Sept. 15, 1953 A. J. GOODFORD 2,651,843

CIRCLE MARKER

Filed Aug. 16, 1950

Fig. 1

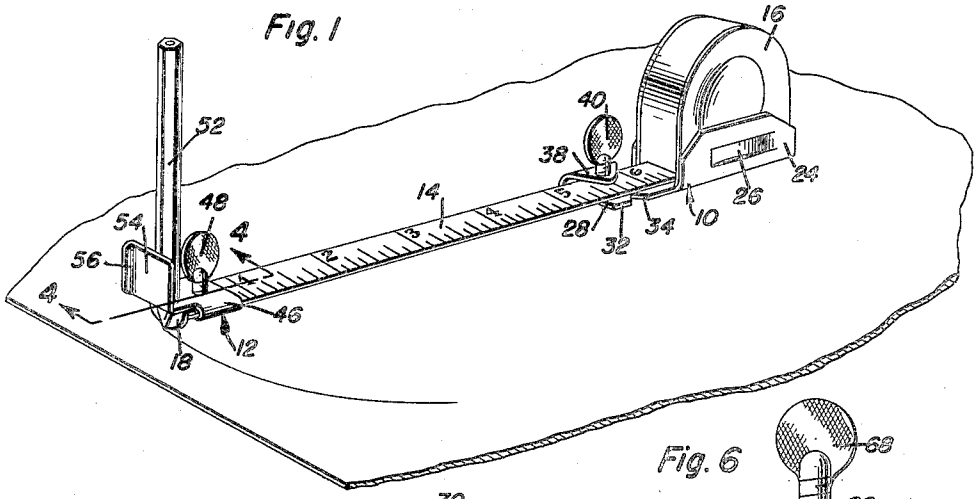


Fig. 5

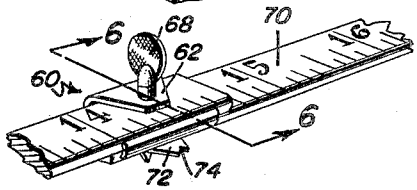


Fig. 6

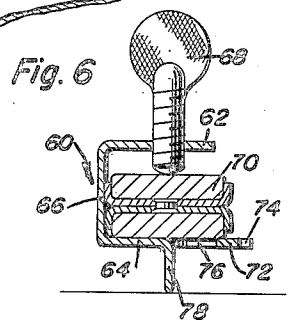


Fig. 2

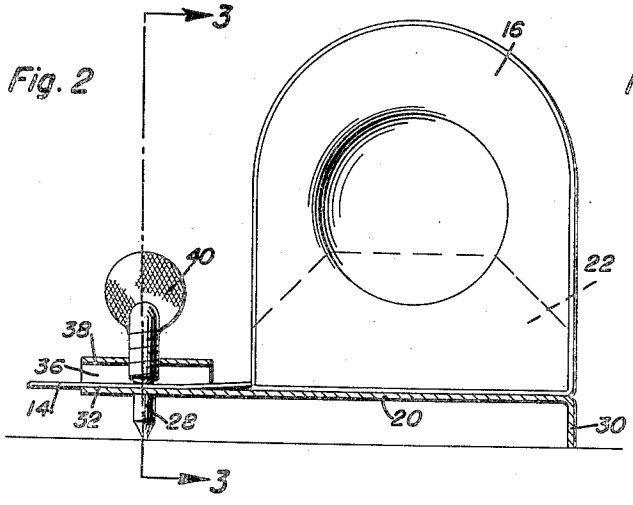


Fig. 3

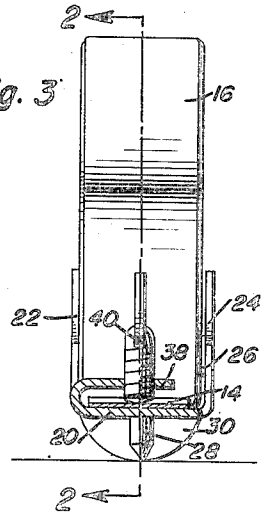
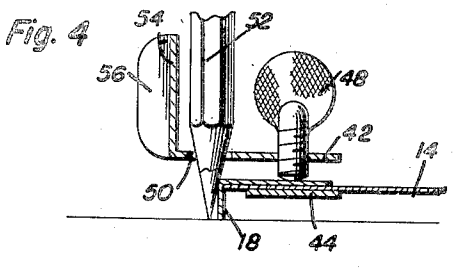


Fig. 4



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CIRCLE MARKER

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3 Claims. (Cl. 33—27)

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This invention comprises novel and useful improvements in a circle marker and more specifically pertains to circle marker attachments for use with rulers of either the folding or the flexible tape type, for adapting these rulers for use as compasses for scribing circles and arcs of circles of various sizes.

The primary object of this invention is to provide circle marking attachments for use with rulers of either the folding ruler or the steel tape type whereby the ruler may be adapted for use as a compass for scribing or tracing circles or arcs of circles of various sizes with ease and accuracy, and wherein the ruler and the attachments may be compactly folded when not in use.

Yet another object of the invention is to provide circle marking attachments for rulers which may be readily applied to, removed from or adjusted longitudinally of various types of rulers with ease and accuracy.

A still further object of the invention is to provide circle marking attachments for rulers which are specifically adapted for use with conventional forms of flexible steel tape rulers which are yieldingly wound in cup-shaped or cylindrical containers.

And a final important object of the invention is to provide a set of circle marking attachments for rulers which are equally applicable for use with pencils, scriber points, marking chalk and the like for describing circles and arcs of circles of a wide variety of radii.

These, together with various ancillary features and objects of the invention, which will later become apparent as the following description proceeds, are attained by the present invention, preferred embodiments of which have been illustrated, by way of example only, in the accompanying drawings, wherein:

Figure 1 is a fragmentary perspective view showing the manner in which a preferred embodiment of the invention is applied to a flexible steel tape for adapting the same to describe an arc with a pencil employed as a scriber:

Figure 2 is a vertical central longitudinal sectional view taken substantially upon the plane indicated by the section 2—2 of Figure 3 and showing the manner in which the center point clip is adapted to be attached to a flexible steel tape and the housing for the same;

Figure 3 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 2;

Figure 4 is a vertical longitudinal sectional detail view taken substantially upon the plane in-

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dicated by the section line 4—4 of Figure 1 and illustrating the manner in which a scriber clip attachment is associated with the end of a flexible steel tape for guidingly receiving a scriber such as a pencil;

Figure 5 is a fragmentary perspective view showing a modified application of the principles of this invention associated with a folding rule; and

Figure 6 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 6—6 of Figure 5.

Reference is now made more particularly to the accompanying drawings, wherein like numerals designate similar parts throughout the various views.

In the following description, it is to be understood that the term "ruler" as used hereinafter and in the appended claims is to be considered as generic to either the flexible steel tape type of ruler or the folding wooden or steel ruler, Figures 1–4 illustrating the invention as applied to a flexible steel tape ruler, while Figures 5 and 6 disclose the application of the invention to a folding wooden or steel rule.

Referring now more particularly to Figure 1, it will be apparent that the invention consists of a center point clip or attachment indicated generally by the numeral 10 and a scriber clip attachment indicated generally by the numeral 12, these attachments being removably and adjustably secured to a flexible steel tape 14 at longitudinally spaced positions along said tape.

As will be readily understood, the flexible steel tape 14 is conveniently of the type which is yieldingly and resiliently coiled in a cylindrical or cup-shaped housing 16, the forward end of this tape having a depending flange or lip 18 in accordance with customary practice.

The center point attachment 10, as will be apparent from Figures 1, 2 and 3, consists of a flat sheet metal plate 20 of any suitable thickness, which is provided with a pair of integral upstanding side walls 22 and 24, which are adapted to receive the side edges of the tape 14 and the sides of the tape housing 16 therebetween. As will be readily understood, although sheet metal may be conveniently employed as the material from which the center point clip is constructed, this attachment can likewise be formed of any other suitable material as desired.

A resilient finger 26 in the form of a leaf spring which may be integrally or rigidly attached to one of the side walls as 24, or which if desired may be constructed by striking out a portion of the side

wall to form an integral tongue therewith, is provided for yieldingly biasing the housing **16** and/or the edge of the tape **14** against the other side wall **22**. Thus, the tape and/or the housing **16** are resiliently and frictionally held in the attachment **10**.

At any convenient point, the bottom surface of the plate **20** is provided with a depending center point **28** which is adapted to be pressed into the surface upon which it is desired to inscribe an arc or circle. The center point **28** may be conveniently formed by striking downward a portion of the plate **20** to provide an integral depending tab beneath the same; or may be formed as a separate point welded or otherwise rigidly secured to the plate **20**.

Conveniently, the plate **20** is provided with a further depending member **30** in the form of a flange or the like which may serve to support the attachment **10** as the latter is rotated about the center point **28** to thereby maintain the plate **20** upon a substantially parallel plane to that of the surface upon which the arc or circle is to be inscribed.

At its forward end, the plate **20** extends beyond the side walls **22** and **24**, as well as the center point **28** to thus provide a forwardly extending portion **32**, which upon one edge of the same may be provided with a V-shaped notch **34** which is substantially in the same transverse plane as the center point **28**.

Integrally attached to the forwardly extending portion **32** as by an upstanding flange **36** is a bracket **38** which extends above and overlies in substantially parallel but vertically spaced relation the portion **32**. Screw threadedly engaged in a bore through the bracket **38** and in axial alinement with the center point **28** is a clamping member in the form of a thumb screw or the like **40** which thus is adapted to adjustably clamp the tape **14** between the bracket and the plate extension **32** to thus lock the tape in adjusted, extended position.

As so far described and illustrated, the attachment **10** has been applied to a flexible steel tape **14**. It will be readily apparent, however, that the same could just as easily be applied to a folding type of rule, whether of wooden or steel construction.

Reference is now made more particularly to Figures 1 and 4 for an understanding of the construction and operation of the scriber clip **12**. The latter conveniently comprises a sheet metal bracket having parallel upper and lower plates **42** and **44** which are integrally connected by an upstanding side wall **46**, a thumb screw **48** being screw threadedly engaged in one of the plates, such as the upper plate **42** for clamping the forward end of the tape **14** between the two plates. By means of this thumb screw, the scriber bracket is thus adjustably clamped to a portion of the ruler which is spaced from the center point clip **10**.

One of the parallel plates of the bracket, such for example as the upper plate **42**, is extended forwardly from the other plate and is provided with means for guidingly receiving a scriber. This means may conveniently comprise a suitable guide aperture **50** through which may be extended a scriber such as a pencil **52**, the aperture **50** and if desired the forward depending flange **18** of the ruler **14** serving to position and guide the scriber **52** as the latter is rotated through an arc as the device is oscillated or turned about the center point **28** of the center point clip **10**.

However, the means for guidingly receiving the scriber further includes a preferably integral, upstanding plate **54** rising from the upper plate **42** in advance of the aperture **50**, the outer surface of the plate **54** constituting a seat or shoulder for receiving the side of a scriber such as a pencil, a carpenter's pencil, marking chalk and the like. To facilitate the engagement of the member received and guided by the plate **54**, the latter is provided at one side with a vertically and longitudinally disposed projection or flange **56**.

The members **54** and **56** thus serve to selectively support alternative scribers as desired; or may cooperate to provide a finger grip when the operator employs a scriber such as that at **52** during the operation of the device.

It will be readily understood that various types of scribers can be employed with this invention, since the pencil **54** could be replaced with a scribing point, a pen, or any other marking or scribing instrument.

The attachments so far described are equally applicable to the flexible steel tape **14** or to a folding type of rule.

However, a further embodiment of the invention of a somewhat simplified construction may be employed which although not limited to the folding type of rule is specifically and efficaciously applicable thereto.

This modification consists of the previously described center point clip **10** together with a modified form of scriber clip, shown in Figures 5 and 6 and indicated generally by the numeral **60**. The scriber clip **60** comprises parallel upper and lower plates **62** and **64** which are vertically spaced in substantially parallel relation, and which are integrally joined as by a vertical side flange or plate **66**. A thumb screw **68** is screw threaded through the upper plate **62** for clamping a folding rule **70** between these plates. The lower plate **64** is preferably extended laterally beyond the side edge of the upper plate **62** to provide a lateral projection **72** which is notched or recessed as at **74**. Conveniently, the bottom plate **64** may be notched or cutaway as at **76** to provide a downturned struck-out portion **78** constituting a depending point.

The attachment **60** may also be substituted for the center point clip **10** by clamping this attachment at any desired position along the rule **70** from the previously described scriber point attachment **12**.

From the foregoing it will be apparent that the center point attachment and the scriber attachment of this invention are equally applicable to the folding type or the flexible tape type of rules to adapt the latter for efficaciously describing circles or arcs of any predetermined magnitude.

From the foregoing, it is felt the construction and operation of the invention together with its many advantages will be readily apparent and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not desired to limit the invention to the exact construction shown and described, but all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A circle marker attachment for rulers comprising a center point clip and a scriber clip adapted for attachment to spaced portions of a ruler, said center point clip comprising an elongated plate having a center point depending therefrom, a pair of side walls rising from said plate for receiving the edges of a ruler therebetween, a bracket mounted on said plate and disposed forwardly of said side walls in spaced overhanging relation upon said plate, a clamping member on said bracket for adjustably securing a ruler between said plate and bracket, a resilient member on one wall for yieldingly biasing a ruler against the other wall, said clamping member being disposed in axial alignment with said center point.

2. A circle marker attachment for rulers comprising a center point clip and a scriber clip adapted for attachment to spaced portions of a ruler, said center point clip comprising an elongated plate having a center point depending therefrom, a pair of side walls rising from said plate and being interconnected with each other solely through the medium of the plate for receiving the edges of a ruler therebetween, a bracket mounted on said plate and disposed forwardly of said side walls in spaced overhanging relation upon said plate, a clamping member on said bracket for adjustably securing a ruler between said plate and bracket, said clamping member being disposed in axial alignment with said center point said scriber clip comprising a bracket having parallel upper and lower plates, a clamping member on said scriber clip bracket for adjustably securing a ruler between said parallel plates, means on said scriber clip bracket for guidingly receiving a scriber in alternate positions, said last means including an aperture in one of said parallel plates for receiving a scriber point, and an upstanding plate on one of said parallel plates and a guide shoulder on said upstanding plate.

3. A circle marker attachment for rulers comprising a center point clip and a scriber clip

adapted for attachment to spaced portions of a ruler, said center point clip comprising a plate having a center point depending therefrom, a pair of side walls rising from said plate for receiving the edges of a ruler therebetween, a bracket mounted on said plate and disposed forwardly of said side walls in spaced overhanging relation upon said plate, a clamping member on said bracket for adjustably securing a ruler between said plate and bracket, said clamping member being disposed in axial alignment with said center point said scriber clip comprising a bracket having parallel upper and lower plates, a clamping member on said scriber clip bracket for adjustably securing a ruler between said parallel plates, means on said scriber clip bracket for guidingly receiving a scriber, said last means including an upstanding plate on one of said parallel plates and a guide shoulder on said upstanding plate.

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