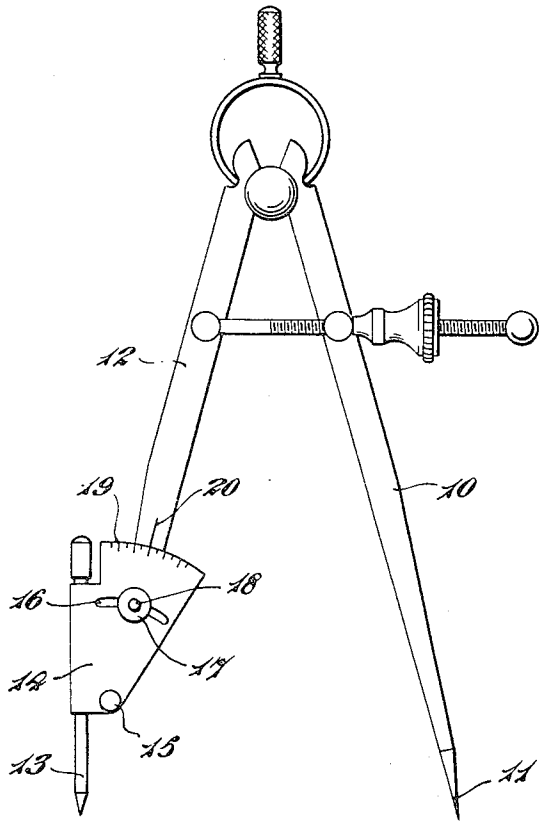
Aug. 14, 1956 I. BENKOE 2,758,381

DIVIDERS

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DIVIDERS

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2 Claims. (Cl. 33—149)

This invention relates to dividers and has for its chief object to provide a tool which will enable the center dot to be punched with a much higher degree of accuracy than has been possible with the hand-manipulated center punch, without the use of complicated and expensive apparatus.

According to the present invention the center punch is combined with a divider, the center punch forming one point of the divider and being so mounted on the divider than the center punch may be pre-set so that it will lie perpendicular to the surface to be marked when the divider is adjusted to the desired dimension.

Preferably the center punch is carried by a graduated segment pivotally mounted on one leg of the divider, said segment co-operating with an index mark on the divider leg to enable the center punch to be adjusted so that it will be perpendicular to the surface to be marked.

The center having been located with the aid of the combined divider and center punch, the center dot is made by a light tap on the end of the center punch.

In order that this invention may be the more clearly understood and readily carried into effect, reference may be made to the accompanying drawing which is a front elevation of the preferred form of combined divider and center punch according to the present invention.

Referring now to the accompanying drawing, in the divider therein illustrated one leg **10** is provided with the usual point **11**. The other leg **12** is provided with a center punch **13** which is carried by a segment **14** pivotally mounted as at **15** on the end of the leg **12**. The punch **13** is so disposed that its upper end is exposed clear of the segment and leg so that said end may be impacted. The segment **14** is slotted as at **16** and is adapted to be locked to the leg **12** in its adjusted position by means of a nut **17** on a screw **18** carried by the leg **12** and passing through the slot **16**. The upper edge of the segment **14** is graduated as at **19** and co-operates with an index mark **20** on the leg **12**.

The graduations **19** are spaced and numbered in such a manner that when the segment is set to correspond with the dimension to which the divider is to be adjusted the center punch **13** will become located perpendicular to the surface to be marked. Thus, if the adjustment of the divider is to be of the order of 4 inches, the segment is pre-set to **4**. Similarly, if the adjustment of the divider is to be of the order of 2½ inches, the segment is pre-set to the graduation between the marks **2** and **3**.

In use the divider is used in the normal way to mark out the center and when the center has been located the end of the center punch is given a light tap to displace it longitudinally and indent the center dot.

Due to the fact that the center punch will lie perpendicular to the surface as a result of its pre-setting whatever be the adjustment of the divider any error that might arise if an independent center punch were used will be avoided.

It must be clearly understood that whilst the graduated pivoted segment **14** and the index mark **20** form a very simple and effective means of setting the center punch relative to the leg of the divider any other means of obtaining this setting may be employed without departing from the scope of the present invention.

The dividers according to the present invention are preferably used in conjunction with the setting gauge described in my co-pending patent application No. 294,338, now Patent 2,659,977, as such a gauge enables the dividers to be easily set to a high degree of accuracy.

What I claim is:

1. A combined divider and center punch comprising a graduated segment having an arcuate slot pivotally mounted on one leg of the divider, a center punch carried by said segment for longitudinal displacement, the upper end of said punch being exposed clear of the segment and the leg so that it can be impacted for longitudinal displacement relative to said segment, a screw outstanding from said leg passing through said arcuate slot, an index mark on said leg co-operating with the graduations on the segment and a locking nut on said screw whereby the center punch can be pre-set so as to lie perpendicular to the surface to be marked when the divider is adjusted to the desired dimension and the center dot made by a light tap on the end of the center punch.

2. A combined divider and center punch which comprises, in combination: a pair of divider legs, said legs being pivotally mounted, one with respect to the other, at a pivot point so that they may be arcuately swung with respect to each other about said pivot point; a graduated segment having an arcuate slot, said segment being pivotally mounted on one of said divider legs so that it may be swung arcuately with respect to said leg through an arc of considerably shorter radius than that of the arc through which said pivotally mounted divider legs may be swung; a center punch carried by said graduated segment so that it is swung arcuately through said arc of shorter radius when said graduated segment is swung with reference to said divider leg on which it is mounted, said punch being longitudinally displaceable relative to said segment and being so disposed thereon that its upper end is exposed clear of the segment and the leg, whereby, the upper end of said punch can be impacted to thereby displace said punch longitudinally relative to said segment; a screw outstanding from said leg and passing through said arcuate slot in said graduated segment; an index mark on said leg cooperating with the graduations on said graduated segment; and a locking nut on said screw, whereby said center punch can be pre-set so as to lie perpendicular to the surface to be marked when the combined divider and center punch is adjusted to desired dimensions, the center dot being then made by a light tap on the end of said center punch.

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