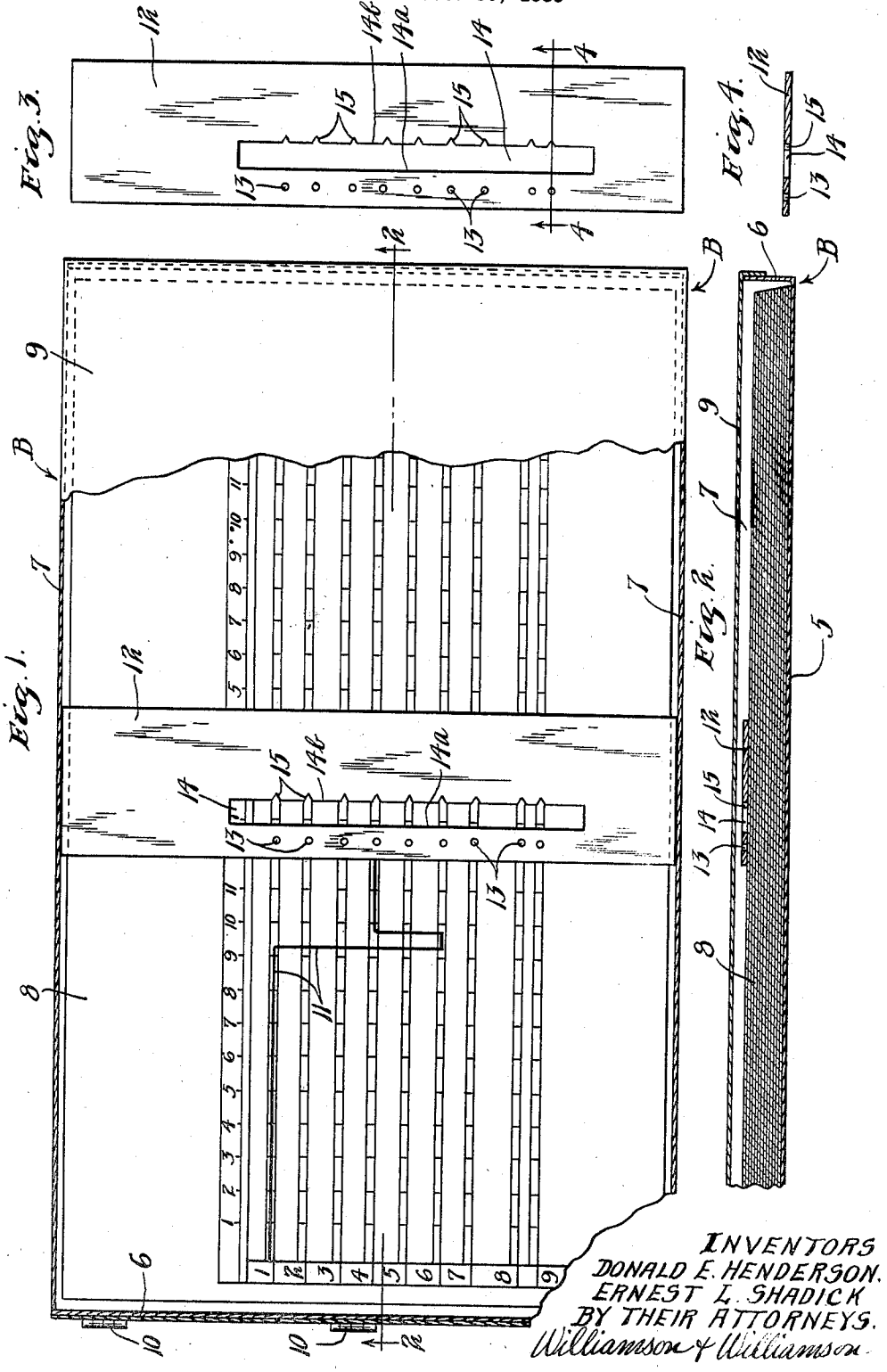
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CHART HOLDER AND MARKING GUIDE

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CHART HOLDER AND MARKING GUIDE

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3 Claims. (Cl. 33—80)

Our invention relates to apparatus for use in drawing lines on graphic charts and more particularly to apparatus for holding a rectangular paper sheet and guiding a drawing instrument applied thereto.

In many instances record sheets consist of printed forms on which the record is entered graphically by drawing thereon a line which extends horizontally of the sheet in some portions and vertically of the sheet in other portions. For example, one type of bus driver's daily log sheet has a horizontal scale representing the twenty four hours of the day and subdivisions thereof and a vertical series of markings indicating "off duty" time, rest time and various classes of "on duty" time. The record of allocation of time is made by drawing a suitably arranged line which is horizontal in portions and is vertical in other portions. In making such a graphical record the same will not be neat and clearly understood unless a ruler is used in making the lines and such use of a ruler is usually inconvenient and time-consuming.

An object of our invention is to provide apparatus which constitutes a container for a supply of graphic record chart sheets and includes structure for use as a guide in drawing horizontal and vertical lines on a chart sheet contained in the apparatus.

Another object is to provide such apparatus including a chart sheet container arranged to prevent edgewise shifting of a chart sheet contained therein and means co-operating with said container for guiding a drawing instrument in making horizontal and vertical lines on the contained sheet.

Yet another object is to provide such apparatus including a shallow chart sheet containing box and a straight edge element slidable longitudinally in the box and maintained thereby in normal relation with the longitudinal side walls thereof.

Still another object is to provide such apparatus wherein the straightedge element is provided with suitable openings therethrough for guiding a drawing instrument during horizontal movement of said element and said instrument in unison.

A further object is to provide such apparatus wherein the straightedge element is transparent to afford view of portions of a chart sheet therebeneath.

A still further object is to provide such apparatus of simple, light, compact and inexpensive construction and adapted for convenient and rapid use thereof.

These and other objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawing, wherein like reference characters refer to the same parts throughout the views, and, in which:

Fig. 1 is a partially broken-away, partially sectional top view of an embodiment of our invention having a chart sheet therein in operative relation therewith;

Fig. 2 is a partial sectional view taken along the line 2—2 of Fig. 1 as indicated by the arrows;

Fig. 3 is a view of the guide plate included in the apparatus of Fig. 1; and

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3 as indicated by the arrows.

Referring to the drawing the embodiment of our invention disclosed therein includes a shallow box B having a bottom wall 5, end walls 6 and longitudinal side walls 7. The box B is of rectangular shape and is of such dimensions as to receive a stack of chart sheets 8 of pre-determined dimensions with the end walls 6 and side walls 7 closely adjoining the edges of the chart sheets 8.

The box B is provided with a cover 9 for covering the open top of the box B. The cover 9 is preferably attached at one end thereof to the box B by hinges 10 or the equivalent thereof.

Box B described above constitutes a container for a stack of chart sheets 8 and also comprises a portion of means for guiding a drawing instrument in producing horizontal and vertical lines on the uppermost one of the chart sheets 8 contained within the box B.

The chart sheets 8 shown in the drawing have printed matter thereon in accordance with the type of chart sheets with which our apparatus is intended for use. The chart sheets 8 have a horizontal series of numerals thereon which may represent the hours of the day and a vertical series of numerals which may represent different activities wherein time may be consumed. For convenience in making and interpreting records kept on such chart sheets horizontal lines are provided in alignment with the respective numerals of the vertical series thereof printed on the chart sheet. In the drawing a line 11 is shown which represents a graphic record entered on the chart sheet 8 and which has some portions drawn horizontally to indicate elapsed time and other portions drawn vertically to indicate a change in the class of time consuming activity.

The purpose of our apparatus is to facilitate the drawing of graphic records of the type represented by the line 11 on chart sheets of the type of which the illustrated chart sheet 8 is an example.

A guide element or plate 12 is provided for cooperation with the box B and a pointed drawing instrument in drawing record lines such as the line 11 on a chart sheet. The plate 12 is of relatively narrow rectangular shape and is of such length that the end edges thereof may be placed in sliding engagement with the longitudinal side walls 7 of the box B as shown in Fig. 1. The guide plate constructed in this manner will be slidable longitudinally of the box B and will be maintained in such position relative to the box B that the longitudinal edges of the guide plate 12 will remain normal to the longitudinal side walls 7 of the box B, that is will remain vertical relative to a chart sheet 8 contained within the box B. Thus the longitudinal edges of the guide plate 12 may be used as a guide in drawing vertical lines on the chart sheet 8 as indicated in Fig. 1.

The guide plate 12 is also constructed to function as guide means for drawing horizontal lines on the chart sheet 8 in substantial alignment with the respective numerals of the vertical series thereof printed on the chart sheet 8 in the left-hand marginal portion thereof. For this purpose the guide plate 12 is provided with a series of spaced small apertures 13 extending longitudinally of the guide plate 12, the individual apertures being in substantial horizontal alignment with the numerals of the vertical series thereof on the chart sheet 8 and being of such diameter as to receive the point of a drawing instrument such as a pencil and afford access of the pencil point to the chart sheet 8 lying beneath the guide plate 12. It should be apparent that a pencil point may be thrust toward the chart sheet 8 through one of the apertures 13 and that movement longitudinally of the box B of the pencil and the guide plate 12 in unison will produce a straight horizontal line on the chart sheet 8.

Further means is provided in the structure of the guide plate 12 for guiding a pencil point or the like in production of vertical and horizontal lines on a chart sheet. A longitudinally extending rectangular slot 14 is formed in the guide plate 12. One edge 14*a* of the portions of the plate 12 defining the slot 14 may be used as a straight edge in drawing vertical lines on the chart sheet 8. The other longitudinally extending portion 14*b* of the plate 12 defining the slot 14 is provided with a series of notches 15 aligned horizontally with the respective apertures 13. The notches 15 are adapted to receive the point of a pencil so that the pencil and the guide plate may be moved in unison longitudinally of the box B to produce a horizontal line on the chart sheet 8. In drawing a line such as the line 11 of the chart sheet 8 use of the longitudinally extending edge 14*a* and the notches 15 will enable the user to draw both horizontal and vertical lines on the chart sheet 8 without removing the pencil from the slot 14.

To afford a view of portions of the chart sheet 8 lying beneath the guide plate 12 in order to facilitate rapid and convenient drawing of lines on the chart sheet, the guide plate is preferably made of transparent material as, for example, clear sheet Celluloid of suitable thickness.

It is to be noted that the box B constitutes a container for a supply of chart sheets such as the chart sheets 8 and also for the guide plate 12 and also constitutes means for cooperation with the guide plate 12 in producing apparatus for use as guide means in drawing horizontal and vertical lines on a chart sheet contained within the box B. It should be apparent that the guide plate 12 may be made to include the slot 14 and notches 15 without having the apertures 13, or that the guide plate 12 may be made with the apertures 13 and not having the slot 14 and notches 15.

It is apparent that we have invented a novel, compact, simple, light and inexpensive apparatus for containing graphic chart sheets and guiding the drawing of horizontal and vertical record lines on the uppermost one of a stack of chart sheets contained within the apparatus.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of our invention.

What is claimed is:

1. Apparatus for holding a rectangular chart sheet and guiding the drawing of lines thereon comprising, a shallow open-topped rectangular box of such dimensions as to closely receive a selected flat chart sheet and having side walls for closely adjoining the edges of a chart sheet placed in said box, said side walls being of a height to project above said chart sheet, and a relatively narrow rectangular guide plate of thin relatively inflexible material adapted to overlie a chart sheet in said box and of such a length that the end edges of said plate may be placed in engagement with respective opposite walls to slide therealong and be maintained thereby in parallel relation therewith, said plate having a longitudinally extending slot therethrough and an edge of said plate defining one longitudinal edge of said slot having a series of spaced notches formed therein and extending longitudinally thereof.

2. A drawing guide comprising, a relatively narrow rectangular plate of thin relatively inflexible material adapted to overlie a sheet on which marks are to be made, said plate having a longitudinally extending slot therethrough, and an edge of said plate defining one longitudinal edge of said slot having a series of spaced notches formed therein and extending longitudinally thereof.

3. Apparatus for supporting a rectangular chart sheet and guiding the drawing of lines thereon comprising, structure affording a flat surface upon which a sheet to be drawn upon may be placed, a straight-edge element secured to said surface for engaging an edge of a sheet placed upon said surface, and a relatively narrow elongated guide plate of thin relatively inflexible material adapted to overlie a sheet placed upon said surface and having one end which is straight for engagement with said straight-edge element, said plate having a longitudinally extending slot therethrough disposed normal to said end, and an edge of said plate defining one longitudinal edge of said slot having a series of spaced notches formed therein and extending longitudinally thereof.

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