Sept. 3, 1957 H. A. KULTNER 2,804,688

DEVICE FOR DRAWING OR SCRIBING CIRCULAR LINES

Filed Aug. 6, 1953

Fig. 1

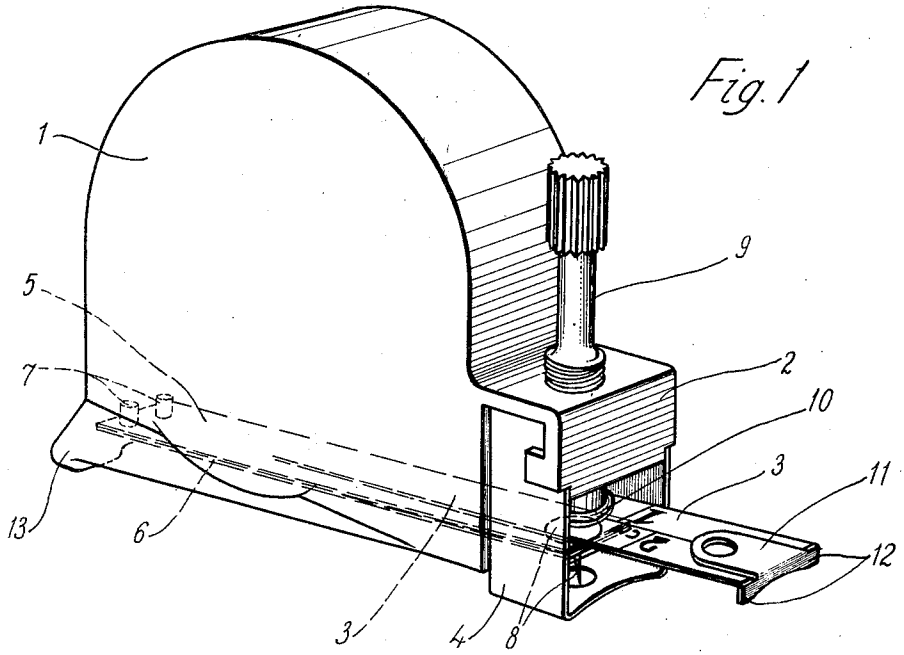


Fig. 2

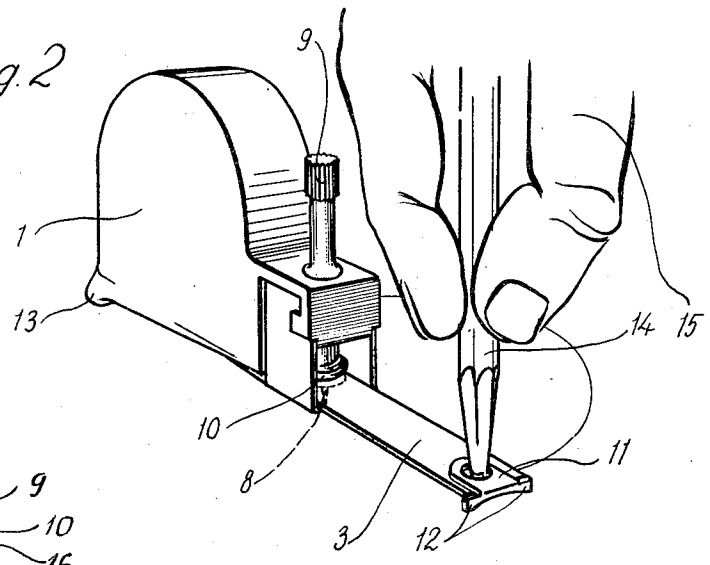
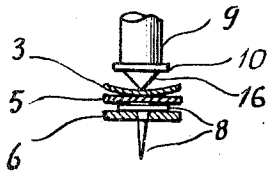


Fig. 3



INVENTOR

Holger Augustin Kultner

United States Patent Office 2,804,688 Patented Sept. 3, 1957

2,804,688

DEVICE FOR DRAWING OR SCRIBING CIRCULAR LINES

Holger A. Kultner, Sollentuna, Sweden

Application August 6, 1953, Serial No. 372,779

3 Claims. (Cl. 33—27)

This invention relates to improvements in a device-beam compass for drawing circular lines on a drawing board, or scribing same on flat pieces of wood, steel and other kinds of material such as plywood, cardboard, steel sheets, dies or special tools, etc. The device is also useful as a measuring tape for inside and outside, or shipping dimensions in inches or millimeters.

The object of this invention is to provide a better, simpler and more positive beam compass, or measuring device than has hitherto been designed.

Another object is to provide such a device which possesses an extremely artistic appearance.

Other objects will appear from the following description and claims when considered together with the accompanying drawing.

Fig. 1 is a perspective view of my improved compass, or measuring device. Fig. 2 shows how a pencil or steel point is used in my device. Fig. 3 is a section through the center point, springs, tape and tightening screw.

To further extend the description enclosed drawing depicts one form of my invention.

In the drawing, **1** is the drum-cover, designed with bottom supports or feet to receive a rolled up regular or special steel measuring tape, **3**, graduated on one or both sides with different scales at each edge. The drum-cover has an extended portion, **2**, which on its outer end wall has a hole through which the tape may be pulled out. In the end of the tape is provided a hole for inserting a pencil, **14**, or a steel point perpendicular to the bottom of the drum or steel tape, **3**. An interchangeable draftsman's or architect's tack **8** is mounted the way I describe it below when device is used for drawing or scribing circular lines. In the extended portion of drum **2**, which is perpendicular to steel tape **3**, is arranged a tightening screw **9**, that locks the tape temporarily or permanently at any predetermined position; and the centerline of tack **8** and axis of screw **9** coincide. The free end of the steel tape is provided with an end-fitting **11**, in which an eyelet with a hole is inserted to receive the pencil or steel point and two heels **12** are bent down to guide the tape on the underlying material and prevent the scale from tilting over to one side or the other. The center point **8** is a regular draftsman's or architect's tack, which is interchangeable and its head in the shown type of compass is placed under the tape between two parallel springs **5** and **6** approximately horizontally mounted in the lower rear of the casing to insure a fixed and stable position for tack **8**, and also its correct position relative to the extended portion of drum **1**. A close fitting hole for the same tack is provided in lower supporting spring **6**.

A modification of my invention is to use only one supporting spring, the lower one **6**, which is then mounted under steel tape **3**, so that the tack's head is enclosed between steel tape **3** and spring **6**. This spring or both supporting springs **5** and **6** are enclosed at the bottom of drum-cover **1** above the bottom **13** of the drum and the drum's inner and rear portion and are there fastened

with screws **7**, or similar fastening details, in which case they do not hinder rolling up of steel tape **3** inside drum **1**. Locking screw **9** is provided with a tapered, lower end as shown at **16** or shaped as indicated in same figure to hold tape **3** in predetermined position, as said lower end of screw **9** is pressed down when the screw is tightened only against the central portion of tape **3** inside the edge graduations, so that the latter never can be damaged even if the device is used a long time. Extended portion **2** forms the upper part of the tape outlet from drum-cover **1**, but its lower part consists of a steel strap **4** which is held in place by two anchor jacks or slots in said extended portion of the drum, and at the same time it constitutes a foot resting on the material being drawn or scribed. Locking screw **9** is provided with a shoulder **10**, between the lower, tapered point and upper portion of the same as it runs through the extended portion **2** of the drum which prevents the screw from being unscrewed upward through said portion. The position of the outer edge of the hole in fitting **11** to the free end of tape is dimensioned exactly the same length as from front edge of strap **4** to the centerline of the tack. This is to compensate the read dimension on the steel tape.

At **15** is shown human fingers holding pencil while drawing or scribing.

The above description may be different in detail without changing the idea of my invention.

What I claim as new is:

1. A beam compass for drawing circular lines and also useful as an ordinary measuring tape, comprising a drum cover accomodating a rolled-up measuring steel tape graduated at least along one edge and provided with a hole at the free end thereof to receive a pencil, said drum cover having a flat bottom portion and an outlet for the tape, a projecting portion on said drum cover having a passage for the tape in the extension of said tape outlet, the bottom part of said projecting portion being provided with a hole extending downwards from said tape passage, a locking screw screwed through said projecting portion above said tape passage in the centre line of said bottom hole and at right angles to the free tape end to lock the tape in any pulled-out position thereof, a point extending below said tape in the axis line of said locking screw and arranged to be pressed out through said bottom hole in response to the tightening of said locking screw, and means for retracting said point through said bottom hole responsively to the loosening of said locking screw.

2. A beam compass as claimed in claim 1, in which said means for retracting said point consists of two flat springs mounted one upon the other approximately horizontally in the drum cover above said flat bottom portion and fastened at the rear of the drum cover, said point being a thumbtack having its head clamped between said flat springs and its point protruding through a hole in the lower spring.

3. A beam compass as claimed in claim 1, in which the lower part of said projecting portion consists of a strap, which is secured to the upper part of the projecting portion and is provided in its bottom with said hole for said point.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 152,838	Stephen	Feb. 22, 1949
588,129	Clough	Aug. 17, 1897
671,690	Creasey	Apr. 9, 1901
838,463	Saxton	Dec. 11, 1906

(Other references on following page)

3

UNITED STATES PATENTS

1,986,551	Anderson	Jan. 1, 1935
2,108,251	Clark	Feb. 15, 1938
2,349,670	Moxey	May 23, 1944

FOREIGN PATENTS

169,674	Austria	Dec. 10, 1951

4

OTHER REFERENCES

Read: "Special Base Adapts Steel Tape for Use as a Beam Compass," Popular Mechanics Magazine, November 1943, page 139.