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MARKING OR CUTTING TIP FOR FLEXIBLE RULE WITH COMBINATION RULE GUIDE AND TIP GUARD

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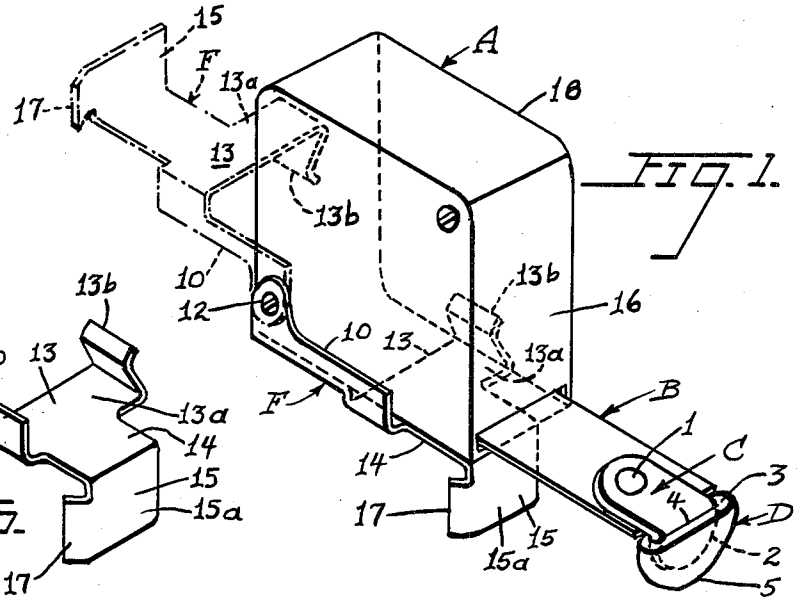


FIG. 1.

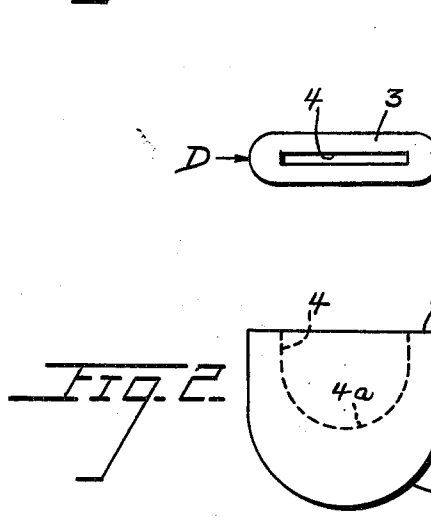


FIG. 6.

FIG. 3.

FIG. 2.

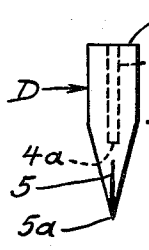


FIG. 4.

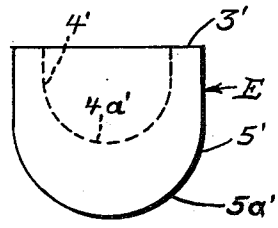


FIG. 5.

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MARKING OR CUTTING TIP FOR FLEXIBLE RULE WITH COMBINATION RULE GUIDE AND TIP GUARD

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The present invention relates to a marking or cutting tip for a flexible rule and it includes a guide for the rule that also acts as a guard for the tip when the rule is in retracted position. The invention consists in the construction, combination and arrangement of parts hereinafter described and claimed.

The invention relates generally to the marking and/or cutting of wallboard, plywood and sheet metal. The marking and/or cutting tip can be attached to any commercial roll tape measure. The marking tip is preferably permanently attached to the end of a flexible rule that is adapted to be wound up within a housing when the rule is not in use. The cutting tip is preferably permanently attached to the end of another flexible rule which is similar to the first one. It is possible to use only one flexible rule and have the marking tip and the cutting tip removably secured to the end of the rule so that either one may be used. When once the marking tip is attached to the end of the rule, it takes the place of a pencil and when the cutting tip is attached to the end of the rule, it takes the place of a knife.

A further object of my invention is to provide a combined guide for the marking or cutting tip, this guide also acting as a guard for protecting either the marking or cutting tip when the rule is retracted into the casing or housing and only the marking or cutting tip is exposed. The combined guide/guard can be attached to the housing of a commercial flexible ruler or roll tape and one of the screws in the housing is used for pivotally securing the guide/guard in place. The guide/guard can be rotated from operative into inoperative position and when it is in the latter position, the bottom wall of the tape casing is free of obstruction and the flexible ruler can be used in the conventional manner.

When the combined guide/guard is used as a guide, it has a portion that will ride on the edge of the material that is to be marked or cut. The tape housing can be moved back and forth and the guide will bear against the material edge and cause the mark or cut that is made, to parallel the edge of the material. The combined guide/guard functions as a guard for the marking or cutting tip when in inoperative position and will protect the tip and also protect the operator's hands from being marked or cut by the tip.

A further object of my invention is to provide a device of the type described which is extremely simple in construction and can be readily attached to the housing and flexible tape of a commercial tape ruler. The marking and cutting tips will give more accurate workmanship in the marking or cutting of material. It is not necessary to score the measured material. The workman can speed up his operations with the device while still doing accurate work.

Other objects and advantages will appear as the specification continues. The novel features of the invention will be set forth in the appended claims.

Drawing

For a better understanding of my invention, reference should be made to the accompanying drawing, forming part of this specification, in which:

FIGURE 1 is an isometric view of a commercial flexible tape rule and housing in which a spring mechanism, not shown, is used for retracting and rolling the tape within the housing. My marking or cutting tip is shown applied to the free end of the tape and my guide/guard is pivotally secured to the housing and is shown in operative and inoperative position.

FIGURE 2 is a front elevation of the marking tip shown on a greatly enlarged scale.

FIGURE 3 is a top plan view of the marking tip.

FIGURE 4 is an end view of the marking tip.

FIGURE 5 is a front elevation of the cutting tip shown on the same scale as FIGURE 2.

FIGURE 6 is an isometric view of the guide/guard.

While I have shown only the preferred form of my invention, it should be understood that various changes, or modifications, may be made within the scope of the annexed claims without departing from the spirit thereof.

Detailed description

In carrying out my invention I make use of a roll tape housing for a flexible ruler, the housing being indicated generally at A in FIGURE 1. This roll tape housing may be of any commercial standard type and it receives a flexible ruler indicated generally at B that can be rolled up inside the housing A when not in use. The ruler B is usually provided with a tip C that is secured to the end of the flexible tape by a rivet 1 or other suitable fastening means. The usual ruler tip C is angular in shape and it has a downwardly depending portion 2. My marking tip or cutting tip can be secured to the downwardly depending portion 2 of the tip C. In FIGURE 1, I show my marking tip D secured to the downwardly depending portion 2 of the tip.

The marking tip is shown in detail in FIGURES 2, 3 and 4. It is preferably made from a composition material composed of equal portions of lead and tin. The marking tip has a flat top 3 and is provided with a recess 4 that opens out onto the flat top 3. The recess or pocket 4 has a width equal to the thickness of the downwardly depending portion 2 of the tip C. The inner edge of the recess or pocket 4 is curved as at 4*a* and this curvature corresponds with the curvature of the end of the downwardly depending portion 2.

The outer end of the marking tip D is rounded as indicated at 5 and this rounded end is made pointed as at 5*a* so that the pointed portion forms an arcuate edge that will constitute a marking edge for the marking tip D. The composition of material forming the marking tip D of equal amounts of lead and tin causes the marking tip to act like a pencil. The sides of the marking tip that extend to the arcuate edge 5*a* are inclined and the edge 5*a* is centered with respect to the width of the recess 4 in the marking tip D so that the edge 5*a* will lie in a plane that extends through the zero marking disposed at the outer end of the flexible ruler B.

The composition of the marking tip D is such that it can be compressed after it is applied to the standard tip C and this will cause the marking tip to be rigidly and permanently secured to the standard tip. If desired, the marking tip can be welded to the standard tip C.

I will now describe the cutting tip E. The cutting tip is similar in size and shape to the marking tip D and corresponding portions will be given the same reference numerals except that they will be primed. The recess or pocket 4′ in the cutting tip receives the depending portion 2 of the standard ruler tip C, after the marking tip D is removed. In actual practice, however, the workman would preferably have two rules housed in two separate roll tape housings A. One tape rule would have the marking tip D permanently attached to its flexible rule B, while the other tape rule would have its cutting tip E permanently attached to its flexible rule B.

Before describing the operation of the cutting tip E, it is best to describe the combined guide and guard mem-

ber F, shown in FIGURES 1 and 6 in isometric views. This member includes an arm **10** that has an opening **11**, see FIGURE 6, for receiving the same screw **12** that is provided for holding the parts of the casing or housing A, together. The arm **10** can pivot about the screw **12** as a center when the guide and guard member F is swung from the full line or operative position in FIGURE 1, into the dot-dash line or inoperative position.

The member F has a spring clip or saddle portion **13** that is integral with and extends at right angles to the arm **10**. The spring clip **13** has a base portion **13***a* that is designed to be brought into contact with the underside of the housing A when the guide and guard F is swung into operative position about the screw **12** as a pivot. The end of the base portion **13***a* that is disposed opposite to the arm **10** is provided with an integral clip portion **13***b* that will yieldingly contact with the housing wall disposed opposite to the wall that carries the arm. The spring clip **13***b* yieldingly holds the guide and guard member F in operative position on the housing A.

Both FIGURES 1 and 6 illustrate the member F as having an extension **14** that is integral with the base or saddle **13** and the plane of the extension lies flush with the plane of the base portion **13** of the member F. At the outer end of the extension **14**, I provide a flat portion **15** that extends at right angles to the base **13** and acts both as a guide and as a guard. The flat portion **15** is integral with the extension **14** and depends therefrom. When the member F is in operative position, the outer face of the flat portion **15** lies in the same plane as the outer face of the wall **16** of the ruler housing A, see FIGURE 1. The flat portion **15** has a curved lip **17** at the left hand end of the portion when looking at FIGURE 1. The right hand end could have a curved lip if so desired. The purpose of the curved lip is to prevent the side edge from digging into the edge of the material being marked or cut when the housing A is moved along the edge of the material in a manner hereinafter described. The guide face **15** will therefore move smoothly along the edge of the material as the housing A is moved.

Operation

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. When either the marking tip D or the cutting tip E is used, the guide guard member F is swung into the full line position as shown in FIGURE 1. The spring clip **13***b* will yieldingly contact with the wall **18** of the casing A for holding the member F from swinging about the screw **12** as a pivot. When the member F is in the full line position of FIGURE 1, the outer face **15***a* of the flat portion **15** will lie in the same plane as the outer face of the casing wall **16**. Therefore the operator can use the outer face of the casing wall **16** as an indicating means on the portion of the flexible scale B that projects beyond the casing A.

For example, if the flexible tape B has been extended in FIGURE 1 so that a length of 1½ inches projects beyond the casing wall **16**, then the outer face of the casing wall **16** will be in line with the 1½ inch graduation mark on the flexible ruler. If now the workman desires to draw a line on the material to be cut which is 1½ inches from an edge of the material, he will hold the casing A in one hand and bring the face **15***a* of the flat portion **15** into contact with the edge of the material. The workman will then move the casing so that the face **15***a* will ride along the edge of the material and keep in contact therewith. During this movement the operator presses on the tip C to bring the arcuate marking edge **5***a* of the marking tip D into contact with the surface of the material. As the housing A and the marking tip D are moved, a line will be drawn by the curved edge **5***a* which will parallel the edge of the material. The operator does not need a pencil to accomplish the marking of the material.

The operator will usually have a second casing A with its flexible tape B and the tip C of the other ruler will have the cutting tip E secured thereto. If the operator wishes to make a cut along the marked line on the material, he will move the scale B until the 1½ inch marking thereon will register with the outer surface of the wall **16**. A cutting line can be made on the surface of the material by moving the housing A so that the outer face **15***a* of the flat portion **15** will ride along the edge of the material. A standard piece of sheet rock has its opposite faces covered with paper. When one of the sheets is severed along a cutting line by the cutting edge **5***a'* of the cutting tip E, then the material can be broken along this cut line. In this way no special cutting knife need be used with the flexible tape.

After either the marking tip D or the cutting tip E is used, it can be moved into a position adjacent to the flat portion **15** of the member F when the flexible tape B is wound up within the casing. The flat portion **15** will therefore act as a guard for the marking or cutting tip when it is in inoperative position. The guard will prevent the sharp cutting edge **5***a'* from cutting the operator's hand.

It is possible to use the ruler B and housing A in the ordinary manner and the guide guard member F can be swung into an out of the way position as indicated by the dot-dash lines in FIGURE 1 where it will be held from interfering with the normal use of the tape.

The invention is extremely simple in construction and it is durable and efficient for the purpose intended. The standard casing or housing A and the flexible ruler B need not be altered in any respect in order to have my invention operatively connected thereto. It is a simple matter to secure the marking tip D or the cutting tip E to the standard ruler tip C. Furthermore the screw **12** in the casing A is used for securing the member F to the casing. This screw can be removed and then inserted through the opening **11** at the end of the arm **10**, and then the screw can be reinserted into the casing A for securing the member F to the casing.

The spring clip **13***b* will hold the member F in operative position for use with either the marking tip or the cutting tip. Also the flat portion **15** will protect the marking or cutting tip when they are not being used. It is also a simple matter to swing the member F into the inoperative dot-dash line position of FIGURE 1 when the operator wishes to use the casing A and ruler B in the usual manner.

The invention can be used for measuring and marking or cutting gypsum wall board, plaster lath and Gyplap. It can be used by carpenters for numerous jobs. If the device were manufactured from suitable materials, it could be used by plumbers.

I claim:

1. The combination with
   (a) a housing having a bottom wall and an end wall with a slot therein disposed near the bottom wall;
   (b) a flexible ruler enclosed in said housing and being extensible through said housing slot; and
   (c) an angular tip secured to the free end of said ruler; of
   (d) a marking tip secured to said angular tip; and
   (e) a guide/guard pivotally connected to said housing;
   (f) said guide/guard having a member whose surface lies in the same plane as the outer surface of said housing end wall that has the slot therein when said guide/guard is in operative position; said member projecting below said housing bottom wall;
   (g) whereby said guide/guard member will act as a guide for said marking tip as the member rides along an edge of the material to be marked; and will act as a guard for protecting said marking tip when said ruler is substantially received within said housing and the marking tip positioned adjacent to the member of said guide/guard.

2. The combination with
(a) a housing having a bottom wall and an end wall with a slot therein disposed near the bottom wall;
(b) a flexible ruler enclosed in said housing and being extensible through said housing slot; and
(c) an angular tip secured to the free end of said ruler; of
(d) a cutting tip secured to said angular tip; and
(e) a guide/guard pivotally connected to said housing;
(f) said guide/guard having a member whose surface lies in the same plane as the outer surface of said housing end wall that has the slot therein when said guide/guard is in operative position; said member projecting below said housing bottom wall;
(g) whereby said guide/guard member will act as a guide for said cutting tip as the member rides along an edge of the material to be cut; and will act as a guard for protecting the operator's hands from said cutting tip when said ruler is substantially received within said housing and said cutting tip is positioned adjacent to the member of said guide/guard.

3. An article of manufacture comprising
(a) a marking tip composed of 50% lead and 50% zinc;
(b) said marking tip having a body with a flat top and a recess extending inwardly from the flat top for receiving the end of a ruler tip and being secured thereto;
(c) said body having an arcuate marking edge that lies in a plane that is normal to said flat top.

4. An article of manufacture comprising

(a) a cutting tip having a body with a flat top and a recess extending inwardly into the body from the flat top and receiving the end of a ruler tip and being secured thereto;
(b) said body having an arcuate cutting edge that lies in a plane that is normal to said flat top.

5. The combination with
(a) a housing having a bottom wall and an end wall with a ruler-receiving slot therein; and
(b) a flexible ruler enclosed in said housing and being extensible through said slot; of
(c) a guide member having an arm pivotally secured to said housing and having a saddle portion with a spring clip;
(d) said arm being swingable for moving said saddle portion against said housing bottom wall; said spring clip yieldingly engaging with a portion of said housing for holding said guide member in this position;
(e) said guide member having a guide surface designed to lie in an extended plane that lies flush with said housing end wall when said saddle portion abuts said housing bottom wall; this guide surface being movable along the edge of a material.

6. The combination as set forth in claim 5: and in which
(a) said arm can be swung about its pivotal connection with said housing for swinging said saddle portion and said guide surface away from said housing bottom wall.

No references cited.

ISAAC LISANN, *Primary Examiner.*