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1,567,602

A. W. KEUFFEL

TAPELINE MEASURE

Filed Nov. 29, 1924

Fig. 1

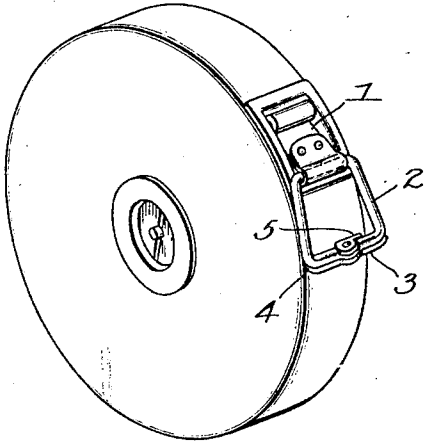


Fig. 2.

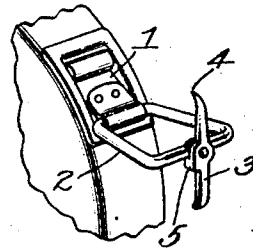


Fig. 3.

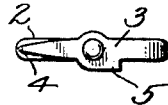


Fig. 4.

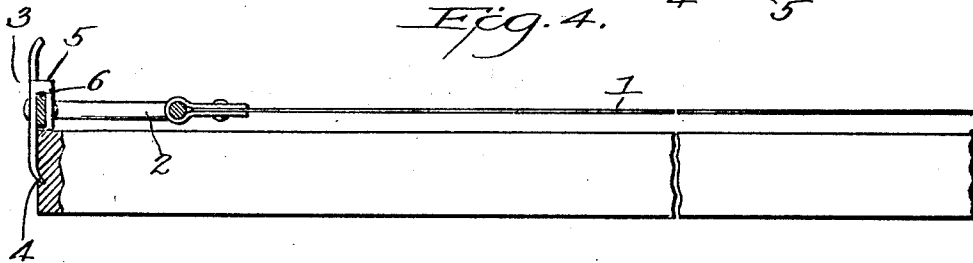


Fig. 5.

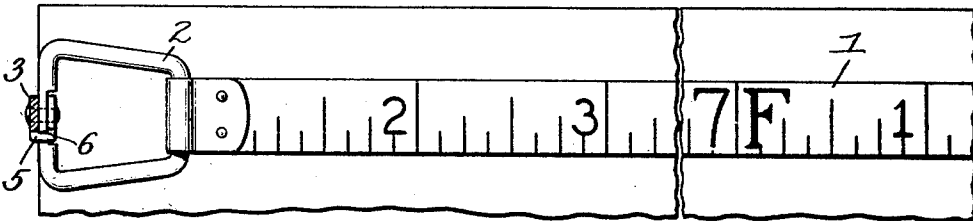


Fig. 6.

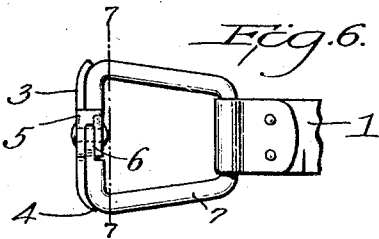


Fig. 7.



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UNITED STATES PATENT OFFICE.

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TAPELINE MEASURE.

Application filed November 29, 1924. Serial No. 752,866.

To all whom it may concern:

Be it known that I, ADOLF W. KEUFFEL, a citizen of the United States, and a resident of Montclair, in the county of Essex and State of New Jersey, have made and invented certain new and useful Improvements in Tipline Measures, of which the following is a specification.

This invention relates to an improvement in tape line measures.

It has for its main object the provision of a simple, efficient and durable means associated with the end of a tape line for the purpose of enabling this end to be readily attached or engaged, preferably with an edge to which the line is to be attached and from which a measure is to be taken.

A further object concerns the provision of simple and efficient means adapted to achieve the above-mentioned object and which when in operative position can be moved to occupy a position of minimum space and in line with the other elements of the tape line so as not to project unduly and be liable to catch on objects.

A still further object concerns the provision of means to establish the aforesaid object and so constructed that its movement to either the normal inoperative position or the operative position is arrested when it is moved to either one of these positions, so that its movement beyond these positions is prevented.

The invention is illustrated in the drawing, of which Figure 1 is a view in perspective of my improved tape measure with the hook or spur in its retracted or inoperative position;

Figure 2 is a similar view with the hook or spur extended;

Figure 3 is a detail view of the hook or spur;

Figures 4 and 5 are views in side elevation and top plan, respectively, illustrating my improved tape in use;

Figure 6 is a detail view of the hook; and

Figure 7 is a sectional view taken on the line 7—7 of Figure 6.

It is to be understood, of course, that the construction and arrangement of the parts and the character of the materials used can be varied within reasonable limits from those illustrated and described, without departing from the spirit of the invention.

Hitherto in using tape line measures it

has been customary to provide or attach to the ends of said measures or tapes, means in the form of spurs, fingers or similar devices whereby the end of the tape can be engaged with and lie adjacent to edges or surfaces from which the measure was to be taken. However, in most of these cases the devices were extra attachments which had to be applied to the end of the tape line, or they were permanently affixed thereto, but so cumbersome that when disposed in their inoperative position they enlarged the end of the tape line and projected considerably therefrom in any direction, so as to be not only unsightly but liable to catch on objects when carried in the pocket or in a kit of tools.

This invention, however, comprises a simple pivoted bar or finger which is pivotally mounted on the end of the tape line, preferably on the outer end of the metallic loop which is generally provided at the end of the tape line. This finger in its pivotal movement is adapted normally to lie along the outer edge of the loop and in the plane thereof, and is substantially no thicker than the end of the loop, so that it does not project therebeyond materially in any direction. This finger, furthermore, is adapted to be moved to an operative position at right angles to the end of the loop or the tape line, and by reason of the fact that it is pivoted to the end of the loop or the tape line at substantially its middle point, when so transversely disposed either the upper or lower portion thereof can act as a spur to engage with a point or the edge of a surface from which a measure is to be taken.

As hereinafter to be more in detail described, the pivotal connection between the finger and the loop is such that the finger cannot be moved transversely beyond its operative position, nor can it be moved beyond its inoperative position in alignment with the end of the loop.

The preferred form of the invention as illustrated in the drawing is applied to a tape line 1 on the end of which a member shown in the form of a metal loop 2 is preferably disposed. In using the tape line this loop is generally held in the hand adjacent a point from which a measure is to be taken or it is looped over a projection such as a pin or a stud from which a measure is to be taken. It is not always convenient, however, to provide such a pin or

stud, especially where the measure is to be taken from an edge. This invention therefore provides a bar 3 in the form of a finger, of a length not greater than the width of the loop and substantially no thicker than the thickness of the loop and pivoted at its middle point to the center of the end of the loop. One end 4 of this finger is preferably pointed so that it may project into an aperture or be forced into soft material, such as wood, to make proper engagement therewith. The pivotal connection between the finger 3 and the end of the loop is effected by reason of a U-shaped plate 5 formed integrally on the finger, one side of this U-shaped plate lying on the opposite side of the end of the loop from that on which the finger lies, this U-shaped plate 5 being provided with a slot 6.

When the finger is disposed in its inoperative position it lies along the end of the loop and in the plane thereof, so that the U-shaped plate to some extent embraces a portion of the end of the loop, whereas when the finger is disposed in its operative position it extends transversely to the end of the loop; because of the fact that the axis about which the finger is arranged to turn is radial to the center of the loop 2 and lengthwise of the tape line 1, the finger 3 occupies an operative position in which it constitutes a projection capable of interposing a resistance to a pull exerted upon the tape in a lengthwise direction. In the transverse position of the finger the inner end of the slots 6 will abut the edge of the loop to prevent further movement of the finger beyond its operative position. It will therefore be readily seen that the finger cannot be moved beyond its operative position by reason of the engagement of the end of the slot in the U-shaped plate with the edge of the loop in this position, nor can it be moved beyond its inoperative position by reason of the engagement of the U-shaped plate with the loop. Furthermore, the position of this U-shaped plate in connection with the finger provides a material rigidity to the pivotal support of the finger which greatly enhances the rigidity of the mounting and therefore the durability of the device.

In operation the finger is moved to the transverse position and either end can be engaged with a point, an aperture or an edge from which a measure is to be taken. When the finger is moved to an inoperative position in line with the end of the loop it does not project in any direction materially beyond the dimensions of the loop and therefore is out of the way as much as the loop itself would be.

Having thus described and explained my invention, I claim and desire to secure by Letters Patent:

1. In combination with a tape line, a member fixed to the end thereof and a bar pivoted upon said member to turn about an axis extending in a direction lengthwise of the tape line and adapted to lie in an inoperative position coincident with the plane of the tape line and in an operative position transverse to said plane of the tape line.

2. In combination with a tape line, a member fixed to the end thereof, a bar pivoted upon said member to turn about an axis extending in a direction lengthwise of the tape line and adapted to lie in an inoperative position coincident with the plane of the tape line and in an operative position transverse to said plane of the tape line, and means for limiting the movement of the bar beyond its operative and inoperative positions.

3. In combination with a tape line having a loop on the end thereof of a bar pivoted to the end of the loop to turn about an axis radial to the center of the loop and adapted to lie along the end of the loop and in the plane thereof and to be moved transversely to the plane of the loop for engagement with an edge or an aperture.

4. In combination with a tape line having a loop on the end thereof, a U-shaped plate straddling the end of the loop and pivoted thereto to turn about an axis radial to the center of the loop, a bar projecting from the plate on the outer side of the loop and adapted to lie in the plane of the loop and to be moved transversely thereto for engagement with an edge.

5. In combination with a tape line having a loop on the end thereof, a U-shaped plate straddling the end of the loop and pivoted thereto to turn about an axis radial to the center of the loop, said plate having a slot therein, a bar projecting from the plate on the outer side of the loop and adapted to lie in the plane of the loop and to be moved transversely thereto for engagement with an edge, the engagement between the U-shaped plate and the end of the loop when the bar lies in the plane of the loop preventing further movement of the bar in this direction, the engagement of the loop with the end of the slot in the plate when the bar is moved transversely to the loop preventing further movement in this direction.

Signed at Hoboken, in the county of Hudson and State of New Jersey this 26th day of November, A. D. 1924.

ADOLF W. KEUFFEL.