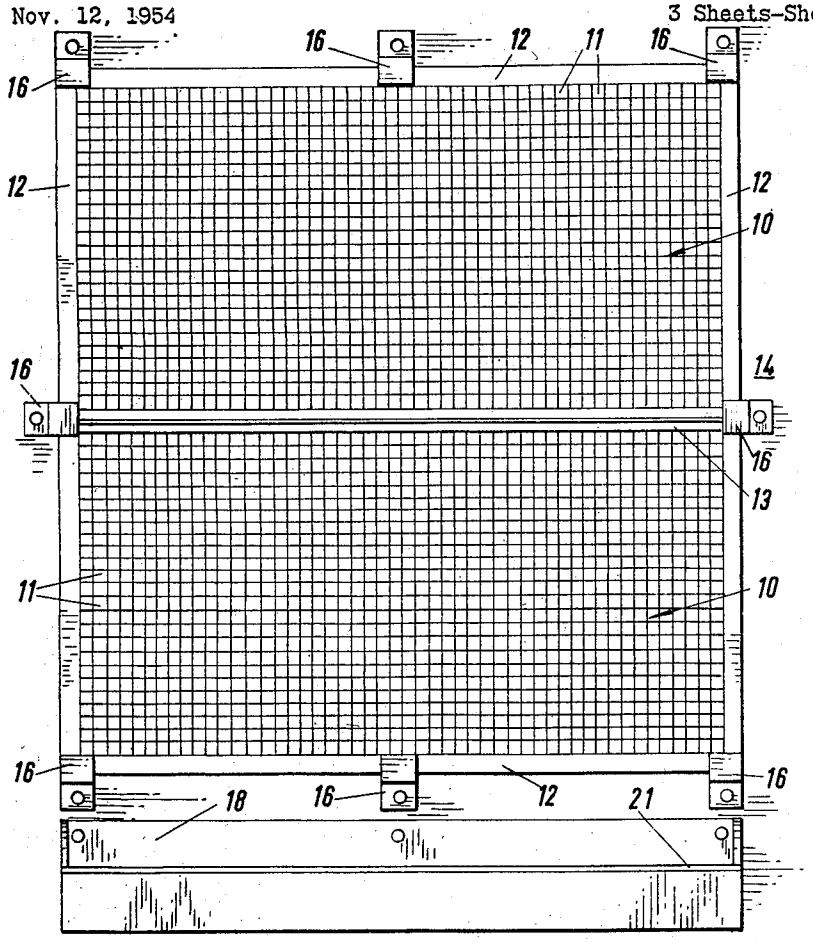
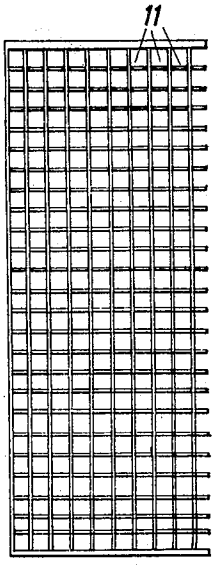
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PEG CHARTS

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-FIG. 1.-



-FIG. 5.-

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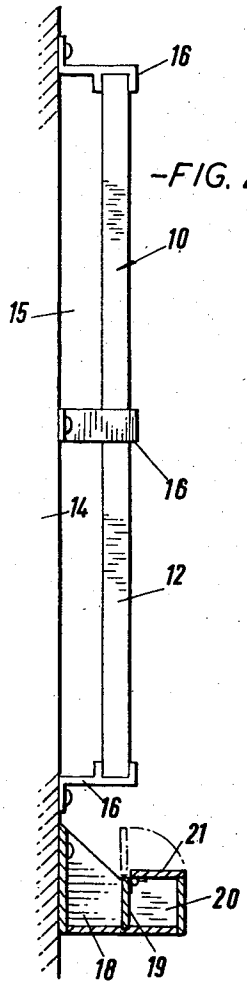
By

Attorney

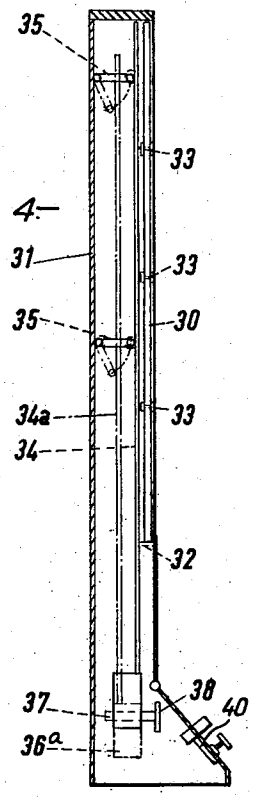
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-FIG. 2.-



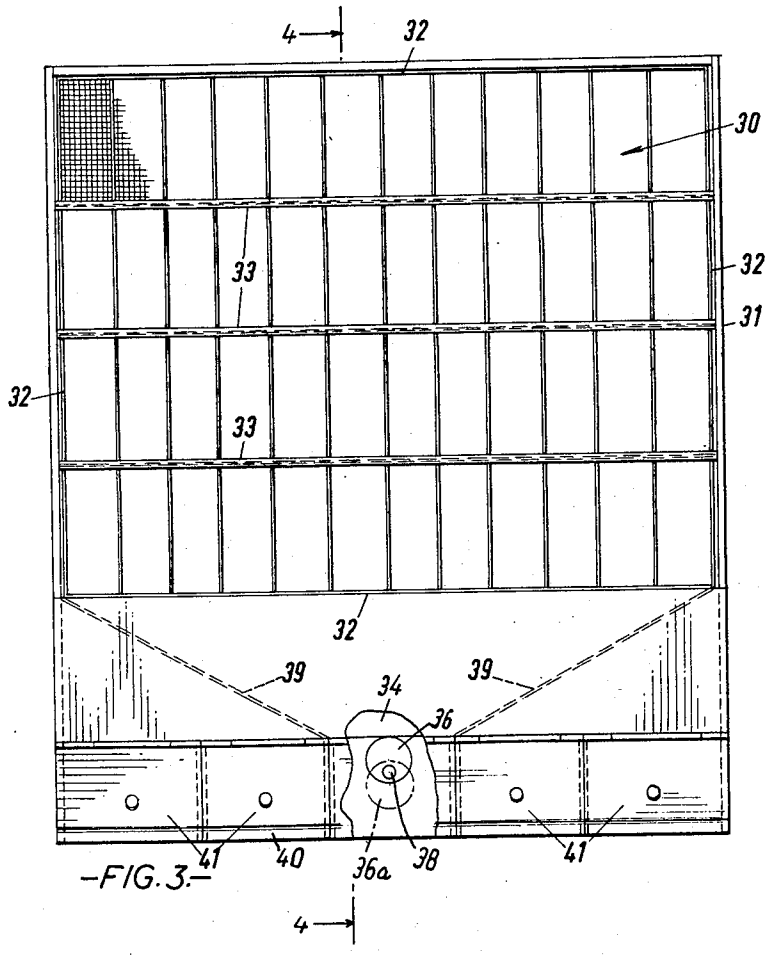
-FIG. 4.-

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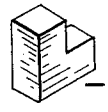
-FIG. 3.-



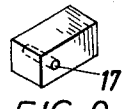
-FIG. 6.-



-FIG. 7.-



-FIG. 8.-



-FIG. 9.-

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United States Patent Office 2,902,776 Patented Sept. 8, 1959

2,902,776

PEG CHARTS

Ernest Matthias Butler, Didsbury, Manchester, England

Application November 12, 1954, Serial No. 468,509

6 Claims. (Cl. 35—27)

This invention relates to peg charts, that is to say, devices which consist essentially of a board or panel having a plurality of rows of holes or recesses, each adapted to receive an indicator usually in the form of a peg whereby an indicator chart may be built up as required, hence the name peg chart.

Such devices have known limitations and disadvantages, for example each peg, by its colour, shape can only provide one indication, according to a code, and the same limitation applies to pegs which bear a numeral, letter or written word. Such pegs also have relatively thin stems, like match-sticks and as they stand out from the surface of the board they are liable to fall out or to be knocked out accidentally, or if more firmly inserted they may become bent or have their ends broken off in a hole.

The object of the present invention is to provide a peg chart having an improved construction and arrangement of parts in which the aforesaid limitations or disadvantages are eliminated or substantially reduced.

According to the present invention a peg chart comprises a board or panel having a plurality of rows of through-holes, each adapted to receive a peg of uniform cross section throughout its length, wherein the board or panel is of such thickness as to retain the pegs when inserted into the through-holes so that their ends lie flush with the surface of the board.

Such a board may advantageously be mounted, for example, upon a wall, there is a space behind it, whereby the pegs may be removed by pushing them right through the holes, and in this connection movable stop means may conveniently be provided behind the panel normally defining possible depth of insertion so that the outer ends of the pegs are substantially flush with the surface of the panel, said stop means being movable to permit pegs to be pushed through by the insertion of another peg or other suitable means.

The peg chart aforesaid may be further characterised in that the holes in the board are of regular polygonal cross section, or further characterised in that the pegs are cubes.

The invention will be described further, by way of example with reference to the acompanying drawings in which:

Fig. 1 is a front view of one form of peg chart according to the invention,

Fig. 2 is a side view corresponding to Fig. 1,

Fig. 3 is a front view partially broken away for clarity of a second form of peg chart in accordance with the invention,

Fig. 4 is a section along line 4—4 of Fig. 3 with some parts eliminated,

Fig. 5 is a front elevation of a section from which the peg charts may be constructed,

Figs. 6, 7, 8 and 9 are perspective views of various kinds of pegs which may be used with the charts.

Referring to Figs. 1 and 2, the peg chart here illustrated consists of a panel or board **10** formed with horizontal and vertical rows of square sectioned through-holes **11**. In the example shown there are fifty vertical rows and fifty horizontal rows of through-holes **11**, and the panel is substantially square, but it will be obvious that the panels can be made with any desired number of holes per row according to a user's requirements.

The panel **10** is made from a number of sections which are illustrated in Fig. 5, and which may conveniently be moulded from a thermoplastic material. Referring to Fig. 1, frame channels **12** and a transverse H-sectioned member **13** serve to receive the said sections in abutting relationship, there being ten of the sections above the transverse member **13**, and ten further sections below the latter.

The panel thickness is such that when a peg such as is illustrated in Figs. 6 or 7 is inserted into one of the holes **11** so as to lie flush with the surface thereof, the peg will remain in this position and will not fall out of the hole, even under vibration. A suitable practical cross-sectional size for the holes **11** is a quarter-of-an-inch square, and in such case the thickness of the panel **10** may be a quarter-of-an-inch, but it could be slightly less than this or, if desired, somewhat thicker.

The panel **10** is adapted to be mounted upon a wall **14** with a space **15** between it and the wall **14** as shown in Fig. 2, and for this purpose a number of brackets **16** are provided. The distance between the panel **10** and the wall **14** should be slightly greater than the length of the pegs to be used with the chart.

In use, the chart serves to receive signals or pegs such as are illustrated in Figs. 6 to 9. The peg of Fig. 6, which may conveniently be coloured, is in the form of a cube, so that six characters, such as numbers, can be provided one on each face thereof, whilst the peg shown in Fig. 7 which, too, may be coloured, is circular in cross-section and may only bear a character on each end face thereof. For use with the chart of Figs. 1 and 2, the pegs will be one-quarter-of-an-inch across their faces, so that the peg of Fig. 6 will be a quarter-of-an-inch cube, and the peg of Fig. 7 will be a quarter-of-an-inch in diameter and a quarter-of-an-inch in length.

The signals or pegs of Figs. 8 and 9 are different from those of Figs. 6 and 7 in that they cannot be inserted so as to lie flush with the surface of the panel **10**. These pegs are merely subsidiary to those already described. The L-shaped peg of Fig. 8 is dimensioned so as to be capable of insertion into the holes **11** of the chart, and to provide a projection which lies against and in contact with the chart, so that additional signals, e.g. coloured strips or the like can be secured to the surface of the chart by being gripped between the projection and the surface of the panel. The peg of Fig. 9 is oblong in shape and square in cross-section, and is bored at **17** to receive a cord or elastic which may be secured to another similar peg, or may extend from a conventional cord frame (not shown) disposed at the side of the chart, the cord serving as a distinctive signal on the chart.

However, it will be appreciated that the chart is primarily intended to receive pegs similar to those of Figs. 6 and 7 and that in use these are pushed into the holes **11** so that their ends lie flush with the surface of the panel **12**.

With the set up of Figs. 1 and 2, it will be evident that the pegs can be removed by pushing the pegs right through the holes **11** until they fall out in the space **15** between the panel **10** and the wall **14**. Removing or stripping large numbers of pegs can be facilitated by use of a stripper (not illustrated) consisting of a bar having parallel teeth thereon at intervals corresponding to the spacing of the holes **11** and somewhat resembling a comb. By inserting the teeth into the holes **11** of a row the whole row can be stripped in a single operation and in a very little

time. In this connection it is to be noted that with all previous known peg or like charts it is necessary for each signal or peg to be removed individually, so that it sometimes takes hours for a chart having thousands of signals to be stripped.

As the panel or peg chart is spaced away from the wall **14**, the pegs, after stripping, fall down behind the chart, and into a tray or like receptacle **18** which conveniently is partitioned as at **19** so as to provide a storage space **20** in which sorted pegs may be accommodated. A lid **21** is provided for the storage space.

Referring now to Figs. 3 and 4, the chart here illustrated is similar to that of Figs. 1 and 2, but in this instance the perforated panel **30** is built as part of the front wall of a cabinet **31**, which is adapted to be secured to a wall.

As before, the panel is built up from a plurality of sections such as are illustrated in Fig. 5 located in channel members **32, 33**. Directly behind the panel, within the cabinet **31** is a backplate **34** which is pivotally mounted upon links **35** which permit parallel movement of the backplate **34** away from the panel **30**, to a position such as is shown in phantom lines at **34*a***.

The lowermost edge of the backplate **34** rests upon a cam disc **36** rotatably mounted at **37** and capable of rotation by means of a knob **38** so that in one position of the cam disc **36** the backplate **34** will be close against the back of the panel **30** and in another the backplate **34** is in the position shown at **34*a***.

Within the cabinet and below the panel **30** are two sloping walls **39**, the purpose of which is merely to direct pegs which are pushed through the panel **30** to a confined space at the bottom of the cabinet so that they can readily be picked out. The confined space is closed by a lid **40**, through which access can be had to the knob **38**.

At its lower part, the cabinet **31** is increased in depth as is clearly shown in Fig. 4, so as to provide a space for peg storage compartments which are closed by hinged lids **41**.

As with the chart of Figs. 1 and 2 the pegs of Figs. 6 to 9 are employed with this embodiment. However it is to be noted that it is not possible to strip the chart unless the backplate is in its position shown at **34*a***. Thus, by providing a lock on the lid **40**, unauthorized stripping of or tampering with the chart can be prevented.

When the backplate **34** is in its position close up to the rear face of the panel **30** it serves to define the possible depth to which pegs can be inserted into the panel, and these will, as previously explained, lie flush with the face of the panel.

I claim:

1. A peg chart comprising a substantially vertical panel, a mounting therefor, a plurality of through-holes in said panel, each adapted to receive a peg of uniform cross-section throughout its length, said pegs being frictionally held in said through-holes, a solid back parallel to said panel and spaced therefrom rearwardly, the distance between said back and panel being greater than the length of said peg so as to permit pegs to be pushed rearwardly free from said panel, means for firmly holding said back in said position, a mounting for said back whereby it may be shifted in parallel relation to said panel to firmly contact the rear thereof, and a receptacle for said pegs below said space.

2. A peg chart comprising a substantially vertical panel, a mounting therefor, a plurality of through-holes in said panel, each adapted to receive a peg of uniform cross-section throughout its length, said pegs being frictionally held in said through-holes, the length of said pegs being about equal to the thickness of said panel, a solid back parallel to said panel and spaced therefrom rearwardly, the distance between said back and panel being greater than the length of said peg so as to permit pegs to be pushed rearwardly free from said panel, means for firmly holding said back in said position, a mounting for said back whereby it may be shifted in parallel relation to said panel to firmly contact the rear thereof, and a receptacle for said pegs below said space.

3. A peg chart comprising a substantially vertical panel, a mounting therefor, a plurality of through-holes in said panel, each adapted to receive a peg of uniform cross-section throughout its length, said pegs being frictionally held in said through-holes, a solid back parallel to said panel and spaced therefrom rearwardly, the distance between said back and panel being greater than the length of said peg so as to permit pegs to be pushed rearwardly free from said panel, means for firmly holding said back in said position, and a receptacle for said pegs below said space, means for moving said back plate parallel to and sufficiently close to said panel to prevent said pegs from being pushed into said space and clear of said panel.

4. A peg chart according to claim 3 in which said means includes a plurality of links connecting said mounting and back.

5. A peg chart according to claim 3 in which said means includes a plurality of links connecting said mounting and back, a cam disk pivoted on said mounting, said back resting thereon and means for rotating said cam disk to cause shifting of said back.

6. A peg chart according to claim 5 in which said cam disk is in said receptacle and means for locking said receptacle.

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