With respect to illuminable diagrams, particularly with track control desks employed with modern interlocking plants, it is desirable that the diagram to be represented is composed of single units arranged in mosaic, so-called diagram elements, in order to obtain a plurality of uniform manufacturing parts. These diagram elements mostly comprise two principal parts, i.e. the upper portion of the element carrying an illuminable top panel, and the lower portion which, e.g. a so-called lamp holder carrying the signal lamps for illuminating said top panel of the element. The common support for all of the individual elements is formed by a grate consisting of a number of flat bars arranged side by side at intervals according to the length or width of the respective diagram elements.

According to conventional embodiments of this kind, the lower parts of the elements containing the lamp holders are either screwed to the upper portion of the element which on its own part is screwed to the grate bars, or the lamp holder is directly screwed to the grate bars, while the upper part of the element is plug-connected with the lamp holder, or is plug-connected with intermediate bars to which the grate bars are screwed.

In order now to be able to utilize the element for all possible signal purposes, in particular for illuminating track systems with the aid of diagram elements whose top panels are provided with a wide variety of signalling symbols, it appears to be necessary to furnish the whole length of the grate bars with tap holes. However, since every diagram comprises a number of individual diagram elements which need not be illuminable—so-called blank elements—it will be obvious that most of the tap holes remain unused, i.e. resulting in a useless expense in machining the holes. Experience has shown that generally and depending on the kind of track diagram fifty and more per cent of the provided tap holes are usually unnecessary. Since the grate bars are appropriately made of drawn or rolled flat iron, the drilling and threading thereof remains an expensive and time-wasting procedure. Likewise the straightening of the intermediate bars, which is necessary for obtaining a flush positioning of the diagram elements, has proved to be rather difficult and requires much time.

For avoiding this drawback it has already been suggested to directly plug-connect the upper parts of the diagram elements with grate bars which are grooved both crosswise and lengthwise. In order to further eliminate the necessity of having to screw the lower parts of the diagram elements, in particular, the so-called lamp holders, to the grate bars, it is else in order to be able to mount the elements as a whole and without the employment of intermediate bars, directly to the grate bars, the mounting of the lower parts of the elements or of the elements as a whole directly to the grate bars is effected, according to the invention, by means of screwable or plug-in devices.

In accordance with this invention, it is possible to mount the parts or portions of the diagram elements to the grate bars either by means of the so-called slides and clips, or to plug-in the whole diagram elements, by means of two or more slotted, preferably flat-type plug springs arranged opposite the diagram element, into spring slots provided on the grate bars and which slots are the crosswise grooves therein.

The above-mentioned and other features and objects of this invention and the manner of attaining them will become more apparent and the invention itself will be best understood, by reference to the following description of an embodiment of the invention taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a side elevation partly in section of a lamp holding element and a translucent top panel, in accordance with the invention;

Fig. 1A is an isometric exploded view of the structure shown in Fig. 1;

Fig. 2 is a side view of a grate bar and a slide shown partly in section;

Fig. 2A is an isometric view of a lamp holding element showing the aligning lugs thereof;

Fig. 3 is an isometric view of a slide;

Fig. 4 is an isometric view of a clamp;

Fig. 5 is a top view of a number of lamp holders arranged side by side between adjacent grate bars;

Fig. 6 is a front view of a translucent top panel cover showing its guiding and retaining springs;

Fig. 7 is a side view of the top panel cover shown in Fig. 6;

Fig. 8 is a front view of a guiding and retaining spring used in Figs. 1, 1A, 6 and 7;

Fig. 9A is a top view of a pair of grate bars; and

Fig. 9B is a top view of a pair of grate bars with a plurality of aligned diagram elements in operating position therebetween and presenting a replica of a portion of the track layout.

Referring now to Fig. 1, there is shown a lamp holding element 1 partly in section and mounted between a pair of parallel grate bars 4. The element 1 is provided with a pair of oppositely extending lugs 2 as seen more clearly in Fig. 2A, and which lugs are adapted to slidingly fit down into corresponding vertical slots 3 of a pair of adjacent grate bars 4 as can be clearly seen in Fig. 4. The elements 1 are provided with recesses 1a at opposite ends as shown clearly in Fig. 2A. The element 1 is supported in position between a pair of adjacent grate bars by means of a pair of slides 5 and winged shape clamping pieces 9. The profile of the slides 5 is clearly shown in Fig. 3 and consists of a U-shaped structure having a pair of outwardly extending guiding lugs 6, the purpose of which will be later explained. In each side of grate bars 4 there is cut a longitudinal groove 7 normal to the grooves 3 as shown in Figs. 1, 1A, 2 and 9A. Each of the slides 5 is adapted to be applied to a grate bar 4 by straddling the bar as shown in Fig. 2, namely, the opposite lugs 6 of each slide is adapted to slide down a pair of adjacent crosswise grooves 3 and then slidably move longitudinally in grooves 7 on opposite sides of the bars.

The upper part of recesses 1A of elements 1 is adapted to fit against the upper parts of the inner lugs 6 of slides 5 as is clearly shown in Fig. 1. Cooperating with each slide 5 is a wing-shaped clamping piece 9 which is screwed to the upper part of slide 5 by means of screw 10 which passes through threaded aperture 17 thereof as shown in Figs. 1, 1A and 2. One of the wings 9a of clamp 9 is placed in contact with the upper surface 1B of element 1 and exerts a clamping pressure against element 1 by forcing it downwardly against lug 6. Simultaneously the screw 10 bears against the up-
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What is claimed is:

1. An adjustable arrangement for illuminable diagrams comprising a plurality of spaced, parallel mounting bars, each bar having a longitudinal groove cut in opposite surfaces thereof and a crosswise groove cut in each of said surfaces, said crosswise grooves intersecting the longitudinal groove on the corresponding surface of said bars, the sets of grooves of each bar in register with like grooves of an adjacent bar, a plurality of sliders for mounting on said bars, each slider having a U-shape and having a pair of guiding lugs, one at each extremity of said slider, each lug adapted to pass through opposite crosswise grooves in a first direction and to then pass through the opposite longitudinal grooves in a second direction, said second direction normal to said first direction, main clamping means intermediate the legs of said slider for clamping said slider to said bar after movement thereof in said second direction, whereby tension is exerted between said guiding lugs and a shoulder of said longitudinal grooves, auxiliary means under control of said main clamping means, said auxiliary means adapted to exert a clamping action between itself and a portion of said slider intermediate its legs, each said slider adjustably movable along the length of a bar.

2. An adjustable arrangement as claimed in claim 1, wherein the lugs at the extremities of said sliders extend outwardly from said extremities in at least two directions, each direction normal to the other.

3. An adjustable arrangement as claimed in claim 1, wherein each of said sliders has a portion intermediate its extremities which is complementary in shape to a surface of said bars.

4. An adjustable arrangement as claimed in claim 3, wherein said intermediate portion is provided with a threaded aperture therethrough, said main clamping means adapted to cooperate with the threads of said aperture.

5. An adjustable arrangement as claimed in claim 4, wherein said main clamping means comprises an adjustable screw.

6. An adjustable arrangement as claimed in claim 5, wherein said auxiliary clamping means comprises a channel shaped member with outwardly extending flanges, said outward extension in a direction normal to the sides of said channel.

7. An adjustable arrangement as claimed in claim 6, further comprising a first diagram element adapted to fit between adjacent bars, each element adapted to be clamped by at least one of said outwardly extending flanges to a slider, a second diagram element adapted to cover said first element, and tension means coupled to said second element, said tension means adapted to cooperate with a pair of registering crosswise grooves in adjacent bars.

8. An adjustable arrangement as claimed in claim 7, further comprising four of said sliders and associated clamping means, each of said sliders spaced from the other on a bar and opposite a like pair of sliders on an adjacent bar, said four sliders and their associated clamping means adapted to secure a first diagram element.

9. An arrangement as claimed in claim 7, wherein said tension means comprise a slotted spring element having a width substantially equal to the width of a crosswise groove.

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