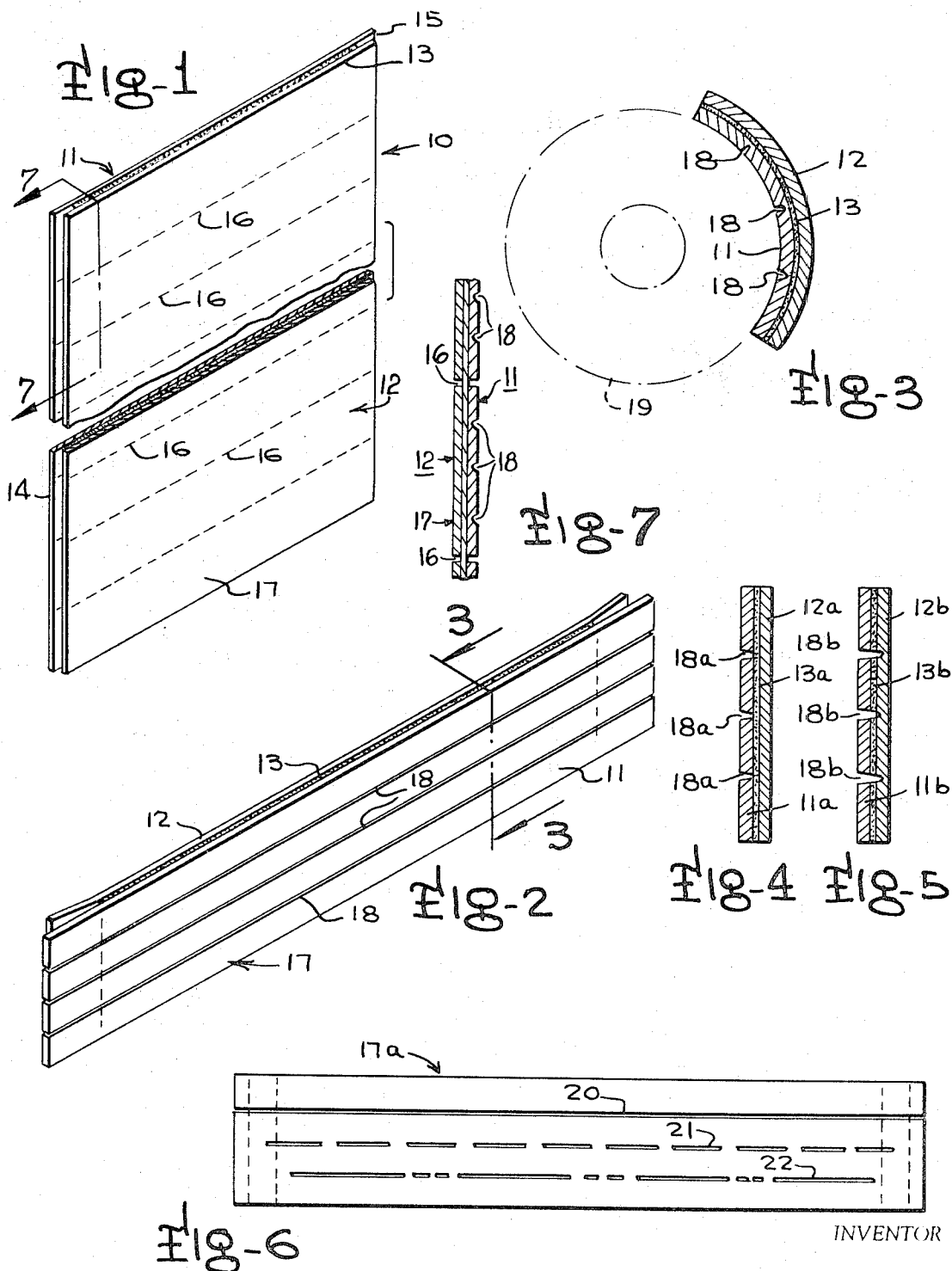


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SHEET CONSTRUCTION HAVING WEAKENED LINES FOR
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SHEET CONSTRUCTION HAVING WEAKENED LINES FOR BENDING AND SEVERING

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5 Claims

ABSTRACT OF THE DISCLOSURE

A sheet construction suitable for insertion into a mechanism having a curved platen comprising at least one ply of material having a plurality of transversely disposed weakened lines thereon which permits the sheet to bend and conform to the curvature of the platen when it is inserted longitudinally into the mechanism. In a preferred embodiment, two contiguous plies of material bonded together except at the side margins have a set of transversely extending, longitudinally spaced perforated lines through both plies and a set of transversely extending, longitudinally spaced creased or kerfed bending lines between the perforated lines in the back ply only. The sheet may be severed along the perforated lines to form individual index strips.

BACKGROUND OF THE INVENTION

This invention relates to a sheet construction and more particularly to a sheet of material suitable for insertion into a mechanism such as a conventional typewriter or a printer for a data processing machine, and the like, having a curved platen adapted to support the sheet and provide a backing for either typing or printing characters on the front surface of the sheet construction.

In the prior art there are various types of printing machines ranging from conventional typewriters to printers for complex data processing systems, which employ cylindrical platens. Most of such prior art machines are adapted to accommodate either single sheets, or continuous webs or tapes of material which are very flexible and thin in construction. Such sheets and tapes can be accommodated in such machines, in that they are adapted to bend easily to conform to the curvature of the conventional curved platen employed by the machines.

Often, however, it has been found desirable to be able to utilize conventional type printing machines having cylindrical platens, for printing on single sheets, or continuous webs or tapes of material having a more rigid construction in comparison to the highly flexible material normally processed through such printing machines. Such a capability has been found not to be feasible with most conventional printing machines. This invention provides a sheet construction of greater rigidity relative to conventional sheets, or continuous webs or tapes utilized in conventional printing machines having cylindrical platens, which is adapted to conform to the curvature of the platens of such machines, thereby permitting such sheet construction to be processed therethrough.

OBJECTS OF THE INVENTION

The principal object of the present invention is to provide a novel sheet construction.

Another object of the present invention is to provide a novel sheet construction which is adapted to be processed through conventional printing machines.

A further object of the present invention is to provide a novel sheet construction which is adapted to be processed through conventional printing machines utilizing curved platens.

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A still further object of the present invention is to provide a novel sheet construction having a greater rigidity relative to comparable sheet constructions, which is adapted to be processed through conventional printing machines.

A more specific object of the present invention is to provide a novel sheet construction having a rigidity greater than comparable sheet constructions, which is adapted to be processed through conventional printing machines provided with cylindrical platens.

Another object of the present invention is to provide a novel sheet construction which is relatively rigid and which is suitable for insertion into a mechanism having a curved platen wherein the sheet is adapted to conform to the curvature of the platen.

A further object of the present invention is to provide a novel sheet construction which is simple in structure and inexpensive to manufacture.

Other objects and advantages of the invention will become more apparent to those persons skilled in the art, from the following description of a practical embodiment of the invention, when taken in conjunction with the drawing which accompanies and forms a part of this specification.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of an embodiment of the invention, having an intermediate portion thereof broken away.

FIG. 2 is an enlarged perspective rear view of a segment of the embodiment illustrated in FIG. 1.

FIG. 3 is an enlarged cross-sectional view taken along line 3—3 in FIG. 2, illustrating the segment conforming to the curvature of a cylindrical platen.

FIG. 4 is an enlarged, vertical cross-sectional view similar to the cross-sectional view shown in FIG. 3, illustrating a modification of the invention.

FIG. 5 is an enlarged, vertical cross-sectional view similar to the cross-sectional view shown in FIG. 4, illustrating another modification of the invention.

FIG. 6 is an elevational rear view of a segment of the embodiment illustrated in FIG. 1, and similar to the segment illustrated in FIG. 2, further illustrating various modifications of the invention.

FIG. 7 is an enlarged cross-sectional view taken along lines 7—7 in FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Briefly described, the present invention relates to a sheet construction suitable for insertion into and through a mechanism having a curved platen generally comprising at least one ply of material, having a plurality of transversely extending, longitudinally spaced weakened lines thereon, whereby when the sheet is inserted into and through the mechanism and advanced in a longitudinal direction relative to the sheet, the sheet will be caused to bend and conform to the curvature of the platen.

Referring to the drawing, FIGS. 1 through 3 illustrate the preferred embodiment of the invention. FIG. 1 illustrates a sheet construction 10 including a first ply of material 11 and a second ply of material 12 bonded to the first ply by means of an adhesive layer 13. The plies 11 and 12 are rectangular and substantially contiguous. The transverse dimension of the ply 12 is slightly less than the transverse dimension of the first ply 11. The two plies are bonded together by the adhesive layer, with the exception of the longitudinal margins 14 and 15 which provide the sheet construction with bifurcated side edges. The sheet construction also is provided with a plurality of transversely extending, longitudinally spaced perfor-

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ated lines 16 which permits the sheet construction as illustrated in FIG. 1, to be severed transversely into individual strips 17 of variable width having bifurcated end portions.

The sheet construction illustrated in FIG. 1 is adapted to be inserted in a typewriter or other type of printing machine, for the purpose of either typing or printing information on the front surface. The sheet construction then can be severed along any of the perforated lines 16 and filed as desired. The bifurcated end portions of one or more of the strip segments 17 permit the segments to be secured to suitable backing members having a pair of longitudinally disposed inwardly facing channel members by tucking the lower flaps of the bifurcated ends into the channel members while the upper flaps rest on the upper surface of the channel members.

To facilitate the bending of the sheet construction 10 when it is inserted in a typewriter or other type of printing machine having a cylindrical platen, the ply 11 is provided with a plurality of transversely extending, longitudinally spaced kerfing lines 18, as best illustrated in FIG. 2. These kerfing lines permit the sheet construction 10 having a greater rigidity than conventional sheet constructions, or continuous webs or tapes normally used in typewriter or other types of printing machines having a cylindrical platen, to be used in such machines. FIG. 3 illustrates the strip 17 shown in FIG. 2 placed on a cylindrical platen 19 of a typewriter or other type of printing machine. It will be appreciated that the kerfing lines 18 permit the comparatively rigid sheet construction 10 to bend and conform to the curvature of the platen 19.

The ply 11 can be provided with any suitable form of weakened lines, including both kerfed and creased lines. The depth of the lines of depression also can vary, depending on the particular rigidity of the sheet material. The depth can extend into the first ply 11 short of the adhesive layer 13, as illustrated in FIG. 3, can extend to the adhesive layer, as illustrated in FIG. 4, or can extend beyond the adhesive layer into the second ply, as illustrated in FIG. 5. Referring to FIG. 6, illustrating an individual strip segment 17a of the sheet construction 10, the lines of depression can extend across the entire width of the ply 11, as shown by the line 20, or can terminate short of the side edges, as illustrated by lines 21 and 22. Furthermore, the lines can be continuous, as illustrated by line 20 or intermittent, as illustrated by lines 21 and 22 in FIG. 6.

It will be appreciated that the kerfed lines formed on the first ply 11 permit the sheet construction 10 to be bent to conform to the curvature of the platen. After the sheet construction has been removed from the typewriter or other type of printing machine, the unweakened ply 12 reinforced by the weakened ply 11 will render the necessary rigidity required to provide a rigid sheet construction and rigid strip segments, suitable for mounting on backing members for filing or other purposes. The plies of the sheet construction can be constructed of any suitable material, including paper, cardboard and other synthetic materials.

From the foregoing detailed description it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof as limited solely by the appended claims.

What is claimed is:

1. A sheet construction suitable for processing through a mechanism having a curved platen, and adaptable to be divided into a plurality of strips of variable width which may be secured to a backing member having a pair of longitudinally disposed, inwardly facing channel portions, comprising two contiguous plies of material

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bonded together with the exception of longitudinal side margins thereof, both of said plies having a first set of transversely extending, longitudinally spaced weakened lines, said first set of lines being sufficiently weakened to permit said sheet to be severed transversely into strips of variable widths having end tabs which may be tucked into the inwardly facing channels of said backing member to secure the strips on said backing member, and only one ply of said sheet having a second set of transversely extending, longitudinally spaced lines disposed between said first set of lines, said second set of lines being sufficiently weakened only to permit said sheet to bend whereby when said sheet is inserted into said mechanism in a longitudinal direction relative to said sheet, said sheet will be caused to bend and conform to the curvature of said platen.

2. A sheet construction suitable for processing through a mechanism having a curved platen, and adaptable to be divided into a plurality of strips of variable width which may be secured to a backing member having a pair of longitudinally disposed, inwardly facing channel portions according to claim 1, wherein said second set of weakened lines terminate inwardly from side edges of said ply.

3. A sheet construction suitable for processing through a mechanism having a curved platen, and adaptable to be divided into a plurality of strips of variable width which may be secured to a backing member having a pair of longitudinally disposed, inwardly facing channel portions according to claim 1, wherein said first set of lines are perforated and said second set of lines are kerfed.

4. A sheet construction suitable for processing through a mechanism having a curved platen, and adaptable to be divided into a plurality of strips of variable width which may be secured to a backing member having a pair of longitudinally disposed, inwardly facing channel portions according to claim 1, wherein said first set of lines are perforated and said second set of lines are creased.

5. A sheet construction suitable for processing through a mechanism having a curved platen, and adaptable to be divided into a plurality of strips of variable width which may be secured to a backing member having a pair of longitudinally disposed, inwardly facing channel portions according to claim 1, wherein said first set of lines are perforated, and said second set of lines are kerfed and terminate inwardly from side edges of said ply.

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