April 18, 1933. A. S. BLUMENTHAL 1,904,674

COMBINED GRAPHIC OUTLINE AND WORK LOCATING TEMPLATE FOR BUILDING MODELS

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Fig. 2

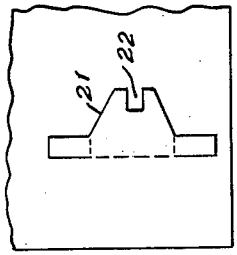


Fig. 4

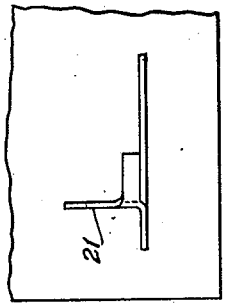


Fig. 3

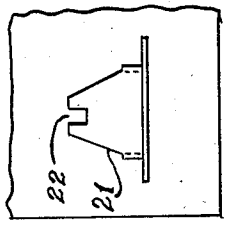


Fig. 1

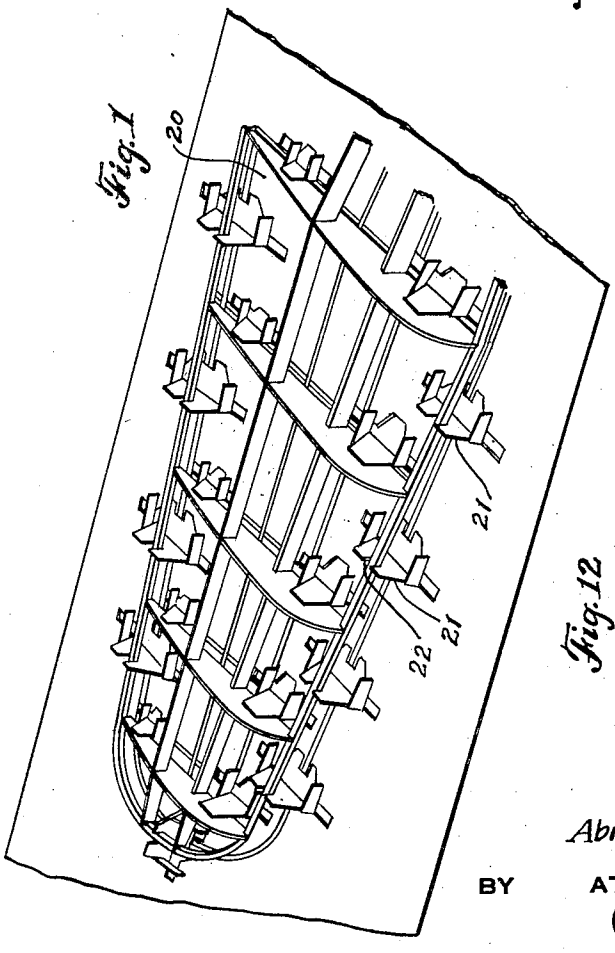


Fig. 13

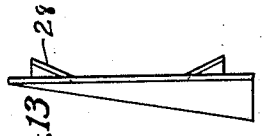
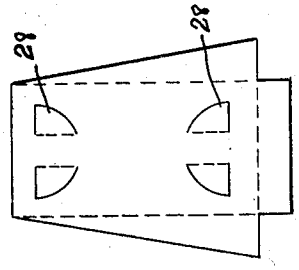


Fig. 12



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COMBINED GRAPHIC OUTLINE AND WORK LOCATING TEMPLATE FOR BUILDING MODELS

Filed Feb. 29, 1932 2 Sheets-Sheet 2

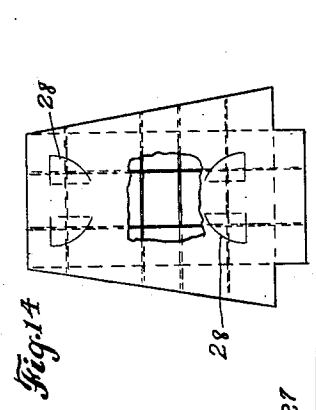


Fig. 14

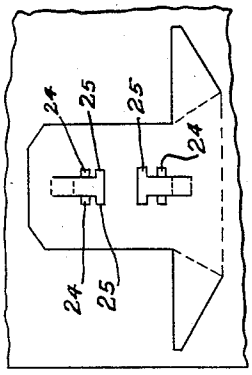


Fig. 8

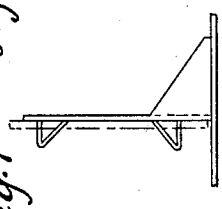


Fig. 7

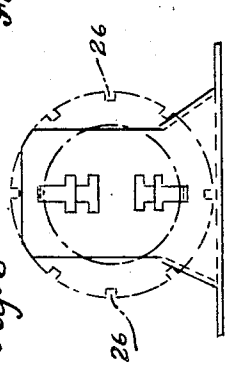


Fig. 6

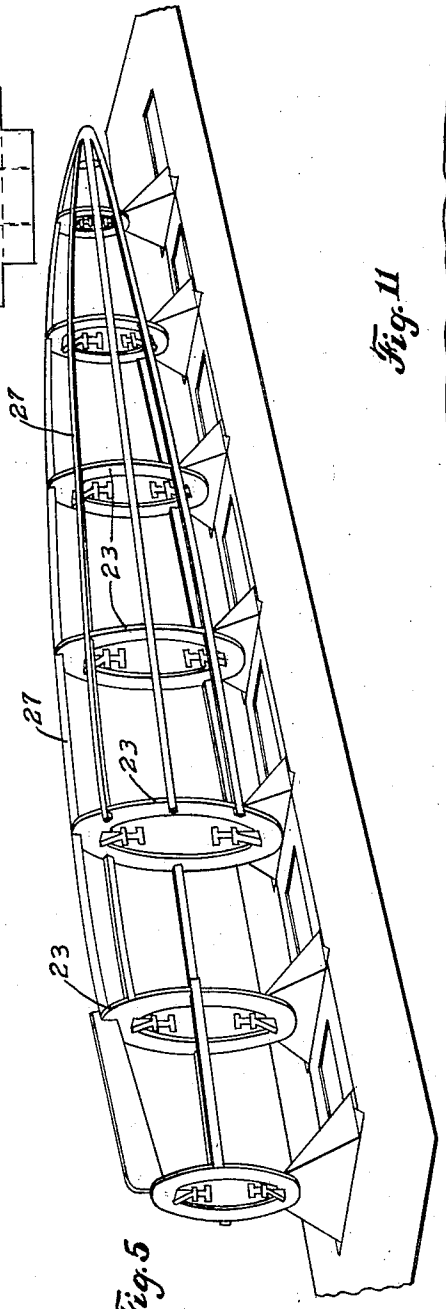


Fig. 5

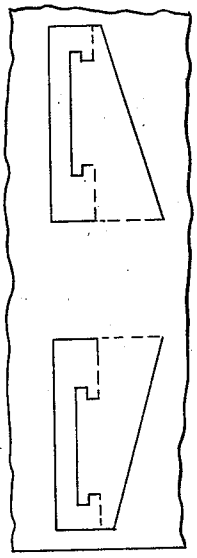


Fig. 11

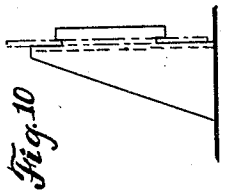


Fig. 10

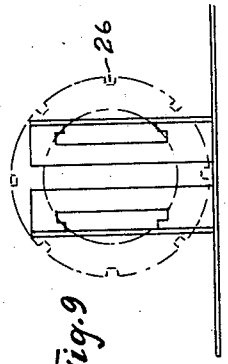


Fig. 9

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UNITED STATES PATENT OFFICE

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COMBINED GRAPHIC OUTLINE AND WORK LOCATING TEMPLATE FOR BUILDING MODELS

Application filed February 20, 1932. Serial No. 595,040.

This invention relates to new and useful improvements in the construction and building up, especially of toys of the kind, where the material for such building is delivered to the child in the form of a great number of pieces.

While this sort of play may be highly educational, especially as a mental training, the task, however, involved in such construction is often too great, and especially disheartening to the child, because of its inability to secure the proper assembly and incidental alignment of the parts involved; this applies especially to large pieces of toys, such as airplanes, or the like.

It is for the purpose of alleviating such conditions that I have constructed this invention, which may properly be viewed as a combined graphic outline and work locating template for building models, especially pertaining to toys and toy-airplanes; the most available form of the said graphic outline being a blueprint.

It will be evident from the purpose of my invention and the practical embodiment of the idea, that the said combined graphic outline and work locating template may be made on and from any suitable material, such as cardboard, metal, etc.; while various methods may be resorted to for procuring the indicating means. In like manner the said combined graphic outline and work locating template may be made in several parts instead of in one unit; and a piece of thin wire may well be bent and formed to cooperate with or take the place of some or all of the specially bent tabs, serving as a support as well as guiding and indicating means for the proper assembly of the larger and more complicated parts of, in this instance, an airplane.

As this device is comparatively simple of construction, the cost of production should be proportionately low.

With the above and other objects in view, this invention consists of the novel features of construction, combination and arrangement of parts, hereinafter fully described, claimed and illustrated in the accompanying drawings forming part of this specification, and in which similar characters of reference indicate corresponding parts in all views, and in which:

Figure 1 is a perspective top plan view of part of an airplane wing illustrating the application of my device; while Figs. 2, 3 and 4 are detail views relative thereto.

Figure 5 is a perspective side view of the skeleton frame of a fuselage, to which my device in like manner has been applied; while Figs. 6, 7, 8, 9, 10 and 11 are detail views pertaining to the illustration shown in Figure 5; and Figures 12, 13 and 14 show still further modifications of these latter views.

Referring more particularly to the drawings, Figure 1 shows an airplane wing constructed and built according to my device, which in this instance comprises first the complete graphic outline 20 of an airplane wing, and next the work locating template 21, erected upon, made from and forming an integral part of the said graphic outline.

It would appear from the nature of the device that the latter may very conveniently, although not necessarily, be made from cardboard.

While thus in this and similar cases the said graphic outline serves as a complete illustration of and guidance to the contemplated construction, the latter is facilitated and made possible to a degree of perfection in regard to correct assembly and alignment of the several parts by the employment of the said templates, which are disposed at proper places upon the graphic outline and arranged in such a manner that they will serve to keep in alignment and retain every member or unit of the pieces for building up the said model. The said templates are indicated upon the graphic outline in a manner as has been especially shown in Figure 2, wherein the heavy lines show the lines to be sheared, while the dotted lines represent the lines upon which the thus cut out figures must be bent; it being noted that the said figure remains an integral part of the graphic outline proper and does not separate therefrom. The said cut out figure thus forming the template has been shown after it has been cut out and bent, in a frontal position in Figure 3 and in a sidewise position in Fig-

ure 4, while the approximate number of templates for constructing an airplane wing have been shown ready for operation in Figure 1.

With the necessary number of templates cut out of the graphic outline and erected upon the latter, it will be evident, that all that is necessary for building up an airplane wing would be to arrange the different pieces of building materials, which have been previously numbered to tally with corresponding numbers on the graphic outline, in the slots 22 of the templates, as shown especially in Figure 2, and then glue, or solidly connect the said pieces of building materials together in any suitable manner; and the building of a perfect wing, as described, will have been accomplished.

It will be evident that many other forms of templates may be made according to the same principle, the integral combination of a graphic outline and work locating templates with the latter arranged at stategic points without any detrimental effect to the clear and unobstructed view, and understanding, of the said graphic outline.

Thus in Figure 5 is shown the building of a fuselage according to my idea, as the bulkheads 23, shown herein, are mounted on templates provided in the manner as described, whereby suitable spacing and proper alignment may be obtained.

The said templates used in Figure 5 may be provided, as shown in Figure 8, where again the heavy lines are to be sheared while the bending is done on the perforated lines. There is, however, in this view the exception to be noted, that in shearing the said heavy lines, the squares 24 in the figure which forms the template, are cut out altogether in order to form seats for the end-pieces 25, 25, when the said cut out figure is bent into a template adapted to receive a bulkhead hung thereon.

Figure 7 merely shows a side view of the template, cut out in Figure 8, and which has been folded along the dotted lines and is in position to receive a bulkhead, while in Figure 6, which is a front view of the said template, the said bulkhead has been actually hung in adjusted position ready to receive in the slots 26 the longitudinal members 27 of the fuselage, as shown in Figure 5.

Figure 11 shows a modification of my idea as embodied in Figure 8, to the extent of providing a different form of templates, although on the same general principle, as also in this view the shearing is done on the heavy line, and the bending of the parts, thus cut out, on the dotted lines; the form of template thus provided is shown in side view in Figure 10, and in front view in Figure 9, ready for operation. In Figure 12 is shown still another modification of my device, provided in a manner as formerly described, for the mounting and adjusting of a bulkhead.

From Figure 13, which is a side view of the embodiment shown in Figure 12, it will clearly appear that the cut out tabs 28 will have a tendency, when slightly bent, to securely hold the frame of the bulkhead in position.

In Figure 14 is shown a thin wire thread partly embedded in the cardboard. It will be evident that in making the different forms of templates, as set forth, such wire-threads may well be used independent of or partly in combination with the said cardboard.

It is also thought appropriate to state in this connection, that, while the said templates have been shown in combination with and forming part of a graphic outline, the said templates may well be made and used separately or in more or less intimate connection with such graphic outline.

It is obvious that changes may be made in the form, construction and arrangement of the several parts, as shown, within the scope of the appended claims, without departing from the spirit of the invention, and I do not therefore wish to limit myself to the construction and arrangement shown and described herein.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. A device of the class described, comprising a combination of a graphic outline and a work locating template made of a material suitable for permitting work locating and holding tabs completing the template to be cut out of the graphic outline while still forming an integral part of the latter and comprising outlines defining said tabs.

2. A device of the class described, comprising a graphic outline made upon a cardboard, figures designed on the said graphic outline and being indicated by heavy lines and dotted lines to permit the shearing of said figures on the heavy lines and bending them on the dotted lines, thereby forming work locating templates arranged upon and forming part of the graphic outline.

3. A device of the class described, comprising a graphic outline made upon a cardboard, figures separately indicated on the said blueprint and being marked by perforated lines and dotted lines to permit the shearing of said figures in part on the perforated lines and bending them on the dotted lines, thereby forming work locating templates arranged upon and forming part of the said graphic outline.

4. A combined graphic outline and work locating template for building models, comprising a graphic outline made on a cardboard, figures separately designed on the said graphic outline at strategic points and being indicated by heavy lines and dotted lines to permit the shearing of said figures on the heavy lines and bending them on the

dotted lines, thereby forming work locating templates arranged upon the said graphic outline without impairing the guiding view of the latter, and forming an integral part therewith.

5. A device of the class described, comprising a graphic outline made upon a cardboard, figures designed on the said graphic outline and being indicated by heavy lines and dotted lines to permit the shearing of said figures on the heavy lines and bending them on the dotted lines and wires combined with said cardboard to form work locating templates with holding tabs arranged upon and constituting part of the said graphic outline.

6. A device of the class described, comprising a graphic outline made upon any suitable material, figures designed on the said graphic outline and being indicated by substantially heavy lines to permit shearing the said figures on the heavy lines, and dotted lines marked upon the said figures to indicate the bending of the latter into work locating templates and holding tabs adapted to cooperate as separate units with a graphic outline.

7. A combined graphic outline and work locating template for building models comprising, figures designed along the lines of the said graphic outline at strategic points, and being indicated by heavy lines and dotted lines to permit the shearing of said figures on the heavy lines and bending them on the dotted lines, thereby forming work locating templates for securing the perfect alignment of parts in, and construction of, said model, without obstructing the view of the guiding lines of the graphic outline proper.

8. A combined graphic outline and work locating templates for building the fuselage of a model-toy-airplane, the said work locating templates being indicated as figures upon the said graphic outline, and marked in heavy and dotted lines for shearing the said figures on the heavy lines and bending them upon the dotted lines, the said figures having portions cut out therein to form a seat for tabs constituting parts of the said figures; the said tabs being seated in the said square openings upon transforming the said figures into a work locating template.

9. A combined graphic outline and work locating template for building toy-airplane-models, comprising a graphic outline with separate figures indicated thereon and designed in heavy lines and dotted lines for shearing the said figures on the heavy lines and bending them on the dotted lines to form work locating templates, the latter having on each side centrally and vertically projecting tabs formed with recesses above and below, adapted to receive a bulkhead hung thereon.

10. A combined graphic outline and work locating templates for building models, comprising a graphic outline with separate figures indicated thereon and designed in heavy lines and dotted lines for shearing the said figures on the heavy lines and bending them on the dotted lines to form work locating templates, the latter having upper and lower semi-circular shaped and horizontally arranged tabs of a springy characteristic, the said tabs being slightly bent and adapted to receive and retain bulkheads to be hung thereon.

11. A combined graphic outline and work locating template for building models of various kinds, comprising in co-acting combination a graphic outline, having suitable indications thereon, and separate work locating templates, the latter consisting of figures cut and bent into shape for cooperation with the said graphic outline, according to the indications made upon the latter.

Signed at Amityville, in the county of Suffolk and State of New York this 11th day of February, A. D. 1932.

ABRAHAM S. BLUMENTHAL.