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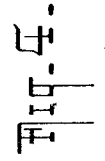
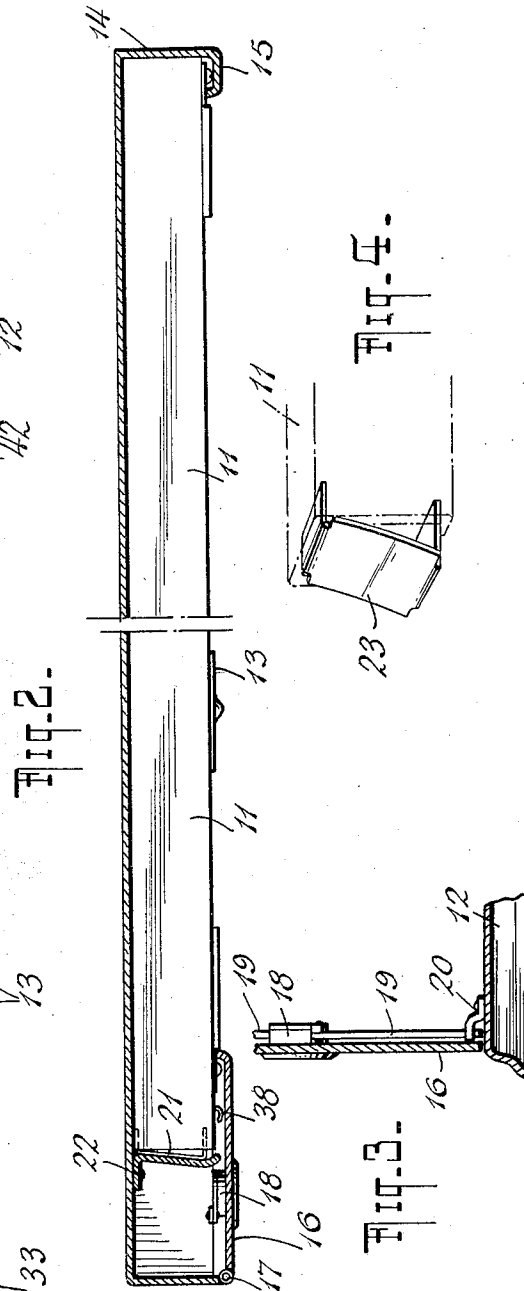
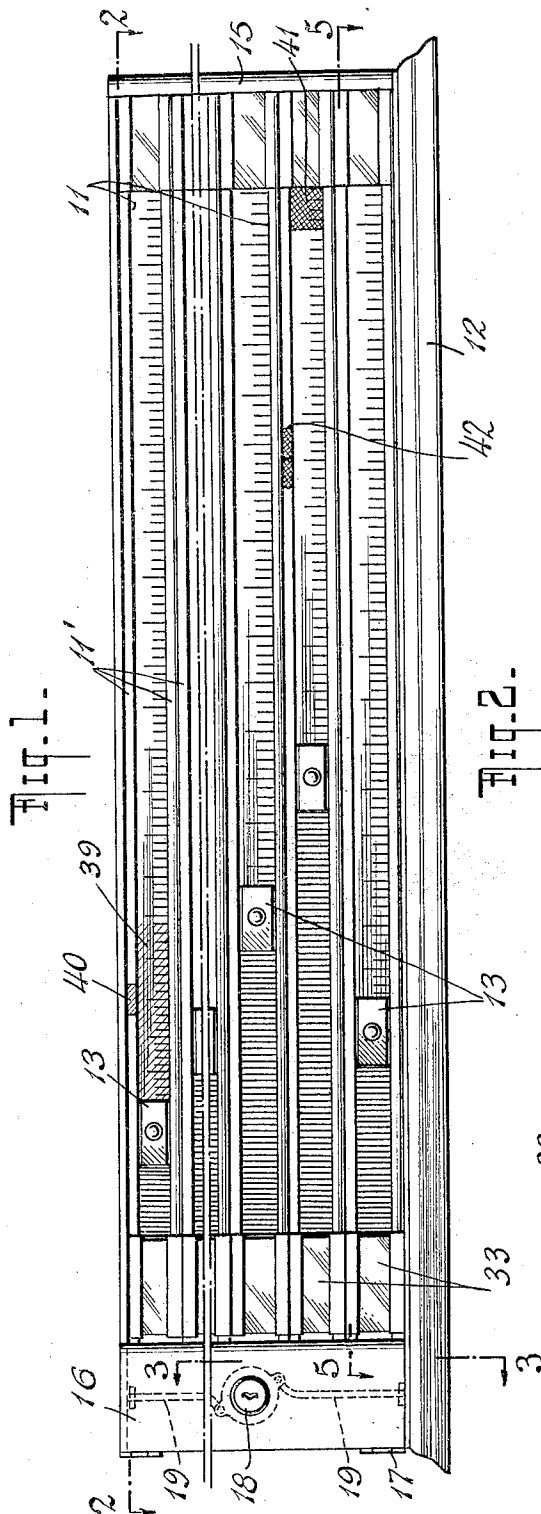
E. SZEPESI

1,889,006

INSTRUMENT FOR GRAPHIC CONTROL

Filed Sept. 8, 1931

2 Sheets-Sheet 1



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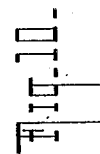
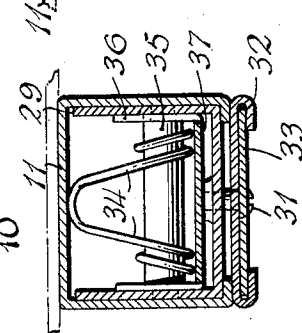
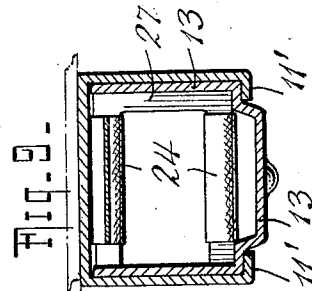
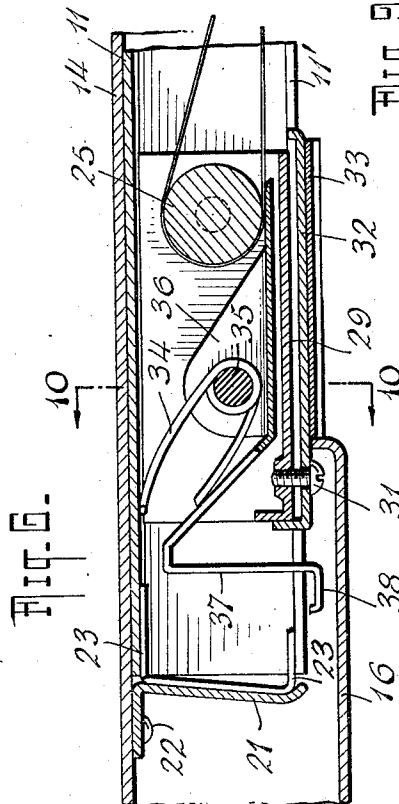
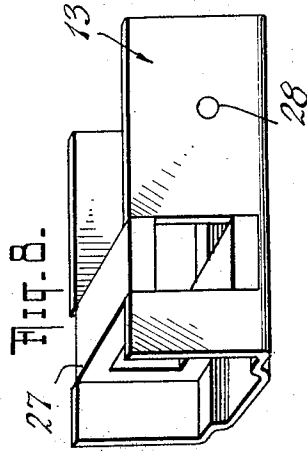
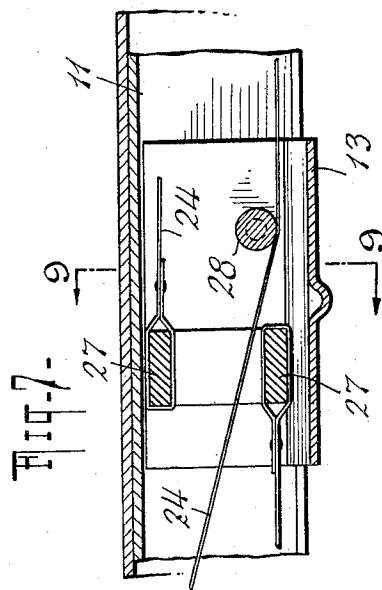
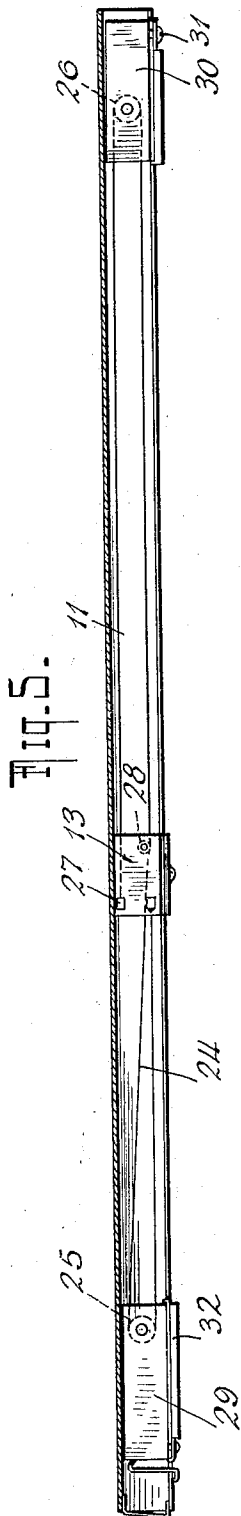
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INSTRUMENT FOR GRAPHIC CONTROL

Filed Sept. 8, 1931

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

EUGENE SZEPESI, OF SCARSDALE, NEW YORK

INSTRUMENT FOR GRAPHIC CONTROL

Application filed September 8, 1931. Serial No. 561,617.

This invention relates to instruments for graphic control and is an improvement over the device described in my United States Letters Patent No. 1,623,216, issued April 5, 1927.

The instrument for graphic control described in the above-mentioned patent is a graphic bar chart composed of individual units placed in a frame to form a graphic chart board, which individual units can be taken out or rearranged in any desired order without disturbing the magnitudes indicated on the bar units. Each unit comprises an elongated casing having a graduated ribbon mounted therein and connected with a sliding indicator member guided along the front of the casing when adjusted to cooperate with said ribbon in indicating the status of the particular subject individual to said unit. Such an instrument is usually employed in workshops and offices and must be placed in such a way that it will be easily accessible to persons interested. It has been found, in some instances, that unskilled persons have tampered with the instrument while it was being employed and, by shifting the indicating members, have changed the adjusted readings of the instrument, thus making it useless.

An object of the present invention is to prevent the possibility of adjustments being made by unauthorized persons by providing a braking device for the ribbon of each unit which will hold said ribbon and its associated indicating member against movement until released by said device.

Another object is to provide an instrument for graphic control wherein the individual units comprising the same and the associated braking devices have a common lock therefor, so that access by unauthorized persons to said units for purposes of removal or adjustment is prevented.

A further object is to provide a control unit with markings which will enable an observer to determine when the supply of any stock material represented by said unit is below the minimum or in excess of the maximum requirements.

The above and other objects will appear

more clearly from the following detailed description, when taken in connection with the accompanying drawings, which illustrate a preferred embodiment of the inventive idea.

In the drawings—

Figure 1 is a front elevation of the instrument showing a series of control units in position;

Figure 2 is a horizontal cross-section taken on the line 2—2 of Figure 1;

Figure 3 is a vertical section taken on the line 3—3 of Figure 1;

Figure 4 is a perspective view of a spring used in conjunction with the bar of each unit;

Figure 5 is a horizontal cross-section through a control unit, taken on the line 5—5 of Figure 1;

Figure 6 is a fragmentary longitudinal section, on an enlarged scale, of one end of a unit;

Figure 7 is a similar view of the indicating member of each unit;

Figure 8 is a perspective view of said indicating member;

Figure 9 is a transverse section of the indicating member, taken on the line 9—9 of Figure 7; and

Figure 10 is a transverse section on the line 10—10 of Figure 6.

In the preferred form of my invention shown in the drawings, I employ a plurality of bars 11 of channeled formation constituting graphic units and each having an indicating member 13. Said bars are supported within a casing 14 which is mounted on a base 12 and which is provided with a flange 15 at one end for engaging and retaining the adjacent ends of the bars 11 in position within said casing. The base 12 has at its other end a closure member 16 hinged at 17 and having a lock 18. Any suitable lock may be used in connection with said member, such as one employing sliding bars 19 (see Figure 3) which, in locking position, engage members 20 and thus prevent the closure 16 from being opened. It will be seen that, when the casing is locked, the closure 16 overlaps and engages the adjacent ends of the bars 11 and, together with the flange 15, will prevent any

bar 11 from being taken out of the casing 14 by an unauthorized person.

An abutment 21 is secured to and extends vertically of the casing 14 adjacent the end carrying the closure 16 and is engaged by spring members 23 carried by the various bars 11. As shown in Figures 4 and 6, each bar 11 is provided with a spring member 23, the normal tendency of which is to exert a yielding pressure against the abutment 21 so as to frictionally retain said bar in position and still enable it to be withdrawn from the casing by an outward pull upon the bar when the closure 16 is opened.

Each bar 11 comprises, in addition to the indicator 13, a ribbon 24 which passes around rollers 25 and 26 situated at opposite ends of said bar. Each end of the ribbon 24 is attached to one of the legs of a U-shaped member 27 disposed within the indicator 13 and the intermediate portion of said ribbon engages a roller 28 which is used as a guide for the purpose of positioning the graduated portion of said ribbon adjacent the front or open side of the bar, as best shown in Figure 5.

The roller 25 is journaled in a sliding member 29 of cross-sectional U-shaped formation which may be moved along the bar 11 so that the position of the roller 25 may be changed for the purpose of adjusting the tension of the ribbon 24, or varying the effective size of the bar in accordance with different ribbon lengths. A similarly shaped sliding member 30 is provided for the roller 26 situated at the opposite end of the bar.

The sliding member 29 is firmly held against the inner sides of the flanges 11' of the bar by means of a screw 31 carried by a card holder 32 which engages the outer sides of said flanges. By loosening said screw, the member 29 may be shifted longitudinally of the bar to any desired position and then again secured in place. The holder 32 carries a card 33 upon which suitable indicia may be inscribed.

A spring 34 (see Figures 6 and 10) is situated within the U-shaped member 29 and is coiled about a pin 35 mounted in the sides of said member and forming a pivot for the braking element 36, one end of which is adapted to normally contact, under the influence of said spring 34, the portion of the ribbon extending about the roller 25, thereby frictionally holding said ribbon against movement when a pull is exerted upon the indicator 13 in either longitudinal direction. The other end 37 of said element 36 is bent and terminates in a finger piece 38 which projects beyond the open side of the bar so that the operator, after opening the closure member 16, may readily depress said piece 38 against the tension of the spring 34 and thus disengage the element 36 from the ribbon 24, whereupon the indicator may be easily pushed or pulled along said bar.

When one or more of the units is used, for instance, to determine the amount of stock materials on hand, means are provided on said unit or units for indicating when the supply of said materials is below normal or in excess of the maximum requirements. Thus, as shown in Figure 1, the indicator 13 of the uppermost unit is located near the left of the bar 11 and in such position there is exposed to view a portion 39 of the ribbon 24 which is colored red, thereby indicating immediately to the observer that the supply of stock represented by the unit is below the minimum requirements for the jobs on hand. Then, as said stock is replenished, the indicator is moved to the right. As this is done, the exposed part of the ribbon moves to the left owing to its arrangement within the bar of the unit and, when the red portion is no longer exposed to view, the observer then knows that the stock on hand is above the minimum requirements. In order to further enable the observer to determine when the minimum is being approached, a red marker 40 may be placed upon one of the flanges 11' of the bar 11 so that as the supply diminishes and the indicator 13 is moved to the left, thereby approaching the marker 40, it can be determined when to replenish the supply to avoid it reaching the point of minimum requirement. It can likewise be determined when the stock supply is approaching or has exceeded the maximum needed. Thus, a portion 41 (see second unit from the bottom) of the ribbon 24 may be colored green and when such portion is exposed, this is indicative that the maximum has been exceeded. Or, as the indicator 13 nears the green marker 42, and before the portion 41 is exposed, the observer becomes aware that the maximum supply is being approached.

What is claimed is:

1. A graphic control device, comprising a supporting structure, graphic units carried by said supporting structure, each of said graphic units comprising a bar, end members slidable along said bar, rollers mounted in said members, an indicator ribbon mounted for movement within the bar and passing over said rollers, said ribbon having its tension adjusted by sliding movements of said end members and an indicator to which the ends of said ribbon are connected.

2. A graphic control device, comprising a supporting structure, graphic units removably mounted in said supporting structure, a locking device engaging said units preventing removal thereof from said structure, each of said graphic units comprising a bar, end members slidable along said bar, rollers mounted in said members, an indicator ribbon mounted for movement within the bar and passing over said rollers, an indicator to which the ends of said ribbon are connected, and means for releasably holding said rib-

bon in an adjusted position, said means being releasable only when said locking device is disengaged from said units.

3. A graphic control device, comprising a casing, graphic units within said casing, a closure for said casing, means for locking said closure to prevent removal of said units from said casing, each of said units comprising a bar, end members slidable along said bar, a roller in each of said end members, an indicator ribbon mounted for movement within said bar and passing over said rollers, an indicator to which the ends of said ribbon are connected, and means for holding said ribbon in an adjusted position, said means being inaccessible when said closure is locked.

4. A graphic control device, comprising a casing, graphic units within said casing, a closure for said casing, means for locking said closure to prevent removal of said units from the casing, each of said units comprising a bar, end members slidable along said bar, a roller in each of said end members, an indicator ribbon mounted for movement within said bar and passing over said rollers, an indicator to which the ends of said ribbon are connected, and a braking element pressing against one of said rollers and holding said ribbon in an adjusted position, said element being releasable only after said closure has been unlocked.

5. A graphic control unit, comprising an indicator ribbon, means to adjust said ribbon in the direction of its length, and a braking element engageable with said ribbon for retaining the same in adjusted positions.

6. A graphic control unit, comprising an indicator ribbon, an indicator to which said ribbon is connected for adjusting the same, a guide roller for said ribbon, and a spring-pressed braking element associated with said roller and engageable with said ribbon to retain the same in adjusted positions.

7. A graphic control unit, comprising a bar, an indicator ribbon movable along said bar, a sliding member supported by said bar and to which said ribbon is connected, and a braking element pivoted to said sliding member for engagement with said ribbon.

8. A graphic control unit, comprising a bar, an indicator ribbon movable along said bar, a sliding member supported by said bar and to which said ribbon is connected, a braking element pivoted to said sliding member for engagement with said ribbon, and means to secure said sliding member in its adjusted positions relative to said bar.

9. A graphic control unit, comprising a graduated indicator ribbon, and an indicator to which said ribbon is connected and which is movable relative to said ribbon and along the graduations thereof, said ribbon having distinguishing portions thereof exposed to view only when said indicator is in certain positions relative to said ribbon.

10. A graphic control unit, comprising a bar, an indicator ribbon movable along said bar and provided with distinguishing portions normally invisible, an indicator for moving said ribbon to expose said portions of the ribbon, and markers on said bar cooperating with said indicator.

11. A graphic control device comprising a supporting structure, graphic units removably mounted in said supporting structure, and a locking device carried by said structure and overlapping portions of said units with other portions thereof exposed to view to prevent removal thereof when said device is locked.

12. A graphic control device comprising a supporting structure, graphic units removably mounted therein, cooperating means at opposite ends of said structure and engaging said units to releasably retain same in said supporting structure, said means including a closure pivoted to one end of said structure, and means to lock said closure in closed position.

13. A graphic control device comprising a supporting structure, graphic units removably mounted therein, an indicator carried by each unit and movable to various positions relative thereto, locking means for said units preventing their removal from said structure and means to retain said indicators in adjusted positions, said means being releasable only when said locking means is inoperative.

In testimony whereof, I have affixed my signature.

EUGENE SZEPESI.