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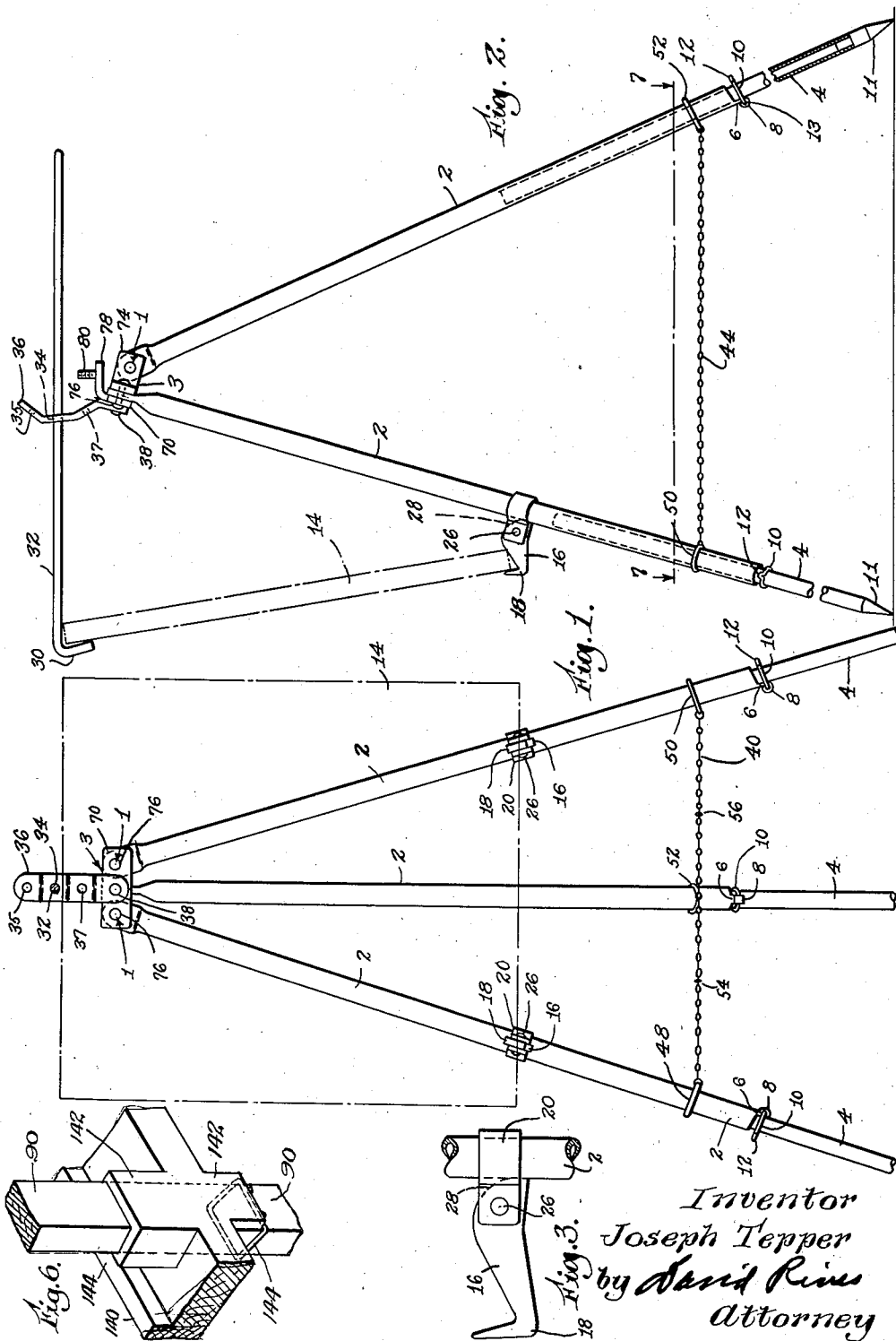
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2,064,232

EASEL

Filed March 11, 1933

2 Sheets-Sheet 1



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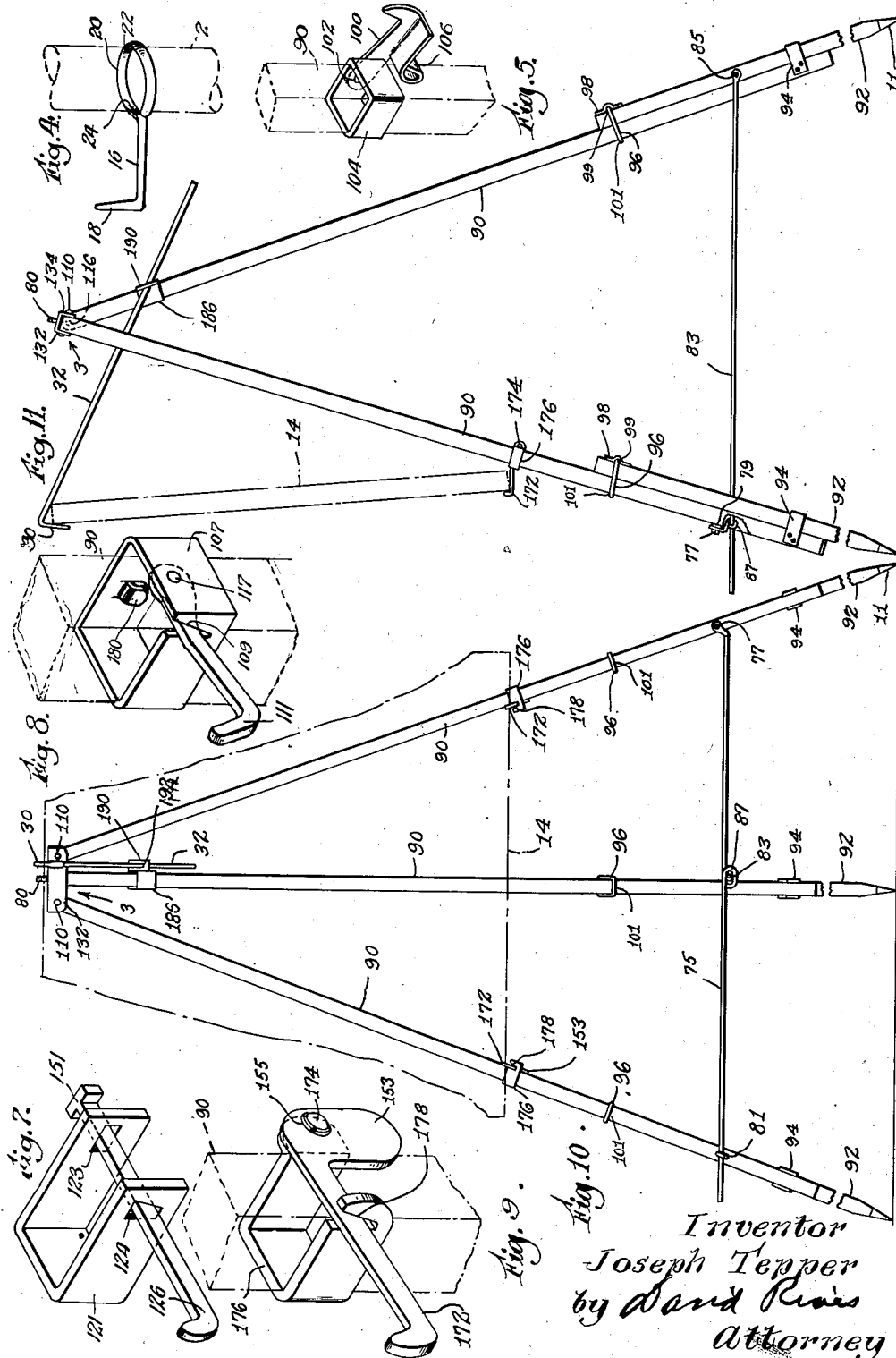
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UNITED STATES PATENT OFFICE

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EASEL

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14 Claims. (Cl. 248—197)

The present invention, though having fields of more general utility, is particularly related to easels.

Easels as commonly used comprise a tripod with collapsible legs, a canvas support carried by the tripod and a clamping member for clamping the canvas to the support. To set up the easel it is necessary to unclamp three clamping screws to release the members of the three collapsible legs, and to retighten them after the legs have been extended; to perform similar manipulations for the canvas support; to actuate a further clamping screw to secure the clamping member in place; and to go through a number of other and further time-consuming steps; and all this before it is possible to put brush to canvas. The very purpose of employing easels of this character is to make it possible for the artist to travel from place to place in the endeavor to find a scene worthy of reproduction; but these scenes are often so fleeting in nature that, by the time that the easel has been set up, the scene has shifted, and it may never be possible to find another just like it.

It is accordingly an object of the present invention to improve upon easels of the above-described character, to the ends that they may be rendered as self-adjusting as possible, in a minimum of time.

Another object is to render the canvas support on the tripod self sustaining as soon as it shall have been placed in the desired position.

A further object still, above all, is to eliminate the necessity for using clamping screws or other time-consuming mechanisms.

Other and further objects will be explained hereinafter and will be particularly pointed out in the appended claims, it being understood that it is intended, by suitable expressions in the claims, to set forth all the novelty that the invention may possess.

The invention will now be described in connection with the accompanying drawings, in which Fig. 1 is a front elevation of the upper portion of an easel constructed according to one embodiment of this invention; Fig. 2 is a side elevation of the same, parts being broken away and a part being in section for clearness; Fig. 3 is an enlarged elevation of a detail as shown in Fig. 2; Fig. 4 is a fragmentary perspective of a modified detail upon a larger scale than in Figs. 1 and 2; Fig. 5 is a similarly enlarged view, similar to Fig. 3, of a modification; Fig. 6 is a similarly enlarged perspective of a further modification, more particularly adapted for studio easels; Figs. 7, 8 and

9 are perspectives of further modifications corresponding to Fig. 3; Fig. 10 is a view similar to Fig. 1 of a further modification; and Fig. 11 is a side elevation corresponding to Fig. 10.

The illustrated, novel tripod comprises three collapsible legs, each pivoted at 1, which may be in the form of a bolt 76 or 110, to a support 3, and each comprising two collapsible members that may be in the form of tubes 2, 4 (Figs. 1 to 4) or bars 90, 92 (Figs. 5 to 11). If the members are tubular, they may be of metal; and if in the form of bars, of wood. The tube 4 is of smaller diameter, so as to fit within the tube 2. The bars 90 and 92, on the other hand, may both be of the same cross-sectional shape and area, more or less square, or oblong.

The diameters of the tubes 2 and 4 are preferably such that the outside wall of the inner tube 4 engages more or less snugly against the inside wall of the outer tube 2, so as to permit frictional telescoping movement of the tubes. If desired, however, the outside wall of the inner tube 4 may be of slightly smaller diameter than the inside wall of the outer tube 2.

In the case of the wooden bars 90 and 92, as shown in Figs. 10 and 11, the lower end of the bar 90 may be provided with a metal, U-shaped guide 94, within which the lower bar 92 is slidable.

The lower end of the tube 2 is provided, as shown in Figs. 1, 2, with an integral tongue 6, the extreme, free end 8 of which is bent over so as freely to hold pivotally a split end portion (not shown) of a ring 10, preferably of metal wire, surrounding the tube 4. Corresponding metal rings 96 may be used with the wooden bars 90 and 92, freely held pivotally to the upper ends of the bars 92 at 98 around end portions 99, and corresponding in shape to the shape of the bars 90 and 92. The rings 10 and 96 may, if desired, be provided with an extending thumb piece 12, disposed diametrically opposite to the split portion 13. The diameter, shape and other dimensions of the rings 10 and 96, as well as the diameter of the wire of which they are constituted, are such that, when it is attempted to force the tube 4 telescopically upward into the tube 2, the tube 2 will automatically be caused to bind against the inner walls of the ring 10. When a similar collapsing, slidable movement of the bars 90 and 92 is attempted, the bar 90 will bind against the free end 101 of the ring 96. This is assuming that the rings 10 and 96 occupy their illustrated position, above dead-center. To aid this binding ac-

tion, the metal of the rings 10 and 96, as well as of the tongue 6, may be built so as to have a slight spring action. This is facilitated by splitting the rings 10 and 96 at the before-mentioned, respective, split end portions (not shown) and at 98.

All that is necessary to set up the tripod, therefore, is to let the tubes 4 fall telescopically out of the tubes 2, or to let the bar 92 fall downward with respect to the bar 90, and then to set the sharpened lower ends 11 of the tubes 4 or the bars 92 upon the ground. The sharpened ends 11 may be secured in place in any desired manner, as by means of set screws (not shown).

When the tripod is thus set up, with its lower ends 11 dug into the ground, and left to itself, the legs would tend to collapse, due to the weight of the tripod. Such tendency to leg-collapsing movement will, however, introduce forces such as to control the rings 10 and 96, causing them to pivot slightly upward about their pivoting portions. For the reasons before given, the tubes 4 and the bars 92 will each then bind against its corresponding ring 10 or ring 96. Collapsing movement of the legs will thus be prevented by the rings 10 and 96, and the easel will be automatically held, uncollapsed, in place.

To permit collapsing the legs of the tripod, when the painter's work is finished, one needs only to press with the fingers or the thumb downward upon that portion of the rings where the thumb pieces 12 are situated.

The rings 10 may be replaced by any suitable equivalent.

After collapsing the legs, it may be desirable to lock the tubes 2 and 4, or the bars 90 and 92, against relative outward, or uncollapsing, movement. This may be effected in any desired way, as by means of spring catches (not shown) provided upon one of the members 2 and 4 or 90 and 92 and engaging against the other member. In practice, however, the same rings 10 or 96 may be relied upon, if they are permitted to swing freely about their pivoting portions, in a direction of pivotal movement downward, or to the other side of the dead-center position from that illustrated. When a tube 4 or bar 92 starts to fall downward, therefore, it will cause the corresponding ring 10 or 96 to pivot downward about its pivoting portion, causing a binding action similar to that before described, but in the opposite direction.

In Fig. 4, there is shown a one-piece, preferably metal, canvas-supporting member 16. It is provided, at one side, with an upwardly extending, canvas-supporting, hook portion 18; and, at the other side, with a ring 20, of somewhat larger diameter than the tube 2 and in which the latter is received. The weight of the supporting hook portion 18 will exert a force causing the walls 22 and 24, at opposite sides of the opening 26, to engage opposite sides of the tube 2, at slightly different levels, to maintain the supporting member 16 on the bar. It is preferred, however, instead of having the member 16 in one piece, to make it in two pieces, as illustrated in Figs. 1, 2 and 3, pivoted together at 26, and to provide the hook member 18 integrally with a cam 28. As the weight of the canvas 14 will force the hook portion 18 pivotally downward, the cam 28 will bind against the tube 2 to lock the supporting member 16 in place on the easel. In both cases, the supporting members 16 are adjustable on their respective tubes 2 and are automatically retained in their adjusted

position by the mere weight of the canvas 14; indeed, by their own weight alone.

The canvas supports may, as shown in Fig. 5, be constituted of hooks 100, pivoted at 102 to oblong, rectangular or other suitably shaped guides 104, within which the correspondingly shaped, four-sided bars 90 are slidably received. The pivoted hooks 100 are integrally provided with cams 106 for engaging against the bars 90 to hold the hook supports 100 in adjusted position on the easel.

Still a different construction is shown in Fig. 8. The oblong, rectangular or other, suitably shaped guide 107, corresponding to the shape of the bar 90, has a wedge-shaped slot 109 in one side or wall, into which fits a canvas-supporting hook 111, pivoted about a pintle 117, to an adjacent side or wall. The weight of the canvas causes the hook 111 to bind between a wall of the recess 109 and the bar 90, thus locking the guide 107 in adjusted position. When the tripod is collapsed, the hook 111 may be pivoted upward about the pintle 117, out of the way.

As a still further modification, shown in Fig. 7, a U-shaped guide 121 is provided, the legs and the neck of which are respectively disposed adjacent to three of the sides of the four-sided bar 90. An opening 123 is provided in the rear wall of the guide 121, aligned with a wedge-shaped opening 124 in its front wall. The wedge-shaped opening 124 is shown continuous, but it may be formed in one edge of the guide 121. The opening 123 may be elongated horizontally, as illustrated in Fig. 7, or vertically. The weight of the canvas 14 causes the hook 126 to become jammed down between a wall of the wedge-shaped opening 124 and the bar 90, to hold the parts in position, as before described. The hook 126 has, at its rear end, a head 151 that may be passed through the opening 123, but not through the opening 124. The guide 121 may thus be removed from the bar 90 and replaced on the lower bar 92, if desired, or vice versa.

A further modification is illustrated in Figs. 9, 10, and 11. The guide 176 is also U-shaped, in order that it may be removable, as described in connection with Fig. 7. The canvas-supporting, hook member 172 is pivoted, at one end, about a pintle 174 to the free end of one leg of the U-shaped guide 176, so as to be capable of being pivotally received in a wedge-shaped slot 178 at the free end of the other leg. The hook member 172 thus extends forward, beyond the guide 176, as illustrated. When the hook 172 is raised about its pivoting pintle 174, the guide will be held in place by an enlarged plate portion 153 of the hook 172, which plate portion 153 is pressed against the bar 90 by a spring washer 155. A similar binding action may be provided in other guides, such as that illustrated in Fig. 8, by cutting a spring tongue 180 out of the metal.

A further form, suitable especially for a studio easel, is illustrated in Fig. 6. The canvas-supporting hook 140 is integral with a sleeve 142 in which the bar 90 is slidably received, and that is provided with an oblong-, or square-shaped ring 144 similar to the ring 96, retained in similar fashion, and acting similarly to cause the parts to bind.

A hook 30, at the free end of a clamping rod or bar 32, engages the upper end of the canvas to clamp it against the supports 16, 100, 111, 126, 140 and 172. The bar 32 is shown in Figs. 75

1 and 2 extending through an opening 34 in a plate 36, pivotally or otherwise supported on the support 3 at 38. The opening 34 may be round, but is preferably slightly oval. The bar 32 and the plate 35 may both be of metal, and the pivot member 38 may be in the form of a metal rod, pivotally holding the member 36 to a metal plate 70, as hereinafter described. Because the canvas presses upward upon the bar 32, it is automatically retained frictionally in canvas-clamping position, by binding against opposite side walls of the opening 34.

A single opening 34 may suffice, particularly if it is oval-shaped, so as to permit of a wide range of adjustment, as described. If desired, however, additional openings 35 and 37 may be provided, as illustrated in Figs. 1 and 2. The member 36 is provided with three sides, inclined to one another, and one of the openings 34, 35 and 37 is found in one of each of the three sides. The clamping member 32 may be received in any of the openings 34, 35 and 37 at different elevations and at different inclinations, so as to make it possible to clamp readily canvases 14 of different height, arranged at different angles, in different planes. Different pivotal positions, to produce a like result, may, however, be assumed by the bar 32 even when but one opening 34 is employed, merely by pivoting the member 36 about the pivot 38. The artist will approximately adjust the member 36 to the size of the canvas 14, and will then give a slight downward movement to the member 36 to tighten the bar 32 and maintain it in place.

A similar result may, of course, be obtained by bending the device out of sheet metal, as shown at 186, Figs. 10 and 11, so that it may be freely mounted on the rear leg of the tripod, with a projecting portion 190, having an elongated opening 192 therein for receiving the clamping rod 32. The rod 32 is adjusted in the same way as before described, after which the guide is moved slightly downward to tighten the rod 32 so that it may clamp the canvas 14.

When the clamping rod 32 is released, the guide 186 will tilt, so as to be held in place on the bar 90 by their own weight. When the guide 186 is slid to the top of the rear leg, the easel being collapsed, it may be held in place against falling by a small spring (not shown) secured to the rear leg.

Three interconnecting chains 40 and 44 constitute, when the legs are fully opened out pivotally, a support for a painting box and palette or the like 46. The chain 40 connects rings 48 and 50 that are disposed at intermediately positioned points of the two front legs. The chains 42 and 44, which are of equal length, connect fixed, intermediately positioned points 54 and 56 of the chain 40 with an adjustable, intermediately positioned ring 52 of the third, or rear, leg. The rings 48, 50 and 52 are at the same level. The length of that portion of the chain 40 between the ring 48 and the point 54 is the same as the corresponding length between the ring 50 and the point 56. It follows that the sum of the first-named length and the length of the chain 42 is the same as the sum of the second-named length and the length of the chain 44. This sum is so designed as to be substantially equal to the distance of the ring 48 or the ring 50 from the pivot 1 of the corresponding leg. It is therefore possible to slide the ring 52 upward along the rear leg until it reaches the support 3, thus to maintain the chains 40,

42 and 44 from sagging when the easel is collapsed.

As an alternative construction, a rigid bar 75, as shown in Figs. 10 and 11, may be pivoted to one of the front legs at 77 and received in a notch 79 of a member 81 fixed to the other front leg at the same elevation as the pivot 77. A bar 83, pivoted to the rear leg at 85, also at the same elevation, extends through a ring 87 that is integrally formed, as shown more particularly in Fig. 10, at an intermediately positioned point of the bar 75. The ring 87 is suitably bent diagonally out of line with the rod 75 and its diameter is somewhat greater than the diameter of the rod 83. This construction lends itself more particularly to metal bars 75 and 83. The bar 75 may be replaced by a wooden bar, and the bar 83 by a wooden bar.

When the tripod is collapsed, the rods 75 and 83 become nested in between the legs of the tripod, the rod 75 being angularly bent near the pivot 77 to permit such nesting.

When the tripod is opened, the bar 75 falls by gravity and the bar 83 slides downward with it along the opening 87. A reverse action takes place when the tripod is collapsed.

The support 3 may assume any of a number of different forms. In one form, it may, for example, be constituted of a metal plate 70 and two metal, angular plates 72 and 74, as illustrated in Figs. 1 and 2. The upper ends of the tubes 2 may be flattened and the flattened ends pivotally secured between pairs of the plates 70, 74 by rivets 76, which may, at the same time, serve as the pivots. An angular extension 78 of the plate 70 may carry a threaded stud or bolt 80, that may carry other elements, such as a camera (not shown).

The support 3 may be made of one piece of metal, as illustrated in Figs. 10 and 11, by forming it U-shaped and cutting tongues (not shown) out of an intermediate portion of one of the legs 134 of the U, so as to cause them to project toward the other leg 132. The pivoting pintle 116 for the rear leg is disposed between the tongues 130, the front legs pivoting between the legs 132 and 134.

Further modifications will occur to persons skilled in the art and all such are considered to fall within the spirit and scope of the present invention as defined in the appended claims.

What is claimed is:

1. A support comprising a multiple-sided guide adapted to be mounted over a bar and having a wedge-shaped slot in one of its sides, and a supporting member pivotally mounted on an adjacent side and adapted to be received in the slot.

2. A support comprising a multiple-sided guide adapted to be mounted over a bar and having a wedge-shaped slot in one of its sides, and a supporting member pivotally mounted on the guide and adapted to be received in the slot, the supporting member having an enlarged portion for engaging the bar.

3. A support comprising a multiple-sided guide adapted to be mounted over a bar and having a wedge-shaped slot in one of its sides, a supporting member pivotally mounted on the guide and adapted to be received in the slot, the supporting member having an enlarged portion for engaging the bar, and means for yieldingly pressing the enlarged portion against the bar.

4. A support comprising a U-shaped guide adapted to be mounted over a four-sided bar with the legs and the neck of the U respectively adja-

cent to three of the sides of the bar, and a supporting member connecting the legs of the U and having an extension beyond one of the legs of the U, with the said one leg of the U disposed between the extension and the bar, the extension having a supporting portion, one of the legs of the U having a wedge-shaped slot in which the supporting member is received, and the supporting member being adapted to become jammed between the bar and a wedge face of the slot to cause the supporting member to be held in position on the bar.

5. A support comprising a guide adapted to be mounted over a bar and having a leg provided with a wedge-shaped slot, and a supporting member mounted on the guide and adapted to be received in the slot, and having an extension beyond the slot with the leg disposed between the extension and the bar, the extension having a supporting portion.

6. A support comprising a U-shaped guide adapted to be mounted over a four-sided bar with the legs and the neck of the U respectively adjacent to three of the sides of the bar, and a plate-like supporting member pivoted to one of the legs of the U connecting the legs of the U and having an extension beyond and substantially at right angles to the other leg of the U, the extension having a supporting portion.

7. A support comprising a multiple-sided guide adapted to be mounted over a bar and having a wedge-shaped slot in one of its sides, and a plate-like supporting member pivotally mounted on another side of the guide and adapted to be received in the slot, a portion of the plate-like supporting member being adapted to become jammed between the bar and a wedge face of the slot to cause the supporting member to be held in position on the bar.

8. A support comprising a U-shaped guide adapted to be mounted over a four-sided bar with the legs and the neck of the U respectively adjacent to three of the sides of the bar, a plate-like supporting member mounted on one of the legs of the U, and means upon the other leg of the U cooperating with the supporting member to clamp the U-shaped guide to the four-sided bar, the supporting member having an extension beyond the said other leg of the U, the extension having a supporting portion.

9. A support comprising a U-shaped guide adapted to be mounted over a four-sided bar with the legs and the neck of the U respectively adjacent to three of the sides of the bar, and a plate-like supporting member connecting the legs of the U and having an extension beyond one of the legs of the U, the extension having a supporting portion, one of the legs of the U having a wedge-shaped slot in which the supporting member is received, and a portion of the plate-like supporting member being adapted to become jammed between the bar and a wedge face of the slot to cause the supporting member to be held in position on the bar.

10. An easel comprising three bars, two supporting members respectively mounted adjustably on two of the bars and each having a canvas-supporting extension, the lower portion of a canvas being adapted to be supported by the canvas supporting extensions, a sleeve adjustably carried by the third bar and having an opening, and a clamping member having a portion for engaging the upper portion of the canvas with a downward pressure against the said upper portion of the canvas and another portion for adjustably engaging the walls of the opening

in the sleeve, whereby the engaging action of the clamping member against the walls of the opening and against the said upper portion of the canvas causes the clamping member to become adjustably clamped against the walls of the opening and causes the canvas to become clamped between the canvas-supporting extensions and the first-named portion of said clamping member.

11. An easel including two bars, two supporting members respectively mounted adjustably on the bars and each having a canvas-supporting extension, the lower portion of a canvas being adapted to be supported by the canvas-supporting extensions, a clamping member constructed and arranged to engage the upper portion of the canvas with a downward pressure against the said upper portion of the canvas, and means carried by said easel for adjustably receiving the clamping member, whereby the action of the clamping member against the said means and against the said upper portion of the canvas causes the canvas to be clamped between the canvas-supporting extensions and the first-named portion of the clamping member.

12. An easel comprising three bars, canvas-supporting means for supporting a canvas mounted on two of the bars, a clamp-carrying member adjustably carried by the third bar and having an opening, and an elongated clamping member having a portion for engaging the upper portion of the canvas with a downward pressure and another portion for adjustably engaging the walls of the opening in the clamp-carrying member, whereby the engaging action of the clamping member against the said upper portion of the canvas causes the clamping member to become adjustably frictionally engaged by the walls of the opening, thereby clamping the canvas between the canvas-supporting means and the first-named portion of said clamping member.

13. Means for clamping a canvas to canvas-supporting means carried by an easel comprising a clamp-carrying member adjustably carried by the easel and having an opening, and an elongated clamping member having a portion for engaging the upper portion of a canvas, with a downward pressure and another portion for adjustably engaging the walls of the opening in the clamp-carrying member, whereby the engaging action of the clamping member against the said upper portion of the canvas will cause the clamping member to become adjustably frictionally engaged by the walls of the opening, thereby clamping the walls of the opening and the canvas between the canvas-supporting means and the first-named portion of said clamping member.

14. An easel including two bars, canvas-supporting means for supporting a canvas mounted on the bars, an elongated clamping member having a portion for engaging the upper portion of the canvas with a downward pressure, and means carried by said easel for adjustably receiving another portion of the clamping member and holding it by friction only, whereby the engaging action of the clamping member against the said upper portion of the canvas and the frictional holding action of the clamping member against the said means causes the canvas to become adjustably clamped by friction between the canvas-supporting means and the first-named portion of the clamping member.