United States Patent

[11] 3,588,210

[72] Inventors **John Des Marais**
1856 Lincoln, Fla. 33020;
Roger A. Sinigoi, 3186 McKinley,
Hollywood, Fla. 33021

[21] Appl. No. **843,928**
[22] Filed **July 23, 1969**
[45] Patented **June 28, 1971**

[54] **CONVERTIBLE DESK**
9 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **312/196**
[51] **Int. Cl.** **A47b 17/00**
[50] **Field of Search** 312/196

[56] **References Cited**

UNITED STATES PATENTS

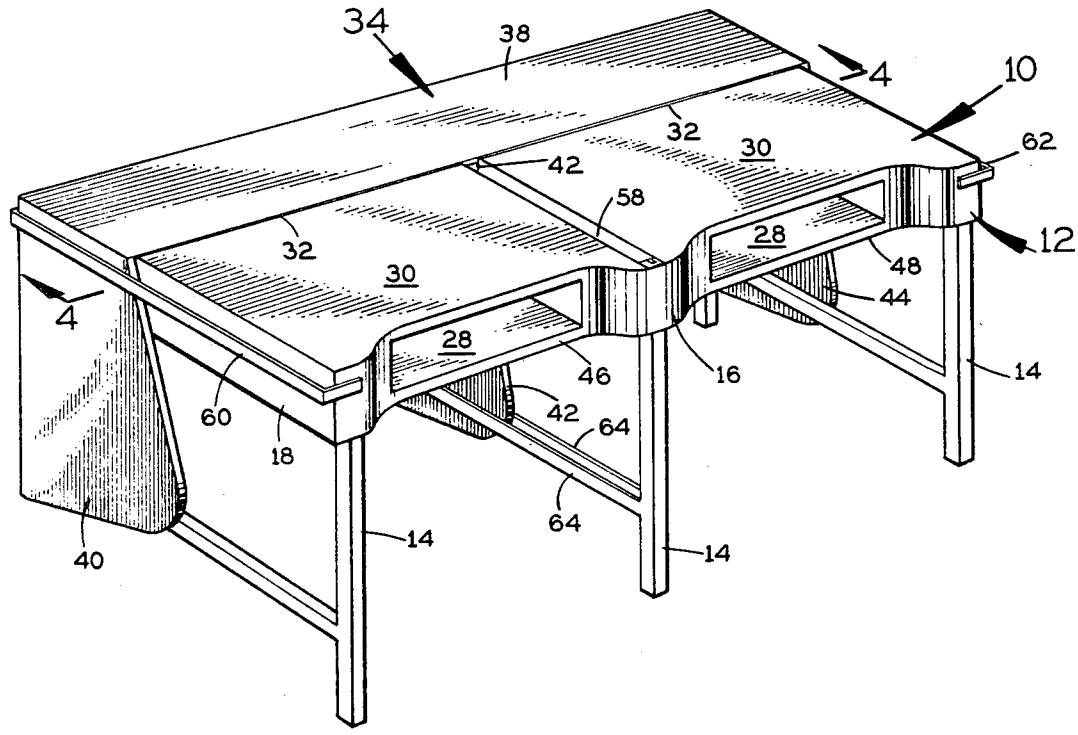
2,694,614	11/1954	Dent	312/196
2,944,861	7/1960	Lessin	312/196
3,117,533	1/1964	Martland	312/196X

FOREIGN PATENTS

1,177,410	4/1959	France	312/196

Primary Examiner—Patrick D. Lawson
Attorney—Settle and Oltman

ABSTRACT: A two-position convertible desk having a panel unit which can be raised to provide privacy for individual learning situations and lowered to retract divider panels for group learning situations. The panel unit includes a rear panel which serves as a screen when the panel unit is raised, and wing panels which divide the desk into two working areas when the panel unit is raised. When the panel unit is lowered, the rear panel extends the working area of the desk, and the wing panels retract nearly out of the way.



PATENTED JUN 28 1971

3,588,210

SHEET 1 OF 2

FIG. 1

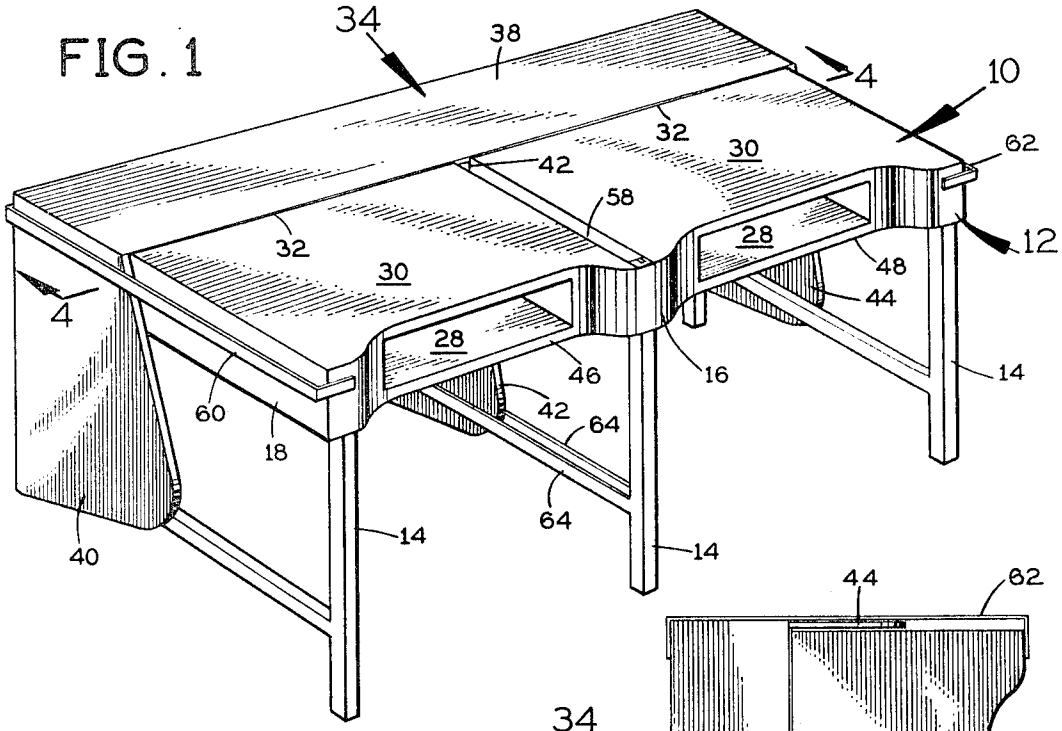
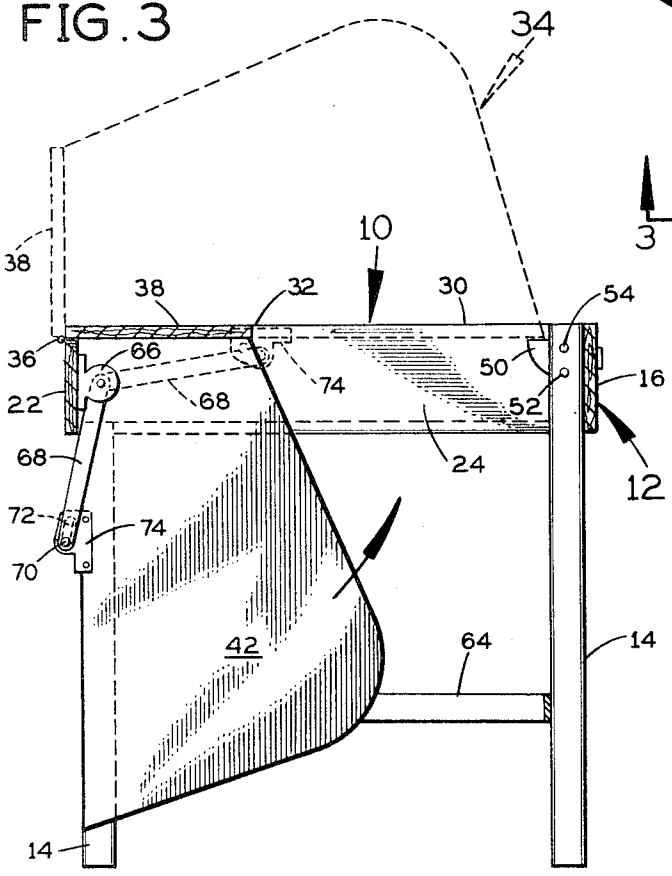


FIG. 3



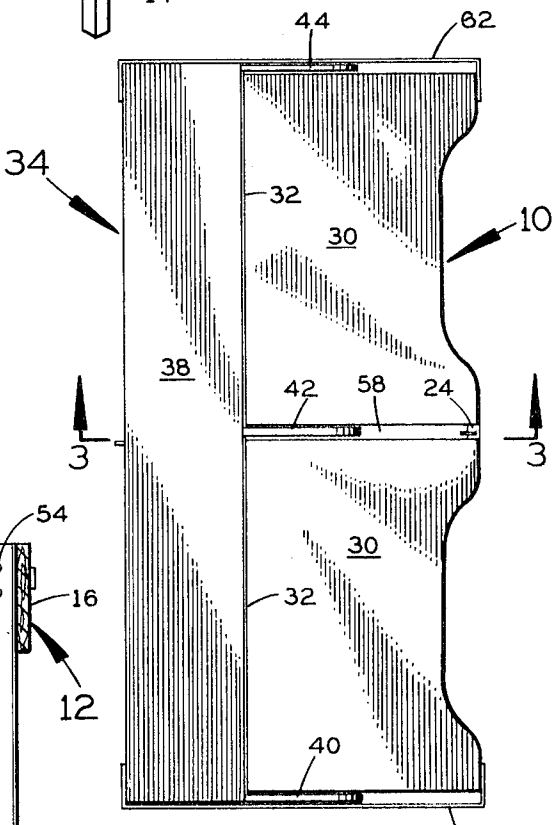


FIG. 2

INVENTORS
JOHN DES MARAIS
ROGER A. SINIGOI
BY
Settle and Ollman

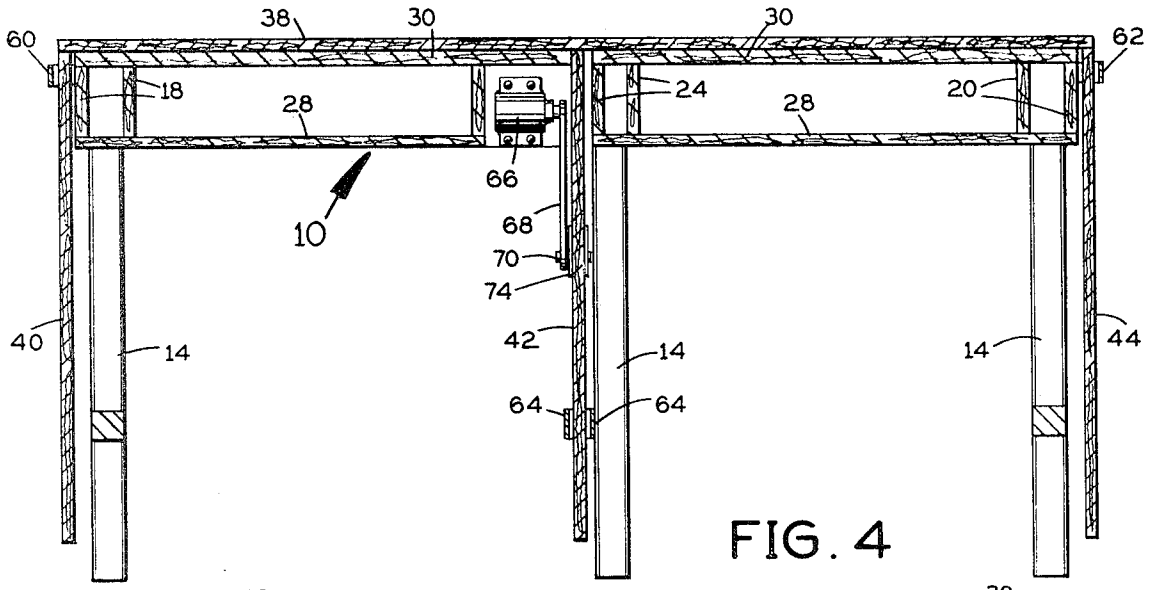


FIG. 4

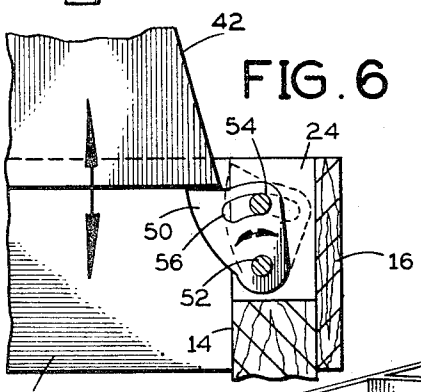


FIG. 6

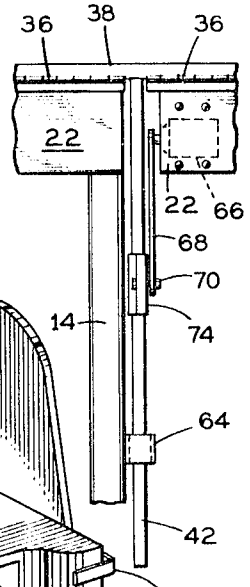


FIG. 7

FIG. 5

INVENTORS
JOHN DES MARAIS
ROGER A. SINIGOI
BY
Settle and Ottman

CONVERTIBLE DESK

BACKGROUND OF THE INVENTION

In the interest of conserving space in crowded classrooms, there are advantages in providing desks which will seat more than one person. Modern classroom teaching techniques make it desirable to provide a desk which affords privacy for individual students in individual learning situations, and which can be converted to afford unrestricted visibility and access in total group learning situations. The desk should also accommodate use of learning aids such as projectors, recordings, and the like.

OBJECTS OF THE INVENTION

It is an object of the present invention to provide a two-position desk with a swingable panel unit which divides the desk into two private working areas when the panel unit is raised, and which can be retracted easily to remove all obstructions from the top of the desk.

Another object of the invention is to provide a two-position desk with a panel unit having a rear screen panel and three wing panels which project forwardly from the rear panel, all arranged such that the panel unit can be retracted out of the way when desired.

A further object of the invention is to provide a panel unit for a two-position desk having a rear panel which forms a rear extension of the desk top when the panel unit is in a lowered or retracted position.

A further object of the invention is to provide a two-position desk with a panel unit which affords relatively great privacy by means of contoured recesses in the desk which allow students to enter into the working area confined by the panel unit.

Another object of the invention is to provide a two-position desk with a panel unit which can be lowered against the resistance of a closer device to prevent the panel unit from slamming.

Other objects of this invention will appear from the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

On The Drawings:

FIG. 1 is a perspective view of a two-position desk in accordance with one embodiment of the invention;

FIG. 2 is a plan view of the desk of FIG. 1;

FIG. 3 is a sectional view of the desk taken along line 3–3 of FIG. 2, the panel unit of the desk being shown in a lowered position in solid lines and in a raised position in dashed lines;

FIG. 4 is a vertical sectional view of the desk taken along line 4–4 of FIG. 1, the panel unit being shown in a lowered position;

FIG. 5 is a perspective view of the desk similar to FIG. 1, but the panel unit being shown in a raised position;

FIG. 6 is a fragmentary sectional view taken along line 6–6 of FIG. 5; and

FIG. 7 is a fragmentary view of the rear of the desk.

Before explaining the present invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practices or carried out in various ways. Also, it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation.

As shown on the drawings:

A two-position convertible desk **10** as illustrated in the drawings includes a rectangular frame **12** which is supported at writing level for two seated students by means of floor-engaging legs **14**. There are three sets of legs **14**, as shown, with two legs being provided at each end of the desk and two additional legs being provided at the middle of the desk. The rectangular frame **12** includes a front support **16**, two side supports **18** and **20**, and a rear support **22**. These supports may be simply wooden boards secured together at the corners of the desk in the usual fashion. Two additional cross supports **24** are provided at the middle of the desk for additional support (see FIG. 4). The legs **14** are fastened as by screws **26** between the two support boards **18**, the two support boards **20**, and the two support boards **24**. As shown for example in FIGS. **1** and **4**, storage shelves **28** are connected to the supports for storage of books and the like.

A desk top **30** is affixed to the supports **16**, **18**, **20**, **22** and **24** to provide a working surface for students. The desk top **30** is generally coextensive with the frame **12** except that the rear edge **32** of the desk top is spaced from the rear support **22** a substantial distance, as shown, for example, in FIGS. **2** and **3**. A panel unit **34** is connected by a hinge **36** to the rear support **22** so as to allow the panel unit to be swung from a raised position shown in dashed lines in FIG. **3** to a lowered position shown in solid lines in FIG. **3**. The panel unit **34** is shown in the lowered position in FIG. **1** and in the raised position in FIG. **5**. The panel unit **34** includes a rear panel or screen panel **38** which forms a viewing screen in the raised position of the panel unit, and which swings down to a horizontal position as shown in FIG. **3** wherein the front edge of the rear panel **38** is flush with the rear edge **32** of the desk top. In the lowered position, the panel **38** covers the space between the rear edge **32** of the desk top and the rear support **22**. Thus, the panel **38** forms a rear extension of the desk top **30** when the panel **38** is in its lowered position.

The panel unit **34** also includes three wing panels **40**, **42** and **44** which are affixed to and project normally from the rear panel **38**. There are two side panels **40** and **44** and a middle panel **42** which divide the desk top **30** into two equal working areas to accommodate two students and to provide privacy for the students in the individual learning situations. When the panel unit **34** is in its raised position, the wing panels **40**, **42** and **44** extend forwardly across substantially the entire depth of the desk as shown in FIG. **5**. The desk top **30** and the front support **16** have contoured recessed portions **46** and **48** which allow the student to sit close to the desk and enter into the working areas confined by the panels **40**, **42** and **44** to afford relatively greater privacy for the student.

A latch member **50** is pivotally attached to the middle support **24** as shown in FIG. **6**, there being a pivot pin **52** and another pin **54** which is received in a curved slot **56** in the member **50**. The latch member **50** can be swung to the left as viewed in FIG. **6** to hold the middle panel **42** in the raised position, and can be moved to the right as shown in dashed lines to release the panel unit so that it can be lowered.

A slot **58** is formed in the desk top **30** to receive the middle panel **42** when the panel unit **34** is swung down to the lowered position. The other two wing panels **40** and **42** straddle the desk top **30** and the desk frame **12** and are received in metal channel members **40** and **62** which are affixed to the ends of the desk frame **12**. The channel members **60** and **62** may have soft material applied to the inside thereof to slidably engage the end wing panels **40** and **44** for guiding them as they are moved to the lowered position. The cross members **64** provide another channel for receiving the middle panel **42**.

A hydraulic or pneumatic closer drive **66** (see particularly FIG. **4**) is affixed to the rear panel support **22**, and is connected by an arm **68** to the middle panel **42**. As shown in FIG. **3**, the arm **68** has a pin **70** which is received in a slot **72** in a bracket **74** which is attached to the middle panel **42**. The closer drive **66** acts to retard the downward movement of the panel unit **34** to prevent slamming thereof when it is being lowered.

In order to accommodate audio visual equipment, the desk may be suitably wired. For this purpose, ear phone jacks may be provided in each desk half, with one jack connecting from the equipment to the desk and another jack being used by the student for his earphones. A third jack may be provided for the instructor to listen in on the student program for the purpose of monitoring or responding to the student. An AC outlet

may be located on the front support 16 to provide power for each desk half.

One important aspect of the two-position desk is that it occupies less space in the classroom and provides the student with a larger working surface when the side panels are in the retracted position. All side and middle panels operate simultaneously in a quiet and relatively effortless manner. When the panel unit 34 is retracted, the screen panel 38 comes flush with the top of the desk enabling the student to work on a larger surface area with no obstructions. The guide channels 60 and 62 guide the side panels 40 and 44, and the slot 58 provides a similar guiding function for the middle panel 42 so that the wing panels move vertically in a straight path such that they are not easily weakened or pulled out of place. The convertible desk can be fabricated relatively economically so that it can be made available in large quantities at reasonable cost. Having thus defined our invention,

We claim:

1. A two-position learning center comprising a horizontal desk top, legs supporting said desk top at writing height for a seated person, a rear support connected to said desk top and said legs but spaced a substantial distance to the rear of said desk top, a screen panel hingedly connected to said rear support and spanning the width of said desk top, said screen panel having a horizontal lowered position wherein said screen panel covers the space between said support and said desk top in flush relation with said desk top to form a rear extension of said desk top, and said screen panel having a vertical raised position wherein said screen panel provides a viewing screen for visual projection spaced from the rear of said desk top, two side panels and a middle panel projecting forwardly from said screen panel respectively at the opposite sides and middle thereof to divide said desk into two pupil positions, said desk top having a transverse slot extending from front to rear thereof receiving said middle panel, and said side panels clearing the sides of said desk top, so that said side and middle panels may be raised and lowered with said screen panel, said panels providing separation of the two pupil positions from each other when in the raised position and being retractable to said lowered position wherein said screen panel enlarges the effective working area, means to retard lowering of said panels to inhibit slamming thereof, and means to hold said panels releasably in said raised position.

2. The learning center as claimed in claim 1 in which said retarding means comprises a closer.

3. The learning center as claimed in claim 2 in which said closer comprises a hydraulic closer.

4. The learning center as claimed in claim 1 in which said holding means comprises a releaseable latch.

5. The learning center as claimed in claim 4 in which said latch is affixed to said desk top at said slot to releasably engage said middle panel.

6. The learning center as claimed in claim 1 including side bar members secured to and spaced from the sides of said desk top to receive said side panels.

7. A convertible desk for two pupils comprising a frame, floor engaging legs supporting said frame horizontally at writing height for a seated person, said frame including a rear support, a horizontal desk top affixed to said frame and having a rear edge spaced horizontally from said rear support, said desk top having sufficient width to accommodate two pupils seated side-by-side, a retractable panel unit comprising a screen panel pivotally connected to said rear support, a pair of end panels projecting generally forwardly from said screen panel to partially enclose said desk top, and a middle panel projecting forwardly from said screen panel to divide said desk top into two working areas separated from each other by said middle panel, said end panels clearing said desk top and said desk top having a central opening therein receiving said middle panel so that said panel unit may be pivoted downward from a raised position to a lowered position wherein said screen panel covers the space between said rear support and said desk top to provide a rear extension of said desk top and said end and side panels hang downward from said screen panel, means to retard downward movement of said panel unit to prevent slamming thereof, and means to hold said panel unit releasably in said raised position.

8. The convertible desk as claimed in claim 7 in which said retarding means comprises a hydraulic closer.

9. A two-position desk with retractable panels comprising a rectangular desk frame, floor-engaging legs supporting said desk frame horizontally at writing level for seated persons, a desk top on said frame and coextensive therewith except at the rear of said desk where said frame has a rear support spaced a substantial distance from the rear edge of said desk top, said frame and said desk top being sufficiently wide to seat two persons side-by-side at the front thereof, and said desk top and said frame having two inwardly recessed portions at the front thereof to receive the seated persons, a panel unit including a rear panel and three wing panels all projecting normally from said rear panel, two of said wing panels being located at opposite ends of said rear panel to straddle said desk top and the third wing panel being located at substantially the middle of said rear panel to divide said desk top into two working areas, said rear panel being dimensioned to cover said space between said rear support and said desk top when in a lowered position substantially flush with said desk top, means connecting said panel unit to said frame for swinging movement between said lowered position and a raised position wherein said wing panels project forwardly from said rear panel across substantially the entire depth of said desk, means for releasably holding said panel unit in said raised position, and means forming an opening centrally of said desk top to receive said third panel when said panel unit is lowered.