United States Patent

Petersen

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[54] **ADJUSTABLE EASEL**

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[52] **U.S. Cl.**.....**248/459,** 248/453

[51] **Int. Cl.**.....**A47b 97/08**

[58] **Field of Search**.....248/459, 455, 453, 454, 457, 248/174; 40/152.1; 108/9

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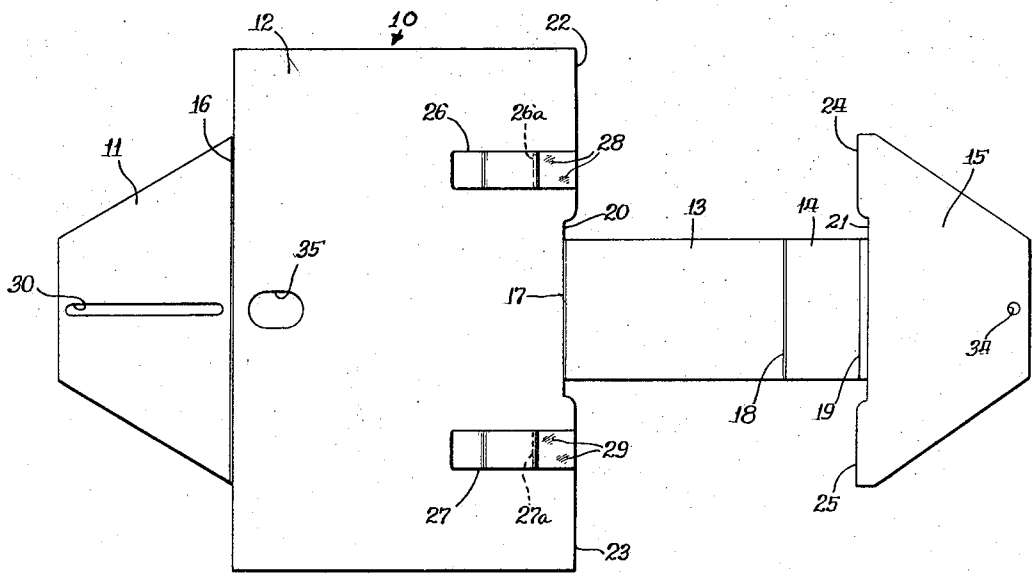
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[57] **ABSTRACT**

An easel for supporting a loose-leaf binder, a book, or other written matter on two clips on the easel face which is angularly adjustable through a wide range of angles with great ease. The easel is formed of a series of sections joined together with hinges and arranged for either upright operating position or collapsed folded position.

8 Claims, 4 Drawing Figures



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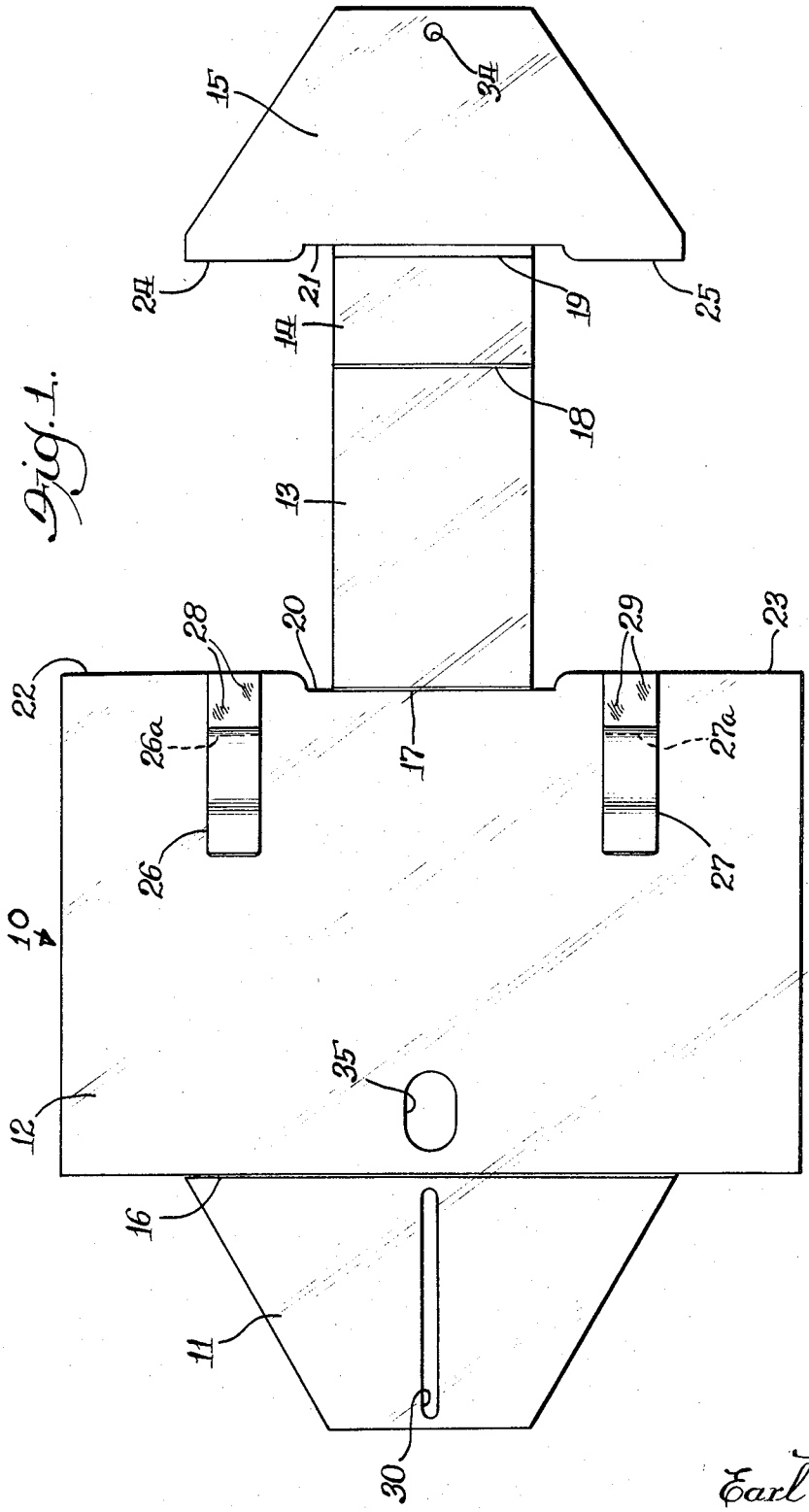


Fig. 1.

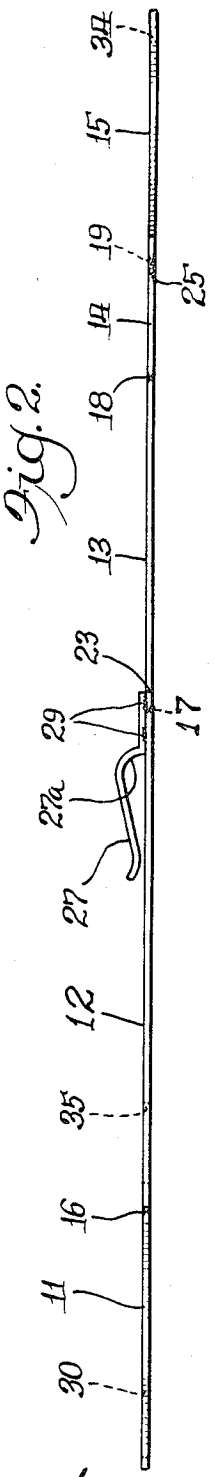
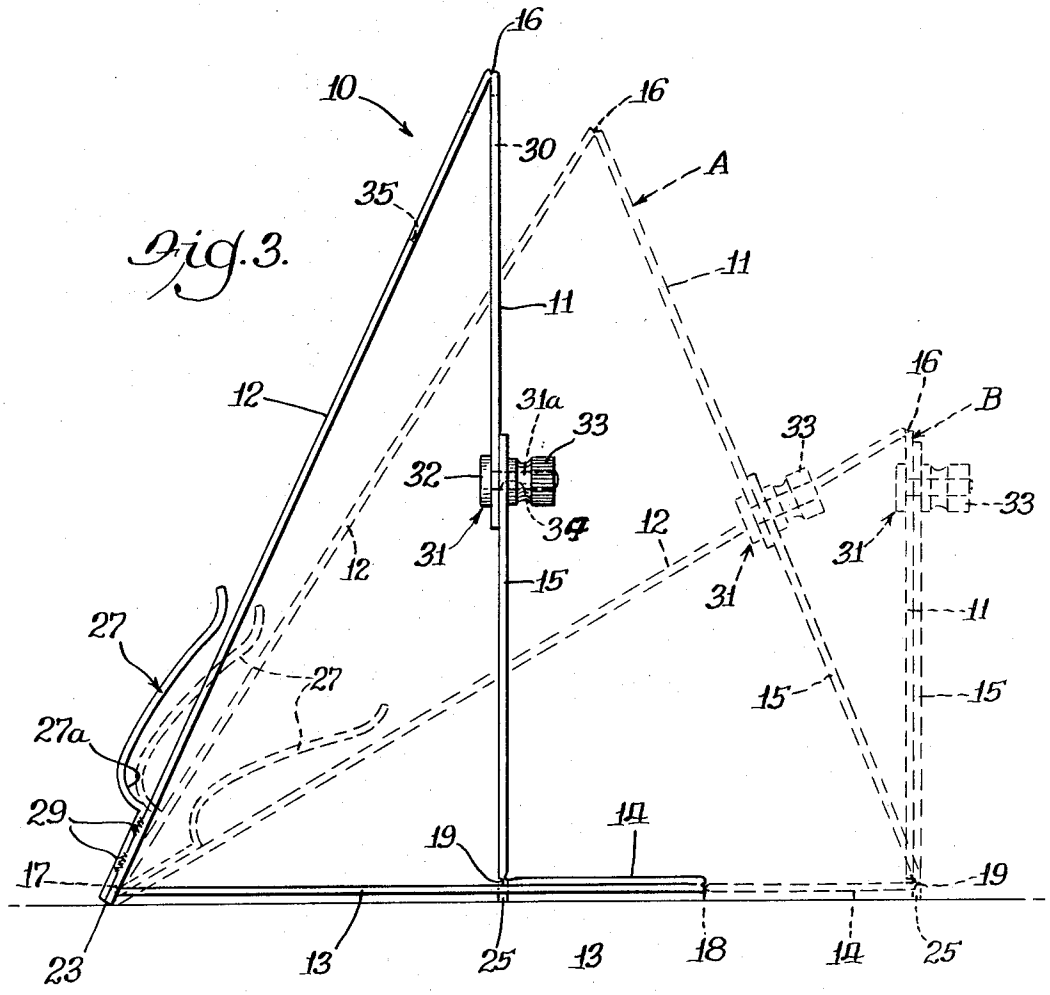


Fig. 2.

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Fig. 3.



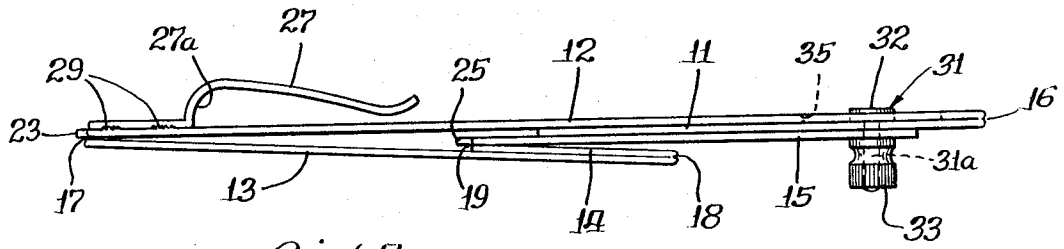


Fig. 11.

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ADJUSTABLE EASEL

BACKGROUND OF THE INVENTION

1. **Field of the Invention**

The invention is directed to an easel for holding a binder, book or other printed matter or indicia in an upright position for a person viewing, making frequent reference to, reading, studying, or copying the material thereon.

2. **Description of the Prior Art**

Easels have been made in all sizes and shapes for many years. Most easels are of a fixed inclination but yet many have been made with angularly adjustable capabilities. Most, if not all, such easels had only a ledge or raised strip along the lower edge to prevent material resting thereon from sliding off. Other easels have been made with great sophistication to either facilitate reading or typing. Some are arranged to expose a single line of printed matter at a time.

SUMMARY OF THE INVENTION

The present invention relates to a simple easel for supporting a book, other printed matter, or other illustrated material in any desired angle of inclination.

One principal object of this invention is to provide an easel which has quick adjustability and can be folded to a collapsed compact package for ease of shipment and storage.

Another principal object of this invention is the two clip holding means which permits easy page turning from their lower edges as well as their upper edges without disturbing or moving the binder or book, the cover of which is resting and semi-anchored in the two clips on the face of the easel.

An important object of this invention is to provide an easel made of a series of sections arranged in end-to-end relationship and the sections joined by intermediate hinges.

Another important object of this invention is that the two clip holding means so amply grips binder or book covers that the easel will support in position a wide range of binder sizes, including many which may extend several inches beyond the left and right edges or several inches above the upper edge of the easel.

Another important object of this invention is the maximum stability maintained for all binder sizes and throughout all of the possible face angle positions by the four legs or the four point resting contact edges.

Another important object of this invention is the provision of a novel easel having a triangular shape in cross section with a front, a back, and a base.

An object as set forth in the preceding paragraph in which the triangular back is formed of two overlapping sections and means joining the sections in any desired degree of overlap to affect the inclination of the front of the easel.

Another important object as set forth in either of the two preceding paragraphs in which the base is formed of two sections which can be used either in overlapped or extended relationship to affect the inclination of the front of the easel.

Other and further important objects and advantages will become apparent from the disclosures in the following specification and accompanying drawings.

IN THE DRAWINGS

FIG. **1** is a top plan view of the easel of this invention shown in flat, extended position.

FIG. **2** is a side view of the device of FIG. **1**.

FIG. **3** is a side elevational view of the easel in operating position and showing various adjustments in dash lines.

FIG. **4** is an end view of the easel of FIGS. **1** and **3** in which it is compactly folded for shipping or storage in a desk or compartment when not in use.

AS SHOWN IN THE DRAWINGS

The reference numeral **10** indicates generally the easel of this invention. As shown in FIGS. **1** and **2** the easel includes a plurality of end-to-end arranged sections **11, 12, 13, 14,** and **15**. The sections are preferably all made of a plastic material which has substantial rigidity for its thickness and yet is strong and non-breakable. The sections **11** and **12** are joined by a hinge **16** which is also preferably formed of the same plastic material. Similar hinges are provided between the sections **12** and **13** at **17**, **13** and **14** at **18**, and **14** and **15** at **19**. It will thus be seen that the series of sections are all joined by intermediate hinge members which permit the folding of the easel in many relationships. For ease of folding and to effect unimpaired standing of the easel the sections **12** and **15** are provided with transverse notches **20** and **21** at the position of the hinges **17** and **18** respectively. The centrally located notch **20** defines short leg members **22** and **23** at the outer edges of the section **12**. Similarly the centrally located notch **21** defines short leg members **24** and **25** at the outer edges of the section **15**.

The extreme end sections **11** and **15** constitute the back of the easel **10**. The first back section **11** depends generally downwardly and rearwardly while the second back section **15** projects upwardly and somewhat forwardly. The sections **11** and **15** overlap and it is at these overlapping portions that the sections are adjustably held together in any desired relationship. When the easel is folded up for use as in FIG. **3** the legs **24** and **25** of the end section **15** constitute the rear support for the easel.

Section **12** adjacent the end section **11** constitutes the front or face of the book supporting easel of this invention. When the easel is folded up for use as in FIG. **3** the spaced apart short legs **22** and **23** of the front section **12** constitute the front support for the easel. Spaced apart supporting brackets or clips **26** and **27** form a part of the front face **12** of the easel. These may be formed integrally with the face or may be separately formed and cemented, welded or otherwise fastened at **28** and **29** to and adjacent the lower edge of the front face of the easel. When formed integrally with the face there may be holes approximately the same width and height as supporting clips **26** and **27** in the front face **12** directly behind or under those clips. The brackets are designed to support a book or reference binder by its cover in an open position or to support sheets for viewing, copying, or studying, or the like. The book cover supporting crotches **26***a* and **27***a* of the spaced brackets are in generally horizontal alignment and at a position spaced above the base of the easel. This permits a user to turn the pages of a book carried in the easel from the bottom.

The other intermediate contiguous sections **13** and **14** constitute the base of the easel. Together with the front and back members, the base forms a triangle in cross section or in end elevation as viewed in FIG. **3**. The full line showing of the device of FIG. **3** has the second base section **14** folded back about its hinge **18** so that it overlies the first base section **13**. In this position the back sections **11** and **15** are generally vertically disposed so that the easel triangle is generally a right triangle and the easel face is in its most upright position. When the second base section **14** is extended in end-to-end relationship as shown in dash lines A in FIG. **3** the front face is automatically inclined a substantial degree without changing the relationship of the back sections **11** and **15**.

As shown in FIG. **1** the first back section **11** is provided with an elongated slot **30**. The slot is substantially centrally disposed in a vertical path when the section **11** depends from the top of the easel as shown in FIG. **3**. A bolt **31** is adapted to have its threaded shank **31***a* pass through the elongated slot **30** in the first back section **11**. An enlarged head **32** prevents the entire bolt from coming through the plastic section **11**. A cooperative nut-knob **33** threadedly engages the bolt **31**. A hole **34** in the second back section **15** is adapted to receive passage of the threaded shank **31a**. By drawing up tightly on the knob **33** the first and second back sections may be adjustably held in any desired relation of overlap. This adjustment, illustrated by dash lines B in FIG. **3**, causes a change in the angle of inclination of the front face **12** of the easel **10**. It should also be understood that the back sections **11** and **15** may be adjusted when the base members are either in an overlapping relationship or an extended relationship. This provides for an infinite number of adjustable positions of the front face of the easel. A big shift in easel inclination is accomplished when the base members are overlapped or extended as previously described.

A hole **35**, elongated in a generally vertical direction, is provided at the upper center of the front face section **12**. The hole is positioned so that when the easel is folded or collapsed for shipping or storage the nut-knob **33** passes loosely therethrough. The width of the elongated hole **35** is slightly greater than the diameter of the knob **33**. This provision for passage of the knob permits greater compact folding and thus easier shipment or storage.

In the operation of the easel of this invention the hinge connected series of sections is folded as in FIG. **3** and the angle of inclination of the front face **12** adjusted as desired. When the easel is to be stored or shipped the easel is collapsed or folded in to a position with the sections in overlying relationship as shown in FIG. **4**.

What is claimed is:

1. An easel comprising a face for supporting an object in an inclined position, a first back member hinged to the top edge of the easel face and generally depending downwardly and rearwardly from the upper edge of the face, a first base member hinged to the bottom edge of the easel face and extending generally horizontally rearwardly, a second base member hinged to the rearward edge of the first base member, a second back member hinged to the edge of the second base member opposite the hinge attachment of the second base member to the first base member, said second back member generally projecting upwardly and at least partially overlapping the first back member, means joining said first and second back members in any selected overlapping relationship to change the angular inclination of the easel face, and utilizing the second base member in a position folded back on the first base member to position the easel face in a more upright position or in an extended position with the first base member to position the easel face in a more inclined position.

2. An easel as set forth in claim **1** in which said means joining the first and second back members comprises said first back member having a centrally disposed elongated slot in a generally vertical position when the first back member depends from its upper hinge, a headed bolt member centrally disposed in said second back member and adapted to have its threaded shank pass through said slot in the first back member, and a cooperative nut-knob to engage the threaded shank.

3. An easel as set forth in claim **2** in which said easel face has a hole therein arranged for axial alignment with the bolt member when the easel is folded in a compact arrangement, whereby the head of the bolt member passes through the axially aligned hole to facilitate the compact folding of the easel.

4. An easel comprising a face for supporting an object in an inclined position, spaced clip means on the face near the lower edge for gripping an object supported by the face, a first back member hinged to the top edge of the easel face and generally depending downwardly and rearwardly from the upper edge of the face, a first base member hinged to the bottom edge of the easel face and extending generally horizontally rearwardly, a second base member hinged to the rearward edge of the first base member, a second back member hinged to the edge of the second base member opposite the hinge attachment of the second base member to the first base member, said second back member generally projecting upwardly and at least partially overlapping the first back member, means joining said first and second back members in any selected overlapping relationship to shange the angular inclination of the easel face, and utilizing the second base member in a position folded back on the first base member to position the easel face in a more upright position or in an extended position with the first base member to position the easel face in a more inclined position.

5. An easel as set forth in claim **4** in which the spaced clip means are generally horizontally disposed and having book supporting crotches spaced above the base of the easel whereby book pages may be easily grasped and turned by a user from the bottom of the easel.

6. An easel comprising a series of five sections arranged end-to-end and each of said sections joined to its adjacent section by hinge means, the two extreme end sections together constituting an easel back, one of said intermediate sections immediately adjacent one of said end sections constituting an easel face, the other two of said contiguous intermediate sections disposed between the easel face and the other of said end sections constituting an easel base, and means joining said back sections in selected overlapping relationship.

7. An easel as set forth in claim **6** in which said contiguous intermediate base sections can be arranged so

one of said sections overlaps the other of said sections or so that said sections are extended in end-to-end relationship.

8. An easel as set forth in claim 7 in which said series of sections can be folded in a collapsed state for ease of shipment of the easel.

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