

June 15, 1937.

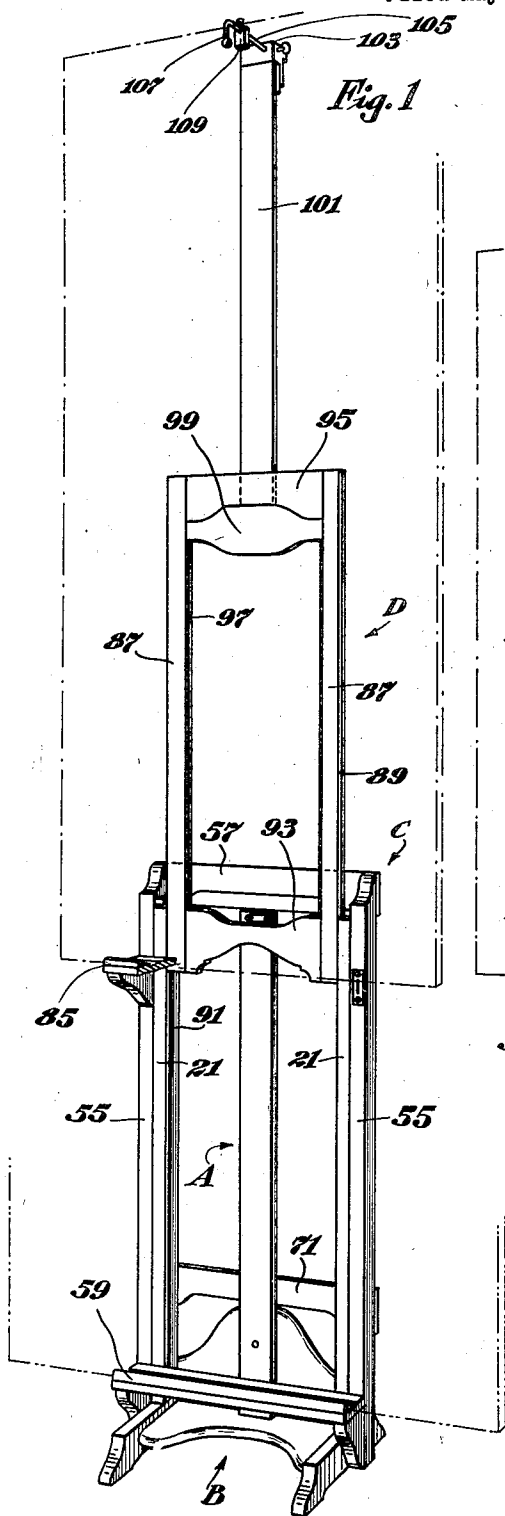
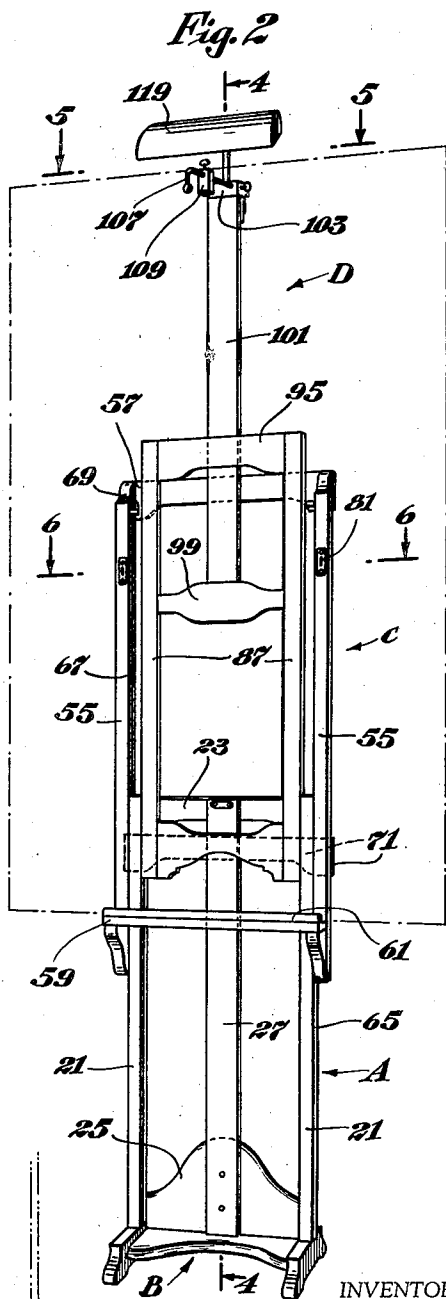
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2,083,839

SUPPORT

Filed May 16, 1935

3 Sheets-Sheet 1



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June 15, 1937.

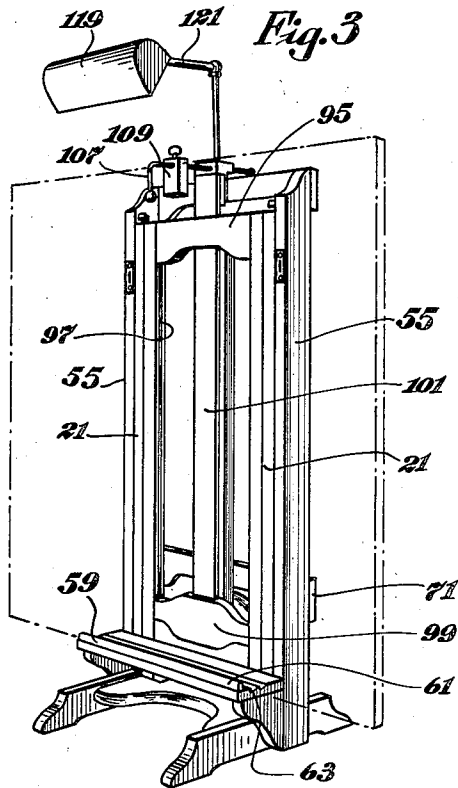
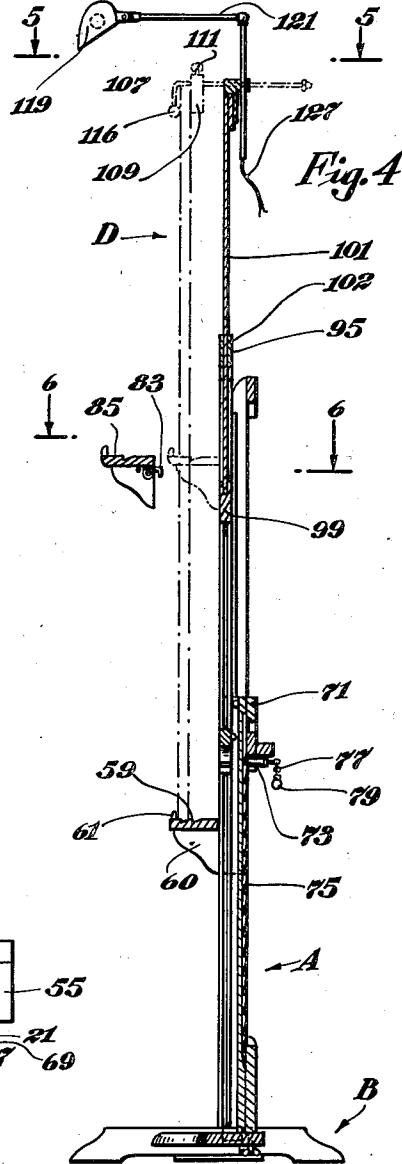
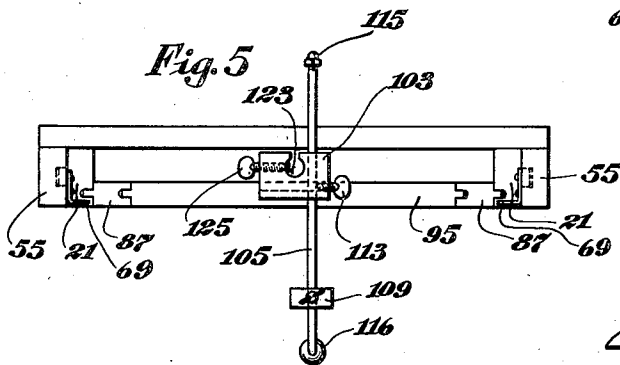
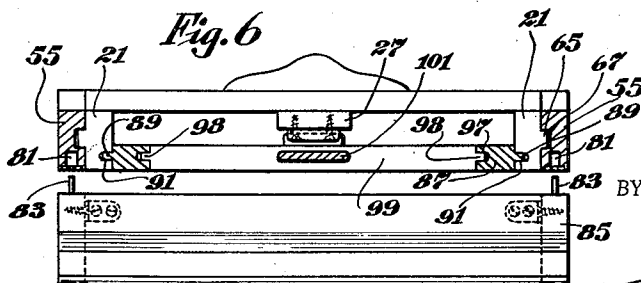
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SUPPORT

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3 Sheets-Sheet 2



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SUPPORT

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Fig. 7

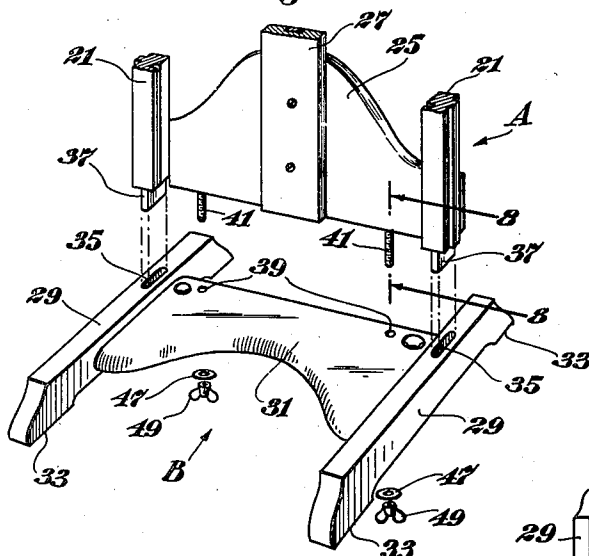


Fig. 8

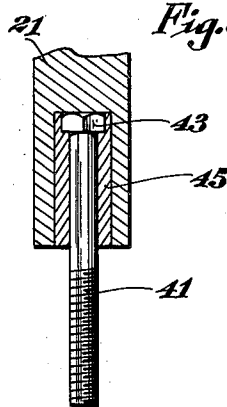


Fig. 9

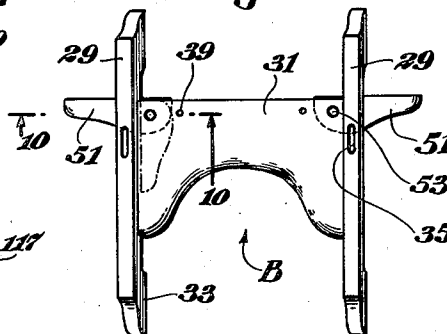
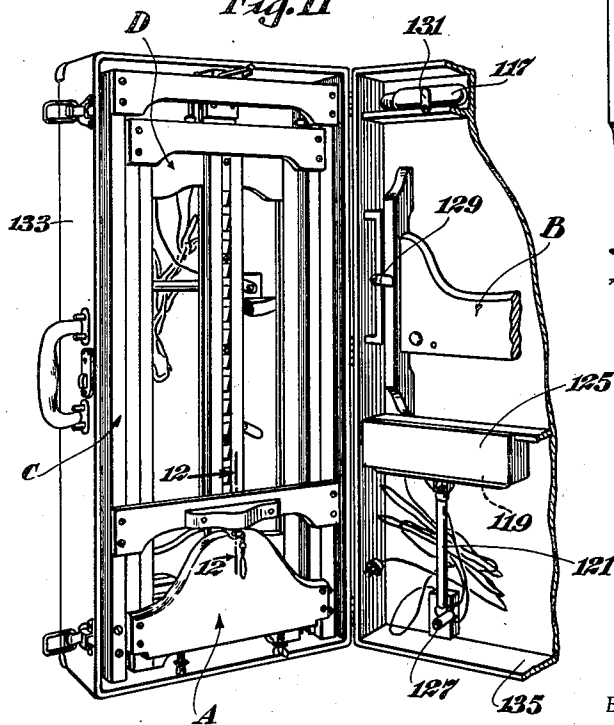


Fig. 10



Fig. 11



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UNITED STATES PATENT OFFICE

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SUPPORT

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8 Claims. (Cl. 248—197)

This invention relates in general to supports for mounting articles for display or other purposes, and in one of its applications to easels such as are used to support artist's canvases and the like. In one of its aspects it relates to a support, such as an artist's easel, that is collapsible, so that it is adapted for accommodation in a limited space, and is also light in weight, whereby it is readily portable and transportation thereof is made easy.

While in the particular embodiment disclosed herein my invention has been described in relation to easels, it is to be understood that it is not so limited and that as to certain phases thereof it may have other applications.

Easels as at present constructed have many disadvantages that it is the aim of my invention to overcome. Among them may be mentioned that of great weight and large dimensions in relation to the size of the canvases they are adapted to support, and also the fact that they are adapted for the accommodation of only a limited range of sizes of canvases. Where such easels are collapsible, their dimensions when in collapsed form, particularly where the easels are adapted for the support of large canvases, are such that, coupled with their great weight, they are not readily portable, and therefore are difficult and expensive to transport.

It is therefore among the objects of my invention to provide an easel that, while light in weight and small in dimensions when collapsed, may support a wide range of canvas sizes, from very large ones to small ones, and one that is readily transportable because of its small weight and its small dimensions when collapsed.

Among other objects of my invention may be mentioned the provision of means for supporting the lower edge of a canvas at a desired height, the provision of means for increasing the lateral stability of the easel where unusually large or high pictures require this, and the provision of means associated with the easel for suitably illuminating canvases mounted thereon.

For the attainment of these objects and such other objects as will hereinafter appear or be pointed out I have shown an illustrative embodiment of my invention in the drawings in which:—

Figure 1 is a view in perspective of an easel according to my invention, extended to its maximum height;

Figure 2 is a view similar to Figure 1 showing the easel in partly extended position;

Figure 3 is a view in perspective showing the easel completely collapsed;

Figure 4 is a sectional view on the line 4—4 of Figure 2, looking in the direction of the arrows;

Figure 5 is a plan view of the easel, on an enlarged scale on the line 5—5 of Figure 4, looking in the direction of the arrows, the lamp bracket and the base of the easel being omitted for the sake of clarity;

Figure 6 is a sectional view on an enlarged scale on the line 6—6 of Figure 4, looking in the direction of the arrows, portions being omitted;

Figure 7 is a perspective view of the lower portion of the easel showing the base separated from the upright frame, and showing particularly the manner of attachment of the base to said frame;

Figure 8 is a sectional view, on a greatly enlarged scale, on the line 8—8 of Figure 7, looking in the direction of the arrows, and illustrating a detail;

Figure 9 is a perspective view, almost in plan, of the base, showing movable portions thereof in extended relation to the base;

Figure 10 is a view on the line 10—10 of Figure 9, looking in the direction of the arrows, and showing a detail of the construction;

Figure 11 is a view in perspective showing the easel in collapsed form, with the base and other portions thereof disassembled therefrom, and the whole compactly packed into a suit case; and

Figure 12 is a detail view, in section, on the line 12—12 of Figure 11, looking in the direction of the arrows, and on a greatly enlarged scale, showing the latch mechanism for holding the supporting shelf at a desired height.

Before entering into a detailed description of the parts, I will premise that my easel, in general, comprises a main frame, adapted to be supported in upright position by a base, readily detachable therefrom and readily attachable thereto, and slidable on said main frame are a section adapted to support the lower edge of a canvas, and another section adapted to engage the upper portion of a canvas. The latter section itself comprises slidably related sections. All of the slidable sections are so related in size and manner of mounting to the main frame, that when slid into collapsed or nested relation, the overall height of the easel will be substantially equal to that of the main frame, whereas when they are extended to the maximum, the height of the easel is many times that of the main frame, in the particular embodiment herein disclosed by way of illustration, being substantially three times that of the main frame. In addition the lower slidable section may be raised or lowered, thereby

providing for a corresponding raising or lowering of the lower edge of the canvas. If desired the easel in its collapsed form may be so dimensioned as to fit into an article of luggage of ordinary suit case size, and for this purpose, parts thereof, in addition to the base, may be made readily demountable, and the weight of the parts kept to a maximum.

Referring now to the drawings in detail, it will be observed that I there show a main frame denoted as a whole by the letter A and shown in the particular embodiment disclosed herein as comprising a pair of spaced parallel uprights 21 mounted, so as to stand upright in a base denoted as a whole by B. These uprights are joined at their tops by a cross-strip 23, and at their bottoms by a cross-piece 25, and a central upright member 27 is shown as positioned midway between the uprights 21 and as bridging the two cross members 23 and 25.

By referring to Figure 7 the construction of the base and the manner of its association with the frame A will become clear. The base B is shown as comprising a pair of parallel members 29 connected by a cross member 31. The lower surfaces of the members 29 are cut away so that its mid-portion is raised from the floor and only the ends 33 of each member 29 contact with the floor. The portions 33 thereby form foot portions that are spaced from each other to the extent necessary for stability. The cross piece 31 is also raised from the floor so that it does not interfere with the action of the portions 33 and for another purpose to be explained hereinafter.

For purposes of attaching the base to the frame A, slots 35 are shown formed in the members 29, and into these may be inserted tongues 37 formed on the ends of the uprights 21. The piece 31 is further provided with holes 39, into which may be inserted the ends of bolts 41 protruding from the cross piece 25. These bolts are mounted in non-rotatable relation to the piece 25, as will appear from the showing of Figure 8, in which the bolts 41 are shown as provided with square heads 43 fitting into square recesses in dowels 45 fitted permanently into the pieces 21 in any suitable or preferred manner, as for example by gluing. When the bolts 41 are inserted into the holes 39, the tongues 37 at the same time enter the slots 35, and frame A may then be fastened to the frame B by the wing nuts 49 applied to the ends of the bolts 41. Washers 47 are also conveniently applied beneath the wing nuts 49, in the customary manner.

In order to provide for greater stability I may provide members 51 pivoted to the base in any suitable or preferred manner as by the bolts 53 passing through the members 51 and the member 31. When these members 51 are extended outward from the base, as shown in Figure 9, they increase the lateral stability thereof. For smaller canvases however, where such added stability is not needed, they may be folded underneath the member 31 and into the dotted line position indicated at the left of Figure 9.

Mounted in slidable relation to the uprights 21 is a frame denoted as a whole by C and comprising parallel uprights 55 united by a cross piece 57 at the top and a shelf 59 at the bottom. The shelf 59, which is used to support the lower edge of the canvas, may be provided with a ledge 61 at the front, and with a plurality of longitudinal grooves 63, the purpose of which, as will be obvious, is to prevent the sliding forward

and off the shelf of the lower edge of the canvas. It will further be noted that I show bracket members 60 to provide adequate support for the shelf.

Sliding engagement between the members 55 and 21 may be provided by a tongue and groove construction, comprising the tongues 65 on the outer edges of member 21, which fit into grooves 67 in the inner edges of members 55. This construction is shown on an enlarged scale in Figure 6. Stops 69 may be provided at the upper ends of the grooves 67 and so positioned that they engage the tops of members 21 so as to limit the downward movement of the members 55 before their lower ends extend beyond the lower surfaces of the cut-away mid-portion of members 29. This is desirable to prevent the lower ends of members 55 from interfering with the movement of members 51 to cause their lateral extension from the base.

A third cross member 71, shown in full lines in Figures 1 and 3, in dotted lines in Figure 2, and in section in Figure 4, is also shown as supported by the members 55, and carries the latch element 73, slidable in a housing 74, and adapted to engage the teeth of a rack 75 shown as carried by the back of the member 27 of the main frame. The latch 73 may be of any suitable or preferred type, such as one that is caused to move outward from the casing by spring pressure, and may be retracted by any suitable or preferred arrangement such as the chain 77 and the ring 79, these features being indicated on a large scale in Figure 12. The latch 73 and the teeth of the rack 75 are of the one-way type and are so arranged, as shown in Figures 4 and 12, that the frame C is normally supported against downward movement. If it is desired to move the frame C upward all that is necessary is to raise it, and, because of the inclination of the lower surfaces of the rack teeth and of the upper surface of the latch, the latch will ride up thereon. In order to move the frame C downward, however, it is necessary to withdraw the latch by the chain and ring 77, 79, since the rack teeth on their upper surfaces and the latch on its lower surface, are provided with abutments that do not permit the latch to ride up on the rack teeth, and thereby prevent the downward movement of the frame C unless the latch 73 is retracted.

It will be obvious from what has been said about frame C that the shelf 59, mounted thereon, and with it the lower edge of a canvas supported thereon, may be raised or lowered into substantially any position intermediate the base of the easel and the top of the frame A. The lowermost position is shown in Figure 1, and the uppermost position in Figure 2.

As a further convenience I may provide near the top of the frame C and on the uprights 55, sockets 81 adapted to receive suitable members 83 (see Figures 4 and 6) carried by a second shelf 85, that may be similar in construction to shelf 59, to thereby render it readily removable and readily attachable. When use is made of this second shelf the base of the canvas may be mounted a considerable distance above the top of the frame A, as clearly appears from Figures 2, and 1, in which is indicated in dot and dash lines the position assumed by a canvas having its lower edge resting on the upper shelf.

To provide for retaining the upper edge of the canvas in place, I have shown a frame D, comprising a pair of parallel uprights 87, slidably mounted between the uprights 21, and for this

purpose the uprights 87 may be provided with tongues 89 and the uprights 21 with grooves 91 (see Figure 6). The cross piece 93 joins the uprights 87 at the bottom, and a second cross piece 95 unites them at the top. At their inner edges the uprights 87 may be grooved as shown at 97 to accommodate tongues 98 on a member 99 that carries the upright 101 and passes through a slot 102 in cross piece 95, so as to slide therein. The members 101 and 99 constitute an extendable portion of the frame D, slidably mounted in the frame D so that it may be extended into the extreme upper position shown in Figures 1 and 4, or collapsed into the extreme lower position shown in Figure 3.

At the upper end of the upright 101, I have shown means for engaging the upper edge of the canvas. This means may take the form of a member 103 having a hole therein through which the sliding member 105 may pass. The latter, as shown, may be in the form of a rod bent downward at its forward end so as to form an overhanging portion 107, that may engage the front portion of the upper edge of the canvas, and thereby limit its forward movement. An element 109 is shown as slidably mounted on the member 105 and may serve, as indicated in Figure 4, as a clamp member cooperating with the overhanging portion 107 to hold the upper edge of the canvas therebetween. A set screw 111 passing through element 109 may be used for clamping it in place on the member 105. A second set screw 113, passing through member 103, may be used to clamp the member 105 in any desired position of extension outward from the easel.

It will be obvious that the construction just described affords a wide range of adjustment for the upper edge of the canvas, not merely in a vertical direction, but also outwardly from the easel. For added convenience a member 115 may be provided at the rear end of the member 105, and the overhanging portion 107 may be terminated by a knob or ball 116, the former feature being for the purpose of preventing disengagement of the member 105 from the member 103, and the purpose of the latter feature being to provide a smooth surface for engaging the canvas, as well as adding an ornamental touch.

It will be observed that I provide no means for holding the frame D in its positions of vertical adjustment. This is unnecessary for the reason that a canvas carried by the easel will itself provide the necessary support for the frame D in its extended position, since the element 105 rests on the upper edge of the canvas and is held there by the weight of frame D, which pulls element 105 downward. Obviously however such holding or clamping means for the frame D may be provided if found necessary or desirable. Such means may be similar to the latch and rack arrangement by which the frame B is held in any position of elevation.

As a further convenience I may provide, in connection with my easel, means for illuminating a canvas mounted thereon. This may take the form of an incandescent electric lamp 117 mounted within a reflector 119 adjustably carried on the bracket 121, the latter being slidably mounted within an opening 123 of the member 103. A set screw 125 may serve to hold the bracket 121 in any desired position of adjustment. The electric wiring 127 for furnishing power to the lamp is conveniently passed through the bracket, and, as shown in Figure 4, the bracket 121 may be mounted on the rear of the member

101, so that the electric wiring is not visible from the front of the easel and will not interfere with a canvas positioned in front of the member 101.

It will be obvious from the foregoing description that my easel is adjustable within a wide range, to meet various conditions, so that it can accommodate canvases differing greatly in size and in contour, and that these canvases may be mounted in various positions so that the greatest variety of mounting effects and the greatest convenience may be obtained. On referring to Figure 1 it will be seen that by making use of the removable shelf as well as the permanent shelf, and by extending the easel to its full extent, canvases of great vertical extent may be conveniently displayed at heights varying between the limits indicated in Figures 1 and 2. In Figure 2 the lower edge of the canvas is raised substantially to the top of the frame A while in Figure 1 it is shown as resting almost on the floor level. Or, again, a canvas of even greater vertical extent may be accommodated by having its lower edge rest on the lower shelf while in its lowermost position, while the frame D is at the same time extended to its greatest height.

While ordinarily it would not be necessary to use the members 51 whereby greater lateral stability may be obtained, this feature greatly extends the range of usefulness of the easel to meet unusual conditions.

Attention must also be called to the great convenience of the shelf construction and the adjustment for the upper edge of the picture, and of the convenience of the illuminating means permanently associated with the easel and also adjustable within wide limits.

In Figure 11 the easel is shown in collapsed form, with the base and the lamp separated therefrom, and accommodated within the confines of a suit case of ordinary size. The frames A, C and D are shown collapsed within the base 133 of the suit case, while mounted within the cover 135 are shown the base B, the electric bulb 117, and the reflector 119 and bracket 121. The reflector 119 is shown as housed within a compartment 125, while the bracket is held by a clamp arrangement 127. Clamps 129 and 131 are shown as respectively holding the base B and the electric bulb 117 in place. It will be noted that the bracket 121 is shown as having only one straight leg, therein differing from that shown in Figure 4. However, whatever type of bracket is used, suitable provisions may be made therefor, as will be obvious to a person skilled in the art.

If desired or found necessary clamps may be used to hold the frames A, C and D in the base portion of the suit case. In the arrangement of Figure 11 the braces associated with the housing 125 and the clamps 129 and 131, will serve, when the suit case is closed, to hold the frames A, C and D within the base member.

While I have disclosed herein one embodiment of my invention, it is to be understood that my invention may be embodied in many other forms, as will be obvious to those skilled in the art, and that I do not limit myself, to the exact disclosure herein, which is illustrative merely and is therefore not to be construed in a limiting sense, and that I do not limit myself in regard to my invention other than as called for by the language of the appended claims.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is:—

1. An easel comprising a body portion having

three interconnected sections adapted to be extended into end to end relation, a base portion adapted for ready attachment to or disengagement from said body portion, and adapted, when attached thereto, to support said body portion in upstanding relation, a member slidably carried by said body portion and having means thereon for supporting the base of an article to be mounted on the easel, and means on said body portion for retaining the upper portion of such article.

2. An easel comprising a body portion having three interconnected sections adapted to be extended into end to end relation, a base portion adapted for ready attachment to or disengagement from said body portion, and adapted, when attached thereto, to support said body portion in upstanding relation, laterally extensible sections carried by said base portion and adapted to increase the lateral stability thereof, a member slidably carried by said body portion and having means thereon for supporting the base of an article to be mounted on the easel, and means on said body portion for retaining the upper portion of said article.

3. A collapsible easel comprising an upstanding frame provided with two guideways, a first member carried in slidable relation to said frame and provided with guide means complementary to one of said guideways, said member carrying a support on which an article to be mounted on the easel may rest, and a second member carried in slidable relation to said frame, and provided with guide means complementary to the other of said guideways, said second member being slidably extensible in an upward direction and carrying at its upper end means for engaging said article mounted on the easel and resting on said support, and said second member together with said support maintaining said article in place on the easel.

4. A collapsible easel comprising a base member, and a frame removably carried thereby, said frame comprising a pair of upwardly extending members having guide grooves on the opposed inner surfaces thereof so as to form a guideway, and other guide grooves on the outer surfaces thereof so as to form a second guideway, a first member carried in slidable relation to said frame and provided with guide means complementary to one of said guideways, said member carrying a support on which an article to be mounted on the easel may rest, and a second member carried in slidable relation to said frame, and provided with guide means complementary to the other of said first mentioned guideways, said second member being extensible and carrying at its upper end means for engaging said article mounted on the easel and resting on said support, and said second member together with said support maintaining said article in place on the easel.

5. A collapsible easel comprising an upstanding frame provided with two guideways, a first member carried in slidable relation to said frame and provided with guide means complementary to one of said guideways, said member carrying a support on which an article to be mounted on the easel may rest, and a second member carried in slidable relation to said frame, and provided with guide means complementary to the other of said guideways, said second member carrying an upwardly slidable extension thereon, and said extension having at its upper end means for engaging said article mounted on the easel and resting on said support, and said means carried by said extension together with said support maintaining said article in place on the easel, and illuminating means positioned on said second member for illuminating the article carried by said easel.

6. A base for an easel comprising elongated members held together fixedly in spaced parallel relation and engaging the floor at the respective ends thereof, whereby four points of support are provided, and a pair of extensible members carried by said base, and adapted, when extended therefrom to furnish additional points of support located outside the polygonal area defined by said points of support and increasing the stability of said base.

7. A collapsible easel comprising at least three slidably interfitting sections of substantially the same length, adapted to be slid into nested relation so that the total length of the nested sections is substantially that of one of the sections, and a base section carried by one of said sections in readily removable engagement therewith.

8. A collapsible easel comprising an upstanding frame provided with two guideways, a first member carried in slidable relation to said frame and provided with guideways complementary to one of said first-mentioned guideways, said member carrying a support on which an article to be mounted on the easel may rest, a second support for an article removably associated with said member, and a second member carried in slidable relation to said frame, and provided with guideways complementary to the other of said first-mentioned guideways, said second member being slidably extensible in an upward direction and carrying at its upper end means for engaging said article mounted on the easel and resting on said support and together with said support maintaining said article in place on the easel, and said frame being supported on a base readily removable therefrom, and provided with adjustable means adapted to increase its stability when required.

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