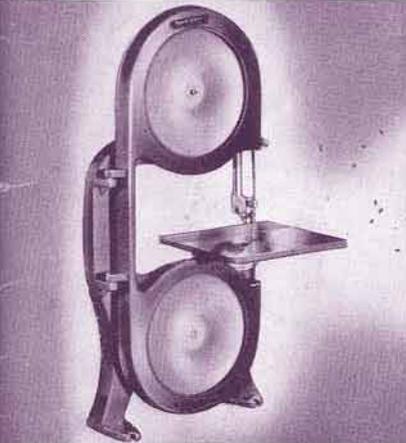




**7-INCH BENCH SAW**

Cuts to 2 1/4 in. Table raises and lowers (not blade). Tilts and locks up to 45°. See Page 2.

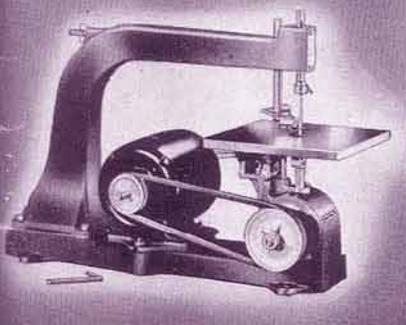
**\$975**



**9-INCH BAND SAW**

Cuts to center of 18-in. circle—4 in. thick. Balanced, rubber tired wheels. See Page 6.

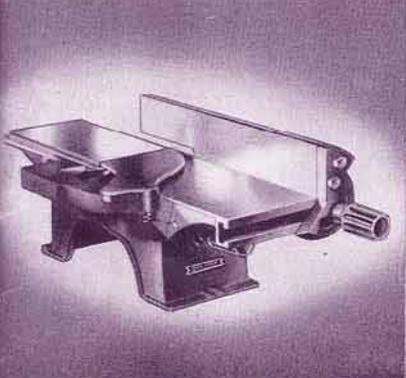
**\$1395**



**16-INCH SCROLL SAW**

Removable upper arm. Adjustable spring tension. Improved hold-down foot. See Page 10.

**\$1695**

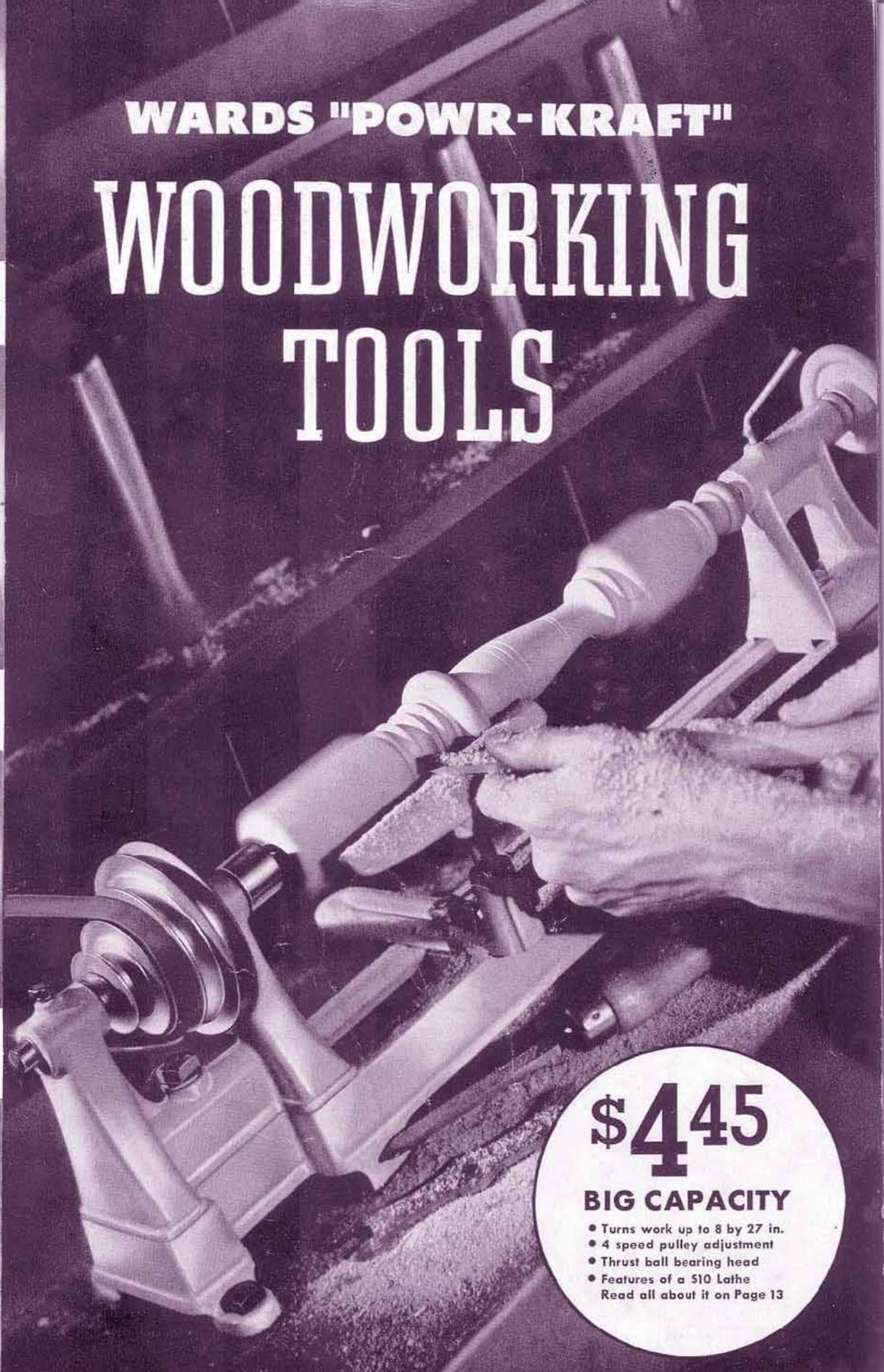


**4-INCH JOINTER**

Cuts to 4 in. wide up to 1/4 in. deep. Self-lubricating bearings. See Page 9.

**\$1195**

# WARDS "POWR-KRAFT" WOODWORKING TOOLS



**\$445**

**BIG CAPACITY**

- Turns work up to 8 by 27 in.
- 4 speed pulley adjustment
- Thrust ball bearing head
- Features of a 510 Lathe

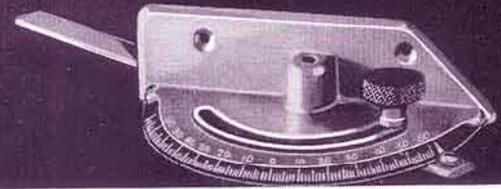
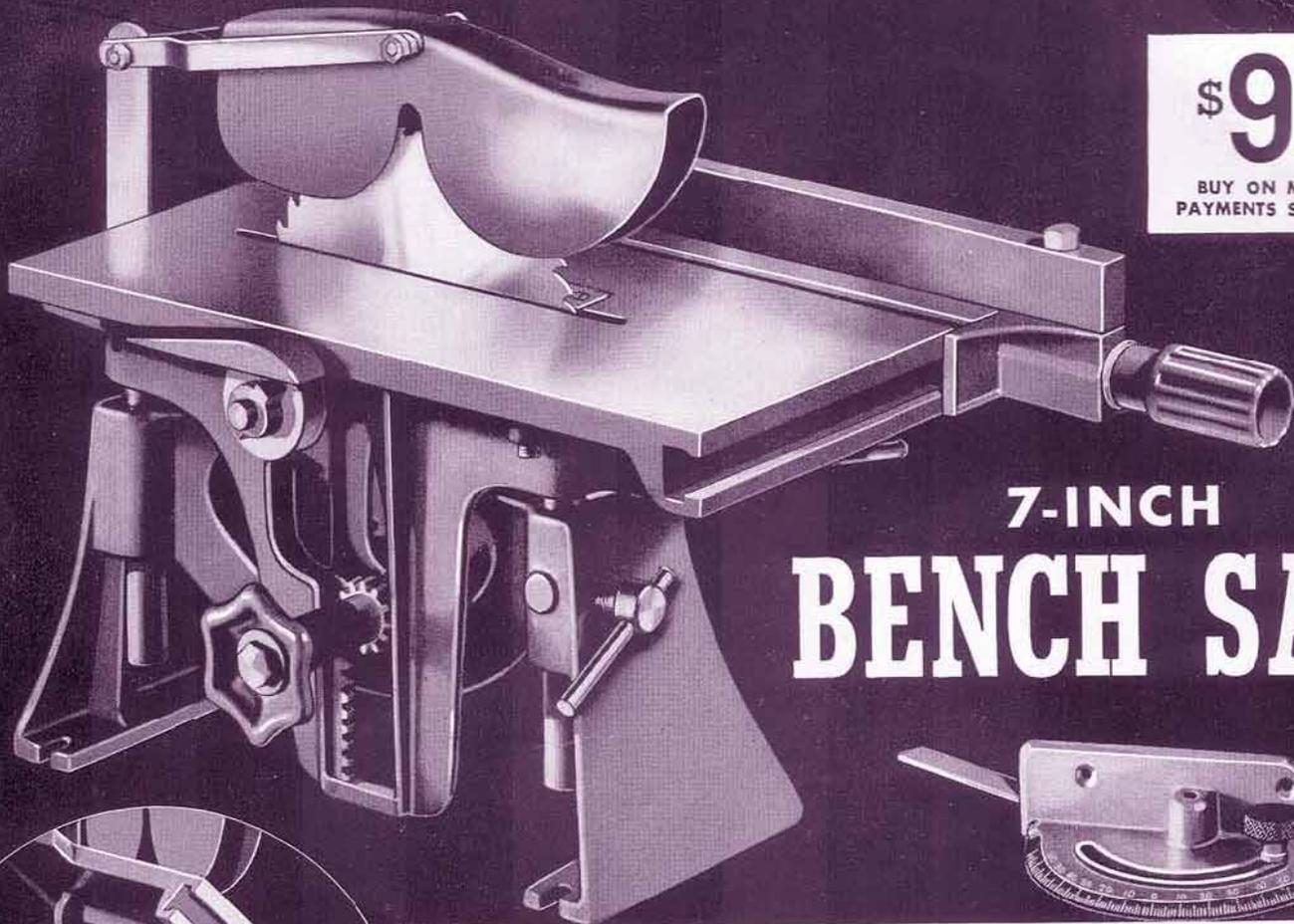
Read all about it on Page 13

**MONTGOMERY WARD**

\$975

BUY ON MONTHLY PAYMENTS SEE PAGE 22

# 7-INCH BENCH SAW



## These Features Usually Cost Many Dollars More

- Table (not blade) raises and lowers—no belt adjustments to bother with
- Table tilts on trunnions, and locks at any angle up to 45 degrees

With this saw you can rip, cross cut or miter with the same precision you'd expect from a tool selling far above this price. It cuts to a full 2 1/4 in. and it's so easy to operate—all you do is turn the hand wheel and the table raises or lowers—no need to touch the blade—no fussing with the belt every time you change the depth of the cut.

Then there's the trunnion construction of the tilting table which costs us more but which gives you the rigidity and accuracy of much higher priced saws. The sturdy rip fence is heavy cast iron, accurately ground—can't warp or twist. Easily adjustable and locks solidly.

An easy-to-read miter gauge is included for accurate cross-cutting and mitering. It slides at the touch of your thumb, in a close fitting groove. Table inset removable for dado head or sanding disc. (Dado heads and other accessories on Page 24.)

The saw is perfectly guarded at all times and the guard is designed to meet all State Safety Codes. It raises as work is fed in and can be quickly

swung out of the way, if desired. A convenient splitter back of the guard, prevents binding and stalling of saw blade.

### SPECIFICATIONS

**Capacity**—Depth of cut full 2 1/4 inches.

**Blade**—7-inch combination crosscut and rip.

**Bearings**—Self-lubricating bronze for long wear.

**Table**—Machine ground cast table, size 10 by 14 1/2 in., tilts on trunnion. Height 8 1/2 in. to table top. Removable insert for dado head or sanding disc.

**Weight**—Over 31 pounds net—runs steady and smooth. Heavy, seasoned cast iron throughout—will not warp.

Durable gray enamel finish. With 1 1/2-inch pulley. Speed 3500 R.P.M. Run from below or behind. Use 3-inch pulley on 484 WT 9800 or 484 WT 9811 motor, on Page 26. When ordering extra pulleys state both diameter and bore. Shipping weight 37 pounds. *Mailable.*

484 WT 873—Saw, without motor.... **\$9.75**

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**NOTICE:** Prices in this catalog good until February 1, 1937. If during the life of this catalog, direct or indirect means of raising prices are adopted by the Government, we may be affected. Furthermore, certain states have already passed laws imposing sales taxes and special taxes. Other states and the Federal Government may also do so. These situations of course will have to be met by price adjustments.

You Can Buy Everything  
Wards Sell on  
MONTHLY PAYMENTS  
See Page 22

Note the sturdy mounting of the table on double trunnions which assures rigid, smooth, accurate work on any job. This construction keeps the table perfectly aligned with the saw and avoids binding. The trunnion construction also permits using a narrow 1/2-inch slot in the table for saw blade and keeps the saw in center of slot when table is tilted. Notice how every part is designed for simplicity and strength. You'd pay dollars more for a saw with features comparable to these.

You want convenience too! Wards designed this saw so that the table (not the blade) operates up and down by means of a sturdy geared hand wheel. Improved lever locking device holds the table in position without changing the adjustment. This construction enables you to place your motor either behind or below the saw. No need to fuss with the belt every time you change the depth of the cut—once adjusted it stays put. Sturdy steel posts built into the frame at both front and rear travel in long bearing supports, giving firm support to the table.

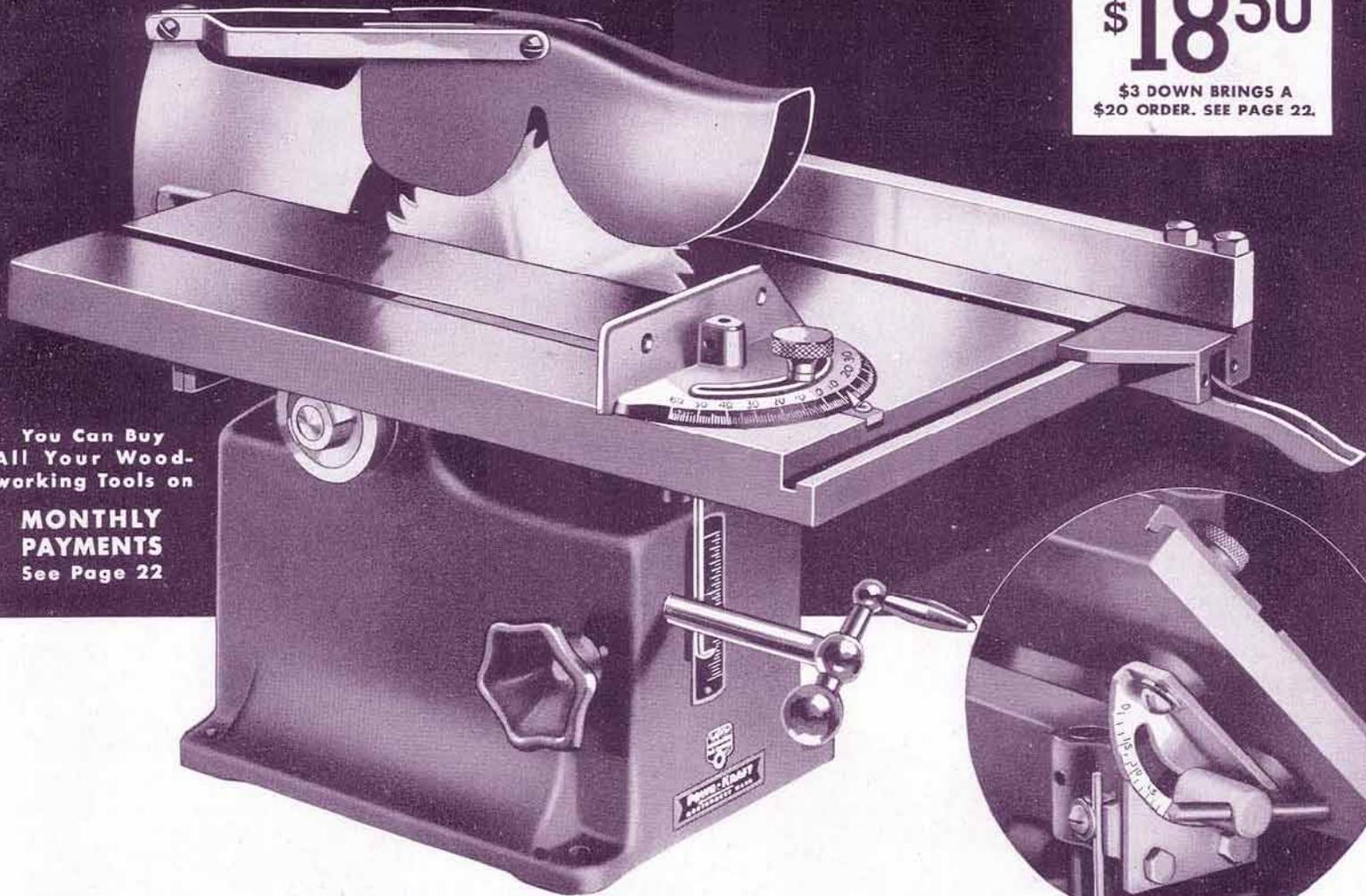
# USUAL \$30 VALUE

## Wards 8-inch POWR-KRAFT Bench Saw

# \$18<sup>50</sup>

\$3 DOWN BRINGS A  
\$20 ORDER. SEE PAGE 22.

You Can Buy  
All Your Wood-  
working Tools on  
**MONTHLY  
PAYMENTS**  
See Page 22



- Spindle runs on New Departure Ball Bearings—Grease Sealed for Life
- Ball crank mechanism raises the table (not the blade)—no belt adjustments to make. Convenient gauge shows depth of cut at a glance
- Table mounted on trunnions—tilts to 45°. Gauge shows degree of tilt

They said it was impossible to build a sturdy heavy-duty bench saw to sell for this low price, but Wards Engineers have done just that . . . by using time-saving production methods and eliminating useless "gadgets." The result is a simple, well-designed precision tool that sails through stock 2 $\frac{1}{4}$  in. thick with ease and speed.

And it does every job with a remarkable smoothness that comes from accurate machining and from using the finest, seasoned, non-warping cast iron for the base, frame and table of the saw. It actually weighs over 56 lbs. uncrated.

#### FINGER-TIP CONTROL!

Every part which controls the adjustments is arranged to save time and effort. A balanced ball crank raises or lowers the table smoothly without back-lash, while the saw itself remains stationary. No need to adjust the belt every time you change the depth of cut. The table tilts to any angle up to 45 degrees on smooth running trunnions and can be locked in position. The double trunnion mounting permits a narrow,  $\frac{1}{2}$ -in. table slot for the blade . . . not necessary to remove table insert when tilting the table, but table insert is removable for dado head. (Dado saws are listed on Page 24.) Included with the saw is a quick change clamp-type, solid steel rip fence and an accurate miter gauge for cutting true squares or angles. Both can be operated on either side of saw.

#### FINEST NEW DEPARTURE BALL BEARINGS

Wards Engineers chose New Departure Ball Bearings on which to mount the saw arbor. Each bearing is packed in grease and sealed so that the grease can't drip out, neither can dust nor grit possibly get in; your assurance of a lifetime of smooth running with a minimum of friction. Be sure the saw you buy has New Departure Ball Bearings.

Complete with 8-in. combination rip and cross cut saw. New safety type saw guard covers the blade at all times and a convenient splitter behind the guard separates the wood and avoids binding and stalling. See the new Anti-Kick attachment on Page 5—it can be placed on this saw in a jiffy and makes kick backs impossible.

#### SPECIFICATIONS

**Capacity:** Cuts stock up to 2 $\frac{1}{4}$  in. thick.

**Blade:** 8-inch combination cross cut and rip saw of finest crucible alloy steel with a cutting edge that stays sharp.

**Table:** Heavy gray cast iron—ribbed, nonwarping. Size 12 by 17 $\frac{3}{4}$  in. Height 8 $\frac{3}{4}$  in. to table top with table at lowest point.

Durable gray enamel finish. With 2-in. V-pulley. Drives from below or behind. Use 4-in. V-pulley on 484 WT 9811 Motor. Ship. wt. 72 lbs.

Not Mailable.

184 WT 686—Saw, without Motor. . . \$18-50

No other device can equal a trunnion mounting to give a bench saw smooth, rigid operation. No matter to what angle the table is tilted (it tilts and locks with a hand lever at any angle up to 45°) the blade remains in the center of the narrow table slot. An easily read scale shows the exact degree of tilt and once set at the angle desired, the table stays in position. Note the sturdiness of every part—see that substantial table of heavy seasoned gray cast iron—no wonder the saw runs so smoothly



A perfectly balanced ball crank moves the table (not the blade) up or down without backlash at the slightest turn of the hand! Adjusting the table instead of the saw speeds up the work, because there's no need to adjust the belt every time the depth of cut is changed. The convenient depth gauge is graduated in fractions of an inch and can be set and locked by means of the hand wheel at any point you desire, and once set, the saw turns out repeat work with unflinching accuracy.

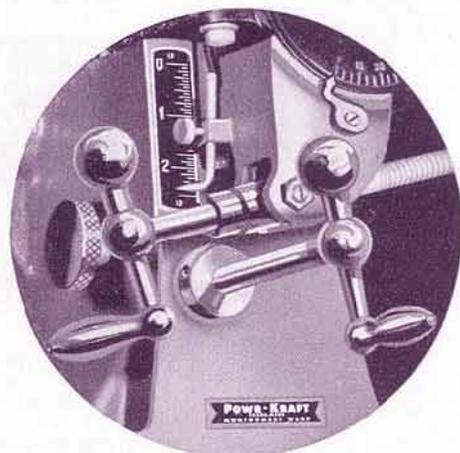
# WARDS 8-INCH



**\$29.95**  
CASH PRICE

**\$3 DOWN**  
**\$5 A Month**  
on Monthly  
Payments

## YOU'D EXPECT TO PAY \$40 FOR A SAW



### Easy Raising Action

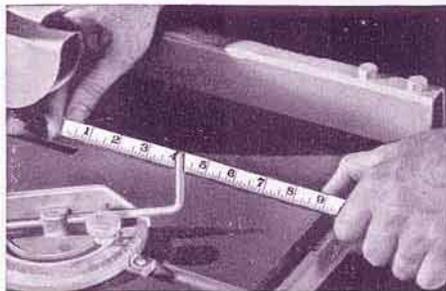
A raising and lowering action so smooth and positive that you can raise a 200-lb. man standing on the table by turning the ball crank with one hand. No back-lash—no jamming. Table is raised by two precision machined gears operating two 1 1/8-in. steel posts. Accurate scale graduated to 1/16 in.

### Miter Gauge—Speed Design

It's fast . . . it's accurate . . . it's practical! It's easy to cut or trim angles and know the joints will fit. Just swing it to the angle you want . . . give lock screw a twist . . . and you're ready to go!

An easily read scale, accurately calibrated to 60° in either direction, shows the angle of setting. Gauge is mounted on machined steel slide 3/4 by 5/16 in. which fits snugly in the table grooves—use it on either side of saw.

Holes drilled in metal face to permit attaching wood extension face if desired. The miter gauge is equipped with two removable cut-off rods for repeat work. Rods are mounted on top of gauge and fasten securely with wing nut.



### 9 In. of Table Ahead of Saw

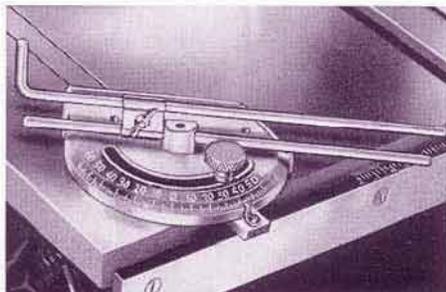
Think what full 9 inches in front of the blade at 2 inch cut means when you're cross cutting wide boards. It gives you room to brace and steady heavy stock—gives you room to use the miter gauge for proper squaring of the work. There's no need to pay extra for a front extension with this Powr-Kraft saw. Compare this feature, also the extra large table top 20 in. deep by 16 in. wide with similar saws at anywhere near Wards low price. We know of no other saw with full 9 inches of table ahead of blade for less than \$75.00.



### Built-In Sawdust Chute

Save time . . . do less sweeping . . . keep the shop clean! Save the sawdust . . . it has many uses. Just tie a bag over the chute or use a pipe extension and a bin.

This special Powr-Kraft feature saves lots of work and saves many small tools often swept out with sawdust on the floor. Note how the base about the chute and saw blade is enclosed. It protects your hands from contacting the blades of the moving saw when reaching under table. Easily removed panel for changing or removing blades.



**\$3 Down Brings Any  
\$20 Order—For  
MONTHLY  
PAYMENTS**  
See Page 22

# PRODUCTION BENCH SAW

## DESIGNED FOR HEAVIEST SERVICE

- We put 9 inches of table ahead of saw at 2 inch cut—gives greater freedom—big work handles easier
- Entire table top (not the saw) raises and lowers—pulley and saw remain stationary—belt stays at proper tension
- Cuts to 2 $\frac{3}{8}$  in. depth (many saws cut only to 2 $\frac{1}{4}$  in.)
- Operates on velvet-action New Departure ball bearings with housings spaced far apart for greatest accuracy
- We made the table top larger than most (full 16 by 20 in.)—surface not only ground but polished
- Rip fence precision machined from solid steel bar (no stamped steel to warp or twist—no wood facing to wear)

Make every job a pleasure! Use this big, powerful, smooth-running machine to turn out clean cut jobs that are accurate to the last degree. Handle bigger jobs with greater ease . . . every part is massively built and skillfully balanced for heavy work . . . weighs 84 lbs. net on the bench.

Each casting is made of selected, seasoned material that is absolutely non-warping. All moving parts pass rigid inspection for proper analysis and close tolerance. Gauges and indicators are carefully calibrated—they are second to none in accuracy. Saw is equipped with our standard 8-in. combination rip and cross cut blade described on Page 24. Removable insert provides space for dado saws or sanding discs. The table top stands 9 in. high in lowest position. Entire unit finished in durable baked-on gray enamel with cadmium or chrome plated exposed parts. Motor mounts behind or below saw. The construction features that give years of endurance for the heaviest kind of service are described below.

### SPECIFICATIONS

**BASE:** Heavy duty, vibration-free base machined from selected gray iron casting. Fully supported with reinforcing cross ribs.

**CAPACITY:** Full 2 $\frac{3}{8}$  in. depth cut.

**TABLE:** Non-warping, rib reinforced cast gray iron. Precision machined, ground and polished surface. Ball crank handle, acme threaded, tilts table with micromatic exactness from 0° to 45°.

**ELEVATING MECHANISM:** Quick, easy working, positive gear action without back lash. Ball crank handle extends out within easy reach. Heavy spring to counterbalance table weight. Locks securely in position with large hand wheel.

**ARBOR:** Extra tough, special analysis alloy steel operating on famous New Departure ball bearings sealed in grease.

**RIP FENCE:** Machined from solid steel bar. Micro-set friction adjustment for accurate setting. Scale by  $\frac{1}{8}$  in. at front of table.

**MITER GAUGE:** Attached to slide bar operating in table groove on either side of saw. Accurate scale, positive lock adjustment. Two cut-off rods.

**DRIVE:** Run at 3500 R.P.M. Use  $\frac{1}{3}$  H.P. motor for ordinary requirements or  $\frac{1}{2}$  H.P. motor for maximum utility. See Pages 26 and 27.

**EQUIPMENT INCLUDED:** 8 in. combination cross cut and rip saw, rip fence, miter gauge, guard, splitter, 2-in. V-pulley.

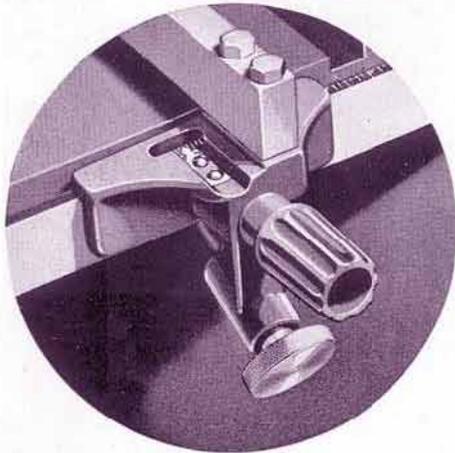
Use 4-in. V-pulley on 1750 R.P.M. Motor.

184 WT 661—Bench saw as described. Ship. wt. 100 lbs. . . . . **\$29.95**

184 WT 663—Same as above but including our Heavy Duty  $\frac{1}{3}$  H.P. Powr-Kraft Motor (110-volt, 60-cycle) No. 484 WT 9811, also 4-in. motor pulley and 44-in. V-belt ( $\frac{1}{2}$  in. wide). Ship. wt. 138 lbs. . . . . **\$39.95**

When Ordering Extra Pulleys State Both Diameter and Bore

## WITH THESE OUTSTANDING FEATURES

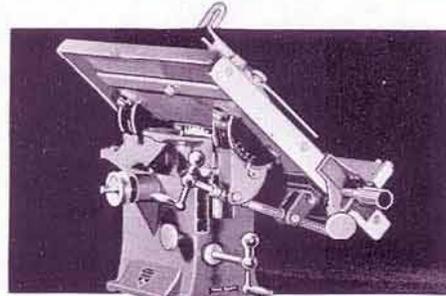


### Machined Steel Rip Fence

We know the rip fence is important . . . that's why we have it precision machined from a solid bar of steel. No steel stamping or die cast metal will do. The smoothly ground steel face is set exactly parallel to the saw blade . . . it cannot warp or twist out of line. . . it has no wood facing to distort or wear out. . . your work is always in true alignment. Cap screws on top of fence permit re-alignment.

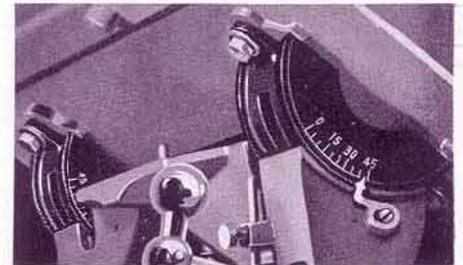
The micro-set friction adjustment permits the most accurate adjustment on either side of saw blade. A quick, easy turn of the locking handle fastens the fence securely—locks without disturbing selected adjustment. The scale and indicator are graduated by  $\frac{1}{8}$  in. and set along front of table where it is quickly and easily read.

For speedy setting the pinion may be disengaged by pushing the hand wheel inward to permit sliding the fence along the bar at front of table. This bench saw offers features never before found in a saw anywhere near Wards low price.



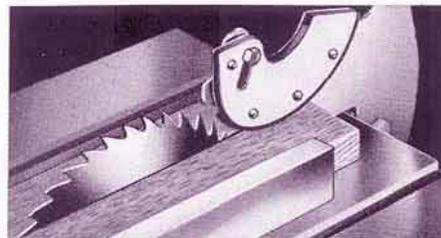
### Speedy Tilting Control

A few quick turns of the perfectly balanced ball crank tilts the table to the angle you want. No sticking or jamming—the spindle is acme threaded for smooth, positive gear action. Mechanism is so true and free of play that table stays in position without locking. 45° scale of micromatic exactness on front trunnion.



### Smooth Trunnion Accuracy

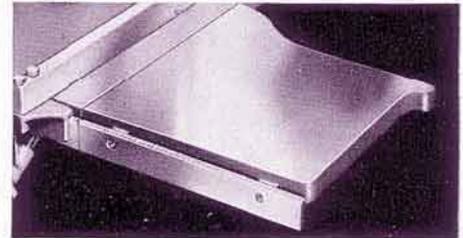
See how wide these special analysis alloy steel trunnions are—how they're mounted on closely machined double ways for hairline accuracy. They tilt the table top smoothly and on such a true axis that only a narrow  $\frac{1}{8}$ -inch slot is required for the blade. That's why Powr-Kraft angles are clean cut and all work is finer.



### Anti-Kick Attachment

Fits either 184 WT 686 or 661 Bench Saws by simply attaching to splitter. Permits work of any thickness to pass freely in cutting direction, but locks instantly and prevents saw from kicking work back toward operator. Bolts furnished for attaching to splitter.

84 WT 8867—Ship. wt. 8 oz. Each. . . . . **95¢**



### Add Width to Your Table

Extend your table to a full 20 in. from rip fence to saw blade. Cuts to the middle of a 40-in. panel with the work accurately guided . . . and it's easy with this perfectly machined 13 by 13 $\frac{1}{2}$ -in. extension. Two bolts for attaching. Extension slide bar for rip fence included.

84 WT 653—Ship. wt. 12 lbs. . . . . **\$2.95**

# 9-INCH POWR-KRAFT BAND SAW

DOES THE WORK OF MOST SAWS SELLING UP TO \$20

## \$1395

### Features:

- Cuts to center of 18-in. circle—in stock up to 4 3/8 in. thick.
- One-piece swinging safety guard for convenient blade changing.
- 9 by 9-in. table tilts to 45 degrees on heavy trunnion mounting.
- Rigid frame of seasoned, non-warping gray cast iron.
- Heavy cast 9 3/8-in. wheels, carefully machined and balanced.

See how much Band Saw you get for this low price. It's the perfect machine for the home craftsman or small shop owner who demands accuracy, rigidity and speed . . . at a price he can afford to pay. And this band saw handles thicker stock than many 10-in. band saws—a full 4 3/8 in. cut.

### Smooth-Running, Effortless Sawing

In a band saw especially you want smooth, straight cutting, and in Wards Powr-Kraft Band Saw, the use of heavy, seasoned, non-warping gray iron gives you the results you'd expect from larger machines. Note also the channel frame cast in one piece, heavily ribbed to eliminate all springing . . . keeps the wheels perfectly aligned always. Even the swinging guard is cast in one piece.

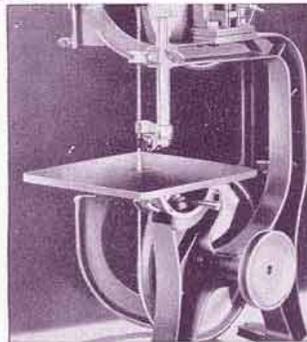
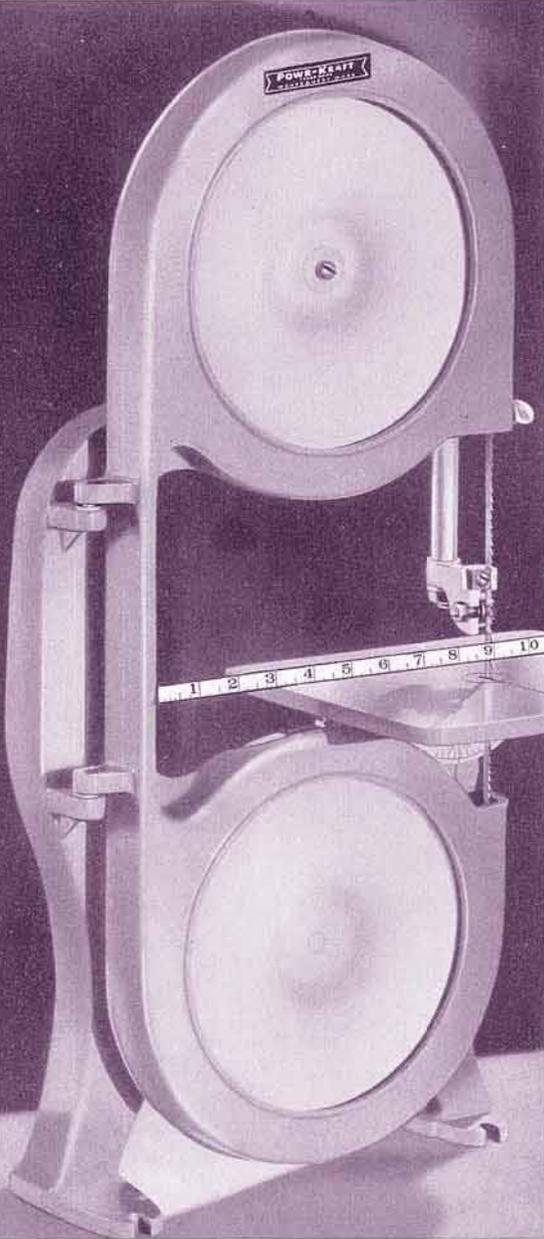
### Heavy Double Trunnion Mounting

The 9 by 9-in. heavy, reinforced non-warping, cast table (not a steel stamping) is mounted on a huge carefully machined, double trunnion. Tilts to 45 degrees with clear-cut gauge to show degree of tilt. Aluminum insert in table protects blade. Rubber crowned 9 3/8-in. diam. wheels are dynamically balanced to prevent vibration. Blade tension adjustable by hand wheel at top of upper wheel. Wheels are disc type . . . no spokes to catch clothing or work.

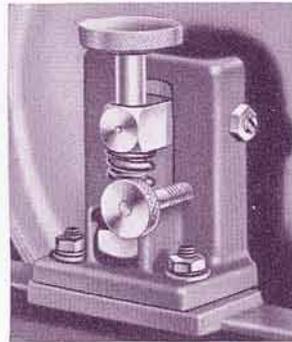
Roller saw guide permits blade to run on the edge (not the side) of the hardened steel roller. This reduces friction and blade breakage to a minimum.

Gray baked enamel finish. Height 26 in. Includes 4-in. V-pulley and 1/4-in. 6 tooth blade 60 in. long. Use 2-in. pulley on 484 WT 9800 Motor. See page 26. Ship. wt. 46 lbs.

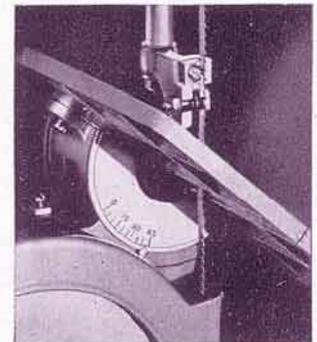
484 WT 870—Mailable . . . \$13.95



**Built like a bridge** for extra rigidity. This view shows the heavily ribbed semi-box frame of seasoned gray iron—non-warping, and that means smooth running. One-piece cast safety guard makes blade changing simple. Note also the extra long bearing on the wheel and pulley . . . another point that spells Sturdiness all the way through.



**Every wheel dynamically balanced** on a specially built tool that detects the slightest variation in weight distribution. The cast 9 3/8-in. disc wheels are mounted on self lubricating bronze bearings. Hand screws afford instant adjustment of blade tension. Heavy spring in tension adjustment absorbs shock and reduces blade breakage.



**Giant double trunnion mounting** gives the utmost rigidity for the heavily reinforced cast iron table and keeps blade in perfect alignment with table even when it is tilted. Table is 9 in. square, is surface ground and has aluminum insert to protect blade. Easy-to-read gauge shows degree of tilt up to 45 degrees. Squaring screw for instant leveling. Lever lock.

## Mount Your Tools on RIGID STEEL STANDS

\$595 Size 13 by 14 in.

\$645 Size 13 by 20 in.

\$795 Size 13 by 47 1/2 in.

\$835 Size 13 by 57 in.

- Saves space—avoids obstructions—eliminates series of belts and pulleys—no line-shafts to bother with—less friction losses—more power delivered at point of service.
- Perforations on top, legs and motor supports of the machine stands permit adjustment to fit motor or machine base of practically all makes of woodworking machinery.
- Heavy angle iron strongly braced—no jiggling.

Mount each tool on one of these sturdy steel stands, connect it directly to a motor and make all of your woodworking tools more efficient and easier to handle. Stands can easily be moved, or may be fastened to floor. Attractive baked-on gray enamel finish to match your tools. *Mailable.*  
484 WT 8790—Size 13 in. wide by 14 in. long on top, by 28 3/8 in. high. For 184 WT 661 or 686

Bench Saw, 484 WT 876, Spindle Shaper, 484 WT 870, Band Saw, or 484 WT 873, Bench Saw. Shipping weight 35 lbs. . . . \$5.95

484 WT 8791—Size 13 in. wide by 20 in. long on top by 28 3/8 in. high. For 184 WT 664, Scroll Saw, 184 WT 655, Jointer, 184 WT 651, Band Saw, or 184 WT 669, Drill Press. Shipping weight 37 lbs. . . . \$6.45

384 WT 8792—Size 13 in. wide by 47 1/2 in. long on top by 30 7/8 in. high. For 484 WT 868, Lathe. Shipping weight 51 lbs. . . . \$7.95

384 WT 8793—Size 13 in. wide by 57 in. long on top, by 30 7/8 in. high. For 184 WT 658, Lathe. Shipping weight 55 lbs. . . . \$8.35

Use Wards Monthly Payment Plan—\$3 Down Brings \$20 Order. See Page 22.

# 12-INCH BALL BEARING BAND SAW

## BUILT WITH TWICE THE NEEDED STRENGTH

- Cuts to center of 24-in. circle—in stock up to 5 3/4 in. thick
- 12 by 12-in. cast table tilts to 45° on double trunnion. Lever locking
- Smooth running New Departure Ball Bearings on upper and lower wheels
- Improved blade guides above and below table assure longer life of blade
- Actual weight uncrated—80 lbs. Extra sturdy for professional woodworkers

**\$25.95**  
CASH PRICE

**\$3 DOWN**  
**\$5 MONTHLY**

"Build a Band Saw at a moderate price that can be used by professional woodworkers,"—that was the order given to Wards Engineers, and here is the result. A tool that's twice as strong as most people would consider "strong enough," with the weight, rigidity and smoothness to perform unflinchingly day after day.

### Vibration Reduced to a Minimum

The heavy castings of seasoned gray iron absorb the vibrations set up even when running at full load, and that means the blade will follow a line in the toughest sawing jobs with ease. It's rigid too, because the one-piece cast frame is full box construction. It can't warp, spring or get out of line.

### Equipped with New Departure Ball Bearings

Each wheel is mounted on two Nationally Known New Departure Ball Bearings (not ordinary "precision-type" ball bearings) . . . your guarantee of the smoothest possible operation with a minimum of friction loss. Wheels are safety disc-type, perfectly machined, dynamically balanced and rubber crowned to assure quietness and long blade life.

Other features are described below—such as the heavy 12 by 12-in. table mounted on double trunnion—the new roller blade guide—the one-piece saw guard—the spring tension blade adjustment. Yet, with all these features Wards price is actually below the price asked for lighter saws.

Baked gray enamel finish. Height overall 33 1/2 in. Includes 6 1/2-in. V-pulley, and 3/4-in. 6 tooth blade 78 in. long. Run at 675 R.P.M. When ordering extra pulley state both diameter and bore wanted.

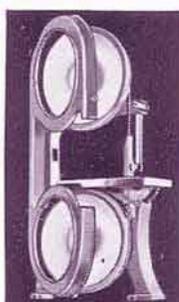
184 WT 651—Band Saw without Motor. Ship. wt. 95 lbs. *Not Mailable.* **\$25.95**

184 WT 652—Band Saw with 1/2 H.P. Motor (110-V. 60-cycle) 484 WT 9811, Motor Base, 3-in. V-pulley and V-belt. Ship. wt. 130 lbs. *Not Mailable.* **\$37.95**

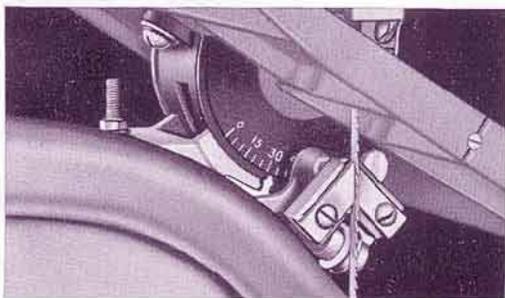
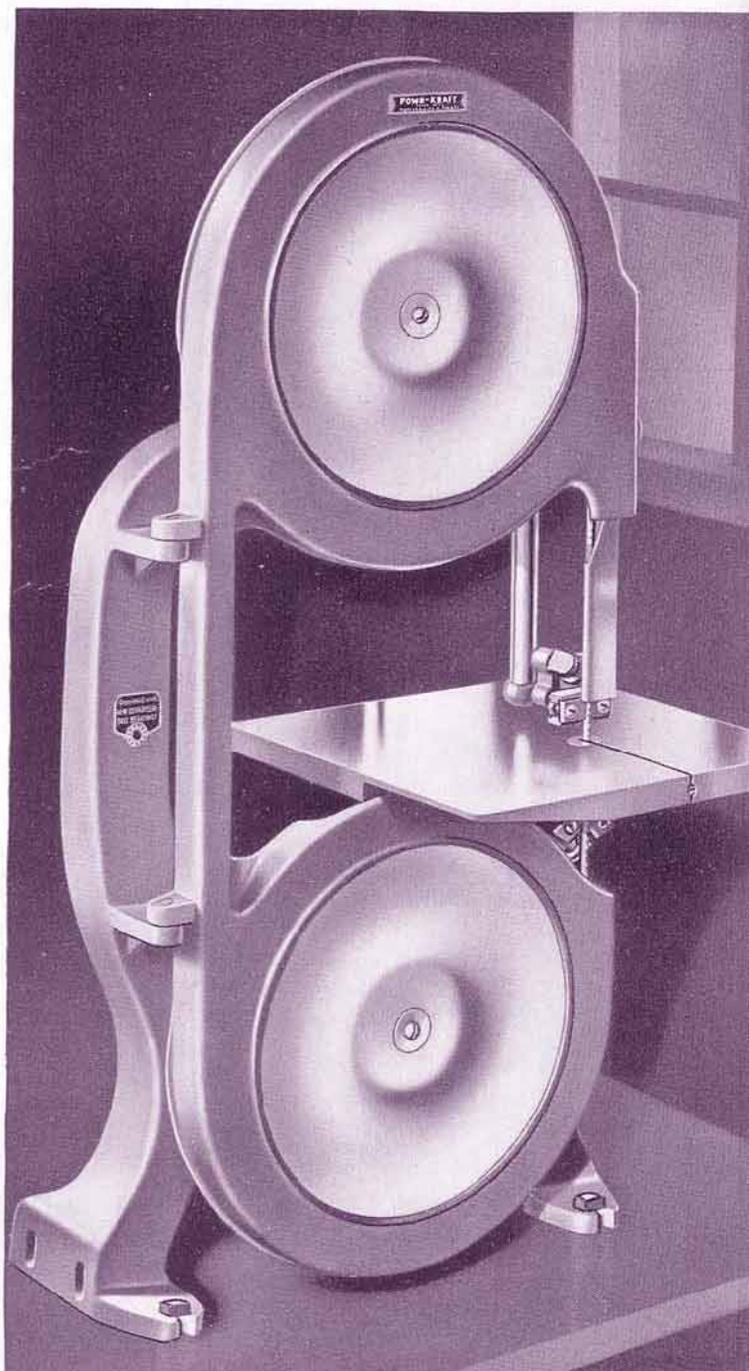
YOU CAN BUY ANYTHING IN THIS CATALOG ON MONTHLY PAYMENTS. FOR DETAILS SEE PAGE 22



You can't beat cast iron for permanent rigidity and for freedom from warping or springing out of line. And there's no more rigid, sturdy construction than this—a full box frame cast in one piece of finest seasoned, gray iron—full 80 lbs. of it. Strength, weight and precise adjustments combine to give you a rugged machine that does the job quickly, accurately, and smoothly.

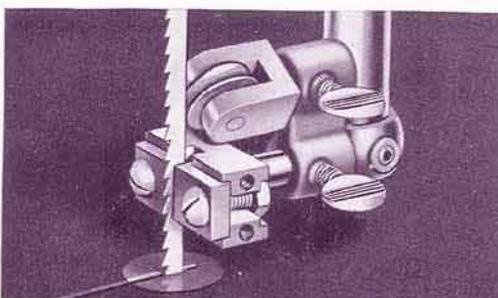


Note the ruggedness of the swinging guard—not a flimsy two-piece affair, but a solid one-piece casting of finest seasoned non-warping gray iron that is free from rattles. Guard opens easily for quick changes of the blade—a convenience not found on most saws at this price.—Another reason why this Band Saw is a genuine pleasure to use.

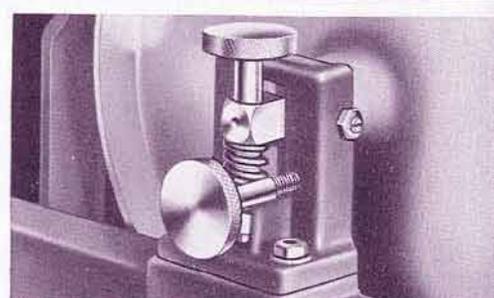


The 12 by 12-in. table is mounted on a large double trunnion accurately machined for velvety-smooth action. This construction keeps the blade in the center of the opening and in perfect alignment with table. Aluminum table insert protects blade. Table tilts to 45 degrees and locks at the twist of a lever.

See how heavily reinforced the table is . . . won't warp or spring because it's seasoned gray iron (not a stamping).



Improved concave roller guides above and below table set at an angle so that blade contacts entire surface of guides (not just the edge). One guide block above table and another below table provide free running slot that prevents blade dislocation. Safety guard, attached to the guide, covers the blade except at the cutting point. Entire guide and guard assembly above table mounted on solid steel bar quickly adjustable for varying wood thicknesses.



Blade tension and wheel alignment can be adjusted in a second by a quick turn of the convenient hand screws. No wrench needed. Sturdy spring insert on tension adjustment takes up sudden strain and saves blade breakage. You'll find this type of adjustment only on industrial band saws costing many dollars more than Wards price.

# 16-INCH BAND SAW

**\$97<sup>50</sup>**  
CASH PRICE

**BAND SAW WITHOUT BASE**

- Cuts to the Center of a 32-inch circle—in stock up to 10 $\frac{1}{2}$  inches thick
- 16 by 24-inch table tilts and locks to 45 degrees
- Double, Grease Sealed New Departure Ball Bearings on upper and lower wheels
- New and improved blade guides with independent adjustments above and below table

Wards introduce for the first time a new 16-inch Band Saw that's capable of doing full-fledged industrial work . . . and it's priced low enough to suit the demands of the home craftsman or small shop owner. So precise in its adjustments, so carefully machined, so smooth and rigid in its operation that it meets the needs of the most particular cabinet or pattern maker, and has safety features that will pass all school requirements.

### Seasoned Gray Iron Castings

Rugged construction throughout. The saw itself weighs 255 lbs. uncrated . . . a feature that eliminates vibration. Note the extra strong box type frame and the sturdy one-piece guards; the table and the base too are built from seasoned gray iron . . . won't warp or spring out of shape. The table is 16 by 24 in. (384 sq. in. of working surface) and is mounted on rigid double trunnions. Table tilts and locks to 45 degrees and is fitted with solid steel rip fence with micro-set adjustment.

### New Departure Ball Bearings

Nothing rolls easier than a ball, and no bearings surpass New Departure Ball Bearings for the ultimate in smooth, vibrationless performance. That's why Wards Engineers mounted the upper and lower wheels on a double set of these nationally known bearings.

They're packed in grease and sealed for life—grease can't get out, neither can dirt and dust get in—positively lubricated all the time.

### Dynamically Balanced Wheels

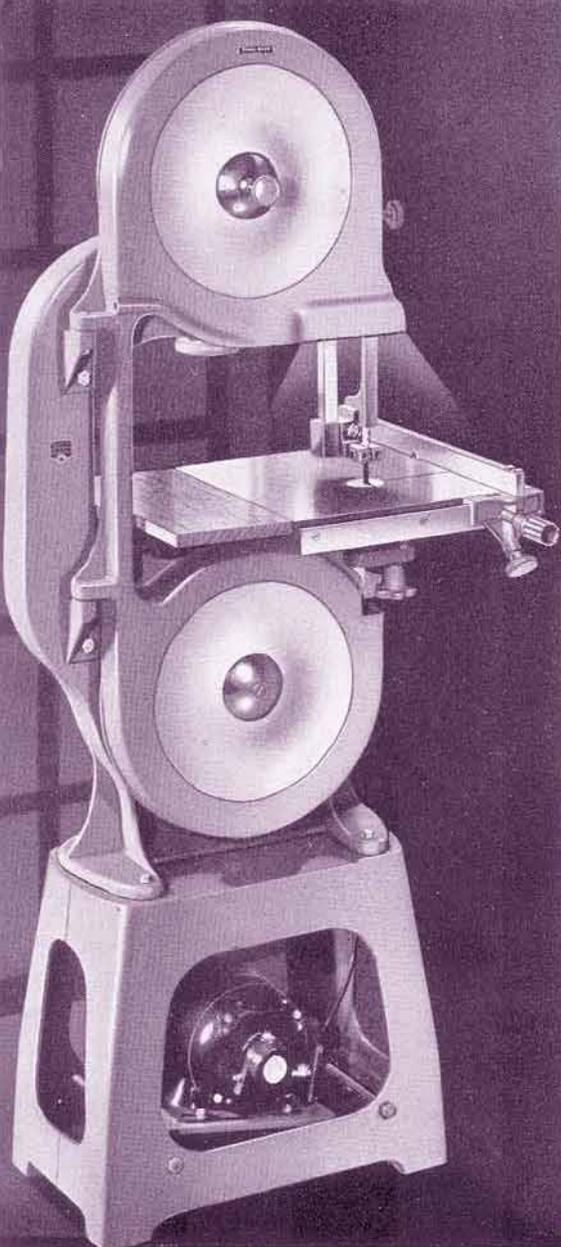
The wheels themselves are safety disc type, perfectly machined, dynamically balanced and rubber crowned to assure quietness and longer blade life. The upper wheel operates in a cast box frame having 60 degree dovetailed machined ways with adjustable gibs. Handy wheels adjust blade tension and alignment . . . all blade and table adjustments are made from front of saw.

Other features include a solid steel fence with microset friction adjustment, a built-in electric tool light on upper guard, an improved spring tension device and a new improved type of upper and lower blade guide (described at right).

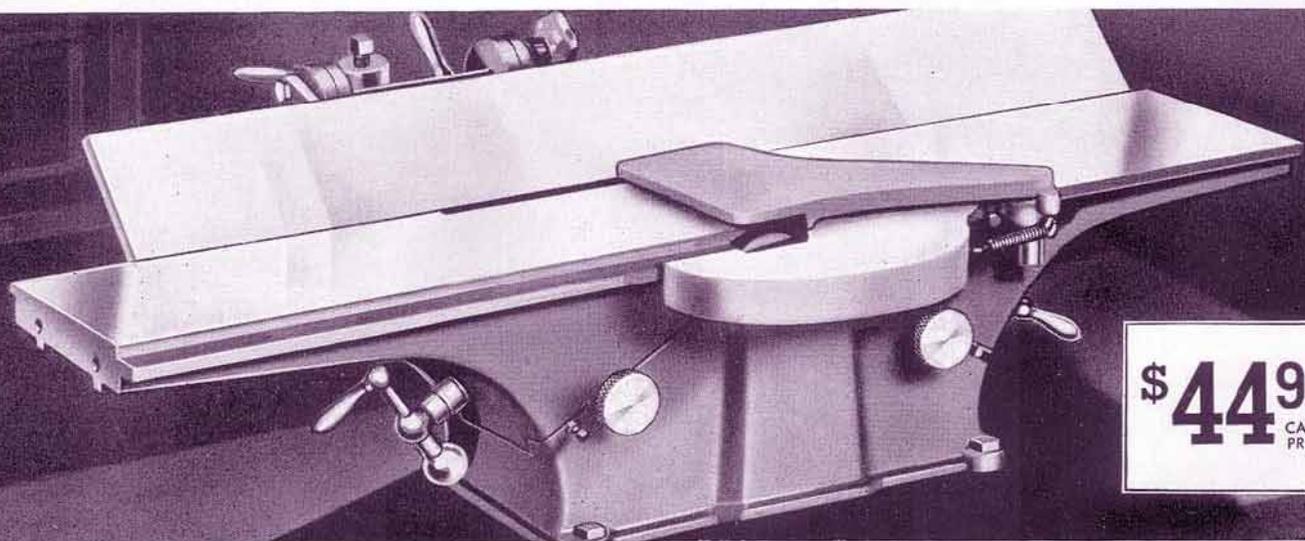
Baked gray enamel finish with chromium-plated fittings. Height overall (not including base) 69 $\frac{1}{2}$  in. Includes 9-in. V-pulley and  $\frac{3}{8}$ -in. 4 $\frac{1}{2}$  tooth blade 111 in. long. Handles up to  $\frac{3}{4}$ -in. blades. Run at 540 R.P.M. Use 2 $\frac{1}{2}$ -in. V-pulley on  $\frac{1}{2}$ -H.P. 1750 R.P.M. motor (see page 26). When ordering extra pulleys state both diameter and bore.

184 WT 687—Band Saw without motor or base. Ship. wt. 285 lbs. . . . . \$97.50

184 WT 688—Solid cast iron base for above band saw as pictured at left with floating motor mount in base. Height 19 $\frac{1}{4}$  in. Floor space 12 $\frac{1}{2}$  by 22 $\frac{1}{2}$  inches. Baked gray enamel finish. For complete mounted unit order also motor, motor pulley and 62 by  $\frac{1}{2}$ -in. V-belt. Ship. wt. of base only 110 lbs. Band Saw Base only . . . . . \$15.50



## WARDS 6-INCH PRODUCTION JOINTER with



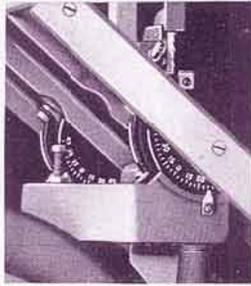
**\$44<sup>95</sup>**  
CASH PRICE

**USE WARDS MONTHLY PAYMENT PLAN  
\$3 Down Brings Any \$20 Order... See Page 22**

## EXTRA HEAVY DUTY FOR INDUSTRIAL PURPOSES

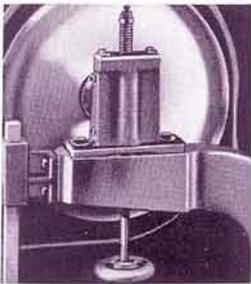
### TRUNNION MOUNTING

The accurately machined rigid trunnion mountings keep the blade in the center of the opening—always in perfect alignment. Table tilts smoothly to 45 degrees—locks at the twist of a lever. Aluminum table insert protects blade. See how sturdy the table is—well ribbed to prevent warping and springing.



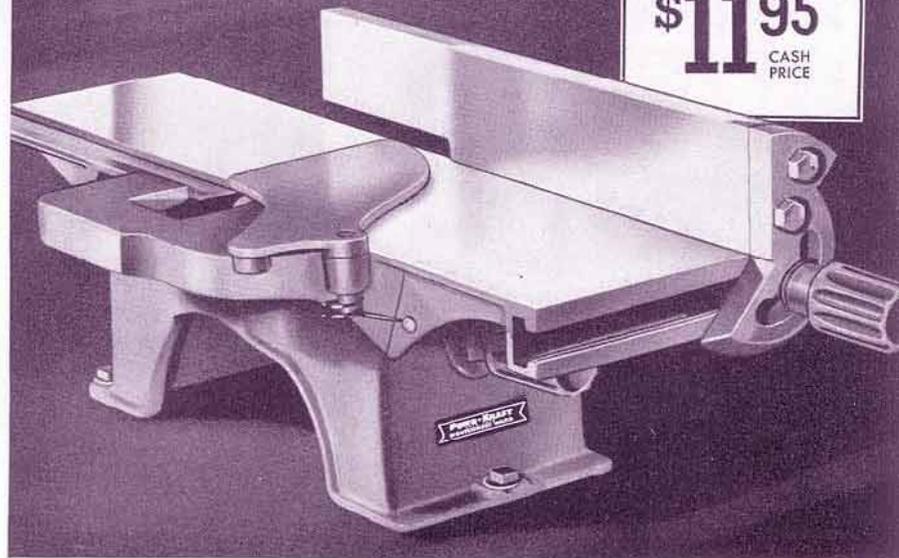
### BLADE ADJUSTMENT

A quick turn of convenient hand screws adjusts the blade tension and wheel in a jiffy. Lever locks wheel in position. No wrenches needed. Sturdy spring insert takes up sudden strain on the blade and saves blade breakage. You'll find features like these only on machines costing many dollars more.



### IMPROVED GUIDES

Friction and wear on the roller guides is overcome by the new concave groove design developed by Wards Engineers. Rollers set at angle so blade contacts entire surface of guide (not just edge). Guide blocks above and below table prevent blade distortion. Roller guides, guide blocks and blade guard are all adjustable.



**\$11.95**  
CASH PRICE

## Wards Powr-Kraft 4-Inch Jointer

- Cutting capacity to 4 in. wide and up to 1/4 in. deep
- Self-lubricating Bronze Bearing—no oil on your work
- Double tilting self-aligning fence with protractor scale
- Front and rear tables adjustable on extra long milled ways

This hefty jointer combines the smooth cutting, the weight, rigidity and precision adjustments of jointers that are not within dollars of its price. And here's why: it weighs 26 lbs. net—unusually solid; it has long, accurately ground tables (about 21 in. overall); the extra long milled ways give more accurate depth adjustment; and a convenient eccentric cam lever on side of base locks front table solidly.

**One-Piece Balanced Cutter Head**  
Cutter head is mounted in perfectly ground shaft and dynamically balanced after the blades are installed. Shaft mounted on self-lubricating bearings. Three 4-in. blades are of

high speed steel. Cutter head operates at 4000-5000 R.P.M. or 12 to 15,000 cuts per minute. Guard swings open as work passes through. Removable for rabbeting.

Tables 5 1/2 in. wide at narrowest point—hand wheels adjust up or down. Front table has rabbeting arm, rear table has rabbeting ledge. Height 5 1/2 in. to table top. Overall length 24 inches. Gray enamel finish. Furnished with 1 1/2-in. V-pulley. Use 4-in. V-pulley on 484 WT 9811 Motor. For motors See Page 26. When ordering extra pulleys state diam. and bore. Ship. wt. 36 lbs. *Available.*

484 WT 667—Jointer only . . . . . \$11.95

# Smooth Running New Departure Ball Bearings

- Cutting capacity to full 6 in. wide and up to 1/2 in. deep
- Shaft mounted on Finest New Departure Grease Sealed Ball Bearings
- Cutting head and shaft one piece of steel—dynamically balanced
- Rip fence tilts to 45 degrees both ways—swivels across table

Wards designed this jointer for cabinet makers, furniture and novelty makers, and pattern shops—in fact for every woodworker who demands a real industrial jointer at a moderate price . . . a tool that won't flinch at the toughest jobs you can give it.

### Seasoned Gray Iron Castings

Accuracy is assured through the use of the best quality gray iron castings properly seasoned to prevent warping or twisting out of shape. After assembly the table tops are ground perfectly parallel and to a glass-like finish. Ball crank handles raise or lower the tables.

Large knurled knobs at the side of each table lock them in position. Clearly marked gauge indicates depth of cut.

### New Departure Ball Bearings

To give the smoothest operation with a minimum of vibration, we mounted the shaft on New Departure Ball Bearings—permanently sealed in

grease—it can't drip out and dirt and dust can't get in.

The massive base gives the necessary rigidity to support the high speed shaft which runs up to 4500 R.P.M. Cutting head equipped with three 6-inch high speed steel blades and chip breakers.

The heavy cast aluminum guard is actuated by a strong spring that presses guard against work entirely covering the blade after the work passes through. Guard at right side of fence covers blade even when fence is moved across the table.

Front table is 16 in. long and 7 1/2 in. wide with 3-in. rabbeting arm. Rear table is 17 in. long and 7 1/2 in. wide with 1-in. rabbeting edge. Length overall about 34 in. (For extension rods see picture and listing at right.) Height to table top 8 1/2 in. Gray enamel finish. Furnished with 2-in. V-pulley. Use 5-in. V-pulley for 1750 R.P.M. 1/2 H.P. motor. When ordering extra pulleys state diam. and bore. Ship. wt. 149 lbs.

184 WT 655—Jointer Only . . . . . \$44.95

### EXTRA LARGE RIP FENCE

The cast iron rip fence is 30 in. long by 4 1/2 in. high, and can be swivelled at an angle across table to allow a shearing cut in curly grained wood or glued up stock. Fence tilts to any angle up to 45 degrees in either direction—hand wheel locks in position. Graduated indicator shows degree of tilt. Fence operates on arm fastened to the back table—the proper point of suspension.

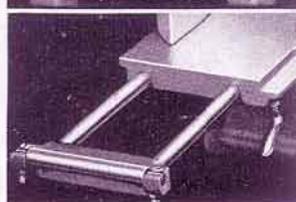
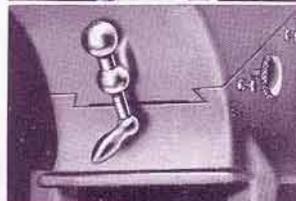
### ADJUSTABLE GIBS

Front and back tables are mounted on smoothly machined, dovetailed ways with adjustable gibs for taking up any wear. This feature costs more to produce, but increases the accuracy and durability of the machine. Convenient ball cranks operate up and down movement of tables easily and without backlash.

### EXTENSION RODS

Increase the overall table length of this jointer to 60 in. by inserting a roller extension rod in each end of the table. Proper support is thus given to long pieces, and the rollers make it easier to pass the wood over the jointer. Rollers are adjustable and are perfectly aligned with table. Ship. wt. pair, 7 lbs.

84 WT 8911—Pair . . . . . \$2.95



# A FULL 12-INCH JIG SAW *Only* \$485

20% MORE CAPACITY

18% MORE WEIGHT

Than Usually Offered at this Low Price

On how many saws at this low price can you—

- CUT TO THE CENTER OF A 24-INCH CIRCLE OR PANEL
- GET SUCH LARGE CAPACITY—2 $\frac{3}{8}$ -IN. CLEARANCE UNDER FOOT
- CUT A PERFECT ANGLE WITHOUT ADDITIONAL TOOLS

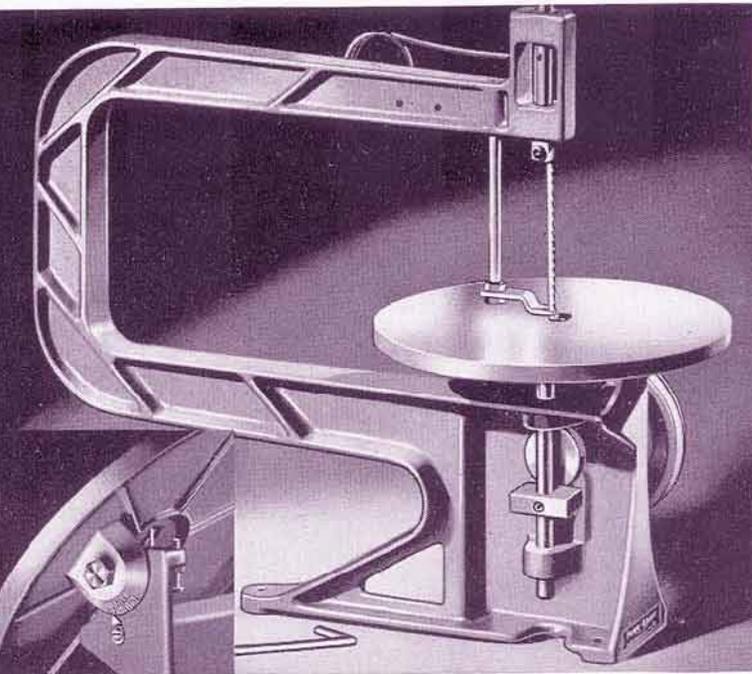
Not only are these features exclusive with Wards 12-In. Powr-Kraft saw, but it will do every job that any similar-priced saw will do and do it better. There's no secret—the saw is up to 18% heavier than most saws at this price. Naturally it is stronger . . . steadier . . . cuts with less vibration. Note the solid reinforcements in the heavy close-grained gray cast iron throat and base. The net weight (unpacked) is over 14 lbs.

### 8½-Inch Table with Built-In Tilt Gauge

Solid working surface—unusual accuracy! The reinforced, cast table tilts to 45°. Graduated tilt gauge is part of the smoothly finished casting. Cam and cross head are long-wearing, tempered nickel steel. Upper and lower drive shafts are ground and polished steel working in extra long bearings. Blade tension is constant with torsion type spring.

The hardened steel saw guide and hold down foot are adjustable vertically for thicker stock. Baked-on gray enamel finish. Height 16 in. Uses 5-in. plain end blades of any width or thickness. Has 4-in. V-pulley. Use 1½-in. "V" pulley on 1750 R.P.M. motor. Ship. wt. 21 lbs. Mailable. See ¼ H.P. Powr-Kraft Motor on Page 26 to drive this saw.

484 WT 875—Saw complete with one blade..... **\$4.85**



## 16-INCH SCROLL SAW WITH REMOVABLE UPPER ARM

**These Powr-Kraft Features Are Usually Found Only in \$25 Saws**

- Extra capacity—saws to center of 32-in. panel
- Chucks and blade turn to right angle for extra long work—takes blade up to ½ in. wide.
- Detachable arm. Saws through any size panel or any length strip when arm is removed
- Larger—heavier—steadier—weighs 53 lbs. net
- Balanced crankshaft driving action—operates in enclosed, dust-proof oil reservoir
- Extra large (10 by 10 in.) table tilts on trunnion up to 45° with scale indicating degree of tilt
- Handles any stock up to 1½ in. thick

We know of no other saw selling near this price with as great a capacity . . . as smooth and quiet running . . . as versatile as this 16-In. Powr-Kraft. It weighs more—has a deeper throat—and the detachable arm is an exclusive feature in this price range.

### Spring Tension Is Adjustable

This new positive acting spring adjustment permits tension to be adapted to type of work and size of blade. This is important when changing from light to heavy work—reduces blade breakage.

### Universal Chuck—Holds all Blades

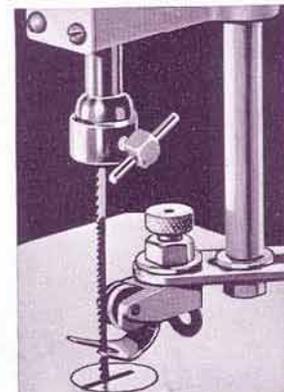
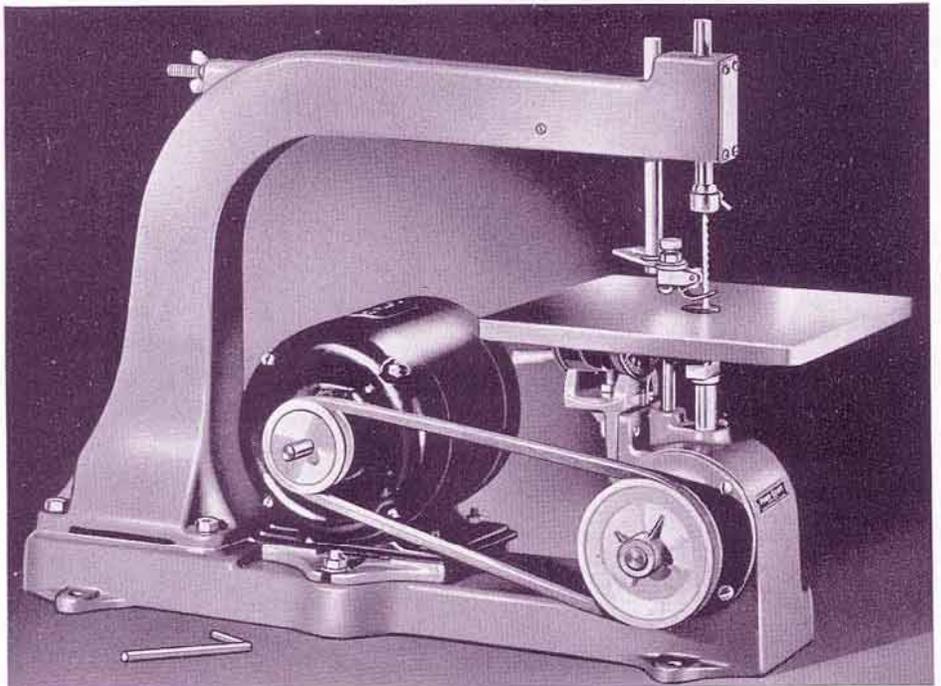
The hardened and tempered steel lower chuck tightens with a socket head set screw—holds any jig saw blade, saber blade or file firmly. By releasing locking nut it may be turned to right angle for sawing long pieces without removing upper arm.

### Castings and Driving Parts

Base and upper arm are carefully cast from selected grade gray iron. The hardened steel crankshaft is ground, polished and perfectly balanced. Crankshaft operates in a bath of oil enclosed in dust-proof case. Upper drive rod bearings are self-lubricated. The adjustable motor mounting is a part of the base and will accommodate any type motor. Height 18¾ in. Finished in durable baked-on gray enamel. Equipped with 4 in. V-pulley. Use 2 in. V-pulley on 1750 R.P.M. motor. Our ¼ H.P. Powr-Kraft motor on page 26 will handle this saw nicely. *Not Mailable.*

184 WT 874—Scroll Saw only without motor. Ship. wt. 68 lbs. .... **\$16.95**

184 WT 884—Scroll Saw complete with 484 WT 9800 motor, pulley and belt as pictured. Ship. wt. 100 lbs. .... **\$23.65**

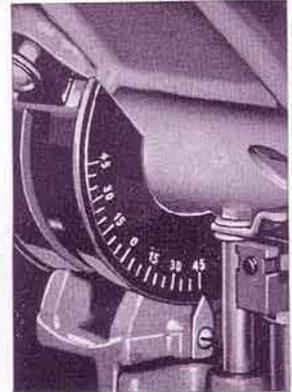


### HOLD DOWN FOOT

Hardened steel roller guide supports back of blade—blades last longer. Rigid steel rod support—adjustable to size work and the thickness of blade. Note the new spring tension hold down on the foot—holds work securely against the table even when the table is tilted. Non-drip, self-lubricating bearings are enclosed in head.

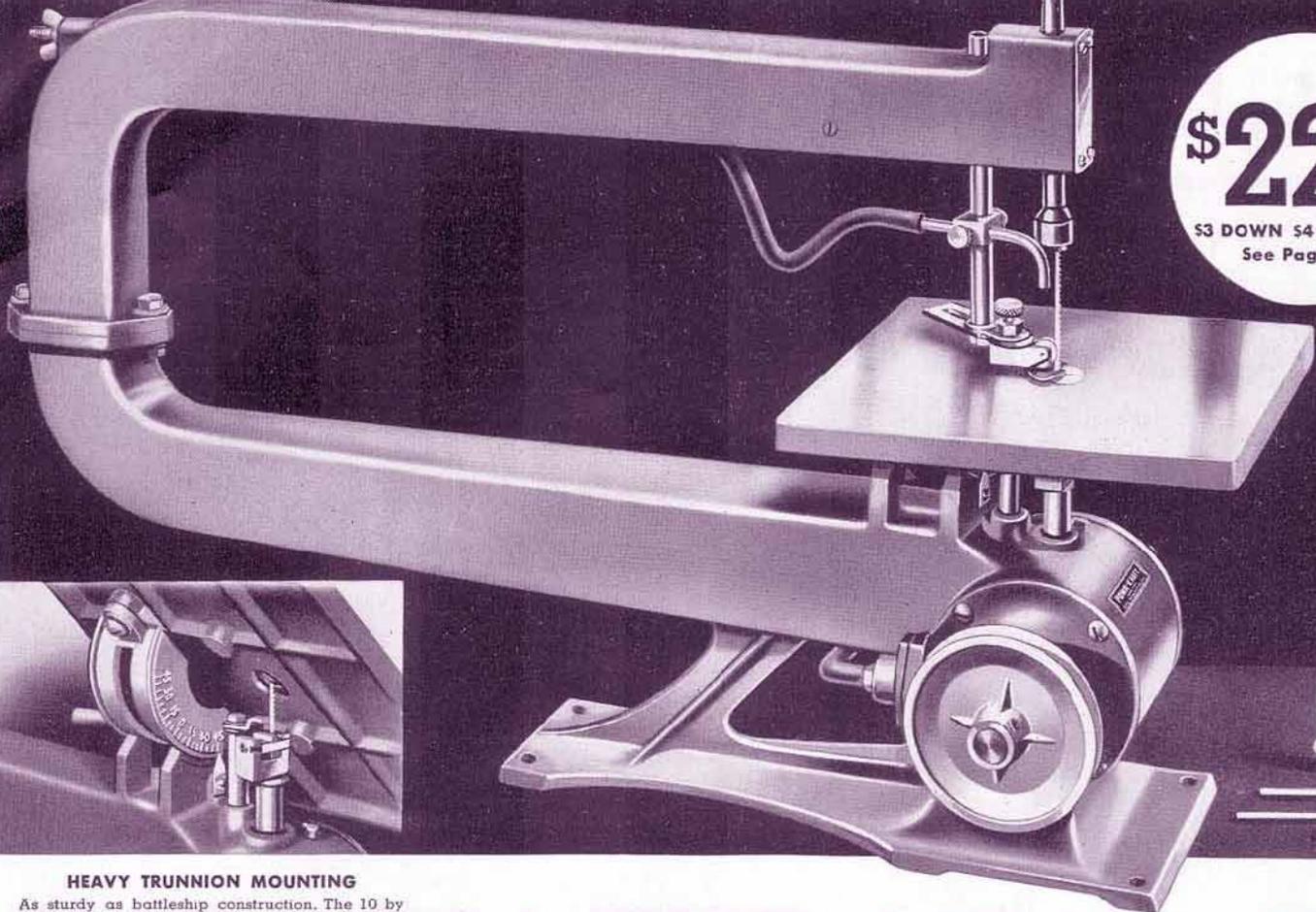
### TRUNNION MOUNTING

Large 10 by 10 in. surface ground, rib-reinforced cast gray iron table is solidly mounted on big trunnion with double ways machined in the casting. This is the finest construction yet devised for table support. Tilts to 45° with a cam lock. Has graduated scale. When table is tilted the blade is always in the center of table opening.



**\$22<sup>50</sup>**

**\$3 DOWN \$4 A MONTH**  
See Page 22



**HEAVY TRUNNION MOUNTING**

As sturdy as battleship construction. The 10 by 10-in. table of finest quality seasoned cast iron is mounted solidly on a big trunnion operating on two carefully machined ways. Accurate—blade is always centered. Tilts to 45° either side with scale for setting table. Locks with positive cam lever and won't jar out of position.

# 24-INCH SCROLL SAW

**For Pattern Shops – Cabinet Makers – and Production Work**

- Heavy duty—vibration-free—built for production work—weighs 61 lbs. uncrated.
- The full box frame assures permanent rigidity
- Cuts to the center of a 48-in. panel or circle
- Detachable upper arm gives unlimited capacity
- Universal chuck—takes all types of blades
- Chuck turns to right angle for extra long work
- Efficient air pump blows sawdust away from work
- Extra sturdy 10 by 10-in. table tilts on rigid trunnion mounting with accurate gauge
- Fully enclosed crankshaft runs in oil bath
- Takes work up to 1 7/8 inches thick with ease

**Precision Drive Operates in Oil**

Smooth operation and long life are assured by the finest construction and fitting of every part. Balanced crankshaft and hardened steel movement run in constant oil bath—fully enclosed—dust-proof. Two self-lubricating bearings guide upper chuck spindle.

**Universal Chuck for All Scroll Work**

Adjustable chucks permit blade to be turned at right angles to cut long pieces without removing the arm. Chucks take any type of blades. New adjustable spring clip on hold-down foot presses work against the table.

Height 19 in. Baked-on gray enamel finish. With 4-in. pulley. Run at 800 to 1200 R.P.M. Use No. 484 WT 9800 Motor, Page 26. *Not Available.*  
184 WT 664—Scroll Saw only. (Without \$2250 Motor.) Ship. wt. 81 lbs.

We designed and built this 24-Inch Saw for heavy duty shop production—but Wards low price is within the reach of practically every home shop.

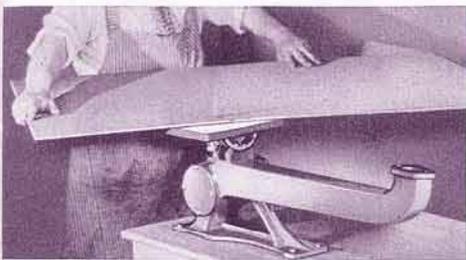
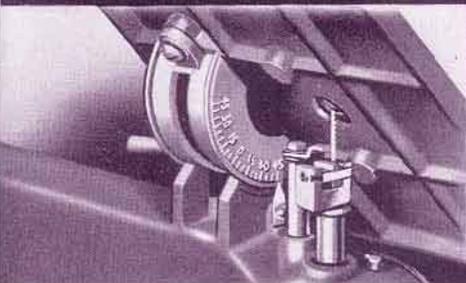
Because it is heavier, practically vibrationless and accurately balanced it will do the most exacting work—follow the most intricate lines—easily.

**Extra Heavy Construction**

The extra weight (weighs 61 lbs. net) is evenly distributed—not just in the base. Both the base and the rigid, box style arm are heavy, gray cast iron for smooth operation without vibration.

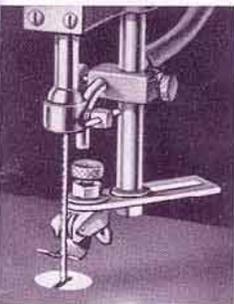
**Blade Tension is Adjustable**

This feature saves many blades. Just turn the wing nut at back of arm to adjust tension to size of blade and type of work. This construction insures even spring tension at all positions of the stroke.

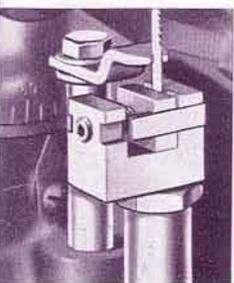


**ARM DETACHES FOR WIDE WORK**

Arm is quickly and easily detached simply by removing bolts at back—a feature that permits cutting through any size wallboard, panel or similar piece. The heavy universal chuck holds any saber blade firmly for smooth, clean-cut work.

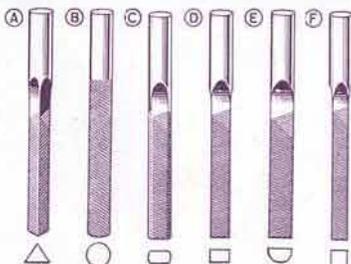


Longer blade life assured because the blade travels on the edge (not the side) of freely turning hardened steel roller guide—reducing friction to a minimum. Guide is held by extra heavy and rigid supporting arm which is easily adjusted for different size work and various width blades. Note the enclosed head with self lubricating bearings—no oil can drip onto your work. Adjustable return spring in head permits setting tension to fit blade.



Equipped with Universal chuck, made of heat treated alloy steel. For all types of jig saw and saber saw blades. Hollow head set screw tightens jaws to grip blade firmly. Chuck may be turned 90° for cutting long work without removing upper arm. This superior chuck is an important and efficient feature on Powr-Kraft Scroll Saws.

## SCROLL SAW FILES FOR WOOD OR METAL



Do away with tedious hand filing with a set of these files—they make short work of those hard-to-get-at places and do better, more accurate work in a fraction of the time. Made of specially refined file steel—hardened and tempered, with sharp teeth cut at correct angles.

To install, remove upper arm from either the 16-inch or 24-inch Scroll Saws and replace universal chuck with special file chuck fur-

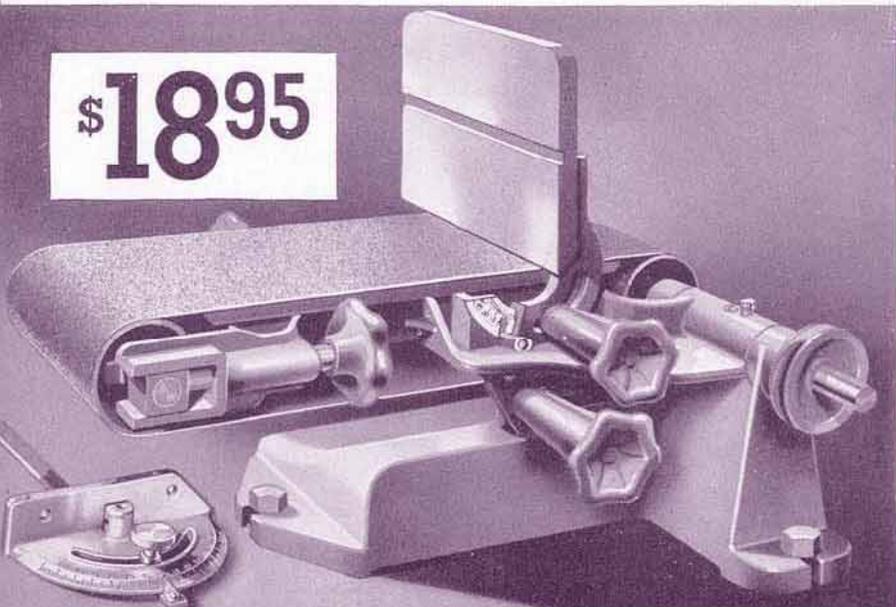
nished with each machine. Insert correct file in chuck for filing inside or outside patterns. Length 3 3/4 in. with 3/16-in. shank. Ship. wt. 3 oz. **State shape wanted.**

84 WT 8926—File for wood. Shapes: A, B, C, D, E, or F. Ea. **48c**

84 WT 8927—File for metal. Shapes: A, B, C, D, E, or F. Ea. **48c**

**You Can Buy Everything Wards Sell on Monthly Payments. See Page 22**

**\$18<sup>95</sup>**



## 6-Inch Belt Sander

Runs Horizontally, Vertically or At Any Angle In Between

- Heavier—sturdier—less vibration—weighs 52 lbs. net—50% more weight than usual at this price
- Belt type—kind approved by professional wood workers—prevents ridges and circular disc marks
- Sanding Belt full 6 in. wide—50% more sanding surface—50% faster than usually found in 4-in. belt sanders
- Carriage adjusts to any angle—horizontal—vertical or any intermediate position. (See picture below at left.)

Turn out the same fine, smooth work that factory experts do! Here is the sander that does it—the kind skilled cabinet makers use. It's big—it's sturdy and has the same uniform speed across the entire sanding surface—leaves no ridges or circular scars as disc sanders do. Has adjustments to make speedy work of any sanding job at any desired angle.

### Big Tables—Accurate Miter Gauge

The Tilting Table is big (full 6½ by 11 in.) so you can handle big jobs and handle them accurately. It tilts 45° in one direction, 15° in opposite direction on a large, accurately scaled trunnion. For sanding compound angles merely adjust the table, set the miter gauge in the machined groove and do it all in one operation. The work is perfect for every part is held rigid and vibration-free by the heavy cast iron, rib-reinforced base.

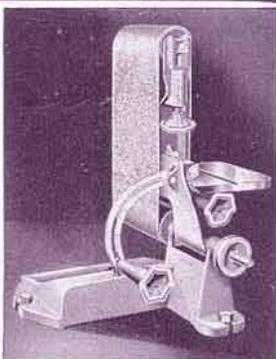
The wide 6-in. belt runs on balanced, rubber-covered pulleys with self-lubricating bronze bearings. The 6 by 12½-in. precision ground main table supporting the belt is mounted on rugged machined posts—the surface has to be even. Proper belt tension adjustments described at left.

**Dimensions:** Length 22 in., width 15¾ in., height 8½ in. Finished in durable, baked-on gray enamel. Equipped with 2½-in. V pulley and 6 by 4½-in. sand belt. For extra belts see Page 24. Run at 1200 R.P.M. for average work. Use 1¾-in. pulley on No. 484 WT 9811 motor on Page 26. *Mailable.*

484 WT 654—With medium belt. Ship. wt. 67 lbs... **\$18.95**

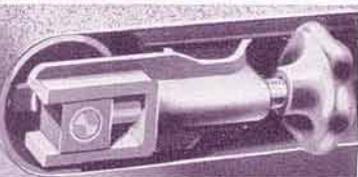
### Versatility

A few quick, easy adjustments and you're ready for any sanding job. For joint or butt sanding just tilt the table to the angle you want and lock it with the hand screw. Or adjust your miter gauge for compound angles. Table is quickly detached. Carriage locks rigidly in vertical position by large hand screw.

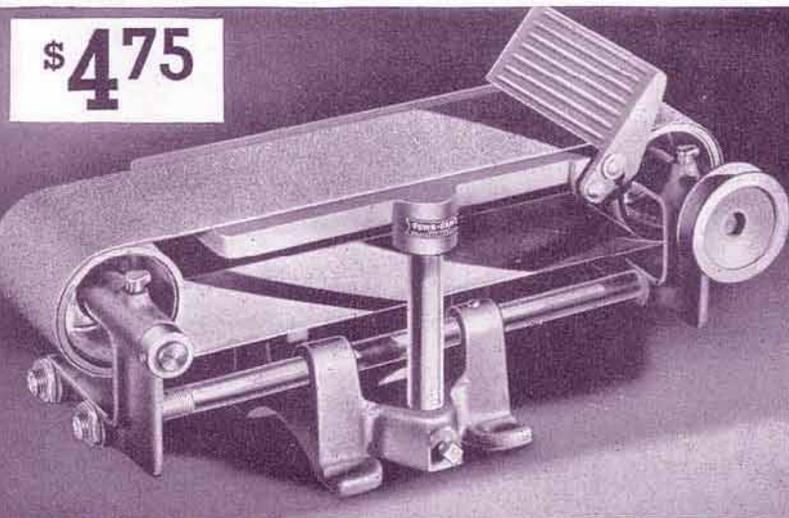


### Adjustable Belt Tension

Simple... positive... quick! No wrenches necessary. Just turn the big hand screws on each side of belt for proper tension and alignment. No complicated devices to work loose.



**\$4<sup>75</sup>**



## Don't Be Without a Bench Belt Sander

- Give your work a factory finish with this economical, low priced machine
- Adjustable rubber covered pulleys make it smooth operating
- Sturdy fence or stop-guard adjustable to full 45° angle
- Smoothly ground main table for absolute trueness in all work

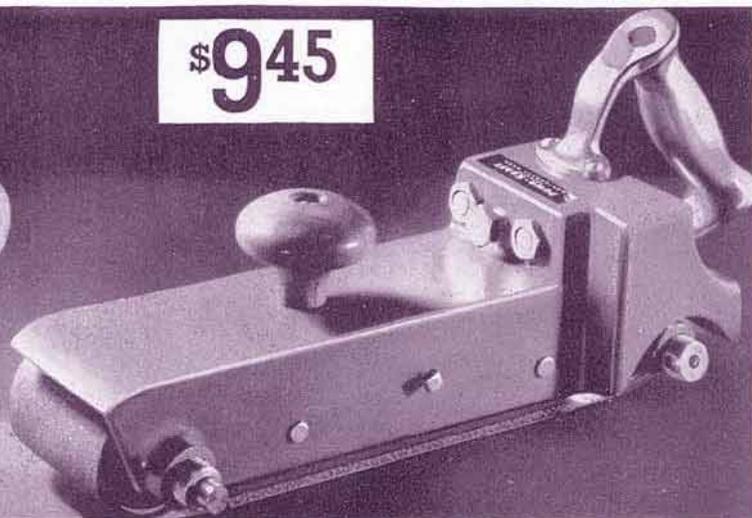
You can equip your shop for fine finishing at a mighty small cost. At this low price you can do away with tedious hand sanding—give large surfaces a flawless smooth finish—get straight sharp lines and square edges in a fraction of the usual time.

This sturdy bench sander is equipped with features you'd hardly expect to find at such a low price. Revolving abrasive belt runs over pulleys which are rubber covered to give maximum gripping power. Pulleys turn on long 3-in. self lubricated bearings. The sturdy main table is mounted on steel uprights and smooth ground for accuracy and minimum friction. Fence is quickly removed for sanding long pieces. Finished in durable baked-on gray enamel.

**Dimensions:** Length 13½ in., height 5¼ in., Table is 4 by 8 in. Complete with 2 in. V pulley and 3 by 30 in. medium sanding belt. Run at 1200 R.P.M. Use 1½-in. V pulley on No. 484 WT 9800 Motor. See Page 26. **\$4.75**

484 WT 877—Sander complete. Ship. wt. 13 lbs.....

**\$9<sup>45</sup>**



## Portable Sander—For Flexible Shaft

- Economical—practical—time-saving—labor-saving
- Light weight—permits delicate touch for fine finished work
- Adjustable belt type—cuts smooth and leaves no marks
- Attaches quickly to any standard flexible shaft with motor drive

Take this sander to the job! Finish table tops and extra large surfaces with ease and speed. Do professionally smooth jobs in half the time without the labor of tedious hand sanding.

Just attach the sander to any standard flexible shaft running direct from a motor. For most convenient operation use both flexible shaft and extension (See Page 22). Because it's light weight and is designed for a natural arm position it takes most of the labor out of sanding jobs. Frame and pistol grip are light weight, high grade aluminum. The rubber covered crown pulleys eliminate slipping and turn on sealed-in, self-lubricated bronze bearings... no oil can drip out and mar your work. Handy belt tension adjustment in front of pistol grip handle. Length, 17 in. Equipped with 3 by 30 in. medium sanding belt. Recommended speed, 1750 R.P.M. Use with No. 484 WT 9800 motor described on Page 26. For extra belts see Page 24. *Mailable.*

484 WT 879—Portable Sander with belt. Ship. wt. 13 lbs..... **\$9.45**



**\$4.45**

# ALL THE FEATURES OF MOST \$10 LATHES

- Big capacity. Swings stock 8 in. by 27 in. Overall length of lathe 39 inches.
- Rugged Strength. Weighs over 21 lbs. Rigid cast iron can't warp or spring out of line.
- Thrust Ball Bearing head. Reduces power required—smooth operation means closer work.
- Steel dowelled head and machined ways for accurate alignment between centers.
- Baked-on gray enamel finish. Attractive and durable—easy to clean.

Wards \$4.45 Lathe wins on every count—for weight, for capacity, for adaptability, for strength—in every way it stands alone in its price field. A big statement to make, but consider these facts: Wards lathe can handle stock 8 inches in diameter by 27 inches long and that is greater capacity than other lathes. Provision has been made to further increase capacity between centers to 39 inches by adding the bed extension. The actual weight is 21 pounds uncrated—much heavier and therefore more rigid than other lathes near this price. Instead of a 5-inch tool rest you will appreciate the full 6-inch working length of the tool rest on this lathe. And instead of only three speeds Wards lathe has a four-speed pulley giving you a greater operating range. No wonder we say—"It's a \$10.00 lathe in everything but price."

### It's the Weight that Counts

When you buy a lathe, even a low priced one, you expect smooth, chatter-free operation—something you don't get in a light, flimsy construction. But this sturdy tool is built of well seasoned gray cast iron—which means that the machine is more rigid and free from vibration than any stamped steel lathe could be. It takes full capacity loads with the least vibration—and it can't warp or spring out of shape. It actually weighs 21 lbs. net.

### Consider the Capacity, Too

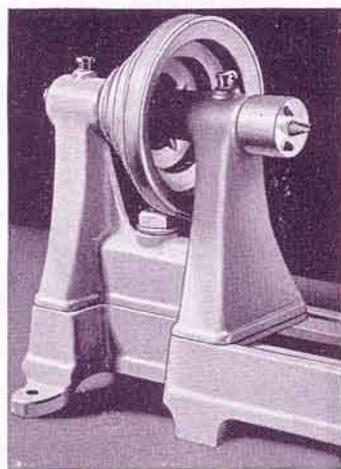
Extra inches capacity—between centers is full 27 inches, with an 8-inch swing over bed. You can increase the capacity between centers to 39 inches, by attaching the bed extension listed below. Overall length too (without bed extension) is more than you'll find on other lathes priced anywhere near \$4.45.

### Ball Thrust Bearing Reduces Friction

The sturdy 1/2-inch head stock spindle of ground and polished steel runs in four big bearings and against a ball thrust bearing which takes up end play, reduces power required to operate and gives smooth performance. Sufficient clearance around 4-step pulley allows motor to be run above, below, or behind.

Then there's the accurately machined ways which assure perfect alignment between the centers, the carefully fitted screw feed tail stock with lever lock, and the heavy, solid head stock all described at right.

All these features mean a rugged, sturdy, he-man's lathe that will delight every home shop owner, and every man or boy who hopes to own a shop.



**HEAVY SOLID HEAD STOCK**

Big and husky! Steel dowels run from bed into head stock and accurately align head with bed of lathe. Head is then bolted securely. Spindle runs on large self lubricating bearings with ball thrust bearing. Four step pulley-speed or power when needed. Drive from above, below or behind. Spur center included.

### Specifications

Capacity: 8-inch swing 27 inches between centers (39 in. with extension)  
 Overall dimensions: 39 inches long, 8 inches high  
 Uncrated weight: 21 lbs.  
 Heavy Gray Iron Frame  
 Self lubricating bearings  
 Ball thrust bearing  
 Four speed Pulley  
 6-inch tool rest and holder, spur and cup centers and wrench included  
 Finish: Baked gray enamel

484 WT 865—Ship. wt. 29 lbs. Mailable.....\$4.45

84 WT 9990—V-Pulley same as on lathe. State 1/4 or 5/8-inch bore. Ship. wt. 1 lb. 3 oz. Each.....49c

Order 3/8-inch wide V-belt, Page 23. 1/4 H.P. Motor is suitable: Use 1/3 H.P. for faster work.

### BED EXTENSION INCREASES DISTANCE BETWEEN CENTERS TO 39 INCHES

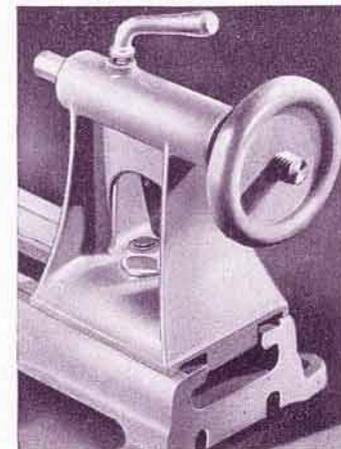
**98c**



Built of heavy gray cast-iron—rigid as the lathe bed. Perfect line-up—milled ends carefully squared to fit perfectly with lathe bed. That's important because it means the centers will always line up exactly, even after years of hard use. Ways closely machined. The tail stock slides freely over milled joint. Matches lathe with same durable baked-on gray enamel. Increase the utility of your lathe with this precision made extension. No danger of chatter or vibration while working long pieces. The rugged weight, absolute alignment and rigidity of lathe and extension—bolted to form one unit—means high-precision work on long turnings.

484 WM 867—  
 Shipping weight 6 lbs..... 98c

You can buy anything Wards Sell on Monthly Payments See Page 22



**SCREW FEED TAIL STOCK**

Milled bottom fits machined ways accurately—always in perfect alignment. Heavy flared base gives rigidity. Cup center with hand wheel feed and positive locking lever.

**\$34<sup>95</sup>**

\$4 DOWN \$5 A MONTH

# Extra Heavy Duty COMMERCIAL TYPE LATHE

## TURNS WORK UP TO 13 BY 36 INCHES



• A Real Professional Model

- Massive Heavy Construction—Weights 104 lbs. net uncrated
- Exclusive Clutch-in-Head Control—Instantly Disengages Motor
- New Departure Ball Bearings Assure Vibrationless Stamina
- Swings 13-In. Stock Over Bed—36-In. Capacity Between Centers
- Improved Indexing Device for Fluting—Holds Spindle in 32 Positions
- Easily Convertible for Metal Turning—For Accessories See Page 16

### Specifications

Capacity: 13 inch swing, 36 inches between centers.  
 Overall dimensions: 54½ inches long, 14½ in. high.  
 Uncrated weight: 104 lbs.  
 Nationally known New Departure Ball Bearings.  
 Width Bed Top: 6 inches.  
 Heavy gray iron frame.  
 32-position spindle locking device for fluting.  
 1-inch Hollow Spindle—¾-inch hole. Spindle threaded both ends (16 thread).  
 Both head and tail stock take No. 2 Morse Taper.  
 Face Plate: 3½ inches.  
 Tool rest: 12 inches with hand wheel lock.  
 Endless V belt: 56 inches.  
 Tail Stock with convenient hand wheel and lever lock.  
 Gray enamel finish.

America's finest extra heavy duty lathe. Proved by actual test and by actual comparison with other well known lathes, by many enthusiastic owners. It's professional in its specifications—built for commercial work—and thoroughly capable of handling any project you'll want to tackle in your shop.

### Unusually Quiet Performance

Wards use only the finest *seasoned* gray cast iron which with heavy ribbing and bracing eliminates warping and insures perfect alignment of lathe centers. This construction assures an exceptional smoothness, quietness, and precision. Weighs 104 lbs. net—heavy enough, rigid enough to eliminate practically all vibration.

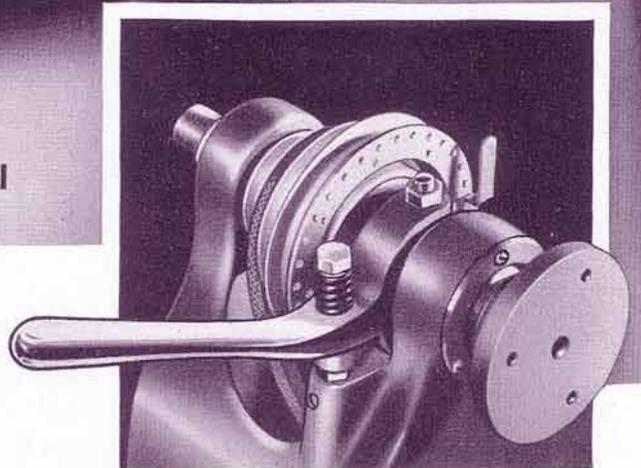
### Carefully Planed V and Flat Ways

See the close-up of tail stock at right, and notice the improved ways. One large V-way and one flat way—both carefully machined—accurately align the tail stock on the base... a precision feature not obtained with ordinary flat ways alone.

### New Departure Ball Bearings

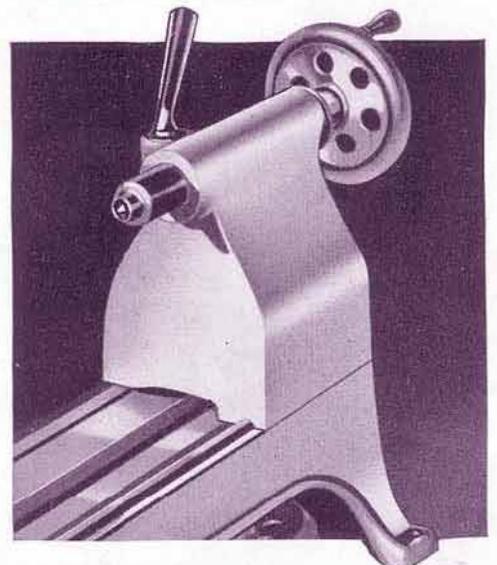
Engineers everywhere recommend these bearings for a life-time of service. They're far superior to the usual "precision type" bearings because they're sealed in grease—grease can't come out, neither can dirt or dust get in. As for precision—the 1-inch hollow spindle is ground to an accuracy of 1/5000-in. Spindle is threaded at both ends and takes No. 2 Morse Taper. Holds ¾-in. rod. 4-speed pulley is driven from above, behind, or below lathe. Complete with 3½-in. face plate; tool rest holder; 12-in. tool rest; 56-in. V belt; spur and cup centers.

- 184 WT 658—Shipping weight 126 lbs. Cash Price... **\$34<sup>95</sup>**  
 84 WT 9989—4-step Motor Pulley to match lathe pulley. State ½, ⅜, or ¼-inch bore. Shipping weight, 2 lbs. .... **75c**  
 484 WT 657—Pillar Blocks to increase swing from 13 to 21 inches, also larger tool rest holder. Ship. wt. 17 lbs. .... **\$6.75**



### DISENGAGES MOTOR INSTANTLY

Exclusive at Wards! New, quick "clutch-in-head" control permits finger tip control of pulley. Mere flip of the nickel-plated throw-out lever does the trick. Starts and stops lathe without touching power switch. New improved ratchet device—permits finer fluting results with 32 (instead of 16) different locking positions.



### PRECISION LOCKING TAIL STOCK

No fussing—no tools needed now! Wards Powr-Kraft has new, more convenient 5-in. hand wheels under bed to lock tail stock and tool rest securely. Large tail stock spindle hand wheel gives micrometer adjustment. Full 3½-in. quill movement locks firmly by lever. Self-ejecting center.

**You Can Buy Anything Wards Sell on MONTHLY PAYMENTS See Page 22**

# Wards Heavy Duty Lathe

## URNS WORK UP TO 10 BY 30 INCHES

**\$12<sup>75</sup>**

FOR MONTHLY  
PAYMENTS  
SEE PAGE 22

• A Regular \$20 to \$25 Value

- Heavy Machined Gray Cast Iron Throughout—Expensively Machined
- Full 10-Inch Swing Over Bed . . . 30-Inch Capacity Between Centers
- Heavy Ball Thrust Bearings take up End Thrust—Reduce Friction and Wear
- Actual Uncrated Weight—42 lbs.—Gives Needed Rigidity for Precision Work
- Easily Convertible to Metal Turning—See Page 16 for Complete Information

Equip your shop with Wards Heavy Duty All-Purpose Lathe. Has the features, capacity, weight and precision to handle hardest jobs. Its combination V and Flat Way bed assures rigid mounting and correct alignment. All parts are carefully machined. Has extra wide base—provides firmer footing on bench—ample clearance underneath. Big hand wheel operates tail stock spindle.

Head and tail stock spindles have No. 1 Morse Tapers. Self-ejecting centers.

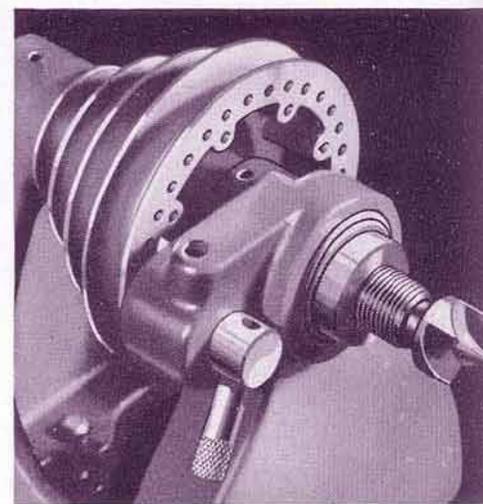
### Specifications

Capacity: 10-inch swing  
30 in. between centers.  
Overall dimensions: 47 inches  
long, 10 $\frac{1}{2}$  inches high.  
Uncrated weight: 42 lbs.  
Self-lubricating bearings.  
Ball thrust bearing  
Width bed top: 4 inches.  
 $\frac{3}{4}$ -in. Hollow Spindle— $\frac{3}{8}$ -in.  
hole.

Takes No. 1 Morse Taper.  
Includes spur and cup centers,  
tool rest holder and  
12-in tool rest. Shipping  
weight 57 lbs.

184 WT 868 . . . . . **\$12<sup>75</sup>**

Order 84 WT 9974 4-step V-  
pulley and  $\frac{1}{2}$ -in. V-belt of  
right length on Page 23.

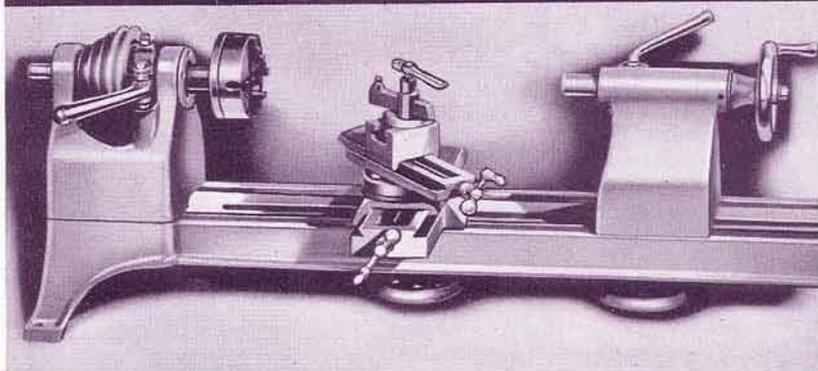


### INDEXING HEADSTOCK

This new headstock, with balanced four-step pulley, is provided with one row of 32 holes and one row of eight holes accurately spaced for indexing, making it invaluable for fluting or laying out work when metal cutting.

Heavy  $\frac{3}{4}$ -in. spindle, which runs on large self-lubricating bearings, is hollow with  $\frac{3}{8}$ -in. hole, and fitted with No. 1 Morse Taper. Ball thrust bearing takes up end play and reduces power required. 4-speed Pulley. Spur center included. Spindle projects at left for outboard turning; use any face plate with  $\frac{3}{4}$ -in. unthreaded hole.

## METAL CUTTING ATTACHMENTS for Both of These Lathes

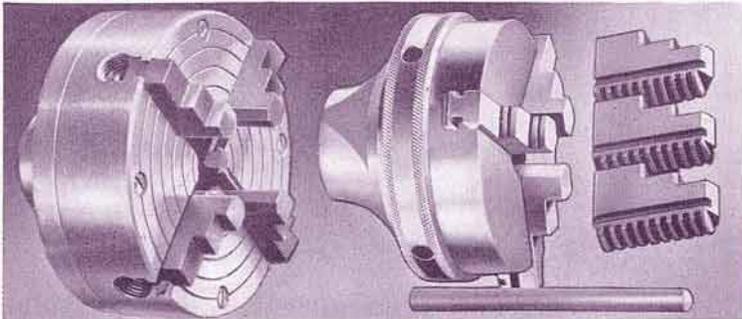


The extra weight and extra stamina of Wards POWR-KRAFT Heavy Duty Lathes fit them ideally for the difficult task of metal cutting. In the picture at left you see lathe fitted with the simple attachments which quickly convert them into efficient metal cutters.

Both of these lathes are designed for metal cutting by being built with hollow spindles to handle long rods and both have newly improved indexing devices for laying out work. Note both flat and V-ways for precise and permanent alignment of compound rests, tail and head stocks. A feature usually found only on higher priced lathes. Metal cutting attachments are fully pictured and described on Page 16.

Every garage and small shop today needs one of these lathes for turning commutators and similar metal-turning jobs—and the lack of this facility in the home work shop limits the amount and variety of work you can do.

# Precision Built Lathe Accessories



## 4-jaw Independent Chucks

Substantially and accurately built with hardened steel reversible jaws. Each jaw works independently. 4-in. capacity. Wrench and back plate included. Ship. wt. each 7 lbs.

84 WT 8802—Fits No. 184 WT 658 Extra Heavy Duty Lathe (Page 14) or any lathe with 1-in. spindle. 16 threads per inch. \$4.95

84 WT 8803—Fits No. 184 WT 868 Heavy Duty Lathe (Shown on Page 15) or any lathe with 3/4-in. spindle, 16 threads per inch. \$4.95

## 3-jaw Automatic Chuck

A carefully machined precision tool for the master mechanic. 3-inch capacity. Three hardened steel jaws work simultaneously and grip work firmly.

Fits No. 184 WT 658 Extra Heavy Duty Lathe (shown on Page 14) or any lathe with 1-inch spindle, 16 threads per inch.

Key and extra set of jaws included as shown. Shipping weight 6 lbs.

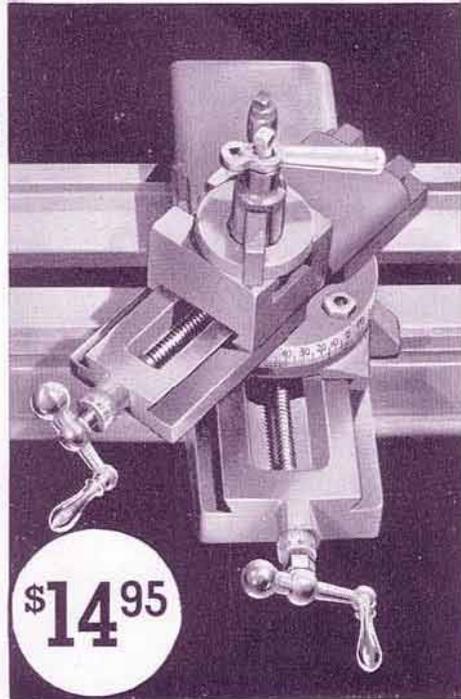
84 WT 8804—Complete as described. \$14.95

## Compound Rest For Metal Turning

Enables you to do dozens of metal turning jobs right on your own lathe. Every part is sturdy (not ordinary die cast parts) . . . complete tool weighs 19 1/2 lbs. net. Swivel base is graduated to 180 degrees, with both longitudinal and transverse feed handles calibrated in thousandths of an inch. One turn of either handle equals only 1/16-in. of travel. Micrometer gauges at the handles. Longitudinal feed is 6 1/2 in.; transverse feed 7 in. All ways machined to 60° and gibbed for take-up. Tool holder included. Ship. wt. 24 lbs.

84 WT 8800—Rest for 184 WT 658 Extra Heavy Duty Lathe. Use hand wheel on tool rest holder for attaching. \$14.95

84 WT 8801—Rest for 184 WT 868 Heavy Duty Lathe. Clamps and bolts included. \$14.95



## Cast Iron Tool Rests

84 WT 8840—For any tool rest holder with 1-in. hole. State size. 4-in. size. Ship. wt. 2 lbs. 65c

12-in. size. Ship. wt. 3 lbs. 95c

24-in. double post. Ship. wt. 7 lbs. \$1.85

84 WT 8841—For any tool rest holder with 3/8 inch hole. State size. 12-in. size. Ship. wt. 3 lbs. 90c

18-in. double post. Ship. wt. 5 lbs. \$1.40

## Cast Iron Tool Rest Holders

Accurately machined to fit lathe bed. 84 WT 8836—Tool Rest Holder only, as pictured at left above. Fits 184-WT 868 Heavy Duty Lathe.

3/8-in. hole. Ship. wt. 3 lbs. 69c

84 WT 8835—Complete with 5-in. hand wheel and bolt. Hole for tool rest posts 1 in. in diameter. Fits 184 WT 658 Lathe. Ship. wt. 9 lbs. \$1.45

## Cup Centers

Hardened steel. Removable points. Ship. wt. 8 oz.

84 WT 8816—

With No. 2 Morse Taper Shank. 65c

84 WT 8817—

With No. 1 Morse Taper Shank. 59c

## 60° Centers

Hardened steel, ground to fit. Ship. wt. 8 oz.

84 WT 8812—

With No. 2 Morse Taper Shank. 65c

84 WT 8813—

With No. 1 Morse Taper Shank. 59c

## Screw Centers

Accurate taper, removable screw. Ship. wt. 8 oz.

84 WT 8818—

With No. 2 Morse Taper Shank. 65c

84 WT 8819—

With No. 1 Morse Taper Shank. 59c

## Spur Centers

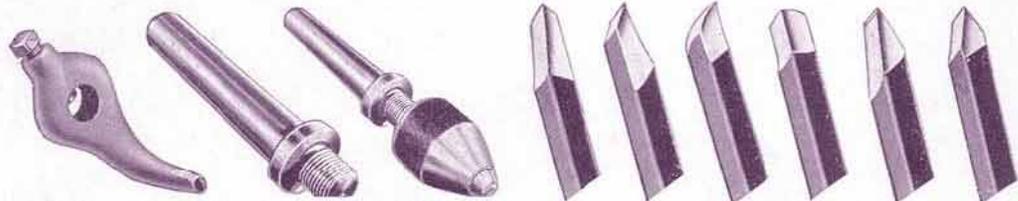
Fine quality hardened steel. Ship. wt. 8 oz.

84 WT 8814—

With No. 2 Morse Taper Shank. 65c

84 WT 8815—

With No. 1 Morse Taper Shank. 59c



## Lathe Dog

Drop forged from highest quality bar steel, insuring required strength. Ship. wt. 8 oz.

84 WT 9811—

3/4-in. size. 49c

## Center for Jacobs Chuck

Hardened steel. Fits Jacobs Chuck on Drill Press. Ship. wt. 8 oz.

84 WT 8822—

No. 2 Morse Taper Shank. 80c

## Chuck Centers

With 1/2-in. chuck shown on Page 22. Shipping weight 1 lb. 8 oz.

84 WT 8820—

No. 2 Morse. \$1.19

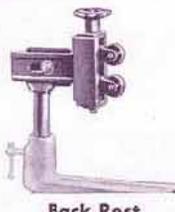
84 WT 8821—

No. 1 Morse. \$1.19

## High Speed Steel Tool Bits

It's the high speed tool steel that makes these first quality bits exceptionally tough and durable. They're ground, ready for use—and heat treated to hold a keen edge in the toughest metal cutting jobs. Set consists of round nose turning tool, right and left hand turning tool, right and left hand facing tool, and threading tool. Fit tool holder of compound rests listed above. Size 3/16 by 1 1/2 in.

84 WT 8809—Ship. wt. per set, 1 lb. Set of 6. 69c



## Back Rest

Mounts behind when turning long pieces. Rollers adjustable as work progresses. Ship. wt. 4 lbs.

84 WT 8846—For tool rest holders with 3/8-in. hole. \$3.45

84 WT 8847—For tool rest holders with 1-in. hole. 3.45



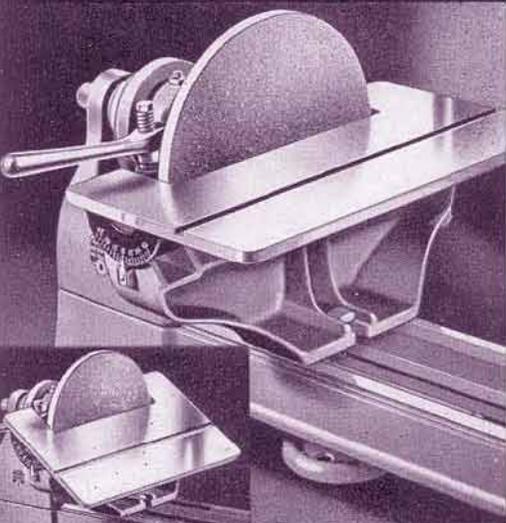
## Steady Rest

For work up to 2 1/2 in. diam. Wt. 6 lbs.

84 WT 8845—For 184 WT 868 Lathe. \$1.95

84 WT 8844—For 184 WT 658 Lathe. \$2.15

# DO SANDING ON YOUR LATHE, TOO!



## Sanding Attachment for Lathe

Convert your lathe into a large and efficient disc sander with this economical attachment. The 10-inch disc which is included fits onto the spindle of your Powr-Kraft lathe. Table is designed to fit the V and flat ways of the lathe and is held in position on the lathe bed with the same clamp parts used for your tool rest. Heavy cast table 10 by 16 in. is ground and polished—tilts to any angle up to 45 degrees. Convenient tilt gauge. Baked gray enamel finish. Ship. wt. ea., 28 lbs.

84 WT 8903—For 184 WT 868 Lathe. \$8.65

84 WT 8904—For 184 WT 658 Lathe. 8.65

## DISC SANDPAPER

10 in. diam. to fit above sanding attachment. Fine, medium and coarse grit. State grit wanted. Ship. wt. 2 oz.

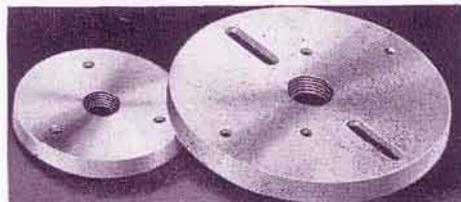
84 WT 712—Each. 12c

## MITER GAUGE

Miter gauge and bar slides in table slot of above sanding attachment. Enables you to sand accurately at any angle. Same as miter illustrated with Bench Saw on Page 2.

84 WT 8825—Ship. wt. 2 lbs. 8 oz. 98c

Buy All Your Woodworking Tools on Monthly Payments See Page 22



75c Accurately Balanced Face Plates \$1.00  
3 1/2 in. 6 in.

Heavy seasoned gray cast iron, carefully machined and dynamically balanced on a precision testing machine which guarantees even distribution of weight and prevents vibration. Ship. wts. 2 and 3 lbs.

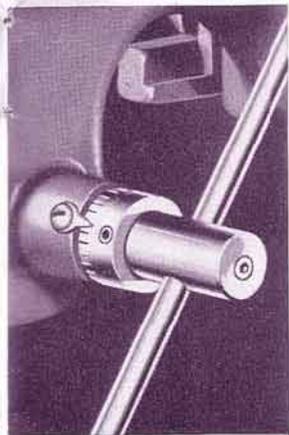
84 WT 8833—3 1/2-in. diam. For 1/2-in. unthreaded spindle. Fits 484 WT 865 Lathe. Each. 75c

84 WT 8831—3 1/2-in. diam. 3/4-in. bore 16 thread. Fits 184 WT 868 Lathe. Each. \$1.15

84 WT 8832—6-in. diam. For 3/4-in. unthreaded spindle. For outdoor turning on 184 WT 868 Lathe. Each. \$1.00

84 WT 8830—6-in. diam. 1 in. bore 16 thread. Cross threaded for either end of 184 WT 658 Lathe. Each. \$1.35

# WARDS POWR-KRAFT 13-Speed Utility Bench Drill



**Depth of Cut Easily Controlled**

In the close-up above you will see how the depth of your cut is indicated on the circular scale. This convenience eliminates all guesswork and permits measuring depth drilled from any starting position without special setting. Note or large illustration at right the positive lock for holding quill in position when routing. You'd pay dollars more for a machine with comparable features.

- Self-lubricating bronze bearings—with thrust ball bearing to take up end thrust
- Seasoned non-warping gray iron castings—weighs 32 lbs. net as it stands on your bench
- Heavy well machined cast table is 8 in. diam.
- Efficient 3-jaw chuck takes drills up to 1/2 in.
- Quick-sight depth gauge graduated in fractions of an inch. Positive "T" lever lock
- 13 speeds available by adjusting V-belt drive

You'd pay dollars more for a bench drill that begins to compare with features like these . . . yet for this low price you get ample strength, capacity and accuracy to meet the needs of the average home craftsman. Has the same general construction of our higher priced drills with a heavy head casting, adjustable motor bracket, and precise depth adjustment.

The spindle runs in large self-lubricating bronze bearings. End thrust is taken up by a thrust ball bearing. The result is an accurately aligned machine with both horizontal and vertical friction reduced to a minimum.

Baked gray enamel finish. Use 484 WT 9810 or 9811 Motor. Besides motor you will need 84 WT 9974 4-step pulley to fit motor and 84 WT 9964 33-in. V-belt. Ship. wt. 43 lbs. *Mailable.*

484 WT 878—Drill Press without motor or belt. . . . \$10.95

### SPECIFICATIONS

Overall height: 26 inches.  
Maximum distance from table to chuck jaws: 7 3/4 inches.  
Spindle travel: 3 1/2 inches.  
Drills to center of 12-inch circle.

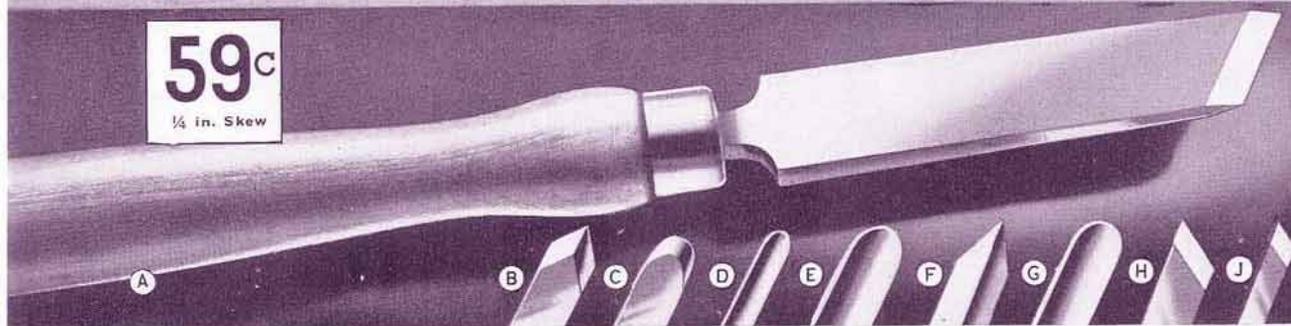
Chuck capacity: 1/2 inch.  
Range of speeds: 760 to 4000 R.P.M.  
Table: 8 in. diam. Seasoned gray iron, ground and slotted.  
Net weight: 32 lbs.



**\$10<sup>95</sup>**  
LESS MOTOR

## FINEST CRUCIBLE STEEL WOODTURNING CHISELS

**59<sup>c</sup>**  
1/4 in. Skew



**\$3<sup>29</sup>**  
Set of 5

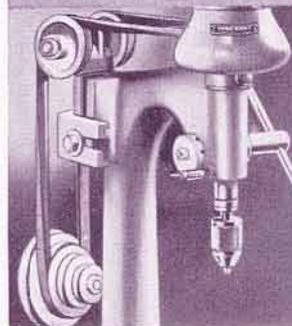
### Wood Turning Chisel Set

A set of the five most commonly used wood turning chisels. Same high quality as chisels described at right. Set consists of 1/2 in. gouge, (E); 3/8 by 1/2 in. parting tool, (F); 3/4 in. skew, (H); and 1/4 in. skew, (J). Complete in a durable canvas roll. Ship. wt. 2 lbs. 8 oz.  
84 WT 723 Set of 5. . . . \$3.29

Real professional chisels that bite into the toughest wood, and do finer, smoother work than is possible with easily dulled carbon steel chisels often sold near this price. They come to you sharpened to a hair-splitting edge, and they are easily kept that way because only highest quality crucible steel, specially hardened and correctly tempered to hold a razor edge, is used in their manufacture. Blades are 4 inches long, fully polished, and ready for use. Fitted with polished hardwood handles 8 inches long. Shipping weight each, 12 ounces.

- (A) 84 WT 728—1-in. Skew. . . . 98c
- (B) 84 WT 730—1/2-in. Spear Point. 65c
- (C) 84 WT 726—1/2-in. Round Nose. . . . 65c
- (D) 84 WT 729—1/4-in. Gouge. . . . 69c
- (E) 84 WT 732—1/2-in. Gouge. . . . 69c
- (F) 84 WT 722—3/16-in. by 1/2-in. Parting Tool. . . . 69c
- (G) 84 WT 721—3/4-in. Gouge. . . . 89c
- (H) 84 WT 720—1/2-in. Skew. . . . 65c
- (I) 84 WT 733—1/4-in. Skew. . . . 59c

### Pulley Attachment



Use this pulley attachment in place of the motor bracket on either of our bench model drill presses for driving from a line shaft instead of using individual motor. Also used for driving from jack shaft to obtain greater number of speeds.

Attachment consists of a heavy gray iron casting, which is fastened to back of machine, and two V-type idler pulleys 2 1/2 inches in diameter which are mounted on smooth running self-lubricating bearings.

84 WT 8865—Ship. wt. 3 lbs. . . . \$1.50

### LAKESIDE QUALITY WOOD TURNING CHISELS

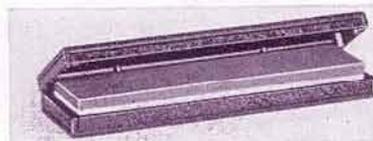
Full size wood turning chisels that represent a real value at this low price. Made of carefully tempered vanadium steel—take and hold their keen edge. Cadmium plated to resist rust. Polished wood handles, 8 in. long. Each chisel carefully tested to give long service. Ship. wt. 12 oz. each.

- (K) 84 WT 8918—1/2 in. Skew. . . . 47c
  - (L) 84 WT 8917—1/4 in. skew. . . . 43c
  - (M) 84 WT 8916—Parting Tool. . . . 47c
  - (N) 84 WT 8919—1/2 in. Gouge. . . . 52c
  - (P) 84 WT 8920—3/4 in. Gouge. 69c
- 84 WT 8915—Set of 4 chisels. K, L, M, N, in canvas roll. Shipping weight, set, 2 lbs. . . \$1.98

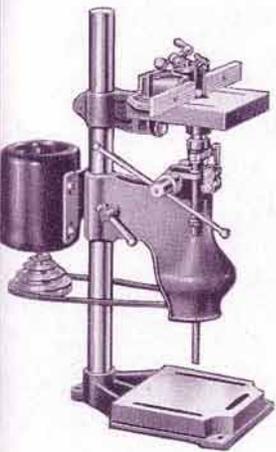
### Medium Grit Slip Stone



Keep your gouges in best-cutting condition. Cuts rapidly and gives a smooth keen cutting edge to your tools. Length 4 1/2 in.  
84 WT 2427 Ship. wt. 8 oz. . . . 39c



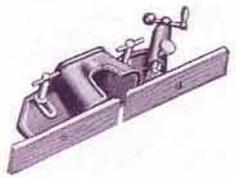
**Vitrified Combination Oil Stone**  
Finest stone for sharpening planer knives, chisels etc. Coarse grit for fast cutting—fine grit for finishing work. Size stone 1 1/2 by 2 1/2 by 1 inch. Felt pad keeps stone oiled. Metal case with non-slip cork base.  
84 WT 2475—Ship. wt. 5 lbs. . . . \$4.50



## DRILL PRESS ACCESSORIES

The illustration at the left shows how quickly and easily you can convert either of these heavy duty drill presses into a shaper cutter. All you do is reverse the head stock with the motor, and place the regular table over the head stock. Then with the guard, adaptor and shaper cutters in place you are ready to do a first class job with ease, speed and accuracy. (For shaper cutters see Page 20.)

For extreme accuracy one face of the heavy shaper fence may be moved forward or backward with micrometer precision by means of a handy ball crank. Can be rigidly locked in position. (Completely described on Page 20.)



### SHAPER GUARD AND FENCE

84 WT 8851—Complete, same as supplied with Spindle Shaper shown on Page 20. Shipping weight 4 lbs. .... \$2.75

### ADAPTORS FOR SHAPER CUTTERS

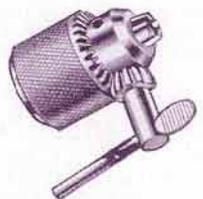
84 WT 8852—Adaptor for 3/8-in. bore cutters. Ship. wt. 8 oz. .... 49c  
 84 WT 8853—Adaptor for 1/2-in. bore cutters. Ship. wt. 8 oz. .... 49c



### IMPROVED JACOBS CHUCK

Known everywhere as the finest chuck developed, and found in most production tools. Recently improved to provide more rapid action. Hardened and carefully ground jaws that grip and hold like a vise. Capacity 1/2 to 1/2 in. Fits any spindle 5/8 in. diam., 16 threads per inch. Included without extra charge with drill presses at right. Ship. wt. 2 lbs. 8 oz.

84 WT 8850—Jacobs chuck with key. .... \$5.63



### DRILL PRESS VISE

For holding small work solidly when drilling on 184 WT 669 Drill Press. Attaches to table with stove or machine bolts. Overall length 8 1/4 in. 2 3/4 in. jaws open to 3 in. capacity.

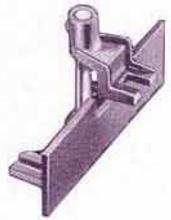
84 WT 8858—Ship. wt. 6 lbs. Each. .... \$1.98



### HOLD DOWNS FOR MORTISING

Holds the work on the table during the up stroke of the chisel and assures true-square mortises. Especially handy when mortising long narrow stock. Hold down is raised or lowered on a vertical rod carried in a casting at the back of fence, and is adjustable for stock up to 4 1/2 in. thick. Ship. wt. 6 lbs.

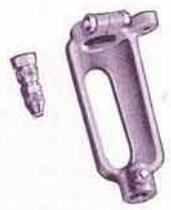
84 WT 8855—Set. .... \$1.45



### MORTISING HEAD AND CHUCK

This is the chisel holder which attaches to the quill and holds the hollow chisel and bit pictured below. The set consists of a gray iron Hollow Chisel Holder, small diameter Chuck and necessary Collet. Everything you need to go to work. Fits only Wards bench and floor model drills listed on these two pages. Ship. wt. 4 lbs.

84 WT 8854—Mortising Head Set. .... \$1.95



For Monthly Payments See Page 22



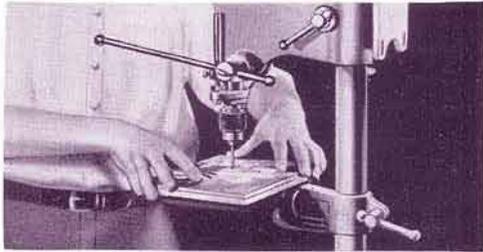
### HOLLOW CHISELS AND BITS

It is easy to make close-fitting mortise joints with a Hollow Chisel and Bit. The bit, revolving within the hollow chisel, travels slightly ahead of the chisel and removes the wood. The chisel trims the edges square. Powr-Kraft chisels are special heat treated steel . . . hold their edges over long use. Bits are finest tool steel (not ordinary carbon steel). Ship. wt.: chisels, each, 8 oz.; bits, each, 4 oz. State whether you want 1/4, 3/8 or 1/2 in. size.

Article Number	Item	Each
84 WT 8860	Chisel only	\$1.40
84 WT 8861	Bit only	1.19

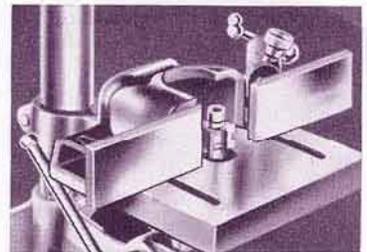
## WARDS POWR-KRAFT

# HEAVY



### Does Routing of All Kinds

Routing of inlaid work and all kinds of grooves is easy, due to the unusual strength and even flow of power. You also have a choice of 13 speeds and positive depth stop that adjusts with micrometer accuracy.



### You Can Do Shaping, Too

Moldings and frames in a great variety of shapes are cut with ease by simply inverting the head and attaching guard, adaptor and shaper cutters

### BENCH MODEL

**\$24.95** CASH PRICE

### LESS MOTOR

Just read the features of the Floor and Bench Model at the right and you know why we claim this is an outstanding tool, not only for its versatility, but for the unusual value offered.

The ground solid steel column is full 2-inch diameter, ample support for the motor, drill head and table in any operation—at any speed. Adjustable table 8 by 8 inches, with machine ground top—tilts to any angle up to 45 degrees and locks in any position. Head mechanism is fully enclosed with heavy gray iron casting. Base serves as auxiliary table. Size of base 9 1/4 by 15 inches overall.

184 WT 669—Less Motor, but with pulley and "V" belt, ready for motor. Ship. wt. 78 lbs. .... \$24.95

184 WT 666—Complete with Powr-Kraft Heavy Duty 1/2 H.P. Motor No. 484 WT 9811 for 110-120 volt 60-cycle A.C. as shown on Page 26. Ship. wt. 111 lbs. .... \$34.75

### Specifications

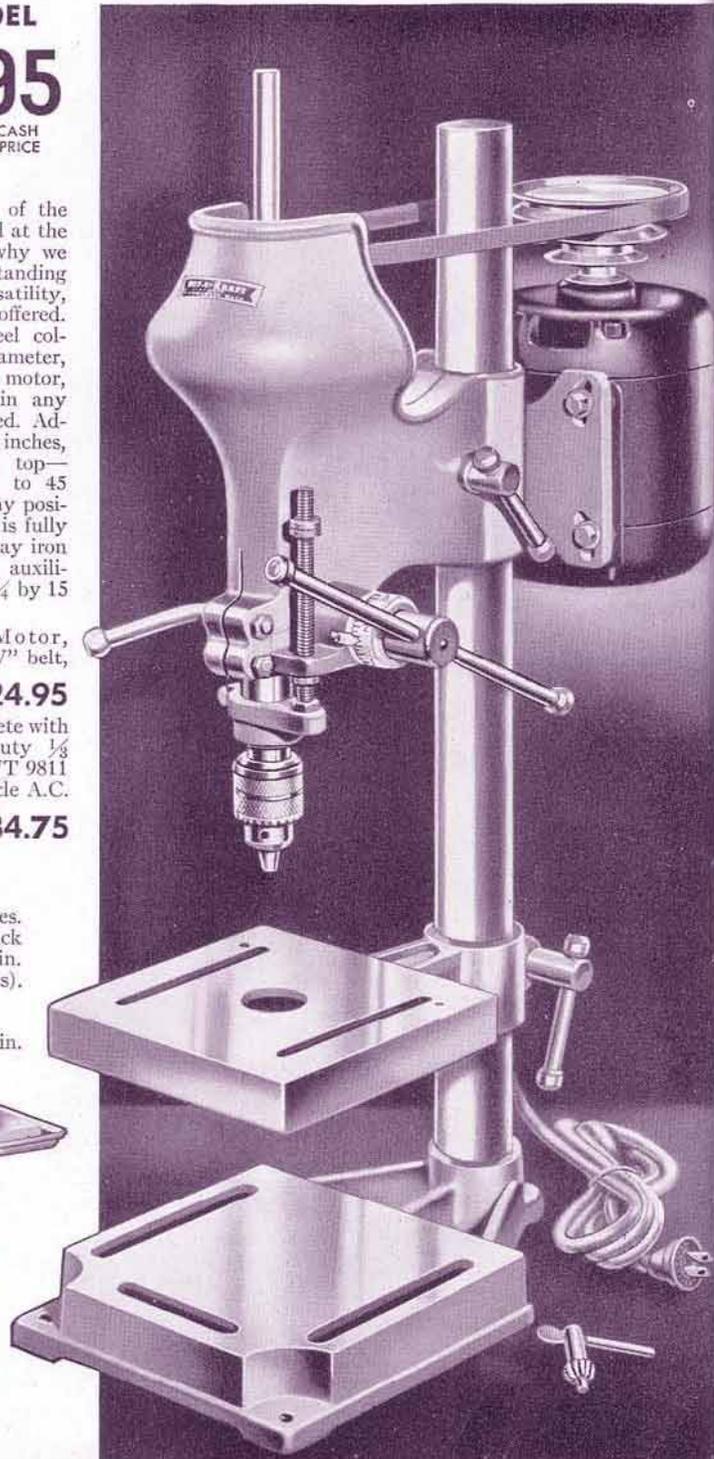
Overall height: 36 inches.  
 Maximum distance chuck to base: 17 in. (1 1/2 in. more than most machines).  
 Table: 8 by 8 in.  
 Net wt.: 68 lbs.  
 Steel Column: Full 2 in. diameter.



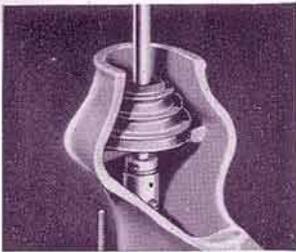
### PRODUCTION TABLE

Same table as used on Floor Model pictured on opposite page. Fits Bench Model drill for handling larger work. Gray cast iron, ground top. Size 11 1/2 by 12 1/2 in. Ship. wt. 20 lbs.

84 WT 6656. .... \$4.95

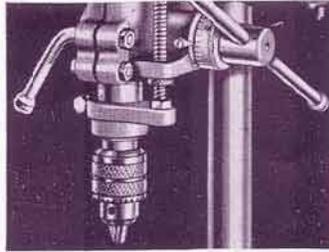


# DUTY DRILL PRESSES



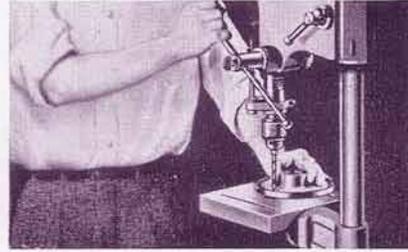
**13 Speed Adjustments**

Motor bracket adjustable vertically and horizontally. 4-step pulleys give total of 13 speeds from 760 to 4000 R.P.M.



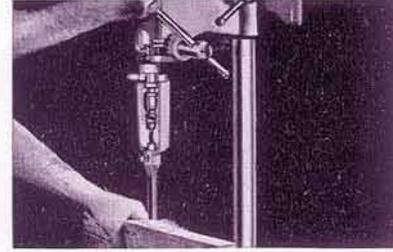
**Improved Depth Gauge**

Depth gauge is graduated in 1/16ths of an inch on convenient circular scale. Depth stop adjusts with micrometer accuracy by two nuts on stop rod.



**Does Real Production Work**

Will do a precision job on all drilling in metal or wood. Drills to center of 14 in. circle (7 in. from center of drill to column). This Drill Press is really a complete workshop in itself.



**A Perfect Mortise in a Minute**

Remove regular chuck, attach the mortising head and chuck with hollow chisel and bit. Then attach hold-down, and adjust for depth.

## Features Common to Both Floor and Bench Models

- Equipped with Nationally Known Jacobs Chucks. Capacity up to 1/2 in.
- 5/8-in. spindle runs on self-lubricating bearings—perfectly aligned.
- Ball thrust bearing takes up end thrust on spindle—reduces power required.
- Graduated depth gauge adjusts with micrometer accuracy. Positive lock stop.
- Drills to the center of 14-in. circle.
- 13 speed adjustments—760 to 4000 R.P.M. Convenient horizontal or vertical belt adjustment in motor mounting.

## Massive—Powerful—Versatile

The drill press is rapidly becoming the most important tool in the shop—almost a machine shop in itself. Does four separate jobs—drills, mortises, shapers, routes and its limits of utility depend only on the skill of the operator. Every part of these heavy duty drills is built for the toughest daily production work. All castings are seasoned gray iron, rigidly braced to prevent warping. Notice the massive gray iron head, sturdy column, and the heavy, carefully machined tables—everything spells quality.

## Self-Lubricating Spindle Bearings

The most vital part of any drill is the spindle mounting . . . and that's where these drills excel. Wards have provided separate and distinct bearing mountings for radial and thrust loads. There are three self-lubricating bronze bearings to take up the radial load and a thrust ball bearing to take up friction set up by end thrust. This construction reduces the power required to operate the tool and the self-lubricating bearings keep your work free of oil marks.

Wards designed these tools to eliminate the need for extra spindles and other expensive gadgets, thereby saving the shopman and home craftsman many dollars. Prices on the few accessories required are as moderate as the prices on the drills themselves. Without extra charge we've included the famous Jacobs Chucks—used on the finest drilling machinery everywhere.

## Heavy Duty in Every Way

It's the weight that counts. For instance, the net uncrated weight (without motor) of the Bench Model is 68 lbs.; of the Floor Model, 96 lbs. That gives you an idea of the massiveness, the sturdiness of the gray iron castings and the steel columns. Both of these models will drill to the center of a 14-inch circle with spindle movement of 4 1/2 inches. Here is capacity, accuracy and steadiness to satisfy the most exacting requirements. Tools have an attractive baked gray enamel finish.

## Specifications

No. of Speeds: 13	Drills to center of 14-in. circle
Spindle Travel: 4 1/2 in.	Range of speeds: 760
Chuck Capacity: 1/2 in.	to 4000 R.P.M.



## FLOOR MODEL

**\$2995**  
CASH PRICE

### LESS MOTOR

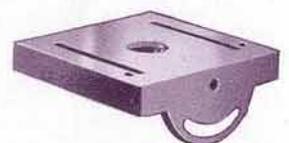
Enormous capacity—maximum distance from table to bottom of chuck 42 inches. Table is 11 1/2 by 12 1/2 . . . 43% more working surface than ordinary floor models within dollars of this price. Table is a heavy casting and tilts to any angle up to 45 degrees. Equipped with trough for catching excess oil or cutting compound. Overall height with spindle down 68 in. Diameter of ground steel column full 2 3/4 in. A heavy cast base 20 inches in diameter. And the price is only a few dollars higher than our Bench Model.

**184 WT 671—Less Motor** but with pulley and "V" belt, ready for motor.  
Ship. wt. 123 lbs. . . **\$29.95**

**184 WT 670—Complete** with Powr-Kraft Heavy Duty Motor No. 484 WT 9811 for 110-120 volt 60-cycle A.C. as shown on Page 26.  
Shipping weight 157 lbs. . . . . **\$39.70**

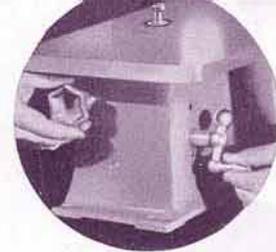
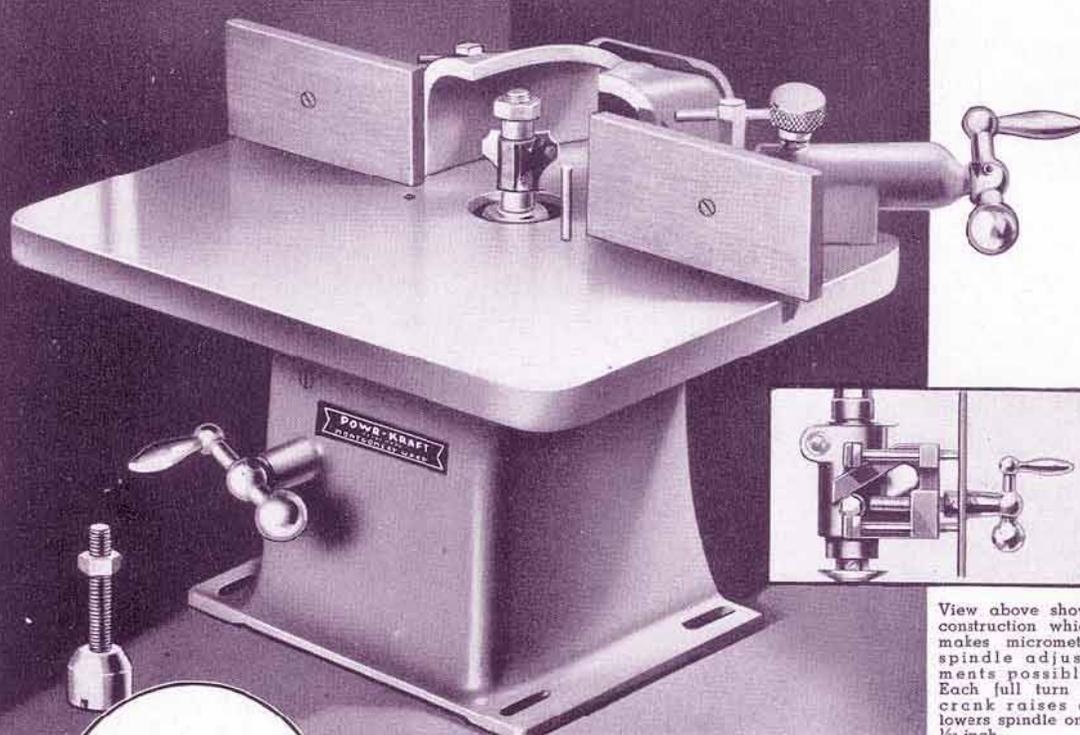
## Specifications

Overall height: 68 inches.  
Maximum distance table to chuck jaws: 42 inches. Table: 11 1/2 by 12 1/2 inches.  
Net wt.: 96 lbs.  
Steel column: full 2 3/4 in. diameter.

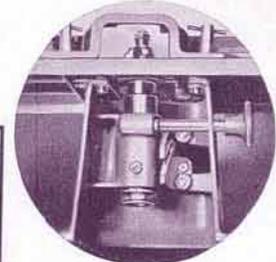


## SHAPER TABLE

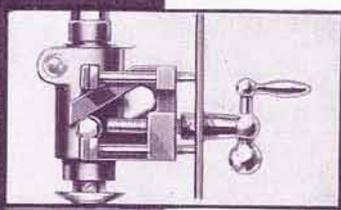
Same upper table as supplied with Bench Model pictured on opposite page. Fits Floor Model when desirable to use it as a shaper. Table is heavy seasoned cast iron. Shipping weight 7 lbs.  
**84 WT 8857 . . . . . \$1.95**



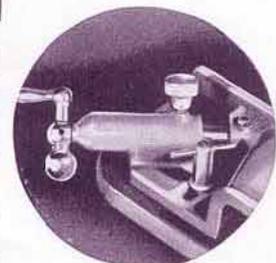
Note the ball-crank which gives micrometer adjustment for raising and lowering spindle. Positive lock wheel locks spindle in position.



Rear view showing the spindle assembly which is equipped with New Departure grease-sealed ball bearings. Note the husky construction throughout.



View above shows husky construction which makes micrometer spindle adjustments possible. Each full turn of crank raises or lowers spindle only 1/32-inch.



Ball-crank adjusts one side of fence shaper to jointer. A full turn of crank moves fence arm only 1/8 inch giving real micrometer accuracy.

**\$14<sup>95</sup>**  
LESS CUTTERS

# HEAVY DUTY SHAPER

## ... A Precision Tool with Micrometer Adjustments and New Departure Ball Bearings

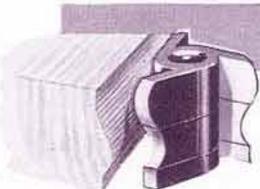
- Spindle mounted on nationally known New Departure Ball Bearings—Grease Sealed for life—protected against dirt and dust.
- Heavy, non-warping, ground and polished cast iron table 11 by 14 in.—larger than most shaper cutters near Wards price.
- Ball crank adjusts front guide backward or forward with micrometer accuracy. Shaper can be used as a jointer.

No ripples—no roughness—no cupping . . . you can do professional work on this husky shaper. It turns out an endless variety of trim, moldings, edges and ends—makes 22,500 cuts per minute at our recommended speed of 7500 R.P.M. We've used heavy seasoned gray iron castings to eliminate vibration and to give smooth, quiet performance. Actual weight, 33 lbs. net. Ground and polished table—every piece of material glides across it with perfect accuracy. Precision adjustments . . . a complete turn of the ball crank raises or lowers the table

only 1/32 in. without backlash. Spindle travel 1 in. Front guide face has ball crank adjustment for depth of cut—a full turn moves fence arm only 1/8 in. Ball cranks give a quick, micrometer adjustment not found in ordinary hand wheels or levers.

Spindle is mounted in Grease Sealed New Departure Ball Bearings (not ordinary "precision" bearings), for smoothest possible action. Takes either 1/2 or 3/16 in. bore cutters with a simple change of adaptors—no need to reverse spindle. Machine is reversible by using reversing switch for motor on Page 26. Finished in gray enamel. Height overall 11 1/2 in. Has 2-in. V-pulley. Recommended speed 6000-7500 R.P.M. Use 8-in. V-pulley on 484 WT 9811 Motor.

When ordering extra pulleys, state diameter and bore.  
**484 WT 876**—Shaper without cutters. **\$14.95**  
 Shipping weight 38 lbs. *Mailable* . . . . .



### 5/16 - INCH BORE CUTTERS

Your Choice  
**50c**  
 Each

Same quality as cutters at right. Use on shapers taking 5/16 in. bore cutters. Can be used in combinations (see cut at left). "Thickness" below indicates width of cut made by cutter. Ship. wt. each 2 oz. Order by Art. No.



**Depth Washers**  
 Assorted diameters to regulate depth of cut. Ship. wt. 8 oz.  
**84 WT 8880**—Set of 6 . . . . . **50c**

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8870</b>	A .177 in.	.95 in.
State Type	B .264 in.	.95 in.
	C .354 in.	.95 in.
	D .442 in.	.95 in.

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8873</b>	A .125 in.	.95 in.
State Type	B .156 in.	.95 in.
	C .187 in.	.95 in.
	D .250 in.	.95 in.

THICKNESS	Thick- Type ness	Diam.
<b>84 WT 8876</b>	A .282 in.	1.18 in.
State Type	B .344 in.	1.24 in.

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8871</b>	A .221 in.	.994 in.
State Type	B .442 in.	1.03 in.

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8874</b>	A .177 in.	1.02 in.
State Type	B .264 in.	1.06 in.
	C .354 in.	1.09 in.
	D .442 in.	1.13 in.

THICKNESS	Thick- Type ness	Diam.
<b>84 WT 8877</b>	A .194 in.	1.13 in.
State Type	B .260 in.	1.20 in.

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8872</b>	A .303 in.	1.09 in.
State Type	B .388 in.	1.16 in.

THICKNESS	Thick- Type ness	Max. Diam.
<b>84 WT 8875</b>	A .177 in.	1.02 in.
State Type	B .264 in.	1.06 in.
	C .354 in.	1.09 in.
	D .442 in.	1.13 in.

THICKNESS	Thick- Type ness	Diam.
<b>84 WT 8878</b>	A .177 in.	1.12 in.
State Type	B .282 in.	1.21 in.

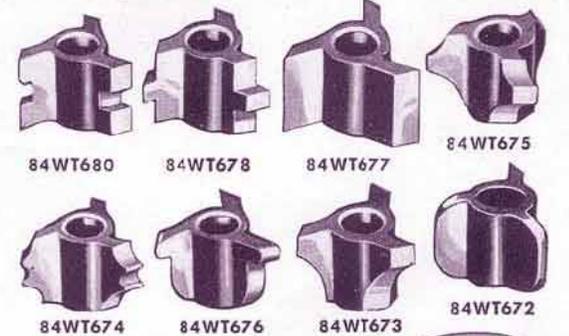
**Set of 24 Cutters—Save \$2.70**  
 With this complete set, which includes all of the cutters listed above, you can turn out an almost unlimited variety of designs. You save \$2.70 by buying the complete set. Set of 6 depth washers included. In wood box.  
**84 WT 8882**—Ship. wt. 2 lbs. 8 oz. Complete Set . . . . . **\$9.95**

**Set of 7 Cutters \$3.59**  
 Same quality Chrome Vanadium tool steel as above. Set of 7 most frequently used cutters to provide fifty to sixty designs. Set of 6 depth washers included.  
**84 WT 8881**—Shipping weight 2 lbs. . . . . **\$3.59**

### 1/2 - INCH BORE CUTTERS

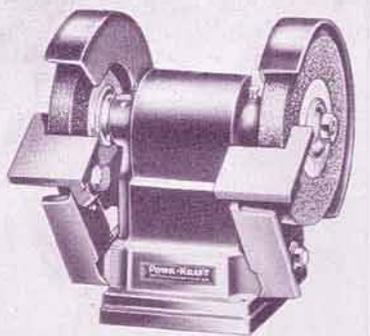
Tough chrome vanadium tool steel—carefully tempered so that the keen edges of cutting blades stay sharp longer than ordinary carbon steel or case hardened cutters. Special grinding of cutter heel eliminates drag. Cutting edges have the correct rake angle for a true shaving cut. Use on any shaper fitted for 1/2-in. bore cutters. All cutters listed below have 1 3/4-in. maximum diameter and make cut 1 in. wide. Ship. wt. each, 10 oz. Order by article number.

Your Choice  
**89c**  
 Each



**Depth Washers** →  
 Assorted diameters to regulate depth of cut, making possible a variety of patterns with the same cutter. Shipping weight set, 8 oz.  
**84 WT 685**—Set of 6 . . . . . **50c**

# New POWR-KRAFT 6-INCH BENCH GRINDER



- Heavy Rugged Cast Iron Frame • V or Flat Belt Drive • Belt and Wheels Fully Guarded • 3/4-in. Spindle, 1/2-in. Arbor • Self Lubricating Bearings

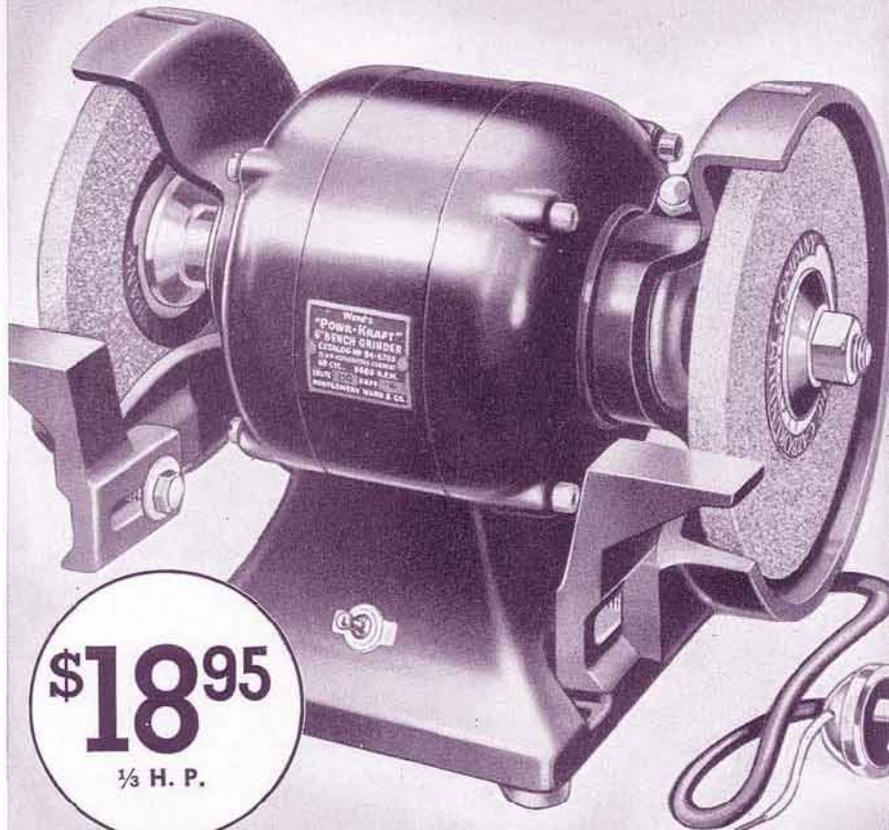
**\$6<sup>45</sup>**

Handsome new safety type design for general purpose bench grinding. Not only the wheels, but also the drive pulley is fully guarded. Two fast cutting grinding wheels size 1/2 by 6 inches dressed on 3 sides. One coarse wheel for rough work, one fine wheel for fine work and finishing. Grinding wheels may be replaced with wire scratch wheel for removing paint and rust or cloth buffer wheel for polishing. Extra long, heavy self-lubricating bearings with oil reservoirs add years of trouble-free service. New double adjusting tool rests with convenient gauges that show degree of tilt to 65 degrees. Overall height 9 inches. Baked gray enamel finish. Motor not included.

Include your grinder in an order of \$20 or more and buy on Monthly Payments—for details see page 22.

484 WT 885—Grinder only. Shipping weight 22 lbs. . . . **\$6.45**

# 6-inch Electric Grinders FOR FAST PRODUCTION WORK



**\$18<sup>95</sup>**  
1/3 H. P.

## Equipped With Heavy Duty Fully Enclosed Dustproof Motor

- Husky Split Phase Motor Sealed Against Grit, and Dust—Means Longer Life
- Motor Runs Quietly—Dynamically Balanced to Eliminate Vibration Almost Entirely
- Develops Full Rated Horse Power
- Heavy, Oil-Packed Bronze Bearings Assure Cooler, Smoother Operation and Low Current Consumption

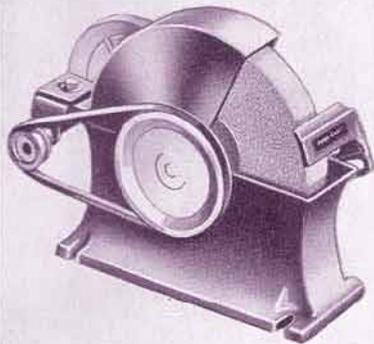
A Grinder with plenty of power and weight to handle all types of bench grinding, tool sharpening and wire wheel brushing. Tool rests are adjustable. Rests and guards can be removed entirely for cloth buffing work.

Furnished complete with motor, ON-OFF switch in base, two Ward Master

Quality vitrified grinding wheels—one coarse, one fine—and cord with plug. For 110 to 120-volt, 60-cycle A.C. only.

Art. No.	H. P.	R. P. M.	Size Wheels	Ship. Wt.	Each
484 WT 6703	1/3	3600	6x 1/2 in.	51 lbs.	\$18.95
484 WT 6704	1/2	1800	8x 3/4 in.	64 lbs.	22.45

# Slow Speed Wet Grindstone



- Finest Quality Natural Ohio Sandstone Wheel, Size 10 by 1 1/2-in.
- Built-in Jack Shaft for Reducing Speed
- Double Adjustable Tool Rest

**\$7<sup>95</sup>**

All tempered tools should be sharpened on a slow speed water grinder to prevent drawing temper. Heavy cast iron construction designed to prevent vibration. Extra large base for added rigidity. Full hooded water shield gives extra protection from water splashing. 5/8-in. shaft runs on self-lubricating bronze bearings. Overall height 11 1/4 in. Overall length 16 1/2 in. Baked-on gray enamel finish. Use 1 1/2 in. V-pulley on 484 WT 9811 Motor listed on Page 26. Motor not included.

484 WT 890—Grinder only. Ship. wt. 34 lbs. . . . . **\$7.95**

## Vitrified Grinding Wheels



Use Standard Grit for general rough grinding—Fine Grit for sharp-edged tools. State Art. No., diam., thickness and size shaft hole.  
584 WT 8500—Standard Grit  
584 WT 8501—Fine Grit

Diam. In.	Thickness Inches	Ship. Wt.	Price Each
4	1/2	1 lb.	45c
4	1	1 lb. 12 oz.	65c
5	1/2	1 lb. 4 oz.	59c
5	1	2 lbs. 4 oz.	85c
6	1/2	2 lbs.	75c
6	1	3 lbs.	98c

## Cloth Buffing Wheels

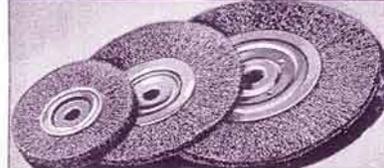


Consist of 18 layers of bleached muslin, securely sewed together. Attach to grinder, polishing head or flexible shaft for polishing. 1/2 inch reinforced hole. See page 22 for listings of polishing heads and flexible shafts.

84 WT 6742—State article number and diameter wanted.

Diameter Inches	Ship. Wt.	Price Each
4	3 oz.	12c
6	4 oz.	19c
8	5 oz.	39c
10	6 oz.	47c
12	9 oz.	65c

## Steel Wire Scratch Brushes



Use on grinders, polishing heads, and flexible shafts for scrubbing rust from metal, removing burrs from metal parts, etc. Highest quality steel wire. Carefully manufactured to turn true. Securely fastened to steel core. Be sure to state article number, diameter and bore wanted.

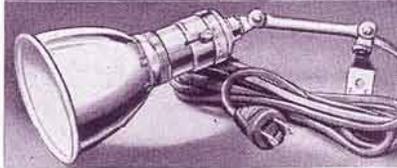
84 WT 6743—Coarse Wire

Diam.	Bore	Ship. Wt.	Each
4 in.	1/2 in.	6 oz.	25c
6 in.	1/2 in.	10 oz.	39c
8 in.	3/4 in.	1 lb. 4 oz.	49c

84 WT 6744—Fine Wire

4 in.	1/2 in.	6 oz.	38c
6 in.	1/2 in.	12 oz.	45c

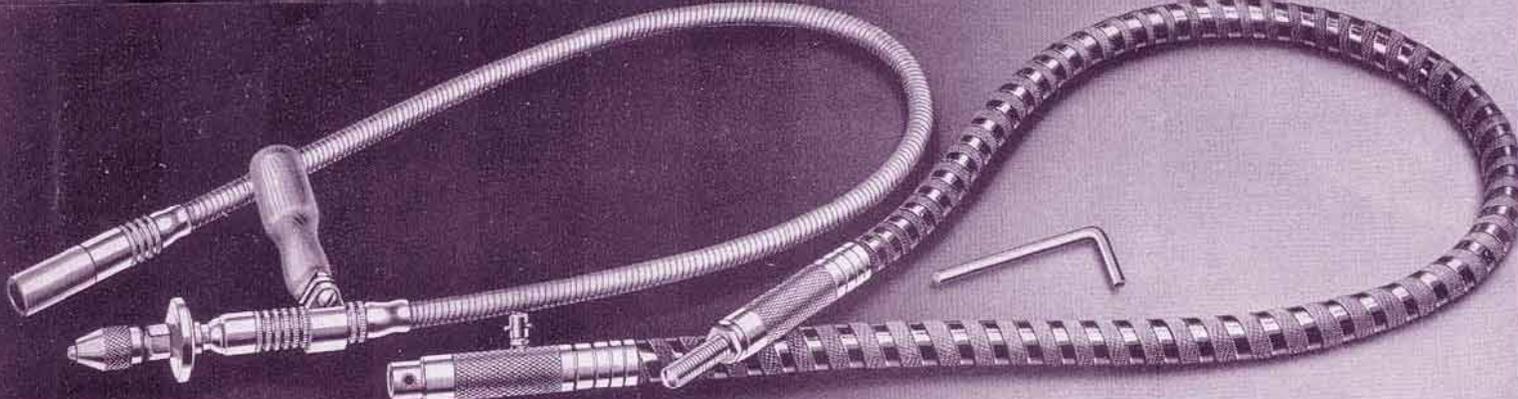
## Better Work with a Tool Light



Large reflector directs beam of light on your work—keeps light out of your eyes. End plate attaches to any convenient bolt or screw on your machines. Length overall extended 10 1/2 in. Uses standard 25 watt lamp (lamp not furnished). Nickel-plated finish. 8-ft. rubber cord and plug included. Ship. wt. 1 lb.

84 WT 8866—Each. . . . . **\$1.15**

You Can Buy Everything  
in this Book on Monthly  
Payments—See Page 22



**Sturdy Flexible Shaft with 5/16-in. Core \$4.85**

One of the handiest, most versatile tools you can have in your shop. Can be used for drilling, sanding, grinding and polishing jobs. Fits 1/2-in. motor or line shaft. Grip handle. Specially tempered spring steel core 3/16 in. diam. and cadmium plated outer casing. Double row of heat treated, precision ground ball bearings at each end. Fitted with 1/4-in. 3-jaw chuck and 1/2-in. grinding wheel arbor.  
**84 WT 880**—Length overall 52 in. Ship. wt. 6 lbs. *Mailable*.....\$4.85  
**84 WT 883**—Flexible Shaft Extension. Adds 43 in. to above flexible shaft. Complete with coupling. Ship. wt. 4 lbs. *Mailable*.....\$2.75

**Heavy Duty Flexible Shaft with 3/8-in. Core \$11.95**

Specially designed for drilling, polishing, buffing and grinding wherever a real industrial tool is required, such as in garages and machine shops. Attaches to any 1/2-inch motor or line shaft. Outer casing is tough fabric—steel reinforced on the outside for protection against scraping on rough surfaces. Inner walls are lined with special friction reducing material. Strong 3/8-in. wound wire core rides in two rows of heat treated, precision ground ball bearings on each end. Heavy 1/2-in. 24-thread spindle end fits all standard accessories.  
**84 WT 881**—Length overall 62 1/2 in. Slipping weight 9 lbs.....\$11.95



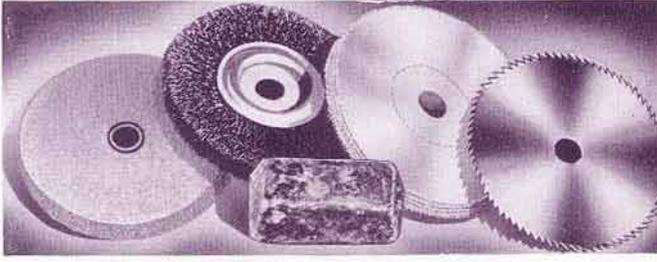
**Sheepskin Buffer**

Excellent buffer for automobile bodies, or most any polished surface whether metal or wood. Sheepskin jacket slips over sanding disc and rubber pad and fastens securely with draw string attached. Sanding disc and rubber pad listed on Page 24. For use also on Flexible Disc at right. Ship. wt. 3 oz.  
**84 WT 711**—Each.....75c



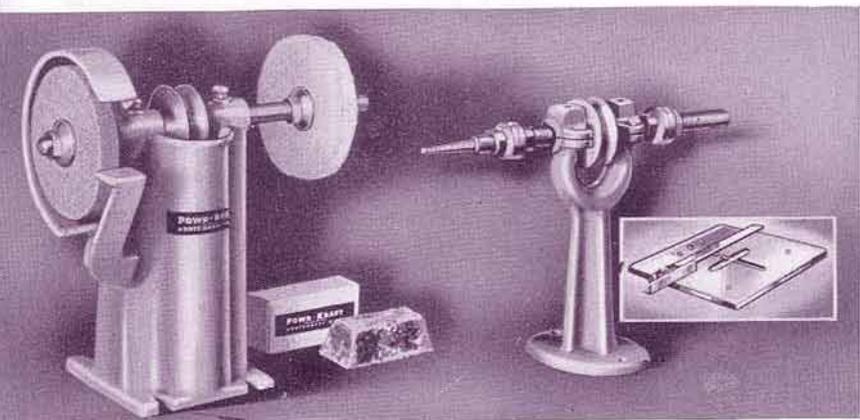
**Flexible Disc**

A handy accessory for buffing and polishing curved surfaces. Use with either flexible shaft shown above or any shaft with 1/2-in. 24-thread spindle. Rubber pad 6 in. diam. by 3/8 in. thick is attached to back plate by threaded metal center piece which also holds **84 WT 719** Sandpaper in place. Ship. wt. 1 lb.  
**84 WT 8868**—Each.....\$1.50



**Handy Utility Kit for Any Workshop \$1.25**

Your shop isn't complete without one of these handy outfits. For grinding, polishing, buffing, sawing, etc. Set consists of saw, grinding wheel, scratch wheel, cloth buffer—all 4 in. in diam. with 1/2 in. hole—and cake of polishing compound. Pieces fit polishing heads, motor arbor or flexible shaft.  
**84 WT 9982**—Shipping weight 2 lbs. Complete outfit.....\$1.25  
**84 WT 8862**—Saw only. Ship. wt. 5 oz. Each.....45c  
**84 WT 8864**—Polishing Compound. Ship. wt. 3 oz. Each.....10c  
**84 WT 8516**—Grinding Wheel. 1/2-in. face. Fine Grit. Ship. wt. 10 oz. Ea. . . .27c  
**84 WT 8517**—Grinding Wheel. 1/2-in. face. Standard Grit. Ship. wt. 10 oz. Ea.27c  
 For Scratch Wheels and Cloth Buffers see Page 21.



**Heavy Duty Polishing Head \$2.75**

The first real development in Polishing Heads in years. Heavy rigid gray iron base which also acts as a belt guard . . . eliminates hazard of catching fingers or clothing in belt. May be driven from below or behind. Has 2 1/4-in. pulley for 1/2-in. V belt and runs on 1/2-in. steel shaft mounted in two self lubricating bearings.  
 Adjustable guard and tool rest. Use 3-in. pulley on motor or line shaft running 1750 R.P.M. to obtain the proper running speed. Baked gray enamel finish. Complete with tool rest, guard, 1/2 by 4-in. grinding wheel, 4-in. buffing wheel and cake of polishing compound. Overall height 9 1/2 in.  
**84 WT 9995**—Ship. wt. 9 lbs.....\$2.75

**Standard Polishing Head 75c**

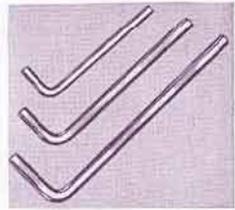
Heavy gray iron base. Split-type adjustable bearings on each end. One end has threaded taper arbor. Has 3-jaw, 1/4-in. chuck. 1 3/4-in. pulley for 3/8 or 1/2-in. V-belts. 1/2-in. steel shaft. Holds wheels 6 by 1/2 in. each end. Gray enamel finish.  
**84 WT 9991**—Polishing Head, without Chuck. Ship. wt. 3 lbs.....75c  
**84 WT 9980**—Polishing Head, with Chuck. Ship. wt. 4 lbs.....98c  
**Saw Table for Polishing Head Above**  
**84 WT 9981**—Ship. wt. 3 lbs.....50c



**Adjustable Thin End Wrenches**

WARDS MASTER QUALITY—Finest drop forged alloy steel, tempered and heat treated. 200 per cent stronger and 33 per cent thinner than standard pattern wrenches. Fits hexagon or square nuts. Chromium plated—polished head, buffed body. State size wanted.

Size	6 in.	8 in.	10 in.
Opens.....	3/4 in.	1 1/8 in.	1 1/2 in.
Ship. wt.....	6 oz.	9 oz.	1 lb. 4 oz.
<b>84 WT 7460</b> —Ea.....	58c	68c	85c



**Hollow Head Set Screw Wrenches**

For use on Powr-Kraft Tools and other high grade machinery. Ship. wt. each, 3 oz.

**84 WT 8930**—To fit 1/4 in. Set Screw. Each.....5c  
**84 WT 8931**—To fit 3/8 in. Set Screw. Each.....5c  
**84 WT 8932**—To fit 1/2 in. Set Screw. Each.....10c



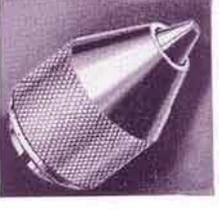
**Motor Arbors**

With chucks at right. Hold wheels with 1/2-inch holes to 3/4 in. thick. Fit 1/2-inch shaft. Ship. wts. 1 lb. 8 oz. and 1 lb. 4 oz.  
**84 WT 9976**—1/2-in. capacity.....98c  
**84 WT 9977**—1/4-in. cap.....75c

**Three-Jaw Chucks**

Threaded for 1/2-in. spindle having 24 threads per inch.  
**84 WT 8890**—State size wanted.

Size	Ship. Wt.	Ea.
1/4 in.	6 oz.	25c
1/2 in.	10 oz.	50c



**MONTHLY PAYMENT PLAN**

On orders of \$20 or more, you can buy Powr-Kraft Tools with a down payment and pay the balance monthly. Build your order up to \$20 and take advantage of this plan. Just be sure to fill in Monthly Payment Order Blank, and follow table below.

If Cash Price of Your Order Amounts to	First Payment With Order	Monthly Payments	Add for Monthly Payments
\$20.00 to \$25.00	\$3.00	\$4.00	\$2.50
25.01 to 30.00	3.00	5.00	3.00
30.01 to 35.00	4.00	5.00	3.50
35.01 to 40.00	4.00	5.00	4.00
40.01 to 50.00	5.00	5.00	5.00
50.01 to 60.00	5.00	6.00	5.50
60.01 to 70.00	6.00	7.00	6.50

**LOW FREIGHT RATES**  
 on Powr-Kraft Tools per 100 lbs.: 100 mi. 67c; 200 mi. 93c; 300 mi. \$1.46; 500 mi. \$1.86; 750 mi. \$2.27; 1000 mi. \$2.77.



### White Metal "V" Pulleys

So well balanced and so well built with accurate flanges and hub, these pulleys run true at all speeds—which means smoother, quieter running and greater efficiency. Light weight, yet their high tensile strength makes them exceptionally durable and long-wearing. Of fine quality die cast white metal—designed to take either 3/8 or 1/2-in. "V" belts. Solid disc type. We can supply only diameter and bores listed.

**14c**  
Ea.  
1 1/4-in.

84WT9968—State diam. and bore.

### Pressed Steel Pulleys

Accurately balanced to run true at all speeds. Take either 1/2 or 3/8-in. "V" belts. Choice of 1/2, 3/4, 3/8, 7/8, 1, 1 1/8 or 1 3/8 in. bore. State dia. and bore. Shipped from Factory near Cincinnati, Ohio.

284 WT 9999

Diam. In. . . . .	15	18
Ship. wt. lbs. . . .	9	12
Each. . . . .	<b>\$2.89</b> 3.69	

Diam.	Bore. In.	Ship. Wt.	Price
1 1/4-in.	1/2	4 oz.	14c
1 1/2-in.	1/2	4 oz.	17c
1 3/4-in.	1/2	5 oz.	19c
2	1/2	6 oz.	20c
2 1/4-in.	1/2	8 oz.	21c
2 1/2-in.	1/2	8 oz.	23c
3	1/2	10 oz.	27c
4	1/2	12 oz.	35c
5	3/4	1 lb.	45c
6 1/2	3/4	1 lb. 12 oz.	63c
8	1	2 lbs. 4 oz.	\$1.00
10	1 1/4	4 lbs.	1.19
12	1 1/2	5 lbs.	1.39



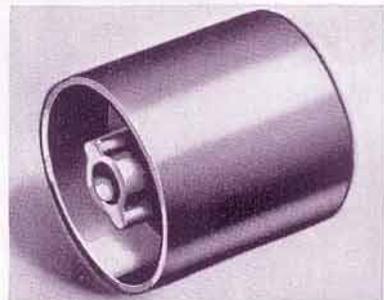
**49c**  
4-Inch

### 4-Step "V" Pulleys

Change belt from one step to another and you change the speed of your machine! Wards 4-step die cast white metal "V" pulleys are scientifically designed and carefully balanced to run true at all speeds—smoother performance and longer life! Take either 3/8 or 1/2-in. "V" belts. Choice of 1/2, 3/4, or 3/8-in. bore. State bore size wanted.

84 WT 9974—4-inch maximum diameter. Shipping weight 2 pounds. **49c**

84 WT 9975—5-inch maximum diameter. Shipping weight 2 pounds 8 ounces. **65c**



### Flat Face Metal Pulleys

Die cast white metal, high tensile strength. Face slightly crowned. All sizes have set screw; sizes 3x3 (3/8 and 3/4 in.) have keyway also.

84 WT 9969—State size and bore.

Size Diam. by Face	Bore. Inches	Ship. Wt.	Price Each
1 1/2 by 1 3/4 in.	1/2, 3/4	8 oz.	22c
2 by 2 in.	1/2, 3/4	12 oz.	23c
2 1/2 by 2 1/2 in.	1/2, 3/4	1 lb. 4 oz.	27c
3 by 3 in.	1/2, 3/4	1 lb. 8 oz.	43c



**25c**

### 2-Step "V" Pulley

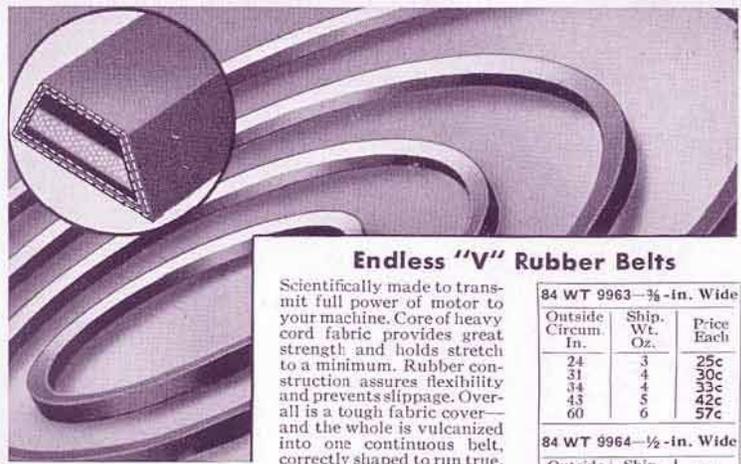
Perfectly balanced to run true at all speeds. Takes 3/8 or 1/2-in. belt. Die cast white metal with high tensile strength. Diameters are 2 and 2 1/2 in. State whether you want 1/2 or 3/8-in. bore.

84 WT 9972—Ship. wt. 6 oz. **25c**



### Flexible Couplings

Die-cast white metal. Rubber cushions in center allow for flexibility. Ship. wts. 7 and 10 oz. 84 WT 9970—1/2-inch bore. **25c** 84 WT 9971—3/4-inch bore. **37c**



### Endless "V" Rubber Belts

Scientifically made to transmit full power of motor to your machine. Core of heavy cord fabric provides great strength and holds stretch to a minimum. Rubber construction assures flexibility and prevents slippage. Overall is a tough fabric cover—and the whole is vulcanized into one continuous belt, correctly shaped to run true. State circumference wanted.

84 WT 9963—3/8-in. Wide

Outside Circum. In.	Ship. Wt. Oz.	Price Each
24	3	25c
31	4	30c
34	4	33c
43	5	42c
60	6	57c

84 WT 9964—1/2-in. Wide

Outside Circum. In.	Ship. Wt. Oz.	Price Each
28	4	29c
33	4	31c
37	4	39c
39	4	41c
42	5	42c
44	5	44c
48	6	45c
56	6	55c
62	8	59c
77	8	75c
92	10	89c

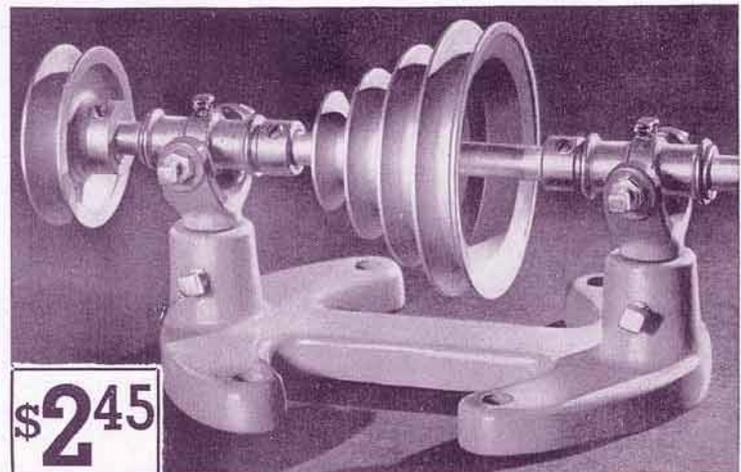


### ROUND LEATHER BELTING

Flexible—made for minimum stretch. Ship. wt. ft. 2 oz. 84 WT 9973—State size. Size, In. . . . . 3/8 3/4 1/2 3/4 Per Foot. . . . . 9c 7c 5c 3c

### How To Order

For circumference of belt, measure around outside edge of pulleys (not in groove).



**\$2.45**

### Convenient Jack Shaft for Quick Speed Changes

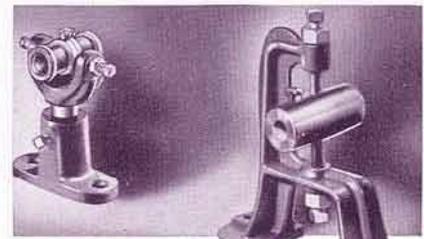
For increasing or reducing speeds. Especially suitable for increasing speeds of high speed tools such as Shapers, Drill Presses, etc. Equally useful for machines where extra slow speed is desirable. Rigid cast iron frame. Ground shaft runs in bronze bush bearings, fitted with oil cups. Adjustable up and down. Die cast pulleys. One 2 1/2-in. regular and one 4-in., 4-step pulley taking 3/8 or 1/2-in. V-belt.

84 WT 9988—Shipping weight 12 lbs. **\$2.45**



### Couplings and Collars

84 WT 9983—Rigid Couplings. Used for extending shaft. 1/2-in. bore. Ship. wt. 6 oz. **19c** 3/4-in. bore. Ship. wt. 8 oz. **29c** 84 WT 9984—Shaft Collars. Used to prevent end-play. 1/2-in. bore. Ship. wt. 2 oz. **9c** 3/4-in. bore. Ship. wt. 3 oz. **15c**



### HANGERS

You'll need several of these when building a line-shaft for your workshop. Adjustable up and down as well as sideways. Heavy bronze bush bearings with oil cup for smooth quiet operation. State size bore. 84 WT 9987—1/2-in. bore. Ship. wt. **89c** 1 lb. 8 oz. **89c** 3/4-in. bore. Ship. wt. 1 lb. 12 oz. **\$1.19**

### HEAVY DUTY SHAFT HANGER

Open one side for quick replacement of belt and pulley. Self-aligning height adj. from 4 to 5 in. Two self-lubricating bronze bushings, oil cup and oil well between. 3/4-in. bore. 84 WT 9997—**\$1.75** Ship. wt. 5 lbs.

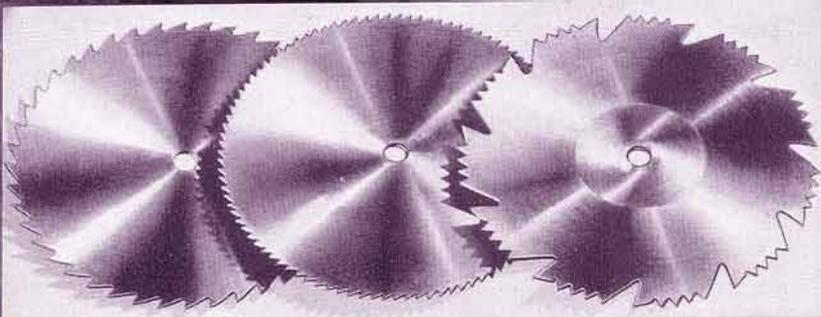
**CONVENIENT TABLE OF SPEEDS**  
This handy table shows at a glance the approximate speed of the pulley on any machine with different pulley sizes on the motor shaft. These are correct when belt is at proper tension, and are based on a motor speed of 1725 R.P.M.

Size, In. Motor Pulley	Size, In. of Pulley on Machines															
	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	4	5	6 1/2	8	10	12	15	18	
1 1/4	1725	1435	1230	1075	950	860	715	540	430	330	265	215	175	140	115	
1 1/2	2065	1725	1475	1290	1140	1030	860	645	515	395	320	265	215	170	140	
1 3/4	2400	2000	1725	1500	1340	1200	1000	750	600	460	375	315	250	200	165	
2	2775	2290	1970	1725	1530	1375	1145	860	685	530	430	345	285	230	190	
2 1/4	3100	2580	2200	1930	1725	1550	1290	965	775	595	485	385	320	255	215	
2 1/2	3450	2870	2480	2150	1900	1725	1435	1075	860	660	540	430	355	285	240	
3	4140	3450	2950	2580	2290	2070	1725	1290	1070	800	615	515	430	345	285	
4	5500	4570	3940	3450	3060	2775	2295	1725	1375	1060	860	690	570	460	380	
5	6850	5750	4920	4300	3825	3450	2865	2150	1725	1320	1075	860	715	575	475	
6 1/2	8950	7475	6400	5590	4975	4480	3730	2790	2240	1725	1400	1120	930	745	620	
8	.....	9200	7870	6900	6125	5520	4600	3450	2750	2120	1725	1375	1140	915	765	
10	.....	.....	9850	8620	7670	6900	5750	4300	3450	2650	2150	1725	1430	1140	950	
12	.....	.....	.....	.....	9200	8280	6900	5160	4130	3180	2580	2070	1725	1380	1140	
15	.....	.....	.....	.....	.....	.....	6635	5170	4170	3230	2580	2150	1725	1430		
18	.....	.....	.....	.....	.....	.....	.....	6470	5170	3970	3230	2580	2150	1725	1430	
								7750	6200	4770	3880	3100	2580	2070	1725	



### GROUND STEEL SHAFTING

Not ordinary cold rolled steel, but shafting that is accurately ground and held to 1/1000-inch. This means longer life for the bearings and the highly machined surface makes shaft more resistant to rusting. Ship. wts. 2 lbs. and 7 lbs. 84 WT 9985—1/2 by 24 inches. **23c** 84 WT 9986—3/4 by 48 inches. **89c**



**COMBINATION RIP AND CROSS-CUT SAW**      **CIRCULAR CROSS-CUT SAW**

We believe there are no better saws for fast, clean, smooth cutting. Finest quality crucible alloy steel, with a cutting edge that stays sharp! Correctly tempered, hand filed, hammered and set—no binding or buckling. **State diameter wanted.**

84 WT 284—Combination Rip and Cross-Cut Saw.  
84 WT 281—Circular Cross-Cut Saw

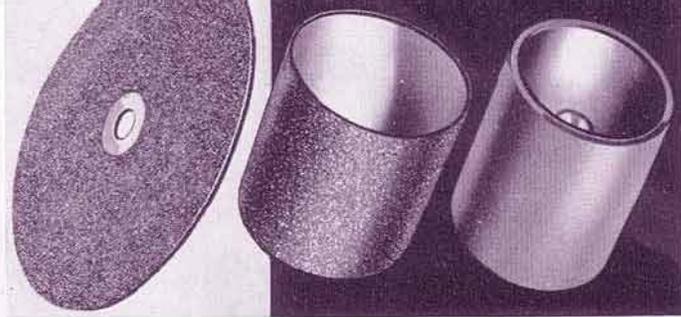
Diam. In.	Gauge	Size Hole	Ship. Wt.	Each
6	18	1/2 in.	10 oz.	\$1.00
7	18	1/2 in.	12 oz.	1.35
8	18	3/4 in.	1 lb.	1.45

**HOLLOW GROUND MITER SAWS**

Where smoother and finer edges are required, this type of blade cannot be excelled. Finest quality crucible alloy steel, correctly tempered and balanced.

84 WT 283—State diameter.

Diam. In.	Gauge	Size Hole	Ship. Wt.	Each
6	16-19	1/2 in.	10 oz.	\$2.45
7	15-18	1/2 in.	12 oz.	2.95
8	15-18	3/4 in.	1 lb.	3.25



**ABRASIVE DISC**

A good abrasive disc is a handy accessory for any shop. This one is rubber bonded for fast, clean cutting of metals, stone, brick, tile, and other materials difficult to cut by ordinary means. It's 8 inches in diameter, 1/2 in. thick, and has a 1/8-in. hole. We recommend a speed of 5000-6000 R.P.M. Ship. wt. 3 lbs.

84 WT 8901—**95c**  
Each

**DRUM SANDPAPER**

Excellent for smoothing rounded edges and surfaces. This heavy sanding band fits over the metal drum at right or any other 2 1/2-in. drum. Use with flexible shaft, polishing head, etc. **State Coarse, Medium or Fine.** Ship. wt. 2 oz.

84 WT 703—**10c**  
Each

**SANDING DRUM**

This accurately designed die-cast metal Sanding Drum attaches easily and quickly to flexible shaft, polishing head, etc. Makes a convenient sander for your shop. Diameter for your shop. Diameter, 2 1/2 in. Width, 3 in. Complete with rubber sleeve as shown. Ship. wt. 8 oz.

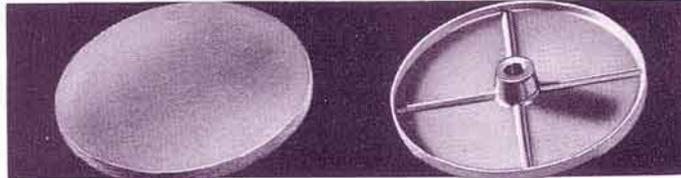
84 WT 704—**75c**  
Each



**CAREFULLY TEMPERED ALLOY STEEL DADO SAWS**

For grooving, rabbeting, and tenoning with or across the grain. Use on any bench saw having removable throat on table. Complete saw consists of two outside blades and six inside chippers. All chippers .066 thick, 5-in. blade 1/4 in. thick, 4-in. blade 3/8 in. thick. (Available only in sizes listed.)

State Diam.	84WT785 Complete	84WT716 Blade	84WT715 Chipper
4-in. diam. 1/2 in. bore.....	\$2.19	69c	22c
5-in. diam. 5/8 in. bore.....	3.45	95c	29c
Ship. wt. ....	1 lb.	6 oz.	2 oz.



**SPONGE RUBBER DISC**

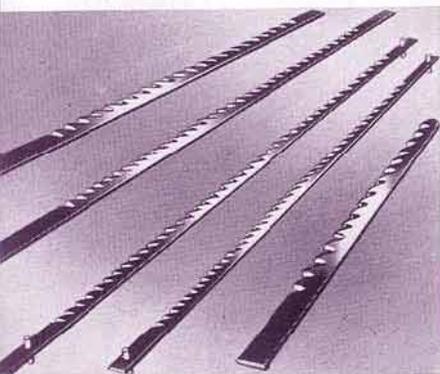
Use this tough gray sponge rubber pad as a cushion between sanding disc (shown at right) and sheepskin buffer (on page 22). Sheepskin fits over sanding disc and rubber pad. Rubber pad is 6 in. diameter 1/4 in. thick. Shipping weight 4 ounces.

84 WT 718—**25c**  
Each

**SANDING DISC**

Fine quality die-cast metal, carefully machined and perfectly balanced. For bench saws, lathes and flexible shafts. Diam. 6 in.

84 WT 714—1/2 in. threaded bore. Ship. wt. 13 oz. Each..... **50c**  
84 WT 717—1/2 in. unthreaded bore. Ship. wt. 13 oz. Each..... **50c**



**STEEL JIG SAW BLADES**

All blades 5 1/4 inches long, unless otherwise specified. Ship. wt. pkg. 2 oz.

**Plain End Blades**

84 WT 8784—.020 in. thick, 1/8 in. wide. State whether you want 10 or 15 teeth per inch. Package of 6..... **15c**  
84 WT 8783—.010 in. thick, .040 in. wide, 18 teeth per in. Pkg. of 12..... **27c**  
84 WT 8785—Assorted Sizes. Pkg. of 12..... **27c**

**Pin End Blades**

84 WT 8774—.010 inches thick, .040 in. wide, 20 teeth per inch. Pkg. of 12..... **29c**  
84 WT 8775—Assorted Sizes. Pkg. of 12..... **29c**

**Saber Blades**

84 WT 8781—3/8 in. wide, 4 1/2 in. long. Package of 3..... **19c**  
84 WT 8780—Assorted sizes, 4 1/2 in. long. Package of 12..... **49c**



**STEEL BAND SAW BLADES**

Finest alloy steel, correctly tempered and properly set for fast, smooth cutting in all kinds of wood. Tough and strong, yet flexible. Widths 1/4, 3/8, 1/2 and 3/4 in.

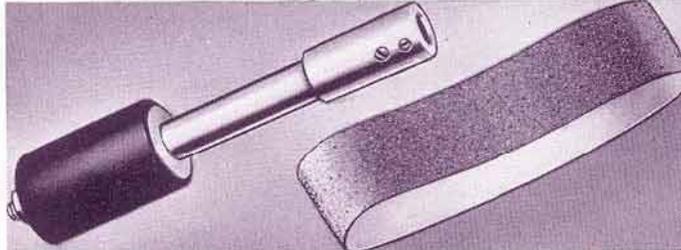
84 WT 746—State Length and Width. Blade 60 in. around for most 9-in. saws. 6 teeth per in. Ship. wt. each 8 oz. .... **79c**

Blade 78 in. around for most 12-in. saws. 6 teeth per in. Ship. wt. each 8 oz. .... **89c**  
84 WT 750—Blade 111 in. around. Ship. wt. ea. 10 oz. State width wanted. .... **\$1.40**

1/8, 1/4, and 3/8 in. widths, each..... **1.60**  
1/2 and 3/4 in. widths, each..... **1.60**

**METAL CUTTING BLADES**

84 WT 757—For cutting soft metals, such as brass, aluminum, copper, etc. 3/8 in. wide, 19 teeth per inch. Ship. wt. each 8 oz. State length wanted. .... **90c**  
60 in. around..... **90c**  
78 in. around..... **98c**



**SPINDLE SANDER**

A most useful accessory for sanding carvings, moldings, etc. Sanding roll should overhang the end of rubber drum by about 3 inches. Centrifugal force makes paper conform to the work when pressed against paper. Rubber sleeve, wood roller for forming paper and sheet of garnet paper included. Fits any 1/2 in. shaft.

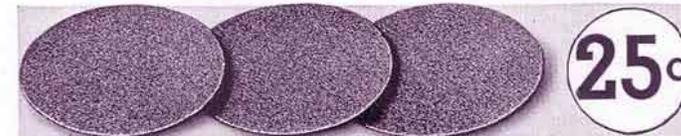
84 WT 740—Ship. wt. 2 lbs. .... **\$1.75**

**ENDLESS SANDING BELTS**

Fine quality garnet paper, with cloth back. State whether coarse, medium or fine grit is wanted.

84 WT 780—For use on Belt Sanders, 484 WT 877 and 484 WT 879, or any other sander using 3 by 30 in. sanding belt. Ship. wt. 8 oz. Each..... **35c**

84 WT 790—For use on 484 WT 654 Sander. Size 6 by 44 1/2 in. Ship. wt. 12 oz. Each..... **89c**



**QUALITY DISC SANDING SHEETS**

Use these discs of Sandpaper to give your work a smooth, flawless finish. Each disc is 6 inches in diameter, for use with metal sanding disc (shown above). Attach to sanding disc with glue. Set of six consists of two each of coarse, medium and fine. Keep extra sandpaper on hand and renew it frequently.

84 WT 719—Ship. wt. per pkg. 4 oz. Per Pkg. of 6..... **25c**



**ROUTING AND MORTISING CUTTERS**

Finest quality high speed steel cutters that bite right into the toughest kind of wood. Correctly tempered and accurately shaped to do a clean cutting job. 3/16 in. shanks. Use with drill presses and wood carvers for routing and mortising operations.

84 WT 641—State size wanted. Ship. wt. each, 4 oz.

Size, Inches...	A	A	B	B	D	E
Each.....	59c	59c	59c	59c	63c	85c

Anything In This Book on Monthly Payments See Page 22



**PLANER OR JOINTER KNIVES**

Made of finest quality, correctly tempered high speed tool steel—hold their cutting edge in the hardest wood much longer than ordinary carbon steel knives. Actual size of cross sections shown above.

84 WT 8900—For 484 WT 667 Jointer or any Jointer taking 4-in. blades with same cross-section as shown above at right. Ship. wt. per set 1 lb. Set of 3..... **\$1.89**

84 WT 8902—For 184 WT 655 Jointer or any Jointer taking 6-in. blades with same cross-sections as shown above at right. Ship. wt. per set 1 lb. 8 oz. Set of 3..... **\$2.75**

**\$1.89**  
Set of 3  
4-inch

**\$2.75**  
Set of 3  
6-inch

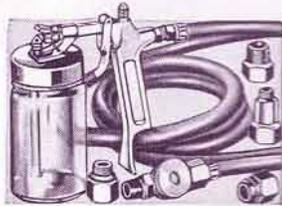
# Save Time! Use Wards Spray Guns FOR PAINT, VARNISH OR ENAMEL



## Auto Paint Sprayer

Small spray outfit operated by any auto motor. Attach steel compression valve to spark plug opening. Extra fittings for any size opening included. Use for wicker furniture, screens or any small odd jobs. Hose 15 feet long. Shipping weight 4 lbs. 12 oz.

575 WT 240—Auto Sprayer ..... \$2.35



## Auto Power Sprayer

Brass valve inserted in spark plug opening produces steady pressure. Extra fittings for any size spark plug opening. All metal gun; carefully machined working parts. Fan type 3-vent air nozzle breaks up paint—produces a smooth, flat or round spray. Complete with pint jar, 2 nozzles—one for coarse

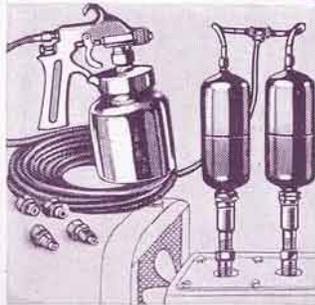
and one for fine spray and 25 feet of hose.  
575 WT 235—Auto Power Sprayer. Ship. wt. 8 lbs. ... \$5.95



## Portable Electric Sprayer

Ideal for inside work—furniture, walls, radiators, etc. Paints continuous operation with both hands free. Shoulder strap supports small rotary compressor run by 1/2 h.p. 110-volt, 25 to 60-cycle, universal A.C. or D.C. electric motor. Compressor and motor both in same housing. Special air filter and silencing device—operates quietly. 4-ft. hose from compressor to gun; 12-ft. electric cable. Internal break-up type gun with an adjustable nozzle sprays enamel, insecticides and germin-

lacquer or paint—effectively handles acids, as well. Instructions included.  
575 WT 257—Electric Sprayer. Ship. wt. 9 lbs. ... \$19.95  
Monthly Payment Plan Price: \$3 Down, \$4 a Month. 22.45



## 2-Valve Power Sprayer

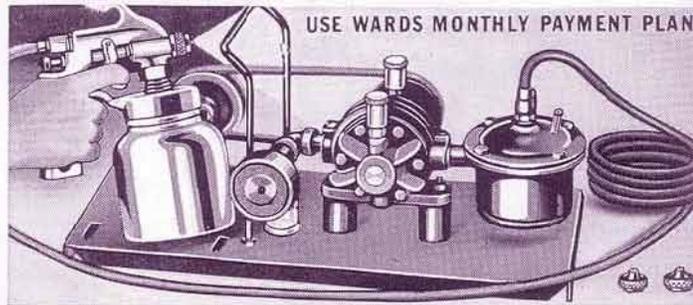
- 5 Times as Fast as Brushing
- Covers 600 to 1000 Sq. Ft. Per Hour

**\$935**

A high grade Auto Sprayer with two compression chambers. Much superior to Sprayers with only one compression chamber because it gives a steadier, more even flow of air, breaks up the paint finer, spreads it faster and smoother. Operates from two spark plug openings of any auto, truck or tractor engine.

Outfit consists of 2 compression valves; adapters for all cars; 2 pulsation chambers tested to 300 lbs. pressure; quart size Spray Gun same as furnished in Rotary Spray Outfit at right; 25 feet of 3/8-in. rubber hose; three nozzles—for fan, round and 45° angle spray (for floors and ceilings). Shipping weight 8 pounds.

575 WT 260—Complete Outfit. \$9.35



## USE WARDS MONTHLY PAYMENT PLAN

## Wards Improved Portable Rotary Spraying Outfit

- Rotary Type Compressor—No Diaphragm to Break
- Produces Greater Pressure than Diaphragm Type
- Is 7 Times as Fast as Brushing Paint by Hand
- Covers from 750 to 1200 Square Feet Per Hour

**\$1750**

Don't confuse this Rotary Compressor with any Diaphragm type! Has no rubber diaphragm to break or wear out—no extra parts to buy. Works faster—does a better job—because it's the largest capacity 1/2 h.p. spraying outfit on the market... 3 1/2 cu. ft. of air at 25 lbs. pressure, while the capacity of most diaphragm types is only about 1 1/2 cu. ft. at 25 lbs. pressure. Safety Valve controls pressure. Special oil filter eliminates possibility of oil mixing with air. Outfit includes: Rotary Compressor, Intake Valve and Air and Oil Filters on 2 1/2 by 8-in. steel base; quart size aluminum Spray Gun with adjustable trig or control and 3 nozzles—for round, fan and 45° angle spray (for floors and ceilings); 15-ft. 3/8-in. inside diam. Rubber Hose;

2 "V" Pulleys with Belt for average 1/4 h.p. motor. Operates from any 1/4 h.p. motor with 1/2-in. shaft or from light gasoline engine or line shaft. Instructions included. Ship. wts. 28, 50 and 25 lbs. and 2 lbs. 4 oz. and 1 lb. 4 oz.  
475 WT 250—Complete (no motor) ..... \$17.50  
475 WT 255—Complete with 1/4 h.p. 110-V., 60-cycle Alternating Current motor. .... \$22.75  
Monthly Payment Plan Price: \$25.25  
\$3 Down, \$4 a Month.  
475 WT 251—Compressor and base only ..... 10.45  
75 WT 254—Extra Cup for Gun. 95c  
75 WT 253—15-ft. Hose and Connections ..... \$1.19

## LIQUID GLUE

LePage's—the finest liquid glue! Ship. wts. 4 oz., 11 oz. and 1 lb. 4 oz.  
75 WT 8538—1 1/4-oz. tube. 15c  
75 WT 8589—4-oz. can. .... 25c  
75 WT 8590—1/2-pt. can. .... 39c



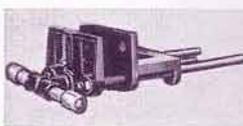
## CASEIN GLUE

Strong, tough, waterproof glue for making or repairing furniture, radios, cabinets, musical instruments, trunks, etc. Powder form—easy to mix in cold water.  
75 WT 1400—1 1/2-oz. can. Shipping weight 4 oz. .... 9c  
75 WT 1401—4-oz. can. Shipping weight 8 oz. .... 23c



## WOOD-FIX

Buff color natural wood in paste form. Pliable like putty, yet hardens in 1/2 hr. Can be plane or sawed—holds screws or nails. Waterproof.  
75 WT 8296—3-oz. tube. Ship. wt. 8 oz. 19c  
75 WT 8297—1/2-lb. can. Ship. wt. 1 lb. 39c



## Our Finest Woodworker's Vise

Precision built. 7-in. cast iron front and back jaws, ground faces. Opens to 9 in. Adjustable locking bench stop. Cold rolled steel screw and guides. Blue gray finish. Ship. wt. 22 lbs.

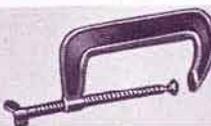
484 WT 6831 ..... \$4.75



## Woodworker's Vise

Instant locking device for quick adjustment. Clamps to anything from 3/4 to 2 in. thick. Steel rods. Malleable iron reinforced jaws 1 1/2 by 5 1/2 in. Open to 3 3/8 in. Black japanned. Shipping weight 8 lbs.

484 WT 6833 ..... \$1.95



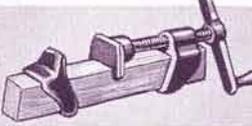
## Malleable Iron Clamps

Swivel head with ball joint. Cold rolled steel screw with machine cut threads.  
84 WT 6900—State size.  
Opens In. 4 6 8 10  
Depth In. 2 2 1/2 3 1/2 4  
Ship. wt. lbs. 2 1/4 3 4 7  
Each ..... 37c 59c 89c \$1.25  
Pair ..... 69c \$1.10 \$1.68 2.35



## Steel Bar Clamps

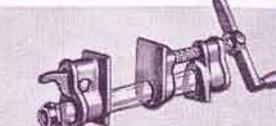
A powerful, quick action clamp that won't buckle. Flat steel bar 1 1/2 by 1/2 in. notched to vary width opening. Shipping weights each 11 and 12 lbs.  
484 WT 6910—State length.  
Length ..... 3 ft. 4 ft.  
Each ..... \$1.95 \$2.25  
Pair ..... 3.75 4.25



## Cabinet Clamp

Powerful, quick-action clamp of heavy cast iron. For large work. Easily attached to any length of 1 1/2 by 2 1/2 in. wood bar. Sliding head 1 3/4 in. square. 5/8 in. steel screw. Bar not included. Ship. wt. 4 lbs. 4 oz.

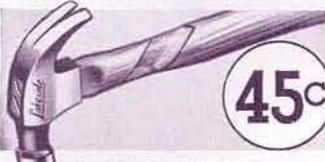
84 WT 6905 ..... 89c



## Clamp Fixture

For any length 3/4 in. threaded pipe. For large adjusting screw. Back fixture adjustable, self-locking. Clamp faces 1 3/4 by 1 3/4 in. Semi-steel. Pipe not included. Shipping weight 4 lbs.

84 WT 6907 ..... \$1.00

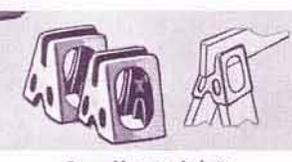


## Lakeside Quality Hammers

- Drop forged steel head... heat treated tempered
- Seasoned hickory handle... securely wedged head

Usually sells for 65c. A well balanced hammer for all-around hard use. Strong claws pull any size nail. Sides, claws, and face polished; neck and under claws, black. Ship. wt. each 1 lb. 8 oz.

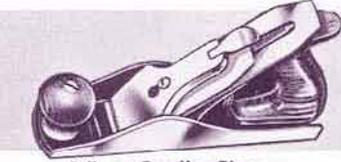
84 WT 1531—Size 1 1/2; 16-oz. head. 45c



## Saw Horse Joints

Cut lumber to desired lengths. Insert in joints and job is done. No beveling, nailing, or braces needed. Lock tight grippers prevent side sway, spreading or disjuncting. Malleable iron. Painted red. Ship. wts. per pair 3 and 6 lbs.

84 WT 8892—No. 1 for 1 by 3 in. lumber. .... 78c  
84 WT 8893—No. 2 for 2 by 4 in. lumber. Pair. .... \$1.40



## Eclipse Quality Planes

- Heavy cast body—ground, polished
- Forged steel cut-ter 1 3/4 in. wide—cuts smooth and true

Every woodworker needs a good, general purpose plane, and carpenters pick this one for clean, accurate work and long service. Can't be beaten for fine quality at low cost. Adjustable for depth or leveling. Polished hardwood handle and knob. 9 in. long. Ship. wt. 4 lbs.

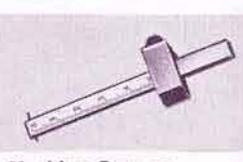
84 WT 460—Smooth style 3 ..... 95c



## Block Planes

Eclipse Quality. Fits the hand. The handiest type of tool for doing end grain planing and other similar jobs. Correctly tempered steel cut-ter 1 1/2 inches wide. Blade is adjustable. Polished bottom and sides. Hardwood knob. Length 7 inches. Ship. wt. 2 lbs.

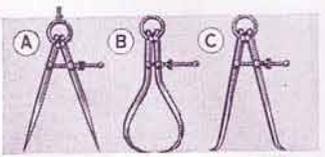
84 WT 545 ..... 39c



## Marking Gauges

Accurate with tempered steel pin. 6-in. rule graduated to 16ths. Shipping weight each 8 oz., 6 oz.

84 WT 2325—Boxwood with brass screw and face plate. 8 1/2 in. .... 69c  
84 WT 2324—Beechwood with wood screw. 8 1/2 in. overall ..... 18c



(A) Dividers (B) Outside Calipers (C) Inside Calipers

Same as sold under nationally known maker's name for much more than Wards low price. Tempered steel springs. Tested for accuracy. State article number and size wanted.

Size In.	Ship. Wt. Oz.	84 WT 2614 Outside Divider	84 WT 2613 Inside Caliper	84 WT 2612 Inside Caliper
4	5	55c	55c	55c
6	7	60c	60c	60c
8	8	65c	65c	65c



## Comb. Square

Die-cast head. Level glass and scriber. Steel scale, grad. to 16ths one side, 32nds on other. Length 12 in.

84 WT 2529—Wt. 1 lb. 4 oz. 85c  
84 WT 2530—12-in. scale only. Ship. wt. 8 oz. Each ..... 55c



84 WT 1840—Eclipse Folding Rule. 6 ft. Yellow. Marked to 16ths on both sides. Shipping weight 7 oz. .... 12c  
84 WT 1841—Lakeside Folding Rule. 6 ft. White. Marked to 16ths on both sides. Wt. 7 oz. .... 18c



## SANDPAPER

84 WT 2401—Size 8 1/2 by 10 1/2 in. State number.

No.	Ship. Wt. lbs.	24 Sheets
00	1	12c
0	1	15c
1	1	17c
1 1/2	1	19c
2	2	21c
2 1/2	2	23c

84 WT 2404—20 Sheets Ass't. Size 4 1/2 by 7 Weight 4 oz. .... 7c



## GARNET PAPER

A superior quality garnet paper made of sharper particles of abrasive for faster cutting and longer service than regular sandpaper at left. Use for all general purposes but made especially for use on Spindle Sander listed on page 24. Size of sheets 9 by 11 in. Ship. wt. per pkg. 12 oz.

84 WT 705—State grade wanted. Fine. Pkg. of 12 sheets. .... 45c  
Medium. Pkg. of 12 sheets. .... 39c  
Coarse. Pkg. of 12 sheets. .... 55c

Emery Cloth—3 Grits  
84 WT 2403—Standard size 9 by 11 in. State choice: Coarse No. 1, Medium No. 0, or Fine No. 00. Shipping weight 3 ounces. Per Sheet ..... 4c

HANDY ASSORTMENT  
Size 4 1/2 by 5 in. Ship. wt. 4 oz.  
84 WT 2406—6 sheets. .... 7c



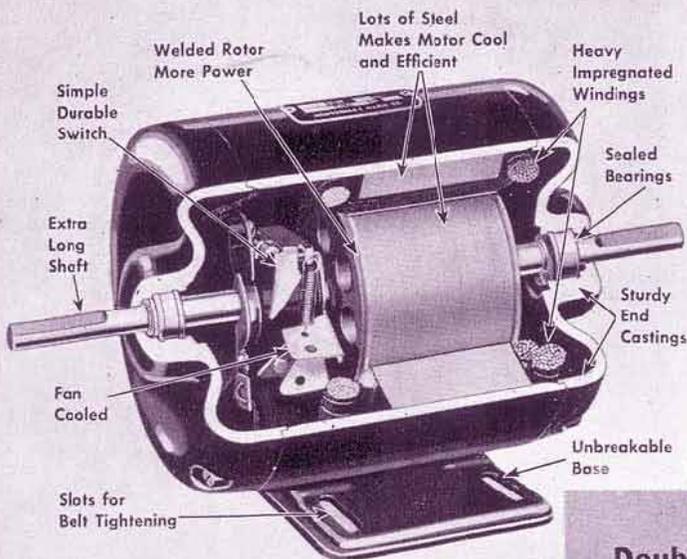
## Master Quality Chisel Set

- Finest crucible steel, correctly tempered—holds edge longer
- Polished, bevel edged blades

Finest butt chisels you can buy. Blades are evenly tempered, carefully honed, polished to bright, mirror-like finish. Blades are 3 in. long. Select quality hickory handles leather tipped. Sizes 1/4, 1/2, 3/4 and 1 in. Ship. wt. 1 lb. 8 oz.  
84 WT 808—Set of 4 ..... \$1.85

# All Wards Motors Have

Under the maker's own name plate, these motors would cost up to double Wards price. In first cost, in economical operation, in length of dependable service, Wards motors give the biggest value per dollar cost of any motor made.



## MORE WEIGHT INSIDE

Wards motors outweigh most others of equal H.P., and the weight is *inside*—where it counts. More copper in the windings, more steel in rotor and stator—mean more power, better efficiency. Frames of rolled steel—not heavy cast iron that adds weight but not power.

## ECONOMICAL

The larger the motor (per H.P.) the more efficient it is. Wards ¼ H.P. motors cost less than 1½¢ per hour at average rates; the ½ H.P. less than 2¢.

## PERFECT BALANCE

Every motor tested on \$5000 dynamic balancing machine for both balance and precision. Automatic end-play take-up.

## BIG OVERLOAD CAPACITIES

While starting, Wards motors develop from 2 to 4 times their rated H.P. No motor should be continuously used delivering more than its rated H.P. but for emergency demands for reasonable periods, Wards motors will deliver up to 4 times their rated H.P. For example the ¼ H.P. motor below develops well over ½ H.P., the ½ H.P. size over ¾ H.P. before stalling. This extra capacity will pull you through tough spots where ordinary motors would stall.

## COOL RUNNING—QUIET

Lets of weight, plus efficient ventilation, enables Wards motors to run day and night at full rated H.P. without rising over 40° C. above room temperature. Heavier weight makes them run quieter, too. A cool motor costs less to run.

## Split Phase Motors

Above is shown in general the heavy duty type of construction of *all* Wards Split Phase Motors shown on this page. Split phase Motors of any brand can be used only on machinery that starts easily, although heavy loads may be thrown on after motor and machine have come up to full speed. Suitable for Home Workshop Tools. Not suitable for Water Pumps. No radio interference.

## Adjustable Motor Base

Use one motor with a number of machines. Buy complete set for first machine and motor, extra rails only for each extra machine. The stamped steel rail forms a sturdy, portable base for your motor. Shipping weight, set, 2 lbs. 10 oz.  
84 WT 9831—Per Set, ..... **89¢**  
84 WT 9830—Extra Bench Rails Only. 14 in. long. Ship. wt. 1 lb. Each, ..... **19¢**

## Reversing Switch

A 3-position switch (Forward—Off—Reverse) that will handle any split-phase or direct current motor up to ¼ H.P. When used on a shaper simply reverse the cutters and the rotation of the shaper spindle and you double the number of patterns from the cutters you now have. Size approximately 4¼ by 2¾ in. Full instructions included. Ship. wt. 3 lbs.  
84 WT 9836..... **\$3.25**

## Motor Switch

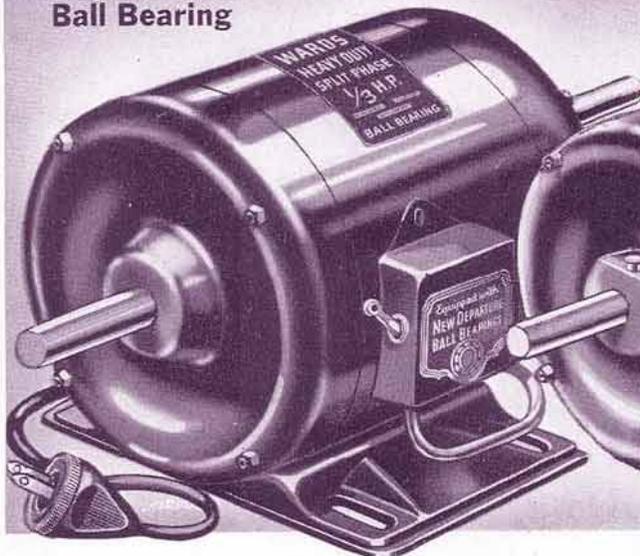
The handiest Motor Switch ever devised! Mount it anywhere on your bench. Stretch the 8-ft. pull-cord under the front edge of your bench, and control motor from any point. Switch is double pole, for long life. Shipping weight, 10 oz.  
84 WT 9832—Each, ..... **\$1.49**

## Overload Switches

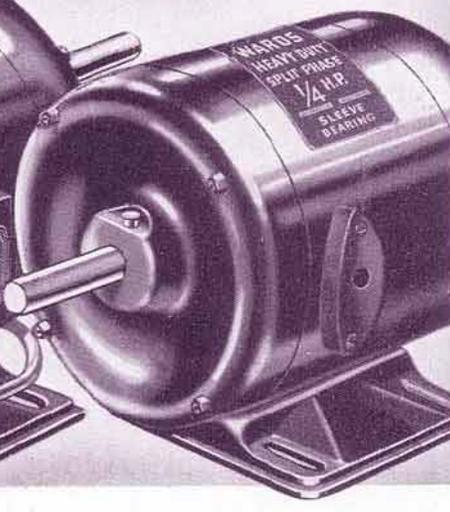
These sturdily built Cutler Hammer switches definitely protect motor against burning out, and also are used to start and stop motor. Easily installed. When ordering, give *All* information on nameplate of your motor (or specify Art. No. of motor, if ordering with motor). If motor is 110-220-V style, *Be Sure* to specify whether it is to be used on 110 or 220 V. **Shipped from Factory** in Milwaukee or San Francisco. Ship. wts. 2, 3, 7 and 8 lbs.

Art. No.	Cutler Hammer No.	Largest HP motor switch protects				Price
		32-V (DC)	115-V (DC)	110-V (AC)	220-V (AC)	
284WT9837	9101	1/8	1/8	3/4	3/4	\$2.90
284WT9838	9103	1/2	1/2	1	1 1/2	6.00
284WT9839	9115	1/2	1/2	1 1/2	3	8.00
284WT9840	9584	Suitable	3	5	20.00	

## Double Shaft Ball Bearing



## Single Shaft Sleeve Bearing



## GUARANTEED 6 YEARS

All features described above. Big, husky motors for tough use. Especially for home workshop tools and other easy starting machinery. The ¼ H.P. size automatically develops over ½ H.P., the ½ H.P. size over ¾ H.P. before stalling; plenty of overload capacity. Compare the weight with other brands.

**\$7.95**  
¼ H.P.

New Departure Ball bearings, grease-sealed, never need oiling. Use motor in any position. Splash-proof. 1750 R.P.M.—for 110 to 120 volt, 60 cycle A.C. Reversible. Heavy 10-ft. cord, ON-OFF switch, ½ in. diam. shaft projects 2 in. in each end. Ship. wts. 33 and 37 lbs.  
484 WT 9810—¼ H.P. 12½ in. overall. *Available.* **\$7.95**  
484 WT 9811—½ H.P. 13½ in. overall. *Available.* **9.45**

## GUARANTEED 4 YEARS

Same motors as at left but sleeve bearing, diamond bored, with large oil wells, oil yarn filtered. Mount motor in horizontal position only. No switch. Shaft projects 2 in. at one end. 1750 R.P.M. Easily reversible. For 110 to 120 volt, 60 cycle A.C.

**\$5.85**  
¼ H.P.

484 WT 9799—¼ H.P. Less Cord. Ship. wt 30 lbs. *Available.* ..... **\$5.85**  
484 WT 9800—¼ H.P. With Cord. Ship. wt. 32 lbs. *Available.* ..... **6.25**  
484 WT 9801—½ H.P. With Cord. Ship. wt. 36 lbs. *Available.* ..... **7.95**



## For High Speed Machinery

Full ½ H.P.; runs at 3450 R.P.M. Capacitor type—economical to operate, starts bigger loads. New Departure sealed Ball Bearings; ½ in. diam. shaft projects full 2 in. at each end. Same heavy-duty construction as motors above; has all features covered at top of page. 10-ft. cord, ON-OFF switch, 13½ in. overall length. For 110-120 volt 60 cycle A.C. only. A real saving at Wards price.

For machines that require high speed—shapers, carvers, etc. Not suitable for slow speed machinery. *Available.*  
484 WT 9814—Ship. wt. 45 lbs. .... **\$17.95**



## Guaranteed 3 Years

Dependable—strong motor for ordinary purposes such as washing machines, workshop tools, etc. We know of no better motors except those listed above. Bronze sleeve bearings, wool yarn lubrication. Carefully balanced—well insulated. ¼ H.P. 1750 R.P.M. ½ in. shaft projects 1½ in. For 110 to 120 V. 60 cycle A.C. only. Ship. wt. 27 lbs. and 28 lbs. *Available.*

484 WT 9796—Less Cord, ..... **\$4.85**  
484 WT 9793—With Cord, ..... **5.25**

**Everything in this Book Sold on Monthly Payments**

See Page 22

# More Power—Longer Life

## LONGER SHAFTS

2 inches long—longer on larger sizes—give ample length for lining up pulleys. Plenty of room to mount a 4-step pulley.

## SEPARATE BASE

Not in one piece with frame. In case of damage, easily replaced. Slotted for belt tightening.

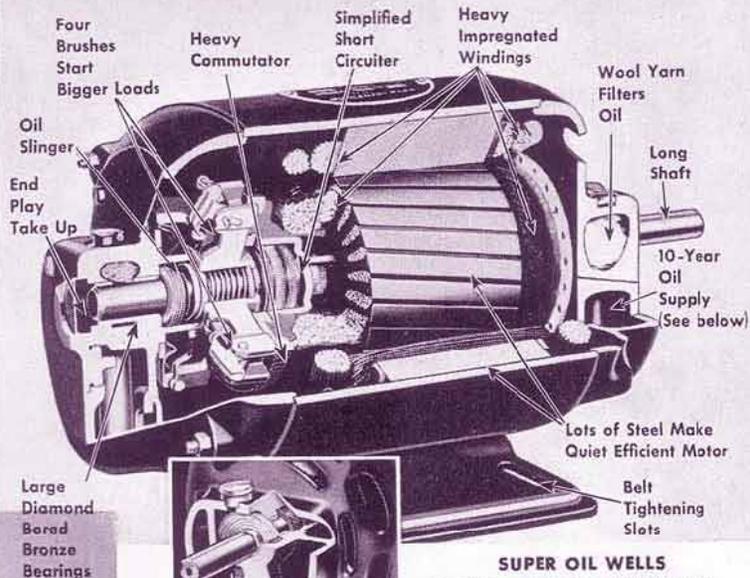
## LONG LIFE

Bigger motors... cooler running... diamond bored bearings (or ball bearings)... precision manufacture... excellent lubricating system—all combine to give you added service, when you buy your motor from Wards.

Write us for prices on other motors not listed here.

## GUARANTEE

With each motor we give you a definite time guarantee, as explained in the descriptions. If any motor should fail to give the service specified, we will repair or replace on a service basis—charging you only for the time the motor has performed satisfactorily. Twenty-six service stations all over the U.S. insure quick service on repair parts at any time.

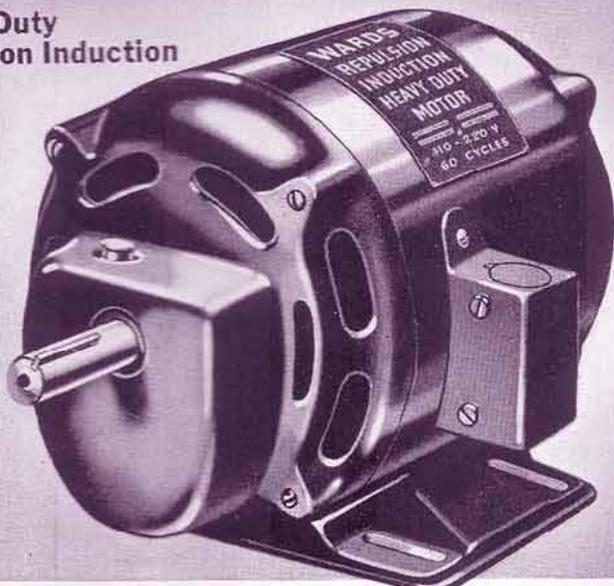


Large Diamond Bored Bronze Bearings

## SUPER OIL WELLS

No oiling required for 10,000 hours—10 years of ordinary use. Wool yarn filters oil. Install motor, forget it. This feature is worth dollars extra.

## Heavy Duty Repulsion Induction



## Repulsion-Induction Motors

Above is shown the dependable, industrial type construction of all Wards Heavy Duty Repulsion-Induction Motors. They are designed for use on the hardest kind of jobs—any machine whatever. Use them for toughest service, even if motor must run day and night. Wards Motors "can take it": No better buys anywhere! Meet all Power Companies and NEMA requirements.

## GUARANTEED 6 YEARS

Heavy Duty Motors for tough jobs. Equipped with Super-Oil Wells and all other points of superiority shown above.

**\$9.95**  
1/8 H.P.

Four brushes permit motor to start on low voltage. Develop 3 to 4 times rated H.P. while starting, double power any time for short, heavy pulls. Low starting current—connect direct to line. 1/8, 1/4, and 1/2 H.P. are brush lifting type.

Use on either 110 to 120, or 220 to 240 volt, 60 cycle A.C. Single Phase (ordinary house current). Speed, 1750 R.P.M. Easily reversible by shifting brushes.

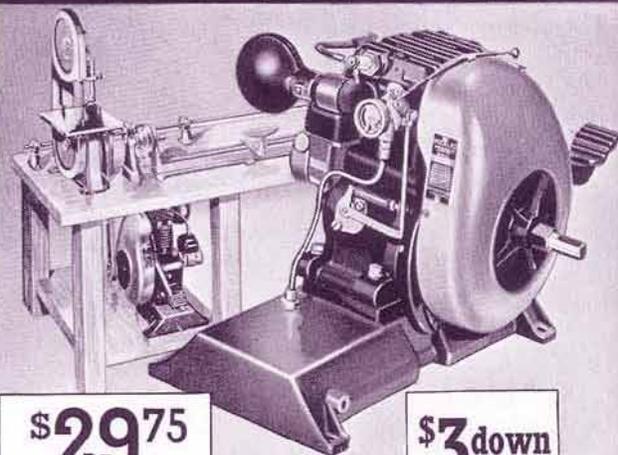
The 1/2, 2 and 3 H.P. have regular oil well construction, not super oil-well described above, and are standard industrial type motors.

184 WT 9821—State H.P. wanted. All sizes shipped from Stock. First five sizes Mailable.

H.P.	Shaft Diam.	Ship. Wt.	Price
1/8	1/2 in.	37 lbs.	\$ 9.95
1/4	3/8 in.	41 lbs.	10.95
1/2	1/2 in.	47 lbs.	15.45
3/4	3/4 in.	63 lbs.	19.95
1	7/8 in.	65 lbs.	26.50
1 1/2	1 in.	106 lbs.	34.95
2*	1 in.	114 lbs.	46.95
2*	1 in.	157 lbs.	59.95
3*	1 in.	180 lbs.	79.50

\*Before ordering 2 or 3 H.P. see your Power Co. See if your line and transformer are big enough for this size. If you need 3-phase motors write for price—State size wanted.

## Have that Power Workshop EVEN WITHOUT ELECTRICITY



**\$29.75**  
Cash from Chicago

**\$3 down**

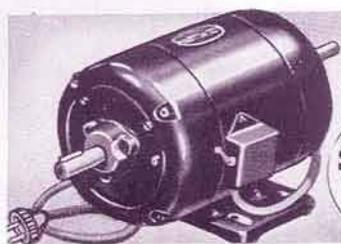
## AIR-COOLED GASOLINE ENGINE

### Check These Other Uses:

Operates Cream Separators • Churns • Pump Jacks • Washing Machines • Air Compressors • Paint Sprayers • Corn Shellers • Feed Grinders • Tool Grinders and any other job requiring a 1/4 to 1/2 H. P. electric motor.

- 4-Cycle, Single Cylinder Type Produces 1/2 H. P. at 1750 R. P. M.
- Air Cooled—Can't Freeze or Heat
- Costs \$35 to \$40 Elsewhere

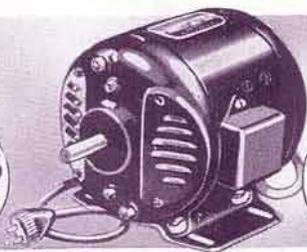
Strong enough to operate any tool in your Power-Kraft workshop. Its new automotive type construction with silechrome steel valves and aluminum alloy piston means this power is produced quietly, smoothly, with a minimum of gas consumption! Has a high tension, specially designed magneto. Fly ball type governor adjustable while engine is running. One-piece forged steel crankshaft. Foot pedal starter. Fuel tank in base holds 3 qts. for 12 to 13 hrs. operation. Pulley not included—see Wards General Catalog. Ship. wt. 90 lbs.  
187 WT 5025—Cash Prices from:  
Chicago or Springfield, Ill. \$29.75  
Balt., Albany, Kan. City, St. Paul.. 31.50  
Denver, Portland, Oakland, Ft. Worth..... 32.25



**\$23.95**  
1/2 H.P.

## Double Shaft 1/2 H.P. Motor

Guaranteed 6 years. Same as 1/2 H.P. Repulsion-Induction Motor above, except has double shaft, grease sealed New Departure Ball Bearings, ON-OFF Switch, 10-ft. cord and plug. Use it for tough jobs. Just the motor for industrial shops or DeLuxe home workshop. Operate motor in any position. For 110 or 220 volt, 60 cycle A.C. 1750 R.P.M. Easily reversible by shifting brushes. Shafts 3/4 in. diameter. Shipping weight 67 pounds.  
484 WT 9813.....\$23.95



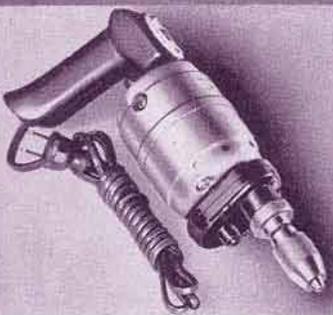
**\$13.95**  
1/4 H.P.

## Heavy Duty D.C. Motors

For any machine—hard or easy starting. Compound wound. 1/2-in. shaft projects 2 in. 1750 R.P.M.  
484 WT 9803—1/4 H.P. Single Shaft, sleeve bearing; no switch, for 32 V. Ship. wt. 32 lbs. ....\$13.95  
484 WT 9804—115-V. D.C. .... 13.95  
484 WT 9807—1/4 H.P. Double Shaft, New Departure Ball Bearings, ON-OFF Switch, for 32 V. Shipping weight 37 lbs. ....\$17.95  
484 WT 9808—115-V. D.C. .... 17.95

# WARDS POWR-KRAFT ELECTRIC DRILLS

General Electric Motors - Jacobs Key Chucks - New Departure Ball Bearings



**PENCIL TYPE \$14.95**

**PISTOL GRIP \$28.25**

**BREAST PLATE \$44.95**

• G. E. Motor—operates on 110 or 120 Volt A.C. or D.C. Will not stall with maximum size drill specified • New Departure Grease Sealed Ball Bearings • Jacobs self-tightening key release chuck. • Helical cut double reduction gears of heat treated

Chrome Vanadium Steel • Ventilated aluminum alloy case—strong and light weight • Shock-proof switch and 10-foot safety cord—3 conductor cable—Listed by Underwriters' Labs. Inc. • Hand-some new crackle gray finish.

## PENCIL TYPE MODEL

Here's a high quality pencil-type drill so well built that you'd expect to pay much more than Wards low price. G.E. Motor—Jacobs Chuck—New Departure Ball Bearings—all nationally known products used in highest priced precision drills. It's the leader for the price in quality—and in design too. Made for close-quarter drilling, an excellent tool for pattern and cabinet work in the small workshop. Speed 2000 R.P.M. Read about the other features described above.

Shipping weight 6 pounds.  
84 WT 1018—Size 1/4 in. .... \$14.95

## PISTOL GRIP MODEL

A heavy duty drill—built for continuous production service in garages or shops. Heavier New Departure Ball bearings used on spindle and shaft. Enclosed Cutler Hammer double pole switch with lock for continuous running.

Removable plate for easy access to brushes. Aluminum alloy ventilated case. Shipping weights 11 and 12 pounds.

Article Number	Size In.	Spindle Speed		Price
		No Load	Full Load	
484 WT 1019	1/4	1800	1275	\$28.25
484 WT 1020	3/8	1400	1020	34.25

## BREAST PLATE MODEL

Big Super-Power drill designed for the toughest work in your shop. Extra-heavy motor—oversized bearings—three-piece aluminum alloy ventilated motor housing. Enclosed double pole Cutler Hammer switch with lock.

Combination breast-plate and side handle removable for close drilling. Ship. wts. 24, 25 and 26 lbs.

Article Number	Size In.	Spindle Speed		Price
		No Load	Full Load	
484 WT 1021	1/2	580	295	\$44.95
484 WT 1022	5/8	500	325	51.75
484 WT 1023	3/4	480	310	56.00

## UTILITY MODEL

A new low price for a dependable electric drill. Used in home workshops and in garages for hundreds of light drilling jobs. Not a heavy duty drill, but will outperform drills costing up to \$15.00. Can be operated within 3/4-in. of a corner . . . and that's real close-quarter drilling. Sturdy universal motor for 110-120 volt A.C. or D.C. . . . won't stall with full capacity load. Chuck holds drills up to 1/4 in. Handy off-on switch set into cast aluminum handle. 8 ft. approved rubber cord and unbreakable plug. Spindle Speed 1350 R.P.M.

84 WT 1030—  
Ship. wt. 5 lbs. .... \$8.95

## Master Quality Drill Sets



**\$1.19** Carbon Steel Set

Highest quality precision ground straight shank drills for hand, breast, post or bench drills. Use in wood or metal. Handy container—keeps drills sorted for easy selection. We recommend the high speed tungsten steel type for use with electric drills. Set consists of container and 8 drills, sizes: 1/16, 1/8, 3/16, 1/4, 5/16, 3/8, 1/2, and 5/8. Shipping weight 12 ounces.

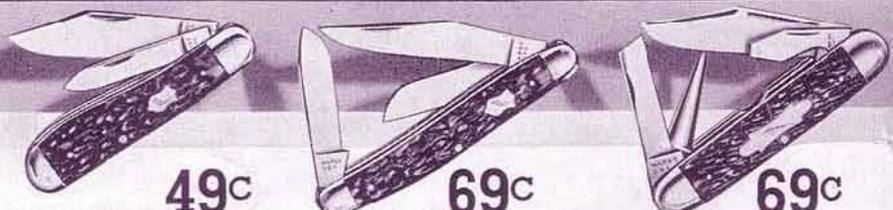
84 WT 1045—Carbon Steel. .... \$1.19  
84 WT 1044—High Speed Tungsten Steel. .... 2.50

### Individual Straight Shank Drills

84 WT 1063—Finest quality high-speed tungsten steel. State diameter wanted. Shipping weight 2 to 6 ounces.

Diam. in.	1/16	1/8	3/16	1/4	5/16	3/8	1/2
Length in.	2 1/2	2 3/4	3	3 1/4	3 1/2	4	5
Each. ....	18c	19c	22c	24c	31c	42c	75c 1.20

## POCKET KNIVES FOR SHOP USE



**49c**

JACK KNIFE

Stag handle, "Swell" type pattern. Clip and pen blades of cutlery steel, operate smoothly and firmly. Lining, rivets, bolsters and pins are nickel silver. Won't tarnish or corrode. Length closed 3 1/2 in. Ship. wt. 4 oz.

84 WT 386—Each. .... 49c

**69c**

STOCK KNIFE

Heavy premium stock pattern. Finest cutlery steel sheepfoot, clip and spay blades. Stag handle. Oil tempered steel springs with uniform tension throughout. Length closed, 4 inches. Ship. wt. 5 oz.

84 WT 432—Each. .... 69c

**69c**

WHITTLING KNIFE

The handiest knife for shop use we've ever offered. Four useful cutlery steel blades—saber clip, screwdriver, punch and coping. Stag pattern handle. Nickel silver bolster, brass lining. Length 3 3/4 in. Ship. wt. 6 oz.

84 WT 480—Each. .... 69c