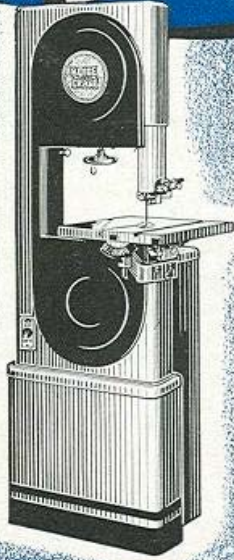


# Boice Crane

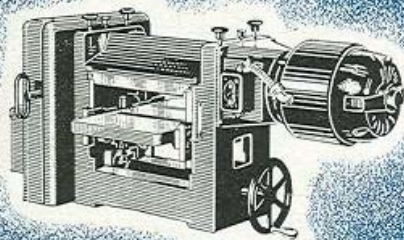
CATALOG 44-B

## PRODUCTION-PROVED POWER TOOLS

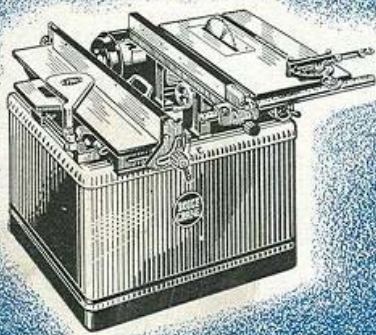
H. H. SULLIVAN, INC  
65 SOUTH AVE.



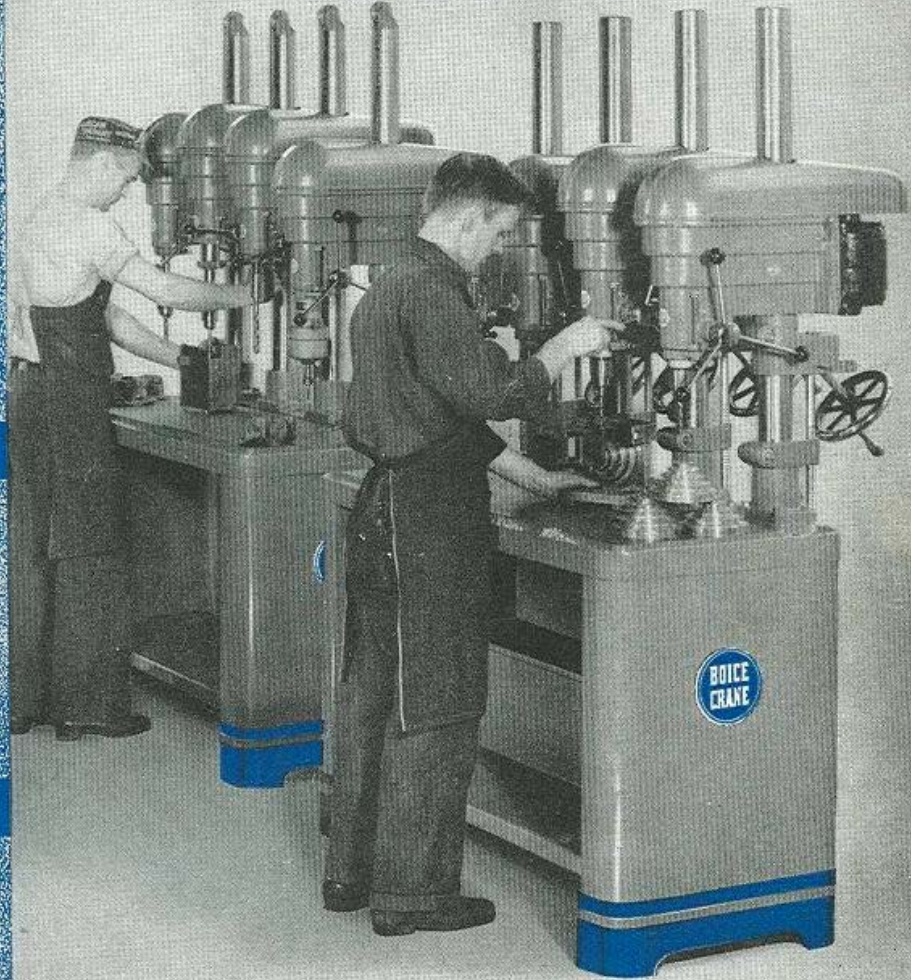
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**PLANERS** Pages 12, 13



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16-in.	Back Cover	<b>MOTORS</b>	47	<b>SHAPERS</b>	18

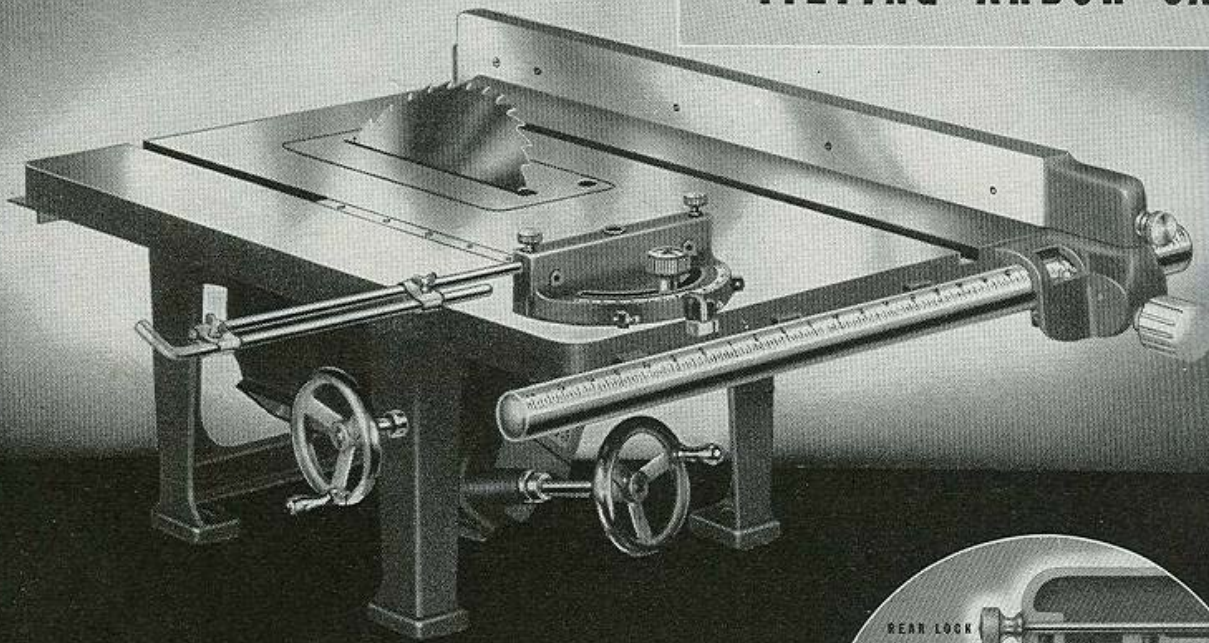
For METALS · WOOD · PLASTICS



# BOICE-CRANE

No. 2500

## TILTING ARBOR SAW



### NOW *You Can Have* PERFECT SAWING PERFORMANCE

When Boice-Crane announced the very first, low cost Tilting-Arbor Saw, we incorporated big oversize ball bearings and a large oversize diameter saw-arbor . . . to stand punishing service sawing with big 10-inch blades. To this day, Boice-Crane saws have far greater overload capacity than other ordinary saws.

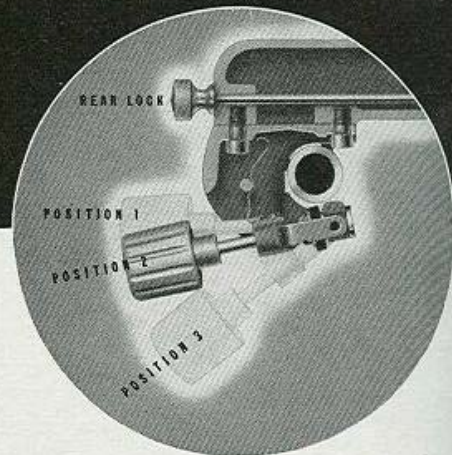
In its present perfection, you may feel confident that this Boice-Crane Tilting-Arbor is a more finely constructed, and a far superior performing machine than is being offered today at anywhere near our low price.

Every detail in both construction and performance has been "Shop-Tested" and its worth proved by thousands of installations in the better shops throughout the entire world. In Boice-Crane, you get more highly refined construction, longer lived materials (no die-castings in any part subject to wear), bigger and more costly ball bearings, bigger and stronger arbor, heavier all cast-iron rip fence, and many more fine features . . . all of which gives you super-accuracy on every conceivable saw-cut . . . all with greater economy in first cost, as well as in upkeep over a long period of years.

And no other Tilting-Arbor Saw allows you to make the **BIG ECONOMY** of driving a big capacity saw by a low cost "standard" motor, or of driving **BOTH** this SAW and a 6-inch JOINTER with just one, "standard" low cost motor.

**No. 2500** Boice-Crane Tilting and Lowering Arbor Saw with Ball Bearings. Includes "micro-set" ripping fence, combination extension bars, "auto-set" miter gauge, one 10-inch diameter rip blade (or cut-off or combination saw), 42" circumference V-belt, and arbor pulley for V-belt drive. Ship. wt. 160 lbs. . . . .

**No. 2511** Rolling Drive Pulley. 5 3/4" dia. for 10" blades. Specify size of shaft, 1/2", 5/8" or 3/4", or if for 3/4" dia. line shaft. Ship. wt. 5 lbs. . . . .



### ONE KNOB FENCE CONTROL

You will like the amazing ease, and the built-in convenience in Boice-Crane's ONE-KNOB Fence Control. It's lightning fast and accurate. To operate, you lift knob to 2nd position for rapid traverse; to 1st position for alignment and micro-set; and drop knob down to 3rd position to lock fence in a positively slip-proof bull dog grip. Once you see it, you'll want this better One-Knob control.

The very instant you bring the micro-set, feed-wheel of a Boice-Crane Fence into play . . . and before you can even micro-set the fence by a hair's breadth . . . our fence is *automatically aligned parallel to blade*. It stays parallel too, throughout the feeding because in the Boice-Crane One-Knob Fence Control, the micro-set feed-wheel (see above cut-away) contacts the bar at a spot which is diametrically opposite the mid-way point between the 4 bearing pads of the fence bracket.

No lag whatsoever exists at the rear of Boice-Crane Fences. Every Boice-Crane scale reading indicates accurately the exact distance from any point along the fence to blade, as though measured at the very blade itself.

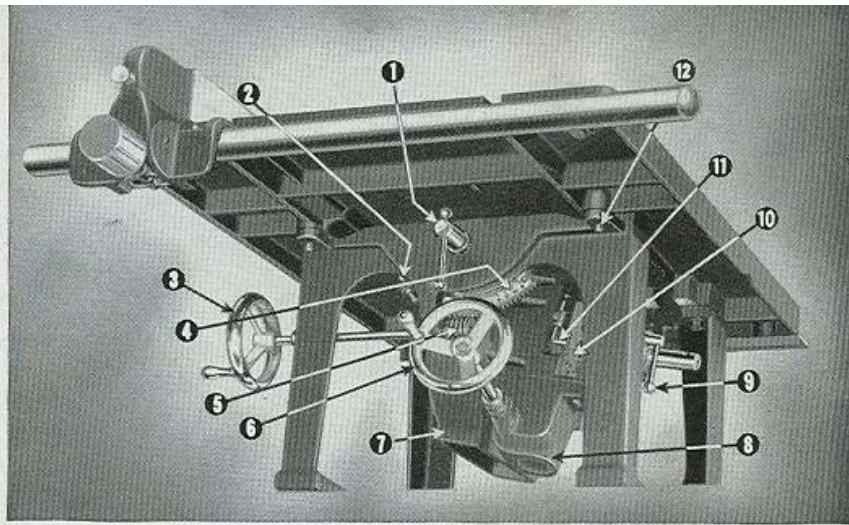
Only in Boice-Crane, does fence align as it micro-sets. Only in Boice-Crane is all fence "lag" removed at the very start. And only in Boice-Crane, do you secure fence settings that coincide *every time* to accurate "inch-scale" measurements . . . at the very first lock-up.



# CONTROLS, LOCKS AND GAUGES

*All at your fingertips*

- 1 Hand Lever locks angular position of saw-arbor by directly clamping the two large trunnion faces solidly together. Direct action locks hold best.
- 2 Adjustable, "Auto-set" screw to stop tilt of blade exactly at 45 degrees. A similar screw is provided for 90°. Once set, always set.
- 3 Rotating Handle Deluxe Crank very conveniently placed to tilt saw arbor. Ample clearance around it. No skinned knuckles.
- 4 Degree Dial indicates all angles to a "split-hair" degree of accuracy.
- 5 Steel worm, and cast-iron worm-wheel segment tilt saw-arbor. Both are machine-cut to last a lifetime.
- 6 Another Rotating Handle Deluxe Crank. This one raises or lowers saw-arbor (never the table).
- 7 Large Dust Chute of cast-iron encloses lower portion of blade. Discharges sawdust downward—away from motor.
- 8 Totally enclosed Gear Box keeps the spiral gears out of flying sawdust. Box is grease packed, for a lifetime of service.
- 9 Hand Lever locks vertical position of saw-arbor. This lock acts directly on the gibbed dovetail slide casting. Never slips.

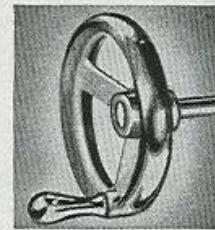


## NO OTHER HAS THESE 12 FEATURES

- 10 Accurate Vertical Scale, fully visible, indicates exact depth of cut. No need to stop machine to measure saw-projection with a rule.
- 11 Pointer for depth-of-cut. Adjusts for different projections of 6, 8, or 10-inch blades.
- 12 Large taper dowel pins maintain exact position of the front trunnion casting. Never can shift out of alignment.

Both hand cranks shown above, feature our Deluxe Rotating Handles.

Now you can actually keep firm grip on handle while you spin crank. Makes all adjustments faster and easier. Your hand won't heat up, or blister. Order several for your other machines.



Your every convenience is provided for in most masterful fashion in Boice-Crane.

Protected by patents 1,922,151, 1,894,010, 1,902,270, 2,166,703, 2,256,607 and others pending.

No. 2508 Deluxe Cranks. Hole size  $\frac{3}{8}$  or  $\frac{1}{2}$ ". Ship. wt. 1½ lbs. ....

## BIGGER BEARINGS AND ARBOR FOR GREATER OVERLOAD CAPACITY

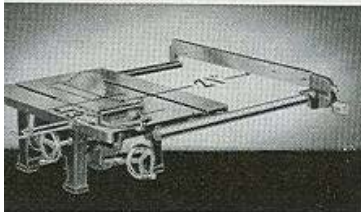
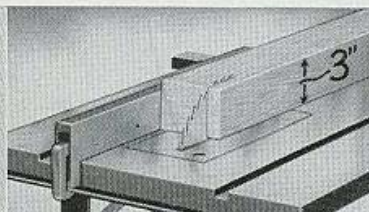
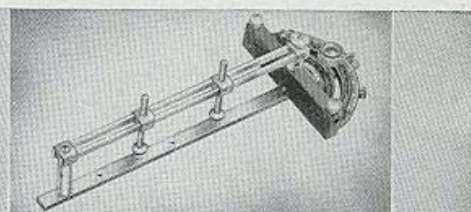


Table Bars may be centered on ordinary work (to save space or annoyance of protruding bars) or may be instantly extended to 21-inch capacity, as shown. A wood table-extension may be readily attached to both bars. You won't find these 3 features in other saws.



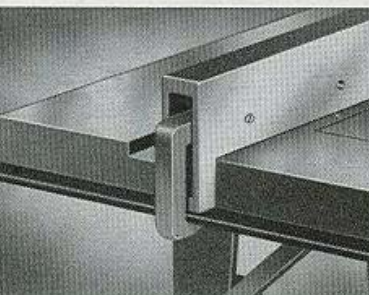
10-Inch blade cuts 3" stock. Makes 45° miter thru standard 2 x 4's. Practical capacity for industrial users. 8-Inch blade, recommended for lighter work, cuts thru 2" stock. Lowers entirely below table. Thinnest stock sawed with a minimum of saw-projection. Safe.



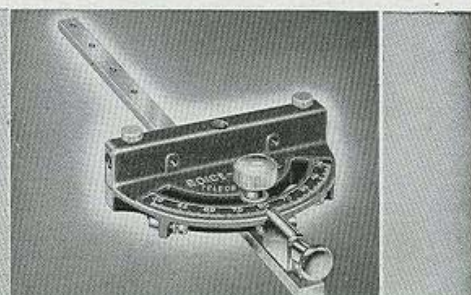
This practical Clamp Attachment (for miter gauge) holds work from creeping away from blade. It insures accuracy on difficult-to-hold, miter cuts. One job saved from spoilage pays for it. Pat. 1,894,010. Not No. 2503 Clamp Attachment... Available



Wide "working zone" in front of blade makes cross-cutting of 13-inch wide stock easy. Miter gauge rests entirely on table. Ample  $5\frac{1}{2}$ " table space behind blade for outfeed support. Table measures 20" x 27½".



Rear Fence Locking finger is operated from front of fence to eliminate reaching over blade. Safe and handy. Fence can't spring away from blade. Accuracy assured on even heaviest work. Finely graduated scale.



"Auto Set" Miter Gauge. Adjustable tapered pivot-pin removes wear, maintains accuracy. "Auto-set" stop screws for 45, 90 and 135-degree angles. Accurate for a lifetime. No. 2502 Auto Set Miter Gauge, Pat. No. 1,902,270. Shipping weight 4½ lbs. ...



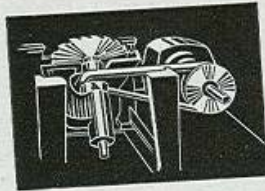
# 8 QUESTIONS

## 1 Why does Boice-Crane use a Rolling Pulley and V-Belt Drive? Why not a gear drive, or a V-Belt and tilt-the-motor type?

First, for lower cost. Defining the "drive" as including motor and all essential driving parts, the Boice-Crane drive usually costs less.

Second, for more fool-proof performance. Rolling Pulley drive is simple but very efficient. No gears to wear out or get noisy. No troublesome lubrication problem usually encountered with gear drives. No rapid wearing, extremely short belts. No need to disassemble entire saw-mandrel to make belt replacements.

Third, to give the user every choice and possible economy in the purchase of a motor without sacrificing efficiency.



## 2 Is a slight twist V-belt drive unusual or inefficient?

Absolutely not. Not just because we say so either. Note this: when the Boice-Crane Arbor tilts, the twist never exceeds 45°. Long before we designed the Rolling Pulley, V-belt engineers (knowing the full possibilities of their products), were recommending and successfully using up to 90° twist V-belt drives for much larger machines than our saw table.

Ask any V-belt expert if these are not facts.

We are proud of the record of our Rolling Pulley drive. Any manufacturer would be. Tens of thousands are in use, many going on 14 years constant use, and not one actual complaint of excessive belt wear, or unnatural belt deterioration.



## 3 Of what importance is the fact that there is a successful '3-year service record behind the Rolling Pulley Drive?

It is your guarantee that the drive will do everything that we claim it will for these reasons: We have over ten thousand satisfied users. Our reputation in our field is a valuable asset to us, and to continue to offer something for that length of time that proved less practical and less efficient than claimed, would be virtual business suicide.

Then too, remember Boice-Crane originated the belt drive tilting arbor saw, years ahead of its competitors and never since relinquished leadership. Before and since, we experimented with many other types of drives. If there was something better than our drive, with the same or additional advantages, eleven years would have seen our engineers at work on it.



## 4 Why do Boice-Crane mount their motor on the stands or bench? Why not directly on the saw arbor or trunnions?

First, to save you money by using "standard" motors (ball or sleeve bearing) which never carry a "premium" price, instead of expensive "special" motors.

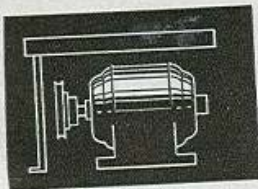
Then, to enable each user to select a motor size adequate for his individual needs, ranging from 1/2 h. p. for light duty on up to 1 1/2 h. p., even 2 h. p., where maximum speed of output is required. To make it possible for anyone to enjoy tilting-arbor advantages even those whose current is odd voltage or frequency, or as in the case of builders, to permit the use of gasoline engine drive.

To enable the user to drive a second machine, jointer for instance, with a double shaft motor, or even drive from lineshaft or jackshaft if that suits the user better.

Further, to reduce the poundage and strains on machine trunnions to absolute minimum—at the same time eliminating uselessly tilting, raising, and lowering 60 to 90 lbs. of motor merely to position or adjust the blade.

To keep motor vibration out of the saw arbor and blade, where it can easily decrease the satisfactory performance of the entire machine regardless of how good it otherwise is.

Finally, to keep the motor out of the dust, and to make use of fan ventilated motors—the least expensive type that operates at peak efficiency.





# EVERY SAW BUYER SHOULD ASK . . .

## 5 Besides a saving in money, are there more reasons why Boice-Crane uses "standard" Repulsion-Induction Motors?

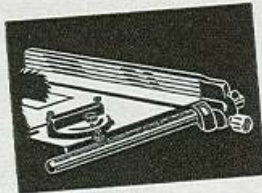
Yes, several more in fact. First, ours and most "standard" 1750 r. p. m. motors are fan ventilated and operate at 40° C (or less) above room temperature—long the standard with motor builders for classifying motors having peak overload capacity and longest winding life.

Non-fan ventilated and totally enclosed motors usually used on motor-on-arbor and tilting-motor saws, usually operate at 55° C rise with consequent far lower reserve power and shorter winding life due to the higher heat within the motor. Our 40° C rise motors by comparison have peak reserve power and the cooler operation lengthens the life of the winding.

You get far greater value then, in "standard" 40° C rise "standard" motors like ours, at lower dollar cost.

Finally, 55° C rise, non-ventilated, totally enclosed motors usually weigh more too (as much as 25 lbs. more in ½ h. p. size)—and on tilting-motors saws that means additional strain on trunnions and supports that you never worry about in a Boice-Crane.

Some special motors used for motor-on-arbor saws are "capacitor" 3450 r. p. m. type, built in relatively smaller frames than similarly rated Repulsion-Induction motors. "Capacitor" motors lack many of the fine operating characteristics and the peak power output of the Repulsion-Induction type.



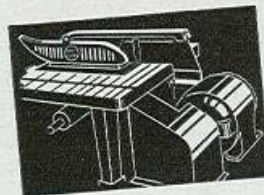
## 6 Which is the ONLY Tilting-Arbor Saw with full length carefully ground, cast iron, front and rear locked Ripping Fence?

Boice-Crane. Its fence is actually longer than the table itself. Front and rear locks anchor it instantly. Will never budge to spoil a cut for you. Seasoned cast iron—the unsurpassed material for a rip fence. Now a better fence than ever with its new single control!

## 7 Why does Boice-Crane use a tilting saw guard with longer overhanging splitter, arching over the back of the table? Why not a short one coming up through the insert or table?

For the same reason car manufacturers use X type frame—stiffness. Our construction more firmly supports the "hood" actually doing the guarding at the same time eliminating possible accidents occurring when a flimsy splitter allows the "hood" to "tangle" with the blade. Our splitter supports a larger "hood," guaranteed to entirely cover a 10" blade.

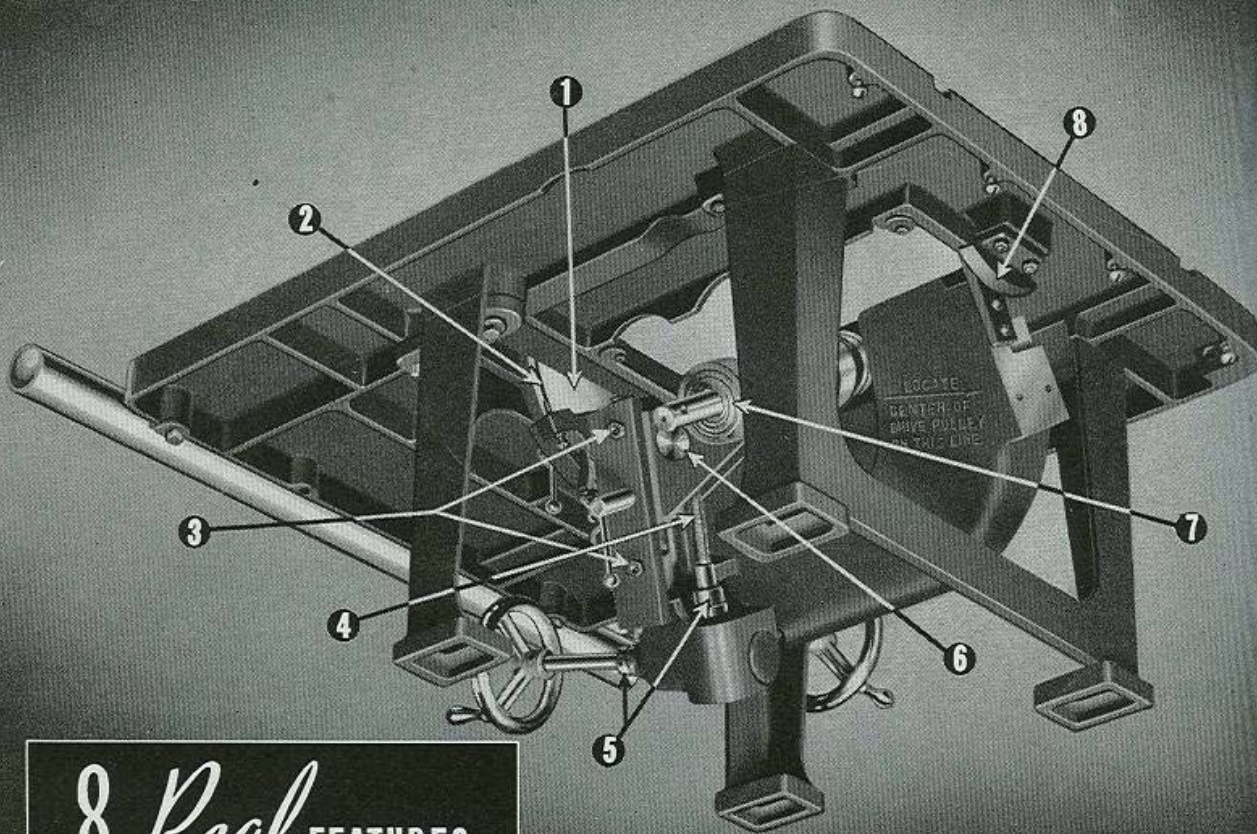
Our splitter leaves your insert whole, not weakened for many operations like end tenoning.



## 8 Which is the ONLY medium-priced Tilting-Arbor Saw with saw arbor larger than 5/8" diameter?

Boice-Crane, with ¾" diameter arbor which guarantees best results with 10" blades. Our bearings are proportionately larger too—in fact, Boice-Crane bearings carry radial loads 160% greater at 4000 r. p. m. than similar bearings for 5/8" diameter shafts. (Bearing manufacturers' figures).





## 8 Real FEATURES YOU CAN'T OVERLOOK

- 1—Extra large trunnion surface for true saw blade alignment.
- 2—Circular, tongue and grooved ways machined from solid cast-iron. Blade at every setting intersects table on same line. "Inch Scale" readings always true and dependable.
- 3—Adjusting screws with jam nuts tighten gib of dovetail way to any friction wanted.
- 4—Acme thread elevating screw.
- 5—Ball-thrust bearings on both shafts absorb all endwise frictional forces. Easy turning.
- 6—Unique, full floating Steel Nut automatically aligns to axis of lead-screw. Eliminates any possible cause of friction. Easiest of all saw arbors to elevate.
- 7—Two, double seal, life-lubricated ball-bearings of extra large size. Bigger  $\frac{3}{4}$ " diameter shaft (saw bore the same) mounted on larger, heavier duty ball bearings. More costly, but best for 10" blades.
- 8—Tongue and grooved Rear Trunnion completes the rigidity of the "tilt-arbor" mounting.

Boice-Crane's construction, that you see here, fully equals the construction you would expect in machines costing upwards of \$500. Every part, which is subject to even the slightest wear during many years of use, is fully machined, and is made only of long-wearing, accuracy-holding grey cast-iron or steel. No soft, alloy die-castings are good enough here.

So very exacting is Boice-Crane in this regard, that even small parts like our deluxe Rotating Handles on our hand-cranks ARE STEEL—so wear cannot develop even at minor points.

Similar care is given to every part. Consequently, this Boice-Crane Tilting-Arbor Saw is the only power saw which is constructed 100% of cast-iron and steel at all wear-subjected parts . . . and available to you at a remarkably low price.

Thousands of voluntary reports, like those below, have come from enthusiastic users of Boice-Crane's Tilting-Arbor:

.... "Five years of use, only 75 cents for repairs" . . . "Three years and still not a penny for upkeep" . . . "Accurate as the day I got it, four and a half years ago."

.... "After I wore out a \_\_\_\_\_ saw in 6 months, I shopped around long and carefully for my second power saw and take it from me I used your 'Magnet Test' for I certainly didn't want any 'die-cast' construction in my second saw. Needless to say, after my magnet test, I bought Boice-Crane. It has proved all you claim, and more. I'll surely get 10 years use out of it."

Testimonials like those attest to the exceptional value in Boice-Crane's rugged construction. When you decide to buy your power saw, be sure to use the informative "Magnet Test" . . . See next page.

## AN APPROVED SAFETY GUARD THAT IS *Really Safe!*

Tilts with the blade. Attractive hood shields entire sawblade . . . lifts and drops to table after passage of work. Stiff, hard-tempered steel splitter spreads lumber so blade never binds. Full range, Anti-Kickback Dogs on both sides of splitter . . . prevent either piece of lumber from being thrown forward . . . and they hold EVERY thickness of stock up to the 3-inch capacity of machine.

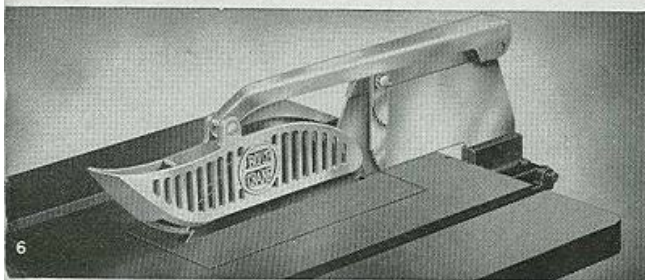
### 100% SAFE! ANTI-KICKBACK DOGS ON BOTH SIDES OF SPLITTER!

Boice-Crane's Steel Splitter is ribbed along both the top and bottom edges for greater stiffness. Our Hood can't ever tangle with blade. Our long gentle tapering knife edge enters saw-kerf evenly and smoothly, spreads lumber gradually under uniform feed-pressure on part of operator . . . and the very long length of the splitter keeps lumber spread. Worth every penny of its price.

View on right shows the two horizontal "Stop-Screws" which align splitter to blade. Once set always set, to facilitate quick and perfect re-attachment. This guard fulfills all requirements of State Industrial Safety Commissions.

#### No. 2507

Complete Saw Guard for 8- and 10-Inch blades. With hood, arm, splitter, dogs, cast-iron attaching arm, and attaching screws.  
Ship. wt. 24 lbs.....





# First -- MAKE THIS "MAGNET TEST" BEFORE YOU BUY ANY SAW



On the preceding page, you have read about Boice-Crane's 100% cast-iron and steel construction at every part subject to wear. Most competitive power saws contain part after part made of soft, alloy die-castings—and when these are painted, you nor any buyer can seldom detect by eye the substitution for cast-iron.

This brings up the question, "How then can I distinguish die-cast parts from those of cast-iron or steel, so that I can buy the best built power saw without fail?"

That is just where the "Magnet Test" comes in to help you. Just touch an ordinary horseshoe magnet (every hardware or 10c store has them) to all parts in question. When the magnet "pulls," you know the part is of hard-to-wear, cast-iron or steel. When magnet "does not pull," the part is certainly not steel or cast-iron, but is undoubtedly a soft, easy-to-wear, alloy die-casting. Paint does not alter the effectiveness of this test.

Thus, in a few minutes, you can check every part of a number of makes. You find Boice-Crane the outstanding value. In others, you'll find that even their most vitally important parts are usually die-castings even such parts as the trunnions, main-arbor bearing housings, dovetailed slide-ways, worm gears, worm-wheel segments, etc.

Before you buy your power saw, be sure to make this discriminating "Magnet-Test" . . . and you won't go wrong on the power saw you buy. This Boice-Crane Tilting-Arbor Saw is the ONLY 100% cast-iron and steel constructed machine at every wear-subjected part—available at such a remarkably low price. Isn't this the saw YOU want for YOUR shop.

## HERE IS THE DRIVE *You Want*

On the floor stand, notice that motor is entirely separate from machine itself. Only Boice-Crane *Tilting-Arbor* Saws can be driven like that—and the following facts tell why it's most advantageous:

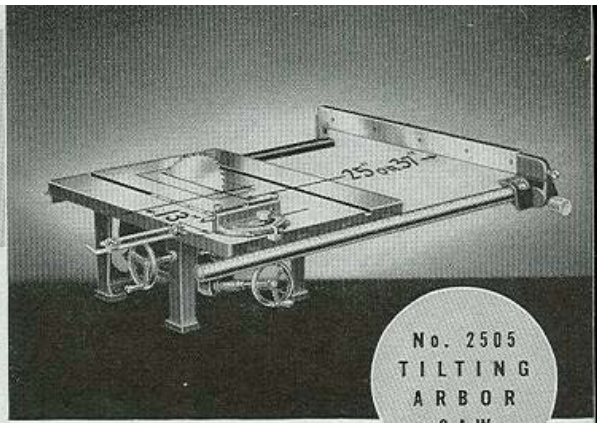
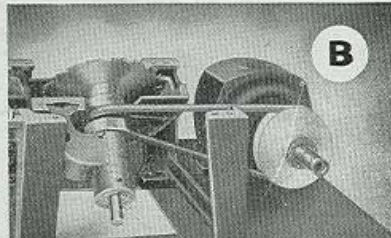
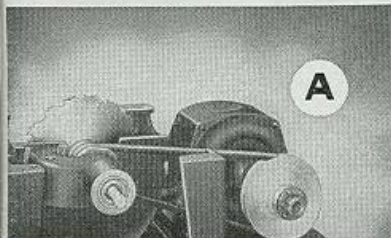
**Gives Better Performance.** Keeps motor-vibration from reaching saw arbor. No motor weight on trunnions or slide ways. Saves these parts from needless wear. Makes hand cranking easy. Saw arbor stays locked in position. Sawing is always accurate. No. 2511 Motor pulley gives a saw-arbor speed of 4200 r.p.m. for fast and clean cutting with all sizes of blades.

**More Versatile.** Boice-Crane's Tilting Arbor Saw is the ONLY one which can be successfully driven by motor, gas-engine, or lineshaft.

**More Economical.** Any "stock" motor of ½, ¾, 1 or 1½ horse power drives this saw. "Stock" motors are lower in price than "specials." Still another economy for you, which too is ONLY possible with a Boice-Crane Tilting-Arbor Saw, is the saving you can readily make by driving both this SAW and our 6-Inch JOINTER by ONE MOTOR.

**13-Year Shop-Tested.** Thousands of installations in thirteen years have thoroughly "shop-tested" Boice-Crane's Saw and V-belt drive. We know both are 100% efficient. Our V-belt is much heavier and wider than is used on ordinary saws, and is capable of transmitting up to TWO horse-power. Yet should the saw blade ever become seriously jammed in a cut, V-belts can slip—and many a motor has thus been saved from "burn-out." Our rolling Drive Pulley which makes all these advantages possible, is a practical, proven, efficient transmitter of all the power of your motor.

Boice-Crane's Rolling Drive Pulley acts much like a cone-pulley on a drill press. Only here, the pulley travels rather than the spindle. At "A" is pulley position for 90-degree sawing; at "B" for 45-degree. Pulley travels freely on ball-bearing, splined spindle, and aligns itself automatically to belt. No change occurs in belt tension. No more wear on belt or motor-bearings than occurs with ordinary long length V-belt drives.



No. 2505  
TILTING  
ARBOR  
SAW

## EXTRA WIDE CAPACITY

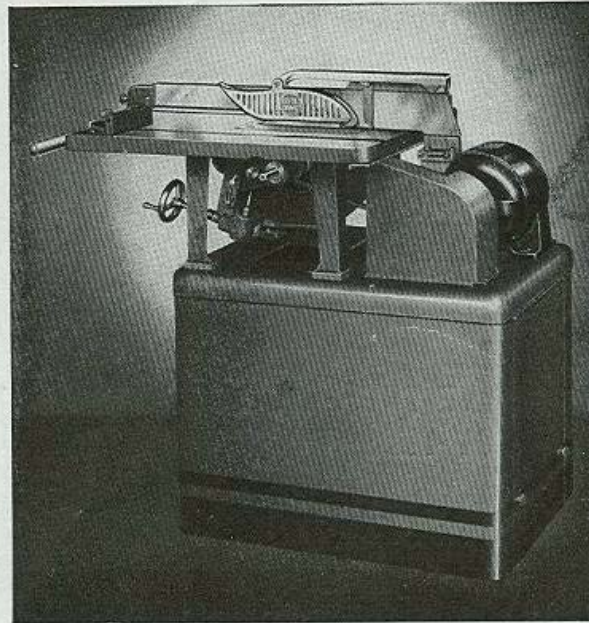
If you need more than the 21-inch ripping capacity of our standard No. 2500 Tilting-Arbor Saw, you should purchase this Boice-Crane No. 2505 Tilting-Arbor Saw.

With its long extension ripping bars, you can rip a SIX-FOOT wide panel thru the center, at a bevel too if you wish. Ripping capacity is thirty-seven inches when bars are in extended position; twenty-five inches when positioned as shown.

To these bars, table-wings of hardwood are easily attached for a permanent extra large table.

**No. 2505** Tilting-Arbor Saw (same in design and equipment as No. 2500 Saw) except that No. 2537 Extra Long Ripping Extension Bars of 37" capacity are furnished instead of standard bars. Ship. wt. 163 lbs.

**No. 2537** Extra long Ripping Extension Bars only, when ordered separately for a No. 2500 Saw. No allowance for return of standard bars. Ship. wt. 12 lbs. . . . .

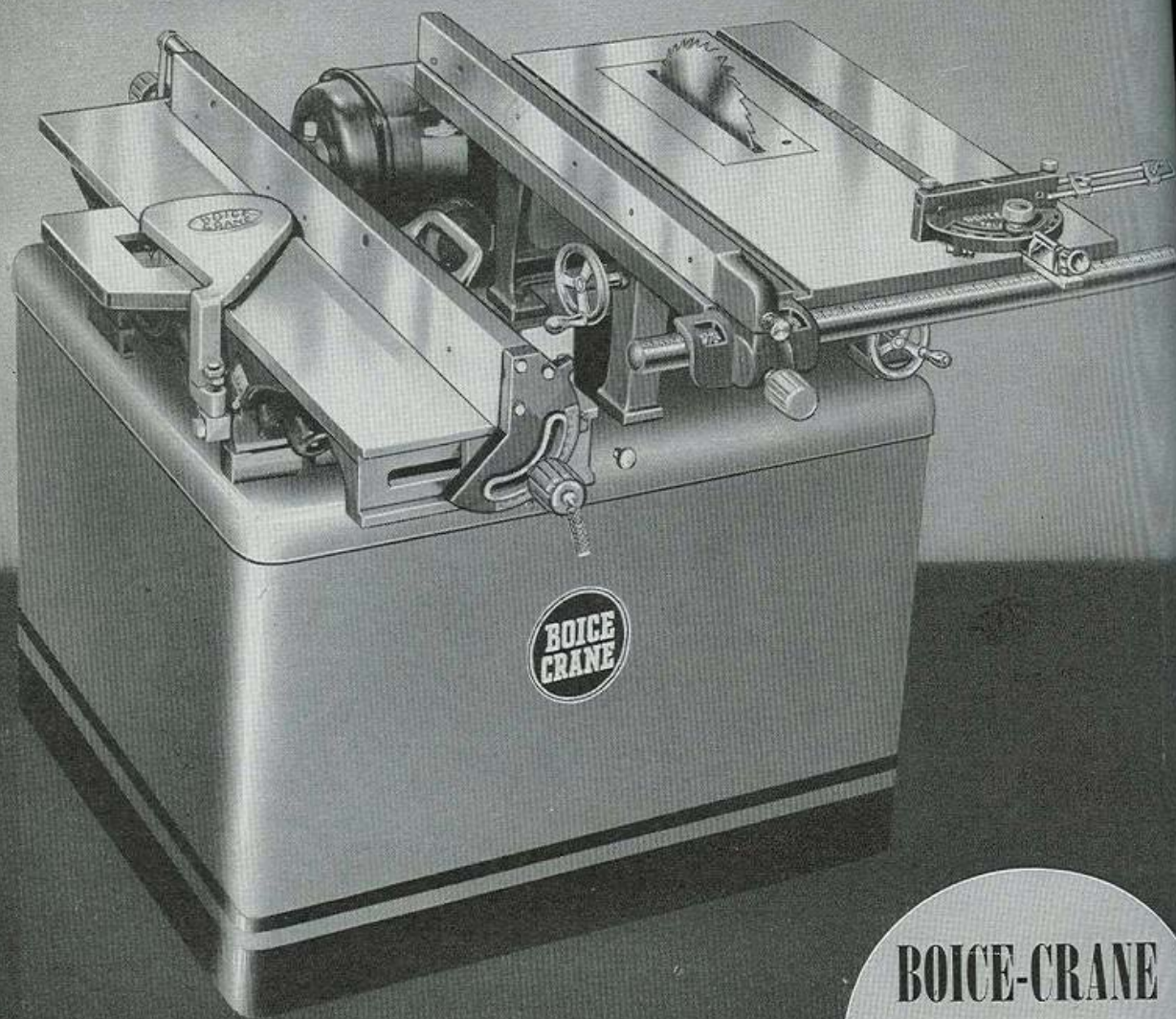


## INDIVIDUAL SAW MOTOR DRIVEN FLOOR MODEL COMPACT — PORTABLE — LOW COST

- No. 2500 Tilting-Arbor Saw with V-belt . . .
- No. 2511 Rolling Pulley, ¾" hole . . . . .
- No. 2585 Motor, 1 h.p., with push-pull switch . . . . .
- No. 2541 Cabinet Stand with switch rod . . .
- No. 2514** Complete Saw with Stand as itemized above for 110 v. 60 cy., 1 ph. Ship. wt. 307 lbs. . . . .
- No. 2510 Belt and Pulley Guard. Ship. wt. 4 lbs. . . . .

Other Motors on page 47. Recommended for Light Duty, Nos. 2561, 2563, 2565, 2567, 885; Medium Duty, Nos. 2575, 2577, 887; Heavy Duty, Nos. 2585, 2587, 2595, 2597, 889, 891.





**BOICE-CRANE**

**No. 2529**

**SAW-JOINTER**

**SAVE THE PRICE OF ONE MOTOR!  
BUY THIS 10" TILT ARBOR SAW—6" JOINTER UNIT**

Here is a complete workshop in itself . . . Boice-Crane's No. 1400 6-Inch Jointer, and No. 2500 Tilting-Arbor Saw . . . compactly mounted together on a steel floor stand . . . both driven by one motor. Very popular and practical among all classes of woodworkers, school shops, industrial plants, even home shops.

In industrial plants where space is costly and at a premium—it is practical to install this compact, combination Boice-Crane Saw-Jointer. Uses only one motor—and that is economy.

The Jointer has long tables, and an unusually long fence, which locks at both ends. Other details are fully illustrated on pages 10 and 11. No better jointer at the price.

The Boice-Crane 10-Inch Tilting-Arbor Saw is the latest design "tilting-arbor" type whose own unbeatable performance is further enhanced by combination with 6-inch jointer like this. Your two most used machines are side by side. Convenient. Compact. No interference. *Choice of motors to 1½ h. p., see page 47.*

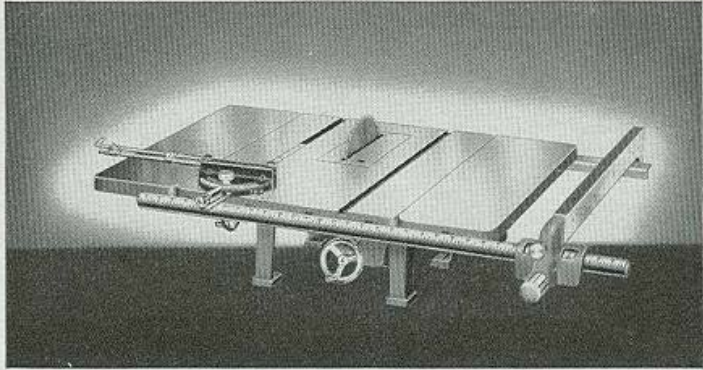
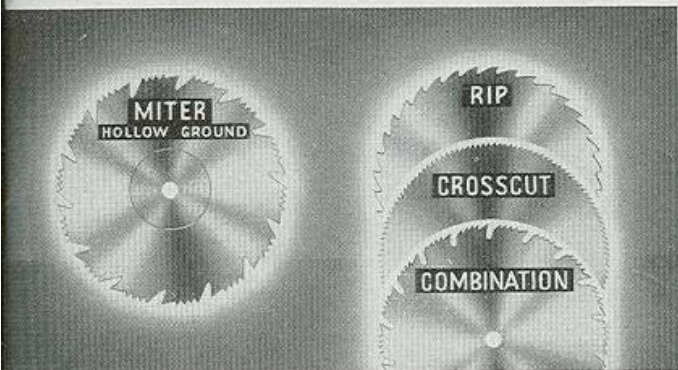
- No. 2500 Tilting-Arbor Saw with V-belt.....
- No. 2511 Rolling Pulley, 5½" dia.....
- No. 1400 6" Jointer with guard.....
- No. 1015 V-Pulley, 5" dia.....
- No. 1037 V-Belt, 37" circumference.....

- No. 2586 Motor, 1 h.p., 2-shaft, with push-pull switch .....
- No. 2549 Cabinet Floor Stand with switch rod....
- No. 2529** Saw-Jointer complete as above for 110 v., 60 cy., 1 ph., A.C. Ship. wt. 520 lbs.

Other Motors page 47. Recommended for Light Duty, Nos. 2566, 2568, 886; Medium Duty, Nos. 2576, 2578, 888; Heavy Duty, Nos. 2586, 2588, 2596, 2598, 890, 892.



# ACCESSORIES FOR SAW TABLES



## CIRCULAR SAWS FACTORY PRICE • HIGHEST QUALITY

Boice-Crane Circular Saws are distinctly "factory production quality." Made of highest grade steel, properly tempered and tensioned. Not to be confused with cheaply made and inferior "homeshop quality" blades.

Standard 3/4" Bore	8" Dia.	10" Dia.
Rip Saws.....	No. 835	1025
Cross-Cut Saws.....	No. 836	1026
Combination Rip and Cross-Cut.....	No. 837	1027
Miter Saws (Hollow Ground).....	No. 838	1028
Ship. wt.....	2 lbs.	3 lbs.

## NEW! Table Extension Side Wings

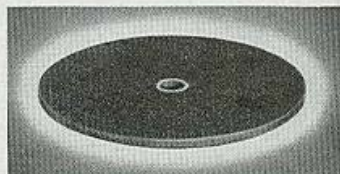
These Side-Wings enlarge the table of Boice-Crane Tilting Arbor Saws to 27½ x 36 inches wide. Enable easier, faster, and more accurate sawing of extra large materials. The side walls of both tables and side-wings are machined to guarantee that entire work-table surface is perfectly smooth just like a single casting.

- No. 2515** Pair of Side Wings for No. 2505 Tilt-Arbor Saws. Ship. wt. 65 lbs.....
- Note:** When side wings are for No. 2500 Tilting-Arbor Saws, No. 2537 Extension Bars should also be purchased. See page 7.
- No. 2516** Right Table Wing only, for Tilt-Arbor Saws installed into No. 2529 Saw-Jointer Units. Ship. wt. 35 lbs.....

## SANDING DISC—Abrasive on Both Faces

Every woodworker has hundreds of jobs on which to use this low cost Sanding Disc to tremendous advantage. The disc fits on the saw-arbor in place of the circular saw blade, and transforms any Boice-Crane Tilting-Arbor Saw into a most amazingly efficient "Tilting-Disc" sanding machine.

- No. 1733** Sand Disc, 8" dia. 3/4" bore. Not available.
- No. 704** Garnet Discs for above. Ship. wt. 1½ lbs. Per dozen.....



## DADO HEADS

Dado Heads are as necessary to the cabinet maker as saw blades themselves. These well made Dado Sets cut grooves and rabbets, with clean sides and bottoms, with or across the grain. They make good strong joints and well fitting tenons, quickly and easily.

The inset view shows that the teeth of Boice-Crane Inside Chipper Cutters are SWAGED WIDER than their bodies . . . a very important feature.

When these cutters are stacked together to make a wide cut, the cutting teeth OVERLAP each other and cut a clean, and finless groove.

The OVERLAPPING feature also permits you to expand the dado head in width, by inserting a thin shim washer between the cutters, to cut a finless groove even some wider than the standard widths listed below. Excellent for cabinet makers.

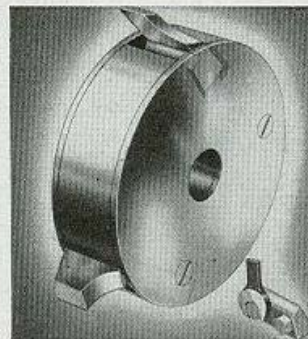
- No. 843** Dado Head Set, 6" dia., 3/4" bore. Cuts widths 1/8", 1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 1/4", 1 1/2", 1 3/4", 1 7/8", 2", 2 1/4", 2 1/2", 2 3/4", 3", 3 1/4", 3 1/2", 3 3/4", 4", 4 1/4", 4 1/2", 4 3/4", 5", 5 1/4", 5 1/2", 5 3/4", 6". Ship. wt. 2 1/2 lbs.....
- No. 844** Dado Head Set. Cuts same as No. 843 plus 5/8", 1 1/8", 1" and 1 1/4". Ship. wt. 3 lbs.....
- No. 2506** Table Insert for dado and cope heads. Ship. wt. 4 lbs.....

## COPE HEAD—Side Guarded for Safety

Boice-Crane Cope Heads make beautiful mouldings and enable you to put the touch of a master craftsman on your projects. Boice-Crane Cope Head is easy to set up. Also much safer to use than most others, because it is made of solid, tough steel: each knife is locked by powerful tapered safety wedges and 2 hardened jack-screws; and furthermore, because knives are held against possible side slip by Boice-Crane's Safety Side Plates on both sides of head. Your personal safety is still further increased, because Boice-Crane Knives are high speed steel—not weakened by any holes and are 3/8" inch thick . . . fully 50% thicker and stronger than usually found in other makes.

Our knives come carefully balanced in sets of three. Patterns listed are widely used, authentic, and in good taste for finest furniture. Cope Head handles any special pattern that can be ground on a 1" wide knife.

- No. 2540** Cope Head, 3/4" bore. No knives. Ship. wt. 3 lbs. ....
- No. 1541** Formed Knives. Set of three knives of any one
- No. 1547** pattern. Ship. wt. 8 oz.



FOR TABLE EDGES, QUARTER ROUND, COVE AND BEAD DECORATION

NO. 1541



THE EVER POPULAR "OGEE"

NO. 1542



FOR WINDOW STOP, QUARTER ROUND AND GENERAL USE.

NO. 1543



FOR DROP LEAF TABLE JOINT AND 1/2" RAD COVE

NO. 1544



FOR DROP LEAF TABLE JOINT AND 1/2" RAD QUARTER ROUND

NO. 1545



STRAIGHT FACE FOR JOINTING RABBETTING AND GROOVING

NO. 1546

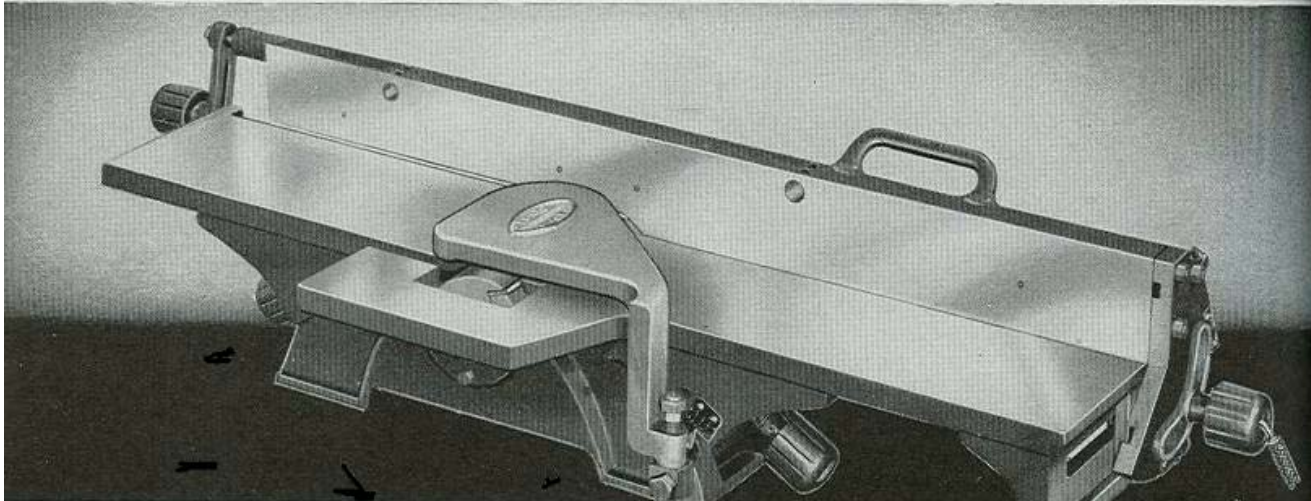


FOR STRONG GLUE JOINTS ON STOCK 1/2" AND UP

NO. 1547



# BOICE-CRANE NO. 1400 SIX-INCH JOINTER



Overall machine . . . 43 1/2"  
 Net table length . . . 36"  
 Fence length . . . . . 35"  
 Fence height . . . . . 3 3/4"  
 Max. width of cut . . . 6"  
 Max. rabbet depth 9/16"

These tables average a full 5" longer than others. This fence is a good 10 inches longer than others. In terms of relative capacities, a Boice-Crane handles work 25% to 50% longer.

## FOUR Models to Choose From

**BELTED MOTOR DRIVE — IN BENCH AND FLOOR TYPES**  
**DIRECT MOTOR DRIVE — IN BENCH AND FLOOR TYPES**

This big, sturdy, extra long 6-Inch Jointer, which is built and operates with remarkable accuracy, is chosen more often than any other make by those men who know and want good tools. This overwhelming preference arises from the superior, basic design and specifications of the Boice-Crane,—plus our highly refined quality and the fact that Boice-Crane Jointers are available to you in FOUR different models of which one is sure to meet your every need.

When you buy any 6-inch jointer, you do so primarily because you want to joint long stock, and therefore need long tables. However, long tables alone are not enough. Fully 90% of all your jointing, such as all edge jointing, face jointing, bevelling, rabbetting, etc., must be fence guided. Consequently, it is important to purchase a Boice-Crane Jointer that has long tables, and also a long rigid fence.

Boice-Crane's 6-inch Jointer embodies both of these valuable features, which enables the jointing of longer lengths, and also makes it possible for even the most unskilled operator to feed lumber with utmost ease and steadiness. Makes every cut accurate through its full length, even on 6, 8, and 12-foot lumber, doors, sash, etc.

Boice-Crane's 3" diameter cutterhead is the largest found in any low priced 6-inch jointer we have ever heard of. This makes possible a freer cutting "rake-angle" to knives, for a chatterless and much smoother shearing cut in the direction of the wood fibers—rather than the chipping and chattering cut across the wood-fibers occurring with a smaller diameter cutterhead.

These 3 factors: longer tables; longer and more rigid double-locked fence; and bigger diameter cutterhead—are accountable for the better performance of Boice-Crane 6-Inch Jointers.

No matter whether you purchase a Boice-Crane in belted or in direct-motor drive, you can't beat Boice-Crane jointing.

**No. 1400** 6-Inch Ball Bearing Jointer with fence, 3-knife head, safety guard, and 2 1/2" dia. V-pulley for belt drive. Ship. wt. 130 lbs. . . . .

**No. 1015** 5" dia. V-pulley for motor, 3/4" bore. Shipping weight 1 lb. . . . .  
**No. 1058** V-belt, 58" circumference. Shipping weight 8 oz. . . . .  
**No. 1408** Cabinet Floor Stand, chute and motor-bracket. Ship. wt. 105 lbs.

**No. 1415** Motor 1/2 h.p., 1750 r.p.m., Repulsion-Induction, Ball-bearing, 110-220 volt, 60 cycle, 1 phase AC., including cord, plug, and a special 2-pole switch that mounts flush on side of cabinet. Ship. wt. 67 lbs. . . . .

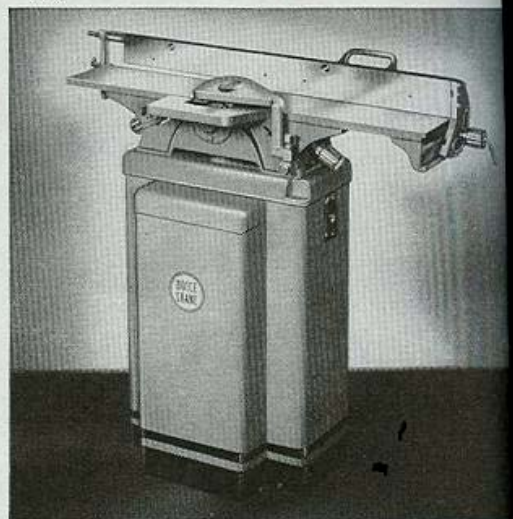
**No. 1420** Complete Floor Model, 6-Inch Jointer with belted-motor-drive, as itemized above. Shipping weight 305 lbs. . . . .

**No. 1407** Special Rear-Knife Safety Guard. Shipping weight, 3 lbs. . . . .  
**No. 1409** Belt and Pulley Guard Panel for No. 1408 Stand. Ship. wt. 30 lbs.  
**No. 1417** Motor 3/4 h.p., otherwise same as No. 1415 motor. Ship. wt. 67 lbs.



The rear end of fence is locked just as rigidly as the front. See how far backward your left hand can travel and still be abreast our solid fence. Boice-Crane gives fullest, longest control to lumber.

Long Tables, with equally long fence tilted over bevelled work—and with fence locked AT BOTH ENDS—with your hands wide apart—makes accurate bevelling a pleasure not a chore. The ONLY Fence that is 100% rigid



**No. 1420 Belted-Motor-Drive Jointer**  
 Steel Cabinet contains and guards 1750 r.p.m. motor, belt, and pulleys. Built-in dust chute shields motor by discharging shavings out the side. Removable panel at rear gives access to interior. Handsomely styled.



# NOW! THIS DIRECT-DRIVE JOINTER AT PRICES OTHERS ASK FOR BELT-DRIVE

Operates on standard 60 cycle AC electric current! This Boice-Crane Direct-Motor-Drive Jointer is superior in every way to any belted-motor drive . . . and here are a few important reasons why:

Direct-Motor-Drive is the most efficient. All motor-power goes directly into cutterhead. No belts to slip, replace, nor to guard.

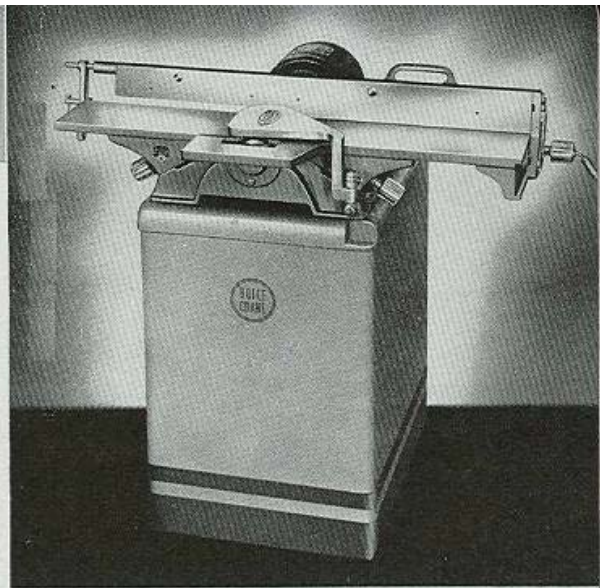
Boice-Crane's floor cabinet catches all shavings . . . keeps your shop-floor clean and tidy. The accumulated shavings are removed through the large hinged door at rear of cabinet, whenever convenient. Most cabinets just discharge shavings out upon the floor.

In Boice-Crane, you get a big  $\frac{3}{4}$  H.P., 3450 r.p.m., Direct-Drive Motor, for the same money you would expect to pay in all for a belt, motor-pulley, and a less powerful  $\frac{1}{2}$  h.p., 1750 r.p.m. motor. Boice-Crane gives MORE horse-power for the money!

The new Boice Crane  $18\frac{1}{2}$ " x  $23\frac{1}{2}$ " Cabinet Base has sleek, modern lines. Its heavy steel sides and top are welded into a single unit that is exceptionally strong and stiff, and allows no vibration in machine. Yet, it costs little more than open-type belt-drive stands.

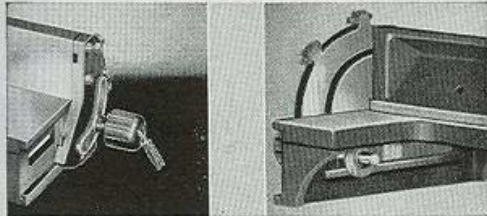
All in all . . . Boice-Crane, Direct-Motor-Driven Jointers are ideal for all classes of woodworking shops . . . schools, home shops, and industries. For 60 cycle AC current, we recommend this new, efficient, clean, safe and low cost Direct-Motor Drive.

**No. 1425** Bench Model, Direct-Motor-Drive 6" Jointer complete with No. 497 Motor,  $\frac{3}{4}$  H.P., 3450 r.p.m., ball-bearing Repulsion-Induction, 60 cycle, 1 phase, A.C., for 110 or 220 volt, includes switch. Shipping weight, 230 lbs. . . .

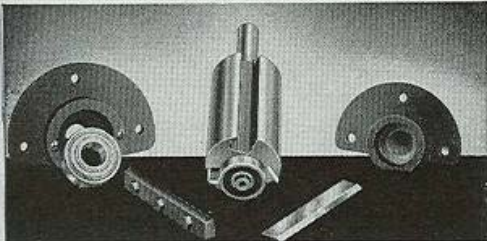


**No. 1430** Floor Model, Direct-Motor-Drive Jointer, as shown above, complete with same motor No. 497 of  $\frac{3}{4}$  h.p., including switch, and cabinet base hinged door at rear. Ship. wt. 340 lbs. . . . .

**No. 1433** Jointer, same as No. 1430, except with a 3-PHASE,  $\frac{3}{4}$  h.p. motor, 220-440 volt, 60 cycle, and 3-phase switch.



*Right.* Fence tilts on circular trunnion machined into rear of bracket. Makes degree scale accurate. *Left.* Lateral movement is on tongue and grooved cross-slide. Free sliding. Patented dual locks at front. Act independently. Handy. Patented "Auto-set" stops for 45, 90, and 135 degrees.



Bearing Housings anchored by 3 cap screws each. Can not loosen. Two life lubricated ball-bearings. Larger 3" diameter cutterhead with greater "rake" angle to knives is chatterless even on deep cuts. Joints smoother than smaller heads.



Spring Hold-Downs for safe feeding of short or thin materials. Keeps hands away from cutterhead. Also holds long lumber down while you feed from a position several feet distant from machine. Convenient "Hand-Hold" on fence facilitates easy tilting or lateral movements. Fence has 4 holes for attaching wood facings.

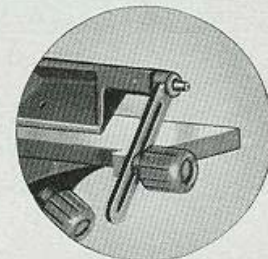
**No. 1403** Set of 2 Spring Hold-Downs. Ship. wt. 3 lbs.

**No. 1402** Set of 3 high speed jointer Knives. 6". Ship. wt. 12-oz.

## FENCE HAS REAR LOCK

This patented Rear Fence Lock makes fence so extremely rigid that even six times the ordinary feed pressure cannot spring it backwards. Now, full jointing accuracy is a certainty. On bevel cuts, with fence tilted over work, fence can never lift upwards either. Takes but a half second to lock. Makes all jointing easier and better.

Two-end fence locks have proved best on power saws—one lock never is rigid. Same is doubly true in jointers because jointer-fences are much longer, and must withstand heavier strains. Therefore insist on Boice-Crane, the only 6-Inch Jointer featuring two-end fence locks.



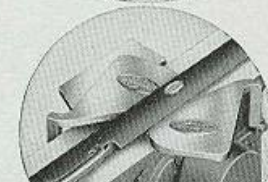
## BOTH KNIFE GUARDS HAVE DOUBLE-PIVOT ACTION

The vertical pivot allows guard to open and shut over knives. Torsion spring keeps guard closed against fence or work. The horizontal pivot lets guard be swung entirely below table, as shown, to permit rabbeting to be done. Guard remains bolted all the while to machine. To replace guard into regular guarding position, just a slight flip and the guard snaps entirely shut over knives. No fitting. No fussing as on ordinary one-pivot guards.



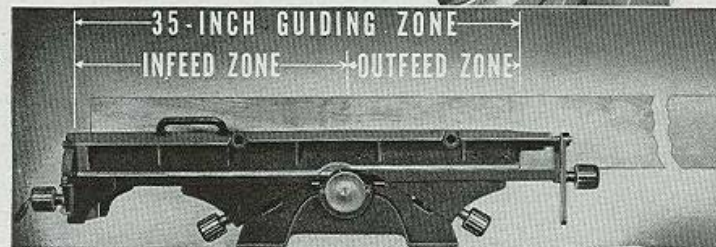
## FULLY GUARDED CUTTER

With Cutter-Head Guards covering knives both in front and behind fence, as shown, no portion of the knives remains exposed when fence is moved forward across tables. Here is fullest possible safety to the operator and also to passers-by. Ideal for industrial and school shops.



Patent Nos  
1,790,288  
1,927,477  
1,967,791  
2,049,044  
2,049,045

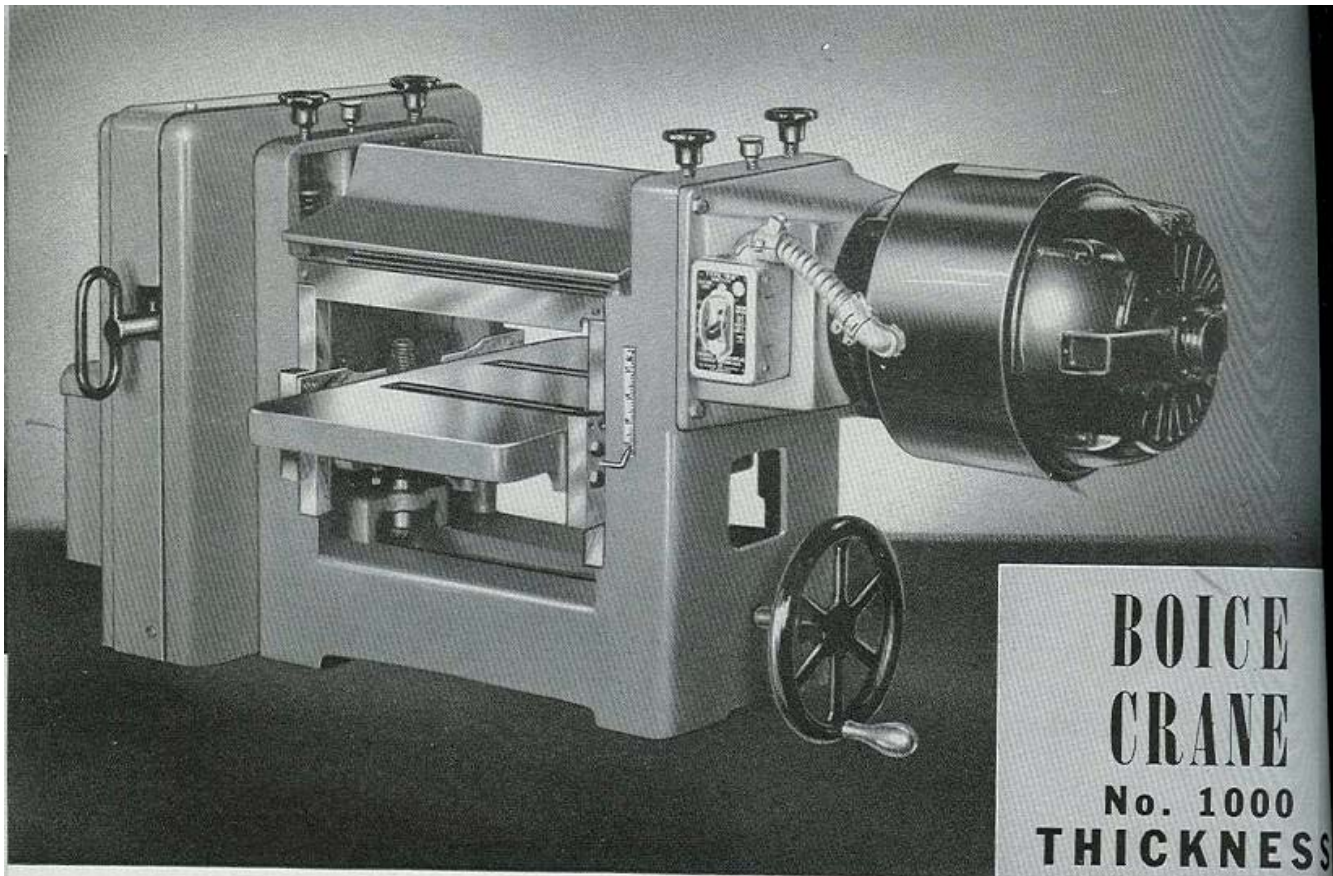
Others Pending



## RIGID LONG FENCE VASTLY IMPROVES JOINTING!

Long 35-Inch Guiding Zone eliminates difficulties in feeding lumber with accuracy. Long fence gives long firm guidance. Allows wide spacing of your hands so you always get firmest possible grip and leverage on lumber. Feeding of lumber made easier, better and steadier. No more judging "by eye" the steadiness of feed, as on short fenced jointers. No other jointer has a long, and rigid fence like this.





# BOICE CRANE

No. 1000  
THICKNESS  
PLANER

*You* CAN USE THIS 12" x 4" PLANER IN *Your Shop!*

Hundreds and hundreds of satisfied users buying Boice-Crane Planers during the past 12 years, prove by their experience that the bench or intermediate size planer as *Boice-Crane builds it*, is practical—amounting almost to a necessity in modern shops and plants. Users range from home shop owners who want to be independent of the mill—to the finest cabinet shops, and largest furniture plants in the land.

We are the largest builders of bench planers in the country. Our large volume of sales permits mass production methods and *saves from 50 to 100 dollars for every user*. On top of that, we guarantee the Boice-Crane so substantial and so extra strong that the grueling service planers get in box and casket plants won't phase it, and so accurate besides that it will consistently surface material perfectly, down to veneer-like thicknesses—precision jobs it actually *is doing* in scores of aircraft plants and cabinet shops. The shrewdest equipment buyers, and ultra particular cabinet makers don't hesitate saying that Boice-Crane construction and performance is equal to that of larger planers costing three to four times as much.

### SPECIFICATIONS

CAPACITY:	Widest Stock.....	12 inches
	Thickest Stock.....	4 inches
	Thinnest Stock.....	1/16 inch
	Shortest Stock.....	6 1/2 inches
MAXIMUM DEPTH OF CUT:.....		1/8 inch
RATE OF FEED:	Head running 3500 r.p.m.'s.....	14 ft. per minute
	Head running 4500 r.p.m.'s.....	17 1/2 ft. per minute
CUTS PER INCH OF MATERIAL:.....		60
TABLE SIZE:.....		20" x 12 1/4"
FRAME: One-piece casting, rigidly ribbed. Weighs 150 lbs. alone.		
CUTTERHEAD: 3 knife, 2 3/8" dia. (Cutting Circle 2 7/8" dia.)		
CUTTERHEAD BEARINGS: S.K.F. self-aligning Ball-Bearings.		
FEED ROLL BEARINGS: Bronze in self-aligning Journals.		
FEED ROLLS: Two, each 2 1/4" dia. One corrugated and hardened. One smooth.		
POWER REQUIRED: 1 1/2 to 2 horse power. Belt or Direct Drive.		

**No. 1000** Boice-Crane 12" x 4" Thickness Planer, no motor, with 3" dia. Vee Pulley for 2 1/2" wide Vee Belt.....  
Net weight 375 lbs. Weight crated 425 lbs.

**No. 1001** Cabinet Floor Stand. Ship. wt. 110 lbs. ....

**No. 2016** 6" Vee Pulley for 2 1/2" wide Vee Belt. State bore....

**No. 1002** Same as No. 1000, but with 1 1/2 h.p. ball bearing, Repulsion-Induction Motor direct connected to cutterhead, for 110-220 volt, 60 cycle, 1 phase A. C. including motor bracket, switch. Ship. wt. 535 lbs. ....

**No. 1002 1/2** Same except for 220-440 volt. 60 cycle, 3 phase A.C....

**No. 1004** Same as No. 1002 except with heavier motor bracket and 2 h.p. motor for 110-220 volt, 60 cycle, 1 phase A.C....

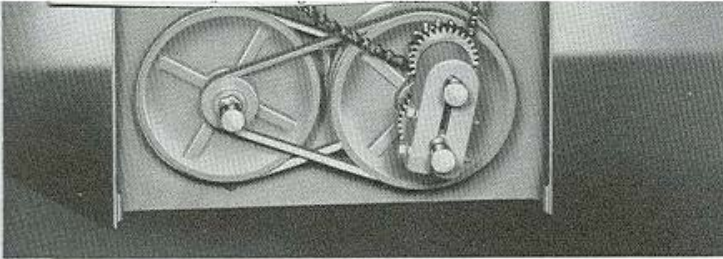
**No. 1005** Same as No. 1004 except with 2 h.p. motor for 220-240 volts, 60 cycle, 3 phase A.C. ....  
Net weight Nos. 1004 and 1005, 595 lbs.  
Weight crated Nos. 1004 and 1005, 645 lbs.

**No. 1003** Extra 12" High Speed Planer Knives, per set of 3.....

**Note:** Direct connected motors can be furnished for Direct Current. Write for prices. Belt drive models only for 25, 30 or 50 cycle A. C., single or polyphase.

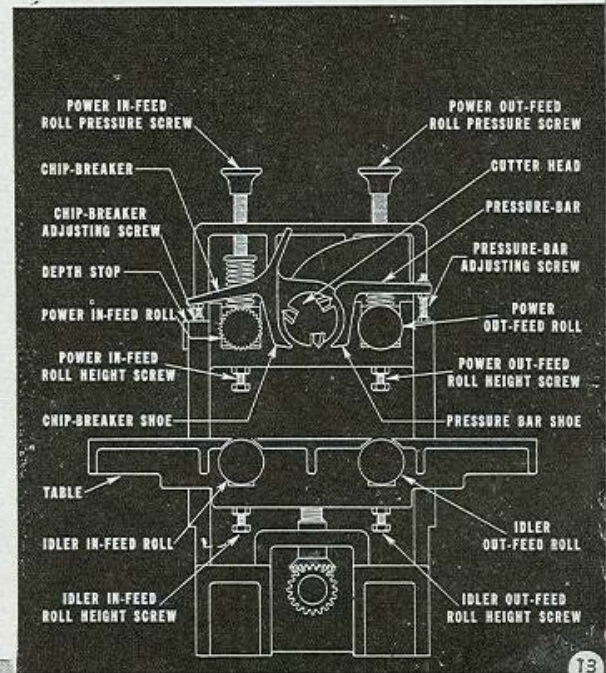


## Upper Half Cut Out



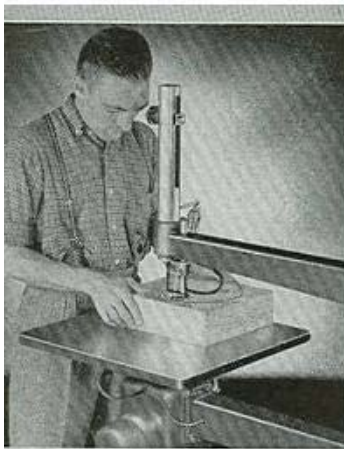
5. Quality is carried even to the hidden parts—parts for easy table adjustment for instance. Large, oversize, lightning-fast table lifting screws, and large, long-wearing gears are mounted on ball thrust bearings.
6. Table equipped with two idler rolls mounted on **adjustable** journals make the feed steady and more powerful. That's why even rough resawed stock is so successfully planed on a Boice-Crane.
7. Boice-Crane provides the more expensive to make but time-proven Chip Breaker and Pressure Bar often omitted on pony planers. The difference tells when you see how easy and perfectly a Boice-Crane planes the hardest, also the brashy, "splintery" varieties of wood. A feature you won't want to be without.
8. Feed pressure is always within complete control of the operator on a Boice-Crane—from a light feather-weight touch to a bulldog grip—the **greatest range ever built into a small planer**.
9. Instant power feed control. Stops the feed instantly without having to stop motor, engine or line shaft. Extra valuable where power is from gasoline engine or line shaft.
10. Choice of drives. Direct-to-cutterhead or V-belt electric motor drive, or drive from line shaft or gasoline engine. If you have an odd voltage condition which makes a direct drive out of the question, you can still use a Boice-Crane. Consult us on your drive problems.

**Large Plants** save money every day. They do it by the extremely economical practice of doing small work on a smaller, more suitable machine. Then, by salvaging for profitable use, such short, thin and otherwise waste stock that large planers can't handle. Too, it is always ready as an auxiliary planer, to speed up production and relieve congestion anywhere on the production line. A further sizeable and constant source of saving is in the low first cost and extremely low power consumption.





## Upper half cut out



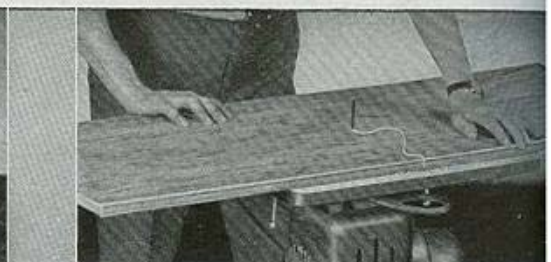
# BIG WORK TABLE... 20 INCHES SQUARE ... TYPIFIES ITS EXTRA CAPACITY

Big capacity. Cuts two thicknesses of 2" thick material or 16 pieces of 1/4" (a total of 4") in exact duplicate pattern all at one time.

Uses blades 5 to 9 inches long. The long 1 1/2-inch stroke cuts extra rapid.

If ever a jig saw was designed for the convenience of the operator, and with extreme versatility in the variety of work it performs, it is this DeLuxe Boice-Crane Jig Saw.

It is built with costly precision, has extra large capacity and ruggedness for sawing thick heavy materials. Then from a jig saw with strong spring tension on heavy sawing, it can be transformed in an instant by the convenient spring tension control to a sensitive, light-action scroll saw that is equally wonderful for cutting the most delicate scroll work such as inlaying or marquetry.



In these two views, see how ripping capacity equals that of costly 24-Inch Band Saws. Notice how blade guide, hold-down, air blower, and tilt-of-table are all in proper positions for full extent of use. You can even rip 45-degree bevels on long lumber. You get unheard of versatility in this big deluxe jig saw—combined with band-saw capacity—all in one machine. Woodworkers owning the Boice-Crane DeLuxe Jig Saw seldom need a band saw too. So again, a Boice-Crane saves you real money. Belt is completely guarded.

By removing U-Frame from base casting, and by using Sabre Saws as illustrated above, there is no limit to the size of panel that can be cut. Lower thrust guide, just below table surface, holds blade up to the work. Sawing is accurate. Frame is relocated by tapered dowel pins to exact original alignment.



# SAWS THRU 5-INCH THICK STOCK... SAVES COST OF A BAND SAW TOO!

Check all makes and you won't find another with such complete versatility. That is why we call the Boice-Crane a SCROLL and JIG SAW. It does the work of both types of machines—from light scroll work to heavy jig sawing. Also does die-filing, saber-sawing, and sanding.

Furthermore, the Deluxe Boice-Crane is so capable in handling the heavy work of curved sawing (with its big work-table, deep 5-inch thick sawing capacity, and its deep 24" frame) that home craftsmen have little or no need for a band saw too. This Boice-Crane Scroll and Jig Saw does all the curved sawing that arises in the average shop.

## UNIQUE 11-FEATURE UPPER HEAD FOR COMPLETE VERSATILITY IN EVERY USE

**Measured Tension** Calibrations on upper head show correct amounts of spring-tension to apply to every kind and size of blades. No guesswork. You simply lift Boice-Crane's tensioner knob—to desired calibration—and clamp it there. Quick. Easy. Always the correct tension.

**Correct Tension At Very Outset Saves Blades** If any jig saw is started with too little tension on blade—the blade buckles and is damaged; or if too much tension—the blade snaps. The damage happens the instant you snap on the switch, long before any correction could be made. Consequently, correct tension must be applied to blade before machine is ever started. Boice-Crane's Measured Tension does that, and guarantees longest possible blade life and economy.

**Instant Tension Release** Still another time saving feature. On every blade change, Boice-Crane's Upper Plunger is free of all tension. With no spring tension to work against, you clamp blades easiest, and get perfect blade alignment in exceptionally fast time, and every time.

**Double-Bearings For Upper Plunger Accuracy** Two long wearing bronze bearings, widely spaced, guide upper plunger in an accurate, vertical stroke. Blade can not go askew at bottom of stroke as on a single bearing. This Boice-Crane construction gives a lifetime of accuracy and greatly prolongs blade life.

**Has Plunger Positioner** Boice-Crane's tensioner knob is also your "plunger positioner" too. Only obtained in Boice-Crane. Often times the upper plunger of any jig saw gets drawn up tightly into its bearings, particularly after a blade has broken. On Boice-Crane, you merely unclamp the tensioner knob as usual—and push it down against plunger to free it and to reposition it—all in one easy motion. Now blade is easily inserted into chuck. No time wasted.

**Takes Blades Long** Upper head housing has vertical adjustment of 4 inches so you can use blades of different lengths. This broadens the capacity and versatility of this jig saw many times over ordinary ones. Calibrations for 5, 6, 7, 8, and 9" long blades show correct position for upper head—for each blade length. Never shifts. Saves you time and money.

**Upper Head May Be Turned For Ripping** Easy to read, scribed lines indicate exact position of head for ordinary sawing, or for ripping crosswise to frame. No chance of misalignment. No wasted time setting up.

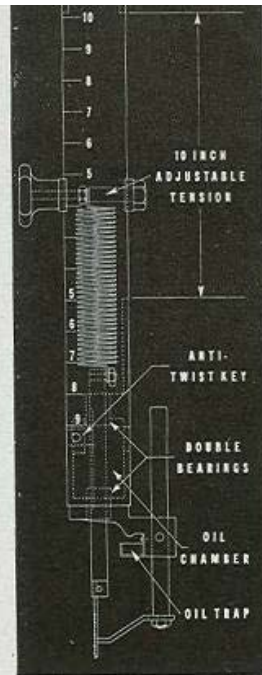
**Blade-Guide And Hold-Down** Whenever you have occasion to turn upper head, the blade-guide, blower, and hold-down all follow around as one unit—and perform their duties perfectly with no further adjustment. A time-saving Boice-Crane feature for your convenience.

You can always tell a Boice-Crane by its feature Upper Head. It makes it look different... makes it perform differently too than any other jig saw. This Upper Head alone gives you 11 extra features, and that super-performance you have always heard craftsmen enthuse over.

**Oil-Soaked Wool Packing Really Lubricates** Many a blade is saved from breakage by Boice-Crane's fully lubricated, free running upper plunger. No tightness, no sticking with lubrication like this.

**Upper Head All Over** A mere glance at the highly polished nickel plated Head Casting (it is 16" long by 2" diameter) indicates real quality of workmanship. Every adjustment you make, is easy. Bold calibrations, easy to read. Stays bright, slides freely for years.

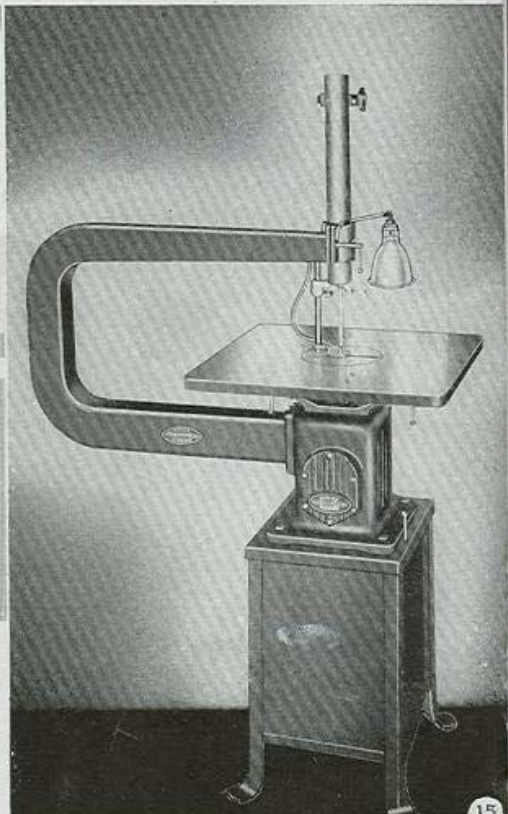
**Oil Trap** Any oil seepage always gathers on a low dimple of metal, and when oil falls, it falls squarely into the Oil Trap—never on your work. This unique design is again indicative of the exhaustive way in which Boice-Crane constantly strives to give you perfect machines—for perfect performance.



Patent No. 2,107,174

- No. 2200** 24" x 5" Jig Saw with six assorted 5" long fret blades, one 3/4" x 8 3/4" long jig blade, 4" diameter V-pulley and wrenches. Ship. wt. 178 lbs. ....
- No. 1012** V-Pulley, 2" dia. for motor. Drives jig saw at 1100 r. p. m. Ship. wt. 8 oz. ....
- No. 1044** V-Belt, 44" circumference. Ship. wt. 8 oz..

- No. 2203** Steel Stand and switch rod. Ship. wt. 45 lbs..
- No. 1601** Motor, 1/2 h. p., 1750 r. p. m., one shaft with built-in switch. Ship. wt. 33 lbs. ....
- No. 2208** Complete motor-driven Jig Saw on stand. Ship. wt. 257 lbs.....
- No. 2210** Belt and Pulley Guard. Ship. wt. 4 lbs. ....

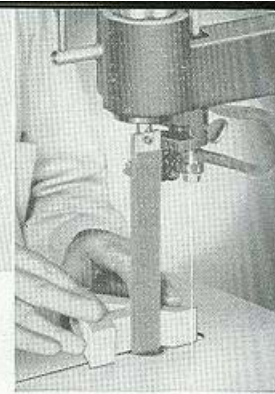
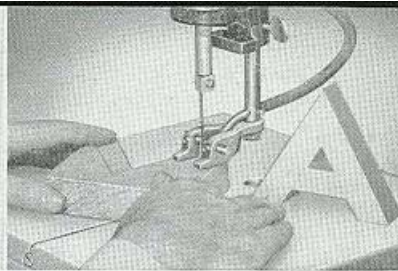
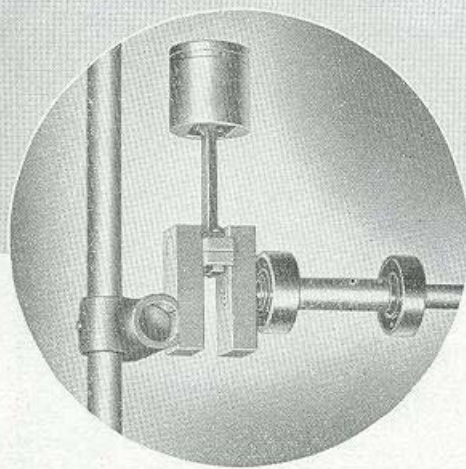


Iron, brass, copper, pewter in either sheet or tubing, as well as materials like bone, bakelite, ivory, aluminum, die-castings, and many others are all sawed fast and clean using fret or hack saw blades. Consult our engineers.

Open side Blade Chucks hold finest jewelers to heaviest hack saw blades—centrally and vertically. Easily cleaned. All hardened steel. Jaws won't wear rough, or become bent or worn under continued clamping, thus failing to hold blades. Quick. Positive. Full blade range capacity.

For blades, see page 17.





Full sets of letters in any size ranging from characters 3" high out of 3/4" stock, up to characters 12" high from 3" stock, are sawed out easily. The Boice-Crane is the only low cost Jig Saw which has deep enough capacity for sawing the thicker materials that jobs like this require.

Sanding flat edges or into corners is an easy task. Saves tedious hand labor.

## BALL BEARING *Balanced* DRIVE!

Crank shaft revolves on highest quality ball bearings. They give a lifetime of accurate service, sawing heavy materials at high speeds. Likewise, as there is so little friction, the finest fret blades give excellent service and have long blade life.

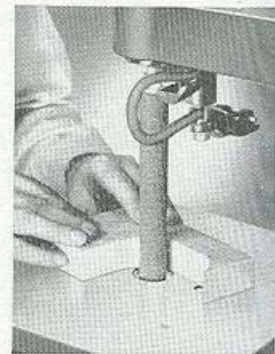
Notice the Balanced Action of the drive. As blade-pistons move up, large air-piston moves down—weight of one counterbalances the other. Consequently, Boice-Crane's Deluxe Jig Saw reaches high speeds without slightest vibration.

## OPERATES IN MASSIVE OIL-TIGHT CRANKCASE

The finely balanced Drive Mechanism consists of a bronze cross-head, hardened steel cross slide, and a steel crank shaft—mounted upon highest quality ball bearings. All moving parts are fully splash lubricated. Connecting rod of air pump is also bronze, and its bearing has take-up adjustment for any wear. The Boice-Crane Drive Mechanism is the strongest used on any bench jig saw on the market. Furthermore our 50% longer blade-stroke clears blades rapidly, and cuts thicker stock, faster. Boice-Crane's Jig Saw is heavy duty ALL THE WAY THRU—in construction, in table capacity, in sawing capacity—yet has the light sensitiveness of finest scroll saws for light-duty work.

## U-FRAME IS FREE FROM BENCH DISTORTION

The Base, handsome in its modern styling, is a heavy single iron casting with a broad flanged foot for bench mounting. Standing firmly on its one massive foot, the Boice-Crane Jig Saw has the appearance of big costly industrial machines, and performs like one too. You can bolt this Jig Saw to the most uneven bench surface without the slightest possibility of ever distorting the U-frame and the upper plunger alignment from the lower. Year after year with Boice-Crane, you'll experience permanent accuracy and enjoy the thrill of smooth running, versatile performance, unequalled by any other.



Sanding of curved edges is likewise readily done with ease and accuracy.

### SPECIFICATIONS

Capacities. Table to upper chuck. 5 1/2"  
Blade to frame. . . . . 24"

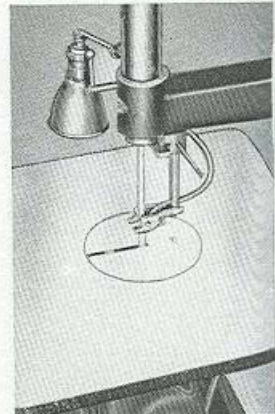
Table. Machined cast iron. Has removable throat ring. Tilts 45 degrees, also turns and tilts 45 degrees. Size 20" x 20"

Sawing capacity under hold-down. .5"  
Stroke of Blades. . . . . 1 1/2"  
Length of blades, overall. . . . . 5 to 9"  
Blade Guides above and below table. Yes  
Air Jets above and below table. . . . Yes  
Motor H. P. recommended. . . . 1/2 or 1/2  
Overall: 39" high; 20" wide; 38" deep.  
Weight less motor. . . . . Net 133 lbs.  
Crated 178 lb..

## A BIGGER TABLE HERE — THAN IN MOST BAND SAWS

Boice-Crane's Table (20" x 20") contains nearly THREE SQUARE FEET of area, or in other words 2 to even 3 times more area, to give just that much more support to your work, than ordinary jig saw tables. Only in Boice-Crane do you get a 'able, industrial capacity in size, something you have always wanted in a jig saw and which now you can afford.

Now, all your work having long sweeping curves, your big panels, your "inside" sawed work that has always been difficult to handle on a smaller table, and your saber-sawing of panels as big as they come—are all fully supported. Your work is ever so much easier, and more accurately done. Production is faster, your costs lower. Boice-Crane's Deluxe Jig Saw is a real value. Every shop wanting a jig saw of "Industrial" size and performance—at low price—should order now.



Only a table the size of this one handles largest panels with ease and accuracy. Machined cast-iron, with smooth, highly polished surface.

## JIG SAW FILES



No. 910 THREE SQUARE

Files for metal. Specify those wanted by number.  
Each . . . . .  
Six, assorted

- |     |            |     |         |     |         |
|-----|------------|-----|---------|-----|---------|
| 911 | AURIFORM   | 914 | ROUND   | 918 | PILLAR  |
| 912 | OVAL       | 916 | KNIFE   | 919 | LOSENGE |
| 913 | HALF ROUND | 917 | CROCHET | 920 | SQUARE  |



## CHUCKS

This Chuck has been especially designed to rigidly hold metal files in exact alignment with the plunger, so very accurate filing can be done. Entire length of file shank fits firmly into deep socket of chuck, and is gripped tightly by a hollow-head set screw. Square, or 3-Square files cannot possibly rotate in chuck as might occur on chucks with less grip.



No. 2206 Chuck for holding files with 1/4" dia. shank

(For No. 2200 Saw only)

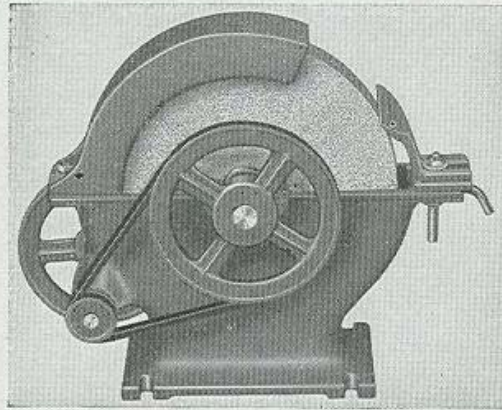


# NEW! BOICE-CRANE WET GRINDER NEW!

Every hom craftsman with woodworking tools and the wife's kitchen cutlery to keep sharp needs this Boice-Crane Wet Grinder. Splendid equipment too for manual training schools, farmers, gardeners, butchers, and all classes of woodworkers.

Its large 10-inch diameter sandstone wheel grinds what is practically a straight-bevel from heel to edge. Due to the largeness of the wheel, the concavity is negligible; the thickness and stiffness of the metal in the tool directly behind the point is not weakened as happens when grinding with a small diameter wheel. A Boice-Crane sharpened tool is backed-up strongly and stiffly—the sharpened point of tool won't "turn-back-over" when making heavy cuts in wood.

A tool sharpened on a Boice-Crane Wet Grinder stays sharp and keen—hones up quickly with fine slip-stones—makes all your hand-tools cut easier and faster, and improves your work.



Complete at a Price You Can Afford

The very necessary Slow-Speed Countershaft is neatly and attractively embodied into this Boice-Crane Wet Grinder as an integral part of the machine—is not added on as an afterthought.

For the proper grinding speed of 120 r.p.m., you simply belt this grinder to your 1750 r.p.m. motor, lineshaft or gas-engine. This slow rotation does not throw water.

This Boice-Crane Wet Grinder has a perfectly true running wheel. Every wheel is painstakingly centered on its arbor, every machine is given a running test. These two costly operations (usually neglected in cheap manufacture) guarantees that every Boice-Crane purchaser receives a concentric running wheel that grinds steadily and uniformly at all points around its circumference. There is no bumping of wheel against tool at every revolution like you see in inferior values.

On the opposite side of the Water Sump Casting, there is a drain plug for quick and easy emptying of water. Look for the Boice-Crane Oval Trade-mark cast on that side—your guarantee of a genuine Boice-Crane.

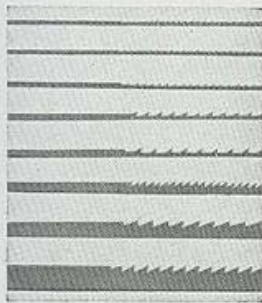
## No. 100

Deluxe Wet Grinder including 10-Inch Sandstone Wheel, adjustable main bearings, wheel guard, adjustable tool rest, slow-speed countershaft with large grease reservoir

between bearings, V-belt shown, and the proper diameter motor pulley with  $\frac{1}{2}$ " hole unless otherwise specified. Ship. wt. 34 lbs.

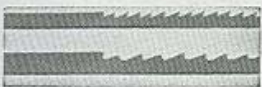
# BLADES FOR ALL CLASSES OF WORK

## One End of Blades Shown in Full Size



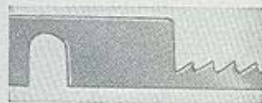
### 5 Inches Long—Jeweler—Fret—Blades

No.	Thickness	Width	Teeth per inch	Price per doz.	Price per gross
5P-7028	.007	.028	21		
5P-1022	.010	.022	27		
5J-1225	.012	.025	25		
5J-1234	.012	.034	25		
5F-1535	.015	.035	15		
5F-1845	.018	.045	13		
5J-1654	.016	.054	20		
5F-2085	.020	.085	12		
5F-20125	.020	.125	15		



### 7 Inches Long—Fret Blades

7F-2077	.020	.077	15		
7F-20100	.020	.110	15		



### Common Jig Blades $3\frac{3}{4}$ " Long

No.	Thickness	Width	Teeth per inch	Price each	Price per doz.
9JC- $\frac{1}{8}$	.035	$\frac{1}{8}$ "	9		
9JC- $\frac{1}{4}$	.035	$\frac{1}{4}$ "	6		
9JC- $\frac{3}{8}$	.035	$\frac{3}{8}$ "	5		



### Metal Cutting Hack Saw Blades 6" Long

9HS- $\frac{3}{8}$	.025	$\frac{3}{8}$ "	25		
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### Sabre Blades 8" Long

SB- $\frac{1}{8}$	.035	$\frac{1}{8}$ "	9		
SB- $\frac{1}{4}$	.035	$\frac{1}{4}$ "	6		
SB- $\frac{3}{8}$	.035	$\frac{3}{8}$ "	5		

Blades prefixed 5P, are best suited for sawing picture puzzles in stacks of 2 or 3 at a time. Cut very sharp curves without binding. Cut a very narrow kerf, so no detail of picture is lost after reassembly.

Blades prefixed 5J, are best suited for inlaying, overlaying, and marquetry, and also for puzzle sawing.

Blades prefixed 5F, are for ordinary fret work in stock from  $\frac{3}{8}$ " to 1" thick.

Blades prefixed 7F, are best suited for sawing 2" to 3" thick stock into the very sharp curves that a band saw is not capable of doing, or when a wide saw kerf is objectionable.

Blades prefixed JG, are used on thin or thick stock whenever there is no objection to a wide saw-kerf.

## Finger Type Blade Guide For No. 2200 Jig Saw



Very useful on No. 2200 Jig Saw, when sawing picture puzzles or when sawing closely to a line with fine blades. Hardened steel. Front edge perfectly smooth. Will never dull the teeth of fine blades. Quickly and easily attached.

No. 2207 Finger guide. Ship. wt. 4 oz.

## Smooth Cutting Blades



They are specially ground saws that run with no set to the teeth. They make an extremely smooth cut and perform exactly like a hollow ground saw. Saves the time of sanding that would be required ordinarily if the piece had been cut by a common jig saw blade or by a band saw.

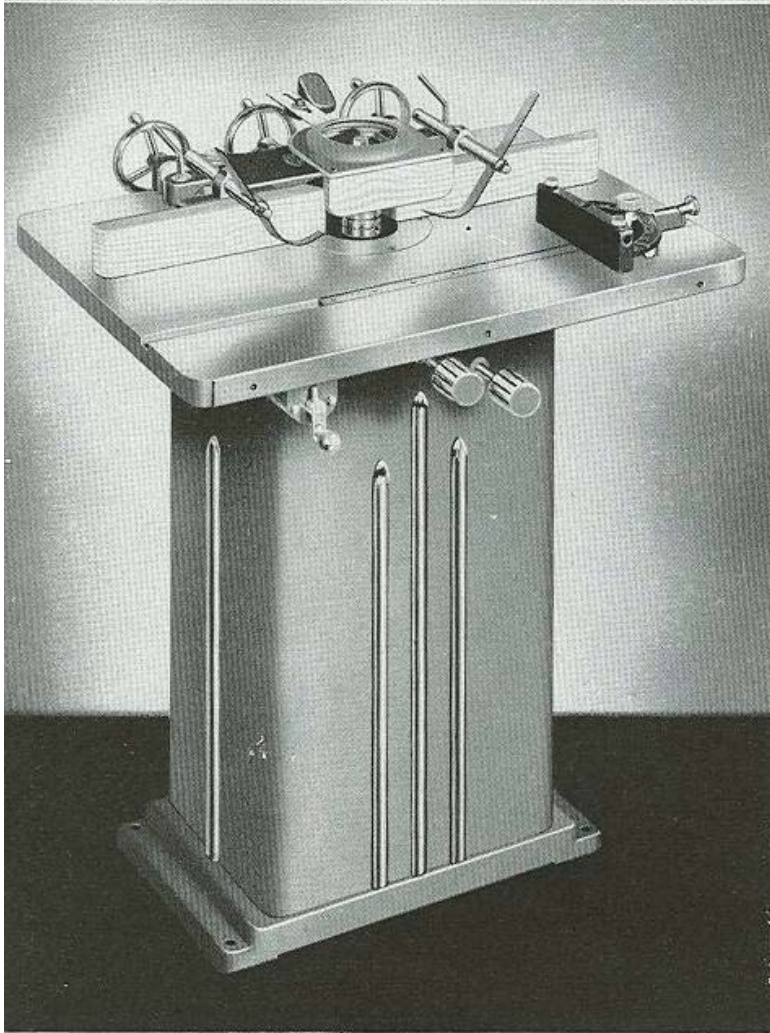
No.	Width	Teeth per inch	Price each	Price dozen
8SC-2	$\frac{1}{8}$ "	8		
8SC-3	$\frac{1}{4}$ "	8		
8SC-4	$\frac{1}{2}$ "	7 $\frac{1}{2}$		
8SC-6	$\frac{3}{8}$ "	6 $\frac{1}{2}$		

Ship wt. each 3 oz. Per dozen 1 lb.

All sizes are  $3\frac{3}{4}$ " long overall.  $\frac{1}{8}$ " and  $\frac{1}{4}$ " sizes have plain ends with no notch.  $\frac{1}{2}$ " sizes and wider, are notched as shown.



# Step Up Your Profits... Choose The BOICE-CRANE The ONLY Shaper With This New Type Spindle



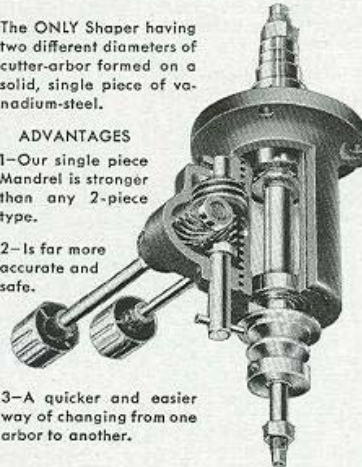
The ONLY Shaper having two different diameters of cutter-arbor formed on a solid, single piece of vanadium-steel.

#### ADVANTAGES

1—Our single piece Mandrel is stronger than any 2-piece type.

2—Is far more accurate and safe.

3—A quicker and easier way of changing from one arbor to another.



The ONLY Shaper having powerful 'down-draught' blower fans on spindle directly under cutters.

#### ADVANTAGES

1—Shavings are sucked down below table; away from your face and eyes.

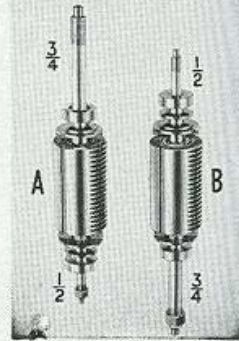
2—Shavings are blown off upper ball-bearing... and clean bearings run cooler.

3—Shavings discharge into interior of our cabinet base. Keeps your shop floor clean.

## CHANGING ARBOR SIZES IS EASY... You Merely Invert Quill

Changing from  $\frac{3}{4}$  to  $\frac{1}{2}$  inch cutter-ARBORS, or vice-versa, is very easy. No tools of any kind needed. All you do is remove V-belt, and crank our quill-unit upward and out of its housing and invert it (A to B). The quill-unit is now replaced into housing and cranked downward as far as it can go. Now just replace the V-belt around that V-pulley which is now lowermost, and you are ready. Very easy, but more important than that, you *know* your cutter runs true . . . is perfectly secure on our solid single-piece arbor.

Notice too that our heavy-duty arbor is driven by doubly powerful TWIN-BELTS. Any single-belt-drive shaper arbor can never duplicate Boice-Crane's TWIN-BELT performance!



### SPECIFICATIONS

Models Available	Floor Model Only	
Table has miter-gauge groove	20" x 27 1/2"	
With Front Table Wing	28" x 27 1/2"	
Table-Opening Diameters	6 1/2", 3 1/2" and 2"	
Widest Bevel Edge Knife Capacity	2 1/2"	
Widest Wing-Type Cutter Capacity	3"	
Largest Diameter Cutter Capacity	6 1/4"	
Vertical Spindle Travel	1 3/4"	
Spindle Diameter at Ball Bearings	1"	
Cutter Arbors: Heavy Duty End	3/4"	
Medium Duty End	1/2"	
Height from Floor to Table	35"	
Power: 1/2 h.p. Cutters 3 1/2" and less.	1 h.p. Cutters over 3 1/2"	
Recommended Speed: 7200 or 10,000 RPM		
Motor Bracket: Takes motors to 1 h.p.	Has quick belt tensioner.	
Controls: Grouped, including switch, spindle raise and lower, and spindle housing lock.		
	Net	Crated
Weight Shaper only	200 lbs.	240 lbs.
Weight Shaper and motor	265 lbs.	315 lbs.

## Has These 4 Exclusive Features!

Boice-Crane is first to combine "modern-design" in a shaper with many super-shaping features. In all, Boice-Crane has FOUR standout features not one of which is found in any other shaper in our price class.

**Feature Number 1 . . .** is the Boice-Crane strong, stiff, accurate, one-piece spindle. The Boice-Crane spindle takes up to 6 1/4" diameter cutters—or fully TWICE the maximum cutter size usually recommended for others in our price class. *Consequently, a Boice-Crane runs cuts twice as deep.*

**Feature Number 2 . . .** This is really a standout feature. Boice-Crane's table-opening measures 6 1/2" diameter. Enables big cutters to be used—and what is most important, they can be lowered below table-level to gain 7 distinct shaping advantages (see next page) and also so all these big practical cutters can be properly positioned vertically in respect to work.

**Feature Number 3. No other shaper has this!** Our table-opening is reduced in its diameter by a series of nested table-rings to make the net opening conform to the various cutters—big, medium, and small—so all sizes have the smallest possible gap around them for greater operator safety.

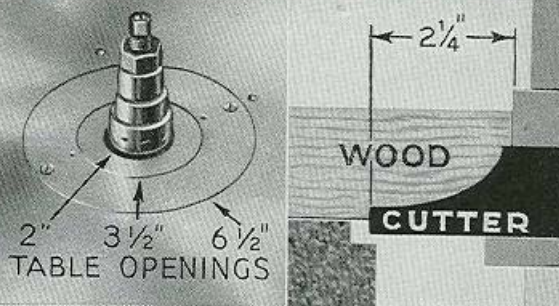
**Feature Number 4.** This feature saves you \$12. You can use your 6-inch dia. Dado Head on the Boice-Crane Shaper (the very same one you use on your power saw) to cut tenons and grooves as deep as 2 3/8". Dado head also lowers below table for deep rabbetting.

The Boice-Crane Shaper is the money-making shaper for commercial shops; the safe, versatile and practical shaper for schools; and is low in price for all, especially for the hobbyists who invest their tool dollars with their eyes open to their ever-growing future needs.



# BOICE-CRANE

## No. 2100 FLOOR TYPE SPINDLE SHAPER



### ... AND HANDLES KNIVES TO 2 1/2" WIDE

In addition to handling solid-wing-cutters to 3 inches wide and from 1 3/4 to 6 3/4 inches diameter on either one or the other of the two Boice-Crane cutter-arbors . . . the Boice-Crane 3/4 inch cutter-arbor is regularly equipped with a pair of conventional notched knife-collars. Thus you are fully equipped to shape with knives to 2 1/2 inches wide—at no additional cost.

### Precision Built SPINDLE . . . and Sealed for Life BALL BEARINGS

The Boice-Crane spindle, 1" dia. at bearings, is ground to precision dimensions and is carried on two very high quality ball bearings of dust sealed, and grease-sealed type. No dust can enter bearings. No grease can leak out. The bearing-seats in the quill-casting, as well as the entire body of quill are all finely ground to precision dimensions. Our spindle stays true even after years of running wide, deep cuts with cutters of a size that would "stop" most shapers.

### No Ordinary Big Cutter "Stops" the Boice-Crane

A Boice-Crane has what it takes to run sash mouldings, wide Chippendale mirror mouldings, deep and wide thumb-moulds, raised-panels and the like . . . in just one single cut. And on cutters like our Nos. 401 to 443 1/2, a Boice-Crane completes the job while most others have barely begun. These are the reasons why sash-and-door, cabinet, school, and furniture shops, and also those many home-shop men who enjoy only the best, have all taken so to Boice-Crane Shapers. It's the best choice for your shop too!

The Boice-Crane Shaper has a maximum table-opening of 6 1/2" dia. which reduces to 3 1/2" and 2" by nesting rings, so every cutter large and small can be run **BELOW THE WORK** to gain the following very important shaping advantages:

1. Safer for operator because work covers the cutter.
2. Cutters are always closer to spindle-bearings. Less spindle strain. Bearings last longer.
3. Should the spring hold-downs fail to completely flatten and straighten out the bow or wave from a board, which can happen on any shaper because all boards are bowed some . . . on the Boice-Crane the work merely lifts up and off the cutter . . . and no bending strain is thrust on the spindle. On shapers where cutter can only be run above the work, spindles often become badly strained.
4. On a Boice-Crane which runs any and all cutters **BELOW THE WORK**, you can not possibly spoil good lumber by shaping **TOO DEEP** when stock is bowed and springs up while feeding. This important Boice-Crane feature saves you plenty of money.
5. Cutters running below the table level leave no fins.
6. With cutters below work, materials can even vary in thickness and still be perfectly and evenly shaped. By contrast with cutters above work, any unevenly thick materials are bound to be unevenly shaped.
7. With cutters below work, a Boice-Crane runs edge-mouldings on material as thick as 12 inches or more as easily as on 1" thick. No extra long spindle-travel is needed to "hike" cutters to top of work.

All these 7 Boice-Crane shaping advantages are made possible by our series of three table-openings. No other shaper in our price class has this advantageous feature.

## 7200 RPM STANDARD MODELS

- No. 2100** Floor type Shaper including outer table ring, 2 notched collars 1 3/4" dia., 3 fill-in collars, starting pin, 6" dia. motor pulley, one No. 1035 V-belt and motor bracket. No motor or cutters. Ship. wt. 200 lbs. . . . .
- No. 485** 1/2 h.p. Repulsion-Induction Ball Bearing Motor, 110-220 volt, 60 cycle, 1750 r.p.m., 1 phase, A.C. with drum type switch, for one-way operation. Ship. wt. 66 lbs. . . . .
- No. 2120** Complete One-Way Shaper as itemized above. Ship wt. 315 lbs. . . . .
- No. 487-A** 1/2 h.p. Motor, electrically reversible, with reversing drum switch, for 110 volts only. Ship wt. 66 lbs. . . . .
- No. 487-B** Same as 487-A except for 220 volts only . . . . .
- Prices of 1 h.p. motors, 1750 r.p.m., 1 and 3 phase, on page 20.

**IMPORTANT NOTE:** The reversible shaper with reversible type cutters is recommended for fastest possible production. This permits always shaping with the grain without change of setup. Some production plants prefer two Boice-Crane Shapers, each running in opposite directions using opposite-hand one-way knives.



## 10,000 RPM SPECIAL MODELS. NEW!

Woodworking plants in Oregon, Washington, Michigan and North Carolina, etc., all centers of most progressive methods of wood product manufacture in the entire world, use Boice-Crane Special 10,000 RPM Shaper. The higher spindle speed gives 33% to 50% faster production, and does the work about 50% smoother. This is easily understandable, because at this high spindle speed, a 3 3/4" diameter cutter attains a peripheral speed at the cutting point of over 100,000 inches of velocity per minute. Actually easier on cutters . . . than slower speeds.

- No. 2150** High Speed, 10,000 RPM Specially Built Spindle Shaper including outer table ring, 2 notched collars 1 3/4" dia., 3 fill-in collars, starting pin, 6" dia. motor pulley, two No. 1036 V-belts for powerful twin belt drive motor bracket. No motor or cutters. Ship. wt. 200 lbs. . . . .

- No. 2151-A** Motor, 1 H.P., Ball Bearing, 3450 r.p.m., reversible Repulsion-Induction, reversing drum switch, for 60 cycle, one phase, 110 volts only. Ship. wt. 85 lbs.
- No. 2151-B** Motor, same as No. 2151-A except for 220 volts only. . . . .
- No. 2155-A** Motor, 1 HP., for 220 volt 3-phase and 3-phase switch. Otherwise same as No. 2151-A. Ship. wt. 55 lbs.
- No. 2155-B** Motor, 1 HP., for 440 volt, 3-phase and 3-phase switch. Otherwise same as No. 2151-B. Sh. wt. 55 lbs.

Above motors for No. 2150 High Speed shaper only.

Table-wing extension makes table 28 x 27 1/2 inches, with 19 1/4" in front of spindle to firmly support wide panels, and long pieces being end-shaped. Center hand-wheel of fence moves both fence-plates forward or back together. The side wheels move each fence-plate independently.

Motor mounted on pivoted bracket. Quick locking screw sets and maintains proper belt tension.

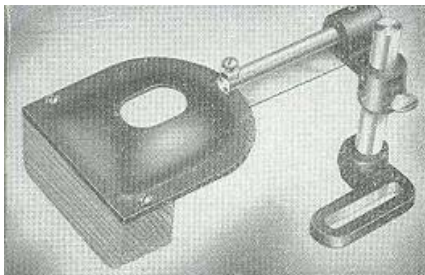
**No. 2136** Table-Wing Ship. wt. 35 lbs. . . . .

**No. 2132** Inner Table-Ring, Ship. wt. 2 lbs. . . . .

**No. 2106** Guard over motor-pulley and belts. Ship wt. 12 lbs. . . . .

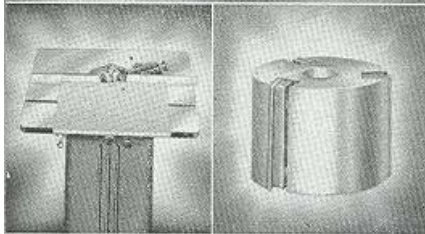


# SHAPER SUPPLIES AND ACCESSORIES



**No. 2131** Guard and Hold-Down for all Boice-Crane Shapers Nos. 2100, 460, and 560. Complete, ready to attach. Ship. wt. 7 lbs. ....

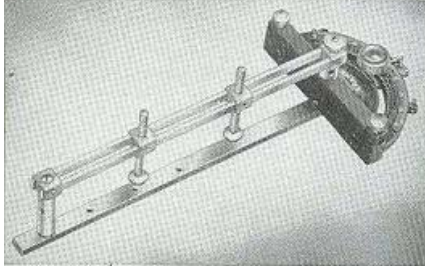
Here is really a guard that makes shaper operation safe for anyone. Same type used in mills for years. Quickly adjusts to thickness of work. Pressure on work under operator's control. Does not obstruct view of work. Wood face prevents scoring the material.



**No. 2103** Jointer Head with 3 sharpened high speed steel knives and wrench. Ship. wt. 3 3/4 lbs. ....

Make your Boice-Crane Shaper an efficient Jointer with this low price Jointer Head. Better than a jointer for wide materials. Edges and shapes in one operation saving band sawing and sanding. Highest grade steel for safe high speed use. Three 2" wide knives securely held by taper wedges. Fits previous Boice-Crane Shapers and No. 2100, or any make with 3/4" dia. spindle.

**No. 2104** 3 required, 2-inch wide sharpened knives. Ship. wt. 3 oz. ....each

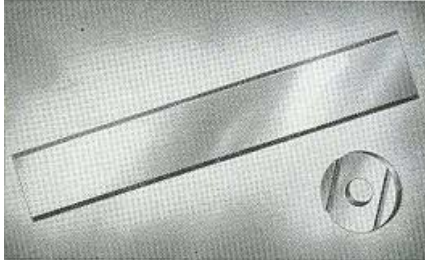


**No. 2502** "Auto-Set" Miter Gauge complete with end-stop rods and wrench. Ship. wt. 4 1/2 lbs. ....

Our famous "Auto-Set" Miter Gauge becomes a very handy device for shaping across end-grain on short, narrow pieces. An extra protection for the operator too, and saves spoiled work at the end of the cut when bearing on the fence is reduced.

**No. 2503** Clamp Attachment for No. 2502 Miter Gauge Pat. No. 1,894,010. Ship. wt. Not 1 1/2 lbs. ....Available

No. 2503 Clamp Attachment still further assists feeding on end-grain shaping. Leaves nothing for the operator to do, but feed the work.

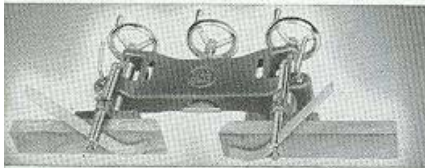


**Notched Shaper Collars**  
3/4" Hole Per Pair  
No. 2118 1 3/4" dia. ....  
No. 2119 2 1/4" dia. ....  
Ship. wt. 1 1/2 lbs.

Boice-Crane Shaper Collars are truly precision made. Every one carefully trued, ground, then balanced into pairs. Grooves carefully machined too so knives are clamped with equal pressure.

**Bevel Edged Knife Stock**  
No. 2115 1" x 3/4" x 12" long  
No. 2116 1 1/2" x 3/4" x 12" long  
No. 2117 2" x 3/4" x 12" long  
Ship. wt. 1 1/2 lbs.

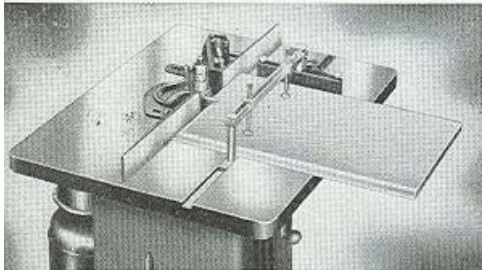
Our Knife Bar Stock is fine high-speed steel from which you can make special pattern knives at low cost. Accurately bevelled and uniform thickness for finely balanced, easy to grip knives.



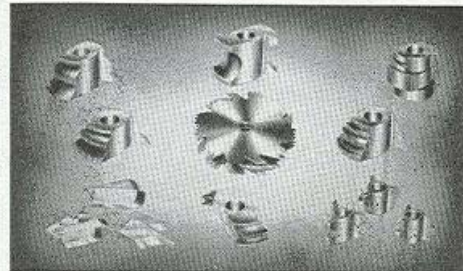
**No. 2130** Fully adjustable Fence for Boice-Crane No. 2100 Shaper. Ready to attach. Ship. wt. 25 lbs. ....

Bigger, more durable, more practical. Runs more jobs with bigger range of cutter diameters. Full 27 inches of guiding surface. Each face 2 1/4" high. Screw, micrometer adjustment on each face, also on complete guide. Adjusts for any cutter 1" to 6 1/2" diameter. Hold-downs available at slight extra cost.

**No. 2133** Pair of Hold-downs. Ship. wt. 3 lbs. ....

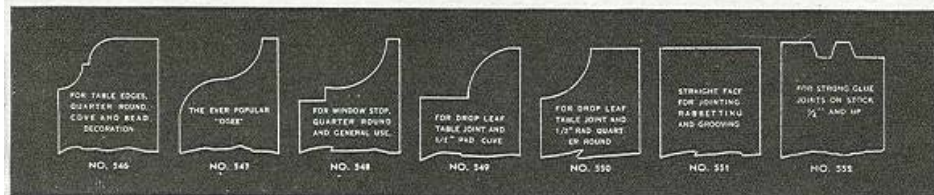


Extra large table with spindle scientifically placed close to its center—a very important feature. Provides plenty of table behind spindle to give firm support to work of big sweep, as well as work being dressed inside. Table has a removable throat ring. Miter gauge and clamp attachment, too, for safety and accuracy on end shaping.



Large cutters, small 3-wing cutters (see page 31), sash cutters, bevel edged knives, dado heads, grooving and slitting saws, jointer heads—are all instantly useable.

**No. 843** Dado Head 6" x 1 1/2" 3/4" bore .....



FOR TABLE EDGE, QUARTER ROUND, COVE AND BEAD DECORATION  
NO. 546

THE EVER POPULAR "OGEE"  
NO. 547

FOR WINDOW STOP, QUARTER ROUND AND GENERAL USE.  
NO. 548

FOR DROP LEAF TABLE, JOINT AND 1/2" AND COVE  
NO. 549

FOR DROP LEAF TABLE, JOINT AND 1/2" RAD QUARTER ROUND  
NO. 550

STRAIGHT FACE FOR JOINTING, RABBETING AND GROOVING  
NO. 551

FOR STRUTS GALE JOINTS ON STOCK 7/8" AND UP  
NO. 552

Above are Bevel Edged Knives. Every shape of high decorative value. These knives have extra clearance, cut fast and clean. Leave no splinters or feathery edges. Easy to use. Versatile. Any part of shaper usable alone, and only one size collar needed. Sharpened.

Nos. 546, 547, 548, 549, 550, 551, 552, Bevel edged Shaper Knives. Price of each pattern, per set of 2 knives. Ship. wt. 8 oz. ....  
**No. 553** Complete set of 7 pairs .....

## 1 H.P. MOTORS

For 7200 R.P.M.

### No. 2100 SHAPER

Prices include two No. 1035 V-belts for powerful twin-belt drive.

ONE-WAY ROTATION MOTOR including drum switch.

No.	Phase	Voltage	Price
2109	1	110 or 220	

REVERSIBLE ROTATION MOTOR with Reversing drum switch. (Motors below are for single, indicated voltage only).

No.	Phase	Voltage	Price
2111-A	1	110	
2111-B	1	220	
2124-A	3	220	
2124-B	3	440	

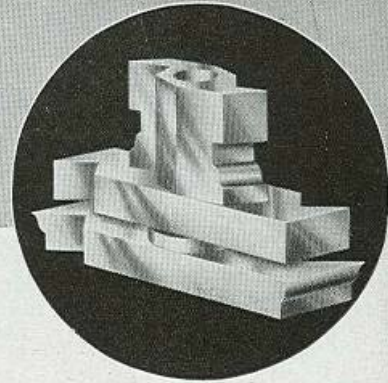
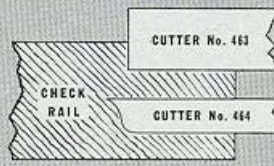
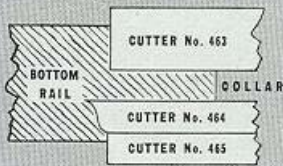
All above motors are for 60 cycle, and are Ball Bearing, Repulsion-Induction, one-shaft, 1750 r. p. m.



# FACTORY SIZE QUALITY CUTTERS

This is only a brief listing of cutters we can furnish from stock. Write for complete Bulletin S-1. Make us your cutter headquarters.

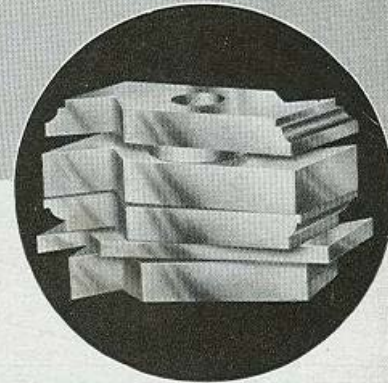
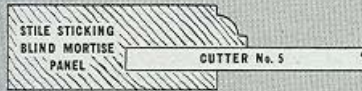
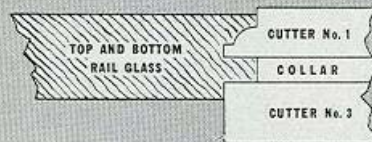
We also make special cutters, one way or reversible to exact shape you need. Send sketches and we will quote on first quality cutters.



## SASH CUTTER SETS

This complete cutter set turns any shaper into a machine for making fine commercial sash. Big money maker. Cuts all sash 1 1/2", 1 3/4" and 1 3/8" using same size ogee and 1/4" tenon. Two-wing cutters 3" to 6" dia. for faster, cleaner cutting. Recommended speed 7200 r.p.m.'s. Easy to sharpen. Order a set!

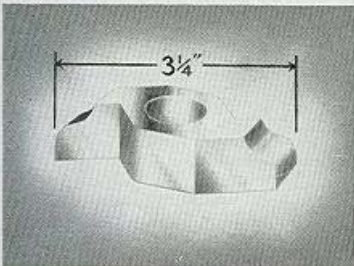
No. 2112 Sash Cutter Set. Nos. 464 and 465 made as one cutter. DOES NOT CUT CHECK RAIL. 1/2", 3/8", and 3/4" bores.....  
 No. 2112A Same, but Nos. 464 and 465 made separately FOR CUTTING CHECK RAIL ALSO..



## CABINET CUTTER SETS

Handiest Shaper Cutter set to own for edge work, sticking, coping in general cabinet and special furniture work. Don't confuse with small, thin cutters. Ours have thick wings—last for years. Easily sharpened. Large diameter for faster, cleaner cutting. 2 sizes and shapes. 1/2", 3/8", 3/4" bores. Recommended speed 7200 r.p.m.'s.

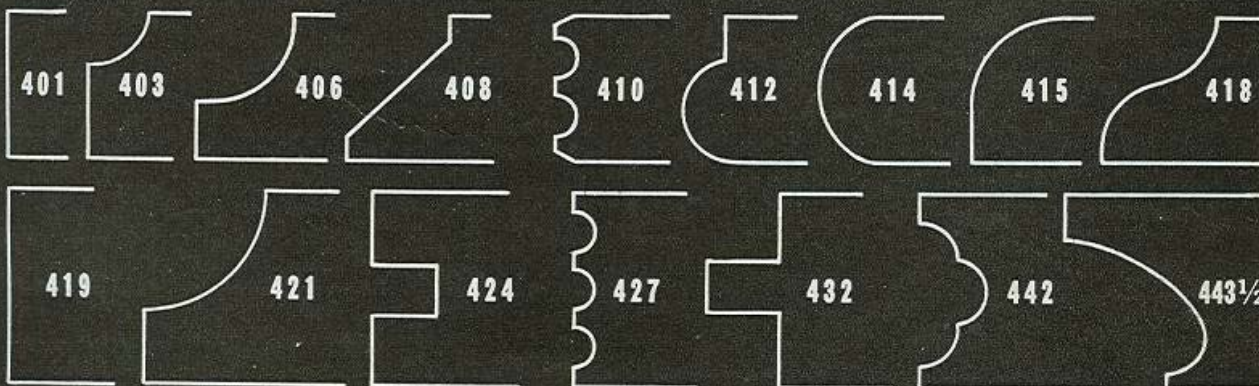
No. 2113 Standard Cabinet Set, with 4 Cutters 3 1/4" dia. and collar. Ogee Pattern only. Ship. wt. 4 lbs.  
 No. 2114 Champion Cabinet Set with 5 cutters 4 1/2" dia. and collar. Ovolo Pattern. Heavy Duty. Ship. wt. 5 lbs.



## FACTORY SIZE TWO-WING CUTTERS

Our new "400" Two-Wing Cutters are same as used in mills for years, at about half the usual price. Carefully tempered High Carbon Tool Steel. Perfect grinding. Cut fast—clean. Authentic patterns. Shown are a few stock shapes. Write for Bulletin S-1 for complete listing. Dozens of additional patterns in three widths. When ordering specify 1/2", 3/8" or 3/4" bore.

	3/4"	1"	1 1/4"
Straight Cutters, ea.....	No. 401	No. 419	No. 435
Standard Shapes, ea.....			
No. 443 1/2 Thumb Mold Cutter 3 3/4 dia.....			
Standard Bores 1/2", 3/8" and 3/4". Extra charge for other bores. Specify bore when ordering.			



TOP ROW ARE 3/4" WIDE CUTTERS • BOTTOM ROW ARE 1" WIDE CUTTERS • FULL CUTTER LINE SHOWN IN BULLETIN S-1



# NOW...A SAFE, STEEL-CLAD BAND SAW

## BOICE-CRANE

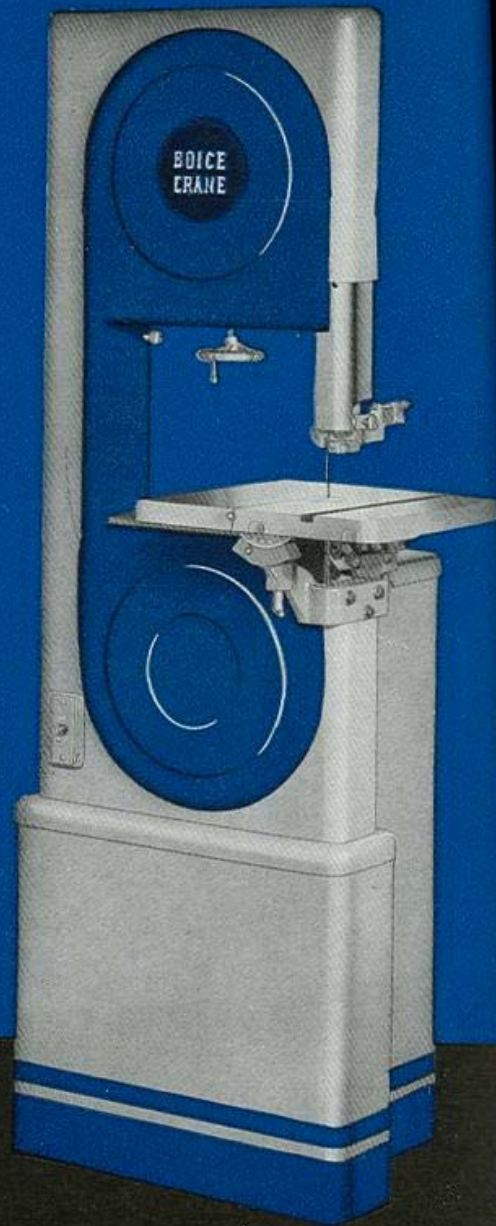
MODEL 2300

## BAND SAW

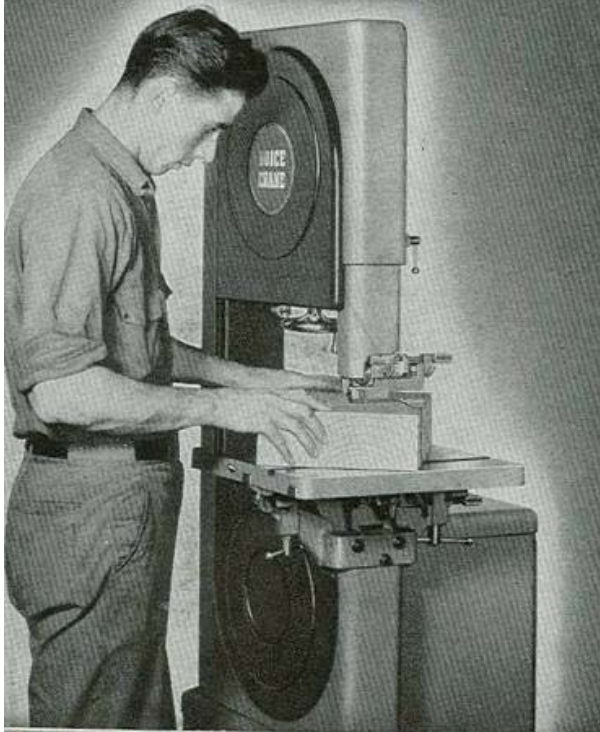
### SPECIFICATIONS

SAWING CAPACITY: Blade to guard. 13½"  
 Guide to Work Table.....85%"  
 TABLE: Tilts on Double-Trunnions  
 45° to right; 10° to left. 15" x 15½"  
 HEIGHT OVERALL of Floor Model....67"  
 HEIGHT OF WORK-TABLE from  
 Floor.....39½"  
 OVER-ALL WIDTH 27½". Overall  
 depth.....29"  
 BLADE WIDTHS: 3/16, 1/4, 3/8, 1/2, and 3/4"  
 LENGTH OF BLADE.....98"  
 WHEELS: Disc. Moulded Textolite.  
 14" dia. 1" face. Weight 40 ounces.  
 BEARINGS: Grease-sealed Ball Bearings.  
 FRAME: Heavy Welded-Steel Construction.  
 BLADE-SPEED at 1200 rpm: 4400 ft.—min.

NET WEIGHTS (All weights less motor.)	No. 2304 Belt-Drive	No. 2300 Direct-Motor-Drive	No. 2308 Gear-Box 3-Speed Drive
Bench Models:	157 lbs.	154 lbs.	213 lbs.
Floor Models:		255 lbs.	313 lbs.



Patent No. 2347764  
 Patent No. 2347765  
 Design Patent No. 131216



*Here* is the finest 14-inch band saw in any 1944 Power Tool Catalog. It has that "years ahead" kind of engineering that the woodworking trade expects, and gets, in Boice-Crane Tools. We spent thousands in research, planning, designing, and testing to give you a band saw performance never attained before.

**More Safety.** Steel-clad design makes it the safest band saw built. The kind that State Safety Commissions give top rating. Best for schools, homeshops, and industry.

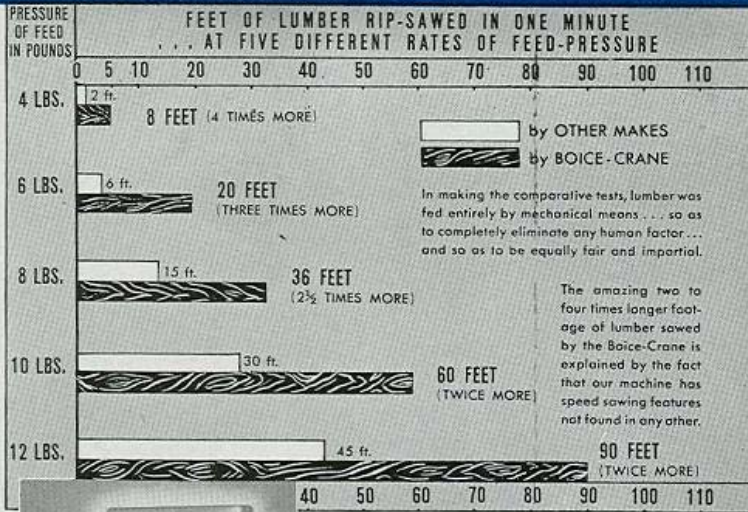
**Faster.** Cuts two to four times faster! This means the new Boice-Crane turns out two to four times more work for the same labor cost. Think of the big money saving!

**Smoother Cutting.** Its super sawing smoothness saves sanding labor on every cut. A second important money-saving feature.

**Easier to Use.** On the following pages you find part after part, and feature after feature designed to accomplish one object—to make band-sawing with a Boice-Crane the easiest, safest, and fastest job in your shop!



# SAWS EASIER • SMOOTHER • 4 TIMES FASTER . .



Actual tests prove that a Boice-Crane Band Saw saws from **twice to four** times more lineal feet of lumber in a given time than any other 14-inch band saw built and averages **three times faster** to make tremendous savings in time, labor and money for every user.

If you use a band saw 3 hours a day in your shop, a Boice-Crane saves you at least \$250 per year. In other words, it pays for itself in 3 to 6 months.

The comparison chart at left shows the results from these actual tests. Study the facts. Keep in mind that fully 80% of all your band-sawing is done with feed pressures of 4, 6, or 8 pounds . . . so you can use it most where the Boice-Crane effects the very greatest increase in output, and where it produces the greatest profit.



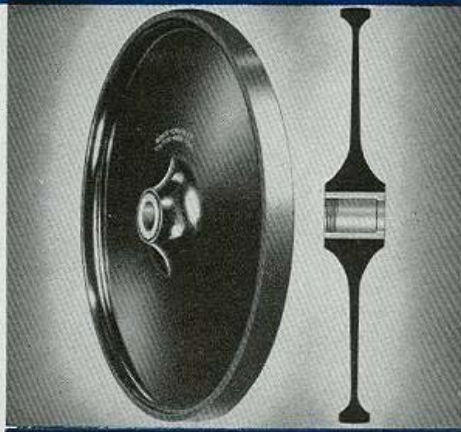
It is easy to see why Boice-Crane band-sawing is as fast as we say, when you realize that Boice-Crane wheel speed is 1200 rpm; blade speed is **4400 feet per minute**.

Other 14-inch band saws have a wheel speed of only 600 rpm or thereabouts, presumably because their wheels of pressed steel or cast iron, weighing 12 to 16 pounds per pair, cannot be rotated any faster without over-straining blades to the breaking point.

### New Lightweight Molded Wheels

Boice-Crane Engineers have designed a solid disc-wheel of tremendous strength and have moulded it in a scientifically proportioned section of maximum strength per unit of material. To lighten our wheel still more we selected TEXTOLITE, one of the strongest—lightest weight materials known. As a result, the Boice-Crane wheel weighs only 2½ pounds, a mere 5 pounds per pair. No sacrifice in wheel strength. Years longer ball-bearing life. Still another major improvement! Even running our wheel at 1200 rpm., the resulting blade-strain on Boice-Crane blades is 20% to 40% LESS than has been accepted as permissible on other machines which may rotate at 600 rpm.

Unquestionably, the Boice-Crane TEXTOLITE wheel and new all-welded steel frame are the most outstanding advancements in band saw design ever announced!



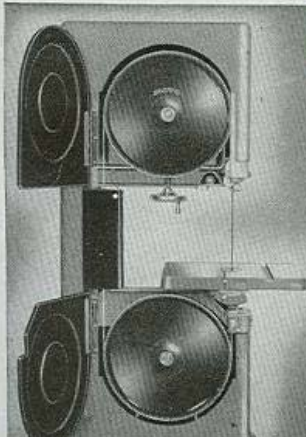
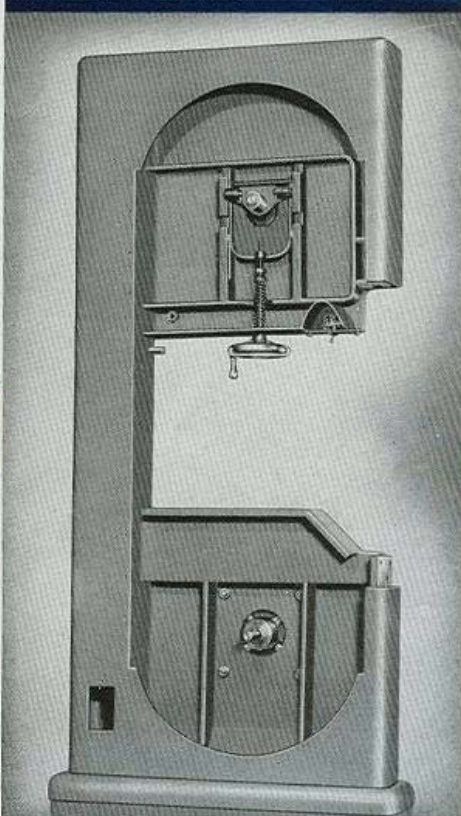
Good looking from the rear too. All mechanisms, motor, etc., are fully enclosed. No ugly cross-arms, or exposed moving parts.

Notice unique Instruction-Plate affixed to machine. Its directional arrows show proper lever movements in tracking and in tensioning blade. Eliminates guesswork. Its scale tells exact amount of tension to use.

### INDUSTRY'S NEWEST ACHIEVEMENT—WELDED STEEL MACHINE FRAMES

The entire framework, which you see in photo at right, is joined solidly together by thorough electric welding to make a single, one-piece steel structure of gigantic strength and stiffness that knows no vibration. The interior of frame is very smooth—easy to keep clean and sanitary too, when used to cut food products. The steel bulkhead at back of lower wheel-compartment separates motor from all dust and grime and protects motor from any damage.

Now for another feature that saves time aplenty, and prevents accidents! Wheel-Guard is a single, hinged door unit and to open it you remove just one knob-fastener, instead of as many as four on some. Boice-Crane Wheel-Guard is never taken off—and it must be closed before you can operate machine. Both wheels are guarded on 5 sides by frame itself.





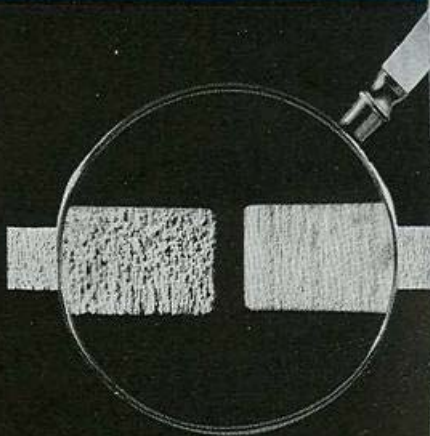
# .LEADS THE FIELD IN PERFORMANCE!

The smoother sawing obtained on a Boice-Crane saves you hours of tedious sanding labor, otherwise necessary on all your fine work. And there is where a Boice-Crane piles up *extra* profits for you year in and year out. This alone makes a Boice-Crane your best buy—and on top of that you have extra savings from faster sawing.

In 32 years of power-tool building, we've never found even a high priced, large band saw that cut any faster or smoother. And in the low price field the Boice-Crane stands alone—the finest, most modern, fastest, smoothest cutting, and money savingest band saw you can buy.

**This unretouched actual photo (made thru reading glass) illustrates better than words the far greater smoothness of cut produced by Boice-Crane Band Saws.**

**Work sawed by Boice-Crane needs little, if any sanding.**



## Telescope Guard Covers Blade on ALL SIDES!

The Boice-Crane Telescoping Blade-Guard completely surrounds blade by a solid sheath of heavy steel. Our blade is guarded . . . all the way around the front . . . along the entire outer side . . . and completely around the rear of blade as well. In most others, the rear of the blade and fully half the outer side of blade is usually left wide open . . . and entirely unguarded. Only Boice-Crane Band Saws offer the complete guarding protection that you see here.

Our construction is extra strong, too. The telescoping guard is joined to the vertical slide-bar by a strong 12-inch long arc-welded joint to make these parts into an inseparable unit of utmost strength and stiffness. With such massive strength as this, our telescoping guard can take severe accidental blows and still never sag or deflect against blade, as so commonly occurs on other makes when their screw-fastenings loosen.

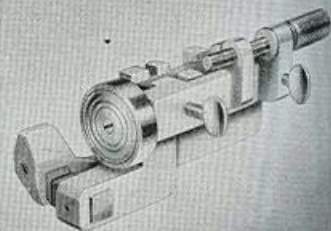
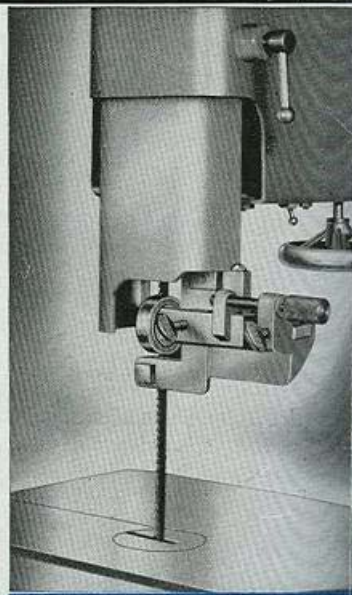
The Boice-Crane Telescoping Guard is held friction-tight in its ways by a compression spring. Consequently when you release lock handle, the guard does not drop, but stays in place until you are ready to reposition it. The guard also covers and shields the Blade-Guides from accidental blows.

## Blade Guides Firmly Set—Stay Set Till Unlocked

Boice-Crane Blade-Guides are styled to harmonize with the rest of the machine. The Ball bearing roller, and the Hardened Steel Jaws are mounted on individual slide-castings. Each of these adjust separately to proper relationship with blade with micrometer accuracy . . . by means of a convenient readily accessible *single knob* control. The adjustment of roller does NOT alter the precision adjustment of the side-jaws . . . or vice-versa. Adjustments to both are made secure against creeping by individual thumb-screw locks. Adjustments may be made with full safety, even when machine is running. Our double-seal ball-bearing roller is extra large in diameter so when contacting our high-speed blade, the large roller rotates relatively slow . . . for longer life. These guides are supplied both above and below table as regular equipment.

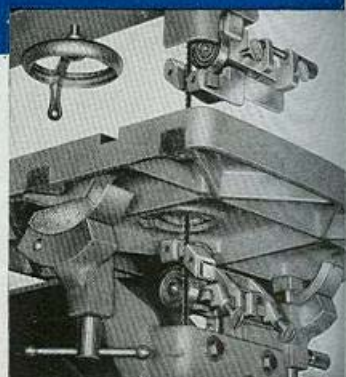
**No other guide has all five of these features:**

1. One Knob Control.
2. Independent Micro adjustment.
3. Anti-creep locks.
4. Large Roller.
5. Modern styling.



## TABLE RIGIDLY HELD ON DOUBLE-TRUNNIONS AND BLADES SLIP IN FROM FRONT—THE BEST WAY

The table, 15" x 15½", is rigidly supported on two large trunnions. With one trunnion at front, and one at rear, no portion of table can ever sag or vibrate under heavy cuts. The blade-entry-slot, leading forward to front edge of table . . . the only really acceptable direction for a quick and easy installation of every blade . . . just clears left side of our solid front trunnion without cutting through or weakening it in the least. Table tilts 45 degrees to right, 10 to left. Has 90° Locating Stop. Front and rear trunnion-locks clamp table securely. Degree-scale and pointer indicate degree of tilt. Removable throat-piece is keyed within its opening so it cannot strike blade. Tapered dowel pin at front of entry-slot holds table true.





# THREE MODELS FOR WOODWORKING

## DIRECT-MOTOR-DRIVE BALL BEARING

Here you see the model most popular among woodworkers . . . the Boice-Crane Direct-Motor-Drive Band Saw. Available in bench or floor type. Neat and trim looking. Most efficiently powered. Lower wheel is keyed directly to shaft of motor. No gears, no belts, no couplings, no unnecessary parts to wear. No power wasted. All power goes directly into work, and what a wonder-worker it is! It saws faster, smoother and runs so quietly you scarcely know it is running. You *must* see the Boice-Crane to fully appreciate it.



Large steel Cabinet-Stand subtends big floor area. Gives machine staunch footing. Also makes a completely sealed-off, dust free compartment for motor, and safeguards motor from falling objects. Interior of cabinet makes a nice place to store extra blades.

**Direct-Motor-Driven, 14-Inch Band Saws**  
Including one  $\frac{3}{8}$ -inch wide wood-sawing blade . . . but less motor. These models require Direct-Drive Motors, Nos. 2311, 2318, and 2319 listed below.

**No. 2300** BENCH Model, Direct-Motor-Drive Band Saw.  
Ship. wt. 250 lbs. . . . .

**No. 2301** FLOOR Model Direct-Motor-Drive Band Saw.  
Ship. wt. 395 lbs. . . . .

### DIRECT-DRIVE MOTORS

No.	H.P.	Voltage	Cycle	Phase	Price
2311	$\frac{1}{2}$	110-220	60	One	
2318	$\frac{3}{4}$	220-440	60	Three	
2319	1	220-440	60	Three	

Average Shipping Weight 75 lbs.

**Be SURE to specify single VOLTAGE for switch connections. Direct-Drive motors for 50 cycle, A.C.; and for Direct Current . . . write for prices.**



A highest quality toggle-switch neatly mounted on front of machine in easy reach of operator . . . see front view . . . and a ten-foot cord and plug, both fully connected are included equipment with one-phase, direct-drive motors. On 3-phase, the cord and plug are omitted.

## V-BELT DRIVE MODELS Use 1750 r. p. m. Motors

We recommend our Direct-Motor-Drive Band Saw to everyone. From the very outset, we believe, it is the cheapest way to buy and the most efficient to use. These V-Belt-Drive Band Saws are offered to meet the need of certain woodworkers who drive from gas-engine, lineshaft, or from a 1750 rpm motor they already own. A bench model is offered for those who want to build their own floor stand to suit their particular needs. These belt-drive band saws have lower wheel on a ball bearing mandrel, and a 6-inch diameter v-pulley.

**SUITABLE MOTORS**  
Nos. 1455 and 1457 page 47, and Nos. 2345, 2346, 2348 and 2349, page 27.

**No. 2304** Bench Model, 14-inch Belt-Drive Band Saw with  $\frac{3}{8}$ " wide blade and 6" diameter v-pulley. Ship. wt. 250 lbs. . . . .

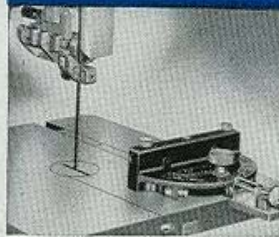
**No. 2310** Floor Model, otherwise same as No. 2304. Ship. wt. 395 lbs. . . . .

**No. 1014** V-pulley, 4" dia. for motor . . . . .

**No. 1060** V-Belt, 60" circumference . . . . .



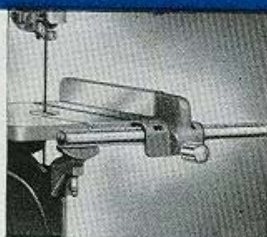
## MITER GAUGE • RIP FENCE • WORK LAMP • BLADES • TIRES



The very same miter gauge as used on Boice-Crane No. 2500 Saw and No. 2100 Shaper is also used with the band saw, interchangeably.

Very handy and valuable for cutting precise miters and angles in wood. A clamp attachment (see page 3, catalog) secures work from creeping, and assures accuracy.

**No. 2502** Miter Gauge. . .



Very valuable accessory. Guides material up to 12 $\frac{1}{2}$ " wide. Fence control is same as on No. 2500 Saw-fence. No rear lock. An "inch-scale" indicates width of cut. Front bar never need be removed to change blades.

**No. 2302** Rip Fence with 18" long front and rear bars. Ship wt. 18 lbs. . . . .

**No. 2303** Same but with 32" bars. Ship. wt., 23 lbs. . . . .



Concentrates a bright spot of light directly on the cutting point. Enables sawing to a line easily and with accuracy. Excellent for night work or for dark shops.

**No. 2321**

Work Lamp Attachment, Including reflector, socket, switch, and cord and plug. Shipping wt. 2 lbs. . . . .

**No. 2322** Lamp bulb for 110 volts. Ship. wt., 4 oz. . . . .

The following blades, 98 inches circumference, are proper length for No. 2300 Band Saws ONLY . . . and are NOT for former model No. 800 Band Saws.

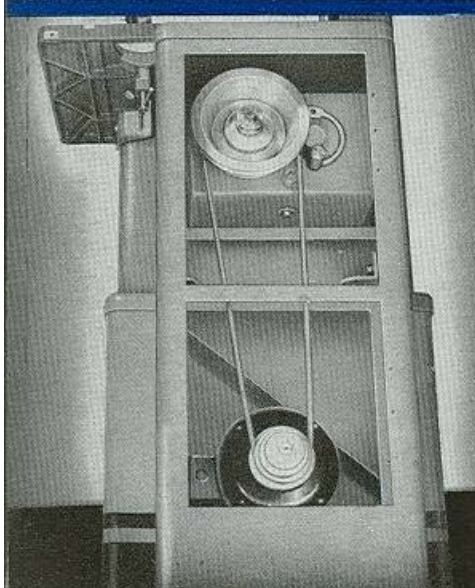
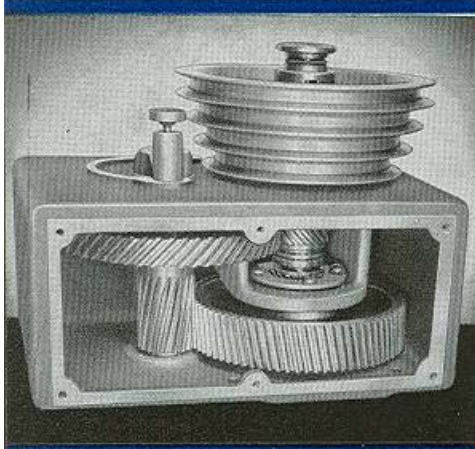
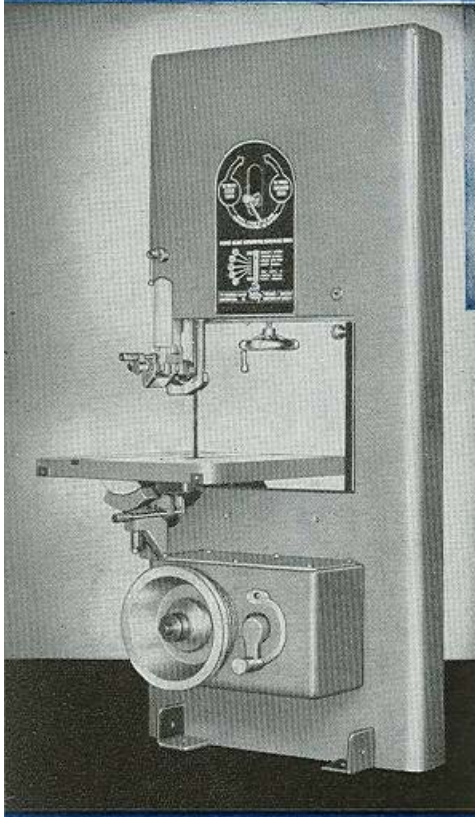
Wood Saws	Cat. No.	Blade Width	Cat. Metal No. Saws
	2375	$\frac{3}{16}$	2385
	2376	$\frac{1}{4}$	2386
	2377	$\frac{3}{8}$	2387
	2378	$\frac{1}{2}$	2388
	2379	$\frac{3}{4}$	2389
Average Ship. Wt. 1 $\frac{1}{2}$ lbs.			


**No. 2305** Rubber Tire. Ship. wt., 8 oz. ea.

**No. 2306** One-Pint Can Tire Cement. Ship. wt. 2 lbs. Special Blades in various temper and cutting teeth can be furnished for all sorts of materials. Consult Boice-Crane Engineers on your sawing problems. No obligation.



# 8-SPEED MODELS FOR CONTROLLED CUTTING



8 SPEEDS IN ALL	GEARS OUT OF MESH 1 to 1 Ratio		GEARS IN MESH 1 to 17 Ratio	
	Wheel Speed RPM	Blade Speed Ft/Min	Wheel Speed RPM	Blade Speed Ft/Min
		1120	4100	70
	890	3260	50	183
	660	2420	35	128
	450	1650	25	92

The new 1944 Boice-Crane Metal Sawing Band Saw has 8 speeds . . . one to suit every kind of blade and to efficiently saw every kind of material. Available in bench and floor models. *Not* a former wood-sawing model converted as an afterthought to do metal sawing with a lot of "babying" along. The Boice-Crane is entirely new from the ground up, a thoroughly-proved metal sawing band saw in every part, feature, and in performance.

The Boice-Crane has an all-welded steel frame of gigantic strength and stiffness—a distinctly better frame—a frame that knows no vibration or tremor under heaviest metal sawing—a frame so strong that the very heaviest feed-pressure won't cause it (or blade) to yield backwards the smallest fraction of an inch. It's the very same kind of frame that you see in big expensive metal-sawing band saws for which you would expect to pay \$500 or more.

The strong Boice-Crane frame most firmly "backs-up" the big blade-guide roller, and the saw-blade. Under heaviest metal sawing, and heaviest feed-pressure, the Boice-Crane blade runs dead-true, saws true, and saws metals swiftly.

## HANDY GEAR-SHIFT LEVER

### Alters Speed to Suit Any Material

The Boice-Crane Gear Box, which drives lower wheel, is precision built. You can tell it is high quality, because it contains no less than *seven* anti-friction—two regular type, one ball-thrust bearing, plus four needle-roller bearings in addition. Every one is large size and has ample load-capacity for continuous service.

A mere flip of the gear-shift-lever produces an extra series of speeds—a total of 8. A clutch disengages gears entirely at the four highest speeds. The helical gears are  $1\frac{3}{8}$ " and  $\frac{3}{4}$ " wide and have heavy 12-pitch teeth; they transmit as much as one horse-power at lowest speed with a large margin of safety. The Gears are properly proportioned to distribute the slight wear over all the teeth evenly; and this results in years of *extra life*. All gears run in oil.

## SAFETY-SEALED POWER!

In the view at the left, you look into the rear of the all-steel floor cabinet of the Boice-Crane floor model Gear-Box Driven, Metal-Sawing Band Saw. Through the large hinged door, the gear-shift-lever and V-belt are easily accessible for speed changing. All gears run in a bath of oil. Gear box is sealed by a gasket and cover plate. Special leather oil-seals stop any seepage of oil along the shafts that protrude. Both oil-filler, and oil-drain plugs are also accessible through door.

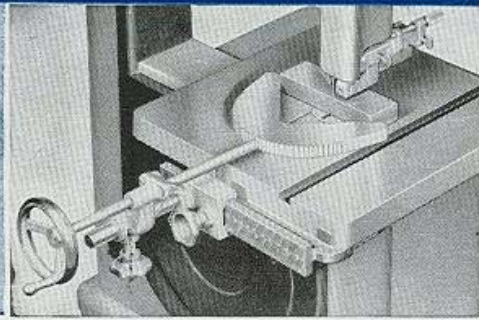
The gear-box unit and motor are both entirely contained within the protective walls of cabinet, and both are entirely sealed off from any dust or grime. Door has a convenient handle. Two spring-latches hold door snugly shut. The door shields all rotating parts . . . the belt, both pulleys, and the motor-shaft. Nothing remains exposed to endanger workmen or passers-by. Rear of machine is smoothly and handsomely styled.



# OF ALL GENERAL MATERIALS IN INDUSTRY

**IRON & STEEL**  
**BRASS & COPPER**  
**ALUMINUM & ZINC**  
**BRAKE LINING**  
**MEAT & FISH**

**PLASTICS**  
**BUILDERS' BOARDS**  
**CASTING SPRUES**  
**FIBER & PAPER**  
**WOOD & PLYWOOD**



In large industrial plants, the Boice-Crane takes over large quantities of medium and small sized jobs of metal sawing—and thereby frees your big high-overhead machines for the bigger jobs. Use it on "inside" cutting jobs too by simply ordering our inexpensive automatic blade welder. Thus Boice-Crane enables big machines to earn MORE than they normally could . . . and Boice-Crane (don't forget) makes this *extra* profit possible.

The above savings alone quickly pay for a Boice-Crane. In addition, Boice-Crane earns a very handsome regular profit upon its own sawing. For, Boice-Crane is better suited to, and actually performs many smaller jobs of metal sawing . . . easier, better and faster . . . at less power consumption, lower machine overhead rate . . . and at considerably lower net cost than on big machines.

At our amazingly low price, a battery of 6 to 10 Boice-Cranes cost no more than some single machines of big size. A good portion, perhaps all your work is within the capacity of a Boice-Crane. A ten-day trial is all we ask. May we show you? Just wire your trial order today.

## NO PERFORMANCE LIKE THIS BEFORE AT SO LOW A PRICE!

### MOTORS for Gear-Box Drive

No.	H. P.	Voltage	Cycle	Phase	Price
2345	3/4	110-220	60	One	
2346	3/4	110-220	60	One	
2348	3/4	220-440	60	Three	
2349	1	220-440	60	Three	

Average Shipping Weight 75 lbs.

A toggle switch is neatly mounted flush on front of machine, see front view illustration, and a ten-foot cord and plug . . . all of which come fully connected to motor . . . are included equipment with one-phase motors above. On 3-phase motor the cord and plug are omitted. Above are 1750 rpm, ball-bearing motors.

Motors for 50, 40, 30, and 25 cycles, A.C.; and for Direct-current are also available . . . write for prices.

The Boice-Crane No. 2307 Screw-Feed for metal cutting includes a segment that holds all shapes securely without further clamping . . . square, hexagonal, and round.

Similar screw-feed devices lack a very important extra feature you find in the Boice-Crane . . . namely a swivel, compensating adjustment to quickly and easily match the actual feed direction to the "natural lead" of any blade. With this extra adjustment, straight cuts are assured with our device . . . operator has complete control over cut at all times and blade life is lengthened too.

A lateral adjustment to lead-screw provides easy means for sawing accurate curves. The rotating hand-grip on the large crank makes continuous feeding smooth and effortless. The half-nut lifts off lead-screw so long movements can be made quickly.

With this screw-feed, the Boice-Crane cuts 1-inch thick cold-rolled-steel at the rapid rate of 2 lineal inches per minute! Big machines seldom saw faster.

### 8-SPEED BAND SAWS

Including gear-box drive unit, complete with 4-step vee (drive) pulley; one 3/8" wide metal-sawing blade; No. 1058 V-belt; and No. 1101 4-step pulley for motor shaft. Less motor, and screw-feed device.

**No. 2308** BENCH Model, 8-Speed Band Saw  
 Ship. wt. 313 lbs.

**No. 2309** FLOOR Model, 8-Speed Band Saw  
 Ship. wt. 455 lbs.

**No. 2307** Screw-Feed Device complete . . .  
 Ship. wt. 16 lbs.

**No. 2312** Automatic Electric Blade Butt-Welder . . .  
 A necessity for inside cutting on dies, blanks, and production parts. Greatly enlarges work range of your metal cutting band saw. Complete—welds, anneals, vise for removing flash. Efficient too. Handles all blades to 3/4" wide. Ready to plug in. 110 v., 60 cy., 1 ph., A. C. Ship. wt. 50 lbs.

## FORMER NO. 800 BAND SAW ACCESSORIES

Thousands of customers throughout the world know the sterling performance of this former No. 800 Boice-Crane Band Saw. Discontinued now, but Boice-Crane assures all owners that we will continue to carry saw-blades, tires, and replacement parts in our stock.

**No. 805** Rubber tire . . . . . Each . . . . .

**No. 806** Ball Bearing Upper Guide . . .

Wood-Sawing and Metal-Sawing BLADES	Wood Blades		Width	Metal Blades	
	No.	Price		No.	Price
90-inch circumference for former No. 800, 14-inch Band Saws ONLY.	875		3/8"		
	876		1/4"	976	
	877		3/8"	977	
	878		1/2"	978	





# BOICE-CRANE

NO. 2600

HELMET HEAD

DRILL PRESS

SAFETY



ECONOMY



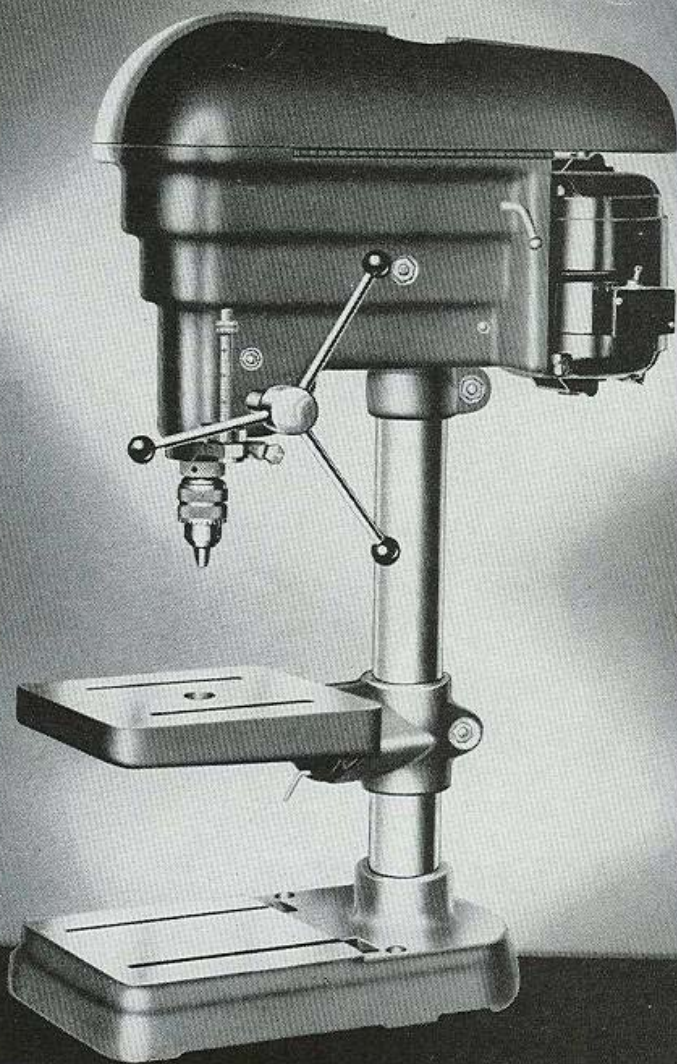
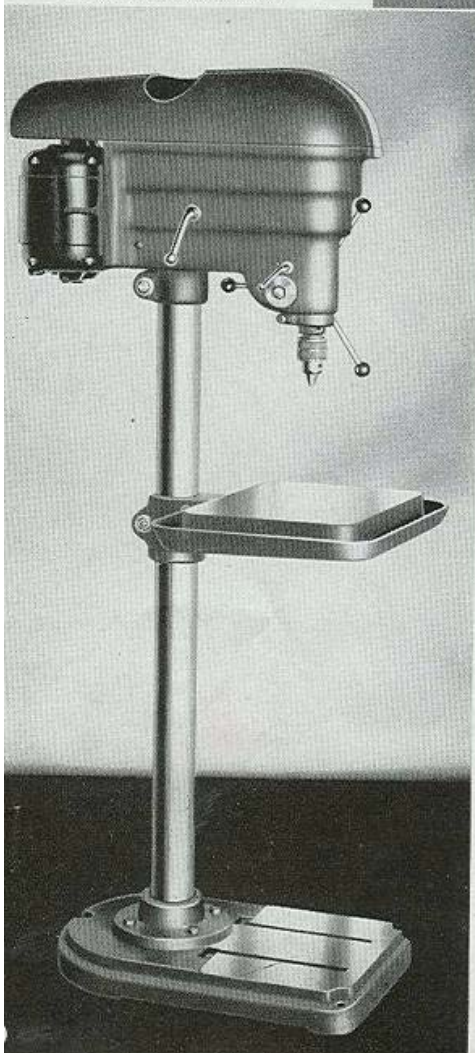
ACCURACY



SPEED



Patent No. 2,211,050  
Design Patent No. 113,369



## ★ ★ *America's Finest* MEDIUM-PRICED DRILL PRESSES

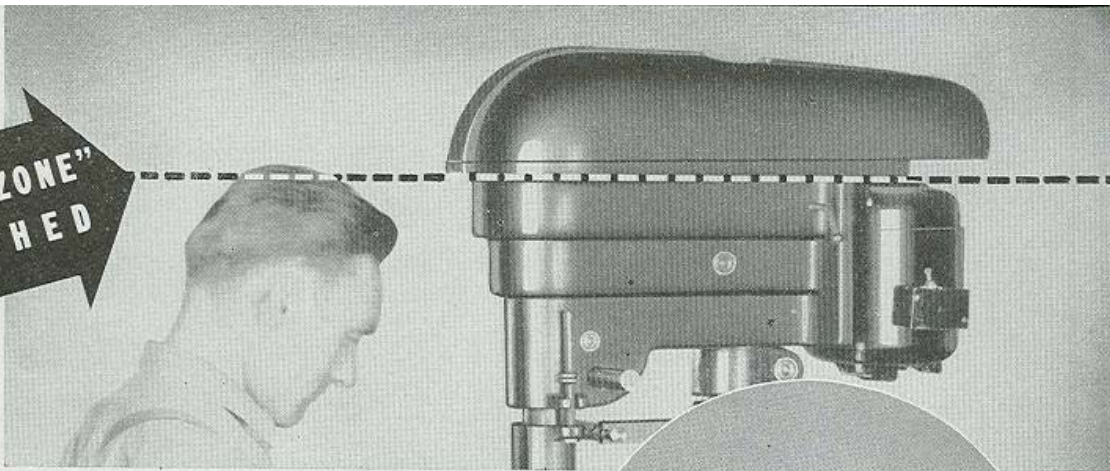
Here you see the Drill Press that is far out in front of the drill press field. This Boice-Crane Helmet Head is the most complete, most finished, and most modern in engineering and construction, as well as the most beautifully designed drill press in America today . . . at any price. Our price is down where you can afford it . . . only a few dollars more than ordinary drills.

It is backed by 32 years of designing successes in the power-tool field, and 32 years of building finest, quality machinery. We honestly believe we have built more expensive machine features into this drill than you have ever thought could be done for the money.

Nowhere else can you find a medium priced drill press with such massiveness in the Drill-Head, such large oversize quill and bearings. In no other drill do you find our self-centering, involute, six-splined spindle for greater power transmission, and for proven longer life, or a built-in Helmet Guard for your complete operating safety . . . all in one complete, handsome, and fully modernized drill press. You'll agree with us, once you see it, that the Boice-Crane Helmet Head is the finest in America . . . easily worth dollars more than the low price we ask. Stupendous extra value. Place your order today. Should you be dissatisfied for any reason with your purchase, after a ten-day trial, you certainly may return it. You take absolutely no risk dealing with Boice-Crane, or any authorized Boice-Crane Dealer.



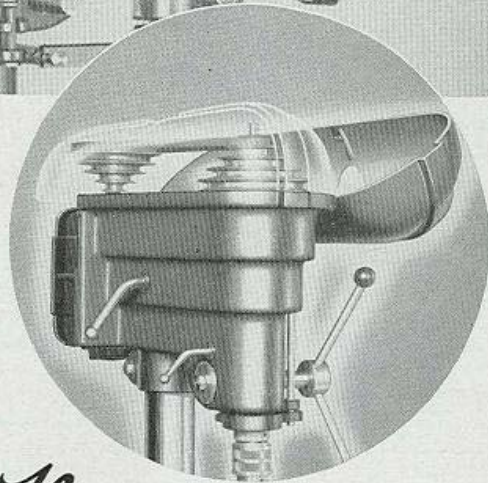
**"DANGER ZONE"  
BANISHED**



## New HELMET HEAD DESIGNED FOR YOUR PERSONAL Safety

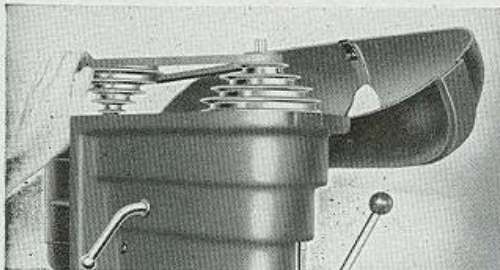
Industrial Plants, Schools, and Homecraftsmen can't be too careful in choosing completely guarded, safe equipment. Many states have recently adopted new laws that definitely require all belts and pulleys to be fully guarded. Other states are sure to do the same. You want approved guards on your tools for your own personal safety.

No matter how firmly your state clamps down, the new Boice-Crane passes inspection, and you'll not need to add some sort of unsightly makeshift guard at considerable cost. Our Helmet Head being a part of the machine itself, joins smoothly and fits snugly, and completely encloses every moving part. 100% safe. Standard equipment, not an expensive "extra." Never before have you seen this kind of complete guarding and massive sturdiness... combined with such modern, beautiful styling as in this new 1943 Boice-Crane.



## New HELMET HEAD SAVES TIME—NO EXTRA COST

The Boice-Crane Helmet Head is the ONLY Drill Press priced under \$100.00 that gives you a guard *without extra cost* that COMPLETELY encloses every driving part. Nothing exposed to cause even a slight accident. And the Helmet Head is the first guard ever offered that's easy to get into for speed changing and drive adjustments. There are no nuts or knobs to loosen. No parts to dismantle. No close quarters to work in at any point. No skinned knuckles. No wasted time. Guard swings on a 12" long hinge for lightning-quick action. Shuts tight and secure automatically. No guard like this before, even as an extra.



Motor bracket is hinged to quickly slacken belt for effortless belt shifting. Quicker and easier than other mountings!

### SPECIFICATIONS

Drills to Center of Circle.....	15"
Spindle Travel.....	4"
Chuck Capacity.....	17/32"
Speeds with 1750 R.P.M. Motors	
Hi-Speed—500, 925, 1750, 3250, 5500 R.P.M.	
Slo-Speed—425, 775, 1330, 2200, 3340 R.P.M.	
Number of Sealed Ball Bearings.....	4
Spindle.....	Six Involute Splined
Spindle Nose.....	Standard No. 33 Jacobs Taper
Locks for Head, Table, and Quill, Coordinating Dual-Wedge Type	
Production-Table Work Surface.....	11" x 16"
Standard-Table, Tilts 45 Degrees.....	10" x 11"
Bench Base, Working Surface.....	10" x 10"
Floor Base, Working Surface.....	10" x 14"
	Bench    Floor
Maximum, Table to Chuck Jaws.....	10 1/2"    39 1/2"
Maximum, Base to Chuck Jaws.....	17 1/2"    46 1/2"
Height Overall.....	42"    71"

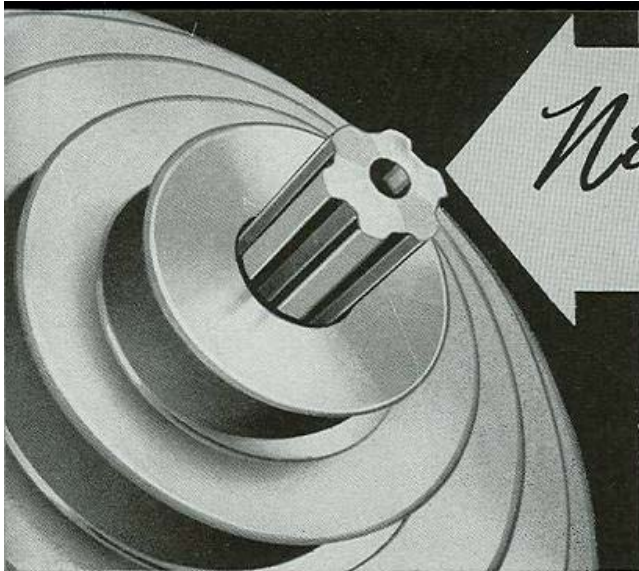
### PARTIAL LISTING—HIGH SPEED MODELS ONLY GET BULLETIN M-2600. LISTS ALL OF THE 64 DIFFERENT MODELS

<b>BENCH</b>	With Bench Base and Standard Work Table	No. 2600 with taper shank spindle and chuck .....
		No. 2645 with No. 1 M. T. Socket Spindle. No chuck .....
		No. 2646 with No. 2 M. T. Socket Spindle. No chuck .....
		Shipping weight, all models 185 lbs.
<b>FLOOR</b>	With Bench Base and Oil-Trough Production Table	No. 2601 with taper shank spindle and chuck .....
		No. 2647 with No. 1 M. T. Socket Spindle. No chuck .....
		No. 2648 with No. 2 M. T. Socket Spindle. No chuck .....
		Shipping weight, all models 207 lbs.
<b>BENCH</b>	With Floor Base and Standard Work Table	No. 2610 with taper shank spindle and chuck.....
		No. 2649 with No. 1 M. T. Socket Spindle. No chuck....
		No. 2650 with No. 2 M. T. Socket Spindle. No chuck....
		Shipping weight, all models 205 lbs.
<b>FLOOR</b>	With Floor Base and Oil-Trough Production Table	No. 2611 with taper shank spindle and chuck.....
		No. 2651 with No. 1 M. T. Socket Spindle. No chuck....
		No. 2652 with No. 2 M. T. Socket Spindle. No chuck....
		Shipping weight, all models 227 lbs.

3/8" to 5/8" capacity Jacobs Chuck can be substituted for \$2.75 each extra, instead of standard 0-17/32" chuck on Nos. 2600, 2601, 2610, 2611, 2620 and 2640. Note: Chucks furnished as standard equipment ONLY where stated above. Where indicated, chuck is 0"-17/32" capacity. Jacobs Geared with key. All models include V-belt, 5-step motor pulley, motor bracket but no motor.

**MOTORS for Drill Presses** Motors listed on page 47, opposite Drill Press sketch. Only Nos. 2655 to 2667 and Nos. 885 and 887 recommended. Write for prices on odd voltage and slo-speed motors.





# New SELF-CENTERING INVOLUTE SPLINE

Gives You Smoother Action  
..... Quieter Performance

Here you see the very latest of modern, 6-tooth splines . . . Boice-Crane's new 30-degree pressure angle, Involute Spline. Because the driving forces between our spindle and pulley-fitting act *inwardly* on a 30-degree pressure angle, the spindle and fitting *automatically center themselves* to each other. The result is smoother power transmission, easier feeding, and more quiet performance than ever before.

Square keys (used in other presses) have a zero degree pressure angle & never self-center like ours. Boice-Crane's 6-tooth Involute Spline has a much broader base thickness in both spindle and fitting . . . and so makes for a stronger key. Our Involute curved key provides greater area of sliding surface . . . guaranteeing longer life. No other drill press has this better Involute Spline feature. Boice-Crane is first to offer its superior performance.

## New "LINE-BORED" Head

In the cut-away view, you clearly see how Boice-Crane uses an entirely new method of construction to maintain an everlasting perfect alignment of these three vital parts—spindle, quill, and spindle-pulley.

In the old commonly used method, the quill and spindle-pulley bearings are fitted into two holes of different diameters. In the new Boice-Crane, these parts are fitted into a single, long rifle-bored hole of ONE diameter from top to bottom. The boring of this hole is done with the most meticulous care by most modern machine-tool equipment. A very costly machine-tool built especially for this particular operation, not only roughs and finish-bores this front hole, but also roughs and finish-bores the rear of column hole AT THE SAME TIME AND SETTING, ALL IN ONE OPERATION. Thus, the front hole for the vital parts and the rear hole for the column come straight, true to size, and exactly parallel, and Boice-Crane's vital parts line up true . . . and stay true.

### EXTRA STRENGTH AT EVERY POINT

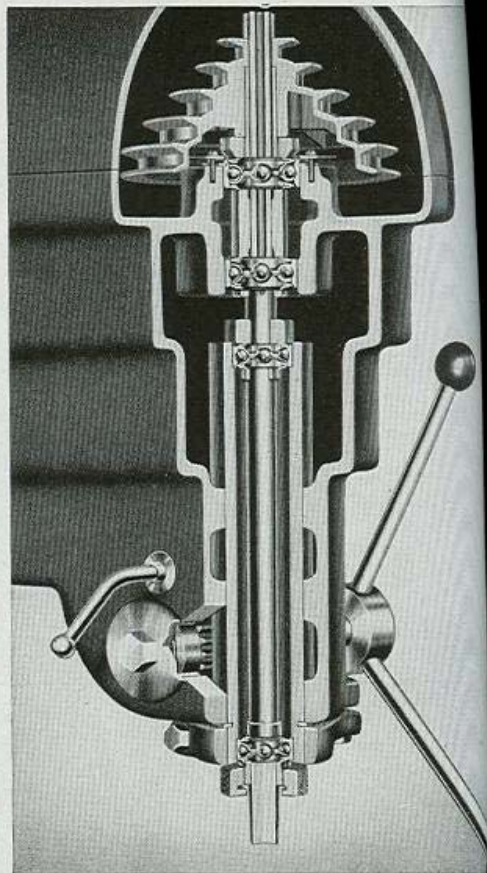
The Feed-Pinion Gear won't ever twist loose from its shaft. These two steel parts are brazed together in a furnace, fired to 2100 degrees, thereby joined as strong as a solid piece.

The Quill is precision built. It is larger in diameter than others use, and longer too, and when fed downwards to its limit of travel, plenty of quill is still held and braced firmly and accurately within a long portion of rifle boring in the head. It bores long holes more accurately.

The three artistic "steps" which create the handsome, modern lines of the machine, are also responsible for a great increase in Boice-Crane's strength over ordinary head castings.

### NEW COORDINATING LOCKS THROUGHOUT

The head casting, table and quill are locked by dual coordinating wedges. They never slip. Don't mar. Note that the lever actuating the quill-lock is so located that it does not hamper operator's movements . . . another refined feature planned solely for your convenience.



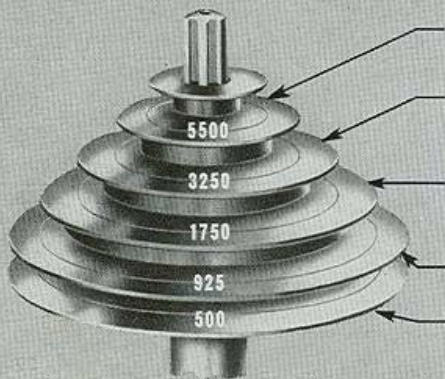
### VERSATILE SPEED RANGE

There are 5 carefully pre-determined speeds in Boice-Crane Drill Presses to provide an efficient speed for every size of metal drill up to chuck capacity, also for every other style of tool or cutter used in routing, shaping, mortising, tapping, plug-cutting, drum-sanding, etc., referred to on next pages.

Each metal drill, every tool or cutter is driven at its most efficient speed to do good, high quality work with longest possible tool life, and for rapid production at least possible cost to you.

### Special SLO-SPEED Models

By substituting a larger Boice-Crane Cone Pulley for the standard pulley shown, a slower range of speeds is attained . . . namely 3340, 2200, 1330, 775 and 425 r.p.m. . . when driven by a 1750 r.p.m. motor. Available in all models. For prices, ask for Bulletin M-2600.



5500 R. P. M. IDEAL FOR ROUTING, SHAPING, AND SMALL DRILLING IN METAL.

3250 R. P. M. THE SPEED ADVISED BY MANUFACTURERS FOR BEST RESULTS WITH MORTISE-CHISELS AND WOOD SPUR MACHINE BITS.

1750 R. P. M. CORRECT SPEED FOR PLUG-CUTTERS, DRUM SANDERS, AND AVERAGE SIZED METAL DRILLS.

925 R. P. M. JUST RIGHT FOR MEDIUM-LARGE SIZES.

500 R. P. M. SLOW ENOUGH SO LARGE DIA. METAL DRILLS, AND MULTI-SPUR WOOD BITS, WILL NOT "BURN."



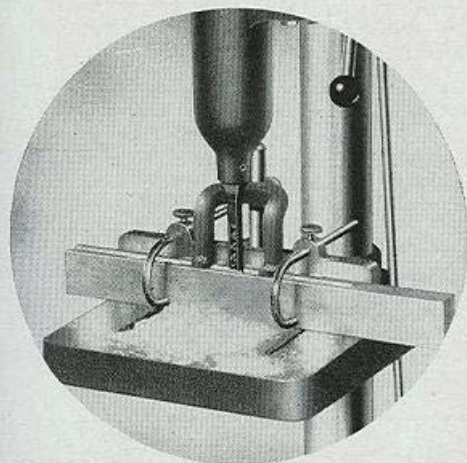
# Wide Range APPLICATIONS WITH THESE LOW-COST FIXTURES

Labor Costs of many metal-drilling jobs are greatly reduced by the addition of this Foot-Feed Device to our floor model Helmet Head Drill Presses. The Foot-Feed enables operator to keep both hands free for handling the material, jig clamps, ejectors, etc., and to make the very fastest production time possible, with the least possible fatigue to himself.

The illustration at the right shows the Foot-Feed being used in hollow-chisel mortising. It works splendidly too, on production jobs of metal drilling, tapping, plug-cutting, routing, etc. All these jobs are far easier, and done more rapidly too, on Boice-Crane Helmet Heads. You can do all these operations, and save hours upon hours of labor, by the addition of the few, low cost accessories listed below.

Every part of the Boice-Crane Helmet Head Drills, and all of the low cost fixtures for mortising, tapping, etc., are built with a surplus of strength and rigidity. Regardless of what the job is, the Boice-Crane does it accurately, and at a production-machine speed that satisfies the piece-worker, and factory officials.

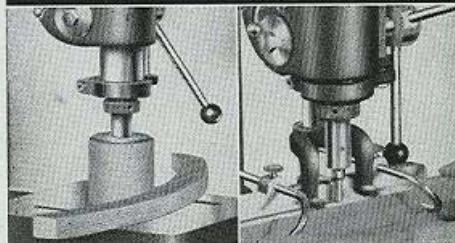
## NO ROTATING PARTS EXPOSED — MORTISING NOW SAFE



The Boice-Crane Mortiser is so very husky that it mortises as rapidly and accurately as individual mortising machines of twice the price. Not even  $\frac{1}{2}$ " mortising deflects Boice-Crane's unique, extra strong "barrel-shaped" chisel holder in the slightest, to cause costly chisel breakage so common with light-weight holders.

Our extra strong chisel holder serves also as a chuck guard and chip-deflector—two new safety features long needed. Now no rotating parts remain exposed to "skin" your hands. No longer will chips fly forward into your eyes, nose and mouth, or to litter your clothing.

The Boice-Crane Mortiser has the added advantage of being quickly set up. Drill chuck never need be detached from spindle. Mortise bits are directly held by the chuck, so there is no tinkering with special spindles, special adaptors, or bit-bushings of any kind.

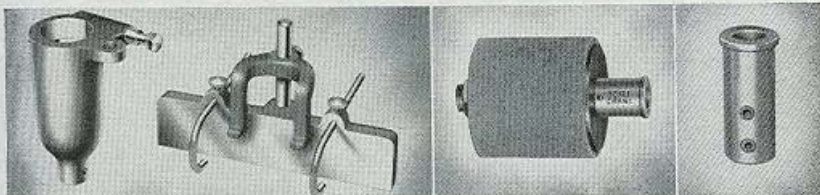


### DRUM-SANDING

Smoothing band-or-jig sawed work is quickly done. Sander-Arbor takes  $\frac{3}{4}$ ", 2", and 3" dia. abrasive sleeves interchangeably. Grits for either wood or metals.

### ROUTING

Grooves for drawer-bottoms, rabbet-cuts, channels for banded-inlay, etc., are but a few of the many routing jobs capably performed on press.



No. 2612

No. 2605

No. 2613

No. 2608 Foot-Feed Attachment complete as shown at upper right. Includes treadle, pair of column-clamp fulcrums, telescoping connector rods, top lever with tension recoil spring, and all bolts. Ship. wt. 25 lbs. ....

No. 2612 Mortiser Attachment complete, including Helmeted Chisel Holder, and entire Fence with hooked rods and hold-down shoe, and all bolts. Ship. wt. 9 lbs. ....

No. 2613 Multi-Purpose Spindle Extension. Takes  $\frac{1}{2}$ " diameter shanked Router Bits, Plug-Cutters, etc. Ship. wt. 8 oz. See page 45 for prices of Router Bits and Plug-Cutters.

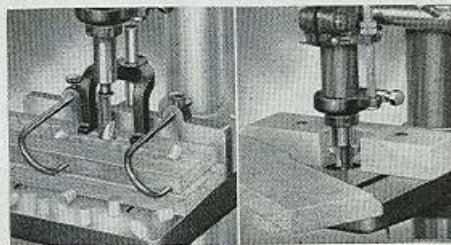
No. 2605 Sand Drum Attachment complete as illustrated with 3" dia. x 3" high rubber drum, washers, and one abrasive sleeve. Ship. wt. 3 lbs. ....

No. 525 Rubber Drum, 2" dia. with washer. Ship. wt. 2 lbs. .... See page 37 for prices of  $\frac{3}{4}$ ", 2" and 3" dia. abrasive sleeves.

### — Important —

Nos. 2608, 2612, 2613 and 2605 fit ONLY the 2600 series Drill Presses. For same to fit 1600 Presses—see page 33.

Price does not include chisel or mortise bit. See page 45 for prices.



### PLUG-CUTTING

Here you see drill press set up to cut wood plugs in rapid-fire time. Foot-Feed aids jobs like this. Full line of cutters priced on page 45.

### SHAPING

The Shaper Cutters below have  $\frac{1}{2}$ " hole, for use on either No. 2100 Shaper or any Boice-Crane Drill Press.



# Use BOICE-CRANE TAPPING MACHINES FOR HIGH SPEED AND LOW COST PRODUCTION

Factories today are freeing bigger and slow machines from all light tapping . . . because light tapping is done better, quicker, with fewer broken taps on fast Boice-Crane Drill Presses. In other cases, factories are using Boice-Crane Tappers to actually replace those bigger, more costly, and slower machines. In all these instances greater efficiency . . . greater production . . . and greater profits result.

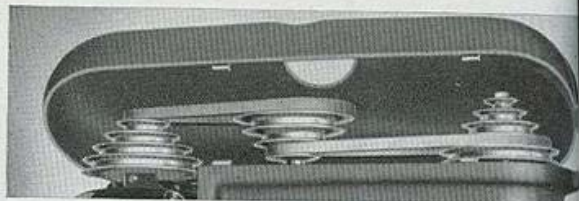
Boice-Crane Tappers are modern, ball bearing throughout. They are designed to clamp to our heavy, oversized diameter quill as solidly as an integral part of the machine. Boice-Crane Tapper Heads are further designed to operate absolutely efficiently at unbelievably fast speeds of up to 3000 r. p. m. "IN"; and up to 6000 r. p. m. "OUT" . . . or even better than you would get with costlier, big machines.

Boice-Crane Tapper Heads run steady. All taps run true as a die, and can be entered centrally into every hole without putting the slightest breaking-strain on the tap. Taps last thousands of holes longer. Holes are tapped faster and cleaner than ever before. Still more remarkable, you get all these advantages with Boice-Crane equipment at a mere fraction of what you would ordinarily have expected to pay.

## AVAILABLE IN 1, 2, and 4 SPINDLES

In fact for what you might pay others for a bigger one-spindle machine, you can get a Boice-Crane 2- or 4-spindle machine and be able to handle efficiently a much larger variety of drilling and tapping with far less material handling.

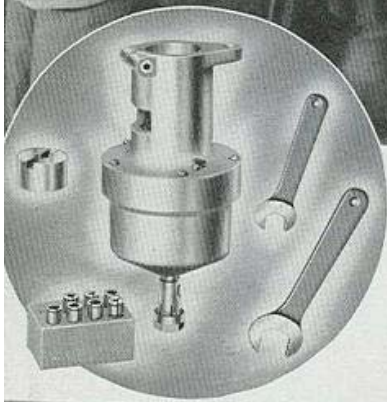
Boice-Crane Drill Presses are available in standard, stock models of 1-, 2-, and 4-heads. Each head may be used interchangeably for either drilling or tapping, or in woodworking plants for boring, mortising, routing, drum-sanding, shaping, and plug-cutting. Boice-Crane Machines make production flow smoothly, and reduce your costs to absolute rock bottom.



## SLOW SPEED ATTACHMENT

With belt in pulley-steps shown, spindle speed is 150 r. p. m. By lowering motor-belt one step, 375 r. p. m., or slow enough to permit using 1/2" carbon steel drills without burning. The Helmet Head fully encloses every part.

No. 2607 Slow-Speed Attachment, including two belts and idler pulley. Ship. wt. 5 lbs. . . . .



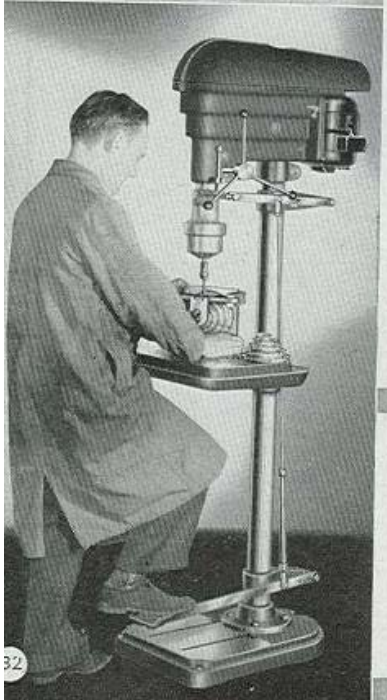
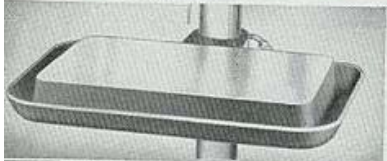
In contrast to drilling and tapping machines of yesterday of which the 3-spindle machine in the background is an example, Boice-Crane Helmet Head machines excel in every way: in compactness, good looks, in power economy, in complete safety to the operator, in lowest possible cost per spindle, in modern, ball-bearing sealed for life lubrication, in high speeds, and in far easier adaptability to any plan of machine grouping for systematic production.

Production work tables may be purchased any time, and will fit. Two 3/4" pipe plugs in trough. Working surface 11" x 16".

No. 2625 Production Table with column clamp. Ship. wt. 65 lbs. . . . .

Our Tapper Heads are ball bearing, accurate and frictionless. Tap reversal occurs instantly with the up-stroke, is smooth in action. All rotating parts are in balance, oil lubricated. Clutch has guaranteed long life cork facing. Tap Holder Collets have patented grip . . . whereby taps are centered by the round shank, and driven by the square end of tap, and the engagement is visible.

Tapping by Foot-Feed, as shown here, makes an ideal arrangement for getting highest production, lowest cost, with minimum fatigue to operator.



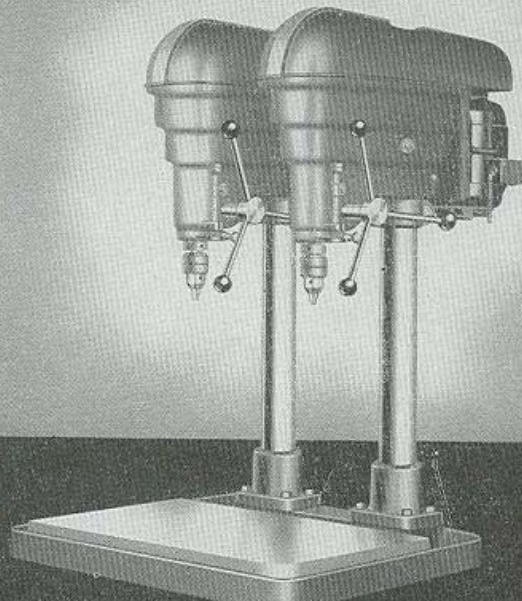
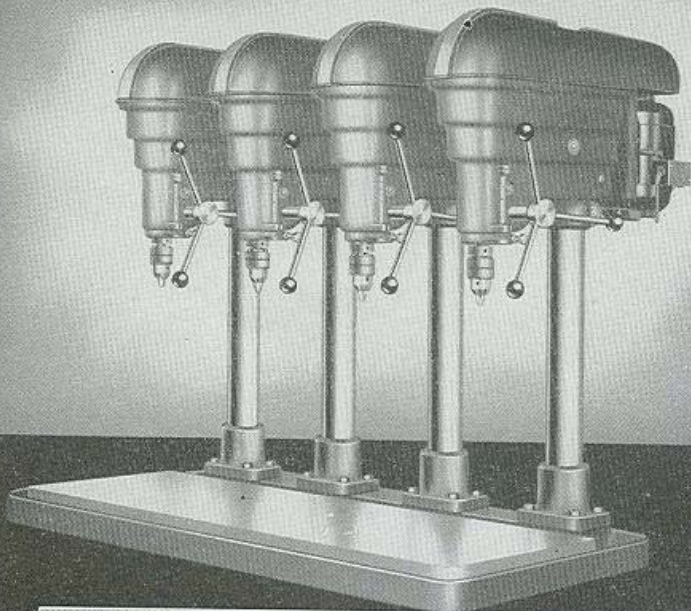
- No. 2678 Floor model, Helmet Head Drill with production table
- No. 2603 Tapper Head, 3/4" capacity
- No. 2608 Foot-Feed Attachment. . . . .
- No. 2615 Floor model, Helmet Head Drill and Tapper Machine as itemized, as illustrated but less motor. Ship. wt. 265 lbs. . . . .

- No. 2603 Tapper Head with tap collets for Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10 and 1/4" taps packed in box. Two wrenches and driving dog. Ship. wt. 6 lbs.
- No. 2604 Tapper Head with tap collets for Nos. 8, 9, 10, 1/4", 1/8", 3/8", 1/2" and 3/4" taps packed in wood box. Two wrenches and driving dog. Ship. wt. 10 lbs. . . . .

We recommend that motors Nos. 2655 or 2665 be used. See Page 47.

Above Tappers fit interchangeably to any 1, 2, or 4-Spindle Boice-Crane Helmet Head Drill Press.





**QUALITY  
LOW-COST** *Multiple* **DRILLS**

The individual heads here are Boice-Crane Helmet Heads described on preceding pages. Boice-Crane Multiple Spindle Machines, with their modern, sealed for life ball-bearings, are ideally suited to the higher speeds needed by small drills and taps which would rack a bigger machine to ruin in a few short months. Individual motors eliminate huge countershaft power losses, save power when spindle remains idle, and make possible the low, overall height in Boice-Crane which lets sunlight stream back into your factory. Boice-Crane's Helmet that encloses every moving part complies everywhere with state safety laws. Easily portable to the job.

SPECIFICATIONS	4-Spindle	2-Spindle
Working surface of table.....	15½" x 48½"	15½" x 24"
Overall dimensions of base .....	23" x 52"	23" x 27"
Distance between spindles .....	12"	12"
Overall height .....	49"	49"
Maximum distance, table to chuck .....	25"	25"
Shipping weight, pounds.....	750	390

Price: complete including belt, drill chuck, motor-pulley, but less motor....  
**No. 2640 No. 2620**  
 For motor data and prices see page 47. Multiple Drills can have spindles for standard Jacobs Chuck, or for drills with No. 1 or 2 Morse Taper shank; and spindles can be either Hi-Speed, or Slo-Speed . . . all of one kind or assorted to suit your exact needs. Ask for special 12-pg. Drill Press Catalog M-2600.

**BOICE-CRANE No. 1600 SERIES DRILL PRESSES**

For many years a favorite with those craftsmen who want a good substantially built, accurate drill press at a moderate price, these Boice-Crane "1600 Series" Drill Presses offer unsurpassed value.  
 Our low prices are no indication of any deviation from high standards of Boice-Crane quality. The machines are ball-bearing throughout. Spindle is ball-bearing; spindle-pulley is ball-bearing . . . for long lived dependable, accurate performance. Five speeds: 500 to 5500 r.p.m. Hinged motor bracket for easy speed changing.

- No. 1600** Bench Model, Boice-Crane Drill Press with Geared Chuck (0" to ½" capacity), No. 1044 V-belt, 5 step No. 1651 cone pulley for motor (½" bore) and motor bracket but without motor. Ship. wt. 110 lbs. ....
  - No. 1610** Floor Model, Boice-Crane Drill Press with same equipment as in bench model. Ship. wt. 160 lbs. ....
  - No. 1630** 2-Spindle Drill with counterweighting.....
  - No. 1640** 4-Spindle Drill with counterweighting.....  
 Motor prices on page 47.
- 8 additional Models described in Catalog M-2600.

**ATTACHMENTS AND ACCESSORIES**

- No. 1612** Mortiser Attachment including chisel holder, fence, hooked hold-down rods, hold-down shoe, and bolts. Price does not include chisel or bits. Ship. wt. 8 lbs. ....
- No. 1613** Multi-Purpose Spindle Extension Takes mortising bit bushings, router bits, wood spur machine bits, and plug-cutters .....
- No. 1605** Sand Drum Attachment complete with 3" dia. x 3" high rubber drum washers, and one abrasive sleeve. Ship. wt. 3 lbs. ....
- No. 1607** Slow-Speed Attachment including 2 belts and idler pulley
- No. 1608** Foot-Feed Attachment complete. Ship. wt. 25 lbs. ....
- No. 1614** Shaper-Cutter Arbor with nut. Takes ½" hole cutters...
- No. 1603** Tapper Head, ¼" tap capacity, with complete set of tap collets for Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10 and ¼" taps in box, with wrenches and driving dog. Ship. wt. 6 lbs.
- No. 1604** Tapper Head, ½" tap capacity, with complete set of tap collets for Nos. 8, 9, 10, ¼", ⅜", ½" and ⅝" taps in box, with wrenches and driving dog. Shpg. wt. 10 lbs.



**8 MACHINES IN 1**

**DRILLS  
TAPS  
BORES  
SHAPES  
ROUTES  
GRINDS  
MORTISES  
DRUM SANDS**

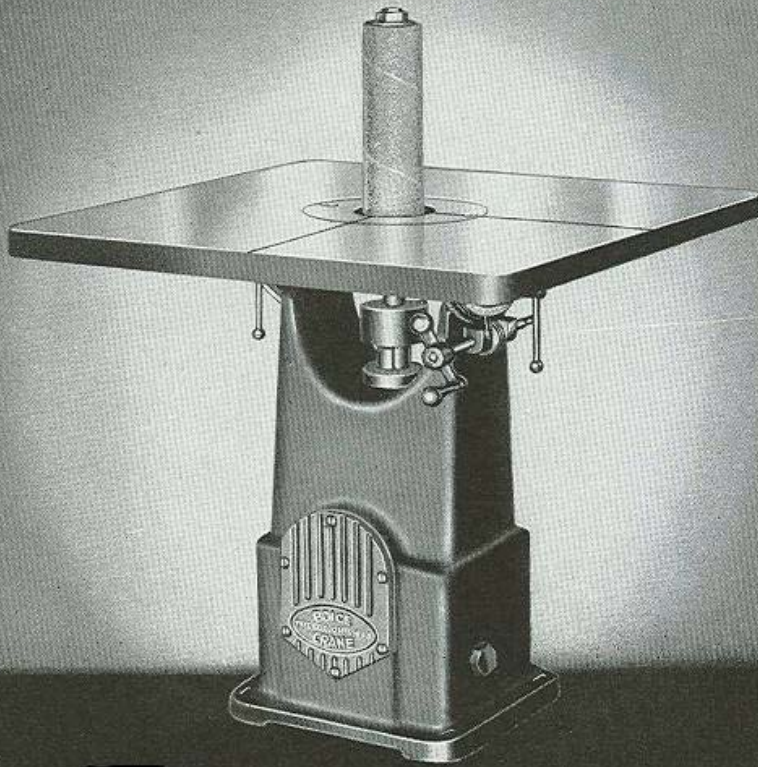
SPECIFICATIONS	Bench	Floor
Overall height .....	38½"	70"
Table to chuck .....	11½"	44½"
Spindle travel .....	4½"	4½"
Drills to center of circle .....	15½" diameter	
Takes drill diameters .....	0" to 1½"	
Table size .....	10" x 11"	
Spindle speeds .....	500, 925, 1750, 3250, 5500 r.p.m.	
Shipping weight, less motor.....	110 lbs.	160 lbs.



# BOICE-CRANE

No. 2000

## SPINDLE SANDER



### Super LUBRICATION

The Boice-Crane crank case is filled ONCE A YEAR with 3 to 3½ QUARTS of fresh oil to indicated level. None can leak out. Dust can't enter. Fully lubricates every internal part. The oscillating bearing is doubly sure lubricated too. This is grease-packed at factory. Needs extra grease but once or twice a year. Fully sealed too against dust and leakage.

With such positive lubrication, every Boice-Crane user is sure of years of accuracy—with not a penny for repairs. Your first cost is your final cost.

### FEATURES

Select this Boice-Crane Oscillating Spindle Sander for the sanding jobs in your shop that are slow and difficult by hand. Saves hours and hours of hand work. Improves every project or product. Make your hobby more enjoyable and save real money on commercial work.

Before selecting any type of sander, check over the hand sanding jobs that are pure drudgery, and those that eat up profits fast. You'll find most of them jobs that this Spindle Sander will run fast and easy. (A few will be disc sander jobs you can handle on a \$3.00 Sand Disc attachment, see page 9. And those that involve large flat expanses like table tops are jobs for our belt sander.)

### ONLY A SPINDLE SANDER HANDLES THESE 10 JOBS

1. Sands any length curved edge. Convex curves. Concave curves to as sharp a radius as ½".
2. Sands any degree of bevel on curved or straight work up to 6 inches in height, to any length.
3. Sands inside of holes over 1" dia.
4. Sands curve sawed edges smooth, which are to be run against rubbing collars of a Power Shaper, thereby guaranteeing smoothest possible shaping.
5. Sands or Grinds perfect "draft" on wood or metal patterns. Leaves no "back-draft" at any point.
6. Sands straight edges, or straightens face of materials up to 6 inches in width, and to any length—by the addition of our regular No. 2130 shaper fence. See page 20.
7. Grinds aluminum, brass, or die-castings.
8. Grinds sheet iron for templates.
9. Sands those faces which blend gradually thru different slopes at successive cross-sections. A most simple job on this spindle sander—yet entirely impossible on any other sander.
10. Sands "glued-up" work 6" high.

With all these jobs of every day occurrence to perform, a Boice-Crane Spindle Sander leads in usefulness. It merits your first choice. Pays more dollars in profit. Decide NOW on a Spindle Sander for your shop, and order a Boice-Crane today.



Here you see the SMALLEST diameter abrasive sleeve ever used on any spindle sander. Inside diameter only ¾ inch. Usually 2" is smallest. Our full assortment of sizes, ¾", 1½", 2", and 3", handles every class of work in any shop.

Boice-Crane table, 20" x 20", compares with machines priced 3 to 5 times higher. Perfectly flat, highly polished. Two scribed Index Lines on table show exact positions for beveling, drafting patterns, and for core-box work.

Garnet Sleeves with Cardboard Back			Length 9"		Emery Cloth Sleeves Without Cardboard Back		
No.	Grit	Price for 6	Inside Dia.	Ship. wt. ½ doz.	No.	Grit	Price for 6
2061	1		¾"	1 lb.	2072	½	
2062	1		1½"	2 lbs.	2073	1	
2063	1½		1½"	2 lbs.	2074	½	
2064	1		2"	2 lbs.	2075	1	
2065	1½		2"	2 lbs.	2076	½	
2066	1		3"	3 lbs.	2077	1	
2067	1½		3"	3 lbs.			

No. 2001 Rubber Drum, 1½" dia. Ship. wt. 3 lbs...

No. 2002 Rubber Drum, 2" dia. Ship. wt. 3 lbs...

No. 2003 Rubber Drum, 3" dia. Ship. wt. 5 lbs...

(No rubber drum needed for ¾" dia. sleeves)



# Oscillating SPINDLE

Sand Drum oscillates automatically thru  $\frac{7}{8}$  inch long stroke—83 complete strokes at 2,500 revolutions per minute. The oscillating drum always sands silky smooth, even with the coarsest abrasives which are faster and freer cutting, and which don't clog readily. Coarse abrasives on non-oscillating drums score the work. The wear on Boice-Crane abrasives is evenly distributed. Less clogging between grains. The abrasives stay clean, cut smoothly, and last for a long time to lower your operating costs.

## LOW COST COMPLETE UNIT

This motor driven Boice-Crane on floor stand is very compact. Readily portable. An amazingly efficient, complete Power Sander at very low cost. Try one for 10 days.

- No. 2000** Spindle Sander with  $\frac{3}{4}$ " and 2" dia. abrasive sleeves, 2" dia. rubber drum, 2 table rings, expanding collars, and V-pulley for belt drive. Ship. wt. 143 lbs. ....
- No. 1012 $\frac{1}{2}$**  V-Pulley, 2 $\frac{1}{2}$ " dia. for motor. Ship. wt. 8 oz.
- No. 1044** V-Belt, 44" circumference. Ship. wt. 8 oz.
- No. 1755** Motor,  $\frac{1}{2}$  h.p., 110 volt, 60 cycle, rep-ind., ball bearing, with built-in switch. Ship. wt. 34 lbs. ....
- No. 2005** Steel Stand with switch rod, and belt guard. Ship. wt. 65 lbs. ....
- No. 2006** Complete Spindle Sander on stand as itemized above. Ship. wt. 240 lbs. ....



# AND SANDER ACCESSORIES

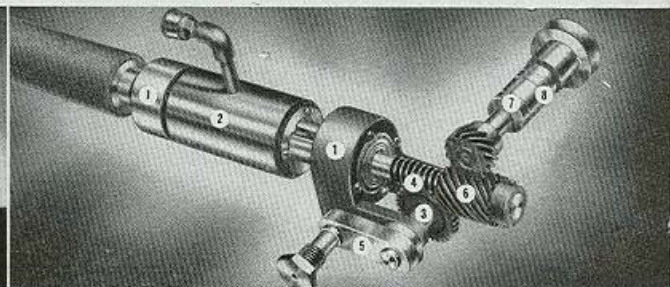
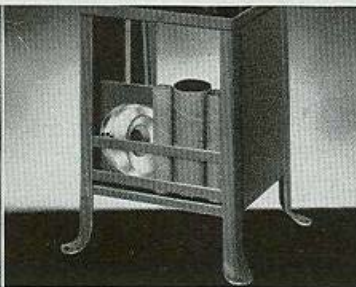


Table tilts 45° Both Directions on two extra large, closely fitted, machine-cut trunnions. Sensitive adjusted by worm, and worm-wheel.

Double locking levers hold table rigid at every angle. Degree scale fully visible as you tilt table.

Large storage compartment in the floor stand keeps all accessories and a large supply of abrasive sleeves right at machine. A most convenient time saver.

Left side panel shields v-belt. Motor controlled by ball-end switch rod within easy reach.

- 1 Two quality Ball-Bearings. Life lubricated.
- 2 Here, 12 Nichrome steel ROLLING BALLS for frictionless sand drum shaft. Grease filled and sealed housing.
- 3 Bronze bearings BOTH SIDES of worm wheel. Splash oiling.
- 4 Steel worm, and bronze worm-wheel. Runs in oil.

- 5 Bronze bushed connecting arm.
- 6 Hardened Steel Gear for long wear. Runs quietly with mating steel spiral gear. Both run in oil.
- 7 Special Oil-Sealed Unit seals shaft against oil leakage.
- 8 Shaft built right into special New Departure, Double-Row, Ball Bearing. Life lubricated.



Abrasive sleeves spiral-wound into lapless cylinders. No joint. No humps. Heavy cardboard retains perfect shape. Quickly and easily changed.

Rubber Drum No. 2002 is regular equipment. Very Soft. Expanded by spindle-nut. Slight expansion grips sleeves firmly, without distortion.

Table Rings,  $\frac{3}{4}$ " and 2" are regular equipment.  
**No. 2023** Ring for 3" dia. sleeves ...  
**No. 2022** Ring for 1 $\frac{1}{2}$ " dia. sleeves ..



# New BOICE-CRANE BELT SANDER *for* FLAT PARTS & LARGE CONTOURS



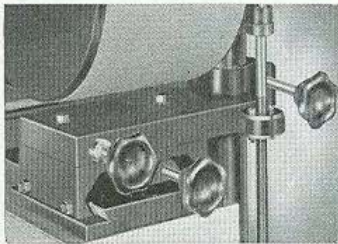
WITH  
*Exclusive*  
**Height-O-Matic  
V-BELT DRIVE**

•  
**Visible Operation**  
• • •  
**THE WORK IS  
ALWAYS FACE-UP  
EXACTLY LIKE  
BIG MILL-SIZE  
SANDERS**

**INSTANT CONTROL—Light "Spot" Touch-Up to Deep "All-Over Cuts"**

Woodworking production men recognize in this Boice-Crane — the time-proven mill type sander in a more popular, compact size. Besides sanding wood parts, its uses include fine surface finishing of plastic and many metal parts. The oscillating motion so indispensable for fine finishes by mechanical means, is provided in this machine by a freely rolling work table. It also features instant and complete operator control—ranging from light "spot" touchups to heavy "all-over" cuts. It comes closer to being the ideal "all around" or general purpose sander-surfacer of any single type yet developed.

**For Quick Surfacing of Wood, Metals, Plastic, Fibre**



*Belt Tension and Aligning Controls. Accurate lineup, and take-up for wear provided in dovetail construction shown.*

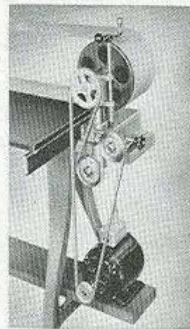
The Boice-Crane is not limited to sanding wood. It grinds or surfaces, also polishes most any industrial material. Among them are steel parts, die castings in various metals, other cast aluminum, brass and copper parts. Also, plastics of all kinds, bone, fibre, ivory, and a host of others.

Refer your metal surfacing and finishing problems to us. On hundreds of jobs a Boice-Crane Sander-Finisher will show an improved finish at lower cost. Our recommendations include proper abrasive and speed.

## **Height-O-Matic Drive**

Exclusive Height-O-Matic Drive maintains drive belt tension automatically, regardless of height of abrasive belt.

This efficient drive uses V-belts and powerful motors up to 1½ h.p. Large size needle-bearing equipped idler pulleys give longer belt life and increased power.



## **SPECIFICATIONS**

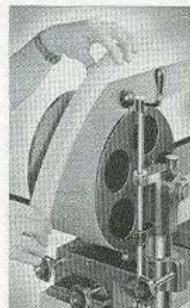
Drums.....10" diameter. 7" wide. Shell Type. Spun Steel  
Work Table.....18" x 60"  
Table Fore and Aft Travel.....18"  
Abrasive Belts.....6" wide. Cloth Back  
Maximum Capacity...Areas 36" w. x 60" long; 0 to 4" Thick  
(Unlimited length capacity on stock 6" wide or under)  
Power.....½ h.p. Light; ¾ h.p. Medium; 1 h.p. Heavy Duty

## **Use As Drum Sander**

The drums on the Boice-Crane are an ideal diameter for a big range of contour sanding, grinding and polishing.

This often saves the purchase of a second machine for this class of work only.

In many shops this one machine handles 75% to 85% of ALL sanding, grinding and polishing on flat and contour parts.

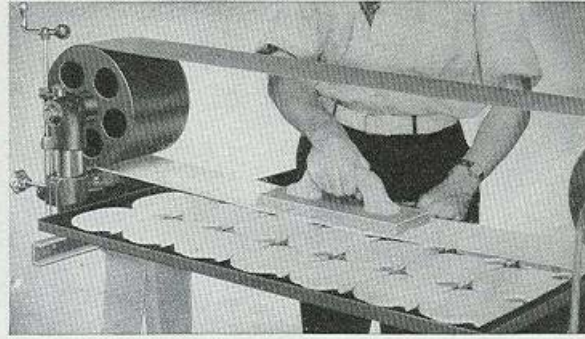
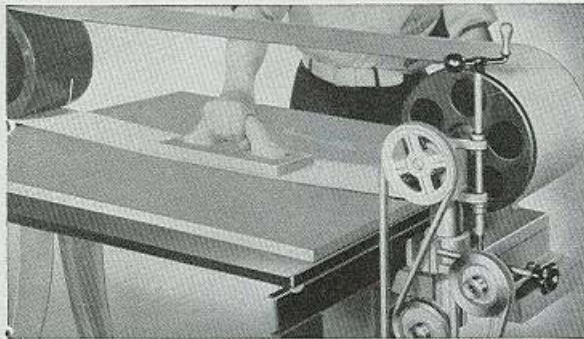




# THE BOICE-CRANE BELT SANDER DOES MORE DIFFERENT KINDS OF SANDING JOBS

and **50% faster**

Industry uses 6 main types of mechanical sander-finishers. Generally speaking the Hand Stroke type undeniably handles a bigger variety of work than the rest. Its results on large flat surfaces are also far superior. In the Boice-Crane this basic advantage is further increased to as much as 50% faster production . . . directly traceable to our 6" wide belt, large work table, tremendous length capacity (20 ft. or more), and large powerful motors.



**Face Up Operation . . .** On a Boice-Crane the surface worked on is always toward the operator. He never loses time turning the part over to check results. No chance to take off too much and spoil the part. Guesswork eliminated.

**Multiple Parts . . .** For small wood, metal, plastic and fiber parts, multiple fixtures attached to table take dozens at a time. On long runs, one side of table can be unloaded and reloaded while surfacing those on other side.

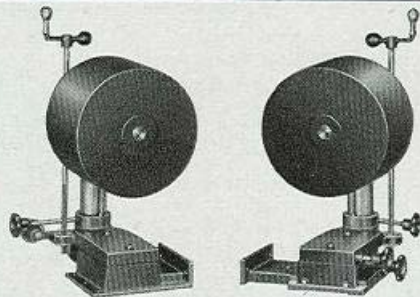
## Metal Finishers, Novelty Manufacturers, Fabricators of All Kinds of Metals, Wood and Plastics—All Use Them

The above industries head the long list of successful installations of Boice-Crane Hand Stroke Sander-Finishers. One of the most recent additional applications has been for refinishing painted

venetian blind slats on which original finish has to be removed. There is no limit to the ways in which this practical size, labor saving tool will speed up finishing in your own plant or shop.

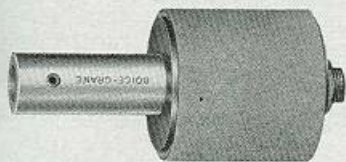
- No. 1160** Belt Sander. Includes two drum units, 1-14'1" Abrasive Belt and Hand Stroker. Ship. Wt. 200 Lbs. . . . .
- No. 1161** Pair of Floor Legs. Includes wood top shelf, No. 1096 V-belt, No. 1013 V-motor pulley, bolts. Ship. Wt. 128 lbs. . . . .
- No. 1485** Motor, 1 h.p. with switch. Ship. wt. 69 lbs. . . . .
- No. 1165** Complete Motorized Sander. Includes all above equipment and No. 1485 Motor. Ship. wt. 419 lbs. . . . .
- No. 1147** 14'1" Garnet Cloth Belts for Nos. 1160 and 1165 Sanders. Shipping Wt. 1 lb. Each . . . . .
- No. 1146** 10'1" Garnet Cloth Belts for former Nos. 1136 and 1140 Sanders. Shipping Wt. 1 lb. Each . . . . .  
Specify grit wanted— $\frac{1}{2}$ , 1 or  $1\frac{1}{2}$ .
- No. 1172** 20'6" Garnet Belt. Grits  $\frac{1}{2}$ , 1,  $1\frac{1}{2}$ . Ship. Wt. 1 lb. Each . . . . .

### No. 1170 BOICE-CRANE DRUM UNITS FOR MAKING YOUR OWN SPECIAL PURPOSE SANDER



No. 1170 Drum Unit. Consists of both driven and idler drums as shown. No work table or belt. Belts listed column to left. Shipping weight 120 lbs. . . .

## BOICE-CRANE Cushioned Sander Drums



A valuable accessory for large and small shops. Used on any machine or motor arbor running 1750 to 3500 r.p.m. Satiny smooth finish from the "cushiony" action of the live rubber drums used. Our spiral wrapped abrasive sleeves leave no bumps to tear paper or mar work. No wedges needed. Sleeves 1" dia. used without drum.

- No. 554** Sanding Drum, 2" dia. x 3" long complete. Includes Attachment Spindle for  $\frac{1}{2}$ ",  $\frac{5}{8}$ " or  $\frac{3}{4}$ " shaft (specify which), rubber drum, compressing washers and 1 abrasive sleeve. Ship. wt.  $3\frac{1}{2}$  lbs. . . . .
- No. 553** Same, except includes 3" dia. x 3" long Rubber Drum.
- No. 525** 2" dia. x 3" Rubber Drum only with 2 compressing washers and 1 abrasive sleeve. Ship. wt. 2 lbs. . . . .

Garnet Paper Sleeves			Prices for $\frac{1}{2}$ doz.			Emery Cloth Sleeves		
No.	Grit	Price for 6	Inside Dia.	Length	Ship. wt. $\frac{1}{2}$ doz.	No.	Grit	Price for 6
565	1		$\frac{3}{4}$ "	3"	$\frac{1}{2}$ lb.	574	$\frac{1}{2}$	
			$\frac{3}{4}$ "	3"	$\frac{1}{2}$ lb.			
566	1		2"	3"	$\frac{3}{4}$ lb.	576	$\frac{1}{2}$	
			2"	3"	$\frac{3}{4}$ lb.			
567	$1\frac{1}{2}$		2"	3"	$\frac{3}{4}$ lb.	577	1	
			2"	3"	$\frac{3}{4}$ lb.			
568	1		3"	3"	1 lb.	578	$\frac{1}{2}$	
			3"	3"	1 lb.			
569	$1\frac{1}{2}$		3"	3"	1 lb.	579	1	
			3"	3"	1 lb.			

**SPINDLE, DRUM AND BELT SANDERS—BOICE-CRANE HAS ALL 3!**

SEE PAGES 9, 34 and 45



# BOICE-CRANE No. 950 4-INCH JOINTER

Has Extra Long and Accurate Tables  
—Extra Long "Fence Guiding Zone,"  
and Joints  $\frac{3}{8}$ " Deep.

27 $\frac{1}{2}$ "  
OVERALL



Built as Accurate  
As Ordinary 6" Jointers. Big Value!

Patent Nos.  
1,790,288  
1,925,477  
1,967,791  
2,049,044  
2,049,045

## BOICE-CRANE'S EXTRA LONG TABLES AND FENCE GIVE HIGHEST POSSIBLE ACCURACY IN FURNITURE MAKING

### Extra Length in This Jointer

Boice-Crane 4" Jointers are extra long, 27 $\frac{1}{2}$ " overall. The tables are fully 24" long—so will guide work better and joint boards to a greater degree of straightness than short tables will. Every woodworker knows that. Both tables raise and lower on inclined, machined ways by means of easily accessible hand controls. Front table has a rabbet arm, 3" x 6 $\frac{3}{4}$ ", to provide extra support to boards being rabbeted.

### Precision Accuracy at a Low Price

This jointer gives truly precision quality. In fact you can lay a Brown & Sharpe Straight-Edge in all directions across the tables and with a "steel feeler" (3-1000 of an inch thick), you would fail to find any inaccuracy of that slight amount over the entire surface.

Boice-Crane Jointers are accurate. They will not only dress a board smoothly but the surface will be jointed perfectly straight as well. For the kind of work homecrafters have in mind, Boice-Crane jointers are ideal.

### Smooth Running Head

The 3-knife, round safety type cutter head is made from solid bar steel and is ground all over body of head as well as the shafts. Means perfect running balance and permits speeds as high as 5,000 r.p.m., without vibration. Taper wedges we furnish for holding knives is absolutely safest method known.

### Vibrationless Construction

The Bearing Housings are securely fastened to machined faces on the main casting by 3 cap screws each (the same as on our 6-Inch Jointer), to prevent any possible chance for the bearing housings to vibrate loose and permit cutterhead to chatter. High quality ball bearings of the grease-sealed type are used. The 4-Inch Jointer Fence (24" long) is sufficiently rigid in itself, without our "rear lock," for work to full capacity.

### Extra Fine Guard

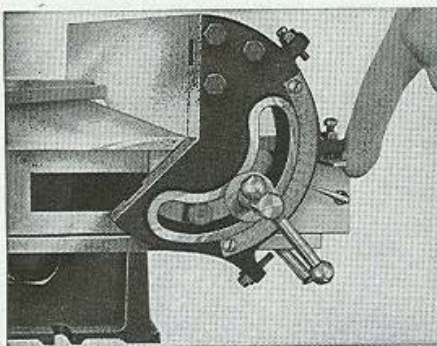
No better made. Has dual pivots. Guard covers unused portion of knives, opens and closes by itself. To rabbet, you simply flip guard under table. Instantly available again for guarding, by flipping back on table.

### Fence "Guiding Zone" 24 Inches Long

Boice-Crane's full length fence, with long "Guiding Zone" gives extended support so every board can be fed with utmost steadiness and firmness against the fence thru the entire length of the board. With our long "out-feed zone" too, utmost accuracy is guaranteed even to the very last inch of the board. It's the finest fence used on any 4" Jointer.

### Quality Counts More Than Low Price

In jointers, as in any manufactured product, there are jointers of varying quality. On jointers in which the table accuracy is lacking, the board may be "smoothed" all right, but it will not necessarily be "straightened" as it should be. Inaccurate jointing as this, is entirely inadequate for making furniture and other high class work, which is just the kind of work most of you want a jointer for. For doing good work, high quality Boice-Crane Jointers are needed.



### Patented "Auto-Set" Stops for 3 Angles

The Boice-Crane Fence, too, is very quickly positioned to any angle of tilt. Three adjusting stops are provided for setting fence quickly and exactly to 45, 90 and 135-degree positions. A wonderful time saving feature for all users. All other angles are indicated by the two-color easy to read degree scale. When the desired angle is selected, the fence is locked by a convenient hand lever.

### Fence Tilts on Trunnions

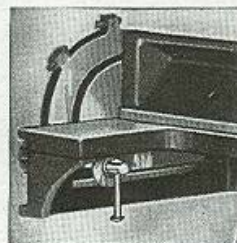
This is important. The fence tilts on trunnions around one axis (or point), which is also the exact center of the degree scale. Hence all degree readings, on the properly centered degree scale, are always absolutely dependable and accurate. This is an exclusive Boice-Crane feature you will want.

### Dual Locks Independent

The fence may next be positioned laterally across the tables, to any desired point, in an instant, without disturbing the previously made angular setting. The lateral adjustment is then locked by its own, separate lock lever. This fence construction is protected thoroughly by Patents Nos. 1,790,288, 1,925,477, 1,967,791, 2,049,044, 2,049,045. Others pending.

### "Lateral Lock" for Fence

In Boice-Crane Jointers, the lateral lock is entirely separate and works independently from the tilting-lock. You tilt the fence first, and lock it. Then, without disturbing this setting, you set fence laterally—and lock that. No fence construction at any price is any better, more convenient, or quicker acting.



- No. 950** 4-Inch, Long Tabled, Ball Bearing Jointer, complete with guard, with full length 2-way tilting fence, wide rabbet arm, safety head with 3 knives, wrench and 2" V-pulley for belt drive. Ship. wt. 60 lbs. ....
- No. 952** Extra set of 3 High-Speed Knives. Ship. wt. 10 oz. ....
- No. 1014** 4" dia. V-pulley, drives jointer at proper speed with 1750 r.p.m. motor. Specify bore,  $\frac{1}{2}$ ",  $\frac{3}{8}$ ",  $\frac{3}{4}$ ". Ship. wt. 1 lb. ....



## V PULLEYS, 38°

All V Pulleys in the No. 1000 and 2000 Series are of die-cast metal construction, and run true.

No. 1000 Series are furnished with slotted head set screws.

No. 2000 with hollow head safety set screws.

Keyways are not furnished, except when specified, and at an extra charge per pulley.

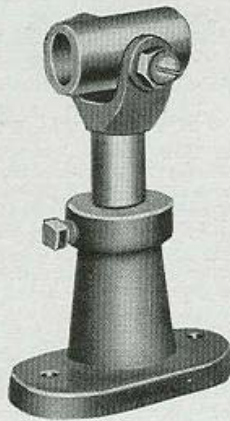
In sizes 4" diameter and larger, keyways are supplied.

No. 1000 SERIES			No. 2000 SERIES		
For use with only No. 1000 V-Belts			For use with only No. 2000 V-Belts		
No.	Outside Diameter	Price	No.	Outside Diameter	Price
1011	1 3/4"		2012 1/2	2 1/2"	
1012	2"		2013	3"	
1012 1/2	2 1/2"		2014	4"	
1013	3"		2015	5"	
1014	4"		2016	6"	
1015	5"		2018	8"	
1016	6"				
1018	8"				

**Adjustable Hangers:** Bronze bearing, 1 3/4" long for 3/4" dia. shafting. An elliptical oil groove distributes oil lubricant.

Adjustable 1/4" forward or backward. Adjustable in height from 3 1/2" to 5".

Hangers should be located close to drive pulleys and greatest distance between hangers should not be more than 36". The bushings are so low in price they may be thrown away when worn, and new ones inserted with little trouble or expense.



No. 640 Bronze Bearing Adjustable Hanger. Ship. wt. 2 3/4 lbs. . . .

No. 641 Polished Shafting, 3/4" dia. Per foot . . . . .

No. 642 End Collar. Ship. wt. 4 oz. . . . .

## V BELTS, 38°

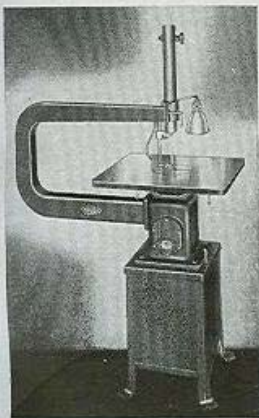
Boice-Crane V Belts are moulded endless, and are uniform in cross-section. During manufacture, the core of the belt is stretched under tremendous tension, so the finished belt can not possibly stretch further when in use.

Boice-Crane V Belts are extremely flexible, will revolve at high speeds and still maintain close contact with very small pulleys. This means a tight grip, and full transmission of power, using only a slight belt tension.

No. 1000 SERIES				No. 2000 SERIES			
<p>No. 2000 Series V-Belts are heavier in cross-section and will transmit far greater power with less belt tension than No. 1000 Series belts.</p> <p>Less belt tension causes less wear and strain on belt and bearings.</p> <p>For these reasons No. 2000 Series V-Belts are greatly preferred on such heavy duty Boice-Crane Machines as our No. 1400 6-inch Jointer, No. 2500 Tilting-Arbor (10-inch) Saw, and No. 1000 Thickness Planer.</p> <p>No. 2000 Series V-Belts, and V-Pulleys may be purchased for other heavy duty applications, in which the motor power to be transmitted is 1/2, 3/4, 1, or 1 1/2 h.p.</p> <p>No. 1000 Series V-Belts and V-Pulleys are for 1/2 h.p. or less.</p>							
No.	Outside Length	Inside Length	Price Each	No.	Outside Length	Inside Length	Price Each
1030	30	27.7		2046	46.3	43.7	
1031	31	28.7		2048	48.3	45.7	
1032	32	29.7		2050	50.3	47.7	
1033	33	30.7		2052	52.3	49.7	
1034	34	31.7		2054	54.3	51.7	
1035	35	32.7					
1036	36	33.7					
1037	37	34.7					
1038	38	35.7					
1039	39	36.7					
1040	40	37.7					
1044	44	41.7					
1045	45	42.7					
1046	46	43.7					
1048	48	45.7					
1052	52	49.7					
1058	58	55.7					
1060	60	57.7					
1068	68	65.7					
1072	72	69.7					
1094	94	91.7					
1096	96	93.7					

## HANDY MACHINE LAMPS FOR YOUR BOICE-CRANE MACHINES

**Fine Sawing  
Requires Good  
Lighting**



No. 2200—24" Jig Saw has tapped hole ready to receive single screw to attach lamp. Mounts out of the way.

Boice-Crane Machine Lamps were developed to solve your lighting problems. Most overhead lamps do not concentrate the light sufficiently for efficient machine operation. This problem is especially acute where work is mostly done at night. These lamps throw all their light directly on the work. They become a part of the machine, making relocation of overhead lights unnecessary if machine is moved or the shop rearranged.

Notice particularly how the Boice-Crane lamp may be focussed exactly at cutting point or on spot being drilled or mortised.

This is an exclusive feature made possible by any arm that swivels in two directions. This one style of mounting bracket takes care of all machines.

The lamp socket has its own control switch . . . so operator can instantly snap on the light without having to walk to some distant point across his shop.

### Have Many Other Uses

These lamps are for other machines too. You will find a dozen places around the home where they are just the thing you have wanted.

**No. 115** Machine Lamp complete with bracket, double swiveling arm, 8-foot cord and plug and attaching screw. No bulb. Ship. wt. 1 lb. . . . .

**Light Exactly Where Needed  
For Greater Safety—Better Work**

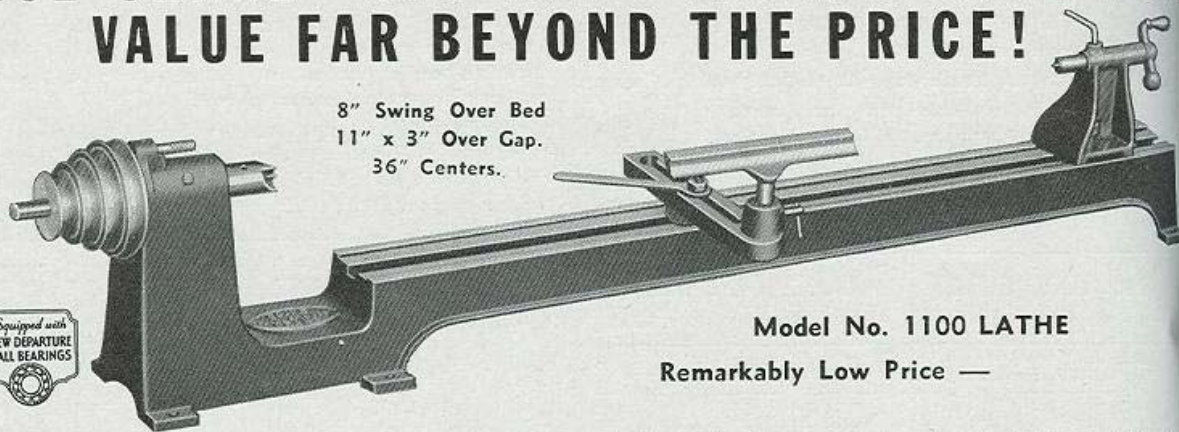


No. 1600—Drill Press. Simply remove one guard attaching screw to mount lamp on drill press.



# BOICE-CRANE "GAP-BED" LATHES GIVE YOU VALUE FAR BEYOND THE PRICE!

8" Swing Over Bed  
11" x 3" Over Gap.  
36" Centers.



Model No. 1100 LATHE

Remarkably Low Price —

The Gap-Bed feature is one big important difference between this year's Boice-Crane lathes and most other makes. We were first to offer it.

There are a number of good reasons why we developed the GAP-BED, after we had built the conventional type of lathe. It is only natural to expect that our many years of contact with thousands of customers would uncover new needs, better ideas, and more thorough ways of doing jobs, and these in turn presented to us the unusual opportunity to develop a more suitable lathe design for all classes of users.

## Facts Why Craftsmen Buy GAP-BED Lathes!

In one sense, a lathe is entirely different from any other machine. For example, if a Circular Saw is too small, you can resort to hand-sawing the bigger pieces; if a Jointer is too small, to jack-planing. But with a lathe too small, you are just up against it, for there is no possible way to do lathe turning by hand methods.

For this reason craftsmen should purchase lathes big enough. Boice-Crane GAP-BED Lathes provide 35% to 55% greater turning capacity directly over the bed, without any increase in price. This extra Boice-Crane capacity certainly repays in many numerous and unexpected ways after you begin to use it.

The GAP-BED feature fully provides for bigger work at the very outset. Even 11 to 17-inch diameter work, frequently encountered in just ordinary projects that every craftsman will wish to make, can be done.

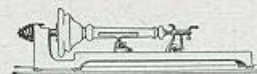
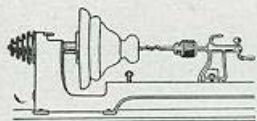
In "gapless" lathes, you must resort to turning work equally as large out here, like this, and you will have to spend about \$7 to \$10 extra money for a floor type tripod to hold the tee rest.

Even on the assumption that this method of turning will be satisfactory, and that you do not mind the extra tripod cost, another major problem will present itself.

Almost all bases for floor lamps, smoking stands, table lamps, etc., require a deep center hole to receive the tenon of the upright column. Consequently if in "gapless" lathes you cannot swing such work over the bed, the tailstock and drill cannot be brought into use.

The GAP-Bed feature enables every craftsman (without any extra equipment whatever) to completely turn these larger bases, and also in the same set-up to drill the center hole accurately and at right angles. Merely feed up the drill held in the tailstock, and the job is neatly done. Nothing could be more practical or easier than that. Accuracy is definitely assured.

The GAP-BED feature is also used to prepare such articles for staining and varnishing. After the base and column are joined and glued together, the entire assembly can be swung over the bed between lathe centers as shown.



Using a Gap Bed in this manner, it is very easy and advantageous to be able to go over the entire surface lightly with sandpaper to remove any excess glue, or any traces of smudgy finger prints which would otherwise show thru the varnish.

On the other hand, "gapless" lathes without the capacity to swing assembled work like this compel you to resort to sanding by hand methods, which is slow and tedious.

It is big capacity afforded in a GAP-BED; our very low price; and the ability of GAP-BED lathes to handle all operations which you will encounter that have convinced craftsmen as to the desirability of Boice-Crane Lathes.

In addition, the GAP-BED feature opens up an entirely new vista of interesting and instructive work, namely the fascinating craft of "Metal-Spinning."

This change in design was not made merely "to be different." Our new, major development of the GAP-BED feature in our lathes serves certain definite needs and purposes (never before known to any lathe) which yield greater service, utility, and satisfaction to our customers.

After you read of the things a GAP-BED does for you, without costing you any more money, we feel that you will agree that a Boice-Crane GAP-BED Lathe will make you a better tool and a most economical investment. We present a series of GAP-BED FACTS to substantiate our claims.

## Facts About This No. 1100 GAP-BED Lathe

The Boice-Crane No. 1100 GAP-BED Lathe is a very practical size for average craftsmen. At its very low price it is an excellent value. It gives you equally as much face-plate turning capacity directly over its bed, as you would expect in a straight-bed lathe at \$25 or more.

The No. 1100 GAP-BED Lathe swings work 8" diameter over the bed, which is usual for this price lathe. The swing is increased in the gap by 35% to swing face-plate turnings as large as 11" diameter by 3" thick. The distance between centers is 36", which is ample for table legs.

The headstock and bed are cast in one piece. The bed proper is generously ribbed for strength and stiffness. See photo page 42. The top surface, and center spot, are milled straight and true. The bed is raised off the bench by a gracefully arched span which makes it easy to clean under. No shavings can clog inside to interfere with the parts that slide along the bed. The open span under the bed provides the handiest place for tools not in use. With the headstock and bed cast in one piece, all boring, reaming, and milling operations are performed in the same master jig. The method produces precision accuracy, and perfect alignment of all parts.

In our No. 1100 Lathe, high grade ball bearings of the radial and thrust type are used, the same as in our larger lathes. This assures that even at a low price, every craftsman can have a quiet, smooth running and vibrationless machine of high quality throughout. The ball bearings never require any adjustment, need oil but occasionally, and will easily withstand the heaviest load.

The driving pulley gives 4 speeds: 3180, 2110, 1450, and 960 r.p.m. These speeds are entirely correct for all wood-turning and metal-spinning of pieces up to 11 inches diameter. The No. 1100 Lathe is equipped with the same indexing device as our No. 1700 Lathe. See next page.

The screw feed of the tailstock gives 1" of travel to the quill. Calibrations in inches, by sixteenths, indicate depth of bored holes.

The spindle of the headstock, and quill of the tailstock are both 5/8" diameter and that is extra large for such lathes. All attachments such as spur centers, face plates, etc., attach to spindle by hollow head set screws. The tee rest holder is cast iron, and very strong. Our standard 8" or 24" long, tee rests have 5/8" diameter stems.

**No. 1100** Boice-Crane GAP-BED Lathe with 8" tee rest and holder, tailstock, milled spur center, and wrenches. Ship. wt. 60 lbs. ....

For lathe accessories, see pages 42, 43 and 44.

Floor Stand—A Complete, Compact Unit

**No. 1710-X** Bench—30" x 40" x 4" high, completely bored for No. 1100 Lathe, and for motor on top. Ship. wt. 110 lbs. ....

**No. 1601** 1/2 h.p. motor built-in switch .....  
**No. 1144** Switch rod .....  
**No. 1101** 1/2" Cone Pulley, 1/2" hole .....  
**No. 1068** 1" Belt, 68" circumference .....

**No. 1145** 4-Speed, Floor Stand for No. 1100 Lathe, complete as itemized above. (Does NOT include Lathe.) Ship. wt. 140 lbs. This Floor Stand is same as illustrated on page 42, except motor is bolted on lower shelf with switch-rod leading up to top of bench. No countershaft.

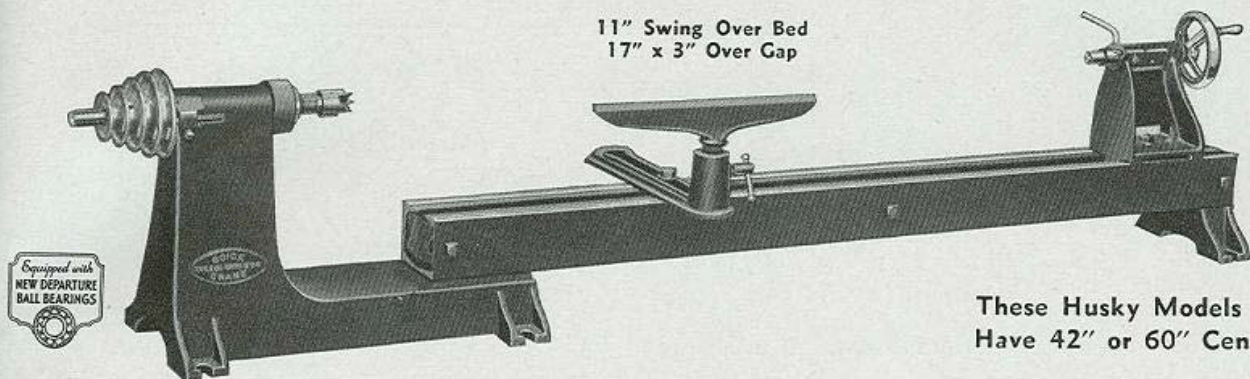
NOT AVAILABLE



# 55% ADDED CAPACITY WITHOUT ANY EXTRA COST

## THE LARGER, No. 1700 AND 1701 BOICE-CRANE GAP-BED LATHES

11" Swing Over Bed  
17" x 3" Over Gap



These Husky Models  
Have 42" or 60" Centers

### HEAVY DUTY, BALL BEARING. EVERY WORTHWHILE FEATURE INCLUDED

Due to the fact that this year, 1943 is our thirty-third in this business, we have worked especially hard and diligently to make every machine in the Boice-Crane line of greater value than ever dreamed possible.

A glance thru our catalog will bear out this statement, for where else can you find such wonderful values as in Boice-Crane's 1943 Models of Tilting ARBOR Saws, highly perfected Jointers, big capacity Jig Saws, and now on these pages, GAP-BED Lathes?

The No. 1700 GAP-BED Lathe is without question the very finest lathe we have ever built with so many desirable features included in it, all for such a low price.

We have on the previous page already told you about the advantages which a GAP-BED affords to a lathe. Everything we say there is true to even a greater extent on this No. 1700 Lathe, because here the entire lathe and the GAP is bigger in this lathe than in the No. 1100 Lathe.

No. 1700 GAP-BED Lathe has very large capacities. It swings work over bed 11" diameter. The GAP-BED increases this normal capacity, so face plate turning can be swung over the bed in size up to 17" diameter x 3" thick. This is an increase of 55%.

The center distance is 42" on No. 1700; and 60" on the No. 1701 GAP-BED Lathes. Overall lengths are 60" and 78" respectively.

This greatly enlarged capacity, at a low price every craftsman can afford to pay, the sturdy construction and precision workmanship all through, and the many new features, all go to make the No. 1700 GAP-BED Lathe a favorite with pattern makers, cabinet makers, furniture, toy and novelty manufacturers, as well as home-craftsmen.

#### Every Part Designed for Severe Service.

From the bed up, every part of this big, husky lathe has been designed with heavy duty service in mind.

It is no ordinary bed that we use in this No. 1700 Lathe. Two structural steel sections, walls  $\frac{3}{8}$ " thick, are bolted rigidly together and then carefully planed and milled along their full length on modern production machines. These beds will stand tremendous strains and are guaranteed not to spring. Centers cannot ever get out of alignment on such a bed a this. The headstock is doweled in place.

The bed is raised off the bench by gracefully designed legs. The open span under bed makes it easy to clean shavings off bench, prevents interior of bed from clogging full of shavings which would hinder adjustment of the sliding parts, and also provides a handy place to lay tools to be instantly available. The legs are a part of the machine and not an extra charge.

The headstock spindle in this de-luxe lathe is turned and ground from tough textured steel 1" diameter, to which are fitted best grade New Departure Ball Bearings. We use and recommend only ball bearings for such a high speed application. Ball bearings require no adjustment of any kind for the life of the machine.

Consistent with the large capacity of this lathe, the headstock and tailstock were designed to carry loads many times heavier than will ever be required of them. These parts are strong iron castings—not die-cast. Live spindle has a hole clear through, for chucking long rods or dowels. The nose of the live spindle is fitted with a deep, coarse thread for the various attachments for wood turning, metal turning, and metal spinning. Both spindles have No. 2 Morse taper sockets, and tailstock has a self-ejecting center feature.

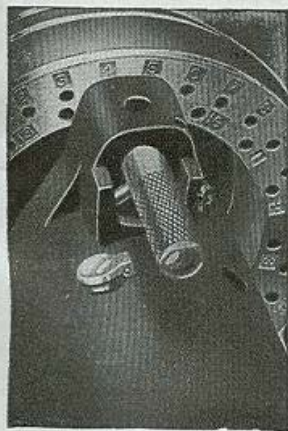
**No. 1700** Boice-Crane Gap-Bed Lathe with tee rest and holder, tailstock, taper shank spur center, taper shank cup center, and wrenches. Ship. wt. 100 lbs. ....

**No. 1701** Same, except 60" c. to c. ....

**No. 1101** 4-Step Cone Pulley, for motor. Specify size of hole,  $\frac{1}{2}$ ",  $\frac{3}{8}$ " or  $\frac{3}{4}$ ". Ship. wt. 2 lbs. ....

**No. 1040** V-Belt, 40" circumference. Ship. wt. 8 oz. ....

### STUDY THESE OTHER IMPORTANT FEATURES OF BOICE-CRANE GAP-BED LATHES



**Indexing Device:** All Boice-Crane GAP-BED Lathes have an improved indexing device, which is of considerable use in craftsmen's work as you will see below.

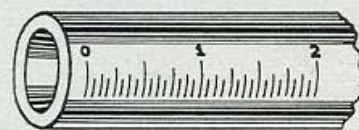
This device performs the most difficult and tedious jobs any craftsman ever encounters, namely the laying out of circular work into any number of equal divisions. Laying out exact positions for spokes in a wheel, or for bosses and holes in circular pieces are two examples. Many other uses will occur to you.

Another opportunity for use, which every craftsman will grasp at, time and again, is to lock the spindle from turning, so that you can use both hands on the face plates, to screw them on (or off) more easily.

It is also used to lay out flutes in a table leg so you can carve accurately between the marked lines; or if you own a portable router or flexible shaft you can make the actual fluting cuts while the table leg is held stationary between centers in the lathe, with the tee rest acting as a horizontal guide for the cutter.

The Boice-Crane indexing device is unique in several particulars. The index pin operates from the one position as shown, and will engage either of the two rows of holes. It divides a circle into a great number of practical divisions, namely 2, 3, 4, 5, 6, 8, 10, 12, and 18 equal parts. Every "division hole" is numbered, see photo, to simplify the use of the device and to eliminate errors that otherwise might occur from miscounting unidentified "divisions."

A small detail usually overlooked in bench lathes but included in all Boice-Crane Gap-Bed Lathes, is a calibrated tailstock spindle used in connection with accurate depth boring operations. An adjustable pointer is furnished to set at zero when the boring starts. The exact depth of the bore is right before the operator's eyes

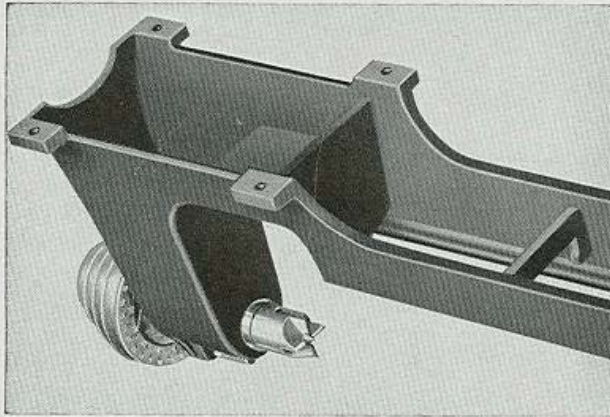


Calibrated Quill of Tailstock

at every moment of the operation. The scale is accurately calibrated in inches by sixteenths.



## UNDERNEATH SHOWS STRENGTH



Regardless of the Boice-Crane lathe you select, its bed has these features:

1. Extra weight to prevent springing and to absorb vibration.
2. Thick cast iron walls, exceptionally strong, thoroughly cross braced, to keep all parts in alignment.
3. Span type, to lift bed off bench. Permits slipping tools under bed where they are handiest. Makes cleaning up easy too, and prevents shavings clogging the inside of bed. No legs to buy.

**4-Step Cone Pulley:** Steps are 4, 3.4, 2.8, and 2.2 inches in diameter. When two are used in combination with a 1750 r.p.m. motor, the following speeds are developed: 3180, 2110, 1450 and 960 r.p.m. These speeds are exactly right for woodturning and metal spinning up to 11" diameters, making no countershaft necessary on the No. 1100 lathe at any time.

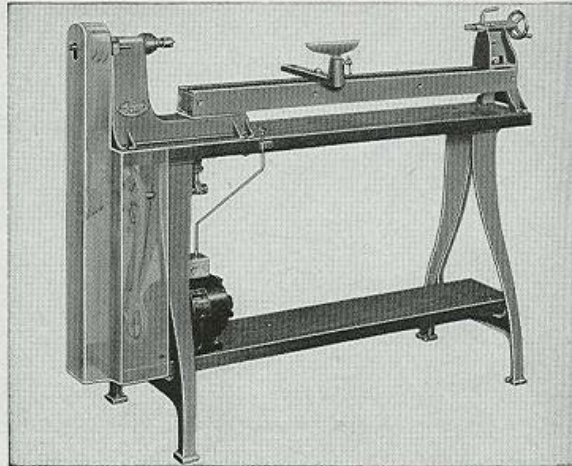
Using the No. 1700 lathe for wood turning and metal spinning above 11" diameter slower speeds give better results. And of course for metal turning, greatly lessened speeds are absolutely necessary. We can furnish a countershaft developing 8 speeds for all these classes of work.

**Countershaft for Slower Speeds:** Use our No. 1708 Countershaft between lathe and 1750 r. p. m. motor. Selectivity of speeds by quick, easy shifting of belts, as follows: 4600, 3020, 2030, 1330, 940, 620, 415 and 275 r. p. m. This wide range will handle every job of wood and metal turning, or metal spinning possible on the No. 1700 lathe.

Price of No. 1708 countershaft is in right hand column.

## MOUNTED 4 AND 8 SPEED LATHE OUTFITS

These sturdy, compact, lathe outfits complete with stand, motor and switch are the finest lathe units we offer. They are an extraordinary value too, especially for large homecraft shops, schools, pattern shops, repair shops, etc., because they are the equal of the floor type lathes costing three or four times as much. Choice of motors permitted.



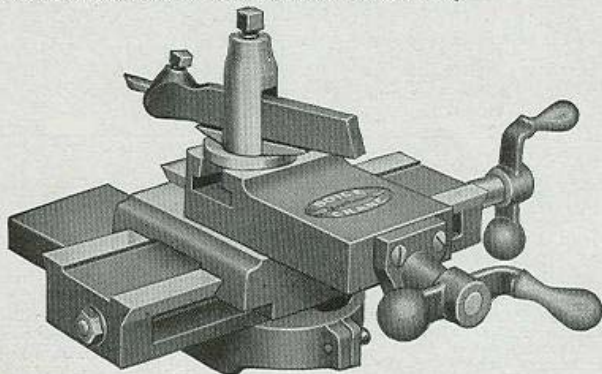
- |                     |   |
|---------------------|---|
| <b>No. 1710</b>     | Bench, 10" x 60" x 34" high, completely bored for either lathe, with shelf for countershaft.. |
| <b>No. 1761</b>     | Motor, 1/2 h.p., with push-pull switch .....  |
| <b>No. 1016</b>     | V-Pulley, 6" dia., for motor .....  |
| <b>No. 1012 1/2</b> | V-Pulley, 2 1/2" dia., for motor.....   |
| <b>No. 1046</b>     | V-Belt from motor to countershaft .....   |
| <b>No. 1045</b>     | V-Belt from countershaft to lathe .....   |
| <b>No. 1708</b>     | Countershaft, complete with all three pulleys, hangers, and end collars .....                 |
| <b>No. 1720</b>     | Eight-Speed Mounting for Lathe, complete as itemized above. Ship. wt. 220 lbs.....            |
| <b>No. 1722</b>     | Same, except 4 speeds only .....  |
| <b>No. 1723</b>     | Belt Guard for No. 1722 unit. Ship. wt. 8 lbs.  |
| <b>No. 1725</b>     | Belt Guard for No. 1720 unit. Ship. wt. 12 lbs.   |

**Power Required:** No. 1100 lathe, woodturning to capacity of machine 1/8 h. p. Metal spinning to capacity of machine at least 1/8 h. p.

No. 1700 lathe, 1/2 h. p. for best results whether wood turning, metal spinning or metal turning.

## METAL TURNING EQUIPMENT FOR No. 1700 LATHE

With the addition of a Compound Slide Rest, shown here, and with Point Centers instead of woodturning centers, the No. 1700 Gap-Bed Boice-Crane Lathe performs excellent metal turning. The lathe has the necessary strength and stamina, and the features essential for metal turning.



**Compound Slide Rest**

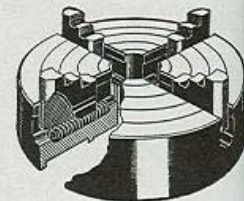
For Pattern Making or Metal Working. Is of cast iron construction entirely, and has machine-cut lead screws. Longitudinal feed 6 1/2 inches. Cross feed 2 1/2 inches, and swivels to any angle. Standard tool post takes standard tool holders and bits 1/4-inch square. All ways are dovetailed and gibbed, fitted with adjusting screws and also locking devices. Suitable for any 11" swing lathe.

- |                 |   |
|-----------------|---|
| <b>No. 1713</b> | Compound Slide Rest for Pattern Making, or Metal Turning. Includes tool post, rocker, and rocker pins. Ship. wt. 22 lbs. (No. Tool Holder)... |
| <b>No. 310</b>  | 1/4" x 1/2" Tool Bits, each. Ship. wt. 2 oz.....  |
| <b>No. 312</b>  | Tool Holder for 1/4" sq. bits. Ship. wt. 8 oz...  |

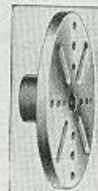
We can also provide other metal turning accessories, such as 4-Jaw Independent Chucks, slotted face plates, dogs, drill pads, and point centers. The countershaft needed for slow metal turning speeds is described above.

### Independent 4-Jaw Chuck

For holding square, or irregular pieces on a lathe. Chuck body is a special quality semi-steel. Jaws have serrated teeth, are reversible and of heat-treated steel. Jaw screws are of hardened steel and have a hexagon socket for wrench. Hubs are bored 5/8" or 3/4" diameter. Locks to shaft by set screw.



- |                 |   |
|-----------------|---|
| <b>No. 34</b>   | 4" Independent 4-Jaw Chuck. Fits 5/8" shaft. Ship. wt. 3 1/2 lbs. ....                      |
| <b>No. 35</b>   | Same, but fits 3/4" shaft .....   |
| <b>No. 1712</b> | 4" Independent 4-Jaw Chuck with fitted plate for 1" x 14 pitch thread. Ship. wt. 9 lbs..... |

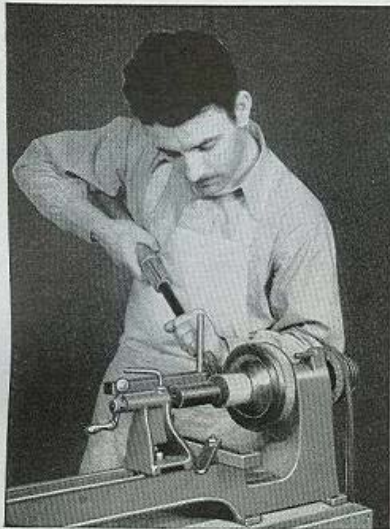


### Other No. 1700 Lathe Metal Turning Accessories

- |                 |   |
|-----------------|---|
| <b>No. 356</b>  | Dog. 1/2" capacity. Ship. wt. 1 lb...                           |
| <b>No. 357</b>  | Dog. 3/4" capacity. Ship. wt. 1 lb...                           |
| <b>No. 1711</b> | Slotted Face Plate, 6" dia. Ship. 2 1/2 lbs. ....               |
| <b>No. 1714</b> | Point Center with No. 2 Morse Taper Shank. Ship. wt. 12 oz..... |



# EVERYTHING FOR SUCCESSFUL SPINNING



Your spinning equipment, in addition to the lathe, should include: a Spinning Tool Rest, a Spinning Face Plate, and a Ball Bearing Back center of proper size to fit the lathe you select. Also spinning tools for the kind of work you will do. See below for details. All equipment can be furnished too for other makes of lathes. Write for prices.

Sheet pewter, aluminum, etc. also quoted on request.

## INSTRUCTION BOOKS ON SPINNING

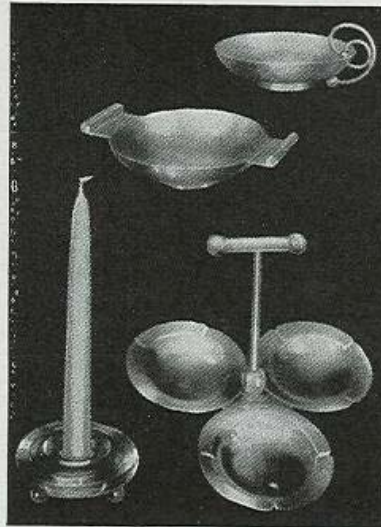
Plainly written books of instruction. Double the enjoyment out of your lathe with metal spinning. Add to your income too, making beautiful giftwares easily. These books teach you how.

### No. 980 METAL SPINNING, Reagan-Smith.....

First and only complete text book on the subject. Just out. All the fine points but written so the amateur can understand it and become an expert spinner. 80 pages; 35 illustrations; 15 project sheets.

### No. 979 HOW TO SPIN METAL..

A fine book for the beginner and for students. Non-technical. 16 pages; 12 illustrations.



## PROFESSIONAL TYPE SPINNING TOOLS AND ACCESSORIES



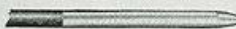
We guarantee these tools to be professional style and designed by professional spinners. Finest construction throughout. Maple handles 1 3/4" diameter, nicely balanced with easy grip. Tools average 26" overall, a proper size for any craftsman. Tool bits are forged from highest quality carbon steel, then hardened and carefully polished. The five tools listed make a complete, all purpose set.

No. 1125



**All Purpose Flat Tool:** One portion of tip is flat for smoothing purposes. Opposite side is rounded for "breaking down" and "spinning to chuck" purposes. Portion where flat joins the round is also rounded but to a sharper radius, so this edge can be used to bear into sharply rounded fillets. This is the tool you will use most. It will perform 65% of all spinning on soft metals such as pewter or aluminum. Ship. wt. 3 lbs. ....

No. 1126



**Point Tool:** The next most used tool. Used for spinning disc to chuck at very beginning, and for bearing into curves of small radii. Dia. 3/4". Ship. wt. 3 lbs. ....

No. 1128



**Cut-Off Tool:** The third, indispensable tool. Used entirely for trimming excess metal from lip of spun object, and for rounding off sharp edges. Ship. wt. 3 lbs. ....

No. 1129



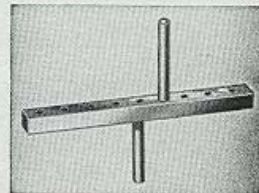
**Beading Tool:** The fourth tool in value to a spinner. Is used for turning the edge of a spun object to a beaded lip. Can also be used for grooving shallow decorative motifs around bowls. Rolls are interchangeable. Ship. wt. 3 lbs. ....

No. 1130



**Ball Tool:** This type is never used on soft aluminum or pewter, and if your work will comprise such metal entirely you do not need this tool. It is for hard metals, such as brass, copper, or steel, and then only for "breaking down" metal to roughly approach the chuck. Never to bring metal to bear snugly to chuck. Ship. wt. 3 lbs. ....

**Spinning Tool Rest:** Rest is 10" long, heavily constructed of steel throughout. Has 9 holes to vary location of fulcrum.



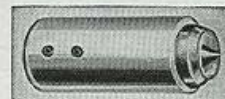
We make them with different diameter shanks to fit the standard tool rest holders of Boice-Crane, and other makes.

No. 1121 Spinning Tool Rest with fulcrum. Shank 5/8" dia. to fit No. 1100 Gap-Bed Lathe. ....

No. 1122 Same, but with shank 3/4" dia. ....

No. 1123 Same, but with shank 1" dia. to fit No. 1700 Gap-Bed Lathe, and other make lathes. .... Average Ship. wt. 3 lbs.

**Ball Bearing Back Center:** Professional type. Revolves freely under heavy pressure. Is of steel throughout. Has removable center point, and a fine quality ball, thrust bearing. Fine for woodturning use, is essential for spinning. Made with socket, or taper shank, to fit any make of lathe.



No. 1115 Ball Bearing Back Center, with socket to fit all tailstock spindles 5/8" dia. as on No. 1100 Gap-Bed Lathe. ....

No. 1116 Same, but with a No. 1 Morse taper shank. ....

No. 1117 Same, but with a No. 2 Morse taper shank to fit spindle socket, as on No. 1700 Gap-Bed Lathe. .... Average Ship. wt. 1 3/4 lbs.

**Spinning Face Plate:** Differs from a woodturning face plate. This spinning face plate has a coarse thread, large diameter, blunt nosed screw securely affixed to plate. All this provides strength. The threads on nose act as a "tap" to cut threads in wooden chucks as they are screwed on. Any chuck may be attached any number of times, and it will be held securely, and centrally on plate.



Made by us to fit spindle of Boice-Crane Lathes or other makes.

No. 1110 Spinning Face Plate, 4" dia. Hub fits a 5/8" dia., non-threaded, lathe spindle, as on No. 1100 Gap-Bed Lathe. ....

No. 1111 Same, but hub fits a 3/4" dia. non-threaded, lathe spindle. ....

No. 1112 Same, but with hub to fit a 1" dia. x 14 threads per inch lathe spindle, as on No. 1700 Gap-Bed Lathe. ....

No. 1113 Spinning Face Plate, 6" dia. Hub fits a 1" dia. x 14 threads per inch lathe spindle as on No. 1700 Gap-Bed Lathe. For spinning over 11" dia. .... Average Ship. wt. 2 lbs.

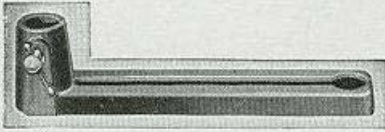


# LATHE ACCESSORIES FOR WOODTURNING



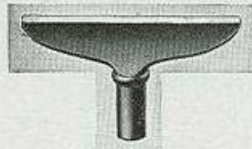
Four-step Cone Pulley corresponding to pulley on Nos. 1100 and 1700 Lathes. Fits any motor or lineshaft. Runs true. Has socket head set-screw.

No. 1101 4-step Cone Pulley. Specify hole,  $\frac{1}{2}$ ",  $\frac{5}{8}$ ", or  $\frac{3}{4}$ " dia. Ship. wt. 2 lbs. ....



No. 1105 Holder for No. 1100 Lathe. Ship. wt. 2 lbs. ....  
No. 1705 Holder for No. 1700 Lathe. Ship. wt. 3 lbs. ....

Rigid, cast iron, long reach Holder for T-Rests, complete with clamp. The clamping washer is always pressed up against lock nut by the compression spring, after removal of the holder. Makes it easy for you to put it on again.



Rigid, accurately machined, cast-iron Tee Rests, 8" and 24" lengths. Shank size  $\frac{3}{4}$ " for No. 1100 Lathe.

No. 1106 8" Tee Rest....  
No. 1107 24" Tee Rest....  
Ship. wt. 2 and 5 lbs.  
Shank size 1" dia. for No. 1700 Lathe

No. 1706 8" Tee Rest ....  
No. 1707 24" Tee Rest ....  
Ship. wts. 2½ and 5½ lbs.



Spur, or Driving Centers. Four sharply milled teeth. Suited to all sizes of work.

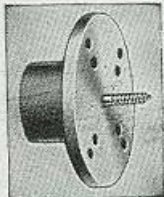
No. 1735 Spur Center with removable center point, and No. 2 Morse taper shank. For No. 1700 Lathe. Ship. wt. 12 oz. ....

No. 1135 Spur Center for No. 1100 Lathe. Fits over  $\frac{3}{4}$ " dia. spindle. Ship. wt. 12 oz. ....



Cup Center for woodturning purposes. Deep cup retains lubricant, and eliminates considerable friction and overheating.

No. 1736 Cup Center with No. 2 Morse taper shank. Ship. wt. 12 oz. ....



Screw Center Face Plates for woodturning purposes. Removable center point. Accurate. Run true.

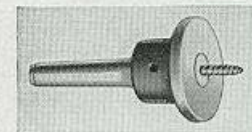
No. 1139 and 1739 also fit quill of tail-stock to serve additionally as a Drill Pad.

No. 1139 4-Inch Diameter. For turning of work either upon the right or left (outer) end of the No. 1100 Lathe. Fastens to spindle by hollow head set screws. Ship. wt. 1¼ lbs.

No. 1737 4-Inch Diameter. For right end of spindle only of No. 1700 Lathe. Ship. wt. 2 lbs.

No. 1738 6-Inch Diameter. For right end of spindle only of No. 1700 Lathe. Ship. wt. 2½ lbs. ....

No. 1739 6-Inch Diameter. For LEFT (outer) end of spindle only of No. 1700 Lathe. Ship. wt. 2½ lbs. ....



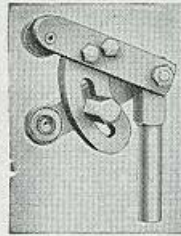
Small sized wooden knobs, drawer pulls, etc., are best turned upon a small face plate like this. Has No. 2 Morse taper shank. Center screw is removable, so it will serve also as a Drill Pad.

No. 1740 Small 2½" dia. Screw Center Face Plate—Drill Pad in one. Ship. wt. 2 lbs. ....



## ARBOR for EMERY WHEELS

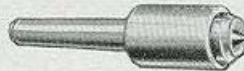
No.	For Machine	Dia. Hole in Wheels	Price
51	Motor No. 1601	$\frac{1}{2}$ "	
53	No. 1100 Lathe	$\frac{5}{8}$ "	
55	Motors with $\frac{3}{4}$ " shaft	$\frac{3}{4}$ "	
1709	No. 1700 Lathe, R. H.	1" threaded	
1719	No. 1700 Lathe, L. H.	$\frac{3}{4}$ "	



This Boice-Crane Steady Rest is of the approved, frictionless type. Prevents spring and vibration of long, slender turnings. Its freely revolving Ball Bearing Rollers are best for woodturning. They will not wear (or burn) a groove into the wood, so consequently you do not need to make frequent re-adjustments to the rollers to keep the wood spindle running true.

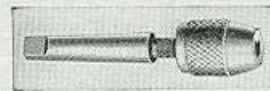
The entire front of the Boice-Crane Steady Rest is open. A nice feature. A series of spindles may be quickly and easily placed between, or removed from the lathe centers. No need to disturb the rollers nor the tailstock. Is adjustable to  $\frac{1}{4}$ " to 6-inch diameters. Requires an extra Holder for T-Rests.

No. 235 Steady Rest, 1" dia. shank. For 1700 Lathe....  
No. 335 Steady Rest,  $\frac{5}{8}$ " dia. shank. For 1100 Lathe....  
No. 135 Steady Rest,  $\frac{3}{4}$ " dia. shank .....  
Average Ship. wt. 4 lbs.



This "Live" Cup or Ball Bearing Back Center is very valuable in wood turning. Ball Bearing. Is frictionless under heavy thrusts. Will not wear into soft woods to permit looseness and chatter.

Lowers costs to rock bottom. Enables many jobs to be inserted "on the fly" between the live center and a "screwless" face-plate without stopping lathe. Saves much time. No need to screw every piece on and off face plates. Increases production. Available to fit every make of lathe. For prices, see page 43.



No. 1142  $\frac{3}{8}$ " Drill Chuck with hub to fit No. 1100 Lathe quill .....  
No. 1742  $\frac{3}{8}$ " Drill Chuck with No. 2 Morse taper shank, for No. 1700 Lathe.

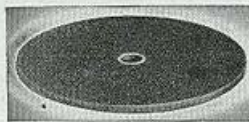
NOT AVAILABLE

Straight of curved edges that have been rough-sawn are easily sanded smooth with this low cost lathe attachment.



No. 1732 Sand Drum Mandrel with No. 2 Morse taper shank. Fits No. 1700 Lathe. Complete with 3" dia. x 3" wide rubber drum and garnet sleeve. Ship. wt. 3 lbs. ....

For extra garnet sleeves and drums, see page 37.



No. 1133 Sanding Disc 3" dia.,  $\frac{3}{8}$ " hole. Fits both ends of No. 1100 Lathe spindle .....  
No. 1733 Same with  $\frac{3}{4}$ " hole. Fits left end only of No. 1700 Lathe ....

NOT AVAILABLE

Faced on 2 sides with garnet discs. Average Ship. wt. 1½ lbs.

No. 704 Garnet Discs grade No. 2. Ship. wt. 1½ lbs. Per dozen .

## Long—WOODTURNING TOOLS—Length



Maple handles, 9" long x  $1\frac{1}{4}$ " dia., big enough to grasp and hold securely. Highest quality blades, 9" long beyond handle, will reach into deep turned holes, bowls, etc. Total length averages 18 inches. Professional length.



GOUGES No. Price Each  
 $\frac{1}{2}$ " wide..... L-1272 .....  
1" wide..... L-1274 .....  
1½" wide..... L-1276 .....



SPEAR POINT  
 $\frac{1}{2}$ " wide..... L-1282 .....  
1" wide..... L-1284 .....  
1½" wide..... L-1286 .....



ROUND POINT  
 $\frac{3}{4}$ " wide..... L-1291 .....  
 $\frac{1}{2}$ " wide..... L-1292 .....  
1" wide..... L-1294 .....



PARTING TOOLS  
 $\frac{1}{2}$ " wide x  $\frac{3}{8}$ "..... L-1302 .....



SKEW, COMBINATION RIGHT AND LEFT  
 $\frac{1}{2}$ " wide..... L-1312 .....  
1" wide..... L-1314 .....



SQUARE  
 $\frac{3}{4}$ " wide..... L-1321 .....  
 $\frac{1}{2}$ " wide..... L-1322 .....  
1" wide..... L-1324 .....

Average Ship. wt. 1½ lbs.



## ROUTER BITS



Dia.	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Price							
No.	174	175	176	177	178	180	182

## WOOD MACHINE BITS WITH BRAD POINT



Dia.	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"
Price						
No.	74	75	76	77	78	80

## PLUG CUTTERS (BEST QUALITY)



Dia.	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Price							
No.	276	277	278	280	282	284	286

## MORTISING CHISELS--BITS--BIT BUSHINGS

The Mortising Attachments for both the Boice-Crane Saw Table and Drill Press, are for heavy duty, fully able to do the work ordinarily done on an individual Mortising Machine.

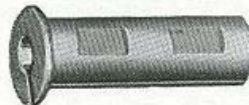
In keeping with the heavy duty capacity, we recommend the use of standard production type and quality Hollow Chisels and Bits, and list just one grade—the best.

They may be used on the hardest materials, mortising to their very limit of depth capacity, without danger of burning or removing the temper. Consequently they hold their edge longer.

They cut fast and clean, as they are made with two large rapid chip clearance openings.

A single chisel and bit will last for years. True economy results when you buy Boice-Crane mortising tools manufactured by one of the oldest and most successful firms in the business.

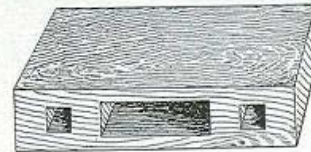
### BUSHING



No bushings are required with our Helmet Head Drill Presses, because bits are held directly in chuck. Bushings are for use with Drill Presses Nos. 1600-10 and 1650-60.

No.	Bit Size	Dia. Hole	Price
794	1/4"	1/2"	
795	5/16"	3/4"	
796	3/8"	1"	

## For Drill Press and Saw Mortising Attachments



### CHISEL



No.	Size	Depth of Mortise	Price
774	1/4" x 1/4"	1 3/8"	
775	5/16" x 5/16"	1 3/8"	
776	3/8" x 3/8"	3 3/4"	
777	1/2" x 1/2"	3 3/4"	
778	1/2" x 1/2"	3 3/4"	

Ship. wt. each, 8 oz.

### MORTISING BIT



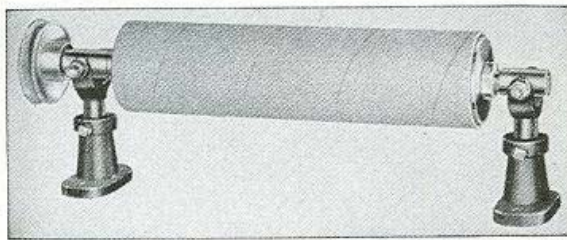
No.	Size	Dia. Shank	Price
784	1/4"	5/16"	
785	5/16"	3/8"	
786	3/8"	1/2"	
787	1/2"	5/8"	
788	1/2"	3/4"	

Ship. wt. each, 6 oz.

# EVERY SHOP CAN USE THIS PRACTICAL 3' x 12" DRUM SANDER

**Sand All Your Work Smooth and Clean, Quickly—By Power!**

**A Machine You've Always Wanted:** How many times haven't you wished you could buy a large Power Drum Sander at a price really within reach? Here is exactly what you have been looking for. A big capacity, efficient, labor saving Drum Sander so low in price that every craftsman can afford one in his shop now.



**Beats Hand Sanding:** The Boice-Crane Power Drum Sander will do all of your sanding jobs better, quicker, and practically without effort. Compared to hand sanding, which is such an awfully tedious job, it is lightning fast. Your projects will take a better finish too. One week's use will convince you it is a mighty good investment.

**Dozens in Use:** You can use this Sander many times on every project. It will sand the edges of straight and irregular shaped band and jig sawed pieces. It will finish sand the faces of wide and narrow stock. One of the uses you will appreciate it most for is finishing resawed stock too wide to dress on your jointer.

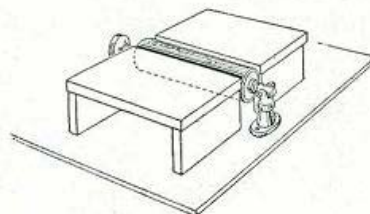
**Few Dollars Buy All Essential Parts:** You buy just the essential parts from us, namely, the mandrel; rubber expansion drum; abrasive sleeves; two bushed hangers; and the pulley. The outfit is priced complete. No table is included however. You make your own from wood as suggested in the sketch below.

- No. 760** Sand Drum Mandrel, complete as shown. Includes mandrel, rubber expanding drum, garnet sleeve, two bronze hangers, and V-Pulley for belt drive. Ship. wt. 14 lbs. Only .....
- No. 761** Extra Garnet Sleeves, Nos. 1/2, 1 and 1 1/2 grit. Ship. wt. 3 lbs. Price for three.....

### TABLE EASY TO MAKE—SAVE TWO-THIRDS THE COST OF THE MACHINE

The table is easy to make as there are no table adjustments to be provided for. The drum is placed in position exactly level with the rear table by adjusting the height of the hanger posts. The front table is slightly lower but parallel to the rear one. We suggest making the entire table and supporting frame detachable from bench so you can do curved sanding.

This will make you an efficient, accurate and all around useful Drum Sander for a few dollars, equal to most any \$30 to \$50 machine.





**SPLIT-PHASE**

**CAPACITOR**

**BOICE-CRANE  
REPULSION-INDUCTION**

Close-limit fuse protection is not possible.

50% LIGHT LOSS VERY ANNOYING

38 AMPS

22 LBS.

220% OVERLOAD CAPACITY

Close-limit fuse protection also impossible.

25% LIGHT LOSS VERY NOTICEABLE

20 AMPS

25 LBS.

250% OVERLOAD CAPACITY

The best, close-limit protection. Smallest fuses.

5% LIGHT LOSS NO VISIBLE

11 AMPS

55 LBS.

550% OVERLOAD CAPACITY

25 Ampere fuses too small for 38 ampere start-demand, and 4 times too heavy for normal 6 ampere demand.

20 Ampere fuses do for 20 ampere start-demand, but 3 1/2 times too heavy for a normal 6 ampere run-demand.

10 Ampere fuses carry the momentary start-demand of 11 amperes. Exactly correct for a normal 6 ampere run-demand.

Actual starts of three types of motors were made 40 feet from the feeder line, with 110 volts on the line, and with No. 14 wire. All motors tested were of 1/4 h. p. rating.

Each 10 pounds of weight shown is the measure of 100% rated load.

In any motor, ampere-demand increases in direct proportion to horse power. A 1/2 h.p. Split-Phase motor would require 50 ampere fuse protection. It is obvious, even in small horse power sizes that a Split-Phase is the least desirable of all A. C. motors.

The Capacitor motor is basically a split-phase motor with a capacitor (condenser) in connection with the starting winding. The condenser is an expedient which reduces the ampere-demand only slightly below that of the split-phase. From the price difference between a split-phase and a capacitor, it is obvious that the condenser (a current reducer . . . not a power builder) is a big share of the total price of a capacitor motor.

The Boice-Crane Repulsion-Induction Motor starts the largest load; takes the least starting current; dims lamps the least; takes the smallest fuse protection; develop 550% or the highest overload rating; and is the most efficient, one-phase A. C. motor.

*Shop tested*  
**MOTOR PERFORMANCE**  
... YOUR SAFE BUYING GUIDE

Here are some quick facts and figures which show better than anything else we can say why Boice-Crane Motors are the cheapest in the end, and the most power for your money.

In accordance with electrical terms, any complete motor name tells first—*how it starts*; and second—*how it runs*.

**Complete names of motors are:**

*Split-Phase start—Induction run*  
*Capacitor start—Induction run*  
*Repulsion start—Induction run*

**Commonly called:**

*Split-Phase Capacitor*  
*Repulsion-Induction*

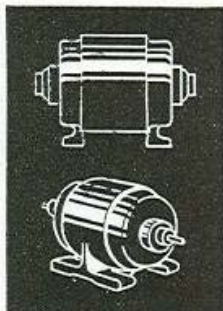
Thus from the names alone, you see that while the 3 types of motors *start* upon different principles . . . they all *run* on the same induction principle. Obviously therefore, any *performance* advantage of one motor over another rests largely on "How it Starts." And there is a definite relation between low amperage . . . and good performance. Note the accompanying chart.

Low amperage consumption of Boice-Crane motors saves you money in many ways. Low amperage saves you money on power bills; is "easy" on motor windings and insulation; is easy too on the "points" of starting controllers for far longer life of every part.

Low amperage allows your shop's service lines to be fuse-protected at a safe point, far below maximum permissible capacity, to really protect them from blowing. Consequently, any fire-risk in your home or shop is reduced to a minimum, and that alone is worth far more to you than any slight saving on the initial cost of different motors.

By installing Boice-Crane, low ampere, Repulsion-Induction Motors, you avoid the tremendous expense of rewiring your shop with new and heavier size service lines that would otherwise be needed for complete safety if you install motors of other type.

**AN X-RAY EXAMINATION REVEALS MOTOR CONSTRUCTION**



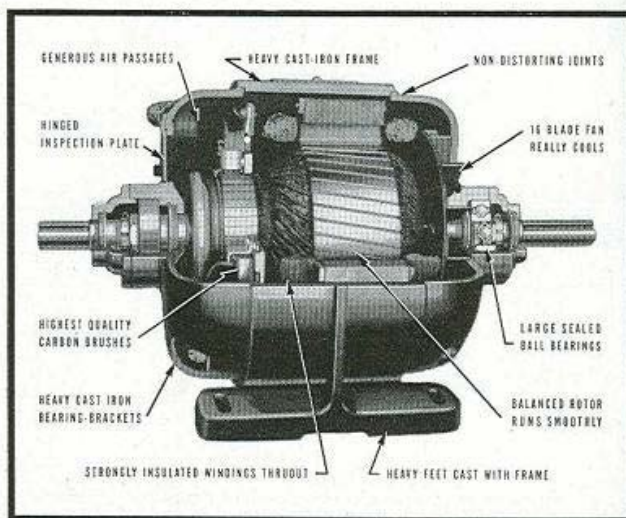
Some motors have narrow feet projecting from their bearing-bracket castings, (see sketch). The mere bolting of motor to bench often twists the bearings out of line, to cause rapid wear. Such feet are also easily broken.

On Boice-Crane motors, the feet are cast integrally to the heavy rugged frame, and extend full width of frame . . . for still greater strength. Such a heavy casting is entirely break-proof, and twist-proof. Precision bearing alignment is everlasting.

Some motors have welded steel casings which are relatively soft, easily dented, readily distorted. Motor windings, end-bell joints, and bearing alignment get little real protection from damage by falling objects. Boice-Crane motor frames are heavy walled, hard textured, cast iron. No chance for dents, breakage, or distortion. Every motor part gets 100% protection against falling objects. Continuous service assured.



The costly, machine-bored recessed joints in Boice-Crane frames (see sketch), always remain perfectly round . . . to let you dismantle and reassemble the end-bells with ease . . . and with none of the service troubles from poor fits that come with easily distorted frames.



Because no condenser whatever is needed in obtaining Boice-Crane's excellent ampere economy, and highest efficiency and power per ampere, . . . the entire cost of manufacture of a Boice-Crane goes into EXTRA quantities of POWER-MAKING iron and copper . . . which make Boice-Crane Repulsion-Induction Motors attain the highest (550%) overload capacity of any type of 1-phase, A. C. motor.

A Boice-Crane Motor . . . and a Boice-Crane Machine are the best Motor-Machine Value per dollar you'll ever find.



Strong blast of cooling air saves windings from softening and shorting. Prolongs life. Allows heavier overload

CENTI-GRAD 55°C RISE 40°C RISE 20°C ROOM TEMP



FAHREN-HEIT Run cooler. Only 40°C 167°F (72°F.) rise above room temperature. Don't expect 55°C motors to equal our performance.



All performance tests measure up to high standards established by National Electric Manufacturers Ass'n.



Windings are strongly insulated to resist moisture and heavy dew. Shorts, and grounds are rare. Prolongs life.



# EACH MOTOR HAS THIS HEAVY DUTY 2-POLE SWITCH

## TO START

Only an intentional pull by operator starts this ever safe switch.



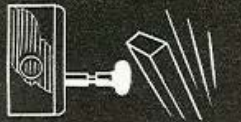
## TO STOP

No groping for a tiny toggle. The broad palm of your hand can't miss this switch-knob.

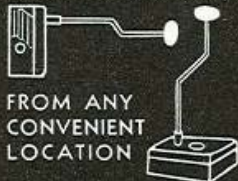


## NO ACCIDENTAL STARTS

A falling object can only throw switch to STOP.



## REMOTE CONTROL



FROM ANY CONVENIENT LOCATION

## SUITABLE FOR REMOTE CONTROL

A lifetime of trouble-free starts and stops from this larger, really heavy-duty, 2-pole switch.

A few noteworthy construction features are: larger, heavier switch-points; thicker insulation against shorts; eight fiber-shields to guard "off-position" and to snuff arcing; and a very rapid snap-action that shortens arcing to small flashes.

Notice also our large Control Knob. It is a big easy target to strike by palm of hand . . . for stops; easy to grasp . . . on starts. Its big shaft and bearing of steel are indestructible.

This better construction saves you aggravating breakdowns and repairs.

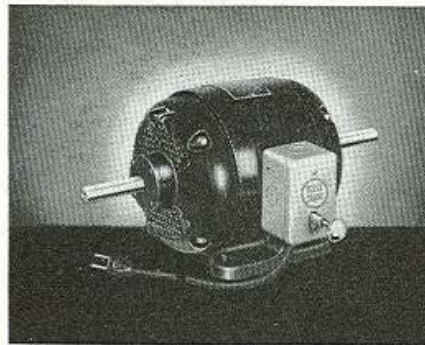


The massiveness of this Boice-Crane Switch (4x2½x2¼ inches) shows it is not limited to light homeshop usage, but for heaviest factory service.

One-Shaft for No. 2514 Saws

Two-Shaft for No. 2529 Saw-Jointers

No.	Price	H.P.	Voltage at plug	Bearings	Ship. wt. lbs.	No.	Price
2561		1½	110	Bronze	62		
2563		1½	220	Bronze	62		
2565		1½	110	Ball	62	2566	
2567		1½	220	Ball	62	2568	
2575		¾	110	Ball	62	2576	
2577		¾	220	Ball	62	2578	
2585		1	110	Ball	69	2586	
2587		1	220	Ball	69	2588	
2595		1½	110	Ball	145	2596	
2597		1½	220	Ball	145	2598	



## SAW

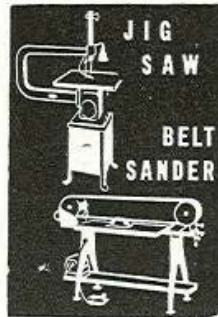
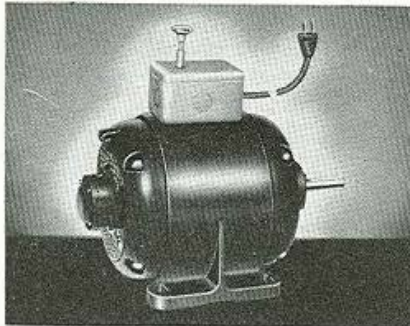


## SAW-JOINTER



# FOR BEST POWER...BEST MOTOR CONTROL...AT LOWEST PRICE

ALL MOTORS On This Page Are REPULSION-INDUCTION 1750 RPM.



No.	H.P.	Voltage at plug	Bearings	Ship. wt. Lbs.	Price
1455	1½	110	Ball	34	
1457	1½	220	Ball	34	
1461	1½	110	Bronze	62	
1463	1½	220	Bronze	62	
1465	1½	110	Ball	62	
1467	1½	220	Ball	62	
1475	¾	110	Ball	62	
1477	¾	220	Ball	62	
1485	1	110	Ball	69	
1487	1	220	Ball	69	

# INSIST ON THESE MOTORS...ENGINEERED BY BOICE-CRANE

Abreast each of the 3 classes of motors (which differ in switch location), we illustrate those Boice-Crane Machines for which each class of motor is intended. For those who have other appliances to motorize, one of these 3 classes of complete, switch-equipped Boice-Crane Motors is sure to save you real money.

The prices of Boice-Crane Floor Stands always include the proper Push-Pull extension rod to locate the operating knob of switch at the most convenient place on machine. We list motors in each single voltage to avoid mistakes on switch connections. Please order by catalog number. But remember, all Boice-Crane R-1 motors are dual (110-220) voltage and may be connected for either 110, or 220 volt at any time by merely interconnecting the motor-leads to switch terminals. Motors of 2500 and 1400 series rotate counterclockwise; 1700 and 2600 series rotate clockwise, as viewed from shaft end. Rotation may be reversed at any time by shifting position of brush-ring.



## LATHE



No.	H.P.	Voltage at plug	Bearings	Ship. wt. Lbs.	Price
1755	1½	110	Ball	34	
1757	1½	220	Ball	34	
1761	1½	110	Bronze	62	
1763	1½	220	Bronze	62	
1765	1½	110	Ball	62	
1767	1½	220	Ball	62	
1601*	1½	110	Ball	33	
2655	1½	110	Ball	34	
2657	1½	220	Ball	34	
2665	1½	110	Ball	62	
2667	1½	220	Ball	62	

\*No. 1601 Motor is a 1½ h.p. Split-Phase, 1-shaft, with one pole switch. For 1600 series Drills, 1900 Jig Saw, 1100 Lathes, and other light duty power tools.

## 3-PHASE MOTORS

Prices of 3-phase ball-bearing motors do NOT include cord, plug, nor switch. However when the 3-phase switch is also purchased, the switch is mounted on machine and motor-leads connected to switch terminals, thru metal conduit. Customer to supply and connect 3-phase service line and plug.

No.	1-Shaft	Horse Power	Ship. wt. Pounds	Volts	No.	2-Shaft
885		1½	32	220	886	
887		¾	55	220-440	888	
889		1	88	220-440	890	
891		1½	119	220-440	892	

No. 899 Starting Switch, heavy duty for 3-phase motors listed above. Ship. wt. 10 lbs. Specify single voltage for switch connections.

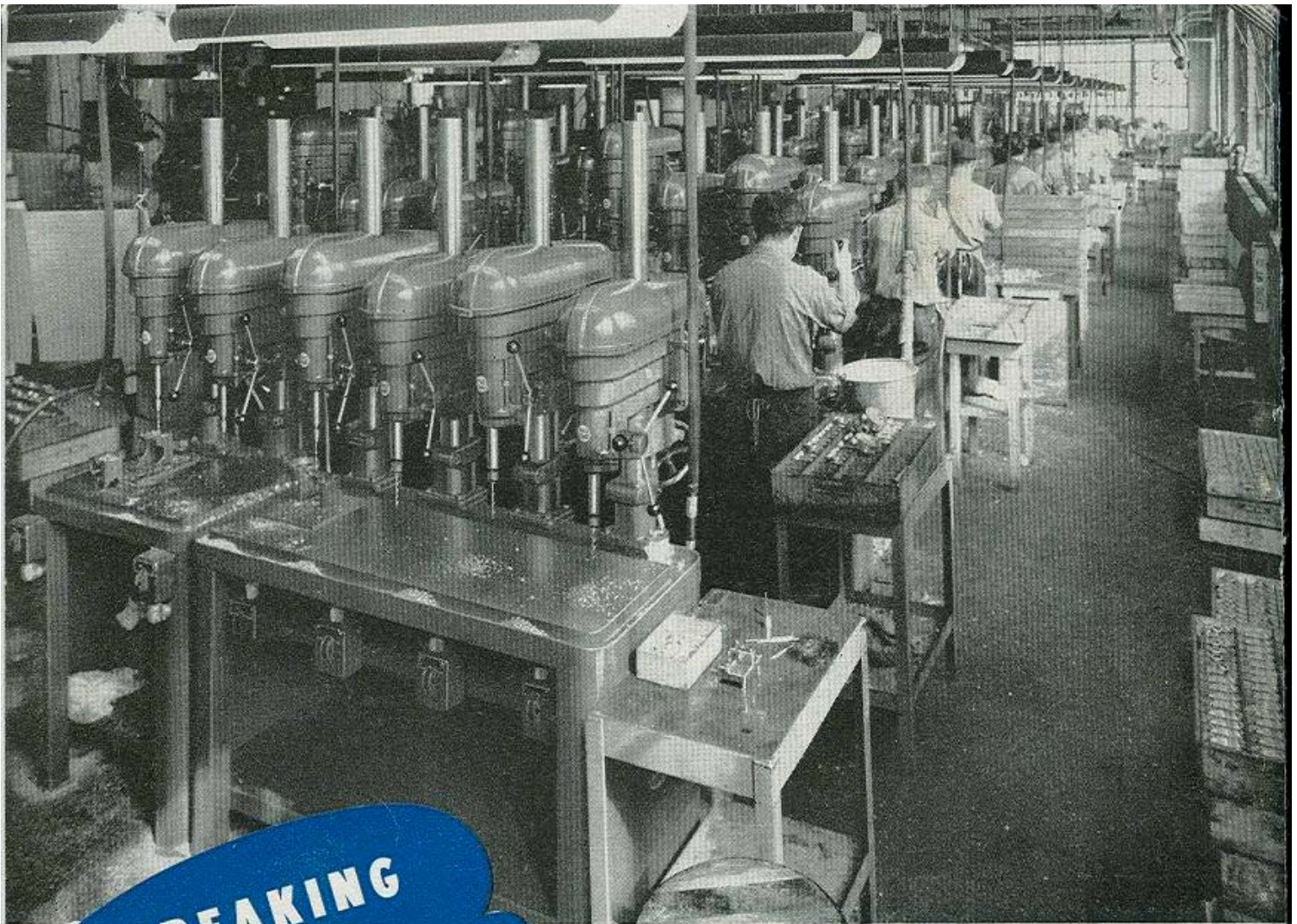
## SPINDLE SANDER



## DRILL PRESS







## BREAKING A BOTTLENECK

*The above illustration is a typical example of modern mass production. This battery of Boice-Crane Helmet Heads were chosen for tooling a precision drilling and tapping job, and another industry's bottleneck was broken a few days after placing their order. As a result of their experience with this flexible installation, we predict the plant owners in looking to the future, will never again return to the use of heavier equipment for many operations.*

Industry today knows Boice-Crane Power Tools have met the demand for more flexibility and increased production, while proving their ability to withstand continuous operation. It has been demonstrated that two or three small machines with a lower total cost will out-produce the big heavy machine on most operations and do the job as well. Boice-Crane engineers are proud to say that even unskilled labor can easily adapt themselves to running any Boice-Crane machine efficiently. Quick delivery is a Boice-Crane pledge.

SOLD BY

We reserve the right to make changes in design, specifications, or equipment at any time without incurring any obligation to install these on any machines already sold.

BOICE-CRANE COMPANY      TOLSON, OHIO