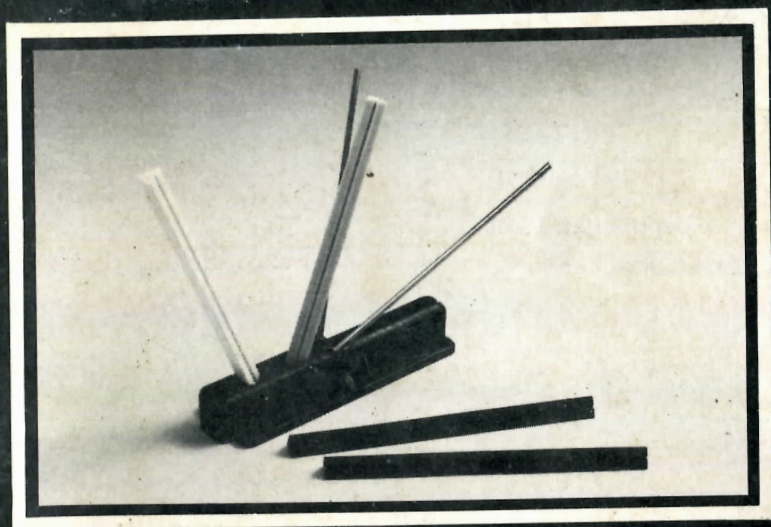


\$1.95

The Tri-**▲**ngle™

SHARPMAKER SHARPMAKER



**The Sharpening Tool
For All Knives, All Shears
And Most Cutting Tools**

This is a comprehensive manual illustrating how to sharpen these tools on the Tri-Angle Sharpmaker, a lasting resultant sharpening system.

Introduction

Dear Customer,

This product has been produced for people like you who have a need and can appreciate a well-engineered tool. This manual complements the tremendous amount of time that has gone into the development of this sharpening device, enabling you to achieve the highest level of performance from your Tri-Angle Sharpmaker.

So . . . please take 10 minutes to read it! Lock up the kids, hide in the garage or bring it along with you to your favorite "water closet." The time spent will be returned tenfold.

Lastly, we know you will enjoy your Sharpmaker and that in the many years of service it gives, you'll agree that a sharp tool is a safe tool.



Spyderco, Inc.

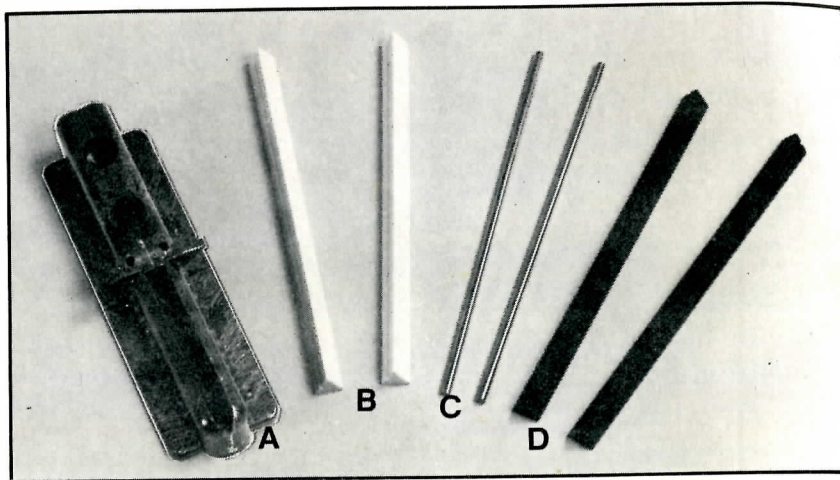
Made in U.S.A.

CAUTION: "SHARPENING A KNIFE IS AN INHERENTLY DANGEROUS ACTIVITY. This product should be used with the utmost care and caution."

Table of contents

Introduction.....	Inside cover
Table of contents.....	
Technical data	2
Safety first	3
Using different grit stones	4
Sharpening straight edge knives	5
Sharpening serrated or scalloped edge knives	6
Sharpening a fillet knife or a very sharp flexible knife	7
Sharpening an electric knife	7
Sharpening regular shears and scissors ...	9
Tin snips.....	10
Thinning shears	10
Sharpening pinking shears.....	11
Sharpening shears with radical bevel	12
Sharpening fish hooks	13
Pointed objects	13
Router bits—all types	14
Chisels and plane blades	15
Wire cutters, side cutters, cuticle nippers .	15
Spade bits, paddle bits, flat bits	16
Drill bits	16
Wood gauges	17
Nail clippers	17
Axes and hatchets.....	18
Screw drivers	19
Potato peelers.....	19
Sharpening straight edge razors.....	20
Cleaning instructions	22
Stone imperfections	22
Portable hand	23
Guarantee	24
Notes!	24

Technical data



- A. Base holder—ABS injected plastic.
- B. Alumina Ceramic triangles, fine grit, 2 per unit.
- C. Safety guards, brass, 2 per unit.
- D. Alumina Ceramic triangles, medium grit, 2 per unit.

The Sharpener and Its Working Features

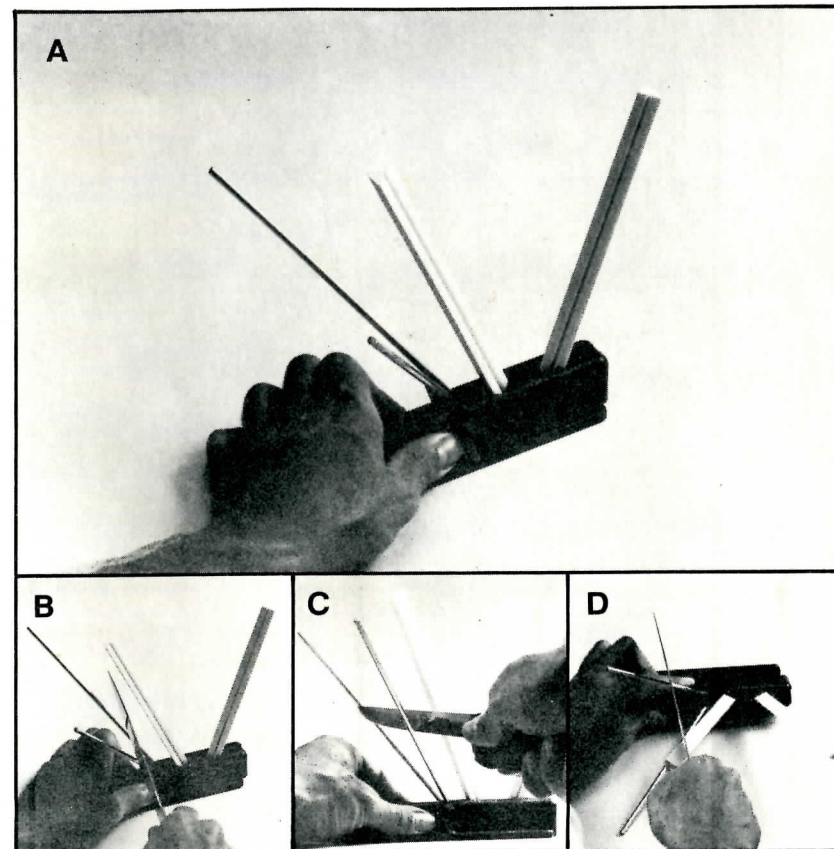
The Alumina Ceramic stones are very hard and will not wear out. They can be used to file any type of metal, including all types of stainless steel, tool steel, Stellite, Vasco wear, and even those tools made from, or tipped with tungsten carbide.

The "Tri-Angle" Sharpmaker meets or exceeds all U.S.D.A. and F.D.A. requirements for use in the medical and dental profession as well as the areas of food processing and preparation.

The Tri-Angle's properly engineered design and scientific construction will sharpen new knives sharper than their factory delivered edge. The sharpening action produces the proper "scratch pattern," creating a finely polished edge on both straight and serrated knives. Contact your nearest Tri-Angle representative for information on this and other honing and sharpening products. Remember, "A Sharp Tool is a Safe Tool."

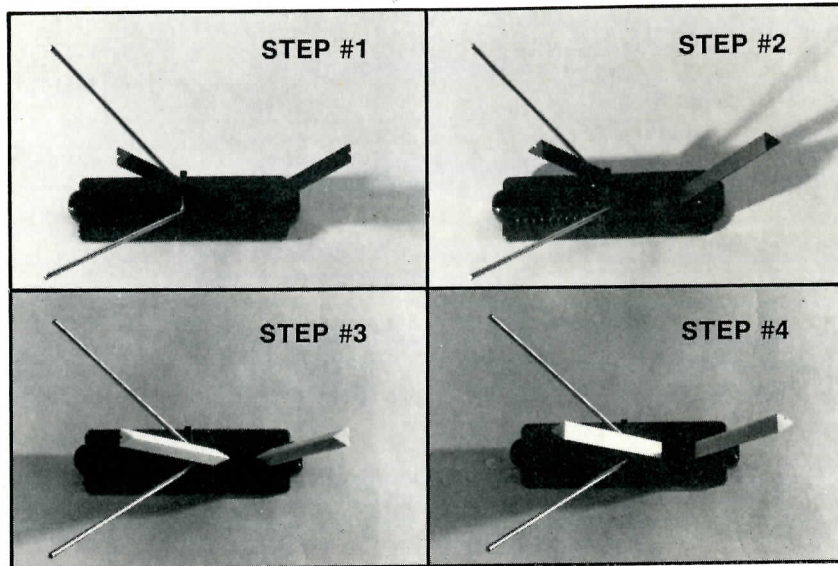
- Alumina Ceramic stones (grey or white) are 9.22 on hardness scale of 10 (next to diamond). 1/2" x 7"
- Base holder is injection molded from a high grade ABS Industrial plastic. Melting temperature approximately 400°F
- Safety Guards cut from 5/32 solid brass
- Weight per unit—10.3 Oz (291 Gr.)
- US Patent 4231194, Foreign patents pending

Safety first



1. Always hold Sharpmaker on flat surface.
2. Keep hand behind and below safety guards. NEVER USE TRIANGLE TO SHARPEN ANY KNIFE WITHOUT SAFETY GUARDS. See Photo A.
3. Safety guards are designed to stop knife should you carelessly slip off of stone or pull unit over towards you. See photos B, C, D.
4. Slow deliberate strokes are more effective than quick motions which may not get the whole blade.

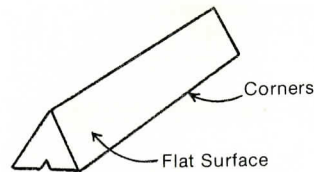
Using different grit stones



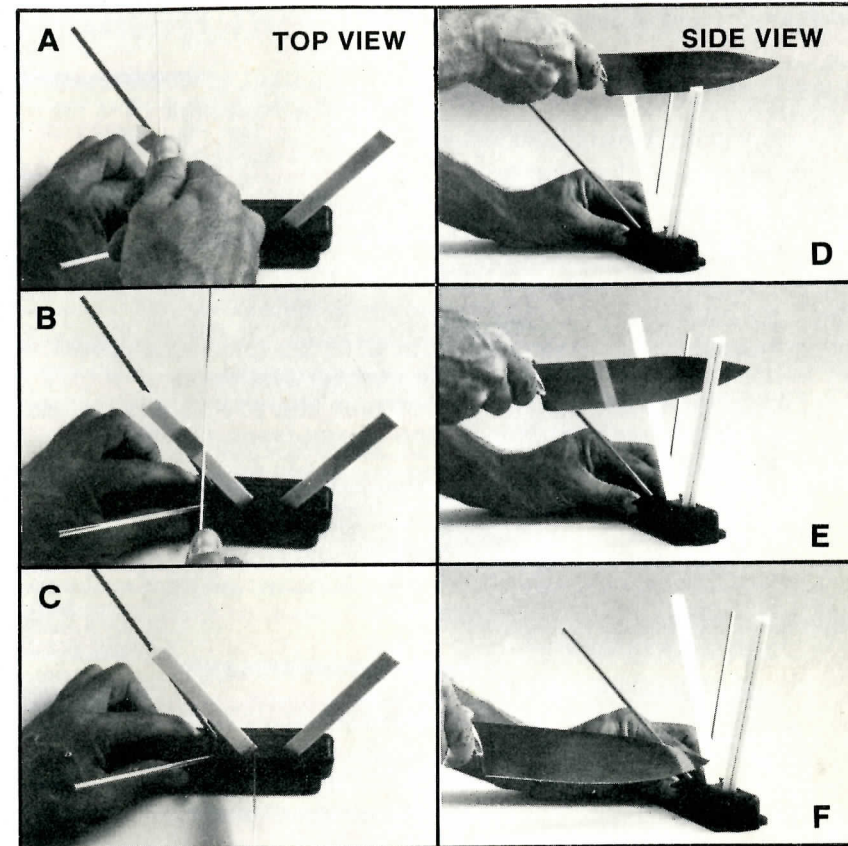
Four stone positioning steps for sharpening. (To be referred to repeatedly in booklet) (Arrows refer to working surfaces).

1. Grey stone—medium grit—used for faster metal removal.
2. White stone—fine grit used for final finish.
3. On both grey and white stones, the corners or edge of stones may be used as well, and cut faster than flat surface.

4. The corner of the grey stone cuts the fastest and can be used first to shape edge or set bevel. Step #1.
5. The flat surface of the grey stone is step #2. Produces utility edge.
6. The corner of the white stone is step #3. Produces very sharp edge.
7. The flat surface of the white stone is very fine, step #4. Produces a razor edge.



Sharpening straight edge knives

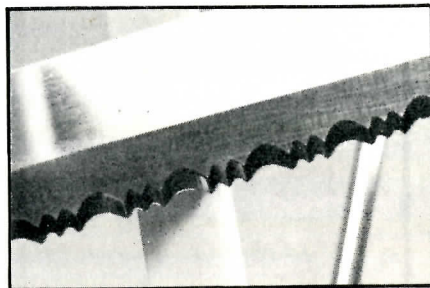


1. Always use both safety guards. Keep hand behind and below guards.
2. Press hard enough to remove metal (excess pressure does not serve).
3. Always keep knife blade straight up and down (so knife blade is perpendicular to base) (easiest grasp is with thumb on top of blade).
4. Always sharpen entire blade from heel to tip. Draw blade towards you as you "slice" down stone. See photos A,B,C & D,E,F.

5. When one area of stone is loaded with steel, to where it is no longer cutting metal, rotate stone in base to a fresh area. (See page 22 for cleaning instructions.)
6. Set stones in step #1 position first (corners of grey stones).
7. Sharpen blade by giving 20 strokes on each side, alternate strokes from right to left stones, a total of 40 sharpening strokes in step #1 stone position. Repeat same number of strokes with grey stones positioned as in step #2. Continue the sharpening process with white stones illustrated in step #3 and finish with step #4 to obtain the razor edge.
8. If knife has not reached desired sharpness, repeat process. A knife's first sharpening will require the greatest amount of sharpening strokes.

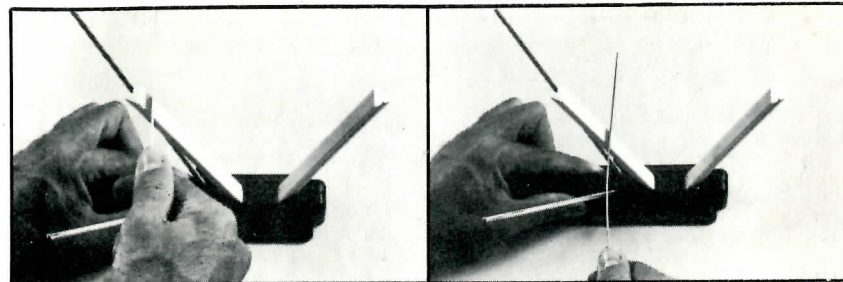
Sharpening serrated or scalloped edge knives

1. Done in the same manner as sharpening a straight edge knife but only use corners of stones (step #1 and step #3) in most cases step #1 will not be necessary and step #3 will be sufficient. The corners of stones will slide in and out of serrations.

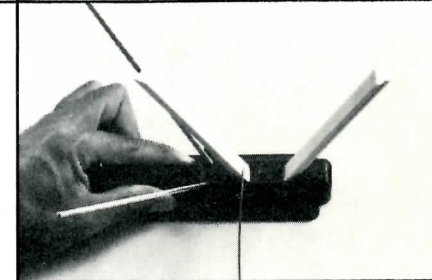


2. Sharpen on both sides even if original sharpening is only on one side. This will create a straighter cut when using the serrated knife.

Sharpening a fillet knife or a very sharp flexible knife

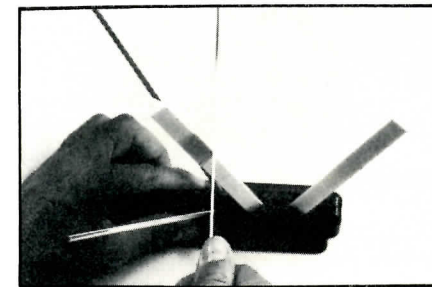


1. Sharpen in the same manner as rigid knives, but apply sufficient side pressure to sharpen cutting edge and maintain pressure the full length of blade to sharpen tip.

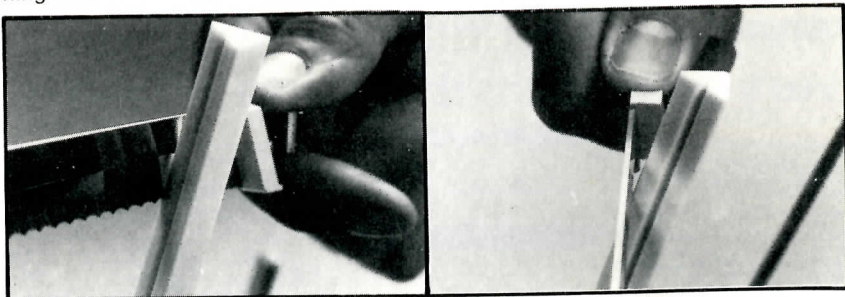


Sharpening an electric knife

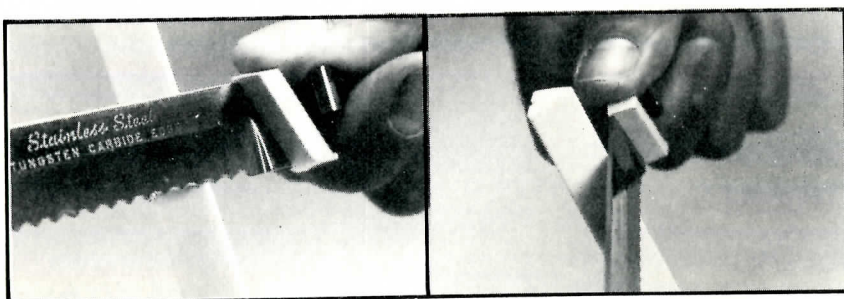
1. Use only corner of white stone (step #3)
2. Sharpen both blades separately.
3. Sharpen beveled side only holding blade straight up and down like regular knife.



4. DO NOT ALTERNATE FROM SIDE TO SIDE.

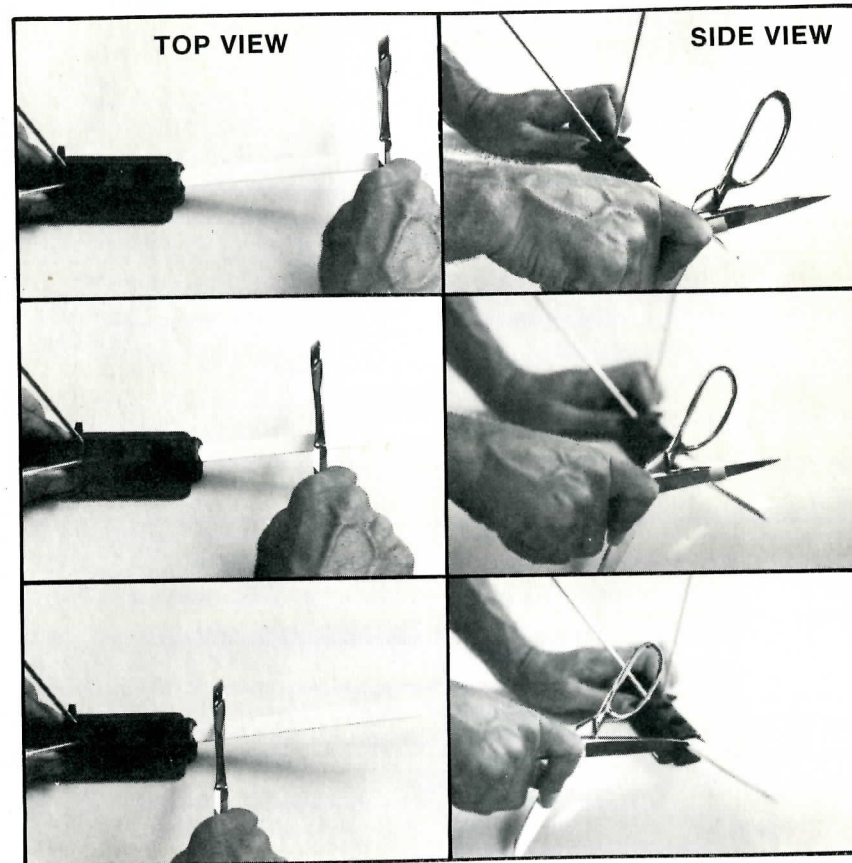


5. Sharpen left blade on left stone, right blade on right stone.
6. Apply 20 strokes to each blade.
7. Sharpening on one side only will create a burr on the opposite side. After sharpening beveled side, lay blade flat against stone on opposite side and stroke down 5 strokes to remove burr (step #3).



8. Repeat with other blade.

Sharpening regular shears and scissors



1. For sharpening shears, place one stone in the end hole of the base. The hole is keyed to use both corners and flats of stones. Working surface facing upwards.
2. Place Sharpmaker near edge of table or desk.
3. As with knives, utilize steps #1 thru #4 with approximately 20 strokes on each blade for each step.
4. Hold shear blade straight up and down.

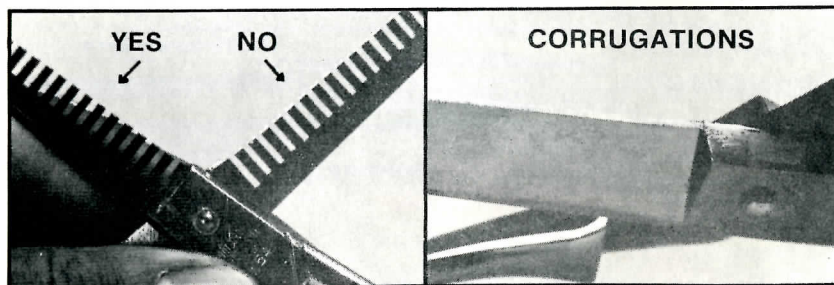
5. Pull towards you, making sure to sharpen heel to tip.
6. For lefthanded scissors, reverse procedure and sharpen with left hand.

Tin snips

1. Tin Snips are sharpened like regular shears.

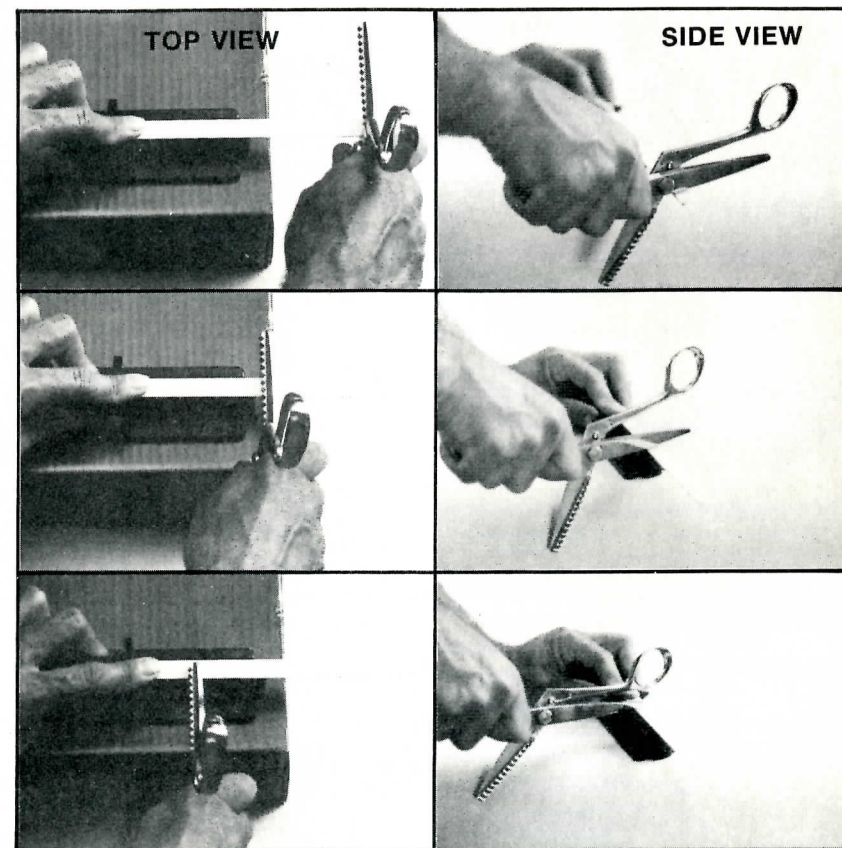


Thinning shears



1. For thinning shears, sharpen only the blade side of the shear. Do not sharpen the forked side.
2. Corrugations are cut into shear blade to keep material or hair from slipping. Sharpen corrugated side of blade on step #3 only. Use several strokes. After several sharpenings, the corrugations will be cut off. Those can be re-cut into the shear blade using a corrugation file, available from Nicholson File Company.

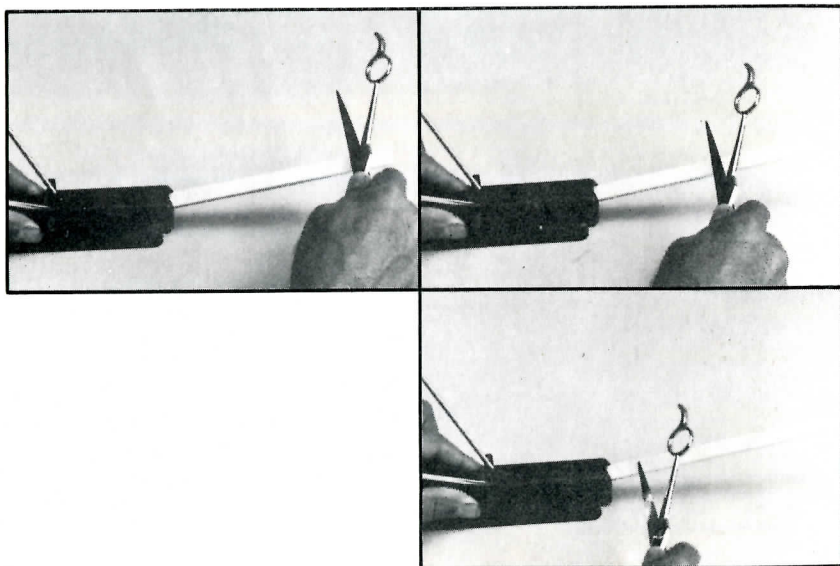
Sharpening pinking shears



1. Pinking shears are sharpened using the stones in the "flat" working position (step #2 and #4).
2. Hold pinking shear blade so flat ground section or bottom of blade is flat against flat surface of stone.
3. Pull towards you while cutting along full length of stone.
4. Be sure to sharpen entire blade from heel to tip.

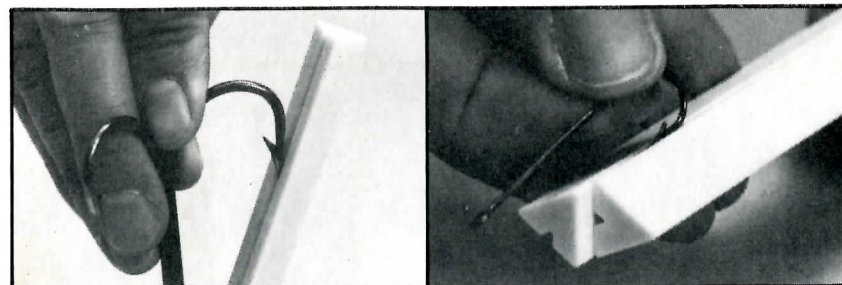
5. Never sharpen between teeth of pinking shear.
6. Pinking shears that are loose or bent should be straightened or tightened prior to sharpening.

Sharpening shears with radical bevel



1. Some shears used professionally for cutting hair or polyester will have a bevel that is radical by normal standards. These will be sharpened as regular shears. But instead of keeping the blade straight up and down, the shear blade must be laid over until the bevel is flat against the stone.

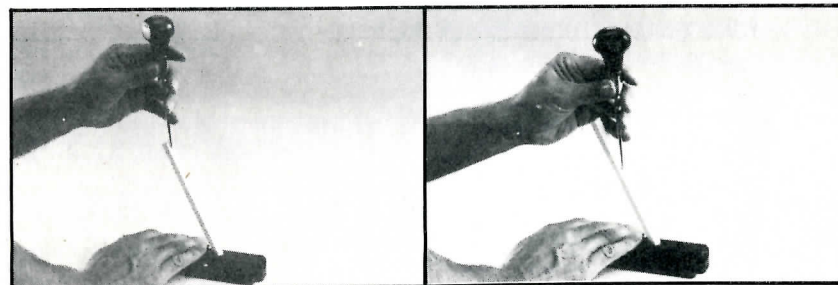
Sharpening fish hooks



Fish hooks are sharpened on the tip using two methods.

1. For larger hooks, rub point of hook up and down in groove while rocking hook from side to side.
2. For very small hooks, hold two stones adjacent and rub hook back and forth in groove between stones.

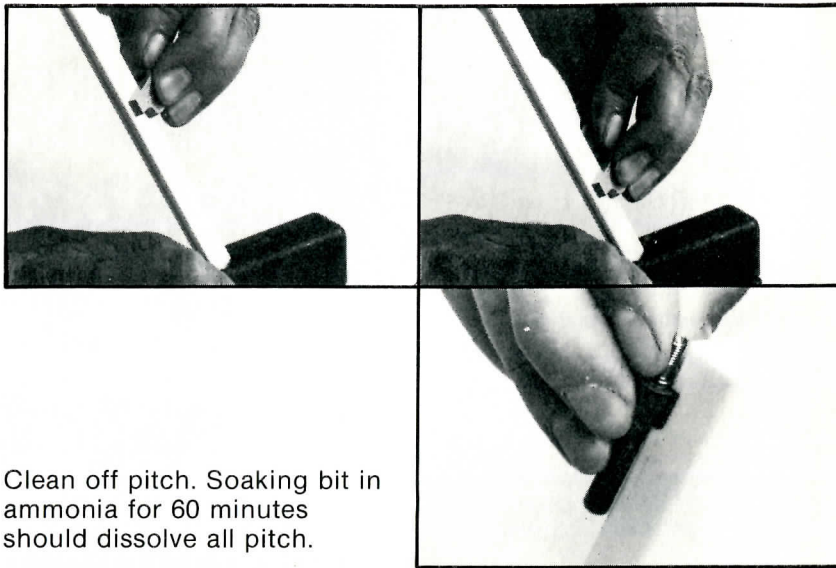
Pointed objects



Ice picks, awls, darts, needles.

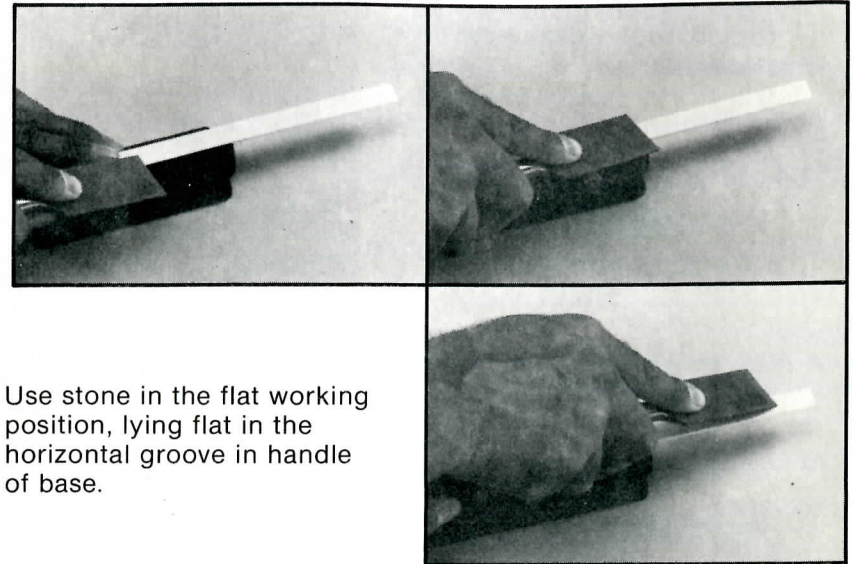
1. Put one stone in the position for knives, flat grooved side up.
2. Use this groove in the grey stone to shape the tip and the groove in the white stone to sharpen point.
3. Hold tool straight up and down and rotate tool in fingers while rubbing up and down.

Router bits—all types



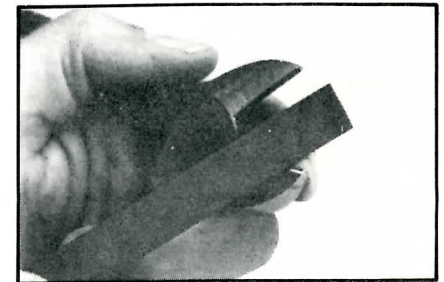
1. Clean off pitch. Soaking bit in ammonia for 60 minutes should dissolve all pitch.
2. Use one stone in the upright position.
3. Use the grey stones until edge feels sharp (steps #1 and 2). Then use white stone to finish (steps #2 and 4).
4. Lay inside of flute flat against flat surface of stone and rub up and down until sharp.
5. Never sharpen outside as it changes size and shape of the cut.
6. Should a burr develop, one or two strokes on outside bevel should remove burr.
7. Carbide bits take longer to sharpen than steel bits.

Chisels and plane blades



1. Use stone in the flat working position, lying flat in the horizontal groove in handle of base.
2. Place chisel on flat of stone with one corner on stone. Match bevel and stroke length of stone moving stone sideways until entire blade is edged.

Wire cutters, side cutters, cuticle nippers



1. Use single stone as file.
2. Use your finger as guide to maintain the bevel.
3. Use the grey stone for shaping, rub back and forth until edge feels sharp, then finish with white stone.

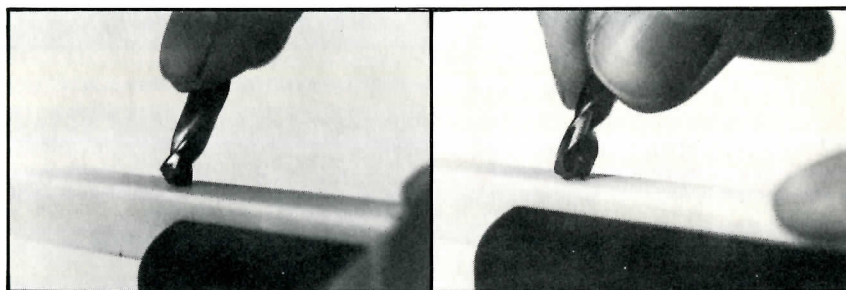
Spade bits, paddle bits, flat bits

Spade bits are easily sharpened by using single stone as a file.

1. Place bit securely in vise to eliminate movement.
2. Use finger as guide to maintain bevel.
3. Rub back and forth until sharp.

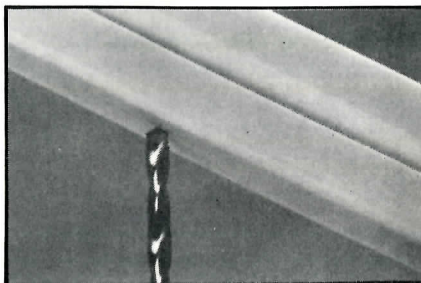


Drill bits

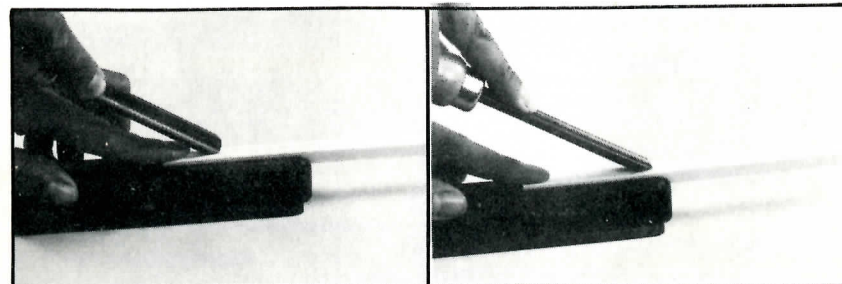


Drill bits are difficult to sharpen. Beginners are recommended to learn sharpening bits on a grinder before expecting professional results.

1. For those experienced, use stone in flat working position. Set your bit on the stone at the cutting bevel and stroke across the bevel, rolling out the relief with a twist of the wrist, alternate flutes.
2. For drills smaller than 1/16" (.062), place bit in a vise and using the stone as a file, cut the bevel and relief as one flat surface.

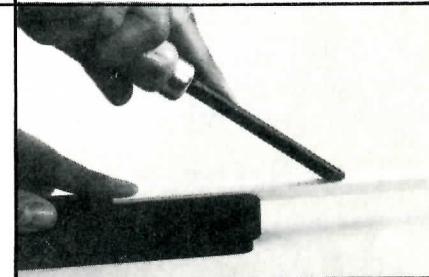


Wood gouges



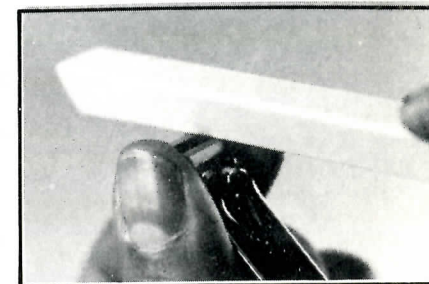
Wood gouges require a very sharp finish and it is recommended that you finish on the white stone.

1. For straight edges, sharpen as a chisel (see page 15), but sharpen both sides alternately.
2. For rounded gouges, place the stone in the flat working position with the **groove up**. Begin by setting the edge in the groove, at the proper bevel and rotate the edge from one side to the other while stroking the length of the groove in the stone.
3. Use the corner of the white stone to cut off any burr that might develop on the concaved side of the gouge. Two or three strokes should remove burr.

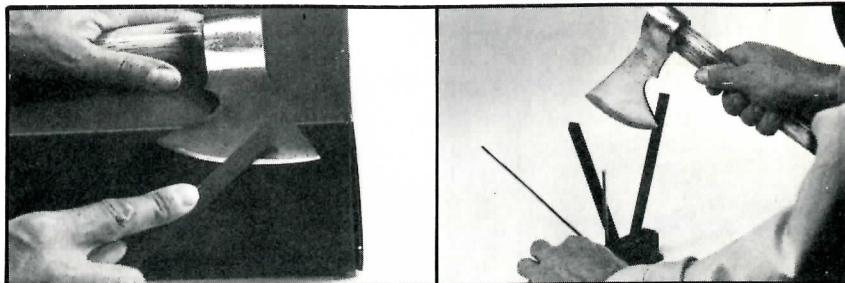


Nail clippers

1. Hold clippers with blades open.
2. Place thumb and forefinger on either side to keep stone from sliding off edge. Stroke across entire edge with white stone.



Axes and hatchets



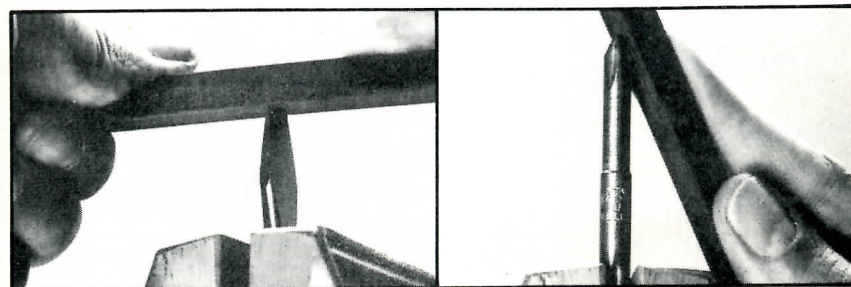
Axes and hatchets should be free of nicks. If edge is badly nicked, first grind edge even with belt sander.

1. Grey stone may be used as a file to bevel edge. Set hatchet securely on table and rub back and forth to set bevel.
2. Finish sharpening with Sharpmaker set in knife position using only the flat surfaces (steps #2 and 4). Start with heel of hatchet in center of flat stone.
3. Keep blade straight up and down.
4. Stroke down stone pulling towards you to sharpen entire blade. Alternate from side to side.
5. Use grey stone (step #2) until edge feels sharp.
6. Use white stone (step #4) until shaving sharp.

CAUTION: This should be done slowly with control. An axe is a large tool and attention must be given to a hatchet's ability to reach through the safety guards resulting in an injury.



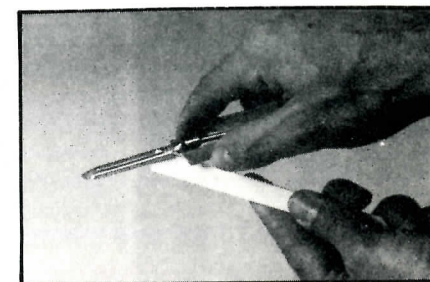
Screw drivers



Screwdrivers stop working effectively when they lose their squared-off edges.

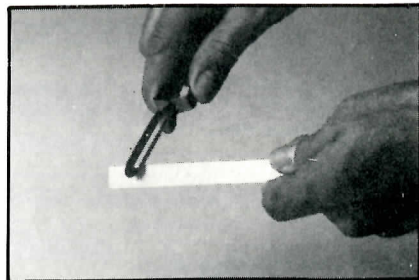
1. For straight screwdrivers, place in a vise to restrict movement. Use grey stone as a file to square off end and sides.
2. For phillips screwdrivers, place in vise also and use grey stone to straighten insides of grooves.

Potato peelers



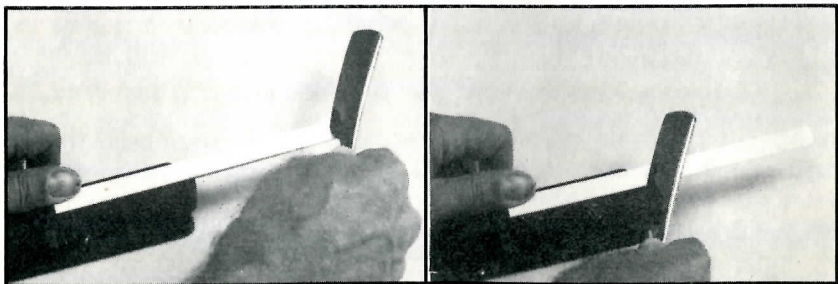
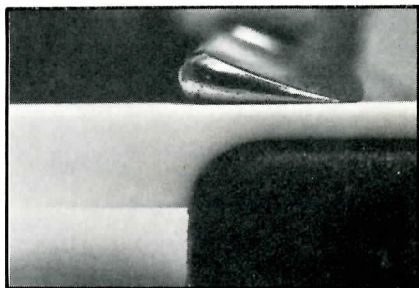
1. By using the corner of the stone, rub back and forth from the inside of peeler to de-burr and align cutting edges.

2. Lightly run corner of stone (step #3) from heel to tip like peeling a carrot.

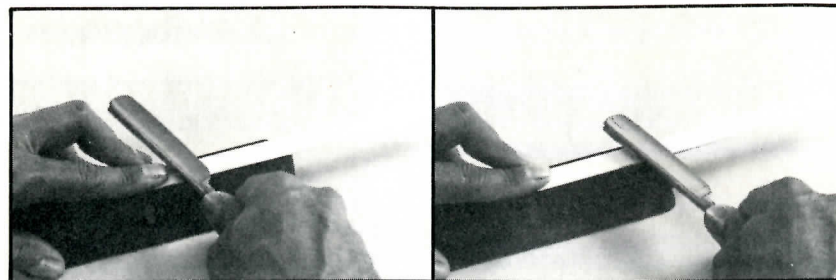
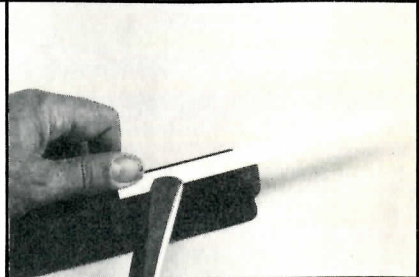


Sharpening straight edge razors

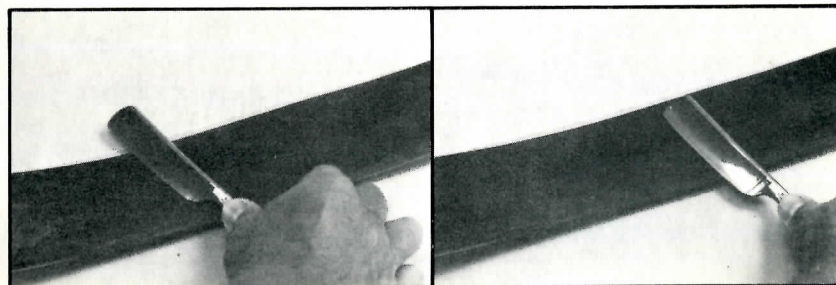
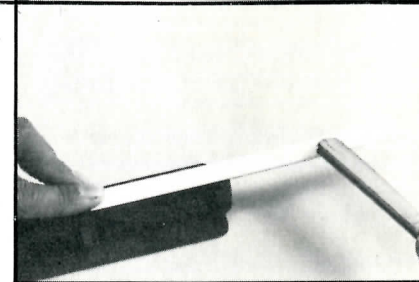
1. Place razors cutting edge and back edge, flat on white stone in flat working position.



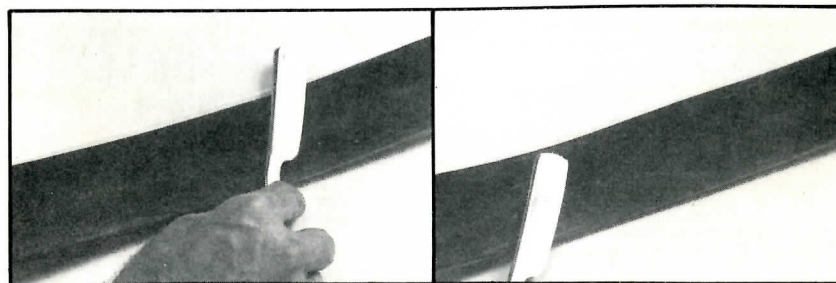
2. Stroke white stone from heel to toe of blade, alternating sides and lead with cutting edge of razor.



3. Maintain even pressure and continue until desired sharpness is produced.



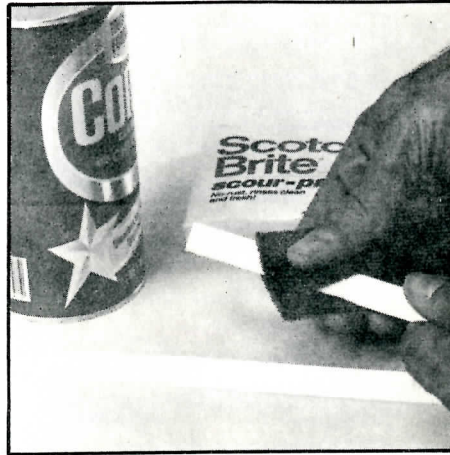
4. Polish razor on leather strop, trailing with the cutting edge.



Strop both sides of razor.

Cleaning instructions

1. The ceramic will not clean completely for the first few washings, do not let this cause concern.
2. When the abrasive areas are covered with steel, wash the steel from the ceramic with a household cleanser such as Ajax, Comet, etc. A non-metallic cleaning pad is helpful.

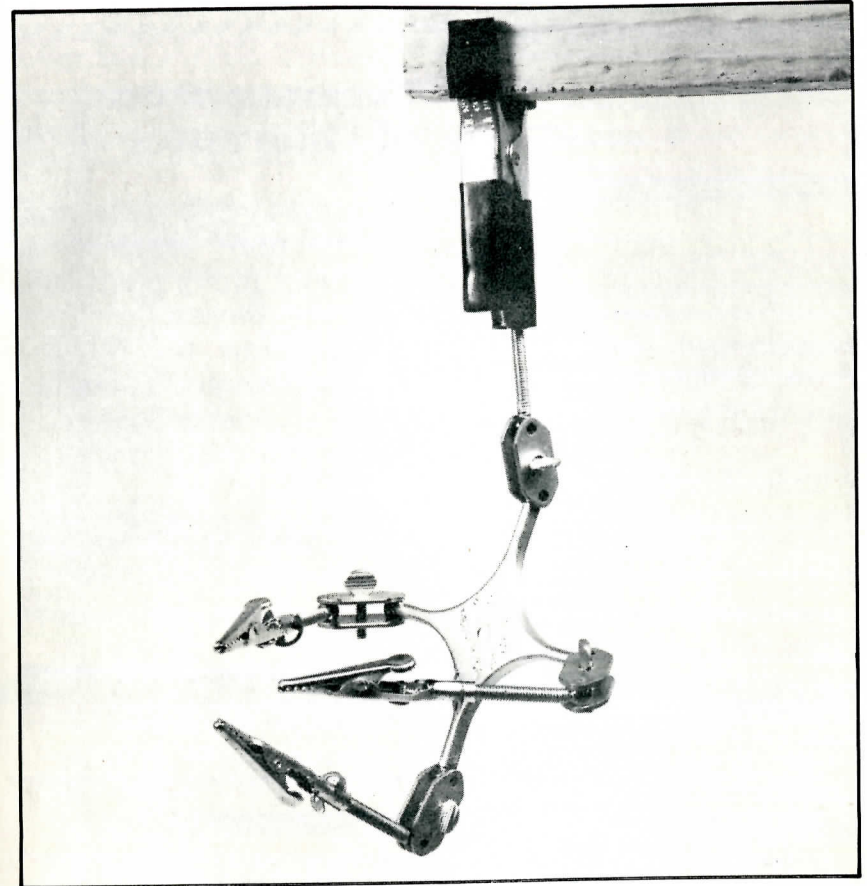


Stone imperfections

Occasionally imperfections occur on the surface of the ceramic. These imperfections can be filed off by using the other ceramic. Rub back and forth until imperfection is removed.

1. Over a period of sharpening the corners of the grey stones, thru excessive use, may show some wear. The efficiency of the corner edge will continue to perform as it is designed to.

Portable hand



Spyderco, over the years, has manufactured and patented many products. Our first being the Portable Hand, which clamps on a shelf, for example, and has four adjustable hands that move in all directions and hold light weight objects. Ideal for electronics and assembling parts or holding messages. The development of the product is where Spyderco derived its name. This handy tool is still available.

Guarantee

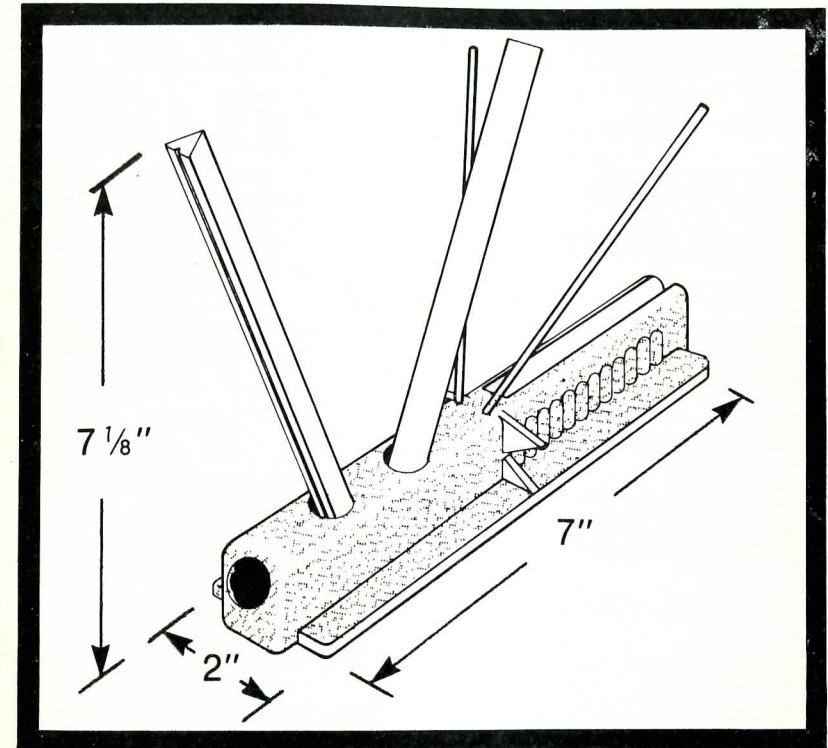
Certificate of Guarantee

This product is manufactured in the United States to the highest standards possible in both material and craftsmanship. Should this product prove defective in either material or craftsmanship, please return the defective part to the address below for repair or replacement (our option). The triangle is made of ceramic and is NOT guaranteed against breakage.

This guarantee is effective for five years.

Notes!

Advantages



- Uses no oil or water
- Sharpens and polishes at same time
- Little or no wear
- Pre-set angles for simple use
- Professional quality results
- Scrubs clean with household cleanser
- Produces proper "scratch pattern"

 **Spyderco, Inc.**