

# TEXT BOOK

*of*

## ATKINS SILVER STEEL SAWS

*HAND RIP AND PANEL*

HOW to CARE *for and* USE THEM  
*for* MANUAL TRAINING SCHOOLS

**MECHANICS**

**FARMERS**

*and all Users of*

**SAWS**





6,

# TEXT BOOK

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# ATKINS *SILVER* STEEL SAWS

FOR MANUAL TRAINING  
SCHOOLS

*How to Care For and Use Them*



*Published by*

**E. C. Atkins & Co., Inc.**

Established 1857

*The Silver Steel Saw People*

Home Office and Factory, INDIANAPOLIS, IND.

Canadian Factory, Hamilton, Ont.

Machine Knife Factory, Lancaster, N. Y.

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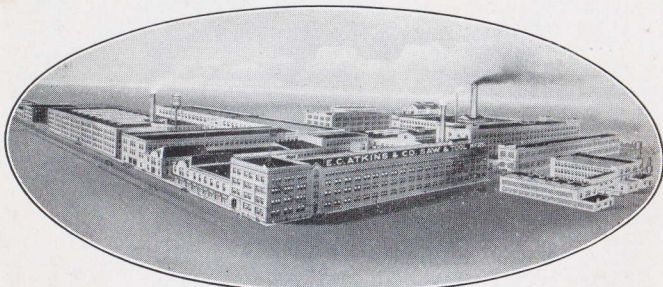
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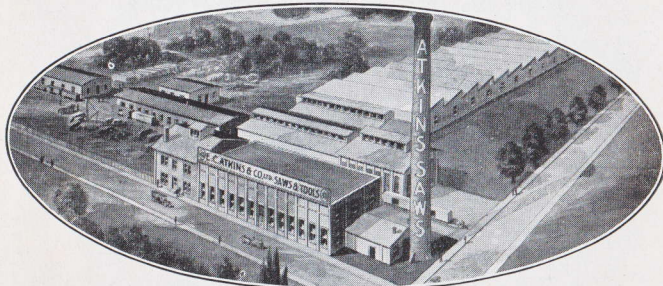
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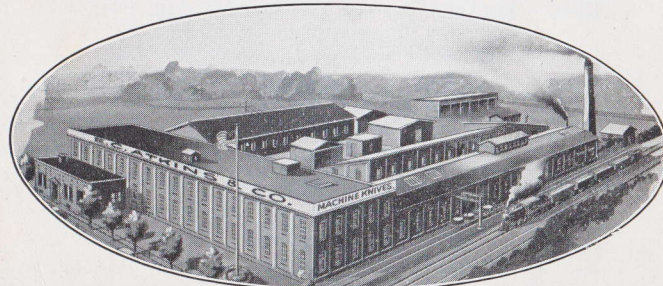
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**Our Main Factory at Indianapolis, U. S. A., covering many acres,  
Where "Silver Steel" Saws and Tools are made.**



**Our Canadian Factory, Hamilton, Ont., which serves our customers  
with "Silver Steel" Saws and Knives.**



**Atkins Machine Knife Factory at Lancaster, N. Y., where we  
manufacture Machine Knives for every use.**

## *To the Manual Training Instructor*

For the great interest manifested in teaching the boys of today, the men of tomorrow, the essentials of industrial education and their untiring efforts to help produce better mechanics, we dedicate this volume.

## **Atkins Quality Products**

**T**HE Atkins family began the manufacture of saws in Indianapolis in 1857. Before that period they were prominently identified in the metal industry for over 300 years. From one generation to another, they have actually followed the growth of the saw from its most primitive type to its present state of development. They have been students as well as inventors. Their slogan has ever been "ATKINS ALWAYS AHEAD." This means more than a mere catch phrase. It means that the policy of the Atkins Company has been to maintain the highest standard in all things pertaining to the manufacture of the very finest Saws, Saw Tools, Saw Specialties and Machine Knives. It also means that cost of manufacture is not to be considered where it will add one whit to the result-giving qualities of the products. It is, therefore, with a feeling of pride that we ask instructors and other saw users to demand and insist upon their hardware dealers supplying them with saws and kindred products made by Atkins.

**A PERFECT SAW FOR EVERY PURPOSE**

*Three*

# ATKINS TEXT BOOK

## LESSON I



"THE 400" SKEW BACK—REGULAR PATTERN

The saw is the most important tool in the carpenter's kit. It is used more frequently than any other, and it is at least one tool for which others cannot be substituted.

Through the use of the proper saw, it is possible to greatly reduce other operations, for if the saw has done its work properly, has cut true to the line and has made a smooth cut, unnecessary planing, trimming and other operations are avoided.

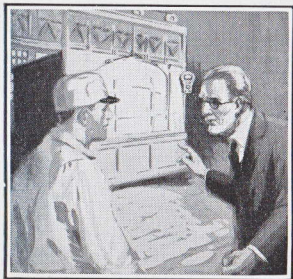
It is of the utmost importance, therefore, that the finest and most scientifically constructed saw should be used, and that the proper shape and size of teeth should be employed, and that the saw be properly fitted so as to perform the best work.

## MATERIAL

The material used in the high grade saw is of primary and vital importance. It should be of extremely high quality, in order to take a hard, tough temper, so that the teeth may not only receive a sharp, keen cutting edge, but that this edge may be given with the least exertion and effort, and that the steel should be hard enough to retain the sharp cutting points.

The blade must be given uniform temper throughout, so that there are no soft nor hard spots, else certain teeth would become dull more quickly than others, and the saw would soon be wasting the energy of the user unnecessarily.

In order to insure absolute uniformity and the proper temper, E. C. Atkins & Co., the Silver Steel Saw People, analyze their steel, and the exact heat treatment is prescribed by the chemist, based upon his analysis.



From long experience, the Company knows the degree of heat to which the blade should be subjected, the length of time that it should be subjected to this heat, and the proper oil baths to which it should be subjected, in order to produce blades not only uniform throughout, but that the temper of all blades may be rendered similar.

The heat treatment is applied through the use of patented furnaces and appliances, whereby the proper degree of heat and all the conditions of tempering are reduced to a fixed basis.

Formerly these processes were in charge of a so-called expert, who depended on his eye for a guide, and when he supposed the oven had reached a certain shade of cherry red the blades would be placed therein, and remain, and as a consequence there were frequent variations.

Should he have been out late the night before, he would probably "see a little green" the next morning, and as a consequence there was a likelihood of variation in the temper of his saws. It is a

physical impossibility for the human eye to attain absolute accuracy in identifying certain shades.

Through the use of the analysis mentioned, and of the scientific mechanical appliances, there is no room for a possibility of variation, and the Atkins blades can therefore be considered absolutely uniform in temper.

Again, the steel used being of the very finest quality, and actually as fine as razor steel, is susceptible of receiving an extremely high, tough temper, which would not be possible with the steel of inferior quality, or where such unusual care had not been taken in all its various processes.

## QUESTIONS

- 1—What is the most important tool in the carpenter's kit?
- 2—Why the saw?
- 3—What four points should be considered in the selection of a saw which is to perform the best work?
- 4—What is the most important feature in the production of a fine saw?
- 5—Why is it necessary that a saw be carefully tempered?
- 6—How were saw blades previously tempered?
- 7—How are Atkins Silver Steel Saws tempered?
- 8—Is it possible to detect proper temper from the outward appearance of the blade?

Answer—NO.

- 9—How may this point be tested?

Answer—Through actual use.

- 10—How, then, may you be assured of procuring a saw with the proper temper?

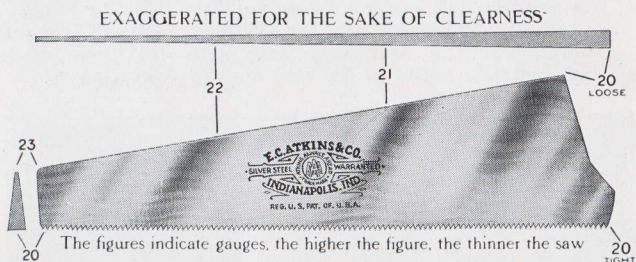
Answer—By buying a saw covered with the guarantee of the maker.



## LESSON II GRINDING

A fine Hand Saw must have proper clearance. We mean by this that the teeth should cut out a kerf sufficiently wide so that the blade may drop easily into the cut without binding or without the sides of the blade coming in contact with the wood.

If the blade sticks in the cut, it is an indication that it is not running smoothly, and with a saw which has not sufficient clearance we always find this binding, which twists the blade out of proper shape and ruins its smooth, easy cutting qualities. When a saw binds it is the fault of the saw.



Formerly this clearance was secured by setting each alternate tooth to the right and left, but this caused the blade to push hard as the teeth were obliged to tear their way through the fibres of the wood.

E. C. Atkins & Company have conceived the process of "taper" grinding, and secure a large part of their clearance by grinding away the blade in such a manner that it is of the same thickness along the entire toothed edge, and gradually tapers throughout the blade toward the point on the back, which is the thinnest part. This makes sawing easy.

In designating the thickness of a saw, it is not customary to use inches or fractions of inches, but thickness of saws is measured in gauges, one gauge being equivalent to .300 of an inch; thus a saw

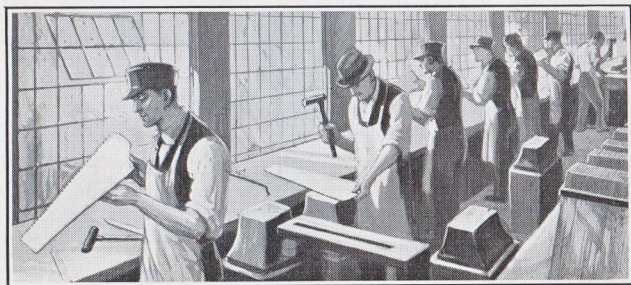
which measured 20 gauge, if measured in inches would be equivalent to .035 of an inch.

By reference to the Atkins Demonstrating saw you will note the exact manner in which Atkins saws are ground. Also see cut of grinding on page 7, Lesson 2.

The point gradually tapers from 20 gauge to 23 gauge, and the back also tapers from 20 gauge to 23 gauge, as indicated on the blade. Remember that the lower the number, the thicker the steel.

Although this feature is not strongly apparent to the eye, the thickness of the blade may be easily measured by using a regular standard saw gauge.

An Atkins saw is thus ground on the same principle as an inverted wedge, and will cut a kerf sufficiently wide to permit it to drop into the cut with very little set, which permits of fast cutting. This accounts for the extremely easy running qualities of an Atkins saw and has much to do with its rapid cutting.



## SMITHING

No blade will run free and easy and cut true to the line unless it is perfectly smithed.

This process consists of hammering the blade with a hammer on an anvil and removing every evidence of even the slightest twist in the blade or any unevenness whatever.

It requires the greatest skill and is an operation in which saw smiths serve a long apprenticeship before they are permitted to do this work.

It is not apparent to the eye, and is frequently omitted in the manufacture of some makes of saws in order to save expense.

We wish, however, to repeat that no saw will cut true to the line, nor will it be free from a likelihood of binding or buckling unless it is properly smithed. Atkins saws are smithed.

### FINISH

While a high polish on a Hand Saw may not be required as an essential, still it is a matter of utmost importance, because no saw can be perfect unless it is capable of receiving the very highest polish.

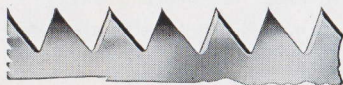
This is the best means of detecting an improperly made saw, for any slight defect, either in grinding or smithing of a saw, will be emphasized after the saw has been polished.

A high polish is also an indication of the finest quality of steel, for none but the finest steel will take an extremely high mirror finish such as given to Atkins saws.

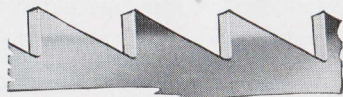
### QUESTIONS

- 1—What feature must a Hand Saw possess in order to run free and easy?
- 2—What process is now most successfully used in order to accomplish this purpose?
- 3—Describe the process of "Taper Grinding."
- 4—What is the thickness of gauge in fractions of an inch?
- 5—Of what does smithing consist?
- 6—What does this process accomplish for the saw?
- 7—Is the finish of a Hand Saw an indication of quality? If so, why?

LESSON III  
TEETH



Hand Saw, Teeth Properly  
Filed and Set.



Rip Saw, Teeth Properly Fitted.

There is quite a difference in the shape of teeth used for ripping from those used for cutting crossways of the grain.

By referring to the demonstrating saw and the above illustrations, you will note that a Rip Saw tooth is filed at right angles with the blade on the front of a tooth, and the back of the tooth is given a very decided angle.

The Cut-off tooth is much more V shaped, although not an exact V, as the angle of the tooth points slightly toward the point of the saw. It would be well to have several of your students indicate on the blackboard with the chalk the shape of a Rip tooth as compared with a Cut-off.

The proper fitting of a Hand Saw is a comparatively simple proposition after it has been mastered, but many of the complaints that are made affecting saws are due to improper fitting.

In order to demonstrate this fact, we have indicated along the toothed edge of the demonstration saw a number of common errors into which the novice is apt to fall.

We show on the point of the saw the teeth without set, and in the next section the proper manner of setting an eight-point Rip Saw tooth.

You will note that these teeth are set alternately to the right and left, but that only the extreme point of the tooth has been slightly twisted.

One of the most common defects has been shown in the next section, where we show a point that has been overset, or the teeth have been pushed over too far to the right and left.

Under No. 5, we see another glaring defect, which we have called a "blade set." You will see here illustrated teeth which have been set too far down into the blade. This saw will chatter, bind, and do everything that a saw should not do, simply on account of the fact that the teeth have been improperly fitted.

In the next section, we show some of the errors which occur in filing saw teeth, as, for instance, we show a saw, under No. 11, which has been filed with an improper bevel. This bevel is too straight across and a saw so filed will not properly perform its work.

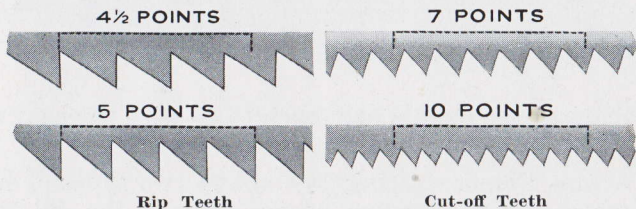
## TOOLS FOR MANUAL TRAINING SCHOOLS

Under No. 9, we give a demonstration of straight-across filing, which is used in metal cutting saws, and not a practical or popular tooth for cutting wood.

Under No. 7, we show a very common error, viz: in filing the saw teeth of improper length; each tooth is of a different length, and thus a saw so filed cannot and will not do proper work.

We have used in our demonstration the word "points" to designate the different sizes of teeth.

The term "points" refers to the number of points per inch, as for instance, there are 7 points to the inch in a 7-point Hand Saw; 9 points to the inch in a 9-point Hand Saw; and 11 points to the inch in an 11-point Hand Saw, etc. Please be particular to get these



ideas into your mind clearly, as there is danger of your inferring that "points" means that there are either 7, 9 or 11 entire teeth to the inch. This is not true, as shown in above illustration, as there is always **one less tooth per inch than points.**

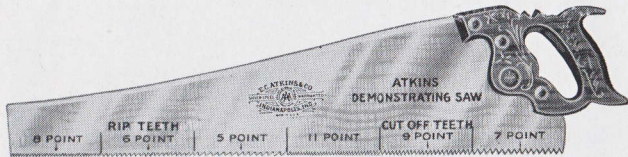
Hand Saws are made usually in various sizes, ranging from 5 to 12 points; and Rip Saws from 3 1/2 to 7 points.

## QUESTIONS

- 1—What is the difference in shape between a saw tooth used for ripping and one used for cutting crossways of the grain?
- 2—Indicate this on the blackboard.
- 3—Give a description of the proper manner of setting a saw tooth.
- 4—Give three common defects in setting teeth.
- 5—Give two common errors in filing teeth.
- 6—How are Metal Saws toothed?
- 7—What does the word "point" as referring to Hand Saws indicate?
- 8—How many teeth to the inch in a 9-point Hand Saw?
- 9—What is the usual number of points for Rip Saws?
- 10—What is the usual number of points for saws for Cross Cutting?

LESSON IV

ATKINS DEMONSTRATING SAW



The shape of the handle has much to do with the easy and accurate cutting qualities of the saw.

The Atkins Demonstrating Saw shows two types of handles which are in common usage, namely, the old style Straight Across pattern, which may be identified by the plain, smooth finish, no carving or embossing, and the Atkins Improved Perfection Handle, which is embossed with a Rose Design, and beautifully finished. On the No. 400-401 saws, which are equipped with the Improved Perfection Handle, the handles are not embossed, but are hand rubbed piano finish, Rosewood.

The saw cuts on the downward stroke, hence the power which directs the saw blade should be, as near as possible, on a perfect line from the elbow, through the wrist, to the cutting teeth.

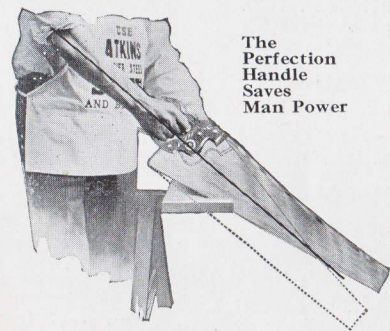
By fastening the Improved Perfection Handle on the Demonstrating Saw, and grasping the handle in the usual and proper manner, you will note that every ounce of

power is directed onto the cutting edge. See illustration below.

Now, use the old style Straight Across Handle, and apply the same test, and you will find that a straight line from the elbow through the wrist and through the saw blade will come out on the back of the blade.

This proves that the operator, in order to secure the same pressure on the saw teeth, must exert a downward pressure of the wrist, which is not only unnecessary, but is apt to make his saw run untrue.

Another advantage of the Improved Perfection Handle lies in the fact that the operator secures the advantages of the use of the entire saw blade.



Many of the older mechanics have become accustomed to the "hang" of the old style handle and prefer it to any other pattern, just as an overhead plasterer might find it more convenient to work on a ceiling than a side wall.

Again, the use of the Improved Perfection Handle, throwing, as it does, all the pressure exerted onto the cutting teeth, might be compared to the moving of a heavy body on a line with the waist.

For the convenience of all saw users, Atkins Saws are

made with both the Improved Perfection and the old style handle. We recommend the younger generation in starting the use of a saw to adopt the Perfection style in preference to any other for the reasons stated.

The genuine Atkins Silver Steel Saw may be identified by the name "E. C. Atkins & Co." and the words "Silver Steel," which are plainly etched on every blade.

Atkins Silver Steel Saws may also be identified by the Mirror and Damaskeen polish or finish, which is used on Atkins Saws exclusively.

## QUESTIONS

- 1—Name the two prominent patterns of handles now in use?
- 2—Does the saw cut on an upward or downward stroke?
- 3—Where should the power be directed in order to make the saw cut easier?
- 4—Where is the greatest power directed with Atkins Improved Perfection Handle?
- 5—Where with the old style handle?
- 6—Why do some good mechanics prefer the old style handle?
- 7—How may genuine Atkins Silver Steel Saws be identified?



LESSON V

DIRECTIONS

How to Set and Sharpen Hand, Rip and Panel Saws



Fig. 1

Bottom view showing correctly fitted Hand Saw.

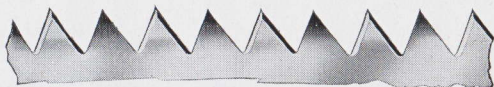


Fig. 2

Side view of properly filed and set Hand Saw. Note bevel on front of teeth.



Fig. 3

Top view of correctly fitted Hand Saws. Note set is slightly wider than entire thickness of blade, thus eliminating the chances of saw binding in the cut.

By examining the teeth of your saw you can readily tell if the teeth are uniform.

If you find the teeth are uneven, it will be necessary to "joint" and correctly shape the teeth according to the directions under "Jointing" on page 16.



Fig. 4

Showing bottom view of properly fitted Rip Saw.

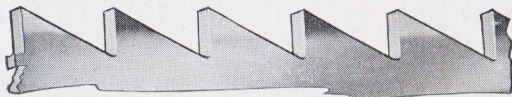


Fig. 5

Enlarged section of Rip Saw correctly filed and set. Note there is no bevel on front of teeth. Teeth are filed straight across.



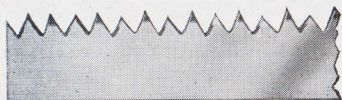
Fig. 6

This shows view looking down on back of blade. You can see that the set in the Rip Saws extends slightly wider than thickest part of blade.

If the teeth are of an even size and shaped correctly, as shown in the above illustration, the teeth will not require "jointing" and in this case refer to the directions under "Setting Saw Teeth" given on page 20.

## JOINTING

Unevenness of teeth is caused in many ways by normal wear, cutting of nails, dropping the saw and unnecessary carelessness. You should remember to always treat a saw with care. This adds longer life.



Uneven Hand Saw Teeth



Uneven Rip Teeth

Fig. 7

Examine Fig. 7 and note how uneven the teeth are in both Cross Cut and Rip Saw. It shows the condition of some teeth before jointing.

It is always good practice to use a jointing tool to hold a file square with the blade; see blade jointer and clamp in illustration No. 8 below. This saw is ready for the jointing operation.

Jointing the teeth means filing the tops of the teeth to make them all level and of even height. Place the saw in the clamp as in illustration No. 8, pass the file lightly over the tops of the teeth until the file touches each tooth, joint until the shortest tooth is touched lightly. The teeth will then look like illustration No. 9.

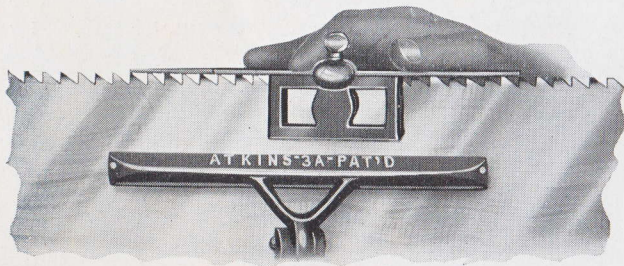
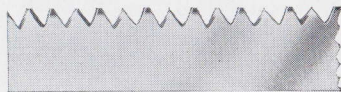


Fig. 8



**Hand Jointed**

Enlarged view of saw teeth jointed down evenly showing flat tops on the teeth.



**Rip Jointed**

**Fig. 9**

Illustration of saw teeth after jointing; showing flat tops and the uneven gullets of the teeth.

It is necessary that all teeth be of uniform size, shape and hook. After jointing, shape the teeth like illustration No. 10, as shown. This illustration represents cross cut teeth not beveled. If you are shaping teeth for Rip Saws, see illustration No. 11 on page 19.



**Fig. 10**

Teeth not beveled for cross cutting.

The above shows an enlarged section of a Cross Cut Hand Saw with the teeth jointed and shaped properly ready for setting.

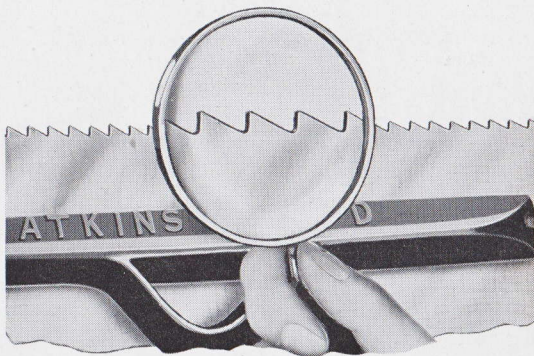


Fig. 11

Teeth shaped to a point for ripping.

This illustration shows the teeth of a Rip Saw, jointed and shaped ready for setting.

To properly shape the teeth before setting, place the file in the bottom of the gullet and file straight down into the blade until the finished side of the tooth is up to a point, and the flat top of the next tooth on the other side of the file is divided in two. Then go on to the next gullet, finishing one tooth to a point and dividing the next as before, continuing through the entire length of the blade.

If the teeth in the saw are unevenly spaced as in illustration No. 9, bear in heavily against the tooth having the largest top until you reach the center of the flat top. Be sure to hold your file square and level.

LESSON VI

SETTING SAW TEETH

Saw teeth, to clear properly, so that the saw will not bind in the wood, whether Cross Cut or Rip, should be bent outward alternately from  $3/1000''$  to  $5/1000''$ . Saws that are straight, level and properly ground for clearance need very little set. This is to be found in Atkins Silver Steel Saws. Do not set the saw teeth too low down on the tooth. Setting should not be deeper than two-thirds the distance from the point to gullet. For skilled mechanics who can handle a hammer set we recommend it as more accurate, positive and better in all respects. The ordinary mechanic who does not often fit a saw should use a saw set especially designed for this work as shown in the illustration No. 12 of Atkins No. 395 Saw Set.

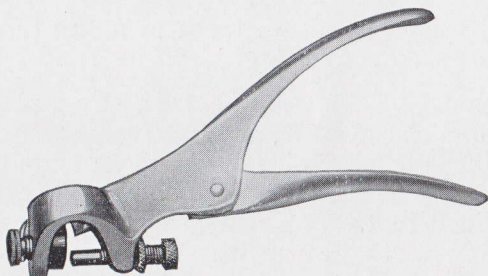


Fig. 12  
ATKINS NO. 395 LEVER SAW SET

Whether you use the hammer or especially designed saw set, when you have finished your saw it should look like illustration No. 13 if for cross cutting, and No. 14 if for ripping.

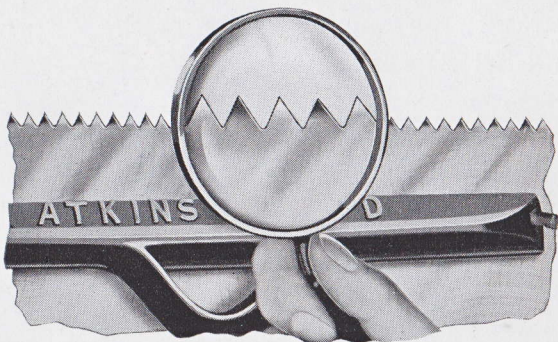


Fig. 13

The above shows Cross Cut teeth set ready to file. The teeth are even, properly shaped and set. Inspect the illustration carefully and note that the teeth are set about two-thirds the distance from point to the gullet. In general, Cross Cut Saws are tools made up of a series of "sharp knives," so arranged as to sever the fibers of the wood across the grain, as shown in illustration No. 15 on page 22.



Fig. 14

This shows Rip Saw teeth ready to finish. After jointing, shaping and setting Rip Saws the pitch in rip teeth should be as shown in illustration No. 14. With the saw teeth properly jointed and set you are now ready for finishing or pointing up and beveling.

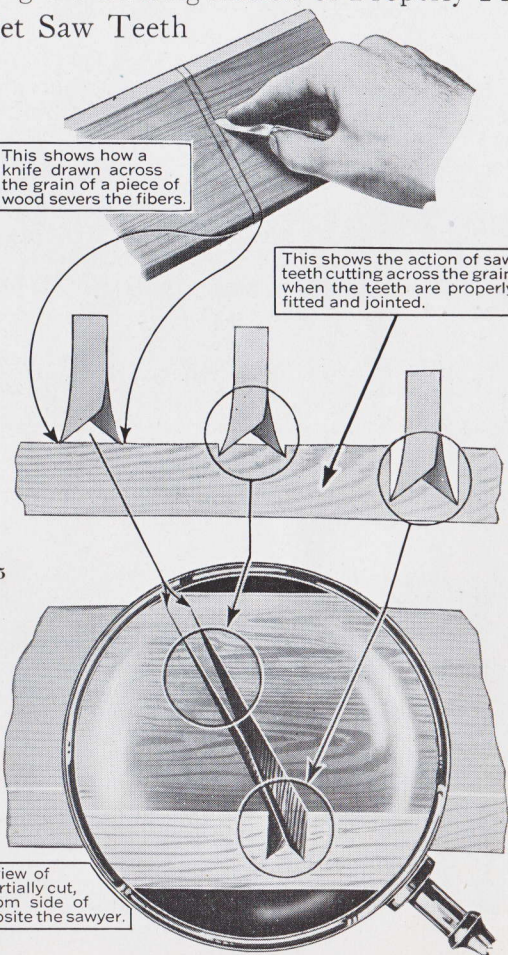
# Illustrating the Cutting Action of Properly Filed and Set Saw Teeth and Set Saw Teeth

This shows how a knife drawn across the grain of a piece of wood severs the fibers.

This shows the action of saw teeth cutting across the grain when the teeth are properly fitted and jointed.

Fig. 15

Enlarged view of section, partially cut, looking from side of board opposite the sawyer.





LESSON VII  
 FILING HAND SAWS

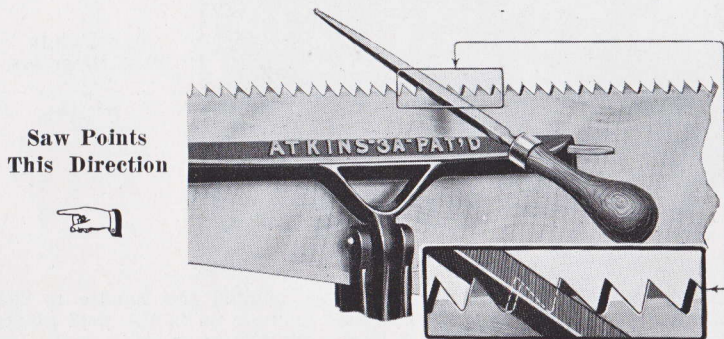
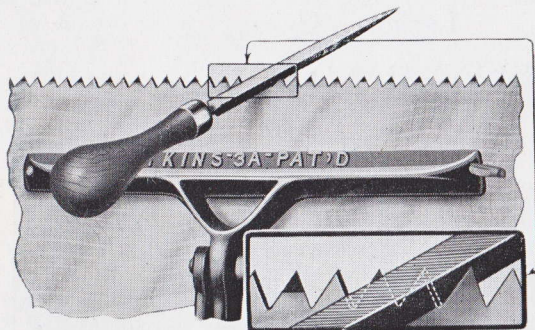


Fig. 16

The above shows a section of Cross Cut Hand Saw teeth filed properly, also the position of the file. For filing a Cross Cut Hand Saw, place the saw in a vise with the handle to the right. The vise should grip the saw from  $\frac{1}{8}$ " to  $\frac{1}{4}$ " below the teeth. Just before starting to bevel, pass a fine file very lightly over the tops of the teeth to make what we call a "shiner," or bright top, as you will find this useful as a guide for finishing each tooth. Your position and the position of the passing of the file should be as shown in illustration No. 16. Start in the first gullet to the LEFT of the first tooth, set away from you with your file in the position shown in illustration No. 16. Hold the file level and push it evenly and at the same time angle it across the saw, bringing each tooth to a point, possibly leaving a trifle of the "shiner" on the tooth to the right of your file. With your file in this position you can easily watch the cut of the file as you proceed with your work. Duplicate this process in every other gullet straight through to the handle.

## ATKINS SILVER STEEL SAWS AND



**Saw Points  
This Direction**



Fig. 17

Then reverse your saw in the clamp, placing the handle to the left and proceed in exactly the same manner as in the first place, except start in the first gullet to the RIGHT of the first tooth set away from you. File each tooth to a sharp point. Your position and the position of the file in this operation should be as shown in illustration No. 17.

When your saw is finished it should look like illustrations Nos. 1, 2 and 3, on page 15, showing a correctly filed Cross Cut Hand Saw, top, side and bottom views. To accomplish this result we recommend the following files for various sizes of teeth:

- |           |                         |    |                 |
|-----------|-------------------------|----|-----------------|
| 5 and 5½  | pt. Cross Cut Saw Teeth | 7" | Slim Taper File |
| 6 and 7   | pt. Cross Cut Saw Teeth | 7" | Slim Taper File |
| 8 and 9   | pt. Cross Cut Saw Teeth | 6" | Slim Taper File |
| 10 and 11 | pt. Cross Cut Saw Teeth | 6" | Slim Taper File |

**NOTE:** Atkins Silver Steel Practice Strips 10" long, 2" wide, toothed one edge, 6 point rip teeth, the other edge 8 point cut-off teeth with a section 1" at the end of each pattern tooth filed and set correctly, which is used as a sample for the student to follow, are sold for \$2.60 per Doz.



LESSON VIII

FILING RIP SAWS

Rip Saws are filed in exactly the same manner as Cross Cut Saws are filed, except there is no bevel to the tooth of a Rip Saw. Therefore, the file is held straight across the saw at right angles to the blade and no bevel should be left on the teeth. Some filers, however, leave a slight bevel, but as Rip Saws are chisels instead of knives, as such they do not need beveling. A well filed Rip Saw should look like illustrations Nos. 4, 5 and 6 on page 16 at the beginning of the directions, showing top, side and bottom views. The proper files to use for filing Rip Saws are as follows:

- 4 and 4 $\frac{1}{4}$  pt. 7" Slim Taper Files
- 5 and 5 $\frac{1}{2}$  pt. 7" Slim Taper Files
- 6 and 6 $\frac{1}{2}$  pt. 7" Slim Taper
- 6 pt. 6" Slim Taper

If these directions are followed carefully, there should be no reason why the youngest apprentice should have trouble in caring for his most valuable tool—the Saw. Too many fine tools are ruined every day to carelessly overlook the most minute attention to your saws.

**Note**—An Atkins Silver Steel Demonstration Saw and two handles will be loaned any Manual Training Supervisor for eight weeks, or sold for \$3.50 net.

## USEFUL FACTS AND FIGURES

### Hardness of American Woods

Very Hard Woods—Hickory, hard maple and best varieties of oak.

Hard Woods—Oak, cherry, ash, birch, black walnut and sycamore.

Medium Hard Woods—Southern and western pines, Douglas fir and sweet gum.

Soft Woods—White pine, spruce, hemlock, cypress, redwood, poplar and chestnut.

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### Board Measure

Lumber is sold on the basis of 1,000 feet board measure (BM). To obtain the number of board feet on any timber, multiply the length, width and thickness together, and divide the product by 12.

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### Siding or Flooring Required

In estimating the lumber required for siding or flooring, remember that one-fifth more than the number of square feet of surface is needed, because of the lap in the siding and matched flooring.

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### Number of Shingles Needed

To find the number of shingles required for a roof, multiply the length of building by twice the length of one rafter. This gives the square feet in entire roof. If shingles are to be laid  $4\frac{1}{2}$  inches to weather, multiply by 8. Shingles are packed 200 and 250 to the bunch.

## STANDARD DIMENSIONS OF FURNITURE

In building or repairing home furniture and in planning its arrangement, it is often essential to know the proper dimensions of the various articles:

Article	Length	Width	Height
Bed, double.....	6' 6"	5'	Ft. 2' 6" to 3' 6" Head 5' 0" to 6' 6"
Bed, single.....	6' 6"	3' 4' 10"	
Piano, grand.....	5' 6"	4' 10"	
Piano, upright.....	6' 10"	2' 4"	4' 9"
Bureau.....	4' 10"	2' 4"	4' 9"
Chiffonier.....	5' 6"	1' 6"	2' 6"
Commode.....	3' 5"	1' 8"	4' 4"
Lounge.....	3' 0"	1' 6"	1' 6"
Sideboard.....	1' 6"	2' 6"	
Table, dining.....	6' 4"	2' 2"	3' 3"
Table, billiard.....	4' 0"	3' 9"	2' 5"
Chairs.....	9' 0"	4' 2"	2' 5"
	Total height, 38" Depth of seat, 19"		Seat above floor, 18" Arms above seat, 9"

## SIZE, LENGTH AND NUMBER OF NAILS PER LB. APPROXIMATE NUMBER PER POUND.

Size, Pennies	Length, Inches	Common Wire Nails
2	1	876
3	1 1/4	568
4	1 1/2	316
5	1 3/4	270
6	2	180
7	2 1/4	160
8	2 1/2	106
9	2 3/4	96
10	3	69
12	3 1/4	63
16	3 1/2	49
20	4	31
30	4 1/2	24
40	5	18
50	5 1/2	14
60	6	11

## THINGS YOU CAN MAKE

### Hints for School and Home Workshops

Happy is the man or boy who has a hobby that involves the use of tools, but thrice happy is he who can build something useful and beautiful for the home, garden or garage—something he can show with pride and use with pleasure.

There are literally hundreds of useful articles that anyone handy with simple tools can construct.

Here are a few suggestions:

Sewing Table	Sewing Cabinets
Smoking Cabinet	Dining Alcove
End Table	Garden Trellises
Kitchen Cabinet	Rush-Bottom Chair
Shaving Cabinet	Simplified Bookcase
Arbor, Gate and Seats	Trousers Hanger for Closet Door
Porch Swing	Wooden Saw Horse for Workshop
Bench Tilt Table	Wooden Vise for Filing Room
Tea Wagon	
Christmas Toys	

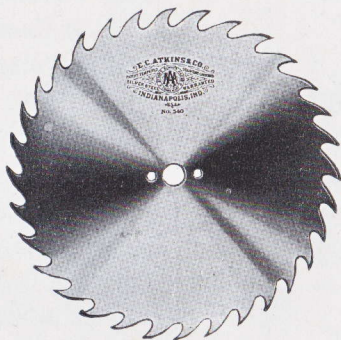
MORE THINGS YOU CAN MAKE

Workshop Bench	Tool Cabinet
Radio Cabinet	Built-in Ironing Board
Cedar Chest	Teeter-Totter for children
Phone Table and Stool	Plate Racks for rooms
Grandfather's Clock	Magazine Table
Flat-Top Desk	Waste Paper Basket
Colonial Desk	Window Seats
Cabinet and Desk	Lawn Swing
Pergola Garage	Portable Card Table
Gateleg Table	Umbrella Racks
Canoe Sailing Outfit	Wall Shelf
Baby's Crib	Hall Tree
Kitchen Cabinet Table	Garden Fencing
Pullman Play Table	Wooden Porch Steps
Toy Tea Cart	Basement Windows
	Flower Boxes

There is an Atkins saw for every cutting purpose. Your hardware dealer should be able to show you any of the saws you need in your workshop. We will be glad to give you any information you may require about Atkins saws for any purpose, or the proper care of any Atkins saw.

Use ATKINS SILVER STEEL SAWS.

ATKINS SILVER STEEL SOLID TOOTH  
CIRCULAR SAWS



Atkins Solid Tooth Circular Saws are being used throughout the World. Because of the superior quality of Silver Steel, Atkins exclusive formula, they are "The Finest on Earth." Especially adapted for accurate cutting. Need very little hammering and retensioning. Use one on your saw table.

ATKINS NARROW BAND SAWS

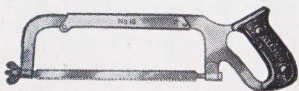


Made of the same high-grade saw steel, Silver Steel, as Atkins Wide Band Saws. Careful attention is paid to the temper so that the same cutting and long lasting qualities are maintained throughout. Can be ordered in any length desired and brazed ready to fit on machine or in coils. Made  $\frac{1}{8}$ " to  $1\frac{3}{4}$ " wide.

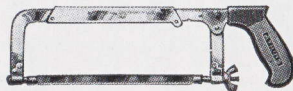
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## ATKINS HACK SAW FRAMES

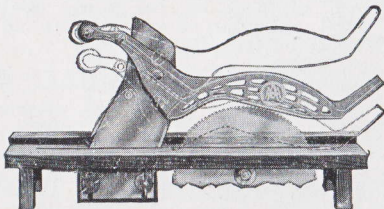


Atkins Hack Saw Frame No. 10 is very strong, yet light. Adjustable from 8 to 12 inches. Frame is heavily nickeled and highly polished; pistol grip hard rubber handle; perfect balance. Cuts exceedingly easy with Atkins Non-Breakable Hack Saw Blades.



Atkins No. 11 Hack Saw Frame is an improvement over other open pistol grip hack saw frames. Very strong, yet light weight. Adjustable for 8 to 12 inch blades. Nickeled and highly polished; fibre handle; plenty of hand room. Handle is hung so as to direct entire force of stroke on the cutting line.

## ATKINS "AAA" SAW GUARD



Atkins "AAA" Saw Guard is recommended by state factory inspectors in many places. Has a capacity of taking lumber up to three inches. User is protected at all times.

Aluminum, and so constructed that it will not cause the lumber to "jam." A swinging dog attached to back of splitter prevents lumber from kicking backwards.

Play safe, use Atkins "AAA" Saw Guards.

## **Other Atkins Products**

Swing to the varied uses for saws and other products of our manufacture and the fact that so many different classes of business are affected, our complete product has been divided into departments.

Each of these is under the direct personal supervision of experts who have made their particular line a life study. The facilities offered, therefore, are the same as though each department were a separate institution.

These different departments and the lines included therein are as follows:

### **MILL SAWS**

Circular Saws, Edger Saws, Concave Saws, Shingle and Heading Saws, Segment Veneer Saws, Circular Mitre Saws, Patent Tooth Saws, Wobble Saws, Circular Knives, Inserted Tooth Saws, Bits and Holders, Rift Saws, Band Saws, Gang Saws, Drag Saws, Mulay Saws, Barrel Saws, Dado Heads, Felloe Webs, Scroll Saws, etc.

### **METAL SAWS**

Circular Metal Cutting Saws of all kinds and for all types of machines, High Speed Metal Saws, Metal Cutting Band Saws and Machines, Hand and Power Hack Saw Blades, Rail Hack Saws, Hand Hack Saw Frames, Metal Cutting Hand Saws and Kwik-Kut Metal Cutting Machines.

### **THE HARDWARE LINE**

Hand Saws, Cross Cut Saws—Two-men, wide and narrow; one-man Cross Cut Saw and Handles, Wood Saws, Ice Saws, Mitre Box Saws, Back Saws, Compass and Keyhole Saws, Pruning Saws, Butcher Saws, Nests of Saws, Coping Saws, Stairbuilders' Saws, Dehorning Saws, Patternmakers' Saws, Whip Saws, Pit Saws, Grass Hooks, Floor Scrapers, Bench, Wall and Belt Scrapers, Cabinet Scrapers, Corn Knives, Cane Knives, Hand Saw Handles, etc.

### **SAW TOOLS AND SPECIALTIES**

Eccentric Swages, Upset Swages, Saw Vises, Clamps and Sets, Saw Fitting Tools, Hammers, Straight Edges, Gummers, Grinders, Grinding Wheels, Brazing Outfits, Mandrels, Car Movers, Belt Punches, Belt Wax, etc.

### **CEMENT AND PLASTERING TROWELS**

Plastering Trowels, Finishing Trowels, Cement Trowels for Edging, Guttering, etc.

### **MACHINE KNIVES**

A complete line of Machine Knives for all classes of work where power machinery is used, including Lathe and Spoke Knives, Cork Cutting and Paper Cutting Discs and knives of special shapes and sizes.

### **SPECIAL WORK**

Our equipment and facilities enable us to economically execute the manufacture of a great many special items where high quality of steel and delicate manipulation is essential, such as automobile and harrow discs, pattern plates, brick plates and liners or sheet metal work of any kind.



