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Description

This invention has reference to continuous stationery webs and has particular reference to what is sometimes known as continuous CPO (Computer Print Out) stationery. Such continuous stationery webs are particularly adapted to receive random printed information from computer print out equipment.

Continuous stationery has been marketed for at least 50 years. The continuous stationery consists of at least one web of paper divided by lines of cross perforations into form lengths and having margins with feed holes spaced apart by a distance of one half of an inch between the holes. The continuous stationery webs are usually folded about the lines of cross perforations into packs to be fed into a typewriter or a print unit of a computer or other printing device. Mechanisms for feeding such continuous stationery have been known for many years and are described for example in British Patent Specification No 468284. Data is applied to the continuous stationery in random fashion (compared to applying data to a form embodying a letterhead with names, addresses and other information printed on each form or form length).

Typewriters have been known for many decades and have included well known devices for feeding the continuous stationery (or other forms) through the typewriter at increments of one sixth of an inch (4.23 millimetres) or of one eighth of an inch (3.17 millimetres).

Over many years difficulty has been experienced in interpreting the information and data printed on continuous stationery and with this in mind lines and blocks transverse to the direction of feed of the continuous stationery have been provided. It has been the practice to print two such sets of continuous stationery with lines or blocks spaced apart by increments of one sixth of an inch (4.23 millimetres) on one set and spaced apart by increments of one eighth of an inch (3.17 millimetres) on the other set. If the typist required to type at a spacing of one sixth of an inch one set of continuous stationery was selected and loaded into the typewriter (or print unit) and if one eighth of an inch was required the other set of continuous stationery was selected and loaded into the typewriter (or print unit). Thus a considerable time was required to select and load the continuous stationery (and even unload a different set of continuous stationery) and also entailed the stocking of two sets of continuous stationery for each typewriter or print unit.

Sales of continuous stationery throughout the world have been very large. It is estimated that annual sales of continuous stationery throughout

the world amount to about 3 billion pounds.

In particular British Patent Specification no 1447965 refers to a continuous stationery web with marginal feed holes and bars printed in half tone of two different colours (preferably of green and red-dish yellow tones) alternately and transversely of the continuous stationery spaced apart by unprinted parts of the continuous stationery of equal depth to the depth of the printed bars.

British Specification No 1507467 refers to a continuous stationery web having printed spaced blocks extending transversely of the web with alternate sets of blocks printed with greater intensity than the blocks spaced there between.

In the two before mentioned specifications the printed blocks (or bars) have depths of one-sixth or one-eighth of an inch spaced apart by distances depending upon the spacing of the printing to be applied to the continuous stationery web so that if the printing is to be applied to respective blocks the continuous stationery has to be changed each time the spacing of the printing on the continuous stationery for example from one-sixth of an inch to one-eighth of an inch is changed.

British Specification No 1501628 describes a continuous stationery web with sets of two transverse blocks formed of diagonal lines and sets of lines spaced apart and extending transversely across and spaced longitudinally of the continuous stationery.

Also French Specification No 2398353 describes a printed sheet bearing screened rulings having a depth of one-sixth of an inch spaced apart by a distance of two-sixths of an inch non-screened.

Swiss Specification No 552477 describes a tabulating paper sheet having a headed area part to receive comments and a body part divided by a plurality of groups of line strokes including some selected lines stronger than the other lines arranged at regular intervals. The body part also includes column figure markings in the margins.

British Specification No 1594771 describes forms for use with computers with printed bands of coloured markings. The printed bands are between 3.17 and 3.18 millimetres in height spaced apart by imprinted bands also of about 3.17 millimetres in height and printed in one colour with alternate bands printed in different patterns.

It is an object of the present invention to provide improved continuous stationery.

It is a further object of the present invention to provide continuous stationery with spaced transverse blocks or bars of half tone printing so arranged that printed matter applied to the continuous stationery is printed on such blocks or bars (or on intermediate unprinted paper) whether the spacing of the mechanisms for feeding the continuous

stationery feeds the stationery at one-sixth of an inch (4.23 millimetres) increments or at one-eighth of an inch (3.17 millimetres) increments.

According to the present invention a continuous stationery web adapted to be typed upon or printed with characters by a print unit of a computer or the like, comprises a plurality of printed blocks extending transversely across the continuous stationery in a direction perpendicular to the line of feed of the continuous stationery and characterised in that the printed blocks have a depth of one eighth of an inch (3.17 millimetres) and that the blocks are separated by an unprinted portion of a depth of three eighths of an inch (9.525 millimetres) and are spaced along the line of feed of the continuous stationery at a distance apart of one half of an inch (12.7 millimetres).

The invention will now be described, by way of example only, with reference to the accompanying drawings wherein:

Fig 1 is a view of the continuous stationery printed with data spaced at a depth of one sixth of an inch and

Fig 2 is a view of the continuous stationery printed with data spaced at a depth of one eighth of an inch and

Figs 3 and 4 illustrate views of modified forms of continuous stationery.

The business forms continuous stationery generally designated 1 comprises a single record web. The record web 2 is provided with groups 4 of spaced blocks each of a depth of one eighth of an inch (3.17 millimetres) and extending transversely of the webs, the blocks of one group being spaced from blocks of the adjacent group of blocks by a distance of three eighths of an inch (9.5 millimetres) between adjacent blocks. Thus there is one block of the depth of one eighth of an inch (3.17 millimetres) on every half inch depth of form (12.7 millimetres) and the blocks are spaced apart along the line of feed of the continuous stationery at a distance of half an inch (12.7 millimetres). These blocks extend from top to bottom of the web.

Each of the blocks 4 is printed in half tone screen printing formed of small ink spots arranged closely adjacent to one another. The blocks 4 provide positive segregation of one line of information recorded from the next line of information recorded as the eye passes down and across the lines of recorded information and assists the eye to follow the lines of recorded information across the web and thereby reduces ocular digression and consequent tendency of inadvertent omission of the information.

The blocks 4 are printed on the record webs 2 in brown ink (conveniently pantone No. 471). It has been found that random printed information printed

on record webs in brown ink is easier to read, particularly under conditions of fluorescent lighting, than if the record webs were printed in other colours. Also photocopies of records in brown ink provide a level of background to the recorded information similar to the original. However, it is also within the scope of this invention that the blocks are printed in blue, green or grey ink. Thus for example the blocks may be printed in blue 285, green 354, 368 or 376, grey 415, 417 or 421, orange 123, pantone yellow U or warm red U colours.

It will be appreciated that business forms stationery according to the invention may comprise a plurality of record webs with intermediate transfer material either in the form of interleaved carbon paper webs or self copy transfer material coated on the webs (such for example as sold under the Trade Mark MCP). The webs have the blocks 4 arranged as shown in the drawings.

Because the blocks 4 are spaced apart a distance of half an inch (12.7 millimetres) when typing or other printing is to be applied to the stationery at a spacing of one sixth of an inch as shown in Fig. 1 the first line of printing is applied to a block and the next two successive lines of typing are applied between the blocks and the fourth line of typing is printed exactly on the next succeeding block 4. Similarly further lines of typing are applied accurately on a block or between blocks 4 with no typing appearing partly on and partly off a block. Similarly if typing is applied to the stationery at a spacing of one eighth of an inch as shown in Fig. 2 the first line of printing is applied to the first block 4 the second, third and fourth lines of printing are applied between the blocks 4 and the fifth line of typing is printed exactly on the next succeeding block. The continuous stationery bears consecutive numbers 6 referring to a line spacing of one eighth of an inch on the right hand side of the continuous stationery web and also bears consecutive numbers 7 referring to a line spacing of one sixth of an inch on the left hand side of the continuous stationery web.

There is also included a line of consecutive numbers 8 referring to the spacing of the blocks 4 down the web. The consecutive numbers refer to a single length of the continuous stationery (between cross perforations about which the web is folded into a pack).

Across the top and bottom of each single length of this continuous stationery web are included a series of lines of transverse numbering 9 to indicate the positions of longitudinal columns of information to be entered on the continuous stationery. This numbering 9 of the columns is helpful to the programmer in working out the format of the information to be recorded on the continuous sta-

tionery.

Instead of printing the blocks 4 of half tone small ink spots the blocks could comprise blocks 10 of closely spaced diagonal stripes as shown in Fig. 3. As shown in Fig. 3 the blocks 10 of the closely spaced diagonal stripes slope downwardly from right to left and are spaced at intervals as the blocks shown in Figs. 1 and 2.

The blocks may be printed in several other kinds of patterns and examples of such patterns are shown in Fig. 4. Thus the pattern 11 comprises a plurality of parallel lines of chevron shape positioned horizontally to form the block. Also as shown at 12a, 12b, the blocks may comprise a series of helically arranged lines parallel to each other with a series of lines running between adjacent turns of the helical lines. As shown at 12a the helical lines are drawn in a clockwise direction as viewed from the left hand side of Fig. 4. As shown at 12b the helical lines are drawn in an anti clockwise direction as viewed from the left hand side of Fig. 4. It is intended that blocks having helical lines arranged in the two pattern directions are arranged alternately longitudinally of the continuous stationery.

As shown at 13 in Fig. 4 the pattern is similar to that shown in Fig. 3 except that the closely spaced diagonal stripes slope downwardly from left to right instead of from right to left.

As shown at 14 the blocks are made up of a composite pattern of three horizontally of variable width disposed lines with cross lines to give the appearance of a line of spaced letters N in one line and a line of spaced figures each being a mirrored image of the letter N. Other patterns of blocks may be employed as convenient or desirable.

half tone screen printing formed of small ink spots arranged closely adjacent to one another.

- 5 3. A continuous stationery web as claimed in claim 1 characterised in that all the blocks (4) are of the same pattern printed in half screen printing formed of closely spaced diagonal strips.
- 10 4. A continuous stationery web as claimed in claim 2 or 3 characterised in that the continuous stationery bears consecutive numbers (6) related to the spacing of one eighth of an inch (3.17 millimetres) on one side of the continuous stationery and consecutive numbers (7) related to the spacing of one sixth of an inch (4.23 millimetres) on the other side of the continuous stationery.
- 15 5. A continuous stationery web as claimed in any one of the preceding claims characterised in that the continuous stationery bears consecutive numbers related to the one half of an inch (12.7 millimetres) spacing of the blocks on the continuous stationery.
- 20 6. A continuous stationery web as claimed in any one of the preceding claims characterised in that the continuous stationery bears consecutive numbers of transverse numbering (9) to indicate the positions of longitudinal columns of information entered on the continuous stationery.
- 25 30 35

Revendications

Claims

1. A continuous stationery web adapted to be typed upon or printed with characters by a print unit of a computer or the like comprising a plurality of printed blocks (4) extending transversely across the continuous stationery in a direction perpendicular to the line of feed of the continuous stationery and characterised in that the printed blocks have a depth of one eighth of an inch (3.17 millimetres) and that the blocks are separated by an unprinted portion of a depth of three eighths of an inch (9.525 millimetres) and are spaced along the line of feed of the continuous stationery at a distance apart of one half of an inch (12.7 millimetres).
2. A continuous stationery web as claimed in claim 1 characterised in that all the printed blocks (4) are of the same pattern printed in

- 40 1. Bande de papier continu adaptée à recevoir des caractères dactylographiés ou imprimés par une imprimante d'un ordinateur, ou analogue, comprenant plusieurs blocs imprimés (4) s'étendant transversalement au papier continu dans une direction perpendiculaire au sens d'avance du papier, et caractérisée en ce que les blocs imprimés ont une hauteur de 1/8 de pouce (3, 17 mm), et en ce que les blocs sont séparés par une partie non imprimée d'une hauteur de 3/8 de pouce (9,525 mm) et sont espacés le long de la ligne de distribution du papier continu d'une distance de 1/2 pouce (12,7 mm).
- 45 50 55 2. Bande de papier continu suivant la revendication 1, caractérisée en ce que tous les blocs imprimés (4) ont le même dessin imprimé en demi-teinte, en sérigraphie, formé de petits points d'encre disposés étroitement adjacents

les uns aux autres.

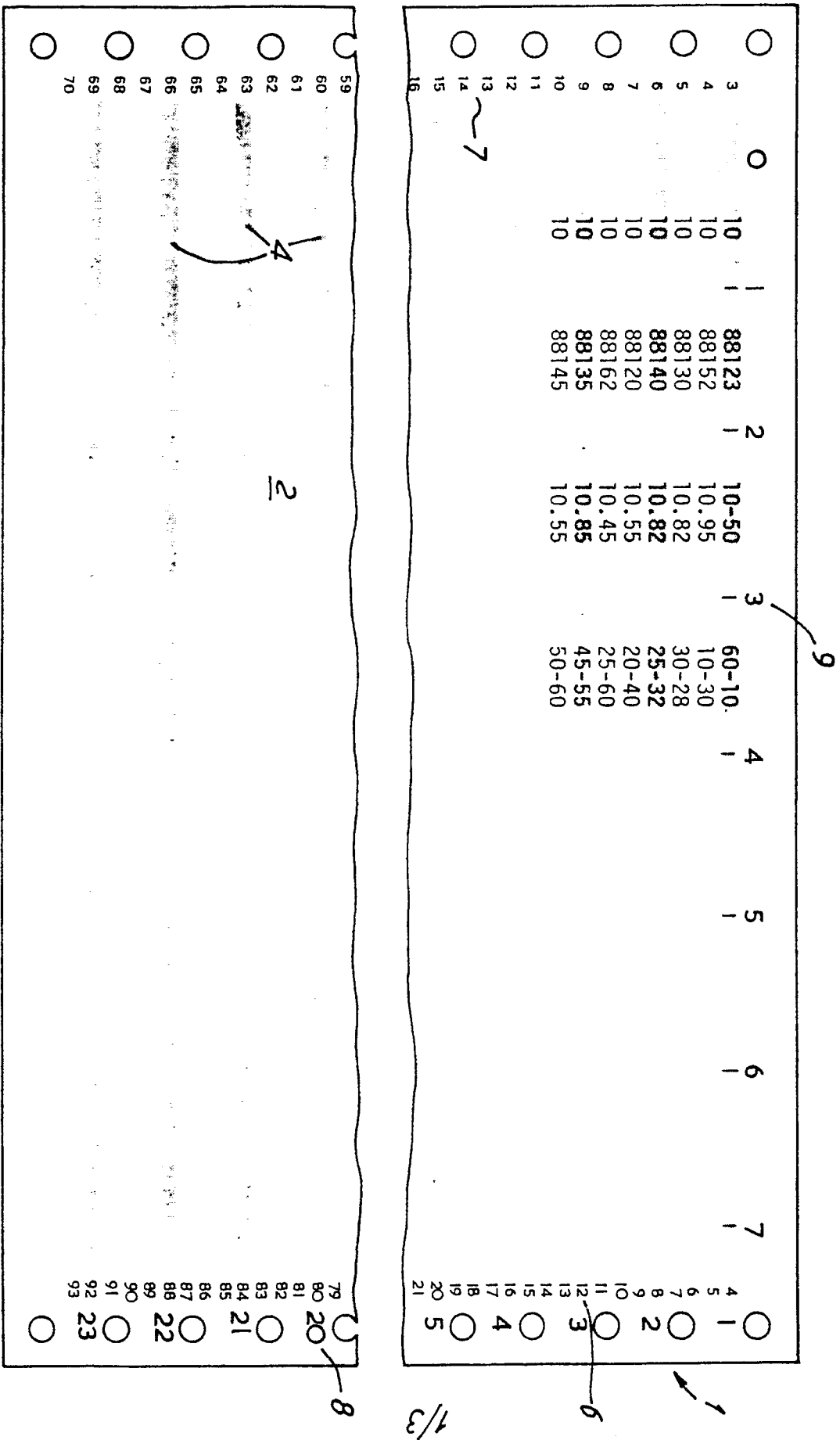
3. Bande de papier continu suivant la revendication 1, caractérisée en ce que tous les blocs (4) présentent le même dessin imprimé en sérigraphie, en demi-teinte, formé de bandes obliques étroitement rapprochées.
4. Bande de papier continu suivant la revendication 2 ou 3, caractérisée en ce qu'elle porte des chiffres consécutifs (6) concernant l'interligne de 1/8 de pouce (3,17 mm) sur un côté du papier, et des chiffres consécutifs (7) concernant l'interligne de 1/6 de pouce (4,23 mm) sur l'autre côté du papier.
5. Bande de papier continu suivant l'une quelconque des revendications précédentes, caractérisée en ce que le papier continu porte des chiffres consécutifs concernant l'interligne de 1/2 de pouce (12,7 mm) des blocs sur le papier.
6. Bande de papier continu suivant l'une quelconque des revendications précédentes, caractérisée en ce qu'elle porte une numérotation transversale de chiffres consécutifs (9) pour indiquer les positions des colonnes longitudinales d'informations appliquées sur le papier.

von gleichem Muster sind, das im Halbton-Rasterdruck aus eng beabstandeten Diagonalstreifen gedruckt ist.

4. Endlos-Schreibpapier-Bahn nach Anspruch 2 oder 3, dadurch gekennzeichnet, daß das Endlos-Schreibpapier fortlaufende Zahlen (6), die sich auf den Abstand von einem Achtelzoll (3,17 Millimeter) beziehen, auf der einen Seite des Endlos-Schreibpapiers und fortlaufende Zahlen (7), die sich auf den Abstand von einem Sechstelzoll (4,23 Millimeter) beziehen, auf der anderen Seite des Endlos-Schreibpapiers aufweist.
5. Endlos-Schreibpapier-Bahn nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das Endlos-Schreibpapier fortlaufende Zahlen aufweist, die sich auf den Halb Zoll Abstand (12,7 Millimeter) der Blöcke auf dem Endlos-Schreibpapier beziehen.
6. Endlos-Schreibpapier-Bahn nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das Endlos-Schreibpapier fortlaufende Zahlen einer Quernummerierung (9) aufweist, welche die Positionen von in das Endlos-Schreibpapier eingetragenen längsgerichteten Informationsspalten anzeigen.

Ansprüche

1. Endlos-Schreibpapier-Bahn, die mit Schreibmaschinen-Schrift oder mit Zeichen durch eine Druckeinheit eines Rechners o.dgl. bedruckbar ist, mit einer Vielzahl gedruckter Blöcke (4), die sich quer zum Endlos-Schreibpapier rechtwinklig zur Vorschublinie des Endlos-Schreibpapiers erstrecken, dadurch gekennzeichnet, daß die gedruckten Blöcke eine Höhe von einem Achtelzoll (3,17 Millimeter) haben und durch einen druckfreien Abschnitt mit einer Höhe von Dreiachtelzoll (9,525 Millimeter) getrennt sind und entlang der Vorschublinie des Endlos-Schreibpapiers mit einem Zwischenabstand von einem halben Zoll (12,7 Millimeter) angeordnet sind.
2. Endlos-Schreibpapier-Bahn nach Anspruch 1, dadurch gekennzeichnet, daß alle gedruckten Blöcke (4) von gleichem Muster sind, das im Halbton-Rasterdruck aus kleinen, eng beieinander angeordneten Druckfarbenstellen gedruckt ist.
3. Endlos-Schreibpapier-Bahn nach Anspruch 1, dadurch gekennzeichnet, daß alle Blöcke (4)



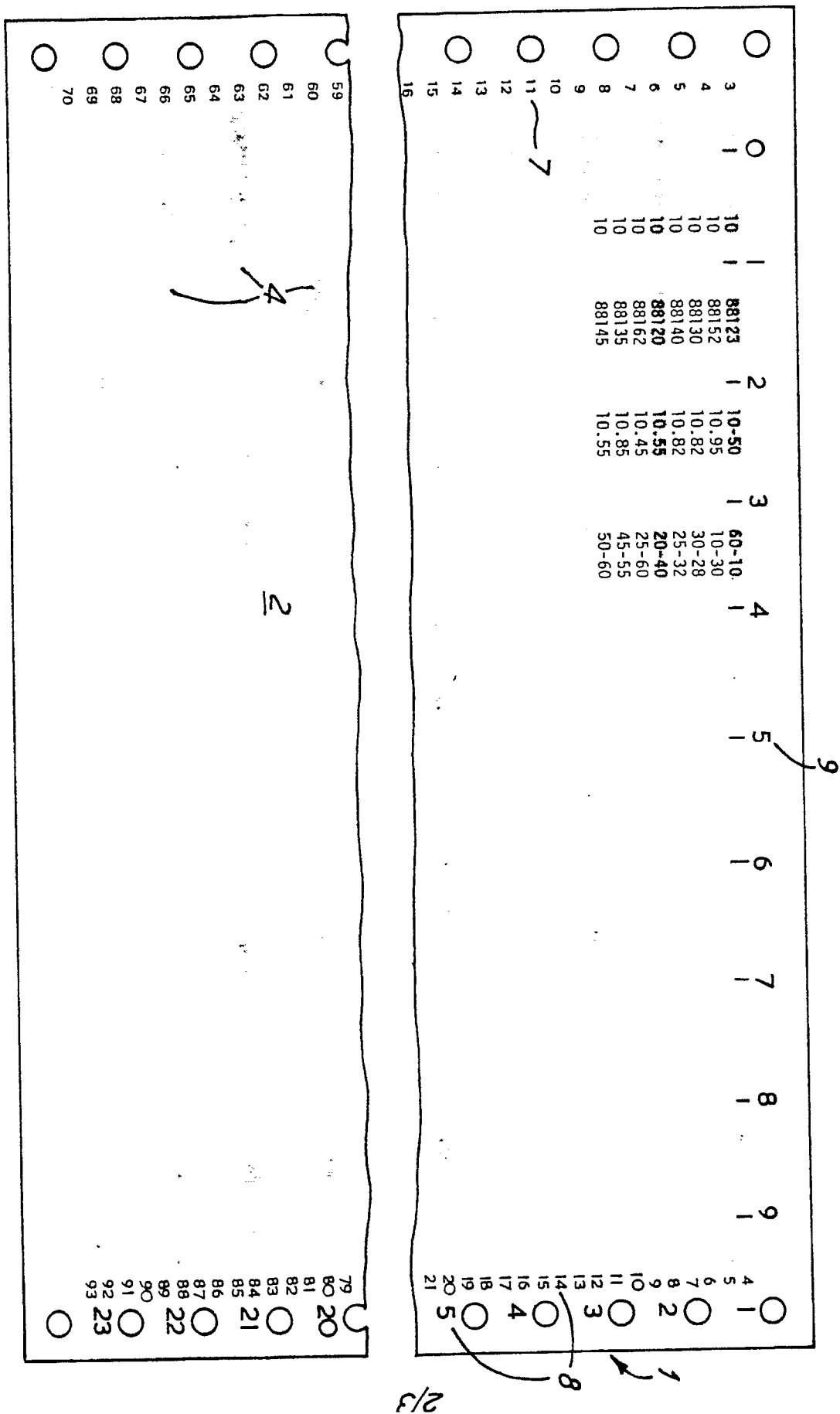


FIG. 2

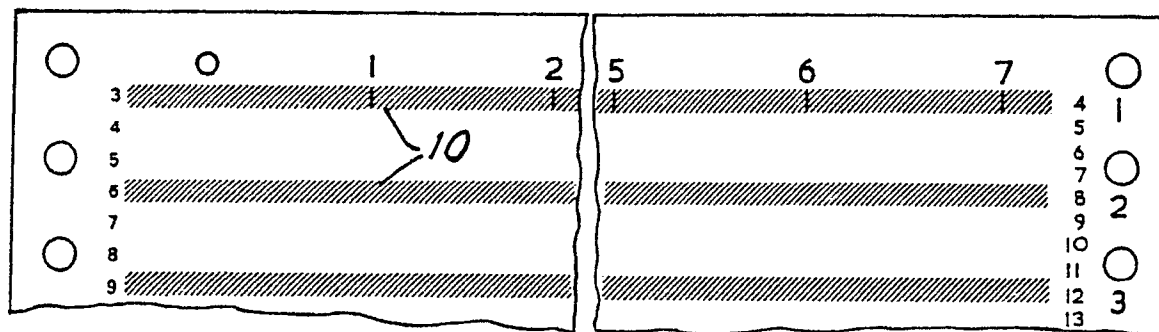


FIG. 3

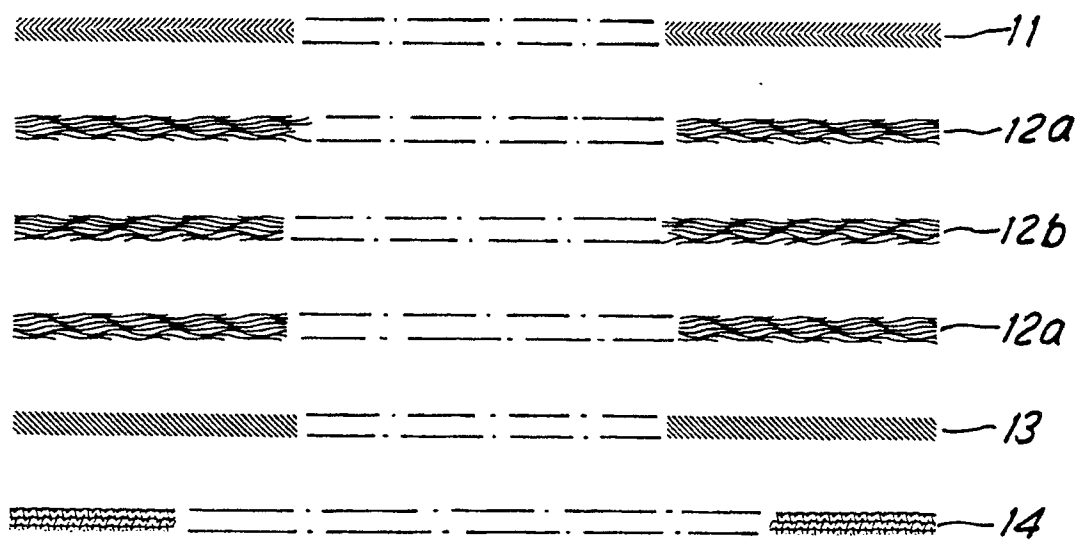


FIG. 4