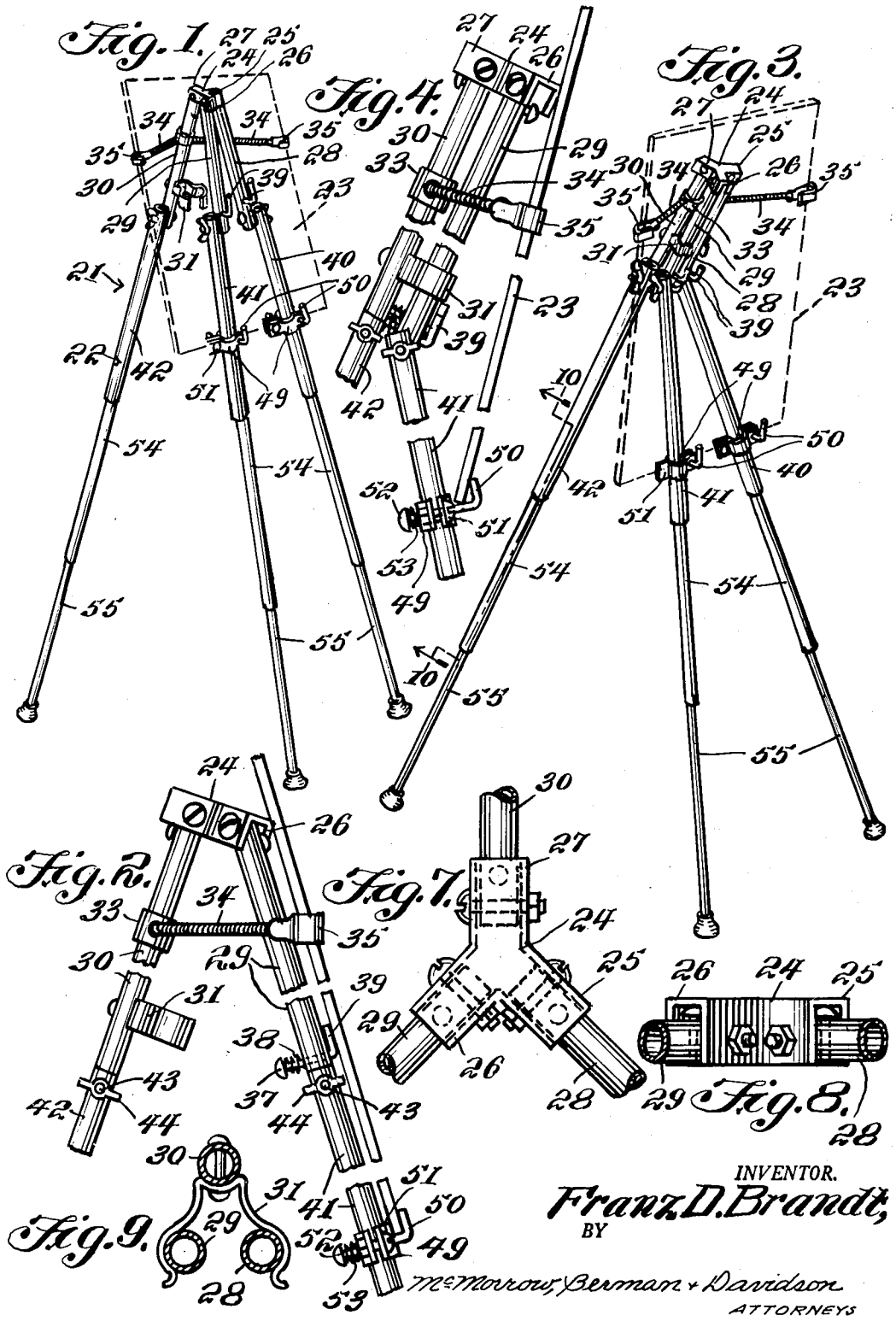
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EASEL

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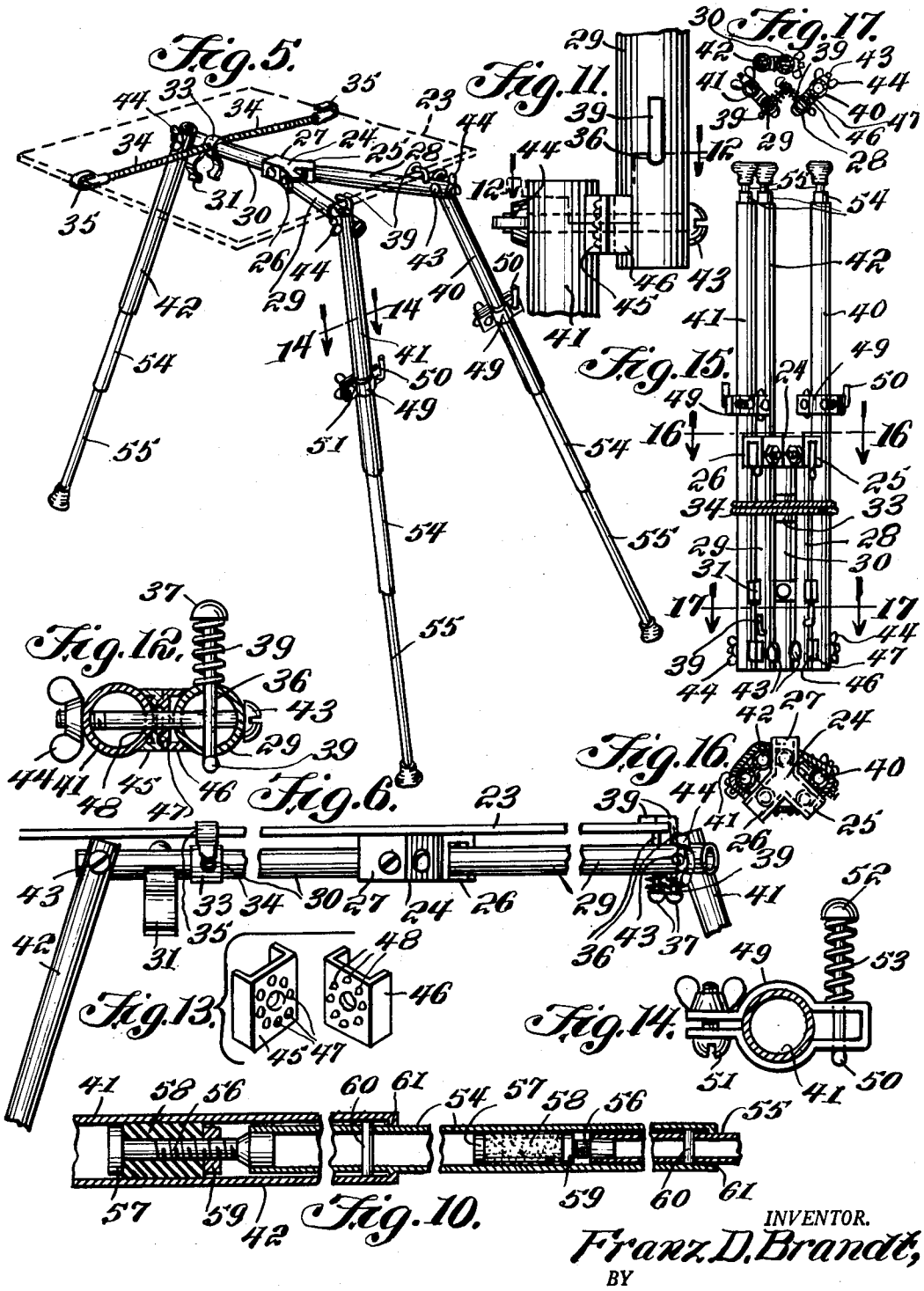


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EASEL

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1 Claim. (Cl. 248—166)

This invention relates to easels, and more particularly to an improved artist's collapsible easel.

A main object of the invention is to provide a novel and improved foldable easel which is simple in construction, which is easy to set up, and which is arranged to support an easel board either in a substantially horizontal position or in an adjusted upright position.

A further object of the invention is to provide an improved artist's easel which is inexpensive to manufacture, which is foldable to a very small volume, which is light in weight and which is durable in construction.

Further objects and advantages of the invention will become apparent from the following description and claim, and from the accompanying drawings, wherein:

Figure 1 is a perspective view of an improved artist's easel according to the present invention, shown set up for supporting an easel board in an upright position.

Figure 2 is an enlarged fragmentary elevational view showing the upper portion of the easel of Figure 1.

Figure 3 is a perspective view of the easel device of Figure 1 with the top portion thereof collapsed and arranged for supporting an easel board in an inclined, downwardly facing position.

Figure 4 is an enlarged elevational view of the upper portion of the easel device of Figure 3.

Figure 5 is a perspective view showing the easel device of Figure 1 arranged to support an easel board in a substantially horizontal position.

Figure 6 is a fragmentary enlarged side elevational view of the easel structure of Figure 5.

Figure 7 is a fragmentary enlarged top plan view of the central portion of the upper, easel-supporting structure of the arrangement of Figure 5.

Figure 8 is a side elevational view of the structure shown in Figure 7.

Figure 9 is an enlarged cross sectional detail view taken on the line 9—9 of Figure 4.

Figure 10 is an enlarged cross sectional detail view taken through one of the telescopic legs of the easel device on the line 10—10 of Figure 3.

Figure 11 is an enlarged elevational detail view showing the joint between one of the top arms and one of the tripod legs of the easel structure of Figure 1.

Figure 12 is a cross sectional detail view taken on the line 12—12 of Figure 11.

Figure 13 is a perspective detail view showing the cooperating locking plates employed in the joint structure of Figure 11.

Figure 14 is an enlarged cross sectional detail view taken on the line 14—14 of Figure 5.

Figure 15 is an elevational view of the easel-board supporting structure of Figure 1 shown in folded position.

Figure 16 is a cross sectional view taken on the line 16—16 of Figure 15.

Figure 17 is a cross sectional view taken on the line 17—17 of Figure 15.

Referring to the drawings, the easel is generally designated at 21 and comprises an easel board-supporting structure 22 on which is mounted the easel board 23.

The easel-board supporting structure comprises a main bracket member 24 formed with three coplanar, downwardly facing, angularly spaced channel elements 25, 26 and 27 in each of which is pivoted the end of a respective arm 28, 29 and 30. As is clearly shown in Figures 7 and 8, the ends of the arms 28, 29 and 30 are received in the respective channels 25, 26 and 27 and are rotatable therein, the channels, however, limiting rotation of the arms beyond the coplanar positions thereof, shown for example, in Figures 5 and 6.

Secured to the arm 30, facing the arms 28 and 29 is the spring clip 31 which is formed to at times receive the arms 28 and 29 in the manner illustrated in Figures 3 and 4 to releasably secure the arms 28 and 29 in parallel relationship to the arm 30.

Secured on the arm 30 above the spring clip 31, as viewed in Figure 2, is a collar 33 to which is secured the ends of respective coiled springs 34, 34, said springs being provided at their outer ends with the hook elements 35, 35 adapted to engage the respective opposite side edges of the easel board 23 in the manner illustrated in Figures 1 and 2.

Each of the arms 28 and 29 is provided with a spring hook 36, said hooks having shanks extending slidably through the respective arms 28 and 29 and provided at their ends with the enlarged head portions 37 against which bear the coiled springs 38, the coiled springs bearing between the heads 37 and the respective arms to bias the right angled ends 39 of the hooks against the respective arms, as is clearly shown in Figure 2.

The hooks 36 may be employed to engage the bottom edges of the easel board when it is desired to support the easel board in a relatively high position on the supporting structure 22.

Pivotally connected to the ends of the respective arms 28, 29 and 30 are the respective tripod legs 40, 41 and 42. As shown in Figure 11, the pivotal connection comprises a pivot bolt 43 extending through the joined ends of the arm and leg and provided at its end with the wing nut 44 for locking the joint with the arm and leg in a desired adjusted angular relationship. Between the arm and leg are the respective channeled plates 45 and 46, the plate 45 receiving the leg and the plate 46 receiving the arm, the bolt 43 passing through central apertures in the plates 45 and 46. The plate 45 is formed with circularly arranged recesses 47 and the plate 46 is arranged with circularly arranged projections 48 adapted to fit into the recesses 47 to lock the plates against rotation with respect to each other when the wing nut 44 is tightened. Since the upper end of the leg is received in the plate 45 and the lower end of the arm is received in the plate 46, the arm is thus locked against rotation relative to the leg. Thus, the respective tripod legs 40, 41 and 42 may be clamped in desired angular relationship with respect to the respective arms 28, 29 and 30 to which they are connected.

Adjustably secured on the upper portions of the legs 40 and 41 are the respective collar members 49, 49, said collar members being provided with the hook elements 50, 50 adapted to supportingly engage the bottom edge of the easel board 23 when the board is arranged in the position thereof shown in Figures 1 and 2.

The collar members 49 comprise substantially U-shaped bands having respective opposing arms embracing the respective legs and connected by bolts 51 opposite the hook bolts 50. The hook bolts 50 are provided with abutment heads 52, and engaged on the hook bolts 50 are coiled springs 53 bearing between the heads 52 and the adjacent collar portions, thus resiliently biasing the hook elements toward said collar members.

As shown, the legs **40**, **41** and **42** are telescopic, each leg comprising an outer tubular section, an intermediate tubular section, shown at **54** in Figure 10 which is telescopically received in the outer section and an inner tubular section **55** which is telescopically received in the intermediate section **54**. The telescopic sections are releasably secured in adjusted positions relative to each other by suitable locking means comprising a threaded stud member **56** rigidly secured to the end of the inner section and extending axially, as shown, the stud **56** being provided with the head **57**. A sleeve **58** of resilient deformable material, such as rubber or the like is engaged on the stud **56**, and threadedly engaged on the stud is a nut **59**. The sleeve **58** fits relatively tightly in the outer section and thus remains substantially stationary when the inner tubular section is rotated. At the same time, the nut **59** frictionally engages the end of the sleeve and is substantially held against rotation relative to the sleeve **58**. Therefore, when the intermediate section **54** is rotated, the nut **59** advances on the threaded stud **56**, bearing against the rubber sleeve **58**, causing said sleeve to be expanded in diameter. This tightly locks the intermediate section **54** relative to the outer tubular section of the leg. Similarly, the inner section **55** of the leg may be releasably locked in an adjusted position in the intermediate section **54** by rotating said inner section **55** in the same direction as was employed for locking the intermediate section in its outer tubular section.

The legs are retained in telescopic engagement by the provision of transverse stop pins **60** extending through the sections adjacent the respective tightening studs **56** and cooperating with inturned annular flanges **61** on the ends of the receiving tubular sections, as is clearly shown in Figure 10, to prevent separation of the telescopic sections.

The tripod structure may be arranged as shown in Figure 1 to support the easel board **23** in the conventional manner with the bottom edge of the board supportingly engaged by the hook elements **50** and the side edges of the easel board engaged by the hooks **35**, **35**. Alternatively, the legs **28** and **29** may be engaged in the spring clip **31** so as to be retained in prallel relationship to the leg **30** and the easel board may be thus supported in an inclined, downwardly facing position, as shown in Figures 4 and 5. A further alternative arrangement is shown in Figures 5 and 6, wherein the arms **28**, **29** and **30** are arranged in coplanar relationship and clamped in substantially horizontial positions to support the easel board **23** in a horizontal position illustrated in Figures 5 and 6.

When the easel board-supporting structure is not in use, it may be folded to the collapsed position thereof shown in Figures 15, 16 and 17, wherein the legs **40**, **41** and **42** are telescoped to their shortest lengths and are

folded parallel to the arms **28**, **29** and **30**, the arms **28** and **29** being received in the spring clip **31**. In this position, the coiled springs **34** are engaged around the legs **40**, **41** and **42** and the hooks **35** on the ends of the springs are interengaged to secure the structure in its folded position.

Channels **25** and **26** are preferably spaced apart by an angle of approximately 90 degrees, whereas, channel **27** is preferably spaced from channels **25** and **26** by respective angles of approximately 135 degrees. This allows the easel to be adjusted to the positions shown in Figures 1 to 5 without requiring excessive spreading of the front legs of the easel.

While a specific embodiment of an improved easel structure has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claim.

What is claimed is:

In an easel, a main bracket member, three coplanar channel elements formed in said bracket member and extending at substantial angles relative to each other, respective arms pivotally connected at their ends in the intermediate portions of said channel elements for swinging movement into and out of the channel elements, whereby said channel elements at times receive said arms and limit rotation of said arms beyond the coplanar positions thereof, and whereby said arms define a planar support for an easel board in the coplanar positions of said arms, respective tripod legs pivoted to the ends of said arms, means for clamping said legs to said arms in adjusted positions thereof, a pair of resilient flexible members secured to one of said arms, respective hook elements on the ends of said flexible members adapted to engage the opposite edges of an easel board supported on said arms, and respective easel-supporting hook members on the remaining two arms adapted to at other times supportingly engage the bottom edge of an easel board to support said board in an upright position against said remaining two arms.

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