

ATKINS ATKINS



THE
SAW WITH
THE
BLUE
STICK



E. C. ATKINS AND COMPANY

"The Silver Steel Saw People"

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Machine Knife Factory, Lancaster, N. Y.

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SILVER STEEL
SEGMENT GROUND

CROSSCUT

SAWS

"The Finest on Earth"

EASTERN PATTERNS

NOTE THE FOLLOWING

ATKINS SILVER STEEL SEGMENT GROUND CROSS CUT SAWS are made with the definite object in view of supplying the every-day user of Cross Cut Saws with saws which are so eminently superior to any other that their merits will be immediately appreciated. They *must* be so much better in every particular that any fair trial will at once demonstrate their superiority.

We claim that our SILVER STEEL CROSS CUT SAWS are superior to those of any other manufacturer in *Material, Temper, Grinding and Finish*, and that they will *run easier*, and will *hold* their cutting edge *longer* than any saw that has ever been made.

As a user of Cross Cut Saws you owe it to *yourself* to investigate the truthfulness of these statements, and in order to do so we want you to give ATKINS CROSS CUT SAWS a practical *test*. Put them into operation and keep a careful *record* of the *results* as compared with any other saw you have been using. Compare, First, the *ease* with which they run; Second, their *speed*; Third, the *amount of timber* they will cut, and lastly, the *length of time* they will run without refiling.

We are satisfied to place ATKINS SILVER STEEL SEGMENT GROUND CROSS CUT SAWS entirely on their merits, knowing full well that if you subject them to a fair, conscientious test you will find them to be as we have claimed for over seventy-eight years, "The Finest on Earth."

The *easy running* quality found in ATKINS SILVER STEEL SEGMENT GROUND CROSS CUT SAWS is secured through the scientific principle with which the cutting teeth are constructed.

E. C. ATKINS AND COMPANY,

E. C. Atkins

President.

ASK FOR THE SAW WITH THE BLUE STICK

Our Cross Cut Saw Department

The Cross Cut Saw Department located at our great factories in Indianapolis is maintained year in and year out by experts in their line, each man having devoted his life study to his particular duty. It is your department where you can secure scientific information in regard to the different operations as well as how to save money and what saws to buy to increase production.

It is the hope of E. C. Atkins and Company that when you have a problem to solve you will not hesitate to call upon us for we earnestly believe we can help you.

Our Demonstrators

The nation-wide force of saw demonstrators employed by E. C. Atkins and Company plays an important part in the service to the saw user. It is his duty to visit the lumber camps, demonstrate the improved features of Atkins SILVER STEEL Saws; to give 100% service and satisfaction. Each of the demonstrators is thoroughly versed in Cross Cut Saw work and can be of real help to you.

ABOUT SILVER STEEL

THE STEEL used in ATKINS SILVER STEEL SEGMENT GROUND CROSS CUT SAWS is made under *our own secret* formula. It is the finest steel that has ever been put into Saw Blades.

There is no Steel as good as SILVER STEEL. Others have tried to imitate it and may tell you that their steel "is just as good as SILVER STEEL." But it isn't, and a trial will convince you of this fact.

SILVER STEEL receives our special process of Gas Tempering, which gives it a marvelous edge-holding quality. This is the reason why ATKINS SILVER STEEL SEGMENT GROUND CROSS CUT SAWS will hold their edge longer and cut faster.

No one can sell you Saws that will stand up to their work as long as ours, as the formula for SILVER STEEL and our process of Gas Tempering are OUR secrets. Others do not "know how."

ATKINS GUARANTEE

We guarantee Atkins SILVER STEEL Cross Cut Saws as to quality and workmanship. Atkins SILVER STEEL Cross Cut Saws are SEGMENT GROUND; that is, they have a true and even taper from the back to the cutting edge. The cutting edge is the same gauge throughout.

Every Atkins SEGMENT GROUND Saw is guaranteed for proper hardness and against any visible flaws in workmanship or material.

We will appreciate any one calling our attention to any defect in an Atkins SILVER STEEL Cross Cut Saw. In such a case we will promptly make complete and satisfactory adjustment to the customer.

HOWEVER

Atkins SILVER STEEL SEGMENT GROUND Cross Cut Saws are not guaranteed against improper usage, such as breakage caused by a wedge being driven against the saw, or a tree falling on the saw by accident.

We do not replace saws which are worn down more than $\frac{1}{4}$ inch unless the customer can justly show there is a natural defect in the steel or in the workmanship. All replacements should be made before saw has been in use over thirty days.

In order to make the best Cross Cut Saw, it must have a very hard temper. A Cross Cut cannot stand much abuse. Special care should be used in setting the teeth.

**RECOMMENDATIONS FOR FITTING ATKINS SILVER STEEL
SEGMENT GROUND CROSS CUT SAWS**

AS MANUFACTURERS of the popular Atkins SILVER STEEL Segment Ground Cross Cut Saws we feel that there is a need for an explanation of the correct method of fitting them for ease in operation, speed and production.

We cannot set an exact standard for the amount of bevel, set and raker drop, as this will have to be determined by the individual woods filer. An expert filer works out his own method of fitting the cross cut saw with the same fundamental principles in mind that are necessary to properly fit the saw, considering the characteristics of the wood, with the exception of slight variations.

We have, however, from over a period of years adopted a standard on bevel, set and raker drop, from which we fit all of our Cross Cut Saws in the manufacturing process. This is done with the utmost care. This fitting process is based upon the kind of timber to be cut in the lumber territories.

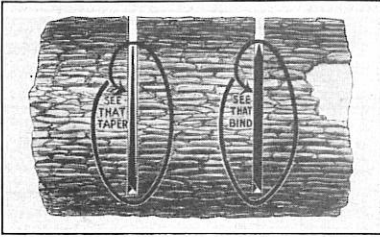
The following recommendations are derived from actual experiments and found to be most satisfactory. For cutting soft wood more set is necessary than for cutting hard wood. The cutting teeth should have from .003 to .005 set on each side of the blade, and raker clearance of rakers from .010 to .015 shorter than the teeth.

For cutting hard and frozen timber, less set is required. We recommend from $.001\frac{1}{2}$ to .003 on each side of the blade, with rakers from .005 to .010 shorter than the teeth.

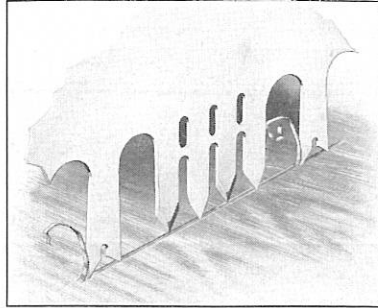
If these suggestions are kept in mind and applied when fitting Atkins SILVER STEEL Segment Ground Saws, you will have a fast cutting, easy running saw, and it will hold the sharp cutting edge a remarkably long time.

What Is Segment Grinding?

Our process of Segment Grinding is patented. No Saw But An Atkins Saw Is Segment Ground. Now, Remember That! Segment Grinding gives our Cross Cut Saws Clearance, with very little set. Atkins SILVER STEEL, Segment Ground Cross Cut Saws can be ordered from your jobber, from us at Indianapolis, or at any of our branches.

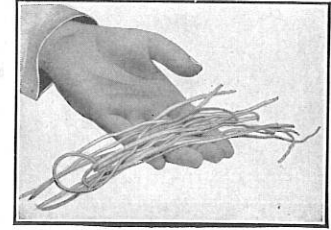


This picture illustrates plainly the difference between Atkins process of Segment Grinding and the imitation. Note carefully how the Atkins blade tapers from tooth edge to back, and then look at the so-called taper on the other saw. They may gauge the same on the extreme back, but down in the center of the blade, where clearance is needed the other saws have no taper at all while Atkins Segment Ground Saws run free and easy. Imitators of our Segment Ground Saws simply "dub" them off for an inch or so on the back edge and call them patent ground. Don't Be Deceived. Insist on having Atkins.



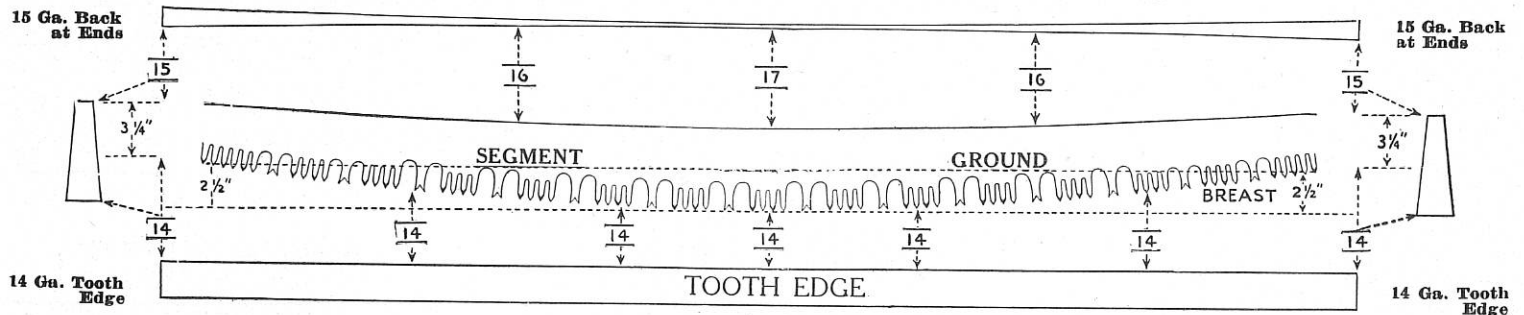
By referring to above illustration you will see how perfectly the alternating cutting teeth cut the sides of the kerf, clean and smooth, leaving the rakers to clear the bottom. The principle is just the same as that of cutting the sides of a groove with an ordinary saw and clearing the center with a chisel.

Every tooth and point has its purpose, and is so constructed that it performs its work with ease and precision.



Notice this illustration and see how Atkins SILVER STEEL Saws cut. We call your attention especially to the fact that Atkins SILVER STEEL, Segment Ground Cross Cut Saws cut Shavings—not saw dust. If you will study these illustrations carefully, you will see why Atkins SILVER STEEL Cross Cut Saws operate easier, cut faster and hold their edge longer than any ordinary saw.

ATKINS SILVER STEEL SAWS
EXAGGERATED FOR THE SAKE OF CLEARNESS



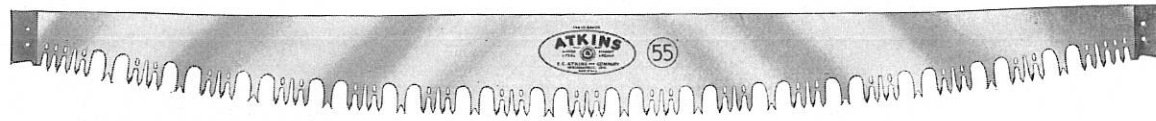
The figures indicate gauges; the higher the figure, the thinner the saw

SEGMENT GRINDING consists of finishing the blade to an absolutely even gauge along the tooth edge; and from the toothed edge to the back at ends it is *segment ground* or tapered to a thinner gauge; and from the toothed edge to the center of the back it is ground on the segment of a circle to an even thinner gauge than the ends at back. This gives the saw a two way taper.

Atkins Segment Ground Cross Cut saws, being thicker at the ends are stiff and do not buckle, and as they are thinner at the center of the back they have ample clearance, enabling them to be operated easily without binding and with very little set.

The illustration above shows clearly the results of segment grinding and why we make the claim that *Segment Ground* saws will run easier, cut faster, and last longer.

ATKINS NEW SILVER STEEL "BLUE END" CROSS CUT SAW No. 55

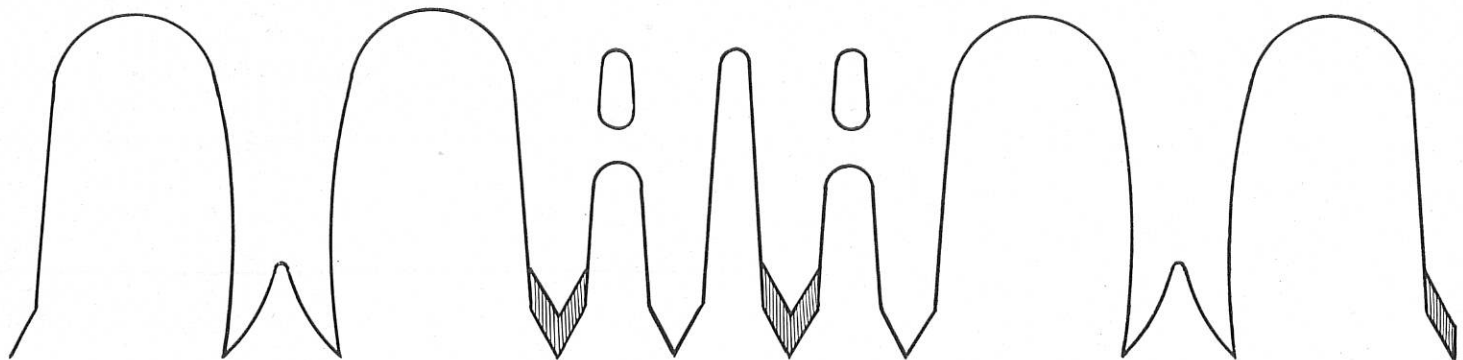


NO. 55 SILVER STEEL, SEGMENT GROUND Cross Cut Saw with the Blue Ends is Atkins newest achievement! A four-cutter saw designed for expert loggers. Each tooth is perfectly shaped and has extra strength at the base to stand up under heavy work. Hand smithed blades; perfect temper. Roomy raker gullets discharge the kerf rapidly. SEGMENT GROUND, Atkins exclusive grinding process, 14 x 20 gauge; positively assures faster cutting *with much less set required*. Depth of raker gullet 1-13/16 inch; width of raker gullet widest place 1 1/8 inch; depth of tooth gullet 1 3/8 inch; depth of tooth gullet at perforation 1 inch; width of tooth gullet widest place 39/64 inch. Each saw is hand filed, set and ready for use. Fitted with Atkins Blue and Yellow Stick and illustrated fitting instructions.

Look for the "Blue Ends."

Lengths, feet	5, 5 1/2, 6, 6 1/2
Weights each, pounds.....	4, 4 3/4, 5 1/2, 6 1/4

Turn to pages 29 and 30 for illustrated descriptions of the handles best adapted for Atkins No. 55 Cross Cut Saw.



This is an actual size tooth section of ATKINS new SILVER STEEL, SEGMENT GROUND Cross Cut Saw No. 55. Four-cutter pattern. Note the roomy raker gullets and extra sharp tooth points. Ground 14 gauge on entire tooth edge, gradually tapering to 20 gauge at center on back and from ends on back at center. Greatly improved tooth pattern has much to do with the better cutting quality of this saw.

ATKINS NEW SILVER STEEL "BLUE END" CROSS CUT SAW No. 77

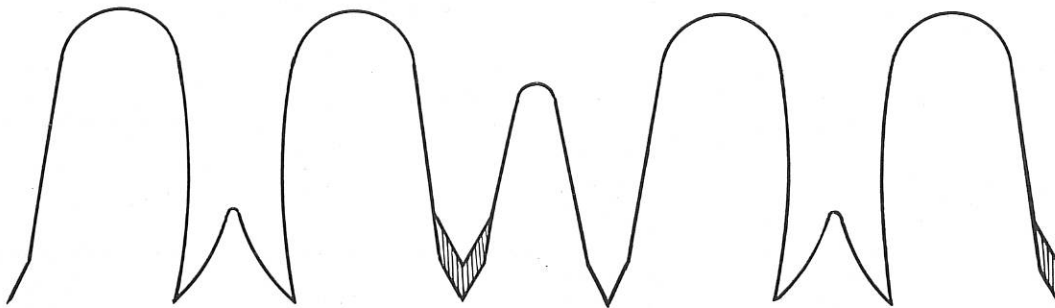


NO. 77 SILVER STEEL, SEGMENT GROUND Cross Cut Saw with the "Blue Ends" is the fastest and smoothest cutting cross cut saw ever made by anyone! A super-fine saw in every way for the use of expert loggers. Two-cutter pattern. Extra strong teeth and rakers with large gullets. SEGMENT GROUND 14 x 20 gauge, which absolutely prevents binding or choking. Good for either soft or hard wood. The perfect tempering of ATKINS SILVER STEEL (never brittle) causes this saw to hold its edge longer than any others—thus requires much less filing. Cuts straight as an arrow. Depth of raker gullet $1\frac{1}{2}$ inch; width of raker gullet at widest place $\frac{1}{8}$ inch; depth of tooth gullet $1\frac{5}{32}$ inch; width of tooth gullet widest place $\frac{3}{4}$ inch. Filed and set ready for use. Identified by the ATKINS "Blue Ends" and the Blue and Yellow Stick. Accompanied by illustrated fitting instructions.

Look for the "Blue Ends" as the sign of a good saw.

Lengths, feet	5, 5 $\frac{1}{2}$, 6, 6 $\frac{1}{2}$
Weights each, pounds.....	4, 4 $\frac{3}{4}$, 5 $\frac{1}{2}$, 6 $\frac{1}{4}$

Turn to pages 29 and 30 for illustrated descriptions of the handles best adapted for ATKINS No. 77 "Blue End" Cross Cut Saw.



This is an actual size tooth section of ATKINS new SILVER STEEL, SEGMENT GROUND Cross Cut Saw No. 77. Two-cutter pattern. Extra sharp teeth are set ready for use. Raker gullets are exceptionally roomy to discharge kerf rapidly. Extra strength at base of teeth and rakers, to stand hard sawing.

ATKINS SILVER STEEL SAWS

ATKINS NEW SILVER STEEL "BLUE END" CROSS CUT SAW NO. 9



THE new No. 9 Cross Cut Saw with the "Blue Ends" is made of SILVER STEEL—the best saw steel made. This is a *better* cross cut saw! Shape, width and thickness of blade is especially designed for medium and small timber, soft, hard or frozen. Tempered to hold keen, lasting edge, but tough enough to stand setting and raker swaging. Forester pattern teeth are of the proper shape and spacing for the work intended. The blade is straight and true, and does not pinch. SEGMENT GROUND 14 x 18 x 16 gauge to provide a uniform cutting edge and gradual taper from tooth edge to back throughout the entire length of the saw; this insures easy running and *no bind*. A perfect tool for men who earn a living cutting timber! Filed and set ready for use. This saw is accompanied by illustrated fitting instructions. Look for the "Blue Ends" and the Blue and Yellow stick.

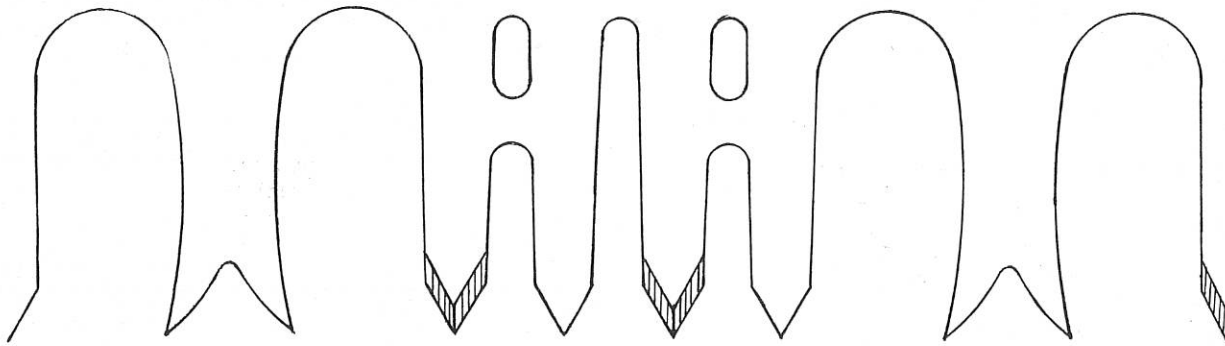
Made in lengths, feet.....4½, 5, 5½, 6

Other lengths made upon request.

Weight.....4½ feet, 4 pounds; 5 feet, 4½ pounds; 5½ feet, 4½ pounds; 6 feet, 5½ pounds

Handles most generally used on Atkins New No. 9 Cross Cut Saw will be found on pages 29 and 30. Atkins Cross Cut handles have no superior. Quality of material and workmanship is unexcelled.

ATKINS SILVER STEEL SAWS



Actual size tooth section of Atkins New No. 9 SILVER STEEL "Blue End" Segment Ground Saw with Forester pattern teeth. Made with deep and wide raker teeth and gullets. Has four cutting teeth, in back section, braces making the teeth especially strong. Note the length of the bevel on cutting and raker teeth. Blade is 14 gauge on tooth edge—18 gauge on back at center—16 gauge on back at ends.

ATKINS SILVER STEEL SAW No. 4

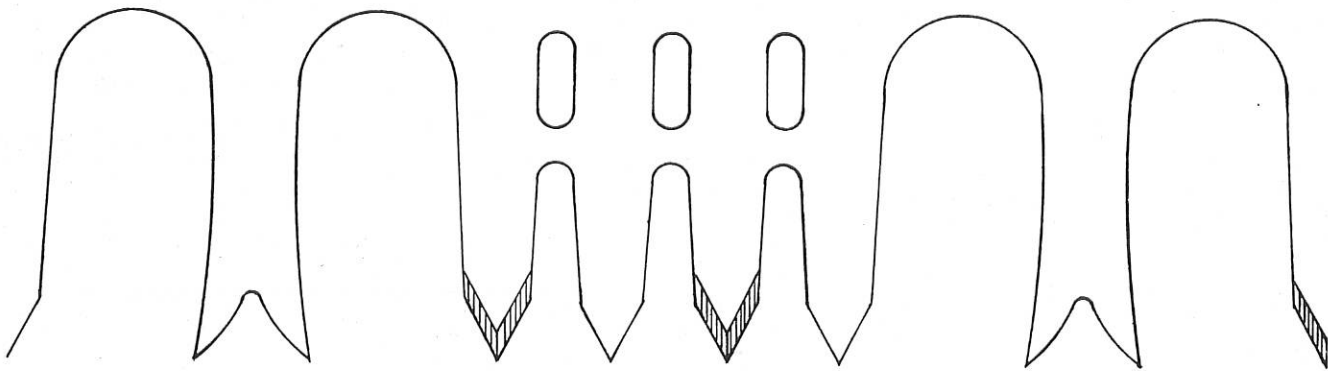


ATKINS No. 4 Cross Cut Saw is one of the most popular on the market today, especially designed for cutting Yellow Pine, Hardwoods, and resinous knotty timber. Made of genuine SILVER STEEL, Segment Ground, and has perfection pattern teeth, with four cutting teeth and raker. Gullets are smooth which enables the saw to cut faster, and eliminates choking in the cut. The blade is highly polished and etched "ATKINS SILVER STEEL." The blade is $3\frac{1}{4}$ " wide at the ends and $5\frac{3}{4}$ " wide at the center on six foot lengths. Other lengths have widths in proportion. Straight back. 14x20x16 gauge. Narrow breast requiring a straight stroke. The easy running quality of this saw is secured through the scientific principle with which the cutting teeth are designed. This saw will cut faster and hold its sharp cutting edge longer than any other saw of similar design. *Segment Grinding* enables the saw to run smooth and easy with very little set.

Actual size section of the No. 4 Cross Cut Saw Teeth illustrated on page 15. This shows the correct bevel for this style tooth. Rakers not swaged.

Made in lengths.....5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, 7, $7\frac{1}{2}$, 8 feet
 Weight5 feet, $4\frac{1}{2}$ pounds; $5\frac{1}{2}$ feet, $5\frac{1}{4}$ pounds; 6 feet, 6 pounds

The style handles recommended for use on this saw are illustrated on pages 29 and 30. The superior quality of Atkins Cross Cut handles is produced by scientific method of manufacture.



This is an actual size section of teeth and rakers of Atkins SILVER STEEL Segment Ground Cross Cut Saw No. 4. Perfection pattern teeth with deep and wide raker gullets. Four cutting teeth to section, perforated and three braces strengthening the teeth, keeping them in line and free from springing. Rakers and teeth are extra strong. The blade is 14 gauge on tooth edge—20 gauge on back at center—16 gauge on ends at back.

—ATKINS SILVER STEEL SAWS—

ATKINS SILVER STEEL SAW No. 5



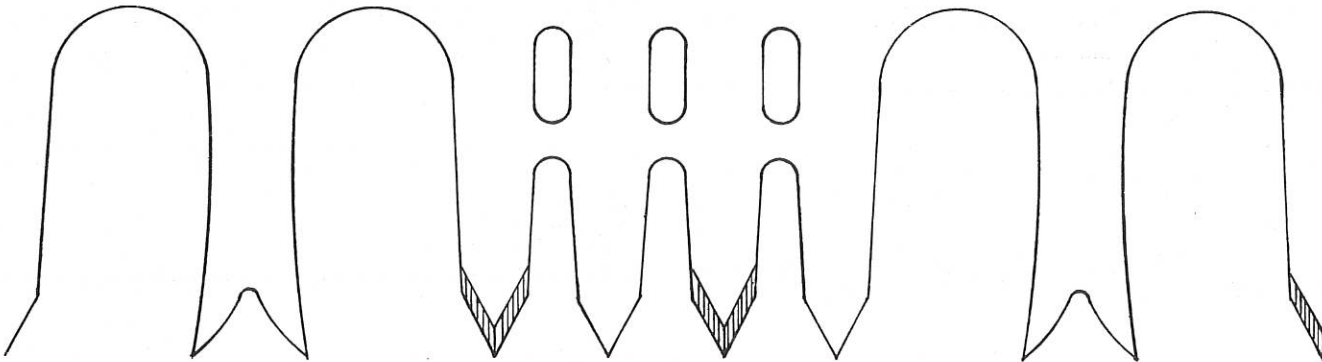
ATKINS No. 5 Perfection Cross Cut Saw is another very popular style pattern especially adapted for cutting hard and soft wood. Blade made of genuine SILVER STEEL, the finest material ever used in saw blades, and equal in quality, yet tougher than steel found in extra fine razors. Accurately tempered by Atkins exclusive process whereby the steel is uniformly hard, stiff, and tough, but not brittle. *Segment Ground*, which enables the saw to run fast, free, and easy. Takes extra sharp keen edge and stays sharp exceedingly long time. *Segment Grinding* gives ample clearance in the cut without the use of excessive set. Has four cutting teeth and raker, large roomy gullets for rapidly clearing the kerf of saw dust. Blade $3\frac{1}{8}$ " wide at ends and 7" wide at center in 6 foot lengths. Other lengths have widths in proportion. 14x20x16 gauge, straight back. Actual size section of the teeth shown on page 17 illustrating the correct bevel. Rakers not swaged.

Made in lengths feet..... $4\frac{1}{2}$, 5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, 7, $7\frac{1}{2}$, 8

Weights, each5 feet, 5 pounds; $5\frac{1}{2}$ feet, 5 $\frac{1}{2}$ pounds; 6 feet, 6 $\frac{1}{2}$ pounds

The handles most generally used on Atkins No. 5 Cross Cut Saw are illustrated on pages 29 and 30. These handles are of extra high quality, and the best on the market. Designed to fit the hand perfectly.

—ATKINS SILVER STEEL SAWS—



Actual size section of Atkins SILVER STEEL Segment Ground perfection pattern Cross Cut Saw No. 5. This saw has large roomy gullets. Four cutting teeth to a section, perforated, and strengthened by the braces. Teeth are wide to eliminate the danger of breaking. Note particularly the style of raker teeth. Blade is 14 gauge on tooth edge—20 gauge on back at center—16 gauge on back at ends.

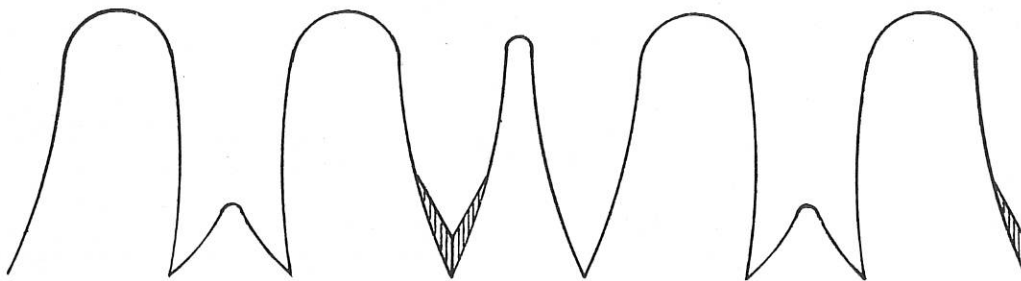
ATKINS SILVER STEEL SAW No. 6



ATKINS Cross Cut Saw No. 6 is the most popular saw made for cutting hard woods. It is principally used throughout the north-west. Made of SILVER STEEL, perfectly tempered and tensioned to assure smooth cutting. New style cutting teeth with deep roomy gullets and wide rakers. Scientifically ground by ATKINS exclusive SEGMENT GRINDING process to eliminate choking and binding. This saw holds a hard, tough temper without being brittle. Requires a minimum of filing. Blade is $3\frac{1}{4}$ -inch wide at ends and 6-inch wide at center on 6-foot length. Other lengths in proportion. Ground 14 gauge on toothed edge, 17 gauge on ends at back and 20 gauge on center at back.

Lengths, feet5, $5\frac{1}{2}$, 6, 8
 Weight each, pounds..... $4\frac{1}{2}$, 5, 6

Turn to pages 29 and 30 for illustrated description of the handles best adapted for ATKINS SILVER STEEL Cross Cut Saw No. 6.



This is an actual size tooth section of ATKINS Cross Cut Saw No. 6. Note the extra deep and wide raker gullets. Has two new style cutting teeth to each section. Long round bevel for added strength. Depth of raker gullet $1\frac{1}{2}$ inch; width of raker gullet widest place $1\frac{1}{8}$ inch; depth of tooth gullet $1\frac{1}{8}$ inch; width tooth gullet widest place $\frac{7}{16}$ inch.

ATKINS SILVER STEEL SAWS

ATKINS SILVER STEEL SAW No. 553



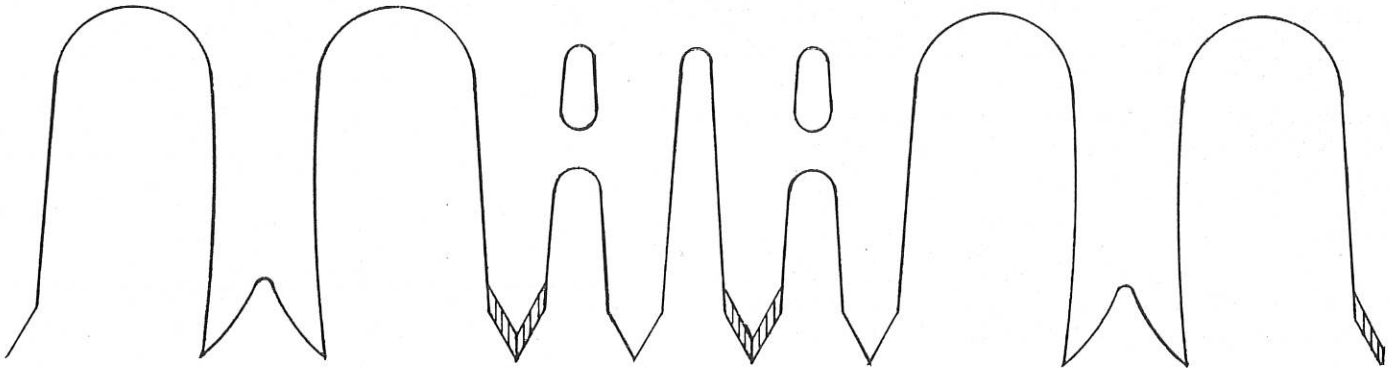
A VERY popular saw with expert timber cutters. It is especially adapted for cutting hard wood such as Yellow Pine, and resinous knotty timber. The blade is made of genuine SILVER STEEL, Atkins exclusive formula. SILVER STEEL will take an exceptionally sharp keen cutting edge and retain it for an unusually long time. The blade is accurately hardened and tempered by Atkins secret process in special furnaces. The blades are uniformly hard, stiff, and tough, but not brittle. The saw is *Segment Ground*, being thinnest at the center of the back and of equal thickness along the entire tooth edge, (See illustration Page 7). This enables the saw to run free and easy, has ample clearance with very little set. Has four cutting teeth and raker, extra large gullets. No danger of the saw binding in the cut. The blade is $3\frac{1}{8}$ " wide at ends and $5\frac{3}{4}$ " wide at the center in the 6 foot length. Other lengths in proportion. 14x19x16 gauge. This saw carries Atkins guarantee. On page 21 is an actual size section of the No. 553 teeth showing correct bevel and rakers not swaged.

Made in lengths, feet.....5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, 7

Weights5 feet, $4\frac{1}{4}$ pounds; $5\frac{1}{2}$ feet, 5 pounds; 6 feet, $5\frac{3}{4}$ pounds

The handles recommended for the No. 553 Cross Cut Saw are illustrated on pages 29 and 30. The style and shape of these handles fit the curve of the hand perfectly, and make sawing a pleasure. Quality, material, workmanship, and appearance constitute the superiority of Atkins products.

ATKINS SILVER STEEL SAWS



Actual size of Atkins SILVER STEEL Segment Ground Cross Cut Saw No. 553. Teeth are similar to the No. 9 saw with the exception of wider and more tapered. Four teeth to the section. Center tooth gullet wide and deep. Has two braces, forming two pair teeth, in each section. Braces keep the teeth in line and free from springing. Extra wide, and deep polished raker gullets. Blade 14 gauge on tooth edge—19 gauge on center at back—16 gauge on back at ends.

ATKINS SILVER STEEL SAW No. 540

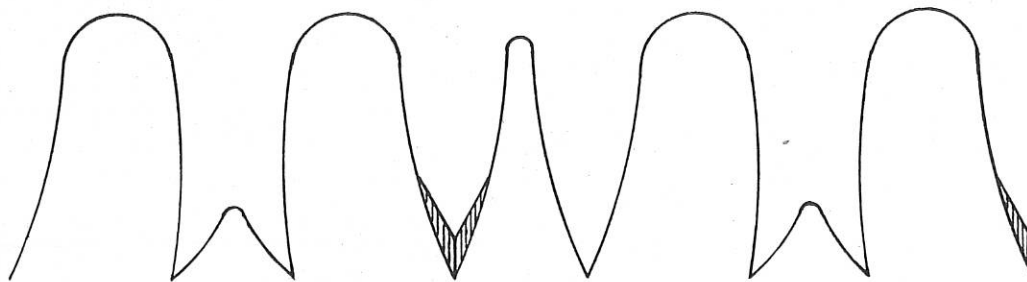


ATKINS No. 540 Cross Cut Saw is particularly recommended for cutting Oak, Cottonwood, and similar hard timber. Note the shape of the teeth, width of the gullets, and size and shape of the raker. (See illustration on page 23). The principal difference in the style of this saw is that the tooth and raker gullets are larger and deeper. This eliminates the possibilities of the saw choking in the cut. The easy running qualities found in this saw are like all other Atkins SILVER STEEL Segment Ground saws, secured through scientific design and manufacturing methods. Blade is made of genuine SILVER STEEL, highly polished, segment ground (Atkins exclusive grinding process). Blade is straight back. It has exceedingly hard, tough temper, yet not brittle, and will take a sharp keen cutting edge and hold it an exceptionally long time. This is one of the most popular style saws with two cutting teeth and raker. Blade is $3\frac{1}{8}$ " wide at ends and 7" wide at center on 6 foot length. Other lengths in proportion. 14x20x16 gauge. Blade plainly etched "ATKINS SILVER STEEL" for your protection. This saw is guaranteed. Accept no substitute. Actual size section of teeth shown on page 23.

Made in lengths, feet..... $4\frac{1}{2}$, 5, $5\frac{1}{2}$, 6, $6\frac{1}{2}$, 7, $7\frac{1}{2}$, 8

Weight5 feet, 5 pounds; $5\frac{1}{2}$ feet, $5\frac{1}{2}$ pounds; 6 feet, $6\frac{1}{2}$ pounds

The handles recommended for use on this saw are illustrated on pages 29 and 30. The quality material used on these handles makes them superior to any other brand. Perfectly shaped to fit the hand.



Actual size section of Atkins SILVER STEEL Segment Ground Saw No. 540. Two cutting teeth to each section. Deep roomy gullets with new style cutting teeth. Long round bevel, teeth and rakers are wide to give them added strength for general use. 14 gauge on tooth edge—20 gauge on back at center—16 gauge on back at ends.

ATKINS NEW VICTOR LINE ELECTRIC ALLOY CROSS CUT SAWS

These saws are made of extra high grade Electric Alloy Steel and are destined to be the most popular line made. Toothed with the well-known four perforated cutting teeth and raker and six end teeth. The deep and wide gullets prevent clogging in the cut. Accurately tempered throughout to insure maximum edge-holding qualities and durability. Given Atkins exclusive Taper Grinding, therefore requires very little set and will not chatter or bind. Fewer fittings are needed because they are tough and never brittle in filing and setting and the set and keen cutting edges stay in a long time. Beautifully polished and etched with the maker's name. An exceptionally high grade, medium priced line of saws.



The No. 224 is a narrow pattern saw, skew back. $3\frac{1}{2}$ inches wide at ends and 5 inches wide at center; ground 14 x 18 x 16 gauge. Filed sharp and set ready for use.

Lengthsfeet, 5, $5\frac{1}{2}$, 6
 Weightpounds, $3\frac{3}{4}$, $4\frac{1}{2}$, 5



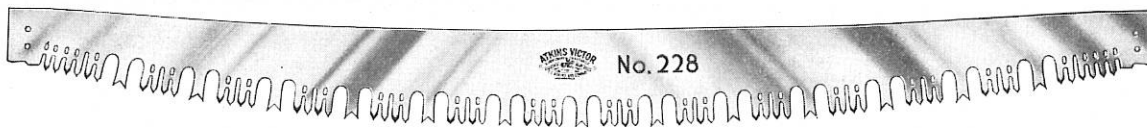
The No. 225 is a straight back wide pattern, particularly adapted for bucking. $3\frac{1}{2}$ inches wide at ends and 7 inches wide at center in the 6-foot length, and $3\frac{1}{4}$ inches wide at ends and $6\frac{3}{8}$ inches wide at center in the $5\frac{1}{2}$ -foot length. Ground 14 x 20 x 16 gauge. Filed sharp and set ready for use.

Lengthsfeet, 5, $5\frac{1}{2}$, 6
 Weightpounds, $4\frac{1}{2}$, $5\frac{1}{2}$, 6



The No. 226 is of the narrower pattern straight back, being $3\frac{1}{2}$ inches wide at the ends and $5\frac{1}{8}$ inches wide at center in the 6-foot length, and $3\frac{1}{4}$ inches wide at ends and $5\frac{1}{4}$ inches wide at center in the $5\frac{1}{2}$ -foot length. Ground 14 x 19 x 16 gauge. Filed sharp and set ready for use.

Lengthsfeet, 5, $5\frac{1}{2}$, 6
 Weightpounds, $4\frac{1}{2}$, $5\frac{3}{4}$, $5\frac{1}{2}$

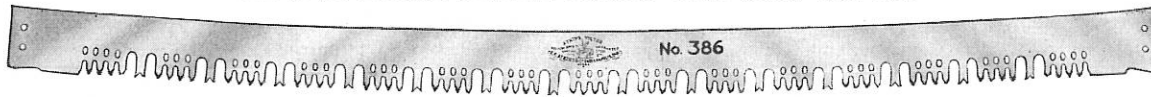


The No. 228 is skew back with heavy breast; $3\frac{1}{2}$ inches wide at ends and $5\frac{1}{4}$ inches wide at center in the 6-foot length, $3\frac{1}{2}$ inches wide at ends and $5\frac{1}{2}$ inches wide at center on the $5\frac{1}{2}$ -foot length. Ground 14 x 19 x 16 gauge. Filed sharp and set ready for use.

Lengthsfeet, 5, $5\frac{1}{2}$, 6
 Weightpounds, 4, $4\frac{3}{4}$, $5\frac{1}{2}$

—ATKINS SPECIAL STEEL SAWS—

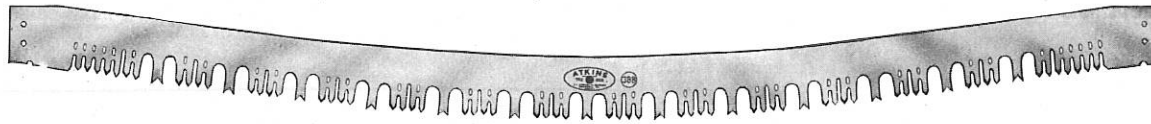
ATKINS SPECIAL STEEL CROSS CUT SAW No. 386



Atkins Hollow Back Victor No. 386 is the well known Lance Tooth Pattern. Made of Atkins high-grade Special Steel and fully warranted. It is $3\frac{1}{4}$ inches wide at ends and center in all lengths. Depth of raker gullet, $1\frac{1}{8}$ inch; width of raker gullet, $\frac{1}{8}$ inch; depth of tooth gullet, $1\frac{1}{8}$ inch; width of tooth gullet at widest point, $\frac{1}{8}$ inch. Ground flat.

Lengths	feet	5	$5\frac{1}{2}$	6	$6\frac{1}{2}$
Weight	pounds	$3\frac{1}{2}$	$3\frac{1}{8}$	$4\frac{1}{5}$	$4\frac{1}{8}$

ATKINS HOLLOW BACK FORESTER, SPECIAL STEEL CROSS CUT SAW No. 388



No. 388 Hollow Back, Forester, is made of special steel and ground thin back for easy clearance. Same width in all lengths. Filed and set ready for use. You get your moneys worth in each of these saws.

Lengths	feet	5	$5\frac{1}{2}$	6
Weight	pounds	$3\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$

—ATKINS SPECIAL STEEL SAWS—

ATKINS HOLLOW BACK, SPECIAL STEEL, CROSS CUT SAW No. 379



Atkins Hollow Back Tuttle Tooth No. 379 is $3\frac{1}{4}$ inches wide at ends and center in all lengths. Depth of raker gullet, 1 inch. Width of raker gullet, widest place, $\frac{1}{8}$ inch. Width of tooth gullet, widest place, $\frac{1}{8}$ inch. Ground flat. Made of Atkins Special Steel, accurately tempered; nicely finished.

Lengths	feet	5	$5\frac{1}{2}$	6
Weight, each	pounds	$3\frac{1}{2}$	$3\frac{3}{4}$	$4\frac{1}{4}$

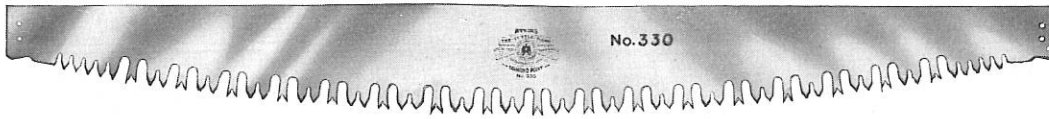
ATKINS HOLLOW BACK DIAMOND CROSS CUT SAW No. 384



No. 384 Hollow Back, Diamond Tooth Cross Cut Saw is $3\frac{1}{4}$ inches wide at ends and center in all lengths. Depth of raker gullet, $1\frac{1}{4}$ inches. Width of raker gullet, widest place, $\frac{1}{8}$ inches. Depth of tooth gullet, $1\frac{1}{4}$ inches. Width of tooth gullet, widest place, $1\frac{1}{8}$ inches. This saw is made of Atkins High Grade Special Steel, carefully tempered for satisfactory service. Ground flat.

Lengths	feet	5	$5\frac{1}{2}$	6	$6\frac{1}{2}$
Weight	pounds	$3\frac{1}{2}$	$3\frac{1}{8}$	$4\frac{1}{5}$	$4\frac{1}{8}$

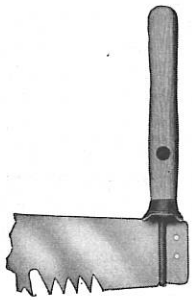
ATKINS SPECIAL STEEL CROSS CUT SAWS Nos. 330, 331, 332 and 332½



ATKINS Nos. 330, 331, 332 and 332½ Tuttle Tooth are the original high grade, medium priced Cross Cut Saws, the most popular medium priced cross cut saws on the market today. They are designed principally for general utility work, and made of Atkins high grade special steel. No. 330 is 14 x 16 gauge, thin back; No. 331 is 14 x 18 gauge, thin back; No. 332 is 14 x 19 gauge, thin back; No. 332½ is 14 x 20 gauge, thin back.

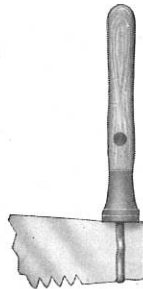
Lengths, feet 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8

—ATKINS CROSS CUT SAW HANDLES—



ATKINS No. 6 CROSS CUT HANDLE

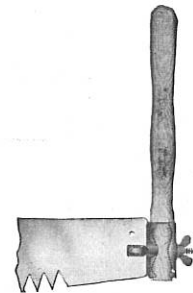
No. 6 Cross Cut Handle is 9½ inches long. Grey iron castings. Steel loop electric welded. Capacity 3 to 4¼ inches. This handle is made of specially selected air-dried hardwood stock. Packed 10 pairs in a carton weighing 13½ pounds.



ATKINS No. 8 CROSS CUT HANDLE

No. 8 Regular Pattern Handle is 10½ inches long. The loop is of extra strong high tensile strength steel, electric welded. Grey iron castings, socket blue, blade washer yellow. Malleable nuts. Packed 10 pairs in a carton weighing 19 pounds.

No. 8 Short Pattern. The short style of No. 8 Handle is the same as No. 8 Regular except that it is 7¾ inches long. Packed 10 pairs in a carton weighing 12 pounds.



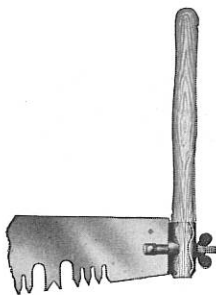
ATKINS No. 11 CROSS CUT HANDLE

This Handle is reversible, and is the Climax pattern. The face plate and washer is cast iron. A steel bolt with lock rivet feature prevents the rivet from becoming detached. The handle is easily adjusted. No. 11 is 13¾ inches long. Packed 10 pairs in a carton weighing 16½ lbs.

No. 11-B is the same except button shaped rear clamp washer. Packed 10 pairs in a carton weighing 16½ pounds.

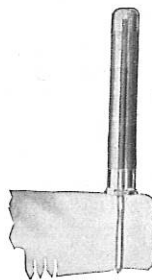
ATKINS CROSS CUT SAW HANDLES

**ATKINS No. 22
CROSS CUT
HANDLE**



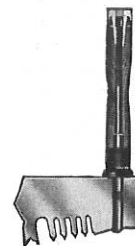
No. 22 Handle is 14 inches long, of selected, dried Hickory, sanded all over and treated to wear smooth. Has very hard surface. Fits the hand and is a pleasure to use. Strong, easily adjusted. Extra heavy malleable castings. Machine-made steel bolt, extra large. "Big Bolt" pattern. Sturdy construction. Large wings prevent castings from slipping. Blue trimmed. Packed 10 pairs in a carton weighing 20 pounds.

**ATKINS No. 28
CROSS CUT
HANDLE**



No. 28 Handle is 8 $\frac{1}{2}$ inches long. One of the most popular Handles on the market. Short and "stocky," yet has plenty of hand room. Made from selected, air-dried beech. Extra hard smooth surface, sanded, waxed and polished. Has even grip that you will like at once. High tensile strength. Malleable bolt extends and screws into malleable socket on end. Capacity: 4 inches. Exceedingly strong—will not break. Easy to adjust. Packed 10 pairs in a carton weighing 16 pounds.

**ATKINS No. 33
CROSS CUT
HANDLE**



Atkins solid steel machine bolt, quick detachable. Cross Cut Handle No. 33 is 7 $\frac{1}{2}$ inches long which is just the proper length for practical sawyers.

Specially selected hardwood, thoroughly seasoned and kiln dried. Sanded, waxed and polished. Designed to fit the hand perfectly. Heavy steel washer, specially heat-treated, heavy steel bolt, very hard and will not wear or break. Also one fibre washer between socket and steel washer which prevents the handle from becoming loose, yet releases quickly. Packed one pair in a sack; 10 pairs in a carton weighing 16 pounds.

ATKINS SILVER STEEL SAWS

ATKINS No. 389 CEDAR KING ONE-MAN CROSS CUT SAW



This is the finest one-man cross cut saw that has ever been manufactured. The blade is of Atkins high-grade SILVER STEEL. Teeth are similar to the No. 540 shown on page 23, except smaller. Has two cutting teeth and raker, deep gullets. Skew back taper ground. An easy grip handle, finely carved, varnished edges; is fastened to the blade by two nickel screws and a medallion. 15 x 19 x 17 gauge. Blade is 2 $\frac{7}{8}$ " wide at point; 7" wide at handle on 4 foot lengths. Other lengths have widths in proportion. Made in lengths of 2 $\frac{1}{2}$ to 5 feet inclusive. Furnished complete with supplementary handle.

ATKINS No. 654 ONE-MAN CROSS CUT SAW



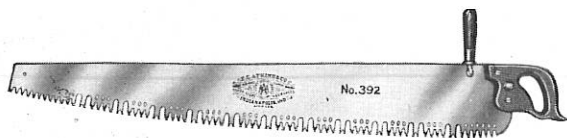
Atkins No. 654 One-Man Cross Cut Saw has a blade the same pattern as our Cedar King and it is taper ground. Lance teeth—perforated. Accurately tempered. Perfection shape rakers. It is made with extra large grip handle; carved and varnished on edge and can be used with heavy gloves for winter sawing. Attached to the saw with three nickel screws. The Saw is ground 15 gauge on tooth edge, 17 gauge on the back at the point and 19 gauge at the butt near the handle. Has 4 cutting teeth and raker, large deep gullets. 2 $\frac{3}{4}$ " wide at point, 7" wide at handle on 4 foot length. Widths of other lengths in proportion. Made in lengths from 2 $\frac{1}{2}$ to 5 feet, inclusive.

ATKINS ONE-MAN TUTTLE TOOTH SAW No. 390



This one-man cross cut saw is made of SPECIAL STEEL. Blade is taper ground 2 gauges thin back. It is finely finished to run free and easy. The handle is of hardwood and polished on the edge, and is an easy-grip pattern. The teeth are the same as found in the regular patterns of Tuttle Tooth. Made in lengths from 2½ feet to 6 feet inclusive.

ATKINS ONE-MAN CROSS CUT SAW No. 392



Atkins No. 392 is a straight back pattern SPECIAL STEEL one-man saw. The teeth are the same style as the regular Victor No. 225 Cross Cut Saw, only smaller. Blade is taper ground 2 gauges thin back. The handle is made of selected air-dried beech, Atkins easy grip pattern, nicely finished and varnished on edges. It may be obtained in lengths from 2½ to 6 feet inclusive.

ATKINS ONE-MAN CROSS CUT SAW HANDLES

ATKINS No. 2 ONE-MAN HANDLE



Made of carefully selected hardwood, air-dried, thoroughly seasoned. Varnished edge, well finished. Extra large roomy easy grip pattern. This handle is highly recommended. Does not include screws. Packed one dozen to a carton.

Weight: Per dozen, 6¾ pounds.

ATKINS No. 202 SUPPLEMENTARY ONE-MAN HANDLE



Thoroughly seasoned air-dried hardwood. New style steel bolt with rivet locking feature, preventing rivet from becoming detached. Used for converting one-man saw into a two-man cross cut saw, or enables the operator to saw with ease using both hands. Packed one dozen to a carton. Weight: per dozen, 4 pounds. Ferrule of high-grade steel, cast washer.

ATKINS No. 389 ONE-MAN HANDLE

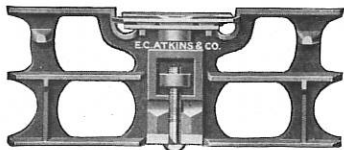


Made of air-dried selected hardwood, sanded. Has extra smooth edges. Large roomy grip. Handle carved, varnished on edge and polished. Screws not furnished with handle. Packed one dozen to a carton. Weight: per dozen, 8 pounds.

Saw Fitting Tools

This briefly describes four of our most popular patterns of Saw Tools. For further information on Saw Tools make request for our catalog.

ATKINS EXCELSIOR SAW TOOL No. 1

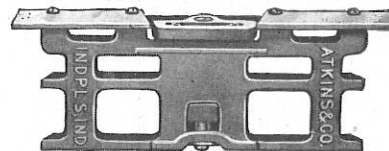


This tool may be used as a jointer, raker gauge or side file. An 8-inch flat file is fastened in the tool. The proper curve is obtained by the set screw slightly bending the file. The proper length of raker teeth may be gauged with the tool after jointing, and then, by readjusting the file, it may be used for side filing. There is also a tooth gauge with each set. This is made with long and short ends, which by reversing, indicates a correspondingly light or heavy set as desired.

The Atkins Improved Channeling Set Block completes the outfit. The block fastens to any flat surface, and the anvil having a slight declivity produces a concave on one side of the teeth, thus insuring a more durable set and relieving the friction on the side of the teeth.

This set requires very little adjustment, and is compact and easy to carry. Packed one set in a box.

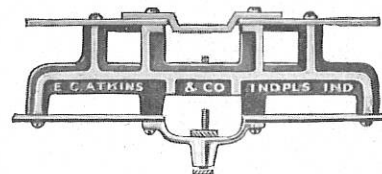
Atkins Patent Excelsior Saw Tool No. 5



It is used as a jointer, as a raker gauge and also as a side file.

An 8-inch file is fastened in the tool. The set screw slightly bends the file, giving it the proper curve. After jointing, the tool may also be used for gauging proper length of raker teeth, after which, by readjusting the file, it may be used for side filing. A tooth set gauge is also included. This is made with long and short ends, which by reversing, indicates a corresponding light or heavy set as desired.

Atkins "AAA" Saw Tool No. 9



This is an exceptionally good tool used for fitting cross cut saws in order to get the best results from them. The tool is 6 1/4 inches long by 2 inches wide and made of good, substantial material throughout. All parts are carefully fitted. It will last for years.

The Raker Gauge Plate is tempered file proof. The ends are beveled so that the depth of the gauge may be regulated by the use of the adjusting screws. This does away with paper packing, which has been used on all tools heretofore.

For jointing, fasten a flat file by set screw, and pass same lightly over the points of the teeth until filed to a uniform height.

For jointing the rakers, place the tool over the raker teeth. Turn adjusting screws until the rakers protrude the desired distance through the gauge, then file them off to a level with top of gauge. This will render all raker teeth exactly the same length.

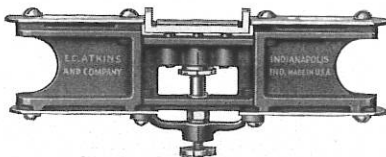
For gauging the rakers, reverse the tool and set gauge pin and tighten by use of thumbscrew, then pass the tool along toothed edge, thus measuring the proper length for each raker. This will be indicated when the point of the raker tooth touches the gauge pin.

The Bearing Plates are the only parts of the tool touching the teeth points and are made of SMOOTH, HARD TOOL STEEL, and will neither dull the points nor wear with use.

Note the little cut-out on each end of the top bar of tool. This is to gauge the set of the cutting teeth and does away with the necessity of carrying an extra tooth gauge. The shallow gauge is for set of teeth in hard wood and the deep gauge is for set of teeth in soft wood.

The tool being open in construction, it is possible to see all work plainly at all times.

No. 16 Saw Tool



No. 16 Saw Tool

No. 16 saw tool is the most accurate made for jointing rakers and gauging rakers. For adjustments see table below. Micrometer tooth set gauge completes the outfit. Made of the finest of material. This tool is recommended where accuracy is desired.

Packed one in a cardboard box, instructions, any quantity ordered. Tooth set gauge packed one in a cardboard box when sold separate.

When the No. 16 Saw Tool leaves the factory both the Raker Joiner and testing Pin are set on the line which means the adjustments are set at zero (or no raker drop.)

To adjust to desired raker drop, No. 1, loosen locking nuts (nuts with no lines marked on them) No. 2, turn hexagon head screw or nut the required amount as to the table below; No. 3, lock in position by turning locking nuts until clamped securely.

Wrench is furnished for use on nuts and screw head.

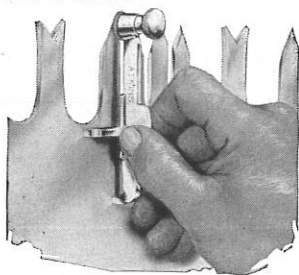
Adjusting

1/6 Turn.....	005"	Raker drop
2/6 Turn.....	010"	Raker drop
3/6 Turn.....	015" or $\frac{1}{16}$ "	Raker drop
4/6 Turn.....	020"	Raker drop
5/6 Turn.....	025"	Raker drop
1 Turn.....	031" or $\frac{1}{32}$ "	Raker drop
1 1/6 Turns.....	036"	Raker drop
1 2/6 Turns.....	041"	Raker drop
1 3/6 Turns.....	046" or $\frac{1}{4}$ "	Raker drop
1 4/6 Turns.....	051"	Raker drop
1 5/6 Turns.....	056"	Raker drop
2 Turns.....	062" or $\frac{1}{2}$ "	Raker drop

Atkins Micrometer Tooth Set Gauge

As Accurate as a Watch

Atkins Micrometer Tooth Set Gauge should be used by all first-class saw mechanics. Made of a high grade steel, nickel-plated, equipped with a hardened steel Micrometer thumb screw with graduations on it measuring from naught (0) to twenty-five one-thousandths (.025) part of an inch.



DIRECTIONS FOR USE

When set at zero all four legs of tool are the same length and No. 0 on barrel of thumb screw is directly opposite, or in line, with No. 0 on body of tool as shown in drawing.

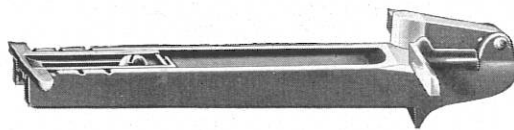
If 1-64 part of an inch, or .015 set in teeth is desired, turn knurled head thumb screw to left to .015, then lock with small knurled nut and set teeth accordingly.

The crowning feature of this tool is that you can get any amount of set with the one tool. Some filers carry several tooth set gauges ground differently, as they may want to cut several kinds of timber in the same day. After one becomes familiar with the required amount of set for each kind of wood it requires only a second to adjust the gauge from one extreme to the other.

This tool can be used for gauging the set of cross cuts and drag saws, also the set and swage of shingle, band and circular saws.

ATKINS SAW FITTING TOOLS

ATKINS CRITERION SAW SET No. 1



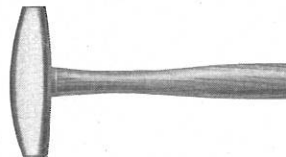
Atkins Criterion Saw Set is used in setting all kinds of cross cut, hand, wood and other small saws.

We recommend the use of a hammer set in preference to a lever set, on account of the ability to secure more uniform results, and there is less likelihood of breaking the teeth.

The Criterion Set has a die resting on the tooth which is struck by the hammer. A set screw on the opposite end makes the tool adjustable so that any desired degree of set may be secured. The pointed die makes the device adaptable to any size of tooth.

Made of the best refined malleable iron, lacquered a rich blue to prevent rusting. The die and anvil are drop forged from the very finest tool steel and are properly hardened and tempered to give excellent service. Packed in individual box.

Atkins No. 4 Setting Hammer

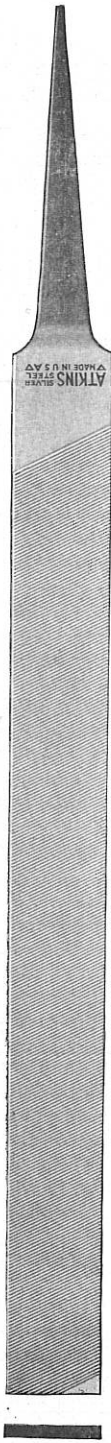


Atkins No. 4 Setting Hammer is made of the finest grade tool steel and accurately tempered. Extra high-grade Setting Hammer. Solid peen. Perfectly shaped and balanced for setting cross cut, drag and circular saws. Polished head. The thoroughly seasoned hardwood handle, sanded smooth, is securely fastened to the head by means of a special wedge arrangement. Will not slip. Packed in individual boxes. Weight each, 14 ounces.

Atkins No. 3 Setting Hammer



Atkins No. 3 Setting Hammer is made of special grade tool steel, drop forged. A very high-grade setting Hammer. Has slotted peen. Highly polished and finished with selected air-dried Hardwood Handle, sanded smooth and fastened to the head by a special wedge arrangement which prevents it from coming loose. Well balanced and the correct weight for setting purposes. Packed half dozen to a box.



SPECIAL CROSS CUT FILE Made in lengths 6" to 10" inclusive, expressly for filing Cross Cut Saws. Are regularly made for thumb rest when desired. The most popular file used in the logging camps for keeping Cross Cut Saws sharp and keen.

Approximate Sizes of Above File by Fractional Sizes and Decimal Equivalents

Length.....	6"	7"	8"	9"	10"
Frac. Sizes.....	5/8x7/64	25/32x9/64	13/16x5/32	29/32x1/16	1x3/16
Dec. Equiv.....	.620x.116	.715x.134	.810x.152	.905x.170	1.000x.187



GREAT AMERICAN CROSS CUT FILE Made in 6", 8", 9", 10" and 12" lengths. A wedge shape file that has been used for many years in filing Cross Cut Saws, and for which there is still quite a large demand.

Approximate Sizes of Above File by Fractional Sizes and Decimal Equivalents

Length.....	6"	8"	9"	10"	12"
Frac. Sizes.....	9/16x3/64	45/64x3/64	25/32x1/16	55/64x1/16	1-3/64x1/16
Dec. Equiv.....	.560x.040	.700x.050	.780x.055	.860x.060	1.040x.070

Saw Fitting

FOR BEST RESULTS

Instructions for Filing and Setting Cross Cut Saws

The best saw in the world, pulled by the best sawyer, cannot do efficient work unless the teeth are kept in proper shape to cut and rake out the sawdust. The best saw filer must have proper gauges and tools, or he cannot do his work accurately.

We must illustrate the fitting of saws by illustrating the use of proper saw-fitting tools. Fitting cross cut saws is based on a few well-known principles. With these principles in mind, slight variation must or can be made in the bevel of the teeth, shape of the teeth, angle of the cutting point, shape and length of the raking or clearing teeth to suit local requirements. These slight variations are made expedient by reason of the fact that it is necessary to adapt the saw for cutting in different kinds of wood; sometimes hardwood, sometimes soft or frozen logs, knotty logs, and logs that are full of pitch.

The principles involved in making the teeth of cross cut saws are as follows:

1. The cutting teeth constitute a series of knives adapted to sever all fibres of the wood. When these fibres are cut through they must be collected in the gullets of the teeth, or dust chambers, and carried out of the kerf, so as to enable the saw to freely start in on a new cut.

2. The clearing teeth constitute a series of rakers to free the kerf from the dust or shavings that are severed by the cutting teeth.

With these principles in mind we come to the preparation of the teeth for the work.

1. All cutting teeth must be the same length, so that each tooth will do its share of the cutting, and no more.

To make all teeth the same length place the saw in a vise, or, if the filing is to be done in the woods, where no vise is available, place the blade, teeth uppermost, in a notch in a convenient stump, pass a file carefully over the teeth, as shown in Figure 1, until all teeth touch the file. This can readily be determined by the bright, flat tops on the cutting teeth.

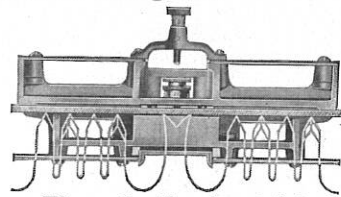


Figure 1—Showing Jointer

Care must be taken to hold the file squarely, so that the cutting on each side of the saw will be the same length. If the file is

allowed to pass over the teeth at an angle, one side of the saw will be longer than the other, and this will invariably make a saw run to the side which has the longest teeth, as this side cuts faster.

2. When all of the cutting teeth are even on top, the next operation should be to regulate the length of the rakers or clearing teeth. We advocate regulating the length of the rakers at this point, because the rakers should be adjusted by gauge, and any tool which is used

for this purpose would have a tendency to dull the sharp points of the cutting teeth if it were used after they had been finally finished.

This operation is one which requires the same accuracy and attention to details. Experience is the best teacher in determining the proper length of rakers, as compared to the length of the cutting teeth. It is essential for good cutting that the rakers should be some shorter than the cutting teeth—not less than 1/100 part of an inch, nor more than 1/64 of an inch. If the rakers are to be swaged, it is proper to leave them the same length as the cutting teeth and allow the swaging to shorten them sufficiently for good work. Unswaged rakers should be cut off accurately to gauge, as shown in Figure 2.

The saw teeth will now look like Figure 3.

3. The next operation consists of filing up the rakers to a keen, sharp edge, using care that their tops shall be square with the side of the blade.

It is necessary to point up the rakers in this manner, whether they are to be swaged or not. (Figure 1.)

4. After determining the shape you desire in the cutting teeth, proceed to shape them to suit you before starting to bevel. It is much better to preserve a uniform tooth formation, and to use that which is best adapted to the various kinds of wood, as can be seen in the different styles of teeth shown at the end of these instructions. Shaping of the teeth should be done at right angles to the teeth, always making square lines, not attempting to do any beveling until all teeth are formed. Carry the square shape up to the point of the teeth. It is important to square up the cutting edge of a cross cut saw from the same side of the teeth that you intend to do the beveling. The reason for this is that it is very difficult to handle a file on a thin cross cut saw absolutely square across the saw, without having it chatter more or less. In the effort to keep the file from chattering you will naturally lean the file slightly toward you at the handle end, which will form a slight bevel on the teeth.

5. You now have your teeth the right length and the correct shape, and can proceed to bevel. The amount of bevel required can be determined by your own experience, and by reference to cuts of various bevels shown at the end of these instructions. Care must be taken not to cut off the points of the teeth in beveling.

To make a flat, straight bevel, a full, straight stroke of the file is necessary, but if a rounded bevel is wanted to follow a round-tooth formation (Figures 14 and 15, page 43), it is necessary to roll the file, following the contour of the saw teeth.

File all cutting teeth to a sharp point.

Your cutting teeth should now be finished, and if you are using unswaged rakers your rakers are finished and the saw is ready to set. If you are using swaged rakers, you are now ready for the swaging process.

6. Swage the rakers with light blows of a light hammer, using care not to spread the point of the raker to a thickness exceeding that of the saw plate. This can be

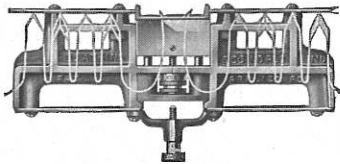


Figure 2—Cutting down rakers.

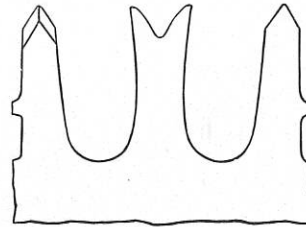


Figure 3

done by inclining your hammer slightly, as shown in Figure 4. This will give your raker teeth a formation as shown in Figure 10, Page 43.

An unswaged raker breaks up the fibres which are severed by the cutting teeth into short pieces which are more apt to pass by the side of the saw and cause the

saw to bind. Whereas, swaged rakers act as a plane on the bottom of the cut, going under the severed fibres and planing out the V-shaped chip left in the bottom cut. See Figure 5.

Your saw is now ready to set.

7. The amount of set necessary is determined by the kind of material to be cut. Perfect alignment is absolutely necessary. Therefore, always use the set gauge. The use of a set gauge is shown in Figure 6, Page 42.

The operation of setting can be accomplished in several ways. If filing is done in the woods, the saw can be set as shown in Figure 7, Page 42.

The point of the tooth should project about 1/4 inch over the apex of the setting block, and the setting should be done by means of a firm, sharp blow on the top, just at the place where it rests on the apex of the setting block. If too large set is imparted, reduce the set by hammering the tooth placed on the flat surface of the set-block. If too little set is imparted at the first blow, re-set the tooth as in the first operation, either using a little harder blow or allowing the tooth to project a little farther from the

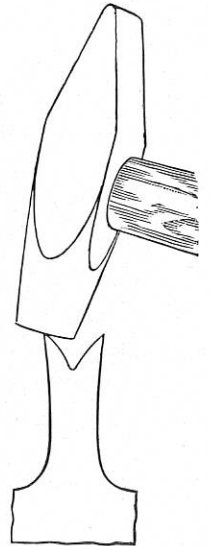


Figure 4

after setting, should be gauged for accuracy, as shown in the cut illustrating the use of a set gauge (Fig. 6). We submit on Page 43 a number of cuts for your consideration which show the principal forms of saw teeth, both cutting teeth and rakers, for different kinds of timber and different requirements.

You will note by carefully studying the different forms of teeth

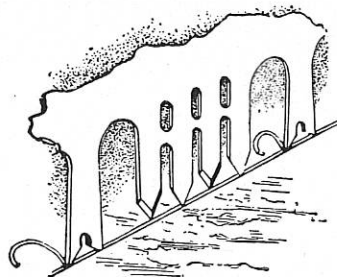


Figure 5

and the different beveling, that the same principle is involved in each case, but different methods are employed to cover special requirements.

In frozen timber, exceedingly hard wood, or wood that has many hard knots (See Figures 13, 14 and 15, Page 43), you will find that it is always better not to make the bevel too flat. Yet by following out the lines laid down in rounded-point beveling (Figs. 14, 15), you are able to secure a fast-cutting saw

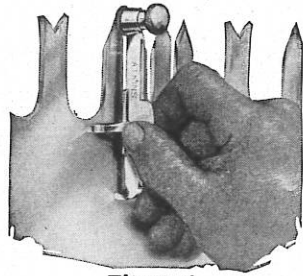


Figure 6

with plenty of bevel, without the danger of leaving the extreme point of the tooth too weak. In other words, a rounded-point beveling will leave more backing to the point of the tooth than a flat bevel, and still leave the saw in shape to do fast cutting. It is considerably more work, however, to file a saw with a rounded point than a saw with a straight, flat bevel.

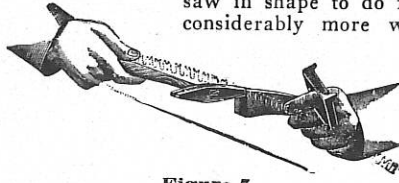


Figure 7

If your saw has a tendency to lose its points, we would advocate reducing your bevel or perhaps increasing the angle of your cutting point. In hard hemlock knots the points have a tendency to bend. Very often with a little less bevel your saw will stay sharpened twice as long, and will cut just as fast, and preserve its points. We would always advocate filing the saw with as much bevel as possible consistent with leaving enough backing to the point of the teeth so that the point will neither bend nor break off in striking small knots in such timber as hemlock or hard woods.

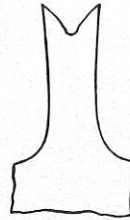
There are many who advocate beveling the teeth clear down to the gullet, but such beveling necessitates extra filing, which is unnecessary, as the point of the teeth is the part of the saw which does the cutting. Each stroke of the saw only allows the point of the teeth to sink as far into the wood as the wedge-shaped point of the bevel will allow it. This is governed to a certain extent by the action of the rakers, which are clearing the cut ahead of the cutting teeth, but as a rule one stroke of the cutting tooth of a cross cut saw will carry each tooth only down to a point where the bevel causes the tooth to wedge into the cut.

Always set your saw wide enough so that it cuts freely, but do not set it wide enough to chatter, as every 1/1000 part of an inch means an excess of power required to pull the saw, as the cut is just that much wider.

In frozen timber, properly ground saws ought to work with very little set. In hard woods they require very little; in pitchy pine woods the saws usually require a little more set, but if they are kept well cleaned, a saw set for hard wood ought to cut in yellow pine.

We sincerely hope that these instructions will be of service to you in carrying on your work, and if at any time we can be of assistance to you, we are at your service.

For Figures Nos. 9 to 19, inclusive, see Page 43.



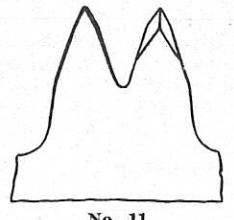
No. 9

Raker without Swage.



No. 10

Swaged Rakers.



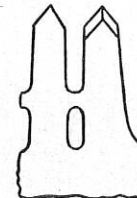
No. 11

Diamond Point Bevel, considered the best point holding method of filing and easy to maintain in good order.



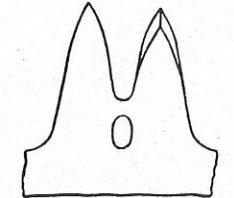
No. 12

Bevel for common tooth, where there are no Rakers, each tooth doing its share of the clearing.



No. 13

Bevel suitable for knots and frozen timber, where extra strength is needed in the extreme point. Not adapted for fast sawing.



No. 14

Round point bevel, for fast, smooth sawing where strength of point must be considered as in the case of pine knots.



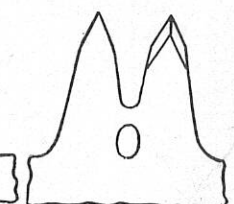
No. 15

Bevel for fast, smooth sawing and where strength in the teeth must be considered.



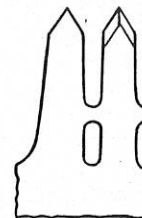
No. 16

Bevel for ordinary work, where skill is not essential. A poor method and a poor tooth. Point too delicate to stand hard usage.



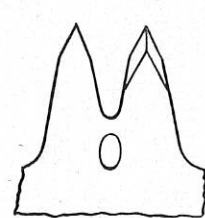
No. 17

Flat, thin bevel, for soft wood and fast sawing, where strength in points is not particularly essential.



No. 18

Bevel adapted for general work.



No. 19

Bevel suitable for general work.