No. 838,463. PATENTED DEC. 11, 1906.

E. L. SAXTON.

TAPE COMPASSES.

APPLICATION FILED JULY 12, 1906.

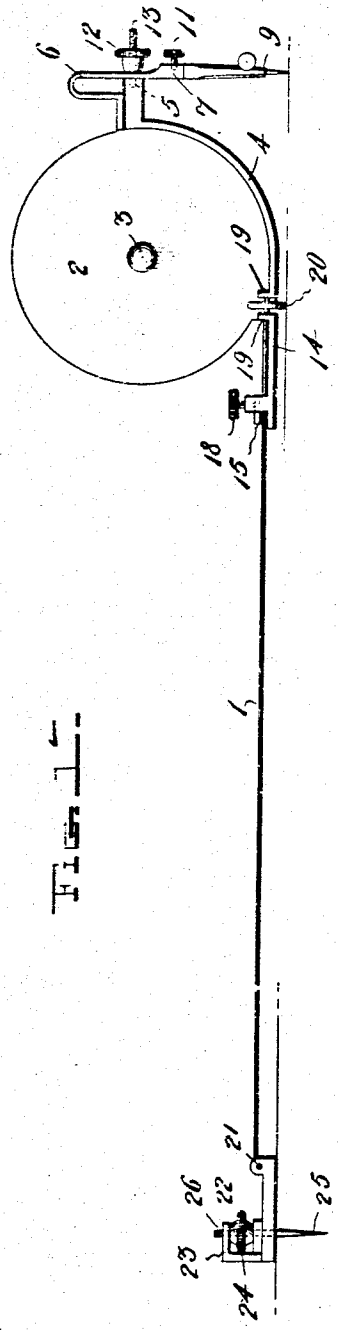


Fig. 1.

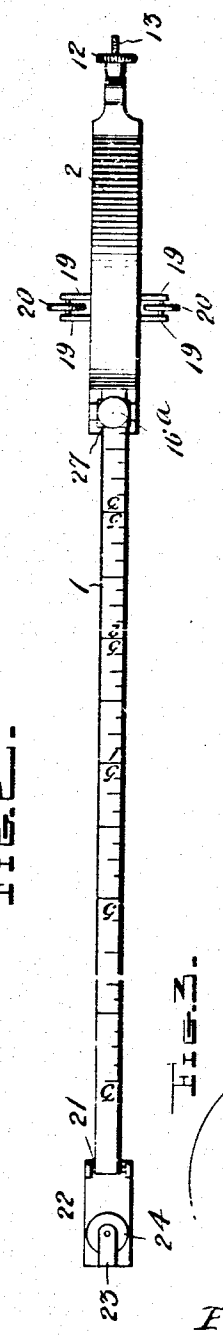


Fig. 2.

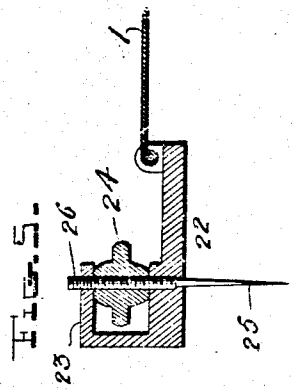


Fig. 5.

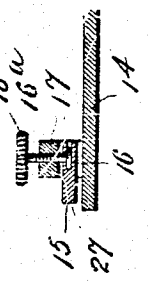


Fig. 4.

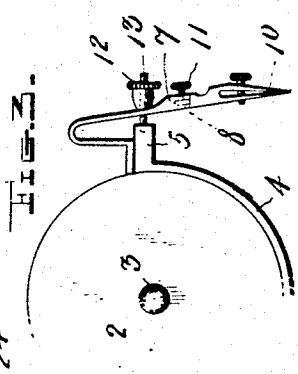


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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TAPE-COMPASSES.

No. 838,463. Specification of Letters Patent. Patented Dec. 11, 1906.

Application filed July 12, 1906. Serial No. 325,911.

To all whom it may concern:

Be it known that I, EDMOND L. SAXTON, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Tape-Compasses, and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improved tape-compass for use in drawing circles and arcs having a greater radius than those that can be drawn with the ordinary compass.

The object of the invention is to provide a device of this character which will be of simple and comparatively inexpensive construction, easy of adjustment, and very effective for the purpose intended.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of the improved tape-compass. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view, showing the operation of the spring-leg and a pen-point secured in the latter. Fig. 4 is a detail sectional view through the tape-clamp, and Fig. 5 is a detail sectional view through the adjustable point of the compass.

In the practice of my invention I preferably employ a measuring-tape 1, which is wound upon a spring-actuated self-winding drum within a casing 2 and controlled by a push-button or knob 3. Pressure upon the button 3 causes the tape to be reeled or allow it to be unreeled.

Attached to the casing 2, which is circular in form, is a curved plate or frame 4, formed at one end with a projecting arm 5, to which is attached a bow-spring compass-leg 6. The latter has at its lower end an enlargement 7, in which is formed a socket 8 to receive the reduced upper end of a compass pencil-point 9, as shown in Fig. 1, or a compass pen-point 10, as shown in Fig. 3, a set-screw 11 holding said reduced end in the socket. The spring 6 is adjusted toward and from the arm 5 by means of a thumb-nut 12 upon a screw-threaded stud 13, which projects from the outer end of the arm 5 and through an opening in the spring 6. The opposite end of the plate or frame 4 is formed with an extended portion 14, over which the tape 1 passes and upon which it is clamped by means of a clamping plate or jaw 15. The latter is swiveled, as shown at 16, upon the lower end of a screw 16^a, which is mounted in a threaded opening in the top of a yoke 17, provided upon the extension 14, and through which the tape passes. A milled head 18 upon the top of the screw 16 permits the latter to be readily turned to adjust the clamping-plate 15 in the yoke 17. Upon the opposite sides of the extension 14 are also formed laterally-projecting lugs 19, between which are journaled rollers 20, which serve to support the casing 2 and its attached parts when the compass is in use.

The free end of the tape 1 is attached, as shown at 21, to one end of a compass-point carrier 22. The latter is in the form of a plate, provided upon its top at its outer end with a U-shaped portion 23, between the arms of which is provided a thumb-nut 24. The latter is thus swiveled and is adapted to operate an adjustable needle-point 25, which extends through alining openings in the parts 22 23, and has a screw-threaded portion 26, which is engaged by the threads of the adjusting-nut 24. It will be seen that by rotating the latter the needle will be adjusted longitudinally in the plate or carrier 22, so as to vary the projection of its point beyond the bottom face of the plate 22. Graduations of any description may be provided upon the tape or ribbon 1, and they are preferably so arranged that the outer edge 27 of the clamping-plate 15 indicates the distance from the center or needle-point 25 to the pencil-point 9 or pen-point 10 when the spring 6 is closed against the arm 5.

In using the instrument the needle-point is first adjusted by means of the thumb-nut 24, and then inserted in the center of the required circle or arc. The casing 2 is then grasped, and one finger is pressed upon the button to release the mechanism which holds the winding drum or reel within the casing against rotation under the action of its spring. The casing may then be moved along the tape in either direction, the spring automatically reeling the tape when the movement is toward the center point. The adjustment to the required radius is then made by moving the indicator and clamping-plate 15 to the division on the tape corresponding to this radius. The tape is then clamped by turn-

ing the head 18 of the screw 16 so that the plate 15 clamps the tape between it and the extension 14. By adjusting the thumb-nut 12 upon the screw 13 a more accurate adjustment may be obtained between the center or needle point and the marking-point of the compass. The wheels or rollers 20 serve to support and hold the casing 2 in an upright position when the compass is in use.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined by the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A tape-compass having a casing provided on one side with a frame provided at one end with guiding and clamping means for the tape and at the opposite end with a device for the attachment of a marking instrument, substantially as described.

2. A tape-compass having a circular casing for the tape, a curved frame on the periphery of the casing having guiding and clamping means at one end and an arm at the opposite end projecting radially with reference to the casing, and a marking instrument attached to the said arm, substantially as described.

3. A tape-compass having a casing provided on one side with a frame provided at one end with guiding and clamping means for the tape, laterally-projecting lugs, near said end, rollers having their axes mounted in said lugs, and provided at the opposite end with means for the attachment of a marking instrument, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDMOND L. SAXTON.

Witnesses:
GEO. H. SAXTON,
MARY F. SAXTON.