

Jan. 7, 1930.

E. O. CLARK

1,743,024

SCRIBER AND ELLIPSOGRAPH

Filed June 25, 1927

2 Sheets-Sheet 1

Fig. 1.

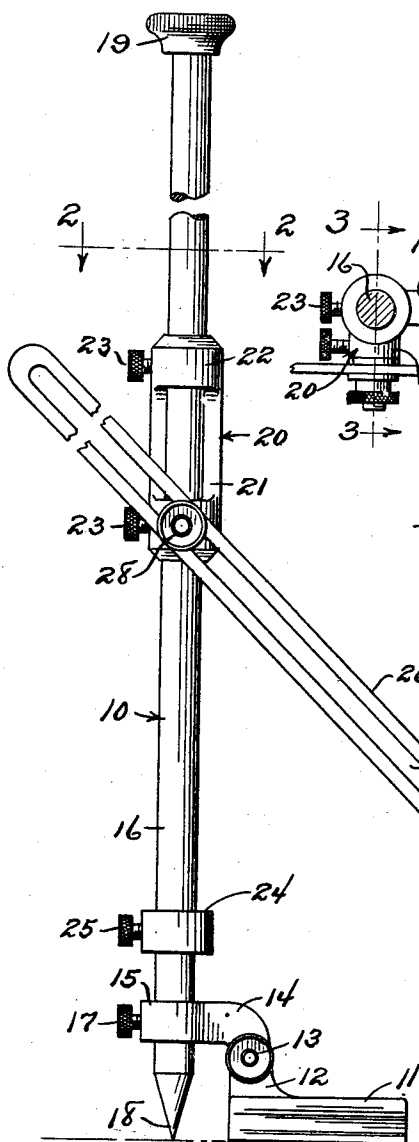


Fig. 2.

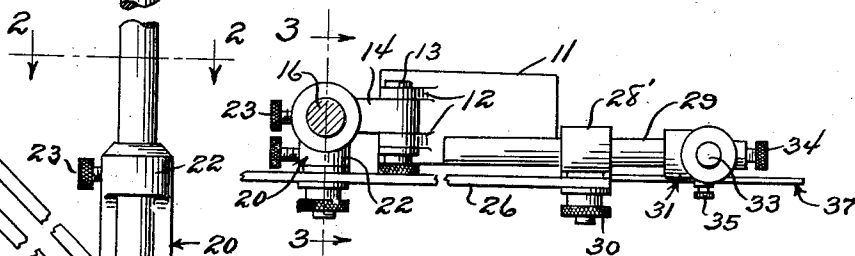
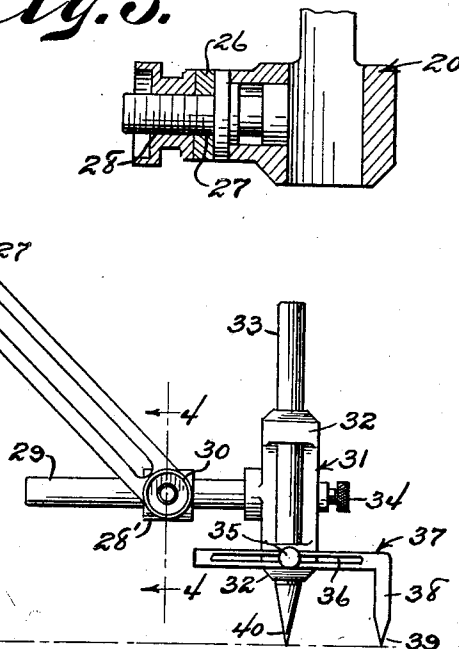


Fig. 3.



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2 Sheets-Sheet 2

Fig. 4.

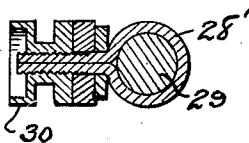


Fig. 5.

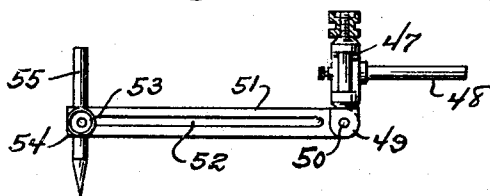


Fig. 6.

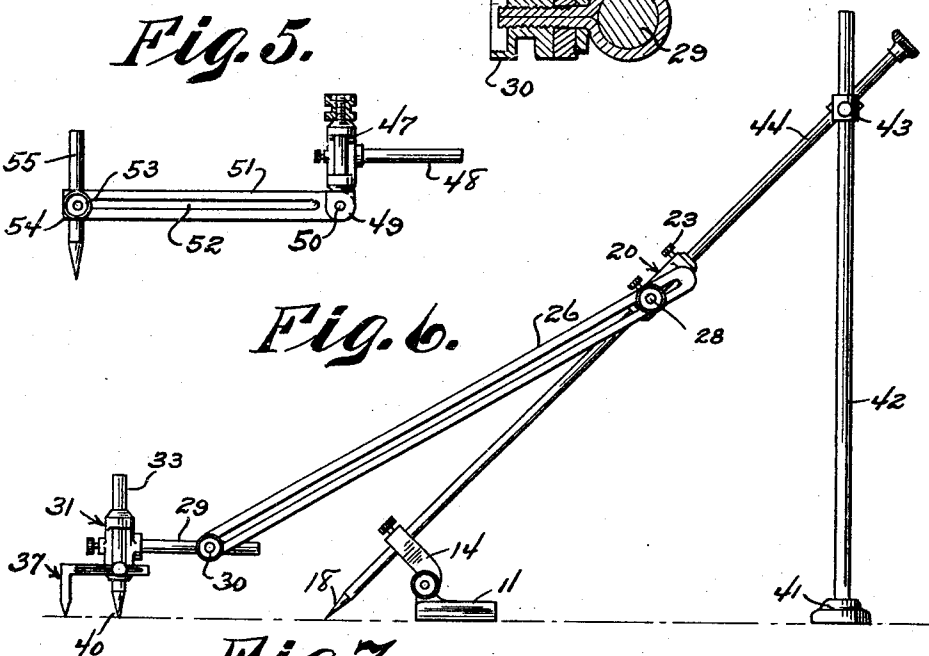


Fig. 7.

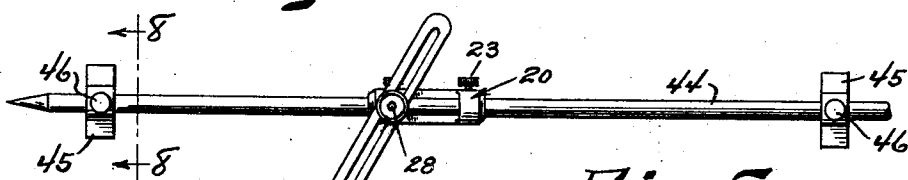


Fig. 8.

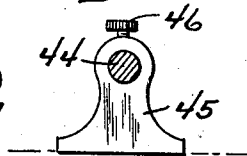
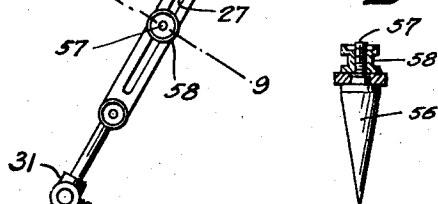


Fig. 9.



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SCRIBER AND ELLIPSOGRAPH

Application filed June 25, 1927. Serial No. 201,447.

This invention relates to geometrical instruments and has for its object the provision of a combined novel scriber by means of which circles, ellipses and the like can be drawn upon work of any kind and on different surfaces and in various positions.

An important object of the invention is to provide a device of this character which will be very simple and easy to adjust and which may be used to inscribe lines or marks upon irregular surfaces.

An additional object is to provide a device of this character which will be simple and inexpensive to manufacture, positive in action, efficient and durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention preferably consists in the details of construction and the arrangement and combination of parts to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of the device.

Figure 2 is a cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a detail sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a vertical cross sectional detail view taken on the line 4—4 of Figure 1.

Figure 5 is a side elevation showing an extension member of a different form.

Figure 6 is a side elevation of the device arranged for drawing an ellipses.

Figure 7 is a top plan view thereof.

Figure 8 is a detail sectional view taken on the line 8—8 of Figure 7, and

Figure 9 is a detail sectional view showing the mounting of one of the scriber points, the view being taken on the line 9—9 of Figure 7.

Referring more particularly to the drawings, the numeral 10 designates, generally, a relatively stationary member here shown as comprising a foot piece 11 provided with spaced upstanding ears 12 between which is pivoted, at 13, an arm 14 terminating in a head 15 formed with a circular opening through which is rotatably and vertically adjustably mounted a rod 16 adapted to be held

in a selected rotatably or vertically adjusted position by means of a set screw 17 or the like. At its lower end this rod is preferably tapered or pointed as indicated at 18 so that it may serve itself as a center instead of reliance being placed upon the foot piece 11 in case the latter is not desired to be employed. At its upper end the rod 16 is preferably provided with a knob or button 19 to which pressure may be applied for the purpose of holding the rod 16 stationary in vertical position during the operation of the device or so that pressure may be applied thereto while turning movement is simultaneously imparted thereto.

Slidably mounted upon the rod 16 is a carriage 20 here shown as comprising a body member 21 having its ends formed as or with bosses 22 with circular openings therein through which the rod 16 extends, set screws 23 being provided for the purpose of maintaining this carriage in a vertically or rotatably adjusted position with respect to the rod. In case it is desired to permit this carriage to be rotatable upon the rod 16, use may be made of a collar 24 serving as a stop, this collar being located of course below the carriage and being provided with a set screw 25 whereby it may be held in any desired adjusted position vertically along the rod.

The device further includes an elongated arm 26 which may be formed as a flat strip provided with a longitudinal slot 27 for the accommodation of a clamping screw 28 which extends into a suitably threaded hole in the lower end of the carriage 20, the purpose being to clamp the arm 26 at any desired adjusted position with respect to the rod 16. At its end most remote from the rod 16, this arm 26 carries a member 28' shown in detail in Figure 4, which member is therein represented as being of cylindrical shape to receive the rod 29 of an extension member, a clamping screw 30 being provided for the purpose of contracting the member 28' about the rod 29. The rod 29 is of course slidable with respect to the member 28' and carries a carriage 31 having boss portions 32 thereon through which is vertically adjustably mounted a rod 33 adapted to be held in adjusted position by a set screw 34. The lower

boss member 32 carries a clamping screw 35 which passes through an elongated slot 36 in an L-shaped arm 37 which has its vertical arm 38 terminating in a point 39 adapted to serve as a scribe. The rod 33 likewise terminates in a point 40 though it is of course apparent that the member 33 instead of being a rod may be an ordinary lead pencil if such is desired. It is also clear that the arm 37 may be omitted in case such is desired or whenever it is contemplated to scribe a line with the point 40 or with a lead pencil replacing the point 40. A purpose in having the arm 37 in addition to the point 40 is to permit the making of concentric lines.

In the operation of the device thus far described, it will be readily apparent that when the foot member 11 is placed upon a suitable surface and the rod 16 arranged in vertical position, a circle may be inscribed by rotating the arm 26 about the rod 16 or with the rod 16 within the member 14 as a bearing. It is also clear that, if desired, the collar 24 may be lifted to the desired position and clamped in such position upon the rod 16 and the carriage 20 permitted to rotate upon the rod 16. If this is the arrangement a circle may be drawn in exactly the same manner as above described. It is of course not necessary always to use the foot piece 11 as it is quite true that the point 18 of the rod 16 may be employed as the pivot, the rod 16 in this instance being entirely removed from the member 11 by loosening the screw 17 and withdrawing the rod from the arm 14 as will be readily apparent. By adjusting the arm 37 properly with respect to the point 40, it is quite apparent that concentric circles different distances apart may be drawn with the utmost ease. If it is desired to draw only one circle, the arm 37 may be removed and the point 40 or a lead pencil in place thereof utilized as the scribe.

In some instances, it may be desirable to employ the device for scribing ellipses. If such is the case, it is readily apparent that the arrangement may be as disclosed in Figure 6 of the drawings. Referring to this figure in detail, the numeral 41 designates a base member from which rises a rod 42 on which is vertically adjustably mounted a collar member 43 through which is slidable a rod 44 which may be the identical rod 16 above described and which may carry the carriage 20 likewise above described, with which carriage is connected the arm 26 carrying the other members comprised by the reference characters 28 to 40 inclusive.

It is also possible to use the device arranged as shown in Figure 7, in which the rod 44 is shown as carrying foot members 45 adjustable with respect thereto by means of set screws 46 or the like. The arm 26 being of course arranged in the desired position with respect to the rod 44 and held, though capable

of rotary movement, by means of the clamping screw 28. In this form there may be provided a scribe point 56 having a reduced shank 57 passing through the slot 27 in the arm 26 and equipped with a clamping nut 58 for maintaining it in an adjusted position. The carriage device 31 and its associated parts may be carried by the arm 26 in a manner described in connection with Figure 6. In this form of the invention it is readily apparent that if the foot members 45 be placed against some flat surface and the arm 26 adjusted to give the proper position between the pivot screw 28, the scribe point 56 and the scribe point 40 carried by the member 31 concentric circles may readily be drawn. In Figure 5, I have illustrated an extension member or modification to replace the structure illustrated in Figure 1. Referring to this figure in detail it will be observed that I have illustrated a carriage 47 corresponding to the carriage 31 and provided with a stem 48 adapted to be received within the member 28 carried by the arm 26. However, in this instance, the carriage terminates in an ear 49 with which is pivotally connected at 50, an elongated arm 51 having a slot 52 along which is adjustably mounted, by means of a screw 53, a carrier member 54 for carrying a lead pencil or other scribe 55.

From the foregoing description and a study of the drawings, it will be apparent that I have thus provided a simply constructed, inexpensive and very easily adjusted and operated device by means of which circles either singly or in concentric relation may be drawn upon flat or upon irregular surfaces. The arrangement of parts is also such that if desired the device may be placed against a vertical surface for drawing circles upon a horizontal surface, and vice versa, depending upon the nature of the work to be done. Furthermore, surface irregularities will have no effect upon the device inasmuch as it may be caused to operate with perfect satisfaction under any and all conditions. It is believed that the construction, operation and advantages will be readily apparent to one skilled in the art without further explanation.

While I have shown and described the preferred embodiment of the invention, it should of course be understood that I reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:

In a device of the character described, a foot piece formed with a body member having upstanding ears thereon, an angular arm pivotally connected with said ears and formed with a bearing portion having a set screw therein, a rod rotatably adjustably mounted within said bearing portion and adapted to

be clamped by said screw, a carriage slidably
and rotatably mounted upon said rod and
having clamping means for maintaining an
adjusted position with respect thereto, an
5 elongated arm having a longitudinal slot, a
pivot secured to the carriage and passing
through said slot, a clamping screw on said
pivot, a member carried by one end of said
arm, a stem slidably mounted within said
10 member, a carriage carried by said stem and
having boss portions, a scriber mounted for
sliding movement through said boss portions,
and an auxiliary scriber pivotally and slid-
ably connected with the second-named car-
15 riage.

In testimony whereof I affix my signature
EDWARD O. CLARK.

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