

[54] **SCISSORS AND POSITION INDICATOR**

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[22] Filed: **May 17, 1974**

[21] Appl. No.: **470,728**

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[52] U.S. Cl. **30/123 R; 30/254; 33/334**

[51] Int. Cl. **B26b 13/22**

[58] Field of Search 30/123 R, 233, 254;
33/186, 334, 370, 371, 372, 373

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[57] **ABSTRACT**

A scissors and a position indicator are combined to provide an indication of the position or angle of a scissors. The position indicator includes an indicator housing mounted on a handle of the scissors with the indicator housing including an indicator dial and indicating means movable within the indicator housing for indicating the position of the scissors.

6 Claims, 7 Drawing Figures

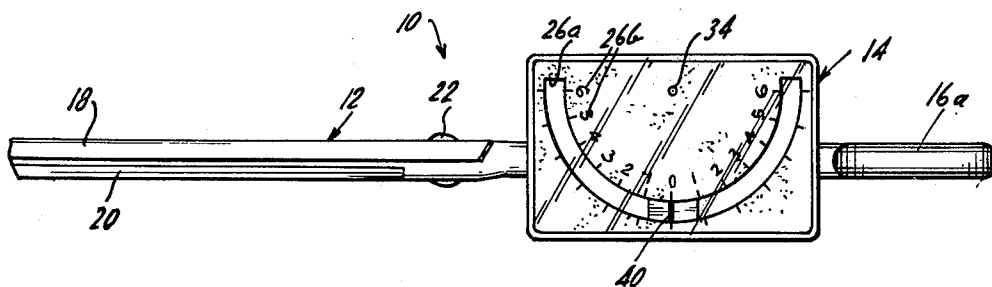


FIG. 1.

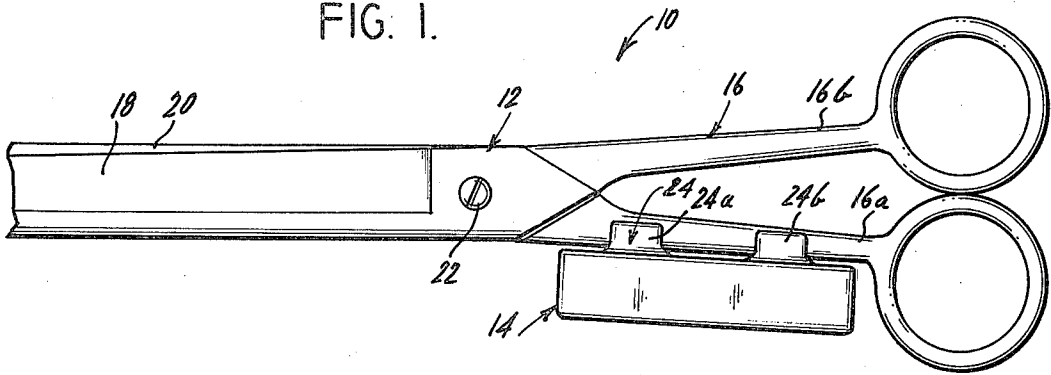


FIG. 2.

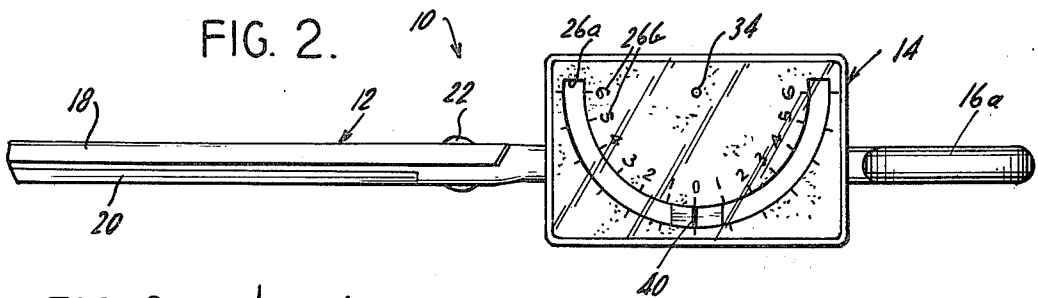


FIG. 3.

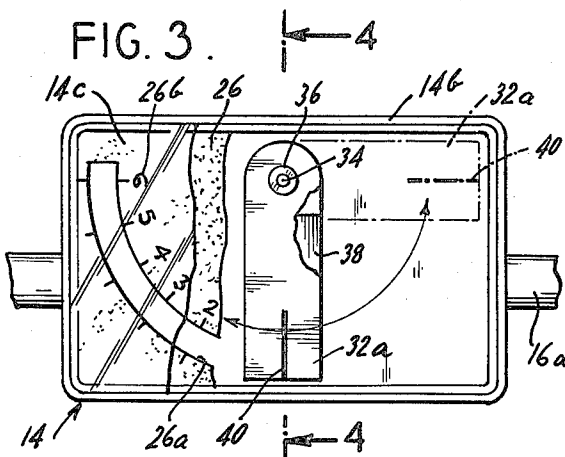


FIG. 4.

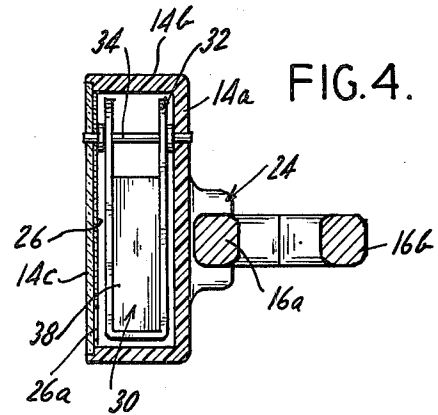


FIG. 6.

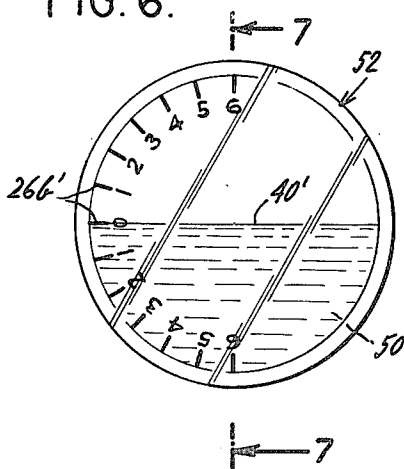


FIG. 7.

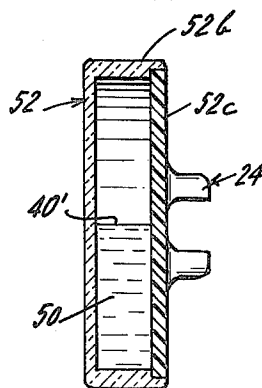
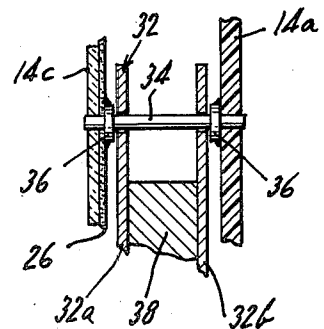


FIG. 5.



SCISSORS AND POSITION INDICATOR

The present invention relates generally to a special purpose tool and, in particular, to a combination of a scissors and position indicator for indicating the angle or position of a pair of scissors.

When employing a pair of scissors or shears to cut an object at one physical location, it is often necessary or desirable to be able to perform an identical cut at the same angle at a different physical location. For example, barbers may desire to accurately cut hair on both sides of a person's head at the same angle. However, this must presently be accomplished by the barber merely looking at both sides of the person's head in an attempt to cut the hair on both sides of the head at the same angle. Accordingly, there is no assurance that the hair cut on one side of a person's head at a particular angle will be at the same angle as the hair cut on the other side of the person's head.

Accordingly, it is an overall object of the present invention to provide a combination tool which overcomes the foregoing problem. In its commercial form, the combination tool is of relatively simple construction, is readily manufactured by mass production techniques at relatively low cost and is relatively indestructible.

It is also a broad object of the present invention to provide a combination cutting tool and position indicator which may be used to accurately cut objects in different locations at the same cutting angle.

It is also a specific object of the present invention to provide a combination cutting tool and position indicator which may be used to quickly and accurately cut hair on both sides of a person's head at the same angle.

In accordance with an illustrative embodiment demonstrating the principles of the present invention, a combination tool is provided which includes a scissors and position indicator. The position indicator includes an indicator housing mounted on one handle of the scissors and the indicator housing includes an indicator dial and indicating means mounted within the indicator housing and movable relative to the indicator dial for indicating the position or angle of the scissors. In the preferred embodiment, the indicator housing is rectangular in shape and the indicating means includes a weight pivotally mounted within the indicator housing. In an alternative embodiment, the indicator housing is circular in shape and the indicating means includes a fluid with the top level of the fluid providing an indicator line relative to the indicator housing.

The above description as well as further objects, features and advantages of the present invention will be more fully understood upon consideration of the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a front elevational view of the combination tool of the present invention;

FIG. 2 is a top plan view of the tool of the present invention;

FIG. 3 is an enlarged detailed view of the indicator housing with parts broken away for the purposes of clarity;

FIG. 4 is a sectional view, taken along the line 4-4 in FIG. 3 and looking in the direction of the arrows, illus-

trating in detail the indicator housing and the indicator means mounted therein;

FIG. 5 is a fragmentary sectional view, illustrating in detail the manner in which the indicating means is mounted within the indicator housing of the present invention;

FIG. 6 is a front elevational view of an alternative construction of the indicator housing; and

FIG. 7 is a sectional view, taken along the line 7-7 in FIG. 6 and looking in the direction of the arrows, illustrating the fluid indicating means located within the indicator housing of the alternative construction.

Referring now specifically to the drawings and in particular to FIG. 1, there is shown a scissors and position indicator in accordance with the present invention, generally designated by the reference numeral 10, which includes a scissors 12 and an indicator housing 14. Scissors 12 is of the conventional type and includes a handle 16 having handle members 16a, 16b and cutting blades 18, 20 which are movable relative to each other about pivot point 22. It should be understood, of course, that any type of scissors 12 may be employed in the present invention as long as handle member 16a is of sufficient length to have indicator housing 14 mounted thereon. In the illustrative embodiment shown herein, indicator housing 14 is mounted on handle member 16a by mounting means 24 which include tabs 24a, 24b. Of course, it is also possible to employ the present invention with mounting tabs 24a, 24b being integrally formed with handle member 16a.

As shown most clearly in FIG. 4, back wall 14a and side walls 14b of indicator housing 14 are opaque and front wall 14c is transparent. Of course, walls 14a, 14b may be formed of any suitable material, such as metal or plastic, and wall 14c may be formed of any material which is transparent. The front wall 14c of indicator housing 14 is also provided with an indicator dial 26 mounted on the interior thereof. Indicator dial 26 may be formed of any suitable material, such as paper, and is provided with a semi-circular cutout in window 26a about which indicia markings 26b are provided. Indicia markings 26b may be of any suitable type such as numbers to indicate a position or they may be in degrees to indicate an angle. In this particular embodiment, indicia markings 26b include numbers 0 to 6 on each half of indicator dial 26.

As shown most clearly in FIGS. 4, 5, an indicating means 30 is mounted within indicator housing 14 and is movable relative thereto for indicating the position or angle of scissors 12. Indicating means 30 includes a U-shaped bracket 32 which is pivotally mounted on a shaft 34. Shaft 34 is mounted on walls 14a, 14c of indicator housing 14 with suitable spacers 36 being provided between U-shaped bracket 32 and walls 14a, 14c. U-shaped bracket 32 is constructed and arranged to carry and support a weight 38 which is fixedly attached to the walls 32a, 32b of U-shaped bracket 32. In addition, the wall 32a of U-shaped bracket 32 is provided with a vertically extending indicator line 40 which is arranged to be visible through cutout or window 26a as the indicating means 30 is moved relative to indicator housing 14. In this manner, indicator line 40 will move relative to indicia markings 26b to provide an indication of the position or angle of scissors 12.

For example, referring to FIG. 2, scissors 12 is shown lying in a horizontal plane and gravity causes weight 38 to lie in a vertical plane and point directly downwardly.

Accordingly, indicator line 40 is lined up with indicia marking 0 to indicate that scissors 12 is in a perfectly horizontal plane. However, if scissors 12 is rotated 45° in a counterclockwise direction from the horizontal plane shown in FIG. 2, indicator housing 14 which is fixedly attached thereto will move with scissors 12. However, as a result of gravity, weight 38 will not move with indicator housing 14. Accordingly, as scissors 12 and indicator housing 14 moves 45°, indicator line 40 will line up with indicia marking 3 on the left half of indicator dial 26 to indicate the position or angle of scissors 12. Turning now to FIG. 3, another example is shown with weight 38 being in the dotted line position relative to indicator housing 14. In this example, scissors 12 and indicator housing 14 have been moved 90° in a clockwise direction from their horizontal plane shown in FIG. 2. Of course, this is indicated in FIG. 3 by the dotted indicator line 40a being lined up with indicia marking 6 on the right half of indicator dial 26.

It should be clearly understood that the scissors and indicator 10 of the present invention has many practical applications. For example, barbers may advantageously employ the present invention to accurately cut hair on both sides of a person's head at the same angle. More particularly, when a barber is cutting the hair on one side of a person's head, the angle can be determined by the barber looking through cutout window 26a to see which indicia marking 26b indicator line 40 is lined up with. If for example, the barber notes that indicator line 40 is lined up with indicia 3 on the right half of dial 26 when cutting on one side of the head, when the barber is cutting on the other side of the person's head and wants to cut the hair at the same angle, the barber will position scissors 12 so that indicator line 40 is lined up with the opposite indicia marking 3 on the left half of indicator dial 26. This is because a barber normally cuts hair on one side of a person's head with the scissors pointing upwardly and cuts hair on the other side of the person's head with the scissors pointed downwardly. Of course, many other applications of the present invention are possible.

An alternative embodiment of the present invention is shown in FIGS. 6 and 7. More particularly, instead of having indicating means 30 include a U-shaped bracket 32 and a weight 38 being movable within an indicator housing 14, in the alternative embodiment, indicating means 30 includes a fluid 50 movable within a circular-shaped indicator housing 52. As shown most clearly in FIG. 7, front wall 52a and side wall 52b of indicator housing 52 are transparent and back wall 52c is opaque. This construction is preferred so that a reading of the position or the angle of the scissors 12 may be made through the side wall 52b of indicator housing 52 as well as through front wall 52a thereof. The amount of fluid within indicator housing 52 is of such quantity that it only fills half of indicator housing 52 and the top level of fluid 50 provides an indicator line 40' which lines up with indicia markings 26b'. More particularly, as the angle or position of scissors 12 is changed, the position of indicator housing 52 will also be changed. However, as a result of gravity, fluid 50 and indicator line 40' will always remain in the same

position as indicator housing 52 is moved relative to fluid 50. Accordingly, as indicator housing 52 is moved relative to fluid 50, indicator line 40' will line up with the appropriate indicia markings 26b'. It will be understood, of course, that the embodiment of FIGS. 6 and 7 operates under the same principles as those described with respect to the preferred embodiment of FIGS. 1 to 5. In addition, it should also be understood that the alternative embodiment of FIGS. 6 and 7 may be employed in any of the practical applications in which the preferred embodiment is employed.

In view of the foregoing, it will be appreciated from the illustrative embodiments that the construction of the scissors and position indicator 10 of the present invention is relatively simple and is capable of use over long periods to provide an accurate indication of the position or angle of a scissors. Accordingly, it will be apparent that the present invention provides a device which may be used to quickly and easily position a scissors at the same angle or position in different locations. In its commercial form, the device is of relatively simple construction, is readily manufactured by mass production techniques at relatively low cost and is relatively indestructible.

A latitude of modification, change and substitution is intended in the foregoing disclosure. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention.

What is claimed is:

1. A combination of a scissors and position indicator comprising a scissors having a handle, an indicator housing mounted on said handle, said housing including an indicator dial, and indicating means within said housing and movable relative to said indicator dial for indicating the position of said scissors.

2. A combination of a scissors and position indicator in accordance with claim 1 wherein said indicating means includes a weight and means for pivotally mounting said weight within said housing.

3. A combination of a scissors and position indicator in accordance with claim 2 wherein said mounting means includes a U-shaped bracket pivotally mounted within said indicator housing to pivotally mount said weight within said housing.

4. A combination of a scissors and position indicator in accordance with claim 3 wherein said indicating means further includes an indicator line and wherein said indicator dial includes a semi-circular shape window constructed and arranged so that said indicator line is visible through said window as said indicating means and said indicator housing move relative to each other.

5. A combination of a scissors and position indicator in accordance with claim 1 wherein said indicating means includes a quantity of fluid within said indicator housing, the top level of said fluid providing an indicator line for indicating the position of said scissors.

6. A combination of a scissors and position indicator in accordance with claim 5 wherein said fluid quantity fills half of said indicator housing.

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