

LANDWELL REED KNIVES INC.

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KNIFE SHARPENING (DOUBLE HOLLOW GROUND)

Thank you for buying the Landwell Double Hollow Ground Reed Knife.

We hone all double hollow ground Landwells with the following sharpening technique. It works well for many people and we use it unless the customer requests otherwise. Doubtless other techniques work as well. We pass this one on in the hope that it may be of use to those not already familiar with it.

Recommended sharpening stones:

1. Carborundum Coarse for Procedure A.
2. Norton India Oilstone (fine) for Procedure B.

The Carborundum stone is used to remove steel from the knife edge quickly to prepare it for honing on the India stone, the stone which puts the cane-scraping edge on the knife.

Procedure A, rough honing, is a restorative procedure to be used only when you cannot obtain a satisfactory edge using Procedure B, fine honing. Your Landwell may not need Procedure A initially, so we suggest that you read Procedure A but start with Procedure B.

Please note:

To maintain a sharp knife, two separate hones are needed: a coarse and a fine. The Carborundum Coarse is a silicon carbide stone; the Norton Fine India is an aluminium oxide. We are not aware of any combination hone adequate for both rough and fine honing. We find the coarse side of a Norton India combination not abrasive enough for rough honing, and the fine side of a carborundum combination somewhat coarse for fine honing.

We are presently experimenting with diamond hones. They are not satisfactory for fine honing but may be of some use for rough honing.

We welcome comments and suggestions about our knives and sharpening method, and will gladly respond to any questions you might have.

PROCEDURE A: "ROUGH" HONING, CARBORUNDUM STONE

Step 1: "Raising" the burr.

With the edge facing north (see illustrations), rest the knife on the stone at a small angle, 5 to 12 degrees. (Our rough honing angle is approximately 5 degrees, perhaps slightly less.) With firm pressure, "rub" the knife edge into the stone using a circular motion to ensure that every

part of the edge, from the heel to the toe, comes into contact with the stone. Try to hold the angle constant. Illustration I.

Step 2: Using your finger tips, feel along the edge of the knife for a burr. It will be on the side of the knife that has not touched the stone. Do not move to Step 3 until you can feel the burr.

Step 3: "Throwing" the burr.

Turn the knife over (edge facing south) and place it flat* on the stone, not at an angle. With firm pressure, "rub" the knife on the stone with a circular motion. Make sure that every part of the edge comes into contact with the stone. Illustration II.

Step 4: Using your finger tips, feel along the edge of the knife for a burr. It will be on the side of the knife that has not touched the stone. In effect, you will have thrown the burr to the other side of the knife. Do not move to Procedure B until you can feel the burr along the knife edge. Continue Step 3 until the burr develops.

The knife is now ready to be honed using Procedure B.

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PROCEDURE B: "FINE" HONING, FINE INDIA STONE

Procedure B has three steps. Steps 1 and 2 are each single stroke motions, pulling (Step 1) and pushing (Step 2) the knife diagonally across the length of the stone, moving from the heel to the toe, as if you were slicing a layer off the sharpening stone.

Step 3 is a single stroke motion from the heel of the knife to the toe, straight across the width of the stone, west to east.

Step 1: "Setting" the burr.

With the edge facing south, rest the knife on the stone at the same angle used in Procedure A, Step 1, 5 to 12 degrees. (Our fine honing angle is 5 degrees, perhaps slightly less.)** With light, but firm pressure, pull or draw the knife towards you diagonally across the length of the stone, moving from the heel to the toe, one stroke only. Make sure every part of the knife edge comes into contact with the stone. Try to maintain a constant angle through the stroke. Illustration III.

*Many people keep the angle they used in Step 1; we recommend you keep it flat. This seems to prevent, or at least delay the problem of a "rounded" knife edge.

**Note that the fine honing angle must be the same as or perhaps slightly greater than the rough honing angle. If it is less, then the knife edge will not be in contact with the stone.

Step 2: "Moving" the burr.

Turn the knife over (edge facing north) and rest it on the stone, at the same angle used in the previous step. With light, but firm pressure, push the knife away from yourself diagonally across the length of the stone, moving from the heel to the toe, one stroke only. Again, make sure that every part of the knife edge comes into contact with the stone and that your angle is constant through the stroke. Illustration IV.

At this point, the knife should be fairly sharp with what is probably a usable scraping edge. Many people end the sharpening process here; i.e., they do not use Step 3. Done correctly, Step 3 refines the edge obtained in Step 2. Done incorrectly, it dulls it.

Step 3: "Shearing" the burr. (Optional)

Turn the knife over (edge facing south) and rest it on the stone at an angle considerably lower than that used in Step 2, perhaps one-quarter to one-half its size. For example, if the angle in Step 2 was eight degrees, your angle in Step 3 might be as small as two degrees. (Our shearing stroke is virtually flat on the stone.)

Using very light pressure (lighter than in Step 2), bring the knife straight across the width of the stone (west to east), moving from the heel to the toe, one stroke only. Illustration V.

Remember that both pressure and angle must be considerably less than those used in Step 2. Otherwise, the edge obtained in Step 2 will be dulled rather than refined. You will probably have to experiment with this shearing technique to find the right combination of pressure and angle.

You may want to repeat Steps 1 and 2 before moving to Step 3, i.e., 1,2,1,2,3, or even 1,2,1,2,1,2,3.

Always try to keep the knife angle constant through the honing stroke and to make sure that every part of the knife edge, from the heel to the toe, comes into contact with the stone.

When you can no longer obtain a satisfactory edge using Procedure B, go back to Procedure A (Carborundum stone), which will restore the knife's ability to take a fine scraping edge from Procedure B (India stone).

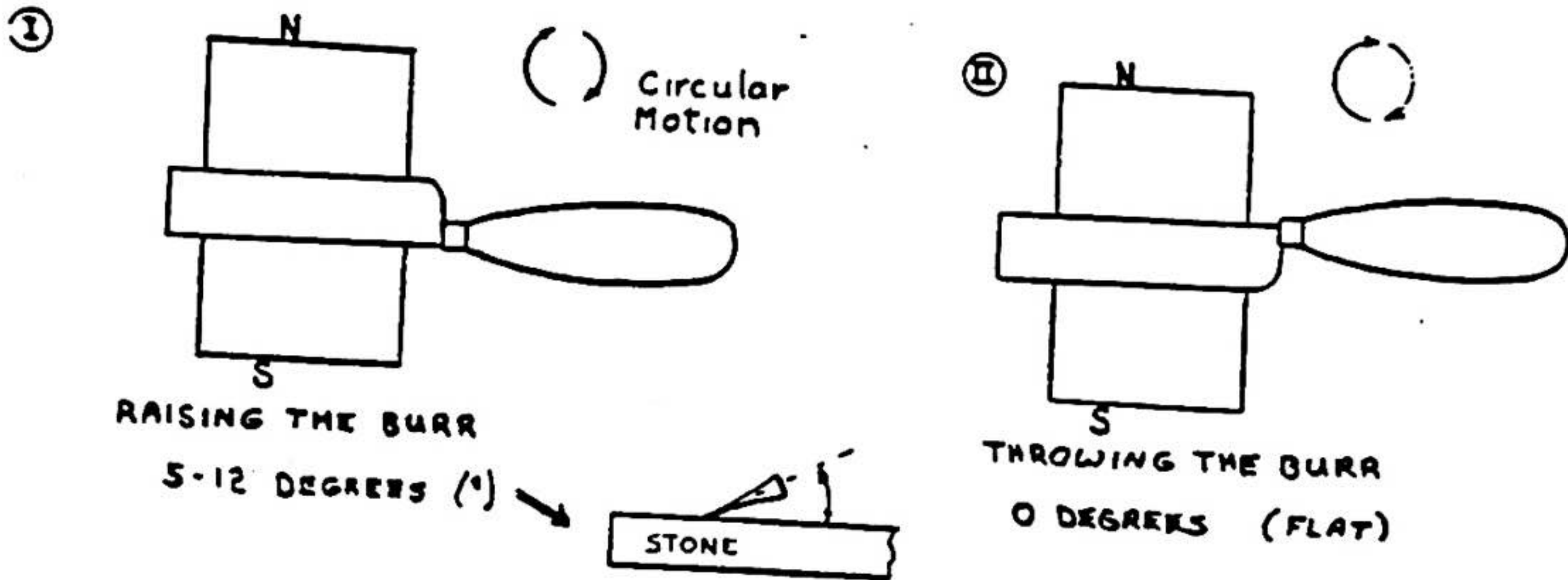
Finally, whatever sharpening technique you use, we recommend that you keep the honing angles as low as possible. Small angles seem to produce a "stronger" edge and lengthen the useful life of the knife.

Please note that these instructions work equally well for right and left-handed users, with the exception of Procedure B, Step 3, in which the stroke direction must be reversed by left-handers.

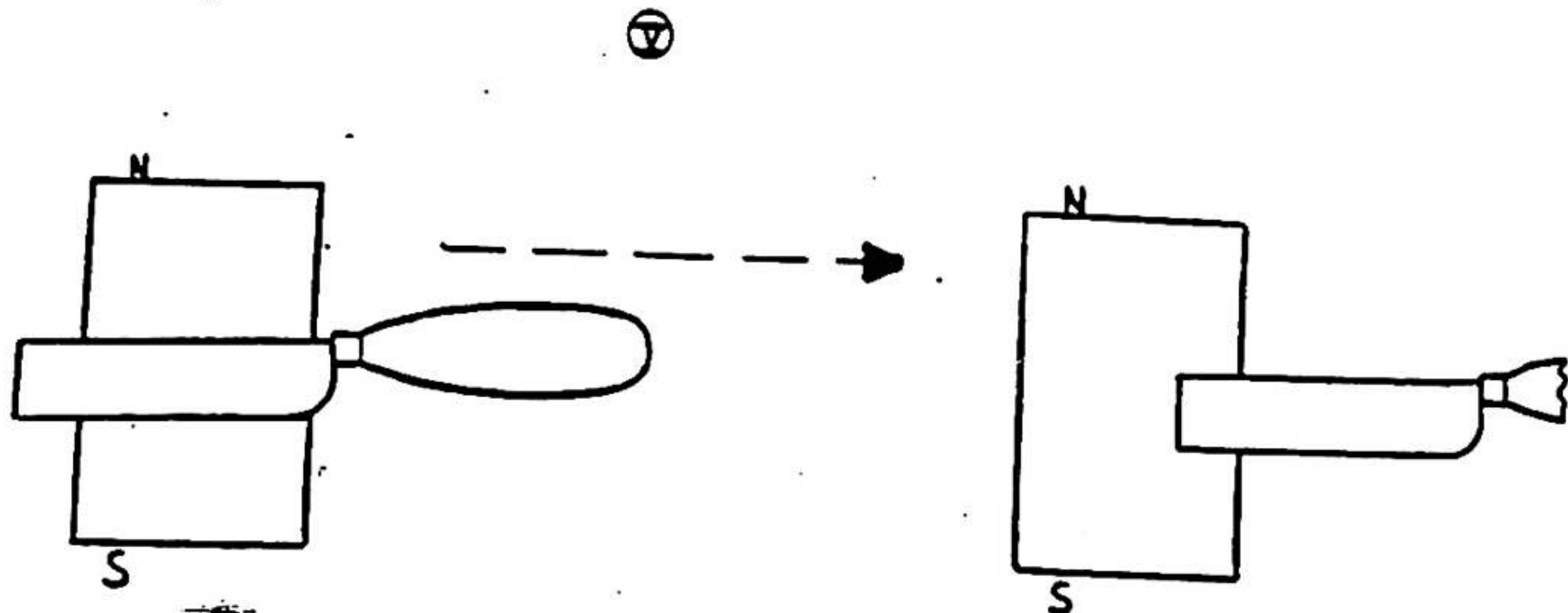
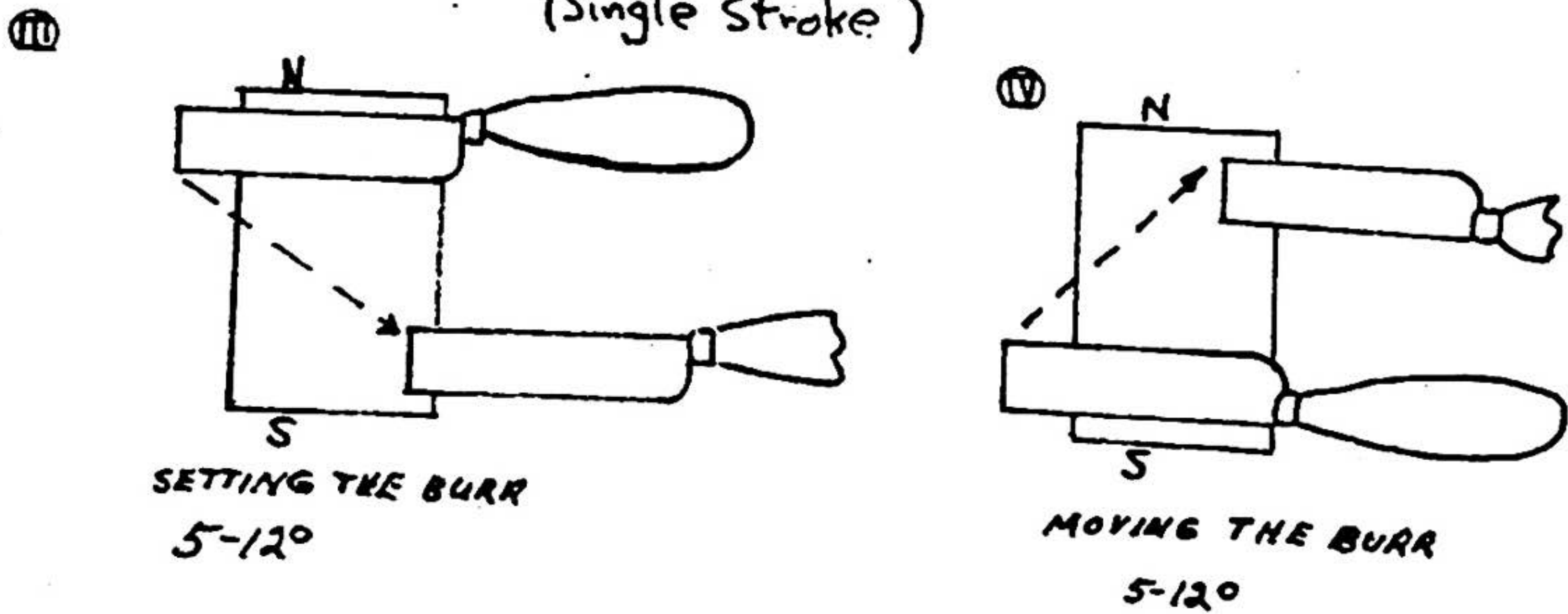
SHARPENING THE REED KNIFE



PROCEDURE A



PROCEDURE B (Single Stroke)



(Angle is $\frac{1}{4}$ to $\frac{1}{2}$ of that used in **III**)