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Cole

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[54] **PAPER CUTTER GUARD**

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[52] **U.S. Cl.** **83/520,** 83/544, 83/545, 83/607, 83/DIG. 1

[51] **Int. Cl.** **B26d 7/22**

[58] **Field of Search** ..... 83/520, 544, 545, 607, 83/609, DIG. 1

[56] **References Cited**

UNITED STATES PATENTS

3,224,314	12/1965	Wolnez	83/609 X
3,424,046	1/1969	Trautmann	83/545
2,518,076	8/1950	Scherig	83/607 X
2,481,162	9/1949	Seely	83/544

Primary Examiner—Frank T. Yost

[57] **ABSTRACT**

A protective guard is presented for attachment to and use with cutting boards of the type having a blade pivotally mounted at the side of the cutting board. The guard is a transparent sleeve extending along both the inboard and outboard sides of the blade to form a pocket in which the blade travels. The inboard part of the sleeve is spaced above the cutting board to allow passage of the material to be cut, and the outboard part of the sleeve has a hinged lower portion to allow passage of the material to be cut. A disc guard also surrounds the blade handle at the location where the blade handle extends from the protective sleeve.

10 Claims, 3 Drawing Figures

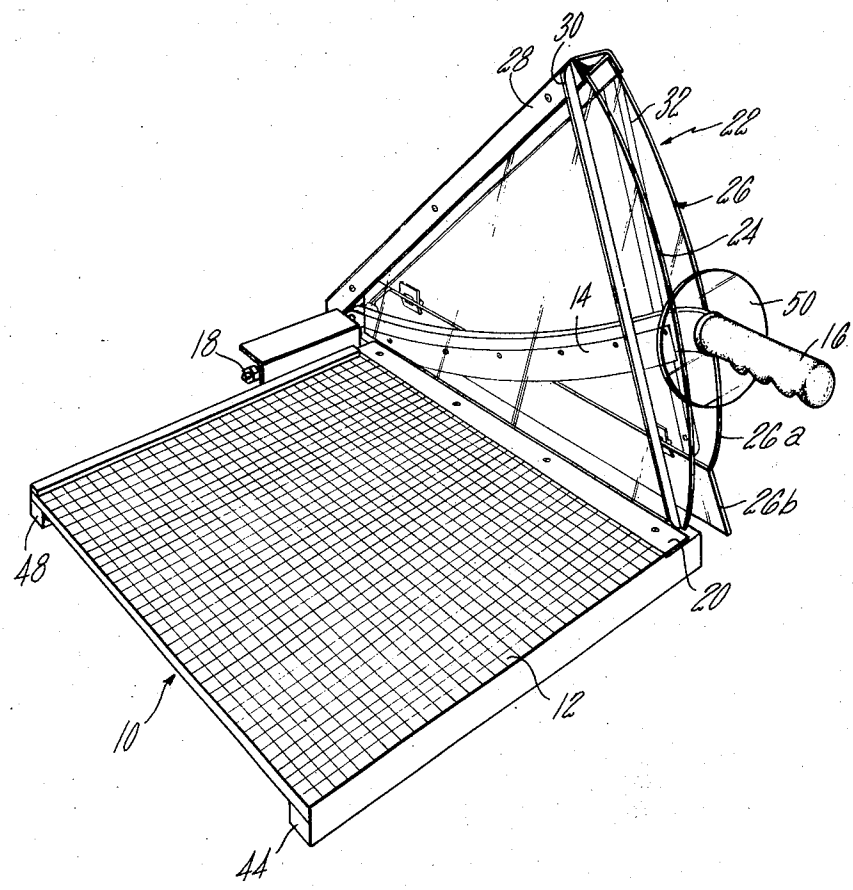


FIG. 1

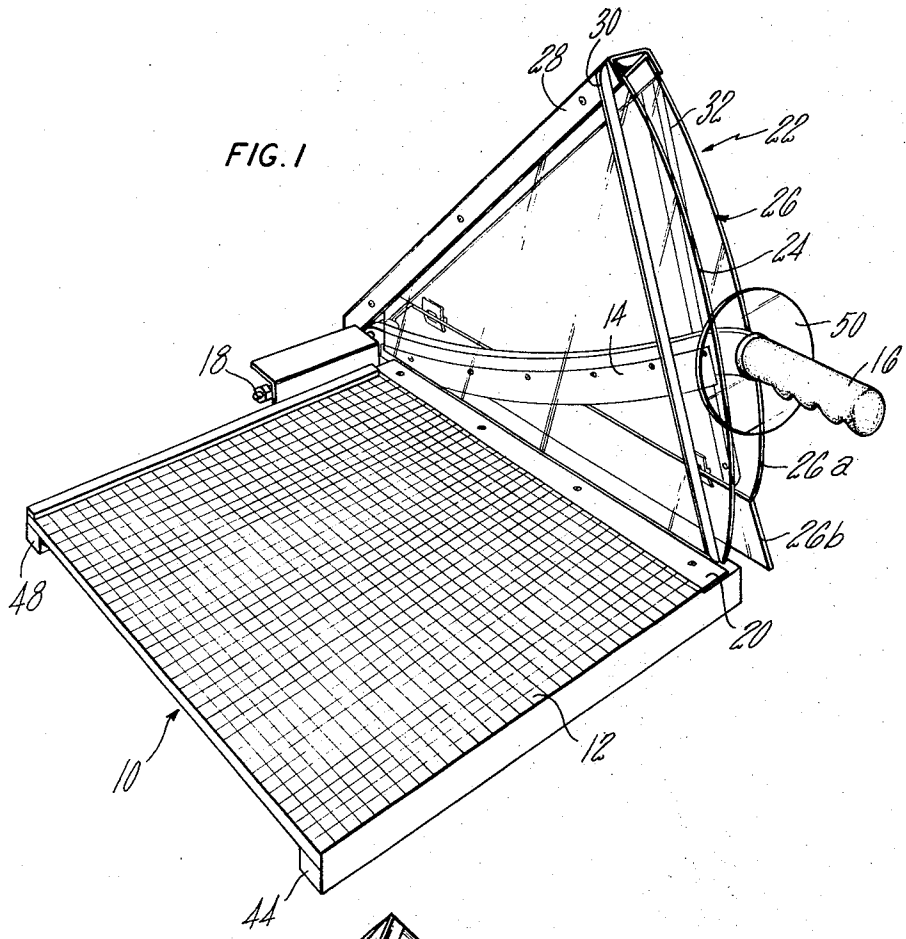

30
28
32
22
26
24
14
50
16
18
26a
26b
48
20
10
12
44

FIG. 2

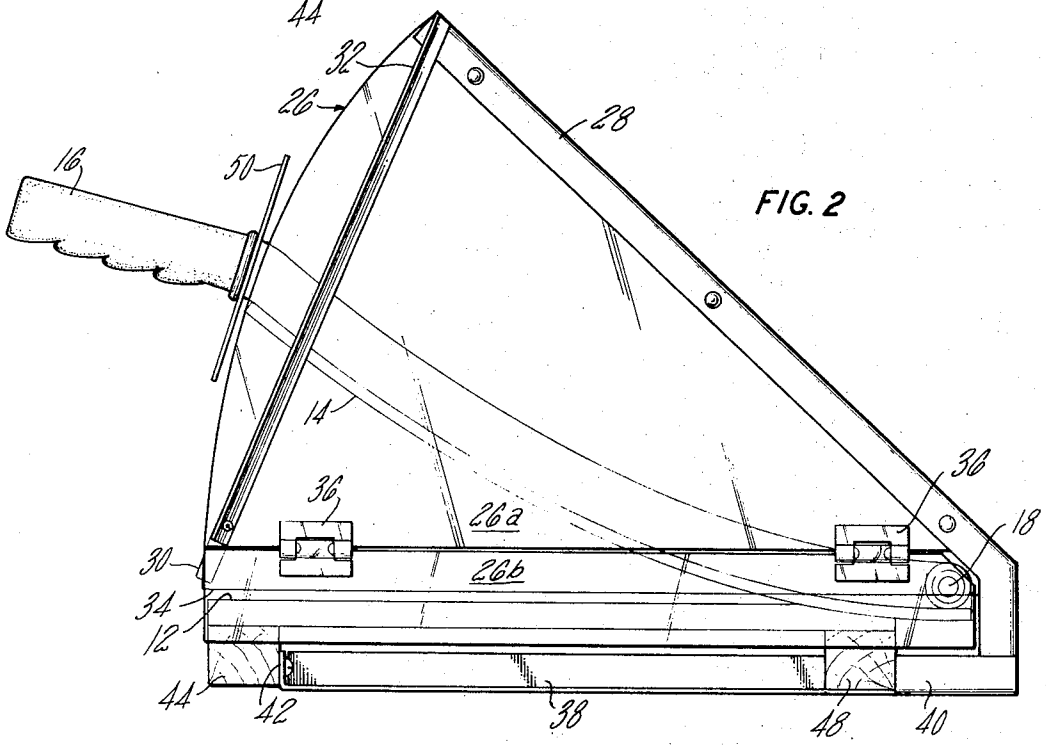
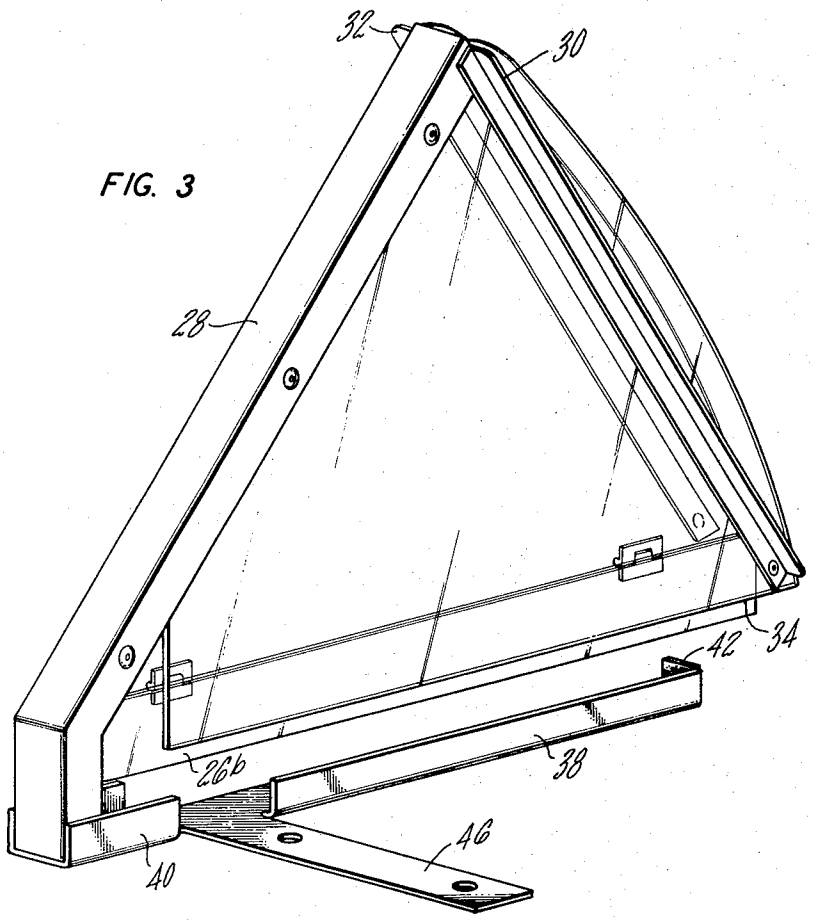

32
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16
50
14
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36
18
26a
26b
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34
12
44
42
38
48
40

FIG. 3



PAPER CUTTER GUARD

BACKGROUND OF THE INVENTION

This invention relates to the field of safety guards or shields for cutting devices. More particularly, this invention relates to cutter guards or shields for the generally standard and well known type of material cutting device known as a paper cutter, this standard type of device having a flat cutting board with a blade pivotally attached to one side thereof for cutting in cooperation with that one side of the board by increasing the overlap between the blade and an edge of the board.

Standard cutting devices of the type referred to above are in wide spread use, especially in places such as schools, offices, store rooms and other similar places where there are frequent occasions to cut paper, cardboard and other similar materials. These paper cutters are typically constructed of a flat board, a cutting lip mounted on one edge of the board, and a cutting blade pivotally attached to that one edge of the board and cooperating with the cutting lip to sever material by drawing the blade down across the cutting lip. These paper cutters are very effective and efficient devices, but they are also quite dangerous because they are seldom, if ever, equipped with suitable safety devices to prevent injury to the user. Serious lacerations, and even amputations, can occur if the user of the paper cutter inadvertently places his fingers in the path of the blade. This safety problem is particularly acute in school environments where young students have access to such cutting devices.

Attempts have been made in the past to provide safety devices of one kind or another for use with paper cutters of the type here under discussion. Examples of such prior art devices can be found in patents such as the patent to Wolnez U.S. Pat. No. 3,224,314 and Scherig U.S. Pat No. 2,518,076 wherein shields are positioned on the cutter on the inboard side of the cutting blade. However, the safety attempts represented by such prior art devices have been inadequate since they have failed to adequately shield the blade in such a fashion as to truly minimize the problem of inadvertent insertion of fingers into the path of the blade.

SUMMARY OF THE INVENTION

The cutter guard of the present invention overcomes the problems of the prior art and results in a safety shield or cutter guard which truly minimizes the possibility of inadvertent insertion of fingers into the path of the cutting blades. The cutter guard of the present invention is in the form of an elongated housing or sleeve which is attached to the end of the cutting board to establish a protective barrier along both the inboard and outboard sides of the cutting blade. The housing is in the form of a pair of spaced apart, parallel, transparent shields which are attached to and suspended from a brace. The shields form a protective barrier along both the inboard and outboard sides of the cutting blade to prevent inadvertent insertion of fingers into the path of the blade from either side. The inboard shield terminates short of the surface of the cutting board to permit access of the paper or the material to be cut. The outboard shield has a lower segment pivotable with respect to the rest of the outer shield, and this lower pivotable segment extends below the plane of the cutting board. This lower segment pivots out of the way to permit passage of the material being cut, while at the same time, since it extends below the plane of the cutting board, it effectively prevents insertion of fingers from the outboard side into the path of the blade.

The protective shield unit of the present invention also incorporates a particularly effective frame for both positioning the parallel protective shields and for mounting the entire unit on the cutting board. The support frame extends along and is attached to the underside of the cutting board, and it has an upright segment to which the spaced apart transparent shields are secured.

Accordingly, one object of the present invention is to provide a novel and improved paper cutter guard.

Another object of the present invention is to provide a novel and improved paper cutter guard for paper cutters of the standard type having a cutting board and a pivotally mounted blade at one edge of the board.

Still another object of the present invention is to provide a novel and improved paper cutter guard for standard paper cutters wherein inadvertent insertion of fingers into the path of the blade from either the inboard side of the blade or the outboard side of the blade is minimized.

Still another object of the present invention is to provide a novel and improved paper cutter guard which can be easily mounted on existing paper cutters of the standard type to provide an efficient means of adding protection to devices already in use.

Other objects and advantages of the present invention will be apparent to and understood by those skilled in the art from the following detailed description and drawings.

BRIEF DESCRIPTION OF THE DRAWING

Referring now to the drawings, wherein like elements are numbered alike in the several figures, FIG. 1 is a perspective view of a standard paper cutter with the paper cutter guard of the present invention mounted thereon.

FIG. 2 is a view looking from the right side of FIG. 1.

FIG. 3 is a view looking from the left of FIG. 1, with the cutter guard removed from the cutting board.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, there is shown a typical cutting board **10** which has a flat horizontal platform **12** and a blade **14** with a handle **16.** Blade **14** is pivotally mounted by means of a pivot rod **18** at the rear of the board, and the blade extends along one side of the board from the rear of the board to the front. A cutting lip **20** extends along the side of the board at which the blade is mounted, and the blade and the cutting lip cooperate in scissoring fashion to cut paper or similar materials positioned between the blade and the cutting edge.

The cutter guard **22** of the present invention is shown mounted in position at the cutting side of the board in FIG. 1. The guard includes a pair of spaced apart, parallel, transparent plastic sheets **24** and **26** which serve as shields. The sheets are attached to and extend from a channel member **28** which extends upwardly at an angle of about 45° with respect to platform **12.** A pair of angle members **30** and **32** extend from the top of channel member **28** to provide positioning and rein-

forcing struts for the shields **24** and **26**, respectively. Each of the shields is attached to its respective reinforcing strut. The shields **24** and **26** and the channel member **28** thus cooperate to form an elongated housing or sleeve having one shield, i.e., shield **24**, positioned on the inboard side of blade **14** and the other shield, i.e., shield **26**, positioned on the outboard side of blade **14**. Both of the shields, and hence the housing formed thereof, extend along substantially the full arc of travel of the cutting blade.

As can perhaps best be seen in a combined view of FIGS. **1** and **2**, inboard shield **24** terminates in edge **34** a short distance, such as on the order of 1/8 of the inch above platform **12**. This spacing of edge **34** above platform **12** serves to allow for the passage of paper or other material to be cut into the interior of the guard housing where it can be positioned between blade **14** and cutting lip **20**. The outboard shield **26** is composed of an upper portion **26***a* and a lower portion **26***b*, with the lower portion extending below the plane of platform **12** and being hinged by a pair of hinge elements **36** to the upper portion **26***a*.

The small separation between the bottom edge of inner shield **24** and platform **12** effectively prevents the inadvertent insertion of fingers into the path of the cutting blade from the inboard side of the blade. The extension of lower outboard shield segment **26***b* below the plane of platform **12** also serves to prevent the inadvertent insertion of fingers into the path of the blade from the outboard side of the blade. The hinged connection between lower segment **26***b* and upper segment **26***a* of the outboard shield serves to permit the passage of either light gauge or heavy gauge material to be cut so that the insertion of the material under inboard shield **24** and against the inner side of shield **26***a* causes shield **26***a* to pivot upwardly to whatever extent is necessary to permit the passage of the material being cut. If the material is of particularly light gauge, pivotable segment **26***a* will pivot only slightly and will deflect the material downwardly; however, if the material is of heavy gauge the pivoting connection between segments **26***a* and **26***b* will permit lower segment **26***b* to be pivoted upwardly to permit the passage of the heavier gauge material.

Referring now to a combined consideration of FIGS. **2** and **3**, the framework of the cutter guard can best be seen and the manner of attachment of the cutter guard to the cutting board can best be understood. The base of the frame has a forward angle section **38** which merges into a rear channel member **40**. Angle member **38** and channel member **40** may be formed of two separate parts joined together or, preferably, they may be formed from a single channel member where one of the legs is removed to form angle segment **38**. Angle member **38** terminates at the forward end in an upwardly standing boss **42** which is screw fastened to a support leg **44** which extends along the full front edge of the cutting board. An extension leg **46** extends from angle section **38**, leg **46** extending along and being screw fastened to the rear support leg **48** of the cutting board. Legs **44** and **48** are standard construction parts of the cutting board. Upright channel member **28** is welded or otherwise suitably connected to the rear channel segment **40** to complete the support frame. Thus, it can be seen that the support frame is rigidly attached to the cutting board by connection to the front and rear support legs **44** and **48**, and it can also be seen that the entire cutter guard can be readily and easily mounted on existing cutting boards merely by positioning the shields **24** and **26** on the respective sides of the cutting blade and by fastening boss **42** to the front leg of the cutting board and fastening extension **46** to the rear leg of the cutting board.

The cutter guard described to this point provides efficient and effective protection against inadvertent insertion of fingers into the path of the cutting blade from either the inboard side of the blade or the outboard side of the blade without interfering with the normal operation of the cutting blade. As one additional feature of protection, a transparent circular disc **50** is mounted at the junction of handle **16** with blade **14** to prevent insertion of fingers along the blade into the space defined by the spaced apart shields **24** and **26**.

While a preferred embodiment has been shown and described, various modifications and substitutions may be made thereto without departing from the spirit and scope of the invention. Accordingly, the present invention has been described by way of illustration and not limitation.

What is claimed is:

1. A safety guard for a material cutter of the type having a board to support material to be cut and a blade pivotally connected to the board with respect to a cutting edge of the board for cutting by increased overlap between the blade and the cutting edge for the board, the safety guard including:

a frame mounted on said board, said frame having a support member extending above said board; and

shield means extending from said support member toward said board at said cutting edge, said shield means defining a sleeve about said blade, said sleeve having a shield member on the inboard side of said blade and a shield member on the outboard side of said blade;

said shield member on the inboard side of said blade terminating above the support surface of said board, and said shield member on the outboard side of said blade terminating below the support surface of said board and having a lower segment pivotal with respect to the upper segment thereof.

2. A safety guard as in claim **1** wherein:

at least one of said shield members is transparent.

3. A safety guard as in claim **1** wherein:

said frame includes a base member attached to said board at the underside thereof, said support member extending from said base at the rear of said board removed from the pivotal connection of said blade to the board.

4. A safety guard as in claim **3** wherein:

said board has at least one support member; and

said base member is connected to said one support member.

5. A safety guard as in claim **3** wherein:

said board has a pair of support members; and

said base member has a boss butted against and connected to one of said support members and a leg extending along and connected to the other of said support members.

6. A safety guard as in claim **1** wherein said shield means includes:

a first plate extending from said support member toward said board on the inboard side of said blade,

said first transparent plate terminating in an edge spaced slightly above the support surface of said board;

a second plate extending from said support member toward said board on the outboard side of said blade, said second plate having a fixed upper segment terminating above the support surface of said board and a movable lower segment terminating below the support surface of said board, said lower segment being pivotally connected to said upper segment.

7. A safety guard as in claim **6** wherein:

said first and second plates are transparent and are spaced apart parallel to each other.

8. A safety guard as in claim **6** wherein:

said frame includes a base member attached to said board at the underside thereof, said support member extending from said base at the rear of said board removed from the pivotal connection of said blade to the board.

9. A safety guard as in claim **8** wherein:

said board has at least one support member; and

said base member is connected to said one support member.

10. A safety guard as in claim **8** wherein:

said board has a pair of support members; and

said base member has a boss butted against and connected to one of said support members and a leg extending along and connected to the other of said support members.

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