July 30, 1946. G. L. LATEUR 2,404,880

ADJUSTABLE SHIP CURVE

Filed March 27, 1944

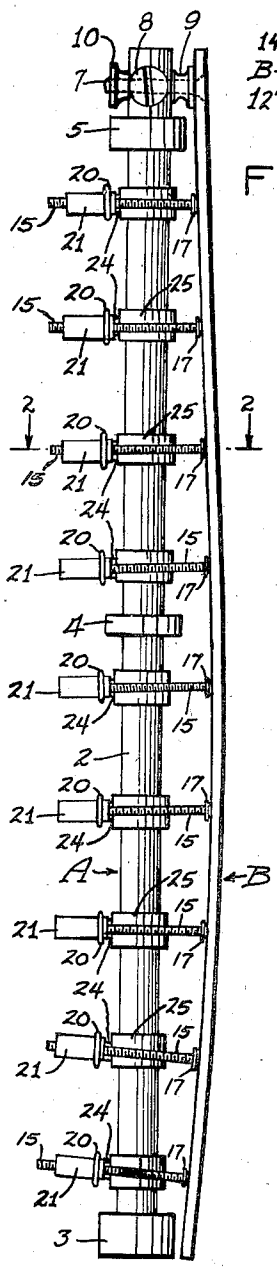


FIG. 1

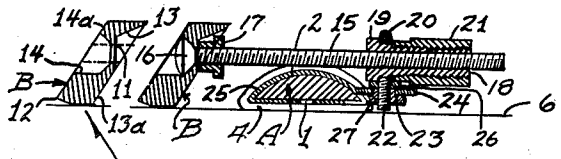


FIG. 2A. FIG. 2.

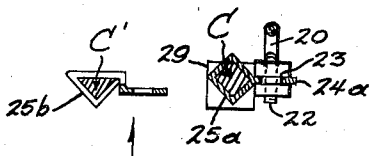


FIG. 3A FIG. 3.

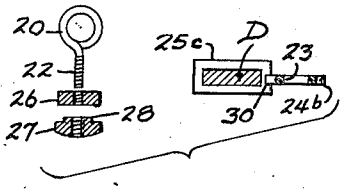


FIG. 4.

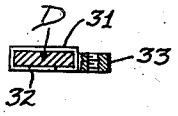


FIG. 5.

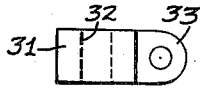


FIG. 6.

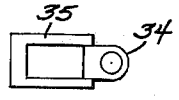


FIG. 7.

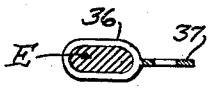


FIG. 8.

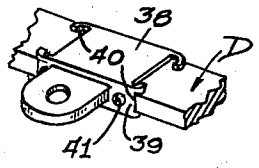


FIG. 9.

INVENTOR.
GASTON L. LATEUR
BY
Mann, Liddy & Glascum
ATTORNEYS

Patented July 30, 1946

2,404,880

UNITED STATES PATENT OFFICE

2,404,880

ADJUSTABLE SHIP CURVE

Gaston L. Lateur, Menlo Park, Calif.

Application March 27, 1944, Serial No. 528,315

2 Claims. (Cl. 33—176)

1

The present invention relates to improvements in an adjustable ship curve, and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

An object of my invention is to provide an adjustable ship curve which is an improvement over my copending application on an adjustable ship curve, Serial No. 520,349, filed January 29, 1944. In the copending case I show a base with two parallel bars and shoes mounted between the bars and slidable therealong. A flexible ruling member is adjustably connected to the shoes by extensible members that maintain the desired curve in the member. In the present invention I disclose a base comprising a single elongated member. Sleeves are slidably mounted on the member and in turn rotatably support extensions that hold the flexible ruling member in the desired shape.

A further object of my invention is to provide a device of the type described in which the flexible ruling member is held at the desired slant with respect to the paper on which the ship curve is to be drawn so that a better defined ruling edge will be presented, along which the pencil or inking pen may be moved when drawing the curve.

A further object of my invention is to provide a device simple in construction and durable and efficient for the purpose intended.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which:

Figure 1 is a plan view of the device;

Figure 2 is an enlarged transverse section taken along the line 2—2 of Figure 1;

Figure 2A is a transverse section through the flexible ruling member;

Figure 3 is an end view of a modified form of the invention;

Figure 3A shows another modified form of the device;

Figure 4 illustrates still another modified form of the invention;

Figure 5 is a sectional view through a slightly modified form of the device shown in Figure 4;

Figure 6 is a plan view of Figure 5;

Figure 7 is a bottom plan view of a modified form of sleeve.

Figure 8 shows another modified form of the sleeve; and

2

Figure 9 is an isometric view of another form of sleeve.

While I have shown only the preferred forms of my invention, it should be understood that various changes or modifications may be made within the scope of the appended claims without departing from the spirit and scope of the invention.

In carrying out my invention I provide a base indicated generally at A and this base has a flat underside 1 and a curved upper surface 2, see Figure 2. The base A is supported by rubber sleeves 3, 4 and 5, see Figure 1, that support the base a slight distance above the supporting surface 6. The rubber sleeves prevent slippage of the base over the supporting surface.

I show a flexible ruling member B in both Figures 1 and 2 and one end of the member is secured to the base A by a screw 7 that is threaded through an upright 8 carried by the base. Nuts 9 and 10 are threaded on the screw 7 and hold the screw against lateral movement with respect to the upright 8. Nut 9 also acts as a spacing member between the flexible rule B and the upright.

The flexible ruling member B has a length substantially coextensive with the length of the base A and the rule is anchored to the base at spaced points, the anchoring means being adjustable for holding the flexible ruling member in any desired shape. At intervals along the rule B I provide openings 11 shown by the dot-dash lines in Figure 2A. It will be noted that the rule is inclined with respect to the supporting surface for the purpose of providing an edge 12 for guiding a pencil or a ruling pen. Each opening has a countersunk recess 13 in the rear wall 13a of the rule and a countersunk recess 14 in the front wall 14a of the rule. A screw 15 is received in the opening 11 and the screw has a head 16 that is received in the countersunk portion 14. A nut 17 is mounted on the screw and is received in the countersunk portion 13. In this way the screws are rigidly secured to the rule B. It is possible to pivotally secure the screws to the rule in the same manner shown in my copending application.

Still referring to Figure 2, it will be noted that the screw 15 is received in a threaded sleeve 18. The sleeve has a head 19 and an eyelet 20 is rotatably mounted on the sleeve and bears against the head 19. An outer threaded member 21 is screwed upon the sleeve 18 which is threaded on its exterior surface for this pur-

pose. The outer member bears against the opposite side of the eyelet.

The eyelet has a shank 22 that is passed through the opening 23 formed in a tongue 24. The tongue extends from a sleeve or a shoe 25 that slides along the base A. The shoe 25 is shaped to contact with the surfaces 1 and 2 of the base and sufficient friction is developed between the sleeve and the surfaces to hold the shoe in adjusted position.

A nut 26, see Figure 4, is threaded upon the shank 22 of the eyelet 20 and the nut bears against the top of the tongue 24. A second nut 27 is threaded upon the lower portion of the shank and has a shoulder 28 adapted to enter the opening 23 in the tongue and to contact with the under surface of the nut 26. The construction is such that the eyelet is rotatably secured to the tongue and the screw 15 can swing about the vertical axis of the shank 22. At the same time the screw 15 can be extended or retracted for moving the flexible rule B the desired distance toward or away from the base A.

A number of the shoes 25 and screws 15 are provided and these are spaced along the base A, as shown in Figure 1. The screws 15 pivot on the shank 22 and they can be extended for giving the flexible ruling member B the desired curve, for example, the curve illustrated in Figure 1.

In Figure 3 I show a slightly modified form of the invention. In this form the base C is square in cross section and the shoes 25*a* are also square. The shoes have tongues 24*a* and all of the other elements going to make up the structure of the supporting means for the screw 15 are the same, so like reference numerals will be applied to similar parts. The supporting rubber members 29 for the base C hold the base so that a lower corner is spaced above the supporting surface.

The form of the invention shown in Figure 3A is the same as that shown in Figure 3 except that the base C' is now triangular shaped in cross section and the shoe 25*b* is also triangular in shape. In all other respects the device shown in Figure 3A is the same as that shown in Figure 3.

Coming to Figure 4, I show a base D that is rectangular in cross section and a shoe 25*c* that is also rectangular in shape. The tongue 24*b* is not struck up from the shoe portion as is true with the shoes 25, 25*a* and 25*b*, but instead is placed in a recess 30 formed in the shoe or sleeve 25*c* and is welded or otherwise secured in the recess.

The form of the device shown in Figures 5 and 6 is similar to that shown in Figure 4 with the exception that the sleeve or shoe 31 is split as at 32 and is more narrow in thickness. The

tongue 33 is of a thicker material and is welded or otherwise secured to the sleeve. In Figure 7 the tongue 34 is formed from a struckup portion from the sleeve 35. In all other respects the device shown in Figure 7 is the same as that shown in Figure 5.

It is possible to use a base E that is oval in cross section and in this event the shoe or sleeve 36 is also made oval. The sleeve or shoe carries a tongue 37 for supporting the other parts of the device.

In Figure 9 I show an isometric view of a modified form of sleeve or shoe. In this view the sleeve 38 is larger than the base D and the sleeve has end members 39 that are curved toward each other and are provided with recesses 40 for slidably receiving the sides of the base D. The edges of the recesses 40 are the sole contacting surfaces between the sleeve and the base and this reduces friction. The end members 39 have openings 41 which may receive ball-bearings (not shown), that can ride on the sides of the base D for reducing the friction still further, if that is desired.

I claim:

1. In a device of the type described, an elongated rigid base having a curved upper portion and a flat under portion in cross section, sleeves slidable along the base and having curved and flat portions to contact with the upper and lower base portions, a portion of each sleeve wall being struck up to form a tongue that parallels the flat under base portion, said tongue having an opening therein, a connector swivelled in each tongue opening and being supported by the tongue and sleeve, an extensible member carried by each connector, and a flexible ruling member carried by the extensible members and being held in the desired shape by the extensible members.

2. In an adjustable ship curve, an elongated base, a shoe slidable therealong, an eye-piece rotatably carried by the shoe, a sleeve rotatably carried by the eye-piece and having its longitudinal axis swingable in a horizontal plane, the interior of the sleeve being threaded, a screw received in the sleeve and being longitudinally advanced or retracted as the sleeve is rotated in one direction or the other in the eye-piece, and a flexible ruling member secured to one end of the screw, said member having a countersunk opening for receiving the screw, said screw having a head receivable in the countersunk opening, said member having an annular shoulder on the opposite side from the countersunk opening and being aligned therewith, and a nut mounted on the screw and bearing against the shoulder.

GASTON L. LATEUR.