND

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### ABSTRACT OF THE DISCLOSURE

This invention provides a calendar pad stand which is formed of one piece of plastic and includes integrally molded arch forming elements which are adapted to be laid flat against the top surface of the pad stand during shipping and storage but which can subsequently be formed into upstanding arches that are characterized by being relatively high compared to their width so that they are adapted to the reception of a calendar pad.

This invention relates to the manufacture of calendar pad stands and is particularly concerned with a molded plastic stand characterized by one-piece construction.

The calendar pad stand with which the invention is concerned is that type which is normally placed on a desk top for holding flip-over calendars having fresh pages for each day of the year. Each page is normally provided with two perforations and the stand includes a pair of arches which are passed through the perforations to hold the pages of the calendars on the stand and to permit turning over the pages each day.

The common type of stand which has been in use for many years employs knurled nuts beneath the stand for releasably holding the arches in place. Later developed stands have eliminated this particular fastening means as to avoid the difficulty encountered as the nuts loosen, with the later types using arches which releasably snap into sockets in the main body of the stand.

The traditional type of stand, as well as the improved types mentioned above, employ at least three different parts and the necessary separate manufacture of these parts is reflected in the total manufacturing costs of the stands. Further, of course, a plurality of parts creates problems in packing and shipping.

It is, therefore, a principal object of this invention to provide a calendar pad stand of one-piece construction whereby to both reduce the cost of manufacture of same as well as to remove the difficulties encountered in the merchandising and use of the known multiple piece calendar pad stands.

The above and further objects of the invention are achieved in accordance with this invention by providing a one-piece plastic calendar pad stand having integrally molded arch forming projections. The arches are formed in such a manner that they are capable of lying substantially flat against the surface of the pad stand during shipping but may be readily formed into the arch shape by the user as new calendar pads are installed each year.

The invention will be more thoroughly understood from the following description of the preferred embodiment thereof as read in conjunction with the accompanying drawings.

In the drawings which illustrate this embodiment of the invention,

FIG. 1 is a perspective view of this preferred embodiment of a one-piece calendar pad stand of the invention and showing one arch member in its configuration when the stand is in use and a second arch member in its posi-

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tion at the time it is molded integrally with the stand body;

FIG. 2 is a vertical cross-sectional view taken along the line 2—2 of FIG. 1;

FIG. 3 is a vertical cross-sectional view taken along the line 3—3 of FIG. 2; and

FIG. 4 is an enlarged detailed view of one of the arch members used on the pad stand of FIG. 1.

Referring to FIG. 1, the calendar pad stand of the illustrated embodiment essentially consists of a main body portion 10 and a pair of arch members 12 and 14. The stand is molded of plastic, preferably polypropylene plastic, in one piece, i.e. the arch members 12 and 14 are formed integrally with the main body portion 10. It should be understood that the calendar pad stand of the invention might be made in a number of different sizes for receiving calendar pads of varying dimensions. Polypropylene is a preferred plastic as this material is particularly resistant to bending stresses and the arch members 12 and 14 are bent at their lower ends to lie flat against the main body of the stand during shipping. However, as the arch members are normally bent at their lower ends at only this one time, other plastics might be used.

The main body portion 10 of the stand includes a top plate 16 and a pair of side walls 18, with the latter being shaped to slant the top surface downwardly from the rear when the stand is placed on a flat desk top or the like. This is a common feature in calendar pad stands of this type and serves to orient the supported calendar pads at a better viewing angle. The main body portion of the stand might be provided with other known expedients in stands of this type such as a pen or pencil holding groove on its front edge. As a further feature, an integrally molded ridge 19 is formed at the center line of the top surface of the stand as to maintain separation between the two groups of pages.

Referring now to FIG. 2, the two illustrated arch members are identical in dimension and configuration. In thickness they are dimensioned to pass through the normal size aperture used in calendar pads, and in length they are dimensioned to receive pads of normal thickness. As previously mentioned, they are molded integrally with the main body of the stand with the mold being designed to cast both arch members in the position in which the upright arch member 12 is shown in FIG. 2. At the point where the arch members are connected to the main body of the stand, there is a small hinge forming element 20 which has an undercut groove 22 whereby to improve the bending ability of the hinge element. The hinge element 22 is preferably wider than the width of the arch member itself so that the bending stress is spread out over a longer length of hinge material. As can be seen in FIG. 1, the hinge 20 is cast at one side edge of an opening 24 in the top 16 of the main body 10. The opening is provided to permit downward folding of the arch members in the direction of arrow A of FIG. 2 whereby the arch members may be pressed flat against the main body of the pad stand for shipping.

In use, the free ends of the arch members are received in sockets 26. Once the arch members have been bent to take the arch shape, they will normally be self-locking within the sockets as the strain imposed on the upper part of the arch members will not be one which will tend to withdraw the free ends from the sockets. However, to further guarantee that the free ends will be locked in place, the walls of the sockets and the free ends are provided with mating grooves and ridges. In the embodiment illustrated, groove 28 is formed in the free end of the arch member and the ridge 30 on the wall of the socket but it will be understood that these positions of the grooves and

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ridges could be interchanged. As illustrated, the ends of the arch members outwardly of the grooves 28 are rounded as at 32, thereby to assist passage of the free ends into the sockets whereby the ridges engage the grooves.

As can be best seen in FIG. 2, the arch members are reduced in size along the center portions of their lengths as to ensure the desired arcing. As a further preferred expedient, this reduced center portion 34 is provided with a surface crown of a large diameter arc whereby to give constant radius to the bend of the arch.

As previously mentioned, the arch members are folded during shipping to lie generally parallel to the main body of the stand. This folded position is shown in dotted lines in FIG. 2. Upon receiving the stand, the user first lifts the arch members to the upright position in which the member 12 is shown in FIG. 2 and the calendar pad is installed on the stand by passing the pad down the length of the arch members with the latter projecting upwardly through the perforations in the pad. Then the arch members are bent over and the free ends fitted into the sockets 26 where they are snapped into place by the engagement of the grooves 28 in the mating ridges 30. The stand is then set up for use and there is no possibility of the arches becoming disengaged from the pad. When a fresh calendar pad is to be installed at the beginning of the new year, it is a simple matter to flip the expired pad back to the starting position, to disengage the free ends of the arch members from the sockets and to raise them into the upright position whereby the used pad may be removed and replaced by a fresh pad.

The one-piece construction of the stand of the invention permits molding of the article in one step so that the manufacturing costs are considerably less than the cost of producing the stands heretofore available. In addition, of course, the integral attachment of the arch members to the main body of the stand overcomes difficulties encountered with multi-piece stands, both in their distribution and in their use.

What I claim is:

1. A calendar pad stand of the type adapted to receive

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and hold for display calendar and the like pads formed of a plurality of sheets, having two or more perforations, said stand being formed of plastic in one piece and having a main body portion dimensioned to support side by side sheets of the calendar or like pad, and at least two arch forming members integrally formed with said main body portion and connected thereto at one end by hinges and carrying means at their free ends for effecting a snap fit of said free ends within sockets in the top surface of the main body portion of the stand, said arch forming members each consisting of elongated rod-like elements having a pair of longitudinally spaced substantially straight, relatively nondeformable and long portions which are interconnected by a relatively thin, short and deformable portion, whereby said elements may be bent over upon themselves to form arches that are characterized by being relatively high compared to their width and in which said relatively long portions are substantially vertical and parallel to one another; said hinged connection of said elements to said main body portion providing means whereby said elements may be rotated about said hinges and laid flat against the top surface of said main body portion during shipping and storage.

2. A calendar pad stand as claimed in claim 1 wherein said relatively thin, short and deformable portions of said elements are each provided with a surface crown of a large diameter arc whereby to give a constant radius to the arches resulting from the bending upon themselves of said elements.

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