

OIL
STONE



OILSTONES

HOW TO SELECT
AND USE THEM



THE OBJECT OF THIS PAMPHLET



Is to give a few practical suggestions on the

SELECTION, USE AND CARE OF OILSTONES

In the briefest and plainest manner possible, so that the most inexperienced person may be enabled to buy and use an Oilstone understandingly. No article among a mechanic's tools is of greater importance to him, for no matter how good the quality of his edge tools may be, they cannot do good work unless properly sharpened. The loss in damaged tools and wasted time resulting from the use of inferior or unsuitable Oilstones is enormous, far exceeding, doubtless, the cost of all Oilstones sold. Notwithstanding this fact, but few mechanics and still fewer dealers understand the particular merits of the different Oilstones, or how to select them for different purposes.

SELECTING OILSTONES

THE first point to be considered in selecting an oilstone is the purpose for which it is required; many mechanics make the common mistake of expecting ONE



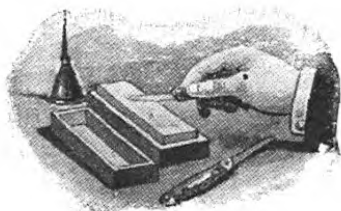
OILSTONE to answer ALL PURPOSES. It would be just as reasonable for a carpenter to use a coarse-tooth saw on fine cabinet work, as to expect a coarse-grained fast-cutting oilstone to impart a fine razor edge.

The kind of an edge imparted by a stone depends upon the size of its grains of grit, or crystals. In a coarse-grit stone, these grains are large, and cut deep, far-apart furrows in the tool, leaving a coarse, rough edge. Such stones cut away steel faster than a fine-grained stone (as a coarse-tooth saw cuts faster than a fine-tooth). The coarse edge left by such a stone is all right for working pine or soft woods in which the cells are large, but for working hardwood, or for any kind of fine work, the tool should be finished on a finer-grained stone.

It is therefore safe to lay down the rule that a good mechanic should have at least two oilstones, one for grinding down dull tools, or imparting a coarse edge, and another for finishing. There are some stones of medium grit which answer well for many purposes, but they cannot cut as rapidly as

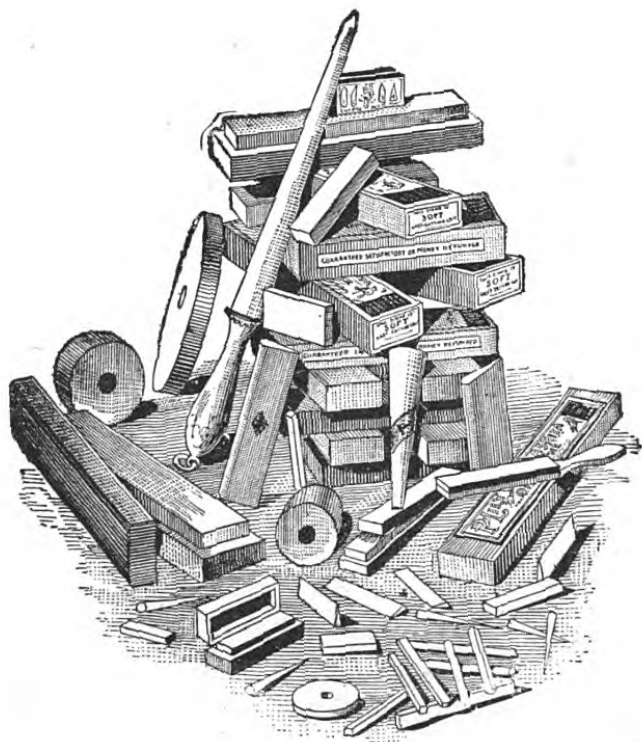
the coarse stone, nor impart so smooth an edge as the fine. A carefully-selected Washita stone, such as the Lily White brand, or a medium grade India are the best general purpose oilstones for all around use.

The hardness of an oilstone is also an important factor in determining its cutting qualities. For sharpening ordinary tools with broad blades or edges; a medium-soft, fast-wearing stone should be chosen. For sharpening narrow chisels, engravers' tools or pointed instruments, however, it is necessary to use a very hard stone, as otherwise the stone will soon be cut full of grooves or furrows.



THE PRINCIPAL OILSTONES ON THE MARKET

THE oilstones most widely in use at the present time are: the Arkansas, Washita, India, and Hindostan. Although these stones are well known to most mechanics, a brief description of them may not be out of place.



The Washita and Arkansas stones are quarried in the state of Arkansas, U. S. A., near the celebrated Hot Springs. They are quite similar in general appearance, both being white or nearly so, but the Arkansas is very much harder, more compact, and finer grained than the Washita. There are various qualities of Arkansas and Washita rock, from a perfect, fast-cutting grit to the vitreous, flinty rock that is practically worthless.

To the ordinary observer, the appearance of the good stone and the worthless is so nearly the same that it is always advisable to buy the known brand of a reliable manufacturer. At frequent periods, since these stones first came on the market, inferior qualities have been put out by irresponsible or inexperienced manufacturers, which has done serious injury to their reputation in some localities. For the past few years, however, the output of the best quarries has been controlled by the Pike Mfg. Co. As this firm has taken great care to select and manufacture only the best rock, both reputation and demand have increased.



**THE PIKE MFG. CO.'S OILSTONE FACTORY,
LITTLETON, N. H.**

ARKANSAS OILSTONES



THE ARKANSAS stone is found in two grades, known as Hard and Soft.

Hard Arkansas is composed of nearly 99½ per cent, pure silica (one of the hardest, sharpest cutting minerals), and is about sixteen times harder than ordinary marble. Steel will not scratch it, but it, in turn, will cut the hardest steel. It is white or bluish white in color, and by reason of its very fine, hard grit is particularly adapted to sharpening fine tools, such as are used by engravers, watchmakers, die-sinkers, wood and ivory carvers, surgeons, etc. It is the finest gritted oilstone known, hence imparts the smoothest edge.

Owing to the very limited supply of good Arkansas rock, and to the great difficulty in quarrying and manufacturing it (about ninety per cent being waste), it is necessarily very high-priced.

Soft Arkansas is of the same composition as the Hard, but is more porous and a little coarser, hence does not impart quite so fine an edge. It is used very largely by machinists, workers in hardwood, cutlers and mechanics in general as a finishing stone. It is carried in stock by most tool dealers, and generally sells at about one-third less price than Hard Arkansas.



WASHITA OILSTONES



THE Washita Oilstone is the most widely used by carpenters and joiners. It is composed of nearly pure silica, but is much more porous than the Arkansas stone. It is stated by expert geologists that a cubic inch of perfectly crystallized Washita stone contains over eight million (8,000,000) cavities or pores. It is the presence of this vast quantity of evenly distributed pores which enables the grit grains, or crystals (the teeth of the stone), to work freely.

There is no oilstone which requires so much experience to select intelligently as the Washita, for it is found in several degrees of hardness and fineness. For ordinary carpenters' tools, such as planes, bits, chisels, gouges, etc., a medium-soft, even-grained, fast-cutting Washita should be chosen.

The Washita stone is supplied in several qualities. The best is the **Lily White** brand, next in order are the **Extra, Number One**, and **Number Two** qualities. Each of these qualities is made in all shapes and sizes required for different kinds of tools.

The **Lily White Brand**, or quality, is selected from the very best rock, each stone is tested at the factory, and labeled, telling whether it is a Soft, Coarse or a Hard, Fine grit. Every **Lily White** stone, whether of coarse or fine grade, is of **UNIFORM**

GRIT THROUGHOUT, free from hard or soft spots, or streaks, and fast cutting. Each stone is perfectly white, carefully finished and bears a guarantee label. The manufacturer warrants each stone to be just as labeled and to give absolute satisfaction; hence neither the dealer nor the mechanic take any risk on this stone, as it will be replaced free of charge if not satisfactory.

THE NUMBER ONE QUALITY WASHITA is a well-finished stone, free from cracks, quartz, or noticeable imperfections. It is the most largely used brand on account of its lower price, but as there are both hard and soft stones in this grade, and they are not warranted, the stone should be selected by an experienced judge.

It is usually better economy to buy the labeled and guaranteed **Lily White** brand.

THE NUMBER TWO QUALITY WASHITA is, as its name would imply, a second-quality stone. It usually contains some quartz streaks, "sand holes," or other imperfections, but always has one or more serviceable faces, and many very excellent cutting stones can be found in this grade.

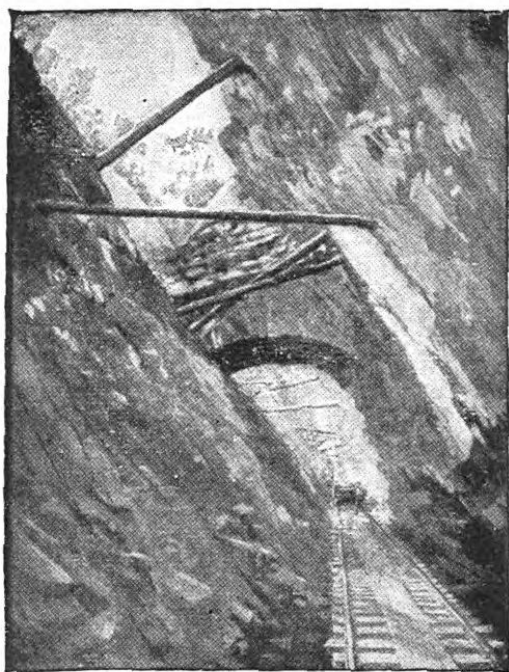
In addition to the above-named grades of Washita stone, there is also the **Rosy Red**, which is very similar in cutting qualities to the Lily White, except that it is generally a little softer and coarser. This stone is streaked with orange or dull red color, which indicates a soft, porous grit. It is a guaranteed brand, and is well adapted for grinding down dull tools or wherever rapid work is required.

The difference between a hard and soft Washita stone can be told in several ways: first, by the sight, as in a soft stone the minute pores are usually apparent to the eye, and the surface of the stone will have an open, granulated appearance; second, by scratching with a knife blade, as a soft stone can be quite readily scratched on the edges, whereas a hard stone will show very little impression; third, by the sound, holding the stone loosely by one end between the thumb and forefinger and tapping it with a



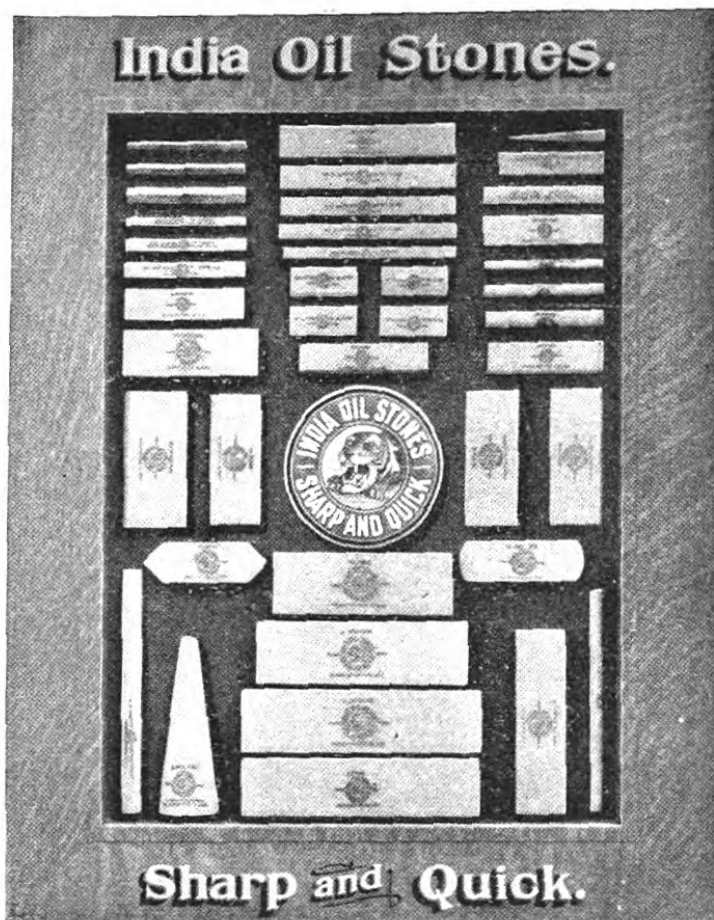
knife, light hammer, or any metal substance; the soft stone will sound dead like wood whereas a hard stone gives forth a metallic ring.

In buying an oilstone of any kind, price should always be a secondary consideration. A good stone will very quickly make up the difference in price over a poor one in its quicker, more efficient work. Furthermore, a GOOD STONE WILL LAST MANY YEARS if rightly used, whereas the sooner a poor stone is thrown away the better.



A Washita Stone Quarry in Arkansas, near Hot Springs, owned by The Pike Mfg. Co.

INDIA OILSTONES



ABOVE SHOWS THE ASSORTMENT OF REGULAR SHAPES.



MADE BY
NORTON EMERY WHEEL CO.,
WORCESTER, MASS.,
U. S. A.

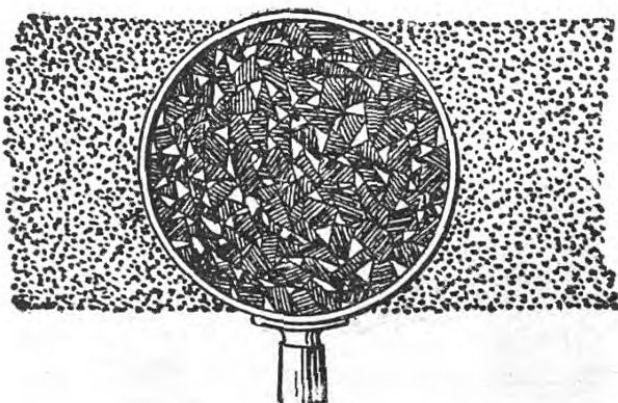
SOLD BY
PIKE MANUFACTURING CO.,
PIKE, N. H.,
U. S. A.

INDIA OILSTONES



THESE are comparatively new, having been on the market but a few years, yet their reputation and use have become world wide. They are made from pure corundum, the hardest of all substances except the diamond, and have wonderful cutting qualities. They differ greatly from emery oilstones with which they are sometimes confused, as they cut steel much faster, impart better edges, and do not glaze.

They are superior for most kinds of sharpening to natural stones because they cut faster, keep a better surface, and are free from seams and uneven spots, and are uniform in texture as can be seen



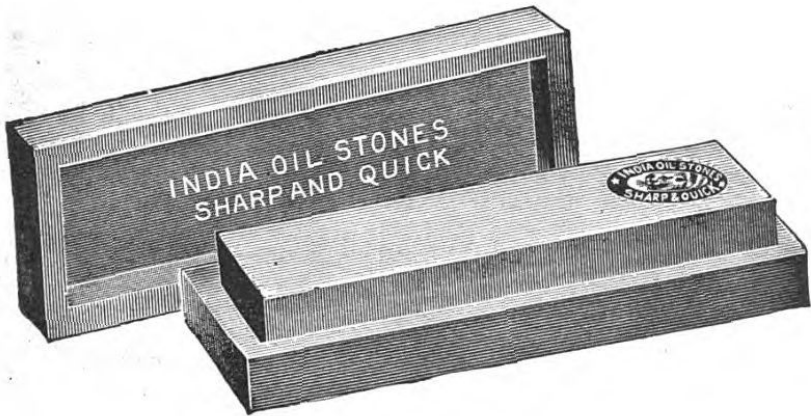
from the accompanying cut, which shows a section of India Stone under a powerful magnifying glass.

India Oilstones are furnished in three grits—Coarse, Medium, and Fine, and in all required shapes.

USES: The "Fine" stones are adapted for all descriptions of high-class wood and metal working tools, also for knives for the finer grades of cloth, like silks, satins, serges, and other fabrics, and for all classes of tools requiring fine cutting edges.

The "Medium" stones are adapted for carpenters' and pearl workers' tools and ordinary machine shop use, also cloth, leather, rubber, and paper-cutting machines or hand knives, and will make a quick cutting edge, although not quite as smooth as the "Fine" stone.

The "Coarse" stones are adapted for rough work where fast cutting is required, without regard to fine finish, also for rubbing stones.



ALL INDIA STONES ARE SOLD UNDER A POSITIVE GUARANTEE TO GIVE SATISFACTION.

N. B. THE SUCCESS OF THE INDIA HAS CALLED FORTH MANY IMITATIONS WHICH ARE FALSELY CALLED "CORUNDUM OIL-STONES" BUT IN REALITY CONTAIN LITTLE OR NO CORUNDUM. RUB ONE OF THESE IMITATION STONES WITH A GENUINE INDIA OILSTONE AND YOU WILL FIND THAT THE INDIA WILL CUT IT LIKE CHALK, LEAVING NO MARK ON THE INDIA ITSELF.

HARTFORD. Feb. 27, 1904.

Gentlemen: It gives us great pleasure to state that we have used the India Oilstone on die work, and it has given perfect satisfaction.

Yours very truly,
THE JACOBS MFG. CO.

A. I. JACOBS, President.



HARTFORD, April 4, 1904.

Gentlemen: I have used the India Oilstone for some time now and I find it A No. 1 in every respect; also, my men speak very highly of it and say they would not be without one.

Yours very truly,
ROBERT T. ALCORN.



PROVIDENCE, R. I., Feb. 29, 1904.

Gentlemen: We have made use of the India Oilstone for a long time in our shops, and for the vast majority of work prefer them to the natural Oilstones that we have formerly used and, as a matter of fact, they have displaced all the old style stones in our works.

Yours truly,
BROWN & SHARPE MFG. CO.
By W. A. VIALL.

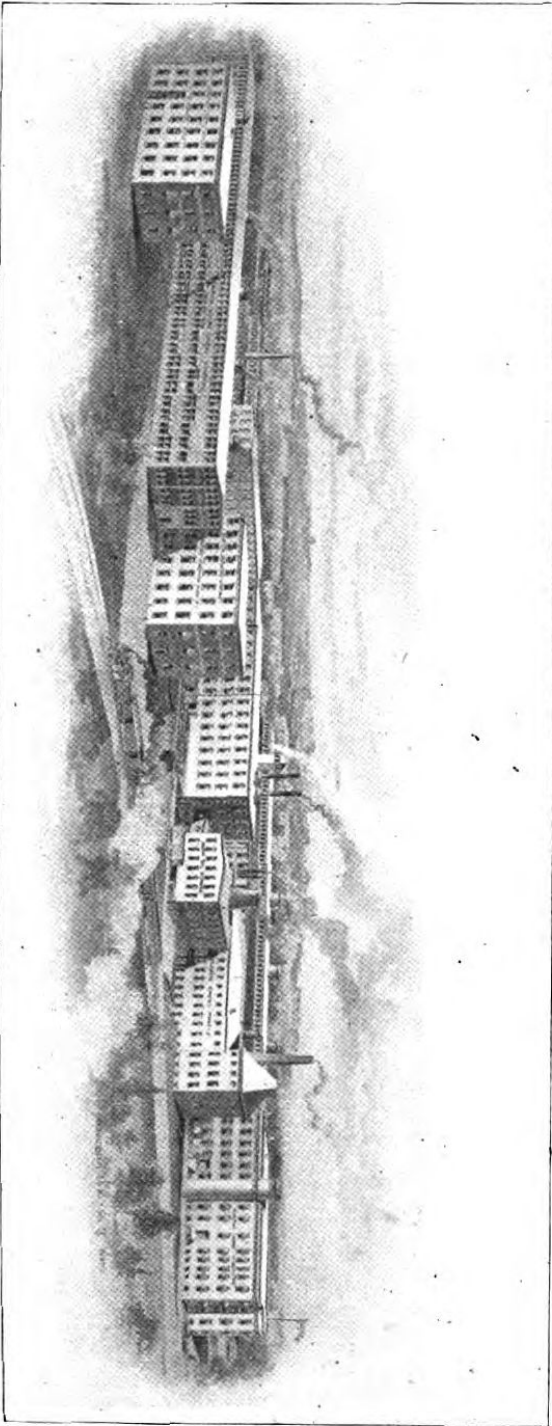


March 30, 1904.

Gentlemen: In answer to your request for our opinion of the India Oilstones manufactured by you, will say that we have used them for some years past and find them in every way satisfactory.

Yours truly,
SMITH & WESSON,
E. E. NEAL, Asst. Supt.

"NORTON EMERY WHEEL CO.'S WORKS, WORCESTER, MASS., WHERE INDIA OILSTONES ARE MADE."



HINDOSTAN STONE



HINDOSTAN, although usually called an oilstone, can be used with water with equally good results. It is a very fine-grained sandstone, and is the best low-priced sharpening-stone for mechanics' tools. It is a fast-cutting stone, but owing to its softness, the powder or grit which is cut from the stone soon forms a mud that clogs the pores and makes it cut more slowly unless the stone is kept free by the plentiful use of water. By using a little oil and leaving this dust on top of the stone, a fine surface is given the stone, which produces a very fine edge on the tool. It is a very good stone for imparting a quick medium-coarse edge, and is used very largely by amateurs and those who do not have to use an oilstone very often. It is sold in three grades, as follows:

EXPORT EXTRA QUALITY, which is the finest-grained, hardest Hindostan, white or yellowish-white in color; WASHITA FINISH QUALITY, which is well finished, grayish white stone; and the NUMBER ONE QUALITY, which is generally a very roughly-finished stone and varies in color from a bluish gray to almost a yellow.

EMERY AND CORUNDUM OILSTONES

THERE are so many kinds of emery and other artificial oilstones on the market that an attempt to describe them would be useless; but, briefly, emery stones, as a whole, have never been found satisfactory for mechanics' tools, except for grinding down very dull or blunt tools, which must afterwards be finished on a Washita or other oilstone. An emery stone can be used to good advantage where a mechanic cannot take his tools to a grindstone or emery wheel, but must be used with care, as fine edge tools can be easily damaged on an emery stone by an inexperienced hand.

Of late many artificial oilstones have been put on the market under the name of emery and corundum oilstones which in reality contain either none or at most but very little of either material, being made for the most part of quartz-sand and colored to imitate emery and corundum goods. These usually become glazed and useless after short usage.

OTHER OILSTONES

IN addition to those already mentioned, there are many other oilstones more or less known to the American trade. Among those now on the market are the QUEER CREEK, TURKEY, CHOCOLATE, and DEERLICK oilstones.



The QUEER CREEK is a hard, medium-coarse-grained sandstone, quarried in Ohio, dark gray in color and suitable only for grinding down dull tools, or sharpening those intended for coarse work. It is inclined to glaze unless used with care, and

works fully as well with water as with oil.

The CHOCOLATE is a fine-grained Mica Schist of a bluish chocolate color. It is a little softer than the Queer Creek and a very fast-cutting stone. It imparts a medium-coarse edge, and is especially adapted for sharpening leather and skinning knives. It is also used quite largely for sharpening cloth cutters' tools, kitchen and carving knives, pocket knives, and similar work. It can be used dry or with oil or water.

The Deerlick is practically the same as the Queer Creek in appearance and sharpening qualities. The Queer Creek and Deerlick are generally sold a little lower than the No. 1 Washita.

TURKEY oilstones were the leading oilstones fifty years ago but have been entirely superseded in America and largely in other countries by the Washita. They are between the Arkansas and Washita in fineness but always contain more or less cracks, seams, and uneven spots.

HOW TO USE OILSTONES

IN the first place, it should be borne in mind that a good oilstone can be ruined by improper usage or lack of care. Many stones are condemned when the fault lies either in not having selected the right stone for the work or in not having taken proper care of it.

The mechanic who expects one oilstone to grind down his dull-nicked tools and at the same time impart a keen, razor edge, using any kind of oil that happens to be at hand, leaving the dirty oil on the stone to dry in, leaving his stone around in the dust and dirt of the shop, will NEVER have a good oilstone and does not deserve one.

No sensible carpenter will think of using other tools in this way, yet many of them treat their oilstones

in just this manner. Many times have we seen oilstones returned to dealers with the complaint that they would not "cut," when, as a matter of fact, they were completely coated or varnished with dried, dirty oil and steel dust, in such a manner that the tool could not possibly come in contact with the grit or "teeth" of the stone.

There are three objects to be attained in using and caring for 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 a 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, and 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 the stone, as well as in the middle, to prevent wearing a trough-shaped depression. It is impossible to prevent a stone becoming slightly hollowed with long usage, but this can be remedied by grinding the stone on the side of a grindstone, or by rubbing it down with sandstone or an emery brick.

To prevent an oilstone glazing, the user must first understand what causes a stone to glaze. This can best be explained by showing why oil and water are used on sharpening stones, and how they should be used.

The word "oilstone" has come to be applied to all stones used for sharpening mechanics' tools, from the fact that it is necessary to use oil on most of them for two purposes: first to prevent the stone from heating the tool, which draws its temper and ruins the best tool instantly; second, to keep the particles of steel ground off the tool from entering the pores of the stone, which would soon fill them up and cause a glazed surface.

Most coarse-grained and all soft stones can be used successfully with water, although they may be generally termed "oilstones." On such stones, water should be used plentifully to carry off the powder rubbed up by the tool. Most water-stones are quick cutting and leave a coarse edge, but a much finer edge can be procured on the same stone by using just enough water or oil to rub up a paste. This paste when kept on the stone will give a finishing edge, but should be thoroughly cleaned off before putting the stone away.

Fine-grained, hard stones, like the India, Washita, Arkansas, and Turkey, should always be used with oil, as water is not thick enough to keep the steel out of the pores. 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 and soon causes the stone to glaze. 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.

CANTON, OHIO, April 29, 1905.

"I have given the Stonoil which you sent me a trial, and have found it in every way satisfactory. I used it for one week on a Hard Arkansas stone, not cleaning the stone in that time, and the stone did not become gummed or glassy. Have also used it on India and Washita, and find it superior to anything I have ever used. It has a moistening effect which I have not noticed in any other oil."

FRANK RICHARDSON.

There are many opinions as to
THE BEST OIL FOR OILSTONES



but it may be laid down as a general rule that any oil which does not have a tendency to gum up or harden will answer; while on the other hand, an oil that will do this should never be used. Sperm oil is very widely used. Glycerine diluted with alcohol is a first-class oilstone lubricant, and is particularly good to

leave on a stone, when putting it away, to keep it moist and 'soft'. There are some who use kerosene or coal oil and get excellent results, while others claim that kerosene hardens and glazes an oilstone. As there are many different opinions on this point, it is safer to use some oil that is conceded by all to be good.

After experimenting for many years with all sorts of oils, and combinations of lubricants, we have at length found what we consider the ideal oil for use on oilstones, hones, and other abrasive surfaces. It is marketed under the name of PIKE'S STONIL. It is absolutely free from acid, so it will not corrode or harden the stone, and is also free from vegetable matter, so that it will not become gummy, thereby causing the stone to glaze. It is in short an acidless, non-drying oil, thin enough to flow freely, yet with sufficient body to float off heavy steel cuttings. It keeps the stone soft and PERPETUALLY MOIST and is adapted to all kinds of stones,—Arkansas, India, Washita, and even to barber's hones.

The NECESSITY OF ALWAYS KEEPING YOUR OILSTONE CLEAN CANNOT BE TOO STRONGLY EMPHASIZED. If it becomes glazed or gummed up, a good cleaning with ammonia will usually restore its cutting qualities, but if it does not, then scour the stone with sandstone and water, or sandpaper fastened to a perfectly smooth board.

BOSTON, Nov. 15, 1900.

Gentlemen: I find a great many dealers will try to sell something that is "just as good" as the Lily White Washita. I have used the above make of stones these last sixteen years and I have no hesitation in saying that it is the best stone, by far, of any that is on the market to-day. Thanking you for your promptness and fair dealings, I am,

Yours very respectfully, E. L. STACK.

CINCINNATI, O.

Dear Sirs: . . . I have used one of your Lily White Washita Oilstones, purchased from B. H. Niebrugge, 657 Vine St., from about 1885 continually since, and want no better recommendation than my own experience with it, but have reduced it to about $\frac{1}{4}$ inch in thickness. I have tried others but have found none to compare with it.

DAVID FISHER,
(Sec'y U. B. C. & J., Cincinnati, O.)

WALDEN, N. Y., Feb. 14, 1902.

THE PIKE MFG. Co., 151 Chambers Street,
New York, N. Y.

MR. E. BERTRAM PIKE, Sec'y and Treas.

Dear Sir: For fully twenty years we have been using your product to our complete satisfaction, and in our nearly fifty years' experience have had no whetstones equal to your Lily White Washita for the setting of blade edges in fine Pen and Pocket Cutlery. With best wishes,

Yours very truly,
NEW YORK KNIFE CO.
THOMAS W. BRADLEY, Pres.

HADLEY, B. C., March 11, 1904.

Gentlemen: The Lily White Oilstone that you sent me by mail at hand. It is the best stone I ever used.

ARTHUR F. DAWSON.



PIKE'S SHARPENING
STONES ARE SOLD BY
LEADING HARDWARE
AND TOOL DEALERS
THE WORLD OVER.

We will send a 68-page illustrated catalogue of OIL-STONES, RAZOR HONES, and SCYTHESTONES to any address upon receipt of four cents in stamps for postage, but we sell only to dealers. If your dealer does not have our goods, send us his name and address. Insist on having "PIKE'S" when it is sharpening-stones you are buying. They are warranted to give satisfaction and there are no others "just as good."

The Pike Manufacturing Co.

Pike, N. H., U. S. A.



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