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SKETCHING APPARATUS

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2 Claims. (Cl. 33—20)

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This invention relates to sketching apparatus for use by artists, and more particularly to readily portable apparatus arranged to enable an artist to accurately sketch the outlines of an object or scene.

It is among the objects of the invention to provide sketching apparatus which is easily portable and can be conveniently set up at any desired location; which includes means providing an image of an object or scene to be sketched and means for manually transferring the outlines of the image to a suitable base or carrier, such as a sheet of drawing paper; which produces a sketch of a size having a predetermined ratio to the size of the image; which automatically produces a sketch when a sighting point is manually moved along the outlines of an image; and which is simple and durable in construction, economical to manufacture, easy to use, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawing, wherein:

Figure 1 is a perspective view of sketching apparatus illustrative of the invention;

Figure 2 is a perspective view similar to Figure 1, but showing the side of the apparatus opposite that illustrated in Figure 1;

Figure 3 is a fragmentary cross-sectional view on an enlarged scale on the line 3—3 of Figure 1; and

Figure 4 is an elevational view on an enlarged scale of a fragmentary portion of the apparatus.

With continued reference to the drawing, the apparatus comprises a drawing board 10 of rectangular shape which is shown mounted on an easel, generally indicated at 11, and including a T-shaped base 12, a standard 13 extending upwardly from the base at the intersection of the base members, a brace 14 extending between the base and the standard and adjustably connected to the standard for supporting the latter in upright position at various selected inclinations, a trough 15 mounted on the standard substantially perpendicular to the latter and receiving the bottom edge of the board 10, and braces 16 extending from the standard 13 to the respectively opposite ends of the trough 15 to hold the trough in perpendicular position relative to the standard. The trough 15 and braces 16 may be moved longitudinally of the standard to selected positions of adjustment by means well known to the art.

As the easel 11 may be of well known con-

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struction, a more complete illustration and description thereof is considered unnecessary for the purposes of the present disclosure, and it is also to be understood that the drawing board 10 may be mounted on other supporting means than an easel, if desired.

The drawing board 10 is provided with an opening 20, preferably of circular shape, and an image screen 21, also preferably of circular shape and comprising a body of translucent sheet material, such as frosted glass, is mounted in a suitable frame or bezel 22, disposed in the opening 20 and having an outwardly projecting annular flange 23 at one end overlying the rear side of the drawing board 10 surrounding the opening 20 in the board. This frame is secured to the board by suitable means, such as the screws 24 extending through apertures in the flange 23 and threaded into the board.

A telescope, generally indicated at 25, is disposed adjacent the front side of the board and has a tube 26 one end of which is secured to the frame 22 in surrounding relationship to the image screen 21, the tube 26 being provided at the adjacent surface of the board with a circumferentially extending slot 27 of approximately semicircular extent. At its end remote from the board 10 the tube 26 carries a telescope eyepiece 28 including a lens or lenses, as indicated at 29, for viewing an image on the image screen 21. The eyepiece may, if desired, be provided with suitable focusing means well known to the art.

Conventional means, such as the image-forming means used in portrait camera of Patent Number 1,528,464 to Beidler, et al. or such as the image-forming means shown in German patent Serial Number 19,324, may be used to produce the image on the frosted glass image screen 21. Since this image producing means forms no part of the present invention, it has not been illustrated.

The board 10 provides a sketch-supporting surface 30 adjacent the opening 20, which sketch-supporting surface is adapted to carry a sketch base or carrier, such as the sheet 31 of sketching paper mounted on the board by suitable means, such as thumbtacks.

The board also carries a pantograph, generally indicated at 35, including a first major arm 36 pivotally connected at one end to the board adjacent the corner of the board remote from the opening 20, a second major arm 37 pivotally connected at one end to the free or distal end of the arm 36 and extending from the arm 36 toward the image screen 21 in the opening 20

in the board, a first minor arm 38 pivotally connected at one end to the major arm 35 intermediate the length of the latter and extending from the arm 36 substantially parallel to the arm 37 and a second minor arm 39 pivotally connected at one end to the arm 37 intermediate the length of the latter and extending from the arm 37 to the end of the arm 38 remote from the arm 36 and pivotally connected thereto. A scribing element, such as the pencil 40, is carried by the arms 38 and 39 at the pivotally connected ends thereof, and this scribing element is movable over the sketching paper 31 mounted on the sketch-supporting surface of the drawing board 10.

The arm 37 is somewhat shorter than the arm 36, and an extension 42, preferably in the form of a wire of small diameter, extends longitudinally from the end of the arm 37 remote from the arm 36 and carries at its end remote from the adjacent end of the arm 37 a ring 43. A pair of cross hairs 44 and 45 are mounted in the ring 43 and intersect at the center of the ring, and a small dot 46 is carried by the cross hairs 44 and 45 at their point of intersection and constitutes a tracing point which is movable over the image screen 21.

A small knob 48 is preferably mounted on the arm 37 adjacent the end of the arm from which the wire extension 42 projects for manually moving the ring 43 and the tracing point 46 carried thereby over the viewing screen.

With this arrangement, as the tracing point 46 is moved along the outlines of an image on the image screen 21, as viewed through the telescope 25, the scribing element 40 will be moved in a similar manner over the paper sheet 31 and will produce a sketch on the sheet corresponding to the outlines of the image. The pantograph 35 may be arranged to produce any desired magnification of the sketch relative to the image on the image screen 21.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. Sketching apparatus comprising a drawing board having an opening therein, means support-

ing said drawing board in upright position, a frame secured to said drawing board and disposed within said opening, a viewing screen mounted in said frame, a telescope secured at one end to said frame and carrying at its other end a lens spaced from said screen, said telescope having an opening therein adjacent said screen, a sketch receiving member mounted on said board at a location spaced from said frame, and a pantograph pivotally mounted on said board at a location spaced from said frame and said sketch receiving member and having a free end of an arm thereof extending through the opening in said telescope and carrying a tracing member adjacent said viewing screen and having a portion thereof overlying said sketch receiving member and carrying a scribing element.

2. Sketching apparatus comprising a drawing board having an opening therein, means supporting said drawing board in upright position, a frame secured to said drawing board and disposed within said opening, a viewing screen mounted in said frame, a telescope secured at one end to said frame and carrying at its other end a lens spaced from said screen, said telescope having an opening therein adjacent said screen, a sketch receiving member mounted on said board at a location spaced from said frame, and a pantograph pivotally mounted on said board at a location spaced from said frame and said sketch receiving member and having a free end of an arm thereof extending through the opening in said telescope and carrying a tracing member adjacent said viewing screen and having a portion thereof overlying said sketch receiving member and carrying a scribing element, said tracing element comprising a circular ring of a size materially less than the size of said screen and cross hairs extending diametrically across said ring perpendicular to each other.

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