# YATES AMERICAN

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WOODWORKING

WATERSTON S 28 E. LARNED S

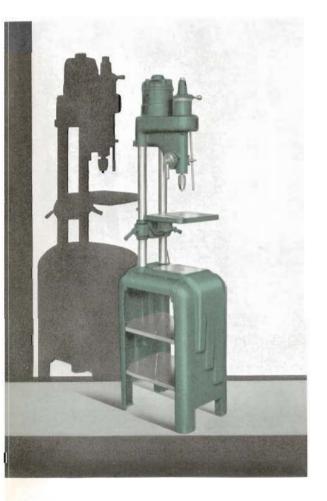
MACHINES

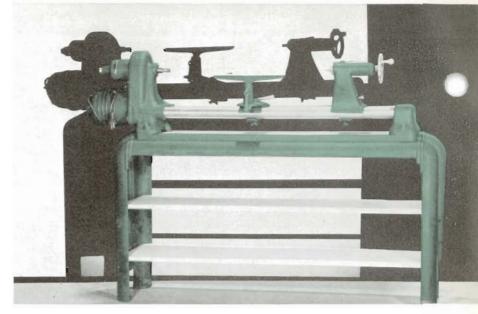
FOR HOME . SCHOOL . INDUSTRY

YATE/-AMERICAN MACHINE CO.

BELOIT, WITCONTIN, U. T. A.

# DESIGNED for THE SHOP of TOMORROW

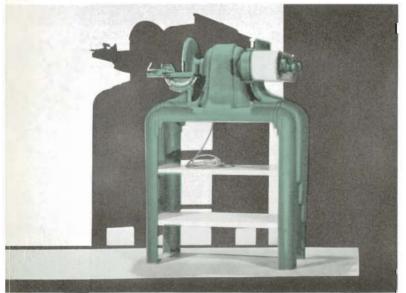


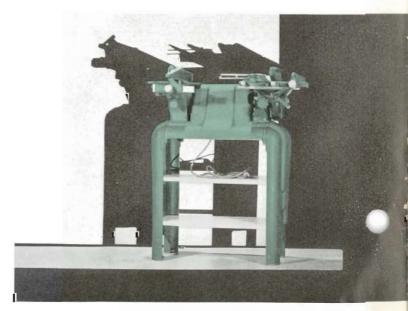


These pedestal bases, designed by Yates-American engineers, point the way to a new trend in machine design. Their modern lines are indicative of the advanced engineering and design which are incorporated throughout the "W" line.

The "W" machines, mounted on the modern, DeLuxe bases—with their attractive satin finish and rugged beauty, will give a shop the appearance of tomorrow. Their entire appearance gives a subtle suggestion of refinement and quality. Not only are they beautiful and in the modern trend, but they are practical as well. Their smooth surfaces, unbroken by sharp corners or crevices, are easily kept clean—their wide shelves give a surprising amount of valuable storage space.

These bases, exclusively Yates-American, also lend themselves to convenient and practical combinations, two of which—the W-40, 4" Hand Jointer—W-50 Circular Saw and the W-90 Belt Sander—W-95 Disc Sander are shown here. Both machines are powered by a single motor — and are instantly available — without any time-consuming set-ups. These double unit combinations require an incredibly small amount of floor space (14" x 26")—an essential factor in the small shop.





# SPEEDS FROM 800 TO 4000 R.P.M.

# without TOUCHING A BELT-

# without STOPPING THE MACHINE!

# YATES-AMERICAN MULTISPEED DRIVE

The MULTISPEED Drive was brought down from the heavy machinery field by Yates-American engineers after a close study of the requirements of the small shop. It is carefully designed to fill the need for a safe drive and a wide range of workable speeds. Extensive production facilities have enabled Yates-American to bring to the small shop this drive, which

formerly only the large industrial shop could enjoy.

With the MULTI-SPEED Drive, a range of speeds from 800 to 4000 R.P.M. on the lathe and drill press, and from 700 to 1800 R.P.M. on the Jig Saw, is available — without delay, inconvenience or touching a belt. Unlike other types of drive, the MULTISPEED does not restrict the

operator to three or four set speeds. On the contrary, any desired intermediate speed which is safest and most efficient for any given operation is instantly available—without stopping the motor. An effortless shift of the conveniently located control lever is all that is required. With the MULTISPEED Drive, Yates-American brings "Finger-tip Speed Control" to the small workshop.

The value of the MULTISPEED Drive for small shop machines cannot be over-emphasized. Consider as an example, the turning lathe. The operator may encounter turnings varying in diameter from 1/4" spindle to a 14" face plate. The same

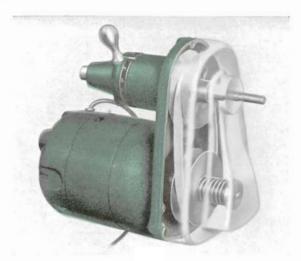
situation obtains with the drill press. It may be used for drilling a ½6" hole in steel or 1" hole in wood. One job may require a ½6" router cutter, the next a 3" sanding drum. A three or four step-cone pulley cannot possibly provide the most efficient or safest operating speed for all of the many and varied uses to which these machines are put, or the particular

speed which will assure a fine quality of finish.

Still more important is the fact that the MULTISPEED Drive is entirely enclosed. There are no moving belts or pulleys exposed—accidental contact, either with tools or hands, is impossible. This safety is paramount—in industry—to the student in the school and especially where

there are small children in the home. Yates-American "built-in" protection sets a new standard of safety.

The MULTISPEED Drive is a simple, positive driving principle which delivers a smooth, even flow of power through a wide range of workable speeds. It has been developed and made practical for the small shop only after long hours of study, research and testing by the engineers of the largest manufacturer of woodworking machinery in the world. In bringing the MULTISPEED Drive to the small shop, Yates-American continues to pioneer outstanding improvements in woodworking machines.



# W-70 JIG SAW

The jig saw that sets a new standard for performance. The W-70 is the first powered jig saw which gives the operator the flexibility and speed variations that are so necessary for the most intricate patterns, and which up to this time, have only been accomplished by the most skilled workman using a hand scroll saw.

This almost human touch is supplied by the MULTISPEED Drive with which this jig saw is equipped. This exclusive Yates-American feature makes possible "finger-tip" speed control, and any rate of speed from 700 R.P.M. to 1800 R.P.M. can be obtained by simply moving the convenient control lever. The saw may be run at high speeds for "straightaway" sawing and simple cuts, and instantly retarded when the intricate section of the pattern is reached. No handling or shifting of the belt or motor is necessary,—the MULTISPEED Drive is not only convenient, but safe as well. Yates-American engineers, in putting into this jig saw their many years of experience, have perfected a saw that is smoother, sturdier, and vibrationless in performance.

The frame is properly cored—the proper thickness of metal and correct distribution of weight frees it of all strain and stress and eliminates all vibration.

The heavy cast-iron table is well ribbed for absolute rigidity and to prevent warping. It tilts 45 degrees to the right and to the left—a feature which permits the operator to remain in his normal operating position at the front of the machine—no special adjustments or turning of the table are necessary. The angle of tilt is easily read on the radio type scale.

The operation of the top and bottom plungers is so perfectly synchronized that the blade always remains under a constant tension—whip and buckle, which are responsible for blade breakage, are entirely eliminated. The tubular upper plunger is supported by two widely spaced prelubricated, sealed bearings, which prevent oil from dripping on to the work. The lower plunger runs in two automatically lubricated, sealed bronze bearings. The lower assembly runs in oil.

Two guides are regularly furnished—one above and one below the table. This gives rigid support to the blade and prevents twisting—it permits faster cutting of small diameters and intricate patterns, and minimizes blade breakage. These guides automatically align the blade and make it possible to insert new blades easily and quickly—an exclusive Yates-American feature. The guides consist of two hardened steel discs with slots to accommodate different size blades. Both discs may be set to provide slots of the proper depth and thickness for various sizes of blades.

The two jaw chuck can be rotated 90 degrees for working long stock from the side of the machine. Its movable jaw holds the blade with a vise-like grip and prevents twisting and cramping the blade while it is being tightened. The chuck holds saber saws, jewelers blades, machine files and accessories—it is locked with a socket head screw.

The dust blower system supplies a constant, uniform volume of air, regardless of the speed at which the saw is being operated. The totally enclosed, rotor type blower is mounted directly on the motor and operates constantly at motor speed. It is simple in construction—consisting of only three moving parts—there are no pistons, valves or plungers to wear or get out of order.

The W-70 Jig Saw readily lends itself to cleanliness. Its refinement in design—beauty of line—smooth and vibrationless performance—large capacity—convenience and ease of operation—wide range of workable speeds—safety to the operator—totally enclosed construction which seals all working parts against dust and dirt and prolongs the life of the saw, combined with the MULTISPEED Drive—are essential features which enable the W-70 Jig Saw to "set a new standard for performance."









SABRE SAWING

CUTTING INTRICATE PATTERNS

CUTTING LETTERS

JIG SAWING AT 45 DEGREES

# W-70 JIG SAW SPECIFICATIONS

TABLE: — Nickel alloy, cast iron, heavily ribbed, tilts 45 degrees either way, 14"x14", height from floor 39\%",

WIDTH OF THROAT: 24".

THICKNESS CAPACITY:-

2¼", with 6" blades. 1¼", with 5" blades.

LENGTH OF STROKE:-1".

RANGE OF SPEEDS:—700 to 1800 R.P.M.

SPEED CONTROL:—Continuous within the range, controlled by convenient lever on side of frame. All moving parts enclosed.

BEARINGS:-Ball bearings, sealed.

GUIDES:—Above and below table exclusive design. Upper guide also acts as hold down.

LUBRICATION: - Constant oil bath type.

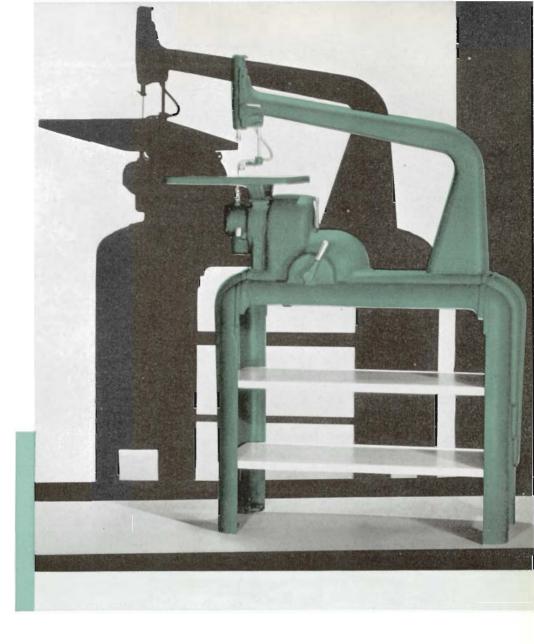
DUST DISPOSAL:—Rotary blower, through nozzle directly above cutting edge of saw blade.

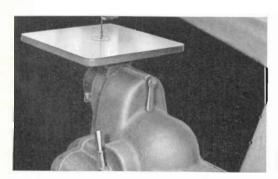
ARM:—One piece, cored cast iron.
Bolted directly to base.

SHIPPING WEIGHT:-240 lbs.

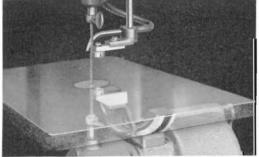
MOTOR: — Built-in. Furnished only with ½ H.P., single phase, split phase and Repulsion Induction motor, as well as ½ H.P., 3 phase motor.

OVERARM:—Removable.

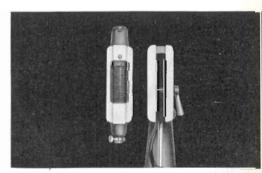




The enclosed motor and "finger-tip" speed control is exclusive on the W-70 Jig Saw. There are no exposed moving parts—on belt to change—no motor to shift, his jig saw is absolutely take to operate by the skilled and the unskilled—by soung and old. Its smooth unbroken surfaces and the climination of all corners and crewices, give it beauty of line and make it easy to keep clean.



The use of two guides—one above and one below the work—gives blade support where it is most needed and assures rapid and accurate blade alignment. No bulky, complicated devices obscure the vision of the operator or cast disturbing shadows under artificial light. The upper guide also axis as a hold-down.



Note the extreme simplicity of the head design, the wide spacing: of the two bearings, and the long bearing surfaces of the dovetailed ways, which keep the head and blade in perfect alignment. The light weight and precision workmanship of the reciprocating parts, enclosed in the head, allow unick reversal of the saw blade to prevent breaking through whip and buckle.

# W-20 LATHE

A precision-built lathe. The W-20 will add much to the enjoyment of wood turning. It embodies in its design, the many years of Yates-American lathe building experience. Its beauty of line, rigid construction, "Finger-Tip" speed control, and freedom from vibration are the essentials for fine wood turning.

The MULTISPEED Drive, found only on Yates-American Lathes, permits "finger-tip" speed control—any suitable speed may be selected by the operator—without stopping the lathe. A simple movement of the conveniently located control lever, gives exactly the correct speed for any particular size and type of turning and permits increasing the speed as the work progresses.

The driving unit, or head stock, is designed to permit the use of a wide variety of accessories; to supply a source of power for the units in the Yates-American combination; or to supply power to a countershaft. It is also equipped with an indexing device. An unusual feature of the head stock is the built-in spindle lock. This permits great ease in changing face plates and accessories—frozen face plates can be removed without damage to the lathe.

The W-20 has a large swing capacity of 14" over its entire bed. This affords large face plate turning from the front of the lathe, with the tool rest supported on the substantial bed in correct turning position.

The bed is constructed of two heavy, cold drawn, seamless steel tubes, ground smooth to precision limits. This type of bed was selected to provide cleanliness, durability and beauty. These tubular sections are absolutely rigid. They carry tensil strength of 60,000 pounds to the square inch, which is far greater than any other type of lathe bed construction or metal that might have been used. The bed is so constructed that it can be mounted on a bench or on a beautiful, modern pedestal, as is illustrated on page 2 of this catalog.

The tool rests furnished with the W-20 are hardened and ground—hardened to prevent turning tools from digging in—and ground to provide a smooth surface over which the tools will glide freely and accurately throughout the life of the lathe. Soft and poorly machined rests are a constant hazard and the cause of poor work.



FULLY ENCLOSED-SAFE



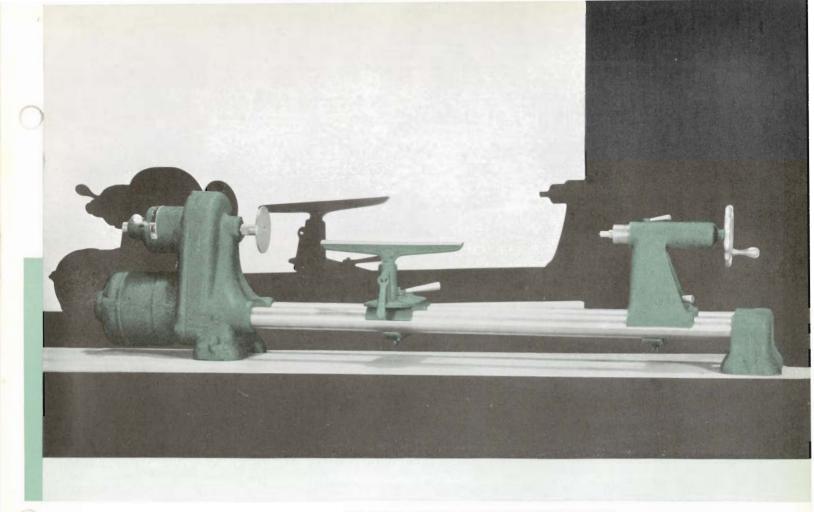
GRINDING SHAPER CUTTERS.



FACE PLATE TURNING



SPINDLE TURNING



### W-20 LATHE SPECIFICATIONS

SWING:-14".

DISTANCE BETWEEN CENTERS:-31". Additional lengths up to 49" available at extra cost.

BED:—Two heavy cold drawn steel tubular sections, ground smooth for accuracy.

HEADSTOCK:—Reversible, for outboard turning. HEADSTOCK SPINDLE:—%6" diameter, threaded

to fit all accessories.

TAILSTOCK SPINDLE:—Self ejecting, No. 2-Morse Taper,

MOTOR:—Furnished only with built-in motor: 1/3 H.P. single phase, split phase and Repulsion-induction.

HEIGHT FROM FLOOR: -With W20-D base-40".

DRIVE AND SPEEDS:—MULTISPEED drive—a totally enclosed driving unit, giving any speed from 800 R.P.M. to 4000 R.P.M.

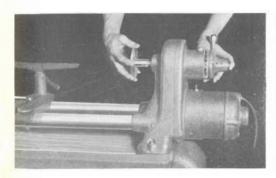
SPEED CONTROL:—By a lever on outside of head stock—without manual belt shifting.

BEARINGS: Highest grade sealed ball bearings.

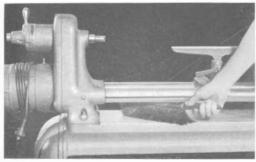
TOOL RESTS: Heavy cast iron face, hardened and ground to a smooth working surface.

OPTIONAL MOTORS:—Repulsion—induction type motors of the following ratings are available: ½ H.P. 110-220 single phase; and slow speed, 1200 R.P.M. Also 220-440,3 phase induction type motor.

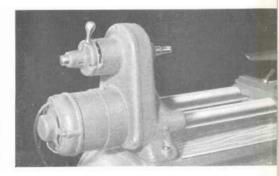
SHIPPING WEIGHT:—Bench type, 150 lbs. Floor type, 275 lbs.



The built-in spindle lock is an exclusive and essential ure. Simply pressing the button, holds the head it spindle securely—the dangerous and unsatisfactory practice of holding exposed belts is eliminated. Frozen accessories can be removed without damage.



Note the ease of keeping the W-20 lathe clean. There are no corners or crevices where dust and shavings can lodge. A bench brush readily passes under the bed,



This totally enclosed MULTISPEED Drive entirely eliminates the handling and shifting of the motor and belts for speed changes. A simple movement of the control lever gives any desired speed—there are no intervening "dead spots"—no inconvenience—no danger—no delay.

# W-30 DRILL PRESS

A drill press which excels in its field. It is advanced in design—sturdy in construction—safe and convenient in operation—free from vibration and chatter—and has a wide range of usefulness.

The supporting column is constructed of two heavy, cold drawn seamless steel tubes smoothly ground to precision limits, giving absolute rigidity—a foremost essential for accurate drilling, mortising, routing, shaping and other operations.

This drill press is powered by the MULTISPEED Drive, found only on Yates-American Drill Presses, giving "finger-tip" speed control. The wide range of usefulness of the machine requires many rates of speed. Simply shifting the control lever gives any desired speed from 800 R.P.M. to 4000 R.P.M. without handling and shifting the motor and belt. No stopping the motor—no steps between speeds—no danger or inconvenience to the operator.

The entire driving and operating mechanism of this drill press is totally enclosed. This essential feature gives ruggedness in construction, beauty of line, prevents dust and grit from entering the bearings and other moving parts, and makes this tool unusually safe to operate.

The built-in spindle lock is an exclusive Yates-American feature. Simply pressing the button locks the spindle rigidly while opening and closing the chuck—the inconvenience and danger of holding the belt is eliminated.

The depth gauge mechanism is totally enclosed—unique in design—conveniently located—accurately set without calculation or uncertainty—another exclusive feature developed by Yates-American engineers.

The quill which encloses the bearings and spindle is of high grade steel. Its entire length of 7%" has a bearing surface in the housing—a feature which gives rigidity to the spindle and eliminates vibration or chatter.

The table is constructed of cast-iron, heavily ribbed. It is supported on the two rigid columns by a sturdy bracket—free of stress and strain—and rigidly resists the thrust from mortising and heavy drilling operations. The table is accurately machined and ground to a true working surface—it can be moved from side to side and tilted to any angle up to 90° either way—the angle of tilt is indicated on a radio type dial.

The combination router pin and shaper rub collar attachment is offered as extra equipment—it is found only on the Yates-American Drill Press. It is instantly available for shaping or routing and readily removed for drilling and mortising. The pin is reversible for use with router bits of different diameters. It will hold various sized rub collars that guide the work in irregular or "serpentine" shaping. This device greatly increases the usefulness of the drill press in shaping—it eliminates flimsy makeshifts and facilitates following a pattern in duplicate routing.











TOOL MAKING

ROUTING

SHAPING

MULTISPUR BIT

MORTISING

## W-30 DRILL PRESS SPECIFICATIONS

HEIGHT: Overall-Floor type, 76"; Bench type, 42".

TABLE:—Heavily ribbed, may be tilted 45 degrees either way, heat treated, cast iron, ground surface, 10" x 12".

BASE:—Cast iron, Bench type—14" x 17". Floor type—16" x 2014".

COLUMNS:—Two cold drawn, seamless tubular and surface ground, 178" diameter.

MOTOR:—Furnished only with built-in motor: 1/3 H.P. single phase, split phase and repulsion-induction.

SPEEDS:—Continuous, 800 to 4000 R.P.M.—std. 500 to 2600 R.P.M.—special.

DISTANCE: Spindle center to columns, 734".

CAPACITY:-Drills to 1/2" dia.

MAXIMUM VERTICAL CAPACITY:-

Bench type—18" Floor type—50"

SPINDLE DIAMETER: -%"—threaded 24 pitch to receive wide range of accessories.

BEARINGS:—Three sets, sealed—two support the spindle and one the speed shifter.

DRIVE:-MULTISPEED fully enclosed, V-belt.

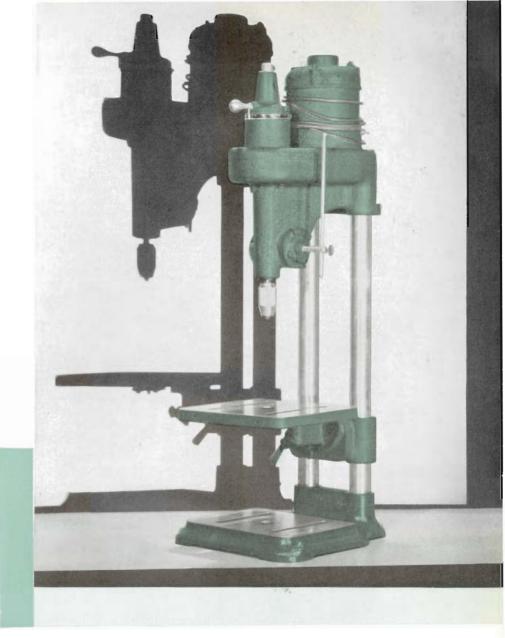
DEPTH GAUGE:-Built-in.

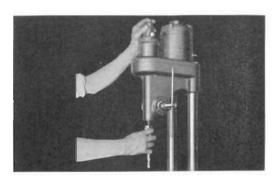
SPINDLE: - Travel-44" maximum; built-in lock.

OPTIONAL MOTORS:—Repulsion—induction type motors of the following ratings are available: ½ H.P. 110-220 single phase; and slow speed, 1200 R.P.M. Also 220-440,3 phase induction type motor.

SHIPPING WEIGHT:—Bench type—155 lbs. Floor type—220 lbs.



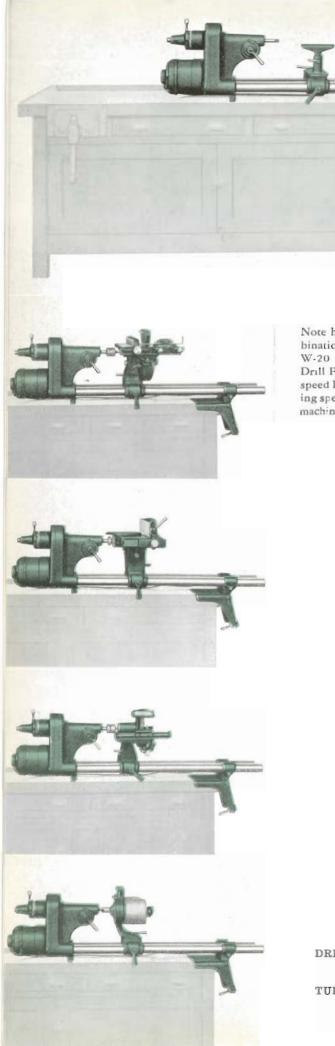


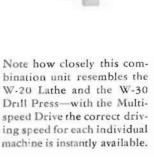


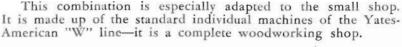
Note the built-in, fully enclosed spindle lock. A slight pressure on the button holds the spindle securely while changing tools and eliminates the necessity of grasping the belt or using other inconvenient and unsafe means of holding the spindle. The butterfly lock nut on the right of the housing, locks the quilt securely and permanently at any desired depth.



The simple design of this depth gauge eliminates all exposed nuts and stop rods—its action is positive—it is accurately set without mental calculation and uncertainty. The movement of the spindle is magnified twice on the dial—it is an easy matter to set the spindle with extreme accuracy. Self-contained and compact in construction it prevents the loss of parts.







In its vertical position, it is the standard W-30 Drill Press, except that a heavy, cast-iron hinge-type bench mounting takes the place of the regular base. All the basic functions of the drill press have been retained-in addition, all the necessary attachments for mortising, routing and shaping, are provided.

In its horizontal position, it is readily converted into a lathe. With the drill press table removed and replaced by the tool rest holder; and with the tailstock mounted on the bed, it is virtually the W-20 Lathe.

In this position, the W-40, 4" Hand Jointer, W-50 Circular Saw, W-75 Jig Saw, W-80 Grinder, W-90 Belt Sander and the W-95 Disc Sander can be mounted on the substantial, accurately machined base upon which the tool rest holder is ordinarily mounted. They are connected directly to the Yates-American MULTISPEED Drive unit by means of a flexible coupling provided for the purpose. The MULTISPEED Drive permits a wide variety of speeds from 800 R.P.M. to 4000 R.P.M. Its "finger-tip" speed control makes it possible to instantly obtain the correct spindle speed for each individual unit-each unit can be operated as efficiently and free from interference as when operated as a separate machine.

These units are the standard "W" line machines-they can, at any time, be used as individual machines, entirely independent of the W-25 Combination-mounted on bench or pedestal-type bases and driven by a countershaft or by direct motor drive.

DRILLING

SHAPING

CIRCULAR SAWING

BELT SANDING

DISC SANDING

TURNING GRINDING JOINTING

JIG SAWING

# W-75 JIG SAW

The W-75 Jig Saw is small in capacity only—it is a big saw in every other respect, as a close study of its specifications will quickly prove. In it, fine materials, precision workmanship, and built-in ruggedness are combined. Its 42 pounds make it foremost in size. The additional weight is there for just one reason—to give added strength and greater rigidity to the saw. Because this weight is properly distributed, vibration is eliminated and a smooth, even flow of power is delivered to the blade.

The heavy, one-piece, cast-iron frame is a solid foundation for the finely balanced operating mechanism—a combination which makes for vibrationless performance and insures a smooth cut.

The crankcase unit clearly reflects the superior engineering design, careful thought and precision workmanship, which distinguish this machine from the ordinary small jig saw. The crankshaft is supported by high grade, sealed ball bearings which are automatically lubricated from the crankcase. The Scotch cross-head type reciprocating mechanism is entirely enclosed and runs in a bath of oil—it is free from dust and dirt and adds much to the smooth, iseless operation of the saw.

The well ribbed cast-iron table tilts 45° right or left on a heavy double trunnion. A quadrant type scale indicates the degree of tilt. Because the table tilts at the saw line, this saw immediately finds favor with the practical craftsman. An attached wrench locks the table securely at any angle.

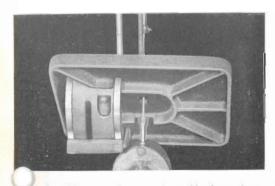
The upper plunger is carried by the heavy truss-type erarm. The massive construction of the overarm, with its generous-sized well spaced trusses—the totally enclosed spring housing—the built-in air pump, with ball type



check valve, which provides an ample supply of air for keeping both the work and the table free from saw dust all contribute materially to the unusually high efficiency of this saw.

Saw vises made of a ring of steel, electro-welded to the plungers, hold the blade. A convenient thumb screw securely clamps the blade between two jaws—the use of a movable jaw prevents the blade from twisting while the screw is being tightened—puzzle blades, sabre blades and files are held equally well. A universally adjustable combination saw guide and hold down is provided. The foot is of hardened spring steel, which not only gives a smooth, even pressure, but long wearing qualities as well.

This saw, with its big machine design and construction will perform a large variety of operations within its capacity, and will widen the scope of many a shop.



rote the widely spaced, accurately machined trunnions and the heavily ribbed table—big machine construction throughout.

### W-75 JIG SAW SPECIFICATIONS

TABLE:—Cast iron, heavily ribbed, 9" x 9".

TILT:-45° right and left as the saw line.

WIDTH OF THROAT:-12".

THICKNESS CAPACITY: -2" with 5" saw.

LENGTH OF STROKE: - 14".

SPEED: Up to 1200 R.P.M. Recommended.

SHIPPING WEIGHT:-47 lbs.

BEARINGS. Ball bearings, sealed type.

HOLD DOWN AND GUIDE: - Universably adjustable.

LUBRICATION: - Constant oil bath type.

DUST DISPOSAL: — Built-in air pump with ball-type check valve.

FRAME: — One piece, cast iron, with heavy truss-type over arm.

FOR DESCRIPTIONS of ACCESSORIES, SEE PAGES 23 TO 28

# W-40 HAND JOINTER

The W-40 four-inch hand jointer includes all the essential features of design which have made Yates-American Hand Jointers, from 12" to 36" capacity, leaders in the woodworking industry for over fifty years. Because of its sturdy construction, this hand jointer will easily stand up under the hard usage of the small shop—it is, in fact, a small industrial machine.

In common with all Y ites-American machines, every possible safety feature has been incorporated in the design of this jointer. The knives are completely covered at all times. The guard over the working surface is constructed of heavy cast-iron and has a strong spring control to force it against the stock. It is designed to swing to the full width of the table as the stock passes through. For rabbeting, the front guard may be easily removed from its socket to swing clear of the table. Meanwhile, that part of the cutterhead behind the fence is completely covered, regardless of the position of the fence—an exceedingly important safety feature.

The cutterhead and knives are made of the same special alloy steel used by Yates-American in its larger industrial type cutting equipment. The construction of the cutterhead is especially outstanding. It is identical in design with all Yates-American thin knife cutterheads which are used in the large industrial machines for heavy production work. The cutterhead is mounted on pre-lubricated sealed ball bearings—its performance is smooth, effortless and accurate—it is "true running" free from whip or chatter.

A substantial foundation is provided for the table by the heavy cast-iron frame. The tables always remain in perfect alignment because they are mounted on full-length, carefully machined, inclined ways. They are easily and positively adjusted by means of conveniently located hand knobs. A practical scale, mounted on the frame, accurately indicates the depth of cut.

The fence is unique in design and simple to operate. It can be tilted by a simple quick-acting mechanism which can be locked in place with one hand—the degree of tilt is shown on the scale at the top of the table—free from glare and shadows, and always visible from the operating position. Instead of being supported by a groove in the table, which invariably becomes clogged with chips and saw dust, the fence slides on a rail which is bolted to the table—it cannot stick or jam. The top of the fence is free from sharp obstructions which would seriously interfere with the fingers when jointing narrow stock.

The jointer may be fitted to a single base for bench mounting and driven from a counter-shaft—it may be mounted on an individual floor type base or on a double base and pedestal together with the W-50 Circular Saw, and belted to a motor—or it may be used as a part of the Yates-American Combination.

The annoyance and danger of an accumulation of shavings under the machine is impossible since the cast-iron housing, which terminates in a dust chute, completely encloses the cutterhead under the table and permits shaving disposal at the rear of the machine only—there are no crevices or corners in the frame of the machine in which the shavings can possibly lodge. This cast-in dust chute is characteristic of all Yates-American work shop and industrial machines—it is just another exclusive built-in Yates-American feature.







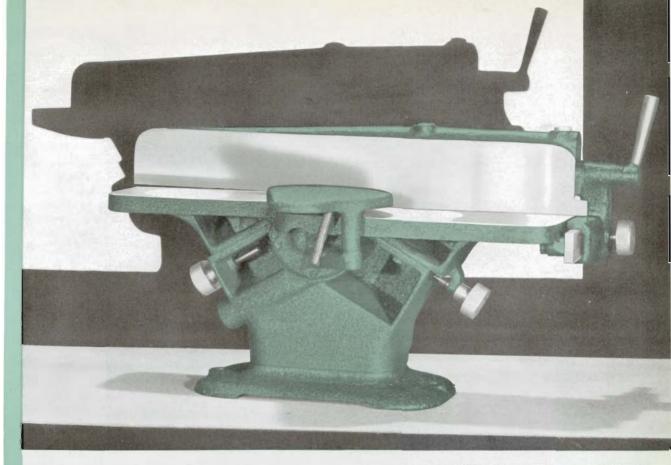


RABBETTING

MITRE JOINT

BEVELING

CHAMFERING



W-40 Hand Jointer shown on W-355 Base

### W-40 HAND JOINTER SPECIFICATIONS

WIDTH OF CUT:-4".

DEPTH OF CUT FOR RABBETTING: -- 36".

LENGTH OVERALL:—22½".

LENGTH OF FRONT TABLE:-934".

WIDTH OF FRONT TABLE FOR RABBET-TING:—6".

SPEED:-4250 R.P.M. Recommended.

CUTTERHEAD: Steel, safety type-three knife.

KNIVES:-Three, self hardening steel.

**TABLE HEIGHT:**— Using floor type base assembly 34".

BEARINGS :- Ball bearings, sealed.

TABLE SUPPORTS: Inclined ways.

TABLE: Cast-iron, accurately ground surface.

FENCE:—Heavy Nickel Alloy east-iron, adjustable, ground face, tilts 45 degrees, non-glare scale easily visible from operating position.

DRIVE:-Right Hand Standard-Left Hand for use with W-25 Combination.

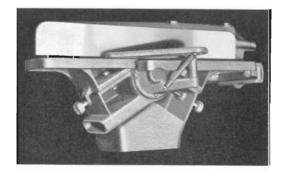
GUARDS:-Two-front and rear of fence.

DUST CHUTE: -- Self ejecting -- built-in.

SHIPPING WEIGHT: 55 lbs.



The revolving knives of the W-40 Jointer are entirely covered on both sides of the fence—regardless of its it in on the table. The guards are positive in action I times. The importance of this safety feature can be dly be over-emphasized. Industrial experience has shown the danger of unguarded contenhends behind the jointer fence. Notice the construction and size of the fence.



The ideal of safety is carried out in the design of the frame of the Jointer. Every possible point of accidental contact is guarded. Notice how the caster head is enclosed from below and how the caster head is chose carries chips away from the knives—Yates-American safety features are built in.



Here is a jointer sence that is the last word in regged simplicity. It can be titted to 45 degrees with one hand and looked rigidly in place with a short turn of the locking lever. The scale which indicates the degree of tilt is always visible from the operating position—here from glare and shadow. The convenience of this feature, especially in artificial light, is apparent.

# W-50 CIRCULAR SAW

The W-50 Saw is a small counterpart of the industrial type circular saws built by the Yates-American Machine Co. over a period of many years. It is built with the same accuracy and design for utility—and differs from them only in size, to meet the requirements of the small work-shop. Therefore, the W-50 Circular Saw contains every practical feature which industry has found to be necessary for the wide variety of work for which a circular saw is used. It does not contain any of the impractical features which have been introduced on this particular type of machine and found only to be a handicap to the user.

The frame and housing for the bearings and saw spindle is one solid casting. The dove-tailed ways on which the table is raised or lowered are also a part of this single unitit is not an assembly of parts; therefore, it cannot be sprung out of alignment from the

strain of the belt or pressure against the saw blade.

The table is cast-iron, heavily ribbed. It is heat-treated and processed before machining, to relieve strains and to give the metal proper age-this process prevents distortion of dimension and alignment. The surface of the table is machined and ground to close limits, giving it a perfect working surface. The corners are rounded for the comfort and safety of the operator. In building this saw, the Yates-American Machine Co. follows its practice of long standing, of carefully checking and testing all materials used in its machines.

The table is mounted on two large cast-iron, accurately machined trunnions which ride on surfaces milled to close limits, and a part of the rugged frame. It tilts 45 degrees to the right—the angle is indicated on a scale located on the front trunnion. The table is securely locked at any angle by a positive locking device located on the rear trunnion. The table tilt is so arranged that the saw always remains in the center of the slot-regardless of the angle of tilt—this is one of the essential features of a circular saw. This mounting permits an unusually narrow slot in the throat plate-wide slots restrict the number of operations and increase the danger, especially when cutting dado joints and short tenons, and in using short, narrow stock. It eliminates make-shift tables, fences and jigs.

The rip fence can be used on either side of the saw-a necessity for many beveling operations. It is east in one piece. There are no adjusting bolts to work loose-it cannot get out of line. Because it slides on a steel bar, mounted clear of the table, dirt and dust cannot accumulate to restrict the freedom of operation and alignment. A scale, reading both ways from the saw center line, is stamped on this bar. The cross-cut gauge can be used on either side of the blade-it is adjustable 90 degrees and equipped with stops.

An added feature of this saw is a built-in dust chute. The self-generated air currents, which result from the operation of the saw blade, blow the dust through the chute, keeping the machines clean. The chute is scientifically designed to follow the natural flow of the

dust-filled air currents.

The capacity of the W-50 is unusually large-stock 21/2" thick can be cut. The saw cuts through standard 2" stock when it is tilted 45 degrees. A pair of extension devices are furnished at no extra cost—increasing the cut-off capacity to 1258". These devices not only support the cut-off gauge and lumber when cutting off wide stock, but provide extra length to support longer stock in ripping operations. They are attached to the rip fence rail in a few seconds and line up accurately with the main table.

The W-50 Saw may be fitted to a single base for bench mounting and driven from a countershaft-it may be mounted on an individual floor type base, on a double base and pedestal, together with the W-40 Jointer, and belted to a motor-or it may be used on the Yates-American combination.

The Yates-American Machine Co. engineers have placed every facility on the W-50 to obtain from it the same satisfactory results, within its capacity, as are obtained from their heavy industrial circular saws.



CUTTING DADOS OVER 2 RIPPING CAPACITY



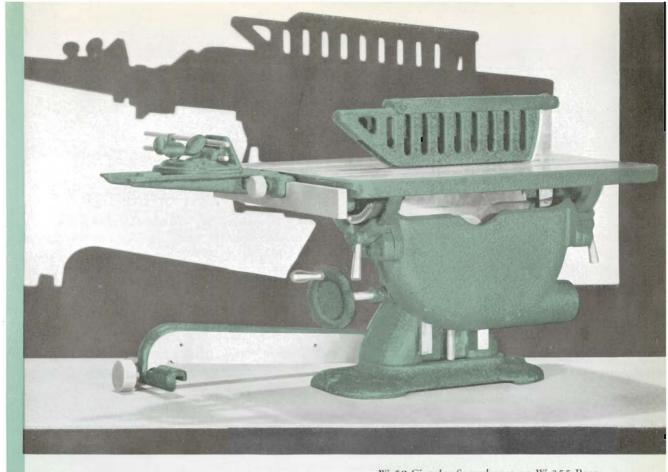
PLOWING GROOVES





CUTTING TENONS

CUTTING TENONS



W-50 Circular Saw shown on W-355 Base

### W-50 CIRCULAR SAW SPECIFICATIONS

TABLE: - Nickel alloy, cast iron, heavily ribbed, accurately ground and slotted.

TABLE, SIZE:-12" x 16"-Special-16" x 20".

TABLE EXTENSIONS:-Available as extra equipment to rip stock 48" wide.

TABLE, TILT:-45 degrees.

TABLE HEIGHT:-Using floor type base Assembly 34".

SAW BLADE, DIAMETER:-7" or 8".

ARBOR, DIAMETER: -%6".

RIPPING CAPACITY: — Thickness of stock, 7" blade, 0" to 2"; 8" blade, ½" to 2½"—with table tilted 45 degrees, 7" blade 118"; 8" blade 158"—

without extension arms, 534"; with extension arms 24".

CROSS CUTTING CAPACITY: -1258".

MITRE CROSS CUT CAPACITY (at 45°):-114".

DADO OR COPE HEAD CAPACITY:-1" wide.

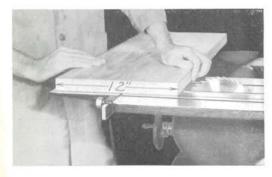
BEARINGS: Sealed Ball Bearings.

DUST DISPOSAL:-Built-in chute-spout 2" dia.

SPEED:-4250 R.P.M. Recommended.

GUARD:-Cast aluminum, double action combined with splitter.

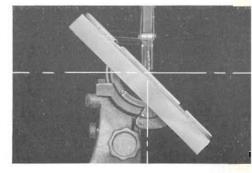
RIPPING FENCE:—One piece, cast iron. SHIPPING WEIGHT:-75 lbs.



Note how the simple, easily attached extensions support both the cut-off gauge and the lumber in cross-cutting wide stock. While the 2" x 12" capacity is ample for all rdinary needs, still greater cross-cutting capacity can be obtained by simply reversing the cut-off gauge on the table and pushing it ahead of the stock-when this is done, the table extensions support the wide stock.



Note the substantial construction of the heavily ribbed table, the accurately machined and sturdy trunnions, the solid cast iron frame with its practical cast-in dust chute and the dove-tailed ways, machined on solid castings. Note also how all corners are rounded for the protection of the operator and for cleanliness.



The center about which the table tilts is in line with the saw at the top of the table. This is a most important safety feature. The saw remains in the center of a narrow slot in the throat plate as the table is tilted-regardless of the angle. Because of the narrow slot, thin, short stock may be worked-it cannot fall through the slot and kick back to injure the operator.

# W-80 GRINDER

The W-80 Grinder is offered in three models—The Motor Driven Double Grinder—The Motor Driven Single Grinder—and The Belt Driven Single Grinder. All are practical, substantial machines, carefully and strongly built—they have many uses in the home, in the school, and in industry. These grinders are designed to resist the heavy shock loads common in grinding and are equipped with every device necessary for safety, accuracy, and convenience of operation.

A heavy, one piece cast-iron frame and wheel guard, completely encloses the danger zone. Self-generating air currents, between the grinding wheel and the guard, draw off and eject all grinding grit and dirt through a built-in dust spout. The spout projects out from the frame so that standard sheet metal pipe can be attached to carry the grit to containers. This feature prevents flying particles from filling the air in the shop, or working into delicate bearings on motors or machines.

Laminated safety glass eye shields in a cast-iron frame are available as extra equipment for all models.

The two motor driven models are mounted on attractive, one piece, cast-iron bases. The surfaces are smooth and rounded and easily kept clean. The motor mounting is machined so that the wheels run in perfect alignment, free from any vibration or chatter. The frame is designed with a neat, cast-in reservoir for cooling the tools. The double motor driven model is available for pedestal as well as bench mounting.

The belt drive model may be fitted to a base for bench mounting and driven by individual motor or countershaft belt drives—or it can be mounted on the bed of all Yates-American Speed Lathes, without a base, and coupled to the spindle for perfect and efficient operation. It has all the features of the motor driven grinder except the cast-in water well. The attachments on all models are interchangeable. Two prelubricated ball bearings are housed in the heavy cast-iron frame and are widely separated to give satisfactory service. This is important to carry heavy shock loads in grinding—a point often overlooked.

The ingenious bit and knife grinding attachment, furnished at extra cost, is simple, easy to operate and very practical for the proper care of tools. It can be set at any angle, from 15° to 90° for beveling edges of plane irons, turning tools, chisels and jointer knives, or held flat for squaring the edges of scrapers. It will readily take knives from a 6" jointer or hand plane bits up to 2½" wide. It is provided with a horizontal screw feed which permits the gradual feeding of the tool to the wheel for accurate and careful grinding.

The wheel dresser is available at extra cost. It is simple in design and very necessary in dressing the face of worn wheels perfectly round and parallel to the tool test or grinding attachment. It is also used for forming the face of the wheel to special shapes and is indispensible in keeping the grinder wheel in perfect shape. It rests firmly on either the tool rest or the knife grinding attachment.







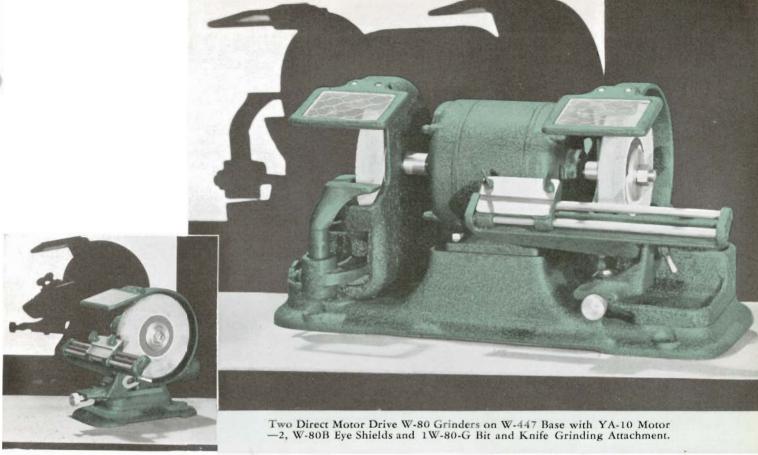


GRINDING DRILLS

SHARPENING TOOLS

REMOVING BURRS

GRINDING JOINTER KNIVES



Belt Drive W-80 Grinder on W-355 Base with W80-B Eye Shield and W80-G Bit and Knife Grinding Attachment.

### W-80 GRINDER SPECIFICATIONS

### DIRECT MOTOR DRIVE GRINDER

WHEEL:-7" x 34" (Wheels up to 7" x 1" may be

FRAME: Heavy cast-iron, with built-in guard, dust chure and water well.

BEARINGS:—Double felt sealed, ball bearings. TOOL REST:—"I." type.

SHIPPING WEIGHT: -32 lbs.

BELT DRIVE GRINDER WHEEL: -7" x 4" (Wheels up to 7" x 1" may be used.)

FRAME:-Heavy cast-iron, with built-in guard and dust chute.

BEARINGS:—Ball Bearings.
TOOL REST:—"L" type.
SHIPPING WEIGHT:—27 lbs.

ARBOR HEIGHT: - Using W80-F floor type base assembly 35".

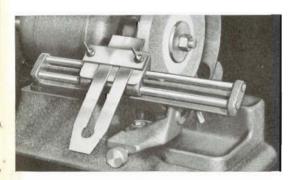
### EXTRA EQUIPMENT

Laminated Safety-glass Eye Shield. Bit and Knife Grinding Attachment. Wheel Dresser. Base for Single Grinder. Base for Double Grinder. Base and legs for Double Grinder. 1/4 H.P. motor.

### EXTRA EQUIPMENT

Laminated Safety-glass Eye Shield. Bit and Knife Grinding Attachment. Wheel Dresser. Coupling for lathe mounting. Base for bench mounting. Cone Wheel 3"x5"

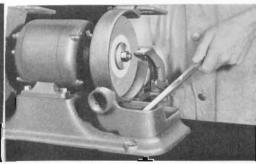
D. M. D. Grinders available for both Right and Left Hand Mounting.



This stachment aids in the grinding and proper care of tools. It diminates the accessity for experience in tool vinding. The design permits adjustment to any angle or grinding chois, thereing tools, plane fits or jointer aives; or ic can be held flat for grinding scrapers. The at and out, or horizontal, adjustment brings the tool gradually and accurately to the wheel and prevents disturbing its temper and burning its edges.



The wheel dresser in the operator's hand shows how simply it can be used for dressing, squaring, or forming the wheel. It slides over the rods of the knife grinding attachment as shown or is held flat on the regular tool holder against the revolving wheel.



The substantial one piece castiron construction of the frame, with its pleasing lines and rounded corners, is shown above. Note how the wheel is completely guarded. The inside surface of the guard is designed to eject all dust and grit through a practical dust chute. For the convenient cooling of tools while grinding, water wells are cast into the frame as shown.

# W-90 BELT SANDER

The W-90 Belt Sander is especially adapted for the small workshop, since it provides power sanding for curved surfaces, puts smooth finishes on flat surfaces and eliminates slow, tedious hand sanding operations, which require a high degree of skill.

The W-90 can be used for light polishing and grinding on metal, fibre, molded plastics, ceramics, bone and numerous other products. It is used in metal finishing and assembly rooms for removing burrs from stampings; light "snagging" on forgings, removing fins from castings, and for grinding die castings. With proper belts it is also practical for polish ing. In the heat-treating and tempering rooms it is indispensable for removing discoloration and scale.

The frame of the W-90 is heavy cast iron, well ribbed. The rolls, or pulleys, on which the belt travels, are very carefully checked for balance, and run on prelubricated sealed ball bearings. The driven roll, which is located nearest to the operator, is used for many miscellaneous sanding operations, and is covered with rubber to provide a soft cushion for this work. The rear roll is equipped with proper adjustments for tightening and aligning the belt. It is properly crowned to keep the belt in alignment at its high speed of approximately three thousand feet a minute.

The table over which the belt travels is an integral part of the cast frame—there is no possibility of its shifting or getting out of alignment. The ends of the table are so designed that they conform to the contour of the rolls, thereby eliminating the usual wide gap between the table and the rolls. This construction adds considerably to the length of the sanding surface—increases the life of the belt—and gives a more even finish to the work.

An adjustable, accurately machined cast-iron fence is furnished as regular equipment. It is designed so that wood faces and forms for special sanding operations can be attached easily and quickly. This feature permits a wide variety of sanding operations—limited in scope, only by the ingenuity of the operator.

A simple and rigid belt tensioning and tracking device is built into this sander—a turn of the knurled nut is all that is needed to keep the belt at proper tension for most efficient sanding. The adjustments are positive and lasting—there are no flimsy parts to work loose or back off. Once set, the belt will run in perfect alignment.

The W-90, like other Yates-American machines, is extremely versatile in its application. It may be equipped with a single base for bench mounting and driven from a countershaft—it may be mounted on a single base for direct motor drive—it may be mounted on a double base for direct motor drive in conjunction with the W-95 Disc Sander—and it may also be mounted as a part of the Yates-American combination.

This belt sander is very substantial in construction, and carries all of the features of the large Yates-American production belt sanders. As the work on this machine is the final touch before staining and finishing, it requires a machine which embodies ruggedness, precision workmanship, and fences and attachments which may be accurately adjusted—the W-90 meets all of these requirements.

A poor finish has often ruined an otherwise perfect piece of work. The W-90 Belt Sander represents a comparatively small investment, yet it insures a professional quality of finish. This Belt Sander is especially necessary in the workshop as it saves hours of precious time, and will do an accurate and finished job without a great deal of skill on the part of the operator.







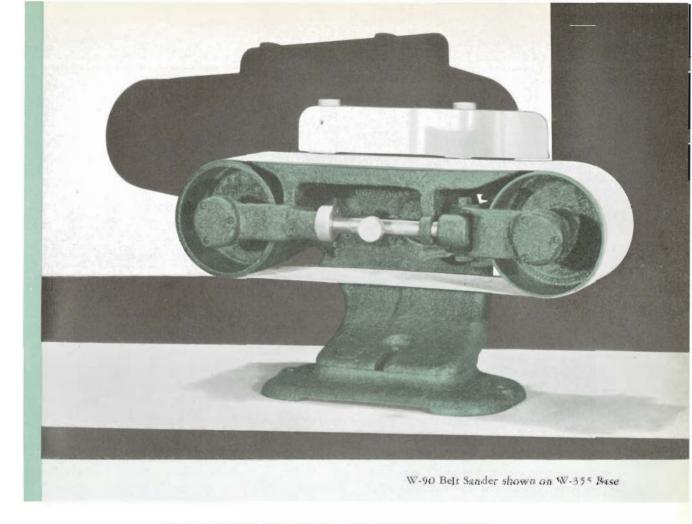
SANDING MITRES



TRACKING BELT



SURFACE SANDING



### W-90 BELT SANDER SPECIFICATIONS

FRAME CONSTRUCTION: — Cast iron, beavily ribbed.

OVERALL LENGTH:-194".

SIZE OF TABLE:-12"x45".

DIAMETER OF ROLLS:-5".

DISTANCE BETWEEN ROLLS:—(center to center) 1452".

MOUNTING:-Right hand only.

WIDTH OF BELT: 4" (2 belts furnished).

SPEED:-1800 R.P.M. Recommended.

FENCE:-- [ 1 M" x 2".

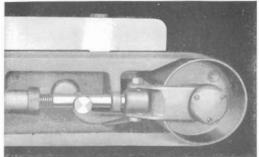
SHIPPING WEIGHT -50 lbs.

NOTE:—For direct motor drive it is necessary to order drive parts No. W-90 C; and for use on the W-25 Combination, drive parts No. W-90 B are necessary. These drive parts consist of 2 sheaves, Vee Belt and cover.

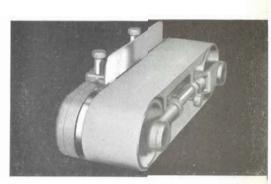
TABLE HEIGHT:-Using W80-F double floor type base assembly 371/2".



The front roll is rubber covered to provide a soft consistion under the puper for sanding curved surfaces. Note how the table follows the contour of the rolls so that only small gap constantion adds approximately four inches the effective sanding surface—adds life to the sander before and improves the quality of the finish. This is an exclusive Years-American feature.



No complicated serups are required to apply tension or track the belt on this sander. The desire used is simple-sturdy and positive—there are no complicated parts to hack off or work hoose. Once set the belt remains in perfect alignment. Notice the negged construction and complicateness in design which makes this marking exact in its field.



This view shows the removable fence and flat working surface of the table as well as the cover on the rear of the machine. This cover is part of W-20-19 [Drive parts and is required when the Belt Sander is direct motor driven Every enclosed feature is incorporated in this machine so that abrasive days cannot enter any working parts.

# W-95 DISC SANDER

A Disc Sander is a very necessary machine for any workshop. The W-95 is designed to meet every requirement of surface sanding on wood, and is readily adapted for many operations on metal, fibre and other materials. Regardless of the type of work to be done, a sanding operation is always necessary. Sanding by hand requires great skill—this powered disc sander simplifies the work. With its tilting table and suitable mitre gauges, the most intricate work can be performed with extreme accuracy. The disc sander widens the scope of the work which can be performed by the small workshop.

The disc, upon which the abrasive is mounted, is heat-treated and processed to eliminate distortion. It is scientifically balanced before mounting and runs on a spindle equipped with pre-lubricated sealed ball bearings.

The table is cross-slotted for greater convenience in bringing the work to the disc. With this construction, the mitre gauge can be used in two directions. The table is supported on both ends by heavy, accurately-machined trunnions upon which it can be tilted 45 degrees, either way. The degree of tilt is registered on a scale, easily seen. A lock on the front trunnion holds the table rigidly in any position.

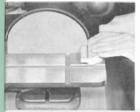
The mitre gauge is equipped with every convenience necessary for easy and efficient disc sanding—stop rods for sanding to length—center pins for sanding circles and discs—a removable tongue provided with holes so that the fence may be moved to accommodate various sizes of stock—a micrometer lead-in screw with wing lock-nut for precision sanding—a pivoted fence which may be swung to 45 degrees either way—and an accurate, etched quadrant scale to indicate the angle. It is a most serviceable and complete gauge.

The W-95 Sander has a heavy one-piece, cast-iron frame, with smoothly rounded surfaces that are easily cleaned. It may be fitted to a single base for bench mounting and driven from a countershaft—it may be mounted on a single base for direct motor drive—it may be mounted on a double base for direct motor drive in connection with the W-90 Belt Sander—or used in a combination with other Yates-American machines.

The removable, heavy cast iron guard is so constructed that self-generated air currents, set up by the revolving disc, draw off and eject all dust through the cast-in dust chute which is scientifically designed to follow the natural flow of the air. Standard round sheet metal piping may be pressed into shape to fit over the broad projecting spout in order to carry all dust to containers.

The Yates-American Machine Company has many sanding machines of various descriptions in its industrial line of equipment—this W-95 Disc Sander contains all of the essential features which have been found necessary in industrial workshops and, therefore, should meet every requirement of the small workshop.

The W-95 Disc Sander is alone in the field as a practical, precision-built, ball bearing machine. It will perform any work within its capacity as accurately and as rapidly as any precision-built sander used in industrial production.









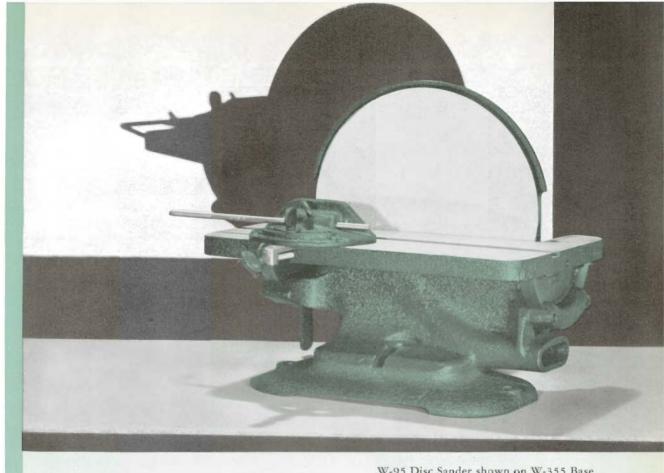


SANDING INSIDE CORNER SANDING COMPOUND MITRE

SANDING DISCS

SQUARING TILE

GRINDING METAL



W-95 Disc Sander shown on W-355 Base

### W-95 DISC SANDER SPECIFICATIONS

SIZE OF DISC: - 10" diameter - ball bearing mounted.

MOUNTING:—Right and left hand, for D.M.D. Belt drive, left hand only.

SIZE OF TABLE: -878" x 14".

TABLE CONSTRUCTION:-Heavy ribbed cast iron-heat treated, ground and slotted two ways for stock guides-tilts 45° up or down-equipped with readily visible dial and pointer.

TABLE HEIGHT:-Using W80-F floor type base assembly 34".

TABLE SUPPORT: - Accurately machined cast iron trunnions support the table rigidly at all angles.

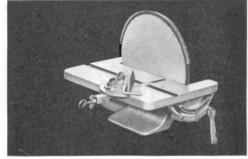
DUST DISPOSAL:-Self generating suction system through built-in cast-iron dust chute.

SPEED:-1800 R.P.M. Recommended.

SHIPPING WEIGHT:-50 lbs.



The radio-type dial indicates the degree of tilt—it is large and easily read. Notice the deep grooves in the heavy trunnions and the convenient wrench which locks she table in position. This view shows the thickness of he table and the depth of the table slots. Note how the urdy cast-iron guard covers the disc for the protection of the operator and also the cut-away section at the table line which permits sanding internal corners and other irregular shapes. Direct Motor Drive illustrated.



This table is designed for every sanding operation. The ends are widened and expanded to support the work for sanding internal corners and various shapes. The lip of the guard has also been cut away for this operation. The mitre gauge operates in the cross-slots of the tableit is so arranged that its head may be removed and remounted to accommodate various widths of stock.



Note the heavy construction of this Disc Sander. Sturdy trunnions support the heavily-ribbed cast-iron table at each end and assure rigidity especially when sanding at an angle. Self-generated air currents set up by the revolving disc forcibly eject the dust through the cast-in dust chute which follows the natural flow of the air. Note also the flowing lines and rounded corners of the castings

FOR DESCRIPTIONS of ACCESSORIES, SEE PAGES 23 TO 28

HE machines illustrated in this catalog are the natural outgrowth of 52 years of building ndustrial woodworking machines. The Yates-American name stands pre-eminent among the manufacturers of woodworking machinery—its machines are used in thousands of plants and schools all over the world—it is the acknowledged leader in its field. Its position of leadership was attained by sound engineering practice, skilled workmanship, proper materials, a high standard of quality, and a keen understanding of the use to which the machines were to be put.

These same factors—plus the accumulated experience of more than half a century—are present in these Yates-American small machines. They represent a background unmatched by a single manufacturer in the field—they are your assurance of that unqualified satisfaction which is being enjoyed by the host of owners of the larger Yates-American machines.

The story of Yates-American growth parallels the history of the woodworking industry. Ever since those early days, when craftsmen first turned from hand tools to a crude form of power machine, the Yates and American name has been closely identified with new and important developments in woodworking machinery.

Yates-American has played an important part in the change from babbitt bearings to ball bearings—from slow to high speeds—from belt to direct motor drives. These, and many other improvements, have felt the guiding hand and steadying influence of Yates-American leadership and foresight. Many improvements pioneered by Yates-American have since become standard in the industry.

Yates-American has recognized the development of the need for smaller auxiliary machines in industry and in the school. Machines that would handle the lighter and smaller jobs more quickly and efficiently—that would augment the work of the larger machines in the production line and in the school shop—without sacrificing precision or safety. Yates-American has also watched the home workshop idea grow and develop—has seen the trend from toys to machines, as the craftsman became more skilled and attempted larger and more difficult projects. As the result of these observations, Yates-American felt a definite obligation to throw its vast resources and experienced organization into the building of small wood-working machines that would meet all the requirements of the small shop—as safe and as accurate as its larger machines.

These machines include new features of design which were formerly available only in expensive production machinery. All non-essentials have been eliminated. On the other hand all those important factors such as safety, ease of operation, simple and accurate adjustments, wide range of workable speeds, ruggedness, freedom from vibration, large capacity, adequate bearings, proper lubrication, and convenience, were emphasized.

These machines were built for woodworkers by THE WORLDS LARGEST MANU-FACTURER OF WOODWORKING MACHINERY. They will add much to the accuracy and finish of the work which is performed on them—and yet, they cost no more than ordinary tools.





W 447

W 355 SINGLE BASE is intended or mounting the following individual machines on a bench when they are driven from a countershaft: Shipping weight 5 lbs. W-40 Hand Jointer. W-50 Circular Saw, W-75 Jig Saw, W-80 Single Grinder, W-90 Belt Sander and W-95 Disc Sander. It is made of heavy cast-iron, accurately machined and interchangeable from one machine to another.

W 554 SINGLE BASE is used as a bench mounting for the motor and W-40 Hand Jointer, W-80 Grinder, W-90 Belt Sander or the W-95 Disc Sander, for direct motor drive. Shipping weight 10 lbs.

W 447 DOUBLE BASE provides a bench mounting for the motor and any two of the following machines: W-80 Grinder, W-90 Belt Sander and W-95 Disc Sander when they are driven directly from the motor. Shipping weight 15 lbs.



W 689 INTERMEDI-ATE LEG is used as a center, or connecting, leg when two floor type machines are mounted together. It has a special value where floor space is limited. It is made of cast-iron and will fit any W floor-type base.

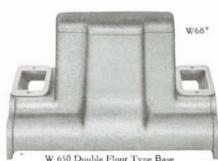
# PEDESTAL ASSEMBLY UNITS for FLOOR TYPE MACHINES



W 772 Floor Type Drill Press Base Shipping Weight 30 lbs.



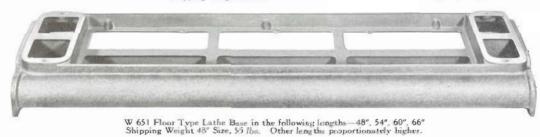
Pedestal Shelf



W 650 Double Floor Type Base Shipping Weight 36 lbs.



W 642 Pedestal Leg Shipping Weight 40 lbs.



Shipping Weight 48" Size, 55 lbs. Other lengths proportion

PEDESTAL SHELVES—smoothly finished, cut to ht the various floor type pedestals. They add much to the appearance of the unit and provide a surprising amount of valuable storage space as well.

LIST OF SHELVES
647 W—Lathe 648 W—Jig Saw
645 W—Belt and Disc Sander; Jointer and Circular
Saw: Double Grinder
646 W—Drill Press
655 W—Lathe Tool T—

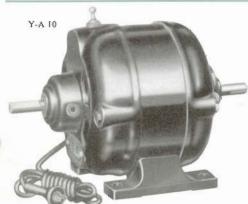
W 642 PEDESTAL LEGS—substantial—cast iron—modern in design. Used together with the proper bases, they make floor type machines out of the standard W

W 40-G DOUBLE FLOOR TYPE BASE ASSEMBLY includes one W 650 Base, two W 642 Legs, two W 645 Shelves, one W 687 Cap over sheaves, one 1006 W Stield for switch, two No. 1223 Vee Belts, two No. 1419 Vee Sheaves, 134" dia., two No. 1409 Vee Sheaves 414" dia., and one Double Pole Toggle Switch. It provides pedestal mounting for the motor, the W-40 Haad Jointer and the W-50 Circular Saw. See Illustration on Page 2.

W 80-F DOUBLE FLOOR TYPE BASE ASSEMBLY includes one W 643 Base, two W 642 Legs, two W 645 Shelves and one W 644 Motor Cover. It provides a pedestal mounting for the W-80 Grinders or the W-90 Belt and W-95 Disc Sanders when they are mounted together and are direct motor driven. See Illus, on Page 2.

W 20-D FLOOR-TYPE LATHE BASE ASSEMBLY includes one W 655 Base and one W 655 Bottom for Tool Tray, two W 642 Legs and two W 647 Shelves. The heavy cast iron base is well ribbed and accurately machined. It, together with the legs, makes a floor-type lathe. See Illustration on Page 2.

W 30. W FLOOR-TYPE DRILL PRESS BASE ASSEMBLY includes one W 772 Base, two W 642 Legs and two W 646 Shelves. For those who do not want to give up space on their work bench for a bench-type drill press, the W 772 base may be substituted for the regular base and used in conjunction with the legs and shelves to make a floor-type machine of the bench-type drill press. See Illustration on Page 2.



Y-A 10--13 H.P. SPLIT PHASE TYPE MOTOR. Y-A 40-14 H.P. REPULSION-INDUCTION MOTOR Ball bearing, Y-A 10 wound for 110 volt, Y-A 40 for 110 or 220, 60 cycle, single phase alternating current, 1725 R.P.M. Both Y-A 10 and Y-A 40 supplied with 1/2" diameter, double extended shafts, measuring 1114" on either end and milled flat for pulley or coupling.

Y.A.—20 BALL BEARING, ½ H.P. MOTOR—This ½ H.P., 1750 R.P.M. motor is ideal for beavier service. It is a 110/220 volt, single phase, 60 cycle, alternating current, repulsion—induction, ball bearing motor. It is offered with a double shaft extension ½" long, ½" diameter, with a keyway for a ½" square key. A ½ H.P., 220 volt, 3 phase, 60 cycle motor (No. Y-A 30) is also available.



Both the ¼ H.P. and ½ H.P. single phase motors are equipped with a rugged toggle switch, conveniently mounted in the end head for starting and stopping. Ten feet of Underwriters approved cord and plug are supplied for connection to outlets. Feet are slotted for belt tension adjustment. These motors are also available in the slow speed type (1200 R.P.M.) at extra cost.



# DRILL PRESS ACCESSORIES

MORTISING FENCE AND HOLDDOWN No. W 30-N\_Cast iron fence, face 11½ x 2½", accurately machined. Quickly clamped to table at two points, 6½" apart. Holddowns heavy cast iron; mounted on rod to adjust to thickness of stock. Two angle rods provided to hold stock against the fence,

W 30-Y GAUGE FOR SETTING MORTISING CHISELS—An indispensable aid in setting up any mortising job, quickly and accurately—for locating fence and squaring chisel with fence, an exclusive Yates-American device.

MORTISING BIT AND CHISEL SOCKET COM-PLETE.—W 30-M—Can be easily and quickly attached to the quill of any type W-30 Drill Press to convert it into an ideal mortiser.

### MORTISING BIT BUSHING

566 W-Required with 14" Bit. 567 W-Required with 16" Bit.

MORTISING BITS—These bits are made with knife edged cutting spurs, without a point. Especially desirable where it is necessary to make partial cuts.

3066-14" x 8" overali 3067-4" x 8" overali

3068—36" x 9" overall 3069—½" x 9" overall

MORTISING CHISELS—Used in connection with mortising attachment on the drill press. These hollow chisels are made of the finest quality tool steel—properly tempered and highly polished, they will cut an accurate and smooth mortise.

3070—14" x 234" 3071—16" x 234" 3072—38" x 4" 3073—12" x 4"

MORSE TAPER ADAPTOR—These adaptors are threaded to fit the spindle of the W-20 Lathe and W-30 Drill Press and will permit the use of any accessories designed with a Morse Taper.

984 W-No. 1

971 W-No. 2

ALLEN WRENCH-For use with the mortising at-tachment, router chuck, router tracer pin and flexible

coupling. 3086—1/8" dia.

3087-46" dia. 3088-3/4" dia.

307 KEYLESS DRILL CHUCK—A precision-built, quick-acting, three jaw chuck. It is accurately machined and rigidly inspected. Drills ranging from No. 60 to 1½" in diameter can be accommodated.

3074 ½" JACOBS CHUCK; desirable where extreme accuracy is required. Key type; balanced; heat-treated; hurdened body. Key included.

3075 JACOBS CHUCK KEY; for use with 3074 Jacobs Chuck.

971W ADAPTOR—For use with chucks baving No. 2 Morse Taper.

DOUBLE SPUR MACHINE BITS—A general purpose bit that will bore rapidly and smoothly—it is designed for easy cutting and built with the zoaximum stock for wear and sharpening. 166° shank.

3058—14" dia. 3059—16" dia. 3060—38" dia. 3061—16" dia.

3062—15" dia. 3063—16" dia. 3064—18" dia. 3065—34" dia.

SPUR MACHINE DRILLS-These drills, with their

cutting spurs and brad point are exceptionally smooth cutting. %" shank.

3050—\( \frac{1}{2} \)" dia.

3051—\( \frac{1}{6} \)" dia.

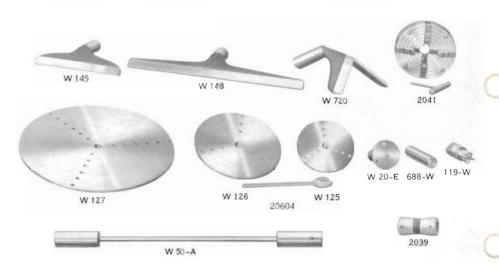
3052—\( \frac{3}{6} \)" dia.

3053—\( \frac{1}{6} \)" dia.

3057—\( \frac{3}{6} \)" dia.

3057—\( \frac{3}{6} \)" dia.

MULTISPUR MACHINE BITS—Designed to fill the need for a fast, smooth boring bit. It operates with a minimum of friction, will not clog and is easily sharpened. Holes can be bored at any angle, overlapping or at close centers, without danger of splitting. Ma shark, 3090—3% dia. 3092—3% dia. 3095—1% dia. 3091—1% dia. 3096—11% dia. 3096—11% dia.



# LATHE ACCESSORIES

FACE PLATES for Lathe. Heavy cast iron, accurately

W 124-4" clia. W 125-6" disc.

W 125- 8" dia. W 127-10" dia.

W 437 4" FACE PLATE AND SHEAVE serves as a lace plate also as a "V" pulley for driving countershalt from MULTISPEED motor lathe head stock.

20604 FACE PLATE WRENCH

TOOL RESTS—The working surface of Yates-American tool rests are hardened and ground—turning tools sumed tig into a Yates-American tool rest and make it impossible to furu accurately. Shanks are awasually long 3½", 1" dia. and machined.

long 3½", 1" sta. and 145—6" long W 146—W 147—10" long W 148—12" long W 146 8' long

W 720 ANGLE TOOL REST-Right angle tool sest. Surfaces 3" each: hardened and ground. Shank I" dis-

1001 W ADAPTOR for mounting 307 keyless clavek on tail stock of W-26 Lathe, for boring.

1004 W ADAPTOR for mounting Jacobs Chuck on tail stock of W-20 Lathe.

119 W SPUR. CENTER-Steel 3/4" diameter. replaceable center pin and four accurately milited teeth.

The treth in the Ystes-American center are bardesed to remain sharp and give longer more satisfactory service. Center lines up with shouldes on spinelle assuring accuracy.

t88 W CUP CENTER 34" 135 W CUP CENTER 34" No. 2 Morse Taper Shank, with center pin.

W 20-E. ROSETTE CHUCK - Has replaceable center serew. Face 2" dia.; 3 holes for additional screws. Steel wachined; screws on, lines up against machined shoulder on spindle for accuracy.

2039 FLEXIBLE COUPLING — For attaching various machines to MULTISPEED head on combination set (page 18).

W 50A EXTENSION COUPLING—For attaching various machines to MULTISPEED head in Combinations Set (page 10) when head may interfere as when cutting wide stock on saw table.

FOUR JAW INDEPENDENT CHUCKS—Heavy cast iron body. Four steel jaws. Used for holding regular or inregular shapes. Each jaw independently adjustable to hold work of most any shape. Back plate furnished.

2049—3" 2041—4" 2042—6"

PLEASE ORDER BY NUMBER TO AVOID MISTAKES AND DELAY



TURNING TOOLS—Two sizes of turning tools are offered below. One, the work-shop set—the other, the professional set. The workshop set is shorter, the blades 4" to 5", handle 6½". Blade of the professional set 8" long handles 8"; lo" overall which increases the ease and safety of turning.

The steel used is known by long experience to give the most satisfactory service. It is scientifically heat treated. The handles are maple, beautifully finished and fitted with heavy brass plated ferrules.

### WORKSHOP PROFESSIONAL

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### ROUTER ACCESSORIES

W 30-S ROUTER CHUCK—Heavy steel chuck,  $\frac{1}{2}$ " socket. Screwed on drill press spindle by fine thread, runs against nut assuring true running router bit.

W 30-U ROUTER TRACER PIN AND SHAPER RUB COLLAR ATTACHMENT simplifies setting up for routing and shaping operations, eliminates make-shifts. Quickly attached to table of W-25 Combination and W-30 Drill Press.

ROUTER CUTTERS—available in various widths; high speed steel; ½" shanks: No. 3077, ½"; 3078, ½"; 3081, ½"; 3081, ½".

# SHAPING ACCESSORIES

W 30-Q SHAPER SPINDLE AND NUT—For use on W-25 and W-30 Drill Press. Heavy steel spindle accurately machined, shank 2½" x 1"—takes cutters with ½" hole. Fine thread screw for attaching to drill spindle assures true running cutters. Capacity 1¾". Close fitting hex nut and fine thread clamps cutters securally.

SHAPER COLLARS. Steel, ground to true surface. %6" hole. Sizes available No. 605 W. ½"; 606 W, ¾"; 607 W, ½"; 608 W, ¾" and 609 W, I".

W 30-P SHAPER FENCE COMPLETE WITH HOLD DOWNS—An absolutely safe and thoroughly practical shaper fence made of cast-iron, with an accurately machined face. A specially built-in chip disposal chute prevents the accumulation of chips—another Yates-American safety feature. Spring hold-downs hold the work against the table and against the face of the fence, permitting the operator to concentrate on feeding the stock.

SHAPER CUTTERS-Yates-American shaper cutters are made of chrome vanadium steel, heat treated and tempered by an exclusive and non-variable process. They are rigidly tested for hardness, balance and uni-formity and will retain a keen cutting edge for a long NOTE:-All Cutters are 15 6" cutting circle.

Cat. No.	Type	Face	Radius
3001	Straight	1/6	
3002	Straight	54	
3003	Straight	16	2.127
3004	Straight	1,4	
3005	Straight	- 1	8111
3006	Round	2/10	3,6
3007	Round	1/4	1.4
3008	Convex	3.7	12
3009	Convex	1,7	3%
3010	Convex	3%	1/
3011	Convex	1.6	5/4
3012	Concave	3.4	1/6
3013	Concave	1/2	8/2
3014	Concave	3,6	1/4
3015	Concave	7.60	5,50
3016	Beader	7.40	1/6
3017	Beader	5/50	8,2
3018	Beader.	3/6	16
3019	Beader.	16	1/4
3020	Vee.,,,	3/4	2000
3021	Vee	9 20	
3022	Double Concave	9.40	16-1
3023	Double Concave	11.20	62-61
3024	Double Concave	7/4	1/2_8/
3025	Complete Set	< 10	28 21



### ACCESSORIES CIRCULAR SAW

W 50-B 6" DADO HEAD-A necessity or cabinet W 50-B 6" DADO HEAD—A necessity or cabinet making—it can be put to any number of practical uses—mortising, tenoning, rabbetting, grooving. Com-plete set consists of two outer blades, one inside cutter \( \frac{1}{2}''\) thick, two inside cutters \( \frac{1}{2}''\) thick, and one inside cutter \( \frac{1}{2}''\) thick—maximum capacity \( \frac{1}{2}'''\). \( \frac{1}{2}'''\) hole.



CROSS CUT SAW built for max-CROSS CUT SAW built for maximum cutting life withoutsharpening. These blades are properly tempered, hand filed, carefully inspected, and set for perfect balance and true running. An unusually efficient saw that will consistently produce a smooth cut. ½" hole.

5010—8" dia. 5015—7" dia.

COMBINATION SAW-COMBINATION SAW—A double-purpose blade that is ideal for general work. It eliminates the necessity for frequent saw changes since it rips and crosscuts equally well. This blade is made of the highest quality steel, properly tempered, and set to eliminate binding and buckling. 15014—8" dia. 5019—7" dia.





RIP SAW traditionally Yates-American in quality—a well de-signed and carefully manufac-tured saw that will render a surprising amount of satisfactory service. ½ "hole. 5011—8" dia. 5016—7" dia.

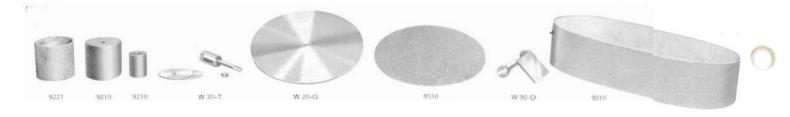


PLANER SAW—a hollow ground blade—ideal for fine work. The teeth have no set and the work is ready for assembly after sawing. No finishing operations are necessary, so accurately does this saw do its work. %" hole. 5012—8" dia.

W 50-C TABLE—For those who want a table larger than the  $12'' \times 16''$  table, which is furnished as standard, this table, which measures  $16'' \times 20''$ , is offered as optional at extra cost.

TABLE EXTENSIONS-With these Yates-American TABLE EXTENSIONS—With these Yates-American table extensions, it is possible to rip to the center of a 48 inch panel, without inconvenience and resorting to makeshift arrangements. These table extensions are easily and quickly attached or removed—they line up accurately with the main table, without adjustment. W 50-D—for use with 12" x 16" table. W 50-E—for use with 16" x 20" table.

PLEASE ORDER BY NUMBER TO AVOID MISTAKES AND DELAY



# SANDING ACCESSORIES

DRUM SANDING ATTACHMENT—Used on W-30 Drill Press or W-20 Lathe. A spindle and nut for using sanding drums: W 30-Q for drums 1½" length; W 30 T, 3".

W 20-G-SANDING DISC-For use on spindle of W-20 Lathe or W-25 Combination; 10" diameter. Use silica or shellac for attaching sand paper to discs.

W 90-D-TILTING CROSS FENCE.—Used on the W-90 Belt Sander or Grinder. Serves as a fence or stop for stock. Set at any angle with the belt. 4" x 25%".

ENDLESS GARNET SANDING BELTS-4" wide x 441/4" long.

9010 #0 grit 9011 #2 grit 9012 #1 grit

SAND PAPER DISCS, 10" DIAMETER

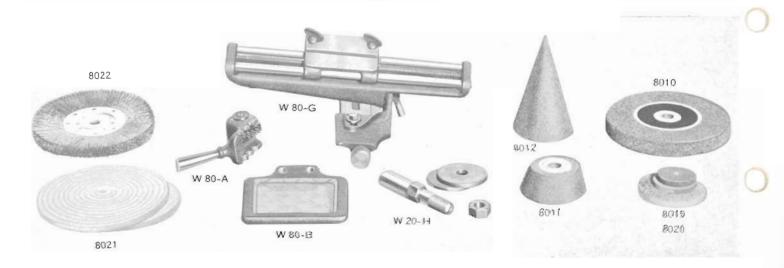
9510 #0 grit 9511 #12 grit 9512 #1 grit

ABRASIVE DISCS—Artificial abrasive discs, 10" diameter for grinding metal. Offered in three grades—

ENDLESS GRINDING BELTS-4" wide, 441/4" long, covered with artificial abrasive for metal grinding. Offered in three grades-

9013.....coarse ..... medium 9015

RUBBER SANDING ROLLS 9210 9211 9212 9213 9214 9215		4.5	116" le 116" 116"	
GARNET SANDING TUBES 9216—0	seter   13	i" long	#0 # #16 ;	rit
9217-0 2"		# ···	#0 #16	
9218-1/2		, ,	10	
9219—1/2	3″ 3″ 3″		#0 14	
9220—14 2"	3"		#0 #14 #1	
9221—1/2. 3"	3" 3" 3"		#0 #12	



# GRINDING ACCESSORIES

W 80-A WHEEL DRESSER—This wheel dresser which slides over the rods of the knife grinving attachment or is held flat on the regular rool rest is used for dressing, squaring or forming the granden wheel.

W 80-G BIT AND KNIFE CRINDING ATTACHMENT—This attachment eliminates the necessity for experience in tool grinding. Its angular adjustment makes it possible to grind an accurate bevel on the tools—its homzontal adjustment brings the tool gradually and accurately to the wheel.

W 80-B EYE SHIELD—Safety glass eye shield protects the operator from sparks, flying goit and particles of metal. It is large emough to give full protection yet small enough to be practical without being cumbersome. Its advanced design permits complete visibility—there are no "blind spats"—no bollows or corners where dist.

8022 WIRE SCRATCH BRUSH-A two-section brush, 6" diameter with a ""
hole to fit the autor. A handy accessory for removing rust and burn from metal.

8021 RAG BUFF.—These butting wheels are 6" in diameter and consist of eighteen layers of bleached muslin, securely sewed together. They are indispensable in obtaining a highly polished finish.

W 6012 3" x 5" GRINDER CONE—Medium based granding cone—especially practical for granding gourss and internal, irregular surfaces. It is topped to fix the W-20 Lathe and W-30 Drill Press, or W-25 Combination.

CRINDER WHEELS FOR CUTTERS—These grinder wheels are of the proper size and grit to grind small shaper catters. They are easily applied to the W-20 Lathe and will be a big kelp in keeping a fine cutting every construction of the wide 8013 - 1" 8014 - 2" 8015 - 3" 35" wide 8018 - 1" 8019 - 2" 8020 - 3"

W 8011 GRINDER WHELL CUP-Invaluable for absencing a sensorth, accurate surface grinding job-size 3° x 1¼".

W 6010 GRINDER WHEEL-A fast cutting long meaning, grander wheel, 7" x 34", with a 34" hole. When ordering, please specify tourse or fine gril.

W 20 H GRINDER SPINDLE WITH COLLAR AND NUT—A tree-running arbor to carry grinding wheels, wise brackes and buffing wheels—mounts are the W-20 Laths, W-25 Combination and W-30 Drill Press.

W 20) REST-Used on the W-20 Lathe in connection with the W 26-H Gründer Spindle when granding took on the lathe. Fits the standard lathe tool rest holder.

# JIG SAW ACCESSORIES

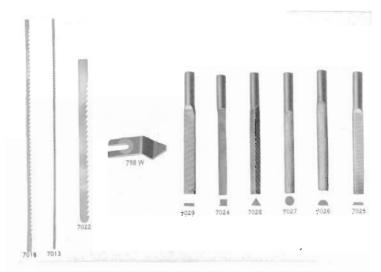
### JIG SAW BLADES

JIG SAW BLADES—All blades are of the highest quality. They are carefully tempered, accurately spaced and set, and hardened for long life.

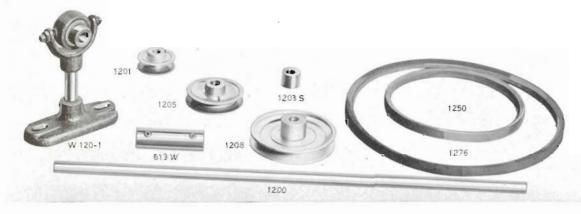
	5" BLADES			6" BLADES		
	Thickness and Width	Teeth per inch		Thickness and Width	Teeth per inch	
7011 7012 7013 7014 7015 7016 7017	.008 x .035 .010 x .045 .016 x .054 .020 x .070 .020 x .070 .020 x .110 .020 x .110	21 18 20 32 15 20 15	7040 7041 7042 7043 7044 7045 7046	.020 x .070 .020 x .110 .020 x .110 .020 x .110 .028 x .187 .028 x .250 .028 x .250	15 20 15 10 10 20 7	
7018 7019 7020 7021	.020 x .110 .028 x .187 .028 x .250 .028 x .250	10 10 20 7	SABR 7022 7023	E BLADES 43/2 .028 x .187 .028 x .250	Long 10 7	

MACHINE FILES—A set that covers all average requirements. Only the finest quality file stock is used. They are properly heat-treated for long life.

1/8" shank	1/4" shank
7031 square	7024 square
7032 crochet	7025 crochet
7033 3/2 round	7026 3/2 round
7034 round	7027 round
7035 3-square	7028 3-square
7036 pillar	7029 pillar
7037 lozenze	
7038 knife	
7039 complete set	7030 complete set



INDIVIDUAL GUIDES-758 W-Complete set of 6 individual guides for use with the W-75, 12" Jig Saw. The guides are quickly interchangeable to fit various sizes of blades.



# BENCH FITTINGS

YATES-AMERICAN "V" PULLEYS—Designed or 3/4" and 3/2" "V" Belts. These pulleys run true, are exceptionally strong, and built with machined steel hulps. They are litted with 3/4"—18 thread set-screws.

1/4"	Bore	%" Bore	
1401	134" Diameter	U499	4" Diamete
1402	2"	1420	y cv
1401	21/4" "	[421]	A"
1404	21/4/	1422	1,2" "
1405	C19 7 W	[423 £3	2.4
[466	2.0	1424. 3"	199
[407	10 W 1/44	F425. 81	15H
1408		1 426	y 500.
1409		1427 4	16"
1410.		14285	/* · · · ·
1411		1429. 5	600
1412		1 430	**
1413	79.07	14317"	
1414	C1.01	14328"	
1415	(Sel' 1)	14319"	
1416	1 (0.9)	143410"	4.6
1417.	1 (1.2)	1435. []"	**
1418.	1 2"	1436	**

V" BELTS—These belts are especially designed for light machines and high speed operation. They are modified into one endless piece and have been rubber filled coasts which are capable of withsteading belt flexing indefinitely. They transmit the full power of the motor its the machine.

3	" Belt			Belt	
1221 28" (	hetaide	Circumference	1325	Outside	Circumference
12.27 27"	*91	-64	1327 27"		.,
1' £30' 30'"	+141	-00%	1350 302"	11	.,
1.2.5.4 3-4"	491	-91	1334 34*"	4 7	**
1238 38"	495	-97	1338		**
1248 43"	4 (4.1)	• • •	1348 43***		
1247 47"	461	241	1348 48"		4.4
1258	- 51	161	1358 58"		**
11261	450		1368 68"		
1201			137878"	* *	
			138888"	**	**

The following belts are used on the machines indicated.

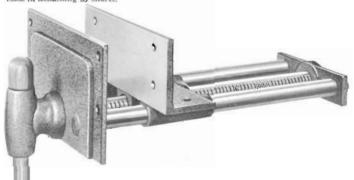
220 20" W.76 Jrs. Saw 223 23" W.70 Jan ter—W. 50 Cascaller Saw and jar Combination (W. 40-50) 25" W.70 Belt Sander 18 W.20" V.36 Eathe—W.50 Drill Pisess.

W 120-1 SELF-ALIGNING SHAFT HANGER—A well designed, practical banger to accommodate 3/2" line shafting. Provided with both vertical and herizontal adjustment. The shafting runs on pre-lubricated ball-bearings, which makes a smooth, even running shaft and a long life of trouble-free service.

1200 1/4" LINE SHAFTING Ground and polished held to close limits to

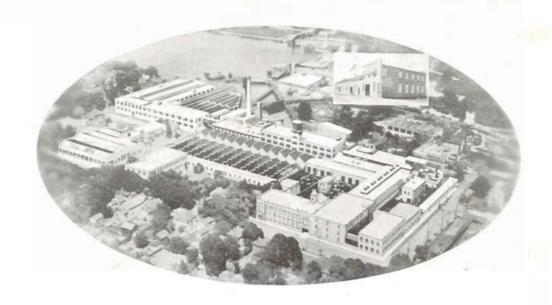
insure smooth operation.

No. 1203 SET COLLARS—These collars are carefully machined so as not to disturb the "true-ranning" of the line shaft. They have a 34 bore to fit 1200 line shaft the "true-ranning" of the line shaft. 613 W SLEEVE COUPLING—Used for coupling two shafts together. Accurately machined from bur steel and equipped with two hollow-head set-serews for convenience in attaching to shafts.



W 120-2 BENCH VISE This quick-acting all-sted vise will save many minutes of valuable time. The intercepted thread screw. operating in a bronze half nut, provides a simple and efficient quickacting mechanism. Jaws are 10" wide by 4" deep with a maximum expansion of 12". A thoroughly practical, life-time vise.





# TEN ACRES --

more than 440,000 square feet of floor space devoted exclusively to the manufacture of woodworking machinery. The Yates-American Machine Company is the only manufacturer of woodworking machines with "controlled production" from the raw material to the finished product — complete research, pattern shop, foundry, machine shop and assembly facilities — a scientifically and technically trained organization — years of practical experience — a complete coordination of effort — all combine to give each part, process and operation that workmanship and inherent quality that is traditional in Yates-American machines.

# YATES-AMERICAN MACHINE COMPANY BELOIT, WISCONSIN