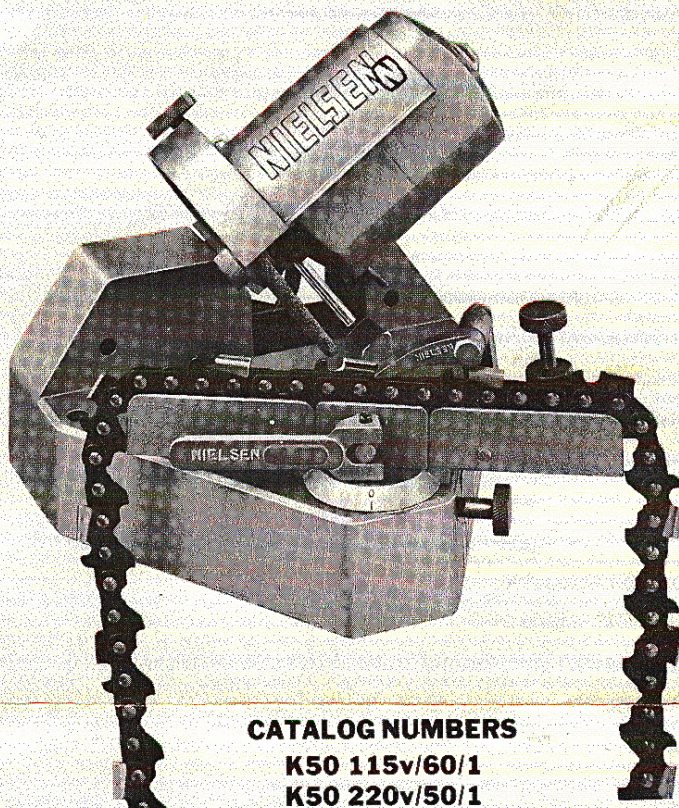


# MODEL K50

## SAW CHAIN GRINDER



### CATALOG NUMBERS

K50 115v/60/1

K50 220v/50/1

## The Ideal Saw Chain Grinder for Chain Saw Owners and Small Shops . . .

The compact, economical K50 Chain Grinder accurately sharpens all chipper type chains of any length, up to and including 1/2" pitch. Because of its easy, foolproof operation, it's possible to do an accurate job from the start!

Its mechanical tooth-after-tooth uniformity makes it easy to correct defects caused by improper hand filing. The K50 is the ideal saw chain grinder for chain saw owners and small shops.

### Precision Grinds Teeth and Depth Gauges

A zero degree marking makes alignment for depth gauge sharpening practically an automatic adjustment and there are built-in, positive stops for the most popular 35° cutting angle. When changing from one side of the chain to the other it is a simple matter to loosen the guide bar lock screw and pivot the guide bar to the positive 35° stop, tighten the lock screw and start sharpening . . . a fast, accurate and economical sharpening job is obtained the very first time you try it!

Sharpens Average Saw Chains in Less Than 5 Minutes for Less Than 5 Cents!

### EASY TO OPERATE!

Fast, non-complicated operation . . . simple positive controls . . . make it possible to do a professional job the very first time!

### SAVES CHAIN — AND DOLLARS!

Actually adds up to 50% to chain life by doing a uniform job on every single tooth and depth gauge. Adds to chain bar life by uniform cutting action of chain.

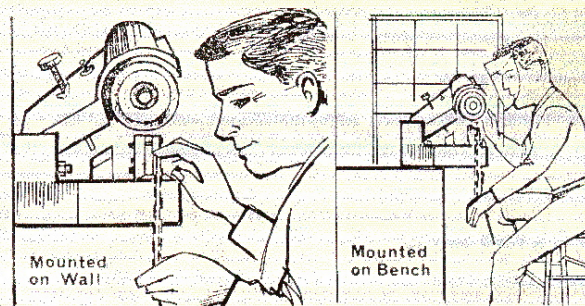
### REPLACES TEDIOUS HAND SHARPENING

Saves time, and does a far better job in the process!

### UNIFORM MACHINE ACCURACY!

Produces the kind of consistent results that even an experienced hand filer can't duplicate.

### MOUNTS ON WALL OR BENCH



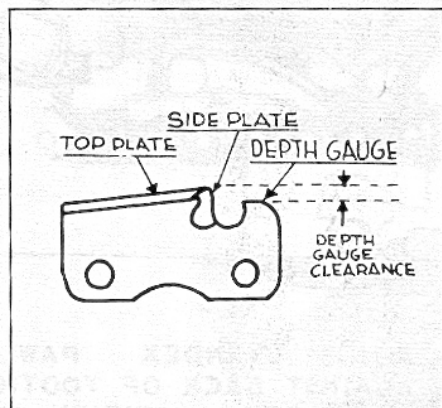
*Convenient, versatile, accurate — yet requires so little space!*

Bell Industries' policy of continual improvement in design and manufacturing requires specifications and prices be subject to change without notice.





## HOW TO GRIND Depth Gauges



Tooth Parts - Their Location

THE DEPTH GAUGE (ALSO CALLED RIDER OR RAKER) CONTROLS THE "BITE" THE TOOTH TAKES IN THE WOOD. AS THE TOP PLATE IS CUT BACK, THE DEPTH GAUGE SHOULD ALSO BE LOWERED TO RETAIN THE ORIGINAL CLEARANCE. THIS WILL DEPEND ON CHAIN PITCH. REFER TO MANUFACTURER'S RECOMMENDED CLEARANCE.

1. Install Rider Wheel No. 186R.
2. Set chain vise to 0° on angle guide and lock.
3. Set depth stop for proper clearance as described above.



Depth Gauge  
Stone # 186R

## Care of Grinding Wheel

1. KEEP WHEEL DRESSED TO TRUE RADIUS, SAME AS A ROUND FILE. USE WHEEL DRESSING STICK NO. 50-42.
2. DO NOT LET WHEEL DEVELOP FLAT SIDE. WHEEL WILL WEAR ON CUTTING SIDE; SO IT SHOULD BE LIGHTLY SHAPED EVERY FEW CHAINS TO A TRUE RADIUS.

## Recommended Wheels

PITCH	THICKNESS	PART NO.
3/8"	1/8"	180
7/16"-1/2"	3/16"	181
9/16"-5/8"	1/4"	183
Rider	1/4"	186R

## Troubleshooting...

If cutters on one side of chain are being ground shorter than on other side, check these possible causes:

1. GRINDING WHEEL NEEDS REPLACEMENT. Minimum recommended diameter: 3/4".
2. CHAIN NOT PROPERLY CLAMPED, allowing tooth to move during grinding. Tighten vise clamp nut if necessary.
3. INDEX PAWL WORN ON ONE SIDE. Not stopping right and left hand cutters at same point. Replace pawl.



**BELL INDUSTRIES**

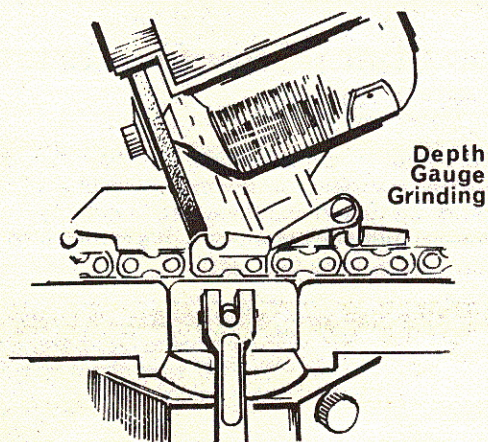
Saw and Machine Division

3390 W 11th Ave.

Eugene, Oregon 97402



## MODEL K50 SAW CHAIN GRINDER



### SPECIFICATIONS

- Motor, 1/10 H.P., 115/60/1 (230/60/1 optional)
- Nominal current draw 1.3 Amps.
- Wheel speed 5850 rpm
- Grinding Wheels 4" Dia. x 3/8" bore.
- Chain clamp range to .07 inch thick chain gauge will accommodate up to and including 1/2" pitch saw chain.
- Adjustable Depth of Grind stop
- Adjustable Feed Pawl to accommodate various pitch saw chains.
- Bench space required 8" x 10"
- Shipping weight 12 lbs.

### STANDARD EQUIPMENT

- Instructions and Warranty card
- (1) D467 Dressing Brick
- (2) Grinding Wheels: (1) D181, 4"x3/16"x3/8"; and (1) D186R, 4"x1/4"x3/8" (for Depth Gauges)

## *Corrects* THESE HAND-FILED DEFECTS



Uniform, correctly sharpened cutters and depth gauges



Add to chain efficiency, economy, and long life with a K50 Saw Chain Grinder.

## ACCESSORIES

CATALOG NO. K50X — SPARE PARTS KIT — Includes: (2) D181 Grinding Wheels, (1) D180 Grinding Wheel, (1) D186R Grinding Wheel, (1) K50-7 Rectifier, and (1) K50-31 Pawl.

CATALOG NO. D478 — EYE & FACE SHIELD. Clear plastic shield with adjustable head band. Replaceable windows.

CATALOG NO. D460 — ROTARY GRINDING WHEEL DRESSER. Small 1 1/2" wheel for dressing and shaping grinding wheels.



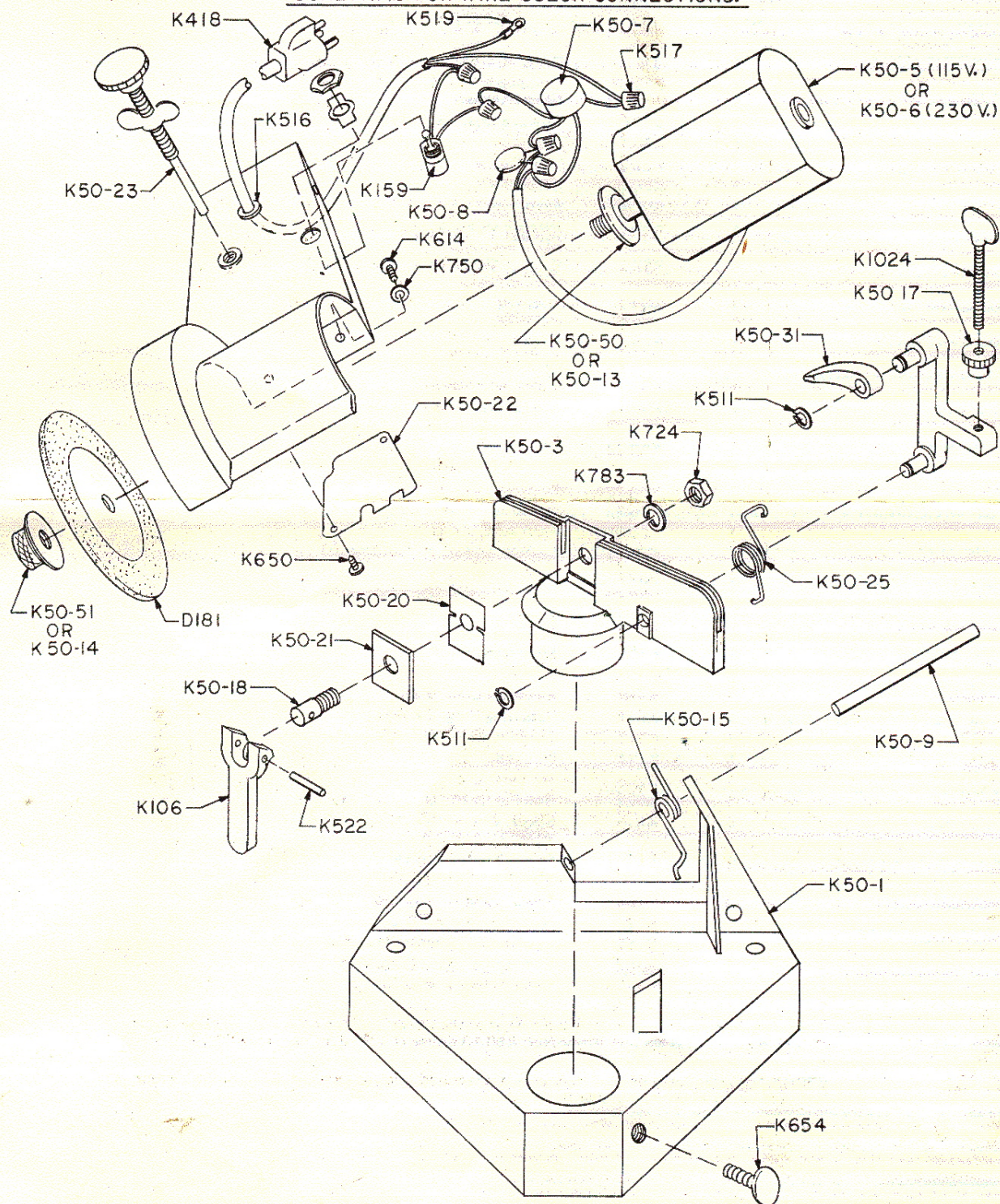
CATALOG NO. D467 — DRESSING BRICK ..... 1"x1"x3"





# **MODEL K50 ILLUSTRATED PARTS BREAKDOWN**

K50-5 (115 V.) WIRING SHOWN SEE ELECTRICAL SCHEMATIC FOR WIRE COLOR CONNECTIONS.



1/76

PRINTED  
IN U.S.A.



# MODEL K50

## SAW CHAIN GRINDER

### PARTS LIST

QNTY. PER MACH.	PART NO.	DESCRIPTION
1	D181	Grinding Wheel, 4" x 3/16" x 3/8"
1	D186R	Grinding Wheel, 4" x 1/4" x 3/8" (Depth Gauge)
1	D467	Dressing Stick (Not Shown)
1	K50-1	Base
1	K50-2	Motor Arm
1	K50-3	Guide Bar
1	K50-4	Feed Arm
1	K50-5	Electric Motor Assy., 115/60/1 (STD.)
1	K50-6	Electric Motor Assy., 230/50/60/1 (OPTIONAL)
1	K50-7	Rectifier
1	K50-8	Capacitor
1	K50-9	Pivot Pin
(A) 1	K50-14	Arbor Nut
1	K50-15	Motor Arm Spring
1	K50-17	Feed Screw Lock Nut
1	K50-18	Vise Clamp Screw
1	K50-20	Vise Anvil
1	K50-21	Vise Clamp Plate
1	K50-22	Switch Box Cover
1	K50-23	Depth Adj. Screw Assy.
1	K50-25	Feed Arm Spring
1	K50-27	Instruction Packet (Not Shown)
1	K50-31	Pawl
1	K50-47	Circuit Breaker (On Optional 230 V. Only)
(A) 1	K50-51	Arbor Nut
1	K106	Lock Handle
1	K159	Switch
1	K418	Electrical Cord, 3 wire
2	K511	Retaining Ring, External
1	K516	Cord Strain Relief
5	K517	Wire Nut
1	K519	Terminal Lug
1	K522	Roll Pin, 3/16" D. x 3/4" Lg.
2	K614	Screw, Slotted Rnd. Hd., #10-32 x 1/4" Lg.
2	K650	Screw, Slotted Pan Hd., #6 x 3/8" Lg., Self-Tap
1	K654	Screw, Wing Hd., 1/4-20 x 1/2" Lg.
1	K724	Nut, Hex Jam, 5/16-24
2	K750	Lockwasher, Internal Th., #10
1	K783	Lockwasher, Split Ring, 5/16
1	K1024	Screw, Thumb, #10-32 x 2" Lg.

NOTE (A) Arbor Nut must be the same outside diameter as the Collar on the motor shaft. K50-50 Collar (1-3/8" dia.) requires K50-51 Arbor Nut. K50-13 Collar (1-1/8" dia.) requires K50-14 Arbor Nut.

K50-14 Arbor Nut used on K50 grinders manufactured prior to serial no. 77A. K50-51 Arbor Nut used on serial no. 77A and later.







# **bell industries**

**SERVICE BULLETIN**

**SAW & MACHINE DIVISION**

P.O. Box 2510, Eugene, Oregon 97402 (503) 342-5461

## **K50 SAW CHAIN GRINDER**

To avoid electrical failures and insure long life to your K50 Chain Grinder, We suggest that before replacing electrical parts, that you first carefully look over the attached wiring diagram.

### ALSO:

1. Look for indication of shorting, such as burned black spots, broken wires, charred insulation, etc.
2. Check all connections for looseness and insulation.
3. If early or older model machine—Check to see whether your unit has a capacitor (Part #K50-8). If it does not have a capacitor you should have one installed. This prevents voltage surges in the electrical system.

### CAUTION:

Many times it is difficult to tell motor failures from rectifier failure. If failure is not obvious, then we recommend taking your grinder to a good electrical repair shop for checking or return it to the factory for a thorough check-over.

### NOTE:

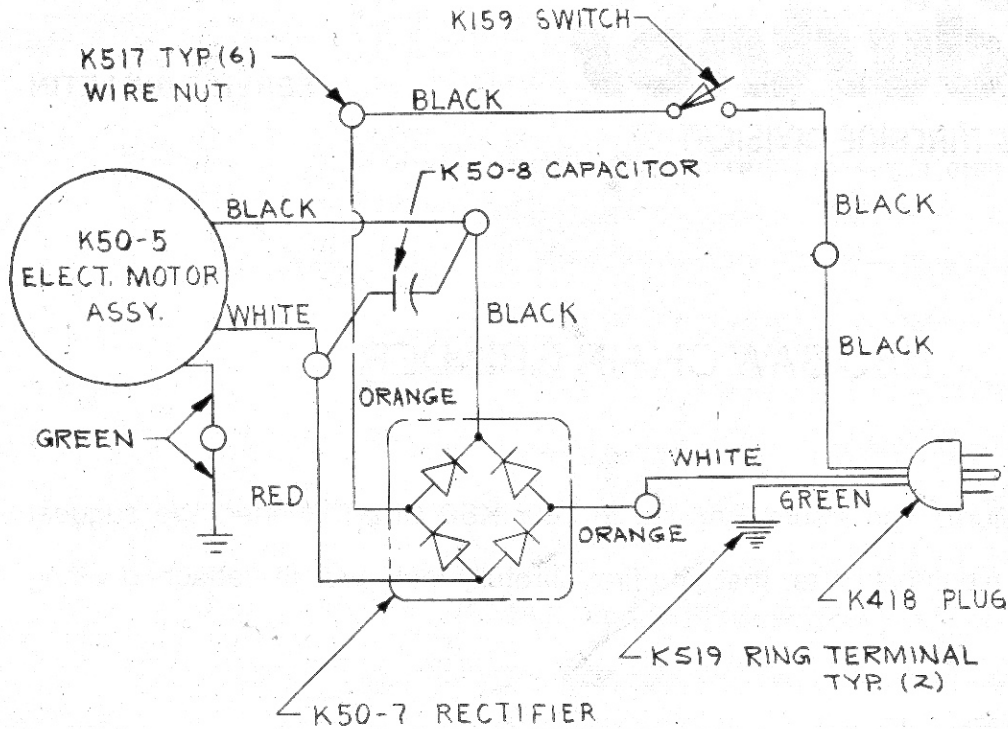
If returning to factory, please pack well and solidly to prevent damage. Always insure and ship prepaid.

**ENGINEERING DEPT.**



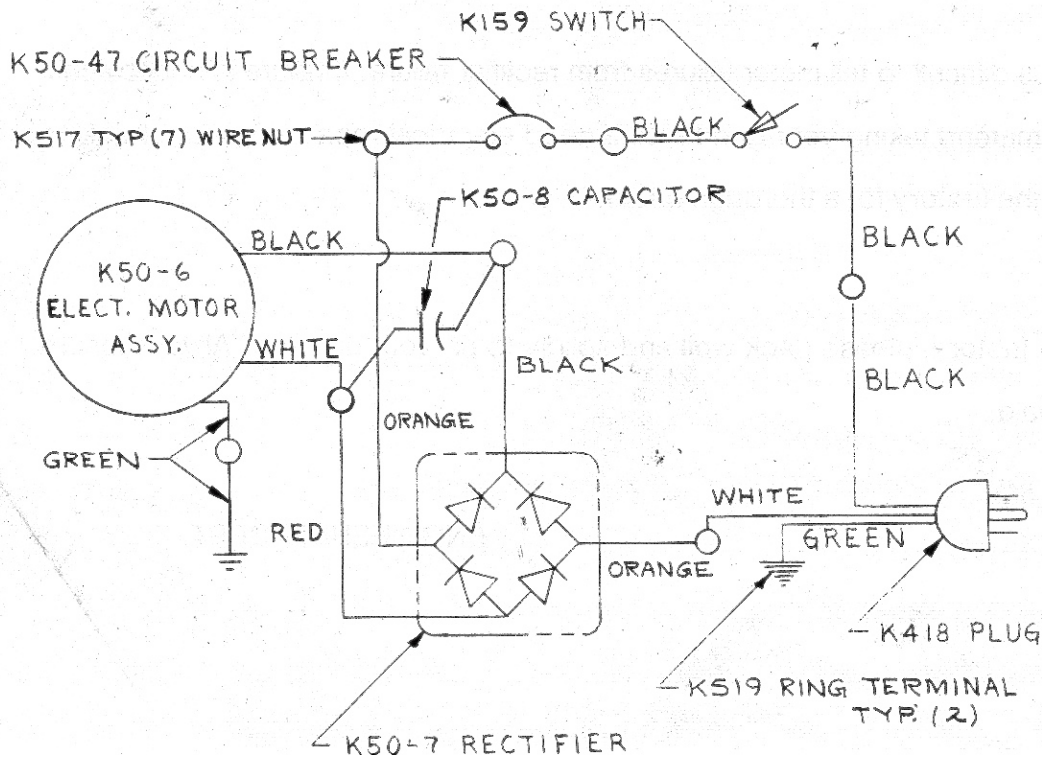
# ELECTRICAL SCHEMATIC

## STD. 115 V. / 60 HZ / 1 PHASE



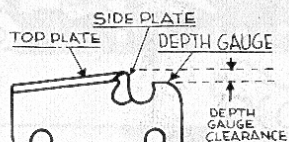
# ELECTRICAL SCHEMATIC

## OPTIONAL 220 V. / 50 HZ / 1 PHASE





## HOW TO GRIND Depth Gauges



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Depth Gauge  
Stone # 186R

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3. INDEX PAWL WORN ON ONE SIDE. Not stopping right and left hand cutters at same point. Replace pawl.

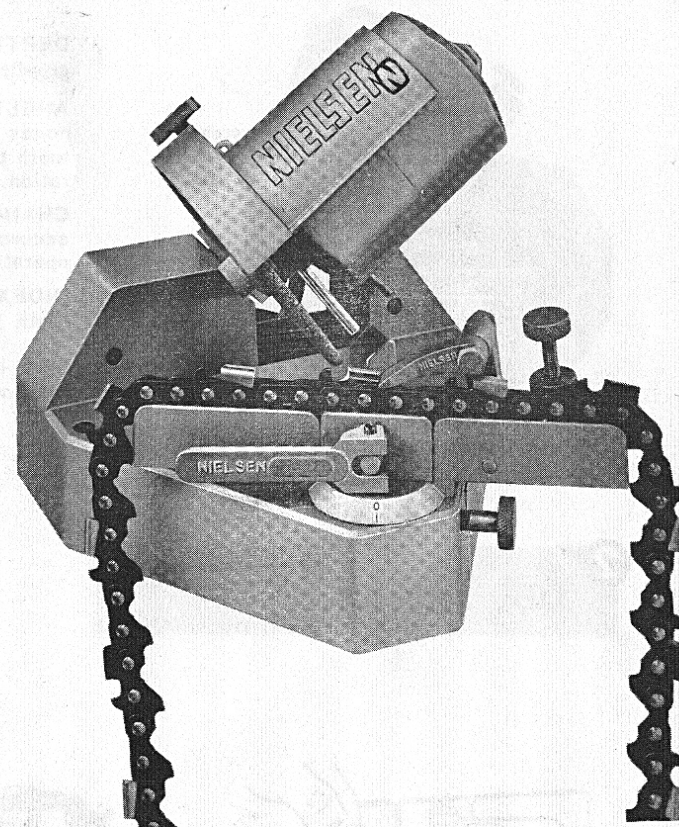
**BELL INDUSTRIES**  
Saw and Machine Division  
3390 W 11th Ave.  
Eugene, Oregon 97402

# HOW TO SHARPEN your SAW CHAINS in LESS THAN 3 MINUTES!\*

\* average 18" - 21" chain

SIMPLE  
INSTRUCTIONS  
FOR THE

EASY-TO-  
OPERATE



**BELL INDUSTRIES**  
Saw and Machine Division  
3390 W 11th Ave.  
Eugene, Oregon 97402

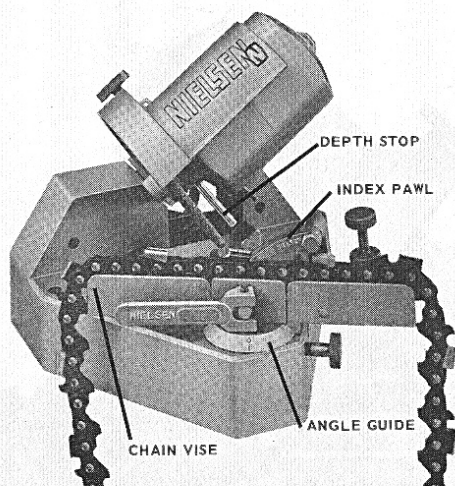
**Model 50  
SAW CHAIN  
GRINDER**



# SO EASY---YOU'LL DO AN EXPERT JOB ON THE FIRST CHAIN!

## 1 Get Ready...

Here are the few simple design features you'll want to get acquainted with before you start:



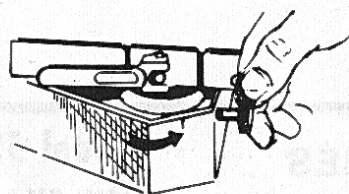
**DEPTH STOP.** Controls grinding depth into tooth.

**ANGLE GUIDE.** Determines grinding angle on tooth top plate (See illustration, back page).

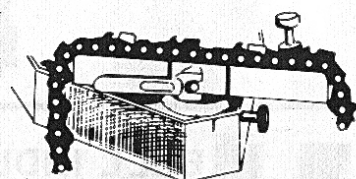
**CHAIN VISE:** Holds chain securely during grinding operation.

**INDEX PAWL.** Positions tooth in relation to grinding wheel--assures that each is ground to exactly the same length.

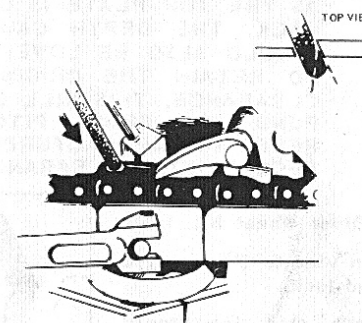
## 2 Get Set Up...



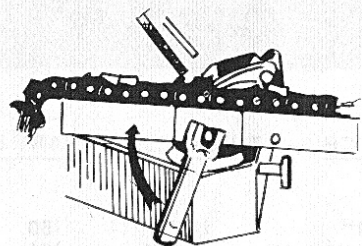
1. TURN CHAIN VISE TO STOP PINS, LOCK.



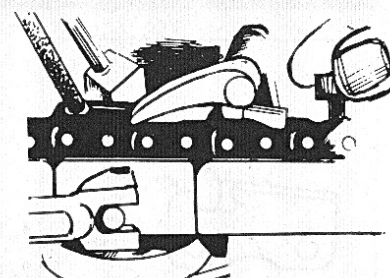
2. POSITION CHAIN IN CHAIN VISE. (YOU'RE ABLE TO SHARPEN ANY LENGTH CHAIN ON THE VERSATILE MODEL 50).



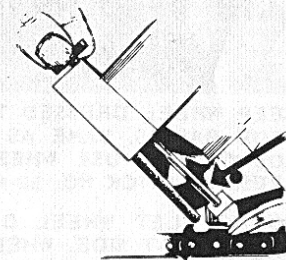
3. BRING GRINDING WHEEL DOWN INTO TOOTH.



5. LOCK CHAIN VISE. QUICK-ACTION CLAMP DESIGN SPEEDS UP OPERATION.

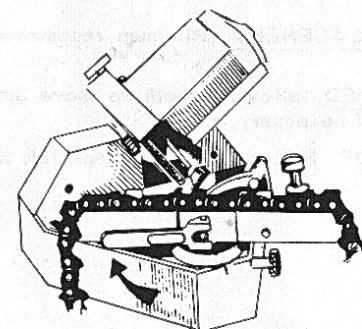


4. ADJUST INDEX PAWL AGAINST BACK OF TOOTH AND LOCK. (POSITION IS CORRECT WHEN GRINDING WHEEL CAN BE HAND-TURNED WITH SLIGHT EFFORT).



6. SET DEPTH STOP. (TAKE CARE NOT TO SET WHEEL TOO DEEP OR HOOK WILL RESULT). LOCK. EVERY TOOTH WILL NOW BE GROUND TO EXACTLY THE SAME DEPTH.

## 3 Go!



TURN ON MOTOR. GRIND ALL CUTTERS ON ONE SIDE OF CHAIN (LEFT OR RIGHT). NOW TURN ANGLE GUIDE TO SAME ANGLE FOR OPPOSITE TEETH. LOCK, AND REPEAT AS BEFORE.

THAT'S IT!  
SET...LOCK...GRIND!

WHAT COULD BE FASTER, EASIER?