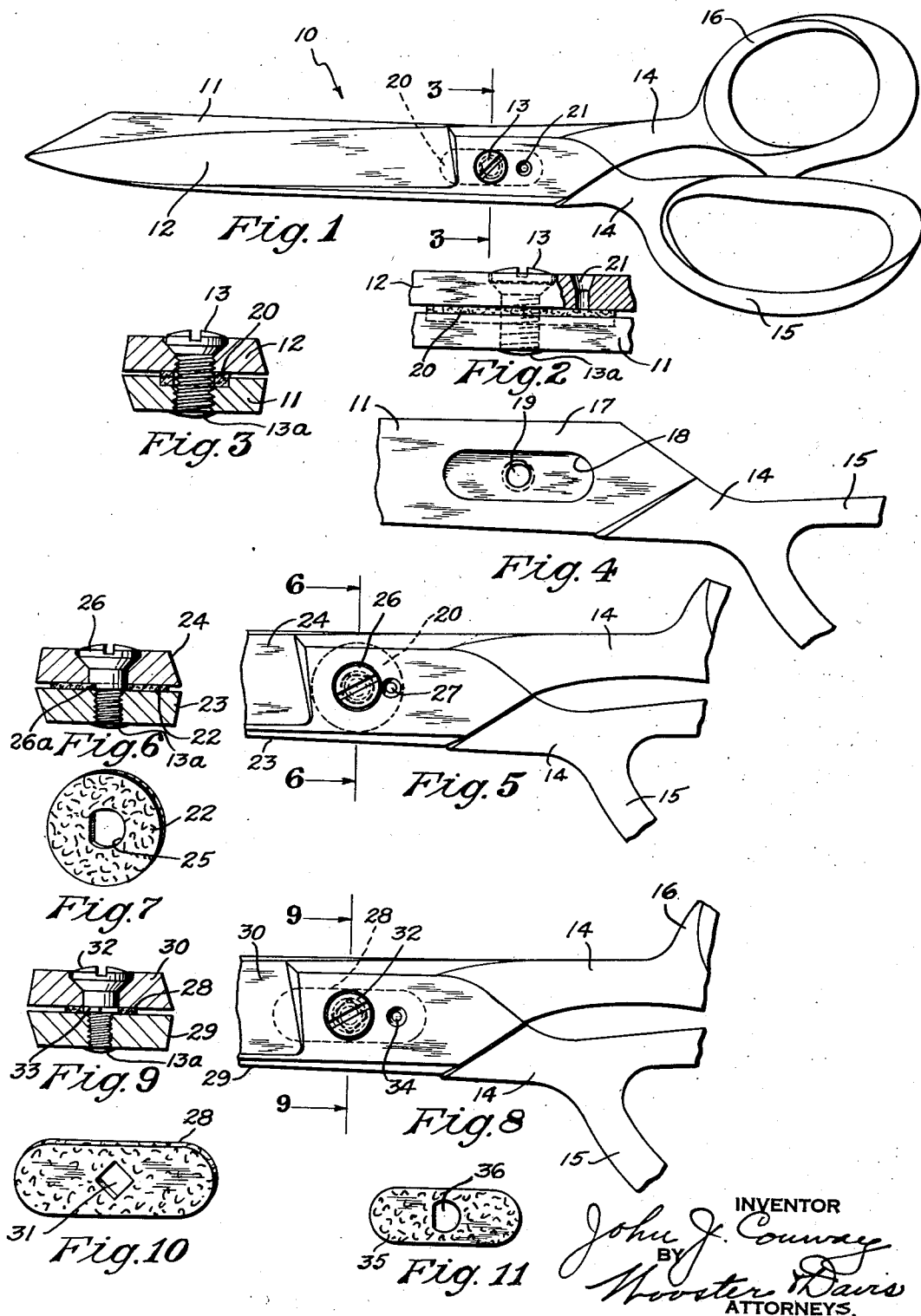


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SCISSORS AND SHEARS
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SCISSORS AND SHEARS

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1 Claim. (Cl. 30—267)

This invention relates to new and useful improvements in shears and scissors (both hereinafter referred to as shears for convenience) and has for an object to provide for the proper oiling or lubrication of the ride portions of the shears.

Another object is to provide for the oiling of a shears in such a manner that the lubricant is kept in the proper places on the shears so that the shears are properly lubricated and there is no danger of soiling of the hands of a user or the material being cut.

A further object is to provide means whereby a shear having a better and more uniform running action is obtained.

Other objects and advantages will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein satisfactory embodiments of the invention are shown. However, it is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claim.

In the drawing:

Fig. 1 is a plan view showing a shears incorporating the improvements of the invention;

Fig. 2 is a view partly in edge elevation and partly in section and on an enlarged scale showing the portion of the shears adjacent the pivot thereof;

Fig. 3 is a transverse sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is an enlarged elevational view looking into the ride portion of one of the blades of the shear;

Fig. 5 is a plan view of the pivot portion of a shears and showing a slight modification;

Fig. 6 is a transverse sectional view along the line 6—6 of Fig. 5;

Fig. 7 is a perspective view of the insert member used between the shear blades in Figs. 5 and 6;

Fig. 8 is a view similar to Fig. 5 but showing another modification;

Fig. 9 is a transverse sectional view taken along the line 9—9 of Fig. 8;

Fig. 10 is a perspective view of the insert member used between the blades of the shears of Figs. 8 and 9; and

Fig. 11 is a similar view showing a modification of insert member that may be used.

Referring in detail to the drawing and at first particularly to the form of the invention shown in Figs. 1 through 4 the shears generally designated 10 include blades 11 and 12 connected by

a pivot 13, and each beyond its pivot having a shank portion 14 while beyond its shank portion blade 11 includes a finger bow or handle 15 while in a similar location blade 12 includes a thumb bow or handle 16. Generally the pivot 13 is rigid with the lower or blade having the finger bow as by riveting over the end 13a or other suitable means, and forms means about which the other blade is turned.

In a shears the place for oil or other lubricant is on the rides, the latter comprising the inner surface portions of the blades from a point somewhat ahead of the pivot 13 and extending to the point where the blade proper meets the shank 14. There is nothing to retain the oil on the rides and oil applied to these rides soon runs off so that they are no longer lubricated, and furthermore it must be applied in very sparing quantities as otherwise it is likely to run along the blades or the handles and soil the material being cut or the hands of the user. This means that if oil is applied to the rides it must be applied very frequently and the result is that for the most part users do not oil their shears.

Blade 11 in its ride portion 17 is (see Fig. 4) provided with an elongated recess 18 extending to each side of the pivot opening 19, and into this recess is introduced an elongated oiler bearing member 20 preferably formed of a fibrous material as fairly hard or compressed leather or what is known as compressed fibre, or the like. It is sufficiently hard to form a bearing for the upper blade and is also of a material which absorbs or becomes saturated with oil so as to retain this oil and lubricate the bearing surface between this member and the movable blade. Said member is of such thickness that its outer surface is disposed beyond or above the surface of ride 17. In the blade 12 adjacent the pivot opening thereof is an oil hole 21 through which oil may be introduced for absorption by the fibrous member 20. This member may be introduced into the recess 18 in a dry condition in which case it may be left for the user to apply the initial oil. However, if desired, the member may be saturated by the manufacturer of the shears and thereafter it is only necessary that occasionally the user apply a small quantity of oil to the member through the hole 21.

As the member 20 is of a thickness to extend above the recess 18 it will be apparent that the ride of the blade 12 does not bear on the ride of the blade 11 but only on the upper or outer surface of the member 20. Since this member is preferably fibrous it may be kept supplied with

oil and afford the required lubrication between the blades and at the same time will retain the oil against flowing along the blades or handles.

The member is somewhat resilient and provides the only bearing between the blades, and comprises means whereby a better and more uniform running of the shear is obtained. This is true since it is practically impossible to get the same angle of ground surface and thus an accurate relation between the blades at the pivot 13, or to extend throughout the length of the blades. With the member 20 in place and forming the bearing between the blades a more easy and smooth cutting action for the full lengths of the blades is obtained, apparently due to a slight yield or give to the member to compensate for irregularities or variations in the blades. Thus with the member 20 in place the shears are properly lubricated and a superior cutting action between the blades is obtained.

As the member is partly disposed in the elongated recess 18 it will be apparent that when the shear blades are closed as in Fig. 1 the member will always be properly positioned to receive oil introduced through the oil hole 21. That is the member cannot turn about the pivot 13 to assume a position crosswise of the blades and out of alignment with the oil hole or to project at its ends beyond the edges of the blade.

Figs. 5, 6 and 7 show a slightly different arrangement wherein the oiler bearing between the shear blades is in the form of an annular or circular disc 22 also preferably of a fibrous material as leather or the like. The annulus member 22 is simply placed between the rides of the blades 23 and 24 of the figures of the modification and has an opening 25 for the passage of the pivot 26. In the blade 24 adjacent the opening therein for the pivot 26 is an oil hole 27 whereby oil may be introduced to the annulus or member 22. The latter in Figs. 5 through 7 functions in the same manner as the member 20 of the figures first described, but being circular need not be recessed or otherwise treated to hold it against turning about the pivot 26 since any such turning of the member will not expose it at the edges of the blades and will not take it out of alignment with the oil hole 27. However, if it is preferred this member should not turn, the opening 25 can be made non-circular as shown or given some other non-circular shape, and the

portion 26a of the pivot screw in this opening given a similar shape.

In the modification of Figs. 8, 9 and 10 an elongated oiler bearing member 28 is disposed between the shear blades 29 and 30, and as in the cases of the oiler bearing members 20 and 22 the member 28 is preferably of fibrous material soaked or saturated with oil whereby to lubricate the rides of the blades. Member 28 is not set into a recess but is provided with an opening or hole 31 of non-circular shape, that shown being of rectangular configuration, and the pivot 32 for the shear blades is provided with a similarly shaped portion such as the rectangular portion 33 entering said rectangular hole 31 whereby turning of the member 28 about the pivot is prevented. Blade 30 is provided with an oil hole 34 through which oil may be supplied to the member 28. With reference to the lubrication and the producing of a smooth cutting action of the blades the member 28 functions the same as the members 20 and 22.

When an elongated oiler bearing member is used inserted between the rides of blades neither of which has a recess it is not necessary that the member be provided with a square opening and that the pivot be provided with a corresponding shank portion. It is only necessary that the member and pivot have engaging non-circular portions whereby turning of the member about the pivot will be prevented. Thus in Fig. 11 there is shown an oiler bearing member 35 having a D-shaped opening 36 therein or an opening with one straight side for the reception of a correspondingly shaped portion of a pivot. Obviously other shapes of openings may be used to cooperate with other shapes of pivot portions to prevent turning of elongated oiler bearing members on shear blade pivots.

Having thus set forth the nature of my invention, what I claim is:

A shears comprising a pair of blades pivotally connected together and having ride portions, one of the ride portions comprising a bearing member embracing the pivot and made of an oil absorptive hard fibrous material, and said member having a bearing surface coacting with the ride portion of the other blade to retain the blades in proper operative relation to each other.

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