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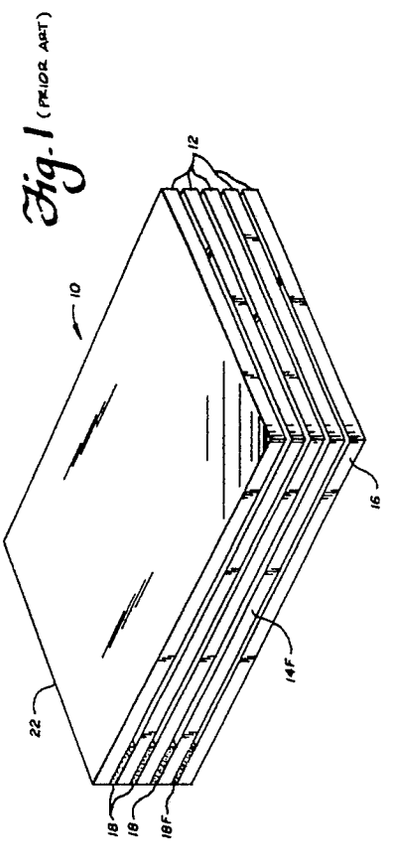
(54) Pad of repositional adhesive-backed sheets with pad-backing of stronger adhesive than used on backs of other sheets in pad.

(57) A pad of sheets of flexible material, e.g. note paper, has each sheet but the last one provided on its rear surface with a band, spot or other region of lightly-tacky adhesive which allows the sheet to be peeled off and pressed onto another surface to removably hold that sheet to a surface, e.g. for bearing a message. The back of the last sheet is provided with an adhesive area having a significantly stronger bonding strength by the adhesive itself being stronger or covering a larger area, e.g. so that the pad, once stuck to a surface, such as that of a wall, will stay put, throughout the life of the pad, and until intentionally removed.

Fig. 1 (PRIOR ART)



EP 0 309 107 A2

Pad of Repositional Adhesive-Backed Sheets With Pad-Backing of Stronger Adhesive Than Used on Backs of Other Sheets in Pad

Background of the Invention

Pads of sheets of flexible material, e.g. note paper are padded by being provided on their backs with so-called repositional (or repositionable) adhesive. The terminal sheet in the pad usually lacks a backing of adhesive, and often is made of a sheet which is noticeably different in appearance (e.g. a padded stack of canary yellow sheets terminated by a kraft brown backing sheet bearing a manufacturer's name and logo on its exterior face). Sheets which are successively the top sheet may be successively written upon, successively peeled off and repositionally stuck on another surface, such as on a page of a book, on a refrigerator door or on a telephone handset.

However, in the usual instance, although the individual sheets are designed to be removably adhered to a surface, the pad is not designed to be adhered to anything so it may easily become misplaced. In addition, because such pads usually are quite small in lateral dimension, writing on the top page may require a two-handed operation, one hand to hold the pad to keep it from moving and the other to hold the pen or pencil. Two procedures have been devised heretofore for alleviating these problems. One, adopted by a major manufacturer of such pads, is to supply a relatively large and heavy container for a pad, through the open top of which the top sheet of the pad is accessible for being written upon. At least partly in testimony to the lack of inclusiveness of that solution, another has arisen, seemingly at the user level And that is for the user to peel the backing sheet off of the pad and then to use the strip of repositional adhesive on the back of the thereby-exposed last sheet of the pad to stick the pad to a surface, such as to a telephone table near the telephone, or to a wall near the telephone, to the refrigerator door, or the like. However ingenious, this last-mentioned solution has shortcomings also. Most important is that the strip of repositional adhesive on the back of the last sheet, not having been meant to hold the weight of the whole pad, but only of a single sheet, lets go. Then, the pad slides or falls and may become lost behind a piece of furniture, or the exposed strip of repositional adhesive may get dusty or attract enough food crumbs, dog hairs or whatever may be on the floor, so that its already deficient power to firmly stick the whole pad to a surface is lost, necessitating at the least, that the rear sheet be peeled off and thrown away in order to expose a new strip of repositional adhesive. Needless to say, this technique results in the pad being used from both ends (one end by being written on and peeled off, and the other by getting dirty and being peeled off).

The present invention was devised to overcome the above-mentioned shortcomings of existing ways and means for fixing the position of a pad of adhesively back-coated repositional sheets of note paper or the like.

Summary of the Invention

A pad of sheets of flexible material, e.g. note paper, has each sheet but the last one provided on its rear surface with a band, spot or other region of lightly-tacky adhesive which allows the sheet to be peeled off and pressed onto another surface to removably hold that sheet to a surface, e.g. for bearing a message. The back of the last sheet is provided with an adhesive area having a significantly stronger bonding strength by the adhesive itself being stronger or covering a larger area, e.g. so that the pad, once stuck to a surface, such as that of a wall, will stay put, throughout the life of the pad, and until intentionally removed.

The principles of the invention will be further discussed with reference to the drawings wherein preferred embodiments are shown. The specifics illustrated in the drawings are intended to exemplify, rather than limit, aspects of the invention as defined in the claims.

Brief Description of the Drawings

In the Drawings

Figure 1 is a perspective view of a pad of the prior art type; and

Figure 2 is a longitudinal cross-sectional view showing that pad in use.

Figure 3 is a longitudinal sectional view of a pad of the present invention, showing the pad being readied for use;

Figure 4 is a longitudinal sectional view similar to Figure 3, showing the new pad in use:

Figure 5 is a longitudinal sectional view similar to Figure 4, showing a top sheet of the pad being pulled off for repositioning elsewhere; and

Figure 6 is a longitudinal sectional view similar to Figure 5, showing a variation in the extent of the adhesive provided on the back of the last sheet.

(In the drawing figures, thickness has been exaggerated for convenience in illustration.)

Detailed Description

A prior art pad of repositional sheets is illustrated at 10 in Figures 1 and 2. This pad comprises a plurality of sheets 14 of flexible material, such as note paper, arranged in a stack. Each sheet 14, except the bottom (or backing) sheet 16 has been provided on its back with at least one strip, band, region, area or the like 18, continuous or discrete, of a lightly-tacky adhesive. The adhesive 18 most frequently is provided in a narrow band occupying, e.g., the top approximately twenty percent of the back surface 20 of each respective sheet, adjoining the top edge 22 of the sheet, which coincides with the top edge of the pad. The backing sheet 16 may be similar in composition to the sheets 14, although it often is a different color, in order to help consumers to avoid attempting to use the wrong side of the pad.

Thus, in normal intended use, the pad 10 rests on a surface 24 with no adhesive between the back surface 26 of the backing sheet 16 and the surface 24 on which the pad is supported. In a known prior art use which has been referred to above, the pad may be stuck to the surface 24 (in an unsatisfactory way), by peeling off the backing sheet 16 and using the band of repositional adhesive 18F on the newly-exposed last sheet 14F to try to temporarily adhere the pad 10 to the surface 24.

Moore Business Forms, Inc. manufactures and/or distributes a type of prior art pad as shown in Figures 1 and 2, under the trademark Note Stix®.

Now comparing Figures I and 2 with Figures 3-6, the pad 10′ of the present invention may comprise exactly the same elements as the prior art pad 10, except for the nature of the adhesive used in the coating on the last sheet in the stack. Accordingly, like parts have been given like numerals, but primed ones.

In the pad 10′ of the present invention, the band of adhesive provided at 18F′ is not merely the same in composition, area, thickness and degree of tackiness as the bands of adhesive 18′. Instead, due to any combination of differences in composition, area, thickness and degree of tackiness, it has substantially greater holding-power than do the individual bands 18′. As a result, the backing sheet 16′ may need to be a release-coated sheet, e.g. a sheet of paper coated with wax, a polyethylene terephthalate varnish or the like so as to permit the backing sheet 16′ to be peeled-off so that the pad 10′. can be firmly stuck. via the adhesive 18F′ to a surface 24.

The adhesive 18F′ may itself be a layer of double-sided adhesive tape, such as that marketed by Moore Business Forms, Inc. under the name "Transfer" tape. In such a case, the removable backing sheet 16′ need be coextensive only with the strip of double-sided adhesive tape and not necessarily coextensive with the rear surface facial area of the last sheet 14F′ of the pad.

Of course, an adhesive which has closer, if not identical holding power to that used for the strips 18′ can be used for the strip 18F′ if the latter covers a greater area than does each of the strips 18′, e.g. as is illustrated at 18F″ in Figure 6.

By way of further exemplifying the preferred embodiment, an example will be given:

In a practice of the invention, a pad 10′ is constructed of the materials and by the techniques currently used to produce Note Stix pads, except that the adhesive used at 18F′ on the last sheet, instead of being merely the same as used at 18′, and the backing sheet 16′ were provided by the Transfer tape product referred to above. The standard test used at Moore Business Forms, Inc. for the holding strength of a pressure sensitive-type adhesive for repositional paper sheets is: 90 DEGREE peel test pulled at 12 inches per minute from stainless steel, sample size 1″ x 8″. Rolled four times with a 4 lb. roller.

According to that test, the holding strength of the bands of adhesive 18′ is typically in the range of: .2 - 4.0 ounces per inch.

Also according to that test, the holding strength of the band of adhesive 18F′ is typically in the range of: .2 - 40.0 ounces per inch. (Note: low strength would apply at high area coverage.)

In the variation which has been described with reference to Figure 6, in which the adhesive used at 18F″ may be the same as that used at 18′ but covers a broader area of the back of the respective sheet, the adhesive used typically is that currently used for making Note Stix pads, but whereas the adhesive 18′ covers a band occupying in the range of: 1 - 50 percent of the rear face of each respective sheet, the adhesive 18F″ covers a band occupying in the range of: 1 - 100 percent of the rear face of the last sheet.

The term 'band' of adhesive has been used loosely (i.e. generically) in the description herein and should not be taken to necessitate that the area to which any adhesive is applied be of any particular shape, or that it consist of a single, continuous region.

It should now be apparent that the pad of repositional adhesive-backed sheets with pad-backing of stronger adhesive than used on backs of other sheets in pad as described hereinabove, possesses each of the attributes set forth in the specification under the heading "Summary of the Invention" hereinbefore. Because it can be modified to some extent without departing from the principles thereof as they have been outlined and explained in this specification, the present invention should be understood as encompassing all such modifications as are within the spirit and scope of the following claims.

Claims

1 A pad of repositional adhesive-backed sheets, comprising:
a stack of sheets of flexible material including a last sheet backed by a backing sheet;
each sheet but said last sheet and said backing sheet being provided on a rear surface thereof with a band of lightly-tacky pressure-sensitive adhesive which allows the sheet on which it is provided to be peeled from the pad and pressed onto another surface to removably hold that sheet to that other surface;
said last sheet having a rear surface thereof provided with a band of adhesive having a substantially stronger bonding strength considering its total area relative to the total area of each of said bands of lightly tacky pressure-sensitive adhesive, than that of each of said bands of lightly tacky pressure-sensitive adhesive;
said backing sheet being peelably removably adhered to said band of adhesive having a substantially stronger bonding strength.

2 The pad of repositional adhesive-backed sheets according to claim 1, wherein:
said band of adhesive having a substantially stronger bonding strength has a substantially stronger bonding strength per unit area on said rear surface of said last sheet than does each of said bands of lightly tacky pressure-sensitive adhesive.

3 The pad of repositional adhesive-backed sheets accordiing to claim 1 or 2 wherein:
said band of adhesive having a substantially stronger bonding strength covers less than all of the total area of the rear surface of said last sheet; and
said backing sheet removably covers all of said band of adhesve having a substantially stronger bonding strength.

4 The pad of repositional adhesive-back sheets according to claims 1, 2 or 3 wherein:
said backing sheet covers less less than all of the total area of the rear surface of said last sheet.

5 The pad of repositional adhesive-backed sheets of claim 1, wherein:
said band of adhesive having a substantially stronger bonding strength covers a substantially greater percentage of the rear surface of said last sheet than does each band of said lightly tacky pressure-sensitive adhesive of the rear surface of each respective sheet.

6 The pad of repositional adhesive-backed sheets of claim 5, wherein:
said band of adhesive having a substantially stronger bonding strength per unit area than that of the lightly tacky pressure-sensitive adhesive provided on the rear surfaces of those of said sheets in said pad which overlie said last sheet.

7 The pad of repositional adhesive-backed sheets according to any of the preceding claims wherein:
said flexible material is paper.

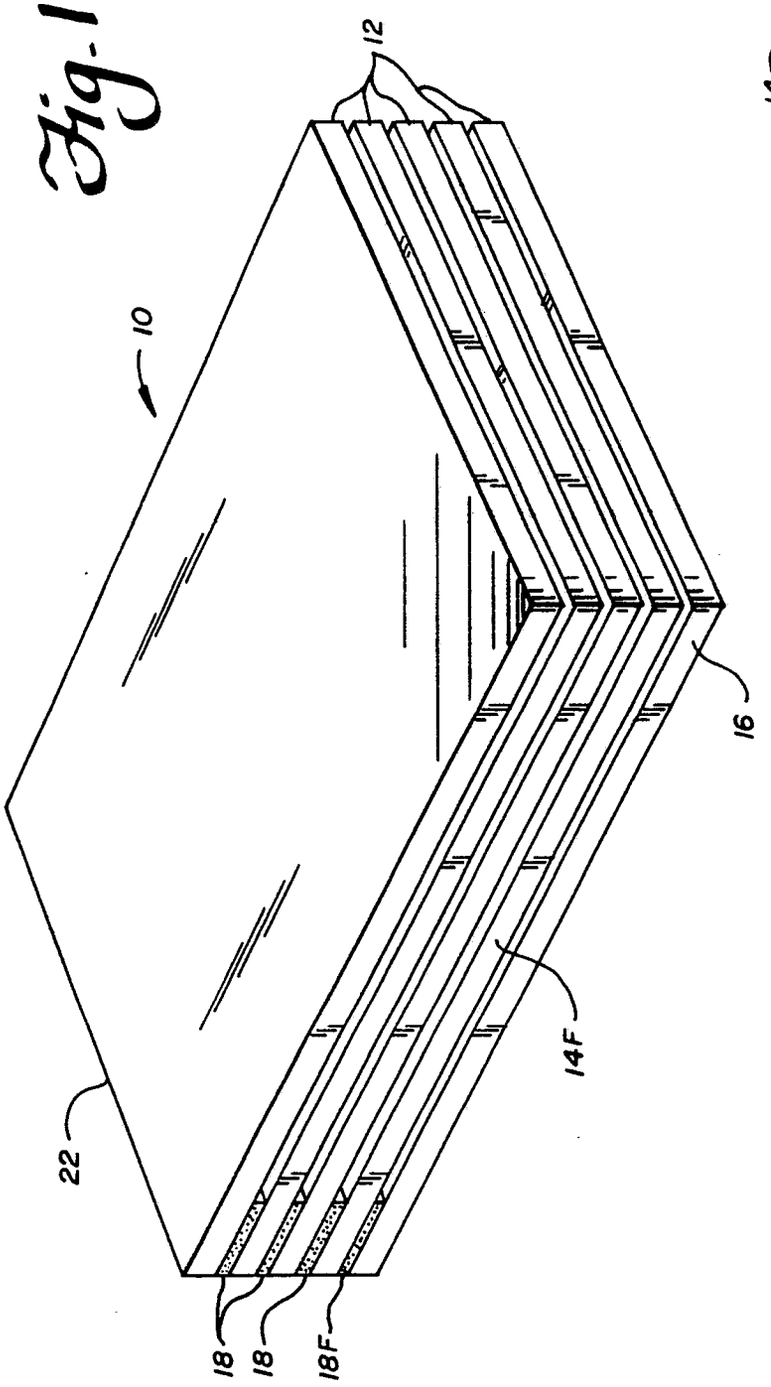


Fig. 1 (PRIOR ART)

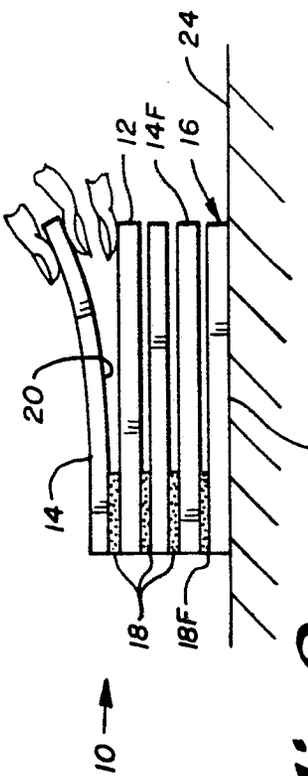


Fig. 2 (PRIOR ART)

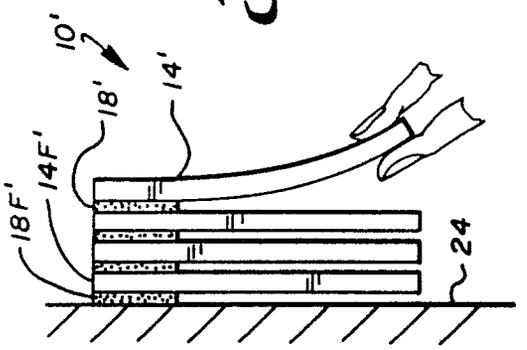


Fig.4

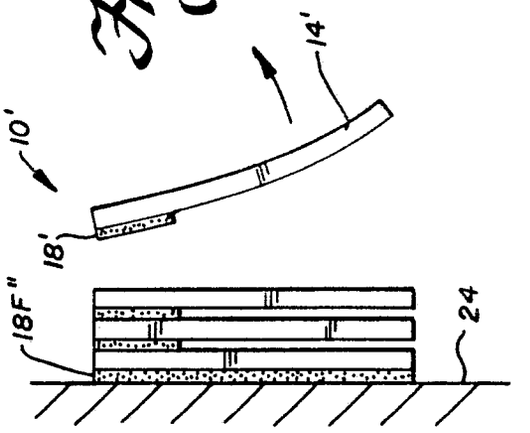


Fig.6

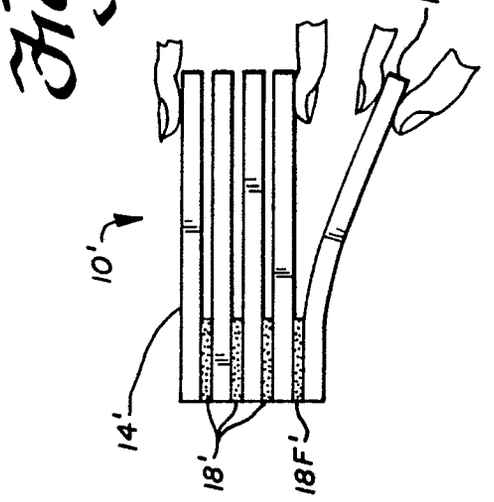


Fig.3

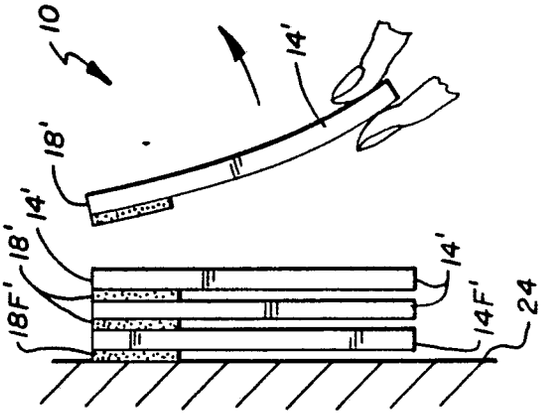


Fig.5