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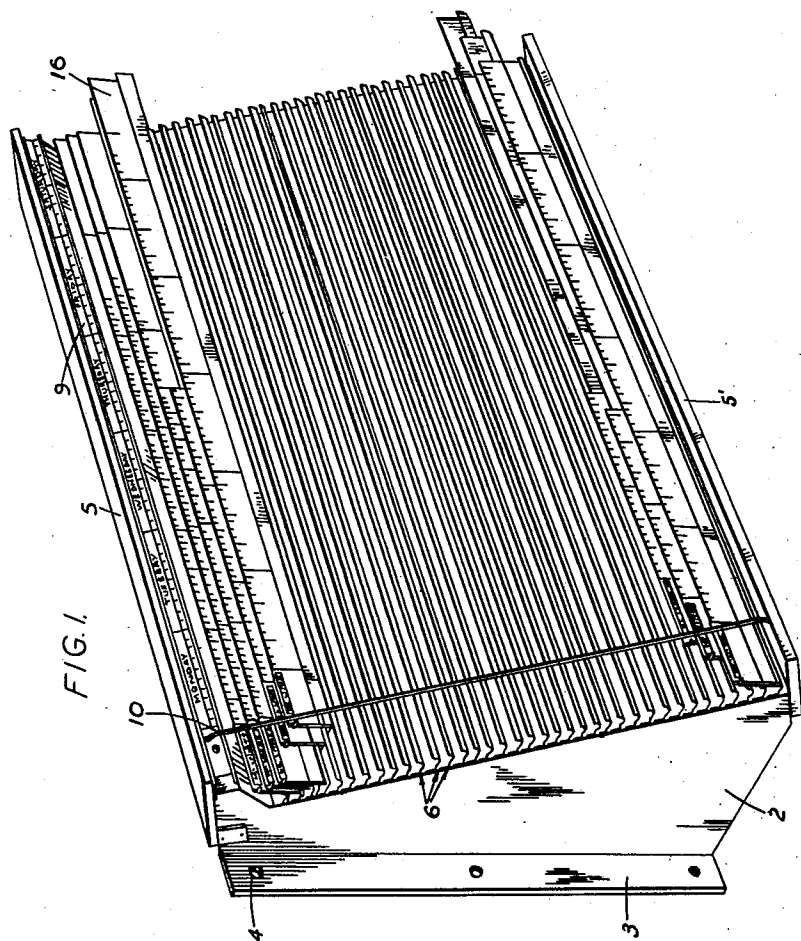
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2,608,012

INDICATING DEVICE FOR DISPLAYING VARIABLE INFORMATION

Filed Oct. 21, 1947

3 Sheets-Sheet 1



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FIG. 2.

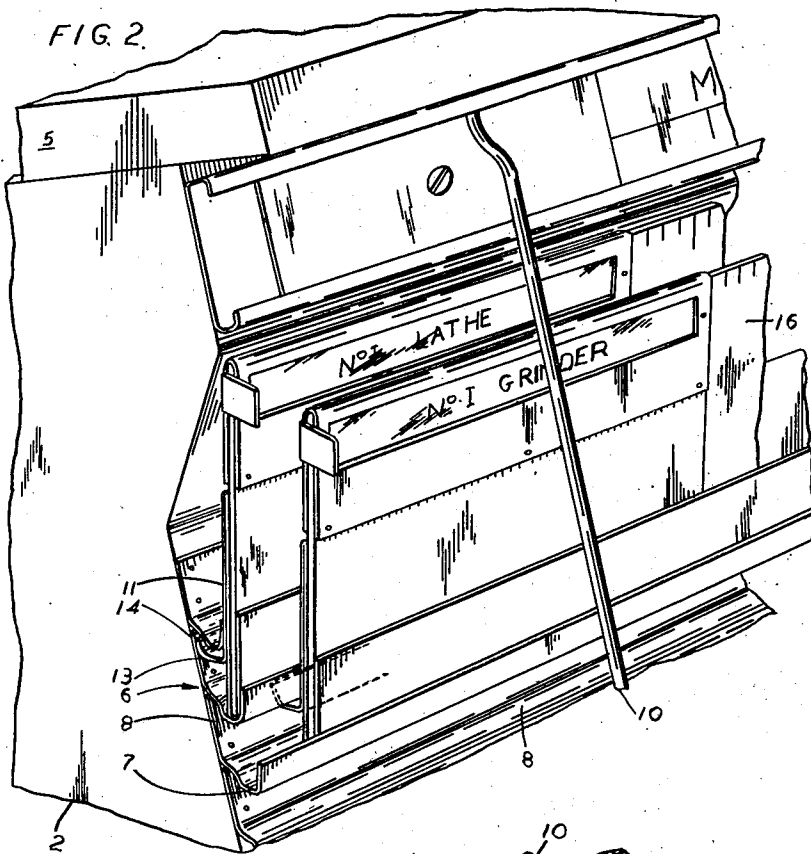
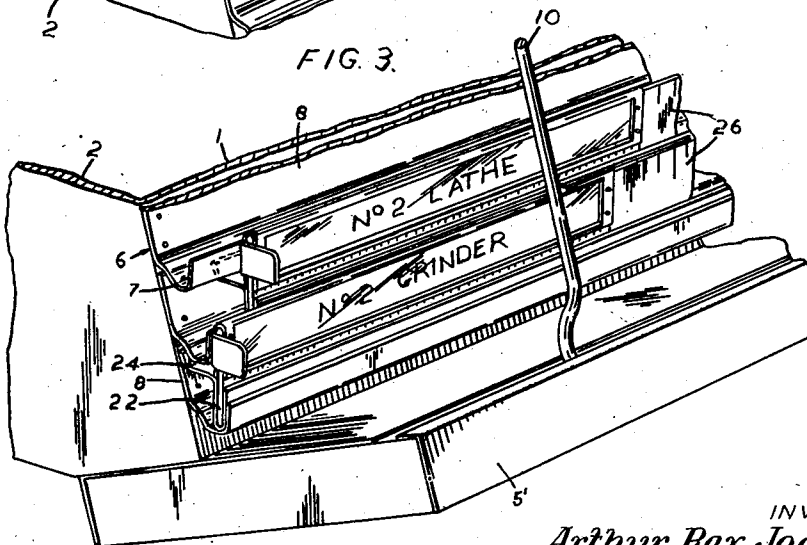


FIG. 3.



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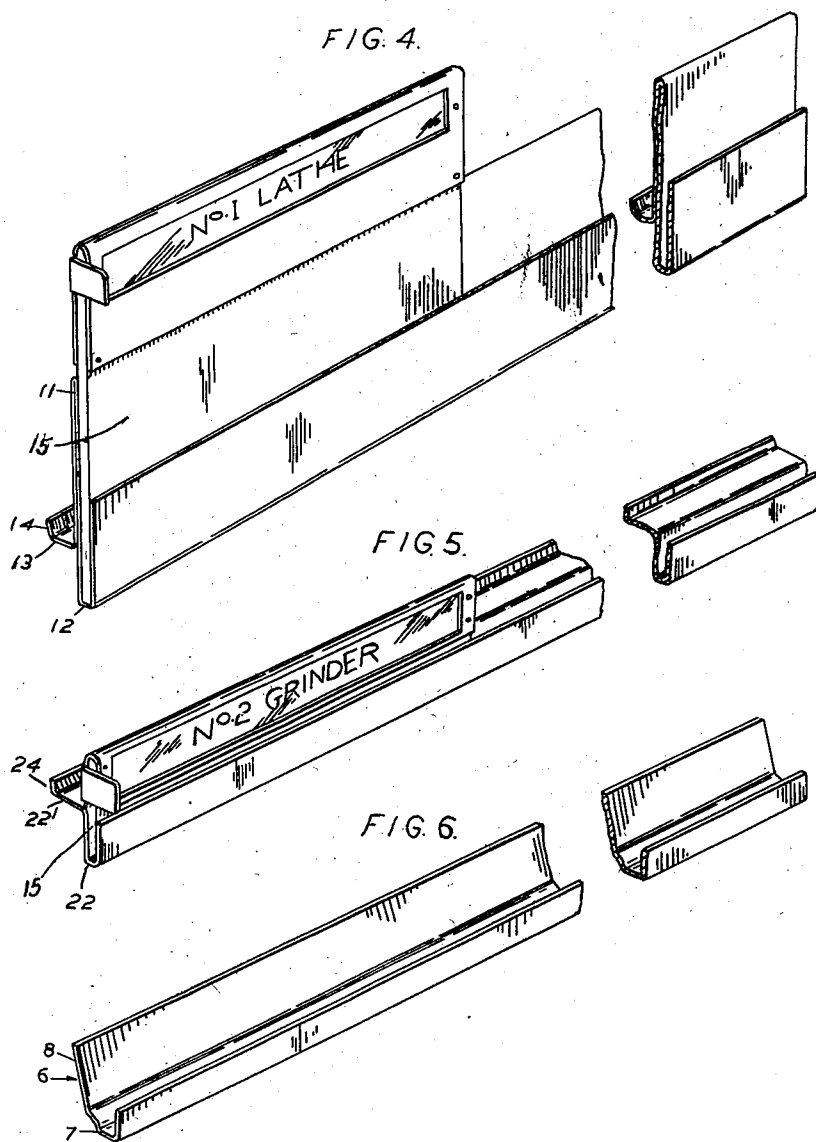
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INDICATING DEVICE FOR DISPLAYING VARIABLE INFORMATION

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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INDICATING DEVICE FOR DISPLAYING
VARIABLE INFORMATION

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4 Claims. (Cl. 40-124)

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The invention relates to a device for displaying variable information of the kind in which cards or the like indicators are mounted in carriers adapted to slide along a bank of parallel horizontal guides secured to a support and a horizontal scale marked in time or other units is provided so that the relationship between the items represented by the card or the like and the units of the scale can be read off. Such devices are described, for example, in British Letters Patent Number 449,015.

The devices as at present constructed are most commonly used for showing the state of work in a machine shop, each carrier being allocated to one machine. A card strip is made out for each job to be done by a machine, being cut to a length corresponding to the estimated number of hours during which the machine will be occupied by the job, and the various card strips for each machine are put end to end in the appropriate order in the carrier allocated to that machine. If the work does not proceed according to schedule the carrier is slid in relation to the time scale to an extent corresponding to the departure from schedule, so that the state of the work in progress can be seen at any time.

In the existing devices, and as shown in British Letters Patent No. 449,015, the carriers are bent strips of metal, channel-shaped along their lower edges, and they slide in fixed guides which form part of the frame or panel and which are strips of sheet metal with intumed upper and lower edges, that is to say, are substantially of C-shape in cross-section. These guides are arranged one above another, each being in contact or nearly in contact with the two guides respectively above and below it. To retain the card strips in the carriers the channels in the carriers must be deep enough to engage a substantial part of each strip. Now the visible part of each card strip is the only one of value for displaying information so in effect the area of the frame taken up by the parts of the cards hidden by the channels of the carriers and by the parts of the fixed guides extending above and below the carriers within them is unused and wasted.

It is an object of the invention to provide a device in which this disadvantage is overcome by overlapping the card strips and carriers in such a way that the only portion of each card visible is the portion carrying the required data. In this way, more cards can be accommodated on a given vertical space. It is also an object of the invention to provide a device in which by simple interchange of one type of card carrier for another,

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the device can be used either with specially cut card strips or with the ordinary job cards used in factories which bear the required information along their top edge.

In accordance with the invention, in a device of the kind specified, the bank of guides is arranged step-wise and each guide above the bottom one is formed as a trough open at the top, the bottom of which is spaced away from the support to accommodate a projection at the back of the carrier which slides in the guide below it.

In this way the information is visible on a vertical surface of each card, but the bank of cards forms a stepped bank and each carrier slides in the trough of one guide and is retained rigid by engagement of its flange behind the trough of the guide above it. While for convenience the bottom guide may be of identical form and identically mounted with the remaining guides, it is not necessary for the proper functioning of the device to step the trough away from the support.

A preferred form of the invention is illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of the device having some of the carriers entirely removed and others shown partly drawn out;

Fig. 2 is an enlarged perspective view of part of the device shown in Fig. 1;

Fig. 3 is also an enlarged perspective view showing a different form of card carrier mounted in position;

Fig. 4 is a perspective view showing a card carrier as shown in Figs. 1 and 2;

Fig. 5 is a perspective view showing a card carrier as shown in Fig. 3; and

Fig. 6 is a perspective view of a guide.

Referring to Figs. 1 to 3, the support for the bank of guides comprises a plate 1, bent to form side wings 2 having out-turned flanges 3 which are drilled as at 4 to accommodate screws for fixing the device to a wall or other vertical surface. Top and bottom plates 5 and 5' are provided. Each guide generally indicated at 6 (see Figs. 1 to 3 and 6) comprises a trough or trough-like portion 7, one wall 8 of which projects beyond the other, the projecting wall being secured to the support 1, for example, by spot welding so that the guides form a bank of horizontal troughs arranged stepwise. It will be noted that each trough is stepped out from the longer wall 8 so that when mounted upon the support 1 there is a space behind the trough. At the top of the device (see Fig. 1) a time or the like scale 9 is

mounted in guides and a cursor 10 may be provided.

The card carrier shown in Figs. 1, 2 and 4 is adapted for the carrying of ordinary works job cards 16 in which the data required to be immediately available for determining the progress of the job is visible at the top margin, while the other data given on the card is not required for such ready reference. The card carrier shown comprises an element of U section 11 having its two edges of trough section, the trough 12 carrying the card or the like so that the U section 11 forms a back support for the card and the rearwardly projecting ledge 13 and up-turned flange 14 formed at the free edge thereof constituting another trough or trough-like portion which cooperates with a trough 7 in retaining the carrier in place. It will be seen from Fig. 1 that each carrier is inserted into the device with its card carrying trough 12 sliding in the trough 7 of the corresponding guide, whilst the upwardly turned projecting flange 14 engages behind the trough 7 of the guide next above it. The upper margins of the cards 16 are hence visible as an overlapping bank. An end tab 15 is provided in each card carrier to serve as an index for the jobs shown by the cards and it will be appreciated that cards may be readily placed in the guides or withdrawn and any card be interposed between any pair of adjacent cards in the series and, furthermore, as is customary with these devices, the whole guide may be displaced sideways in the direction of the time scale to allow for hold-ups in production, or for a speed-up in production such that the number of jobs indicated by the cards will take less than the estimated time.

The card carriers shown in Figs. 3 and 5 are adapted for the more customary card strips 26 and in this case each card carrier comprises a trough or trough-like portion 22 at one side to receive an edge of a card or the like and a ledge 22' having its free edge terminating in an upwardly turned flange 24, projecting at the other side for engagement behind the trough 7 of the guide above it. It will be seen from Fig. 3 that the trough 22 of each carrier rests in the trough 7 of the corresponding guide and the flange 24 projects behind the trough 7 of the guide above it, thus holding the carrier rigid in position, but permitting sliding movement along the guides.

The construction as shown in the figures is adapted to be made of sheet metal. The invention, however, is not limited to a sheet metal construction and other material, such for example as plastics may be substituted. Instead of a plate 1 the support may be formed as a framework.

I claim:

1. A device of the character described for displaying variable information, comprising a support, a bank of guides arranged step-wise on said support, each of said guides being formed with a trough portion open at the top and each of said guides above the bottom one having said trough portion spaced from said support, and a plurality of removable carriers, each carrier being

slidably mounted in the trough portion of one of said guides and having a projection on its back extending into the space between the trough portion of the guide next above and said support.

2. In a device of the character described for displaying variable information, the combination of a support, a bank of guides secured to said support and arranged step-wise thereon, and a plurality of carriers removably mounted in said guides, each of said guides having a portion formed as a trough open at the top, and each of said troughs above the bottom one being spaced outwardly from said support, each carrier being slidably supported in the trough of one of said guides and having a rearwardly extending trough portion receiving the trough of the guide next above, said trough portion on said carrier extending throughout the length of said carrier, and the free edge of said trough portion extending into the space between the trough of said latter mentioned guide and said support.

3. A device of the character described for displaying variable information, comprising a support and a bank of guides mounted on said support in stepped relationship, each of said guides having a trough portion open at the top, a plurality of carriers each of which is slidably mounted in a respective guide trough, each of said guides above the bottom one having said trough portion spaced outwardly from said support and means extending rearwardly from each of said carriers cooperatively engaging the adjacent higher guide to slidably retain said carriers in said guides.

4. A device of the character described for displaying variable information, comprising an inclined support and a bank of guides secured thereto and arranged step-wise thereon, each of said guides having a portion formed as a trough open at the top, each of said guides above the bottom one having said trough portion spaced outwardly from said support, a plurality of carriers arranged to be individually disposed on said guides, each of said carriers having an elongated portion formed as a U-shaped trough with upwardly directed walls, the rear wall of said trough being bent to provide an outwardly extending ledge, the outer edge of which forms an upwardly turned flange, said U-shaped carrier trough arranged to be disposed within said guide trough for sliding movement therein and said carrier ledge flange arranged to cooperate with the adjacent guide to retain said carrier in display position.

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