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MULTI-PURPOSE STAND

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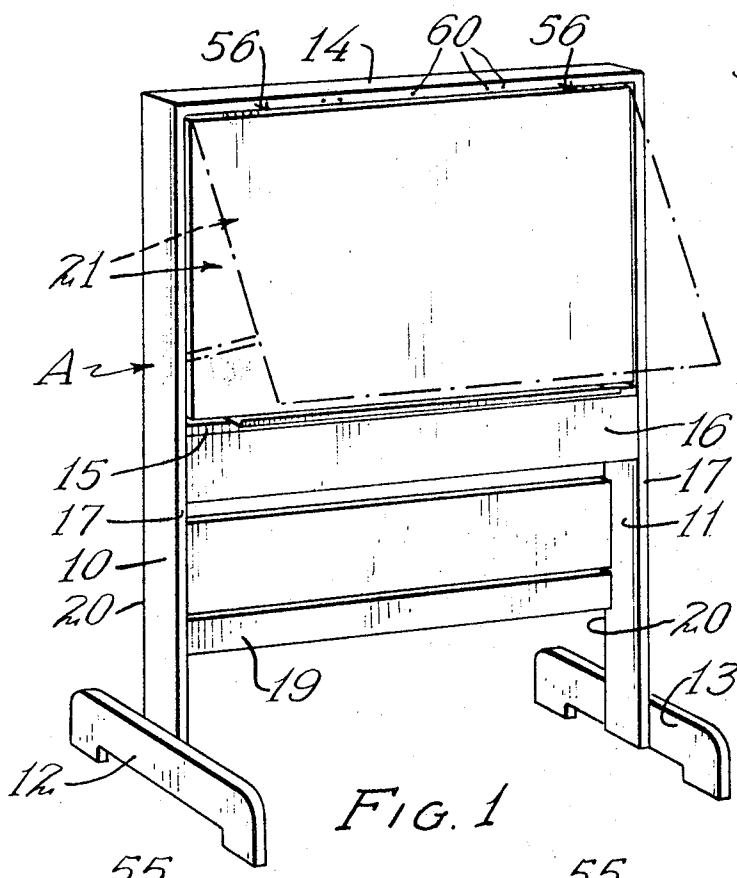


FIG. 1

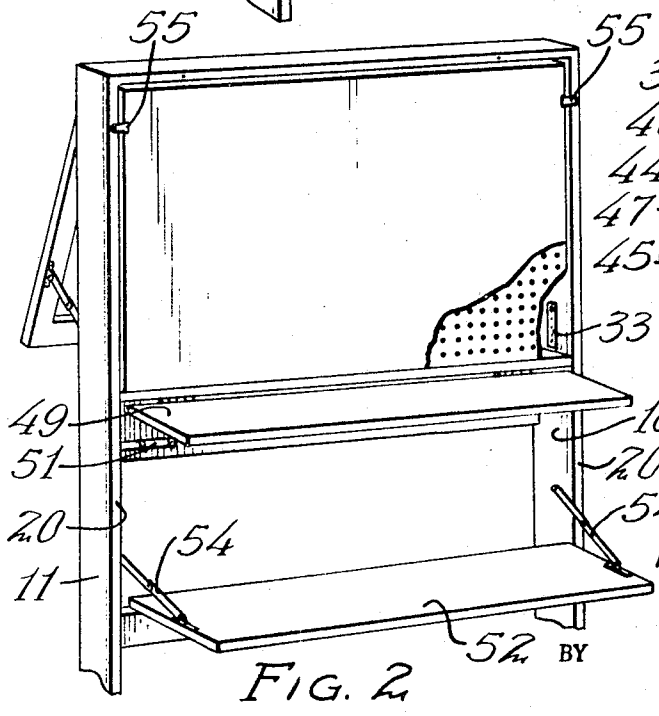


FIG. 2

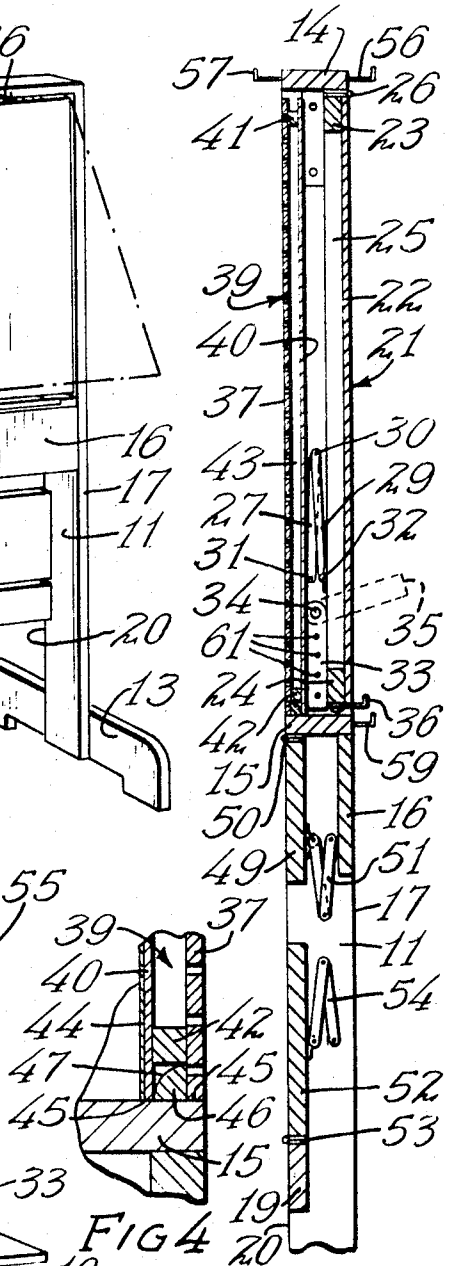


FIG. 3

FIG 4

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MULTI-PURPOSE STAND

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ABSTRACT OF THE DISCLOSURE

This invention relates to a multi-purpose stand designed for use by kindergarten and lower primary grade teachers. The device includes a pair of standards connected by cross-members to form a rectangular frame. A chart board is hingedly connected along its upper edge to the top cross-member of the frame, and means are provided for holding the frame in inclined position when desired. A composite panel is removably supported in the frame and includes an apertured panel known as a "Pegboard," a flannel covered panel, and a frame holding these panels in spaced parallel relation. A shelf is pivotally supported between the standards to extend horizontally below the composite panel. A lower shelf is pivotally supported between the standards beneath the first shelf to form a low level table in horizontal position and a partition panel in vertical position.

This invention relates to an improvement in multi-purpose stand and deals particularly with a support which is primarily designed for, but is not limited to, use by teachers of kindergarten class and lower primary grades.

Various types of equipment have been produced for use by teachers of the lower grades. For example, portable blackboards have been made in which blackboard panels pivotally supported upon a central horizontal axis within a portable supporting frame. Portable partitioning panels have also been provided capable of partially dividing one class from another so that different groups may be individually taught. Easels of various types are commonly used for supporting large writing pads, and also for supporting various reading material. Tables are usually provided for supporting containers used in recognition, classification exercises in reading-readiness programs. It is an object of the present invention to provide a multi-purpose stand designed to take the place of a number of previous devices, and even to permit children on both sides of the stand to use the stand simultaneously.

A feature of the present invention resides in the provision of an upright stand including horizontally extending legs designed to hold the stand in a stable, upright position. The stand includes an open rectangular frame of sufficient thickness to support a plurality of panels. One panel structure is visible from one side of the frame, and the other panel structure is visible from the opposite side thereof.

A feature of the present invention resides in the provision of a panel hingedly supported within the frame, the panel being hingedly connected to the upper horizontal cross-member of the frame. When in one pivotal position, the panel acts as a closure for one side of the frame. This panel, may, if desired, have a writing surface thereupon. However, it is primarily designed as a backing panel for the large writing pads commonly used in teaching. Such pads are normally provided with apertures along the top of the pad. Hook means are provided on the upper cross-member of the frame designed to engage in these spaced apertures, allowing the pad to lie flat against the panel. This holds true whether the panel is in vertical position, or is swung into a downwardly and outwardly inclined position. As a result, the teacher may swing the lower end

of the panel forwardly and upwardly for greater convenience in writing or drawing upon the pad. If desired, the panel may then be swung back into vertical position so that it may be more readily viewed by the children.

A further feature of the present invention resides in the provision of a pair of pivotally supported stops which are mounted upon the vertical sides of the frame inwardly of the pivoted panel. These stops, when pivoted into vertical position, form a means of limiting the downward and inward swinging of the panel and to stop pivotal movement thereof when the outer exposed surface is flush with the edge of the frame. When swung upwardly and outwardly through an angle of slightly more than 90 degrees, the ends of the stops opposite the pivoted ends thereof engage against the pivoted panel to hold the panel in an inclined position.

A further feature of the present invention resides in the provision of a ledge which is detachably secured to the horizontal lower surface of the panel and extends forwardly therefrom. This ledge is designed to serve as a support for paperboard posters, charts, and the large teaching books used in reading-readiness programs. This arrangement permits the panel or chart board, as it is normally called, to serve as an easel.

A further feature of the present invention resides in the provision of a composite panel including a "Pegboard" panel, and a flannel board panel held in spaced parallel relation by an intermediate marginal frame. The Pegboard panel is designed to accommodate hooks and brackets for supporting teaching cards used in reading-readiness and in reading programs and provides a simple and effective means of supporting a considerable number of individual cards in any desired relation.

A feature of the present invention resides in a provision of a flannel board on the reverse side of the Pegboard. The bottom of the composite panel structure is provided with a groove extending through the width of the panels. A projecting rib on the lower cross-member of the rectangular frame engages in this groove, the projecting rib being curved so that the upper portion of the composite panel may be tilted forwardly out of the frame for removal. The composite panel is normally held in the frame by suitable turn fasteners. Thus the duplex panel may be easily detached from the frame and reversed so that the flannel board forms the outer surface. The flannel board is designed for use with felt objects or shapes which are pressed against the flannel board surface and are retained in position thereby.

A further feature of the present invention resides in the provision of a shelf pivotally supported beneath the lower cross-member of the rectangular frame and pivotal from a downwardly depending vertical position to an outwardly projecting horizontal position. When in the latter position, the shelf provides a place for additional cards in matching exercises, or for containers used in recognition-classification exercise in reading-readiness programs. When the flannel board panel is exposed, the shelf serves as a support for the various felt pieces used in making up a design.

A cross-brace is normally provided connecting the vertical standards at a point spaced below the rectangular frame. The upper portions of these vertical standards form the sides of the rectangular frame. A shelf is pivotally supported to the horizontal edge of the cross-brace which is pivotal between an upwardly extending vertical position, and a laterally extending horizontal position. When in vertical position, the shelf serves as a partition panel to assist in forming a wall segregating two areas. When in horizontal position, it provides a work surface when teaching with the children seated upon the floor, the shelf being at a proper height so that they can easily see ob-

jects of groups of objects used in teaching. The lower shelf also provides space for additional containers or material used in recognition exercises. Some reading-readiness programs require as many as twelve containers for use with the programs. This shelf also provides a general display area.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification,

FIGURE 1 is a perspective view of the multi-purpose stand, showing in dotted outline the chart board in its inclined position.

FIGURE 2 is a perspective view of the opposite side of the stand showing the composite panel a portion of which has been broken away for the purpose of illustration.

FIGURE 3 is a vertical sectional view through the upper portion of the stand showing the panel structure and the shelves.

FIGURE 4 is an enlarged detail showing the manner in which the composite panel is supported within the frame.

The multi-purpose stand is indicated in general by the letter A and includes a pair of spaced flat vertical standards **10** and **11** arranged with their wider surfaces in parallel opposed relation. A pair of laterally extending legs **12** and **13** are secured to the lower ends of the standards **10** and **11**, each standard with its leg comprising an inverted T-shaped member. A rectangular open frame is provided between a top cross-member **14** and a bottom cross-member **15**, the cross-member **14** connecting the upper end of the standards **10** and **11**, and the cross-member **15** connecting these standards intermediate their height. The bottom cross-member **15** is reinforced by a vertical partition panel **16** secured between the standards **10** and **11** just below the cross-member **15**. The partition panel **16** is substantially flush with the vertical edges **17** of the standards **10** and **11**. A cross-brace **19** extends between standards **10** and **11** spaced below the partition panel **16**, the brace **19** being flush with the vertical edges **20** of the standards **10** and **11**.

A chart board **21** is supported within the rectangular frame defined by the uprights **10** and **11** and the cross-members **14** and **15**. Chart board **21** includes a panel **22** attached to a rectangular frame including top and bottom frame members **23** and **24**, and side frame members **25**. Hinge means **26** connect the upper frame member **23** to the upper cross-member **14**. When in vertical position, the panel **22** is substantially flush with the vertical edges **17** of the standards **10** and **11**.

A pair of toggle links **27** and **29** are pivotally connected together at **30**. The toggle link **27** is pivotally attached at **31** to the standard **10** or **11**, there being a similar bracket structure on each side of the chart board. The toggle link **29** is pivotally connected to a bracket **32** attached to a vertical frame member **25**. The toggle links are arranged to pivot into alignment or into position slightly beyond dead center to hold the chart board **21** in a downwardly and outwardly inclined position as shown in dotted outline in FIGURE 1 of the drawings.

A pair of pivotally supported stops, one of which is indicated at **33** in FIGURE 3 of the drawings, are pivotally supported on horizontal pivots **34** to the inner surfaces of the uprights **10** and **11**, the pivots **34** being spaced above the lower cross-member **15**. When in the vertical position indicated in full lines in FIGURES 2 and 3 of the drawings, the stops **33** act to limit the inward pivoting of the chart board **21** into the rectangular frame. When in the dotted outline position illustrated, the ends **35** of the stops may engage against the frame sides **25** of the chart board to hold the chart board in a slightly inclined position. While in this position, the chart board may be more readily viewed by the children.

Furthermore, the chart board may serve as an easel when in this position. A forwardly extending ledge **36** is detachably secured to the underside of the lower frame member **24**. This ledge **36** may serve to support a poster, card or book when the chart board is in angular relation to the supporting frame.

An apertured panel **37** known by the trademark "Pegboard" forms a part of a composite panel structure **39** also supported in the rectangular frame in side-by-side relation to the chart board **21**. The composite panel structure **39** includes the Pegboard **37** and a flannel board **40** supported by an intermediate rectangular frame including a top frame member **41**, a bottom frame member **42**, and side frame members **43**. As is indicated in FIGURE 4 of the drawings, the flannel board **40** is covered with a sheet of flannel **44** or other suitable material which forms a surface to which felt will adhere. By placing the felt flat against the flannel surface **44**, the felt will remain in a set position until removed.

In order to hold the composite panel in the rectangular frame, the lower frame member **42** between the panels **37** and **40** is offset upwardly from the lower edges **45** of the Pegboard **37** and flannel board **40**. A rib **46** is mounted upon the lower frame member **15** as indicated in FIGURE 4 of the drawings and engages between the panels **37** and **40**. To simplify the removal of the composite panel, the rib **46** may comprise a strip of quarter-round molding arranged with its arcuate surface **47** directed toward the interior of the rectangular frame.

An upper shelf **49** is hinged to the undersurface of the lower frame member **15** by hinge means **50** and when in the lowered position the outer exposed surface of the shelf is substantially flush with the vertical edges **20** of the uprights **10** and **11**. When in the horizontal position, the shelf **49** is supported by a toggle link arrangement **51** connecting the undersurface of the shelf **49** to one or both of the uprights **10** and **11**.

A lower shelf **52** is hingedly secured by hinge means **53** to the upper surface of the cross-brace **19** as indicated in FIGURE 3 of the drawings. When in the raised position illustrated, the outer exposed surface of the shelf **52** is substantially flush with the edges **19** of the uprights. When in horizontal lowered position, the shelf **52** is supported by a toggle link device **54** similar to the toggle link constructions previously described.

The composite panel **39** is held engaged in the rectangular frame by a pair of turn fasteners **55** secured to the edges **20** of the upright standards **10** and **11**. These turn fasteners may be turned to inoperative position to permit the upper end of the composite panel to tilt forwardly so that it may be readily lifted from the rectangular frame and reversed.

A pair of hooks **56** are detachably supported by the upper cross-member **14** to project outwardly over the chart board **21**, and a second set of hooks **57** are detachably connected to the opposite side of the top cross-member **14** to extend over the composite panel **39**. These hooks **56** and **57** are spaced apart a distance equal to the spacing of the perforations in the large writing pads normally used in teaching children of the lower grades. Similar hooks such as **59** may project from the lower cross-member **15**, these hooks also being spaced properly to accommodate the writing pad. As a result of this arrangement, a writing pad may be supported to overlie the chart board, and a similar pad may be secured to the frame beneath the chart board.

When the chart board is inclined outwardly and supported by the toggle link **27** and **29**, the chart board serves as a supporting surface for the pad to simplify the task of writing or drawing on the pad. When prepared, it may be suspended in vertical position. The ledge **36** may be used to support large teaching books, posters, cards or the like, particularly when the chart board is supported in slightly inclined position by the stops **33**.

The perforated panel **37** may support a series of hooks to support a large number of individual cards such as cards bearing a letter or word for reading practice, or an illustation for recognition-classification exercises. When desired, the composite panel **39** may be reversed and felt designs applied to produce a desired illustration or design.

In describing the chart board, the term "downwardly and outwardly inclined position" has been used. This term is intended to describe the fact that the chart board slopes downwardly and outwardly from the hinge axis. As will be understood, the lower edge of the chart board is actually higher in inclined position than when in vertical position.

The upper cross-member **14** is provided with a series of holes **60** adapted to receive hooks such as **56** for supporting pads of different widths. In practice the stops **33** are provided with holes **61** into which additional hooks may be stored when not in use.

In accordance with the Patent Statutes, I have described the principles of construction and operation of my improvement in multi-purpose stand, and while I have endeavored to set forth the best embodiment thereof I desire to have it understood that changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A multi-purpose stand including:
a pair of parallel standards,
means supporting said standards in upright position,
a pair of horizontal cross-members including in upper cross-member and a lower cross-member connecting said standards and forming a rectangular frame,
a chart board hingedly connected to said upper frame member and foldable from vertical position to an outwardly and downwardly inclined position,
a composite panel detachably secured within said frame and including two spaced panels and an intermediate connecting frame,
said composite panel having a groove along its undersurface,
a rib on said lower frame member engageable in said groove while either of said spaced panels is outermost,
means on said rectangular frame detachably holding said composite panel in said frame.

2. The structure of claim **1** and in which said two spaced panels comprise an apertured panel and a flannel covered panel.

3. The structure of claim **1** and including a stop means pivotally mounted on said standards engageable with said chart board in one pivoted position to limit pivotal movement thereof when said chart board is vertical and engageable with said chart board in a different rotative position to hold said chart board in an inclined position.

4. The structure of claim **1** and including a pair of vertically spaced shelves pivotally supported by said standards beneath said rectangular frame, said shelves being foldable between vertical and horizontal positions, said shelves when in vertical position terminating in closely spaced relation.

5. A multi-purpose stand including:
a pair of parallel standards,
means supporting said standards in upright position,
a pair of horizontal cross-members including an upper cross-member and a lower cross-member connecting said standards and forming a rectangular frame,
a chart board hingedly connected to said upper frame member and foldable from vertical position to an outwardly and downwardly inclined position,
a composite panel detachably secured within said frame and including two spaced panels and an intermediate connecting frame,
one of said spaced panels being an apertured panel including regular spaced apertues,
the other of said panels having a flannel coated outer surface, and
means on said frame to detachably support said composite panel.

6. The structure of claim **5** and including a shelf pivotally supported between said standards on a horizontal axis and swingable from a vertical position between said standards to a horizontal position projecting outwardly from said standards beneath said composite panel.

7. The structure of claim **6** and including a second shelf pivotally supported between said standards on a horizontal axis,
said second shelf being pivotal from a vertical position between said standards to a horizontal position,
said second shelf when in vertical position, terminating in spaced relation to said first shelf and forming a partition panel.

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