Aug. 29, 1967 J. R. McGUIRE ETAL 3,337,962

MECHANICAL AID FOR ISOMETRIC DRAWING

Filed May 31, 1966

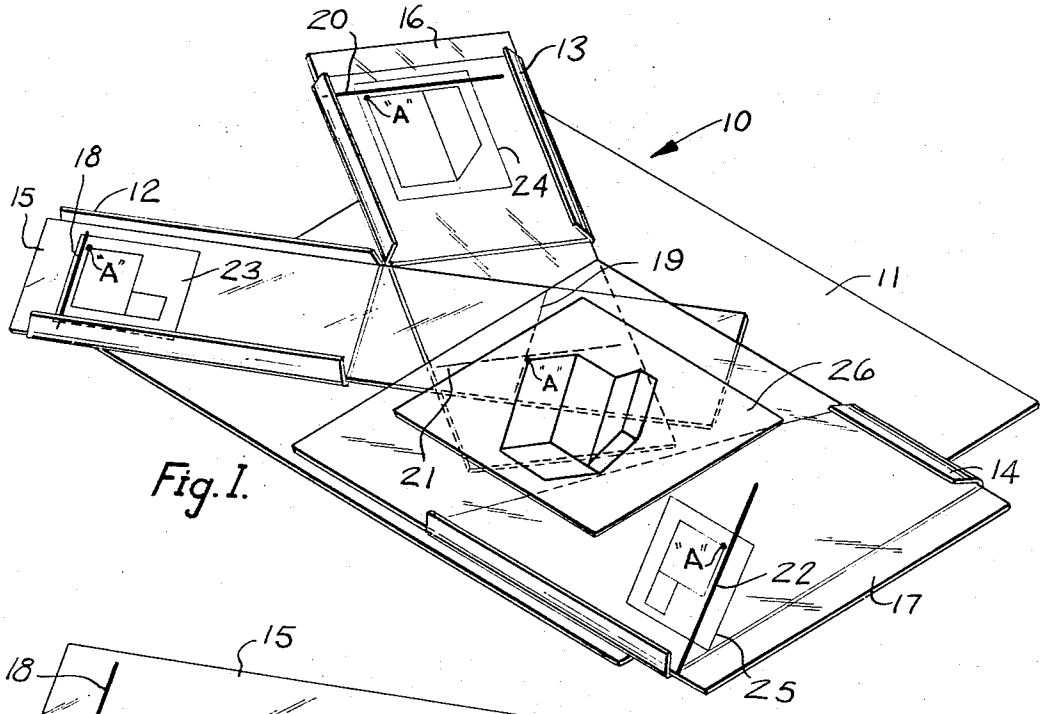


Fig. 1.

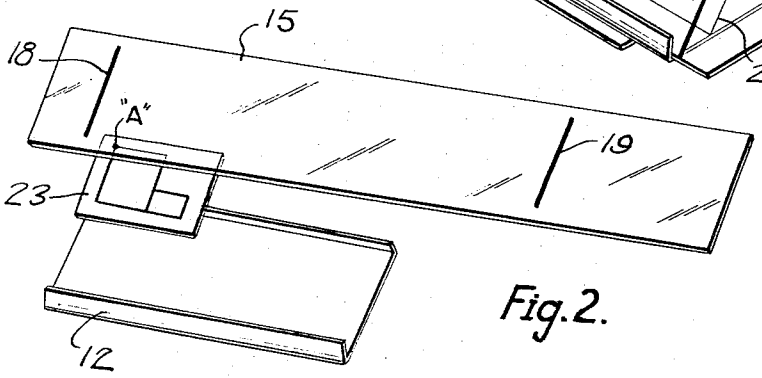


Fig. 2.

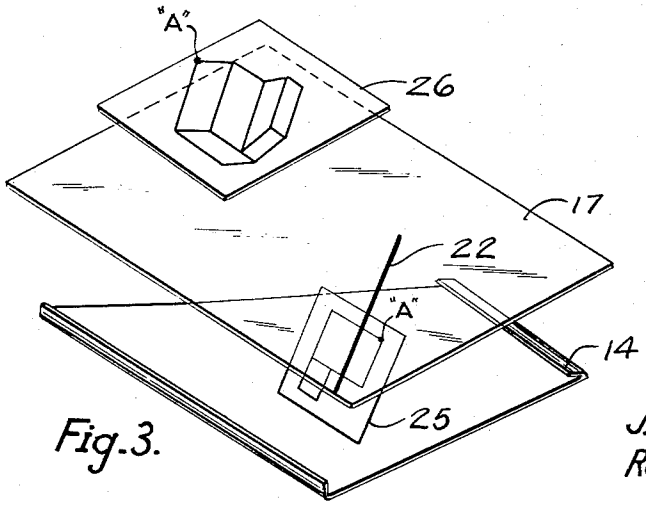


Fig. 3.

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MECHANICAL AID FOR ISOMETRIC DRAWING

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This invention relates to drafting aids, and more particularly a mechanical aid for isometric drawing.

It is therefore the main purpose of this invention to provide a mechanical aid for isometric drawing adapted to considerably reduce time required for drawing conventional isometric lines.

Another object of this invention is to provide a mechanical aid for isometric drawing which increases the accuracy of the lines as opposed to the conventional methods known in the prior art.

Another object of this invention is to provide a mechanical aid for isometric drawing which is adapted to significantly contribute in solving various drafting problems where isometric representation is required.

Still another object of this invention is to provide a mechanical aid for isometric drawing which is inexpensive to manufacture, easy to use, is of rigid construction, and is designed to provide maximum utility to the draftsman.

Other objects and advantages of this invention will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing, wherein a satisfactory embodiment of the invention is shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

FIGURE 1 is a perspective view of this invention.

FIGURE 2 is a perspective view of a slide unit and its retainer removed from the invention.

FIGURE 3 is a perspective view of another slide unit and its retainer removed from the invention.

According to this invention, a mechanical aid for isometric drawings **10** is provided with a base plate **11** of generally rectangular configuration. A primary side retainer **12** having a pair of upwardly directed flaps is capable of slidably supporting an elongated, rectangular slide **15** which is provided with a pair of opaque lines **18** and **19**, said lines are positioned in perpendicular relationship from the sides of the elongated slide **15** and are spaced from each other in parallel. Another primary slide retainer **13** is provided with a pair of upwardly directed flaps adapted to slidably support another elongated, rectangular slide **16** which is also provided with opaque lines **20** and **21**. Thus the primary slide retainers **12** and **13** are permanently fixed to base **11** at an angle of 60 degrees to each other. The slides **15** and **16**, however, are capable of longitudinal movements in the retainers **12** and **13** in such a manner that their respective opaque lines **18**, **20**, **19** and **21** at all times assume perpendicular relationship in the direction of travel. A secondary retainer **14** is capable of slidably supporting a generally rectangular secondary transparent slide **17** which is provided with an opaque line **22**, said line is positioned 60° from the side of the generally rectangular slide **17**. Thus the secondary slide retainer **14** is permanently fixed to the base **11** and is adapted to bisect the angle formed by the positions of the slide retainers **12** and **13**.

Looking now at the drawing, one will see that at least three orthographic views **23**, **24**, and **25** are required. Orthographic view **23** is adapted to show the length of an object and is taped onto the slide retainer **12** under the transparent slide **15**. Orthographic view **24** showing the breadth of the object is taped onto the slide retainer **13** under the transparent slide **16**. Orthographic view **25** showing the thickness of the object is taped onto the slide retainer **14** under the transparent slide **17**. A translucent work paper **26** is taped or otherwise secured on the face portion of the transparent slide **17**. Thus, as it can be seen from the previous description, the opaque line **18** is positioned over a given point A on the orthographic view **23**. Opaque line **20** is positioned over the corresponding point A on orthographic view **24**, and the opaque line **22** is positioned over the corresponding point A on the orthographic view **25**. This causes the translucent work paper **26** to be marked with a point at the intersection of the opaque lines **19** and **21** which indicate the isometric directions to be drawn on said paper **26**. This operation may be repeated as many times as it is necessary.

What we now claim is:

1. A mechanical aid for isometric drawing, comprising, in combination, a base plate, a pair of primary base retainers, a moveable, rectangular, primary transparent slide within each of said primary retainers, said retainers being secured on said base at 60 degrees to each other, said slides being slidable in directions 60 degrees to each other, each said primary slide being provided with a first and second opaque line in parallel, spaced relation from each other, and positioned 90 degrees to said sliding direction of said slide, a secondary retainer secured to said base, a secondary transparent, rectangular, slide adapted to move within said secondary retainer, a singular opaque line positioned on said slide of said secondary retainer, said singular opaque line being positioned at an angle of 60 degrees respective to a sliding direction of said secondary slide, said secondary slide moving in a direction that bisects said 60-degree angle between said primary slides, all three said slides being of a length to overlap each other with said secondary slide being uppermost, means for securing an orthographic view on each said slide retainer for alignment below said first of said opaque lines of each said primary slide and said opaque line of said secondary slide, and a translucent work paper secured on said secondary slide for alignment with the said second of said opaque line on said primary slides for establishing a reference point for an isometric drawing on said translucent work paper.

2. A combination as set forth in claim **1** wherein each of said primary base retainers and said secondary base retainer is provided with a pair of upwardly extending flanges which provide sliding means for said primary slides, and said secondary slide, and each of said flanges being spaced in parallel relationship from each other on each said retainer.

3. The aid for isometric drawing according to claim **1**, wherein each transparent slide assumes an elongated and substantially rectangular configuration and each slide is positioned in such a manner as to not interfere with the longitudinal travel path of another slide.

No references cited.

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