

Jan. 18, 1949.

S. V. TOMKO

2,459,554

DRAWING SCALE

Filed Dec. 2, 1946

2 Sheets-Sheet 1

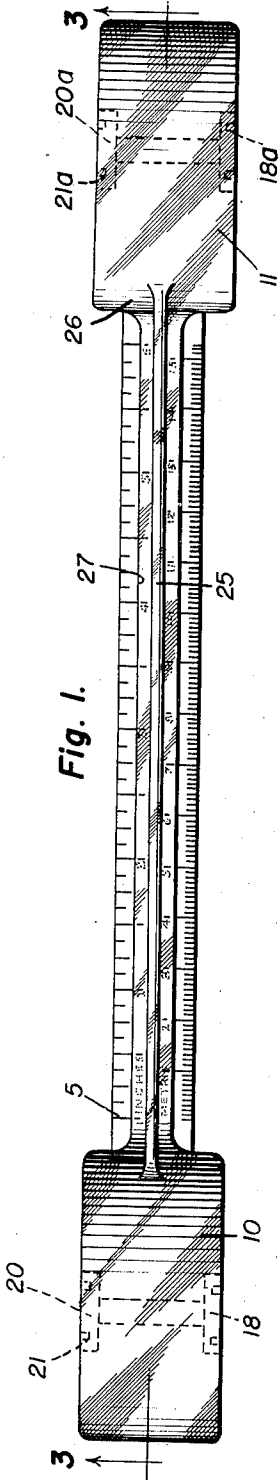


Fig. 1.

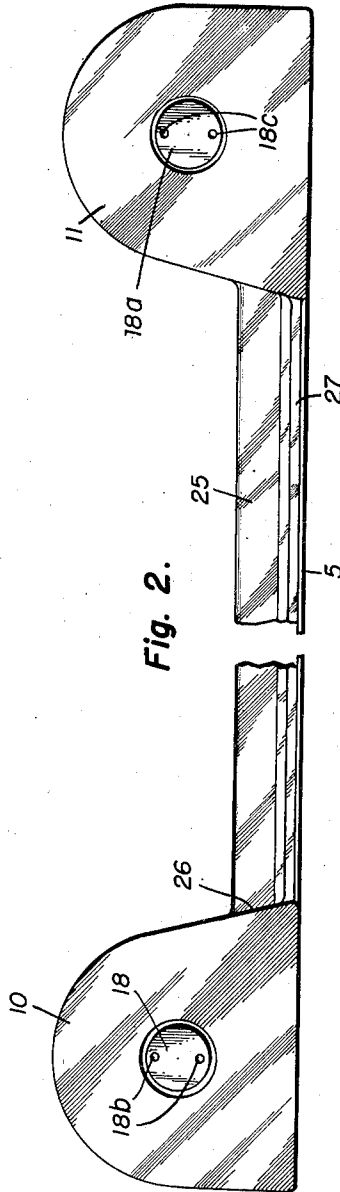


Fig. 2.

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2 Sheets-Sheet 2

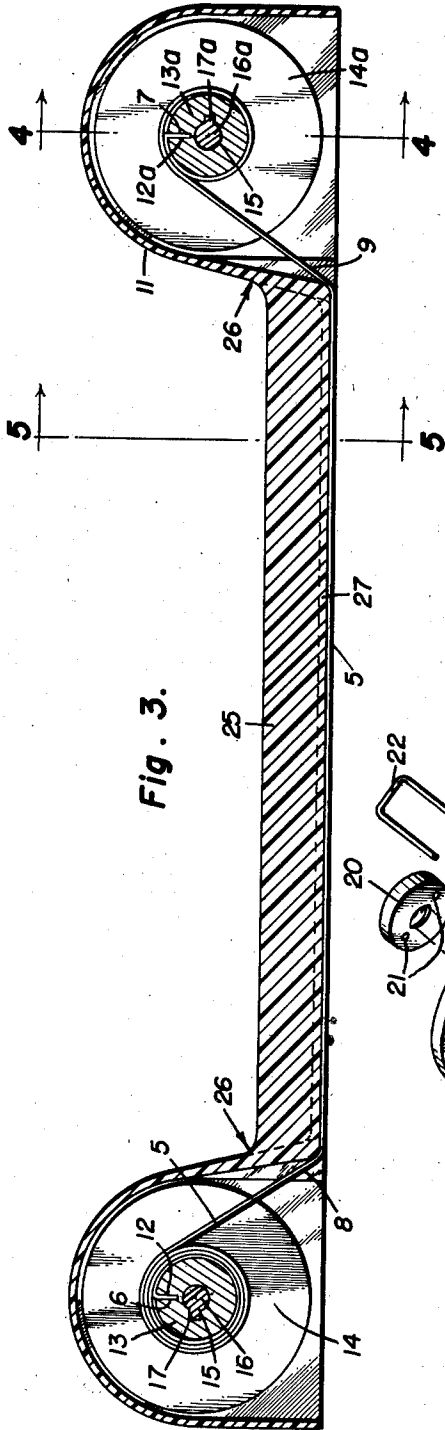


Fig. 3.

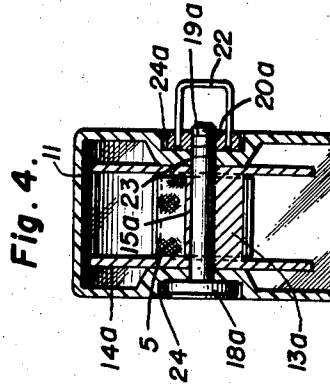


Fig. 4.

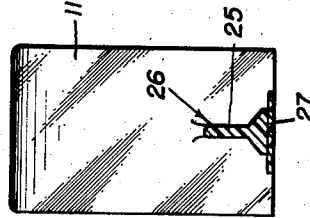


Fig. 5.

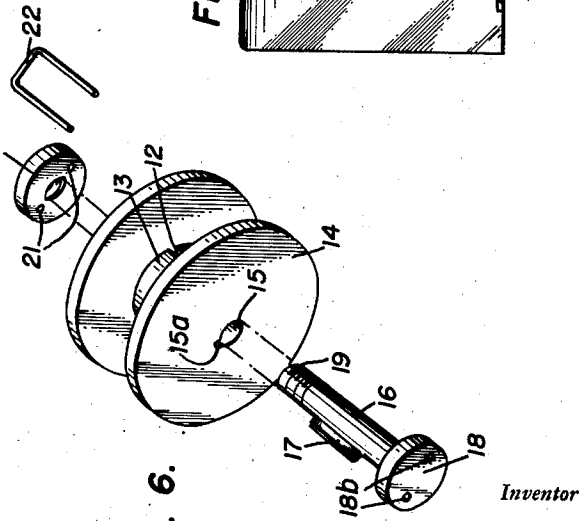


Fig. 6.

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DRAWING SCALE

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Application December 2, 1946, Serial No. 713,592

3 Claims. (Cl. 33—138)

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This invention relates to new and useful improvements in drawing scales and the primary feature of this invention is to provide a tape having various scale graduations along its outer edge thereby permitting said scale to be used for measurement in various systems of measurements.

Another feature of this invention is to provide a device of this character having scales of different systems and types opposite each other on the face of said tape, in a manner to make them the nearest equivalent to each other, this arrangement permitting quick conversion from one scale to another.

A further feature of this invention is to provide a tape of the character referred to having spool means at each end of said tape thereby affording means for winding the tape thereon to bring a selected scale into position and for shipment or storing of said tape without marring its surface.

A still further feature of this invention is to provide a device of the character referred to that is neat and attractive in appearance, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view of the scale constructed in accordance with the present invention;

Figure 2 is a front elevation view thereof;

Figure 3 is a longitudinal sectional view taken on the line 3—3 of Figure 1;

Figure 4 is a sectional view taken on the line 4—4 of Figure 3;

Figure 5 is an end view of one of the spool housings taken in the direction of the line 5—5 of Figure 3, and

Figure 6 is a group perspective view of one of the spools with assembled parts removed therefrom.

Referring now to the drawings in detail, wherein for the purpose of illustration, I have disclosed a preferred embodiment of the invention, the numeral 5 represents a flexible tape having various types of scale graduations successively arranged on its upper face along its edges.

The ends 6 and 7 of tape 5 are adapted to extend upwardly as shown at 8 and 9 in the lower edges of a pair of spool housings 10 and 11.

Ends 6 and 7 of tape 5 fit into a pair of longi-

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tudinal grooves 12 and 12a in shafts 13 and 13a extending between the flanges of spools 14 and 14a respectively.

Bores 15 and key slots 15a extend longitudinally through the center of shafts 13 and 13a and said bores are adapted for receiving shafts 16 and 16a having outwardly extending longitudinal keys 17 and 17a engaged in the slots 15a.

Suitably secured to one end of shafts 16 and 16a are finger knobs 18 and 18a which are preferably circular having a pair of key openings 18b and 18c and the opposite externally threaded ends 19 and 19a of said shafts are adapted to receive preferably circular nuts 20 and 20a having pairs of key openings 21 and 21a which are adapted to receive the outer ends of substantially U-shaped keys 22, said key being removable for also engaging openings 18b and 18c.

Transverse openings 23 are provided in housings 10 and 11, said openings opposing the bores in the shafts 13 and 13a of spools 14 and 14a respectively, and recesses 24 and 24a are provided in the outer faces of said housings 10 and 11 and around said openings 23, said recesses adapted to receive the finger knobs 18 and 18a and circular nuts 20 and 20a whereby the outer surfaces of the respective housings 10 and 11 are relatively smooth.

A substantially inverted T-shaped longitudinal arm 25 has its end suitably secured at 26 to the lower inner faces of housings 10 and 11 keeping said housings in spaced apart relation, said lower horizontal portions or flanges 27 of said arm 25 being slightly above the plane of the lower face of said housings and is adapted to rest centrally on the upper surface of tape 5.

The side edges of said tape 5 extend outwardly from either side of said lower portions or flanges 27 as shown in Figure 1.

Said lower portions or flanges 27 are preferably transparent thereby permitting clear reading of the graduations on said tape which may extend under said lower portion.

The desired scales on tape 5 are brought into play by turning the finger knobs on shafts 16 and 16a by key 22, which unwinds and winds the tape on spools 14 and 14a causing longitudinal movement of tape 5 under the lower portion 27 of arm 25.

The desired scale on tape 5 then rests flat against the work due to the weight of arm 25 thereon.

The scale on tape 5 is then held securely in place by tightening nuts 20 and 20a on the shafts

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13 and 13a by key 22, thereby preventing rotation of said shafts.

The tape is conveniently wound on one of said spools when shipment or storing of said device is desirable thereby keeping the tape in perfect condition for continual usage.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

I claim:

1. A device of the class described comprising a pair of spool housings, a rigid arm extending between and connecting said housings in spaced apart relation to each other, a pair of spools journaled in said housings for rotation therein, and a graduated flexible tape carried by said spools and extending longitudinally under said connecting arm, the side edges of the tape projecting outwardly from each side of the arm.

2. A device of the class described comprising a pair of spool housings, an inverted T-shaped connecting arm, extending between said housings adapted to keep said housings in spaced apart relation, a pair of shafts journaled in said housings for rotation, a longitudinal key on said shafts, a pair of spools, longitudinal bores having key slots in said spools adapted to receive the shafts and the keys carried by said shafts, finger knobs carried by one end of said shafts, a substantially circular nut adjustably carried by the opposite ends of said shafts, said nuts being tightened against the housings for preventing

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rotation of said shafts, and a graduated flexible tape carried by said spools and adapted for longitudinal adjustment under said connecting arm, the lower portion of said connecting arm being transparent and bearing longitudinally on the upper face of said tape.

3. A device of the class described comprising a pair of spool housings, an inverted T-shaped connecting arm, extending between said housings adapted to keep said housings in spaced apart relation, a pair of shafts journaled in said housings for rotation, a longitudinal key on said shafts, a pair of spools, longitudinal bores having key slots in said spools adapted to receive the shafts and the keys carried by said shafts, finger knobs carried by one end of said shafts, a substantially circular nut adjustably carried by the opposite ends of said shafts, said nuts being tightened against the housings for preventing rotation of said shafts, recesses in the outer faces of said housings adapted to receive said finger knobs and circular nuts carried by the shafts, and a graduated flexible tape carried by said spools and adapted for longitudinal adjustment under said connecting arm, the lower portion of said connecting arm being transparent and bearing on the upper face of said tape.

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