Sept. 29, 1959 V. P. SIMMONS 2,906,397

DIVIDED LABEL-LIFT

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Fig. 1.

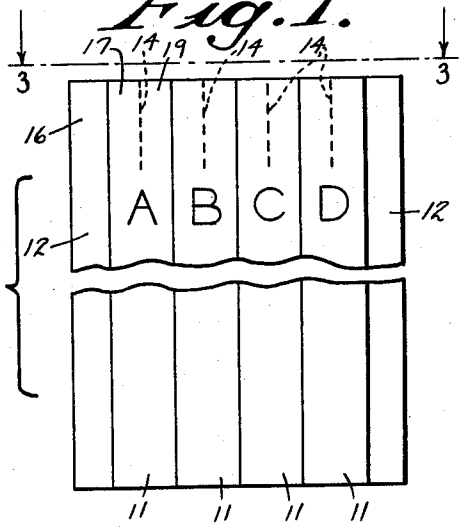



Fig. 2.

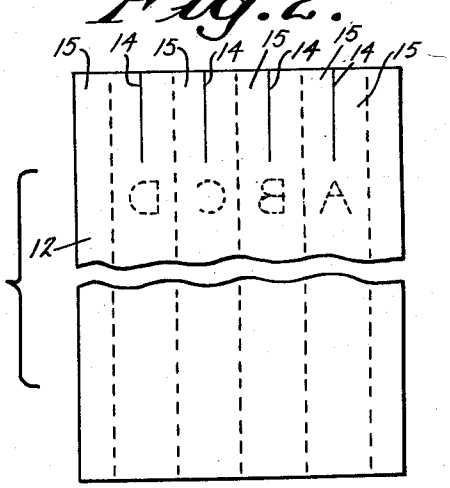



Fig. 3.

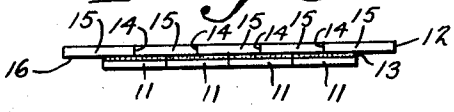



Fig. 6.

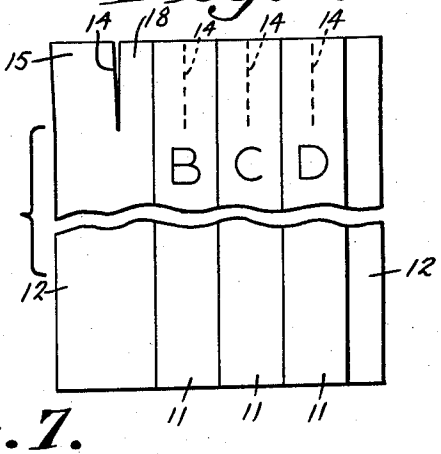



Fig. 4.

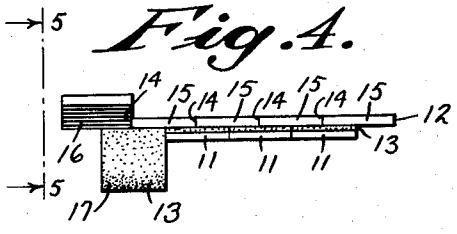



Fig. 5.

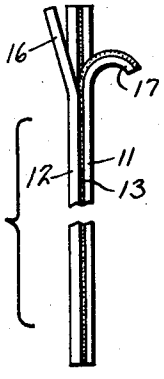
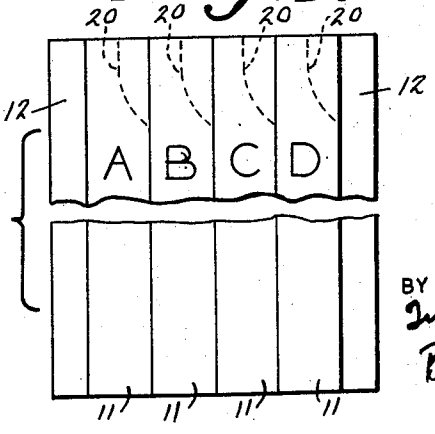



Fig. 7.

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DIVIDED LABEL-LIFT

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Fig. 8.

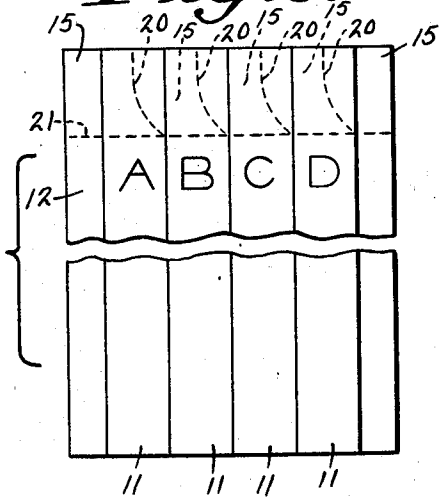


Fig. 9.

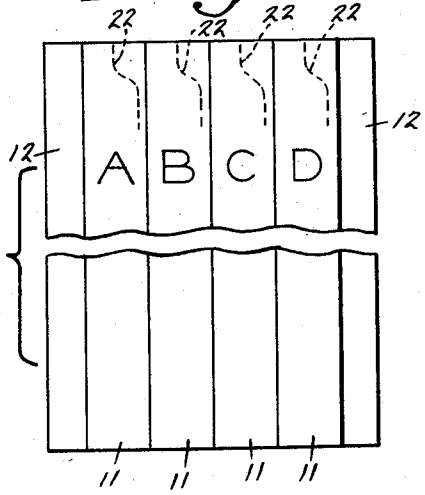


Fig. 10.

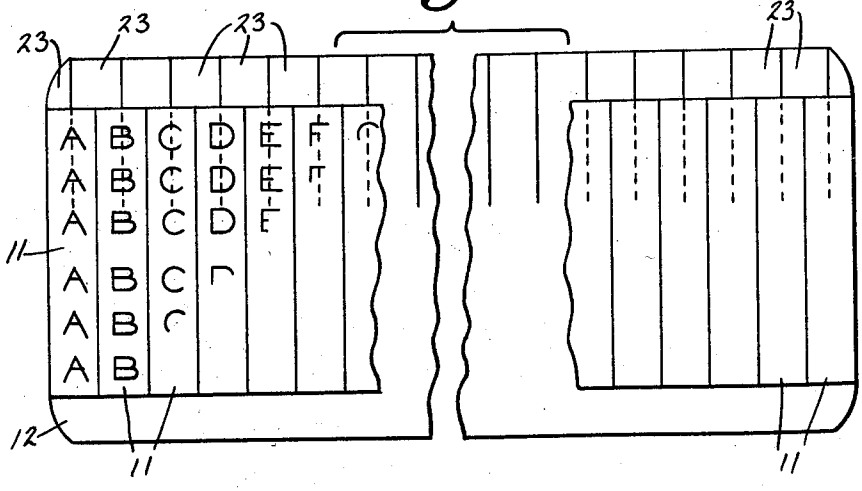


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Fig. 11.

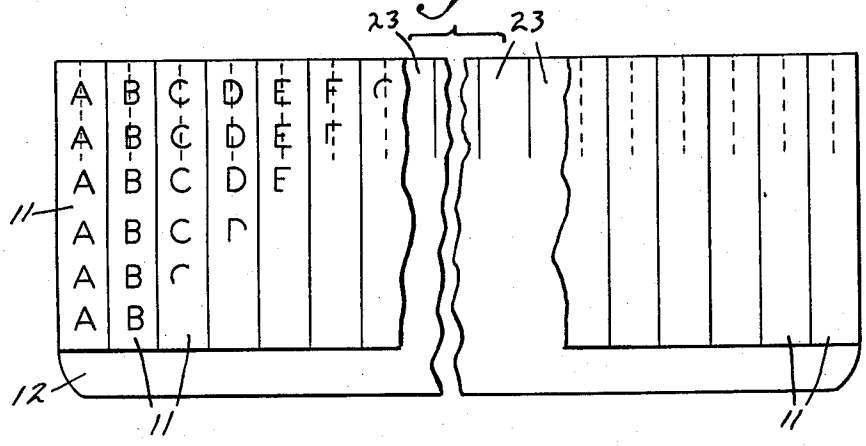
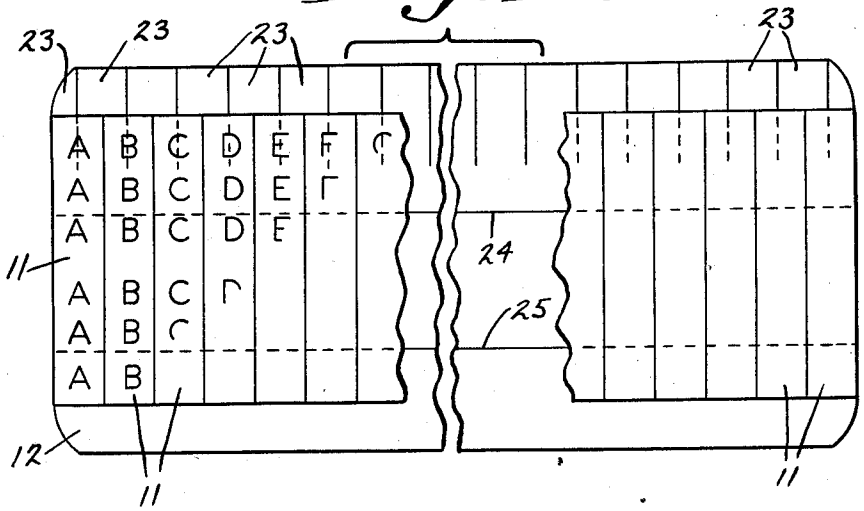



Fig. 12.

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United States Patent Office 2,906,397 Patented Sept. 29, 1959



2,906,397

# DIVIDED LABEL-LIFT

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Application November 4, 1957, Serial No. 694,381

11 Claims. (Cl. 206—56)

This invention relates to backed adhesive sheet material, easily removable from its backing; and resides more particularly in a divided label-lift, for initiating the successive removal of each of a series of precut portions of adhesive tape from a backing-board; and still more particularly in a series of pieces of adhesive tape, removably mounted side-by-side in close proximity with each other on a substantially rectangular backing-board, an edge of which adjacent the ends of the pieces of tape, is divided into tabs by cuts extending only part way across said board, each of said cuts lying between the two sides of one of the pieces of tape, and thereby each of said tabs spans widthwise a part only of each of the ends of two adjacent pieces of tape.

Preferably each of said cuts is a straight line, lying midway between, and parallel to, the sides of the piece of tape.

Preferably a portion of the backing-board, where the same is split into tabs, extends either beyond the ends of the pieces of tape, or beyond the side edge of one or both of the extreme pieces of tape, a sufficient distance to enable the extending portion to be grasped between thumb and finger; but there are also certain advantages to omitting this feature.

Pliant sheet material coated with permanently tacky eucohesive adhesive, requiring no solvent to activate the same, is commonly called pressure sensitive adhesive tape. For convenience such materials are herein called "adhesive tape" or "adhesive sheet material." And, although the present invention is primarily applicable to tape in ribbon form, made of woven material such as surgeon's tape or electrical friction tape, the term "tape" herein is intended to include generically labels and tape of other shapes and materials. Similarly, the term "backing-board" herein is intended to include generically a card, sufficiently stiff to conveniently support the tape, and yet sufficiently bendable for the performance of the invention as hereinafter described, and having a smooth facing which will not part from the backing-board nor impair the adhesive coating of the tape, and from which the tape can be readily peeled.

Heretofore series of separable portions of adhesive tape have been mounted side-by-side on backing-boards, for successive removal therefrom. But starting the removal of each piece of tape has been difficult, especially when the pieces of tape extend flush to the edges of the backing-board. Picking at the edge of the tape with one's fingernails has proved time-consuming and annoying. Even the use of a knife or other sharp-pointed tool for lifting the edge of the tape has likewise proved time-consuming and annoying. Even the expedient of a severable marginal portion of the mounting board, underlying the ends of the pieces of tape, which portion can be severed and then peeled-off to expose said ends so that the same may be grasped for removal, as exemplified in U.S. Patents Nos. 2,434,545 and 2,681,732, has not proved altogether satisfactory, as it weakens the backing-board, and is apt to expose the adhesive of more pieces of tape than are



needed, especially whenever it becomes necessary to remove a piece of tape out of its successive order.

Accordingly it is the principal object of the present invention to provide a more simple expedient for initiating the removal of the pieces of tape, and to eliminate the above objections.

Other objects and advantages of the invention will appear in the description which follows.

In the description, reference is made to the accompanying drawings, forming a part hereof, in which there are shown, by way of illustration and not of limitation, certain specific forms in which the article of manufacture of the present invention may be embodied.

In the drawings:

Fig. 1 is a plan view of the backed adhesive tape of the present invention, with the face which consists of the tape turned toward the observer.

Fig. 2 is a view of the reverse face of the same, i.e., the face which consists of the backing-board.

Fig. 3 is an edge view, as seen from the line 3—3 of Fig. 1.

Fig. 4 is the same view as Fig. 3, after the left-hand tab of the backing-board has been bent down and the left-hand piece of tape has been partially peeled off.

Fig. 5 is an edge view of the situation portrayed in Fig. 4, as seen from the line 5—5 of Fig. 4.

Fig. 6 is the same view as Fig. 1, after the left-hand piece of tape has been peeled off.

Fig. 7 is a plan view, corresponding to Fig. 1, of a second variant of the backed adhesive tape of the present invention.

Fig. 8 is a plan view, corresponding to Fig. 1, of a third variant of the backed adhesive tape of the present invention.

Fig. 9 is a plan view, corresponding to Fig. 1, of a fourth variant of the backed adhesive tape of the present invention.

Fig. 10 is a plan view, corresponding to Fig. 1, of a fifth variant of the backed adhesive tape of the present invention.

Fig. 11 is a plan view, corresponding to Fig. 1, of a sixth variant of the backed adhesive tape of the present invention.

Fig. 12 is a plan view, in the alternative, of two subvariants of a seventh variant of the backed adhesive tape of the present invention.

Throughout the description, the same reference numeral is applied to the same member or similar members.

Referring now to the drawings, and more particularly Figs. 1, 2 and 3, it will be seen that **11** represents each of a series of pieces of adhesive tape removably attached to backing-board **12** by means of adhesive **13**.

As shown in Figs. 1 and 2, the four pieces of tape are lettered A, B, C, and D respectively. This, or a series of numbers or symbols, can serve to identify the respective tapes, in directions for their use.

An edge of the backing-board, adjacent the ends of the pieces of tape, is divided by a series of cuts **14** into a series of tabs **15**. Although cuts **14** could consist of scoring, perforating, or otherwise weakening the backing-board to effect ready separation of tab from tab, cutting completely through is preferred. Preferably, although not necessarily, the extent of cuts **14** across the board is limited to division into relatively short tabs.

Each of these cuts lies between the two sides of one of the pieces of tape. Thus (see Fig. 1) the first tab from the left is uncovered in part and in part underlies tape A; the second tab from the left underlies parts of tapes A and B; the third tab underlies parts of tapes B and C; the fourth tab underlies parts of tapes C and D; and the

fifth tab partly underlies tape D and partly protrudes uncovered to the right.

In the first species of the invention, portrayed in Figs. 1 to 5, the cuts are straight lines, each of which is substantially parallel to, and substantially half-way between, the two sides of one piece of tape.

To remove the tapes in order, starting from the left, one can grasp the exposed corner **16** of the left-hand tab between the thumb and forefinger of one's left hand, and grasp the second tab (and the adjoining portions of the ends of tapes A and B) between the thumb and forefinger of one's right hand. Then bend back the first tab, as shown in Figs. 4 and 5, thus freeing the first tab from tape A. Then, still maintaining the hold of the left hand, the right thumb and finger can grasp the thus-exposed corner **17** of tape A, and peel off this piece of tape. The start of this peeling is shown in Figs. 4 and 5.

This leaves the three remaining tapes and the backing-board in the condition shown in Fig. 6. No piece of tape, except piece A, has even partially or temporarily been removed, nor even loosened, this fact being an important feature of the present invention.

To remove tape B, grasp the exposed corner **18** of the second tab, as corner **16** of the first tab was formerly grasped; and the third tab as the second tab was formerly grasped; and proceed as before.

Somewhat similarly the tapes can be removed in reverse order, by starting at the right and reversing the procedure.

Another way of starting at the left would be to grasp both corner **16** of the first tab and corner **17** of tape A with the left thumb and finger, and to grasp with the right thumb and finger the end of tape B and the mutually adjacent corners of the second and third tabs which underlie it. Then bend up the first tab. Then, still maintaining the hold of the left hand, the right thumb and finger can grasp the thus-exposed corner **19** of tape A, and peel off this piece of tape.

This leaves the three remaining tapes and the backing-board in the condition shown in Fig. 6, just as did the first-described procedure. The first-described procedure or the second-described procedure can then be used to remove the remaining tapes.

To remove a piece of tape out of order, simply grasp, with the left hand the end of the tape to the left of the desired piece, and with the right hand the end of the tape to the right of the desired piece. Then bend one down, and the other up, thus exposing a starting corner of the desired tape, and peel it off.

Various other procedures of starting and peeling-off the pieces of tape in any desired order, will readily suggest themselves.

Fig. 7 shows a second species of the present invention. In this second species curved cuts **20** in backing-board **12** take the place of the straight cuts **14** of the first species.

The procedure of starting and removal is similar, but in the second species is more readily performed starting from the left.

Fig. 8 shows a third species of the present invention. This third species combines the features of the second species with transverse scoring **21**, which may be of the type of the transverse scoring of either of the two already-mentioned Patents 2,434,545 and 2,681,732. Note that transverse scoring **21** contacts cuts **20**. This combination enables each successive tab **15** to be broken off and discarded, after it has been used.

Fig. 9 shows a fourth species of the present invention, somewhat similar to the second species, but with a somewhat different-shaped cut **22** dividing the backing-board into tabs. Still other shapes of cut could be employed, but the straight cut **14** of the first species is preferred.

In all of the species it is important, although not absolutely essential, that none of the cuts which divide the edge of the backing-board into tabs, shall extend beyond more than one of the pieces of tape. Such extending would not only render somewhat more difficult the starting of removal of a desired piece of tape, but would also render likely the premature exposing of the adhesive of an adjoining piece of tape.

Fig. 10 shows a fifth species of the present invention. It is the preferred embodiment, and (as shown) differs from the first species in that its backing-board **12** does not extend beyond the pieces of tape **11** to the right or left, but rather extends beyond the ends of the pieces of tape. It is not important to this fifth species whether the backing-board does or does not extend to the right or left, or to the bottom in the figure, but the distinguishing feature of the present variant is that the tabs **23** do extend beyond the ends of the pieces of tape.

This fifth species is designed primarily for use as identification labels for marking electrical wiring or the like. To this end, the pieces of tape are usually successively printed with a series of numbers, symbols, or (as shown) letters, each number, symbol, or letter being repeated a plurality of times on its respective piece of tape.

Removal of any desired piece of tape is very simply effected, as follows. The two tabs **23** which underlie the desired piece of tape are each grasped with the thumb and finger of one hand. Then either tab is bent down and the other is bent up, thus freeing the tape corner which overlies the bent-down tab. The thus-exposed corner is then grasped and the tape peeled-off.

It will be seen, by comparing the species of Fig. 10 with the four earlier species, that the starting of the removal of a piece of tape is facilitated by having a portion of the backing-board, at or near where the backing-board is divided into tabs, extend beyond an edge or the ends of the pieces of tape, so that the thus-extending portion can be grasped between thumb and finger. This extending can be accomplished in at least two or more ways. For example, beyond the outer edge of tape A or D, as a single tab, as in Figs. 1, 7, 8 and 9. Or, for example, beyond the ends of a plurality of pieces of tape, as a plurality of tabs, as in Fig. 10.

However, inasmuch as the tape can be readily removed without having such an extending portion, and as the omission of such extending portions produces a neater, sturdier, and more compact device, more readily stacked and unstacked, it is within the scope of the invention to omit such extending portions. Accordingly Fig. 11 shows such a device as a sixth species.

Methods of successive removal of pieces of tape of the sixth species, either in order or out of order, will readily suggest themselves by analogy to the methods suggested for the first species.

In view of the fifth and sixth species, when reference is made in the claims to an edge of the backing-board being "adjacent" to one end of the pieces of tape, this word is not intended to imply a limitation to the ends of the tape extending, or not extending, clear to the edge of the backing-board.

Fig. 12 shows alternatively two subvariants of a seventh species. This seventh species combines the features of any of the preceding species, preferably the fifth, with transverse scoring **24** or **25**, which may be of the type of the transverse scoring of either of the two already-mentioned Patents 2,434,545 and 2,681,732. Note that neither of the alternative transverse scorings contacts the cuts which divide tabs **23** from each other. This enables the user to elect whether to avail himself of the invention of said patents or the present invention, in starting the removal of pieces of tape. Note that scoring **24** is near the upper transverse edge of the backing-board, and contemplates peeling each piece of tape down from the top; whereas scoring **25** is near the lower transverse edge of the backing-board and contemplates peeling each piece of tape up from the bottom. Preferably only one

of scorings **24** and **25** will be made on each backing-board.

The adhesive sheet material of any of the seven above-described species, or of any other species within the scope of the present invention, could, if desired, be only partially divided into pieces of tape, the divisions extending inward only a short distance from the edge where the backing-board is divided into tabs. Then, if the adhesive sheet material has a grain such as surgeon's tape, or electric friction-tape, or other similar textile material, each piece of tape could be torn off of the sheet, as needed. Accordingly this expedient is within the scope of the present invention, and such partially divided sheet material is to be considered as a series of pieces of tape.

When reference is made in the claims to the "cuts" which divide the backing-board into tabs, the word "cut" is intended to include cutting clear through, scoring, perforations, or other weakenings which facilitate separating tab from tab. Nor, except where specifically recited, is there any implied limitation as to the distance which these cuts extend.

It will be readily evident from the foregoing description that the present invention affords a novel and useful backed adhesive sheet material, wherein a series of pieces of adhesive tape are easily removable from their backing-board.

Now that seven embodiments of the invention have been shown and described, and several departures therefrom have been suggested, it is to be understood that the invention is not to be limited to the specific forms or arrangements of parts herein shown and described.

The steps of the procedures for removing the pieces of tape are not to be imported into the article claims.

What is claimed is:

1. Backed adhesive sheet material, comprising: a substantially rectangular backing-board; and a series of pieces of adhesive tape removably attached to the backing-board by their adhesive, and disposed side-by-side thereon in close proximity to each other; the combination being characterized by the fact that an edge of the backing-board, which edge is adjacent to one end of the pieces of tape, is divided into tabs by cuts extending only part way across said backing-board, each of said tabs spanning widthwise a part only of each of the ends of two adjacent pieces of tape.

2. Backed adhesive sheet material according to claim 1, wherein a portion of the backing-board, where the same is divided into tabs, extends beyond the adjacent ends of the pieces of tape a sufficient distance to enable the extending portion to be grasped between thumb and finger.

3. Backed adhesive sheet material according to claim 1, wherein there is a scoring extending transversely across the backing-board beyond the inner ends of the cuts, to permit selective use of the tabs or the scoring to start the removal of the pieces of tape from the backing-board.



4. Backed adhesive sheet material according to claim 1, wherein a portion of the backing-board, where the same is divided into tabs, extends beyond the pieces of tape a sufficient distance to enable the extending portion to be grasped between thumb and finger.

5. Backed adhesive sheet material according to claim 4, wherein the extending portion is at the extreme side of one of the extreme pieces of tape.

6. Backed adhesive sheet material according to claim 1, wherein each cut which divides an edge of the backing-board into tabs is a substantially straight line lying substantially parallel to the two sides of the adjacent piece of tape.

7. Backed adhesive sheet material according to claim 6, wherein each cut which divides an edge of the backing-board into tabs lies substantially midway between the two sides of the adjacent piece of tape.

8. Backed adhesive sheet material according to claim 1, wherein there is a scoring extending transversely across the backing-board.

9. Backed adhesive sheet material according to claim 8, wherein the scoring extends across the cuts adjacent their inner ends, to permit breaking-off successive tabs along the line of such scoring, after these tabs have served their purpose.

10. Backed adhesive sheet material, comprising: a substantially rectangular backing-board; and adhesive sheet material removably attached to the backing-board by its adhesive, said sheet being at least partially divided into pieces of tape, by parallel cuts extending at least part way across said sheet; the combination being characterized by the fact that the backing-board, along the edge thereof adjacent the dividing cuts of the sheet, is divided into tabs by cuts extending only part way across said board, each of said tabs spanning widthwise a part only of each of two adjacent divided portions of the sheet.

11. Backed adhesive sheet material according to claim 10, wherein the sheet material has a grain; and wherein the cuts in the sheet material lie with the grain, and extend only part way across the sheet material.

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