March 21, 1944. C. W. GREENHILL 2,344,549

PAD

Filed March 28, 1941

Fig. 1.

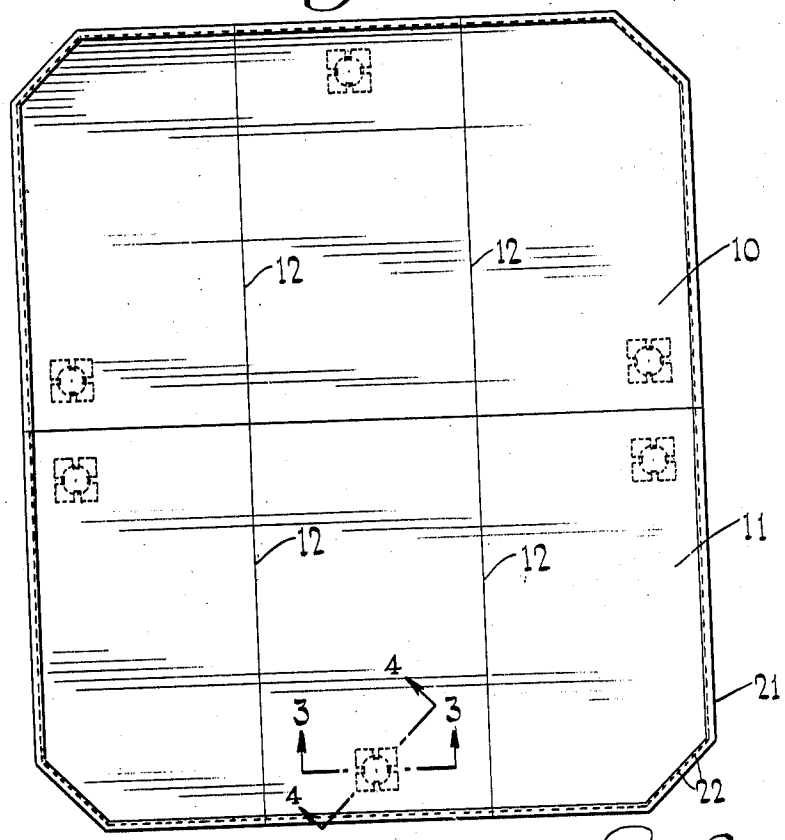


Fig. 3.

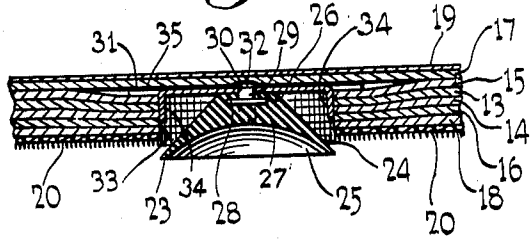


Fig. 2.

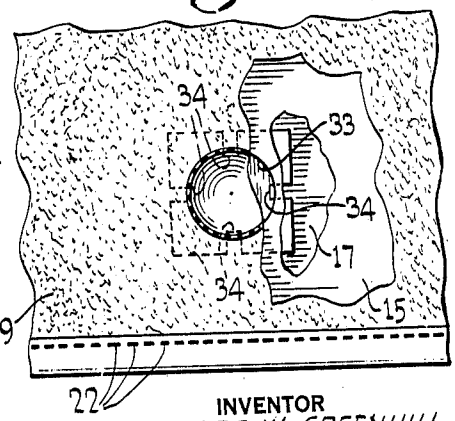
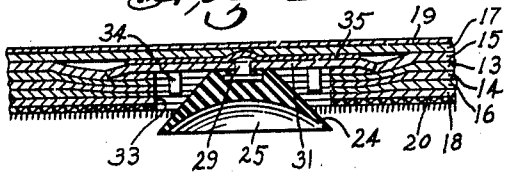


Fig. 4



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PAD

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5 Claims. (Cl. 45—68.4)

This invention relates to pads, such as are used with tables, desks and the like.

Due to the highly polished surface customarily employed on the tops of desks and tables, the ordinary table pads may shift considerably on the table tops.

It is an object of my invention therefore to provide a practical pad of the character described having improved means whereby it may be effectively anchored in any desired position on a table or desk top.

It is another object of my invention to provide a pad of the character described wherein the anchoring means are so constructed and arranged relative to the pad that the top surface of the pad will remain unbroken and the bottom surface of the pad will be substantially in contact with or but slightly raised above the top surface of the table or desk.

A further object of my invention is to provide a pad of the character described having a plurality of rubber suction cups which are mounted on the table pad so that they project only a slight distance beyond the bottom and are not visible at the top of the table.

Still another object of my invention is to provide a pad of the character described having a stiff imperforate top supporting layer and rubber suction anchoring cups, the major portions of which are contained within the pads.

Additional objects of my invention are to provide a pad of the character described having anchoring means which are simple and inexpensive to make and mount, which are rugged in construction, comprise relatively few parts, and which shall withal be highly efficient for the purposes set forth.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the claims.

In the accompanying drawing, in which is shown one of the various possible embodiments of this invention,

Fig. 1 is a top plan view of a pair of folding table pads embodying my invention;

Fig. 2 is an enlarged fragmentary bottom view thereof partially broken away to show the supporting structure for the suction cup;

Fig. 3 is an enlarged sectional view taken substantially along the line 3—3 of Fig. 1; and

Fig. 4 is an enlarged sectional view taken substantially along the line 4—4 of Fig. 1.

Referring now to the drawing, I have shown a pair of table pads 10 and 11, each of which is provided with a pair of folds 12 well known to the art, so that the pads 10 and 11 may be opened to the shape shown in Fig. 1. Said pads, juxtaposed as shown, form a figure having a predetermined plan outline which substantially matches the top surface of the article with which it is intended to be used: in this instance a rectangular table with beveled corners.

Each pad 10, 11 consists of a plurality of plies of comparatively stiff material, comprising a pair of juxtaposed center layers 13 and 14 made from a sheet-like material of substantial strength such as a relatively rigid and hard surfaced cardboard. Above and below these layers are a pair of buffing layers 15 and 16 which may also be fabricated from a sheet-like material of substantial strength such as a cardboard which is a little softer and more flexible than the center layers 13 and 14, the surface of the buffing layers being rough so that they appear to be felted. Two surface supporting layers 17 and 18 are disposed above the layers 15 and 16 and below the layer 16, these supporting layers being made from material substantially similar to that employed for the center layers 13 and 14 and being cushioned by the softer and more resilient buffing layers 15 and 16.

The top of the pad is covered with a layer of surfacing material, such as for example a waterproof textile fabric 19 having a decorative finish, such as a simulated wood grain. The bottom of the pad is covered with a layer of felt 20. Both of the textile covering layers 19 and 20 are smoothly glued to the supporting layers 17 and 18 so as to present unwrinkled attractive surfaces. The edges of the pad are suitably bound with a tape 21 and sewed together by a line of stitching 22.

The table pad thus far described is of more or less standard construction, such as may now be purchased on the open market. However, for the purposes of my invention, I may employ any other table pad or desk pad which comprises two or more layers, exclusive of the textile covering plies.

In accordance with my invention, I provide pad anchoring means which are so constructed and mounted in the table pads 10 and 11 that they will be concealed from the top surface of the pad but will not cause the pads to be raised appreciably, if at all, above the table surface. Said means comprises a plurality of rubber suction cups 23, each having a frusto-conical outer wall 24, a concave recess 25 in its larger end, and a flat surface 26 at its smaller end. The surface 26 is spaced a substantial distance away from the convex recess 25 to provide a solid body portion 27 of appreciable size in which the head 28 of a rivet 29 is imbedded.

In order to mount said suction cups in the pads, I provide a flat sheet metal plate 31 for

each of the cups 23, said plate being greater in at least one dimension than the larger end of the cups. The shank of the rivet 29 extends through a central aperture 30 in the sheet metal plate 31 and is headed over as at 32 so as to firmly secure said plate to the suction cup.

The mounting plate 31 and suction cup 23 are assembled as a unit apart from the table pads 10 and 11. In order to insert these anchoring units into said pads, I form aligned apertures 33 in the felt layer 20 and one or more contiguous overlying layers 18, 16, 14, 13 and 15. These apertures are preferably cut through the said layers in one stroke of a blanking press, before the edges of the pads are bound. After the apertures 33 have been formed, the large end of the rubber suction cup 23 which is slightly greater in diameter than said apertures, is forced therethrough until the mounting plate 31 rests against the uppermost apertured layer 15. The imperforate supporting layer 17 and covering layer 19 are then put in position and the pads stitched together.

Means is provided to centrally locate the anchoring units in the apertures 33 and to prevent shifting of said units therein. Such means may comprise a set of four tangs 34 which are struck downwardly from the mounting plate 31 and which lie on the circumference of a circle of the same size as the apertures 33 and concentric with the rivet 29 and suction cup 23. The tangs 34 thus disposed will serve to guide the anchoring unit to the position relative to the apertures shown in Fig. 3 wherein the side wall 24 of the suction cup 23 is uniformly spaced away from said apertures. If desired, a layer of adhesive 35 may be interposed between the mounting plate 31 and the top layer of cardboard 17 to aid in securing the anchoring unit. Also, the corners of the plate 31 may be inclined towards the apertured layers 13, 14, 15, 16 and 18 and embedded in the uppermost layer 15 thereof, as shown in Fig. 4.

The anchoring units may be placed anywhere in the under surface of the pad, but I prefer to locate them near the line of stitching 22, where the layers 15 and 17 are tightly bound together, so that these two layers will tend to clamp the mounting plate 31 therebetween and prevent shifting of the unit.

In use, the table pads 10 and 11 are placed on the table and set in their desired position. The user then firmly presses down portions of the table pad substantially overlying the plates 31 and suction cups 23. This action will force air out of the suction cups in the wall known manner and create a partial vacuum which firmly anchors the cups 23 and pads 10 and 11 to the table surface.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

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

1. A pad of the character described comprising a plurality of layers of a sheet-material of substantial strength, one of said layers having an aperture and one of said layers being imperforate, and an anchoring unit including a flat plate larger than said aperture and a suction cup permanently secured to said plate, said suction cup projecting through said aperture, said plate being disposed between said imperforate layer and said apertured layer, said plate having integral means for centrally locating said cup in said aperture.

2. A table pad comprising a plurality of panels foldedly connected, each of said panels comprising a plurality of layers of a sheet-material of substantial strength, the uppermost of said layers in each of said panels being imperforate, the remaining layers having a set of aligned apertures, and an anchoring unit in each of said panels, said anchoring unit comprising a square sheet metal plate larger than said apertures and a rubber suction cup permanently attached to said plate, said plate being disposed between said imperforate layer and the uppermost of said apertured layers, said suction cup projecting through said apertures and extending beyond the lowermost of said layers.

3. A table pad comprising a plurality of panels foldedly connected, each of said panels comprising a plurality of layers of a sheet-material of substantial strength, the uppermost of each of said layers being imperforate, the remaining layers having a set of aligned apertures disposed near an outermost edge of said panel, and an anchoring unit in each of said panels, said anchoring unit comprising a square sheet metal plate larger than said apertures and a rubber suction cup permanently attached to said plate, said plate being disposed between said imperforate layer and the uppermost of said apertured layers, the corners of said plate being inclined towards said apertured layers and being imbedded in the uppermost of said layers, the top surface of said plate being adhesively secured to said imperforate layer, said suction cup projecting through said apertures and extending beyond the lowermost of said layers.

4. A pad of the character described comprising a plurality of layers of a sheet material of substantial strength, one of said layers having an aperture and one of said layers being imperforate, and an anchoring unit including a flat plate larger than said aperture and a suction cup permanently secured to said plate, said suction cup projecting through said aperture, said plate being disposed between said imperforate layer and said apertured layer, said plate having integral means for centrally locating said cup in said aperture, said last named means comprising tangs which frictionally engage said perforated layer in the aperture thereof.

5. A pad of the character described comprising a plurality of layers of a sheet material of substantial strength, one of said layers having an aperture and one of said layers being imperforate, and an anchoring unit including a flat plate larger than said aperture and a suction cup permanently secured to said plate, said suction cup projecting through said aperture, said plate being disposed between said imperforate layer and said apertured layer, said plate having integral means for centrally locating said cup in said aperture, said last named means comprising several tangs struck from said plate and defining a circle of substantially the same diameter as the aperture in said perforated layer.

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