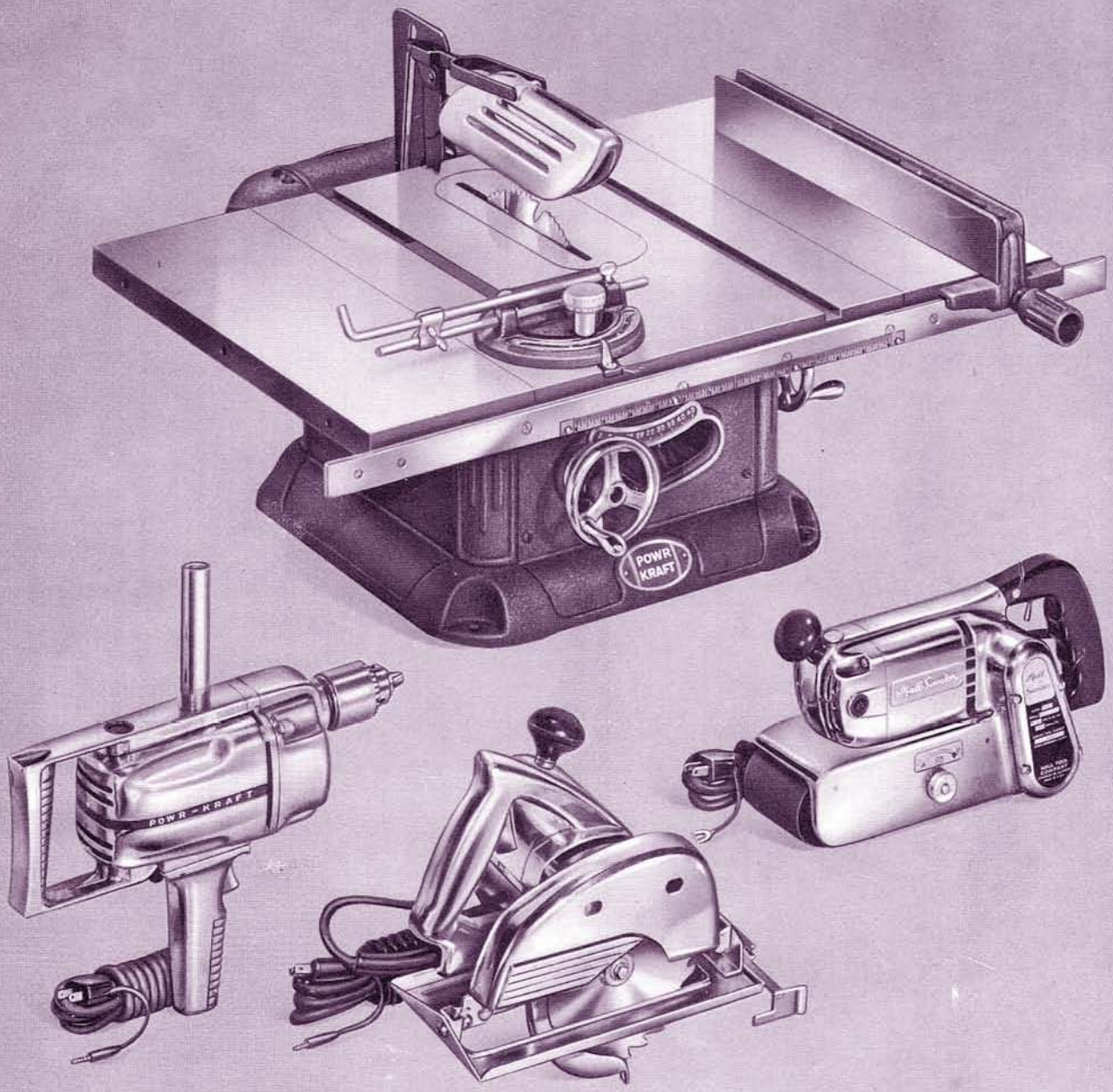


POWR-KRAFT

POWER TOOL AND WELDING CATALOG

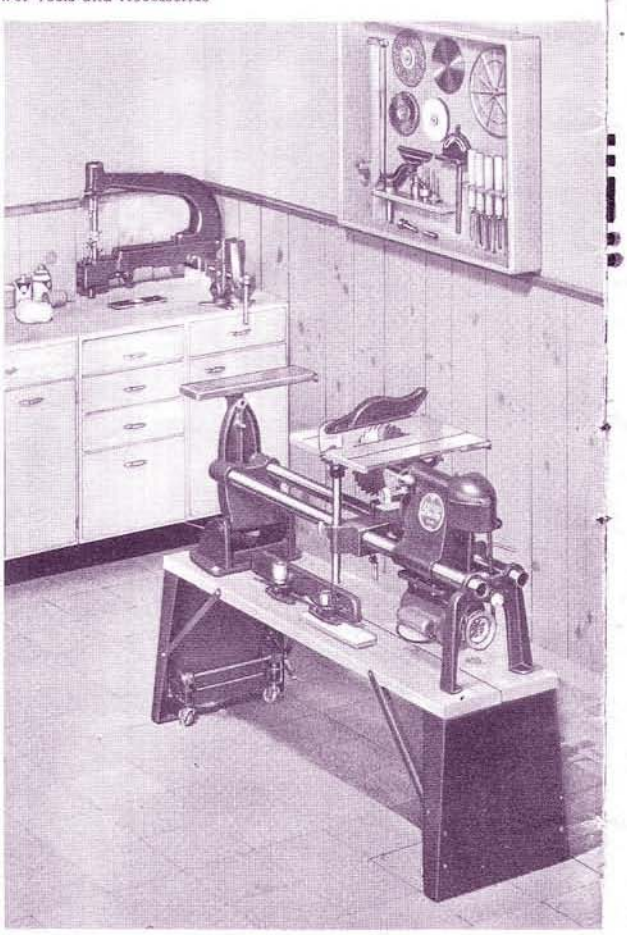
8-inch Tilting Arbor Bench Saw shown above is listed on Page 5.
Drill listed on Page 29; Portable Saw, Page 8; Sander, Page 35.

Convenient Index is on Page 3. Ordering Information on Page 41.
Monthly Payment Plan Information and Table of Terms on Page 24.

Montgomery Ward · 1953-54

Woodworking Shop Equipped with Wards Powr-Kraft Power Tools and Accessories

Workshop Equipped with Professional Quality Beaver Tools



Compact Shopsmith Workshop

Choose from Powr-Kraft and Many Other National Brands

BEAVER, MALL, SHOPSMITH, BLACK AND DECKER, SKILSAW, LOGAN,

SPEEDWAY, CARBORUNDUM, WESTINGHOUSE, DREMEL, SYNCRO, GLOBE

You'll enjoy a fascinating hobby and save money too, by having your own Power Tool Workshop. More and more men everywhere are turning to this relaxing and satisfying hobby and at the same time are doing their own home repairs, maintenance and remodeling work. Just one or two projects often more than pay for a complete power tool, and you'll have the added satisfaction of creating useful articles with your own hands.

UNLIMITED PROJECTS ARE POSSIBLE. With the fine quality power tools in this catalog you can undertake hundreds of projects from the simplest toy to the most elaborate cabinet work. You can build many items at a fraction of the cost of purchasing them ready-made; you can make cabinets, shelves, bookcases, fences, lawn furniture; you can build a boat or a garage; or remodel a basement or attic room. You can produce hand-made gifts for holiday giving, or put your workshop to making money by producing items for sale. You'll save too, by doing your own maintenance and repair work around the house, such as making your own screens and storm sash, repairing damaged or worn furniture, or other day-to-day "fixing up."

Many "how-to-do-it" books covering all phases of planning and building of every type of project are available, giving easy-to-follow instructions (see Page 22 and the Book Section of Wards Big Catalog.)

NO SPECIAL SKILLS REQUIRED. Woodworking is not just for the mechanically inclined; anyone can enjoy the pleasures this popular hobby has in store. The accuracy and precision built into modern power tools largely take the place of manual skills the old-time hand craftsmen acquired after many years of practice. Once you set them on the job, they'll keep the work straight and true and finish the job in a fraction of the time it would take with hand tools. Newly devised adjusting features, and wide range of accessories make it easier than ever for the home hobbyist to do work of professional quality.

PLANNING THE HOME WORKSHOP. Pictured on opposite page are three typical woodworking shops equipped with tools listed in this Catalog. At top is a shop featuring some of Wards own Powr-Kraft tools. At lower left is the Beaver Shop, made up of large capacity professional-type Beaver tools. At lower right is a Shopsmith scene, the ideal solution for the hobbyists faced with limited space. (See more complete descriptions of these tools below.) For more detailed information on how to start your shop, which tools to buy first, etc., we suggest that you order the book "Planning Your Home Workshop" listed on Page 22.

WARDS GUARANTEE. Wards 81-year old guarantee of "Satisfaction or Your Money Refunded" is your protection. It applies to everything listed in this Catalog.

MONTHLY PAYMENT PLAN. Only 10% Down is required if you use Wards Monthly Payment Plan. See Page 24 for complete details.

WARDS POWR-KRAFT TOOLS

A complete line of fine quality woodworking and metal working tools especially designed and produced for home craftsmen, industrial arts shops and light production work. Powr-Kraft tools offer up-to-date design, accuracy and dependable service at Wards typical money-saving prices. They are made to Wards own rigid specifications by outstanding manufacturers in the industry and include many new features and late developments that make for greater efficiency and faster, easier operation.

Each Powr-Kraft tool must pass exacting tests before and after assembly; bearings and other critical parts are machined to close tolerance to insure long dependable service and high degree of accuracy.

The Powr-Kraft line comprises a very wide range of tools including all regular single purpose woodworking tools plus other shop equipment, such as Portable Electric Saws, Electric Drills, Sanders, and Saber Saws, Metal Lathes, Grinders, Electric Welders, Electric Motors as well as a full line of accessories and attachments.

Powr-Kraft tools have long been the favorites of woodworking hobbyists and shop workers everywhere who appreciate their fine construction features, their accuracy, and their wide adaptability.

PROFESSIONAL BEAVER TOOLS

Wards are proud to offer nationally known Beaver Power Tools, the finest professional quality woodworking equipment we know of today for industrial arts training, production work and home workshop. Beaver tools have established an enviable reputation for quality among advanced craftsmen, cabinet makers and production workers. They are designed by industrial engineers and are precision manufactured in Canada to extremely rigid specifications.

Beaver tools meet the most exacting demands of the skilled workman. They operate smoothly and quietly on grease-sealed ball or roller bearings. Specially designed adjustment features permit quick, accurate control of their operation. All are built with large capacity and will handle nearly every type of woodworking job. Beaver tools are preferred where rugged construction, large output and close tolerances are essential. They will stand up under the punishment of every-day, heavy-duty use and still maintain their high operating efficiency.

For the discriminating hobbyist who wants the finest tools available, or for the production worker who depends on power tools for his living, we unhesitatingly recommend the Beaver Tool line.

Beaver Tools include Bench and Floor Model Saws (Page 5), Jointer (Page 11), Jig Saw (Page 13), Band Saws (Page 15), Wood Lathe (Page 16), Drill Presses (Page 19) and Sander (Page 34).

SHOPSMITH AND OTHER TOOLS

SHOPSMITH. This unique 5-in-1 power tool has achieved tremendous popularity since introduced by Wards in 1948. In each of its five major uses as Bench Saw, Wood Lathe, Sander, Vertical Drill Press and Horizontal Drill Press it has equal or greater capacity than most single purpose tools yet one motor drives all tools. It can be quickly changed over from one operation to another, and fits compactly in corner of basement utility room or garage. A large number of accessories are available which make it the most versatile of all tools. This Catalog has the most complete selection of Shopsmith accessories and attachments ever offered (See Pages 46 to 52).

MALL PORTABLE TOOLS. Nationally known Mall Portable Electric Tools are the acknowledged leaders in their field for advanced design, rugged construction and dependable service. This Catalog lists a large selection of Mall Drills, Sanders, Polishers and many Mall accessories.

OTHER NATIONALLY KNOWN BRANDS. In addition to the well-known names listed at the top of this page, this Catalog offers: Jacobs chucks, Barron and Palmgren Drill Press accessories, Dumore and Palmgren Metal Lathe accessories, Revere Hand Tool Kit, Sand-o-Flex Sander, Craft Wood Patterns, and the new Versa-Vise.

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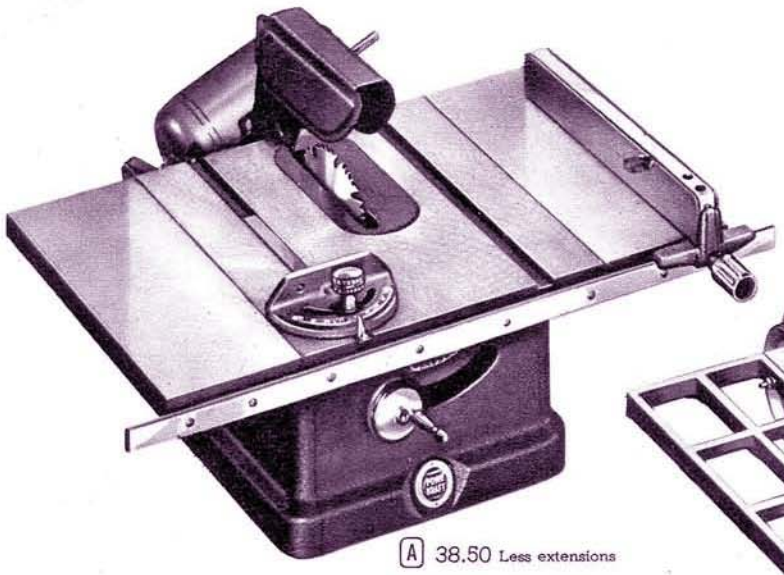
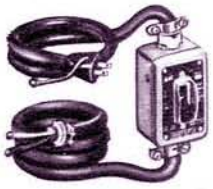
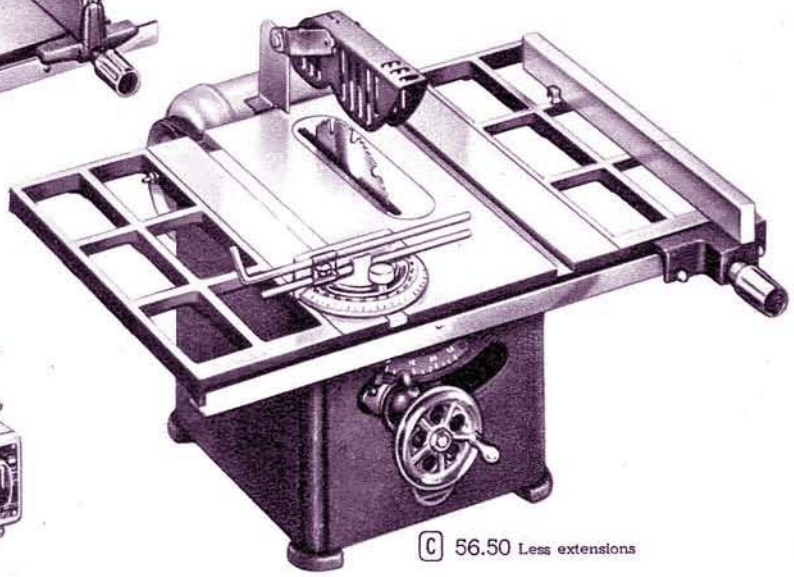


Ⓐ 38.50 Less extensions



Ⓑ 7.50



Ⓒ 56.50 Less extensions

Powr-Kraft and Beaver 8-Inch Tilting Arbor Bench

HOBBYIST'S POWR-KRAFT SAW 38.50

Ⓐ One of the best bench saw values we've ever offered—has many features of more expensive models. Grease-sealed ball bearings. Two handwheel control—one wheel raises, lowers 8-in. diam. blade; other tilts blade and arbor to 45°. Size overall 18x24½x13½ in. See complete specifications at right.

With 8-in. combination crosscut-rip-miter blade, motor bracket, 2-in. diam. "V" machine pulley, guard, splitter. Gray wrinkle finish. Ship. wt. 55 lbs. *Mailable.*

84 WR 3315 M–Saw only. $4 Dn., Cash $38.50

TABLE EXTENSIONS. For (A). 6x17¾ in. each. 84 WR 3316 M–*Mailable.* Wt. 22 lbs. Pr. $10.75

SAW WITH TABLE EXTENSIONS AND ½-HP MOTOR (83 WR 4576M, Page 26), 40-in. "V" belt, 4-in. diam. motor pulley. Wt. 111 lbs. 84 WR 3317R–*Not Mail.* $7.50 Dn., Cash $74.95

Ⓑ SWITCH. For motors up to 2-HP, 110–600-volt, AC-DC. UL Approved. Wt. 2¼ lbs. 84 WR 2288 K—From Los Angeles Fact. $7.50

MEDIUM-DUTY POWR-KRAFT SAW 56.50

Ⓒ For hobbyists and production workers. Sturdily built, with ⅝-in. diam. arbor, larger bearing surfaces. New Departure grease sealed ball bearings. Simplified one handwheel control raises, lowers and tilts 8-in. blade and arbor to 45°. Size overall 13x24¾x15½ in. See specifications at right.

With 8-in. combination crosscut-rip-miter blade, 4 in. diam. motor pulley (fits ½, ⅝-in. shaft), 1¾-in. machine pulley, 37-in. "V" belt, bracket, guard, splitter. *Mail.* Wt. 56 lbs. 84 WR 3480M—Saw only. $6 Dn., Cash $56.50

SAW WITH TWO 6½x17 IN. TABLE EXTENSIONS. 84 WR 3481R—*Not Mail.* Wt. 70 lbs.... $64.50

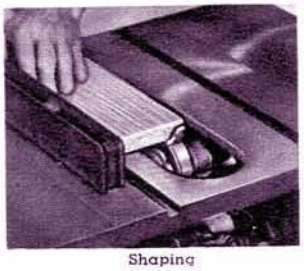
SAW WITH TABLE EXTENSIONS AND ½-HP MOTOR, (83 WR 4576M, Page 26). Wt. 103 lbs. 84 WR 3323 R—*Not Mail.* $9 Dn., Cash $89.00

SAW WITH MOTOR. As above but without table extensions. *Not Mailable.* Ship. wt. 89 lbs. 84 WR 3322 R—$8.50 Down ...or Cash $80.95

BENCH SAW SPECIFICATIONS

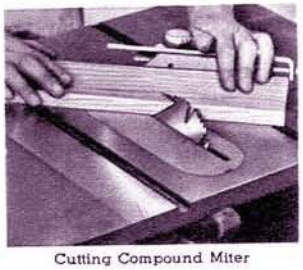
Catalog Number	Ⓐ 84 WR 3315 M	Ⓒ 84 WR 3480 M	Ⓓ 84 WR 3475 R	Ⓔ 84 WR 2294 F
Depth of Cut Vertical	2¼ in.	2⅜ in.	2½ in.	2 7/16 in.
Depth of Cut at 45°	1⅝ in.	1⅝ in.	1⅝ in.	1 7/16 in.
Table Size	14x17¾ in.	13x17 in.	14 3/16x18 in.	24x22 in.
Table With Extensions	26x17¾ in.	26x17 in.	26⅜x18 in.	No Extensions
Ahead of Blade	8⅛ in.	7⅜ in.	8⅛ in.	11¾ in.
Bearings	Ball	Ball	Ball	Ball
Arbor Diam.	½ in.	⅝ in.	⅝ in.	⅝ in.
Rip Fence	16 in.	17 in.	16 in.	22½ in.
Base Size in.	13⅜x15⅝	12¼x13¼	15⅛x15⅛	22½x18½
Dado Insert	3⅝x9 11/16 in.	2 7/16x9⅝ in.	3¾x10 in.	3 11/16x10⅞ in.
Machine Pulley incl.	2 in.diam.	1¾ in.diam.	2½ in.diam.	2½ in. diam.
Rec. Stand	84 WR 2959M	84 WR 2961 M	84 WR 2959M	84 WR 2957K
Rec. Speed	3450 RPM	3890 RPM	3450 RPM	3450 RPM

Bench saw accessories are listed on the following pages: Molding heads, cutters, dado heads and saw blades, Pages 6 and 7; stands on Page 25; belts and pulleys on Page 26.



Shaping

Disc Sanding



Cutting Compound Miter

Dadoing, Using Dado Head In Place of Saw Blade

CHOOSING A BENCH SAW . . . THE BASIC WOODWORKING

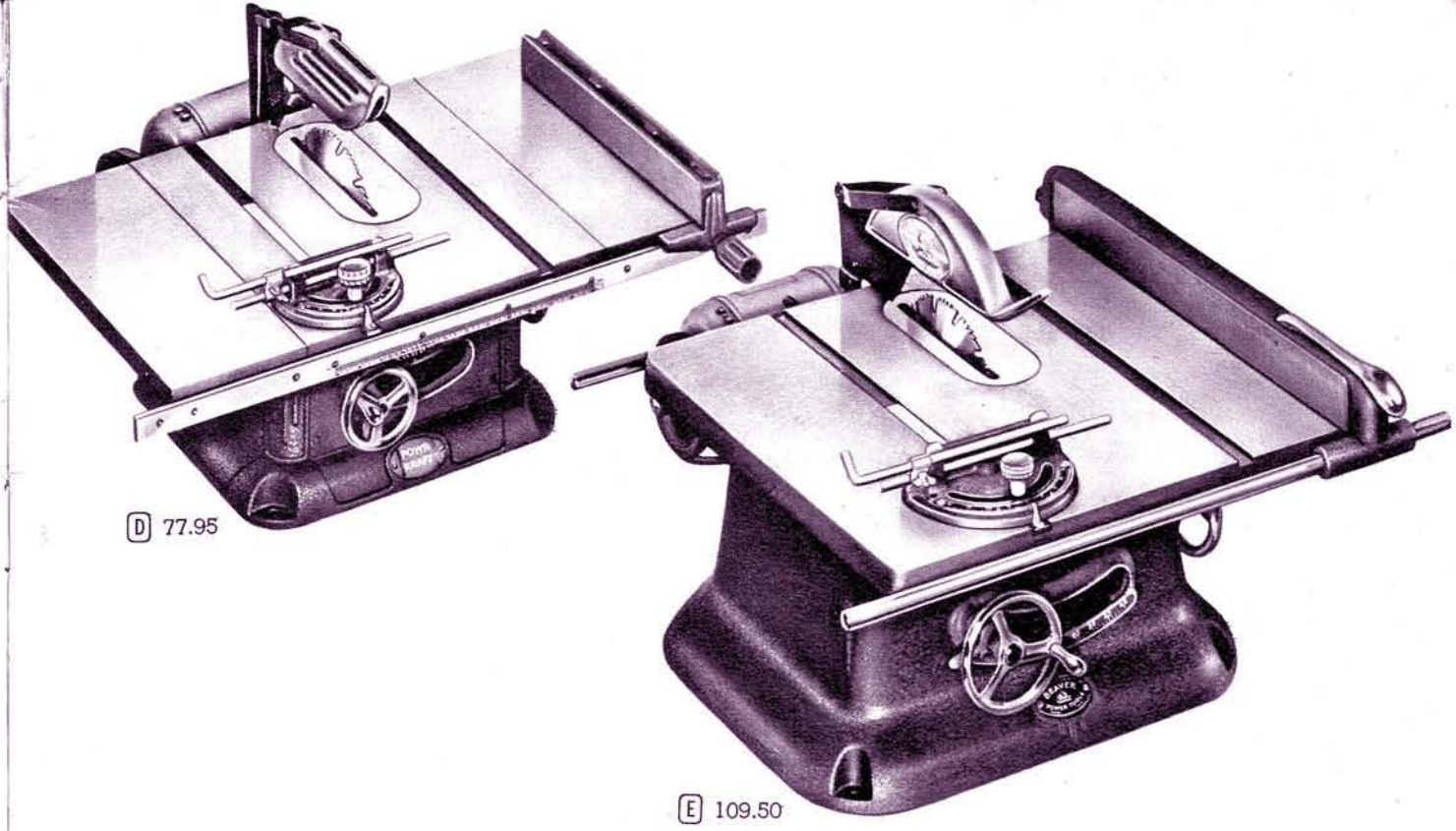
The bench saw fits the classification "all 'round" power tool more closely than does any other single purpose tool. With a bench saw, you can perform more than 75% of all woodworking operations required in cabinet-making. Since it is one of the most useful of all woodworking tools, it is probably the first power tool you will want to buy for your workshop.

Its main use is to rip and crosscut lumber to size, but it also may be adapted to bevel, chamfer, taper, rabbet, miter, groove, shape, dado, sand and to make mortise and other joints. Four common operations are shown in pictures at left. Among the many useful jobs it will help you to perform around the home are both major and minor house repairs, building outdoor furniture, making shelves for your pantry and closets, and dozens of other projects.

There are two basic kinds of bench saws—tilting arbor and tilting table types. On a tilting arbor saw, the table top and work always remain in horizontal position regardless of angle of cut while blade and arbor tilt. For this reason, sawing bevel cuts on a tilting arbor bench saw is easier and faster. However, tilting table saws are equally good for the straight cuts which represent the majority of all general sawing operations.

The named size of any circular saw is based on the diameter of the saw blade which it will swing. Sizes generally run from 6 in. up to 12 in. With the blade as high as possible, a 7-in. saw will make approximately a 2-in. cut; an 8-in. saw a 2¼-in. cut, on an average. In choosing a size, of course, it is important to buy as large a diameter saw as your means permit—as in all probability you will use this tool more often than any other. Larger (10 and 12-in.) saws are available usually as floor models, rather than bench models.

Other than size, a choice must be made on the basis of refinements built into the better saws. Those saws having more precise adjustments for changing the height and angle of blade in the table, and for positioning the fence and miter gauge, have greater accuracy and will *(continued on opposite page)*



(D) 77.95

(E) 109.50

Saws . . . for Faster, Easier, More Accurate Cutting

HEAVY-DUTY POWR-KRAFT SAW 77.95

(D) Chosen for our front cover because it's Wards finest Powr-Kraft bench saw. Easily meets the rigid requirements of production woodworking shops or most exacting hobbyists. Massive heavy-duty construction gives professional performance and exceptional accuracy on every job. Runs quietly and smoothly on ball bearings, grease sealed for protection against dust and dirt. Has two separate operating controls for precision work—one raises and lowers blade, other tilts arbor with 8-in. blade, simultaneously moving motor along saw base. Tilting arbor construction makes bevel cutting easier, faster. Motor mount is part of saw base, not fastened to bench or stand. Extra rigid construction with cast semi-steel table top and solid extensions. Heavy cast iron base encloses working parts. Size overall 31⅞x24x14¾ in. Gray wrinkle finish. See specifications on opposite page.

With table extensions, 8-in. combination crosscut-rip-miter blade, 4½-in. diam. motor pulley (fits ½ or ⅝-in. diam. motor shaft), 2½-in. diam. machine pulley, clear view saw guard, splitter and non kick-back pawls. Order 38-in. "V" belt separately; see Page 26. *Not Mailable.* Ship. wt. 100 lbs.

84 WR 3475 R—Saw complete with extensions. $8 Down.....Cash $77.95

SAW COMPLETE WITH TABLE EXTENSIONS AND ½-HP BALL BEARING CAPACITOR MOTOR (83 WR 4576M, Page 26) and 38-in. "V" belt. *Not Mailable.*

84 WR 3313 R—Ship. wt. 133 lbs. $10.50 Down.....Cash $102.50

HEAVY-DUTY BEAVER PRODUCTION MODEL SAW 109.50

(E) Designed and constructed to meet the most exacting demand of the skilled workman—we believe there is no other bench saw in this price range to match this saw in quality and accuracy. Will absorb plenty of punishment in everyday use and still maintain high operating efficiency and extreme accuracy. Alloy steel spindle mounted on grease sealed SKF ball bearings. Hand wheels operate threaded screws to tilt, raise or lower 8-in. blade. Table is one-piece rib-reinforced semi-steel casting.

Full 12-in. rip cut on either side of blade. Aluminum insert removable for dadoing. Arbor bracket rides on cast semi-steel machined trunnion attached to underside of table. Bracket fits demountable motor base so motor and arbor swing at same time. Semi-steel rip fence, ground smooth on both sides for use on either side of blade; lever clamp locks both ends at once. Miter gauge graduated to 60° in both directions; has extension stop rods for duplicating cuts. 12 in. miter gauge guide bar. See specifications on opposite page.

Size overall 29½ in. wide, 27½ in. long, 16⅞ in. high. Gray wrinkle finish. With 8-in. combination crosscut-rip-miter blade, 5-in. diam. "V" motor pulley (fits ½ or ⅝-in. motor shaft). Recommended "V" belt, 42 in. (Order motor separately below.) Shipped from Detroit Factory. Allow one week.

84 WR 2294 F—*Not Mailable.* Ship. wt. 142 lbs. $11 Down.....Cash $109.50

½-HP BALL BEARING CAPACITOR MOTOR. For saw (E) above. See Page 26.

83 WR 4576 M—*Mailable.* Ship. wt. 32 lbs. $3 Down.....Cash $25.50

TOOL IN MOST SHOPS

(*continued from opposite page*) produce better quality work. A very important quality feature in bench saws is the type of arbor bearings. Generally, saws classified as light duty are equipped with bronze bearings; most medium and heavy duty saws have grease sealed ball bearings for smoother, quieter operation and longer life. Your choice of ball or bronze bearing model will depend on the amount and type of work to be performed. Keep in mind that a ball bearing saw will last longer, give better service and withstand more abuse than a bronze bearing saw.

Here are 10 important safety rules to observe when operating a bench saw: (1) Keep the saw in perfect working order; blades sharp and perfectly set; (2) Leave no tools or other materials on saw table; (3) Keep floor around saw free from scrap lumber; (4) Check setup of saw carefully before turning on power; don't make adjustments while saw is running; (5) Keep your eyes on the job—be alert; (6) Use guards and other safety devices; (7) Roll sleeves above elbows; never wear gloves; (8) Stock must lie flat on table; must have a true edge to be held against fence or guide; (9) Saw blade should not project more than ⅛ in. above stock being cut; (10) Stand slightly to left of saw, never in line with it; use a push stick when cutting against the fence.

BEAVER 10-IN. HEAVY-DUTY FLOOR MODEL TILTING ARBOR SAW 339.95

(F) Large capacity saw cuts to 3½ in. at vertical; to 2½ in. at 45°. Our finest circular saw—will absorb plenty of punishment in everyday use and still maintain high operating efficiency. Precision-built for extreme accuracy. Grease sealed SKF ball bearings on ⅝-in. diam. spindle, roller bearings on right angle drive for efficient power transfer. Motor mounts on inside of base. Blade tilts to 45°; table stays level.

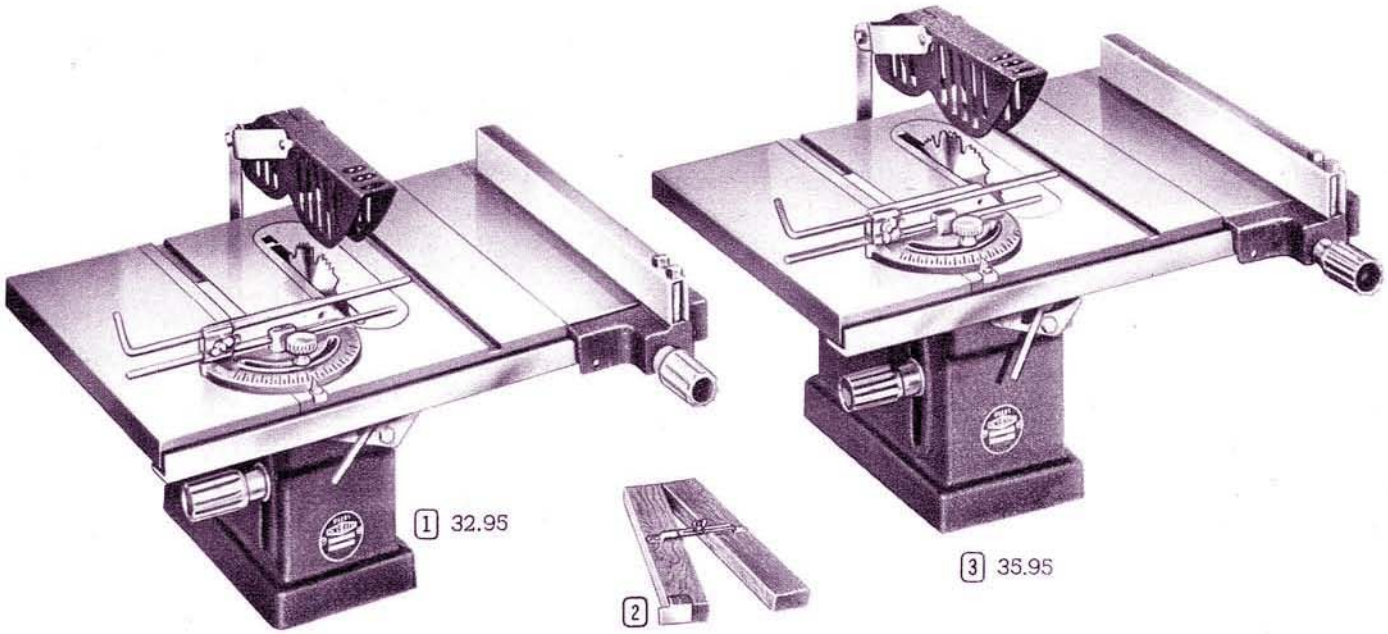
Semi-steel table, ribbed for strength, 28½x44 in. Height from floor to table, 34 in. Rip fence has micro-adjustment, locks front and rear. Built-in on-off switch, sawdust chute. All necessary belts, pulleys included. Gray wrinkle finish. Shipped from Factory in Detroit, Michigan in about a week. Ship. wt. 535 lbs.

84 WR 3484 F—Only $34.00 Down on Terms.....Cash $339.95

2-HP REPULSION-INDUCTION MOTOR. 1725 RPM. Ball bearing.

83 WR 4640 R–Wt. 137 lbs. $120.00

(F) 339.95



Tilting Table Bench Saws . . . Molding Heads

LIGHT-DUTY BRONZE BEARING BENCH SAWS 32.95 TO 35.95

Shown on this page are two Bench Saws built to meet the requirements of the beginner, hobbyist or skilled craftsman. Will miter, cross-cut and rip to exact dimensions with maximum efficiency. Can also be used to shape, bevel, chamfer, taper, rabbet, groove, dado, sand, etc. Both equipped with self-lubricating bronze bearings. Tables are smooth ground, close-grained cast iron, ribbed for extra strength. Enclosed base protects all working parts from falling material.

Blade raises and lowers by hand knob. Rip fence locks on front guide rail. Miter gauge adjusts to 60° right or left; use on either side of blade. Equipped with saw guard, combination cross-cut-rip-miter blade, splitter, motor mount bracket and machine pulley. Gray wrinkle finish.

[1] 7-IN. TILTING TABLE MODEL. Cuts to 2-in. depth. Table tilts to 45° on smooth riding trunnions—locks firmly front and rear. Removable insert for dado work. Steel table extensions. Extension stop bars on miter gauge. Heavy cast-iron base. Clear view guard and splitter. ½-in. diam. arbor. Ship. wt. 48 lbs.

84 WR 2261M—*Mail.* $3.50 Down; Cash $32.95

SAW WITH ⅓-HP MOTOR (83 WR 4534M, Page 26) 44-in. "V" belt; 5-in. motor pulley.

84WR3324Y–Ship. wt. 70 lbs. $5 Dn., Cash $47.15

[2] ADJUSTABLE ANGLE JIG. Set to cut angles and tapers from 1 to 21°; higher angles possible by moving adjustable clamps. Hardwood construction. Fits any saw having a rip fence.

84 WR 2275—Ship. wt. 1 lb. 8 oz. $2.95

[3] 8-IN. TILTING TABLE MODEL. Larger blade gives extra working capacity. Saws to depth of 2 7/16 inches at vertical cut; to depth of 1½ inches at 45° angle. Table on smooth-riding trunnions . . . locks firmly at front and rear. Removable insert for dado work. Steel table extensions. Extension stop bars on miter gauge allow you to duplicate cuts of same length. Sturdy cast-iron base with ⅝-in. diam. arbor. Clear view guard and splitter. Ship. wt. 50 lbs. *Mailable.*

84 WR 2263 M—$4 Down . . . . . or Cash $35.95

SAW WITH ½-HP BALL BEARING CAPACITOR MOTOR (83 WR 4576 M, Page 26) 44-in. "V" belt; 5-in. diam. motor pulley. Ship. wt. 83 lbs.

84 WR 3326 Y—$6.50 Down . . . . . or Cash $61.95

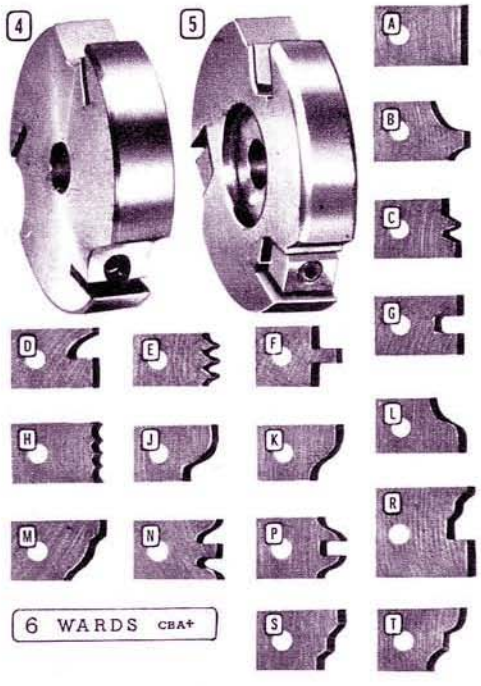
FOR STANDS TO FIT SAWS SEE PAGE 25.

BENCH SAW SPECIFICATIONS

Catalog Number	(1) 84 WR 2261M	(3) 84 WR 2263 M
Saw Blade	7-in. diam.	8-in. diam.
Arbor Diam.	½ in.	⅝ in.
Depth of Cut (Vert.)	2 in.	2 7/16 in.
Depth of Cut (at 45°)	1¼ in.	1½ in.
Main Table Size	10x14 in.	10x14 in.
Table with extensions	20x14 in.	20x14 in.
Bearings	Bronze	Bronze
Dist. Ahead of Blade	5 in.	4¾ in.
Rip Fence Length	15 in.	15 in.
Size of Base, in.	5¼x10	5¾x10¼
Size overall, in.	20x20⅜x11⅞	20x20¾x12¾
Dado insert, in.	1¾x9	2 7/16x9⅝
Recommended speed	4000 RPM	4000 RPM
Machine pulley (incl.)	1¾-in. diam.	1¾-in. diam.
RECOMMENDED FOR USE WITH		
Dado head	4 or 5 in.	5 or 6 in.
Motor	⅓-HP	½-HP
V-belt	½x44 in.	½x44 in.
"V" Motor pulley	5-in. diam.	5-in. diam.
Stand	84 WR 2962 M	84 WR 2962 M

ONLY 10% DOWN. You can purchase any power tool for only 10% Down Payment on orders of $20 or more, the balance payable in convenient Monthly Payments. See Page 24 for complete details.

MOLDING CUTTER HEADS AND KNIVES TO FIT SAWS AND SHOPSMITH 3.75 TO 9.50



6 WARDS CBA+

[4] [5] Make your circular saw or Shopsmith more versatile—convert it into an efficient shaping machine with a molding cutter head. You can produce and shape an infinite number of molding designs by varying the cutting pattern. Each head holds set of three knives of same shape (order knives separately at right). 3 models:

(4) SHOPSMITH MOLDING CUTTER HEAD. Specially designed to fit Shopsmith. Head is 3⅝-in. diameter, ⅞-in. thick; made of cast aluminum. Use with knives 84 WRP 3104 at right.

84 WRP 3103—*Postpaid*. $5.75

(4) POWR-KRAFT MOLDING CUTTER HEAD. Fits most Bench, Floor or Swing saws having ½ or ⅝-in. arbor. 3⅝-in. diam., ⅞-in. thick; cast aluminum. Use with knives 84 WRP 3104 at right.

84 WR 2267—Ship. wt. 2 lbs. $5.45

(5) PARLEC MOLDING CUTTER HEAD. Fits Floor and Radial saws with ¾-inch arbor. Head is 4½-in. diameter, 1 inch wide; made of Meehanite steel. Counterbored on right side. Use with knives 84 WR 2269K at right. Mailed promptly from Factory near Los Angeles, Calif., pay postage from there.

84 WR 2268 K—Ship. wt. 4 lbs. . . . $9.50

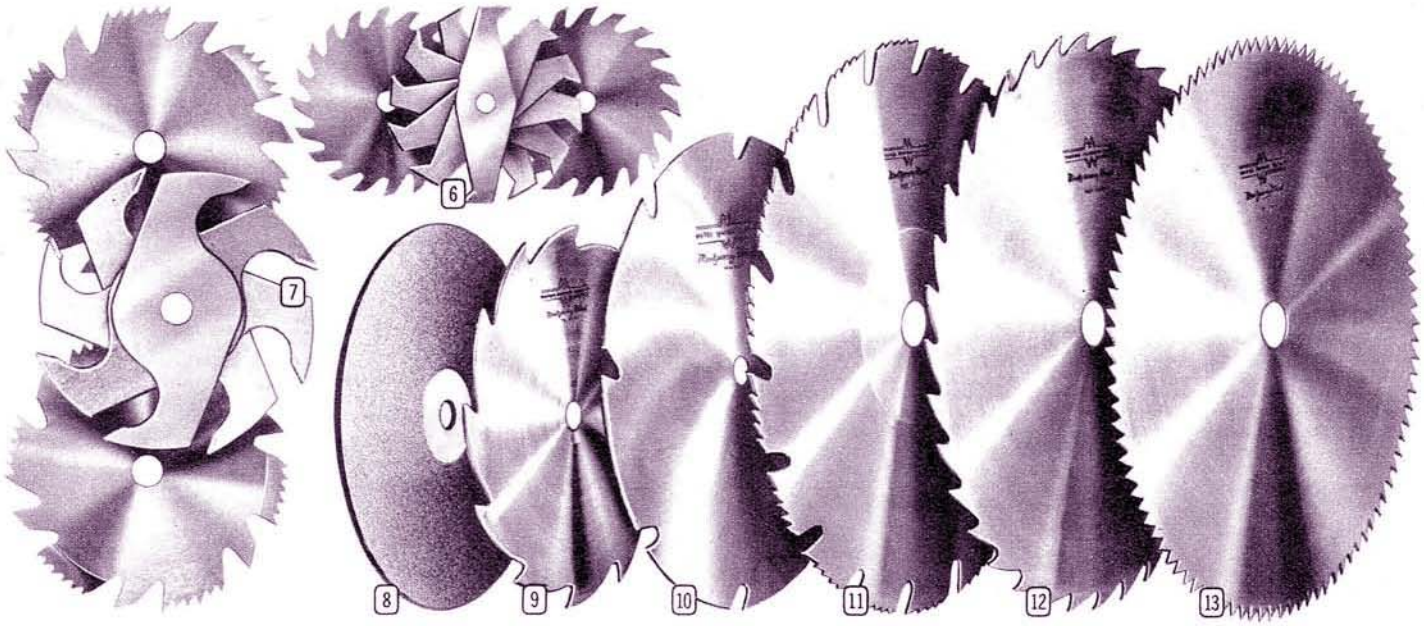
[A] TO [T] MOLDING CUTTER HEAD KNIVES. Fit heads at left. Tempered, hardened high-speed steel. Correct angle for true shaving cut. Several sets can cut an unlimited variety of shapes. Each set has 3 blades.

SHOPSMITH MOLDING CUTTER KNIVES. Fit Shopsmith and Powr-Kraft heads (4) and former No. 84-2265. Knives are ⅛-in. thick, 1 in. wide (except Profile R is 1½ in. wide. *Mailed Postpaid* from Stock. Order below.

PARLEC MOLDING CUTTER KNIVES. Fit Parlec head (5) and former No. 84-2270. All knives are 3/16-in. thick, 1 in. wide (except Profile R is 1½ in. wide). Mailed promptly from Factory near Los Angeles, Cal. Ship. wt. set, 6 oz.

State Catalog Number and Profile Letter wanted.

Profile Letter and Description of Knife	Fit Shopsmith and Powr-Kraft Heads 84 WRP 3104	Fit Parlec Head 84 WR 2269K
(A) Blank Square Knives	Set $3.75	Set $4.95
(B) ¼, ½, Quarter Round	Set 3.75	Set 4.95
(C) Glue Joint	Set 3.75	Set 4.95
(D) Cabinet Door Lip	Set 4.95	Set 5.95
(E) V Flute Molding	Set 3.75	Set 4.95
(F) Groove	Set 3.75	Set 4.95
(G) Tongue	Set 3.75	Set 4.95
(H) 4-Bead Molding	Set 3.75	Set 4.95
(J) O.G. Molding	Set 3.75	Set 4.95
(K) O.G. Molding	Set 3.75	Set 4.95
(L) O.G. Molding	Set 3.75	Set 4.95
(M) Reverse O.G.	Set 3.75	Set 4.95
(N) Panel Insert	Set 4.95	Set 5.95
(P) Panel Insert Cope	Set 4.95	Set 5.95
(R) 1⅜-in. Sash	Set 4.95	Set 5.95
(S) 1⅜-in. Sash Cope	Set 4.95	Set 5.95
(T) Bead, Cove Molding	Set 3.75	Set 4.95



Dado Heads and Blades for Circular Saws

DADO HEADS AND CARBIDE TIPPED BLADES 2.79 TO 28.95

6 7 Use dado heads for dadoing, grooving, notching, rabbeting, tenoning, etc. Cuts can be varied in width and depth.

(6) HOBBYISTS' QUALITY DADO HEADS. Stamped steel. Includes two outside blades and six 1/16-inch chippers. *State diam., bore.*

Cat. No.	Diam.	Bore, in.	Blade thick.	Ship. wt.	Price
84 WR 2282	4 in.	½	3/32 in.	1 lb.	$2.79
84 WR 2282	5 in.	½ or 5/8	1/8 in.	1½ lbs.	4.45

(7) PROFESSIONAL QUALITY DADO HEADS. Precision ground, tempered alloy tool steel. Set includes: two outside blades 1/8-inch thick, four chippers (one 1/16 in., two 1/8 in., one 1/4 in. thick). 8 and 10-inch diam. mailed promptly from Factory in Buffalo, N. Y.; pay postage from there. 6-inch diam. mailed from Stock. *State diam., bore.*

Cat. No.	Diameter	Bore, in.	Ship. wt.	Price
84 WR 2283	6 in.	½ or 5/8	3 lbs. 8 oz.	$ 8.95
84 WR 2283K	8 in.	5/8 or ¾	6 lbs.	22.95
84 WR 2283K	10 in.	5/8 or ¾	9 lbs.	28.95

8 STEEL SANDING WHEEL. 8-in. diam. Fits bench saws with ½ or 5/8-in. diam. arbors. With 1 medium and 1 coarse abrasive disc.
84 WR 2285—Ship. wt. 4 lbs. $2.89
EXTRA DISCS FOR (8) ABOVE. Set of 2 fine, 2 med., 2 coarse grit.
84 WR 2286—Ship. wt. pkg., 10 oz. ..... Package of six 55c

9 CARBIDE TIPPED SAW BLADES. Tungsten carbide tips are silver-brazed to blades, finish ground on diamond wheel. Cut hardwood, transite, plastics, roofing, siding, etc. Master Quality last up to 25 times longer than ordinary blades before resharpening; Professional Quality up to 100 times.

84 WR 6965 L—Master Quality. *State diameter and hole size.*
84 WR 6966 L—Professional Quality. *State diam. and hole size.*

Diam.	Teeth	Hole Size	Ship. wt.	84 WR 6965 L	84 WR 6966 L
7 in.	14	½ or 5/8 in.	1 lb.	$8.50	$14.50
8 in.	16	½ or 5/8 in.	1 lb.	8.95	16.50
10 in.	20	5/8 or ¾ in.	1 lb.	.....	22.50

COMBINATION, RIP AND CROSSCUT SAW BLADES 1.45 TO 8.59

10 8-TOOTH SAFETY SAW BLADE. Combination rip-crosscut blade, made of electric furnace chrome alloy steel. Teeth project only about .020 inch above non-cutting edge (.030 inch on 10 and 12-in. sizes). Substantially reduces major cause of saw accidents . . . teeth cannot grab wood and throw it back at operator. Non-cutting edge acts as effective stop to cuts, limits their depth. Efficient tooth construction means less wasted power, longer motor life. Cuts chips, not sawdust. Has longer life between sharpenings; gives quieter, more efficient operation. *State diameter and hole size.*

Catalog No.	Diameter	Hole size	RPM	Ship. wt.	Price
84 WR 6961L	6	½ or 5/8 in.	6000	12 oz.	$1.45
	7	½ or 5/8 in.	5140	12 oz.	1.69
	8	½ or 5/8 in.	4500	1 lb.	1.79
	10	5/8 or ¾ in.	3600	1 lb. 8 oz.	2.49
	12	¾ or 1	3000	2 lbs. 8 oz.	3.59

11 MASTER (BEST) QUALITY HOLLOW GROUND COMBINATION SAWS. Hollow (taper) ground design means less friction; blades run faster, longer without heating up. Teeth are not set because blade is tapered from edge to center to provide clearance at sides, reduces sharpening time and expense. Narrower kerf means more accurate cuts. Produces smoother cut, no after-planing necessary; prevents binding, minimizes kick back. Made of special analysis chrome-nickel alloy steel. Fancy combination tooth blades do crosscutting, mitering and ripping, perform nearly all sawing jobs without change of blade. *State diameter and hole size wanted.*

Catalog Number	Diameter	Gauge Taper	Hole Size	RPM	Ship. Wt.	Price
84 WR 6955 L	7 in.	14 to 17	½ in. or 5/8 in.	5140	1 lb.	$2.75
	8 in.	14 to 17	½ in. or 5/8 in.	4500	1 lb. 8 oz.	3.49
	10 in.	14 to 17	5/8 in. or ¾ in.	3600	2 lbs. 4 oz.	6.75
	12 in.	13 to 16	¾ in. or 1 in.	3000	3 lbs. 4 oz.	8.59

12 13 MASTER (BEST) QUALITY FLAT GROUND SAWS. Special analysis chrome-nickel alloy saw steel, heat-treated, hardened and tempered, filed and set. Highly polished finish. Combination tooth looks like (11). *State Cat. No., diam., hole size. Mail.*

Diam.	Gauge	Hole Size	RPM	Ship. wt.	(12) 84 WR 6954L Rip	(13) 84 WR 6951L Crosscut	84 WR 6956L Combination
6 in.	18	½ or 5/8 in.	6000	12 oz.	$1.59	$1.59	$1.59
7 in.	18	½ or 5/8 in.	5140	12 oz.	1.79	1.79	1.79
8 in.	18	½ or 5/8 in.	4500	1 lb.	1.89	1.89	1.89
10 in.	16	5/8 or ¾ in.	3600	1½ lbs.	2.79	2.79	2.79
12 in.	14	¾ or 1 in.	3000	2½ lbs.	3.89	3.89	3.89

CLEAN-CUTTING SAW FILES

14 SLIM, EXTRA SLIM AND STANDARD TAPER FILES. Made of high-grade file steel. *State Catalog Number and length wanted.*

File Length	Ship. wt.	Slim Taper 84 WR 4407		Extra Slim 84 WR 4409		Standard Taper 84 WR 4411	
	Each	2 For	6 For	2 For	6 For	2 For	6 For
5 in.	3 oz.	42c	$1.12	39c	$1.15	...	.....
6 in.	4 oz.	47c	1.35	48c	1.35	57c	$1.50
7 in.	5 oz.	59c	1.65	59c	1.65	...	....
8 in.	8 oz.	...	....	...	....	89c	2.49

15 ROUND BASTARD FILES. Made of high-grade file steel. For round openings—saw-gullets, etc. Deeply cut for long dependable service.
84 WR 4419—*State length and quantity wanted.*

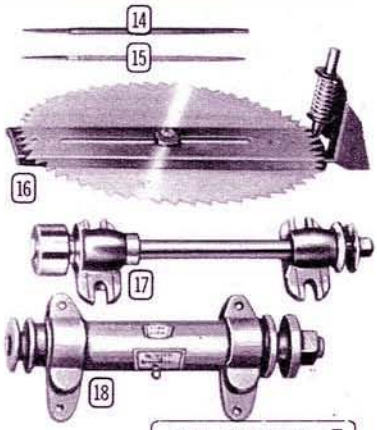
Length	Diam.	Wt. ea.	2 For	6 For
4 in.	1/8 in.	3 oz.	49c	$1.35
6 in.	7/32 in.	3 oz.	58c	1.55
8 in.	9/32 in.	4 oz.	69c	1.89
10 in.	3/8 in.	6 oz.	89c	2.50
12 in.	½ in.	12 oz.	$1.19	3.35

CIRCULAR SAW SET AND MANDRELS

16 CIRCULAR SAW SET. Sets teeth properly on circular saws for different cutting purposes. Holds blades securely. Takes blades up to 10 in. Instructions included.
84 WR 4036—Ship. wt. 1 lb. 2 oz. $2.19

17 LIGHT-DUTY SAW MANDREL. Cold rolled ground and polished steel shaft shouldered to saw bore size with standard threads. Bronze bearings. Die-cast pulley. For ½-in. "V" belt, 1-in. flat belts. Cast pillow blocks.
84 WR 7010 L—*State diameter wanted.*
Diam. 5/8 in.; threaded ½ in. Ship. wt. 4 lbs. $3.95
Diam. ¾ in.; threaded 5/8 in. Ship. wt. 5 lbs. 4.25

18 HIGH-SPEED SAW MANDREL. Zerk fittings. Cast housing. Double-sealed ball bearings keep dirt out, retain lubricant. Ground and polished steel shaft. Left-hand thread.
84 WR 7005—*State diameter wanted.*
Shaft diam. ½ in. Ship. wt. 5 lbs. $5.45
Shaft diam. 5/8 in. Ship. wt. 6 lbs. 5.75
Shaft diam. ¾ in. Ship. wt. 8 lbs. 8.35



Portable Electric Saws

Cut 10 Times Faster than Hand Saws

Portable electric saws are often called the "builder's saws." They are responsible for having done much to cut time and cost of construction in the home-building business. They are ten times faster than handsawing and more accurate as well. An average worker can keep 4 to 6 men busy nailing cut material in place. Highly versatile . . . they can handle almost all the sawing operations the home builder might need. Ideal for on-the-spot sawing of material that cannot be carried to bench saw, or which is too bulky to lift to table height. The most practical tool to use for cutting large sheets of plywood. The time and labor you can save in completing an unfinished attic, playroom or in adding a porch more than earns its relatively low initial cost. Modern engineering developments have added even more to the versatility of the portable electric saw. New blades and cut-off wheels that are now available can readily cut concrete, metals, imbedded nails, composition board and similar materials. For four of the many jobs the portable electric saw is commonly put to, see pictures shown below.

POINTS TO CONSIDER BEFORE BUYING YOUR SAW

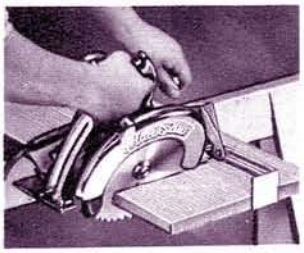
The size and capacity saw you select depends on the type and thickness of materials it will be required to cut and the sustained periods of operation over which it will be in use. Ball bearing construction permits free, smooth operation of the saw over prolonged periods, provides coolest operating temperature, and is best suited for production use and professional operation. Self-lubricating porous bronze bearings provide excellent service when used for intermittent or home workshop use. A 4-in. saw makes a good "scaffold saw"—one used on scaffold or ladder for occasional quick cuts. The light weight and compactness reduce arm fatigue and permits one hand operation for cutting sheathing, overhead cutting, inside finish work, etc. or ordinary cutting of materials not over 1 in. thick.

A 6-in. saw will do a good job on 2-in. lumber if frequent 45° cuts are not required. It is ideally suited for the hobbyist or home craftsman whose work most frequently involves 2-in. and smaller material. 7-in. saws make good general purpose tools to handle many jobs where the light weight of the small saws and the large capacity of larger saws are desirable. Because they can make one-cut miter and bevel cuts on 2-in. stock, the 8½-in. saw is in biggest demand for the home builder. Aside from being more powerful and having over a full inch greater capacity than a 6-in. saw, the 8½-in. saw has more teeth to the blade and therefore stays sharp longer and produces an even smoother and straighter cut.

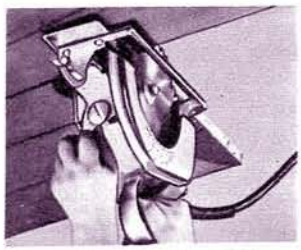
The average portable electric saw has a high speed AC–DC motor; geared down to 3000 to 6000 RPM; a frame and handle; arbor; shoe and guard at top and one that retracts or swings at the bottom. Most saws are equipped with combination blades for rip or crosscutting. A trigger switch should be on the saw to cut off power the instant finger pressure is removed. When an electric saw must be used in a damp place, outdoors or on green stock, it should be equipped with a ground wire jack.

SIMPLE TO USE . . . NO SPECIAL SKILL REQUIRED

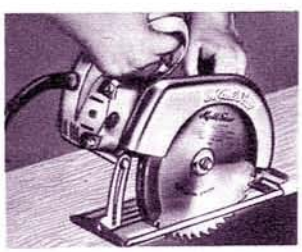
The portable electric saw is used in much the same manner that you would use a carpenter's hand saw. Most of the fundamental principles apply. The saw is held in one hand and the work supported by the free hand (except in cases where the work is secured, when it is permissible and desirable to guide the saw with both hands). The forearm should be kept in a straight line with the blade. Let the blade cut its way into the material under normal guidance and feeding. Light steady pressure is all that is needed to advance the saw for accurate and rapid work.



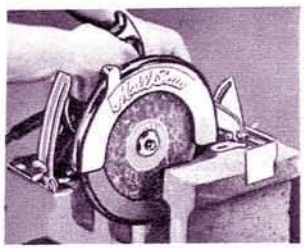
Accurate Bevel Cutting to 45°



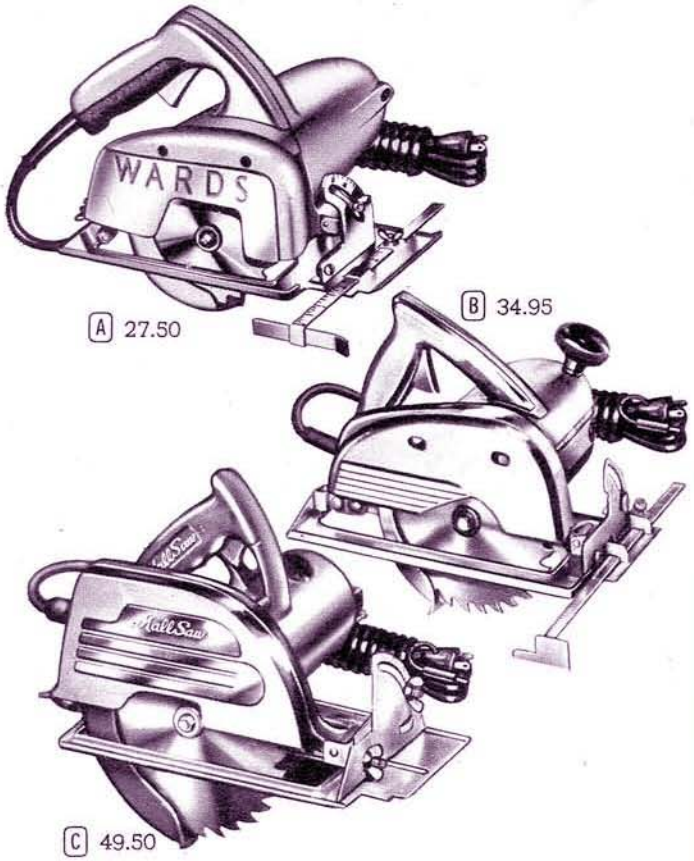
Fast and Easy Overhead Cutting



Depth of Cut Is Adjustable



Cut Non-Metallics with Special Cut-off Wheels and Blades



(A) 27.50 (B) 34.95 (C) 49.50

Powr-Kraft, Mall and

ECONOMY-PRICED SAWS FOR INTERMITTENT USE 27.50 TO 49.50

(A) LIGHT DUTY 4¼-IN. POWR-KRAFT SAW. Ideal for making occasional quick cuts where extreme light weight and compactness are desired. With it, the average hobbyist or homeowner can do the work of a professional craftsman.

Motor develops ⅓ HP on 110–120-V. AC or DC. Spur alloy steel gears in grease sealed chamber. Self-oiling bronze bearings. Propeller type cooling system. Loop handle with trigger switch. Satin finished die-cast aluminum housing. Telescoping blade guard. Bevel adjustment calibrated 15, 30, 45°. Depth of cut adjusts 0 to 1 3/16 in. Cuts through material 1 1/16 in. thick at 45°. See specifications listed in table below. Ship. wt. 9 lbs. 4 oz. *Mailable.*

84 WR 8925 M—Available about Oct. 1, 1953. $3 Down . . . . . Cash $27.50

(B) LIGHT DUTY 6¼-IN. POWR-KRAFT SAW. Designed especially for intermittent (non-continuous) work in home workshops, repair shops, etc. For straight, rafter and bevel cuts, house framing, etc. Motor develops ¾ HP on 110–120-V. AC or DC. UL Approved. Helical-cut gears in grease-sealed chamber. Self-oiling bronze sleeve bearings. Propeller type cooling system. Loop handle with trigger switch. Die-cast aluminum housing has satin finish. Telescoping blade guard. With 10-ft. cord, plug; 6¼-in. combination crosscut-rip blade. Bevel adjustment calibrated at 15, 30, 45°. Depth adjusts from 0 to 2⅛ in. at vertical. Cuts through 1¾-in. material at 45°. See specifications below.

84 WR 8927 M—Ship. wt. 12 lbs. *Mailable.* $3.50 Down . . . . . or Cash $34.95

84 WR 8915 M—Handy metal carrying case for (B). Ship. wt. 9 lbs. 4.69

(C) UTILITY MODEL 7-IN. MALL SAW. Specially designed for home workshops and light-duty carpentry. For intermittent (non-continuous) work. Cuts straight, rafter and bevel cuts, house framing, etc. Motor rated ¾ HP on 110–120-V. AC or DC. UL Approved. Helical cut gears in grease-sealed chamber. Precision ball and oilite sleeve bearings. Trigger switch. Die-cast aluminum alloy housing. Telescoping blade guard. 10-ft. cord and plug; 7-in. rip-crosscut blade. Bevel adjustment calibrated at 15, 30, 45°.

84 WRP 8952 M—See specifications below. *Postpaid.* $5 Down . . . Cash $49.50

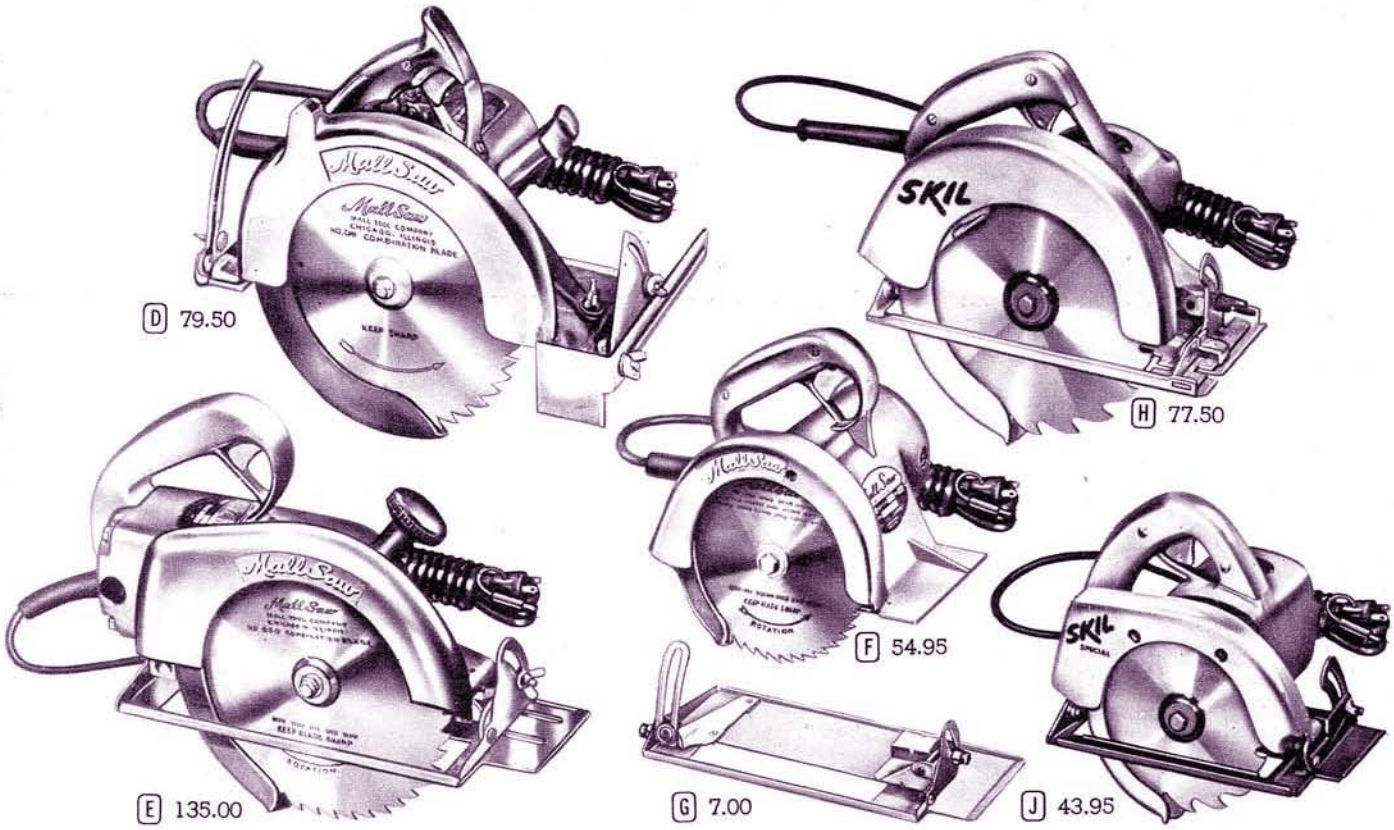
MEDIUM-DUTY 7-IN. BALL BEARING MALL SAW. Construction and specifications same as (C), except full ball bearing construction can handle all jobs except those that fall into a continuous duty, production work category.

84 WRP 8962 M—*Mailed Postpaid* . . . . $6.50 Down on Terms, or Cash $64.50

84 WR 8917 M—Metal case for saws (C) above. Ship. wt. 11 lbs. 4.98

PORTABLE ELECTRIC SAW SPECIFICATIONS

Saw	Blade diam. In.	Max. Cut 90° In.	Min. Cut 90° In.	Max. Cut 45° In.	Arbor hole In.	No load RPM	Full load RPM	Rated HP	Actual Weight
(A)	4¼	1 3/16	⅛	1 1/16	½ rd.	3200	2000	⅓	6¾ lbs.
(B)	6¼	2⅛	0	1¾	½ sq.	4700	3200	¾	11 lbs.
(C)	7	2⅜	½	2	½ sq.	5000	3400	¾	8¾ lbs.
(D)	8½	3 1/16	0	1⅞	13/16 sq.	4500	2700	1	17 lbs.
(E)	8½	2⅞	13/16	2 5/16	13/16 sq.	4200	2500	1½	17½ lbs.
8953K	7¼	2¼	13/16	2	13/16 sq.	4800	3400	1	15½ lbs.
(F)	6	2	5/16	1 11/32	½ sq.	5000	3400	¾	9 lbs.
(H)	8¼	2⅞	1/16	2⅛	Diamond	5000	2700	1	13½ lbs.
8981M	6	1 15/16	1/16	1 7/16	Diamond	6000	3400	¾	10 lbs.
(J)	5⅞	1⅞	¾	1 5/16	Diamond	5800	3000	¾	9½ lbs.



Skil Portable Electric Saws . . . 4¼ to 8½-in. Capacity

MALL 8½-IN. SAW 79.50

(D) MEDIUM-DUTY MODEL. Large capacity saw with grease sealed ball bearings for long life and dependable service. Handles all work except continuous production. 1 HP 110–120-V. AC or DC. UL Approved. Enclosed helical cut gears in grease-sealed chamber. Propeller-type cooling system with blower fan. Trigger switch. Die-cast aluminum housing. Telescoping blade guard. 10-ft. 3-wire rubber cord, plug; wrench; 8½-in. crosscut-rip blade. See specifications on opp. page. *Postpaid.* $8 Down.

84 WRP 8956M—Rt.-side blade. $79.50
84 WRP 8955M—Left-side blade. 79.50

STEEL CARRYING CASE FOR (D).
84 WR 8916 M—Wt. 15 lbs..... $5.49

25-FT. EXTENSION CORD FOR SAWS. Heavy-duty 14 ga., 3 wire type.
83 WR 1270 L—Ship. wt. 5 lbs... $7.95

PRODUCTION-TYPE MALL SAWS 54.95 TO 135.00

(E) (F) HEAVY-DUTY MODELS. Designed to professional specifications of carpenters and contractors. For house framing, form work, etc. Runs smoothly on grease-sealed ball bearings. 110–120-V. AC or DC. UL Approved. Helical cut gears sealed in grease chamber. Exhaust air keeps cutting line clear of sawdust. Well balanced loop handle and trigger switch for right or left-hand control. Die-cast aluminum alloy housing. Automatic telescoping blade guards. With rubber 15-ft. 3-wire cord, plug; wrench; crosscut-rip blade. *Postpaid.* 7¼ and 8½-in. saws shipped promptly from Factory in Chicago. 6-in. saw shipped directly from Stock. See specifications on opposite page.

(E) 8½-IN. MALL SAW. Has adjustable bevel 90° to 45°, saw lubricant, and metal carrying case.
84 WRP 8954 K—Only $13.50 Down..... Cash $135.00

7¼-IN. MALL SAW. Like (E) except smaller capacity.
84 WRP 8953 K—Saw, lubricant and case.....$115.00

(F) 6-IN. MALL SAW. Can cut bevels using (G) below.
84 WRP 8950 M—Only $5.50 Down.....Cash $54.95

(G) BEVEL SHOE ATTACHMENT FOR (F). Cuts $1\frac{11}{16}$ in. at 45°.
84 WRP 8951–Depth adjusts $1\frac{1}{32}$ to $1\frac{31}{32}$ in. *Pstpd.* $7.00

NATIONALLY KNOWN SKIL SAWS 43.95 TO 77.50

(H) SKIL HOME SHOP 8¼-IN. SAW. For home, farm or hobby intermittent use. Large capacity saw with ball and self-lubricating bronze bearings. Powerful motor operates on 110–120-V. AC or DC. UL Approved. Loop handle and trigger switch. Die-cast aluminum housing. Automatic telescoping blade guard. With 8¼-in. crosscut-rip blade; wrench; 3-wire cord. See specifications on opposite page. *Postpaid.*

84 WRP 8983 M—Only $8 Down on Terms; Cash $77.50
94 WRP 8984 M—Skil Home Shop 8¼-in. saw, (H) above, with steel carrying case. $8.50 Dn.; Cash $85.00

SKIL HOME SHOP 6-IN. SAW. Similar to (H) but smaller capacity. See specifications on opp. page. *Postpaid.*

84 WRP 8981M—Only $6 Down.....or Cash $59.50
84 WRP 8982 M—Skil Home Shop 6-in. saw above with steel carrying case. $6.50 Down.....or Cash $64.50

(J) SKIL SPECIAL 6-IN. SAW. Plenty of power for intermittent use. 110–120-V. AC or DC motor, trigger switch. UL Approved. Self-lubricating bronze bearings.
84 WRP 8980 M—*Postpaid.* $4.50 Down. Cash.. $43.95

PORTABLE ELECTRIC SAW BLADES FOR POWR-KRAFT, MALL, SKIL AND OTHER NATIONALLY KNOWN SAWS

(K) "SAFETY" COMBINATION 8-TOOTH SAW BLADES. Master (Best) Quality. Teeth project slightly from cutting edge for controlled cut. Safer from kick back, have longer life, require less sharpening. *IMPORTANT: Universal holes (as shown) fit Powr-Kraft, Thor, Skilsaw, Mall (except 7 in.), Cummins, Wappat Saws. Order from table below. *State diameter.*

(L) CARBIDE TIPPED SAW BLADES. Master (Best) Quality. Last up to 25 times longer than ordinary blades between sharpenings. Tungsten carbide tips silver brazed to blade, diamond wheel ground to closest tolerances. Will cut transite, Formica, plastics, roofing, siding, etc. 6-in. size has 12 teeth; 8-in. size has 16 teeth. Order from table below. *State diameter.*

(M) CARBORUNDUM "MX" CUT-OFF WHEELS. Silicon carbide abrasive for fast cutting of non-metallics such as brick, concrete, tile, etc. Makes construction and remodeling work neater and faster. Wheels cloth reinforced—will not shatter. 3/32 in. thick. Order from table below. *State diameter.*

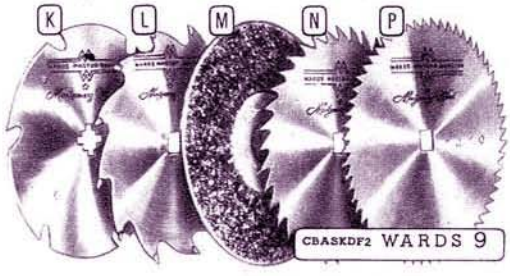
(N) COMBINATION SAW BLADES. Master (Best) Quality. Crosscut-rip. Flat ground, heat treated steel. Hand filed and set. *State diameter.*

COMBINATION BLADES (not shown). Crosscut-rip. Hand filed and set. For Black and Decker, Porter-Cable and Skilsaws. Order from table below. Shipped promptly from Factory near Buffalo, N.Y. Pay postage from there.

Cat. No.	Diam.	Hole, in.	Fits Saws	Wt.	Each
(K) 84WR 6967 L	6 in.	½ sq.	(B),(C),(F)	1 lb.	$1.59
	7¼ in.	See*	See*	1 lb.	1.79
	8 in.	See*	See*	1 lb.	1.89
(L) 84WR 6963 L	6 in.	½ sq.	(B),(C),(F)	1 lb.	7.95
	8 in.	13/16 sq.	(D),(E)	1 lb.	8.95
(M) 84WRP 5244	6 in.	½ sq.	(B),(F)	Pstpd.	1.83
	7 in	½ sq.	(C)	Pstpd.	2.40
	7 in.	13/16 sq.	8953K	Pstpd.	2.40
	8 in.	13/16 sq.	(D),(E)	Pstpd.	3.06
(N) 84WR 6968 L	4¼ in.	½ rd.	(A)	8 oz.	1.29
	6 in.	½ sq.	(B),(F)	1 lb.	1.59
	6¼ in.	½ sq.	(B)	1 lb.	1.59
	7 in.	½ sq.	(C)	1½ lbs.	1.79
	7¼ in.	13/16 sq.	8953K	1½ lbs.	1.79
	8½ in.	13/16 sq.	(D),(E)	2 lbs.	2.39

Cat. No.	Diam.	Hole, in.	Fits	Wt.	Each
Combination (not shown) 84WR6971K	6⅛ in.	11⅛ rd.	Black and Decker	1 lb.	$1.89
	7⅜ in.	11⅛ rd.		1½ lbs.	2.19
	8¼ in.	13⅜ rd.		2 lbs.	2.65
Combination (not shown) 84WR6972K	6¼ in.	⅝ rd.	Porter-Cable	1 lb.	1.89
	7½ in.	⅝ rd.		1 lb.	2.19
	8 in.	⅝ rd.		1 lb.	2.29
Combination (not shown) 84WR6973K	5⅞ in.	Diamond	(J) 8981 Skilsaw (H)	1 lb.	1.85
	6 in.	Diamond		1 lb.	1.85
	7¼ in.	Diamond		1 lb.	1.98
	8¼ in.	Diamond		1 lb.	2.65
(P) Nail Cutting 84WR6970L	6 in.	½ sq.	(B),(F)	8 oz.	2.15
	6¼ in.	½ sq.	(B)	8 oz.	2.15
	7 in.	½ sq.	(C)	12 oz.	2.29
	7¼ in.	13/16 sq.	8953K	1 lb.	2.29
	8½ in.	13/16 sq.	(D),(E)	1 lb.	3.19

(P) NAIL CUTTING SAW BLADES. Master (Best) Quality. For cutting occasional imbedded nails in lumber.



Selecting The Correct

Jointer-Planer For Your Needs

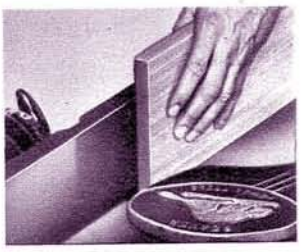
The jointer-planer is essential to accurate craftsmanship and is a "must" for the man concentrating on furniture making, cabinet work or remodeling and construction. No other tool can approach it for producing absolutely straight and parallel edges and surfaces. It does work in a few seconds which formerly took hours with a hand plane, and does it better, more uniformly. It assures a straight and true starting edge, necessary for making subsequent accurate miter or other cuts. It is used extensively for squaring up stock to dimensions prior to working on it with other tools.

Your selection of a jointer-planer will be guided by its capacity—which is measured in terms of the width of the cutting knife. If the majority of your work will be edge jointing or rabbeting, a 4 to 5-inch size will do the job adequately. However, if you have much surface planing to do, the 6-inch size is highly recommended. (For big capacity production-type surfacing, thickness planers are available, see next page). Light duty jointer planers with bronze bearings are satisfactory for many home workshop uses, but ball or roller bearings are necessary to stand up under the punishment of heavy-duty work, or where the machine will be subject to more or less constant, production-type work.

IMPORTANT FEATURES OF A GOOD JOINTER-PLANER. The cutter head, with its cutting knives, is the heart of the jointer. Precision machining and absolutely perfect balancing are necessary in this unit which revolves at an operating speed of about 3500 to 4600 RPM. The blades must be specially built of tempered, heat-treated steel to withstand this high-speed use and still retain a sharp cutting edge. Depth of cut on the jointer is regulated by raising or lowering the infeed table. Convenient, accurate operating controls and a gauge to indicate depth of cut are necessary. The fence must be rigidly supported to provide a firm surface for guiding work over the cutting head. The fence moves back or forward over the table to determine the width of the cut being made. The outfeed table is not normally moved; however, if it is adjustable it permits alignment to compensate for wear on cutter blades.

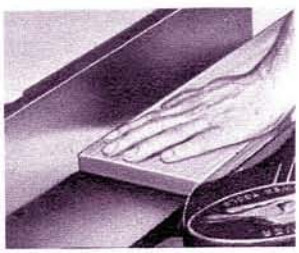
USES OF THE JOINTER-PLANER. Four principal uses are pictured in small view at the bottom of this column. Edge jointing (view 1) is one of the most useful operations. Care should be taken that fence is set at an exact 90° angle to table; for finishing operations no more than a shaving cut should be taken off in one pass over cutter head. For end jointing, make two separate cuts, one from each side, going about half way through in order to prevent splitting of wood. Beveling (view 2) is done by tilting the fence to desired angle then pushing wood over cutter head in regular manner. Fences on many jointers can be tilted in either direction. Chamfering is similar to beveling, except that only a portion of the edge is removed. Surfacing of boards (view 3) is done to eliminate warp in lumber prior to performing other operations. Make as many passes over cutter head as are necessary to obtain a flat, straight surface. Rabbeting (view 4) is done by moving fence to edge of table to obtain the desired width of rabbet or groove. Make as many cuts as necessary to obtain depth of cut wanted. Other operations which can be performed include the making of tapered pieces (such as chair legs), compound and stopped tapers.

THICKNESS PLANERS. These production-type tools have big capacity for surfacing stock, and at the same time reducing lumber to the desired thickness. Capacity of planers is the size of the widest stock that can be handled. Depth of cut is regulated by hand wheels which raise and lower the work table the required distance from the overhead rollers. Most workshop models have corrugated infeed rollers to pull in lumber, and rubber covered rollers on outfeed section to keep from damaging finished surface. Care should be taken to use sufficiently heavy motors to power these units, so that speed can be kept up to the recommended standards.

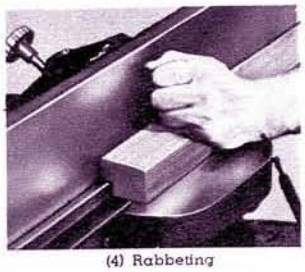


(1) Edge Jointing

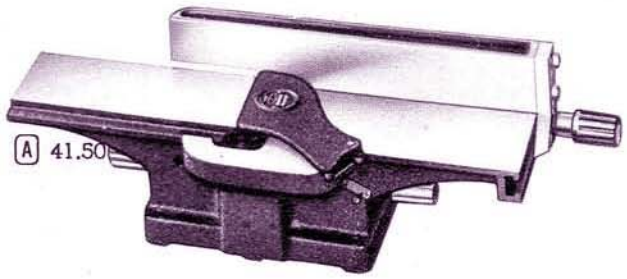
(2) Beveling

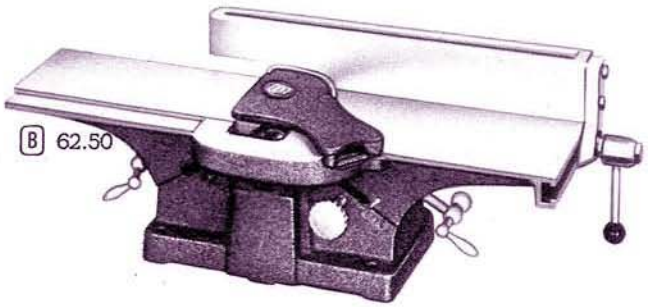


(3) Surfacing



(4) Rabbeting





Powr-Kraft and Beaver

LIGHT AND MEDIUM-DUTY JOINTER-PLANERS 41.50 AND 62.50

All Powr-Kraft Jointer-Planers, including (A) and (B) below and (D) on opposite page, have precision made 3-blade cutter heads with chip breakers, dynamically balanced after knives are installed for accuracy. Knives are high-speed tool steel, carefully sharpened and heat treated to maintain keen edge over long periods. Infeed and outfeed tables are precision machined and ground in pairs after assembly to insure perfect alignment. Infeed tables have rabbeting arm, outfeed tables have rabbeting ledge. Fences tilt to 45° in either direction. Gauges show degree of tilt and depth of cut. Detachable spring guards are mounted over cutter heads.

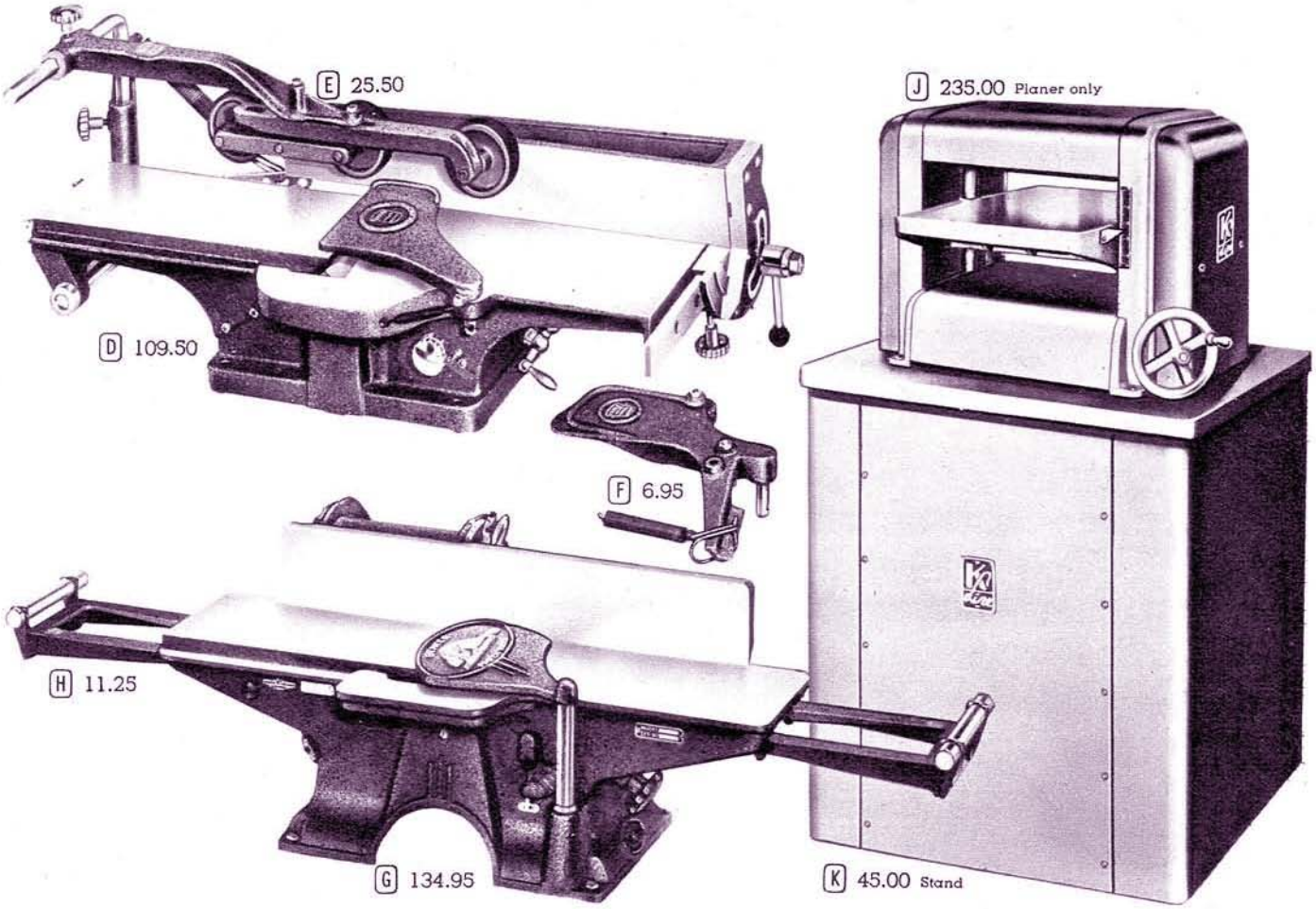
(A) POWR-KRAFT 4½-IN. BRONZE BEARING MODEL. For light duty use. Has all precision Powr-Kraft features above. Cutter head runs on extra long, self-lubricating bronze bearings. Maximum depth of cut and rabbet is ¼ in. Sturdy cast-iron table and base. Complete specifications below.
84 WR 2505 M—*Mailable.* Ship. wt. 45 lbs. $4.50 Down.....Cash $41.50
84 WR 2512 Y—Jointer above with ⅓-HP motor (83 WR 4521M, Page 26), 4-in V motor pulley, 41-in. V belt. Ship. wt. 70 lbs. $6 Down.....Cash $59.75

(B) POWR-KRAFT 5-IN. BALL BEARING MODEL. For medium duty workshop use. Runs smoothly on grease-sealed New Departure ball bearings. Has all precision Powr-Kraft features described above. Maximum depth of cut and rabbet is ⅜ in. Heavy cast-iron base and table. Easy operating ball crank and lever lock controls. See complete specifications below.
84 WR 2506 M—*Mailable.* Ship. wt. 54 lbs. $6.50 Down.....Cash $62.50
84 WR 2507 Y—Jointer above with ½-HP motor (83 WR 4576M, Page 26) 5-in. motor pulley, 46-in. V belt. Ship. wt. 87 lbs. $9 Down.....Cash $88.50

(C) JOINTER KNIFE GAUGE. For accurate installation of jointer knives.
84 WR 2513—Use with (B) above and (D) on opp. page. Ship. wt. 14 oz. $4.59

JOINTER-PLANER SPECIFICATIONS

Catalog Number	(A) 84WR2505M	(B) 84WR2506M	(D) 84WR2508R	(G) 84WR2516F
Width of Cut	4½ in.	5 in.	6 in.	6 in.
Max. Depth of Cut	¼ in.	⅜ in.	½ in.	⅝ in.
Max. Depth of Rabbet	¼ in.	⅜ in.	½ in.	⅝ in.
Infeed Table in	7 11/16x11½	6x12½	7½x16	7⅜x16½
Outfeed Table in	5⅜x11½	6x12½	7½x17	6 9/16x16 7/16
Bearings	Bronze	Ball	Ball	Roller
Knife Size	4½ in.	5 1/16 in.	6⅛ in.	6 in.
Depth Adjustment	Hand Knob	Ball Crank	Ball Crank	Hand Knob
Machine Pulley (incl.)	1¾-in. diam	2-in. diam.	2-in. diam.	3-in. diam.
Fence Adjustment	Hand Knob	Lever Lock	Double Lock	Cam Clamp
Recommended Speed	3800 RPM	4300 RPM	4300 RPM	4600 RPM
Recommended Motor	⅓-HP	½-HP	½-HP	½-HP
Recommended "V" Belt	41 in.	46 in.	46 in.	50 in. (incl.)
Recommended Motor Pulley	4-in. diam.	5-in. diam.	5-in. diam.	8-in. diam.
Recommended Stand	84WR2962M	84WR2962M	84WR2962M	84WR2957K



Jointer-Planers . . . "K"-Line Thickness Planers

HEAVY-DUTY JOINTER-PLANERS 109.50 TO 134.95

(D) POWR-KRAFT 6-INCH BALL BEARING MODEL. Heavy-duty production type tool for industrial shops, cabinet makers, advanced woodworkers, etc. Has all precision Powr-Kraft features described immediately at left on opposite page. Runs smoothly, with no vibration on grease-sealed New Departure ball bearings. Maximum depth of cut and rabbet is ½ in. See complete specification on opposite page. Hold-down attachment not included see (E) below. *Not Mailable.*

84 WR 2508 R—Ship. wt. 113 lbs. $11 Down.....Cash $109.50

84 WR 2509 R—Jointer with ½-HP motor (83 WR 4576M on Page 26), 5-in. pulley, 46-in. V-belt. Wt. 153 lbs. $13.50 Dn.....Cash $134.95

(E) JOINTER HOLD-DOWN. Fits (D) only. Mechanically duplicates skillful touch of the professional. Spring loaded roller exerts continous, sensitive pressure. Rubber rollers guide stock. One man can plane or joint lumber up to 16 ft. long. Capacity 8½ in. vertical; full table width horizontal. Sets below table level when not in use. Shipped promptly from Factory in Chicago, Ill.

84 WR 2510 K—*Mailable.* Ship. wt. 31 lbs. $3 Down.....or Cash $25.50

(F) PRESSURE GUARD. Fits jointer (D) only. Use with (E) above. Roller gives constant side pressure. Tension spring adjusts to 5 different pressure positions. Shipped promptly from Chicago Factory.

84 WR 2524 K—*Mailable.* Ship. wt. 6 lbs. 8 oz.....$6.95

(G) BEAVER HEAVY-DUTY 6-INCH JOINTER PLANER. Big capacity professional quality tool, designed and built to meet exacting requirements of skilled craftsmen and production shops. Runs smoothly on Timken roller bearings between heavy adjustable trunnions. Cutter head and pulley machined in one piece from solid steel bar stock with 3 slots for alloy steel cutter knives. Maximum depth of cut and rabbet is ⅝ in. Table adjusts to working height by hand knobs. Machined cast semi-steel fence tilts to 90° on double trunnions, locks rigidly at any angle. Accurate scale indicates degrees of tilt. Cast aluminum front and rear blade guards. Steel support rod permits any depth of cut without changing clearance between front guard and rear table. Rear guard fastened securely to fence, has 6-in. scale for setting cutting width. Heavy cast semi-steel base. Precision-ground bottom surfaces insure level setup. Can be driven from below or behind. See complete specifications on opposite page. Shipped promptly from Detroit Factory, you pay freight from there.

84 WR 2516 F—Ship. wt. 165 lbs. $13.50 Down.....Cash $134.95

83 WR 4576 M—½-HP motor. (see Page 26) Ship. wt. 32 lbs.....25.50

(H) TABLE EXTENSION ROLLERS. Attach under table on Jointer-Planer (G) in holes provided. Gives 26 in. more table working area. Mailed promptly from Detroit Factory, you pay postage from there.

84 WR 2517 K—*Mailable.* Shipping weight 13 lbs.....Pair $11.25

"K"-LINE BALL BEARING THICKNESS PLANERS 159.00 AND 235.00

Heavy-duty production models, built for big capacity jobs. Exceptionally accurate—hold cut to within .001 in. Minimum thickness 1/16 in., maximum depth of cut ⅛ in. Minimum stock length 4¼ in. Power feed rate 9 ft. per minute. Cutter head fitted with 3 Hi-Carbon, Hi-Chromed steel blades—runs on New Departure ball bearings. Machined surfaces assure correct balance. Cutter speed 3600 RPM. Knives cut 100 times per inch of travel. With all pulleys, V-belts. Planers and stands shipped promptly by Freight or Truck from Factory in Toledo, Ohio.

(J) 12¾-INCH HEAVY-DUTY PRODUCTION MODEL. Power feed drive only. Handles lumber to 4x12¾ in. Planes to uniform thickness. Infeed rolls of solid bar stock with ground bearing surfaces. Coarse straight knurl delivers ample driving power with minimum amount of gumming of roller. Outfeed rolls covered with neoprene rubber. Adjustable compression spring tension. Chip breaker keeps chips from operating side of planer. Table 12¾x20 in. of semi-steel gray iron castings—polished face. Power feed table device raises table 4 in. in 30 seconds. Micrometer adjustment for precise measurement. Size overall 22x20x18 in.

84 WR 2504 F—Ship. wt. 195 lbs. $23.50 Down.....or Cash $235.00

MOTOR FOR ABOVE. 1½-HP ball bearing Repulsion-Induction. 1725 RPM.

83 WR 4640 R—Ship. wt. 105 lbs. *State HP.* From Stock. $9.50 Down...or Cash $93.00

(K) 18-GAUGE STEEL STAND. Fits planer (J) above. Size overall 20½x26x29 in.

84 WR 2523 F—Ship. wt. 82 lbs. *Not Mailable.* $4.50 Down.....Cash $45.00

(L) 10-IN. HEAVY-DUTY PRODUCTION MODEL. Combination power and hand crank feed. Hand crank prevents tearing curly grained woods. Handles lumber to 2¾ in. thick by 10 in. wide. Infeed rolls of bar steel, corrugated. Adjustable feed roll pressure. Table 11x14 in. Hand wheel moves table 1/16 in. per wheel revolution. Gauge for measuring cut depth. Size overall 18x-12x12 in. Order motor and stand separately below. Ship. wt. 132 lbs.

(L) 159.00 Planer only

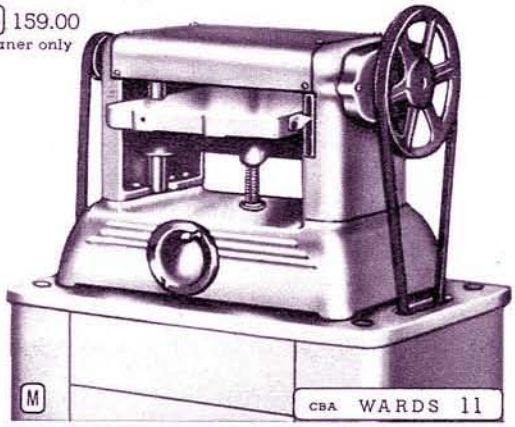
84 WR 2518 F.....$159.00

MOTOR FOR ABOVE. ¾-HP. sleeve bearing, 1725 RPM, Repulsion-Induction.

83 WR 4612 R—Ship. wt. 51 lbs. From Stock.....$51.00

(M) SHEET METAL STAND. For planer (L). *Not Mailable.* Ship. wt. 88 lbs.

84 WR 2522 F.....$35.00



The Jig Saw

For Inside or Outside Curved Cutting

Often the only tool you need if you plan to confine your projects mostly to making small wood novelties and similar fine work. The jig saw is the most satisfactory of all power tools for cutting intricate designs. It is also one of the lowest priced tools to purchase and one of the easiest of all to operate. Ideal for the beginner in woodworking or for starting children in the hobby. Does finer, smoother work than the band saw—however it is slower and not as satisfactory for making long straight cuts. Many types of blades are available for the jigsaw, in many different thicknesses, for light or heavy stock and various kinds of work. Blades are also available for cutting special materials, such as plastics, bone, celluloid and soft metals.

Jig Saws are available in three main types: "V" belt driven jig saws, Built-in motor type jig saws and Magnetic type jig saws.

"V" belt driven jig saws are powered by externally mounted electric motors, connected to the saw by means of a belt and pulley. Power is transmitted to blade through an eccentric system, such as a cam or crankshaft. A spring in the upper arm of saw maintains constant blade tension through all phases of the stroke. Tension adjusts to length of saw blade.

Built-in motor type jig saws are operated directly from drive shaft of motor—no pulleys necessary. Rotary movement of motor is converted into up and down strokes through an eccentric cam system also.

Magnetic-type jig saws completely eliminate electric motors and drive systems. In place of a motor, a self-contained magnetic power unit delivers power to the saw blade through a diaphragm. Economical, easy to operate.

Jig saw sizes are based on throat capacity, or the distance from saw blade to the opposite point on saw arm. This determines the width of stock that saw will handle. A 15-in. jig saw, for example, will saw to the center of a panel 30 in. wide. Some of the most popular home workshop sizes based on throat capacity are, 9 to 12-in. sizes, (small); 15-in., (medium); and 24 to 26-in. (large). When selecting your jig saw, remember to think for a moment about your future needs. You will never regret choosing a large capacity jig saw now, big enough for any future projects you undertake.

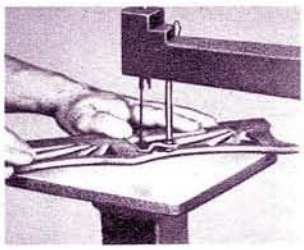
FOUR DIFFERENT WAYS TO USE A JIG SAW

Pictures below illustrate four types of work your jig saw will do. (1) To cut intricate inside patterns—drill hole in stock at starting point, insert blade; lower blade guide and hold down to prevent lifting of stock. (2) To make straight or curved outside cuts—simply lower blade guide and hold down against stock. (3) To make angle cuts up to 45° (can be done with most models), tilt table to desired angle and lower blade guide and hold down against stock. (4) For sawing metal use a metal cutting blade. For best results, speed should not exceed 450 strokes per minute when sawing metal; excessive speed will cause blade to dull quickly.

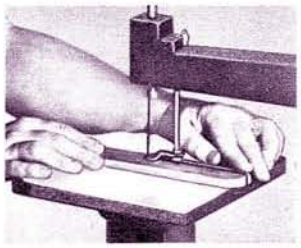
When cutting material such as wood or plastics, use thin or jeweler's blades for extremely fine work. If curves are not too sharp the upper arm of Scroll-Jig saws can be removed for saber saw work, giving unlimited capacity and permitting quick successive cuts.

OPERATING SPEEDS. Magnetic or vibrating type jig saws require a high operating speed, normally 7200 strokes per minute, in order to produce adequate cutting power. Jig saws with built-in universal-type motors operate with maximum efficiency at 1800-2000 strokes per minute.

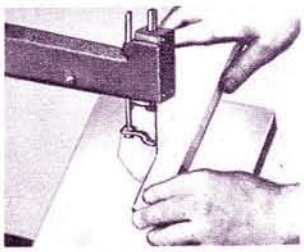
Belt-driven jig saws give best cutting at speeds from 850 to 1000 strokes per minute due to the relatively large amount of power supplied by ¼ or ⅓-HP motors recommended. To find approximate number of strokes per minute, using 1725 RPM motors, multiply the motor RPM by diameter of the motor pulley, then divide by the diameter of the jig saw pulley used.



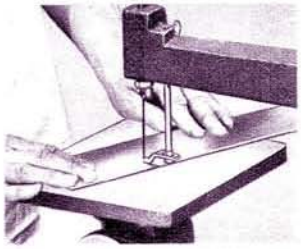
(1) Inside Cutting



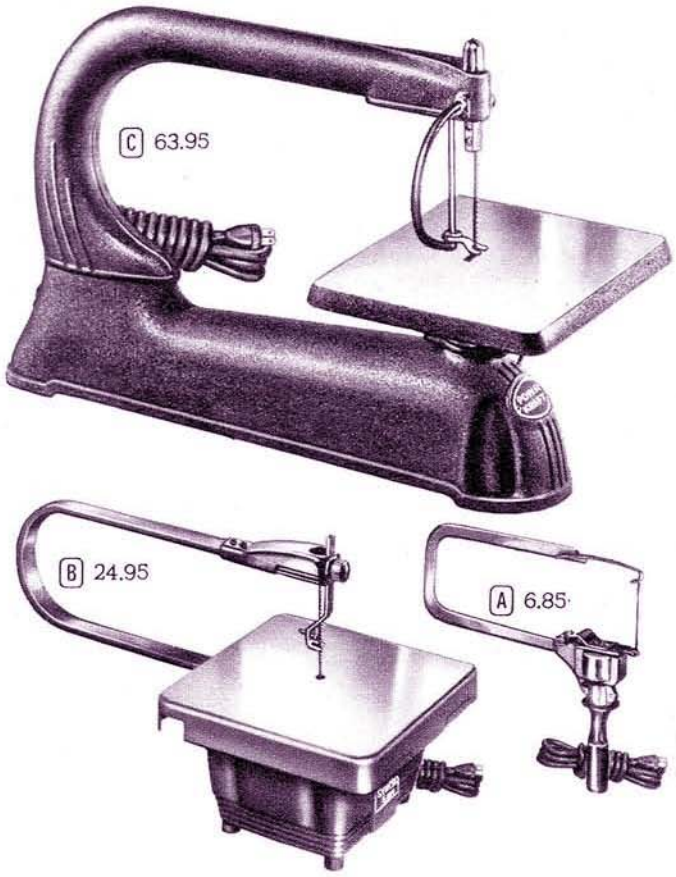
(2) Outside Cutting



(3) Angle Cutting



(4) Metal Cutting with Special Type Blade



Fast Cutting Self-Powered

DREMEL ELECTRIC HAND TYPE MOTO-SAW 6.85

A 9½-IN. CAPACITY. Especially good for beginners and hobbyists, light-duty coping and jig saw work. Spring action, magnetic coil, vibrating type. Produces 7200 strokes per minute. Cuts intricate designs in woods, plastics, etc., up to ½ in. thick, many times faster than ordinary free-hand coping saw. Has 9½-in. capacity . . . cuts to center of 19-in. circle. Four-way blade holder permits reversing or turning blade at right angle to saw for unlimited length of work. Strokes adjust from 1/16 to ¼ in.

Size overall: 10 by 1¾ by 9¼ inches. Actual weight 17 oz. Trigger action fiber switch. Operates on 110–120-volt, 60-cycle AC only. Includes 6-ft. rubber covered cord and plug, three 3-in. pin-end blades.

84 WRP 2398—*Mailed Postpaid*.....$6.85

84 WRP 2399—3-in. pin end blades for above. *Postpaid*...Pkg. of Twelve 60c

SYNCRO MAGNETIC JIG SAW 24.95

B 15-IN. CAPACITY. Complete self-contained unit. UL Approved. Requires no motor—just plug into outlet. Magnetic coil provides reciprocating action, blade vibrations up to 7200 strokes per minute. Cuts require no sanding.

Ideal for hobbyists and craftsmen making models, displays or puzzles. Cuts soft wood up to ¾ in. thick; plywood, plastics, celluloids to ½ in. Will cut to center of 30-in. circle. Adjustable arm is made of specially formed steel stamping ¼x1 in. Smooth metal table measures 10x10 in. 6½x5½-in. base. V-type upper blade guide and hold down.

Dimensions overall: 21¼ in. long, 10 in. wide, 10¾ in. high. Operates on 110-120-volt, 60-cycle AC only. For additional specifications see table on opposite page. Extra blades 84 WR 2384 (H) on opposite page. *Postpaid*.

84 WRP 2397 M—With cord, plug, six pin-end blades. $2.50 Down. Cash $24.95

POWR-KRAFT SCROLL-JIG SAW 63.95

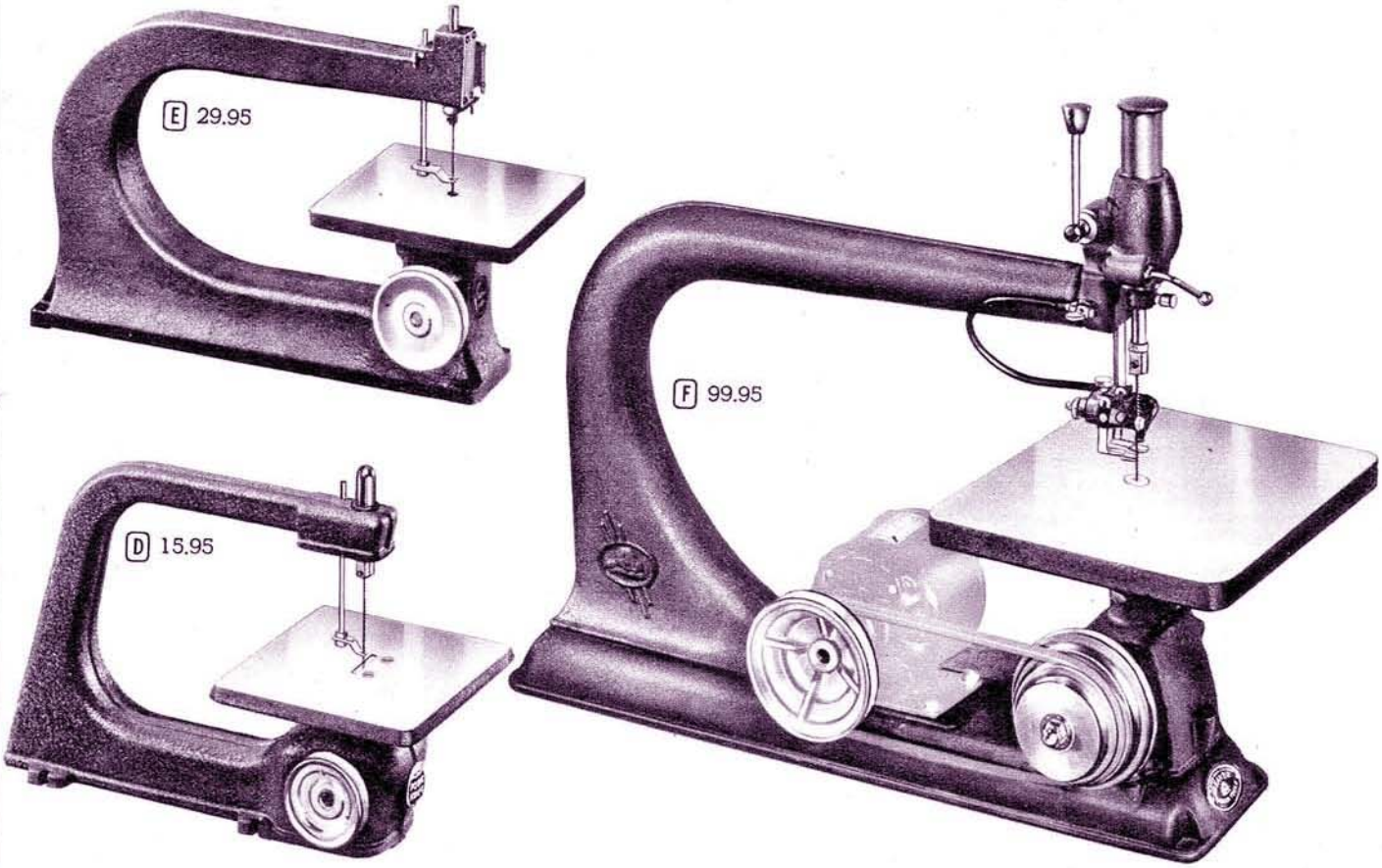
C 18-IN. CAPACITY. For craftsmen and hobbyists. Complete with built-in 110-120-volt, AC-DC universal motor—rated capacity of 1/12-HP. Develops torque equivalent of ¼ HP motor. Large capacity—cuts to center of 36-in. circle; to 2 in. thick. Sturdy cast-iron base. 10¾x12¾-in. cast-iron table tilts up to 45° for angle cutting. Table rotates 360°.

Motor is directly connected to gear box for smooth operation. Cast-iron over arm is removable for saber cutting. Chucks take 6-in. plain end blades, sanding sticks and files with ¼-inch diameter shanks. 11/16-in. stroke at 1900 strokes per minute. Roller type blade guide, adjustable spring work hold down. Built-in work-light, sawdust blower, toggle switch, cord and plug.

Dimensions overall: 29½ in. long, 12¾ in. wide, 18 in. high. See specifications on opposite page. With 6-in. plain end blade. *Mailable*.

84 WR 2370 M—Ship. wt. 50 lbs. $6.50 Down on Terms.....Cash $63.95

84 WR 2387—Assorted blades for above. Ship. wt. 5 oz.....12 for 45c



and Belt-Driven Jig Saws . . . 9½ to 24-inch Capacity

12½-IN. POWR-KRAFT JIG SAW 15.95

D LIGHT-DUTY MODEL. Ideal tool for beginners and hobbyists. Cuts to center of 25-in. circle. Cuts materials up to 1½ in. thick. One inch stroke. Produces about 860 strokes per minute. Bronze bearings. Ground cast-iron table is 9x9 in. Table tilts up to 45°—has tilt indicator, one piece cast semi-steel frame. Blade chucks rotate 90° for ripping long pieces.

Complete lower mechanism enclosed in oil bath. Eccentric cam operates on crosshead. Lower chuck takes ¼-in. diam. shank files, sanding sticks and saber blades. V-type blade guide and adjustable hold down. Upper torsion spring gives even blade stroke. Sawdust blower clears cutting line.

Dimensions overall: 9¾ in. wide, 21¾ in. long, 14½ in. high. Gray wrinkle finish. 5-in. plain end blades included. For more specifications see table below. Available Sept. 15.

84 WR 2350 M—Jig Saw only. *Mailable.* Ship. wt. 29 lbs. . .$15.95

JIG SAW WITH ⅓-HP SPLIT-PHASE MOTOR (83 WR 4534M, Page 26), 38-in. "V" belt, 2-in. "V" motor pulley.

84 WR 2351Y—Ship. wt. 52 lbs. $3 Dn. . . . . Cash $29.65

JIG SAW SPECIFICATION TABLE

	Saw (B)	Saw (C)	Saw (D)	Saw (E)	Saw (F)
Depth of cut	¾ in.	2 in.	1½ in.	2 in.	2¾ in.
Blade type	Pin end	Plain	Plain	Plain	Plain
Blade length	5 in.	6 in.	5 in.	5 in.	5 to 7 in.
Blade guides	V-type	Roller	V-type	V-type	Roller
Table tilt	None	45°	45°	45°	45°
Machine pulley	None	None	4 in.	4 in.	4-step
Dust blower	None	Built-in	Built-in	Built-in	Built-in

FOR TOOL STANDS TO FIT JIG SAWS SEE PAGE 25.

15-IN. POWR-KRAFT JIG SAW 29.95

E MEDIUM-DUTY MODEL. Versatile tool, invaluable for hobbyists, skilled craftsmen and production work. Cuts to center of 30-in. circle; cuts material up to 2 inches thick. Approximately 860 strokes per minute. Hollow frame and base are cast in one piece. Ground cast-iron table is 9x9 in.; tilts to 45°. Pointer indicates angle of tilt on calibrated scale.

Lower mechanism is enclosed in oil bath; eccentric cam operates on crosshead. V-type blade guide foot also acts as hold down. Shafts are ground and polished to precise specifications. Heat-treated blade clamps. Blade tension is controlled by tension type and compression type springs on lower spindle. Piston-type blower attached to upper arm forces air on cutting line.

Dimensions overall: 9 in. wide, 23 in. long, 15¾ in. high. Gray wrinkle finish. 5-in. plain end blade included with saw. For additional specifications see table at left. Ship. wt. 39 lbs. *Mailable.*

84 WR 2356 M—$3 Down. . . . Cash $29.95

JIG-SAW. ⅓-HP MOTOR (83 WR 4534M, Page 26 for complete description), 38-in. "V" belt, 2-in. diam. "V" motor pulley.

84 WR 2364 Y—Ship. wt. 63 lbs. . . . $43.65

24-IN. BEAVER SCROLL SAW 99.95

F HEAVY-DUTY BALL BEARING MODEL. Professional quality tool meets requirements of most critical craftsmen or production workers. Throat depth of 24 in. . . . cuts to center of 48-in. circle, to 2¾ in. thick. Ball bearing crank shaft runs in forced feed oil bath. Built-in sawdust blower. Blade tension adjusts to all types of plain end blades from 5 to 7-in. length. Tension indicated on scale.

Smooth ground 15x13-in. semi-steel table tilts up to 45°. Blade guide is universally adjustable, with blade thrust roller, blade guide and adjustable hold down. Upper housing easily removed for filing or saber sawing. Table and universal-type chucks on drive shaft and upper shaft rotate to 90° to accomodate long work. Lower chuck takes files and sanding sticks with ¼-in. diam. shanks, as well as saber blades.

Cast-iron base: 7½ in. wide, 33 in. long with 4-step "V" machine, motor pulleys. (Motor pulley fits ½ or ⅝-in. diam. shafts). Use 34-in. "V" belt (not included). Size 15x36½x 27 in. Shipped from Factory near Detroit. Allow one week. *Not Mailable.* Wt. 114 lbs.

84 WR 2371F—$10 Down. . . . . or Cash $99.95

⅓ HP SPLIT-PHASE MOTOR. (Complete description on Page 26). For Scroll saw above.

83 WR 4534 M—*Mailable.* Wt. 22 lbs. . .$12.45

WARDS MONTHLY PAYMENT PLAN IS AVAILABLE FOR YOUR CONVENIENCE IN PLACING ORDERS OF $20 OR MORE. 10% DOWN IS ALL THAT IS REQUIRED. SEE PAGE 24

5-INCH PLAIN END JIG SAW BLADES 23c TO 44c

G Fine quality saw steel. Fit jig saws above. Ship. wt. per package, 4 oz. *State Catalog Number wanted.*

Use for	Cat. No.	Thick.	Width	Teeth	Price
Celluloid, Plastics, Wood, etc.	84 WR 2375	.016 in.	.035 in.	21	6 for 23c
	84 WR 2376	.017 in.	.043 in.	18	6 for 23c
	84 WR 2377	.020 in.	.070 in.	7	6 for 23c
Metal. Wood up to 1 in. (*State teeth*)	84 WR 2378	.020 in.	.110 in.	10	6 for 23c
	84 WR 2378	.020 in.	.110 in.	15	6 for 23c
	84 WR 2379	.020 in.	.070 in.	15	6 for 23c
Light woods	84 WR 2380	.010 in.	.045 in.	18	12 for 44c
Hard material	84 WR 2381	.016 in.	.034 in.	32	6 for 23c
General use	84 WR 2382	Assorted sizes			12 for 44c

PIN END BLADES AND SABER BLADES FOR JIG SAWS 23c TO 88c

H 5-INCH PIN END BLADES. Assortment of 12. Fit jig-saw (B) on opposite page.

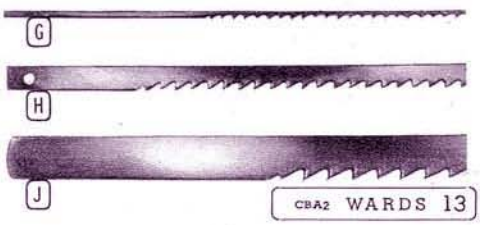
84 WR 2384—Wt. 4 oz. 12 for 49c

J 4½-INCH SABER BLADES. Size .028 x .187 in. 10 teeth per inch. Ship. wt. 4 oz.

84 WR 2385. . . . . 3 for 23c

SABER BLADE ASSORTMENT.

84 WR 2386—Wt. 4 oz. 12 for 88c



The Band Saw

Performs Many Intricate Sawing Operations

An especially useful tool if you have limited space or money to equip your shop. Many consider it the No. 1 tool if the majority of work will consist largely of cabinet or furniture making or boat building. It is used principally for cutting curved or irregular outside lines. However, it is also extensively used for making straight cuts (see pictures below). Straight sawing operations include ripping, crosscutting and resawing (the sawing of thick pieces of wood into thin boards). When a narrow blade is used, the sawing of sharp or acute curves approaches the delicate work executed on a jig or scroll saw. Metal cutting blades can also be used on the band saw to perform almost all operations of wood sawing on either thin sheet metal or stock of considerable thickness.

The band saw's capacity and accuracy for heavy or deep cuts cannot be equaled by any other type of power saw. Wood cuts ranging in depth from a fraction of an inch to about 8 in. (on large saws) can easily be accomplished. Not until you have actually used a band saw will it be possible to fully appreciate the wide variety of work which you can do with it.

POINTS TO BE CONSIDERED WHEN SELECTING YOUR BAND SAW

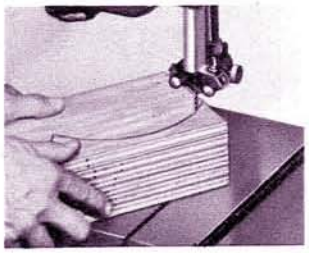
An important consideration in choosing a band saw is its throat capacity (distance from blade to frame). Capacity is fixed by the diameter of the wheels, since the throat size of the saw is the distance between the forward vertical cutting section of the saw blade and the protective covering which encloses the rear vertical section of the blade. The capacity of the saw, therefore, is a fraction of an inch less than the diameter of the two wheels. The depth of cut is roughly indicated as the distance between the table of the saw and the bottom edge of the upper wheel covering. Most popular sizes for the home workshop are 9 to 10 inches (small); 12 inches (medium) and 14 to 15 inches (large).

The amount of service your band saw is going to receive is an important factor governing the type of bearings required. Bronze bearings supplemented by strategically placed ball bearings will provide excellent intermittent service for the home craftsman. When work requirements increase in duration and capacity, roller or grease-sealed ball bearings will withstand the rigors of heavy-duty or production work.

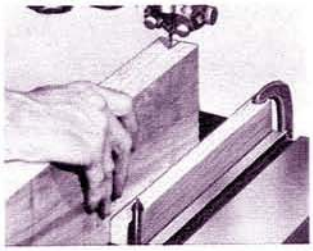
A heavy, massive cast metal frame not only withstands the pounding of heavy-duty workshop use, but is also very important in keeping the blade true-running and the machine properly aligned. A tilting cast-metal table increases the versatility of the saw allowing the workman to quickly and accurately perform bevel, chamfer and other fancy cuts.

The miter gauge, the rip fence and the miter gauge stop rods will make many cutting operations much easier. Stock can be quickly cut to any angle with a miter gauge. Straight cuts can be made with the use of the rip fence. The fence can be quickly adjusted so that stock can be ripped to any desired width. You can improvise these accessories for your saws, or in some cases, they are included, or are available as extra accessories.

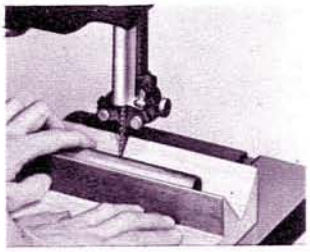
The availability of many types of band saw blades greatly increases the utility of the band saw. Although a single blade for general all-'round work can be used with good results, there is a right blade for every specific type of work. The most significant saw blade characteristic, and one which usually determines what saw blade is to be used, is the width dimension of the blade. Selection of the proper blade width enables the band saw operator to turn out good work of jig saw nature, or to do an equally good job of resawing heavy planks. Choose a blade which will permit the cutting of the sharpest curves you will need to cut. However, use the widest blade that will do the job. For straight cuts always use your widest blade.



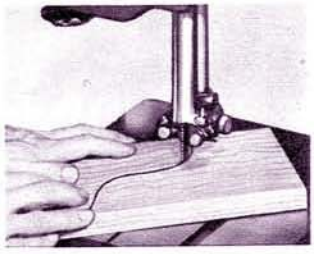
Multiple Sawing of Identical Pieces



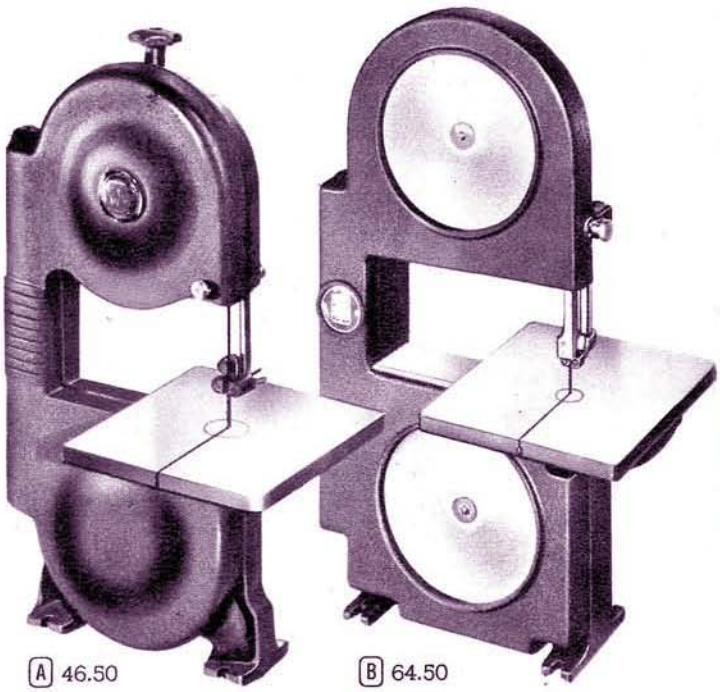
Accurate Large Capacity Sawing



Metal Cutting with Homemade Jig



Band Saw Approaches Jig Saw Delicacy in Cutting Smooth, Outside Curves



(A) 46.50 (B) 64.50

Powr-Kraft and Beaver

MEDIUM-DUTY BAND SAWS 46.50 AND 64.50

(A) (B) For hobbyists and home craftsmen. Cast-iron frame with one-piece hinged cast-aluminum guard; fastens with single knob. Cast-iron table tilts to 45° on firm locking trunnion; locks at any angle; adjustable pointer indicates degree of tilt. Adjustable hardened steel blade guides above and below table; upper guide is roller type. Positive blade tension adjustment. Soft metal table insert. Gray wrinkle finish. See specifications below.

(A) 9-IN. BAND SAW. Rubber tired spoke wheels. Upper wheel has tension and blade trackage control. Runs smoothly on strategically placed ball and bronze bearings. Size overall 11x16½x28 in. high. Ship. wt. 58 lbs. *Mailable.*
84 WR 2320 M—$5 Down; Cash $46.50

BAND SAW (A) ABOVE WITH ⅓ HP MOTOR (83 WR 4534M, Page 26); 2-in. diam. motor pulley; 44-in. V-belt. Ship. wt. 82 lbs. *Mailable.*
84 WR 2321 Y—$6 Down; Cash $59.75

(B) 10-IN. POWR-KRAFT BAND SAW. Die cast wheels with rubber tires, mounted on 4 anti-friction needle roller bearings. Size overall 10½x18¼x30¾ in. Order motor below, belt and pulley separately from Pages 26 and 27. Mailed promptly from Chicago Factory; pay postage charges from there. Ship. wt. 50 lbs.
84 WR 2304 K—$6.50 Down; Cash $64.50

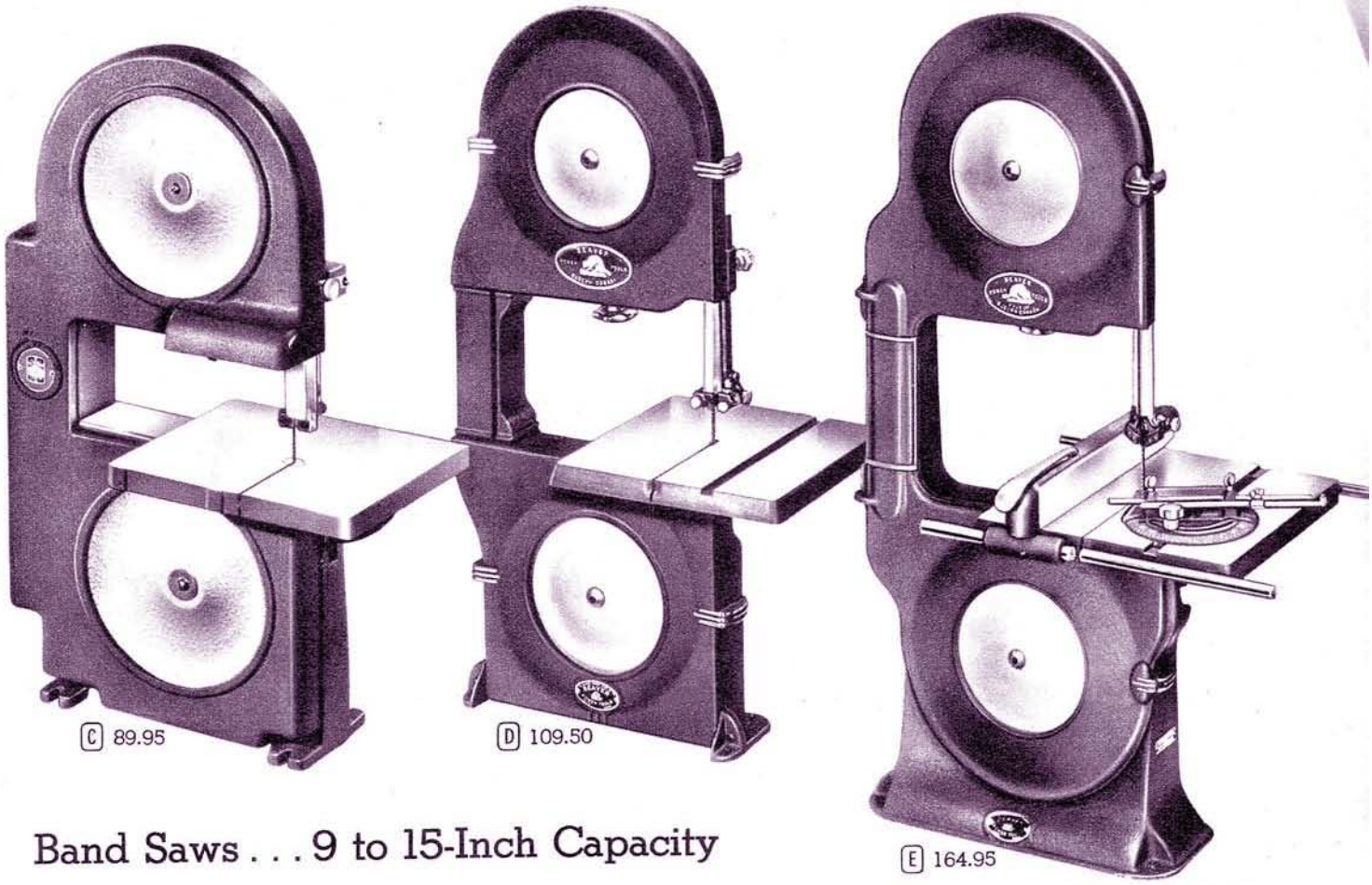
⅓-HP SPLIT-PHASE MOTOR for (B). See (9), Page 26 for description.
83 WR 4534 M—Ship. wt. 22 lbs. $12.45

BAND SAW SPECIFICATIONS

Catalog Number	(A) 84 WR 2320 M	(B) 84 WR 2304 K	(C) 84 WR 2314 R	(C) 84 WR 2315 F	(D) 84 WR 2344 F	(E) 84 WR 2345 F
Capacity	9 in.	10 in.	12 in.	15 in.	12 in.	14 in.
Depth of Cut	4¼ in.	4⅜ in.	5⅛ in.	8 3/16 in.	5 in.	7½ in.
Table size	10x11 in.	10x10½ in.	13x13 in.	15x15 in.	15x12 in.	15x15 in.
Bearings	Ball, Bronze	Roller	Roller	Roller	Ball	Ball
Trunnions	Single	Double	Double	Double	Single	Single
Wheel Diam.	9⅜ in.	10⅜ in.	12½ in.	15¾ in.	12⅞ in.	14⅜ in.
Includes Blade	3/16x60 in.	¼x68 in.	¼x78 in.	⅜x104 in.	¼x85 in.	¼x101 in.
Takes Blades	⅛ to ½	⅛ to ⅜	⅛ to ⅜	⅛ to ½	⅛ to ½	⅛ to ½
With saw pulley	4-in. diam.	4-in. diam.	6½-in. diam.	6½-in. diam.	6-in. diam.	8-in. diam.
RECOMMENDED FOR USE WITH:						
Motor	⅓ HP	⅓ HP	⅓ HP	½ HP	⅓ HP	½ HP
V-Belt	44 in.	46 in.	54 in.	56 in.	52 in.	58 in.
Motor Pulley	2-in. diam.	2-in. diam.	2½-in. diam.	2½-in. diam.	4-in. diam.	4-in. diam.
Stand	84 WR 2962M	84 WR 2962M	84 WR 2962M	84 WR 2961M	84 WR 2957K	84 WR 2957K

FOR STANDS TO FIT BAND SAWS, SEE PAGE 25

HANDY HINT: If a crack does not extend across more than 1/6 width of band saw blade, it can be stopped by drilling a small hole at bottom of crack.



Band Saws . . . 9 to 15-Inch Capacity

POWR-KRAFT BAND SAWS 89.95 AND 129.95

HEAVY DUTY. Precision engineered to give accuracy and efficiency in every band saw operation. Compare most favorably with points to be considered on preceding page. Cast-iron frame with one-piece hinged guard, swings open and fastens shut with single knob. Upper wheel mounting separate from main frame.

Large cast-iron table mounted on heavy double trunnions, tilts to 45°. Wheels mounted on four needle type anti-friction bearings. Concave ball bearing roller blade guides above and below table, rotate with blade, eliminate friction and prevent grooving. Built-in work light throws illumination directly on work; complete with bulb and cord. Gray wrinkle finish. See band saw specifications listed in table at bottom of preceding page. Shipped promptly by Freight or Truck.

C 12-IN. POWR-KRAFT BAND SAW. Heavy-duty model. Runs smoothly on needle roller bearings. Deep throat permits cutting to center of 24-in. circle. Cuts material up to 5⅛ in. thick. Height overall 35½ in. Ship. wt. 118 lbs. Shipped from Stock.

84 WR 2314 R—$9.00 Down on Terms; or Cash $89.95

12-IN. BAND SAW WITH ⅓-HP MOTOR. (83 WR 4534 M, Page 26), 2½-in. diam. motor pulley, 54-in. V-belt.

84 WR 2311R—Ship. wt. 142 lbs. $10.50 Dn., Cash $102.85

C 15-IN. POWR-KRAFT BAND SAW. Has all the heavy-duty features listed above, plus greater capacity. Cuts to center of 30-in. circle; easily cuts material up to 8 3/16 in. thick. Height overall 44½ in. Order motor separately below, motor pulley and V-belt from Page 26. Shipped promptly from Factory in Chicago, Ill.; pay Freight from there. Ship. wt. 155 lbs.

84 WR 2315 F—$13 Down on Terms.....or Cash $129.95

½-HP POWR-KRAFT CAPACITOR MOTOR for 15-in. band saw above. See (12), Page 26 for complete description.

83 WR 4576 M—*Mailable*. Ship. wt. 32 lbs..... $25.50

PROFESSIONAL QUALITY HEAVY-DUTY BEAVER BAND SAWS 109.50 AND 164.50

D E Built to meet most exacting professional requirements. Designed by industrial engineers with years of experience in the construction and operation of professional woodworking tools. Precision manufactured to rigid specifications by a Canadian firm which has established an enviable reputation for unsurpassed quality. Preferred by many cabinet makers and in small millwork plants where rugged construction, large output and close tolerances are essential. For the advanced craftsman, or for the hobbyist who wants the finest professional quality band saw available, we strongly recommend Beaver Band Saws.

Large capacity models that can consistently produce at rated maximum capacity. Massive cast construction withstands rugged everyday use, protecting working parts and keeping saw perfectly aligned. Cast aluminum rubber tired saw wheels mounted on double grease-sealed ball bearings, balanced and interchangeable. Upper wheel adjustable for true blade tracking and spring loaded for blade tension. Semi-steel table mounted on cast-semi-steel trunnion tilts 45° to the right, 10° to the left; adjustable angle of tilt indicator, positive stop for returning to true horizontal position. Gray wrinkle finish. Shipped directly to you from Factory Warehouse in Detroit, Michigan. Pay Freight from there. Allow one week extra for Warehouse handling.

(D) 12-IN. BEAVER BAND SAW. Heavy-duty production model. Cuts to center of 24-in. circle, up to 5 in. thick. Grease-sealed double ball bearings. Hardened steel roller and side guides are adjustable. 3-piece cast-iron frame. Machined groove for miter gauge (not included).

6-in. diam. machine pulley of cast semi-steel, machined and balanced to act as flywheel for smoother operation. Completely covered, permitting drive from behind or below. Cast semi-steel table 15x12 in., extends 7½ in. ahead of blade. Size overall 15x22x37½ in. Base size 16x5½ in. With ¼x85-in. saw blade. Order motor separately below; 52-in. V-belt and 4-in. V motor pulley from Page 26. Ship. wt. 90 lbs. For extra blades order from 84 WR 2331K below.

84 WR 2344 F—$11 Down; Cash $109.50

⅓-HP POWR-KRAFT CAPACITOR MOTOR for saw (D). See Page 26 for description.

83 WR 4575 M—Ship. wt. 29 lbs.... $23.85

(E) 14-IN. BEAVER BAND SAW. Cuts to center of 28-in. circle, up to 7½ in. thick. Grease-sealed double ball bearings. Interchangeable upper, lower saw guides have adjustable tilted ball bearing thrust guide, hardened steel side guides. Cast aluminum frame. Rip fence made of cast semi-steel, 18½ in. long, 2½ in. high, can be used on both sides of blade. Both ends lock with single locking lever. Miter gauge graduated 60° with extension stop rods. 8-in. diam. machine pulley, cast semi-steel, machined and balanced to act as flywheel for smoother operation. Drives from below or behind.

Cast semi-steel table 15x15 in., extends 8½ in. ahead of blade. Soft metal insert. Size overall 20¾x 30x45 in. Base size 19½x8½ in. With ¼x101-in. saw blade, miter gauge, rip fence. Order motor separately below, 4-in. diam. motor pulley and 58-in. V-belt from Page 26. For extra blades order from blades per foot, 84 WR 2331K below.

84 WR 2345 F–Ship. wt. 123 lbs. $16.50 Dn., Cash $164.95

½-HP POWR-KRAFT CAPACITOR MOTOR FOR ABOVE. See Page 26 for complete description.

83 WR 4576 M—*Mailable*. Ship. wt. 32 lbs..... $25.50

F WOODCUTTING BAND SAW BLADES. Endless type. ⅛, 3/16, ¼ or ⅜ in. width. 68-in. length mailed promptly from Chicago Factory. *State width, length.*

84 WR 2330—Wt. 8 oz. 60 in. 85c; 78 in. 89c

84 WR 2335 K—Wt. 8 oz. 68 in. length...87c

METAL-CUTTING BAND SAW BLADES. Endless type. ⅜-in. width. Pay postage from Detroit Factory. Mailed promptly. Wt. 8 oz.

84 WR 2332 K—60 in. $1.95; 68 in. $2.10 78 in. $2.25; 101 in. $2.75; 104 in. $2.85

BAND SAW BLADES PER FT. For wood. Made to order; add 35c for each weld. Mailed promptly from Factory near Boston, Mass. *State length.*

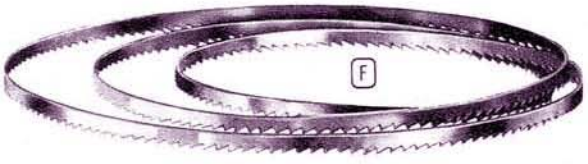
84 WR 2331K—Ship. wt. per ft. 1 to 3 oz.

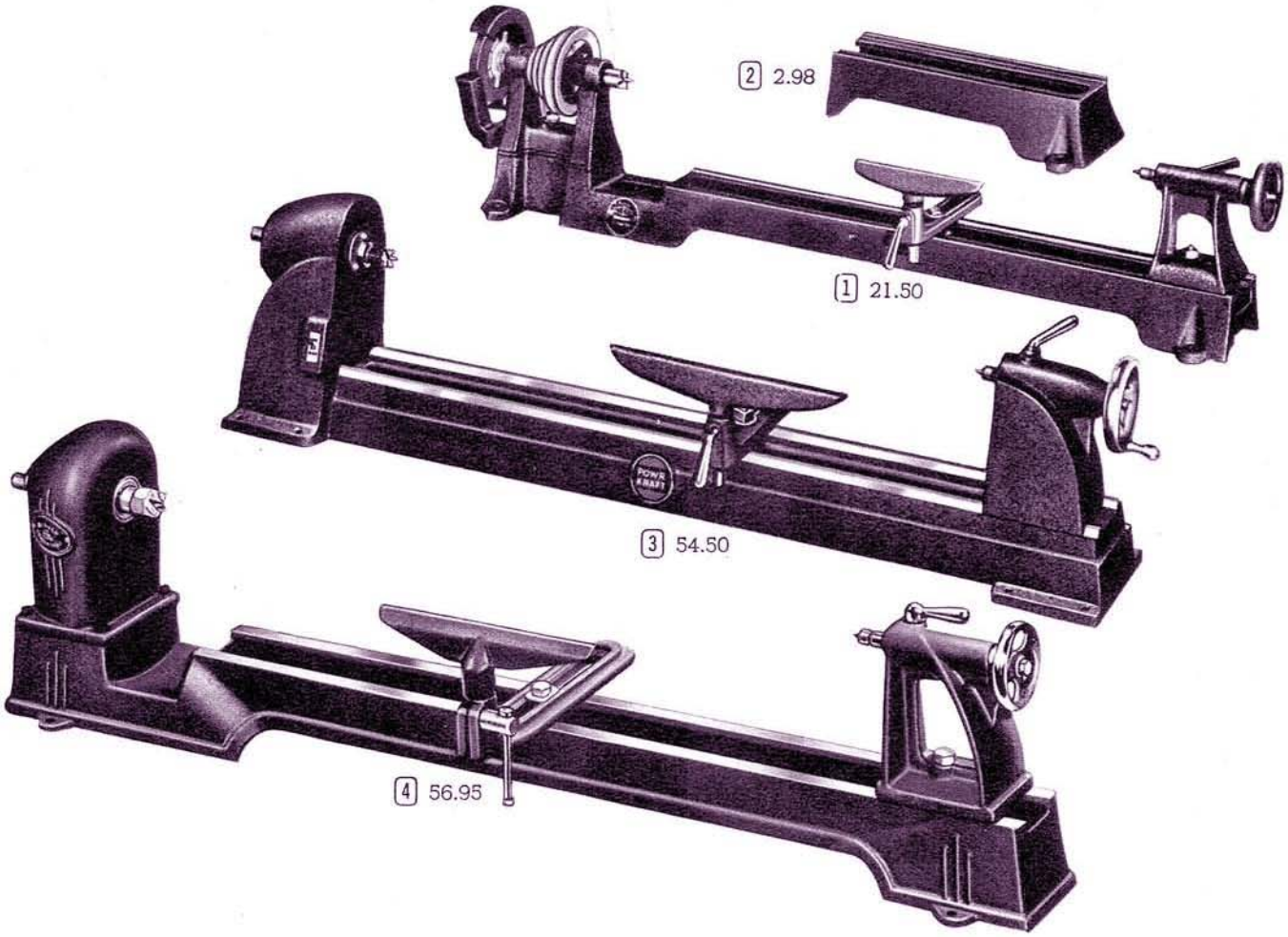
¼ in...12c; ⅜ in....14c; ½ in...16c

⅝ in...19c; ¾ in....20c; 1 in...21c

1¼ in.....27c; 1½ in.....35c

BAND SAW HINT: Do not let grease or oil settle on rubber tires of wheels.





Powr-Kraft, Beaver Lathes . . . 27- to 36-in. Capacity

HOBBYISTS' LATHE 21.50

1 27 IN. BETWEEN CENTERS. Gap bed model with grinding wheel. 10-inch swing over 4-in. gap, 8-in. swing over ways. Machined cast-iron bed, head and tailstock. Drive pulley mounted between self-lubricating bronze bearings; ball bearing takes longitudinal thrust. Adjustable tool rest 6 inches long. 4-step drive pulley gives range of speeds from 775 to 3800 RPM. Includes: ½x4-in. grinding wheel, tool rest, guard mounted on outboard side of headstock. Plain head and tailstock spindles are ½-in. diam. unthreaded. Bed length 37½ in. Gray wrinkle finish. *Mailable.* Ship. wt. 29 lbs.

84 WR 2002 M—Lathe only.....$21.50

84 WR 2000 Y—Lathe above with ⅓-HP split-phase motor (83 WR 4521M on Page 26), 4-step motor pulley and 46-in. V-belt. *Mailable.* Ship. wt. 52 lbs. $4.50 Down on Terms.....Cash $41.15

2 LATHE BED EXTENSION. For lathe (1) above only. Increases between centers capacity from 27 to 38 inches.

84 WR 2011—Ship. wt. 5 lbs.....$2.98

HEAVY-DUTY WOOD LATHE 54.50

3 31 IN. BETWEEN CENTERS. For advanced hobbyist or production shop—designed for convenience of operation. 10-in. swing over bed. Heavier, greater capacity than lathe at left. Every detail of construction engineered to give top performance and extra-long service. ¾-inch 16-thread hollow spindle rides on New Departure ball bearings and self-lubricating bronze bearings. Bed has flat and "V" ways—machined for alignment of spindle and tailstock. Outboard turning possible with face plate listed on opposite page. 12-in. cast-iron adjustable tool rest. No. 1 Morse taper spur and cup center. May be driven from below or behind.

Self-ejecting tailstock center. Guarded headstock, open in rear for belt—4-step machine pulley gives range of speeds from 780 to 3800 RPM. Includes: ½x52-in. "V" belt, built-in toggle switch for wiring to motor, 4-step machine pulley. Cast-iron bed 42½ in. long. Use No. 1 Morse taper accessories on opposite page. Gray wrinkle finish. (Stands on Page 25.) *Not Mailable.* Ship. wt. 71 lbs.

84 WR 2004R—Lathe only .$5.50 Dn., Cash $54.50

84 WR 2014R—Lathe above with ⅓-HP split-phase motor (83 WR 4521M, Page 26), 4-step motor pulley. *Not Mailable.* Wt. 95 lbs. .$72.85

BIG CAPACITY BEAVER LATHE 56.95

4 36 IN. BETWEEN CENTERS. Finest quality professional type lathe for heavy duty production use. Precision-built for long lasting, dependable service. Full 15-in. swing over 3-in. gap, 11 in. over ways; 9½ in. over tool rest. Fully machined ways; one-piece bed; semi-steel construction throughout. Hollow spindle runs smoothly and quietly on grease-sealed ball bearings. Streamlined headstock encloses 4-step V pulley and spindle. Spindle ground for No. 2 Morse taper accessories in front end; threaded ¾-in.-16 left-hand thread on back for outboard turning. With adapter and draw bar for No. 1 Morse taper accessories. Adapter threaded on front end ⅞-in.-14 thread to take spur center, face plate etc. Draw bar prevents slippage of large work. Bed length overall 47¼ inches.

Tailstock takes No. 1 Morse taper accessories, is easily moved to position on ways. Steel barrel housing and friction clamp locks cup center in position. Hand wheel moves cup center 2 in. without moving tailstock. Tool rest base adjusts easily along bed for height and angle with friction clamp.

Includes: draw bar, adapter, spur and cup center, wrench, 4-step motor pulley to fit ½ and ⅝-in. diam. motor shaft, and 46-in. V-belt. Other accessories on opp. page. Shipped promptly from Factory near Detroit, Mich., pay charges from there.

84 WR 2098 K–Ship. wt. 64 lbs. *Mailable.* $6 Down....Cash $56.95

⅓-HP 1725 RPM CAPACITOR MOTOR. (Full description, Page 26).
83 WR 4575 M—For Beaver lathe. Ship. wt. 29 lbs.....$23.85

TOOL STANDS AND LEGS FOR ALL LATHES LISTED ON PAGE 25.

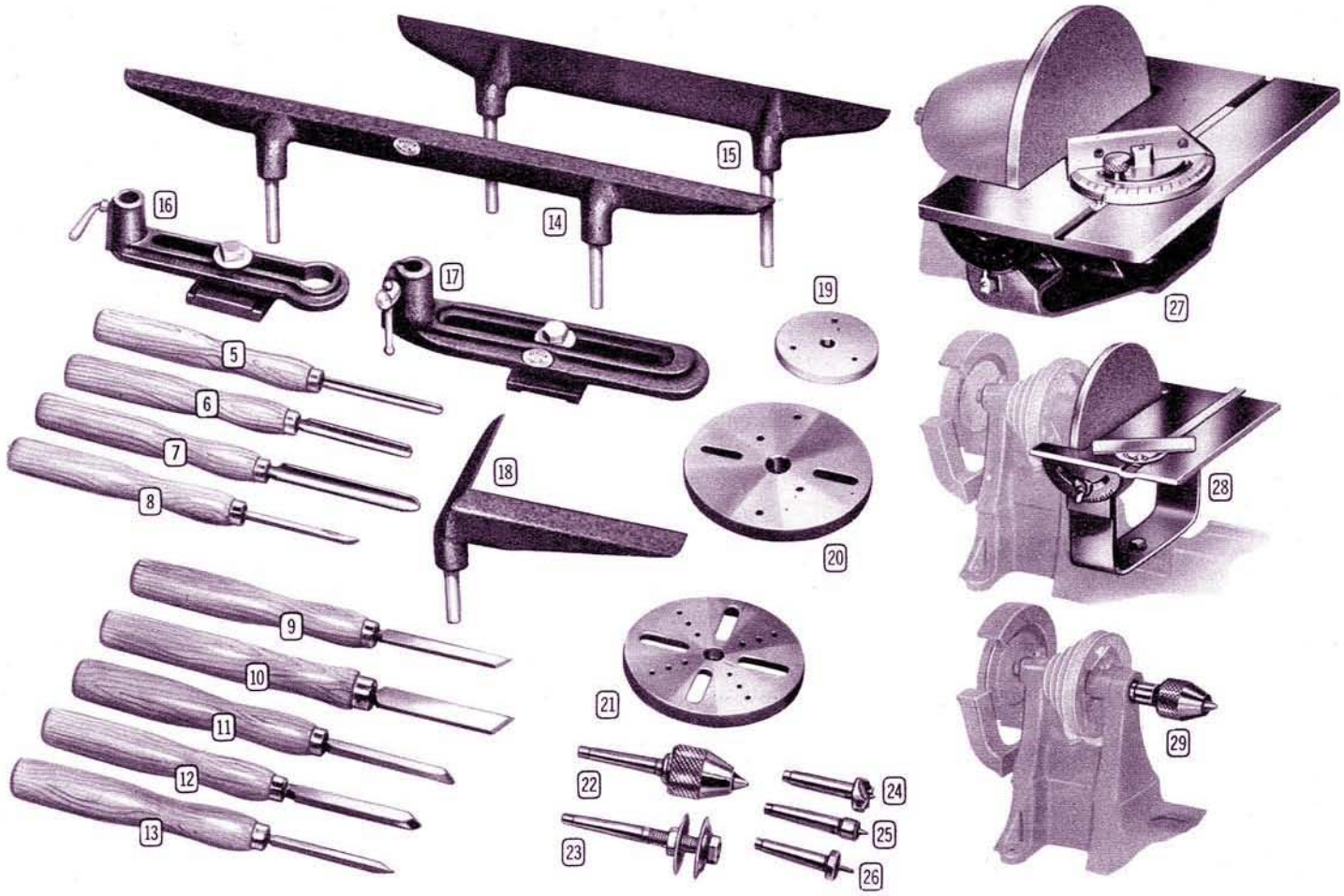
(1) Turning Between Centers

(2) Polishing

(3) Inboard Turning

(4) Outboard Turning

SEE BOTTOM OF OPPOSITE PAGE FOR DESCRIPTION OF THE WOOD LATHE AND ITS OPERATION



Accessories Increase Usefulness of Your Lathe

CHISELS AND TOOL RESTS

5 TO 13 WOOD TURNING CHISELS. Keen-edged crucible steel blades about 4¼ in. long. Wood handles about 8¼ in. long.

(5) 84 WR 2043—¼-in. gouge. Wt. 12 oz.$1.35
(6) 84 WR 2044—½-in. gouge. Wt. 12 oz. 1.45
(7) 84 WR 2045—¾-in. gouge. Wt. 12 oz. 1.59
(8) 84 WR 2046—¼-in. skew. Wt. 12 oz.. 98c
(9) 84 WR 2047—½-in. skew. Wt. 12 oz..$1.15
(10) 84 WR 2048—1-in. skew. Wt. 12 oz... 1.39
(11) 84 WR 2050—Round nose. Wt. 12 oz.. 1.15
(12) 84 WR 2049—Spear point. Wt. 12 oz.. 1.10
(13) 84 WR 2051—Parting tool. Wt. 12 oz.. 1.39

5-Pc. SET. Includes (6), (7), (8), (9), and (13).
84 WR 2052—Ship. wt. 3 lbs.....Set $5.98

SEE CARBIDE TIPPED CHISELS ON PAGE 48.

14 BEAVER TOOL REST. Cast semi-steel. Use with (17) on Beaver lathe (4). ⅝-in. diameter shank. 24 in. long. Double post.
84 WR 2097 K—Ship. wt. 5 lbs.*..... $4.75

15 POWR-KRAFT TOOL RESTS. Cast iron. Fit lathe (3). ⅝ in.-diam. shank. Wts. 3, 4 lbs.
84 WR 2015 K—Single post. 12 in. long*..$1.45
84 WR 2015—Double post. 18 in. long.... 2.59

FACE PLATES, SANDING AND DRILLING ACCESSORIES FOR WOOD LATHES

16 POWR-KRAFT TOOL REST HOLDER. For 18-in. tool rest (15) on lathe (3). For ⅝-in. shank.
84 WR 2016—Ship. wt. 3 lbs. 4 oz.....$1.45

17 BEAVER TOOL REST HOLDER. For ⅝-in. shank. Fits tool rest (14), lathe (4).
84 WR 2099 K—Ship. wt. 5 lbs. 4 oz.*.....$5.45

18 BEAVER RIGHT ANGLE TOOL REST. 3-in. surfaces. ⅝-in. shank diam.
84 WR 2093 K—Ship. wt. 5 lbs. 4 oz.*.....$2.49

19 20 POWR-KRAFT FACE PLATES. For lathes (1) and (3) on opposite page. Accurately machined. Ship. wts.: (19) 2 lbs., (20) 3 lbs.

	Cat. No.	Diam.	Fits Spindle	Price
(19)	84WR2030	3½ in.	½ in. unthreaded	$1.29
	84WR2031	3½ in.	¾ in. 16-thread	2.15
(20)	84WR2033	5⅞ in.	¾ in. unthreaded	2.79
	84WR2034	5⅞ in.	¾ in. 16-thread	2.98

21 BEAVER FACE PLATES. Precision made. FOR OUTBOARD TURNING. ¾ in.-16 LH thread.
84 WR 2092 K—6-in. diam. Wt. 2 lbs. 4 oz. *$3.29

FOR INBOARD TURNING. ⅞ in.-14 RH thread.
84 WR 2091K—6-in. diam. Wt. 2 lbs. 4 oz.*. $3.29
84 WR 2090K—3-in. diam. Wt. 1 lb.*.....2.10

22 TO 26 LATHE ACCESSORIES. For all lathes with No. 1 Morse Taper in headstock or tailstock.

(22) CHUCK CENTER. For straight shank drills to ½ in.
84 WR 2029–For head or tailstock. Ship. wt. 1 lb. 8 oz.$1.95

(23) WHEEL ARBOR. ½-in. diam.—24 thread.
84 WR 2026–Takes to ¾-in. width access. Wt. 12 oz.$1.15

(24) SPUR CENTER. Machined spurs, removable point.
84 WR 2022—For headstock. Ship. wt. 8 oz.....98c

(25) CUP CENTER. With removable point.
84 WR 2024—For tailstock. Ship. wt. 8 oz.....85c

(26) SCREW CENTER. For turning small pieces on lathe.
84 WR 2028–For headstock. Ship. wt. 8 oz.....$1.19

27 10-IN. DIAM. SANDING DISC ATTACHMENT. Fits on headstock of lathe (3) on opposite page. Sturdy cast-iron table tilts to 45°. With miter gauge. Order 10-in. sanding discs 84 WR 2070K separately on Page 36.
84 WR 2068 K–Ship. wt. 26 lbs. *$2.50 Down, Cash $24.95

28 6-IN. DIAM. SANDING DISC ATTACHMENT. Fits lathe (1) on opposite page. Table tilts to 45°, has miter gauge. Order 6-in. sanding discs 84 WR 2672 on Page 36.
84 WR 2066—Ship. wt. 4 lbs. 4 oz.....$4.25

29 ½-IN. DRILL CHUCK ATTACHMENT. For lathe (1).
84 WR 2071—Ship. wt. 1 lb. 4 oz.....$1.89

*NOTE: Suffix K means mailed from Factory. Beaver accessories mailed from Detroit; others from Chicago.

WOOD LATHE—ONE OF THE BASIC WOODWORKING TOOLS

The wood-turning lathe is a link between machine and hand tools, as it combines the art and skill of hand-tool work with the mechanical movement of the lathe. It is one of the most satisfying of all tools for the beginner and expert alike. The lathe can also be used to perform a vast number of wood-working jobs. Although it is used primarily for basic wood-turning of long or short pieces between centers, its usefulness can be increased with the wide variety of accessories. A complete unit, capable of producing finished work, it is a "must" for the woodworker who plans to turn down square stock into cylindrical forms such as table legs, lamp bases and similar projects.

Two capacities must be considered in selecting a Lathe. First is the distance between headstock and tailstock centers which determines the length of stock that can be handled. Second is the swing over bed which determines the diameter of work that can be turned. Most popular sizes for home workshops are 24 to 27 inches between centers (small), 28 to 31 inches between centers (medium), and 32 to 40 inches between centers (large).

FOUR TYPICAL WOODTURNING LATHE OPERATIONS

Four of the many uses of the wood lathe are pictured at bottom of the opposite page. Picture (1) shows turning of spindle between centers of a lathe in making stair balusters, table legs, lamp bases, etc. Picture (2) shows sanding or polishing operation on baluster after completion of turning; Picture (3) shows inboard turning with stock mounted on face plate; small diameter work such as bowls, knobs and saucers can be done in this manner. Picture (4) shows outboard turning for large diameter stock too big for inboard turning; this operation is possible on many lathes.

A wide range of accessories are available to add to the number of operations possible. A wheel arbor placed in the headstock spindle will accommodate various types of grinding wheels, cloth buffing wheels, wire brushes, etc. for a wide variety of grinding and buffing operations. Sanding discs can also be attached to headstock spindle. Horizontal drilling can be done by using a chuck center in the headstock. Extensions are also available to increase working capacity.

The Drill Press

One of the Most Versatile Tools

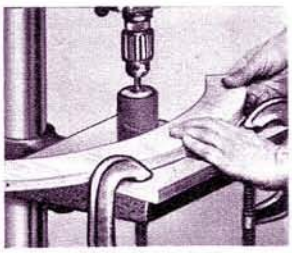
Originally developed for drilling purposes only, the Drill Press has now become a multi-purpose tool capable of dozens of varied workshop operations. Of all single-use power tools, the drill press is most versatile. Multiple-step pulley arrangement gives it an exceptionally wide range of speeds, making it suitable for many types of operations on wood, metal, glass, plastics, etc. Dozens of accessories are available which make it one of the most versatile of workshop tools.

Capacity of Drill Presses is usually expressed in terms of the diameter of the largest circle that can be center drilled, which is twice the distance from chuck to column. Thus a 15-inch drill press has a 7½-inch distance between chuck and column. Bench or Floor Models are available; bench models should be firmly bolted to bench or tool stand between 33 and 36 inches from floor, depending on operator's height.

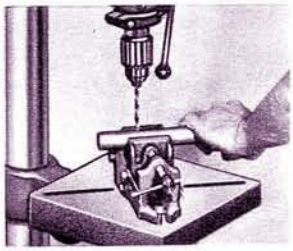
CONSTRUCTION DETAILS. The heart of a drill press is its spindle construction. One of the best designs is a splined drive with free-floating spindle, and an independently mounted drive pulley which prevents belt tension from binding on spindle. Other points to look for when choosing a drill press are the kind of bearings it has and its general strength and rigidity and lack of vibration when running. Ball or roller bearing construction is necessary for heavy duty or continuous use, while bronze bearings give excellent service for light duty or hobbyist's operations. One of the best type of chucks is the Jacobs key chuck, which fits snugly on the tapered end of the spindle. It provides proper gripping power for greatest drilling accuracy. Ball bearing motors must be used on all drill presses, since motors are mounted in vertical position. ⅓ to ½-HP capacitor types are recommended. Tables on many drill presses can be tilted, allowing work to be drilled and tooled at accurate angles, adding to the versatility of the unit.

DOZENS OF USES. Shown at bottom of page are six typical applications of the drill press in actual use: (1) drum sanding of curved surfaces; (2) metal drilling, showing use of drill press vise; (3) rotary surface planing with Barron planer; (4) routing with special bits; (5) shaping (recommended only on drill presses with full ball bearing or roller bearing construction), with one of the many types of molding cutters available; and (6) mortising with the special mortising head, chisel, bit and hold-down attachments. In addition to these there are dozens of other uses including: carving, boring, dove-tailing, countersinking, hole cutting, rabbeting, doweling, rotary filing, polishing and buffing, wire brushing, reaming, rotary grinding, etc. See the drill press accessories listed on Pages 20, 30 and 31.

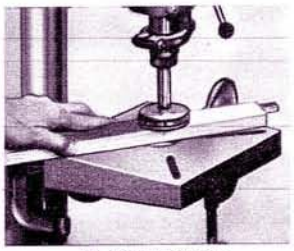
Wide selection of bits are available for drilling. High speed steel bits are used for high RPM drilling in hardened, tempered steels; carbon steel bits are used for low RPM drilling in soft metals and wood.



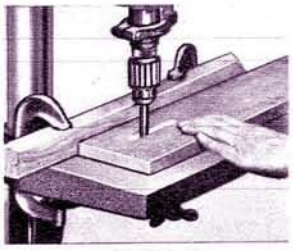
(1) Drum Sanding



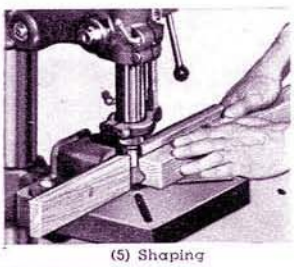
(2) Metal Drilling



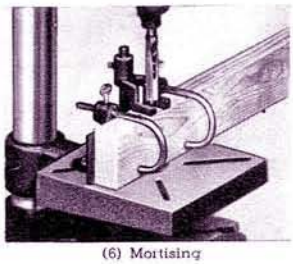
(3) Rotary Planing



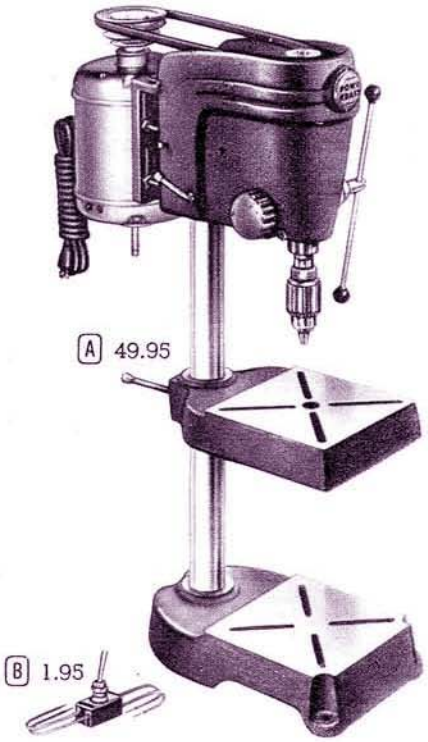
(4) Routing



(5) Shaping



(6) Mortising



Precision-Built Powr-Kraft

12½-IN. POWR-KRAFT DRILL PRESS 49.95

(A) MEDIUM DUTY BRONZE BEARING BENCH MODEL. Accurate to within .005 inches. Will perform all drill press operations described at left (except shaping), when used with proper accessories. Runs smoothly and quietly on oversize self-lubricating bronze spindle bearings; ball bearing absorbs end thrust. Drills center of 12½-inch circle; maximum spindle travel 3¼ in. Sturdy construction throughout with 2-in. diam. column.

Free-floating automotive type involute 9-spline spindle with No. 33 Jacobs tapered end. Spiral coil quill return spring. With 4-step machine pulley. Streamlined design cast-iron head adjusts up and down on machine ground tubular steel column. Adjustable motor mount permits easy movement of motor horizontally and vertically for perfect alignment of machine and motor pulleys. Machined table and base diagonally slotted. Table can be swung out of way, and base used as auxiliary table for extra working capacity; table does not tilt. Gauge shows depth at any position of spindle. With ½-inch Jacobs key chuck. See specifications below. *Not Mailable.*

84 WR 2535 R—Drill Press only. Ship. wt. 82 lbs. $5 Down.....Cash $49.95

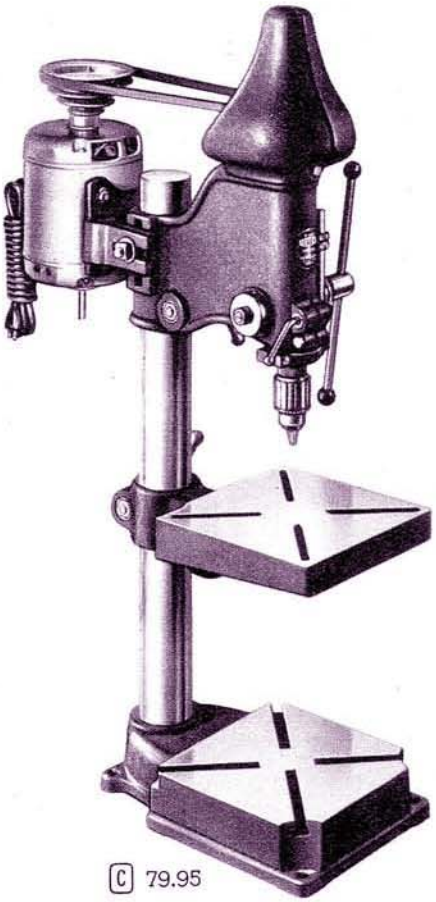
84 WR 2537 R—Drill Press above with ⅓-HP 1725 RPM ball bearing capacitor motor (83 WR 4575M on Page 26), four-step motor pulley and 37-in. "V" belt. Ship. wt. 112 lbs. *Not Mailable.* $7.50 Down.....Cash $74.85

(B) TOGGLE SWITCH. Fits in head of Drill Press (A) only. For use with motors up to 1-HP, 110–120 volts, AC or DC. UL approved.

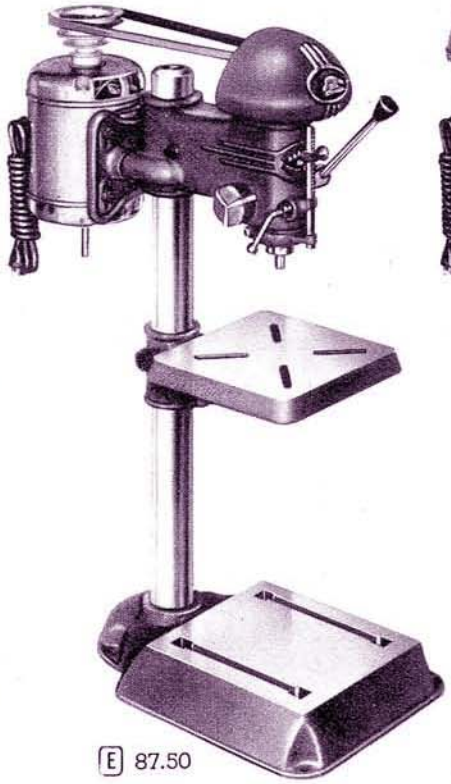
84 WR 2536—*Mailable.* Shipping weight 8 oz.....$1.95

DRILL PRESS SPECIFICATIONS

Catalog Number	(A) 84 WR 2535 R	(C) 84 WR 2533 R	(D) 84 WR 2534 R	(E) 84 WR 2541F	(F) 84 WR 2542 F	(F) 84 WR 2544 F
Drills to center of circle	12½ in.	15 in.	15 in.	12¼ in.	16 in.	16 in.
Spindle travel	3¼ in.	4 in.	4 in.	3¼ in.	4½ in.	4½ in.
Column diameter	2 in.	2¾ in.	2¾ in.	2¼ in.	3 in.	3 in.
Height overall	33 in.	43½ in.	72 in.	35 in.	70 in.	40 in.
Chuck to table	12½ in.	13 in.	43 in.	13¼ in.	39¾ in.	11½ in.
Chuck to base	15½ in.	18½ in.	48½ in.	18¼ in.	45 in.	17¾ in.
Spindle bearings	Bronze	Ball	Ball	Ball	Roller	Roller
Thrust bearings	Ball	Ball	Ball	Ball	Roller	Roller
RPM range	795–3740	590–5000	590–5000	600–4840	600–4840	600–4840
Table tilts	Non-tilt	to 45°	to 45°	360°	360°	360°
Table area, in.	8x8	10x10	10x10	9¼x9¼	12½x11¼	12½x11¼
Base table area, in.	8x8	10x10	12x12	9½x10½	11⅞x11	11⅞x11
Recommended stand (page 25)	84 WR 2962M	84 WR 2962M	None	84 WR 2958K	None	84 WR 2958K
Recommended V-belt	½x37 in.	½x42 in.	½x42 in.	½x44 in.	½x46 in.	½x46 in.
Recommended Motor pulley	84 WR 2895	84 WR 2896	84 WR 2896	Included	Included	Included
Recommended Motor	⅓ HP 1725 RPM Ball Bearing Capacitor (83 WR 4575M, Pg. 26)					



C 79.95

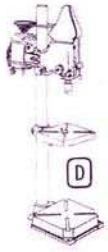


E 87.50

F 152.95

and Professional Quality Beaver Drill Presses

POWR-KRAFT DRILL PRESSES 79.95 (C)



C D HEAVY DUTY BALL BEARING MODELS. Precision built throughout to rigid Powr-Kraft production type specifications. Accurate to .005 inch. Large work capacity make them the favorites of machinists and mechanics for steady production jobs. Run smoothly and vibrationless on grease sealed New Departure Ball Bearings at both ends of spindle. Will perform all operations described on opposite page including shaping. Drill to center of 15-in. circle; maximum spindle travel 4 in.

Free-floating automotive-type six-splined spindle with No. 33 Jacobs tapered end. Spiral coil quill return spring. Cast-iron head adjusts up and down on tubular steel column. Motor mount adjusts horizontally and vertically. Table tilts up to 45° each direction. Adj. depth gauge and stop screw. With 4-step machine pulley and ½-in. Jacobs key chuck. See specifications on opposite page. *Not Mailable.*

C 15-IN. BENCH MODEL DRILL PRESS. Ship. wt. 110 lbs.
84 WR 2533 R—$8 Down.....Cash $79.95

BENCH MODEL DRILL PRESS WITH MOTOR. Includes ⅓-HP Ball Bearing Capacitor Motor (83 WR 4575M Page 25), 4-step motor pulley and 42-in. V-belt.
84WR2539R-Ship. wt. 139 lbs. $10.50 Dn.; Cash $104.75

D 15-IN. FLOOR MODEL DRILL PRESS. Ship. wt. 126 lbs.
84 WR 2534 R—$9 Down.....Cash $89.95

FLOOR MODEL DRILL PRESS WITH MOTOR. Includes ⅓-HP Ball Bearing Capacitor Motor (83 WR 4575 M on Page 26), 4-step motor pulley and 42-in. "V"-belt.
84WR2540R-Ship. wt. 155 lbs. $11.50 Dn.; Cash $114.75

HANDY TABLE OF DRILLING SPEEDS

RPM'S listed below for use with high-speed drills; divide RPM by 2 when using carbon steel drills.

Drill Diam.	Alum. Brass	Cast Iron	Mild Steel	Mall. Iron	Tool Steel	Cast Steel
⅛ in.	9170	4584	3056	2745	1528	1220
¼ in.	4585	2292	1528	1375	764	610
⅜ in.	3056	1528	1019	915	510	407
½ in.	2287	1146	764	636	382	305

BEAVER DRILL PRESSES 87.50 (E)

E F HEAVY-DUTY PRODUCTION MODELS. Professional quality tools built for continuous production use. Meet most exacting demands of skilled workmen where heavy-duty performance and extremely close tolerances are essential. Will do all operations described on opp. page when used with proper accessories. Choice of 3 models.

All Beaver Drill presses have chrome-nickel alloy steel six-splined spindles. Timken tapered roller bearings on 16-inch models and Ball Bearings on 12¼-inch model on spindle and pulley mounting, give smooth, vibration-free operation. Spindle end has No. 33 Jacobs taper. Cast semi-steel heads have adjustable motor brackets, mounting rod recesses and friction clamps on column and quill. Machined ground cast semi-steel table and base surfaces are slotted to hold jigs and clamps. Tables rigidly mounted on knee bracket, tilt to 180° in either direction; automatically sets at level position with pin. Order Jacobs Safe-Lock chucks, motors, and V-belts separately. Dark Gray wrinkle finish. Shipped from Factory Warehouse in Detroit, Mich.; pay freight from there. Allow one week extra time.

E 12¼-INCH BALL BEARING MODEL. Newly designed bench model has all Beaver professional quality features described above. Drills to center of 12¼-in. circle; spindle travel 3¼ in.; column diam. 2¼ in. Spring operated quill return control. Gauge shows depth at any position of spindle. With 4-step machine pulley and matching motor pulley (½ or ⅝-in. bore). See opposite page for table of specifications. Ship. wt. 90 lbs.
84 WR 2541F—$9 Down...Cash $87.50

F 16-INCH ROLLER BEARING MODELS. Large capacity production type drill presses in choice of Bench or Floor Models. Have all professional quality Beaver features above. Drills to center of 16-in. circle; spindle travel 4½ in.; column diameter 3 in. Adjustable friction scale for quill return control; adjustable stop for doing duplicate drilling. Convenient 3-lever handle feed control. 5-step machine pulley with matching motor pulley (½ or ⅝-in. bore) included. Upper belt guard removable for changing speeds. See specifications on opposite page. 10% Down.
84 WR 2542 F—Floor Model (shown). Wt. 210 lbs...$152.95
84 WR 2544 F—Bench Model. Ship. wt. 185 lbs.... 134.95

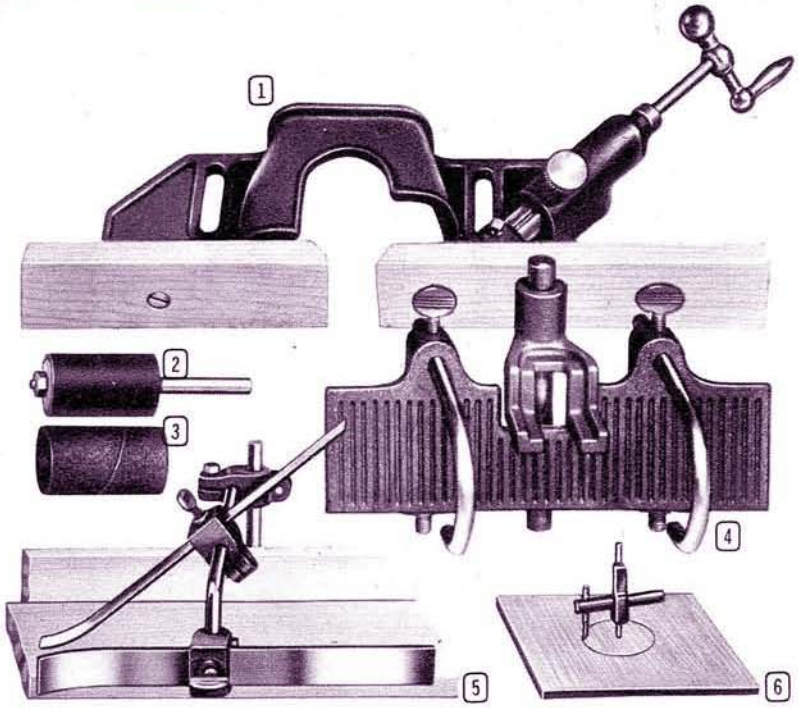
½-INCH CAPACITY JACOBS SAFE-LOCK CHUCK with key. Fits Beaver Drill Presses above.
84 WRP 2589 K—Mailed promptly from Factory near Detroit, Michigan. *Postpaid*.....$9.00

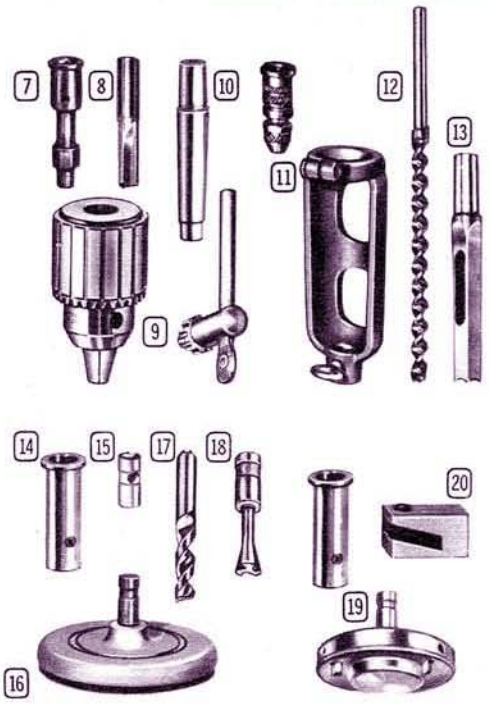
83 WR 4575 M—⅓-HP Capacitor Motor for above. (See Pg. 26). Wt. 29 lbs. Mailed from Stock .. 23.85

BEAVER MORTISING AND HOLD-DOWN ATTACHMENT 19.98

G 19.98

G Adds to the versatility of 12¼ and 16-inch Beaver drill presses. Ruggedly constructed throughout. Complete with adjustable fence, hold-down shoes and hold-in rods. Clamps to table of drill press—hold-down shoes hold work flat on table. Mortising head completely guards all rotating parts from operator in front of drill press. Fence adjusts for different widths of stock. When base has been lined up and secured to table it is necessary to loosen only one thumb screw and fence will slide smoothly in or out ... always remaining square to chisel; saves time and work when changing from one stock width to another. Hold-down shoes easily adjustable on two vertical rods ... quickly clamp in position. Hold-in rods universally adjustable for various stock widths. Order mortising chisels and bits separately on next page. Mailed promptly from Factory near Detroit, Michigan.
84 WR 2543 K—Dark gray wrinkle finish. Ship. wt. 16 lbs.....$19.98





Powr-Kraft and Barron Drill Press Accessories

POWR-KRAFT DRILL PRESS ACCESSORIES FOR INCREASED EFFICIENCY 98c TO 8.75

[1] SHAPER GUARD AND FENCE. Attaches to diagonal slots of drill press tables. Adapts drill press for straight cut shaping. One face adjustable forward or back with micrometer accuracy.
84 WR 2560—Hardwood faces. Wt. 4 lbs. $8.75

[2] SANDING DRUMS. 3-in. sanding area. Expanding rubber type for easy sleeve removal and replacement. 1⅝-in. size has adjusting nut. Ship. wts. 1 lb. 4 oz. and 2 lbs.
84 WR 2548—1⅝-in. diam.—½-in. shank. . . . $1.35
84 WR 2549—2 5/16-in. diam.—13/32-in. shank . . 2.19

[3] SANDING SLEEVES. For Drums above. *State grit.*
FOR 1⅝-IN. DIAM. DRUM. Ship. wt. 12 oz.
84 WR 2564—Fine, Medium or Coarse. . . . 6 for 98c
FOR 2 5/16-IN. DIAM. DRUMS. *Postpaid.*
84 WRP 3133 X-Fine, Med., Coarse or Asstd. 6 for $1.10

[4] MORTISING HOLD DOWN ATTACHMENT. Fastens to drill press table. Holds work securely, insuring straight mortising cuts. Adjusts for stock from ⅞ to 4 in. thick. Hooks adjust to 3½ in. wide. Fence 9 15/16 by 3 inches.
84 WR 2538—Shipping weight 6 lbs. 8 oz. . . . $3.98

[5] HOLD DOWN ATTACHMENT. Clamps to table. Springs hold work flat and against fence. Long bars adjust to width and depth of work.
84 WR 2480—Ship. wt. 4 lbs. $4.35

[6] HANDY HOLE CUTTER. Hardened and tempered tool steel cutter. Accurately cuts round holes ⅞ to 4 inches in diameter in steel, wood, plastic. Combination square and round shank for use in bit brace, hand, electric or breast drill.
84 WR 3656 X—Ship. wt. 12 oz. $1.59
EXTRA BLADE. For hole cutter (6) above.
84 WR 3657 X—Ship. wt. 2 oz. 35c

[7] SHAPER CUTTER ADAPTERS. Fit Powr-Kraft and Beaver Drill presses (except 84 WR 2535 Powr-Kraft press). Ship. wt. ea., 4 oz.
84 WR 2558—Fits 5/16-in. bore shaper cutters . $1.45
84 WR 2559—Fits ½-in. bore shaper cutters . . 1.49

[8] SHOPSMITH ROUTER BITS. High-speed tool steel, hardened and tempered, with precision ground cutting edges. ½-in. diam. shanks. *State* ¼, 5/16, ⅜ or ½ inch cut.
84 WRP 3136 X—*Mailed Postpaid*. . . . . Each $1.45

[9] JACOBS DRILL CHUCK. Jacobs No. 33 taper. Fits all Powr-Kraft Drill Presses. Has 0 to ½-in. capacity. With chuck key.
84 WRP 2550—*Mailed Postpaid* $8.00

[10] JACOBS ARBOR. Fits chuck (9) above. One end is Jacobs 33 Taper, other end is No. 2 Morse Taper. Mailed promptly from Factory in Chicago.
84 WRP 2551K—*Mailed Postpaid*. $1.00

[11] MORTISING HEAD AND CHUCK. Converts Powr-Kraft drill presses for mortising. Special bits drill round hole, hollow chisel cuts corners square. Head fits on quill of drill press; chuck replaces regular Jacobs chuck, holds bits. Order chisels and bits separately below.
84 WR 2555—Fits 12½-in. Drill Press (A) on Page 18 and old No. 2530. Ship. wt. 4 lbs. $3.98
84 WR 2556—Fits 15-in. Drill Presses (B) and (C) on Page 19. Ship. wt. 4 lbs. $4.15

[12] SHOPSMITH MORTISING BITS. Tempered tool steel. Use with hollow chisels (13) below. ¼, 5/16, ⅜ or ½-in. sizes. *State size wanted.*
84 WRP 3135 X—*Mailed Postpaid*. . . . . Each $1.85

[13] SHOPSMITH MORTISING CHISELS. Tempered tool steel. Use with (11) and (12) above. ¼, 5/16, ⅜ or ½-in. sizes. *State size wanted.*
84 WRP 3134 X—*Mailed Postpaid*. . . . Each $3.50

DRILLING LUBRICATION HINT

No. 10 grade motor oil is a good all-'round lubricant for drilling jobs. For better results use the following lubricants: tool steel, turpentine or kerosene; mild steel, lard oil; aluminum or alloys, kerosene; die-castings, dry or kerosene; brass, dry or paraffin oil; cast iron, dry or air blast.

BARRON ACCESSORIES 45c TO 11.50

Nationally known fine quality Barron Accessories add versatility to your drill press. Items with Catalog Number ending with "K" are mailed promptly from Factory near Detroit, Mich.

[14] BARRON DRILL PRESS SPINDLE ADAPTER. Fits 33 taper spindle. For side thrust accessories.
84 WRP 2585 K—½-in. inside diam. *Postpaid*. . $1.25

[15] GRADUATED SLEEVES. ½-in. outside diam. Fit (14). Inside diameters ⅛, 3/16, ¼, 5/16, ⅜, 7/16 in. for holding straight shank tools of same diam.
84 WRP 2586 K—*State size. Postpaid*. . . . . Each 45c

[16] BARRON ROTARY SURFACE SANDER. ½-in. shank. Thick sponge rubber pad bonded to housing. 4-in. diam. 20 assorted discs included.
84 WRP 2583 K—*Mailed Postpaid* $5.95

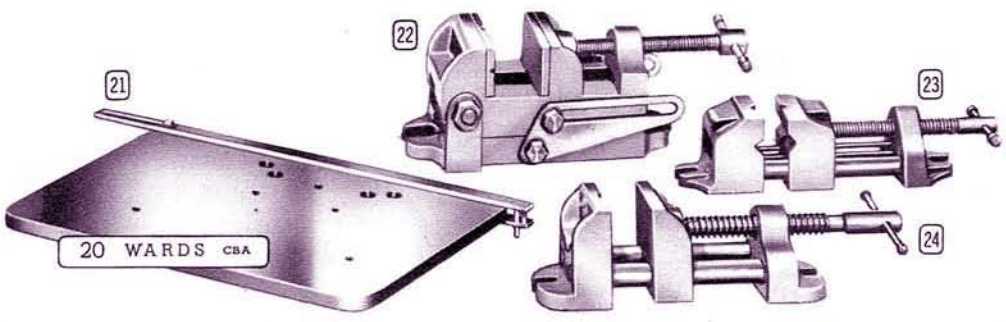
[17] BARRON ROUTING AND ROUND END MORTISING BITS. Shank and cutting flutes are same diam. *State size. Mailed Postpaid.*
84 WRP 2579—⅛ in., $1.50; 3/16 in., $1.65; ¼ in., $1.90; 5/16 in., $2.00; ⅜ in., $2.30; ½ in., $2.65

[18] BARRON DOVETAIL CUTTER. ½-in. diameter. For producing male and female dovetails.
84 WRP 2580—½-in. shank. *Postpaid* $2.30

[19] BARRON ROTARY PLANER. Fits drill presses with Jacobs 33 taper spindles. Cast aluminum and steel cutter body 3-in. diam. Includes drill press spindle adapter with Jacobs 33 taper to replace chuck. Width of cut about 2¼ in.
84 WRP 2578—*Mailed Postpaid* $7.50
EXTRA LONG PLANER BLADES. Fit (19) above.
84 WRP 2582 K—*Postpaid.* Lgth. 1¼ in. .3 for $2.75

[20] PLANER BLADE HOLDER. Holds blades at correct angle for sharpening. Die-cast metal.
84 WRP 2581K—*Mailed Postpaid*. 75c

[21] BARRON AUXILIARY DRILL PRESS TABLE. Fits all standard drill press tables. All aluminum table with steel clamping fence. Blanchard ground for surface accuracy. Won't warp or rust.
84 WRP 2584 K—Size 13x18 in. *Postpaid*. $11.50

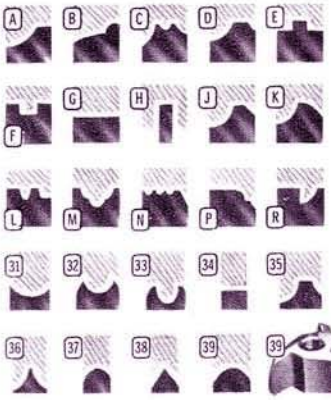


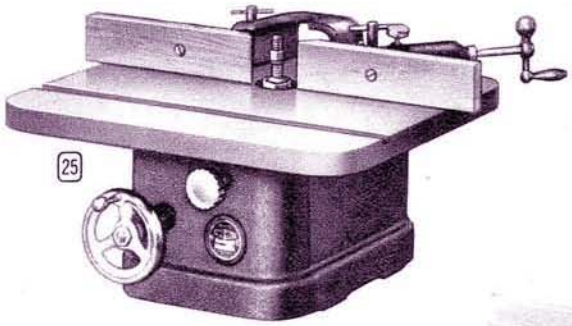
[22] TO [24] DRILL PRESS VISES. For round or irregular shaped objects. Cast iron.

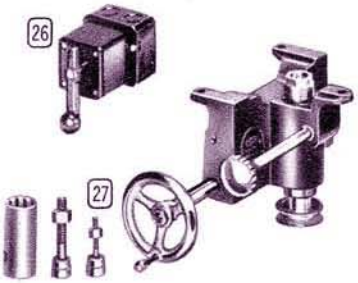
(22) PALMGREN TILTING ANGLE VISE. For production work. Steel jaws. 2½ in. wide, 17/16 in. deep, open to 2½ in. Tilts to 90°.
84 WR 2596—Ship. wt. 10 lbs. $7.25

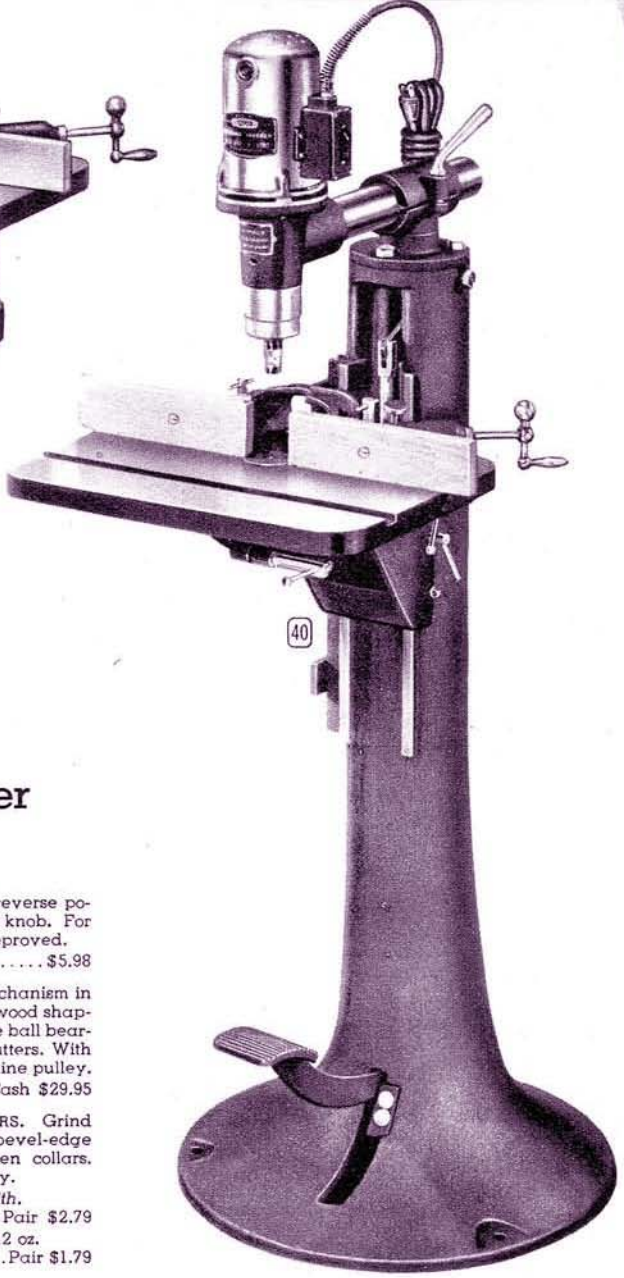
(23) LIGHT DUTY VISE. Jaws 2⅜ in. wide, 15/16 in. deep, open to 2⅝ in. Base 8 in. long.
84 WR 2563—Ship. wt. 5 lbs. $2.59

(24) HEAVY DUTY VISE. Fully machined. Jaws 3 in. wide, 1⅝ in. deep, open to 3¼ in.
84 WR 2561—Ship. wt. 6 lbs. 8 oz. . . . $5.89









Powr-Kraft Wood Shaper and Router

HIGH SPEED PRECISION-BUILT PRODUCTION SHAPER 64.50

25 BALL BEARING MODEL. Takes 5/16 and 1/2-in. bore shaper cutters. Cuts moldings and grooves on edge, sides of straight or curved stock. Makes 24,750 cuts per minute at 8250 RPM spindle speed. New Departure ball bearing spindle, 1/2-in. diam., travels 1 in. 1 5/8 in. diam. quill. Micrometer spindle adjustment—one turn of wheel moves spindle 1/20 in. Self-centered, tapered adapter keyed to spindle, operates in both directions. Micrometer adjustment controls cutting depth. Cast-iron table 14x18 in. Size overall 19 1/2x19 1/2x11 in. With guard fence, wrench, starting pin, 5/16 and 1/2 in. cutter adapters, 2 1/4-in. diam. machine pulley. Wt. 73 lbs. *Not Mail.*

84 WR 2450 R—$6.50 Down.....Cash $64.50

84 WR 2492 R—Shaper with 1/2-HP high-speed capacitor motor (83 WR 4584M on Page 27), 5-in. diam. "V" motor pulley, 31-in. "V" belt. Ship. wt. 101 lbs. $9.50 Down.....Cash $94.75

26 REVERSING SWITCH. On, off and reverse positions. Bakelite case and lever knob. For motors to 1-HP, 110-500-V. AC. UL Approved.

84 WR 2491—Ship. wt. 12 oz.....$5.98

27 SHAPER MECHANISM. Same as mechanism in (25) above. For making your own wood shaper. Spindle mounted in New Departure ball bearings. For 1/2 or 5/16-in. bore shaper cutters. With adapters, wrench, 2 1/4-in. diam. machine pulley.

84 WR 2451—Ship. wt. 20 lbs. $3 Down..Cash $29.95

28 SPLIT SHAPER KNIVES, COLLARS. Grind knives to profile required. Two bevel-edge knives 2 1/8 by 3/16-in. clamp between collars. Mailed promptly from Chicago Factory.

KNIVES. Ship. wt. pair, 6 oz. *State width.*

84 WR 2477 K—1/2 in. Pr. $2.19; 1 in. Pair $2.79

COLLARS. 1/2-in. bore. Ship. wt. pair, 12 oz.

84 WR 2478 K—1 3/4-in. diam.....Pair $1.79

SHAPER ACCESSORIES

29 SHAPER COLLARS. Mount with shaper cutters to control depth of cut. Sets contain assorted thicknesses.

84 WR 2467—Powr-Kraft 5/16-in. bore. Ship. wt. 2 oz..Set of 6..89c

84 WRP 3139 X—Shopsmith 1/2-in. bore. *Postpaid*...Set of 4..$1.45

30 SHOPSMITH 1/2-IN. BORE SHAPER CUTTERS. Use on shapers, Shopsmith or drill presses. Alloy steel. 1-in. maximum width cut. 1 3/4-in. diam. Proper heel clearance prevents burning, eliminates drag. Cutting edges have correct rake angle for true shaving cut. *State Profile Letter (A) to (R) pictured above.*

84 WRP 3138 X—*Mailed Postpaid.* Each.....$1.95

31 TO 39 POWR-KRAFT 5/16-IN. BORE SHAPER CUTTERS. Special alloy steel, heat treated, tempered. Use on shaper, Shopsmith or drill press with 5/16-in. shaping adapter. Ship. wt. each, 3 oz. *State Catalog Number, width, diameter.*

Catalog Number	Width In.	Diam. In.	Price Each	Catalog Number	Width In.	Diam. In.	Price Each
(31) 84 WR 2455	*.177	.95	$1.25	(35) 84 WR 2459	*.442	1.25	$1.25
(31) 84 WR 2455	.442	.95	1.25	(36) 84 WR 2461	.344	1.24	1.25
(32) 84 WR 2456	*.442	1.03	1.25	(37) 84 WR 2462	.260	1.20	1.25
(33) 84 WR 2457	*.388	1.16	1.25	(38) 84 WR 2463	*.177	1.12	1.25
(34) 84 WR 2458	*.125	.95	1.25	(39) 84 WR 2460	*.354	1.09	1.25
(34) 84 WR 2458	.250	.95	1.25	(39) 84 WR 2460	.442	1.13	1.25
(34) 84 WR 2464	1.00	1.25	1.98				

7-PIECE SHAPER CUTTER SET. 5/16-in. bore. Includes 1 each of cutters marked (*) in table above, plus set of 6 assorted collars.

84 WR 2465—Shipping weight 1 lb.....Set $7.50

24-PIECE SHAPER CUTTER SET. 5/16-in. bore. With set of assorted shaper collars. Includes 1 each of cutters in table above, plus: (31) .264 x .95 in.;(31) .354 x .95 in.; (32) .221 x .994 in.; (33) .303 x 1.09 in.; (34) .156 x .95 in.; (34) .187 x .95 in.; (36) .282 x 1.18 in.; (37) .194 x 1.13 in.; (38) .282 x 1.21 in.; (39) .177 x 1.02 in.; (39) .264 x 1.06 in.

84 WR 2466—Ship. wt. 1 lb. 6 oz. $3 Down.....or Cash $27.50

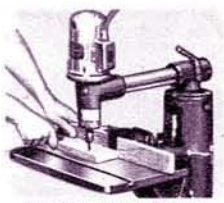
POWR-KRAFT COMBINATION ROUTER-SHAPER-CARVER 287.50

40 COMPACT 3-IN-1 UNIT. Ideal for cabinet and carpenter shops, furniture factories and model makers—will work plastics and aluminum as well as wood. Can be adapted to many jobs (see views below). Changes positions in 30 seconds. Frame and table are heavy gray iron castings. 18x14-in. table has machined slot for miter gauge (not included). Foot pedal raises or lowers table 1 3/8 in. per stroke—table moves up and down 8 1/2 inches on machined, dovetailed ways. Head swivels to allow free movement for carving. With carving cutter spindle, threaded 3/8-inch, 24 thread; fits standard carving cutters. Lock under table fastens motor to table for shaping. Chuck holds shaping adapter close to front bearing for added support to produce smooth cuts. Lock on pedal slot holds table in raised position for routing. With 6 guide pins for duplicate routing or veining.

General Electric universal motor operates on 115-volt, AC or DC, 60-cycles or less. Develops 1200 watts maximum output at spindle (746 watts equal 1 HP). No-load spindle speed 20,000 RPM. Motor and spindle are ground together—balanced and supported by four New Departure precision ball bearings to insure smooth operation. Propeller fan keeps working parts cool. Motor mounted on end of 2x14-in. adjustable steel arm; may be easily swiveled or turned in any direction.

Standard equipment includes: collet chuck for 1/4, 5/16, 3/8 and 1/2-in. shank router bits; carving spindle; shaper adapters for 5/16 and 1/2-in. bore cutters; 6 guide pins; wrenches; base; table; shaper fence; motor, cord and switch. Overall size: 23 1/2x55 in. Shipped promptly from Factory in Chicago; pay shipping charges from there.

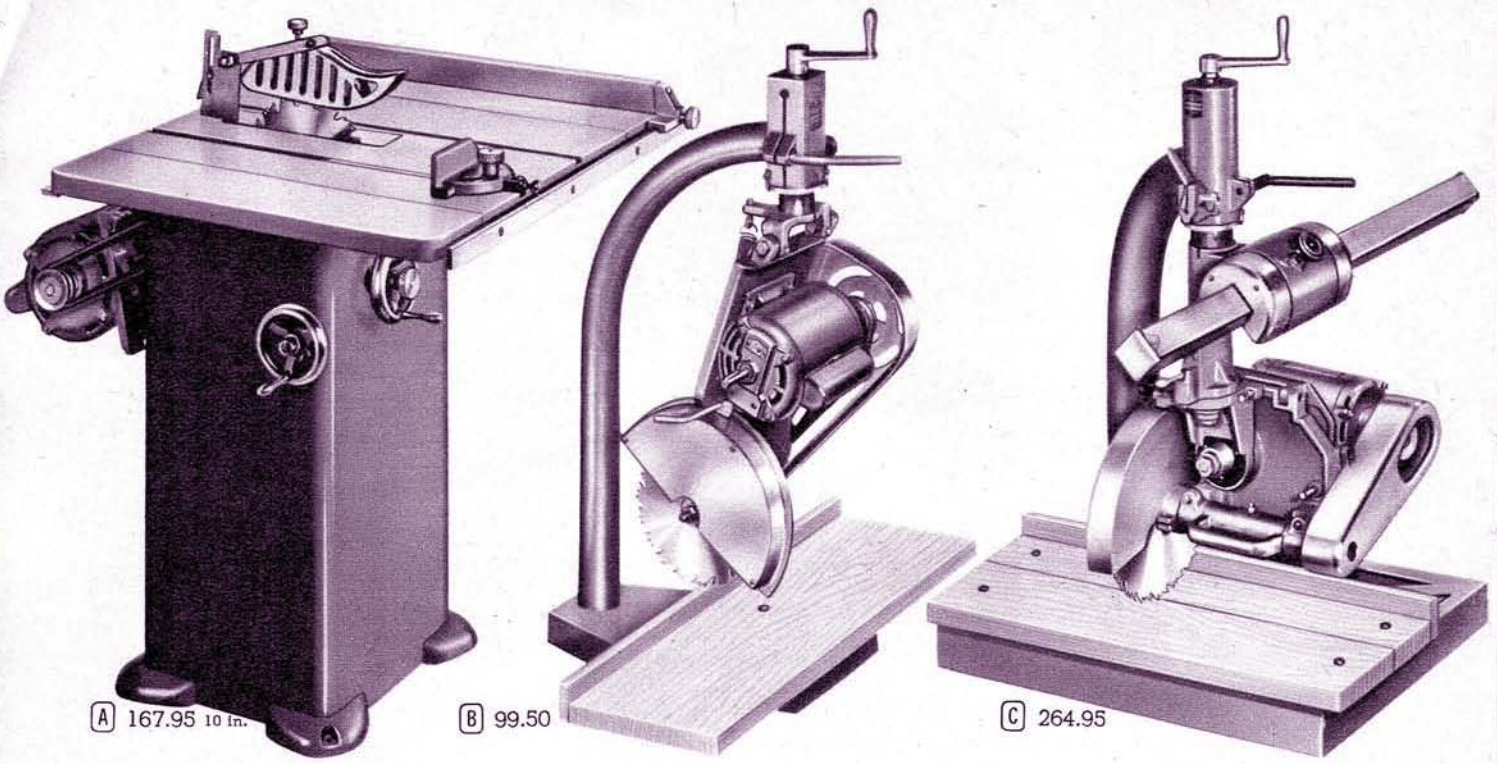
84 WR 2454 F—Ship. wt. 274 lbs. *Not Mailable.* $29 Down.....or Cash $287.50



Has Speed and Power For Routing

Handles Heavy or Light Shaping Operations

Intricate-Carving



Powr-Kraft Floor Model, Swing and Radial Saws

FLOOR MODEL SAWS 167.95 & 229.95

(A) PRODUCTION TILTING ARBOR MODELS. Built to withstand heavy production work. Will crosscut, rip, miter, bevel, cut-off, double miter, angle rip and dado. Entire blade, ball-bearing arbor and motor tilt up to 45° as single unit on cast-iron trunnions—table remains level. Hand wheels control depth of cut and tilt. Motor bracket fits Standard ½ to 2-HP motors. Miter gauge adjusts to 60°, has stops at 90° and 45°. With combination crosscut-rip-miter blade. Height to table 34¼ in.

10-IN. MODEL. Cuts to depth of 2⅞ in. vertically, to 2¼ in. at 45°. Cast-iron main table 20 by 27 in.; with extensions 32 by 27 in.; extends 12⅜ in. in front of blade. ⅝-in. diam. arbor. With 2¼-in. diam. "V" saw pulley, 2½-in. diam. (⅝-in. bore) motor pulley and 42-in. V-belt. Shipping weight 250 lbs.

84 WR 2272 F—$17 Down .....Cash $167.95

1-HP, 3450 RPM CAPACITOR MOTOR. (Pg. 27.)
83 WR 4598 M—Ship. wt. 37 lbs. $42.95

12-IN. MODEL. Cuts to depth of 4¼ in. vertically, to 2¾ in. at 45°. 1-pc. smooth ground cast-aluminum table 31 by 34 in., extends 14½ in. in front of blade. ¾-in. diam. arbor. With double 2¼-in. diam ."V" saw pulley, double 2½-in. diam. (¾-in. bore) motor pulley, two 48-in. "V" belts. Ship. wt. 265 lbs.

84 WR 2277 F—$23 Down. .....Cash $229.95

1½-HP, 3450 RPM CAPACITOR MOTOR.(Pg. 27).
83 WR 4599 M—Ship. wt. 56 lbs..... $67.95

BALL BEARING SWING SAW 99.50

(B) 10 INCH PRODUCTION MODEL. Especially designed for contractors, carpenters, lumber yards, etc. For cut-off, mitering, grooving, ripping and dado work. Shaping also possible in vertical position. New Departure ball bearings, grease-sealed to protect them from dirt and sawdust. Pull saw forward to cut . . . spring action returns it to original position. Maximum depth of cut 2½ by 12 in. Index grooved at 90° cut off, 45° right and left and 90° rip positions. Positive lock holds at any angle.

Vertical depth adjustable to 4 inches by means of screw handle at top of saw. ⅝-in. diameter arbor runs on New Departure ball bearings. 10-in. combination crosscut-rip-miter blade, 2½-in. diameter saw pulley, 2½-in. diameter motor pulley (⅝-in. bore) and 36-in. "V" belt. Lightweight cast-aluminum removable belt and blade guard. Strong, rigid, tubular steel column support. Wood work table mounted on steel base.

Work table size 34¾ by 11½ by 1½ in. thick; steel base size 12 1/16 by 21½ in. Height overall 45½ in. Use 6, 8, or 10-inch x ⅝-inch bore dado heads listed on Page 7. Shaper heads and knives listed on Page 6. Shipping weight 115 lbs.

84 WR 2279 F—$10 Down.... .or Cash $99.50

1-HP BALL BEARING CAPACITOR MOTOR FOR ABOVE. 3450 RPM (For description see Page 27).
83 WR 4598 M—Ship. wt. 37 lbs..... $42.95

BALL BEARING RADIAL SAW 264.95

(C) 12-INCH PRODUCTION MODEL. Has wide range of uses . . does ripping, beveling, compound mitering, crosscutting, bevel ripping, dadoing, mitering, shaping, etc. Easily handles joists, rafters, studding, bracing, concrete forms, foundations, scaffolding, dadoes for beams, sills, bins, shelves, partitions, platforms, crating, etc.

Cuts 4⅝ inches deep through 22 inches in vertical position; 3 inches deep through 14 inches at 45 degrees on compound cuts. Travel of arm 29 in. Rips to center of 58-in. material. Cut-off capacity 4½ in. by 22 in. or 1 in. by 27 in. Swings 45 degrees in either direction . . . tilts to 90 degrees for shaping. Blade raises and lowers 6 in.

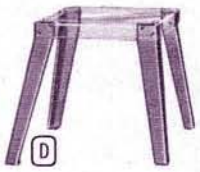
Radial arm is hardened and tempered, precision ground, square steel tubing. Runs on 8 grease-sealed ball bearings. Steel column. Angle-iron platform with 1½x11½x34¾ in. adjustable wood table. ¾-in. saw arbor in ball bearing housing, Strong, lightweight cast aluminum motor base, 10⅛ by 9½ in. Size overall: 32 in. wide, 44 in. high.

Includes: 12 in. combination crosscut-rip-miter saw blade, double 2½-in. diam. by ¾-in. arbor motor pulley, double 2¼-in. diam. saw pulley, two 25-in. "V" belts.

84 WR 2278 F—Ship. wt. 275 lbs. $26.50 Down, Cash $264.95

1½-HP, 3450 RPM BALL BEARING MOTOR FOR ABOVE (see Page 37 for full description).
83 WR 4599 M—Shipping weight 56 lbs..... $67.95

(D) STAND. For saw (C) above only. Four heavy sheet metal legs (about ⅛ inch thick) attach to angle iron platform of Radial Saw. Height of legs 29½ in. Elevates saw about 26½ inches.
84 WR 2264 K—Wt. 38 lbs..$13.65



SAWS ABOVE SHIPPED FROM FACTORY IN BALTIMORE, MD., CHICAGO, ILL., OR LOS ANGELES, CALIF. STAND FROM LOS ANGELES. ALLOW 10 DAYS.

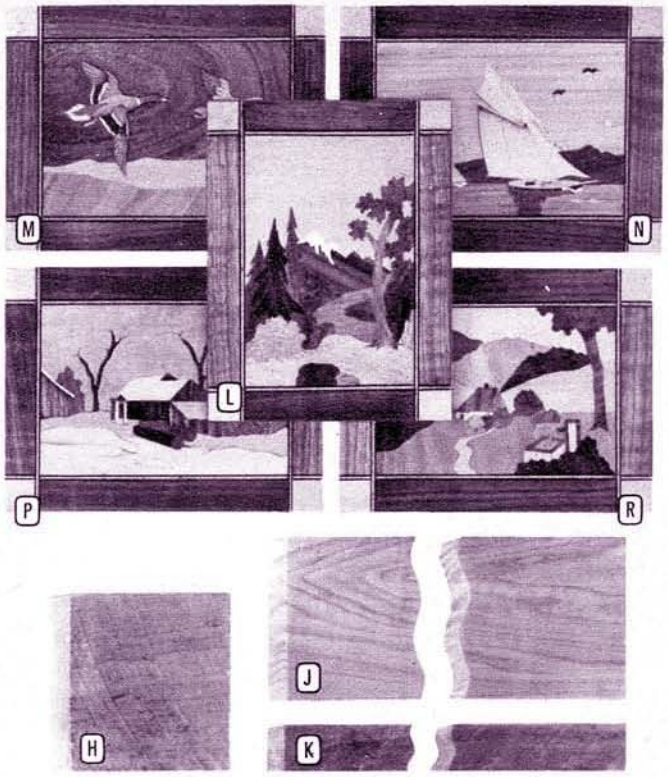
INFORMATIVE BOOKS FOR YOUR WORKSHOP LIBRARY 1.89 TO 4.95

(E) POPULAR MECHANICS CRAFTSMANS' LIBRARY. Series of six matching volumes on construction and operations of woodworking tools, and projects you can make. Illustrated. Size 6½ by 9½ in. Ship. wt. ea. 1 lb.

53 WR 1130—Power Tools and How to Use Them. About 144 pages. . $2.39
53 WR 1124—100 Beautiful Pieces of Furniture to Build. 160 pgs.... 2.89
53 WR 1132—Planning the Home Workshop. About 128 pages..... 2.39
53 WR 1131—60 Power Tools and How to Build Them. 144 pages.... 2.39
53 WR 1125—100 Best Woodworking Projects. About 144 pages..... 1.89
53 WR 1126—Portable Electric Tools. About 96 pages..... 1.89

(F) FARM MECHANICS' POWER TOOL MANUAL. By Floyd Mix and J. C. Moore. Practical guide for the modern farm workshop. Illustrated.
53 WR 1122—Size 6 by 8¾ in. About 352 pages. Ship. wt. 2 lbs..... $3.29

(G) POWER TOOL WOODWORKING FOR EVERYONE. By R. J. DeCristoforo. Comprehensive guide covering operation of Shopsmith and all principal single purpose power tools. With 450 photographs and drawings.
53 WRP 1103—Size 7½ by 10 in. About 292 pages. *Postpaid*..... $4.95



Build-It-Yourself With Craft Patterns and Woods

FINEST QUALITY KILN-DRIED CABINET WOODS 1.95 TO 9.60

(H) (J) (K) Specially selected for texture and character. Thoroughly kiln-dried to assure minimum moisture content and prevent shrinkage. Choice of three fine woods: MAHOGANY, a traditionally fine quality hard-textured wood that mellows with age. Easy to hand tool and machine, takes a fine finish. Used extensively in boat hulls, finest furniture and cabinet work. WHITE MAPLE, a dense, strong, hard-textured wood popular for all kinds of furniture. Has excellent wearing qualities. Attractive light color; can be stained walnut or mahogany color. WALNUT, a strong, hard-textured wood that machines and finishes very well. Dark colored when finished. Best suited for fine furniture, gun stocks, fancy trim, etc. Woods are mailed promptly direct to you from Factory in New York City, N.Y.; you pay postage charges from there.

(H) TURNING BLOCKS. Supplied in rough form. For making ash trays, bowls, candlesticks, vases, lamp bases, etc. *State Cat. No. and size wanted.*

Size	MAHOGANY Ship. wt.	84 WR 3078 K	WALNUT Ship. wt.	84 WR 3079 K	WHITE MAPLE Ship. wt.	84 WR 3080 K
6x 6x2 in.	8 lbs.	4 for $3.55	9 lbs.	4 for $3.98	10 lbs.	4 for $2.80
8x 8x2 in.	12 lbs.	4 for 5.80	14 lbs.	4 for 7.20	16 lbs.	4 for 4.40
10x10x2 in.	18 lbs.	4 for 9.60	.....	.....	24 lbs.	4 for 7.20

(J) DIMENSION-CUT CABINET WOODS. Surfaces smooth on both sides and edges. For making tables, furniture and other projects. *State Cat. No. and size wanted.*

Size	MAHOGANY Ship. wt.	84 WR 3081 K	WALNUT Ship. wt.	84 WR 3083K	WHITE MAPLE Ship. wt.	84 WR 3085 K
¾x5½x24 in.	6 lbs.	2 for $2.30	7 lbs.	2 for $2.30	8 lbs.	2 for $2.10
¾x5½x36 in.	8 lbs.	2 for 3.45	10 lbs.	2 for 3.40	11 lbs.	2 for 3.15
¾x5½x48 in.	11 lbs.	2 for 4.58	.....	.....	14 lbs.	2 for 4.15
Size	**MAHOGANY Ship. wt.**	**84 WR 3082 K**	**WALNUT Ship. wt.**	**84 WR 3084 K**	**WHITE MAPLE Ship. wt.**	**84 WR 3086 K**
¾x7½x24 in.	8 lbs.	2 for $3.10	9 lbs.	2 for $3.05	10 lbs.	2 for $2.79
¾x7½x36 in.	10 lbs.	2 for 4.65	12 lbs.	2 for 4.60	14 lbs.	2 for 4.20
¾x7½x48 in.	13 lbs.	2 for 6.19	.....	.....	17 lbs.	2 for 5.60

(K) TURNING SQUARES. Supplied in rough form. For turning legs, spindles, canes, gavels and similar work. Cut from clear stock. *State Cat. No., size.*

Size	MAHOGANY Ship. wt.	84 WR 3075 K	WALNUT Ship. wt.	84 WR 3076 K	WHITE MAPLE Ship. wt.	84 WR 3077 K
1½x1½x24 in.	7 lbs.	4 for $2.75	8 lbs.	4 for $3.05	9 lbs.	4 for $1.95
1½x1½x36 in.	9 lbs.	4 for 4.10	9 lbs.	4 for 4.60	10 lbs.	4 for 2.89
2 x2 x24 in.	9 lbs.	4 for 5.15	12 lbs.	4 for 5.98	14 lbs.	4 for 3.55
2 x2 x36 in.	11 lbs.	4 for 7.69	14 lbs.	4 for 8.98	16 lbs.	4 for 5.29

CONSTANTINE PRE-CUT WOOD INLAY PICTURES 4.95

(L) TO (R) You can make unusually beautiful inlaid wood pictures without any experience, without any special tools. Selected wood veneers are precision-cut at factory; all you do is arrange them according to patterns furnished, and glue them to back panel. Completed pictures are about 8 by 10½ in., make decorative plaques to hang in office, den, recreation room, etc. Kit includes all necessary materials including pre-cut veneer pieces, borders, backing panel, glue, crack filler, sandpaper, and special penetrating finish. Choice of five attractive subjects. Ship. wt. each kit, 3 lbs.

(L) 53 WR 1873—Mountain Stream Scene.....Complete Kit $4.95
(M) 53 WR 1871—Flying Ducks Scene.....Complete Kit 4.95
(N) 53 WR 1874—Yachting Scene.....Complete Kit 4.95
(P) 53 WR 1872—Old Mill Scene.....Complete Kit 4.95
(R) 53 WR 1875—Homestead Scene.....Complete Kit 4.95

CRAFT WOODWORKING PATTERNS 1.25 Per Packet

(T) There's a wealth of pleasure awaiting you in the hobby of woodworking. Not only because you save money by building it yourself, but also because of the great satisfaction you receive in making and using your own finished projects. Even the amateur can undertake home improvements, lawn furniture, boats and toys with the aid of these complete step-by-step patterns. All patterns are complete with working drawings, easy-to-follow instructions and a list of the materials you will need. (Lumber and materials not included.) All curved patterns are full size for your convenience—others, are drawn to scale. Choose from a wide selection of patterns and projects listed below. Patterns *Mailed Postpaid* promptly from Chicago Factory. State Catalog Number.

CABIN AND COTTAGE PACKET. 11 cabin and 30 furnishing designs.
84 WRP 3020 K—41 patterns in all.....Packet $1.25

BIRD HOUSE PACKET. Large variety of bird houses, baths, feeders.
84 WRP 3018 K—47 patterns in all.....Packet $1.25

LAWN PACKET. Large selection of lawn chairs, tables, garden well, gates, fireplaces and other items and installations for outdoor use.
84 WRP 3016 K—44 patterns in all.....Packet $1.25

GARDEN FURNITURE. Includes designs for chairs, tables, benches and many other useful and attractive outdoor furniture pieces.
84 WRP 3017 K—23 patterns in all.....Packet $1.25

SMALL TOY PACKET. Model RR buildings, doll house, action toys.
84 WRP 3023 K—17 patterns in all.....Packet $1.25

JUNIOR JIG SAW PACKET. Easy-to-make garden markers, toy designs.
84 WRP 3015 K—43 patterns in all.....Packet $1.25

BOAT-BUILDERS' PACKET. Row boats, canoes, sailboats and floats.
84 WRP 3013 K—24 patterns in all.....Packet $1.25

LARGE TOY PACKET. Bigger, more useful toys, rocking horses, wagons.
84 WRP 3024 K—16 patterns in all.....Packet $1.25

CAPE COD DOLL HOUSE. Complete construction details. Floor, wiring, furniture designs and plans. Includes windows and "brick" paper.
84 WRP 3022 K—32x21x21-inch, full size pattern.....$1.25

WINDMILL PACKET. Animated wind mill and weather vane designs.
84 WRP 3021K—14 patterns in all.....Packet $1.25

SENIOR JIG SAW PACKET. What-not shelves, valances, book shelves.
84 WRP 3014 K—28 patterns in all.....Packet $1.25

HOME MODERNIZATION PACKET. Basement, attic rooms, cabinets, bookcases, shelving, kitchen cabinets, wardrobes, shutters, cornices, etc.
84 WRP 30.9 K—47 patterns in all.....Packet $1.25

PLAYGROUND APPARATUS. Archery equipment, gym sets, outdoor games, sand box, modern playhouse, wading pool, etc.
84 WRP 3011K—30 patterns in all.....Packet $1.25

CHRISTMAS DECORATIONS. Santa Claus, church, nativity scene, table, mantle, doorway, window decorations.
84 WRP 3012 K—10 patterns.Packet $1.25

Wards Monthly Payment Plan

Don't let lack of ready cash keep you from buying the items that you want. Use Wards Monthly Payment Plan to purchase the power tool equipment of your choice. Of course, paying cash is the most economical way to shop but it isn't always possible to do so. The reasonable charge for credit at Wards is well justified since you buy and use quality merchandise while paying for it. There are no hidden charges at Wards. Whether you pay all cash or use your credit at Wards, the price of the merchandise is the same. There are no hidden charges. You know exactly what you pay extra for the convenience of credit. The carrying charge as shown in the Table of Terms, applies only to the unpaid balance —the amount remaining after deducting the down payment. If your account is paid in full before the first Monthly Payment is due there will be NO carrying charge.

HOW TO OPEN AN ACCOUNT

Write your order in the usual way on one of our regular order blanks, being sure the order totals $20 or more, then sign and fill in the application for credit on the back. Minors will have parent or guardian sign and fill in application. Enclose check or money order for the Down Payment and mail to the Ward Mail Order House nearest you. There will be a short delay for credit investigation which is confidential. If you live near a Ward Store or Ward Catalog Office see the credit manager there, he will give you courteous, prompt service and handle all the neccessary details for you if you desire.

REQUIRED DOWN PAYMENT

It is to your advantage to make as large a Down Payment as you can comfortably spare. The required Down Payment on merchandise in this Catalog is 10% (one-tenth) but you will find it wiser to send more than the minimum amount if you can. The larger the Down Payment you make the lower the unpaid balance and the smaller the carrying charge. Also by making a larger Down Payment you may reduce the Monthly Payments. This is the economical way to use your credit . . enjoying the use of your merchandise while at the same time keeping the already reasonable carrying charge to a minimum.

AMOUNT TO PAY EACH MONTH

Add up your purchases, including any tax or shipping charges to be advanced by Wards, then subtract the amount for Down Payment as explained above. The remainder is the Unpaid Balance to which a carrying charge is added. Table of Terms shows amount of carrying charge and amount to pay Monthly. Minimum Monthly payment in all instances is $5.

WARDS "ADD-ON" PLAN

If you have an account with us, you may make additional purchases of Power Tools and Welding Equipment in orders of $10 or more to be added to your account. Just sign and fill in the "Add-on" form on the back of the order blank. The amount of your new purchase, plus our usual carrying charge of 10%, is then added to the amount you owe. Monthly Payments will not be increased unless your new balance requires a larger monthly payment according to the Terms shown in Table of Terms at right.

TABLE OF TERMS

If Unpaid Balance is	We Will Add for Carrying Charge	Monthly Payment
20.00 to 22.00	2.00	
22.01 to 24.00	2.25	
24.01 to 26.00	2.50	
26.01 to 28.00	2.75	
28.01 to 30.00	3.00	
30.01 to 33.00	3.25	5.00
33.01 to 36.00	3.50	
36.01 to 40.00	4.00	
40.01 to 45.00	4.50	
45.01 to 50.00	5.00	
50.01 to 55.00	5.50	
55.01 to 60.00	6.00	
60.01 to 65.00	6.50	6.00
65.01 to 70.00	7.00	
70.01 to 75.00	7.50	7.00
75.01 to 80.00	8.00	
80.01 to 85.00	8.50	8.00
85.01 to 90.00	9.00	
90.01 to 95.00	9.50	
95.01 to 100.00	10.00	9.00
100.01 to 110.00	10.50	
110.01 to 120.00	11.50	10.00
120.01 to 130.00	12.50	
130.01 to 140.00	13.50	
140.01 to 150.00	14.50	11.00
150.01 to 160.00	15.50	
160.01 to 170.00	16.50	
170.01 to 180.00	17.50	12.00
180.01 to 190.00	18.50	
190.01 to 200.00	19.50	13.00
200.01 to 210.00	20.00	
210.01 to 220.00	20.50	14.00
220.01 to 230.00	21.00	
230.01 to 240.00	21.50	15.00
240.01 to 250.00	22.00	
250.01 to 260.00	22.50	16.00
260.01 to 270.00	23.50	
270.01 to 280.00	24.50	17.00
280.01 to 290.00	25.50	18.00
290.01 to 300.00	26.50	19.00

Terms subject to change.
Write for terms on larger orders.

WOODWORKERS' VISES 2.98 TO 16.45

[1] QUICK-ACTING TYPE. Front jaw slides to material. Locks quickly, easily released. Like 84 WR 3163M below, but heavier. 1¼-in. diam. screw. Act. wt. 35 lbs. 84 WR 3164 M—*Mailable*. Ship. wt. 37 lbs. $16.45

[2] [3] CONTINUOUS SCREW TYPE. Adjustable stop in front jaw on all except (3). *Mailable*.

Catalog Number	(2) Heavy-duty 84 WR 3162 M	(2) Heavy-duty 84 WR 3163 M	(3) Light-duty 84 WR 3159
Jaw Width	7 in.	10 in.	6½ in.
Jaw Depth	4 in.	4 in.	3½ in.
Opens to	9 in.	12 in.	4½ in.
Screw Diam.	1 in.	1 in.	⅝ in.
Guide Diam.	⅞ in.	⅞ in.	½ in.
Actual Wt.	26 lbs.	30 lbs.	5 lbs.
Ship. Wt.	28 lbs.	32 lbs.	6 lbs.
Price	$11.95	$14.75	$2.98

BENCH, MACHINISTS' VISES 6.95 TO 27.95

[4] BENCH VISES. Medium-duty. Semi-steel body. Polished cut-off tool, anvil surface. Replaceable steel jaws. Pipe jaws take pipe ¼ to 2-in. Steel Acme thread screw. "U" shaped sliding beam. *Mailable*. Ship. wts. 19, 25, 30 lbs.

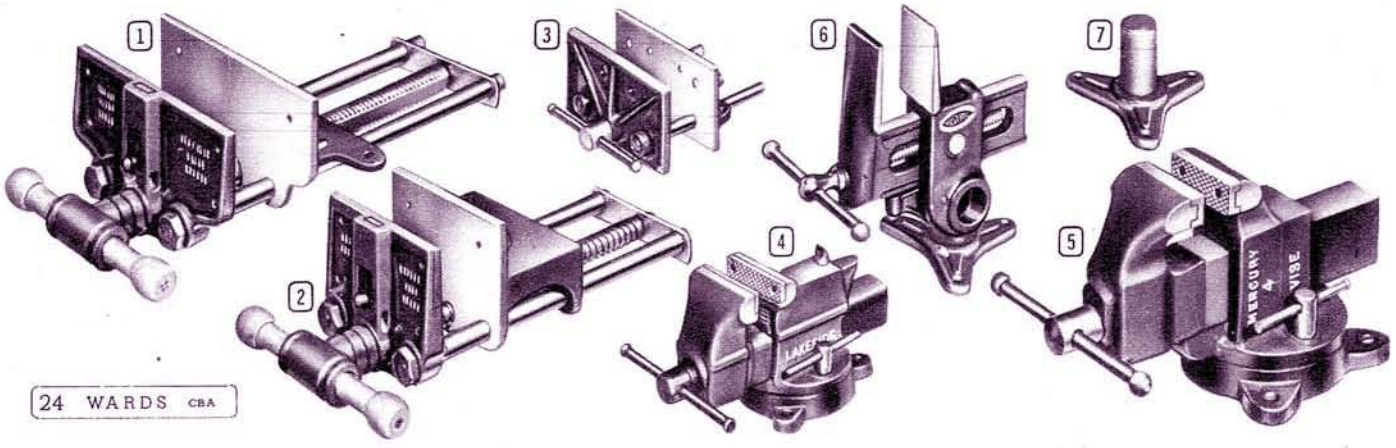
Cat. No.	Jaw Width	Opens	Base Swivels	Price
84 WR 5413M	3½ in.	4½ in.	90°	$6.95
84 WR 5414M	4 in.	5¼ in.	360°	9.95
84 WR 5420M	5 in.	5¼ in.	360°	11.95

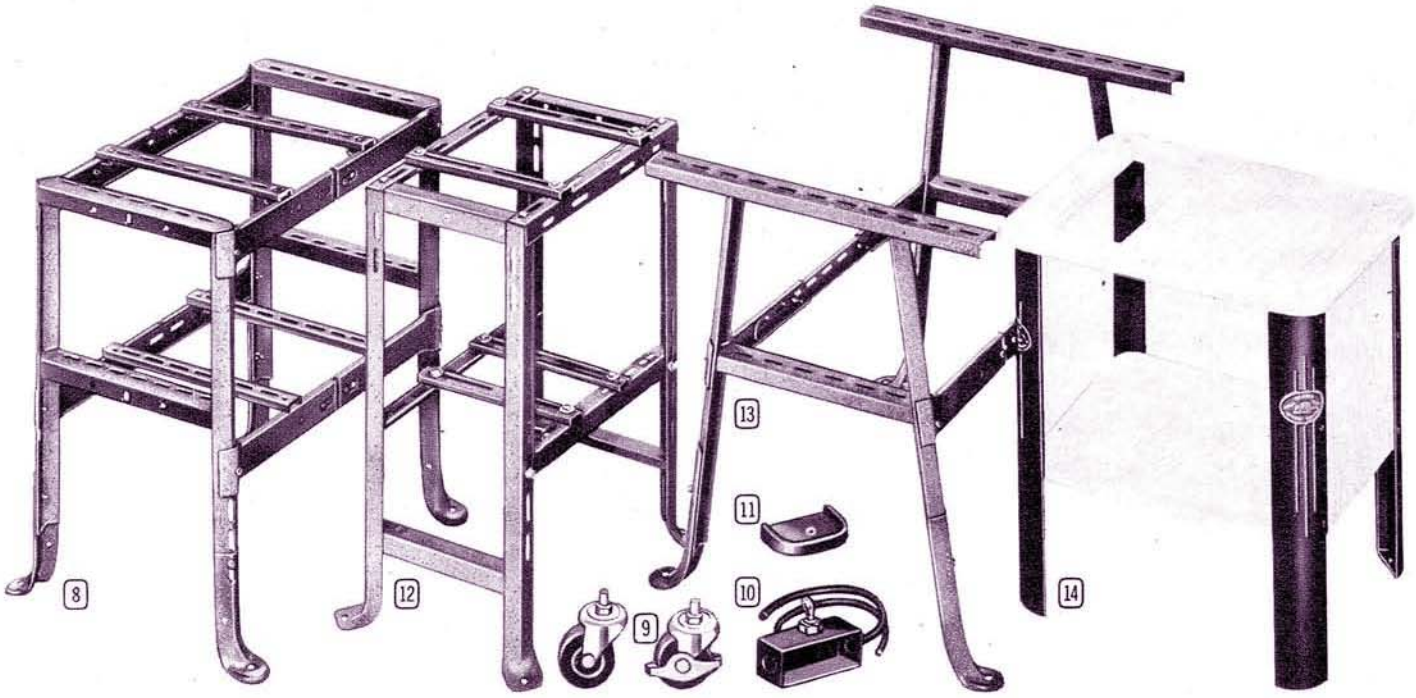
[5] MACHINISTS VISE. Heavy-duty. Meet Army and Navy specifications, removable serrated steel jaws. Semi-steel body, base. Cast-iron sliding bar. Steel Acme thread screw. 4-in. jaw opens to 6 in. Base swivels 360°. Actual wt. 52 lbs.
84 WR 5460 R—Ship. wt. 56 lbs. *Not Mail*... $27.95

NEW WOODWORKERS' VISE 10.95

[6] NATIONALLY-KNOWN VERSA-VISE. Cast, semi-steel construction. Multi-position vise lies flat on either side or stands straight up. Turns full 360° in upright or flat positions. When jaws are tightened, vise automatically locks to base at any desired position. Jaws are 2½ in. wide, 3½ in. deep; open to 5 in. Base included. Actual weight 14½ lbs. For extra mounting bases order below.
84 WRP 3157 M—*Mailed Postpaid* $10.95

[7] EXTRA MOUNTING BASE. For (6). Mount additional bases in basement, garage, etc. Bring vise to work—saves time, labor. One vise does the work of many.
84 WRP 3158—*Mailed Postpaid* $1.50





Power Tool Stands . . . Benches, Woodworking Supplies

ADJUSTABLE STANDS 14.95 AND 17.95

[8] NEW ADJUSTABLE POWER TOOL STANDS. Fit all Powr-Kraft tools except wood lathes. 12-gauge steel. 16½-in. width top. Legs adjust separately 24¼ to 33¼-in.; length adjusts 16⅜ to 25⅞ in. Gray wrinkle finish. Shipped from Factory near Cleveland, Ohio.

84 WR 2954 K—Ship. wt. 38 lbs. $14.95

84 WR 2955 K—Same as (8) but length adjusts 25⅝ to 44⅜ in. Fits Powr-Kraft wood lathes. Ship. wt. 48 lbs. $17.95

[9] CASTERS. Fit (8, 12, 13). Ship. wt. 2 lbs.
84 WR 2973. . . . . Set of four $2.15

[10] TOGGLE SWITCH. Fit (8, 12). UL Approved. For motors up to 1-HP, 115–230 volts.

84 WR 2969—Ship. wt. 1 lb. $4.45

[11] RUBBER FEET. Fit stands (12) only.
84 WR 2968–Ship. wt. 1 lb. . Set of four $1.25

ANGLE IRON POWER TOOL STANDS 11.95 TO 17.95

[12] For most bench-type power tools. Mounting rails for tool adjustable in width—for motor, in width, height. About 11 ga. construction. Gray wrinkle finish. *Mail.*

Catalog No.	Size, In.	Fits	Wt.	Price
84 WR 2960M	13x14 x29	Jig Saw (2355); Shaper (2450); Sanders(2702, 2719); Grinder (5285).	32 lbs.	$11.95
84 WR 2961M	13x20 x22	Band Saw (2315); Bench Saws (3480, 3481).	32 lbs.	12.75
84 WR 2962M	13x20 x28⅞	Bench Saws (2250, 2253, 2263, 2257, 2260, 2261); Sanders (2724, 2704, 2726, 2712); Band Saws (2316, 2319, 2320, 2304, 2314); Jointers (2506, 2521, 2505, 2508, 3427); Drill Presses (2530, 2533, 2535); Jig Saw (2350).	35 lbs.	12.95
84 WR 2963M	13x24 x29	Jig Saw (2356).	36 lbs.	13.25
84 WR 2964 Y	13x47½x30⅞	Lathes (2002, 2004); Jig Saw (2370).	53 lbs.	17.25
84 WR 2965K	13x57 x30⅞	Wood Lathe (2005). (Shipped from Chgo. Fac.)	56 lbs.	17.95

TILTING ARBOR SAW STAND (not shown). Similar to above. For tilting Arbor Saws (84 WR 3475R and 84 WR 3315M). Size 16x26½x28¾ in. high. Wt. 32 lbs.
84 WR 2959 M—*Mailable*. . $9.75

[13] STEEL WORK BENCH FRAME. Adjustable in height from 26 to 35 in., length adjusts 25⅞ to 44⅞ in. Full 26-in. width across top. Legs adjust for uneven floor. Add your own wood top. Shipped promptly from Cleveland, O., Factory.
84 WR 2951K—Ship. wt. 34 lbs. $8.95

BEAVER TOOL STANDS

[14] BEAVER POWER TOOL STANDS. Make stand to fit any Beaver Tool. Cast semi-steel. With plans. All holes drilled in legs (wood not incl.). Shipped from Factory Detroit, Mich. Wts. 26, 31 lbs.

SET OF 4 LEGS. Fit Band and Bench Saws, Jointer, Sander.

84 WR 2957 K—Height 24½ inches. $14.50

SET OF 4 LEGS. Fit Jig Saw, Lathe, Drill Presses 31¼ in. high.

84 WR 2958 K. . . $14.50

CLAMPS AND WOODWORKING SUPPLIES

[15] CABINET MAKERS' BAR CLAMPS. 1¾x 2-in. jaw face. Bar ¼x 1½ in. Spring lock. Crank adjusts 4½ in.
84 WR 3152 M—Wts. 9, 10 lbs. *State length.*
3-ft. $4.45; 4-ft. $4.98

[16] GLUING CLAMP. Use ¾-in. pipe. Jaw face 1½x1⅞ in. Adjusts 1⅞ in. Wt. 3½ lbs.
84 WR 3151L. . . . $2.15

[17] GLUING CLAMP. Use 1⅜x2½-in. wood bar. Jaw face 1⅝x1¾ inch.
84WR3150L–Wt. 4 lbs. .$1.98

[18] 10 ASS'T. HARDWOOD DOWEL RODS. 4 (¼-in.), 3 (⅜), 1 (½), 1 (⅝), 1 (¾). 16 in. long.
84 WR 3176—Wt. 1 lb. .39c

[19] CASCAMITE RESIN GLUE. 8-oz. can.
84 WR 3172—Wt. 12 oz. 60c

[20] "C" CLAMPS. Malleable iron. Deep throat. Machine screw threads on 3-in. size; Acme thread screw on 4 to 8-in. sizes.

84 WR 3160L–*State size.*

Opens to	Wt.	Each
3 in.	1 lb.	75c
4 in.	1½ lbs.	$1.10
5 in.	2½ lbs.	1.29
6 in.	3 lbs.	1.49
8 in.	4½ lbs.	2.19

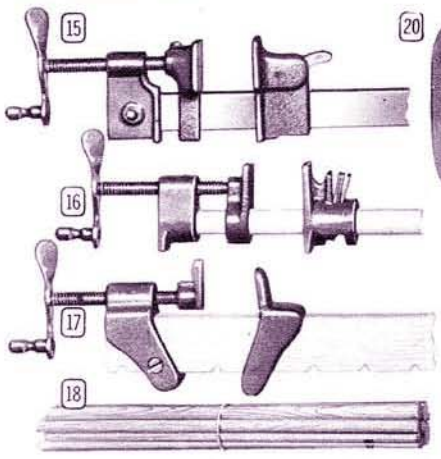
UTILITY AND HEAVY-DUTY WORK BENCHES

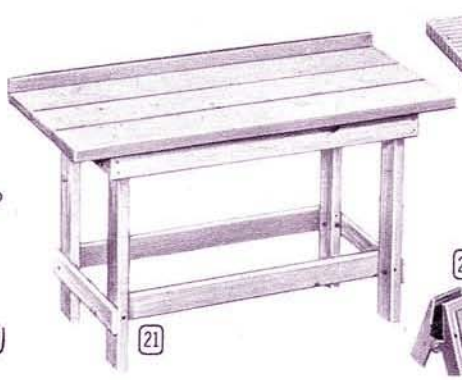
[21] UTILITY WORK BENCH. 22x60-in. top, 1⅝ in. thick. Kiln-dried Douglas fir. Legs 2x4 in. 33¼ in. high. From Factory in Grand Rapids, Mich. or New York City.
84 WR 2956 F—Unassembled. Ship. wt. 72 lbs. . . . $16.95

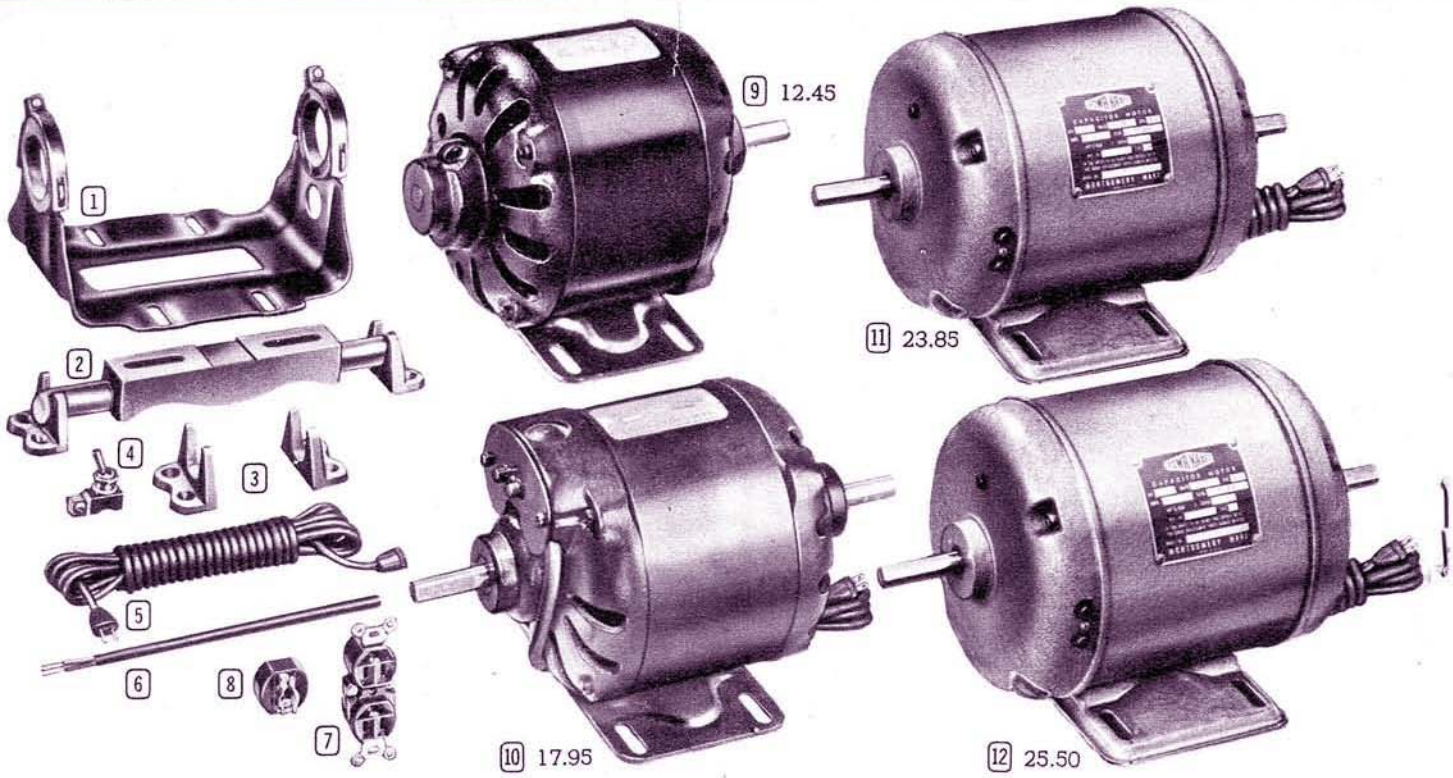
[22] HEAVY-DUTY WORK BENCH. 30x60-in. top, 2 in. thick. No. 1 kiln-dried Northern Maple. Legs, rails 3½x1½ in. 33 in. high. Shipped from Factory near Albany, N. Y.
84 WR 2952 F—Unassembled. Wt. 155 lbs. $49.95

[23] SAW HORSE BRACKETS. Use 2x4 in. lumber (not incl.).
84 WR 2970—Ship. wt. 3 lbs. . . . . Pair $1.75

[24] TOOL LIGHT. UL Approved. Length overall 24 in.
84WR2972–With 6-ft. cord and plug. Wt. 3½ lbs. $3.25







Guaranteed Powr-Kraft Split-Phase and Capacitor

MOTOR ACCESSORIES 35c TO 6.98

[1] RESILIENT MOUNTING KIT. Fits (9) and (10). Metal frame, rubber encased mounting rings.
83 WR 4535—Ship. wt. 2 lbs. 12 oz. $1.35

[2] [3] MOTOR RAIL AND BRACKETS. Mount brackets near each tool, shift motor with attached rail from tool to tool. Fits ¼ to ½ HP motors.
(2) 83 WR 4740—Rail with 2 brackets. Wt. 1 lb. . . . 89c
(3) 83 WR 4741—Extra brackets. Ship. wt. 4 oz..Pr. 35c

[4] TOGGLE SWITCH. For motors up to ⅓-HP. Wt. 2 oz.
83 WR 4701—Fits ½ in. mounting hole. 49c

[5] HEAVY-DUTY EXTENSION CORD, PLUG, OUTLET.
83 WR 1271 L—25 ft. 16 ga. 2 wire. Wt. 2 lbs. . . .$2.10
83 WR 1275 L—100 ft. 16 ga. 2 wire. Wt. 7 lbs. . . . 6.98

[6] HEAVY-DUTY RUBBER COVERED MOTOR CORDS.
83 WR 1216 H—16 ga. 3 wire. Wt. 2 oz. . .Per ft. 12c
83 WR 1273—10 ft. 18 ga. 2 wire. With 2-prong rubber plug. Use with (9) at right. Ship. wt. 1 lb. 72c

[7] GROUNDING OUTLET. Takes up to No. 12 wire. 15 amps. at 125 V. Takes standard or 3-prong plug.
83 WR 138—Brown. Ship. wt. 7 oz. $1.79

[8] 3-PRONG POLARIZED PLUG. Fits (7) above.
83 WR 139—Ship. wt. two, 6 oz. . . . . .2 for 75c

SPLIT-PHASE 12.45 Std.

[9] [10] POWR-KRAFT SPLIT-PHASE MOTORS. Long life, full power, fine quality motors with heavy gauge steel frames, welded seams, sturdy cast end bells. Meet NEMA performance specs. Easily reversed. "Form-Var" insulation gives double protection against heat and moisture. Slotted steel base for rigid mounting. Mounting dimensions 3x4⅞ in. Full load speed 1725 RPM. For 110–120-V. 60 cycle AC. *Mailable.*

(9) ⅓-HP STANDARD. Large steel-backed babbitt sleeve bearing construction (use horizontally). Oversized oil reservoirs. Single ½-in. diam. flat shaft extends 1⅝ in. Order cord 83 WR 1273 at left.
83 WR 4534 M—Wt. 22 lbs. .$12.45

(10) ⅓-HP DE LUXE. Double sealed, oversized New Departure ball-bearings—no further oiling. Use in any position. Double ½-in. diam. flat shaft ext. 1⅝ in. On-off switch. 7½-ft. cord, plug.
83 WR 4521M—Wt. 22 lbs...$17.95

BALL BEARING CAPACITOR MOTOR 23.85 ⅓ HP

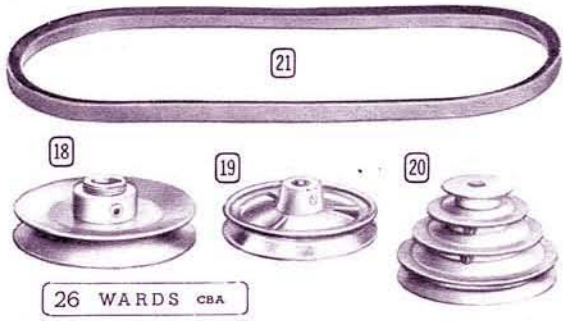
[11] [12] RUGGED POWR-KRAFT CAPACITOR MOTORS. Modern design combines powerful, efficient operation with streamlined appearance—no dust catching crevices. Meet or exceed NEMA performance specifications. Designed and built to give long, dependable service at peak performance. Check these 10 outstanding features: (1) Flush mounted operating controls. (2) Oversized, sealed New Departure ball bearings—no further lubrication required—insure smooth quiet operation, use in any position. (3) Built-in Thermotron overload protector automatically shuts off motor when overload or short circuits occur—prevents motor from burning out, easily reset by push button. (4) Capacitor (condenser) reduces starting current by ¼ to ⅓. (5) "Form-Var" insulation . . . gives double protection against heat and moisture . . . lengthens life and efficiency of motor. (6) Centrifugal starting switch with silver contact points that resist pitting. (7) Fan and air vents provide proper cooling. (8) Dependable on-off switch conveniently located on housing. (9) 7½-ft. rubber cord and plug. (10) Flat double shaft.

Heavy gauge rolled steel frame with welded seams. Drip-proof cast end frame prevents falling particles from entering motor. Slotted steel base. Gray finish. ½-in. diameter shaft extends 1⅞ in. at both ends of motor. Mounting dimensions 3½x5⅛ in. Full load speed 1725 RPM. Operate on 110–120 volts 60 cycle AC. *Mailable.* Ship. wts. 29, 32 lbs.

(11) 83 WR 4575 M—⅓-HP. $2.50 Down. . . . . .Cash $23.85
(12) 83 WR 4576 M—½-HP. $3 Down. . . . . .Cash 25.50

[18] VARIABLE PITCH STEEL "V" PULLEYS. To make speed adjustment (30% speed variation) or tighten belt, turn movable plate to proper pitch diam. ⅝ in. bore pulleys have standard keyway slot. Ship. wt. 1 lb., 1 lb. 4 oz., 1 lb. 8 oz.
84 WR 2914—*State outside diam. and ½ or ⅝ in. bore.*

Outside Diam.	Max. Pitch Diam.	Min. Pitch Diam.	Each
3¼ inches	2.9 inches	1.9 inches	$1.15
4 inches	3.8 inches	2.8 inches	1.49
4¾ inches	4.4 inches	3.4 inches	1.69



[19] [20] PULLEYS. Pulleys with ⅝ and ¾ in. bore have keyway slots and set screw; except 2½ x ¾ in. bore and all ½-in. bore pulleys which have set screw fastening to shaft only.

(19) SINGLE GROOVE "V" PULLEYS. Die-cast. 1½-in. to 4-in. pulleys are webbed as shown; 5, 6 and 8 in. are ribbed oval spoke design.
84 WR 2878—*State diameter, size bore wanted.*

Diam.	Bore, In.	Ship. wt.	Each
1½ in.	½ or ⅝	4 oz.	29c
2 in.	½ or ⅝	6 oz.	37c
2½ in.	½, ⅝ or ¾	8 oz.	44c
3 in.	½, ⅝ or ¾	10 oz.	50c
4 in.	½, ⅝ or ¾	12 oz.	62c
5 in.	½, ⅝ or ¾	1 lb.	79c
6 in.	½, ⅝ or ¾	1¾ lbs.	$1.10
8 in.	½, ⅝ or ¾	2 lbs.	1.59

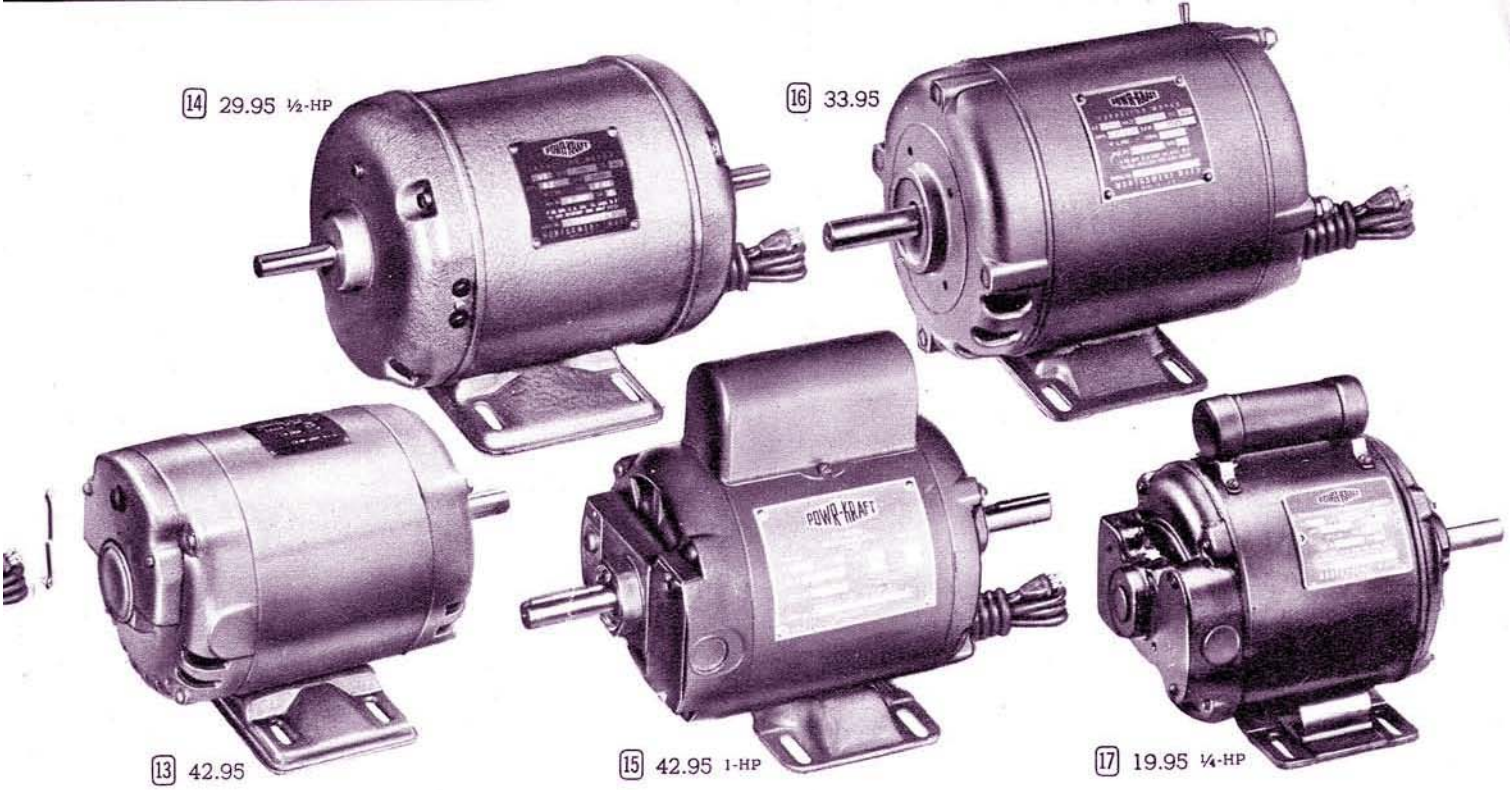
(20) FOUR STEP "V" PULLEYS. Die-cast. *State Catalog Number and ½, ⅝ or ¾-in. bore.*

Cat. No.	Diam. Steps, In.	Ship. wt.	Each
84 WR 2895	4⅛, 3⅜, 2⅝, 1⅞	2 lbs.	$1.45
84 WR 2896	5⅛, 4⅝2, 3⅜2, 2	2½ lbs.	1.69

HANDY HINT: To align motor pulley, run motor with belt riding on loose motor or machine pulley, stop motor and tighten aligned pulley.

[21] RUBBER "V" BELTS. "A" section type. 9⁄32-in. thick, ½-in. wide. Finest materials—rayon cords, rubber core, pressure-formed rubber treated cotton jacket. Measure around outside edge of pulleys (not in groove) to obtain belt length. *State size.*
84 WR 2876—Av. Ship. wt. ea., 8 oz.

Size	Each	Size	Each
20 in.	45c	44 in.	71c
22 in.	46c	45 in.	72c
24 in.	47c	46 in.	73c
25 in.	48c	48 in.	74c
26 in.	49c	50 in.	75c
28 in.	50c	52 in.	80c
29 in.	51c	54 in.	81c
30 in.	52c	56 in.	89c
31 in.	54c	58 in.	90c
32 in.	55c	60 in.	91c
33 in.	56c	62 in.	95c
34 in.	57c	64 in.	$1.00
35 in.	58c	66 in.	1.05
36 in.	59c	70 in.	1.20
37 in.	60c	72 in.	1.28
38 in.	61c	74 in.	1.30
39 in.	64c	77 in.	1.38
40 in.	65c	82 in.	1.45
41 in.	66c	87 in.	1.50
42 in.	69c	92 in.	1.57
43 in.	70c		



Electric Motors for Efficient Power Tool Operation

HEAVY-DUTY AND HIGH-SPEED CAPACITORS 29.95 TO 67.95

13 EXTRA HEAVY-DUTY ¾-HP POWR-KRAFT CAPACITOR MOTOR. Has all fine construction features of (11) and (12) at left plus heavier construction throughout. Has ¾-inch single shaft with keyway, extends 2¼ in. Operates on 110–120 or 220–240 volts 60 cycle AC. Mounting dimensions 3¼x6¾ in. Full load speed 1725 RPM. Without switch and cord. *Mailable.*

83 WR 4577 M—Ship. wt. 47 lbs. $4.50 Down on Terms.....or Cash $42.95

14 15 HIGH SPEED POWR-KRAFT CAPACITOR MOTORS. Have all construction features of (11) and (12) at left. Ideal for high speed power tools . . . reduces the need for step-up pulleys. 1 and 1½-HP motors have keyway, no on-off switch. Full load speed 3450 RPM. *Mailable.* Only 10% Down.

Key	Catalog No.	HP	Volts, 60-cyc. AC	Shaft	Shaft Ext.	Mtg. Dimen.	Wt.	Price
14	83 WR 4584M	½	110–120	½ in.	1⅞ in.	3½x5⅛ in.	27 lbs.	$29.95
	83 WR 4585M	¾	110–120	½ in.	1⅞ in.	3½x5⅛ in.	31 lbs.	33.95
15	83 WR 4598M	1	110–120/220–240	⅝ in.	1⅞ in.	3 x4⅞ in.	37 lbs.	42.95
	83 WR 4599M	1½	110–120/220–240	¾ in.	2¼ in.	5 x5⅞ in.	56 lbs.	67.95

GUARANTEE: If any Wards motor used and cared for in accordance with operating instructions, proves defective in materials or workmanship within one year after purchase, we will repair it without charge.

DUAL VOLTAGE AND INDUSTRIAL CAPACITORS 19.95 TO 33.95

16 ½-HP DUAL VOLTAGE POWR-KRAFT CAPACITOR MOTOR. For power tools. Develops greater power for starting and short emergency periods. Prelubricated sealed ball bearings. Use in any position. Built-in condenser, Klixon overload protector. Efficient fan cooling system. "Form-Var" insulation. Slotted steel base, mounting dimensions 3x4⅞ in. On-off switch. 7½ ft. cord and plug. Full load speed 1725 RPM. For 110–120/220–240 volts 60 cycle AC. ⅝-in. diam. shaft extends 1⅞ in. *Mailable.*

83 WR 4569 M—Ship. wt. 34 lbs. $3.50 Down.....Cash $33.95

17 INDUSTRIAL TYPE POWR-KRAFT CAPACITOR MOTORS. Specially designed to start very high compression loads on industrial equipment, in machine shops, etc. Meets all NEMA and AIEE specifications. Develops 2 to 3 times rated HP for starting and emergencies. Continuous duty. Easily reversed. Oversized steel-backed babbitt sleeve bearings, use horizontally. Efficient fan cooling system. "Form-Var" insulation. Steel frame, welded seams. ⅝-in. diam. keyway shaft extends 1⅞ in. Slotted steel base, mounting dimensions 3x4⅞ in. Full load speed 1725 RPM. 60 cycle AC. *Mail.* Ship. wts. 28, 31 lbs.

83 WR 4592 M—¼-HP. 110–120 volts. $2 Down.....or Cash $19.95

83 WR 4593 M—⅓-HP. 110–120/220–240 volts. $3 Down.....or Cash 27.50

22 REGULAR LENGTH SOCKET KEY SET. Made of hardened tool steel. Fit Allen type No. 6 to ½-in. set screws; No. 4 to 5/16-in. cap screws. With divided plastic case. Ship. wt. per set 3 oz.

84 WR 2901—Set of eight.....75c

INDIVIDUAL SOCKET KEYS. Regular length. Same as (22) above. Fit ¼, 5/16, ⅜ in. hollow head set screws. Ship. wt. ea. 3 oz. *State size wanted.*

84 WR 2900—¼-in.....Each 4c
5/16-in..Each 6c ⅜-in..Each 8c

EXTRA LONG SOCKET KEY SET. Fits No. 8 to ⅝-in. set screws; No. 4 to 7/16-in. cap screws.

84 WR 2902—Wt. 8 oz. Set of 8, 98c

23 MOTOR ARBOR WITH CHUCK, single groove pulley. Fits ½-in. diam. shaft only. Ship. wt. 1 lb. 8 oz.

84 WR 2892—With ¼-in. chuck..$1.98
84 WR 2893—With ½-in. chuck.. 2.45

24 3-JAW CHUCKS. Fit ½-in. diam., 24 thread spindles. Wts. 3, 6 oz.

84 WR 2764—¼-in. capacity.....59c
½-in. capacity 79c

25 MOTOR ARBORS. Hold grinding wheels, buffers, fiber and wire brushes, etc., up to ¾ in. thick. Strong ½-in. 24 thread spindle. Shipping weight each 10 oz.

84 WR 2915—Fits ½-in. diam. shaft.85c
84 WR 2916—Fits ⅝-in. diam. shaft.89c

26 TO 31 Pillow blocks have bronze bushed bearings; are self-adjusting for minor disalignment. Shaft hangers adjust to permit shaft alignment both horizontally and vertically; with bronze bushings; on (27) height adjusts 4 to 5 in. Flexible couplings are self adjusting for minor disalignment. Shaft collars and solid couplings are machined from solid bar steel, cadmium plated to prevent rust; flush set screws. *State bore.*

Key	Description	Catalog Number	Ship. Wt.	½-in. bore		⅝-in. bore		¾-in. bore	
				Each	2 for	Each	2 for	Each	2 for
(26)	Pillow Blocks	84 WR 2925	10 oz.	98c	$1.90	$1.05	$2.04	$1.10	$2.14
(27)	Shaft Hangers*	84 WR 2891K	5½ lbs.	.....	.....	.....	.....	3.69	.....
(28)	Shaft Hangers	84 WR 2890	2 lbs.	$1.59	3.14	1.79	3.54	1.89	3.74
(29)	Flex. Couplings	84 WR 2885	8 oz.	59c	1.14	65c	1.26	79c	1.54
(30)	Shaft Collars	84 WR 2887	3 oz.	19c	36c	25c	48c	27c	52c
(31)	Solid Couplings	84 WR 2886	7 oz.	39c	74c	45c	86c	49c	94c

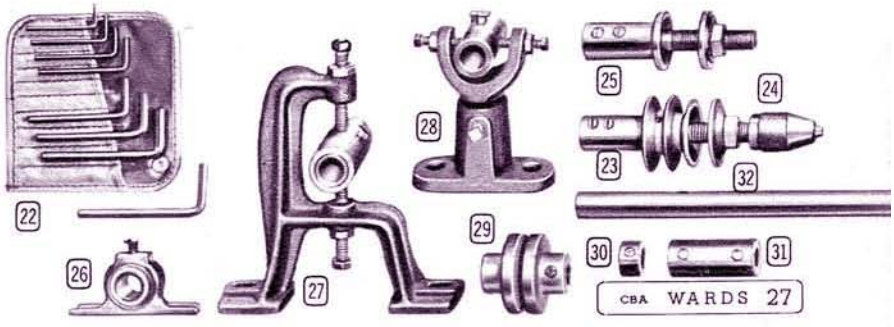
*Shipped promptly from Chicago Factory.

32 STEEL LINE SHAFTING. Centerless ground to .002 in. Wts. 2, 4, 7 lbs.
84 WR 2888—½x24-in. long..50c; 84 WR 2898 M—⅝x35-in. long...$1.05
84 WR 2889 M—¾-in. diam. by 48 in. long..... 1.85

CONVENIENT TABLE OF SPEEDS

This table will enable you to select the proper pulleys for the approximate speeds listed. Machine pulley speeds are based on a motor speed of 1725 RPM.

Motor Pulley Size	Pulley on Machine: Size in Inches							
	1½	2	2½	3	4	5	6	8
1½ in.	1725	1290	1035	860	645	515	430	320
2 in.	....	1725	1380	1150	860	690	575	430
2½ in.	....	2150	1725	1435	1075	860	715	540
3 in.	....	2580	2070	1725	1290	1035	860	645
4 in.	....	3450	2760	2300	1725	1380	1150	860
5 in.	....	4300	3450	2875	2155	1725	1435	1075
6 in.	....	5175	4140	3450	2585	2070	1725	1290
8 in.	....	6900	5520	4600	3450	2760	2300	1725



Choosing the Correct

Portable Electric Drill For Your Needs

Most popular of all portable tools, the Electric Drill has become a favorite of workshop enthusiasts because of its speed and power, and its time and labor-saving ability. It has long been a recognized necessity for the garage, maintenance and repair shop and in production and assembly work. It is light in weight and compact; can be carried right to the job. The wide range of accessories which are available make it a "portable workshop".

Selection of a drill should be guided by (1) the amount of work to be done and (2) the type of work. If your work will consist mostly of occasional or intermittent jobs in home or shop, a light or medium duty drill with bronze bearings will fill your needs. However, if you plan to give it harder, more continuous use, or if you plan to use it on production, repair or garage jobs, you need a heavy-duty model, with ball bearings to keep friction at a minimum and to absorb the punishment of constant daily use.

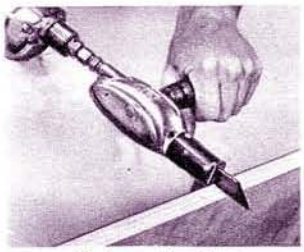
The type of work you intend to do will determine the capacity of your drill. Capacity is the diameter of the largest size shank the chuck will take. For most workshop use, a ¼-inch will be satisfactory. For production, maintenance or garage use, a ⅜ to ¾-inch capacity is needed, with the ½-inch size being one of the most popular models.

OTHER DESIRABLE FEATURES. The chuck is a most vital part of any drill. Three main types are in use: (1) the hand-tite chuck, which is opened and closed manually; usually found on light-duty models only; (2) the hex-type, operated by use of a hex-shaped key (similar to that used to tighten set screws); and (3) the geared-type chuck, operated by a separate chuck key, which gives an exceptionally tight hold, yet opens and closes quickly.

Drills should be compactly built in order to get into tight corners, yet should have sufficient power to operate to full capacity. It should be light in weight so it can be easily handled in any position without fatigue. Comfortable hand grips are needed with a convenient on-off switch having a locking arrangement for continuous running. Underwriters' Laboratory approval on a drill is your assurance that it has been inspected and checked for safety and absence of fire hazard.

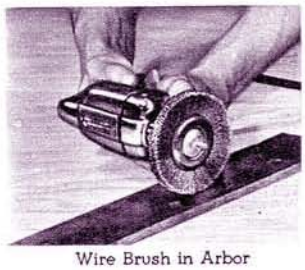
USES OF THE ELECTRIC DRILL. Literally scores of attachments and accessories are available which add much to its versatility. Consider buying your electric drill in a "kit" containing some of the most useful accessories, together with a handy carrying case to keep all pieces together. Additional, more specialized accessories can then be added as the need arises.

Sanding is one of the most important uses of the drill, since it can do this tedious work many times faster than by hand. Other uses include: polishing, buffing, grinding, sharpening, routing, screw driving, wire brushing, hole cutting, paint mixing, sawing, hedge trimming, hack sawing, metal shearing, metal nibbling, etc. (see typical views below).



Reciprocating Saw

Reciprocating Sander

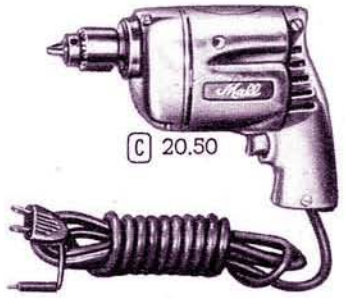


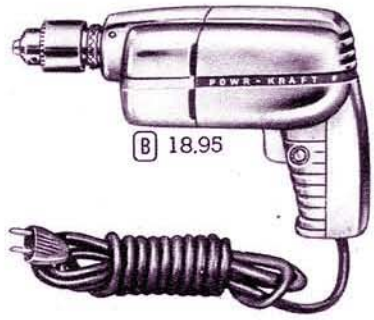
Wire Brush in Arbor

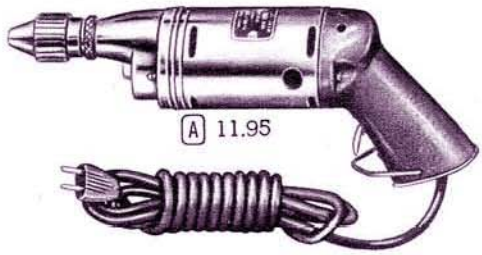
Metal Shear Attachment

Hedge Trimmer Attachment

Circular Saw Attachment
Cuts to Depth of 1 in.







Powr-Kraft and Mall

LIGHT AND MEDIUM-DUTY DRILLS 11.95 TO 20.50

A B POWR-KRAFT LIGHT AND MEDIUM-DUTY ¼-IN. DRILLS. For intermittent use on wood and metals by home craftsmen and hobbyists. Utility tools that belong in every workshop. Choice of light-duty pistol-grip or medium-duty palm-grip models. Housings in both are lightweight yet strong die-cast aluminum alloy. Easily cleaned and serviced. Heat-treated steel alloy gears for silent, dependable service. Operate on 110-120-volt, 60 cycle AC or DC. UL Approved. Trigger switch with lock mounted on grip. No-load speed 1600 RPM; full-load speed 1000 RPM.

(A) LIGHT-DUTY ¼-IN. PISTOL GRIP DRILL. Wards most economically priced drill. Has ¼-inch hand-tight chuck. Drilling capacity ¼ inch in steel; ⅜ inch in hardwood. Bronze bearings. Length 11½ inches.

84 WR 9225—Cord and plug included. Ship. wt. 4 lbs. $11.95

(B) MEDIUM-DUTY ¼-IN. PALM GRIP DRILL. For utility use in home, shop, garage, etc., on all types of wood or metals. Drilling capacity ¼ inch in steel; ⅜ inch in hardwood. High quality geared type chuck with chuck key wrench . . . securely locks drill and accessories firmly in position for more accurate work. Self lubricating bronze sleeve-type bearings. Length 8½ inches.

84 WR 9226—Cord and plug included. Ship. wt. 4 lbs. $18.95

C MALL MEDIUM DUTY ¼-IN. DRILL. Nationally known quality. For general purpose duty in home workshop, etc. Made lightweight for easier handling, yet amazingly sturdy. Strong cast-aluminum alloy housing can be cleaned and serviced easily. Gears are of tough alloy steel, hardened and heat-tempered—accurately meshed for smooth, efficient operation. Bronze bearings. Genuine Jacobs 3-jaw geared chuck with key included. Operates on 110-120-volt 60 cycle AC or DC. No-load speed 2000 RPM; full-load speed 1200 RPM. UL Approved. Lock type trigger switch. With cord and plug.

84 WRP 9275—*Mailed Postpaid.* Actual weight 3 lbs. $20.50

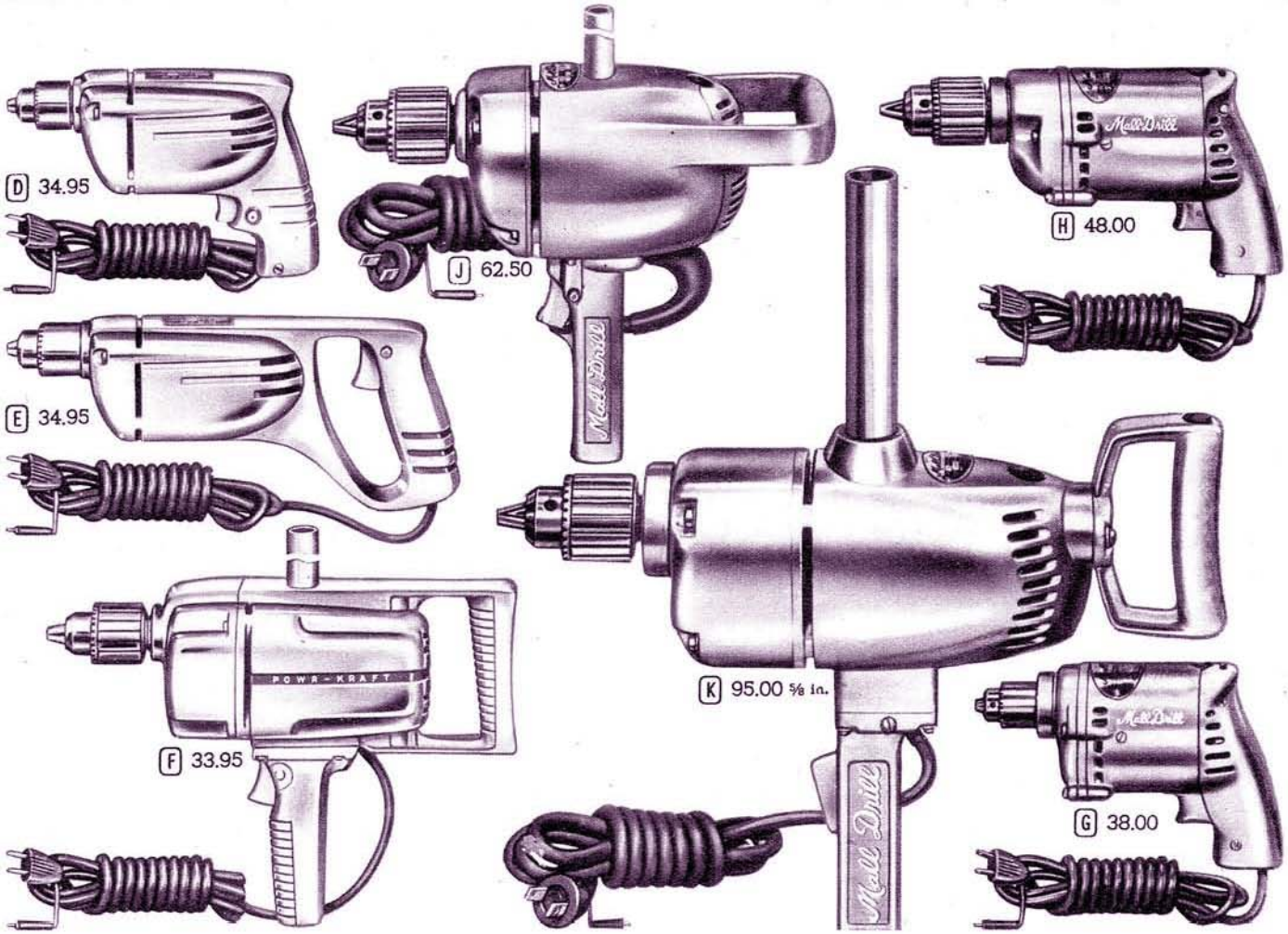
HINTS ON CARE AND USE OF YOUR DRILL

It is important that you operate your drill at the stated voltage. If used on a low-voltage line, drill will lack power, will run at a slower speed, and heat up more quickly. If used on a high voltage line, drill will run at too high a speed and motor will soon overheat.

When drilling at considerable distance from power outlet, do not use less than 16-gauge rubber insulated extension cord. See cords at right.

Overloading or using a light or medium-duty electric drill for continuous use will put a strain on the motor, shortening its life.

When drilling through thicker metals, use the proper cutting oil; it keeps the drill bit cool and prevents dangerous chipping.



Precision-Built Electric Drills . . . ¼ to ¾-in. Capacity

POWR-KRAFT HEAVY-DUTY DRILLS 29.50 TO 34.95

(D) (E) PALM-GRIP OR SPADE-GRIP ¼-IN. DRILLS. Wards finest quality drills, especially adapted for heavy construction, maintenance, continuous production or workshop use. Meet Government Specifications WD-661, Navy Specs. 40T3, Mil-885. Drills have ¼-in. capacity in steel; ¾-inch capacity in hardwood.

Lightweight but strong die-cast aluminum housings. Grease-sealed ball and needle bearings for smooth, quiet operation. Heat-treated, accurately meshed alloy steel gears give smooth, dependable performance and long continuous service. 3-jaw gear-type chuck with chuck key. Automatic release switch.

Powerful, balanced universal-type motors are built to handle big jobs easily. Operate on 110–120-volt, AC or DC. No-load speed 1800 RPM; full-load speed 1200 RPM. Rubber-covered cord and plug with ground wire.

(D) ¼-IN. PALM GRIP DRILL. 8 in. long. Ship. wt. 4 lbs.
84 WR 9227—*Mailable.* $3.50 Down.....Cash $34.95

(E) ¼-IN. SPADE GRIP DRILL. 10¾ in. long. Wt. 4 lbs.
84 WR 9228—*Mailable.* $3.50 Down.....Cash $34.95

(F) PRODUCTION TYPE ½-IN. DRILLS. Large capacity models for heavy-duty construction or repair work on wood and metal. Plenty of power to handle big jobs easily, more efficiently. Choice of hex or gear-type chuck. Both have ⅝-in. capacity in steel; 1-inch in hardwood.

Die cast aluminum housing is lightweight for easy handling, yet strong. Oil-retaining bronze bearings with ball thrust bearing on spindle. Cutler-Hammer lock-type switch. Spur gears of hardened alloy steel.

Two side handles; top handle removable for close corner drilling; lower handle forms pistol grip. Powerful, balanced universal-type motor operates on 110-120-volt, AC or DC. No-load speed 450 RPM; full-load speed 300 RPM. Size 13½x14¾-in. UL Approved. With cord, plug, and ground wire. Ship. wt. 11 lbs. *Mailable.*

84WR9229M-With gear-type chuck. $3.50 Dn., Cash $33.95
84WR9230M-With hex-type chuck. $3 Dn., Cash 29.50

HEAVY-DUTY EXTENSION CORDS. UL Approved. For drills, saws, etc. Rubber cord, plug, outlet. 16-ga. wire.
83 WR 1271L—25-ft. length. Ship. wt. 2 lbs.....$2.10
83 WR 1275L—100-ft. length. Ship. wt. 7 lbs..... 6.98

NATIONALLY KNOWN MALL HEAVY-DUTY DRILLS 38.00 TO 105.00

Mall heavy-duty production type drills are especially adapted for continuous and heavy construction, repair or maintenance work on wood or metal. Powerful universal type motors are statically and dynamically balanced for most efficient performance. With genuine Jacobs 3-jaw geared chucks with keys. Drills run smoothly and quietly on precision ground ball bearings, grease sealed for long, dependable service. Forced draft ventilation system pulls air over moving parts, keeping motors cool. Tough helical cut alloy steel gears are accurately meshed; relative hardness difference between gears and pinion for longer wear. All have lightweight but strong cast aluminum alloy housings, can be easily serviced. All are UL approved, operate on 110-120-volt, AC or DC. With rubber-covered cord and plug with third ground wire.

(G) MALL HEAVY-DUTY ¼-IN. DRILL. Powerful but light in weight, will stand up under continuous production use. Pistol-grip handle with locking trigger switch. No-load speed 2500 RPM; full-load speed 1500 RPM. Length overall 8½ in.; actual weight 2 lbs. 14 oz.
84 WRP 9276 L—*Mailed Postpaid from Stock.* $4 Down on Terms.....Cash $38.00

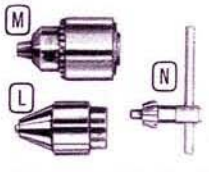
(H) MALL HEAVY-DUTY ⅜-IN. DRILL. Larger capacity but light weight, easy to handle. A favorite in production shops and garages. Pistol grip handle with locking trigger switch. No-load speed 800 RPM; full-load speed 480 RPM. Size overall 10¼ by 5 by 2¾ in.; actual weight 5 lbs.
84 WRP 9277 L—*Mailed Postpaid from Stock.* $5 Down on Terms.....Cash $48.00

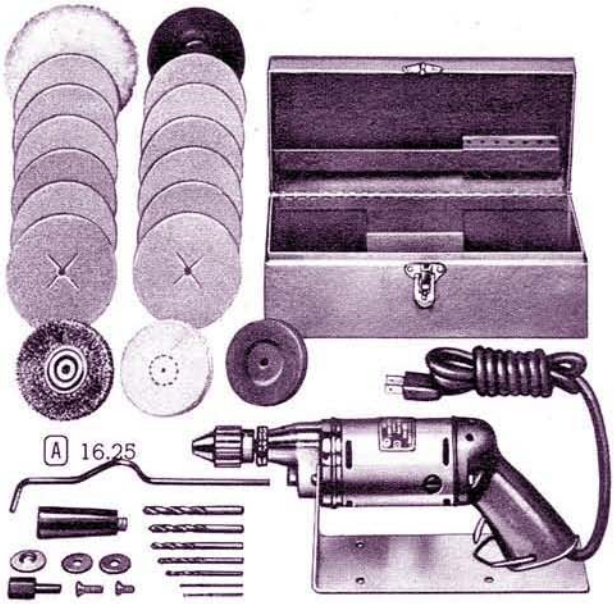
(J) MALL HEAVY-DUTY ½-IN. DRILL. Plenty of power for biggest production jobs. Extra strong construction. Two side handles; upper one removable for drilling in tight locations. Bottom handle forms pistol grip. Main handle is integral part of housing. No-load speed 500 RPM; full load speed 300 RPM. Size overall 12⅛ by 9⅜ by 3⅞ in. Actual weight 8 lbs.
84 WRP 9279 M—*Mailed Postpaid from Stock.* $6.50 Down on Terms.....Cash $62.50

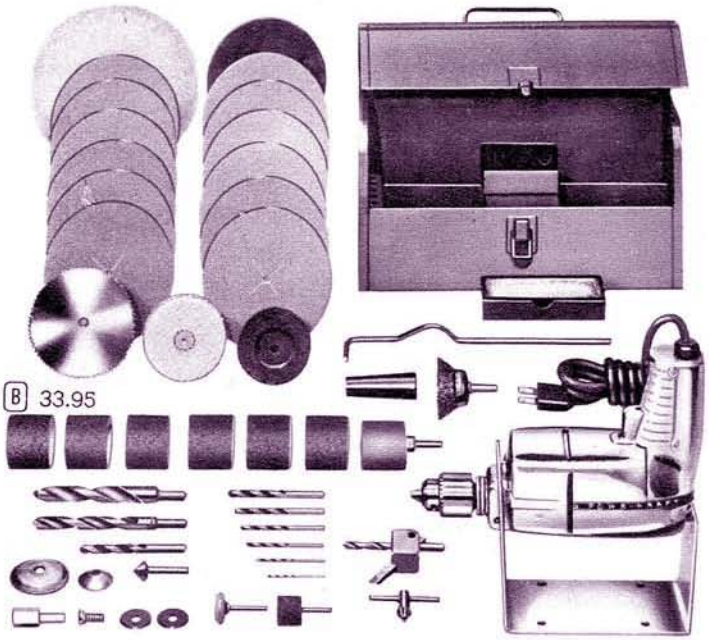
(K) MALL HEAVY-DUTY ⅝ AND ¾-IN. DRILLS. For extra-heavy continuous production jobs. Massive construction will withstand hardest use. Aluminum housing keeps weight down for easier handling. Two side handles; upper one removable; bottom forms pistol grip. ⅝-in. has no-load speed 300 RPM; full-load 180 RPM. ¾ in. has no load-speed 250 RPM; full-load 150 RPM. Size 17 by 15 by 5 in.; actual wt. each 18 lbs. *Postpaid from Factory in Chicago;* allow two weeks.
84 WRP 9278 K—⅝-inch chuck capacity. $9.50 Down on Terms.....Cash $95.00
84 WRP 9280 K—¾-inch chuck capacity. $10.50 Down on Terms.....Cash 105.00

(L) (M) REPLACEMENT CHUCKS. Tight grip. Fit standard drills.
(L)84 WR 9364—¼-in. hand-tite. ⅜-in.x24 thread. Wt. 9 oz.$1.15
(M)84WR9365-¼-in. light-duty geared.⅜-in.x24 thread.Wt.10 oz.4.39
(M)84WR9366-¼-in.heavy-duty geared.⅜-in.x24 thread.Wt.12oz.4.59
(M)84WR9367-½-in. geared. ½-in.x20 thread. Wt. 1 lb. 8 oz.... 6.25

(N) CHUCK KEYS. Fit the following chucks. Ship. wts. 3, 3, 4 oz.
84 WR 9371—No. 1. Fits Supreme 1A, 1T1; Jacobs 1B, 1A.....35c
84 WR 9372—No. 4. Fits Sup. 4A, 4B, 4C, 4T1, 4T2; Jac. 7B, 7-1A, 7..39c
84 WR 9373—No. 5. Fits Supreme 3A, 3B, 3D, 3T2, 5B, 5D, 5T-33; Jacobs 2B, 32B, 32, 33B, 33.....49c







Wards Powr-Kraft Electric Drills Have Hundreds of

POWR-KRAFT ¼-IN. DRILL KIT . . . OUR LOWEST PRICED SET 16.25

(A) 30-PIECE LIGHT-DUTY DRILL KIT. Own an electric drill kit with just a small investment. Designed especially for home use . . . speeds repair work. Drills, grinds, buffs, polishes, wire brushes, even mixes paint.

UL APPROVED DRILL. Capacity ¼-inch in steel, ⅜-inch in hardwood. Hand-tight chuck, aluminum alloy housing, bronze bearings, steel gears. Pistol grip has trigger switch with lock for continued operation. Use on 110–120 volts, 25–60 cycle AC or DC. Free speed 1600 RPM. Load speed about 1000 RPM. Length overall of drill 11½ in. With 6-ft. cord and plug.

INCLUDES: 7 carbon drill bits—1/16, 3/32, ⅛, 5/32, 3/16, 7/32, ¼ in.; drill stand; metal box; side handle; backing pad; sheepswool bonnet; wire brush; grinding wheel; twelve 4 in. sanding discs; buffing pad; paint mixer; adapter set; handy metal carrying case.

84 WR 9240—Shipping weight 8 lbs. *Mailable*. $16.25

HELPFUL HINTS ON THE CARE OF YOUR DRILL. Operate your drill at the stated voltage. If used on a low voltage line your drill will run at a slower speed and will heat up quickly. If used on a high voltage line, drill will run at too high a speed and motor will overheat, causing damage.

When drilling at a considerable distance from your power outlet, use not less than 16-gauge rubber insulated extension cord. See cords at right.

POWR-KRAFT ¼-IN. DRILL KIT 33.95

(B) 43-PIECE MEDIUM-DUTY DRILL KIT. Ideal for hobbyist, home craftsman or professional use. Wide range of accessories included—does dozens of jobs. Drills, saws, grinds, sands, buffs, polishes, mixes paint.

UL APPROVED DRILL. Capacity ¼-in. in steel, ½-in. in hardwood. ¼-in. gear-type chuck. Die cast aluminum alloy housing. Powerful universal-type motor, bronze bearings, alloy steel gears. Automatic safety release. Comfortable palm-grip, trigger switch with lock. Use on 110–120 volts, 25 to 60-cycle AC, DC. Free speed 1600 RPM. Load speed about 1000 RPM. About 8½ in. long. With 6-ft. rubber cord and plug.

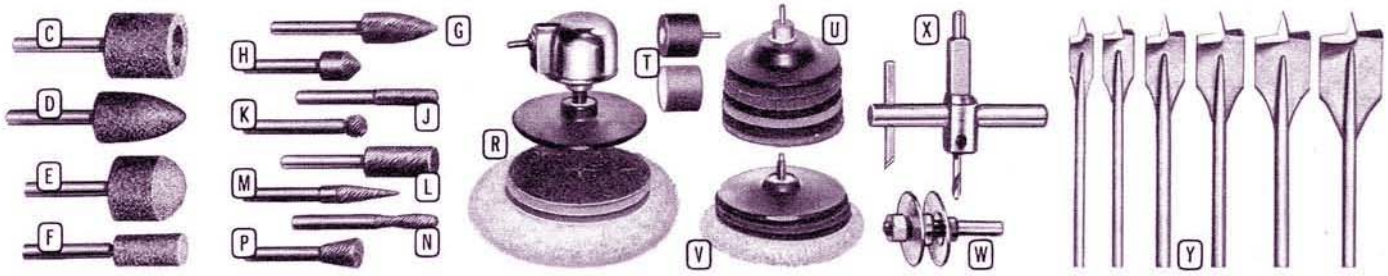
INCLUDES: Drum sander; 6 sanding drums; 5-in. rubber backing pad; 12 5-in. sanding discs; 7 hi-speed drill bits—1/16, 3/32, ⅛, 5/32, 3/16, 7/32, ¼ in.; 2 wood bits—⅜, ½ in.; buffing pad; polishing bonnet; polishing compound; drill arbor; wire cup brush; 3-in. grinding wheel; horizontal drill stand; 4-in. wood-cutting saw blade; paint mixer; hole-cutter; countersink; side handle. In handy metal carrying case.

84 WR 9241M—Ship. wt. 12 lbs. *Mailable*. $3.50 Down. . . . . or Cash $33.95

UL APPROVED RUBBER EXTENSION CORDS. (Not shown). Use with drills and other power tools. Heavy rubber insulation, plug, outlet. 16-ga. copper wire.

83 WR 1271L—25-Foot Length. Ship. wt. 2 lbs. $2.10

83 WR 1275L—100-Foot Length. Ship. wt. 7 lbs. 6.98



USEFUL ACCESSORIES TO MAKE YOUR PORTABLE ELECTRIC DRILL EVEN MORE VERSATILE

(C) TO (F) ROTARY MOUNTED GRINDING TOOLS. Fit electric drills, flexible shafts, etc. For die-cutting, grinding. Vitrified aluminum oxide. ¼-inch steel shafts. Sizes are stone size. *State shape wanted.*

84 WR 9331—Wt. ea. 3 oz.

(C) Straight 1x1 in. 39c

(D) Cone 11/16x1¼ in. . . 59c

(E) Round 1x1 in. 49c

(F) Cylinder ½x1 in. . . 39c

SET OF FOUR. Straight, Cone, Round and Cylinder shapes. Ship. wt. set, 1 lb.

84 WR 9332—Set $1.59

(G) TO (P) HAND CUT ROTARY FILES. Fit portable electric drills. For close tolerance work. Shank is ¼-inch diameter, 1¼ inch long. Made of tough, hardened and tempered high-speed steel. Deep cut for long service. Ship. wt. each, 4 oz. Order from table below. *State shape wanted.*

	Cat. No.	Shape of File	Diam.	Each
(G)	84WR9338	Tree Point	½ in.	$1.89
(H)	84WR9339	90° Deburring	½ in.	1.75
(J)	84WR9337	Cylinder Radius	¼ in.	1.49
(K)	84WR9335	Ball Shape	⅜ in.	1.49
(L)	84WR9336	Cylindrical	½ in.	1.98
(M)	84WR9340	Cone Shape	5/16 in.	1.59
(N)	84WR9342	Convex, Concave	¼ in.	1.49
(P)	84WR9341	Inverted Cone	½ in.	1.98

ROTARY FILE ASSORTMENT. Save $1.21 by ordering the complete set. Includes one each of above rotary files. Set of eight.

84 WR 9343—Ship. wt. 2 lbs. . . . . Set $12.45

(R) BULL BUFFER SET. For sanding and polishing. For chucks ¼ in. or larger. 5-in. rubber disc, 3 sanding discs, sheepswool bonnet.

84 WRP 9320—*Postpaid*. Complete set. $5.75

5-IN. SHEEPSWOOL BONNETS. Fit (R).

84 WR 9328—Ship. wt. ea., 4 oz. . . 2 for 98c

(T) DRUM SANDERS. Fit ¼-in. chucks.

84 WR 9330—Wt. ea., 6 oz. *State size.* 1x1 in. . . 45c; 1½x1½ in. . . 49c; 2x1½ in. . 59c

SANDING SLEEVES. For (T) Fine, med., or coarse grit. *State size of sleeve, grit.*

84 WR 9351—Ship. wt. 2 oz. . . . . 5 for 35c

(U) MALL FLEX SANDING PAD. Heavy-duty. Fits ¼-in. or larger chuck. 6 ass't'd discs.

84 WRP 9295—4 in. diam. *Postpaid*. . $4.20

(V) 5-IN. RUBBER PAD KIT. With 3 assorted discs, wool buffer. Ship. wt. 1 lb.

84 WR 9329—Fits ¼-in. or larger chuck. $1.19

(W) DRILL ARBOR. ¼-in. shank. Telescoping bushing fits ¼, ⅜, ½-in. holes. Wt. 6 oz.

84 WR 9327—3 5/16 in. long 39c

(X) HOLE CUTTER. Cuts holes ⅞ to 4-in. diam. Fits drill chucks, braces.

84 WR 3656—Ship. wt. 12 oz. . $1.59

84 WR 3657—Extra blade. 2 oz. 35c

(Y) POWER AUGER BITS. For electric drills, drill presses. Bore smooth holes 4 in. deep in wood, plastics, fiber, etc. Fit ¼-in. chuck. Self-starting point. Wt. ea. 2 oz.

84WR4524–*State diameter wanted.*

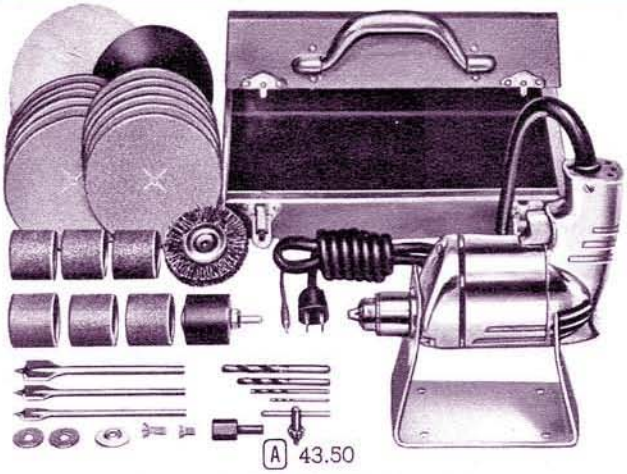
⅜ in. . . . . 59c; ½ in. 65c

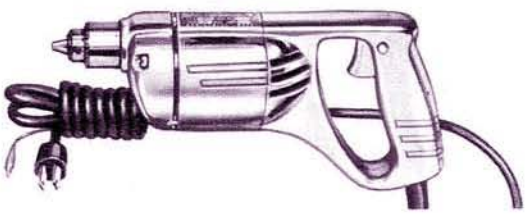
5/8 in. . . . . 69c; ¾ in. 75c

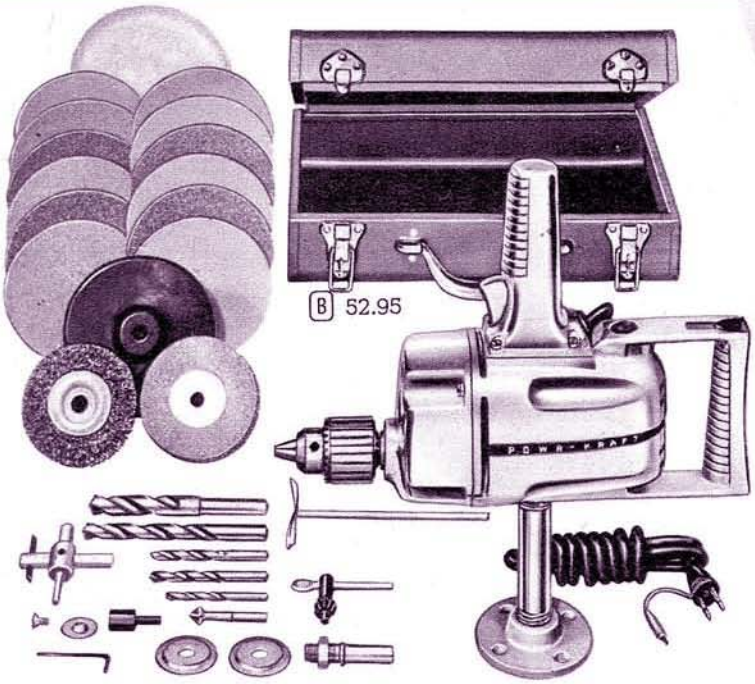
⅞ in. . . . . 79c; 1 in. 85c

SET OF 6 AUGER BITS ABOVE.

84 WR 4522—Ship. wt. 3 lbs. $3.95







Uses . . . Models for Home, Shop or Production Use

POWR-KRAFT PRODUCTION-TYPE ¼-IN. DRILL KIT 43.50

(A) 33-PIECE HEAVY DUTY DRILL KIT. Choice of palm-grip drill (shown on stand) or spade-grip drill. Drills are same except for handle. Production model kits capable of performing hundreds of jobs around the factory, home workshop, garage, etc. Rugged enough for continuous use. Does wood or metal drilling, sanding, boring, polishing, drum-sanding, wire brushing, etc.

HEAVY-DUTY BALL BEARING ¼-IN. DRILLS. For continuous production or workshop use. Meet government specifications WD-661, Navy 40T3, Mil-885. Grease-sealed ball and needle bearings; die-cast aluminum housings; heat-treated alloy steel gears. Three-jaw gear-type chucks with keys. Trigger switch with lock; automatic release switch. UL Approved. 110–120-volts, 25 to 60-cycle AC or DC. Rubber-covered cord, plug. ¼-in. capacity in steel; ¾-in. in hardwood. No-load speed 1800 RPM; full-load speed 1200 RPM.

ACCESSORIES INCLUDE: steel tool box; 4 high-speed drill bits (1/16, 3/16, ⅛, ¼-in.); 3 power auger bits (⅜, ½, ¾-in.); horizontal drill stand; 5-in. rubber backing pad; lambswool bonnet; 12 sanding discs; adapter set; drum sander; 6 sanding sleeves; wire wheel. *Mailable*. Ship. wt. each, 8 lbs. 8 oz.

84 WR 9242 M—Kit with Palm-Grip Drill. $4.50 Down . . . . . Cash $43.50
84 WR 9243 M—Kit with Spade-Grip Drill. $4.50 Down . . . . . Cash 43.50

POWR-KRAFT PRODUCTION MODEL ½-IN. DRILL KIT 52.95

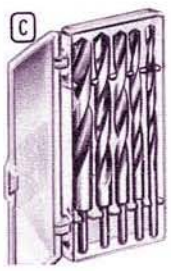
(B) 28-PIECE HEAVY DUTY DRILL KIT. For all types of continuous production work in shops, garages, etc. Powerful drill, perfectly balanced for easier handling. Especially adapted for heavy construction, repair and maintenance work on wood and metal. Drills, buffs, sands, etc.

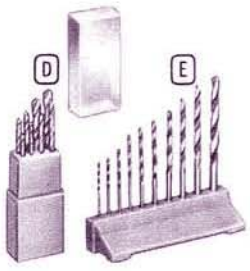
HEAVY-DUTY ½-INCH DRILL. Aluminum alloy housing. 110–120-volts, 25–60 cycle, AC or DC. Plenty of power for toughest jobs. Self-lubricating bronze bearings, ball thrust bearing on chuck spindle. Cutler-Hammer lock-type switch. ⅝-in. capacity in steel; 1-in. in hardwood. No-load speed 450 RPM. Full load speed 300 RPM. Spur gears of hardened alloy steel, accurately meshed. Two handles: upper one removable for close corner drilling; lower handle formed to fit the hand. Handle in rear for straight down drilling or carrying. Chuck is high-quality 3-jaw geared type threaded to spindle. Forced draft cools motor. UL Approved. Size 13½x14¾x4 in. Cord and plug.

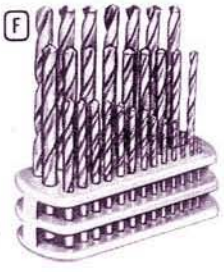
ACCESSORIES INCLUDE: spindle adapter; 4-in. wire wheel; 4-in. grinding wheel; drill stand; 5 carbon drill bits—¼, 5/16, ⅜, ½, ⅝ in.; countersink bit; paint mixer; hole cutter; wrench; 5½-in. rubber pad; 12 sanding discs; lambswool bonnet; arbor unit with flanges and nut; metal tool case.

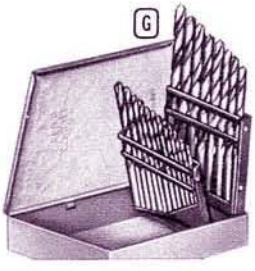
84 WR 9244 M—*Mailable*. Ship. wt. 23 lbs. $5.50 Down . . . . . or Cash $52.95

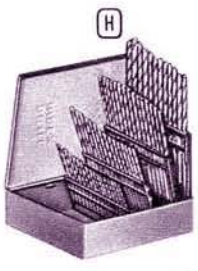
WARDS CONVENIENT MONTHLY PAYMENT PLAN: 10% DOWN ON ANY TOOL ORDER OF $20 OR MORE. SEE PAGE 24 FOR MORE COMPLETE INFORMATION.

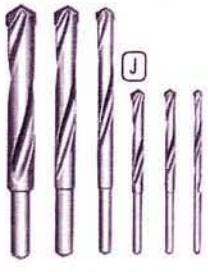












WARDS HIGH QUALITY DRILL BITS ARE PRECISION GROUND . . . LONG LASTING

Your choice of two types of drill bits: HIGH SPEED STEEL—use in high RPM drills for drilling wood and hardened, tempered steel. Stay sharp longer. CARBON STEEL—use in low RPM drills for drilling wood and mild steel.

(C) 5-PC. SET. Fits ¼-in. electric drills. ¼-in. diam. round shank. Includes: ¼, 5/16, ⅜, 7/16, ½-in. sizes. Plastic case. Ship. wt. ea. 9 oz.
84 WR 3642—High Speed Steel. . . . Set of 5 $4.39
84 WR 3640—Carbon Steel. . . . . Set of 5 2.49

INDIVIDUAL BITS. Like (C) above. Ship. wt. 5 oz.

State size	High Speed 84 WR 3643	Carbon 84 WR 3641	State size	Carbon 84 WR 3641
¼ in.	49c	25c	9/16 in.	$1.05
5/16 in.	85c	35c	⅝ in.	1.35
⅜ in.	$1.05	45c	11/16 in.	1.55
7/16 in.	1.45	65c	¾ in.	1.85
½ in.	1.79	78c	. . . . .	. . . .

(D) 8-PC. STRAIGHT SHANK SET. 1/16, 3/32, ⅛, 5/32, 3/16, 7/32, ¼, 9/32 in. sizes. Plastic case.
84 WR 4521—High Speed. Wt. 1½ lbs. . Set $3.69
84 WR 4520—Carbon. Wt. 1½ lbs. . . . . Set 1.89

(E) 10-PC. STRAIGHT SHANK SET. Most popular and useful sizes: 1/16, 5/64, 3/32, 7/64, ⅛, 9/64, 5/32, 3/16, 7/32, ¼ in. In metal stand, marked hole sizes. Wt. 2 lbs.
84 WR 4530—High Speed . $3.10
84 WR 4531—Carbon. 1.75

(F) 29-PC. JOBBERS' SET. Sizes: 1/16 to ½ in. by 64ths. In indexed aluminum stand, 6⅛x3⅛x1¾ in. Ship. wt. 4 lbs. 8 oz.
84 WR 4533–High Speed. . $19.95
84 WR 4534—Carbon 9.85

(G) 21-PC. HIGH SPEED SET. 1/16 to ⅜ in. by 64ths. In indexed metal folding case, 5x4¾x1-in.
84 WR 4513—Wt. 2 lbs. . . $11.50

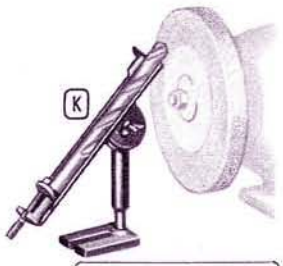
(H) 60-PC. WIRE GAUGE SET. Sizes 1 to 60. Steel case, 5x4¾x1 in. Ship. wt. 7 lbs. 8 oz.
84 WR 4536–High Speed. . $18.50
84 WR 4537—Carbon 11.25

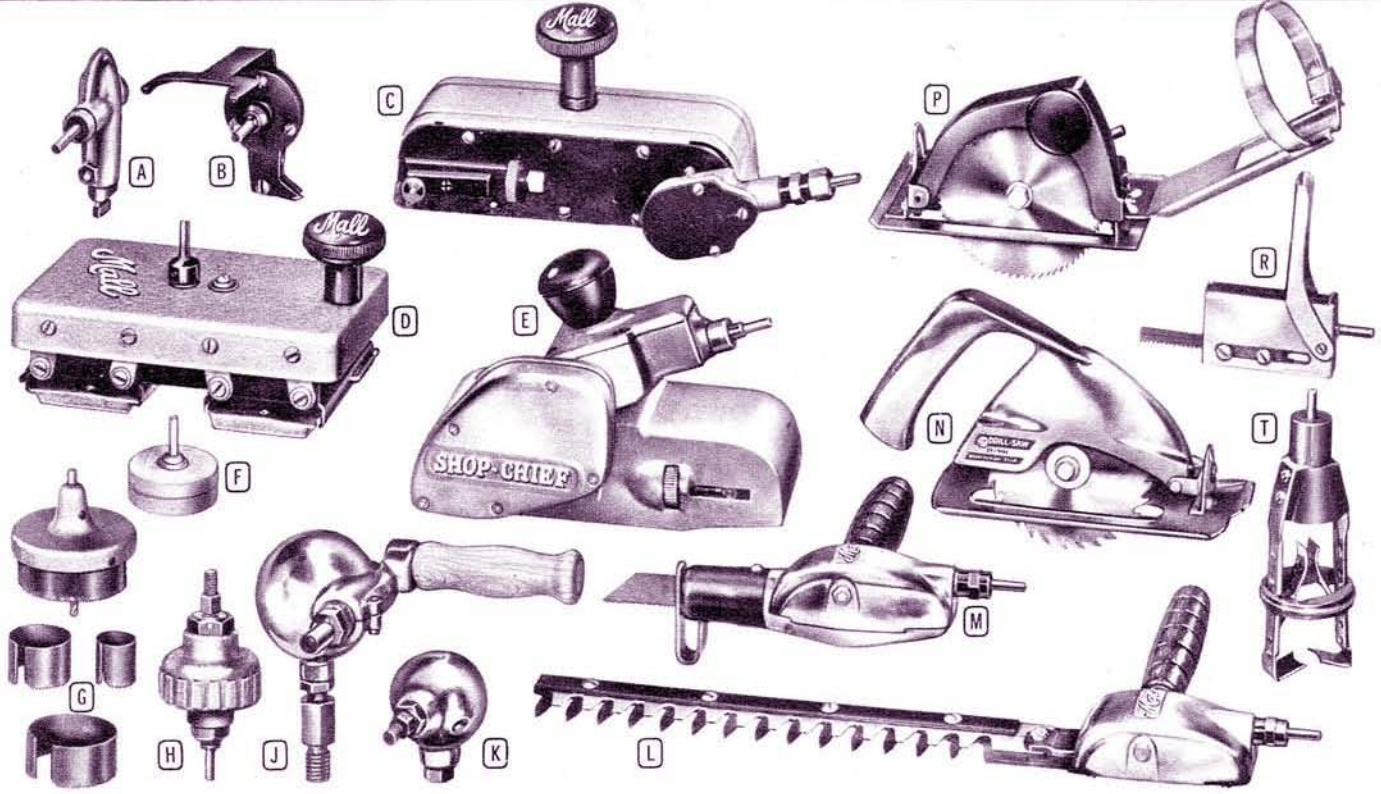
(J) MASONRY DRILLS. Steel with long wearing Tungsten carbide tips. Drill stone, marble, concrete quickly and accurately. Round shanks, spiral flutes.
84 WR 4516—*State diam.*

Diam.	Shank	Ship. wt.	Ea.
¼ in.	3/16 in.	3 oz.	$1.25
5/16 in.	¼ in.	4 oz.	1.39
⅜ in.	¼ in.	5 oz.	1.49
½ in.	⅜ in.	6 oz.	1.85
⅝ in.	½ in.	7 oz.	2.25
¾ in.	½ in.	8 oz.	2.90

DRILL GRINDER STAND

(K) Adjustable. Holds most types of round shank drills for sharpening. Easily mounted, simple to use. With instructions.
84 WR 4501—Ship. wt. 1 lb. $2.49





21 Handy Attachments To Fit Your Electric Drill

SPECIALLY DESIGNED ACCESSORIES GIVE ADDED USEFULNESS TO ANY DRILL 1.00 TO 35.00

(A) NEW MALL NIBBLER. High-speed punch type cutter. For intricate sheet metal work up to 19 ga. (.04 in.) 1/8-inch wide cut. Handles close work with ease. Operates on speeds from 800 to 3500 RPM.
84 WRP 9288—Fits any 1/4-in. chuck. *Postpaid*.$17.50

(B) NEW MALL METAL SHEAR. Cuts smooth even edges on metals up to 18 ga. (.05 in.).
84 WRP 9289—Fits any 1/4-in. chuck. *Postpaid*. $7.20

(C) MALL 2-IN. BELT SANDER. 8½ sq. in. sanding area. All steel housing. Bevel gears, oil impregnated bearings. Adjustable belt tension. Weighs only 4 lbs. With 3 assorted belts. Extra belts, page 36.
84 WRP 9294—Fits any 1/4-in. chuck. *Postpaid*.$14.95

(D) NEW MALL RECIPROCATING SANDER. Approx. 24-sq. in. sanding area. Cut sandpaper to size.
84 WRP 9292—Fits any 1/4-in. chuck. *Postpaid*.$14.50

(E) SHOP CHIEF BELT SANDER. 2-in. wide sanding belt. 10 sq.-in. sanding area. Bronze bearings, grease sealed gears. Cast aluminum housing. With 3 pads, 1 belt. Extra belts, Page 36.
84 WRP 9326—Fits any 1/4-in. chuck. *Postpaid*.$19.95

(F) MALL KNIFE SHARPENER. Hones blades to keen edge. Center is grooved.
84 WRP 9297—Fits 1/4-in. chuck. *Postpaid*. .$1.00

(G) BULL HOLE SAW. Four high-carbon steel blades. 1, 1½, 2, 2½-in. diameter. Cuts any stock—wood, plastic, soft metals to 3/4-in. depth.
84 WRP 9324—Fits 1/4-in. chuck. *Postpaid*. . $4.95

(H) 5-TO-1 SPEED REDUCER. Hand clutch. Grip speed reducer—tool starts; release—tool stops. Torque increases as speed reduces.
84 WRP 9316—Fits 1/4-in. chuck. *Postpaid*. . $8.50

(J) HEAVY-DUTY RIGHT ANGLE DRIVE. 2-to-1 gear ratio. Reduces speed to ½, or doubles speed simply by reversing drive position on spindle. Fits directly on spindle. Helical cut Boston steel gears. Stress-proof steel spindles.
84 WRP 9315—For 1/2-in. drills. *Postpaid*. .$16.50

(K) RIGHT ANGLE DRIVE. Medium duty. 2-to-1 gear ratio. Cuts to ½, or doubles speed. Fits directly on spindle. Close coupled.
84 WRP 9314—For 1/4-in. drills. *Postpaid*. . . $4.25

(L) MALL HEDGE TRIMMER. A real work saver. Trims shrubs, hedges, lawn edges. 11 in. long, 14 teeth. Weighs only 2 lbs. Operate at 800 RPM or more on 1/4 or 3/8-in. electric drill.
84 WRP 9287—With side handle. *Postpaid*.$14.95

(M) MALL RECIPROCATING SAW. Cuts easily through stock up to 2x4 in. Shears nails too. 3/4-in. stroke. Operates at one half drill speed. Die cast aluminum housing. Weighs just 2 lbs.
84 WRP 9290—Fits 1/4-in. chucks. *Postpaid* .$12.50
84 WRP 9291—Extra Blade. *Postpaid*. 35c

(N) 4-IN. CIRCULAR SAW. Cuts up to 1-in. deep, bevels to 45°. Oilite bearings. Cast-aluminum housing. With rip-crosscut blade.
84 WR 9232—Fits 1/4-in. chucks. Wt. 2 lbs. . $5.95
84 WR 9250—Extra Blade. Ship. wt. 8 oz... 1.59

(P) 4-IN. CIRCULAR SAW. Cuts up to 1 3/16 in. deep, bevels to 45°. Grease-sealed gears. Cast aluminum housing. Rip-crosscut blade. Wt. 2 lbs. 14 oz.
84 WR 9310—Fits 1/4-in. chucks. . . . $9.95
84 WR 9311—Extra Blade. Wt. 8 oz.. 1.59

(R) HACK SAW. Cuts 3/4-in. wood or light-ga. metal. Fits 1/4 or 3/8-in. drills. With woodcutting blade.
84 WR 9321—Ship. wt. 1 lb. $4.79
EXTRA BLADES FOR ABOVE. Wt. ea. 3 oz.
84 WR 9322—For Wood. 10c
84 WR 9323—For Metal. 10c

(T) "SPIN-A-BRUSH." Cleans brush in 90 seconds. 1/4-in. shank fits chuck.
84 WR 9254—Ship. wt. 2 lbs. $1.95

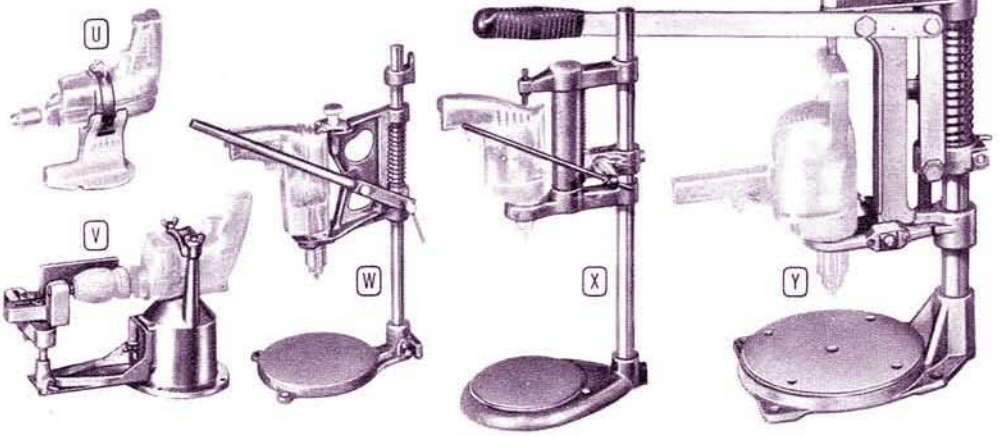
(U) HORIZONTAL DRILL STAND. Fits any 1/4-in. drill. Aluminum base.
84 WR 9325—Ship. wt. 1 lb. $2.25

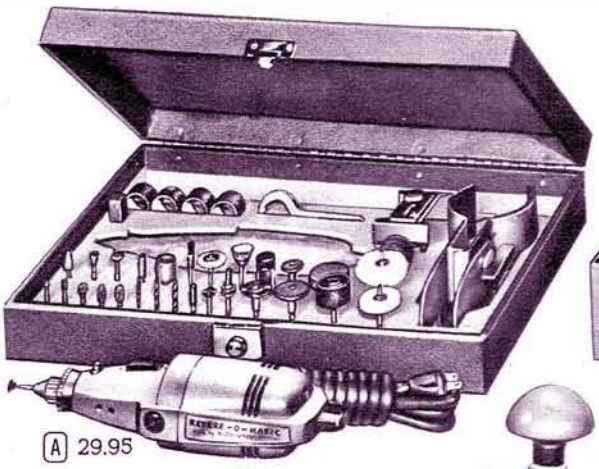
(V) MALL DRILL PEDESTAL. With grinding, turning kit. Turns blocks up to 3-in. x 8-in. diam. *Postpaid*.
84 WRP 9293—For 3/8-in. drill. .$17.00

(W) POWR-KRAFT DRILL STAND. For vertical drill press operations. Drills to center of 8-in. circle. Spindle travels 2¼ in. 6-in. diam. cast-iron table, steel column. 5-to-1 handle leverage. For drills (A), (B), Page 28.
84 WR 9231—Wt. 8 lbs. 8 oz. . . .$10.95

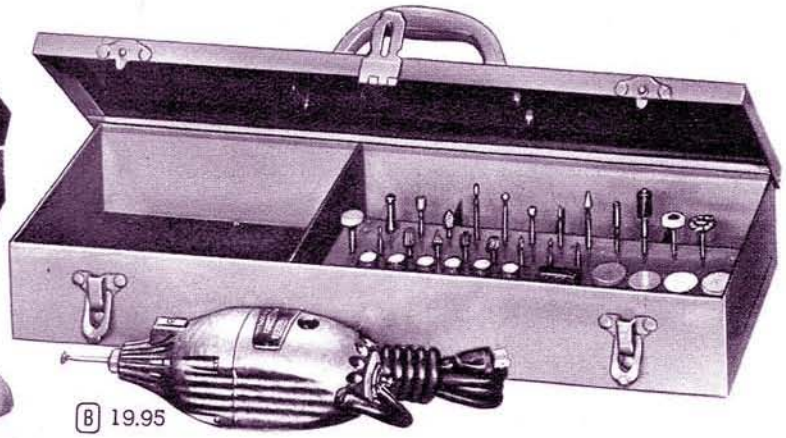
(X) MALL VERTICAL DRILL STAND. Converts Mall drill (9275) Page 28 or (9276), Page 29 into drill press. Drill to center of 9-in. circle. Gives 2¾-in. penetration. Holder can be turned 360°. Raises to 10 in.—lowers to 7 in. Will mount on bench or wall for right or left hand operation. Anti-twist feature.
84 WRP 9299—*Mailed Postpaid*. $14.95

(Y) MALL VERTICAL DRILL STAND. Converts Mall ½-in. drill (J) Page 29 into drill press. Mounts quickly in correct alignment—no tools needed. Drills to center of 10-in. circle. Spindle travels 4 in. Cast-iron table, 9¼-in. diameter. Lever handle. *Mailed Postpaid from factory in Chicago.*
84 WRP 9286 K—$3.50 Dn. Cash $35.00

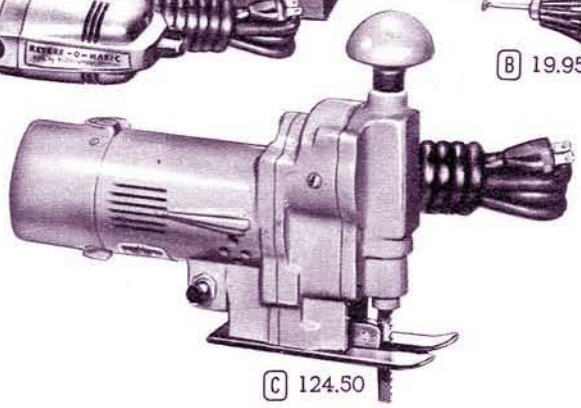




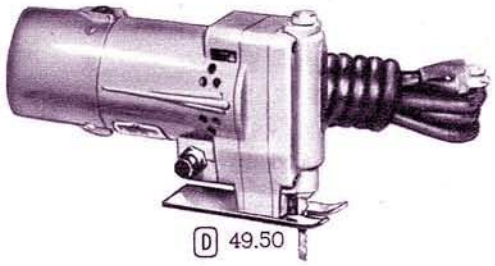
Ⓐ 29.95



Ⓑ 19.95



Ⓒ 124.50



Ⓓ 49.50

Rotary Tool Kits . . . Fast-Cutting Saber Saws

ROTARY TOOL KITS 19.95 TO 29.95

Ⓐ 42-PIECE REVERE-O-MATIC TOOL KIT. Power at high speeds for carving, drilling, engraving, grinding and polishing. 15,000 RPM. Operates on 110-120 volts, AC or DC. UL Approved. Aluminum housing. Built-in fan. Bronze and ball thrust bearings. Three-jaw chuck holds 1/64 to 1/8-in. diameter shank accessories. 7¼ in. long. Includes: 5 steel cutters, 3 high-speed steel drills, 2 saws, 6 assorted abrasive wheels, felt buffer, cloth buffer, dressing stone, 2 rubber bonded polishing wheels, 4 cutting discs, sanding drum, 4 sanding sleeves, 3 mounted brushes, 2 mandrels, spanner wrench, stand for use as bench tool, depth gauge, 2 extra motor brushes, tool box and plug-in cord. *Mailed Postpaid.*

84 WRP 2865—$3 Down....or Cash $29.95

Ⓑ 82-PIECE POWR-KRAFT ROTARY TOOL KIT. Will carve, drill, engrave, grind, sand and buff wood, plastics or metals. 20,000 RPM high-speed motor operates on New Departure ball bearings. 110–120 volts, AC, DC. UL Approved. Takes 3/32 and 1/8-in. diameter shanks. 7 in. long. Includes: 6 wood cutting burrs, 3 metal cutting burrs, 8 mounted abrasive points, dressing stone, sanding drum, 6 sanding sleeves, felt wheel, bristle brush, rubber polishing wheel, 2 corundum discs, grinding wheel, combination mandrel, 48 sanding discs, tool box. Mailed promptly from Chicago Factory. Ship. wt. 8 lbs.

84 WR 2806 K—$2 Down.....Cash $19.95

POWR-KRAFT ROTARY HAND TOOL ONLY.

84 WR 2805 K—Ship. wt. 3 lbs. 8 oz...$13.95

PORTABLE POWR-KRAFT SABER SAWS 49.50 AND 124.50

Ⓒ Ⓓ Powerful reciprocating type hand saws—cut with amazing speed. Can be used in these three ways; see pictures at right. (1) For crosscutting, (2) For hole-cutting. Light duty model has blade with patented point for cutting directly through material without drilling starting hole—just place on starting mark, blade pierces material and starts cut in one operation. (3) For pattern making; handles easily and smoothly. Good balance—lets you guide saw with one hand.

Precision built for close, accurate work. Especially adapted for wood carving, pattern making, hobby work, cabinet work and many other tasks. Fast-cutting Swedish spring tempered steel saw blades will cut wood, plywood, plastic, bone and other materials with ease. Sealed ball bearings in motors. Saws operate on 110-120 volts, AC or DC. Both saws are complete with three special Swedish steel blades, screwdriver, rubber covered cord and plug. Choice of heavy or light-duty model.

HEAVY-DUTY SABER SAW 124.50

Ⓒ Designed for professional carpenters, plumbers, electricians, display and maintenance men. Larger, more powerful, greater capacity than saw at right. 1/8-HP ball-bearing motor. Precision ball and needle bearings. No load speed of 14,000 RPM produces 2200 blade strokes per minute. Cuts through materials up to 2 inches thick with smooth steady stroke. Push button switch—finger-tip control. 7 saws in 1. Does work of rip, crosscut, keyhole, coping, scroll and band saws. Actual weight 6¾ lbs. Ship. wt. 9 lbs.

84 WR 8901L—$12.50 Down .Cash $124.50

EXTRA BLADES FOR SABER SAW ABOVE. Made of tough Swedish spring steel. For cutting wood and plastics. Ship. wt. 1 oz.

84 WR 8903—7 teeth per inch...Ea. 75c

84 WR 8904—12 teeth per inch..Ea. 75c

SPECIAL METAL CUTTING SAW BLADE.

84 WR 8905—Ship. wt. 2 oz....Ea. $1.50

LIGHT-DUTY SABER SAW 49.50

Ⓓ Designed for workshop, display, and light carpentry work. Useful for rough cutting jobs as well as precision work. 1/10-HP ball-bearing motor. Needle bearings in gear head. Oilless bearings on reciprocating shaft. No load speed of 14,000. Extremely fast—3250 strokes per minute. Cuts materials up to 1 in. thick. Ideal for close work requiring close control. Cuts ¼-in. radius turns. Push button switch. Does jig, coping, keyhole work with ease. Actual weight 3½ lbs. Ship. wt. 5 lbs.

84 WR 8900—$5 Down.....Cash $49.50

EXTRA BLADES FOR SABER SAW. Swedish spring steel.

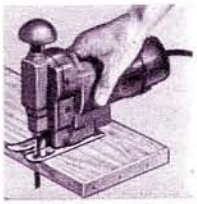
84 WR 8902—Wt. 1 oz.....Ea. 50c

SABER SAW LUBRICANT. 2 oz. size.

84 WR 8906—For (D). Ship. wt. 6 cz..50c

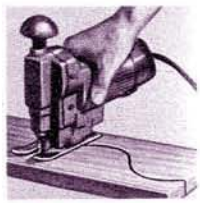
SABER SAW OIL. 2 oz. size. For (C).

84 WR 8907 L—Ship. wt. 6 oz.....75c



(1) Crosscutting

(2) Hole Cutting



(3) Pattern Making

NEW MALL ELECTRIC IMPACT TOOL FOR TIGHTENING AND REMOVING NUTS 120.00

Ⓔ Fast-working portable tool with Mall "tork-hammer" action. Powerful rotary impacts for tightening or removing operations. Power and stamina for running up to 7/8-in. nuts. Universal type electric motor is reversible. Will not stall—slip clutch permits motor to run free even if drive spindle stalls. Motor operates on 110–120 volts, 60 cycle AC or DC. UL Approved. Free spindle speed is 1900 RPM. Hammer is mounted on anti-friction bearings for longer wear. Lightweight yet plenty tough; weighs only 7 lbs. Aluminum alloy housing. Size overall: about 11 in. long, 3 in. wide. Ideal for close quarter work. Contour pistol grip and trigger switch for balanced control and instant power response. Includes 10-ft., 18-ga. heavy rubber cord, three conductor type with grounding wire. Accessories listed below. *Postpaid.*

84 WRP 9281—$12 Down.....or Cash $120.00

Ⓕ JACOBS TAP CHUCK. Converts Impact Tool into drill for reaming, tapping, drilling, etc. Capacity 3/16 to ½ in. Wrench included.

84 WRP 9370—*Postpaid*.....$12.75

Ⓖ IMPACT SOCKETS. ½-in. drive. 7/16, ½, 9/16, 5/8, 11/16, ¾, 13/16, 7/8-in. sizes. *State size.*

84 WR 4870—Ship. wt. 6 oz. ea.....69c

IMPACT SOCKET SET. Includes all sizes above.

84 WR 4890—Ship. wt. 4 lbs....8-Pc. Set $4.95

WARDS MONTHLY PAYMENT PLAN: SEE PAGE 24

Power Sanders

For Every Kind of Finishing Job

A Sander will save you hours and hours of tedious hand labor, and is extremely useful in giving your work that desirable "professional" finish. Available in a variety of types and models for shop work, or for portable use. The type sander you need will depend on the kind of work you expect to do. For all round workshop utility, you may want a Bench Sander; for specialized sanding tasks—one of the portable type models. If you have a power unit you wish to use, a Flexible Shaft Sander will convert your motor and flexible shaft into a belt sander at minimum cost.

BENCH SANDERS FOR GENERAL SHOP USE. Disc or belt type or combination of both. Disc Sanders are primarily for edge sanding—using the miter gauge for squaring, beveling, chamfering. Cutting speed varies across width of disc—gives fastest cutting near edge of disc. Belt Sanders, most popular type for workshop use, perform all operations of the disc sander besides sanding large, flat surfaces. Cutting speed is uniform—gives smooth even action. Belt and disc sanders operate with "V" belts from separate motors.

FLEXIBLE SHAFT SANDERS FOR ADDED PORTABILITY. Belt type sanding motion. Especially useful for sanding large flat surfaces, table tops, desk tops, walls, boat decks, etc. Sander connects directly to flex-shaft and motor.

PORTABLE SANDERS FOR VERSATILITY. Designed in a variety of models for different types of work. Handle work from rough sanding to final finishing. Operate with self-contained motors directly from electrical outlets.

OSCILLATING OR ORBITAL SANDERS: For fine finishes on wood, metal or plastics. Give uniform results superior to best hand sanding and finishing in 1/10 the time. Powered by self-contained fractional HP motor.

ROTARY SANDERS: Used extensively for automobile body work, waxing and buffing. Also adaptable to drilling and other operations with separate attachments. Powered by high-speed rotary-action motors.

BELT SANDERS: Excellent for use on large assembled pieces with big areas of flat surface—flooring, woodwork, etc. Also useful for outside jobs.

VIBRATOR SANDERS: Designed especially for fine work. Used in most types of hobby-crafts, also for buffing and polishing metals and varnished woods. Magnetic power units produce straight line or double arc motion.

FOUR TYPICAL SANDING OPERATIONS

Sanding is an operation that should not be rushed. If you take the time to do a good job the final result will be well worth the extra effort. A few of the many sanding operations are illustrated below. (1) Compound angle sanding with Bench-type Disc Sander. Table and miter gauge are tilted to angle wanted; both angles are sanded in one operation. (2) Curve sanding over drum with Bench-type Belt Sander. Sander is tilted to facilitate easy handling of stock over drum end. (3) Auto polishing with lambswool bonnet on Portable Rotary Sander. Special abrasives also available for finishing metals. (4) Sanding flat surface with a Portable Belt Sander. Simply guide sander over surface permitting the weight of the sander to supply the required pressure. Various grits of abrasives are available for each sander.

NOTE: In selecting a Sander, keep in mind the type of power it requires. Portable Sanders are self-powered and simply plug into electrical outlets. However, if you already have a motor that you wish to use with either the Bench-type or Flexible Shaft Sander, make sure that it produces the speed necessary to operate the sander efficiently. A definite size motor HP as well as motor RPM is usually recommended for this type sander.

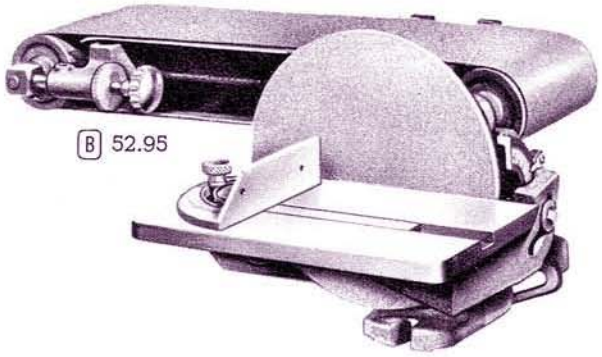
(1) Compound Angle Sanding

(2) Curve Sanding Over Drum

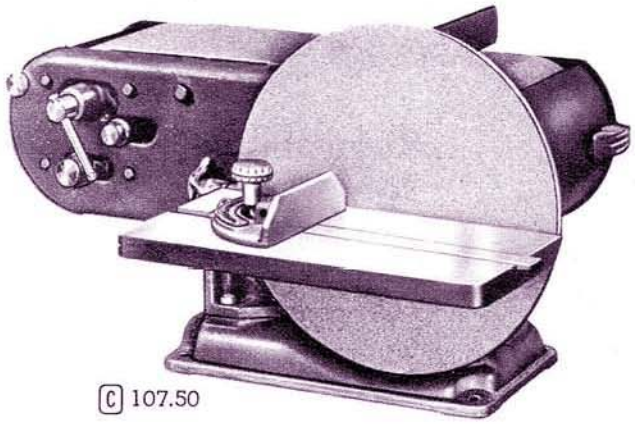
(3) Auto Polishing

(4) Belt Sander
For Sanding Large Flat Surfaces.

A 15.95



B 52.95



C 107.50

Powr-Kraft, Beaver and

BELT-DRIVEN BENCH TYPE SANDERS 15.95 TO 107.50

A POWR-KRAFT 4-IN. BELT SANDER. Compact medium duty tool with self-lubricating bronze bearings. Crowned roller drums for sanding of curved surfaces. Adjusting nuts give proper belt tension and tracking. Removable guide fence tilts 45° to 90°. Table 4 7/16 by 11 in. supports belt. Streamlined sturdy gray iron frame. With 4 by 36-in. sanding belt, and 2-in. machine pulley. Size overall 7½x16¾x4 3/16 in. Gray Wrinkle Finish. *Mailable.*

84 WR 2719 M—Sander only. Shipping weight 18 lbs. $15.95

84 WR 2720 Y—Sander with ⅓-HP split-phase motor (83 WR 4534 M, Page 26), 40-in. "V" belt, 2½-in. motor pulley. Wt. 42 lbs. $3 Down...Cash $29.75

B POWR-KRAFT COMBINATION BELT AND DISC SANDER. For all around heavy-duty use in production or home workshop. Runs smoothly on precision-ground needle bearings. Wide 6-inch belt operates in vertical or horizontal position, locks in any angle from 0 to 90°. Table 6⅜x16 in. supports belt. Disc has 9-inch diam. surface. Large cast iron auxiliary table, 6½x11 in. is interchangeable for use with belt or disc, has miter gauge, tilts up to 45°. Sturdy cast-iron construction. 3-in. diam. drums. Size overall 23¼x24½x11 in. Includes 9-in. sanding disc, 6x48-in. medium grit sanding belt, 3-in. diam. machine pulley. Gray Wrinkle Finish. *Not Mailable.*

84 WR 2726 R—Sander only. Ship. wt. 70 lbs. $5.50 Down.....Cash $52.95

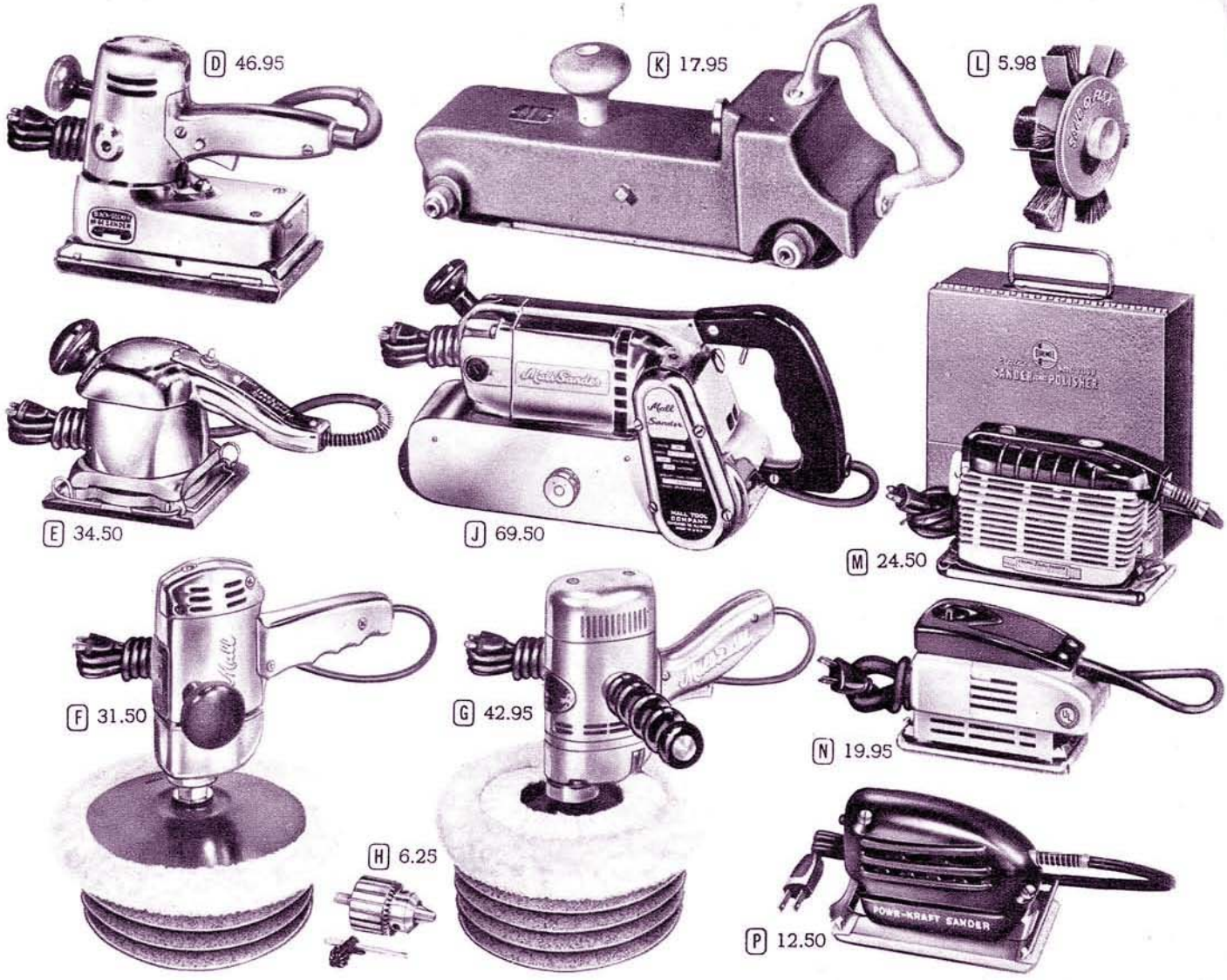
84 WR 2728 R—Sander with ½-HP motor (83 WR 4576 M, Page 26), 2½-in. motor pulley, ½x44 in. "V" belt. Wt. 103 lbs. $8 Down.....Cash $78.75

C BEAVER COMBINATION BELT AND DISC SANDER. Professional quality precision made tool for heavy duty production or home workshop use. Runs smoothly on grease-sealed ball bearings. Sturdy cast-iron construction for extra rigidity. 6-in. wide belt operates in horizontal or vertical position, locks at any angle from 0 to 90°. Table supporting belt is 6⅜x13 in. Big capacity 12-in. diam. disc. Auxiliary work table 7x13 in. with miter gauge can be used with belt or disc. Table and disc are removable, so that spindle can be used for drum sander or any accessory with No. 1 or 2 Morse taper. 5½-in. diam. drums. With 6x48-in. sanding belt, 12-in. disc, 4½-in. diam. machine pulley; 46-in. V-belt (order 3-in. diam. "V" motor pulley separately). Shipped from Factory near Detroit, Mich., pay Freight from there. Allow 7 days. *Not Mail.*

84 WR 2711F—Sander only. Ship. wt. 83 lbs. $11 Down.....Cash $107.50

83 WR 4576 M—½-HP capacitor motor for Sander above. (See Page 26 for complete description). *Mailable.* Ship. wt. 32 lbs. $2.50 Down...Cash $24.50

EXTRA SANDING BELTS ON PAGE 36. STANDS ON PAGE 25. PULLEYS, PAGE 26.



Other Nationally Known Belt Driven and Portable Sanders

GIVE YOUR WORK A FINE PROFESSIONAL FINISH . . . SELECT THE SANDER POLISHER BEST SUITED TO YOUR NEEDS

D E OSCILLATING SANDERS. Unique orbital motion duplicates circular motion of hand finishing—gives action free from reversing points, scratching and grooving. Operates with minimum vibration. Chromed cast-aluminum housings. For wet or dry abrasives. UL Approved. *Mailed Postpaid.*

(D) NEW BLACK AND DECKER SANDER. Big capacity. 30 sq. in. sanding surface. 3½x7⅛-in. sanding shoe. Grease sealed ball bearings. New, abrasive lock lets you change abrasives quickly, easily. Lock-on trigger switch. Use knob handle at front or side. 110–120-volt AC, DC motor. With 6 abrasive sheets.

84 WRP 8508—Takes 3⅝x9-in. sheets. $5 Down, Cash $46.95

(E) SPEEDWAY SPEEDSANDER. 21 sq. in. sanding area 4½x5-in. shoe travels on 4 Neoprene balls, makes 3/16-in. circle at 3450 RPM. Ball bearing motor operates on 110–120 volt AC.

84 WRP 8510–Takes 4½x6½-in. sheets. $3.50 Dn., Cash $34.50

F G MALL SANDER-POLISHERS. Lightweight cast-aluminum alloy housings. Efficient helical cut spur gears. Air cooled motors. UL Approved. 110–120-volt AC or DC. Handy trigger switch. Converts to drill with Jacobs chuck (H).

(F) MALL 7-IN. LIGHT-DUTY MODEL. For general sanding and polishing jobs. Accessory pole included converts sander into floor polisher. Self-lubricating bronze bearings. With 7-in. bonnet, 3 assorted 7-in. sanding discs, cord and plug.

84 WRP 8501Y—*Mailed Postpaid.* $3.50 Down . . . Cash $31.50

(G) MALL 7-IN. HEAVY-DUTY MODEL. Nationally known quality. Grease-sealed ball bearing construction for continuous operation. With 7-in. sheepswool polisher, 4 assorted 7-in. sanding discs, can of plastic polish, cord and plug.

84 WRP 8500 M—*Postpaid.* Only $4.50 Down. . . . .Cash $42.95

H ⅜-IN. JACOBS CHUCK. Converts (F) and (G) to Drill.
84 WRP 8504—3-jaw geared type. With key. *Pstpd.* . $6.25

J MALL HEAVY-DUTY 3-IN. PORTABLE BELT SANDER. Improved design for ripple-free finish on wood, plastic, metal. Belt flush with right-hand side of sander for close work. Sleeve bearings on gear and pulley shaft, grease-sealed ball bearings on armature. Lightweight aluminum housing. For 110–120-volt AC or DC. UL Approved. Trigger switch. Plastic handle. Size 13⅞x4⅝x6⅝ in. With 3 sanding belts, lubricant, cord and plug. Actual weight 10¼ lbs.

84 WRP 8503 M—*Postpaid.* $7 Down, Cash $69.50

K 3-IN. PORTABLE FLEXIBLE SHAFT SANDER. For any flexible shaft having ½-in. 24-thread spindle. (See Page 37.) Lightweight, portable, Ideal for sanding large surfaces. Runs smoothly on self-lubricating bronze bearings. Crowned roller drums. 3-in. belt backed at sanding area by adjustable table. With tension and tracking controls. Cast-aluminum alloy frame. With medium grit 3x29½-in. sanding belt. Recommended (not included) ¼ or ⅓-HP 1725 RPM motor (Page 26). Length overall, 16¾ in. *Mailable.*

84 WR 2703 M—Ship. wt. 12 lbs. $17.95

L SAND-O-FLEX CONTOUR SANDER. For curved or irregular surfaces. 3-in. diam. head. Garnet abrasive cartridge, 6 brushes. *Postpaid.*

84 WRP 2730—For ½-in. diam. motor shaft. $5.98
84 WRP 2731—For ⅝-in. diam. motor shaft. 5.98

ABRASIVE REFILLS. *State fine, medium or coarse.*
84 WRP 2732—Garnet. *Postpaid* . . . . . Each 43c
84 WRP 2733—Aluminum oxide. *Postpaid.* Ea. 43c
84 WRP 2734—Brushes. *Postpaid* . . . . . 6 for 89c

M N P VIBRATOR-TYPE SANDERS. Complete self-contained units. Ideal for fine work. Sand and polish in tight places—on flat, curved or irregular surfaces. Use for sanding with or across grain. No oiling or service required . . . dust and dirt have no effect on operation. 110–120-volt, 60-cycle AC only. Handy thumb switches. UL Approved. Choice of three models.

(M) DREMEL SANDER. 21-sq. in. sanding area. Straight line motion. With steel carrying case, rubber backing pad, 25 sanding sheets (3x9 in.), sheepskin polisher. Actual wt. 5 lbs. *Postpaid.*

84 WRP 8516—$2.50 Down. . Cash $24.50

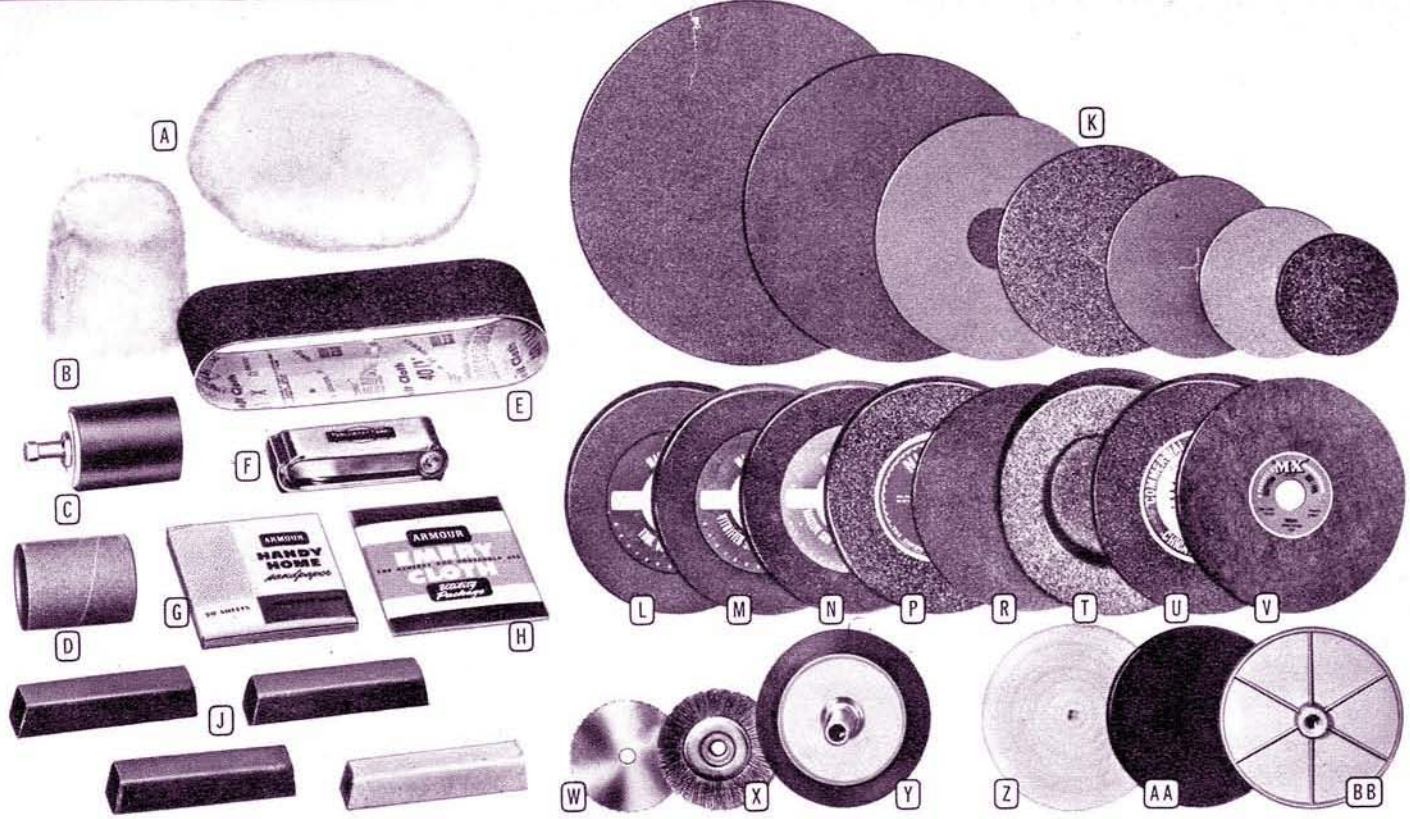
(N) SYNCHRO SANDER. Double arc motion. Throws off dust—prevents clogging sanding sheet. 12-sq. in. sanding area. Gray enamel finish. With 12 sanding sheets (2⅜x7-in.) fabric and lambswool pads. Actual wt. 4½ lbs. *Postpaid.*

84 WRP 8520—$2 Down. . . . Cash $19.95

(P) NEW POWR-KRAFT SANDER. Outstanding value. Self-loading—length of stroke increases with pressure. Straight line motion gives smooth even stroke, full surface contact. Powerful motor. Big 13¾-in. sanding area. Self-tightening clamp makes abrasive changes easy. Lightweight plastic body. With cord, plug, 6 sanding sheets, (2½x7 1/16-in.), polishing pad. Act. wt. 2½ lbs.

84 WR 8514—Ship. wt. 5 lbs. $12.50

FOR COMPLETE LISTINGS OF SANDING BELTS, DISCS AND SANDING SHEETS FOR ALL SANDERS SEE NEXT PAGE



Complete Selection of Sanding and Grinding Needs

SANDING BELTS, SHEETS AND DISCS FOR EVERY PURPOSE

(A) LAMBSWOOL PAD. For polishing and buffing. 6-inch diam.
84 WRP 3128X—Fits over 6-in. face plate or sanding disc. *Postpaid*..$1.50

(B) LAMBSWOOL BONNET. For polishing and waxing.
84 WRP 3129X—Fits over sanding drum (C) below. *Postpaid*..... $1.25

(C) SANDING DRUM. Threaded to fit ½-in. diam. 24-thread spindle.
84 WR 2665 K—2 5/16-in. diameter. Ship. wt. 2 lbs.*.....$2.19

(D) SANDING SLEEVES. Fit sanding drum (C) above. 2 5/16-in. diam.
84 WRP 3133X—*State:* Fine, Med., Coarse, or Asst'd. grit. *Pstpd.* 6 for $1.10

(E) ALUMINUM OXIDE SANDING BELTS. For wood or metal. *State Fine, Med., or Coarse grit.* 84 WR 9354 available in Fine and Medium grits only.

Cat. No.	Size, in.	Wt.	Each	Cat. No.	Size, in.	Wt.	Each
84 WR 9354	2x17.38	2 oz.	25c	84 WR 2716	3x29½	4 oz.	53c
84 WR 9350	2x17½	2 oz.	25c	84 WR 2729	4x36	4 oz.	55c
84 WR 8531	3x24	3 oz.	35c	84 WR 2727	6x48	12 oz.	$1.00

(F) HAND SANDER. Ideal for small sanding jobs. ⅜-in. rubber cushion.
84 WR 4109—With 13⅜x20-in. roll of abrasive cloth. Wt. 6 oz.....65c
84 WR 4110—Refill rolls for (F) Medium grit. Ship. wt. 2 oz.....3 for 47c

(G) SANDPAPER SHEETS. Handy package of assorted grits.
84 WR 4113—4½x5½-in. sheets. Wt. 2¼ lbs.....3 pkgs. of twenty 25c
84 WR 4115—9x10 in. sheets. *State:* Fine, Med. or Coarse grit.

Grit	Sheets	Ship. wt.	Price	Sheets	Ship. wt.	Price
Fine	25	1 lb. 4 oz.	34c	100	5 lbs.	$1.30
Medium	25	1 lb. 12 oz.	40c	100	7 lbs.	1.40
Coarse	25	2 lbs. 4 oz.	45c	100	9 lbs.	1.75

ALUMINUM OXIDE SANDING SHEETS. For use with most portable sanders.

Catalog No.	Size in.	Grits	Fits	Ship. wt.	Pkg. of 12
84 WR 8534	2⅜x7	Assorted	84 WR 8520	8 oz.	20c
84 WR 8513	2½x7 1/16	Assorted	84 WR 8514	8 oz.	19c
84 WR 8533	3 x9	Assorted	84 WR 8516	8 oz.	39c
84 WR 8532	4½x6½	Assorted	84 WR 8510	8 oz.	39c
84 WR 8509	3⅝x9	F,M,C	84 WR 8508	8 oz.	85c

(H) EMERY CLOTH. Handy packages of 6 assorted grit sheets.
84 WR 4119—4½x5½-in. sheets. Ship. wt. pkg., 4 oz.....3 pkg. 38c
84 WR 4121—9x11-in. sheets. *State:* 00, 0 or 1 grit. Wt. 4 oz.....6 for 58c

(J) BUFFING COMPOUND. In one lb. bars. *State Cat. No.* Ship. wt. 1 lb. 4 oz.
84 WR 2786—TRIPOLI.....47c 84 WR 2787—RED ROUGE.....59c
84 WR 2788—WHITE ROUGE.....44c 84 WR 2789—EMERY.....45c
84 WR 2785—ASSORTMENT. One ea. of above. 5 oz. bars. Wt. 2 lbs.....60c

(K) SANDING DISCS. Garnet for wood only. Alum. Oxide for wood or metal. *State:* Fine-F, Medium-M, Coarse-C, Extra Coarse-XC, or Asst. grits.

Cat. No.	Diam.	Hole	Grit	Abrasive	Wt.	Price
84 WR 9345	4-in.	¼-in.	F, M, C, XC	Al. Oxide	10 oz.	10 for 35c
84 WR 9346	5-in.	¼-in.	F, M, C, XC	Al. Oxide	8 oz.	10 for 69c
84 WR 9347	6-in.	¼-in.	F, M, C, XC	Al. Oxide	6 oz.	5 for 39c
84 WR 2672	6-in.	None	Assorted	Garnet	6 oz.	6 for 39c
84 WR 8530	7-in.	⅞-in.	F, M, C, XC	Al. Oxide	8 oz.	5 for 59c
84 WR 2286X	8-in.	2-in.	Assorted	Garnet	6 oz.	6 for 55c
84 WR 2070K*	10-in.	None	F, M, C	Garnet	6 oz.	6 for $1.10
84 WRP 2978X	12-in.	None	F,M,C,Ass't.	Garnet	*Postpaid*	6 for 1.65
84 WRP 3108X	12-in.	None	Assorted	Al. Oxide	*Postpaid*	6 for 2.25

(*) Items with "K" after Cat. No. mailed from Chicago Factory; pay postage from there.

GRINDING WHEELS AND SPECIAL ABRASIVES FOR BENCH GRINDERS

(L) GRINDING WHEELS. Vitrified. Dressed on both sides and face. Wheels with center holes over 1½ in. mailed promptly from Chicago Factory, others from Stock.

State Diam. and Thickness	Ship. wt. lbs.	Coarse 24 Grit 84 WR 5202 L	Medium 60 Grit 84 WR 5201 L	Fine 100 Grit 84 WR 5200 L	Extra Fine 200 Grit 84 WR 5203 L
4x ¼	1	.....	55c	52c	55c
4x ½	1	.....	60c	60c	60c
4x ¾	2	.....	70c	70c	70c
4x1	2	.....	80c	80c	80c
6x ½	2	.....	98c	98c	98c
6x ¾	3	.....	$1.20	$1.19	$1.20
6x1	3	.....	1.35	1.35	1.35
7x ¾	4	.....	1.45	1.45	1.45
7x1	5	.....	1.65	1.65	1.65
8x1	6	$1.98	.....	1.98	.....
8x1¼	8	2.35	.....	2.35	.....
8x1½	8	2.69	IMPORTANT: *State diameter, thickness, hole size.*		
8x2	10	3.49			

(V) "MX" CUT-OFF WHEEL. For fast-cutting of steel, aluminum, brass, copper, Bakelite, Masonite, etc. Use for finish grinding on side or edge. Cotton fabric and abrasive construction provides for greater safety—will not shatter. 1-in. hole, bushing furnished for smaller holes. Recommended speed 3600 RPM. Choice of 24 or 80 grit. *State: Catalog Number, wheel diameter and hole size. Postpaid.*

84 WRP 5241—Fine (80).
84 WRP 5242—Coarse (24).
6x3/32-in.....$1.83
7x3/32-in..... 2.40
8x3/32-in..... 3.06

(M) (N) SAW GUMMING WHEELS. 60 grit. (Bakelite shipped from Chicago Factory).

Diam., Thick.	Ship. Wt.	(M) Vitrified 84 WR 5209L	(N) Bakelite 84 WR 5211K*	Diam., Thick.	Ship. Wt.	(M) Vitrified 84 WR 5209L	(N) Bakelite 84 WR 5211K*
4x3/32	1 lb.		98c	6x½	3 lbs.	98c	$2.49
4x⅛	1 lb.	*State*	$1.10	8x3/32	3 lbs.	.....	1.69
4x¼	1 lb.	*Diam.,*	1.29	8x⅛	3 lbs.	.....	1.85
6x3/32	2 lbs.	*Thickness,*	1.29	8x¼	4 lbs.	$1.10	2.49
6x⅛	2 lbs.	*Hole size.*	1.45	8x⅜	5 lbs.	1.35	3.15
6x¼	2 lbs.	89c	1.79	8x½	5 lbs.	1.49	3.59
6x⅜	3 lbs.	.... 98c....	2.29	10x¼	6 lbs.	1.65	3.39

(P) NIAGARA GRINDING WHEELS. Mfg. by Carborundum. Vitrified aluminum oxide. 1-in. holes. 4-in. sizes have metal bushings. *State wheel diameter, thickness and hole size.*

Diam., Thick.	Ship. wt.	Fine 100 Grit 84 WR 5238	Med. 60 Grit 84 WR 5239	Coarse 46 Grit 84 WR 5240
4x½-in.	10 oz.	74c	74c	.....
4x 1-in.	1 lb. 2 oz.	98c	98c	.....
6x¾-in.	1 lb. 12 oz.	$1.50	$1.50	.....
6x 1-in.	2 lbs. 8 oz.	1.65	1.65	$1.65
8x 1-in.	4 lbs. 8 oz.	.....	2.59	2.59

(R) RUBBER BONDED CUT-OFF WHEEL. Aluminum Oxide. *State size.* Ship. wts. 2, 3 lbs.
84 WR 5213 L—6x3/32-in. (½-in. hole)..69c;.....8x3/32-in. (⅝-in. hole). 89c

(T) (U) HIGH SPEED WHEELS. For cutting brass, copper, cast iron, steel, etc. snagging bars, smoothing rough spots. Ship. wts. 4, 7 lbs.* *State size wanted.*
(T) 84 WR 5216 K—Straight Cup. 5x2-in. (½-in. hole)..$3.49;...6x2-in. (⅝-in. hole). $4.85
(U) 84 WR 5217 K—Snagging. 6x1-in. (½-in. hole).... 2.75;...8x1-in. (⅝-in. hole). 4.19

(W) LIGHT-DUTY SAW BLADE. ½-in. arbor hole.
84 WR 2675—4-in. diam. Wt. 2 oz. 39c

(X) WIRE SCRATCH BRUSHES. *State size wanted.*

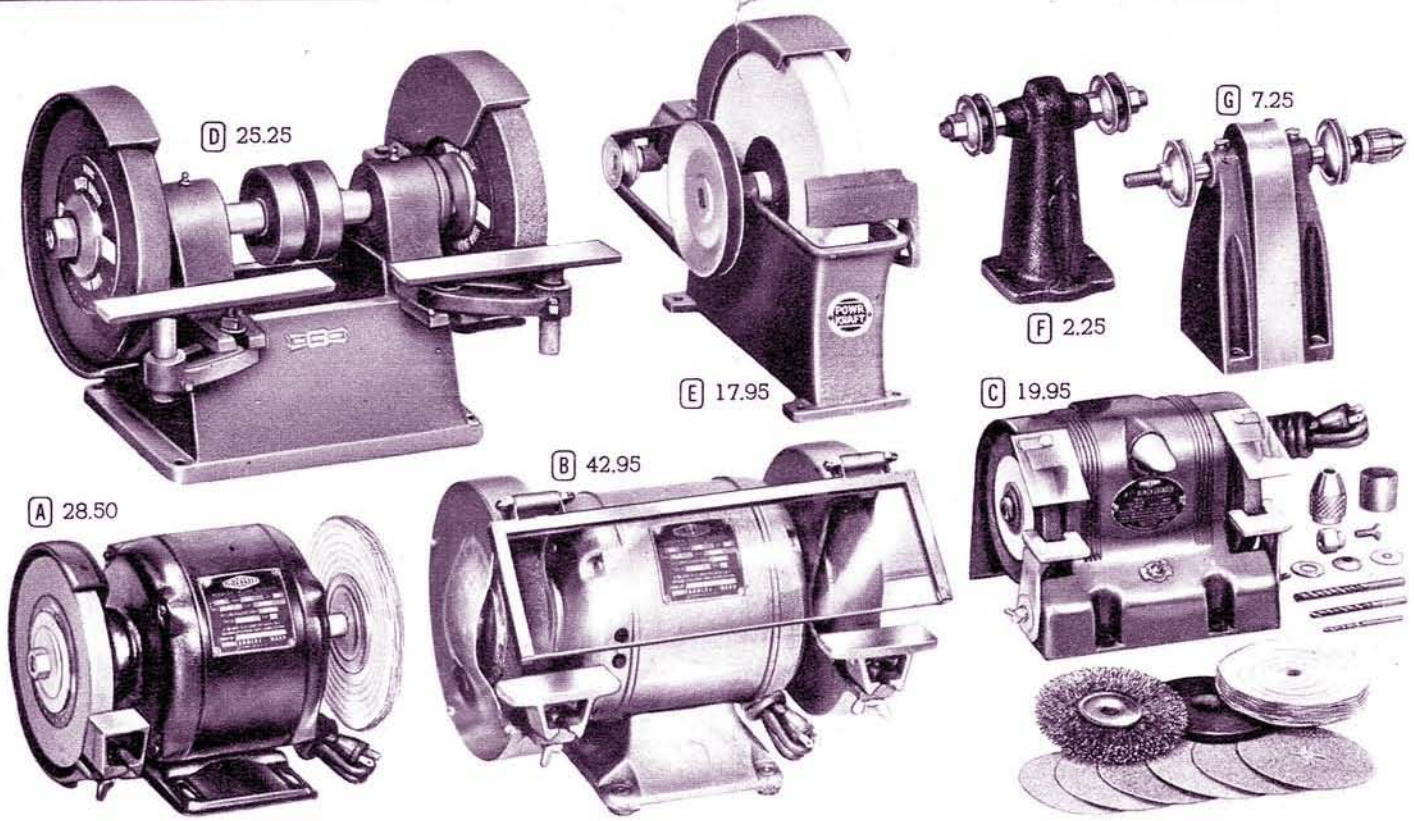
Diam., In.	Arbor Hole	Ship. wt.	Fine Wire 84 WR 2778	Coarse Wire 84 WR 2779
4	½ in.	8 oz.	59c	49c
6	½ in.	12 oz.	85c	65c
8	⅝ in.	1¼ lb.	.....	79c

(Y) RUBBER SANDING DISC. Fits any ½-in. 24-thread shaft. No gluing necessary.
84 WR 2669 K—6-in. diam. Ship. wt. 1 lb.*..$1.98

(Z) CLOTH BUFFING WHEELS. ⅜-in. face ½-in. arbor. *State diam.*
84 WR 2784—Ship. wts. 4, 7, 12 oz.
4-in. diam.....Each 39c; 3 for $1.10
6-in. diam.....Each 59c; 3 for 1.70
8-in. diam.....Each 80c; 3 for 2.35

(AA) RUBBER CUSHIONING PAD. Fits disc (BB) below. Ship. wt. 4 oz.
84 WR 2680—6-in. diam.....43c

(BB) SANDING DISC. Fits ½-in., 24 thread spindle. 6-in. diameter.
84 WR 2668—Ship. wt. 1 lb.....$1.49



Complete Your Workshop With A Power Grinder

THE GRINDER—FOR KEEPING ALL YOUR CUTTING TOOLS RAZOR-SHARP

A Power Grinder will save you both time and effort in keeping your tools sharp and clean. It will add to your safety by helping to eliminate the danger of working with dull tools. Also useful for sharpening cutlery, for grinding edges on farm implements, and for grinding down many kinds of hard and soft metals. A practical addition to every complete home workshop, the grinder is a necessity for the maintenance, metalworking or garage shop. Grinding wheels can easily be removed and replaced with special abrasive wheels, cloth wheels or wire brush wheels for many buffing, polishing, cutting and abrasive operations.

Power Grinders are available in belt driven models or in self-contained models with built-in motors. Grinders run by "V" belt drive are satisfactory for many workshop uses; however, grinders with built-in electric motors and wheels mounted directly on motor shafts have greater power and higher speed for heavier work. Whichever type grinder you select, remember to keep your tools sharp and clean. They will last longer, do a better job and you will be safer and more satisfied with your equipment. Time involved in maintaining keen cutting edges will be considerably shortened with the use of any grinder listed below.

ELECTRIC AND BELT DRIVEN GRINDERS 15.95 TO 42.95

A ¼-HP STANDARD MODEL GRINDER. Outstanding value. Designed and constructed to give years of service under hard use in production shop or home workshop. A versatile tool for grinding and buffing, general maintenance. Runs smoothly on grease-sealed New Departure ball bearings. Powerful split-phase motor, 110–120-volt, 60 cycle AC. UL Approved. No load speed 3600 RPM. Handy on-off switch. ½-in. diam. shaft. Stamped steel base. With adjustable tool rest. Sturdy cast-iron wheel guard . . . one side is clear for buffing. With 1 Master Quality grinding wheel, 6-in. diam., medium grit; 6-in. cloth buffing wheel; cord and plug. Black finish. Ship. wt. 29 lbs. *Mailable.*

84 WR 5120 M—$3 Down on Terms. . . .or Cash $28.50

B DE LUXE ½-HP GRINDER. For production shop or home workshop. Modern design with full length shatterproof glass shield. New Departure grease-sealed ball bearings. If overload occurs, thermotron shuts off current, easily reset by push button. Split-phase motor, 110–120-volt, 60-cycle AC, is enclosed to keep out flying particles. No load speed 3600 RPM, full load 3450 RPM. ⅝-in. diam. shaft. Built-in on-off switch. With cord and plug.

Meets rigid requirements of American Abrasive Safety Code. Cast-iron base, guards, removable end shields. With two Master Quality 7-in. grinding wheels —one medium, one fine grit. Gray finish. Wt. 49 lbs.

84 WR 5119 M—*Mailable.* $4.50 Down..or Cash $42.95

C 16-PIECE GRINDER KIT. Versatile kit at low cost, combines the hobbyist's favorite, the Powr-Kraft ½ HP Grinder, with 15 useful accessories . . . with it you can grind, drill, sand, wire brush, polish—and do it faster and easier. Electric grinder is complete with two 4½x½-in. wheels—1 fine, 1 medium grit . . . on ⅜-in. diam., 24-thread shaft. Adjustable tool rests. Built-in work light, on-off switch. Plastic spark shields. For 110–120-volt, 60 cycle AC. Self-lubricating bronze bearings. UL Approved.

Accessories: arbor assembly; 4½-in. polishing and buffing cloth wheel; polishing rouge; molded rubber backing disc; 8 discs asst'd. sandpaper; ¼-in. capacity chuck; 3 chrome alloy steel twist drills (⅛, 3/16, ¼ in.); 4½-in. diam. wire brush.

84 WR 5106 M—*Mailable.* Ship. wt. 10 lbs. $19.95

½-HP GRINDER ONLY as described in kit above.

84 WR 5101M—*Mailable.* Ship. wt. 9 lbs. $15.95

D MASTER (BEST) QUALITY BENCH GRINDER. For extra-heavy duty use. Ball bearings. Full length adjustable tool rest. Main shaft is 18 in. long; ¾-in. diameter. Cast-iron pulley 2½ in. wide by 3⅛ in. diam. for "V", round or flat pulley belts up to 2 in. wide. Cast-iron base 12x7½ in. Height from base to shaft center 7¼ in. With wheel guards and two Master Quality 8x1¼-in. vitrified wheels; fine, coarse.

84 WR 5187 M—*Mailable.* Ship. wt. 60 lbs. $25.25

GRINDSTONE, POLISHING HEADS 2.25 TO 17.95

E BELT-DRIVEN WET GRINDSTONE. Operates at low speed and in water to prevent drawing temper from tools. Ohio sandstone wheel will withstand heavy industrial use. Size 10x1½ in. Heavy cast-iron construction. ⅝-in. diam. shaft rotates at 125 RPM when 1½-in. pulley is used with 1725 RPM motor. Recommend ⅓-HP split-phase motor (83 WR 4534M), Page 26. With adjustable tool rest, 3 pulleys, "V" belt. Gray finish.

84 WR 5285 M—11½x16½ in. long. *Mail.* Wt. 31 lbs. $17.95

F POLISHING HEAD. Takes wheels ½ to ¾ in. wide. Shaft ½x7⅛ in long, 24 thread. Height to spindle center, 5 in. With 1½-in. diam. "V" pulley. Use 1725 RPM motor, 3-in. motor pulley (not incl.). Ship. wt. 4 lbs.

84 WR 2768—Drive from behind or below. $2.25

G POLISHING HEAD WITH CHUCK. Shaft ½x8¼ in. long, 20 thread with ¼-in. Jacobs chuck. 2 sets 2⅛-in. diam. washers. Cast aluminum housing, bronze bearings. Hgt. to spindle center, 6 in. With 1⅝-in. diam. "V" pulley. Use with 1725 RPM motor, 2½-in. diam. motor pulley (not incl.). Drive from behind or below.

84 WR 2761—Ship. wt. 4 lbs. 8 oz. $7.25

HINTS ON SHARPENING: Never apply excessive pressure when applying tools to grinding wheel. Keep tool edges cool by dipping them in water. Work slowly—feeding lightly. A light touch of the wheel should be enough to refinish an edge on most tools.

POWR-KRAFT FLEXIBLE SHAFTS GIVE "REACH" TO YOUR MOTOR 3.98 TO 15.45

H J K FLEXIBLE SHAFTS AND EXTENSION. One of the most helpful tools in your shop. Has hundreds of uses in home, garage or repair shop. Gets into difficult places and corners where stationary tools cannot reach. Extends power of motor beyond its own permanent or portable mount. Can be used with a wide range of accessories for grinding, drilling, sanding, wire brushing, polishing and cleaning. Attaches to any ½-inch diameter motor or line shaft (use adapter 84 WRP 2992 on Page 47 to fit ⅝-in. diam. shafts), ¼ or ⅓-HP, running counter-clockwise at 1725 RPM. (See motors on Pages 26 and 27.) Flanges for holding grinding wheels, wire brushes, etc. Has ½-in. diam., 24-thread spindle. See accessories on opposite page. For chucks (84 WR 2764) to fit spindle, see Page 27.)

Ball bearing hand piece and motor coupling for positive connection. Inner core of transversely wound layers of high carbon steel wire. Wire is wound with soft dead filler wire making up casing assembly. Choice of medium or light-duty shafts at right.

(H) MEDIUM DUTY FLEXIBLE SHAFT. 60-inch shaft, ⅜-in. diameter core. With hand guard to protect hands. For garages, carpenter, paint and other workshops.

84 WR 2657 M—*Mailable.* Ship. wt. 9 lbs. $15.45

(J) LIGHT DUTY FLEXIBLE SHAFT. 50-inch shaft, 5/16-in. diameter core. Torque release clutch prevents overloads from damaging core. For light grinding, etc.

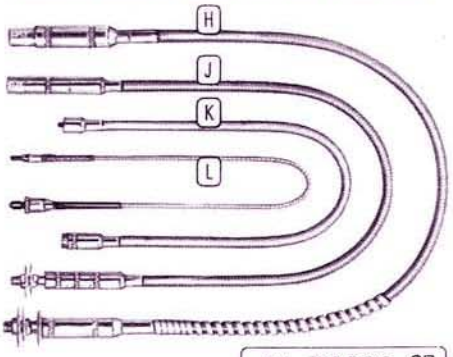
84 WR 2695 L—*Mailable.* Ship. wt. 6 lbs. $9.50

(K) FLEXIBLE SHAFT EXTENSION. Use with light duty shaft (J) only. Length 36 inches, 5/16-in. diameter core.

84 WR 2696 L—*Mailable.* Ship. wt. 3 lbs. 8 oz. . . . $3.69

L FLEXIBLE SHAFT FOR 3-JAW CHUCKS. Fits ¼-in. or larger chuck operating up to 6000 RPM. 4-wire galvanized outer casing. 5/32-in. diam. wire core. Oilite bronze bearings. Replaceable collets take ⅛, 3/32-in. diam. shanks.

84 WR 2654—36 in. long. *Mailable.* Wt. 14 oz. . . $3.98



Important Facts About

Gas And Electric Arc Welders

Modern welding equipment has assumed an important role in the operation of today's farm workshop, garage, repair and construction shop. You can save time and maintenance costs by doing your own repairs with no delay due to equipment shut-downs (see views (1) to (4)' at bottom of page). Welders fall into two major classifications—oxy-acetylene welders (commonly called gas welders) and electric arc welders. In general, the two types mutually complement each other with gas being better for light welding and cutting work, while electric welders are superior for heavy duty and production-type welding.

All gas welders and alternating current electric welders should have the seal of approval of the Underwriters Laboratories for your protection. Be sure to look for this assurance of safety and freedom from fire hazard. Check your source of power supply before ordering any welder. Oxy-acetylene welders operate from cylinders of oxygen and acetylene which must be purchased locally. Many electric arc welders require 230-volt current; contact your local power company and obtain their permission before installing any 230-volt welder.

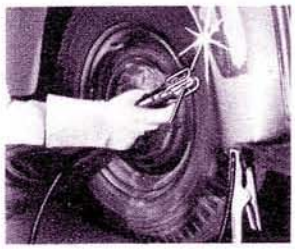
OXY-ACETYLENE WELDERS offer complete portability—they can be trucked right to the job. They produce high temperatures, up to 6300° F., enough to melt practically every type of common metal. They are the most practical type for welding light steel, and are superior as cutting tools; with correct size nozzle, will cut almost any desired thickness of metal (see view (4) below). Also well suited for brazing and soldering.

Most important parts of a gas welder are the regulators, the hose and the torch. Separate regulators for oxygen and acetylene are provided, with scales showing pressure of gas and remaining cubic feet content of tank. Regulators and other parts which come in contact with gases should be made entirely of brass or other non-ferrous metals to prevent rust and corrosion. Separate hoses for the two gases are provided, red for acetylene, and green or black for oxygen. Hoses must be flexible, strong and not subject to deterioration due to gases. Two types of torches are used—one for welding, the other for cutting. Welding torches of the equal pressure type are most suitable for use with cylinder gases. Cutting torches have an extra oxygen orifice, enabling pure oxygen to be fed under pressure for rapid cutting action. Many sized tips are available for torches to use with various types or thicknesses of metal.

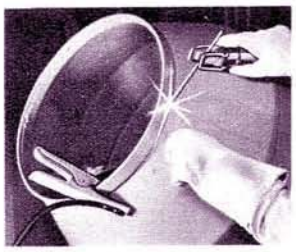
ELECTRIC ARC WELDERS provide the fastest means of welding, producing an intense heat of 6500° to 7000° F. as electricity passes through an air gap from one conductor to another. Arc welding produces unusually strong and ductile welds, since welds are shielded from the atmosphere by flux during welding, thus eliminating oxidation. Since work is accomplished so quickly, minimum distortion of metals is incurred. With the use of the carbon arc torch which gives a gas-like flame, it is possible to do brazing, soldering, and cutting. A wide range of electrodes is available for working with various types and sizes of metals.

An important factor in choosing an electric welder is its duty cycle. This is the ratio of arcing time to total time welder is in use. For a 20% duty cycle, actual welding time is 2 out of every 10 minutes. National Standard Tests require that name plates on approved welders must contain the duty cycle rating. Insulation on approved welders must meet standards which prevent temperature rise from exceeding 50° C on Time Rating Tests. Class "B" insulation meets those standards and contains no flammable materials. REA approval on electric welders means that it is satisfactory for use on rural electric lines.

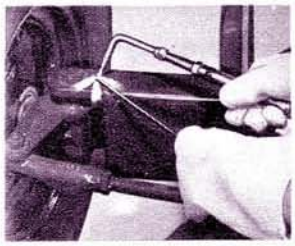
Wards Electric Welders are available in three types: (1) 230-volt AC Farm and Garage Type, best suited to all 'round maintenance and repair use; (2) 115-volt AC Portable Type for light duty home workshop and repair use; and (3) Belt-Driven DC Type, powered by tractor power take off or other separate power source.



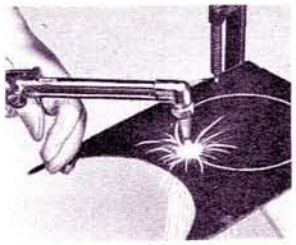
(1) For Garages and Repair Shops



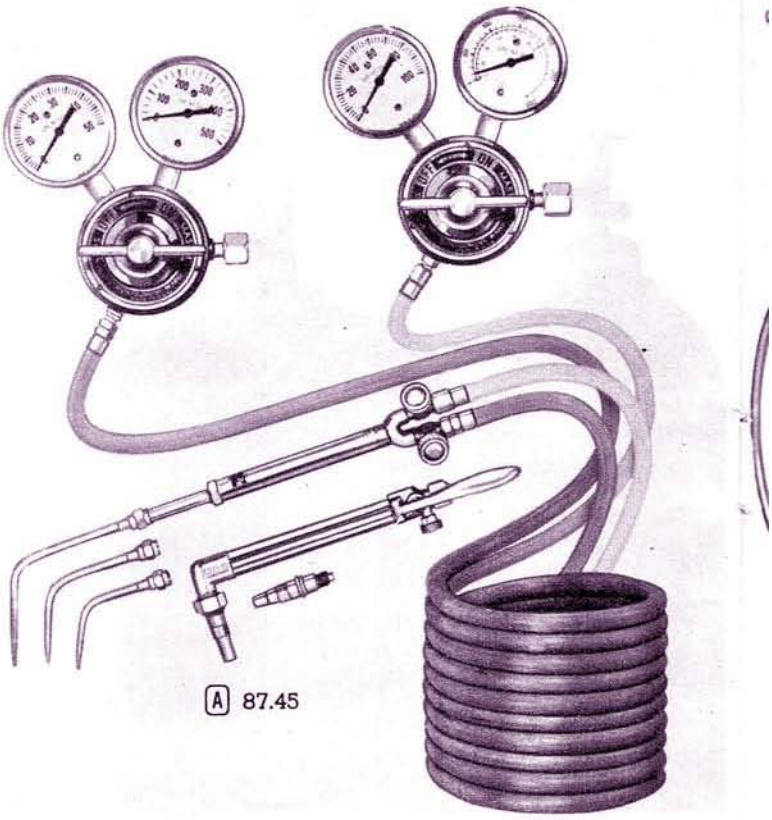
(2) For Contractors On-the-Job Use



(3) For Farm Machinery, Implements



(4) Gas Welder Cutting Attachment Used on Steel Plate



(A) 87.45

Oxy-Acetylene Welders

COMBINATION GAS WELDING AND CUTTING OUTFIT 87.45

(A) MASTER (BEST) QUALITY. Designed for heavy-duty use. Torch, cutting attachment and regulators are approved by Underwriters and Wards Testing Laboratories after most severe tests. Every part tested individually for your protection. Precision-ground, hand-fitted joints prevent leakage. All parts in contact with gas are made of non-ferrous metals to prevent rust and corrosion. Welds metal up to 2 in. thick; cuts steel up to 6 in. thick.

WELDING TORCH. Balanced equal pressure type. Non-flash mixer handles all size tips—no extra mixing chamber needed for larger sizes. Mixing chamber outside of torch handle for maximum safety. Precision fit needle valves for fine adjustments. Heavy knurled grips—torch can be turned off without disturbing regulator settings. Swivel type tips permit right- or left-hand operation; will not backfire. Torch is strongly made of drawn brass, is 14 to 19 in. long with tips. Ribbed handle prevents slipping. With 3 solid-drawn copper tips, sizes T-3, T-5 and T-7; weld up to 2 in. metal. Tips are nozzle type, have 4 times flame range of ordinary fixed tips.

CUTTING ATTACHMENT. Cuts steel up to 6 in. thick. Convenient lever control of oxygen flow for faster cutting. Solid drawn brass, 10½ in. long. With two solid drawn copper cutting tips sizes C-1 and C-3.

OXYGEN AND ACETYLENE REGULATORS. Wards exclusive patented on-off features insure correct usage and long life under continuous service. Regulators operate under gas pressure, don't depend on springs for shut-off. Special shearing mechanism prevents dangerous build-up on low pressure side of regulators. Large capacity diaphragm, 7 sq. in., for more sensitive control, constant even flame. Double cone inlet screen keeps out dust and dirt. 2¾ in. diam. gauges are clearly marked, easy to read. Oxygen regulator has 100 and 3000 lb. gauges showing pressure and cubic feet content of tank. Acetylene regulator has 50- and 500-lb. gauges and adaptor to fit standard size cylinders.

Complete outfit also includes: welders' goggles, torch lighter, wrench, two instruction books, two 25-ft. lengths of welding hoses (¼ in. inside diam.).

84 WR 5815 M—Ship. wt. 25 lbs. *Mailable.* $9 Down..... Cash $87.45

GAS WELDING OUTFIT ONLY...65.45

MASTER (BEST) QUALITY. Same construction as outfit (A) above but without cutting accessories. Includes: welding torch; 5 welding nozzle tips, sizes T-1, T-3, T-5, T-7 and T-9—weld metal up to 2 in.; oxygen and acetylene regulators; goggles; torch lighter; wrench; 10 coppered steel and 8 cast-iron welding rods; 3 Tobin bronze brazing rods; ¾ lb. each cast-iron and brazing flux; two 12½-ft. welding hoses; 2 instruction books.

84 WR 5810 M—Ship. wt. 37 lbs. *Mailable.* $7 Down on Terms.....Cash $65.45

WELDING TORCH. Shown and described in outfit (A) above.

84 WR 5812—Welding tips not included. Ship. wt. 2 lbs. 4 oz.....$14.50

OXYGEN AND ACETYLENE REGULATORS. Shown and described in outfit (A).

84 WR 5813—Oxygen Regulator only. Ship. wt. 6 lbs. 8 oz.....$16.95

84 WR 5814—Acetylene Regulator only. Ship. wt. 6 lbs. 8 oz..... 16.45

SEE PAGE 40 FOR LISTINGS OF ACCESSORIES FOR OXY-ACETYLENE WELDING.

Powr-Kraft and Westinghouse Electric Welders

POWR-KRAFT 230-VOLT AC WELDER 155.00

(B) 180-AMP. FARM AND GARAGE MODEL. UL Approved. Welds steel and castings 1/32 to 1/2 inch thick; cuts up to 5/16 inch plate. Uses electrodes from 1/16 to 3/16 in. Makes welds equal in strength and soundness to those of larger industrial models. Excellent for repairing farm equipment, hard-surfacing wearing parts, welding auto frames, bumpers, etc., and for making your own tools and special machinery from angles, channel, plate and pipe. Choice of 24 heats gives complete selection throughout range from 20 to 180 amps. Has 20% duty cycle.

Operates on 230-volt single phase 50-60 cycle AC. Conforms to REA and NEMA specifications for limited-input welders. Operator safety assured by low 58-amp. secondary voltage. Maximum open circuit voltage 58 volts; arc volts 25; power factor at rated output 62%. Equipped with special switch to improve performance on low line voltage. Can also be used for brazing, soldering with proper accessories.

Strong industrial-type welded steel frame and housing. Case is 22¼x16¾x11 in., is easily moved on two rear wheels. Class "B" nonflammable spun glass insulation protects heavy copper windings. Accessories include: 8 ft. 3-wire primary cable with plug and receptacle; 2 lbs. electrodes; 20 ft. No. 4 electrode cable with insulated holder; 15 ft. No. 4 ground cable, clamp; helmet with #10 protective lens and cover lens; wire scratch brush; instruction manual. *Not Mailable.*

84 WR 5938 R—Ship. wt. 185 lbs. $15.50 Down.....Cash $155.00

WESTINGHOUSE 230-VOLT AC FARM, GARAGE WELDERS 177.50 TO 245.00

(C) 180-AMP. MODEL. UL approved. Nationally known Westinghouse quality. Welds metal up to 1/2 in. thick; cuts up to 5/16 in. plate. Uses electrodes up to 3/16 in. For all farm repairing, garage work and light construction use. 20 heats ranging from 20 to 180 amps. 20% duty cycle.

Uses 230-volt single phase 60 cycle AC. Meets REA and NEMA specifications. Maximum line draw 33 amps.; open circuit volts 65; arc volts 25; power factor corrected to 75%. Max. power used 5.3 kilowatts. Built-in de-ion circuit breaker protects welder from long sustained overloads. On-off switch.

16-gauge steel case 25x17½x12½ in. on steel wheels. Class "B" spun glass insulation. Includes: 8 ft. 3-conductor primary cable, plug and receptacle; two 12-ft. welding cables; electrode holder; helmet; wire brush; 11 lbs. of electrodes; instruction manual. Ship. wt. 191 lbs. *Not Mailable.*

84 WR 5936 R—$18 Down.....Cash $177.50

295-AMP. MODEL. UL approved. Similar to (C) but for heavy-duty garage repair work, construction use or light industrial jobs. Welds metal up to 1 in. thick; cuts up to ½ in. plate. Uses electrodes up to ¼ in. 30 heats from 20 to 295 amps. 20% duty cycle. De-ion circuit breaker.

For 230-volt single phase 60 cycle AC. Meets NEMA specifications. Maximum line draw 65 amps; open circuit volts 65; arc volts 30; power factor corrected to 60%. Maximum power used 9.0 kilowatts.

Steel case 34⅜x21⅞x19⅛ in. on 10 in. wheels. Includes: 16 ft. 3-conductor primary cable, plug and receptacle; two 16-ft. welding cables; and accessories as in (C) at left. Shipped by Freight or Truck. Ship. wt. 320 lbs. $24.50 Down.

84 WR 5937 R—Cash.....$245.00

POWR-KRAFT DIRECT CURRENT WELDER 239.50

(D) BELT-DRIVEN 180-AMP. MODEL. When machinery breaks down in the field take this welder right to the job. Uses any tractor power take-off or other engine of 13 or more HP to operate. Welds 1/32 to 1/2 inch plate in all positions: cuts up to 3/8 inch plate. Uses up to 3/16 inch electrodes on either positive or negative polarity. Simple current adjustment covers complete welding range. Maximum output 180 amps DC at 25 volts; minimum output 20 amps. 20% duty cycle.

Meets NEMA specifications. Direct current and built-in flywheel make striking and maintaining an arc easier. Has lifting hook and hold downs for easy lifting and mounting on tractor, or can be mounted on trailer with or without motor to make your own mobile unit. Has 1⅜-in. shaft. Use four type "A" V-belts and proper size pulleys to attain operating speed of 2400 RPM. Dimensions overall: 15½ in. high, 11¾ in. wide. Case is 9⅝ in. deep, 26⅝ in. long.

Includes: 25 ft. electrode cable with insulated electrode holder and terminal; 20 ft. ground cable with terminals and ground clamp; helmet with No. 10 protective lens and nonspatter cover lens; wire scratch brush and instruction book. Shipped from Factory in Chicago by Freight or Truck, pay shipping charges from there. Allow 10 days extra time.

84 WR 5939 F—Ship. wt. 240 lbs. $24 Down.....Cash $239.50

POWR-KRAFT 115-VOLT WELDER 44.50

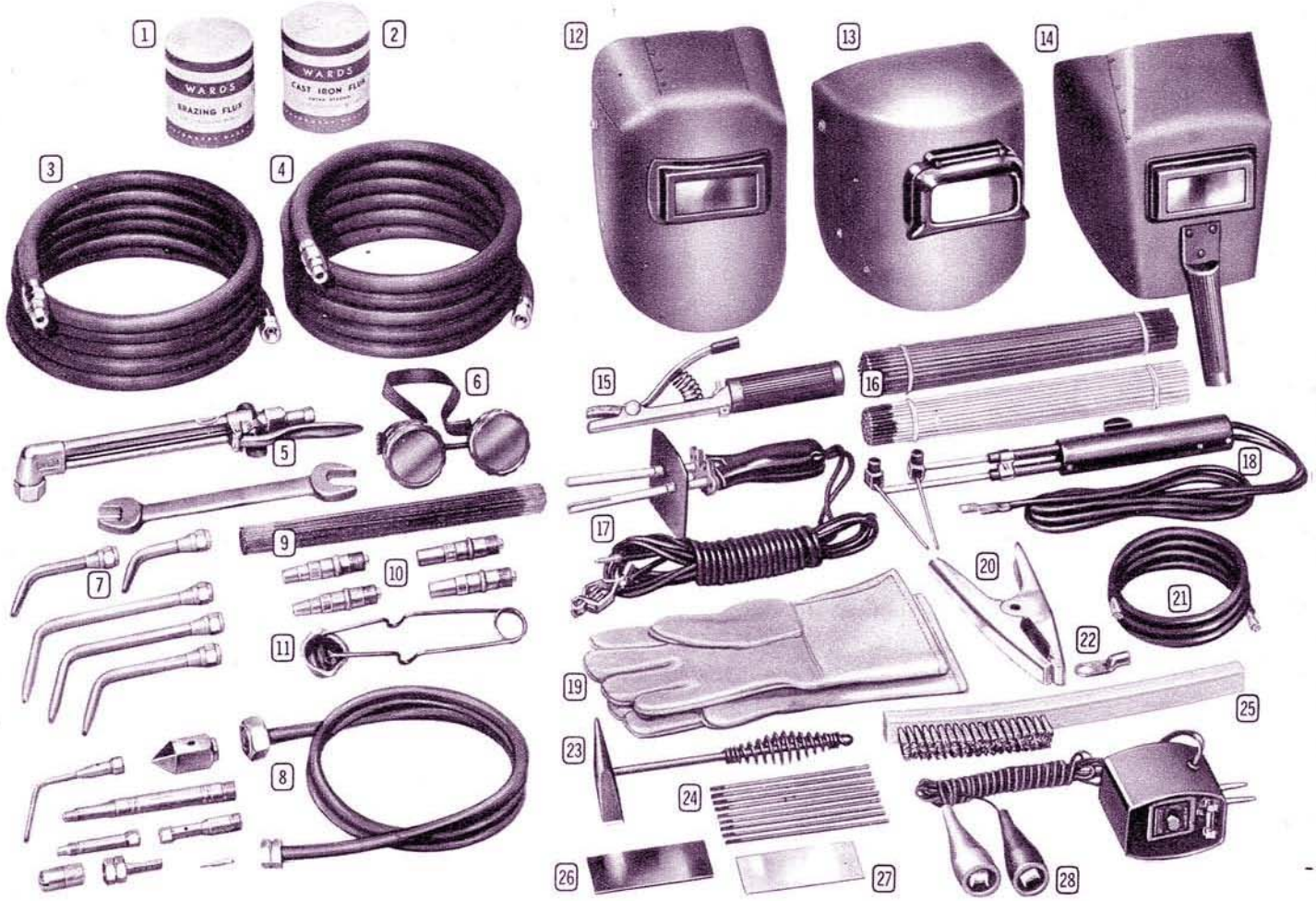
(E) LIGHT DUTY PORTABLE MODEL. UL approved. Versatile welder just plugs in (with adapter) to any 110–120 volt AC outlet. Ideal for car repair, school shops, metalworking hobbyists, etc. Does welding, cutting, brazing and soldering. Welds 1/32 to 1/8 inch steel, cuts up to 3/32 inch sheet metal. Has 20% duty cycle.

No maintenance or adjustments needed. Use with 20 to 30 amp. fuses on 110–120 volt AC. Gives four heats, 35 to 65 amps, covering complete sheet metal range. Class "B" spun glass insulation prevents overheating. Handy on-off switch. Handle for carrying. Power factor corrected to 72%. Size overall: 9¼x8¼x9¼ in.

Includes: 6-ft. 3-conductor rubber covered cord, with plug and adapter for 2-prong receptacle; 9 ft. electrode cable and insulated holder; ground cable and clamp; helmet with protective lens and cover lens; 1 lb. of 5/64 in. electrodes; 1 lb. of 3/32 in. brazing rods; 5 carbons; jar of easy-strike powder; simplified instruction book. Ship. wt. 45 lbs. *Mailable.*

84 WR 5951M—$4.50 Down.....Cash $44.50

SEE NEXT PAGE FOR COMPLETE LISTING OF ELECTRIC WELDING ACCESSORIES.



Oxy-Acetylene and Electric Welding Accessories

ACCESSORIES FOR OXY-ACETYLENE WELDING

[1] [2] FLUX. Cast-iron welding, brazing flux. Wt. ea. 14 oz. (1)84 WR 5837–Brazing .55c; (2)84 WR 5836–Weld .55c

[3] [4] WELDING HOSE. ¼-in. inside diam., ½-in. outside. (3) 84 WR 5819–Red acetylene. 12½ ft. Wt. 2½ lbs. $3.98
(4) 84 WR 5818–Green oxygen hose. 12½ ft. Wt. 2½ lbs. 3.98

[5] CUTTING ATTACHMENT. Fits Wards welding torches only. Cuts steel to 10 in. Brass. 10½ in. long. Wrench incl.
84 WR 5820—Tips not included. Ship. wt. 2½ lbs. $14.95

[6] GOGGLES. Meet Navy specifications. Ship. wt. 8 oz.
84 WR 5835—No. 5 green lens; cover lens. $1.98

[7] WELDING NOZZLE TIPS. Fit Ward welding torches only. Solid copper. Swivel type. Sizes: T-1, 3½ in.; T-3, 4 in.; T-5, 5½ in.; T-7, 7 in.; T-9, 8½ in.
84 WR 5811—*State size.* Ship. wt. ea., 10 oz. . . . . Each $1.75

[8] ACETYLENE BRAZING OUTFIT. Fits acetylene regulator, Prest-O-Lite. Incl.: soldering copper, paint burning tip, tank and hose connections. 6-in. handle. 5-ft. 3/16-in. hose.
84 WR 5802—With tip cleaner. Ship. wt. 2 lbs. 2 oz. . . . $8.95

[9] WELDING RODS. Copper coated low carbon steel. Ship. wt. 5 lbs. 8 oz. *State diameter, Catalog Number.*

Cat. No.	Diam.	Approx. lgth.	Rods per 5 lbs.	5 lbs. for
84 WR 5856 H Mild Steel	1/16 in.	36 in.	About 164	$1.45
	1/8 in.	36 in.	About 40	1.15
	3/16 in.	36 in.	About 18	1.15
	1/4 in.	36 in.	About 10	1.15
84 WR 5855 H Cast Iron	3/16 in.	24 in.	About 27	$1.75
	1/4 in.	24 in.	About 12	1.59

BRONZE BRAZING RODS. Melt at 1600 F. Ship. wt. 1½ lbs.

Cat. No.	Diam.	Approx. lgth.	Rods per lb.	1 lb. for
84 WR 5857 H *State diam.*	1/8 in.	36 in.	About 6	$1.09
	3/16 in.	36 in.	About 3	1.09

MACOLOY BRAZING RODS. Melt at 1180 F. Wt. 1¼ lbs.
84 WR 5865—About 26 rods. ⅛-in. diam. 14 in. long. . . $3.15

[10] CUTTING TIPS. Fit Wards cutting attachment, torches only. Solid copper. Sizes: C-1, cuts metal to 1 in.; C-2, 2½ in.; C-3, 6 in.; C-4, 10 in. *State size.*
84 WR 5816—Ship. wt. each 3 oz. . . . . Each $2.85

[11] TORCH LIGHTER. Spring tension. 2 extra flints.
84 WR 5809—Ship. wt. 3 oz. .55c

HELMETS AND ELECTRIC WELDING ACCESSORIES

[12] ARC WELDING HELMET. Insulated fiber. Riveted seams. 10 lens.
84 WR 5965 L—Wt. 2 lbs. 2 oz. . . . $4.15

[13] PROFESSIONAL ARC WELDING HELMET. Insulated, strong fiber. Seamless. Flipper front (lens holder). Order protective, cover lens at right.
84 WR 5966L—Wt. 2 lbs. 12 oz. . . . $7.75

[14] FACE SHIELD. Pan type. 2x4¼-in. glass. No. 10 protective lens.
84 A 5974 L—Wt. 2 lbs. 4 oz. $3.75

[15] ELECTRODE HOLDER. Holds all sizes electrodes up to ¼-in. Handles 0 to 300 amps. Air cooled handle.
84 WR 5916—Wt. 1 lb. 2 oz. $2.45

[16] LINCOLN (FLEETWELD) MILD STEEL ELECTRODES. For low current welding. Ship. wts. 5½, 9, 11 lbs.
84 WR 5991—*State size wanted.*

Size	Amp. Range	Price
5/64x 9 in.	25– 45	5 lbs. $1.89
3/32x12 in.	40– 70	8½ lbs. 2.19
1/8 x14 in.	60–140	10 lbs. 2.25
5/32x14 in.	90–200	10 lbs. 2.19
3/16x14 in.	130–250	10 lbs. 1.98

LINCOLN (FERROWELD) CAST-IRON ELECTRODES. Use where extreme machinability not needed. 14 in. long, 80-amp. range. ⅛ in. diam. Wt. 11 lbs.
84 WR 5992—10 lbs. for. $2.25

LINCOLN (ABRASOWELD) HARD SURFACING ELECTRODES. For building up new and worn parts to resist impact, severe abrasion. Wt. 11 lbs.
84 WR 5993—*State diameter wanted.*

Diam.	Amp. Range	Length	10 lbs. for
5/32 in.	75–200	14 in.	$3.59
3/16 in.	110–250	14 in.	3.25

BRAZING RODS. 1 lb. of 3/32-in. diameter flux rods for brazing.
84 WR 5985—Ship. wt. 1 lb. 8 oz. $1.75

6-IN. CARBON RODS. ¼-in. diam.
84 WR 5912—Ship. wt. 1 lb. Ten for 45c

[17] CARBON ARC TORCH. Use only with welder (E) on Page 39. Welds light metal; brazes, preheats metal prior to bending, forging, hard surfacing or soldering. Easy to use. Use only copper cored carbons. With torch, 6 carbons.
84 WR 5915 M—Wt. 3 lbs. $7.50

[18] ERGOLYTE TWIN CARBON ARC TORCH. For any arc welder. Automatic switch-off gives fast control of arc flame. Creates flame like Oxy-Acetylene torch for preheating, brazing, etc. 15¾ in. long. With two 5-ft. cables, 4 assorted carbons, instr. Takes up to ⅜-in. carbons. Wt. 3½ lbs.
84 WR 5914 M. $12.95

[19] WELDERS' GLOVES. Split horsehide. Welted seams. 1-pc. back and palm. Large.
84 WR 5960—Wt. 1 lb. Pr. $3.19

[20] GROUND CLAMP. For quick positive connections. Direct contact—current does not pass through clamp. 300 amp. cap. Jaw spread 2¾ in.
84 WR 5973—Wt. 1 lb. . . $1.75

[21] WELDING CABLE. Copper wires stranded for flexibility. Heavy rubber cover.

No. 4 CABLE. For welders up to 200 amps. Stranding: 1078x34. *State length.*
84 WR 5963 H—Wt. 4 oz. Ft. 25c

No. 1 CABLE. 300 amps. Stranding: 2158x34. *State length.*
84 WR 5971H—Wt. 8 oz. Ft. 42c

[22] WELDING CABLE LUG. Fits (21). Wt. each 1 oz.
84 WR 5964—For No. 4. . . . 15c
84 WR 5972—For No. 1. . . . 29c

[23] CHIPPING HAMMER. Forged steel. 9½ in. long.
84 WR 5976—Wt. 1 lb. $1.65

[24] COPPER COATED CARBONS. Use with Twin Carbon Arc Torch (18).
84 WR 5911—*State diam.*

Diam.	Lgth.	Wt.	10 rods
5/32 in.	6 in.	1 lb.	$1.98
1/4 in.	6 in.	1 lb.	95c
5/16 in.	6 in.	1 lb.	$1.19
3/8 in.	6 in.	1 lb.	1.45

[25] WELDERS' WIRE BRUSH. Steel bristles.
84 WR 5969—Wt. 12 oz. .35c

[26] PROTECTIVE LENS. 2x 4¼ in. For use with (12) and (13). Ship. wt. 1 oz. each.
No. 9–Welding to 100 amps.
No. 10–Welding to 180 amps.
No. 11–Welding to 300 amps.
No. 12–Welding to 500 amps.
84 WR 5961—*State No.*
Each. 98c

[27] COVER LENS. Treated chemically so spatter will not stick. For (12) (13).
84 WR 5962—Wt. 1 oz. Ea. 10c

[28] BATTERY CHARGER OR RECTIFIER. Keeps your battery at full charge or recharge old batteries. Use only with welders (B) and (E) Page 39. Charges 6-volt lead acid automobile type batteries. Starts charging fully discharged batteries at about 4-amps, finishes at 2 amps. when charging 90 to 120 amp-hr. battery. Average of 30 amp-hrs. is restored in 10 hrs. 45 amp-hrs. in 15 hrs. Ship. wt. 2½ lbs.
84 WR 5958. . . . . $12.45

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Millions like to order direct by mail because it is so convenient to do your shopping comfortably at home. Take all the time you want to choose the items you need. Then just mail your order direct to Wards, we will give it prompt attention, guaranteeing satisfaction in every way.

Simply list all items wanted, using the order blank enclosed or any plain piece of paper. Give complete information, stating full Catalog Number (Example 84 WR 2505 M) name, shipping weight and price of each item; state Size if there is a choice. Add shipping weights to determine total weight of order.

SHIPPING INFORMATION. Unless otherwise specified, all items in this Catalog are shipped promptly from stock. You pay shipping charges from your nearest Wards Mail Order House unless item is marked "Postpaid," or will be shipped directly to you from a factory. On factory shipments you pay shipping charges from factory location; allow extra time for handling.

On all mailable items except those marked "Postpaid," include amount for postage with your order (see rates below). If you send too much, we will return every cent not needed. Do NOT send money for Freight or Express charges if there is a freight agent at your station; pay shipping charges when goods arrive. See estimated rates below.

HOW TO SEND MONEY. Best ways to send money are: Postal or Express Money Orders; Bank Money Orders or Drafts; Cashier's Checks or your own personal check. If you live on a rural route, your mail carrier will arrange for a Money Order.

ABOUT PRICES. Prices in this catalog reflect Wards policy of quoting lower prices, wherever possible, than asked elsewhere for items of comparable quality. However, if a further price reduction is made on any item during the life of this catalog, we will fill your order at the reduced price. You always get the benefit of any price reductions in effect when your order is received. Prices are subject to change without notice, and are subject to additional charges to cover any applicable sales tax, use tax, or other tax affecting our purchase or sale of merchandise.

ABOUT C.O.D. ORDERS. We do not accept orders for less than $5 to be sent C.O.D. except for repair parts. No C.O.D.'s on orders cut or made to order; nor for any articles described in the Catalog as shipped from a factory.

If there is a Ward Catalog Office or Ward Retail Store near you, they will be glad to handle your order and have it shipped to your home. Or you can call for your order and save part of the transportation charges.

MONTHLY PAYMENT PLAN. Only 10% Down Payment is required. See Page 24 for full details of this convenient plan.

PARCEL POST RATES

Parcels not over 70 lbs. or more than 100 inches in length plus girth (around) at widest point may be mailed to all zones (with certain size and wt. restrictions to 1st Class Postoffices). Rates effective Oct. 1, 1953.

ZONES	Local	1–2	3	4	5
Shipping Weight of Your Order	Within City	Up To 150 Miles	151–300 Miles	301–600 Miles	601–1000 Miles
Up to 8 ounces	2c for the first 2 ounces and 1c for each additional ounce.				
9 oz. to 1 lb	18c	23c	23c	24c	26c
1 lb. 1 oz. to 2 lbs	20c	27c	29c	31c	36c
2 lbs. 1 oz. to 3 lbs	21c	31c	34c	38c	45c
3 lbs. 1 oz. to 4 lbs	23c	35c	39c	45c	54c
4 lbs. 1 oz. to 5 lbs	24c	39c	44c	52c	63c
5 lbs. 1 oz. to 6 lbs	26c	43c	49c	59c	73c
6 lbs. 1 oz. to 7 lbs	27c	47c	54c	66c	82c
7 lbs. 1 oz. to 8 lbs	29c	51c	60c	73c	91c
8 lbs. 1 oz. to 9 lbs	30c	55c	65c	80c	$1.00
9 lbs. 1 oz. to 10 lbs	32c	59c	70c	87c	1.10
10 lbs. 1 oz. to 11 lbs	33c	63c	75c	93c	1.19
11 lbs. 1 oz. to 12 lbs	34c	67c	80c	$1.00	1.28
12 lbs. 1 oz. to 13 lbs	36c	71c	85c	1.07	1.37
13 lbs. 1 oz. to 14 lbs	37c	75c	90c	1.14	1.47
14 lbs. 1 oz. to 15 lbs	39c	79c	96c	1.21	1.56
20 lbs	46c	99c	$1.21	1.56	2.02
30 lbs	61c	$1.38	1.73	2.25	2.95
40 lbs	75c	1.78	2.24	2.94	3.87
50 lbs	90c	2.17	2.76	3.63	4.80
60 lbs	$1.04	2.57	3.27	4.32	5.72
70 lbs	1.19	2.96	3.79	5.01	6.65

ESTIMATED FREIGHT RATES

Freight shipments of less than 100 lbs. take 100-lb. rate. The minimum is the rate for 100 lbs. of the highest rated article in the shipment, but not less than $1.58. On shipments over 100 lbs. charges are based on actual weight. Add Federal Transportation Tax of 3% to all freight charges.

Description of Item	100 Miles	200 Miles	300 Miles	500 Miles	750 Miles	1000 Miles	1500 Miles	2000 Miles
Grinders, Elec.	$1.21	$1.58	$1.91	$2.46	$3.14	$3.67	$4.74	$5.80
Grindstones	.72	.94	1.13	1.46	1.86	2.18	2.82	3.45
Motors, Electric	1.01	1.32	1.60	2.06	2.63	3.07	3.97	4.85
Welding Equipment	1.01	1.32	1.60	2.06	2.63	3.07	3.97	4.85
Woodworking Tools	1.01	1.32	1.60	2.06	2.63	3.07	3.97	4.85
Woodworking Machines	1.21	1.58	1.91	2.46	3.14	3.67	4.74	5.80

ESTIMATED EXPRESS RATES

Express is the fastest way to ship non-mailable merchandise, especially bulky, fragile or odd shaped articles. Add 3% Transportation Federal Tax.

Shipping Weight	100 Miles	200 Miles	300 Miles	400 Miles	500 Miles	750 Miles	1000 Miles	1500 Miles	2000 Miles
5 Pounds	$1.56	$1.56	$1.56	$1.56	$1.58	$1.64	$1.76	$1.88	
10 Pounds	1.56	1.56	1.63	1.69	1.75	1.87	1.99	2.23	2.47
15 Pounds	1.56	1.67	1.78	1.89	1.97	2.14	2.33	2.69	3.06
20 Pounds	1.66	1.80	1.94	2.09	2.19	2.43	2.67	3.15	3.64
25 Pounds	1.75	1.92	2.11	2.32	2.41	2.72	3.01	3.62	4.22
35 Pounds	1.92	2.08	2.43	2.68	2.86	3.28	3.70	4.55	5.40
55 Pounds	2.29	2.68	3.08	3.48	3.76	4.41	5.08	6.41	7.74
75 Pounds	2.64	3.19	3.73	4.28	4.84	5.26	6.45	8.27	10.08
100 Pounds	3.09	3.81	4.52	5.27	5.75	6.96	8.17	10.59	13.01

NOTICE. All rates on this page subject to change.

PROVIDE YOUR WORKSHOP WITH PROPER LIGHT, ELECTRICAL OUTLETS, CORDS AND ACCESSORIES

29 30 2-LT. UTILITY FLUORESCENT FIXTURES. Bright, economical light for workshop. Heavy-gauge steel. Baked-on white enamel finish inside reflectors for better light reflection. Enamel finish. 3-hole end for hanging. General Electric bulbs included. 20-watt size includes six foot cord and plug. *Mailable.*

(29) 83 WR 4238 M—20-watt. Size 24x11¾x4 in. Ship. wt. 10 lbs. $9.45

(30) 83 WR 4237 M—40-watt. Size 48x12½x4 in. Ship. wt. 20 lbs. 14.45

31 1- AND 2-LT. UTILITY CIRCLINES. Flip the switch for instant light, no flickering or waiting—no starters necessary. Designed to save space, provide plenty of light. One 32 W. almost equals 100-W. incandescent. Hang over work bench or laundry area. Heavy white enameled steel reflector. With GE bulbs.

83 WR 4256 M—With one 32, one 22 watt bulb. Ship. wt. 10 lbs. $14.95

83 WR 4255 M—With one 32 watt bulb. Ship. wt. 9 lbs. 10.45

32 NEW PLUG-IN STRIP. Multi-outlet assembly provides plenty of electrical outlets for workshop, etc. Eliminates unplugging one tool to operate another. Spaced for maximum convenience. Solid No. 12 copper electrical system runs length of strip. Unit in metal case, wired and ready to install. Can be used for portable or permanent use. Use cord and plug (not included) for portable installation; use end junction box below for permanent. Choice of two sizes: 33 in. length has five outlets spaced 6 in. apart. 6-ft. length has 4 outlets spaced 18 in. apart. *Mailable.*

83 WR 155M—33-inch length. Ship. wt. 1 lb. 4 oz. $2.95

83 WR 156M—6-foot length. Ship. wt. 2 lbs. 8 oz. 3.95

33 END JUNCTION BOX. For permanent installation of plug-in-strip (32) above.

83 WR 162—Use Armored cable, romex or conduit. Ship. wt. 4 oz. 55c

34 TO 37 BOXES AND COVERS. Full 14-gauge galvanized steel—resist rust. (34) has loom clamp; both can be adapted to non-metallic or armored (BX) cable. ½-in. knockouts for conduit. Meet UL, REA specifications.

Key	Cat. No.	Description	Size in.	Depth	Knockouts	Wt.	Ea.	3 For
(34)	83 WR 263	Recess box.	3x2	2¼ in.	Cable, ½ in.	15 oz.	25c	72c
(35)	83 WR 245	Surface box.	4x2⅛	2⅛ in.	½ in.	12 oz.	20c	57c
(36)	83 WR 247	Cover.	4x2⅛	For Toggle. Fits (35)		12 oz.	10c	27c
(37)	83 WR 248	Cover.	4x2⅛	For Receptacle. Fits (35)		4 oz.	10c	27c

38 39 NEW MONOLOCK WIRING DEVICES. No binding posts; cuts wiring time. Just "plug" wire in. All leads, terminals enclosed. Meet UL, REA specs.

(38) 83 WRP 26—Single Pole Switch. Brown. *Postpaid* ..... Each 44c

(39) 83 WRP 110—Duplex Receptacle. Brown. *Postpaid* ..... Each 34c

40 41 DE LUXE PLATES. Heavy bakelite, easily ganged. Brown finish.

(40) 83 WR 59—Toggle Plate. Ship. wt. each 2 oz. Ea. 9c ..... 5 for 42c

(41) 83 WR 60—Receptacle Plate. Ship. wt. each 2 oz. Ea. 9c ..... 5 for 42c

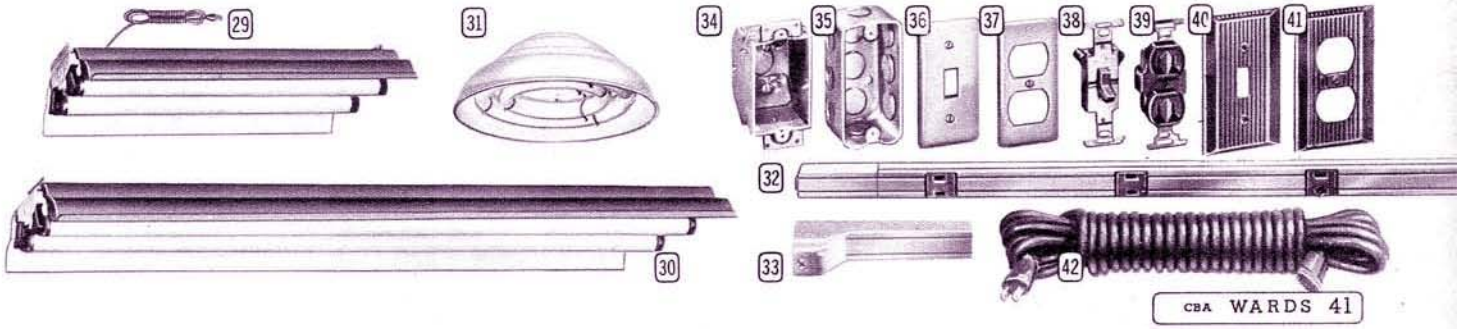
42 HEAVY-DUTY RUBBER EXTENSION CORDS. For power tools, etc. UL Appr. All but (1273) have plug and outlet; 83 WR 1270 has third wire for grounding.

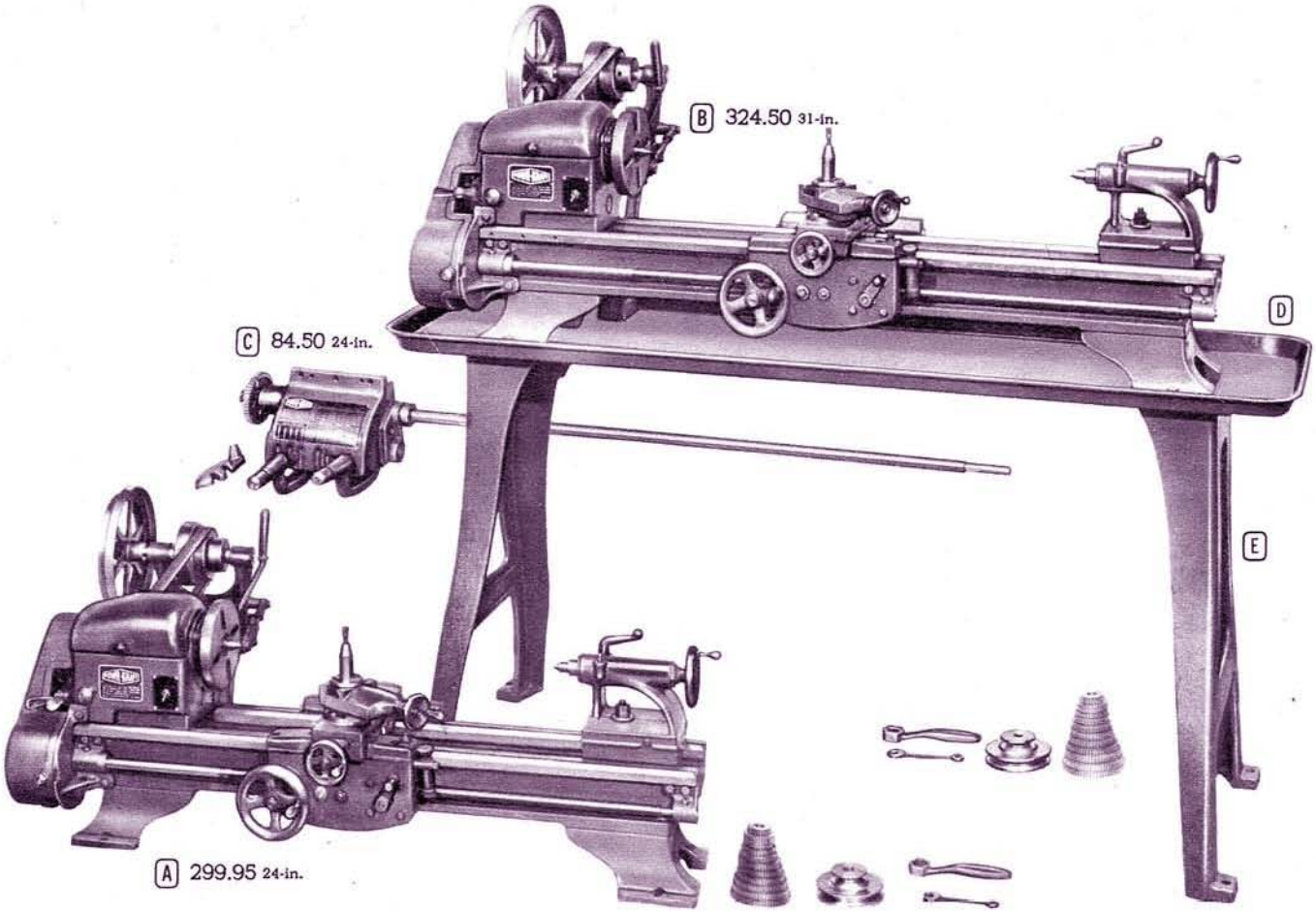
83 WR 1273—2 wire, 18 gauge, 10 ft. long. Has stripped leads. Wt. 1 lb. 72c

83 WR 1271L—2 wire, 16 gauge, 25 ft. long. Ship. wt. 2 lbs. $2.10

83 WR 1270L—3 wire, 14 gauge, 25 ft. long. Ship. wt. 5 lbs. 7.95

83 WR 1275 L—2 wire, 16 gauge, 100 ft. long. Ship. wt. 7 lbs. 6.98





Powr-Kraft 10-In. Back-Geared Screw-Cutting Lathes

CHOICE OF TWO SIZES—24 AND 31 IN. BETWEEN CENTERS

Production models capable of years of precision operation. Designed to operate at high speed—accurate to within .001 inch. Pre-loaded, grease-sealed New Departure ball bearings in headstock; bronze bearings at 18 other points of wear.

CAPACITY: Swing over bed to 10 in.; over saddle cross slide 6⅛ in. Bed $6\frac{15}{16}$ in. wide, of alloy castings. Two flat, two prismatic "V" ways. Machine cut semi-steel gears—bull gear, back gears ⅝ in. wide. With change gears for 46 thread selections. 4 to 216 right or left hand threads per in. Back gears enclosed.

HEADSTOCK: Tempered, precision-ground steel spindle rides on two sets of New Departure ball bearings. Spindle nose diam. 1½ in.—8 right hand threads per in. No. 3 Morse taper spindle with adapter to No. 2 Morse taper. Hole through spindle $\frac{25}{32}$ in. Collet capacity ½ in.

TAILSTOCK, CARRIAGE AND COMPOUND REST: Tailstock spindle travels 2½ in., graduated in 16ths, takes No. 2 Morse taper accessories. $\frac{11}{16}$ in. set-over for taper turning. Self-ejecting center. Carriage has power cross feed, longitudinal feed. Cross slide graduated in thousandths, travels 6¼ in. Cross feed screw mounted in bronze bearings. Compound rest top slide graduated in thousandths, travels 2¼ in., swivels 90° both directions, locks at any angle. Carriage has 10 in. bearing surface on ways. Tool post opening for tool holder shank ⅜x¾ in. Use up to ¼ in. sq. cutter bits.

DRIVE: 3-step cone pulley on countershaft with flat belt drive to headstock. 2-step "V" belt drive from "V" motor pulley to flat countershaft pulley. Countershaft and motor bracket included. Gives a choice of 12 speeds ranging from 30 to 1450 RPM.

LATHES INCLUDE: 17 change gears (6 installed on lathe); 6-in. face plate; two 60° centers; tool post holder; thread cutting dial; flat belt; motor pulley (½, ⅝ or ¾-in. diam. bore); wrenches; parts list and instructions. Gray finish. *Not Mailable.* See Pages 44 and 45 for a complete listing of accessories for Powr-Kraft and Logan lathes.

24-IN. POWR-KRAFT BENCH MODEL 299.95

(A) 24-IN. BETWEEN CENTERS LATHE. 43⅛-in. bed. *State motor pulley bore size.* Ship. wt. 335 lbs.
84 WR 2130 R—$30 Down on Terms.....Cash $299.95

24-IN. LATHE WITH MOTOR. ½-HP 1725 RPM capacitor motor (83 WR 4576 M, Page 26), 41-in. "V" belt. Wt. 367 lbs.
84 WR 2133 R—$32.50 Down on Terms.....Cash $323.95

31-IN. POWR-KRAFT BENCH MODEL 324.50

(B) 31-IN. BETWEEN CENTERS LATHE. 50-in. bed. *State motor pulley bore size.* Ship. wt. 357 lbs.
84 WR 2136 R—$32.50 Down on Terms.....Cash $324.50

31-IN. LATHE WITH MOTOR. ½-HP 1725 RPM capacitor motor (83 WR 4576 M, Page 26), 41-in. "V" belt. Wt. 386 lbs.
84 WR 2128 R—$35 Down on Terms.....Cash $348.50

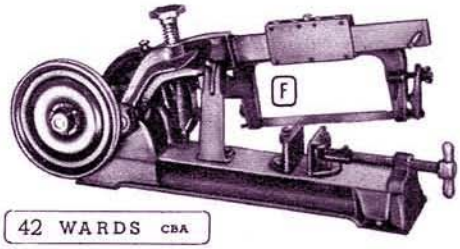
QUICK CHANGE GEAR BOXES

(C) Convert Powr-Kraft 10-in. metal lathes to quick change gear lathes. Corrected lead screw included. Provides 48 threads and feeds in either direction to carriage. By adjusting two levers, screw threads from 8 to 224 per in. are available. Changing 24-tooth stud gear for 48-tooth stud gear furnished with lathe, adds threads from 4 to 7 per in. Longitudinal power feeds .0044 to .1000 in. per revolution of spindle. Power cross feed same as longitudinal feed. Semi-steel gears, bronze self-lubricating bearings. Mailed promptly from Chicago Factory. Pay postage from there.
84 WR 2138 K—Fits (A) and old lathe No. 700. Wt. 16 lbs.....$84.50
84 WR 2139 K—Fits (B) above. Wt. 25 lbs.....$87.50

(D) STEEL CHIP PANS. For lathes (A) and (B) above. Rolled rim. *Mailable.* Ship. wts. 22, 27 lbs.
84 WR 2141 M—Fits 24-in. lathe .$13.25
84 WR 2137 M—Fits 31-in. lathe. 16.50

(E) CAST-IRON LEGS. Fit chip pans above. Ship. wt. 81 lbs.
84 WR 2140 R—*Not Mail*...Pr. $23.50

POWR-KRAFT BELT-DRIVEN POWER HACK SAW . . . STATIONARY TYPE 46.95



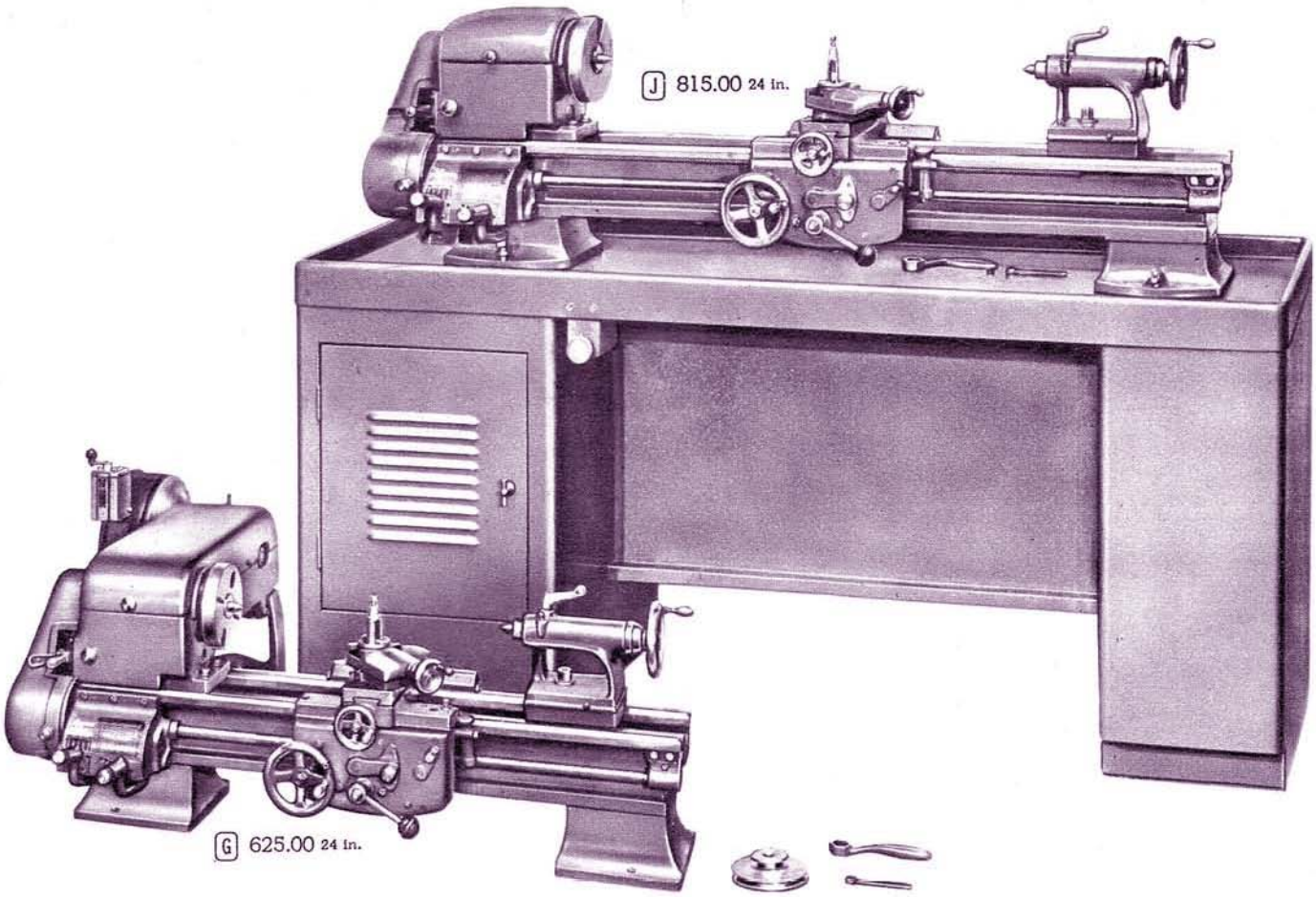
(F) Use in small production shops or for general, everyday run of small stock cutting. Castings of close-grained gray iron. Cam is integral with machine cut gear—controls pressure on forward stroke of blade, insures pressure relief on back stroke—for smooth cutting, longer life. Bronze bearings give dependable performance.

Equipped with cast-iron vise—jaws 4 in. wide, 2 in. deep—opens to 4 in. Swivels to permit angle cutting from 0 to 45 degrees. Capacity 4x4 in. Length of stroke 4½ in.—90 to 100 strokes per min. Size 8¼ in. wide, 29 in. long, 13 in. high.

Includes: 12x⅝-in. blade, 8-in. diam. "V" machine pulley. Ship. wt. 80 lbs. *Not Mailable.*
84 WR 2403 R—Saw only. $5 Down..Cash $46.95

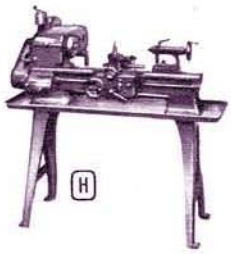
HACK SAW WITH MOTOR. Includes hack saw and ⅓-HP split-phase motor (83 WR 4534 M, Page 26), 2½-in. diam. "V" motor pulley, 44-in. "V" belt.
84 WR 2401 R—Wt. 103 lbs. $6.50 Dn., Cash $60.25

POWER HACK SAW BLADES (not shown). For saw above. High-speed Molybdenum steel. 12 in. long, ⅝ in. wide. 14 teeth per inch.
84 WR 4486—Ship. wt. pair, 5 oz.....Pair $1.09



Logan 11-In. Quick Change Gear Production Lathes

BENCH, FLOOR AND PEDESTAL BASE MODELS—24 AND 36 IN. BETWEEN CENTERS



Fine quality production lathes built to rigid and exacting specifications—accurate to within .001 in. for manufacturing, tool rooms, school shops, etc. Special features include: (1) sealed, pre-loaded New Departure ball bearing spindle mounting, requires no adjustment—16 speeds from 45 to 1400 RPM; (2) ball bearing countershaft assembly; (3) self-lubricating bronze bearings at vital wear points; (4) automatic oil-type apron operates from spline in lead screw through worm drive and friction clutch; half nut drive from lead screw thread for thread cutting; (5) gears, pulleys and belts completely guarded; (6) precision-ground "V" way bed; (7) back gears enclosed in headstock and are engaged and disengaged easily by conveniently located knob on front of headstock.

CAPACITY: Swing over bed to 11 in.; over saddle cross slide, 6⅛ in. Bed $6^{15}/_{16}$ in. wide, of seasoned alloy castings—internal stresses removed. Two flat, two prismatic "V" ways are precision ground. Machine cut semi-steel gears—not die cast. Bull gear and back gears ¾ in. wide. Gears for 48 thread selections from 4 to 224 per in.—right or left.

HEADSTOCK: Precision-ground steel spindle rides on pre-loaded sealed New Departure ball bearings. Spindle nose diam. 2¼ in.—8 right-hand threads per in. Spindle adapter furnished to reduce spindle nose taper to No. 2 Morse taper. Hole through spindle 1⅜ in. Maximum collet capacity 1 inch with No. 84 WR 2194K draw-in collets listed on Page 44.

TAILSTOCK, CARRIAGE AND COMPOUND REST: Tailstock spindle travels 4 in.; graduated in 16ths, takes No. 2 Morse taper accessories. $1^1/_{16}$ in. set-over for taper turning. Carriage is fully equipped with power cross feed and power longitudinal feed. Cross slide travels 6¼ in., graduated in thousandths. Cross feed screw mounted on self-lubricating bronze bearings. Compound rest travels 2¼ in., graduated in thousandths, swivels 90° in both directions. Tool post opening for tool holder shank ⅜x¾ in. Use up to ¼-inch square cutter bits. See Page 45 for complete listing of tool holders and cutting bits.

COUNTERSHAFT ASSEMBLY: Countershaft is mounted on grease-sealed ball bearings for long, trouble-free operation; completely enclosed and guarded. All "V" belt drive. "V" belts and pulleys included with lathes.

ACCESSORIES INCLUDE: 6-in. face plate; two 60° centers; one threading dial; one threading chart; one spindle nose adapter to No. 2 Morse taper; one tool post holder and wrench; one tailstock wrench; parts list; instruction book and 2-step "V" motor pulley (*state ½, ⅝ or ¾-in. bore*). Motor not included. (Order ¾-HP 3-phase motor separately below; for single-phase motor, see 83 WR 4577 M, Page 27.) All lathes on this page shipped from Factory in Chicago; you pay shipping charges from there; allow 15 days extra time.

For additional lathe accessories see following two pages.

LOGAN BENCH AND FLOOR MODELS 625.00 TO 712.50

G BENCH MODELS. Height overall, 21 in. Without chip pan or legs. Order ¾-HP, 1725 RPM, 220–440 volt 3-phase motor below.

24 IN. BETWEEN CENTERS, 43⅛-in. bed. Length overall, 54 in.
84 WR 2222 F—Ship. wt. 505 lbs. $62.50 Down on Terms.....Cash $625.00

36 IN. BETWEEN CENTERS, 55⅛-in. bed. Length overall, 66 in.
84 WR 2220 F—Ship. wt. 550 lbs. $66 Down on Terms.....Cash $660.00

H FLOOR MODELS. Height overall, 48½ in. With heavy-gauge steel chip pan; has welded corners, rolled rim. Close-grained cast-iron legs. Order ¾-HP, 1725 RPM, 220–440 volt 3-phase motor below.

24 IN. BETWEEN CENTERS, 43⅛-in. bed. Length overall, 54 in.
84 WR 2223 F—Ship. wt. 615 lbs. $67.50 Down on Terms.....Cash $675.00

36 IN. BETWEEN CENTERS, 55⅛-in. bed. Length overall, 66 in.
84 WR 2221F—Ship. wt. 665 lbs. $71.50 Down on Terms.....Cash $712.50

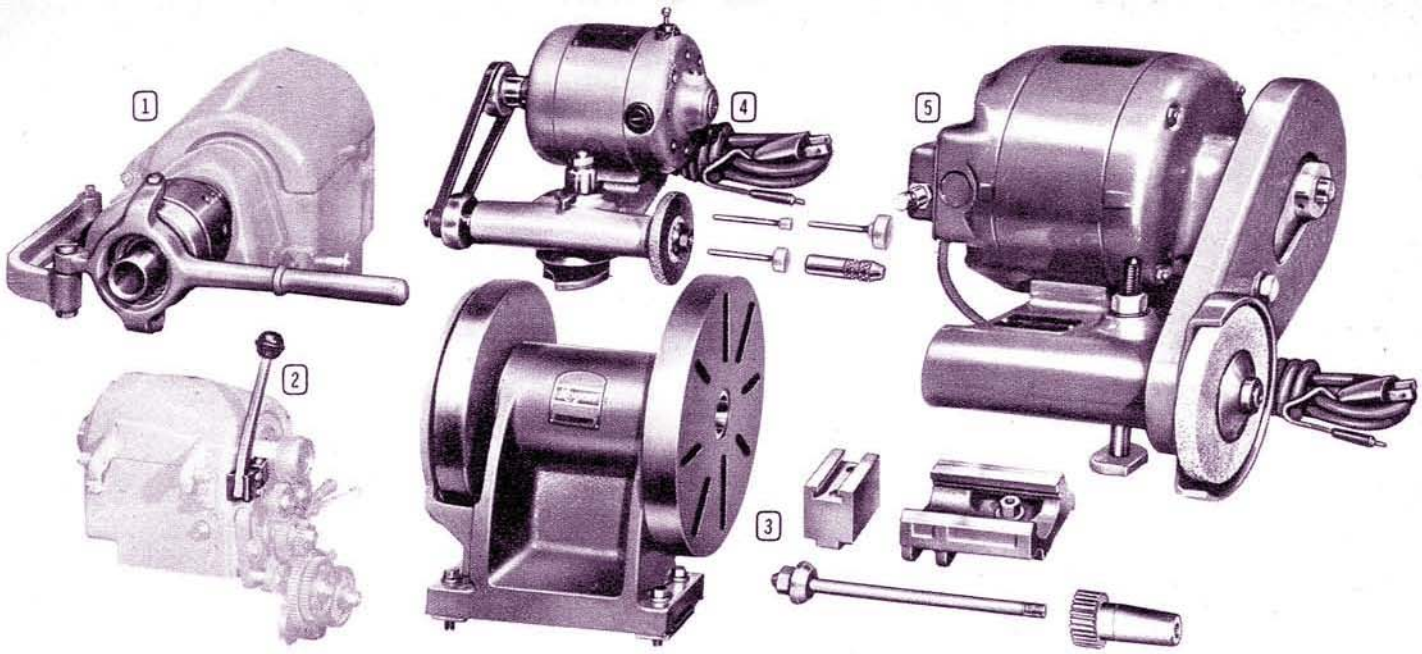
LOGAN PEDESTAL BASE MODELS 815.00 AND 860.00

J PEDESTAL BASE MODELS. Have all precision engineered features listed above plus streamlined steel pedestal base which encloses underneath drive. Trim, compact base with no protruding parts saves valuable floor space is only 21 in. wide. Gears, pulleys and belts completely enclosed for operator safety. Switches and controls are conveniently located at operator's fingertips for instantaneous control. Ball bearing drive assembly, enclosed in left compartment, transmits power to lathe spindle. Lever operated belt tension release for changing belt steps. Height overall, 48¾ in. (Order ¾-HP, 1725 RPM, 220–440-volt 3-phase motor separately below.) Accessories to fit these lathes are listed on following two pages.

24 IN. BETWEEN CENTERS, 43⅛-in. bed. Length overall, 59 in.
84 WR 2224 F—Ship. wt. 810 lbs. $81.50 Down on Terms.....Cash $815.00

36 IN. BETWEEN CENTERS, 55⅛-in. bed. Length overall, 70½ in.
84 WR 2225 F—Ship. wt. 870 lbs. $86 Down on Terms.....Cash $860.00

MOTOR FOR LATHES ABOVE. ¾-HP Ball Bearing 3-Phase. 1725 RPM. 40° C. continuous duty type. Open drip-proof construction. 83 WR 4650 K—For 220/440-V, 60-cycle AC, 3-phase current only. ¾ x 2-in. shaft. Shipped from Chicago Factory. Wt. 37 lbs. . $54.95



Powr-Kraft, Logan, Dumore, Globe and Palmgren

COLLET ATTACHMENT, SPINDLE BRAKE, AUXILIARY HEAD

[1] PRODUCTION COLLET ATTACHMENT. For Logan 11-in. lathes. Lever operated. Opens and closes while the lathe spindle is in operation. Adjustable to provide any desired collet tension. Quickly and easily installed without removing the gear guard. Use with 84 WR 2194K collets below. Mailed promptly from Chicago Factory. Pay postage from there. Ship. wt. 18 lbs.

84 WR 2193 K—Only $9 Down on Monthly Terms.....Cash Price $88.95

[2] SPINDLE BRAKE. Fits Logan 11-in. lathes. Easily and quickly attached. Special replaceable leather shoe applies friction to spindle to provide an efficient rapid spindle brake. Spring return lever. With screws for attaching to lathe. Ship. wt. 10 lbs.

84 WR 2226 K—Mailed promptly from Chicago Factory.....$8.95

[3] AUXILIARY HEAD. Fits Logan 11-in. lathes. Adapts lathes for oversize work. Gives 11-in. lathes a 14½-in. swing over the wings of carriage. Gear reduction feature allows lathe to cut threads four times as coarse as is possible in regular operation. Takes heavy cuts smoothly. Center of spindle is set back and elevated—pressure from cut is over lathe way, does not over-hang. On heavier cuts this design feature reduces chatter to a minimum—provides smooth, accurate operation. Unit with 12-in. face plate includes raising blocks for tool post and tailstock assembly, draw bar and tapered sleeve with drive pinion.

84 WR 2229 F—Shipped promptly from Chicago Factory. Ship. wt. 140 lbs. $295.00

DUMORE TOOL POST GRINDERS 47.00 TO 70.00

[4] PRECISION INTERNAL AND EXTERNAL GRINDER. For small jobs in machine shops, industrial schools, home workshops. Accurate to .0001 in. Fits Powr-Kraft and Logan 10 and 11-in. lathes. Used for sharpening tools, cylindrical grinding, industrial precision grinding. Ball bearing spindle has two speeds—10,000 and 22,500 RPM. ¼-HP 110–120 volt AC-DC motor dynamically balanced.

Takes ⅛ to 2-in. diam. wheels. Internal grinding capacity from ½-in. or larger diam. to 2¼ in. deep. With removable tool post, ⅛-in. chuck assembly, two 10½x⅜-in. belts, can of oil, straight wheel 2x¼x¼ in., 3 mounted wheels, case.

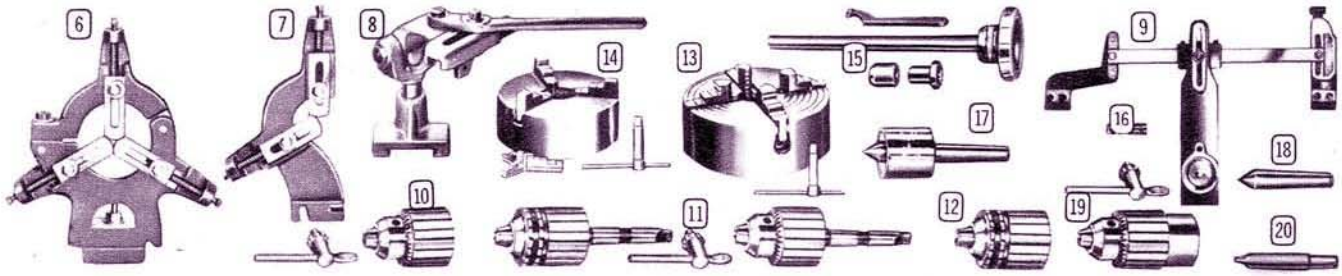
84 WRP 2237 K—*Mailed Postpaid* promptly from Racine, Wis. Factory.....$52.50

EXTERNAL GRINDER ONLY. Same as above less ⅛-in. chuck assembly, 1 belt, 3 mounted wheels, carrying case. *Mailed Postpaid* from Racine, Wis. Factory.

84 WRP 2236 K—$5 Down on Terms.....Cash $47.00

[5] UTILITY DUMORE GRINDER. For heavy duty production use in machine shops, garages, repair and welding shops. Precision built for accuracy to within .0002 in. A powerful portable unit that converts Powr-Kraft and Logan 9 to 11-in. lathes to precision external grinding machine. Cast-iron frame for rigid mounting—minimum vibration. ½-in. diam. spindle rotates at 5,000 RPM on grease-sealed ball bearings. Takes up to 4-in. diam. wheels. Securely mounted on heavy T-bolt for lathe, vise and bench mounting. ¼-HP split-phase motor operates on 110–120 volts 60 cycles AC. On-off switch. Weighs only 33 lbs. With 4x½x½-in. grinding wheel.

84 WRP 2240 K—*Mailed Postpaid* promptly from Racine, Wis. Factory.....$70.00



[6] CENTER RESTS. Clamp to inner bed ways. Top hinged for inserting or removing shafts. Cast-iron frame; adjustable 3-in. capacity cast-iron jaws.

84 WR 2165—Fits 10-in. lathes. Ship. wt. 10 lbs.. $9.85

84 WR 2198 K—Fits 11-in. lathes. Ship. wt. 10 lbs. 12.50

[7] FOLLOWER REST. Used for supporting thin work. Mounts on back of carriage. Adjustable 3-in. cap. jaws. Fits Powr-Kraft and Logan 10 and 11-in. lathes.

84 WR 2164—Ship. wt. 4 lbs.....$5.89

[8] MICA UNDERCUTTER. For armatures up to 5-in. diam. Mounts on back of cross slide. 2-in. stroke. Fits 10 and 11-in. lathes. With .015, .020 saws.

84 WR 2208 K—Ship. wt. 8 lbs. $2.50 Down, Cash $21.50

EXTRA SAWS FOR ABOVE. Size .015 or .020. *State size.*

84 WR 2209 K—Ship. wt. 6 oz.....Pkg. of six 75c

[9] TAPER ATTACHMENTS. Taper up to 4 in. per foot in either direction. Replace lathe cross slide with taper attachment cross slide—becomes permanent part of lathe. All parts except cross slide are easily detached when straight turning is performed. Micro-screw adjustment of slide bar. Ship. wts. 18, 20 lbs.

84 WR 2206 K—Fits Logan, Powr-Kraft 10-in. lathes. $54.95

84 WR 2190 K—Fits Logan 11-in. lathes..... 58.95

[10] JACOBS GEARED DRILL CHUCKS. Fit headstock or tailstock on all lathes. Use with arbors at right to adapt chucks to No. 2 Morse taper.

84 WRP 2146—Capacity 0 to ½ in. *Postpaid*... $8.00

84 WRP 2147—Capacity 3/16 to ¾ in. *Postpaid*. 12.00

[11] JACOBS COMMUTATOR KIT. Chucks hold armature shaft during reconditioning. Includes ¼ to ¾-in. capacity armature driving and center rest chucks. No. 2 Morse taper arbors included to fit headstock and tailstock. In metal box. *Postpaid.*

84 WRP 2151—Complete Kit. $2.50 Down; Cash $22.60

[12] JACOBS CENTER REST CHUCK. Requires No. 2 Morse taper arbor (84 WRP 2153) to mount in tailstock to support centerless work. *Postpaid.*

84 WRP 2150 K—¼ to ¾-in. capacity.....$11.00

[13] LOGAN 4-JAW, 6-IN. INDEPENDENT CHUCKS. Semi-steel—outer edge and face ground. Reversible jaws. For round, irregular work.

FOR LATHES WITH 1½-IN. 8-THREAD SPINDLE.

84 WR 2143—Ship. wt. 13 lbs. $2.50 Down, Cash $24.95

FOR LATHES WITH 2¼-IN. 8-THREAD SPINDLE.

84 WR 2228 K—Ship. wt. 20 lbs. $4.50 Down, Cash $43.75

UNION 4-JAW CHUCK. Fits lathes with 1½-in. 8-thread spindle. 6-in. diam. Ship. wt. 10 lbs.

84 WR 2247 K—Only $2.50 Down. ..... Cash $21.50

[14] 3-JAW, 5-IN. UNIVERSAL CHUCKS. Fit 1½-in. 8-thread spindle. Self-centering jaws.

84 WR 2142—Logan Med. Duty. Ship. wt. 9 lbs. $35.50

84 WR 2207—Logan Hvy. Duty. Ship. wt. 11 lbs. 42.50

84 WR 2246K—Union Med. Duty. Ship. wt. 7½ lbs. 34.50

84 WR 2227 K—Logan Heavy Duty. For lathes with 2¼-in. 8-thread spindle. Ship. wt. 20 lbs.....$74.50

[15] DRAW-IN COLLET CHUCKS. Hollow draw-in bar. Includes spindle cap, closing sleeve, wrench. *Mail.*

FOR 10-IN. LATHES. Chucks round work 1/16 to ½ in.

84 WR 2160 K—Ship. wt. 5 lbs. $3 Down, Cash $25.95

FOR 11-IN. LATHES. Chucks round work 1/16 to 1 in.

84 WR 2192 K—Ship. wt. 7 lbs. $4 Down, Cash $38.95

[16] DRAW-IN COLLETS. Fit 84 WR 2160K above only. Sizes 1/16 to ½ in. by 32nds. *State size wanted.*

84 WR 2162 K—*Mailable.* Ship. wt. 6 oz...Each $4.15

FIT 84 WR 2192K, 84 WR 2193K. Sizes 1/16 to 1 in. by 32nds.

84 WR 2194 K—*State size.* Ship. wt. ea., 12 oz. Ea. $5.39

[17] [18] 60° CENTERS. No. 2 Morse taper shanks.

(17) Anti-Friction Center, ball, roller bearings.

84 WR 2200 K—Ship. wt. 2 lbs.....$25.95

(18) 84 WR 2201K—Regular Center. Wt. 8 oz.....2.15

[19] JACOBS HEADSTOCK CHUCKS. Fit 1½-in. 8-thread.

84 WRP 2148 K—⅛ to ⅝ in. capacity. *Postpd.* $16.20

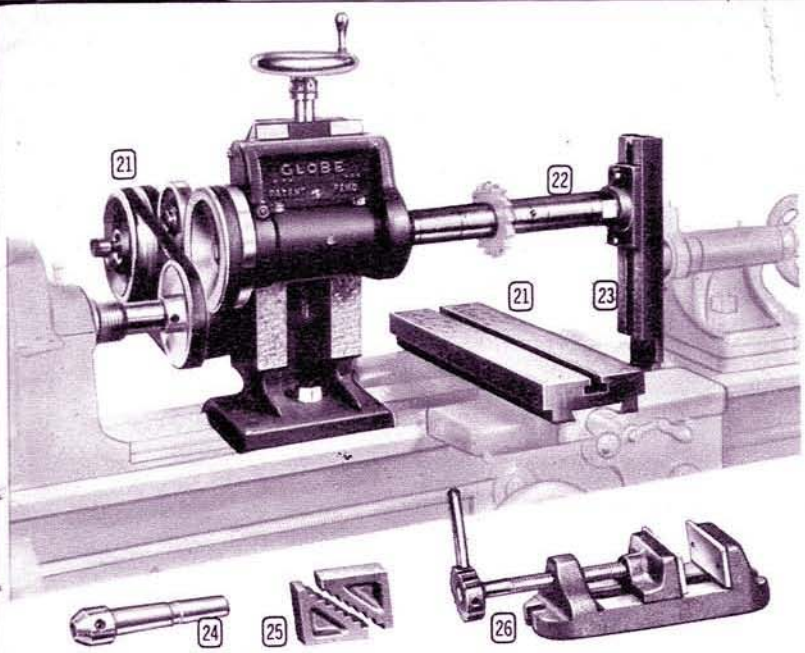
84 WRP 2149 K—3/16 to ¾ in. capacity. *Postpd.*.. 19.75

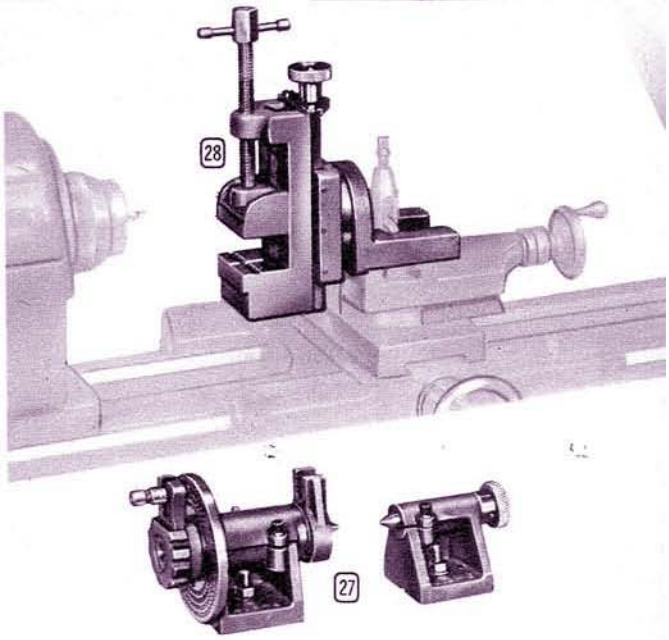
[20] JACOBS CHUCK ARBORS. Adapt to No. 2 M. T.

84 WRP 2152—Fits chuck 84 WRP 2146. *Postpd.* $1.00

84 WRP 2153—Fits chucks 84 WRP 2147, 2150. *Pstpd.* 1.00

Items (6) to (20) with Cat. No. ending in "K" shipped promptly from Chicago Factory.





Attachments Make Your Metal Lathe More Useful

GLOBE MILLING HEADS...QUICKLY AND EASILY CHANGE LATHE TO MILLING MACHINE 178.60 AND 197.35

GLOBE DIVIDING HEAD 81.90

21 GLOBE MILLING HEADS. Quickly attach to Powr-Kraft and Logan lathes. Easy to operate—spindle is moved into position to engage work, rather than work lifted to engage spindle. Can be attached to lathe in three minutes. Base is accurately machined to fit ways of lathe and to insure that face of column is parallel with ways. Speed ratio between lathe and miller spindle is 1 to 1. Faster speeds are possible with a larger pulley.

Large double shielded grease-sealed ball bearings; rugged construction throughout to withstand the hardest use. Unit consists of column, spindle assembly complete with drive pulleys, "V" belts, clamp and milling table with nut and gib. Order milling accessories at right. *Shipped Prepaid.*

FITS POWR-KRAFT AND LOGAN 10-IN. LATHES.
84 WRP 3415 F—$18 Down.....Cash $178.60

FITS LOGAN 11-IN. LATHES.
84 WRP 3422 F—$20 Down.....Cash $197.35

22 MILLING ARBORS. Tough alloy steel, complete with hardened and ground spacers in standard increments. Tapped for draw-in bolt. No. 9 Brown and Sharpe taper. Arbor Support (23) should be used with 8-in. arbor (cutter not included). *State size.*
84 WRP 3417 K—*Postpaid.* 1x4 in....$22.10; 1x8 in.....$31.85

23 BALL BEARING ARBOR SUPPORTS. Double sealed. Serve same purpose as over-arm on large millers. *Postpaid.*
84 WRP 3416 K—Fits Powr-Kraft and Logan 10-in. lathes...$27.30
84 WRP 3423 K—Fits Logan 11-in. lathes..... 38.65

24 END MILL HOLDER. Alloy steel. For double end mills; No. 9 Brown and Sharpe taper; tapped for draw-in bolt. ½-in. size.
84 WRP 3419 K—*Postpaid.* Fit Woodruff Cutters.....$12.35

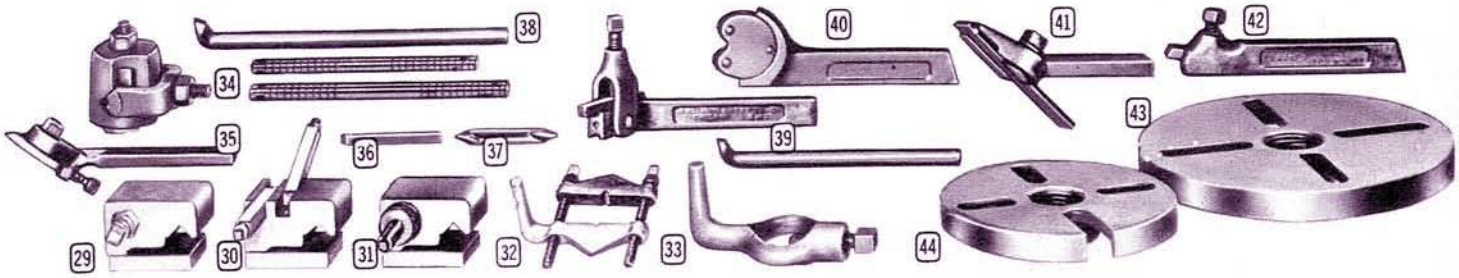
25 STEP BLOCKS. Hold pieces firmly. *Postpaid. State size wanted.*
84 WRP 3419 K—2½ in.high.Pair $1.55; 4½ in. high. Pair $5.85

26 MILLING TABLE VISE. Close-grained casting; replaceable jaw plates. Jaws 3½ in. wide, 1⅜ in. deep, open to 2⅞ in. Has ⅜-in. Acme thread screw. *Mailed Postpaid.*
84 WRP 3420 K—Only $3 Down on Terms.....Cash $28.10

27 FOR MOST INDEXING WORK—cutting spur gears; milling index plates, counterbore and reamer flutes, splined shafts, multiple keyways, squares, etc. Fits on Powr-Kraft, Logan 10 and 11-in. lathes. 4¾-in. swing when mounted directly on base. Headstock and tailstock carry 7/16 in. wide removable tongue. No. 2 Morse taper spindle in headstock, ⅜-in. diam. through hole, 1⅜-8 threaded spindle nose takes standard chuck and dog blocks (dog blocks incl.). 4-hole index plate covers all numbers 1-10, 11, 12, 14, 15, 18, 20, 22, 27, 28, 30, 44, 54, 56, 60.
84 WRP 3421K—*Mailed Postpaid*.....$81.90

28 PALMGREN MILLING ATTACHMENT. Converts Powr-Kraft and Logan 10 and 11-inch lathes for milling, slotting, grinding, grooving, etc. Accurate graduations for rotary angle adjustments; graduated vertical feed screw. Jaws 27/16 in. wide, 1½ in. deep, open to 2½ in. Mailed from Chicago Factory; pay postage from there.
84 WR 2245 K—Ship. wt. 13 lbs.....$24.95

ALL ITEMS LISTED ABOVE EXCEPT (28) ARE SHIPPED PROMPTLY FROM FACTORY IN LOS ANGELES, CALIFORNIA.



Lathe carriage stops (29) to (31) listed below are mailed promptly from Factory in Chicago, Illinois. You pay postage from there.

29 CARRIAGE STOP. Gives positive position stop for lathe carriage. Clamps over front "V" way. Use either to right or left. Adjustment screw with lock nut.
84 WR 2197 K—Ship. wt. 2 lbs.....$4.25

30 DOUBLE CARRIAGE STOP. Adjustable screw at end of each finger sets carriage for two desired positions. Clamps to bed for use on either side of carriage.
84 WR 2196 K—Ship. wt. 3 lbs.....$8.95

31 MICROMETER CARRIAGE STOP. Accurately locates carriage position on lathe bed. Micrometer graduated in .001 inch.
84 WR 2195 K—Ship. wt. 3 lbs.....$10.95

32 CLAMP-TYPE LATHE DOG. For square, hex, rectangular, round work. Mounts without removing work. Drop-forged steel.
84 WR 2182—1¾ in. Ship. wt. 1 lb. 4 oz...$3.69

33 STANDARD LATHE DOGS. Highest quality heavy drop-forged bar steel; square head set screw. *State size wanted.* Wt. ea., 10 oz.
84 WR 2183—½ inch.....99c; ¾ inch...$1.10
1 inch.....$1.38; 1½ inch.. 1.65

Boring bars and bits below shipped promptly from Los Angeles, Factory.

34 GLOBE BORING BAR SET. Holder has ⅜ to ¾ in. diam. capacity. ¼-in. calibrations. Tool bit holes broached 90° one end, 45° on other. Includes: holder, ⅜ and ½-in. boring bars. With tool bits and two wrenches.
84 WRP 2238 K—*Postpaid*.....$13.95

EXTRA GLOBE BORING BARS. With bit.
84 WRP 2239 K—*Postpaid. State size.*

Bar size	Bit size	Ship. Wt.	Each
⅜x 7 in.	⅛ in.sq.	4 oz.	$3.50
½x 8 in.	3/16 in.sq.	8 oz.	3.75
9/16x 9 in.	3/16 in.sq.	12 oz.	3.85
⅝x10 in.	3/16 in.sq.	1 lb.	3.95
¾x11 in.	¼ in.sq.	1 lb. 8 oz.	4.50

TOOL BITS. Fit bars above. Wt. 8 oz.
84 WRP 2249 K—*Postpaid. State size.*

Size, In.	6 for	Size, In.	6 for
1/8x13/16	$1.20	3/16x2½	$1.80
1/8x2½	1.80	¼x1¼	1.50
3/16x13/16	1.20	¼x2½	2.10
3/16x1¼	1.50	.....	.....

35 THREADING TOOL HOLDER. Cuts 60° "V" threads. ⅜x¾-in. shank. Forged. 60° cutter, wrench.
84 WR 2171—Ship. wt. 8 oz....$4.57

36 BLANK CUTTER BITS. ¼x¼x2". 84 WR 2203—Wt. 1 lb. 6 for $1.29

HIGH-SPEED FORMED TOOL STEEL CUTTER BITS (not shown). Includes round nose, right and left turning, right and left facing, and threading bit. ¼x¼ in. Ship. wt. 1 lb.
84 WR 2204—Set of six.....$1.89

TUNGSTEN CARBIDE TIPPED FORMED CUTTER BITS. Like above.
84 WR 2205—Wt. 1 lb. Set of six $8.55

37 60° CENTER DRILL, COUNTERSINK. Ship. wt. 3 oz. *State size.*
84WR2181-1/16.44c; 3/32.50c; ⅛.55c

38 BORING BARS. Fit holder (39). 84 WR 2180—Wt. 3 oz. *State size.*
⅛x4 in.....66c; 3/16x4½ in. 88c
¼x5.$1.10; 5/16x6.$1.32; ⅜x7.$1.76

39 BORING TOOL HOLDER. Reversible yoke for right or left hand work. With ¼-in. bar, bit, wrench.
84 WR 2179—Wt. 1 lb. 4 oz....$5.45

40 KNURLING TOOL HOLDER. With medium knurl.
84 WR 2175—Wt. 10 oz.....$5.45

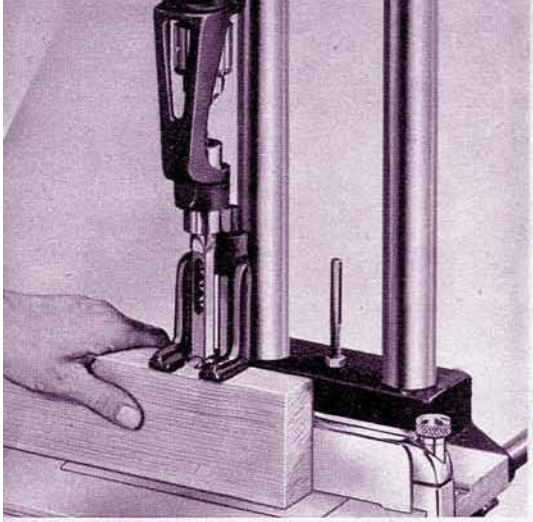
DIAMOND FORMED KNURLS. Ship. wt. pair, 2 oz.
84 WR 2176—Fine.....Pr. $1.77
84 WR 2177—Med.....Pr. 1.77
84 WR 2178—Coarse...Pr. 1.77

41 CUT-OFF TOOL HOLDERS. Wt. 9 oz.; blade, 1 oz.
84 WR 2173—Rt. Hand.....$2.70
84 WR 2172—Straight..... 2.70
84 WR 2174—Extra blade.. 1.19

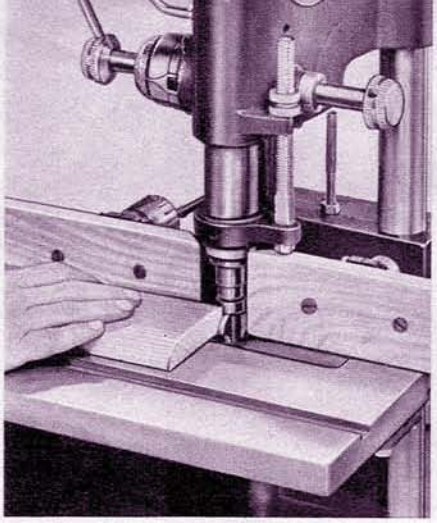
42 DROP-FORGED HOLDERS. For ¼-in. sq. bits. ⅜x¾-in. shank. Av. ship. wt. 9 oz.
84 WR 2168—Right Hand..$2.20
84 WR 2169—Left Hand.... 2.20
84 WR 2170—Straight..... 2.20

43 44 FACE PLATES. Fit 1½-in. 8-thread spindle.
(43) 8-IN. DIAMETER.
84 WR 2155—Wt. 6 lbs....$6.19
(44) 6-IN. DIAMETER.
84 WR 2154—Wt. 3 lbs. 6 oz.$4.19

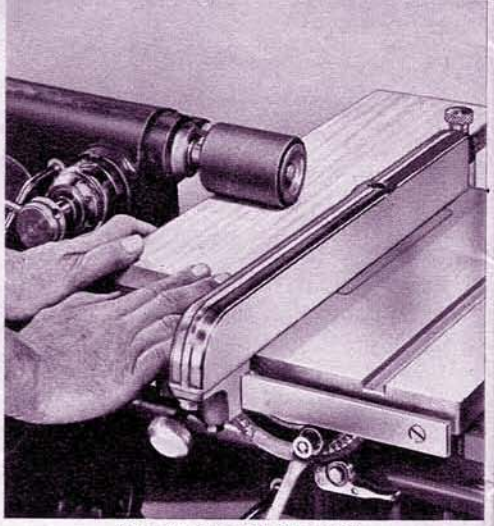
8-IN. DIAM. FACE PLATE. Fits 2¼-in. 8 thread spindle. Shipped promptly from Chicago Fact.
84WR2199 K-Ship. wt. 6 lbs.$7.75



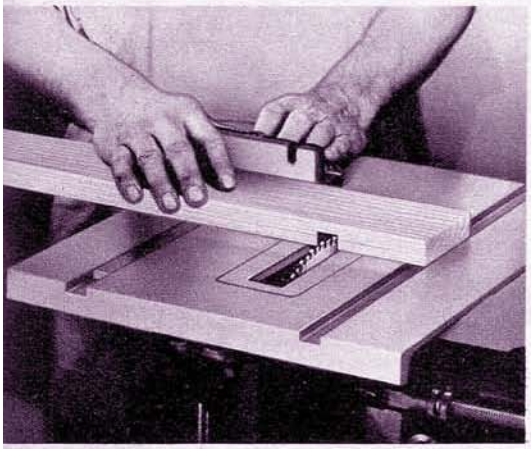
Mortising With Shopsmith



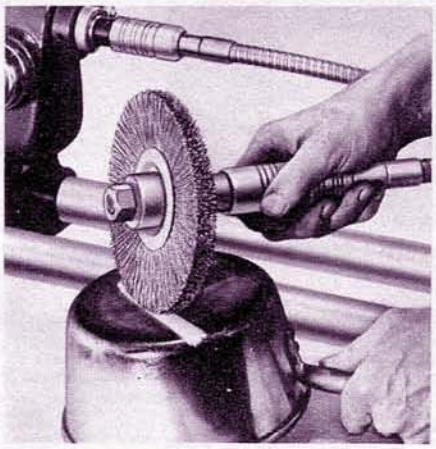
Shaping With Shopsmith



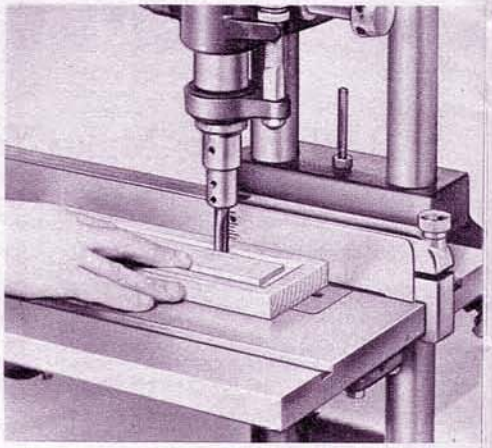
Drum Sanding With Shopsmith



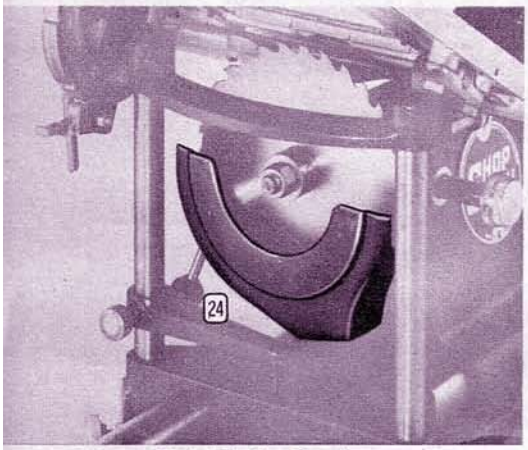
Magna Dado In Use



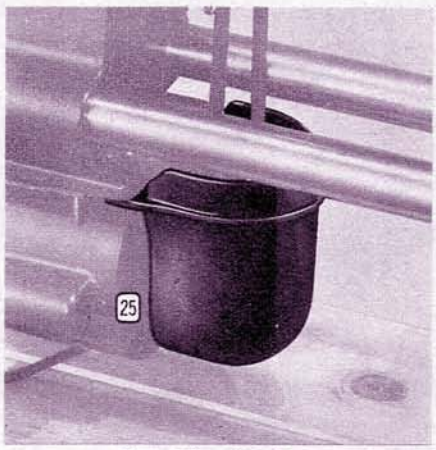
Flexible Shaft In Use



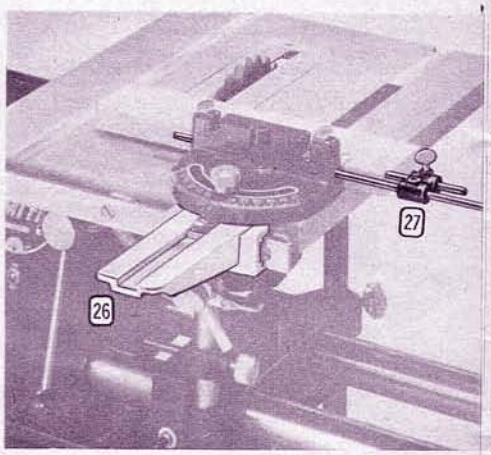
Routing With Shopsmith



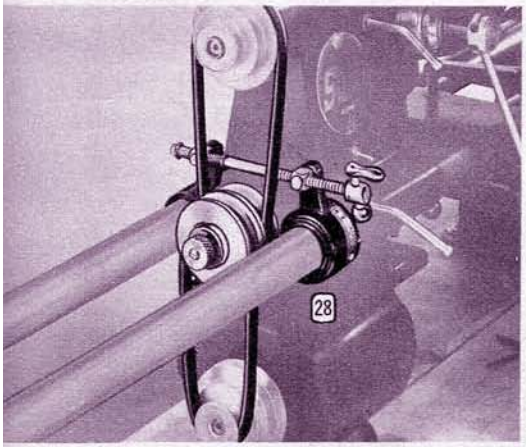
Undertable Saw Guard



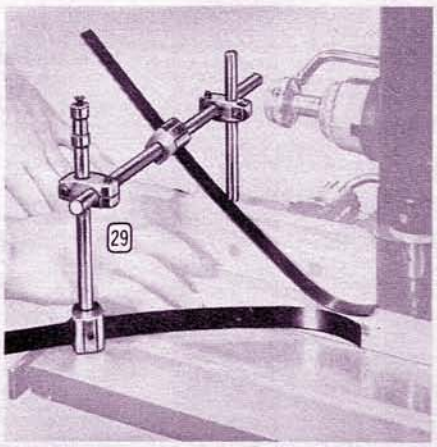
Motor Pulley Guard



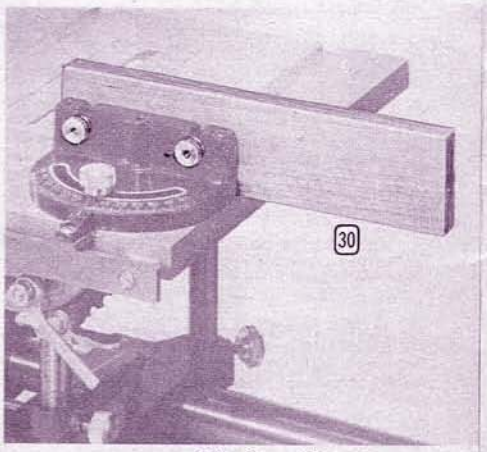
Front Table Extension and Stop Rods



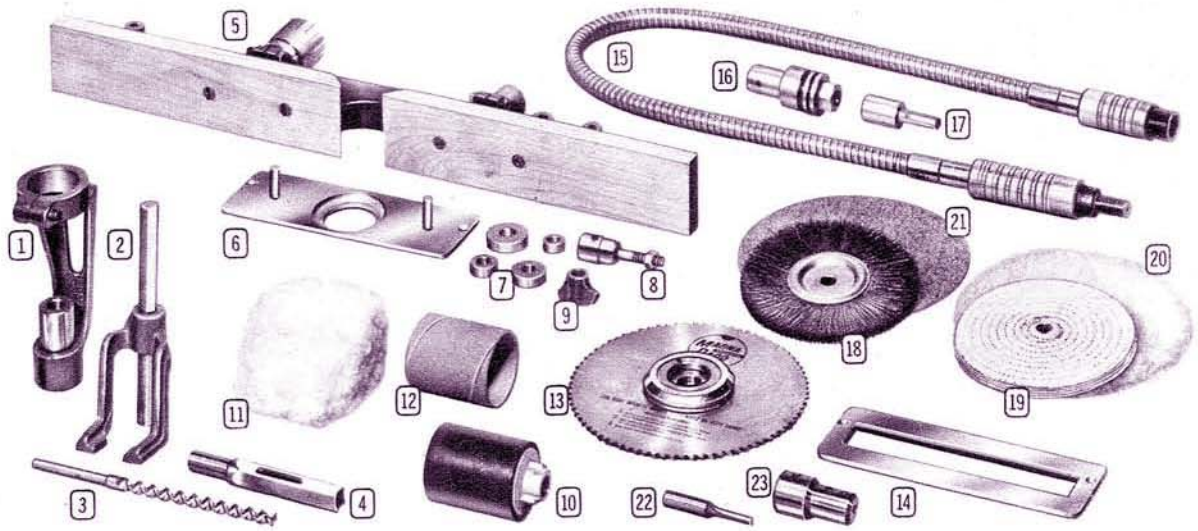
Speed Changer



Hold Down Attachment



Miter Gauge Extension



Accessories Make Shopsmith Even More Useful

1 TO 4 MORTISING ACCESSORIES. See illustration on opposite page. Eliminates tedious hand work when forming mortise and tenon joints and other joints requiring a square cavity.

(1) MORTISING ATTACHMENT. Guides chisel and bit for cutting accurate square holes. Machined cast iron. Use on horizontal or vertical drill press.
84 WRP 3450—*Mailed Postpaid*.....$3.95

(2) MORTISING HOLD-DOWN. Adjusts for varying thicknesses. Holds work to table securely. Cast iron.
84 WRP 3451—*Mailed Postpaid*.....$1.95

(3) MORTISING BITS. Tempered steel. Use with chisels below. *State 1/4, 5/16, 3/8 or 1/2-in. size.*
84 WRP 3135—*Mailed Postpaid*.....Each $1.85

(4) MORTISING CHISELS. Use with bits above for cutting square holes for mortise and tenon joints. Tempered steel. *State 1/4, 5/16, 3/8 or 1/2-in. size.*
84 WRP 3134—*Mailed Postpaid*.....Each $3.50

5 TO 9 SHAPING ACCESSORIES. See illustration on opposite page. Small views (A) to (R) below illustrate various profiles which may be used.

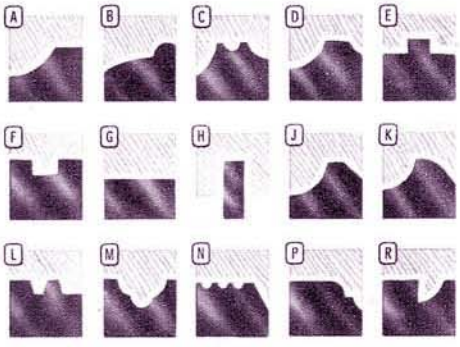
(5) SHAPER FENCE. Controls depth of cut for shaping straight-edged boards. Locks to table. Infeed, outfeed fences adjust for depth of cut.
84 WRP 3425—*Mailed Postpaid*.....$11.95

(6) TABLE INSERT. Cast aluminum. Use when shaping curved work against collars; when sanding edges.
84 WRP 3430—*Mailed Postpaid*.....$1.50

(7) SHAPER COLLARS. For controlled depth of cut on curved surfaces. Fit 1/2-in. shaper adapter. Set of four—25/32 to 1 1/2-in. outside diam. (For 5/16-in. bore shaper collars, see Page 21.)
84 WRP 3139—*Mailed Postpaid*.....Set of four $1.45

(8) SHAPER ADAPTER ASSEMBLY. Use for mounting of 3-lip shaper cutters. *Postpaid.*
84 WRP 3459—For cutters with 5/16-in. bore....$1.25
84 WRP 3460—For cutters with 1/2-in. bore.... 1.25

(9) SHAPER CUTTERS. 3-lip type. 1/2-in. diam. bore. Choice of 15 profiles, see (A) to (R) below. (For 5/16-in. bore shaper cutters, see Page 21.)
84 WRP 3138—*Postpaid. State Profile Letter.* Ea .$1.95



10 TO 12 DRUM SANDING ACCESSORIES. See illustration on opposite page. For surface sanding of narrow boards, contour sanding, sanding rabbets to width. Sanding drum is adaptable for small polishing jobs using bonnet.

(10) SANDING DRUM. Expanding rubber type. 2 5/16-in diam. With 1 med. grit sanding sleeve.
84 WRP 2975—*Mailed Postpaid*.....$2.95

(11) LAMBSWOOL POLISHING BONNET. Fits (10).
84 WRP 3129—*Mailed Postpaid*.....$1.25

(12) SANDING SLEEVES. Fit drum above. *State fine, medium, coarse or assorted grit.*
84 WRP 3133—*Mailed Postpaid*.....6 for $1.10

13 MAGNA DADO ASSEMBLY. See illustration on opposite page. 8-in. diam. geared precision model. Wobble type. Complete unit—no blades and chippers to assemble. One quick adjustment gives desired width of cut. Gear synchronized one-piece unit for grooving, dadoing, notching, cross cutting, ripping. Cuts grooves 5/32 to 7/8 in. wide . . . infinite settings possible. Blade is 1/8 in. thick. Can also be used as a rip or crosscut blade. Cuts to 2 in. deep. Fits 5/8 or 3/4-in. diam. arbors.
84 WRP 3300—*Mailed Postpaid*.....$14.95

14 TABLE INSERT. Cast aluminum. *Postpaid.*
84 WRP 2993—1 3/16-in. Dado slot.....95c

15 TO 20 FLEXIBLE SHAFT AND ACCESSORIES. See illustration on opposite page. Made especially for Shopsmith. For sanding, buffing, polishing, etc., with accessories below. Shopsmith table useful for clamping work.

(15) FLEXIBLE SHAFT. Fits Shopsmith 5/8-in. spindle. 3/8-in. core, 50 in. long. All steel—complete ball bearing construction. Use with (16).
84 WRP 3140—*Mailed Postpaid*.....$15.95

(16) ARBOR ASSEMBLY. Fits flex shaft or Shopsmith spindle. Holds grinding wheels, etc. *Postpaid.*
84 WRP 2996X-Takes 1/2-in. bore accessories.$1.25
84 WRP 2997X-Takes 5/8-in. bore accessories. 1.25

(17) FLEXIBLE SHAFT ADAPTER. Adapts any flex shaft with 1/2-in. bore motor coupling to fit Shopsmith spindle. *Not required with* (15).
84 WRP 2992—*Mailed Postpaid*.....95c

(18) WIRE BRUSH WHEELS. For removing paint, rust, etc. Durable solid metal, reinforced centers. 6-in. diameter. Use with 1/2-in. arbor.
84 WRP 3124—Fine. *Postpaid*.....$1.50
84 WRP 3125—Coarse. *Postpaid*..... 1.25

(19) CLOTH BUFFING WHEEL. Fits 1/2-in. arbor.
84 WRP 3127—6-in. diam. *Postpaid*.....75c

(20) LAMBSWOOL PAD. Fits 6-in. face plate.
84 WRP 3128—*Mailed Postpaid*.....$1.50

21 FLEXIBLE CUT-OFF WHEELS. Laminated linen impregnated with cutting abrasive. 8-in. diam. Fits 5/8-in. arbor. *Postpaid.*
84 WRP 3123—For cutting all metals.....$2.95
84 WRP 3102—For cutting non-metallics.... 2.95

22 23 ROUTING ACCESSORIES. See illustration on opposite page. Add to versatility of Shopsmith when used in drill press position.

(22) ROUTER BITS. 1/2-in. diam. shanks. Use with router chuck for routing, dadoing, grooving, etc. *State 1/4, 5/16, 3/8 or 1/2-in. cutting size.*
84 WRP 3136—*Mailed Postpaid*.....Each $1.45

(23) ROUTER CHUCK. For routing and other operations involving added side thrust—carving, round end mortising, dowelling. *Postpaid.*
84 WRP 3457—Takes 1/2-in. diam. shanks..$1.25

24 UNDERTABLE SAW GUARD. Protects under side of blade. Moves with quill—clears all undertable obstruction. Cast aluminum. Fastens securely to quill with Allen set screws.
84 WRP 3467—*Mailed Postpaid*.....$4.95

25 MOTOR PULLEY GUARD. Gives added protection. Cast aluminum. Need not be removed to change pulley speeds.
84 WRP 3466—*Mailed Postpaid*.....$3.50

26 FRONT TABLE EXTENSION. Increases cut-off width between miter gauge and blade to 12 in. Precision milled from aluminum alloy.
84 WRP 2981—*Mailed Postpaid*.....$2.75

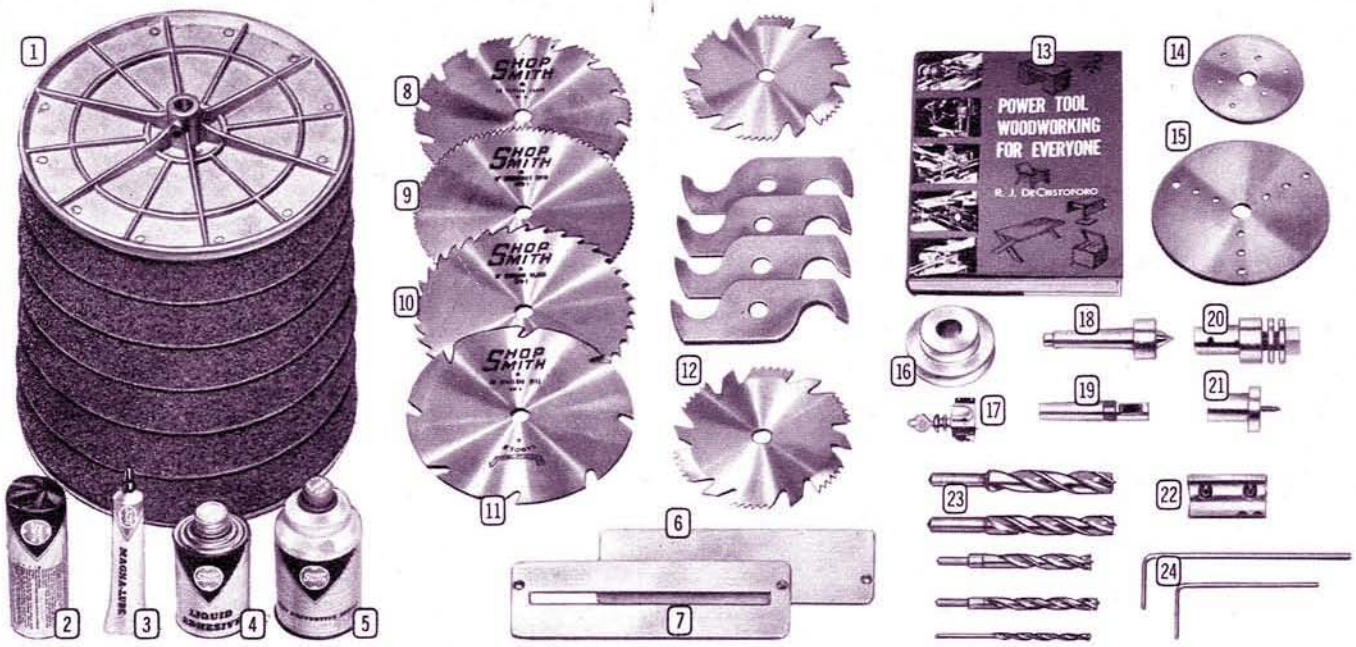
27 MITER GAUGE STOP RODS. Use with miter gauge as a jig for crosscutting workpieces to same length. Adjustable from 0 to 18 in.
84 WRP 2988—*Mailed Postpaid*.....$1.25

28 SHOPSMITH SPEED CHANGER. Provides an infinite range of speeds from 425 to 6800 RPM. Permits rapid selection of exact speed. Can be adjusted while Shopsmith is running. Insures proper speed for routing, shaping, lathe turning, etc. Quickly attached to bed ways and headstock. Mounted as an idler pulley between motor and headstock. Speed selected with ball crank handle and etched indicator. Speed chart, 2 "V" belts and instructions included.
84 WRP 2979—*Mailed Postpaid*.....$13.95

29 HOLD-DOWN ATTACHMENT. Mounts on miter gauge, rip fence or shaper fence. Holds work securely against fence and table. Prevents chatter by holding work firmly when shaping, routing, sawing, etc. Holds odd shaped pieces firmly for cutting. Long mounting bars allow maximum adjustment in thickness and width of work. Can be mounted on any side of Shopsmith table in horizontal or vertical position.
84 WRP 3426—*Mailed Postpaid*.....$7.95

30 MITER GAUGE EXTENSION. Provides extra-large miter gauge face. Top grade hardwood, sealed against moisture. (Miter gauge not included.) Size 9/16 in. thick, 2 7/8 in. high, 12 in. long.
84 WRP 3461—*Mailed Postpaid*.....$1.25

For additional Shopsmith accessories and a complete description of Shopsmith itself, see the following four pages. Additional blades and dado heads listed on Page 7.



Complete Your Shop With Shopsmith Accessories

SANDING DISCS, ADHESIVES, TABLE INSERTS

[1] DISC FOR SANDING. 12-in. diam. Precision machined, balanced. Speed work by ordering an extra disc for each grit. Order sandpaper below.
84 WRP 2977—*Mailed Postpaid*.....Each $3.95

SANDPAPER DISCS FOR (1). 12-in. diameter. Paper backing. *Mailed Postpaid.*
84 WRP 3108—For metal. Assorted grits.6 for $2.25
84 WRP 2978—For wood. *State type grit—fine, medium, coarse or assorted*.....6 for $1.65

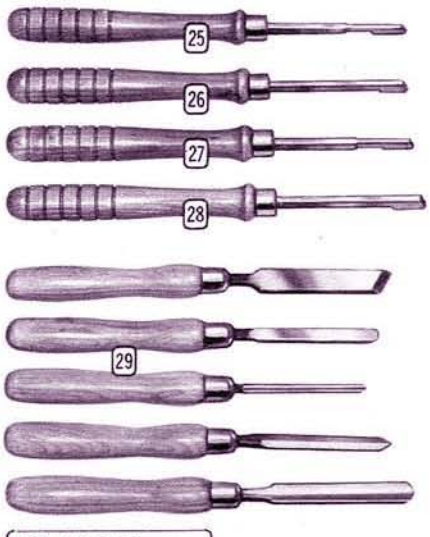
[2] DISTIC ADHESIVE. Makes application and replacement of sanding discs easy. Holds firmly.
84 WRP 2980—Tube 1⅞x5 in. *Mailed Postpaid*..50c

[3] MAGNA-LUBE. Special grease for Shopsmith drive sleeve, spindle spline and quill rack teeth.
84 WRP 3101—2 fluid oz. *Mailed Postpaid*.....50c

[4] LIQUID ADHESIVE. Pressure-sensitive adhesive for sandpaper discs. Brush applicator.
84 WRP 3149—8 fluid oz. *Postpaid*.....95c

[5] RUST-PREVENTIVE SPRAY. Protects Shopsmith ways, keeps other tools free of rust.
84 WRP 3148—12 fluid oz. *Postpaid*.....$1.45

[6] [7] TABLE INSERTS. Sturdy cast-aluminum, heavily ribbed. *Mailed Postpaid.*
(6) 84 WRP 2994—No slot. (Drill Press).....95c
(7) 84 WRP 3146—½-in. saw slot.....95c



SAW BLADES, DADO HEAD, FACE PLATES

[8] 8-IN. COMBINATION SAW BLADE. Rip-crosscut miter. Hollow ground. Produces smooth, easy cuts. Use for fine work and mitering cuts. Blade tapers from teeth to center.
84 WRP 3122—⅝-in. arbor hole. *Postpaid*....$4.45

[9] 8-IN. CROSSCUT SAW BLADE. Has special tooth design for smooth, fast cutting across grain. Use when a great deal of crosscutting is done.
84 WRP 3120—⅝-in. arbor hole. *Postpaid*...$2.65

[10] 8-IN. RIP SAW BLADE. Designed especially for maximum efficiency when ripping.
84 WRP 3121—⅝-in. arbor hole. *Postpaid*...$2.65

[11] 8-IN. 8-TOOTH SAW BLADE. Performs ripping and crosscutting operations with minimum power consumption. Cuts cleanly, reduces "kickback."
84 WRP 3105—⅝-in. arbor hole. *Postpaid*...$2.65

ALL PURPOSE 8-IN. SAW BLADE (not shown). New 30 tooth design. Rips and crosscuts, eliminates need of blade change for specific operation.
84 WRP 3106—⅝-in. arbor hole. *Postpaid*...$2.65

[12] 6-IN. DADO HEAD. Tempered alloy steel. Use for dadoing, grooving, rabbeting, tenoning, etc. Maximum width of cut 13/16 in. Includes two 6-in. dado head blades and four chippers. Use with ⅝-in. arbor and 13/16-inch slot table insert.
84 WRP 3126—*Mailed Postpaid*.....$14.95

[13] POWER TOOL WOODWORKING FOR EVERYONE. By R. J. DeCristoforo. Learn the correct method to use and operate the Shopsmith. 450 illustrations demonstrate each step. Special chapter on sharpening tools, workshop safety hints. 283 pages.
53 WRP 1103—*Mailed Postpaid*.....$4.95

[14] [15] FACE PLATES. Cast iron. Use for turning bowls, lamp bases, and other workpieces which cannot be supported between centers.
(14) 84 WRP 2982—3¾-in. diameter.....$1.95
(15) 84 WRP 2983—6-inch diameter..... 2.75

[16] 2-STEP HEADSTOCK PULLEY. Increases pulley clearance when crosscutting long lengths of 2-inch rough lumber.
84 WRP 3130—*Mailed Postpaid*.....$1.25

[17] SHOPSMITH KEY SWITCH. Similar to car ignition lock. Prevents unauthorized use by children.
84 WRP 3147—*Mailed Postpaid*.....$1.75

[18] TAILSTOCK LIVE CENTER. Ball bearing action. Mounted 60° tip turns with workpiece. Eliminates need for retightening because of "burning out." No. 2 Morse Taper shank.
84 WRP 3109—*Mailed Postpaid*.....$3.25

[19] TAILSTOCK CHUCK ARBOR. Holds Jacobs chuck in Shopsmith tailstock. No. 2 Morse Taper one end, ⅝-in. spindle with tapered flat other end.
84 WRP 3132—*Mailed Postpaid*.....$1.25

AUGER BITS, CHISELS, JOINTER CUTTER

[20] ARBOR ASSEMBLY. Fits Shopsmith spindle. For mounting grinding wheels, saw blades, buffing wheels, wire brushes, etc. *Postpaid.*
84 WRP 2996—Fits ½-inch bore accessories.$1.25
84 WRP 2997—Fits ⅝-inch bore accessories. 1.25

[21] SCREW CENTER. Holds small workpieces for hollowing or facing operations. Screw is replaceable with any No. 14 wood screw.
84 WRP 2990—*Mailed Postpaid*.....$1.25

[22] JOINTER-CUTTER. For jointing stock up to 2½ inches thick; 2-in. diameter. Use with jointer and shaper fence (84 WRP 3425 on Page 47). Three tool steel cutter blades are removable for sharpening and adjustment. Fits on spindle—use in either horizontal or vertical position.
84 WRP 3453—*Mailed Postpaid*.....$9.95

[23] 5-PIECE AUGER BIT SET. Fits Shopsmith chuck. Best type bits for power drilling in soft and hard woods—especially large diameter holes. Set includes 5 bits: ¼, ⅜, ½, ⅝, and ¾ inch. ¼, ⅜ and ½ inch have ¼-in. diam. shank; ⅝ and ¾ in. have ½-in. diam. shank.
84 WRP 3107—*Mailed Postpaid*..Set of five $6.60

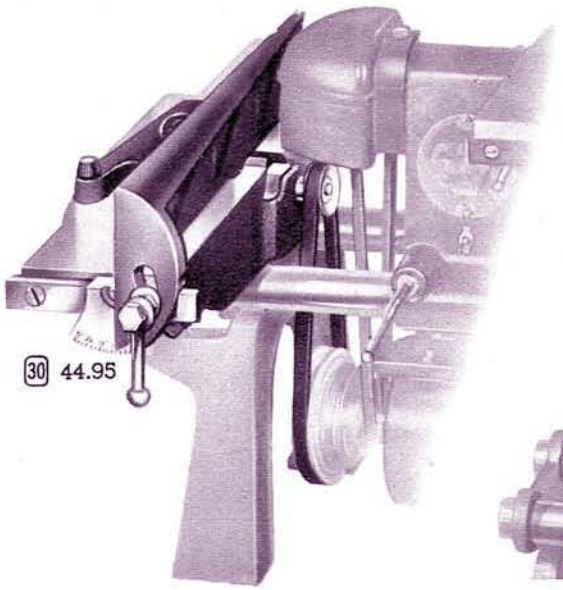
[24] EXTRA LONG ALLEN WRENCHES. Specially made for Shopsmith. ⅛-in. wrench longer than radius of saw blade; 3/16-in. wrench longer than radius of sanding disc. *State size. Postpaid.*
84 WRP 3142—⅛-in size..20c; 3/16-in. size...20c

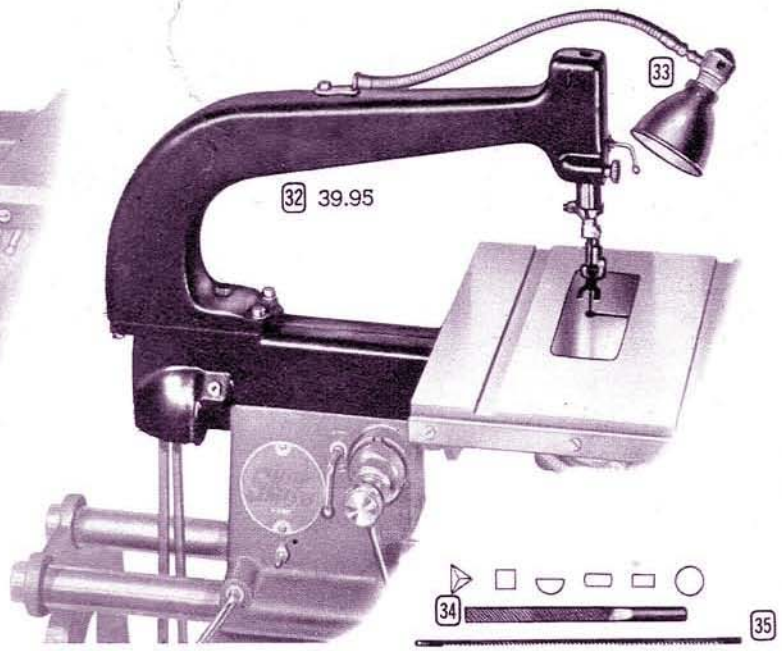
[25] TO [28] CARBIDE TIPPED TURNING CHISELS. Tips retain their razor-sharp edge longer than alloy steel type. Can be used for free hand turning of soft metals as well as plastics and woods. *Mailed Postpaid.*
(25) 84 WRP 2087—⅛-in. round nose.....$3.95
(26) 84 WRP 2088—¼-in. round nose..... 3.95
(27) 84 WRP 2085—⅛-in. square nose..... 3.95
(28) 84 WRP 2086—¼-in. square nose..... 3.95

4-PIECE CHISEL SET. Save 85c by purchasing the entire set above. Includes one each (25) to (28).
84 WRP 2089—*Mailed Postpaid*. Set of four $14.95

[29] LATHE CHISEL SET. Alloy steel. Special selection of chisels most commonly used by skilled wood turners. Will handle all standard lathe operations. Set includes one each of the following: 1-inch skew; ¾-inch gouge, ½-inch round nose, ¼-inch gouge and ½-inch parting tool.
84 WRP 3131—*Mailed Postpaid*..Set of five $8.95

HINTS ON PROPER CARE OF SAW BLADES. To prevent rusting, saw blades, dado heads, etc., should be cleaned thoroughly, then given a coating of thin oil when being removed from the machine for storage. It is best to wrap them in oiled or waxed paper for complete rust protection.





Now . . . Shopsmith Jointer and Jig Saw Attachments

NEW SHOPSMITH JOINTER ATTACHMENT 44.95

30 4-INCH BALL BEARING MODEL. Another important major tool accessory has been designed to make your Shopsmith even more versatile. Fits easily on headrest of Shopsmith (use Shopsmith Mounting Kit below), or may be used as a single purpose tool. Base is drilled for three point mounting as single tool. Jointer swings down when Shopsmith is used in vertical position. Ready for use in seconds when Shopsmith is returned to horizontal position. Heavy cast-iron construction reduces vibration and assures smooth operation.

Three-knife, 2¼-inch diameter cutter head runs easily on 2 grease sealed ball bearings. Spring guard over cutter head, can be mounted on outfeed table during rabbeting operations to cover exposed cutter head behind fence. High-speed steel, precision ground knives retain their keen cutting edge longer . . . eliminates constant resharpening. Knife blades 4 1/32-inches long, are individually adjustable with Allen wrench for quick, accurate setting to fixed out-feed table. Infeed table is 5½x13¼ inches long; outfeed table 4½ x 13¼ inches long. Infeed table has 2-inch rabbeting ledge for cut up to 5/16 inch. Maximum depth of cut, single pass over cutter head 5/16 inch. Maximum width of cut 4 inches. Large, easy-to-grip knob adjusts infeed table for depth of cut. Easily read depth indicator has adjustable pointer.

Sturdy cast-iron fence is 3 inches high by 21¾ inches long; two holes drilled in fence permit attaching high wood facings when jointing excessively wide or long stock. Fence tilts from 45° forward to 45° back, has adjustable automatic stops at 45, 0, and 45° positions. Fence position secured tightly with hand lever, locks firmly in any position.

Jointer utilizes motor of Shopsmith when attached to headrest of Shopsmith (Order Mounting Kit below, for use with Shopsmith). As a single purpose tool, recommended for use with ½-HP 1725 RPM motor (order motor (31) below on this page); 5-inch diameter motor pulley; 44-inch "V" belt; tool stand 84 WR 2962M on Page 25. Jointer includes 1¾-inch machine pulley. Overall size: 9 in. wide, 32½ in. long and 7 in. high. Available about November 1, 1953. *Mailed Postpaid.*

84 WRP 3427 M—Only $4.50 Down on Terms ..... Cash $44.95

SHOPSMITH JOINTER MOUNTING KIT (not shown). Required to attach Jointer (30) above to Shopsmith. With new headrest for Shopsmith, belt and 4 step motor pulley. Can be used with or without speed changer 84 WRP 2979. Fits 5/8 or ¾-inch diameter motor shaft. Available about November 1, 1953.

84 WRP 3428—*Mailed Postpaid* $9.95

SHOPSMITH MOTORS, PULLEYS, CANVAS COVER

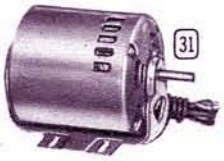
31 ½ AND ¾-HP SHOPSMITH MOTORS. Manufactured especially for Shopsmith with "ceiling mount," short leads and separate cord and plug. Prelubricated ball bearings insure proper performance in either vertical or horizontal position. 1725 RPM capacitor type. Inverted end bells protect motor from sawdust, woodchips or dirt fouling. *Mailed Postpaid* from Factories in Cleveland, Ohio or near Oakland, California. Allow 10 days extra.

½-HP MOTOR. For 110–120 volts, 60 cycle AC. 5/8-in. diam. shaft.

84 WRP 3143K—Only $3.50 Down on Terms ..... Cash $34.50

¾-HP MOTOR. For 110–120/220–240 volts, 60 cycle AC. 5/8-in. diam. shaft.

84 WRP 3144 K—Only $4.50 Down on Terms ..... Cash $44.50



3-STEP MOTOR PULLEYS. Fit ½ or ¾-in. diameter motor shaft. *State size bore.*

84 WRP 3145—*Mailed Postpaid* $1.25

SHOPSMITH COVER. Heavy canvas duck. Protects Shopsmith from moisture, dust, dirt or paint. Box-end design, no loose flapping ends.

84 WRP 3464—*Mailed Postpaid* $5.95

SHOPSMITH JIGSAW ATTACHMENT 39.95

32 JIGSAW ATTACHMENT. This powerful, versatile jigsaw attaches easily to your Shopsmith in just a few seconds. It utilizes the same motor, bench and saw table, eliminates costly duplication. Driven from spindle. Built-in blower keeps cutting line clean . . easy to follow. Maximum depth of cut 2 inches. Throat depth 18 inches; cuts to center of 36-inch circle. Can be used as a saber saw with unlimited capacity. Tilting table, 45° to the right, 15° to left allows operator to cut beveled curves.

Smooth ball and Oilite bearings. Chucks take 5-inch plain end blades—lower chuck takes ¼-inch shank jigsaw files. Jigsaw can also be used as a filing machine to eliminate tedious hand filing. Frame is cast of close grain aluminum alloy; balanced crank drive mechanism is fully enclosed. Includes table insert, jigsaw blade (extra blades available below), mounting bolts, flexible couplings.

84 WRP 3452 M—*Mailed Postpaid.* Only $4 Down..... Cash $39.95

33 ADJUSTABLE LAMP ATTACHMENT. Attaches easily to jigsaw (32) above or Shopsmith headstock. Provides proper illumination directly on the workpiece where all work can easily be seen. Handy on-off switch located at lamp base. With cord and plug.

84 WRP 3463—*Mailed Postpaid* $4.45

34 JIGSAW FILES. Contains shapes most normally used for shop work. Includes 1 each: triangular, round, square, half-round, pillar, crochet (see profiles of each above). Use in jig or saber saw position.

84 WRP 3118—*Mailed Postpaid* ..... Set of six $4.95

35 JIGSAW BLADES. Oil tempered and hardened. Teeth are filed and set. Blades are 5 inches long with plain ends. *Mailed Postpaid.*

Use For	Cat. No.	Thick	Width	Teeth Per In.	6 for
Composition board	84 WRP 3110	.012 in.	.023 in.	20	30c
Wood, hard rubber	84 WRP 3111	.010 in.	.070 in.	14	30c
Plastics, bone	84 WRP 3112	.020 in.	.070 in.	7	35c
Wood, plastics, bone	84 WRP 3113	.010 in.	.040 in.	18	35c
Alum., copper, mild steel	84 WRP 3114	.020 in.	.110 in.	20	30c
Metals, wood, bone	84 WRP 3115	.020 in.	.110 in.	15	30c
Alum., copper, mild steel	84 WRP 3116	.028 in.	.250 in.	20	45c
Soft or hard Presdwood	84 WRP 3117	.028 in.	.250 in.	7	45c

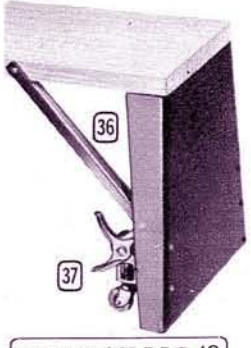
STEEL BENCH ENDS 11.95; RETRACTABLE CASTERS 11.95

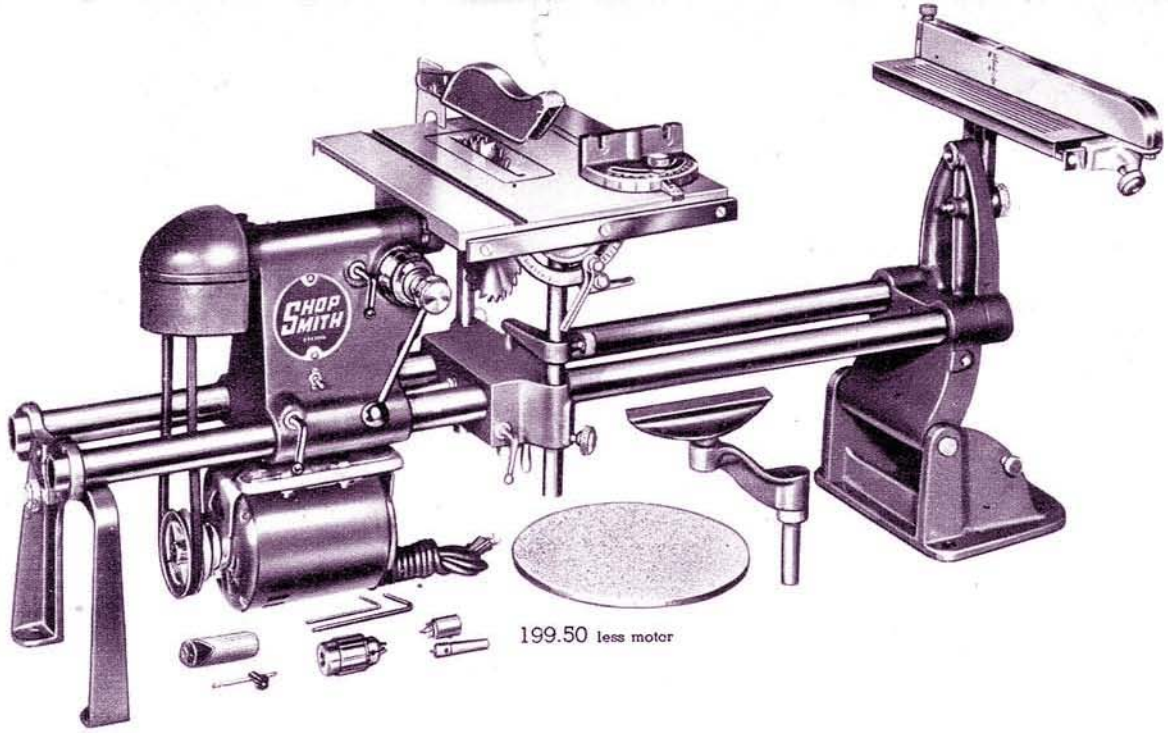
36 SHOPSMITH BENCH ENDS. Heavy-duty 16-gauge steel . . . provides strong support for your Shopsmith. Designed for proper height for efficient operation of Shopsmith. Predrilled holes . . . simply attach two 2x8x57-in. boards to bench ends (boards not included). Size 18 in. wide by 18½ in. high. With four steel braces, bolts, nuts, washers and instructions. Order casters separately below.

84 WRP 2987 M—*Mailed Postpaid*. . . Pair $11.95

37 RETRACTABLE CASTERS FOR SHOPSMITH BENCH ENDS. Roll your Shopsmith easily to any job or out of the way for storage. A touch of your foot raises the bench ½-in. off the floor for rolling, another touch and the bench rests solidly on the floor. With retractable casters your Shopsmith takes even less space. Steel swivel casters insure long life. Bolts incl.

84 WRP 3465—*Postpaid* ..... Set $11.95





199.50 less motor

Shopsmith . . . Most Versatile of All Power Tools

YOU CAN OWN A SHOPSMITH FOR ONLY 10% DOWN ON WARDS CONVENIENT MONTHLY PAYMENT PLAN

Nationally known Shopsmith is a precision-made, multi-purpose power tool combining the Bench Saw, Disc Sander, Wood Lathe, Horizontal and Vertical Drill Press in one compact unit. In each of its five major uses Shopsmith has equal or greater capacity than most single purpose tools, and one motor drives all five tools. Requires less than 60 seconds to change from one operation to another. Shopsmith is a rugged, man-sized tool—can be used to build a house or furnish a home, yet will fit in corner of basement, utility room or garage; can be stored in an area only 18 by 57 inches. Its ease of operation and precision construction will produce work that will satisfy professional craftsmen. An efficient all-purpose power tool for farm or home workshop, repair, construction, and maintenance shops, etc.

Shopsmith accessories add even greater versatility, performing such jobs as jig sawing, jointing, shaping, mortising, etc. (see Pages 46 to 49).

Check these precision features (1) heavy cast-iron headstock, carriage and tailstock; (2) satin-chrome plated (to resist rust) 1¾-in. diam. tubular steel ways; (3) Four grease-sealed ball bearings in headstock (see A below); (4) Micro-adjustment of table with built-in table raising mechanism, ball and crank adjustment; (5) Trunnion has spring loaded stop for easy table tilting —stops at 0°, 45° and 90° (see B below). (6) Carriage locks easily, secures tool rest at desired height and angle (see C below); (7) Tailstock has floating seat for cup center, provides positive alignment of head and tailstock centers (see D below); can be inverted on end of ways so that extension table can be used for horizontal drilling; (8) Extension table bracket slides in channel milled in tailstock—secured with knob and stud screw; (9) Table extension has fence bar—fence can be locked in any position; (10) Fence has back lock, depth of cut scale, built-in hole and set screw for mortising hold-down; (11) Large miter gauge with automatic spring stops; slots permit quick insertion or removal of extension. (12) Adjustable depth stroke scale can be set at zero in any quill position.

Shopsmith does the work of the following five basic woodworking tools:

SHOPSMITH AS A BENCH SAW

Big 8-in. Tilting Table Saw. Pictured at top of page. Has effective table width of 54 in. when used with table extension. Smooth machined table 14½x17 in. tilts up to 45° . . . calibrated with automatic spring stops at 0°, 45° and 90°.

Maximum cut 2¼ in. Maximum distance between blade and fence 48 in. Miter gauge graduated 60° both directions. Machined rip fence and miter gauge can be used on either side of blade. Width of cut controlled by micro-adjustment of quill, depth controlled by table raising mechanism. Adjustable blade guard and splitter.

SHOPSMITH AS VERTICAL DRILL PRESS

Six-Splined Drill Press. See (E) on opposite page. Drills to center of 15-in. circle. Jacobs key chuck fits on ⅝-in. diam. spindle—takes 5/64 to ½-in. diam. straight shank drills. 4-in. thrust, with spring return and shock cushion . . . adjustable stop nuts . . . and scale for reading depth of thrust. Rugged spindle floats on 4 grease-sealed ball bearings. Maximum distance from table to chuck 27 in.; 55 in. from chuck to floor. Speed adjusts from 850 RPM to 3450 RPM.

SHOPSMITH AS DISC SANDER

Big capacity 12-Inch Disc Sander. See (F) on opposite page. Miter gauge permits beveled sanding up to 60°. Use for plain or compound sanding. Adjustable table 14½x17 in. tilts to 45°. Table edge is undercut so table can be brought right up to sanding disc. Disc balanced to minimize vibration.

SHOPSMITH AS HORIZONTAL DRILL PRESS

Six-Splined Horizontal Drill Press. See (G) on opposite page. It drills, bores, reams, countersinks, etc. No limitation on length of work other than size of workshop. Same specifications as vertical drill press.

SHOPSMITH AS A WOOD LATHE

Large capacity Lathe, 33 in. between centers and 15-in. swing over ways. See (H) on opposite page. Tool rest has 360° swing, slides smoothly on ways—always parallel to work; Locks with carriage lever. Outboard face plate turning is easily done: simply take off tailstock, slide headstock to end of ways; swing tool rest around and lock in front of work. Capacity enough for any piece that clears floor. Has wide range of speeds from 850 to 3450 RPM.

SHOPSMITH 199.50 less motor

Shopsmiths are shipped promptly Freight *Prepaid* from Factories in Cleveland, Ohio and near Oakland, California.

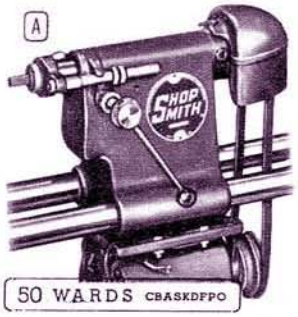
SHOPSMITH LESS MOTOR. Includes the following accessories: table extension and bracket; saw guard and splitter; 8-in. diam. all purpose crosscut-rip blade; saw arbor; ½-in. capacity Jacobs key chuck; 12-in. sanding disc with sanding sheet and adhesive; lathe spur and cup centers; tool rest; machined rip fence and miter gauge; 3-step "V" machine pulley, matching pulley for motor (fits ⅝-in. diam. motor shaft); 38-in. "V" belt; bench blue print; parts list; instructions.

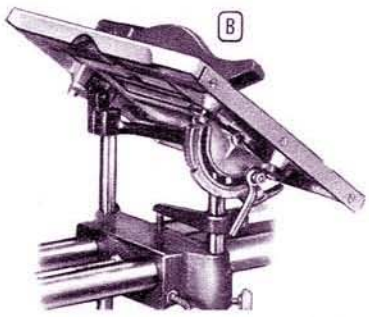
84 WRP 3470F—$20 Down. . . . . .Cash $199.50

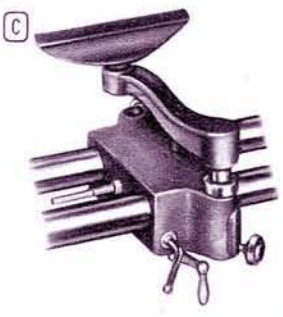
SHOPSMITH WITH MOTOR. Includes all accessories listed above plus specially designed ½-HP 110–120 volt, 60-cycle, AC, 1725 RPM, ball bearing capacitor motor with ⅝-in. diam. shaft, heavy-duty rubber cord and plug.

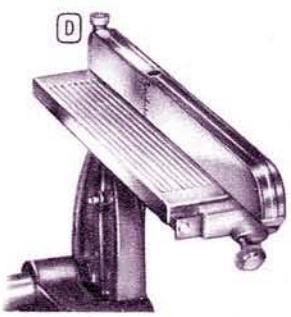
84 WRP 3471F—$23.50 Down. . . . . Cash $234.00

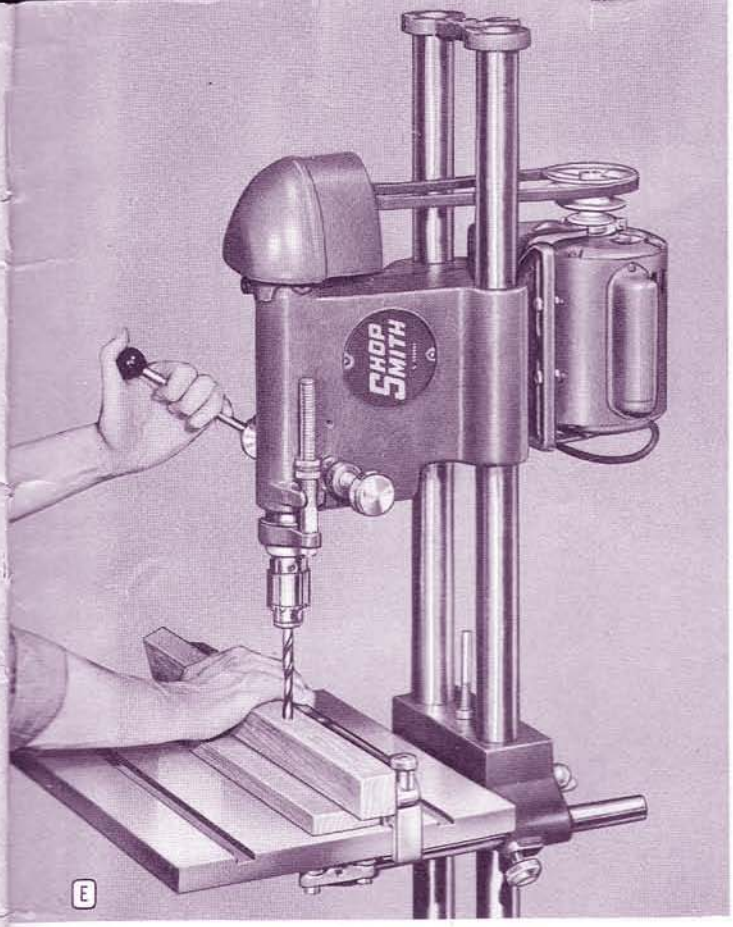
BE SURE TO SEE COMPLETE LISTINGS OF SHOPSMITH ACCESSORIES AND ATTACHMENTS ON PAGES 46 to 49







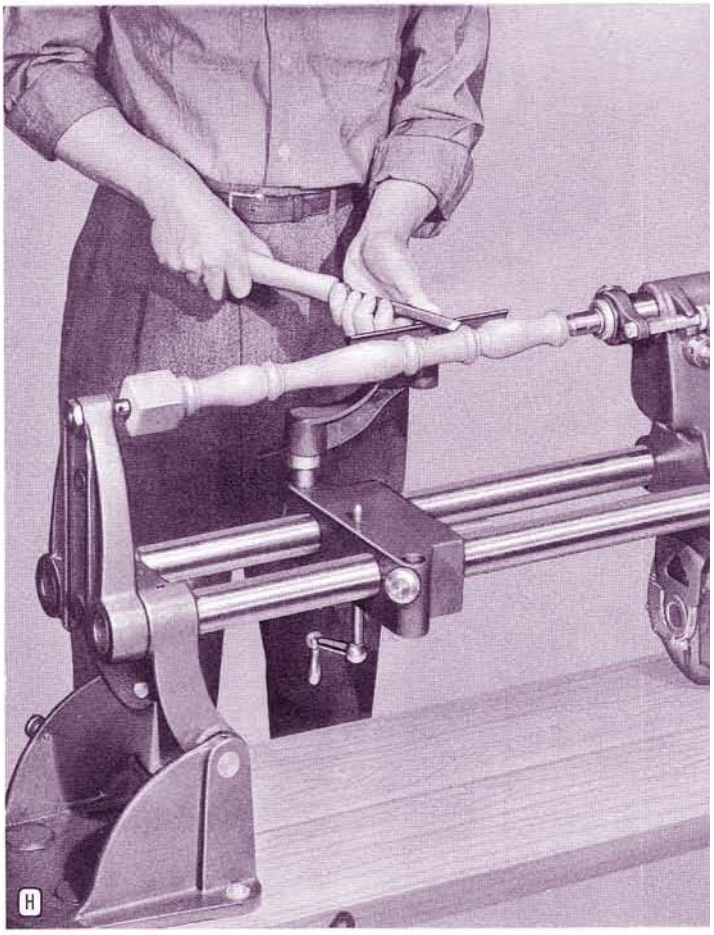




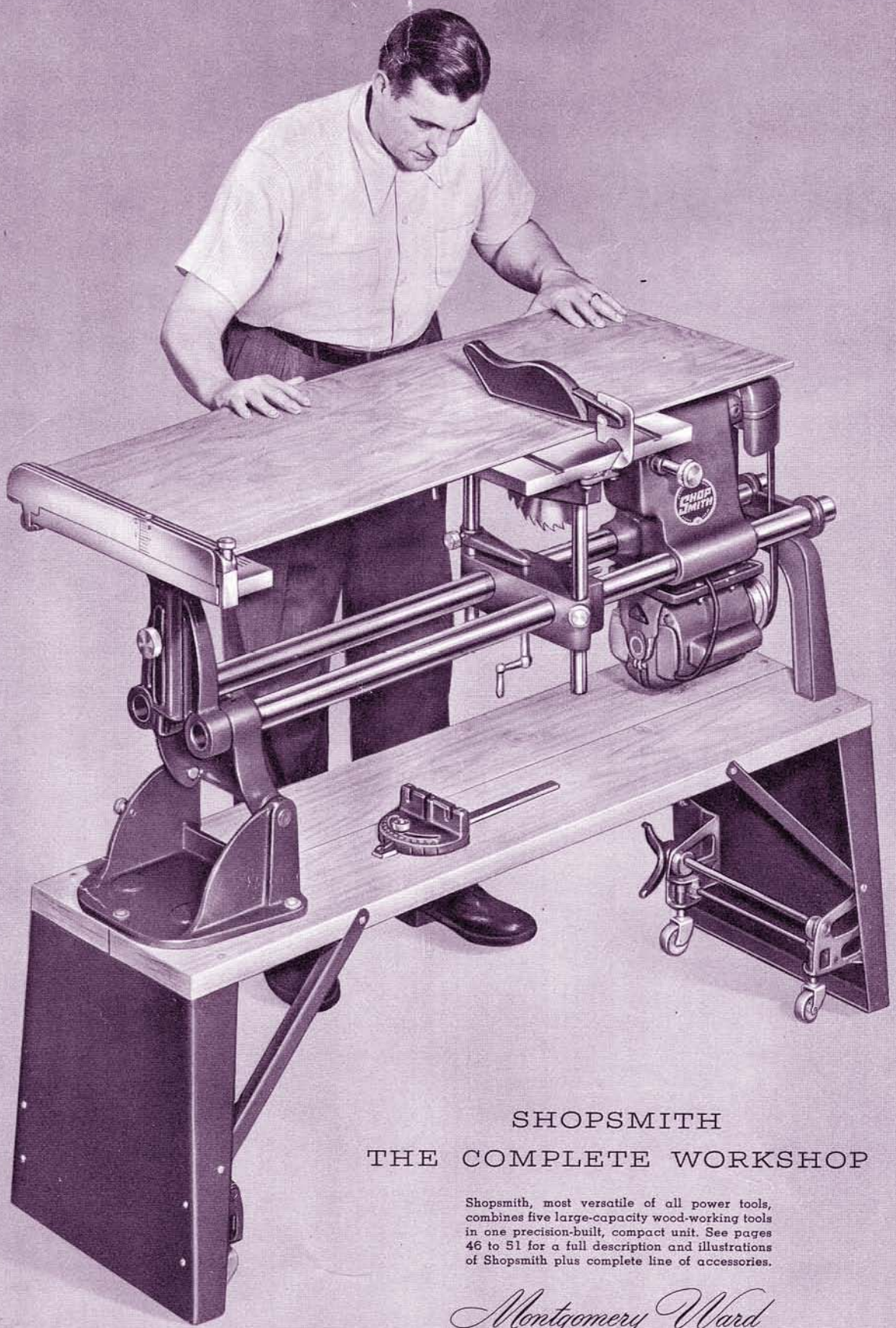
Shopsmith as Vertical Drill Press

Shopsmith as 12-Inch Disc Sander

Shopsmith as Horizontal Drill Press



Shopsmith as 15-Inch Swing Wood Lathe



SHOPSMITH

THE COMPLETE WORKSHOP

Shopsmith, most versatile of all power tools, combines five large-capacity wood-working tools in one precision-built, compact unit. See pages 46 to 51 for a full description and illustrations of Shopsmith plus complete line of accessories.

Montgomery Ward

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