How to Sharpen

AND WHAT TO USE

Chase, Parker & Co.
Boston, Mass.
Telephone Main 6073

An Aid to Users of

PIKE SHARPENING STONES

PRICES OBSOLETE

Prices herein subject to change without notice.

How to Sharpen

AND WHAT TO USE

A Book for the Mechanic
the Farmer, the Handy Man
and the Housewife

Prices herein subject to change without notice.

Pike Manufacturing Co.
Pike, New Hampshire U. S. A.

THE STORY OF OILSTONES

IN Egypt a few years ago a party of excavators for the British Museum unearthed a cabinet maker's tool basket. Its date, as they determined later, was about 1450 B. C.

This ancient tool kit contained such modern-looking things as chisels with wooden handles, a saw, a drill-bow and spindle, a rasp, a plummet and an oilstone as well as a horn in which to carry oil for it.

Advanced as were these implements of 3400 years ago, the art of making tools and tool metals has been steadily improving ever since—this in the case of all implements save one, the mechanic's sharpening stone.

It is hardly more than a dozen years ago that Science offered even the slightest assistance to Nature in the matter of sharpening hand tools. And even yet, when it comes to some kinds of sharpening, nothing that Science has done can approach the work of some of the old-time Natural oilstones.

Before coming into the details of "How to Sharpen," it is decidedly worth while to make the acquaintance of these old aristocrats of the oilstone family as well as of those newer members of the circle called Artificial stones.

An understanding of just how these various stones affect the steel, and of the peculiarities of the stones themselves, will make the pages on "How to Sharpen" much clearer. And such an understanding is the only guide to the selection of a stone—a matter fully as important as knowing how to use one. The Pike Manufacturing Company is the only company whose line includes practically every kind of stone, Natural or Artificial. This fact relieves us from the manufacturer's natural temptation to lean toward his own product and enables us to discuss the various types of sharpening stones with entire impartiality.

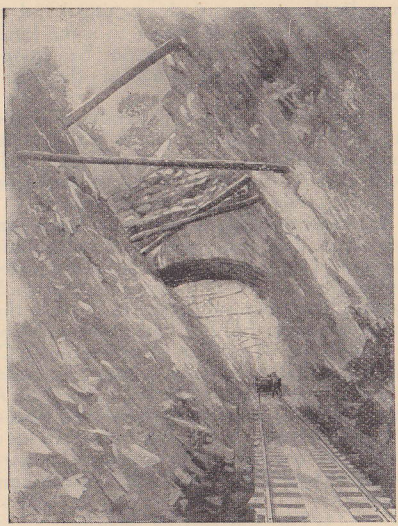
What Sharpening Means

It is not merely the friction between the stone and the steel that brings the latter down to an edge. Sharpening means *cutting.*

Every sharpening stone is a mass of minute crystals—infinitely sharp little cutting points, each of which is harder than steel.

The coarseness or fineness of these crystals, their hardness and their brittleness or toughness—these are the things which, in various combinations, mark the differences between the several kinds of sharpening stones, making one kind better for its own purposes than another.

You would not think of sharpening a razor on a scythe stone. The scythe stone and the razor hone are the two extremes. Between them lie the various stones used in shops, as well as on the farm and in the home.



Arkansas Quarry Scene

NATURAL AND ARTIFICIAL STONES

MODERN improvements in the hardening of tool steel brought with them new problems in sharpening. The recent advances which have resulted in the remarkably hard, sharp Artificial stones of to-day are the solution of these problems. Only in part, however, for there are still, as stated, a number of sharpening requirements for which the Natural stones are unequalled.

Apart from these few exceptional uses, the Artificial offer many advantages over the Natural stones.

Made in Electric Furnaces

By scientists, the production of these Artificial stones is regarded as a triumph of the first order. It means the making by man of rock crystals which are harder than anything in Nature except the pure diamond. The Titanic magnitude of the operation may be partly understood when it is said that these crystals require for their making a temperature of 6,000 to 7,000 degrees of heat, and that this becomes possible only by the use of great electric arc furnaces, the current for which can be economically supplied only by the vast power of Niagara Falls.

There are now two important types of Artificial oilstones on the market. They are known chemically as *Carbide of Silicon* and *Aluminum Oxide.*

Aluminum Oxide is a reproduction of the natural mineral Corundum. When sold in the shape of oilstones, this artificial electric furnace corundum is known as Pike India.

Advantages of Artificial Stones

One of the chief advantages which *Pike India* has over Natural stones is the absolute uniformity which it is possible to impart to the coarseness or fineness of the crystals. Since, as stated, the degree of coarseness is one of the prime considerations in choosing a stone, it becomes a matter of real importance to be able

to *control* this, and thus to secure a perfect stone with either coarse, medium or fine grit.

A second advantage, fully as great and possible only to Artificial stones, is the unvarying hardness and texture throughout the stone due to the scientific "bonding" together of the crystals. This makes it possible to absolutely avoid all of the soft spots, hard spots, crevices, pebbles and other defects which sometimes come to light in even the best Natural stones.

This fact also enables the user of a *Pike India* stone to buy a new stone of the same grit, with the certainty that it will be precisely what he wants, a duplicate of his former stone.

These Pike Artificial stones are superior to other Artificial stones, first, in the fact that their chemical composition *never varies* in the slightest; and, second, in the fact that in no others have the important problems of perfect "bonding" been so successfully worked out.

Superiority of India Stones

The peculiarity of Carbide of Silicon crystals is that they cut extremely fast—but these crystals are very brittle. Hence, while Carbide of Silicon stones are useful for soft steel and for other uses wherein it is desirable to have a rapid breaking down of the crystals, so as to constantly present new cutting points, these stones are not so valuable for regular shop use since they wear down too rapidly to satisfactorily hold their shape.

Aluminum Oxide crystals, on the other hand, from which Pike India is made, are so extremely *tough* that, while they do not lose in fast-cutting quality, they stand up under even the hardest service.

Hence, *Pike India* stones hold their shape almost indefinitely. There is no steel too hard for them to sharpen quickly, nor hard enough to cause them to groove or wear down unevenly if properly used.

Being made in three grits—coarse, medium, and fine—there is no ordinary class of sharpening of which they cannot take excellent care.

It is this unique combination of *toughness* with extreme *hardness*—this *fast-cutting* quality coupled with the ability to always *hold its shape* —that makes *Pike India* the most widely useful sharpening stone known.

This is why in the great machine shops, one after another, *Pike India* displaces all other sharpening stones as fast as it is introduced. This is why carpenters, wood-workers and other mechanics prefer it, and why we prefer to recommend it for every farm and household use.

Another exclusive feature of *Pike India Oilstones* is that they are *oil-filled*, and by a patented process which gives them *remarkable freedom from glazing.* This makes them ready for use with only a slight application of oil, and avoids the necessity of soaking them for days in oil.

The Chief Natural Stones

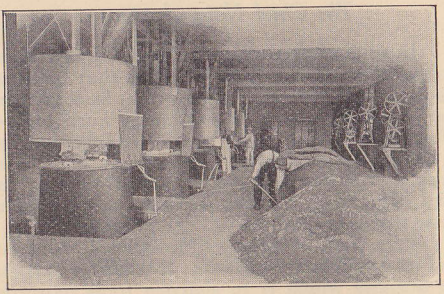
In spite of these superiorities of the Artificial stones, there is one Natural stone that holds its place as firmly as ever. This is that famous stone known to every user of extremely keen tools—"Arkansas." For many years the only quarries in the world extensively producing a high, even quality of Arkansas have been controlled by the Pike Mfg. Co. For this reason the choicest of these stones are known as *Pike Arkansas.*

Pike Hard Arkansas—No other stone, Natural or Artificial, approaches this for its particular purpose which is to sharpen tools requiring the very finest edge—such as are used by surgeons, engravers, dentists, wood and ivory carvers, and harness makers. It is sixteen times harder than marble and has a finer grit than any other oilstone, hence imparts the smoothest edge. Owing to the very limited supply of good Arkansas rock, and to the great difficulty in quarrying and manufacturing (about 90% being waste) it is necessarily very high-priced.

Pike Soft Arkansas is more porous than the Hard, and a little coarser, hence does not impart as fine an edge.

Pike Washita—Before the advent of Artificial stones, Washita oilstones were the favorite variety with carpenters and in wood-working shops. Although they are slow cutting stones, they will always be popular, due to their low price and to the fact that they give a long-lasting edge. *Pike Washita* comes in several grades, "Lily White" and "Rosy Red" being the best selections. The "Extra" Washita is a hard, fine selection especially suited to cutlers' use. The two other grades are styled "No. 1" and "No. 2."

Other Pike Stones—Among other Natural stones in the Pike line are the *Queer Creek, Chocolate, Turkey, Hindostan* and *Sandstone.* These stones are very inexpensive, and find their chief demand among those whose tools do not require a particularly careful edge.



Alundum Furnaces at Niagara Falls

From the product of these electrical furnaces the famous Pike India Oilstones are made

HOW TO SELECT A STONE

THE first thing, of course, to consider is the purposes for which the stone is to be used—whether a fast-cutting stone will be more useful to you than a slow-cutting stone that gives a finer edge.

This question answers itself as soon as you know, first, that the coarser grit a stone has the faster it cuts and, second, that *cutting edges* are classed in three groups—coarse, medium, and fine.

This does not mean that a coarse edge is not a sharp edge. The ideal edge for your very best carving knife, for instance, is a "coarse" edge—best because such an edge will do this work *perfectly*, and because to take extra time to get a finer edge on a slower-cutting stone would mean just so much time put in needlessly.

For Coarse-Edged Tools

Practically all of the tools in the coarse-edged group are *knives*. One of the reasons why these do not require a fine edge is the fact that knives are always used with a diagonal, or a sawlike motion. This adds to the cutting efficiency, and at the same time the slight coarseness of edge, in its turn, adds to the sawlike effect, again making the cutting easier. These tools include canvas-cutters' knives, carpet knives, carving knives, bread knives, paring knives and kitchen, household and farm knives of all kinds, including scythes and sickles, but *not* including *tools*. Some of these knives require a finer edge than others; but all can be given the best edge for their work on a coarse stone.

For Medium-Edged Tools

Medium-edged tools require more smoothness than a coarse edge affords, but yet do not need extreme fineness. Such are the tools used by most mechanics—more particularly the broad,

bevel-edged tools, like chisels, planes, draw knives and others used by carpenters and wood-workers.

The logical inference would be that to secure a medium edge one should use a stone of medium grit. This is not entirely correct. The heavy sale of medium-grit stones is due chiefly to the natural desire of the average mechanic to secure both fast-cutting and a fine enough edge from one stone. Except for special uses, the more satisfactory way is to use a *coarse* stone for rapidly cutting the edge down until it is ready to finish, and then to finish on a *fine* stone to whatever degree of fineness is desired. For this reason, a *Combination Stone*, which unites a coarse stone and a fine stone, is usually more useful than a medium stone. Combination stones are becoming more and more popular among mechanics as well as in homes and on the farm.

For Fine-Edged Tools

The tools and instruments in this group are, without exception, used for highly specialized purposes. They never find a place in the home or on the farm. They are used in the professions, notably by the surgeon and the dentist, also by the scientist in preparing specimens for the microscope. They are also used by the metal engraver, by the furrier and by most workers in leather, such as harness-makers and shoemakers. Such edges when quite dull are usually brought down to comparative sharpness on a fine-grit stone, such as *Pike India*, but the finishing touches are always given on an Arkansas stone.

Special Shapes and Sizes

In many trades peculiarly shaped tools make it necessary to use sharpening stones having special shapes. Many of these shapes are illustrated on pages 26 and 27.

HOW TO SHARPEN

ONE rule that has very wide application in using cutting tools is to

Sharpen Against the Edge

With two exceptions, all kinds of sharpening (both on grinders and oilstones) are performed with the edge of the tool working *against* the stone. The exceptions are: (1) when sharpening on leather, as with a razor strop; (2) when the tool itself is held still while the whetstone or oilstone is moved to do the sharpening—as in sharpening a scythe or sickle with a whetstone or in sharpening the inside of a gouge or other concave edge with an oilstone slip. The reason for sharpening against the edge is that this results in less "wire edge."

Broadly speaking, there are only two ways of sharpening tools or knives:

1. By means of a grinding wheel, as in the old-fashioned grindstone or the more modern tool grinder.
2. By rubbing or whetting the tool on some one of the many shapes and styles of oilstones, hones or whetstones.

There is no type of hand-tool for which you will not find either a Pike tool grinder or a Pike sharpening stone that is perfectly adapted to give you best results. Let us discuss first the reasons for

Sharpening on Grinding Wheels

Grinding wheels have two enormous advantages: First, they cut steel fast; second, they give the tool a *concave* or hollow ground bevel. This does not mean, however, that grinding wheels can take the place of sharpening stones, the use of which is explained further on.

To-day the grindstone is being crowded out by the tool grinder, one type of which is shown on page 44.

The reason is that even a poor tool grinder cuts steel from fifteen to twenty-five times faster than a grindstone.

Now about bevels: Look at the illustrations. The dotted line represents the flat surface of an oilstone or a hone. Figure One shows a cross section of a hollow ground razor. Properly, all hand tools and knives must be sharpened on this same "Hollow Ground" principle to do their best work. It is hard to see this in a knife, but easy to see it in any tool with a broad bevel, such as a chisel or draw-knife.

Figure 1

Figure Two is exaggerated a little to show how exactly like the razor is the *correctly* ground bevel of a chisel—both are *concave*. This concavity comes from the curve of the grinding wheel.

Figure 2

Figure Three shows an *incorrectly* ground chisel. The bevel is *straight* instead of concave. This is caused by not holding the tool *in one unchanging position* on the grinding wheel.

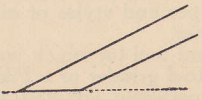


Figure 3

One object of the concavity is that it makes a *thinner* shaped wedge, hence enters wood, etc., easier than does the straight bevel.

Another object is that this hollow ground bevel will last much longer than will a bevel like that shown in Figure Three. Here is the reason for this: Figure Four and Figure Five show the hollow ground chisel and the straight ground chisel after they have been sharpened several times on the oilstone.

Note that the hollow ground chisel (Fig. 4) is still concave. It will not go to the grinder for some time. But the other (Fig. 5) is now *convex*—it works hard and slow. It should go to the grinder right away. It needs grinding much *oftener* than the chisel in Fig 4.

The same thing is true in all other tools—even in butcher and carving knives. The *properly*

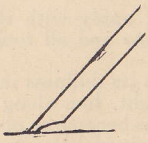


Figure 4

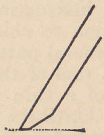


Figure 5

ground tool will cut better and need less frequent sharpening.

The Pike Bevel Guide

Until lately it has been impossible for the ordinary tool user to get a hollow ground bevel without having the tool ground by an expert. The reason is that if the tool slips up and down on the wheel *even a little bit*, the bevel will be *straight* or *convex* instead of hollow ground.

The recently perfected Pike Bevel Guide (patented) solves this problem. This simple device makes it easy for even a beginner to get as perfect a bevel as an expert. It is fully explained on page 45.

The Use of Sharpening Stones

Grinders give the correct *bevel*, but it takes the *flat* surface of an oilstone or hone to put on the finishing touches of a keen, lasting edge.

Many people lay a blade on an oilstone and proceed to sharpen it by a *circular* or *rotary* movement. With a pocket knife or other short blade, this will put on an edge in time. But straight strokes sharpen more quickly. Moreover, in the case of chisel-like tools this rotary motion constantly changes the angle at which the tool is held and prevents the edge from being true.

Sharpening Chisel-like Tools

By far the greater number of the cutting tools in common use are of the chisel type.

These instructions, therefore, apply with slight variation to chisels, plane-irons and all tools of this general pattern.

A tool of this type shows its dullness in the form of a thin white, or bright, line along the edge. Until the bevel-edge has become so obtuse as to need grinding (as explained before), this dullness is properly removed on the oilstone. The test of sharpness is the disappearance of the thin bright line.

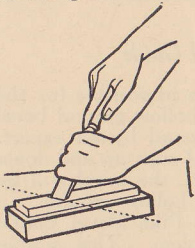


Fig. 6
Sharpening a Chisel

First see that the oilstone lies perfectly level to insure a true edge. Apply a few drops of oil to the stone and grasp the tool as shown in the illustrations, Figs. 6 and 7.

Note that there is no sidewise turn in the right wrist. Any twisted or turned position in this wrist is sure to give a certain amount of rolling or twist to the tool, thus impairing a true sharpening angle. Swing the right arm from the shoulder, bending it only at the elbow and holding the wrist rigid. Place the edge at an oblique angle across the face of the stone, as shown by the dotted lines, and rub backward and forward, bearing down with both hands.

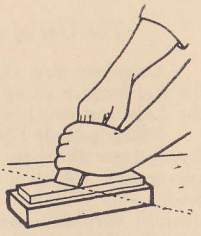


Fig. 7 Sharpening a plane-iron

If the bevel has been recently ground, hold the hands low to make the oilstone bevel correspond with the grinding bevel. With each sharpening it is necessary to hold the hands a trifle higher until, finally, the oilstone bevel becomes too obtuse, when the tool must again go to the grinder. In rubbing over the stone, move the hands *hori-*

zontally—parallel with the stone—instead of giving them a dipping, or scooping motion, as this latter tends to round the edge of tool and make the stone hollow out. For the same reason, it is important to use, as much as possible, the entire face of the stone, rubbing the tool over the entire length and occasionally turning the stone end for end.

When, after wiping the tool clean, you find the thin line of dullness has entirely gone, turn the tool over, *keeping it* PERFECTLY FLAT on the stone, and with one or two light, sidewise strokes remove any burr or wire edge.

The bevel angle on a chisel or gouge varies according to whether the tool is to be used regularly on hard or soft wood. A long, acute angle does not afford as much strength as does a more obtuse one. Hence, men who work in hard woods use tools that would seem to workers in soft woods to have a rather blunt bevel.

The bevel on a framing or mortising chisel must, of course, be more obtuse than that on a paring, or "firmer," chisel for the reason that in the latter there is not as much need for strength.

Curved Edges on Plane-Irons

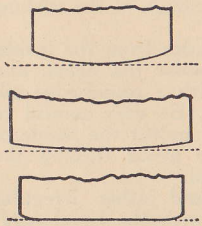


Fig. 8 Curved edges on plane-irons

To avoid leaving marks of the plane on the wood, the plane-iron should be ground to fit the tool in which it is used. (See Fig. 8.) For a single-iron jack-plane the edge should be rounded; for ordinary jack-planes, slightly rounded and for smoothing, panel and trying planes, straight except with a slight turning up of the corners. On all other planes, the edge is entirely straight.

Sharpening a Draw-Knife

Place the tool, bevel uppermost, with one handle flat on the bench and the other projecting over the edge so that you can grasp it firmly in the left hand. With the oilstone in the right hand, run it over the bevel, back and forth in an end-to-end direction, as in this way it is more easy to steady the stone and hold it true to the proper angle.

Gouges and Irregular Edges

For good work, the bevel on a gouge must follow the curve of the tool. For this reason, it is necessary to give the gouge a rocking motion from side to side as it passes back and forth over the stone. (See Fig. 9.)

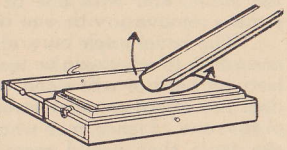


Fig. 9
Turn the bevel while sharpening as indicated by arrows

The same is true in grinding. Hold the length of the gouge, not parallel with the face of the wheel, but at right angles so that the bevel is ground sidewise and rock the entire surface of the bevel back and forth on the face of the wheel. In Fig. 10 A shows the result of good, accurate sharpening, while B indicates the irregular bevel-angle caused by attempting to sharpen a gouge without enough of the rocking movement.

To take off the wire edge from the inside, hold the gouge firmly against the bench and gently rub with a round-edge oilstone "slip." Be very careful to hold this flat against the inside of the groove to avoid turning the edge of the tool.

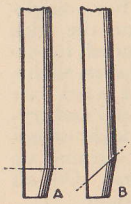


Fig. 10

Gouges and other irregular shaped tools with the bevel *inside* are likewise sharpened by holding them firmly against the bench while an oilstone "slip" of the right shape is rubbed against the bevel.

The two previous paragraphs explain why it is desirable to have several slips of different shapes and sizes.

How to Sharpen Knives

As stated, knives are like the chisel type of tools in that they cut better if sharpened so as to retain the wedge-form. The wedge-like angle, however, is not the main bevel extending from the back of the blade down to the edge. If it were, the whole blade would have to be held flat on the grinder wheel and this would soon grind the blade down to such thinness as to rob it of rigidity and strength. The wedge-like angle, or cutting bevel, extends back from the edge only a very short distance—rarely more than an eighth of an inch even on a large knife. Often this bevel can hardly be seen.

This means that, on the grinder as well as on a Knife Sharpener, or an oilstone, the blade is applied with its back tilted up to get the *bevel edge* flat on the stone.

Practically all mechanics' knives with straight edges are sharpened on a flat oilstone, many of the thinner blades never being put on a grinder at all.

For sharpening ordinary knives, such as used in and around the home, the best device, as before stated, is a household Knife Sharpener. Because it sharpens so quickly and cannot be broken even by rough usage, the most perfect of these is the *Pike India Kantbreak Knife Sharpener.*

It requires no skill and hardly any practice to get perfect results with this. Fig. 11 shows how to use it.

Holding it in the left hand with the point upward, the handle protects the hand so that one may swiftly sweep the blade downward, first on one side, then on the other, with the edge foremost. Hold the blade against the stone with the back of the blade slightly lifted

to give the right angle on the bevel. Always start each stroke at the "heel" of the blade and, sweeping down diagonally, cover the entire length of the edge from heel to point in each stroke. Do not use much pressure.

No one but a butcher should depend on a "steel"—and even he is forced to use it almost constantly to make it effective. A "steel" is only useful to add the last touch of keenness to a knife already extremely sharp.

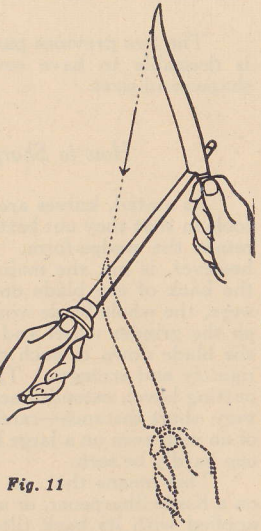


Fig. 11

To Sharpen Scissors

With the tool-rest furnished with *Pike Peerless Grinders*, any one can easily put a perfect edge on scissors. With a little practice, almost as good a result can be secured on a *Pike India Kantbreak Knife Sharpener.*

Hold the latter firmly against the edge of a table. Apply the blade to this so that the bevel lies accurately upon the face of the stone and with the blade crossing the stone at right angles. Then draw the blade smartly across the stone from heel to point. Do not run the blade back and forth—start each stroke at the heel of the blade.

Pocket Knives, Ink Erasers, Etc.

These should be sharpened preferably on a medium or fine oilstone, or better yet, on a Pocket Knife Sharpener such as is referred to on page 33.

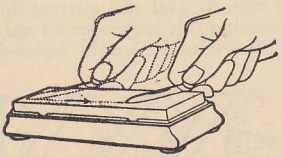


Fig. 12

Apply the blade of a pocket knife to the stone with its back slightly tilted. Hold it obliquely across the face of the stone, and smartly rub straight back and forth. (See Fig. 12.) Then reverse to the other side of the blade and repeat. With a *fine* oilstone, if the blade is sharpened thoroughly, there will be no perceptible wire edge—none at all, if it is finished on a Pike Arkansas. If it is necessary to remove all trace of burr, this may be done by stropping the blade on the coarse side of a razor strop, such as the *Pike Newshell Strop.*

Mr. Frank H. Pierce, Director of Manual Training in Pratt Institute, Brooklyn, recommends the sloyd-pattern knife for young pupils in manual training. This knife has a pronounced bevel extending midway to the back of the blade and is best sharpened by laying this bevel flat on the stone. To sharpen all the way back to the "heel" on both sides of the blade, Mr. Pierce advises first one side of the blade sharpening with the right hand and then applying the blade to the left side of the stone and using the left hand.

Scythes and Long Blades

With blades like the scythe, sickle and others that are too large to be moved over the whetstone or oilstone, the blade is held firmly in the left hand and stroked along the edge with the stone—first on one side then on the other and always toward the point of the blade.

Augers and Gimlets

Augers and auger-bits are often sharpened with a file. But to get a smooth edge, it is necessary to use, at least for finishing, an oilstone "slip." The two parts that get dull are the

"nicker" or scoring nib, A, and the cutting lip, B, in Fig. 13. The scoring nib is sharpened only from the *inside*. Otherwise it would become smaller than the body of the bit. The cutting lip should be sharpened from the lower side, care being taken to preserve the original angle. *Pike India* stone No. 53 is especially shaped to get at the angles of an auger.

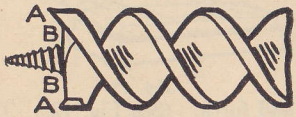


Fig. 13

To restore a gimlet, "fix a piece of oak about 1¼ inch thick in the vise and make a hole ¾ inch deep in its top with the gimlet to be sharpened. Fill the hole with flour emery, adding a few drops of oil and then reinsert the gimlet and bore down into the wood until the point shows through. Repeat for a few minutes, adding fresh emery and oil." Then repeat the process, using this time a piece of soft pine and emery without the oil.

Lawn Mowers

Invert the mower. Grasp the blade near the end with the left hand and with the oilstone in the right hand run it over the bevel, back and forth, in an end to end direction, being careful to follow the bevel already established. If blades are very dull, use coarse side of India Combination stone (page 30) and finish with fine side.

Other Implements

It is a simple matter to sharpen most household tools. A Peerless Tool Grinder (page 44) and an India Combination stone will soon pay for themselves in most homes. Besides tools, articles like garden spades, hoes and trowels, screw drivers, ice picks, axes and hatchets can be kept in first-class condition at all times.

HOW TO SHARPEN A RAZOR

MORE and more men are breaking away from the old idea that only a barber can hone a razor. With a well-chosen hone and a little practice any man can save this expense and greatly add to his shaving comfort.

The barber finds it worth while to choose carefully between the various types of good hones.

To the home shaver, however, the difference between these is not a matter of importance. The main thing is to make sure that the hone *is* a *good* hone. Since even an expert finds difficulty in detecting flaws in a hone by looking at it, the only safe rule is to be guided by a long-established and trustworthy trade-mark.

Among barbers, *Pike* hones have long been outselling all others. This is perhaps the surest recommendation for the man about to buy a hone.

Using the Hone

Hold the razor *perfectly flat* on the hone. The thick back takes care of the bevel. Lay the razor diagonally on the hone and draw it against the edge across the full length of the hone. Use very light pressure.

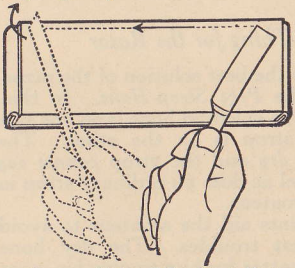


Fig. 14 Using Pike Strop-Hone

Reverse the razor at each stroke rolling it on the back and repeat the stroke in the opposite direction. (See Fig. 14.)

Unless the razor is quite dull, a few strokes will make it ready for the strop.

Some hones may be used dry. On most hones, either lather, water or oil is used to prevent glazing. Do not use the hone too freely. Beyond a certain point, the edge loses its velvety smoothness. This is called "over-honing," and may be safely avoided by observing the rule, "Use the hone less and the strop more."

In stropping safety razor blades, follow the same instructions. The holder takes care of the slight bevel on the edge of these blades.

Using the Strop

For either an ordinary razor or a safety blade in a holder, the action of stropping is this:

Hold the blade perfectly flat on the strop and hold the strop as *taut* and *straight* as possible to prevent rounding the bevel. Draw the razor diagonally from heel to point along the length of the strop—and *away* from the edge instead of against it. Then roll the razor on its back to reverse it and repeat the stroke in the opposite direction. *Strop lightly.*

Be sure that the entire length of the razor edge is covered during each stroke.

Most strops have a coarse and a fine side, and by using both with good judgment, it is possible to avoid frequent honing. This is particularly true with the *Pike Newshell Razor Strop* which has on its coarse side a diagonal scroll which sharpens even a dull razor with astonishing quickness.

A Great Thing for the Razor

In many ways the best solution of the razor-edge problem is the *Pike Strop-Hone.* In this, as shown in Fig. 14, a splendid hone is on one side and a high-class strop is on the other. The hone can be used *dry* and the strop *cannot sag* and round the bevel as does an ordinary strop in the hands of an amateur.

These two points aid the amateur to avoid his two commonest troubles. The dry hone makes it an easy matter for him to give his razor two or three strokes on it *each time he shaves.* And the strop, by virtue of its perfectly straight, flat surface, enables him to give perfect smoothness to the edge with a minimum number of strokes. Thus this device keeps a razor in ideal condition all the time without the need for much practice and with the least possible outlay of time.

HOW TO CARE FOR OILSTONES

LIKE anything else, an oilstone can be ruined by wrong treatment and lack of care.

There are three objects to be attained in taking good care of an oilstone: first, to retain the original life and sharpness of its grit; second, to keep its surface flat and even; third, to prevent its glazing.

To retain the original freshness of the stone, it should be kept clean and moist. To let an oilstone remain dry a long time, or expose it to the air, tends to harden it. A new stone should be soaked in oil for several days before using (this with the exception of *Pike India* as already explained). If kept in a dry place (most of them are) it should be kept in a box with closed cover, and a few drops of fresh, clean oil left on it.

To keep the surface of an oilstone flat and even simply requires care in using. Tools should be sharpened on the edge of a stone as well as in the middle to prevent wearing down unevenly, and the stone should be turned end for end occasionally.

To restore an even, flat surface grind the oilstone on the side of a grindstone, or rub it down with sandstone or an emery brick.

To prevent a stone from glazing requires merely the proper use of oil or water.

The purpose of using either oil or water on a sharpening stone is to float the particles of steel that are cut away from the tool, thus preventing them from filling in between the crystals and causing the stone to glaze.

The chief exceptions to this are the scythe-stone and the household "Knife Sharpener." These are always of coarse grit, and the pressure exerted on them is light as compared with that on the flat surface of an oilstone. For this reason the steel particles are not ground into the stone and no oil or water is needed.

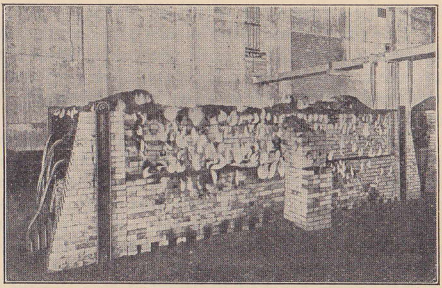
All coarse-grained Natural stones should be used with water. Use plenty of it.

On medium and fine-grained Natural stones, such as Pike Arkansas and Pike Washita, and on *all Artificial* stones, oil should be used always, as water is not thick enough to keep the steel out of the pores.

The most widely used oil on oilstones is *Pike Oil* made especially for this purpose. It is clear and thin, has no acid and is non-gumming and non-drying. This oil is also an ideal one for Sportsmen, Housewives, Jewelers, Carpenters, Machinists, Barbers, Motorists and Aviators.

To further prevent glazing, the dirty oil should ALWAYS be *wiped off the stone thoroughly* as soon as possible after using it. This is very important, for if left on the stone, the oil dries in, carrying the steel dust with it. Cotton waste is one of the best things to clean a stone with, and is nearly always to be found in a shop. Some carpenters use shavings, but they are very apt to leave the stone full of dust. A common clean rag would be better.

If the stone does become glazed or gummed up, a good cleaning with gasoline or ammonia will usually restore its cutting qualities, but if it does not, then scour the stone with loose emery or sandpaper fastened to a perfectly smooth board.



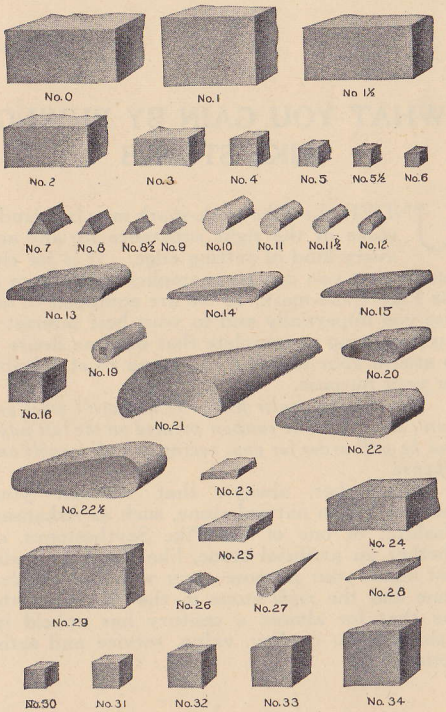
Crystolon Furnace

WHAT YOU GAIN BY BUYING PIKE STONES

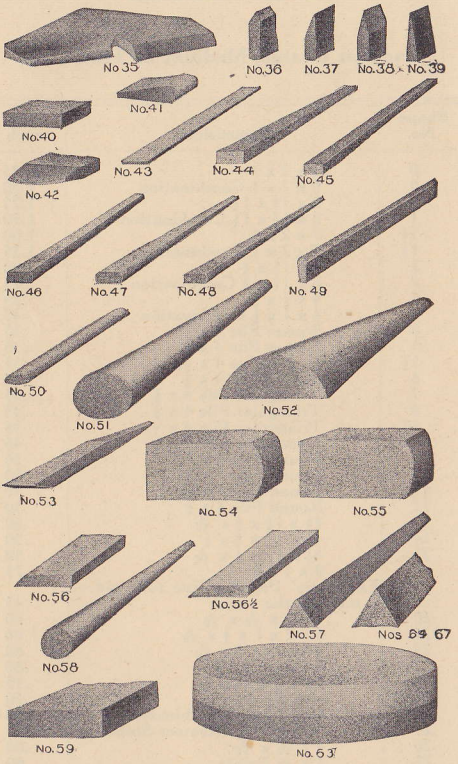
UNDER the Pike trade-mark may be found a stone of the right substance for any and every kind of cutting edge. It is for this reason that you can place implicit confidence in the Pike trade-mark, as we are equipped to advise you impartially and to your best interest—our line being so complete that our one desire is to assure your securing the stone most suitable for your purpose.

Go to your dealer first. If he hasn't what you want, show him the coupon printed on the last page, and he will order for you, saving you all trouble and expense.

Remember, always, that whether your needs call for a natural stone, such as Arkansas, Washita, or one of the Pike Scythestones, or whether an artificial stone, like the Pike India best meets your purpose—you will find the *best* stone and the *right* stone in the Pike line—the line that for almost a century has upheld its superiority in quality, value, service and satisfaction.



This and the opposite page show regular stock shapes and sizes in which India Oilstones are made.



India Oilstones provide shapes for all regular and special work. For prices see next two pages.

India Oilstones

Made in Coarse, Medium or Fine Grits

Shape No.	Dimensions	Price each
0	8 x 2 x 1	$1.25
0	8 x 2 x 1 Combination	1.50
1	8 x 1 3/4 x 1 1/4	1.25
1	8 x 1 3/4 x 1 1/4 Combination	1.50
1 1/2	7 x 2 x 1	1.00
1 1/2	7 x 2 x 1 Combination	1.25
2	6 x 1 5/8 x 3/4	.60
2	6 x 1 5/8 x 3/4 Combination	.75
3	4 x 1 x 1/2	.35
3	4 x 1 x 1/2 Combination	.45
4	Square File 4 x 1/2	.35
5	Square File 4 x 3/8	.35
5 1/2	Square File 4 x 5/16	.35
6	Square File 4 x 1/4	.35
7	Triangular File 4 x 1/2	.45
8	Triangular File 4 x 3/8	.45
8 1/2	Triangular File 4 x 5/16	.45
9	Triangular File 4 x 1/4	.45
10	Round File 4 x 1/2	.50
11	Round File 4 x 3/8	.50
11 1/2	Round File 4 x 5/16	.50
12	Round File 4 x 1/4	.50
13	4 1/2 x 1 3/8 x 1/2 x 9/16	.50
14	4 1/2 x 1 3/8 x 3/8 x 1/8	.50
15	4 1/2 x 1 3/8 x 1/4 x 1/16	.50
16	8 x 5/8 x 5/8	.75
19	Engravers' Pencils, Fine one end,—medium the other	.45
20	4 x 1 x 1/16 x 1/16	.40
*21	6 x 2 x 1 x 3/8 x 9/16	1.00
22	4 1/2 x 2 1/8 x 5/8 x 5/16	.60
22 1/2	6 x 2 1/4 x 3/4 x 3/8	.80
23	3 1/2 x 3/4 x 3/16 x 1/8	.35
24	4 1/2 x 1 1/2 x 5/8	.50
24	4 1/2 x 1 1/2 x 5/8 Combination	.60
25	4 1/2 x 1 x 5/16 (Reamer Stone)	.35
26	4 x 9/16 x 9/16	.60
27	3 x 5/16 Points	.60
28	4 x 1 x 1/8	.50
29	6 x 2 x 1	.75
29	6 x 2 x 1 Combination	1.00
30	Square File 6 x 3/4	.50
31	Square File 6 x 1/2	.50
32	Square File 6 x 5/8	.50
33	Square File 6 x 3/4	.60

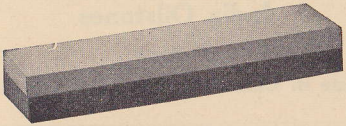
*No. 21 made in special fine only.

India Oilstones

Made in Coarse, Medium or Fine Grits

Shape No.	Dimensions	Price each
34	Square File 6 x 1	$ .60
35	Bath Universal Slip	1.75
36		
37	1 Set (4) Carvers' Slips	1.20
38	2¼ x ⅞ x 5/16	
39		
40	2 x 1 x ½	.30
41	5 x 1 x 5/16 x 9/32	.50
42	4 x 1 x ½	.45
43	4 x ½ x 1/16	.60
44	4 x ½ x ¼ x 5/16 x ⅛	.60
45	4 x 5/16 x 5/16 x 5/16 x 1/16	.60
46	4 x ½ x ¼ x 5/16 x ⅛	.60
47	4 x ½ x 3/16 x 3/16 x 1/16	.60
48	4 x ⅜ x 3/16 x ⅛ x 1/16	.60
49	4 x 7/16 x 3/16 x ⅛	.60
50	3½ x 7/16 x 5/16	.60
51	Oval Plug 6 x ⅞ x 5/16	.75
*52	Heel Breasting Stone 6 x 2 x ⅜	.50
53	Vibrator Stone	.45
53	Vibrator Stone in Case	.70
54	8 x 2 x ¾ (High Round)	1.00
54½	5 x 1½ x ½ "	.75
55	4 x 1½ x ½ "	.60
56	5 x 1 x 5/16 (Reamer Stone)	.40
56½	6 x 1 x ¼ "	.60
57	4 x ½ x ¼	.60
58	4 x ½ x ¼	.60
59	3 x 1½ x ½ (Axe Stone) Coarse grit only	.30
60	Circular Axe Stone, 3 x ⅝	.40
61	3½ x 1 x ⅜	.15
62	Sportsmen's Stone 3 x 1⅜ x ½	.75
63	Circular Comb. 4 x 1	1.25
63	Above in Steel Box	1.75
64	Triangular File 6 x ½	.55
65	Triangular File 6 x ⅜	.55
66	Triangular File 6 x ¾	.65
67	Triangular File 6 x 1	.65
68	4½ x ¾ x 5/16	.25
	Engravers' Chuck	.75
	Points, 1 x ⅛ per dozen	1.00
	Wood Boxes (each list)	.35
	Iron Boxes (each list)	.75

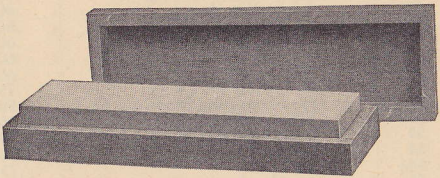
*No. 52 made in medium fine only.



India Combination Stones

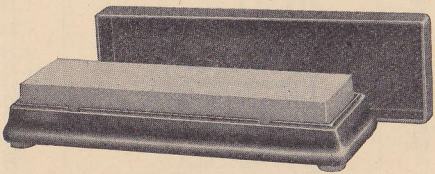
This combination possesses the advantage of two stones in one—coarse side for very dull or badly nicked tools and a fine side for finishing edge. The two grits are vitrified, not glued together, making solid stones.

No. 0 8 x 2 x 1″	$1.50 each
No. 1 8 x 1¾ x 1¼″	1.50 "
No. 1½ 7 x 2 x 1″	1.25 "
No. 2 6 x 1⅝ x ¾″	0.75 "
No. 24 4½ x 1½ x ⅝″	0.60 "
No. 29 6 x 2 x 1″	1.00 "
No. 63 Circular 4″ diameter	1.25 "



Wood Mountings

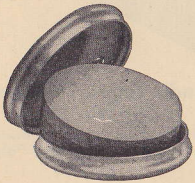
Will keep stones clean and in good condition, thus prolonging the life of the stone. These mountings are of solid oak and are supplied for shapes Nos. 0, 1, 1½, 2, 3 and 29. Price 35c. each.



Iron Mountings

Four cork feet prevent slipping on bench. Felt pad absorbs surplus oil and keeps the stone ready for use. Iron mountings are furnished for shapes Nos. 0, 1½, 2 and 29. Price 75c. each.

India Circular Combination



A novel and practical shape designed for tools requiring straight edges. It presents a breadth of surface which eliminates the necessity for constant wear in one spot.

No. 63, 4 x 1" combination grits $1.25

No. 63, ditto in Steel Box 1.75

India Oilstone Wheels

For all kinds of small lathes used for fine grinding and sharpening, such as dentists, jewelers and others use in their regular work. Made in *coarse, medium* or *fine* grits. These wheels are not carried in stock, but are made up special on receipt of order. From four to five weeks required for delivery.

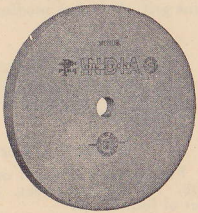
Diameter Inches	Thickness of Wheels in Inches					
	¼"	½"	¾"	1"	1½"	2"
1						
1½						
2						
2½						
3						
3½						
4						
4½	Prices on Application					
5						
6						
7						
8						
9						
10						
12						

Wheels between above diameters or thicknesses take price of next larger size.

Special shaped faces or special grits subject to special prices, quoted on application.

Extra Fine grade and Surgeon's Hone material also supplied. Quotation on request.

India Wheels not subject to return.



India Special Gouge Slip No. 21

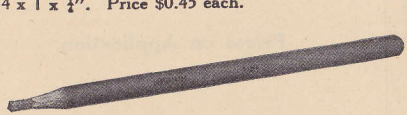
For all curved cutting edges and for smoothing curved surfaces. Size 6 x 2 x 1 x $\frac{3}{8}$ x $\frac{3}{16}$". Special fine grit only. Price $1.00 each.

India Number 16

An all-around general-purpose stone used by lastmakers and in all kinds of wood-working plants; also for sharpening cutting room dies in shoe shops, glove factories, etc. Size 8 x $\frac{1}{8}$ x $\frac{5}{8}$". Price $0.75 each.

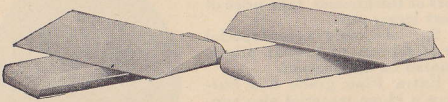
India Amazeen Stone No. 42

For sharpening knives of Amazeen Skiving Machines. Size 4 x 1 x $\frac{1}{4}$". Price $0.45 each.



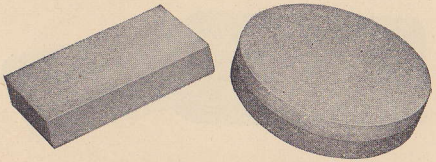
India Engravers' Pencil

For all engravers' tools and for marking metals. One end fine grit, the other medium. Size 7$\frac{1}{2}$ x $\frac{3}{8}$". Price $0.45 each.



India Carvers' Slips Nos. 36-39

For carvers of wood or ivory, engravers, metal chasers, etc. Four shapes in set. Size each 2$\frac{1}{4}$ x $\frac{1}{8}$ x $\frac{3}{16}$". Price per set of four $1.20.



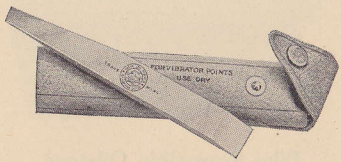
India Axe Stones

Two styles supplied—No. 59 Rectangular and No. 60 Round. The round stone is a pocket fitting combination stone, one side for fast cutting, the other for finishing. Cuts many times faster than the grindstone and sets equally as good an edge.

No. 59, Coarse grit only, 3 x 1½ x ½" $0.30
No. 60, Combination 3" diameter, 0.40

India Pocket Stones No. 61

The man who owns a pocket knife and the woman who owns a pair of scissors should have one of these pocket stones. Puts a dandy keen edge on all kinds of small tools. Invaluable in the office for ink scratchers and for removing ink stains from fingers. Will also remove nicotine stains. Price $0.15 each.



India
Vibrator and Auger Bit Stone No. 53

For touching up contact points of vibrator coils and on the make and break mechanism of the magneto. The correct shape also for sharpening auger bits.

No. 53 price $0.45 each
No. 53 in leather case 0.70 "

Sportsman Stones

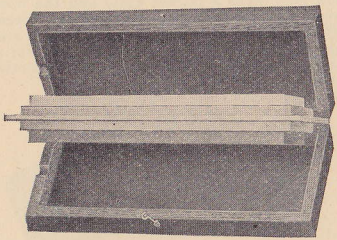
Tools for sport, like tools for work, are doubly valuable if kept in condition. A Sportsman stone is indispensable around the camp for sharpening all kinds of dull edges and repointing fish hooks, gaffs, etc. All lovers of outdoor sports should have one. Made in two different styles, all possessing the combination feature: i. e., two stones in one—coarse and fine grits—and supplied with a soft, strong, pocket-fitting leather case.

Pike Sportsman Stone

A fast cutting Corundum on one side and fine Washita on other. Size 3 x 1⅛ x ½". $0.50 each.

India Sportsman Stone

Same style as regular Combination India Bench Stones Size 3 x 1⅛ x ½". $0.75 each.



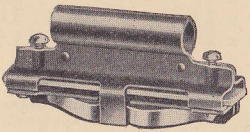
Pike Reversible Oilstone

Designed especially for the man who takes pride in his tool outfit. Two stones in one splendid mounting; either stone ready at an instant's notice. Mounting also insures proper care of stones, keeping them out of dirt and dust and properly oil-moistened. Regularly supplied with India and Lily White Washita stones, each 7 x 2 x ⅛", price $2.25 each.

Pike Oil

An oilstone to give perfect results requires just as much attention as the most expensive tool. To prevent small particles of steel lodging in the pores of the stone, a thin, free-flowing, non-gumming oil is necessary. Heavy oil will gum up and eventually cause the stone to glaze. Pike Oil meets every requirement. It is perfectly pure, acidless and non-gumming and if used regularly will prolong the life of an oilstone indefinitely. Beside being the best for oilstones, Pike Oil is the *greatest all-around lubricant* on the market. It can be used with entire satisfaction for cleaning and polishing furniture or for lubricating all sorts of articles around the home, office, shop, camp or farm. As a rust preventive for firearms and other metal articles, it is unexcelled. It is also used extensively on phonographs motion picture machines, and monotype and linotype machines. Sold regularly as follows:

	Each		Each
2 oz. bottles,	$0.15	1 gal. cans,	$2.00
6 oz. bottles,	0.25	½ " "	1.25
		1 qt. "	0.75



Pike Perfect Saw Jointer

An efficient device which joints saws of any thickness perfectly true; gives excellent satisfaction as a skate sharpener and for any kind of straight edge filing. Adjustable jaw opens to a width of ⅜". Made of steel and is practically indestructible. Price $0.60 each.

Pike Arkansas Stones

This is the one abrasive that is hard enough and fine enough to remove even the last microscopic trace of burr from the cutting edge. Comes in two grades, Hard and Soft. *Hard Arkansas* is used by surgeons, histologists, students of anatomy and biology, engravers, carvers of ivory, etc., watch-makers, dentists, chiropodists, manicurists, cutlers and makers and users of fine tools.

Soft Arkansas is not quite so fine grained and hard. It is especially adapted for sharpening tools of wood carvers, file makers, pattern makers and all workers in hard wood.

Size	Dimensions	Price Each Hard	Price Each Soft
5	$4\frac{3}{4}$-$5\frac{1}{2}$ x 2 x $\frac{3}{4}$-1″	$2.50	$1.00
6	$5\frac{3}{4}$-6 x 2 x $\frac{3}{4}$-1″	3.50	1.50
7	$6\frac{3}{4}$-7 x 2 x $\frac{3}{4}$-1″	4.25	2.00
8	$7\frac{3}{4}$-8 x 2 x $\frac{3}{4}$-1″	5.00	2.50

Hard Arkansas Mounted

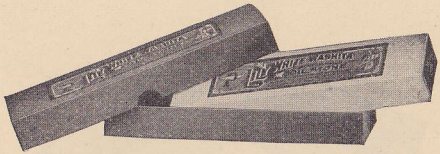
Size	Price Each
5 x 2″	$2.00
6 x 2″	2.50
7 x 2″	3.00
8 x 2″	3.50

Hard Arkansas Round Edge Slips

Size 4—$3\frac{3}{4}$-$4\frac{1}{2}$ x $1\frac{3}{4}$-2 x $\frac{3}{8}$-$\frac{1}{2}$ x $\frac{1}{8}$-$\frac{3}{16}$ $1.00 each

Hard Arkansas Penknife Pieces

Size 4—4 x 1 x $\frac{1}{4}$-$\frac{3}{8}$ $0.50 each



Lily White Washita Bench Stones

For efficient tool sharpening many prefer Washita Oilstones, which, when properly selected give excellent satisfaction, although not cutting as rapidly as artificial stones. Washita is somewhat similar to Arkansas, but is much more porous, hence a faster cutter. Pike Lily White Washita is recognized as the best natural stone for giving a long-lasting edge to general wood-working tools.

Size	Dimensions	Price Each
5	$4\frac{3}{4}$-$5\frac{1}{2}$ x 2 x $\frac{3}{4}$-1″	$0.50
6	$5\frac{3}{4}$-$6\frac{1}{2}$ x 2 x $\frac{3}{4}$-1″	0.60
7	$6\frac{3}{4}$-7 x 2 x $\frac{3}{4}$-1″	0.65
8	$7\frac{3}{4}$-8 x 2 x $\frac{3}{4}$-1″	0.75

Lily White Mounted

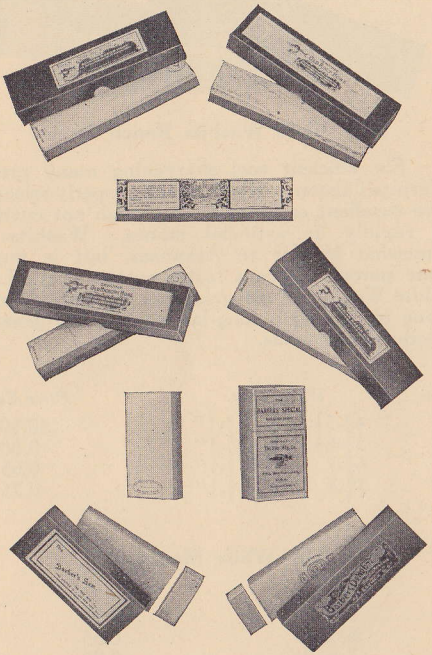
Size	Price Each
5 x 2″	$0.50
6 x 2″	0.65
7 x 2″	0.75
8 x 2″	1.00

Lily White Round Edge Slips

Size 4—$3\frac{3}{4}$-$4\frac{1}{2}$ x $1\frac{3}{4}$-2 x $\frac{3}{8}$-$\frac{1}{2}$ x $\frac{1}{8}$-$\frac{1}{4}$″ $0.25 each

Lily White Penknife Pieces

Size 4—$3\frac{3}{4}$-$4\frac{1}{2}$ x 1 x $\frac{1}{4}$-$\frac{3}{8}$ $0.20 each



Extra Choice Selected *Old Rock*

Old Hickory *Superfine*

Barbers Special

Barbers Gem *Barbers Delight*

A Few of Pike's High Grade Imported Hones

Razor Hones

The leading natural hone is the Belgian Razor Hone. The Belgian, found in the Ardennes Mountains in Belgium, is universally used for honing razors and microtome knives on account of the remarkably fine and even texture of its grit. This hone, sometimes called, "Soap hone," "Petrified Wood," or "Oil hone," may well be called a freak of nature as it consists of two distinct layers, the upper possessing remarkable abrading qualities while the lower serves merely as a support to the softer top.

Our line of imported hones is the most complete one carried by any manufacturer. A few of the best grades are given below:

Price per Hone

BELGIAN	6	7	8	10	5x2½	6x2
No. 1 Fine						
Superfine						
Extra Choice Sel.	**Prices on Application**					
Barbers Special						
Old Rock						

Pike Strop-Hone

The Strop-Hone will make your razor behave, not *part of the time*, but *all* of the time. You can make *every* shave as cool and comfortable as the *best* shave you ever had. The hone is to be used dry and the strop is a dandy—it takes right hold. It is held flat and taut which keeps it from sagging and rounding the bevel of your razor. (See page 22 for further description.)

Size $5\frac{3}{4}$ x 2 x $\frac{5}{8}$" Price, $1.00 each

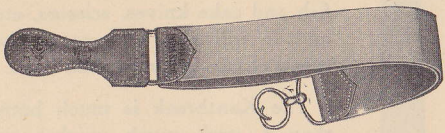
Ezy Edge Razor Hone

A first-class finishing hone suitable for amateur or professional users. The material is selected from the finest natural products. It is made by a process which secures absolute evenness of grit and texture throughout. No other hone at the same price, imparts that fine "gummy" edge to a razor which is so much to be desired.

Size, $5\frac{1}{4}$ x 2 x $\frac{1}{2}$" Price, $0.50 each

Army and Navy Hone and Strop

An outfit which will bring shaving comfort to the soldier and sailor as well as to the camper and traveler. Has a fine, genuine Newshell strop and a first-class razor hone. Handy pocket for razor adds to its convenience. Folds into compact space for the kit. Price $1.25 each.



Pike Newshell Razor Strop

The strop with the Velvet Touch. Beautifully finished, ready for instant use without a bit of preliminary breaking in. Each strop really consists of two strops. The sharpen or fast-cutting side has the fancy diagonal scroll which helps the amateur get the real barber's diagonal stroke. The other strop or finish strop has a delightful velvety touch which gives a dandy, keen edge. Prices range from $.50 up.

Illustrated strop catalogue sent free on request.

India Kantbreak Knife Sharpener

(Patented)

Indispensable to the housewife and the man who carves.

Dropping it won't break it. The Kantbreak is practically indestructible, as it is protected by rubber mountings at every point where it might come in contact with the floor if accidentally dropped. It is also strengthened further by a steel rod running its entire length.

The housewife will find it invaluable for sharpening bread, meat, fish and cake knives, scissors, etc., and it will also take away that dread of carving most men have.

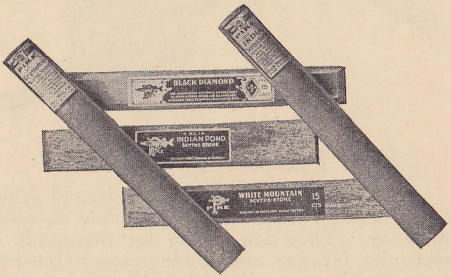
The Kantbreak is much better than a steel—much quicker and easier—just a few strokes will give a fine finished edge. Its cost is small and will save a great deal of money you would otherwise pay for sharpening.

The Kantbreak is also a money saver for the butcher and market man and for the hotel and restaurant keeper, as it does away with a great many trips to the knife grinder.

Length, 15" over all. Price, $0.50

Some Leading Pike Scythestones

The scythestones described on this page are the most popular and best selling stones in a line embracing nearly fifty different varieties.



India Scythestone

A splendid vitrified stone, round oval in shape and manufactured by the India process which secures absolutely uniform grit. One of the best stones made for scythes, grass hooks, carving and kitchen knives and all kinds of edge tools used around the home and farm. Price $0.20 each.

Crystolon Scythestone

Made from the most modern abrasive material in the world—a product of Niagara's wonderful electric furnaces. Imparts a keen, fast cutting edge with trifling effort. Price each $0.20.

Black Diamond Scythestone

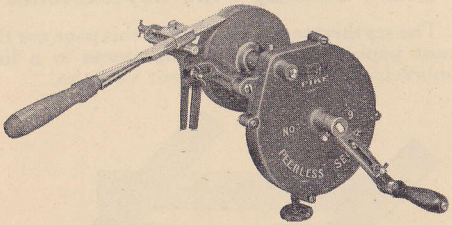
The most popular *natural* grit scythestone ever quarried Very fine gritted, but is extremely sharp and fast cutting, giving a fine, lasting edge. Flat octagon in shape. Price $0.15 each.

White Mountain Scythestone

Selected from fine grain New Hampshire stock. Oval in shape, with square edges, and is a very efficient sharpener for kitchen knives and farm tools, as well as for scythes, grass hooks, etc. Price $0.15 each.

Indian Pond Scythestone

This stone has been on the market for nearly 100 years. It is known and sold in every part of the world. This is the original Pike Red End and is made from stock which gives a medium-coarse edge. Price each $0.10.



Pike Peerless Tool Grinder

Tool grinders are taking the place of grindstones because they make sharpening so quick and easy. They are selling by thousands to mechanics, farmers, and housewives—to business men who like to work with tools—to butchers, barbers, restaurants, and small shops. *Any* grinder is quicker and better than a grindstone.

Pike Peerless grinders are made in two models: i. e., *Senior* and *Junior*, both of which are powerful, high speed, smooth running, compact machines. They mark the acme of perfection in present day construction of hand-power grinders. Both models have an extension crank handle, making easy work of the most awkward job. The *Senior* is especially adapted to machine, blacksmith and wheelwright shops, garages, lumber yards and farms. It is regularly equipped with a 6 x 1¼″ grinding wheel. The *Junior* is an exact duplicate of the Senior except that it is smaller—just right to pack in a tool kit. It is regularly equipped with a 5 x 1″ Crystolon wheel and is designed especially for households, hotels, offices, stores, meat markets, restaurants and small workshops of all kinds.

Price:	Senior,	$12.00
	Junior,	$9.50

Foot power on either model extra, $2.00
Polishing outfit extra, $1.75

Other Pike Grinders from $4.00 to $20.00.

The Easy Way to Get a Hollow-Ground Bevel

To make a dull tool as good as new by giving it a hollow-ground bevel—to do this surely every time and to do it easily, without trouble and without practice—you must have a grinder

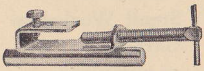


Figure 1

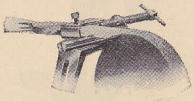


Figure 2

with a *Pike Bevel Guide.* This guide is an exclusive feature of the Peerless Senior and the Peerless Junior grinders described on previous page. Other models of Pike grinders are made without the Bevel Guide, but are furnished with a very satisfactory tool rest.

The pictures show clearly the operation of the Pike Bevel Guide.

Fig. 1 shows the tool holder with adjustable screws to take any size of chisel, plane-iron, etc. Fig. 2 shows the chisel ready for grinding. The

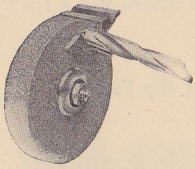


Figure 3

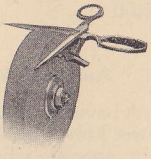
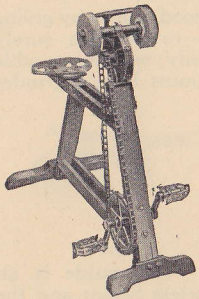


Figure 4

tool holder slides back and forth in the groove and after being adjusted to proper bevel angle it is impossible to make the grinder give you anything but a perfect hollow-ground bevel. Fig. 3 shows how steel drills are ground in the special elbow for this purpose and Fig. 4 shows how simply a pair of scissors may be ground to a perfect, uniform bevel.



Pike Greyhound No. 15

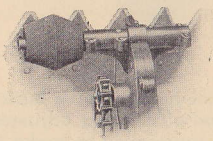
For the Farm
Plantation
Small Workshop
Garage
or any place
where power is
not available.

A portable, bi-pedal machine of great power and speed. Its enclosed cut gears, mounted on a substantial frame make it extremely easy to operate. Ball-bearing, rat trap pedals add greatly to its appearance and utility. Its equipment of coarse and fine grinding wheels enables the operator to do all kinds of work easily and rapidly.

Price, with coarse and fine wheels 6½ x 1 x 1", $21.00

An Ideal Machine for the Farmer

A beveled wheel for mower knives mounted on a special arbor is supplied when desired, making this machine invaluable for general farm and plantation work. Price, $2.50.



Your Dealer Will Get It for You

Pike Sharpening Stones are carried in stock regularly all over the world by nearly all leading hardware and tool stores, in many sporting goods stores, and by barber supply dealers.

There are so many different kinds of Pike stones, however, that few dealers find it advantageous to keep them all, generally confining their stock to those lines for which there is a steady demand in their particular section.

If you have become interested in some article described herein, take this booklet to your dealer, pointing out whatever you desire to obtain. If it isn't in stock, your name signed on the next page will be his authority for ordering the article, without transportation expense either to you or to himself.

Our goods are sold through the regular trade channels and the only exception we make to this rule is where dealers absolutely refuse to take care of individual wants of customers like yourself or where customers are located in sparsely settled districts and there is no dealer carrying our goods. In such cases we will ship goods at catalog prices and pay transportation charges.

Always insist on Pike goods. Look for our trade-mark, the fish in the letter "P." Behind it stands nearly one hundred years' experience in the sharpening stone business.

SPECIAL PREPAID COUPON FOR DEALERS

GOOD ONLY WHEN ATTACHED TO ORDER AND PROPERLY SIGNED BY CUSTOMER

Signature of Customer

We want you to take care of this customer which our advertising has created and sent to your store. Consequently, if you do not have the article wanted in stock, kindly tear out this page, attach it to your regular order blank or letter head and we will send the desired article to you, charges prepaid, providing weight does not exceed 12 lbs., and will bill at your regular price.

NOTE—Our regular terms to the trade are strictly f. o. b. factory, except under above conditions only. This special offer is subject to withdrawal without previous notice, especially on evidence of unfair advantage being taken.

Pike Manufacturing Company ***Pike, N. H.***

ABOVE OFFER IS VOID IF COUPON IS NOT ATTACHED TO DEALER'S ORDER

"PICK A PIKE"

GUARANTEE

Your dealer is authorized to replace any Pike Sharpening Stone that proves defective.

"PICK A PIKE"

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