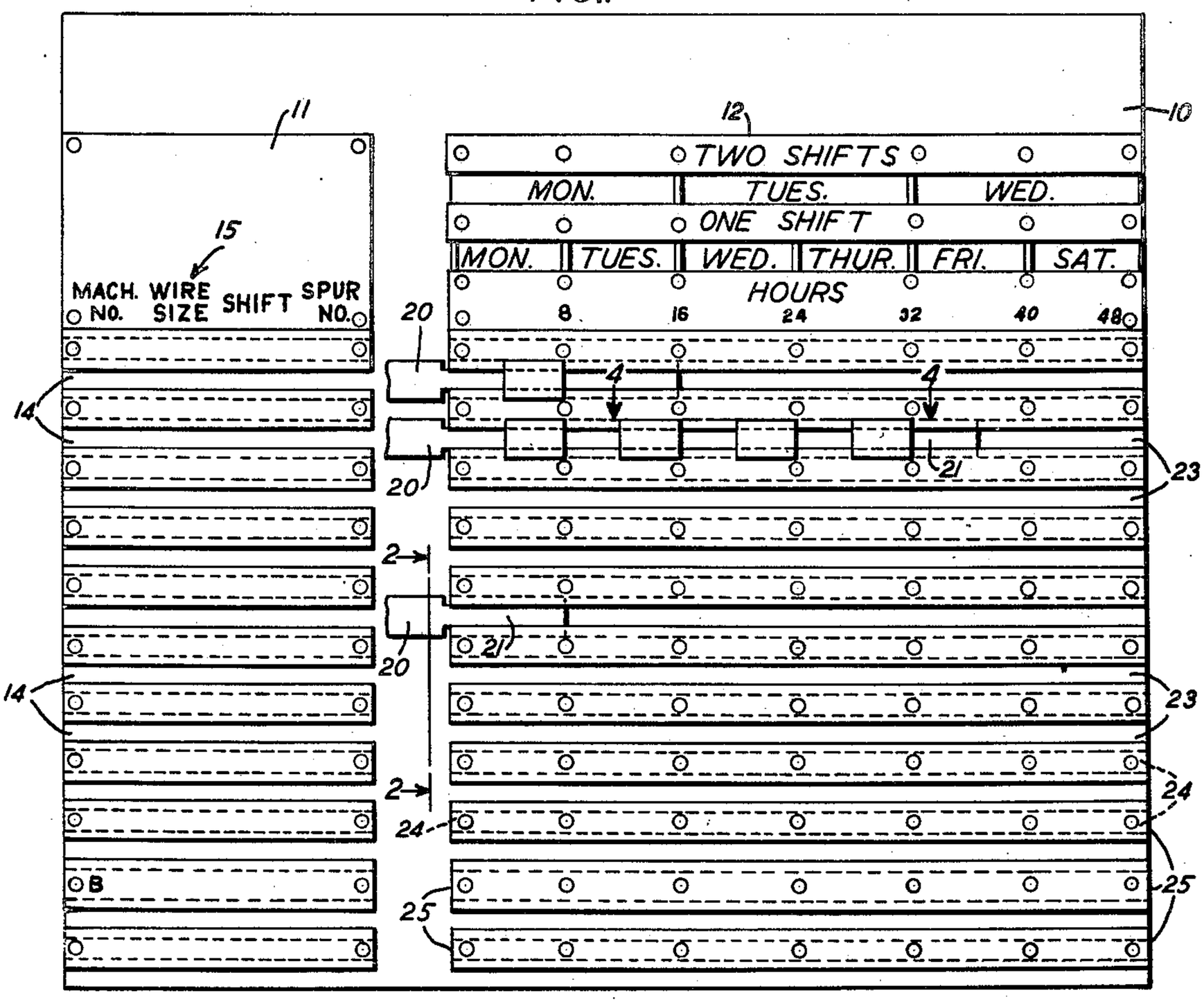
April 10, 1951 J. R. DUNN 2,548,657

PRODUCTION INDICATING MEANS

Filed Sept. 19, 1946

FIG.1



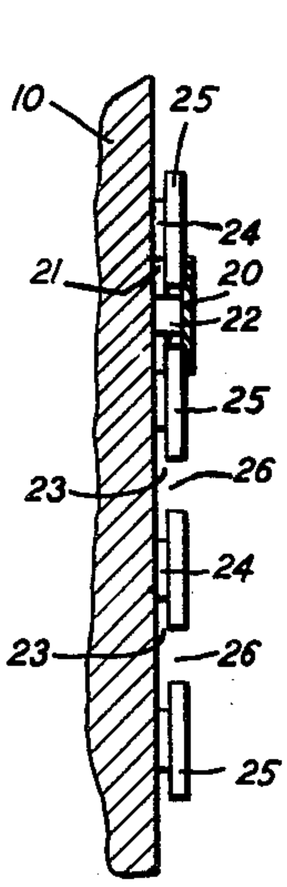


FIG.2

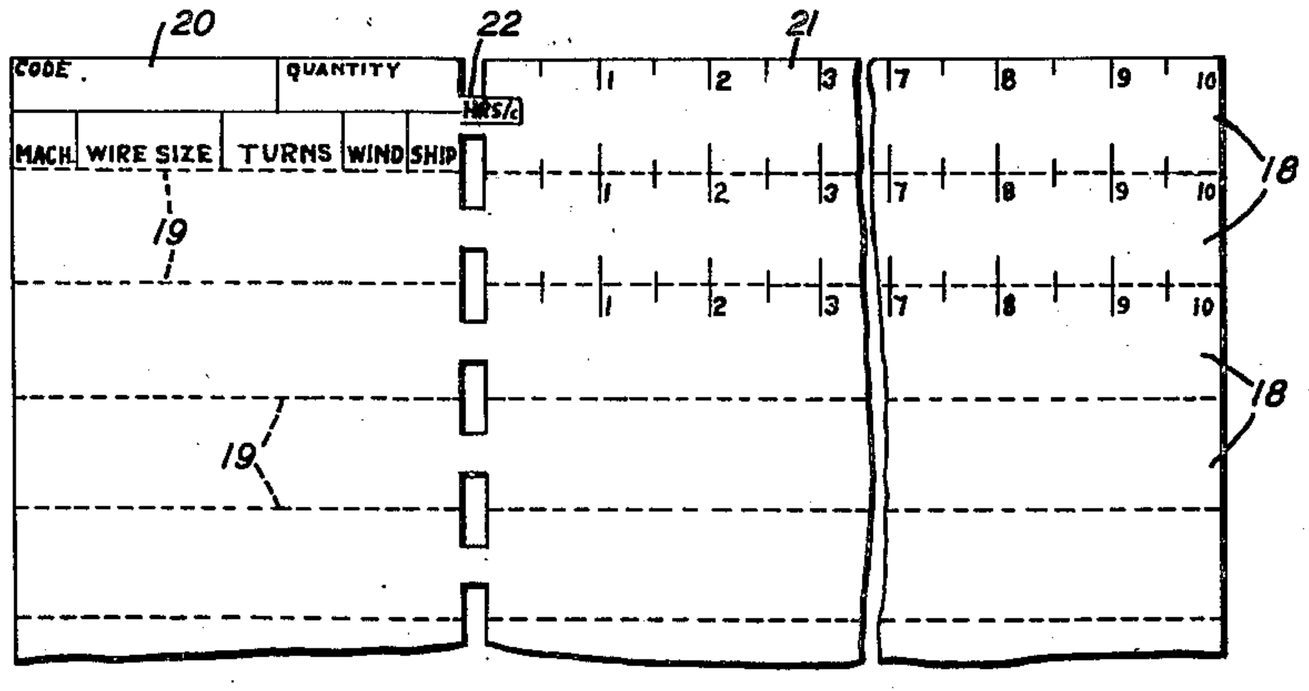


FIG.3

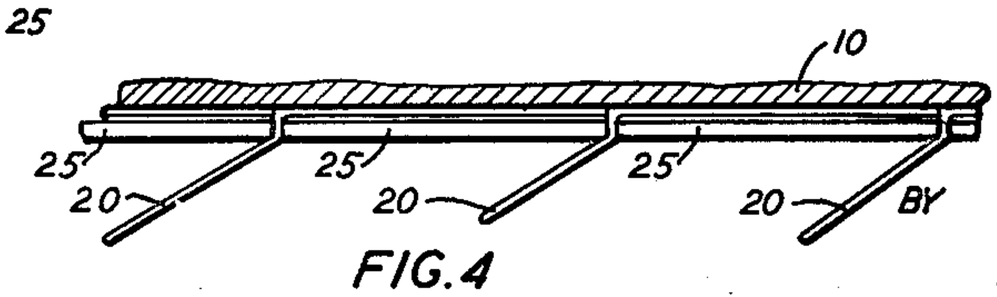


FIG.4

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PRODUCTION INDICATING MEANS

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2 Claims. (Cl. 116—135)

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This invention relates to production indicating means, and more particularly to load control boards and control cards therefor.

In manufacturing concerns where numerous machines are employed in the processes of making parts or articles under given orders, it is advantageous to calculate predetermined data such as the kind and size of the material to be employed and the number of parts or articles to be produced under each order together with other information necessary and the time to be allotted for the processing of such articles. Heretofore load control cards divided throughout their lengths to indicate the element of time, have included among various other information that identifying the materials to be used and the quantity to be produced. With such cards, it was not possible to reduce their lengths to indicate short periods of time without destroying portions of the identifying information thereon.

It is an object of the present invention to provide a production indicating means with a load control board and control cards therefor including separate portions for the identifying information and the indication time allowed whereby the time indicating portion may be reduced in size to represent the shortest amount of time without disturbing the identifying information.

With this and other objects in view the invention comprises a production indicating means including mainly a load control board and a load control card, the board having spaced parallel elements mounted on the face thereof to form a card receiving slot for each machine, the slots being of like lengths and widths with openings throughout their lengths narrower than their widths. Indications on the control board divide the slots into periods of time such as days of the week and hours of each day.

The control card which is employed for each order of articles or parts to be manufactured by the machines includes an identifying information portion and a time indicating portion connected by a portion of smaller width receivable in the opening of any of the slots. On the identifying information portion, all the information necessary for a particular order may be recorded. The time indicating portion is divided into equal parts according to the divisions of the slots, the divisions of the cards representing hours and fractions thereof. At the beginning of a week, for example, the load control board may be filled or partially filled with load control cards representing the work to be produced by each machine

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during the periods of time represented by the cards and although the time allowed may be short for one order represented by one card, the time indicating portion may be reduced to indicate the given length of time without disturbing the identifying information portion.

Other objects and advantages will be apparent from the following detailed description when considered in conjunction with the accompanying drawing, wherein:

Fig. 1 is a front elevational view of the load control board with a few of the load control cards positioned therein;

Fig. 2 is an enlarged fragmentary sectional view taken along the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary front elevational view of a plurality of the load control cards connected along perforated lines; and

Fig. 4 is an enlarged fragmentary sectional view taken along the line 4—4 of Fig. 1.

Referring now to the drawing, attention is first directed to the construction of the control board indicated generally at 10 which may be in the form of a panel of suitable material to be mounted upon a wall or upon any other suitable structure at a position where it may be readily observed. The board is divided into two general sections 11 and 12, the section 11 including a plurality of parallel spaced slots 14 to receive identifying cards (not shown) giving the number of the machine and other information desired, as indicated at 15 above the slots.

The portion 12 may be divided in various manners as indicated in Fig. 1 of the drawing. For the present illustration consideration is given to the division of this portion into six equal parts representing the six working days of a week. These portions are divided also into hours representing eight hours for each day or a total number of forty-eight hours for the week provided the employees are working six days each week or for a total number of forty hours should the employees be working five days each week. The load control board is arranged according to the number of working days in each week and if a holiday should appear, there would naturally be no load requirements for the machines on that day unless according to a prearranged schedule, certain of the machines should be kept in operation.

The load control cards 18 are produced in sheet form with perforations 19 so that the cards may be readily torn from the sheet. Each card includes an identifying information portion 20 and a time indication portion 21 connected by a small-

er portion 22. The widths of the cards determine the widths of slots 23 formed on the load control board 10, the slots 23 being slightly greater in width than the control cards so as to readily receive the time indicating portions of any of the cards. The slots 23 are produced by strips 24 jointly mounted upon the board 10 by wider strips or cover members 25, the strips 24 being parallel with each other and disposed like distances apart. The same is true of the strips or cover members 25 except that they have portions overhanging each slot 23 to retain the time indicating portions 21 of the cards 18 in the slots 23. Openings 26 between the members 25 in the slots 23 are narrower than the slots themselves, but are of sufficient width to receive the connecting portions 22 of the cards 18.

The portions 20 of the cards 18 are divided into identified sections to receive the necessary information required for each order of material, parts or articles to be produced by the machine. For example, in the upper half of this portion may be recorded the code number which will be recognized by the operator in charge of the machine. The quantity to be produced may also be recorded. In the lower half of the portion 20 other information may be recorded including the number of the machine, the size of the wire to be employed in forming coils or the like, and the number of turns required. The portion 21 of the card, as previously stated, is divided into periods of time representing hours and fractions thereof, these divisions being in identical portions to the divisions of the slots 23 of the control board.

In setting up the control board to represent the work load for the various machines in use, the necessary information is placed upon one or more cards for each order depending upon the quantity requested and the time estimated therefor. The time indicating portion 21 of the card is reduced in length to the time required to produce the quantity recorded upon the portion 20 of the card. If this time required is eight hours, the excess portion of the card is removed by cutting or tearing and the card is inserted in the slot 23 adjacent the card identifying the machine on which the material is to be produced. If the next order for articles to be produced by that machine is allowed two hours for processing, then the next card would be reduced at its portion 21 until the length of this portion represents two hours. The time indicating portion of this card is then placed in the designated slot 23 and moved to the left until it engages the right hand end of the first card. In bringing about this result the connecting portion 22 of the second card will extend through the opening 26 of the slot 23, positioning the portion 20 with all the identifying information thereon outside the slot where the operator can readily read it. The thickness of the cards shown in Figs. 2 and 4 is greatly exaggerated. In actual structure the cards are formed of material having a thickness substantially equivalent to two-ply Bristol board making it possible for easy bending of the portion 22 whereby the adjacent ends of the time indicating portions 21 in the slots 23 may abut each other for accurate indication of the load required for each machine.

Through the arrangement of the control board and control card, the complete load for each machine may be set up. Since the length of time indicated on each card is in proportion to manufacturing time, the following cards added to each slot will automatically add their individual manufacturing times and a load picture of the production is available. Although the identifying information portion remains with each time indicating portion regardless of the length thereof. The processing time for each machine is accordingly increased. Furthermore, although the identifying portion 20 may extend in front of a preceding time indicating portion 21 of another card, the operator may at a glance determine the present load requirement for his machine, that is, the total time recorded on the board of the time allowed for the particular order he is working on at that time in that the right hand end of an identifying information portion of one card will indicate the end of the time indicating portion of the preceding card in any one of the slots.

Although specific improvements of the invention have been shown and described, it will be understood that they are but illustrative and that various modifications may be made therein without departing from the scope and spirit of this invention as defined by the appended claims.

What is claimed is:

1. A production indicating means comprising a load control card for use with a control board having spaced parallel slots and openings therefor which combined are substantially T-shaped in cross-section, the slots being divided by indicating means into portions representing periods of time, the load card having three portions, one, a time indicating portion receivable in any selected one of the slots from either end thereof, two, a portion to receive identifying information and, three, a connecting portion sufficiently narrow to extend through the opening of the selected slot at any portion thereof to position and support the identifying information portion externally of the slot.

2. Production indicating means comprising like load control cards for use with a control board having spaced parallel slots and openings therefor which combined are substantially T-shaped in cross-section, the slots being divided by indicating means into portions representing periods of time, the load control cards each having three portions, one, a time indicating portion divided into periods of time and corresponding to the time indicating means of the board, two, a portion of a given size to receive identifying information and, three, a connecting portion sufficiently narrow in width to extend through the opening of the selected slot to support the identifying information portion externally of the selected slot, whereby the whole time indicating portion or any fractional part thereof may be positioned in any one of the slots in abutting engagement with other time indication portions, the connecting portions thereof extending through the openings to position and support their identifying portions externally of the slots.

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