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CUTTING TOOL

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Fig. 1

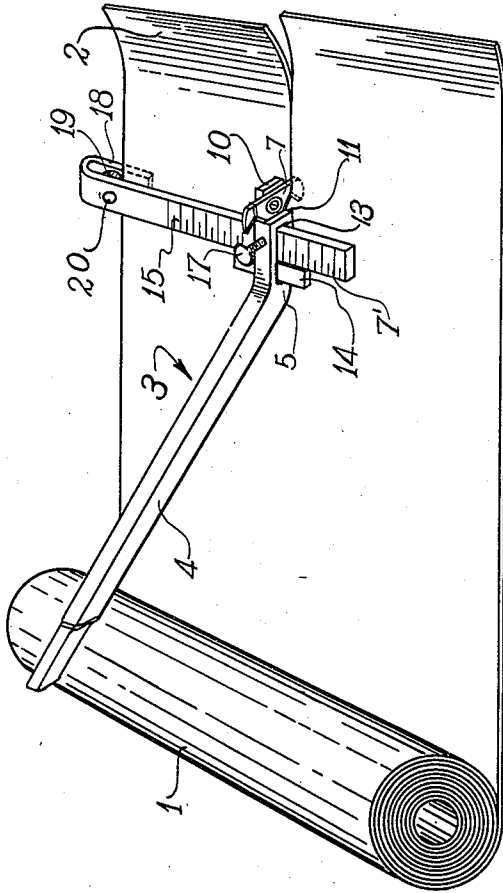


Fig. 3

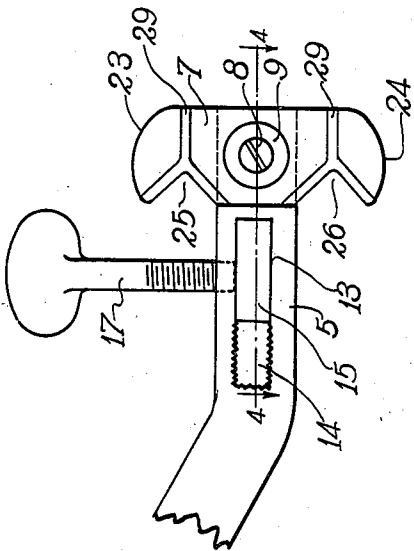


Fig. 5

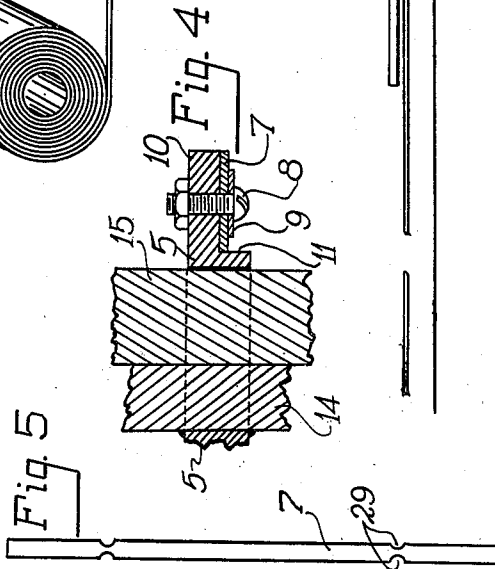
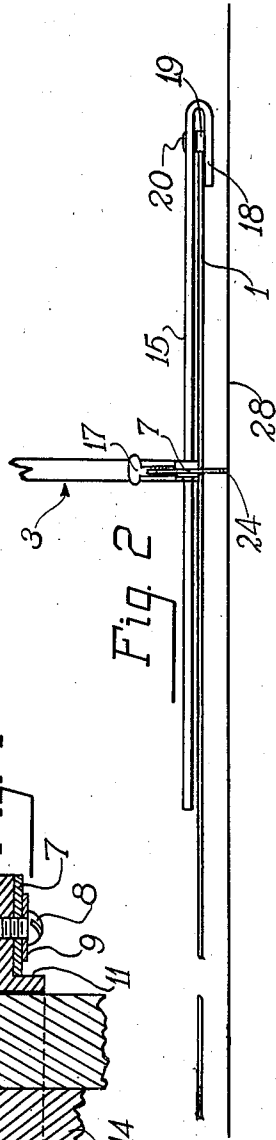


Fig. 2



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# UNITED STATES PATENT OFFICE

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## CUTTING TOOL

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4 Claims. (Cl. 30—293)

This invention relates to cutting tools in general and more particularly to tools for cutting roofing material, such as roofing felt, roofing paper, or the like.

Roofing felt, roofing paper, or the like, generally is sold in the form of a roll of a standard width. It is frequently necessary to obtain a strip of a fraction of the width of the roll. In cutting a strip from a roll it is difficult to maintain the cutting knife at a fixed distance from the edge of the roll which is necessary to obtain a cut strip of uniform width. Furthermore, the cut edge of the strip is generally ragged due to the difficulties in maintaining the cutting knife in the hand always at the same proper angle. Also, the hand knife frequently cuts into the base or support on which the roll rests. It is an object of the present invention to provide a cutting tool which will overcome the above difficulties and which can cut a strip of any desired width from a roll or sheet of such material.

It is a further object of the present invention to provide a tool that has means for guiding the cutting knife and maintaining it at an adjustably fixed distance from the edge of the roll so that the cut strip will be of uniform width throughout its length.

It is a still further object of the present invention to provide such a cutting tool which can easily and readily be adjusted to adjust the width of the strip being cut.

It is a still further object of the present invention to provide such a cutting tool with a cutting knife that cannot injure the surface that supports the strip being cut. Such strips, preparatory to being cut, are positioned on the floor or on the roof. If the cutting tool consists of a knife-like edge that bears down upon the strip and cuts by penetrating through the strip, then there is danger that the point of the knife, which penetrates the strip, will cut the subjacent roofing or other supporting surface. In accordance with one of the features of the present invention the cutting knife is so arranged that it has a non-cutting surface which is supported upon and moves across the surface subjacent to the strip being cut. The knife elevates the strip at the place of cut and thus prevents injury to the subjacent surface.

It is a still further object of the present invention to provide a cutting tool of the above mentioned character which is economical and sturdy of construction so that it may be subjected to rough usage without any reasonable likelihood of injury to the tool.

It is a still further object of the present invention to provide a cutting tool of the above mentioned character having a cutting knife which is removably mounted on the tool so that

it can be readily removed and replaced when the knife edge becomes dull or is worn out.

The attainment of the above and further objects of the present invention will be apparent from the following specification taken in conjunction with the accompanying drawing forming a part thereof.

In the drawing:

Figure 1 is a perspective view illustrating the tool of the present invention in use;

Figure 2 is a front view of the tool in use;

Figure 3 is an enlarged side view of the cutting part of the tool;

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

Figure 5 is an enlarged end view of the cutting knife.

Reference may now be had more particularly to Figures 1, 2 and 3. In these figures 1 indicates a roll of roofing felt of a standard width, from which is to be cut a strip 2 of a fractional part of the width of the roll. The tool 3 for effecting the cutting action comprises an inclined handle portion 4, the lower end 5 of which is bent at an obtuse angle thereto and has a knife blade 7 removably secured thereto in any desired manner, as by a machine screw 8 which passes through a washer 9 and through the knife blade and into an extension 10 at the forward part of the tool. The knife blade rests against the flat surface of the extension 10 and bears against a ledge 11 which holds the knife blade firmly against tilting. The lower end 5 has a rectangular slot 13 formed therein into which is fitted snugly a rectangular metal guiding strip or bar 14 which extends at right angles to the handle portion and is welded in place. A calibrated guide rod 15 slides snugly in the slot 13 and is secured in place by an adjustable thumb screw 17 that threads through the portion 5 of the tool and bears against the rod 15. The guiding strip 14 holds the guide rod 15 against angular tilting with respect to the rest of the cutting tool, and the thumb screw 17 locks it in its adjusted position. The guide rod has a scale 7' thereon calibrated in any desired unit of length, such as inches. One end of the guide rod is bent, as indicated at 18, and has a small roller 19 secured in place as by a rivet 20. The scale 7' is calibrated in terms of units of length of distance of the knife 7 from the roller 19. The cutting knife is rounded at the top and bottom, as indicated at 23—24, and is notched to provide two V-shaped cutting notches 25—26, the cutting portions of which are knife edges.

In order to use the tool the guide rod 15 is inserted through the slot 13 and locked in such a position that the distance from the knife edge to the roller 19 is exactly equal to the width of the strip 2 to be cut from the roll. The cali-

bration 7' on the guide rod facilitates such positioning of the guide rod in the handle of the tool. When this has been done the tool is positioned above the roofing material and the end of the piece of roofing material is inserted between the guide rod 15 and the bent portion 18, as illustrated in Figures 1 and 2. Thereafter the operator gripping the handle 4 merely walks backward along the roll, pulling the tool 3 along, and at the same time unrolling the roll behind him. The operator maintains the tool in such a position that the roller 19 continues to bear against the edge of the roll of roofing material thereby maintaining the knife at exactly the requisite distance from the edge of the roll, thus assuring exactly the requisite width of the cut strip 2. During this cutting action the portion 24 glides along the surface 28 on which the roll 1 rests. This surface may be the surface of a roof to which the cut strip is to be applied. Since the surface 24 is blunt edged and rounded it cannot possibly cut into the support 28, which may be of paper.

When the knife edge 26 becomes dull or chipped the operator can quickly remove the blade for replacement with the cutting knife, portion 25 lowermost, in cutting position, until such time as the knife can be sharpened later in the factory.

It is to be noted that the knife is considerably thinner at the apex of the V of the cutting edges 25—26, as indicated at 29. This facilitates the cutting action in that it reduces the extent to which the cut strip 2 must be flexed sidewise away from the rest of the roofing from which it is cut.

As illustrated in Figure 1, the operator walks backward upon the unrolled portion of the roll of roofing 1 during the cutting operation. If desired the knife may be positioned on the holder with the cutting edges 25—26 directed away from the handle 4 instead of towards the handle. When this is done the operator advances the tool 3 by a pushing action, rather than by a pull. Under such circumstances the tool of Figure 1 would be reversed so that the handle 4 is to the right of the guide rod 15 as seen in Figure 1 and the guide would engage the opposite edge of the roll 1, and the operator would stand on the unrolled part of the roofing roll and push the tool ahead. At that time the back of the knife would serve to unroll the roll 1 or, if desired, the roll 1 could be unrolled manually independently of the cutting tool. In any event, the edge of the roll of roofing material lies between the guide rod and the portion 18 thereof and bears against the roller 19. The guide 15 may be inserted into the slot 13 from either side of the tool.

In compliance with the requirements of the patent statutes I have here shown and described a preferred embodiment of my invention. It is, however, to be understood that the invention is not limited to the precise construction here shown, the same being merely illustrative of the principles of the invention. What I consider new and desire to secure by Letters Patent is:

1. A tool for cutting a strip of material of a constant width from a length of material of a greater width, said tool comprising a handle portion, a cutting knife at the lower end of the handle portion, said handle having a non-circular slot at the lower end thereof, a guide rod having a non-circular section extending through the slot of the handle portion and slidable in a direction at right angles to the cutting edge of the knife,

a guide bar secured to the handle and bearing against the rod for holding it against angular tilting with respect to the handle said guide rod including means embracing an edge of the length of material for guiding the tool to maintain the knife edge at a fixed distance from said edge during the cutting action.

2. A tool for cutting a strip of material of a constant width from a length of material of a greater width, said tool comprising a bar constituting the handle of the tool bent at an obtuse angle at its lower end, a knife at the lower bent end of the bar, a guide rod slidably mounted at the lower bent portion and slidable at right angles to the knife, means for locking the guide rod in adjusted position, and means for holding the rod against tilting with respect to the supporting bar, said guide rod including means embracing the end of the material being cut and engaging the edge thereof as the tool moves along the material being cut.

3. A tool for cutting a strip from a length of roofing material, said tool including a handle portion having a knife at its lower end, the bottom edge of the knife being slidable along the surface that supports the material to be cut and constituting a support for the lower end of the tool, said bottom edge of the knife being rounded and devoid of sharp corners to prevent cutting into the surface supporting the roofing material to be cut as the tool is drawn along such surface, the knife having a V-shaped notch the edges of which are sharp to constitute cutting knife edges, and the lowermost part of the notch terminating above the lower edge of the knife, a guide rod at the end of the tool adjacent the knife and extending at right angles to the cutting edge of the knife, said guide rod including guiding means slidable along an edge of the length of roofing material for guiding the tool for maintaining the knife edge at a fixed distance from the edge of the roofing length during the cutting action and including a portion embracing the edge of the roofing length to keep the edge thereof from moving down out of engagement with the guiding means, said guide rod being slidable at right angles to the cutting edge of the knife to vary the distance between the knife and the guiding means to vary the width of the strip being cut, and means for locking the guiding rod in position.

4. A tool for cutting a strip from a length of roofing material, said tool comprising a bar one end of which constitutes a handle, the opposite end of the bar being bent at an obtuse angle to the rest of the bar and having a slot there-through, a guide bar extending through the slot and rigidly secured to the first bar at substantially the center of the guide bar, said guide bar having a flat guiding surface, a calibrated guide rod extending through the slot and slidable therein and fitting snugly between the edge of the slot and the guiding surface of the guide bar whereby the guide bar holds the calibrated guide rod against skewing with respect to the handle, means for releasably securing the calibrated guide rod in position, a cutting knife secured to the end of the bent portion of the first mentioned bar, and means at one end of said calibrated guide rod for engaging the edge of a strip of material being cut, whereby the distance between the edge of the strip and the cutting knife is determined by the position of the calibrated guide rod in the slot.

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