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EASEL

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2 Sheets-Sheet 1

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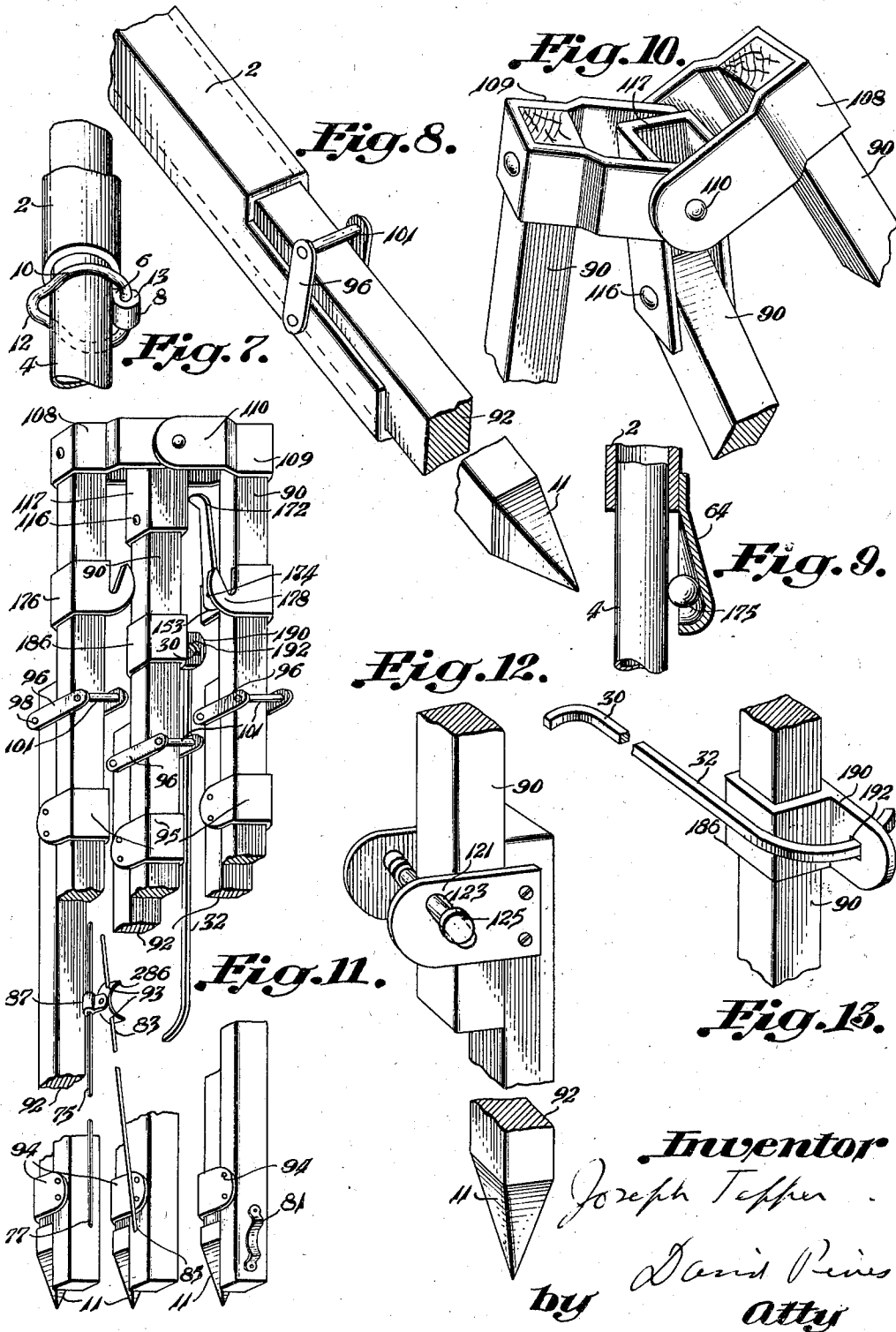
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EASEL

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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.

A further object is to provide an easel or the like with a tripod the collapsible legs of which shall become extended very rapidly and shall thereafter automatically remain in extended position until it is desired to collapse them again.

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

A further object is to provide an easel that will stand up very firmly so as not to be blown over by wind, and so as not to be easily spread out in the studio.

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 perspective of an easel constructed according to one embodiment of this invention, parts being shown broken away, the easel being shown open and holding a canvas in position; Fig. 2 is a fragmentary detail upon a larger scale; Figs. 3 and 4 are similar details, upon other

scales, of modifications; Fig. 5 is a vertical, longitudinal section of the modification shown in Fig. 4; Figs. 6 to 9 are perspectives of further modifications; Fig. 10 is a perspective of the upper portion of the easel support; Fig. 11 is an elevation of the easel, shown collapsed; Fig. 12 is a perspective corresponding to Fig. 2 of a further modification; and Fig. 13 is a perspective of a further detail.

The novel tripod of the present invention comprises three collapsible legs, pivoted together at their upper portions, and each comprising two collapsible members that may be in the form of tubes 2, 4 (Figs. 4, 5, 7, 8 and 9) or bars 90, 92 (Figs. 1 to 3, 6, 8, and 10 to 13). If the members are tubular, they may be of metal; and if in the forms 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.

According to the modification shown in Fig. 8, the lower member 92 is slidably mounted in a correspondingly shaped, tubular member 2. The member 92 may also be tubular.

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, and collar stops (not shown) may be provided to take up the space between the tubes, so as to provide for the frictional engagement of the tubes, and also to limit the degree of relative, outward, telescoping movement of the tube 4 with respect to the tube 2, as described in application Serial No. 660,420, filed March 11, 1933, of which the present application is a continuation in part, and which matured, on December 15, 1936, into Letters Patent No. 2,064,232.

The lower end of the upper bar 90 may be provided with a metal, U-shaped guide 94, within which the lower bar 92 is slidable, and the upper end of the lower bar 92 may similarly be provided with a metal, U-shaped guide 95, within which the upper bar 90 is slidable.

The lower end of the tube 2 may be provided, as shown in Fig. 7, 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 13 of a ring 10, preferably of metal wire, surrounding the tube 4. Corresponding metal, ob-

long-shaped members 96, corresponding in shape to the shape of the bars 90 and 92, may be used with the wooden bars 90 and 92. The members 96 are constituted, as shown, of two side pieces, engaging opposite sides of the bars 90 and 92, and two end rods 98 and 101 connecting the ends of the side pieces. Each rod 98 is pivotally held freely, with lost motion, in the hollow 102 between two humps or projections 104 formed in a bent metal plate secured by rivets or screws 106 near the upper end 99 of a bar 92. The end rod 101 opposite to the end rod 98 will thus bind against the bar 90, as hereinafter described, to prevent relative collapsing movement of the bars 90 and 92. If desired, however, the rod 98 may be replaced by a pintle 108 extending through the bar 92, as shown in Fig. 3. The rings 10 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 the members 96, as well as the diameter of the wire or other material 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 end 101 of the member 96, that is opposite to the freely pivotal part 98. This is assuming that the rings 10 and the members 96 occupy their illustrated position, beyond dead-center. To aid this binding action, the metal of the rings 10, 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 at the portions 13. It is also facilitated by having the tongue 6 sufficiently slender.

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 move the bars 92 downward with respect to the bars 90, and then to set the sharpened lower ends 11 of the tubes 4 or the bars 92 upon the ground.

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 the members 96, causing the rings 10 to pivot slightly upward and the members 96 to pivot slightly downward about their pivoting portions 13 and 98. For the reasons before given, the tubes 4 and the bars 92 will each then bind against its corresponding ring 10 or member 96. Collapsing movement of the legs will thus be prevented by the rings 10 and the members 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, such as perforated metal plate members 82, each supported by a spring tongue 84, secured to the lower end of the tube 2 at 86, as illustrated in Figs. 4 and 5. The tubes 4 are received in the perforations 88 of the plate members 82 and bind against the opposite walls 196 and 198 thereof in the same way as before described, as illustrated by full lines in Fig. 5. The outer wall 198 may, in fact, be omitted, as the

inner wall 196 will alone serve to perform this binding action. The plate member 82 may, therefore, be replaced by a mere tongue, terminating in the wall 196. The spring tongue 84 must, however, be properly designed to bring about the desired result.

As a further modification, the tongue 84 may be made wider than as shown in Figs. 4 and 5, and preferably somewhat cup-shaped, as illustrated at 64 in Fig. 9, to receive a locking ball or balls 175. When the easel is set up in position, the ball or balls 175 will bind between the cup-shaped tongue 64 and the tube 4 to prevent accidental collapse of the tripod legs. The balls 175 may be caused to fall away, out of binding contact, merely by inverting the tripod, thus permitting collapse of the tripod legs.

As shown in Fig. 12, oppositely disposed plates 121 on the lower bar 92 may be provided with oppositely disposed openings 123 that extend obliquely downward to receive a locking pin 125 for binding against the upper bar 90 to prevent collapsing movement of the legs.

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 members 96 may be relied upon, if they are permitted to swing freely about their pivoting portions 13 and 98, 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 or otherwise move downward, therefore, it will cause the corresponding ring 10 to pivot downward or the member 96 to pivot upward about the respective pivoting portions 13 or 98, causing a binding action similar to that before described, but in the opposite direction.

As is also described in the said Letters Patent, the canvas-supporting members are adjustable on their respective tubes 2 or bars 90, and are automatically retained in their adjusted position. These canvas supports may be constituted of upwardly extending, canvas-supporting hooks 172, pivoted at one end, about a pintle 174 to the free end of one leg of a removable, U-shaped or other suitably shaped guide 176, within which the correspondingly shaped, four-sided bars 90 are slidably received, 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. A spring washer (not shown) may be provided to help press the hook 172 against the tripod bar 90.

A further form, suitable especially for a studio easel, is illustrated in Fig. 6. The canvas-supporting hook 140 is fixed to a bar 142 and has a square-shaped opening 143 in which the bar 90 is slidably received, and that is provided with an oblong-, or square-shaped member 144 similar to the member 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 172. The other end of the bar 32 is shown extending through an opening 192 in a projecting portion 190 of a

sheet-metal, oblong-shaped member 186, freely mounted on the rear leg of the tripod. The said other end of the bar 32 is preferably curved to provide a large range of angular clamping adjustments against the upper end of the canvas. 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 192. A wide range of adjustment is permitted by this construction, so as to make it possible to clamp readily canvases 14 of different height, arranged at different angles, in different planes, merely by having the bar 32 assume different pivotal positions in the opening 192. The artist will approximately adjust the lower end of the member 32 to the size of the canvas 14, so that the upper end of the member 32 is positioned slightly below the upper end of the canvas. He will then give a slight springy, upward movement to the bar 32 and slip the upper end of the canvas under the hook 30.

Alternatively, the hook 30 may be adjusted first against the upper end of the canvas 14 and the canvas may then be tightened by moving the supports 172 upward.

When the clamping rod 32 is released, the guide 186 will tilt, so as to be held in place on the bar 90 by its own weight.

When the easel is not in use, or collapsed, the rod 32 may be slid through the opening 192, as is illustrated in Fig. 11, until its end 30 engages the walls thereof. The bar 32 will thus be freely suspended, as illustrated in the said Fig. 11, with the end 30 in the slot 192, so as to be held in place. 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 its own weight, augmented by the weight of the bar 32, and frictional binding.

When the legs are fully opened out pivotally, as shown in Fig. 1, a support for a painting box and palette or the like may be constituted of rigid bars 75 and 83. The bar 75 may be pivoted to one of the front legs at 77 and received in a member 81 fixed to the other front leg at the same elevation as the pivot 77. The opening between the member 81 and the bar 90 is wedge shaped, so as to permit the bar 75 to enter at the upper end of the said wedge-shaped opening and to become bound in at the lower end of the said wedge-shaped opening. A bar 83, pivoted at one end to the rear leg at 85, also at the same elevation, adjustably carries at its other end a member 286 to which is pivoted at 170 a slide 87 in which the bar 75 is slidably received. The member 286 is V-shaped, and is of spring metal, being provided with aligned openings 93 in the oppositely disposed arms of the V, through which openings 93 the bar 83 extends. The arms of the V bind against the bar 83 to hold it in place, but the binding may be released by pressing the said arms toward each other with the fingers.

When the tripod is collapsed, the rods 75 and 83 become nested in between the legs of the tripod, as illustrated in Fig. 11. When the tripod is opened, the bar 75 may fall by gravity and the bar 83 will slide downward with it. A reverse action takes place when the tripod is collapsed.

As explained in the said Letters Patent, the tripod legs may be pivoted together in any of a number of different ways. According to the illustrated embodiment of the invention, the upper ends of each of the two front tripod legs may be fixed in U-shaped, metal members, shown at 108 and 109, which are pivoted together by means of a pintle 110. The upper end of the rear leg is pivoted about a pintle 116 in a U-shaped member 117 that is likewise pivoted at 110.

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 tripod having, in combination, three legs, two pivoted, U-shaped members in each of which the upper end of one of the legs of the tripod is secured, and a third U-shaped member pivoted about the pivot of the two first-named U-shaped members, the upper end of the third leg being pivoted in the third U-shaped member.

2. A tripod the three legs of which each comprises two relatively slidable members, one of the members of each leg having openings disposed obliquely to the direction of extension of the said one member, and means in the openings for binding against the other member of each leg to prevent relative slidable movement of the members of each leg.

3. A tripod the three legs of which each comprises two relatively slidable members, and latching means connected with one of the members of each leg and actuated by the weight of the upper portion of the tripod to bind against the other member of each leg to prevent slidable movement of the members of each leg.

4. A tripod the three legs of which each comprises two relatively slidable members, a latch pivoted to one of the members of each leg so as to swing freely about its pivot and actuated by the weight of the upper portion of the tripod to bind against the other member of each leg to prevent slidable movement of the members of each leg.

5. A palette support for use with a tripod, comprising a bar having one end pivoted to one of the legs of the tripod and the other end slidably engaging another leg of the tripod, a second bar having one end pivoted to the third leg of the tripod, means for connecting the other end of the second bar for longitudinal adjustment on the first-named bar, and means for adjustably clamping the second-named bar to said connecting means.

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