March 3, 1931. W. G. HORTON 1,795,171

APPARATUS FOR RECORDING AND INDICATING OR DISPLAYING DATA OR INFORMATION

Filed Aug. 13, 1928

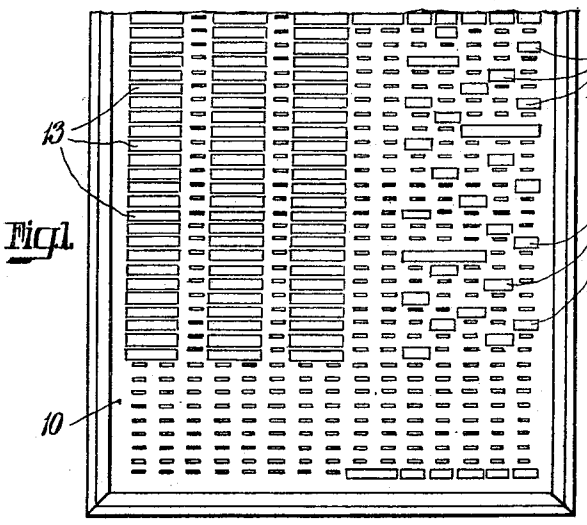



Fig. 1.

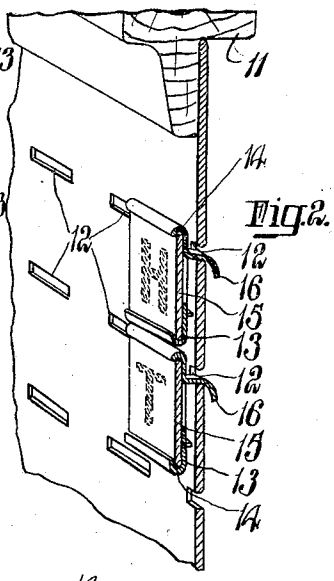



Fig. 2.

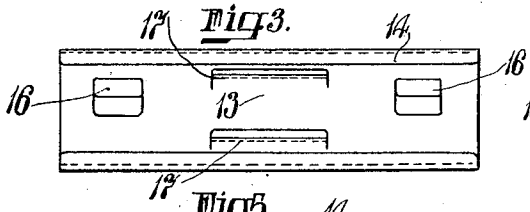



Fig. 3.

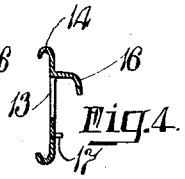



Fig. 4.

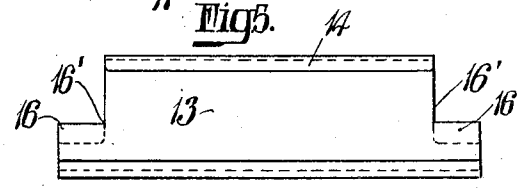



Fig. 5.




Fig. 6.

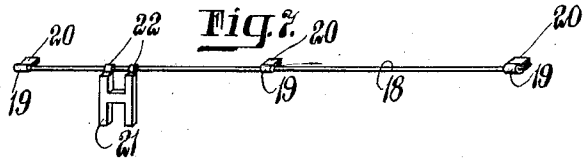



Fig. 7.

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# UNITED STATES PATENT OFFICE

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## APPARATUS FOR RECORDING AND INDICATING OR DISPLAYING DATA OR INFORMATION

Application filed August 13, 1928, Serial No. 399,307, and in Great Britain August 31, 1927.

This invention relates to indicating apparatus or the like for recording or displaying any indication, particulars, data or information and has for its primary object to provide such an indicating apparatus that will enable any desired number of particulars which may occupy various positions to be mounted in desired co-relation with other particulars, which may also occupy various positions.

A further object of the invention is to provide an indicator of the above character upon which the particulars can be changed at will and in an expeditious manner.

A still further object is to enable the indicator to be used for a great number of purposes according to requirements, such for instance as indicating the training and duty programme for a number of regiments or units over a desired period of time, the distribution and operations of travelling salesmen, the distribution and allotment of railway trucks, wagons, etc., the allotment of hotel rooms and similar uses.

In general, an indicating apparatus constructed according to the invention comprises two main elements, one of which constitutes the background and the other consisting of one or more carriers for the particulars or the like that is or are adapted to suitably engage with the background so that the particulars, indications or the like associated with one or more of the carriers is clearly displayed to view in its correct relation to other predetermined signs, dates or other indications or particulars.

The back-ground may be of stiff or flexible material, but preferably the former, and is formed or provided in a great number of positions, preferably regularly arranged, with portions of suitable engaging devices.

The carriers, of which there may be any number, and which may be of any desired size, are formed from stiff or flexible material, preferably the former, and each is furnished with a portion of one or more engaging devices that are adapted to co-operate with the portions of engaging devices provided upon the background.

One particular method of carrying the invention into effect provides a background formed from sheet metal of desired shape, size and gauge, having a number of short vertical or horizontal slots therein, the slots being arranged in horizontal and/or vertical rows to a desired number in such a manner that the number of slots in each row is equal. The carriers are formed from tablets of metal of any suitable shape, for example of square or rectangular form, the length and breadth of the rectangle varying according to requirements and the tablets being formed with turned over edges to receive strips, cards or the like upon which the necessary particulars are written, printed or otherwise indicated. The tablets are formed or provided with projecting means on their rear portions in any suitable manner that are adapted to enter the slots formed in the background.

In order that the invention may be better understood, it will now be described with reference to the accompanying drawings in which:—

Fig. 1 shews a front elevation of a preferred embodiment of the invention.

Fig. 2 shews a perspective cross sectional elevation of a portion of the apparatus shewn in Fig. 1, drawn to a larger scale.

Figs. 3 and 4 shew respectively a front elevation and cross section of one form of carrier.

Figs. 5 and 6 shew respectively a front elevation and end elevation of a modified form of carrier.

Fig. 7 shews a perspective view of a carrier constructed according to a further modification.

Referring to Figs. 1 and 2, a rectangular sheet of metal which is preferably of a thin gauge is mounted in a frame 11 which may itself be supported either upon a base so that it may stand upon a surface, or be provided with any convenient form of device or devices whereby it may be suspended from a vertical surface such as a wall or the like or if necessary from a ceiling. The sheet 10 constitutes the background of the indicating apparatus and its front surface may be plain, of any colour or if desired may be provided with any suitable design or ornamentation.

Elongated rectangular slots 12 are provided in the background and are arranged in horizontal rows in such a manner that the number of slots in each row is equal and that each slot is directly in line with a slot of an adjacent row.

Carriers are provided and adapted to be mounted upon the background and to engage therewith in a manner hereafter fully described.

The particular form of carrier shewn in Figs. 1, 2, 3 and 4 comprises a rectangular tablet of metal or other suitable stiff material 13 which is formed with turned over edges 14 to receive strips, cards or the like 15 upon which the necessary particulars are written, printed or otherwise indicated. At the rear of the tablets of metal 13 projections 16 are formed by a punching or piercing operation and are bent into a hook formation. These projections are spaced apart a distance corresponding to the distance between two or more of the slots 12 in the background 10 through which they are adapted to pass and engage with.

Projections 17 are also provided and extend from the rear of the tablets 13 a sufficient distance to keep the said tablet from the surface of the background 10, to allow for convenient handling in placing the indicators on the board and removing them therefrom.

It is to be understood that carriers constructed as above described may be of any length and if necessary may be wide enough to extend between two or more rows of slots, although those shewn on the drawings are only of sufficient width to extend between the row of slots with which they engage and the adjacent row directly below.

It will be quite obvious that a great number of carriers may be mounted upon a background, each having a strip or card 15 bearing any desired indication, data or information, that it is desired to display and that each carrier may be mounted upon the background in any position thereon so that the combined result shews the co-relation of particulars contained on certain carriers relatively to the particulars contained on other carriers.

An example of the indicators used will now be described with reference to Fig. 1 wherein the carriers arranged one above the other at the left hand edge of the background contain the names of various units, for example "Life Guards"; "R. H. G."; "First Bn. Gren. Gds."; and so on. To the right of these carriers another vertical row of carriers is provided bearing the indications of the normal barracks or locality of such units; the next vertical row of carriers indicate special particulars with regard to the units, for example the training already undertaken thereby.

At the top and bottom of the background and to the right of these vertical rows of tablets may be mounted other tablets having date indications thereon, these coming in horizontal rows and extending across the background. These date tablets may be separate tablets as shewn or may be a combined tablet made up for various days of the month, the arrangement adopted permitting tablets to be disposed beneath any desired date or dates or to extend between any desired dates and to come horizontally in line with the names and the like of the units in the left hand vertical column all this may be termed primary information.

The tablets arranged beneath the dates may be of various lengths and are adapted to carry particulars of the duties assigned to the various units on the particular dates in question, or any other information appertaining to certain dates.

In some cases the tablets or carriers arranged beneath the dates instead of or in addition to extending horizontally may extend vertically and carry particulars common to various units.

If desired, the right hand edge of the background may also be provided with carriers having the names of the various units thereon to enable particulars on the right hand of the background to be more readily identified with the units themselves.

In this manner it will be seen that the indicator may be built up to shew the future activities of a number of units or to shew the past activities of a number of units and when the indicator has served this purpose it may be changed to serve a similar purpose for a further period, and not only this, but if some change of programme occurs, the necessary change of indicators may be easily effected.

Further, the activities of salesmen, travellers and the like can also be indicated in a similar manner by the indicators shewing the names and other particulars of the said salesmen, travellers or the like in co-relation with their localities and times or dates, as well as other desired particulars.

Referring to Figs. 5 and 6 which shew views of a modified form of carrier, 13 is a sheet metal tablet provided with turned over edges 14 to receive strips, cards or the like and rearwardly extending hooked projections 16 which are formed from end portions of the metal tablets 13 that have been cut at $16^1$ and subsequently bent to form the said hooked projections 16.

The carriers shewn in both Figs. 3 and 4 or 5 and 6 may if desired have each only one rearwardly extending projection for engaging with a slot of the background, especially if the carrier member is of short length.

A further form of carrier is shown in Fig. 7 wherein a rod, wire or the like 18 is provided for example with clips 19 that engage around the rod or the like and are formed with resilient projecting portions 20 that are

adapted to engage with slots in the background. The rod or the like 18 forms a support for any desired indicating means for example in a letter 21 which is provided with hook formations 22 to engage the rod or the like. The rod or the like when in position upon the background conveniently covers the slots therein that are not in use.

What I claim and desire to secure by Letters Patent of the United States of America is:—

An indicating apparatus comprising a sheet of stiff material having a plurality of regularly arranged elongated rectangular slots in horizontal and vertical rows, and a plurality of carriers of varied lengths of stiff material, each formed with an integral rearwardly and downwardly projecting hook-like tongue for engagement with the said slots, the said carriers having parallel turned over edges, and strip-like slips, also of varied lengths, bearing the necessary indication, adapted to be mounted in the said carriers and held between the parallel turned-over edges.

In witness whereof I affix my signature.

WILLIAM GRAY HORTON.