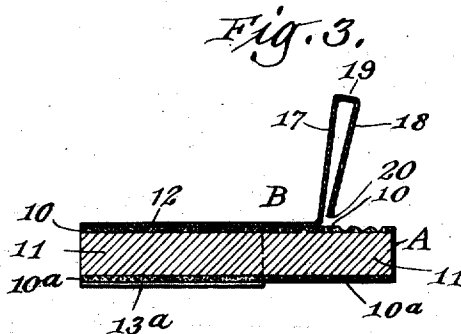
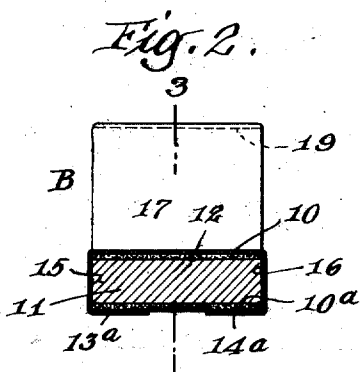
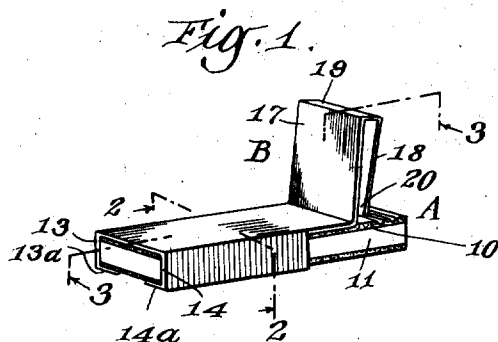


P. RILEY.
SHARPENER FOR SCISSORS.
APPLICATION FILED NOV. 29, 1910.

990,592.

Patented Apr. 25, 1911.



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SHARPENER FOR SCISSORS.

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Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed November 29, 1910. Serial No. 594,682.

To all whom it may concern:

Be it known that I, PETER RILEY, a citizen of the United States, and a resident of the city of Boston, county of Suffolk, State of Massachusetts, have invented new and useful Improvements in Sharpeners for Scissors, &c., of which the following is a specification.

This invention relates to sharpeners for scissors, shears, knives and the like and consists in certain peculiarities in the construction and arrangement of parts substantially as hereinafter described and particularly pointed out in the subjoined claims.

The most important object of the present invention is the provision of a simple and inexpensive means for sharpening the blades of shears, scissors, knives and like tools, which will eliminate the necessity of the exercise of any care or the possession of any special skill by the user in order to assure that the blade is held at a proper angle with relation to the abrading surface and is not ground beyond a proper degree of sharpness. This object, and others which will appear from the hereinafter description, are well accomplished by the construction illustrated in the accompanying figures of drawing to exemplify what I now consider to be the best form of the invention.

In the drawing: Figure 1 is a perspective view of a sharpener embodying my improvements. Fig. 2 is a cross section of the same on the line 2—2 of Fig. 1 and Fig. 3 is a longitudinal section of the same on the line 3—3 of Figs. 1 and 2.

Similar characters of reference denote corresponding parts in the several views.

The sharpening means of the present invention comprises a member A, hereinafter called the abrading member, over which the blade to be sharpened is reciprocated with its edge in contact with the abrasive surface 10 thereof, and a member B, hereinafter called the grinding member, which holds the blade in a predetermined position with relation to the abrading member, which position is such as to give the best results, as will hereinafter appear.

The member B herein shown is mounted upon and supported by the member A and the connection of these members with each other is such as to permit relative slidable movement between them. This movement

is to cause fresh abrasive surface to be presented to the cutting edge, and preferably is manually produced. The connection further is such as to permit the convenient renewal of the abrading member. Such a connection may desirably be made by forming the body of the holding and guiding members with a top wall 12 and clamping members 13, 14. The clamping members project from the longitudinal edges of the top wall and extend alongside the lateral sides or edges 15 and 16 of the member A and preferably have inturned ends or flanges 13^a 14^a which engage the bottom of the member A and prevent accidental separation of the members A and B. It is apparent however that other means than the inturned lips or flanges referred to may be employed to resist or prevent accidental separation of the members referred to, within the spirit of the invention and the scope of the appended claims. This body is shown as sustaining a blade-holding and guiding element, which is arranged at one end thereof and bears such relation to the blade to be sharpened that it will permit the latter to be reciprocated through it and will unfailingly hold the blade at an angle to the abrading surface corresponding to the bevel of the cutting edge of said blade, thus eliminating the necessity of the exercise of any care on the part of the operator to hold the blade at the inclination requisite to give the best results. To the end stated, the holding and guiding element referred to is disposed at an inclination corresponding to the bevel of the cutting edge of the blade and includes two walls, marked 17 and 18, respectively, which are spaced apart in such position as to receive the blade between them and to engage opposite sides of the same. These walls are connected with each other by a wall, marked 19, which is so arranged as to be adjacent to the back of the blade. The portion of the holder opposite to said wall 19 is open, as shown, in order to provide an unobstructed mouth 20 through which the cutting edge has contact with the abrasive surface 10 of the member A. The coöperative action of the walls 17 and 18 is such as to clamp the blade between them with sufficient firmness to overcome any tendency of the blade to turn, while permitting the blade to be reciprocated. Preferably, the wall 18 is yield-

able in order that blades of different thickness may be inserted between it and the wall 17.

It will be noted that the correlation of the parts of the member B is such that said member may be formed conveniently and inexpensively from sheet metal with all of its parts integral, and it is so shown herein, the several parts being formed by bending a suitable blank of sheet metal, on lines proper to produce them.

The abrasive member A is preferably of shape and size which correspond to those of the body or sustaining portion of the member B, and comprises a body 11, one or both of whose top and bottom sides are superficially covered with abrasive material, marked 10 and 10^a respectively, the body 11 being of non-abrasive material and of a character such that it will not mar, dull or sharpen an edge brought into contact therewith. It is preferred to use wood for this body. The particular abrasive material employed is not essential to the present invention. Its thickness, however, corresponding to the distance between the toe and heel of the bevel of the blade and its character is such that when the toe of the bevel has reached the proper degree of sharpness the portion of the grinding surface which has been acted upon in producing such sharpened edge is worn to the non-abrasive body and the sharpening action ceases. The device thus can be safely used by an inexperienced person without any danger of overgrinding, which overgrinding causes unnecessary wear of the blade and the production of a wire edge thereon. When the abrasive surface wears to the body in one place, relative adjustment of the members A and B is brought about, to bring a different portion of the abrasive surface into position for use for the next blade, and this is continued until one surface is completely gone, whereupon the member A may be separated from the member B and replaced in the latter with the other, unused, abrasive surface in position for use. When this is worn off, a new member A may be inserted. These abrading members may be inexpensively produced and add little to the cost of the

device, while they have the very important advantages of preventing overgrinding. When associated with the holder of the present invention, the abrading member co-operates with said holding member in unfailingly assuring the production of a proper angle quickly and easily, even in the hands of a most inexperienced user, the members and parts being so related to each other that no care whatever is required, it being only necessary for the user to insert the blade in the holder, with one side flatwise against the wall 17, and reciprocate said blade over the abrasive surface.

Having now described the invention what I believe to be new and desire to secure by Letters Patent, is:

1. A sharpening means for edge tools, comprising a member having a non-abrasive body and a layer of abrasive material thereon, and means for defining the position of the bevel of the tool with relation to said member, the abrasive surface being of such thickness and character that the portion acting on the tool will be worn to the non-abrasive body when the proper edge has been attained.

2. A sharpening means for edge tools, comprising a member having a non-abrasive body and a layer of abrasive material thereon, and a blade-guide-and-holder, having a sustaining portion mounted on said member and a blade-holding-and-guiding portion disposed at an inclination to said member and having elements which engage opposite sides of the blade and permit the latter to be reciprocated between them, the abrasive surface of said member having a thickness corresponding to the distance between the toe and heel of the bevel and being of a material which will be worn to the non-abrasive body when the proper edge has been attained by said tool.

In witness whereof I have hereunto set my hand at the city of Boston, county of Suffolk and State of Massachusetts this 26th day of November, 1910.

PETER RILEY.

In presence of—

CLAUDE KING,
CLARA H. BOYLE.