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(54) PROGRESS CONTROL BOARD

(71) I, SHU-LIEN LIOU, citizen of Taiwan residing at 195 Chung King North Road, Section 3, Taipei, Taiwan, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to apparatus for indicating progress of a task. A glance at the apparatus not only shows the progress of various steps or elements of the task but also the urgency or progress status of each task is clearly shown so as to draw the attention of management to the need to take the necessary remedial action if required. Those unnecessary actions taken by conventional control methods can thus be eliminated.

Many kinds of progress control boards have been developed, based upon the so-called "Gantt Chart", which may also be used in the control of the progress of multi-operation steps. Usually job schedule and actual progress are simultaneously shown on the board and percentage of completion indicated at the end of each individual job or operation step. However, the urgency or status of the current situation in comparison with the schedule cannot be easily reflected in such a control board.

According to the present invention, there is provided apparatus for indicating progress of a task comprising one or more task elements, which apparatus comprises a progress display board which includes at least one task section, said task section comprising a longitudinal time scale extending laterally across said task section and containing first indicia related to time, one of said first indicia being indicative of a target time for completion of the task, and other indicia each indicative of a time intermediate the start and the completion of the task for correlation with each task element; a respective task element designator tag for each task element which is an operational step pertaining to the completion of the task, said tag being attachable to said task sec-

tion on a first portion of said board and displaceable with respect to said time scale, a portion of said tag being adapted to co-operate with said time scale so as to indicate a predetermined time for the completion of a corresponding task element before the completion of the task; and a fact card attachable to said task section relative to said time scale and at a second portion of said board for displaying the progress of each task element with respect to completion of the task, said fact card being arranged for periodic movement relative to said time scale, a part of said fact card being adapted to co-operate with said time scale so as to indicate a current time, said fact card including a display panel corresponding to a respective one of the task elements, each panel being arranged to receive second indicia indicative of the degree of completion of the task element associated with said panel, and means for receiving third indicia for indicating the urgency of remedial action with respect to completion of the task elements and the task, said third indicia being selected as a result of a visual comparison of the current time position of said fact card and the position of one said task element designator tag relative to said time scale in comparison with the completion or non-completion of the said task element as indicated on an associated panel on said fact card by said second indicia, said third indicia being arranged to indicate whether the task element and the task is on time, ahead of, or behind schedule. The apparatus may include a pair of tags which are allocated to each task element, one of said tags being used to indicate the starting time for a respective task element.

The second and third indicia may be colour coded. The fact card may include a portion for receiving indicia representing data relative to the task elements. The fact card may also include scaled spaces in said display panel for recording actual progress on either a quantity or a percentage basis. Each display panel may be adapted to receive said second indicia, said second indicia com-

[Price 25p]

Price 75p

prising two bars, one bar being arranged to show a quantity received or percentage of completion of the task element based either upon steps preparatory to completion of the task element or related to the completion of a former task element, the second bar being arranged to show the degree of completion of the associated task element. The time scale may extend laterally from the left hand edge to the right hand edge of the progress display board in its operative position, said time scale having its zero mark coincident with the left hand edge of the or each task section, said first indicia on said time scale representing increased numerical values towards the right hand edge. The apparatus may include a plurality of task sections.

Senior management, by using this apparatus, save the time required to leaf through daily progress reports, by checking daily on the displays on the board; they can take the necessary remedial action when the need arises. The registration of facts on the progress display member and filling in of daily progress may be carried out by a clerk who would not need much experience and/or training.

Tedious report reading is therefore shifted from management to a lower grade of office hand, thus increasing the work efficiency of management.

The invention will now be described by way of example only with reference to the drawings in which:—

Figs. 1A, 1B and 1C depict the general layout of the present invention, where Figs. 1A, 1B and 1C show different progress status by change of colour signals.

Fig. 2 shows detail of the fact card; and Figs. 3A and 3B show another arrangement of the apparatus where the task element designator tags and the fact card are used in a different way to that shown in Figures 1A, 1B and 1C.

Referring to Figs. 1A, 1B and 1C of the drawings, apparatus for indicating the progress of a task comprises, in use, an upstanding elongate rectangular display board 1 formed of any suitable sheet material. Examples of a suitable material which may be used are plywood, aluminium or magnetisable metal. The board 1 is sub-divided into elongate rectangular task sections 2 disposed transversely with respect to the board 1, each section 2 representing a task to be completed. Referring to Fig. 1A, section 2 includes a compartment 6 for recording and displaying the identity of the task required to be carried out. The upper portion of each section 2 has first indicia constituted by a longitudinal time scale 3 extending laterally between the compartment 6 towards the right hand edge of the board 1 as shown in Fig. 1A. The time scale 3 may represent any convenient time interval, for example, days,

weeks or months. As seen in Fig. 1A, the zero mark of the time scale 3 is coincident with the right hand edge of the task identifying space and represents task completion; as can be seen from the drawing, the time scale is graduated upwardly from task completion towards the right hand edge portion of the board 1.

The apparatus also includes designator tags 4 representing task elements comprising or making up the task. Each task element is allocated an alphabetical designator which is displayed in or on a task element designator tag 4 constituted by an upstanding rectangular part having a triangular extension disposed along one of the upstanding edges thereof to constitute an arrow head. As shown in Fig. 1A, the arrow head points to the right hand side of the drawing and therefore towards the higher end of the time scale graduations. Each designator tag 4 is attachable to the board 1, the method of attachment depending upon the material from which the board 1 is formed. For example, the designator tag 4 may be hung by any convenient means, or slidably mounted on rails, or in the case of a board being formed from magnetisable metal, the tag may be magnetised in order to be attached to the board 1. In use, each designator tag 4 is attached to the board adjacent to, and upwardly of, the time scale 3. It will be understood, therefore, that each designator tag may be positioned as required with respect to time scale 3.

Each task section 2 includes an elongate rectangular fact card 5 for displaying the progress of the, or each, task element required to be completed in respect to the task. The card 5 is attachable to the board 1 in similar manner to the designator tags 4 and is movable, longitudinally, in a direction parallel with the time scale 3, so as to be immediately adjacent the lower edge thereof. Referring to Fig. 2, the left hand edge portion of the card 5 includes rectangular spaces 51, 52 and 53 in descending relationship. Each of these spaces may be used to record information such as task identity number, commodity code and quantity of order respectively. A further rectangular space is provided below spaces 51, 52 and 53 and in which indicia such as a circular colour code signal may be attached to the card 5. The remainder of the card 5 includes laterally extending elongate rectangular compartments defining respective display panels extending parallel with the longitudinal axis of the card 5. Each compartment may be used to display information relating to one task element. As shown in Fig. 2, the card 5 is marked out to record information relating to task elements A, B, C, D, and E. Each element compartment includes scaled spaces defined by ordinates and co-ordinates con-

stituting a grid 56. As shown in Fig. 2, the right-hand edge portion of each element compartment includes a rectangular space in which a colour code signal 55 may be attached to the member 5. It will be understood that the grid 56 may be used to form part of a bar chart by use of colour coded bars 57 and 57¹ each defining second indicia. In the example shown in Fig. 2, bar 57 may represent orders placed for material required for completing task element A, whilst bar 57¹ displays the percentage completion of task element A. If the task element, for example, related to production, the bar 57 could display material, which may be either raw or in a semi-finished state, and received from a previous task element, whilst bar 57¹ would display the percentage completion of the task element.

In operation, a task identifier is entered into space 6 and details relating to the relevant task elements comprising the tasks are entered on the fact card 5. The completion date for the component task elements of the task are each entered against the time scale 3 by positioning the relevant element designator tags 4 such that the left-hand vertical edge of each designator tag 4 is in register with time scale 3 at the appropriate completion date for the relevant task element. Referring to Fig. 1A, the card 5 is positioned such that its left-hand edge is in register with the current date with respect to the task completion date which is represented by the time scale zero. In the example shown in Fig. 1A, the card 5 is positioned such that it is apparent that the task completion date lies 33 days ahead of the current date. Details relating to each task element are entered in the relevant task element display panel on the card 5 to provide visual indication as to the state or progress of each task element. In the event that a task element is running behind schedule, third indicia including a red circle 55 is attached to the card 5 against the appropriate display panel. The signal 55 will draw attention to a deficiency in the progress of the task element to which the signal 55 relates. Referring again to Fig. 1A, the third indicia include also a yellow circular signal 54 which is attached to the card 5 in the lower left-hand edge portion of the card 5. It will be appreciated that different coloured signals may be used to indicate difference in status or progress of the task. For example, a red signal may be used to indicate warning that progress is behind schedule and is not satisfactory; a yellow signal may be used to indicate that progress is satisfactory; and a green signal may be used to indicate that progress is ahead of schedule.

Referring to Fig. 1A, the task status signal 54 is showing yellow which indicates that progress is satisfactory and that no extraordinary remedial action should be taken. In

this case, the left-hand edge of the card 5, aligned with the current date, has passed the completion date set for task element B by two days. In this case, it is to be understood that for each task element, there is a two days over run allowance; therefore, although the dateline has passed the completion date for task element B by two days, the overall progress of the task could still be considered as satisfactory or normal. Accordingly, the signal 54 is yellow and, as can be seen from the card 5, only a small portion of task element B remains to be completed.

In another example as shown in Fig. 1B, the current date line has passed the completion date of task element B by 3 days, i.e. a further day has passed but task element B has not been progressed further. Accordingly, the overall status of the task has to be indicated in red to give the necessary warning in order that remedial action may be taken. In the example shown in Fig. 1C, the overall status signal 54 is showing green which means that progress is ahead of schedule. According to the current date line, the completion date of task element B has not yet been reached; however, from the record of task element B on the card 5, task element B has already been completed and a proportion of the finished product from task element B has been transferred into task element C. Therefore, the overall achievement of the task is well ahead of the planned schedule.

In another arrangement of the invention, additional task element designator tags 4¹ are used to indicate the start date of each task element. In this arrangement, task element designator tags 4¹ are similar to the designator tags 4 except that the arrow head points towards task completion date.

It will be understood that the bars 57 and 57¹ required to be shown on the card 5, may be formed from coloured adhesive tape, or any other convenient marking material such as pencil, ink or chalk.

WHAT I CLAIM IS:—

1. Apparatus for indicating progress of a task comprising one or more task elements, which apparatus comprises a progress display board which includes at least one task section, said task section comprising a longitudinal time scale extending laterally across said task section and containing first indicia related to time, one of said first indicia being indicative of a target time for completion of the task, and other indicia each indicative of a time intermediate the start and the completion of the task for correlation with each task element; a respective task element designator tag for each task element which is an operational step pertaining to the completion of the task, said tag being attachable to said task section on a first portion of said board and displaceable with respect to said time

stituting a grid 56. As shown in Fig. 2, the right-hand edge portion of each element compartment includes a rectangular space in which a colour code signal 55 may be attached to the member 5. It will be understood that the grid 56 may be used to form part of a bar chart by use of colour coded bars 57 and 57¹ each defining second indicia. In the example shown in Fig. 2, bar 57 may represent orders placed for material required for completing task element A, whilst bar 57¹ displays the percentage completion of task element A. If the task element, for example, related to production, the bar 57 could display material, which may be either raw or in a semi-finished state, and received from a previous task element, whilst bar 57¹ would display the percentage completion of the task element.

In operation, a task identifier is entered into space 6 and details relating to the relevant task elements comprising the tasks are entered on the fact card 5. The completion date for the component task elements of the task are each entered against the time scale 3 by positioning the relevant element designator tags 4 such that the left-hand vertical edge of each designator tag 4 is in register with time scale 3 at the appropriate completion date for the relevant task element. Referring to Fig. 1A, the card 5 is positioned such that its left-hand edge is in register with the current date with respect to the task completion date which is represented by the time scale zero. In the example shown in Fig. 1A, the card 5 is positioned such that it is apparent that the task completion date lies 33 days ahead of the current date. Details relating to each task element are entered in the relevant task element display panel on the card 5 to provide visual indication as to the state or progress of each task element. In the event that a task element is running behind schedule, third indicia including a red circle 55 is attached to the card 5 against the appropriate display panel. The signal 55 will draw attention to a deficiency in the progress of the task element to which the signal 55 relates. Referring again to Fig. 1A, the third indicia include also a yellow circular signal 54 which is attached to the card 5 in the lower left-hand edge portion of the card 5. It will be appreciated that different coloured signals may be used to indicate difference in status or progress of the task. For example, a red signal may be used to indicate warning that progress is behind schedule and is not satisfactory; a yellow signal may be used to indicate that progress is satisfactory; and a green signal may be used to indicate that progress is ahead of schedule.

Referring to Fig. 1A, the task status signal 54 is showing yellow which indicates that progress is satisfactory and that no extraordinary remedial action should be taken. In

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In another example as shown in Fig. 1B, the current date line has passed the completion date of task element B by 3 days, i.e. a further day has passed but task element B has not been progressed further. Accordingly, the overall status of the task has to be indicated in red to give the necessary warning in order that remedial action may be taken. In the example shown in Fig. 1C, the overall status signal 54 is showing green which means that progress is ahead of schedule. According to the current date line, the completion date of task element B has not yet been reached; however, from the record of task element B on the card 5, task element B has already been completed and a proportion of the finished product from task element B has been transferred into task element C. Therefore, the overall achievement of the task is well ahead of the planned schedule.

In another arrangement of the invention, additional task element designator tags 4¹ are used to indicate the start date of each task element. In this arrangement, task element designator tags 4¹ are similar to the designator tags 4 except that the arrow head points towards task completion date.

It will be understood that the bars 57 and 57¹ required to be shown on the card 5, may be formed from coloured adhesive tape, or any other convenient marking material such as pencil, ink or chalk.

WHAT I CLAIM IS:—

1. Apparatus for indicating progress of a task comprising one or more task elements, which apparatus comprises a progress display board which includes at least one task section, said task section comprising a longitudinal time scale extending laterally across said task section and containing first indicia related to time, one of said first indicia being indicative of a target time for completion of the task, and other indicia each indicative of a time intermediate the start and the completion of the task for correlation with each task element; a respective task element designator tag for each task element which is an operational step pertaining to the completion of the task, said tag being attachable to said task section on a first portion of said board and displaceable with respect to said time



scale, a portion of said tag being adapted to co-operate with said time scale so as to indicate a predetermined time for the completion of a corresponding task element before the completion of the task; and a fact card attachable to said task section relative to said time scale and at a second portion of said board for displaying the progress of each task element with respect to completion of the task, said fact being arranged for periodic movement relative to said time scale, a part of said fact card being adapted to co-operate with said time scale so as to indicate a current time, said fact card including a display panel corresponding to a respective one of the task elements, each panel being arranged to receive second indicia indicative of the degree of completion of the task element associated with said panel, and means for receiving third indicia for indicating the urgency of remedial action with respect to completion of the task elements and the task, said third indicia being selected as a result of a visual comparison of the current time position of said fact card and the position of one of said task element designator tag relative to said time scale in comparison with the completion or non-completion of the said task element as indicated on an associated panel on said fact card by said second indicia, said third indicia being arranged to indicate whether the task element and the task is on time, ahead of, or behind schedule.

2. Apparatus as claimed in Claim 1, wherein a pair of task element designator tags are allocated to each task element, one of said tags being used to indicate the starting time for a respective task element.

3. Apparatus as claimed in any one of the preceding claims, wherein said second and third indicia are colour coded.

4. Apparatus as claimed in any one of the preceding claims wherein said fact card

includes a portion for receiving indicia representing data relative to the task elements.

5. Apparatus as claimed in any one of the preceding claims wherein said fact card includes scaled spaces in said display panel for recording actual progress on either a quantity or a percentage bases.

6. Apparatus as claimed in Claim 5 wherein each display panel is adapted to receive said second indicia, said second indicia comprising two bars, one bar being arranged to show a quantity received or percentage of completion of the task element based either upon steps preparatory to completion of the task element or related to the completion of a former task element, the second bar being arranged to show the degree of completion of the associated task element.

7. Apparatus as claimed in any one of the preceding claims wherein said time scale extends laterally from the left hand edge to the right hand edge of the progress display board in its operative position, said time scale having its zero mark coincident with the left hand edge of the or each task section, said first indicia on said time scale representing increased numerical values towards the right hand edge.

8. Apparatus as claimed in any one of the preceding claims including a plurality of task sections.

9. Apparatus for indicating progress of a task, the apparatus being substantially as herein described with reference to, and as shown in, the accompanying drawings.

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