

ANTIQUE WOODWORKING POWER TOOL ASSOCIATION

© 1991

HERE YOU SEE THE FINEST IN BENCH MACHINERY

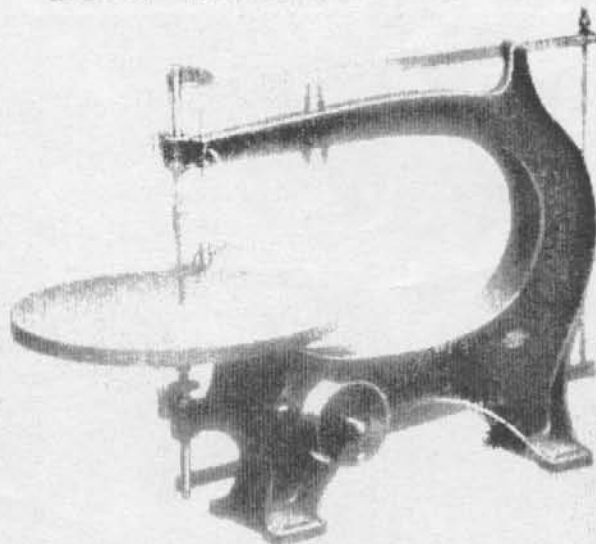
Boice-Crane 20" Jig Saw

Table 15" Dia.
Tilts 45°.

Saws 2" Thick.

Vertical
Stroke.

Nine Sizes
of Blades.



Bronze Bearings
Throughout.

Air Blower.

Saws Wood
and Metal.

Net Weight
70 Pounds.

To woodworkers who require a jig saw with more capacity than our 10" machine, we offer the Boice-Crane 20" Jig Saw. With its larger capacity, you can saw out designs in wood up across the diagonal. By setting blade cross-wise, you can cut in half a panel 40" wide. From the illustration, you can readily see that the 20" Jig Saw is very similar to the 10" Jig Saw, described on pages 19 and 20. To avoid repetition, we merely call your attention here to the

Hold Down: Has wide shoe located close to blade. Holds work down on 3 sides of blade, as soon a saw starts to cut. It also holds nozzle of Air Blower.

Air Blower: Operated by upper rocker arm. Air is forced through a flexible tube, and directed at the saw cut. The blast blows all the dust away from top of work.

Drill Attachments: Same Drill Adapter, and Drill

Circa 1929 Boice-Crane Jig Saw.

TWO PART SERIES ON
BOYCE CRANE

ISSUE # 19

APRIL 1991

Things are pretty exciting around here. We have two gas turbines and one steam turbine. Each of these turbines drive a generator. On January 9, 1991 our steam turbine blew up. No one was injured, but we have been in a crisis management mode since the accident.

That is no excuse for being late but I am trying.

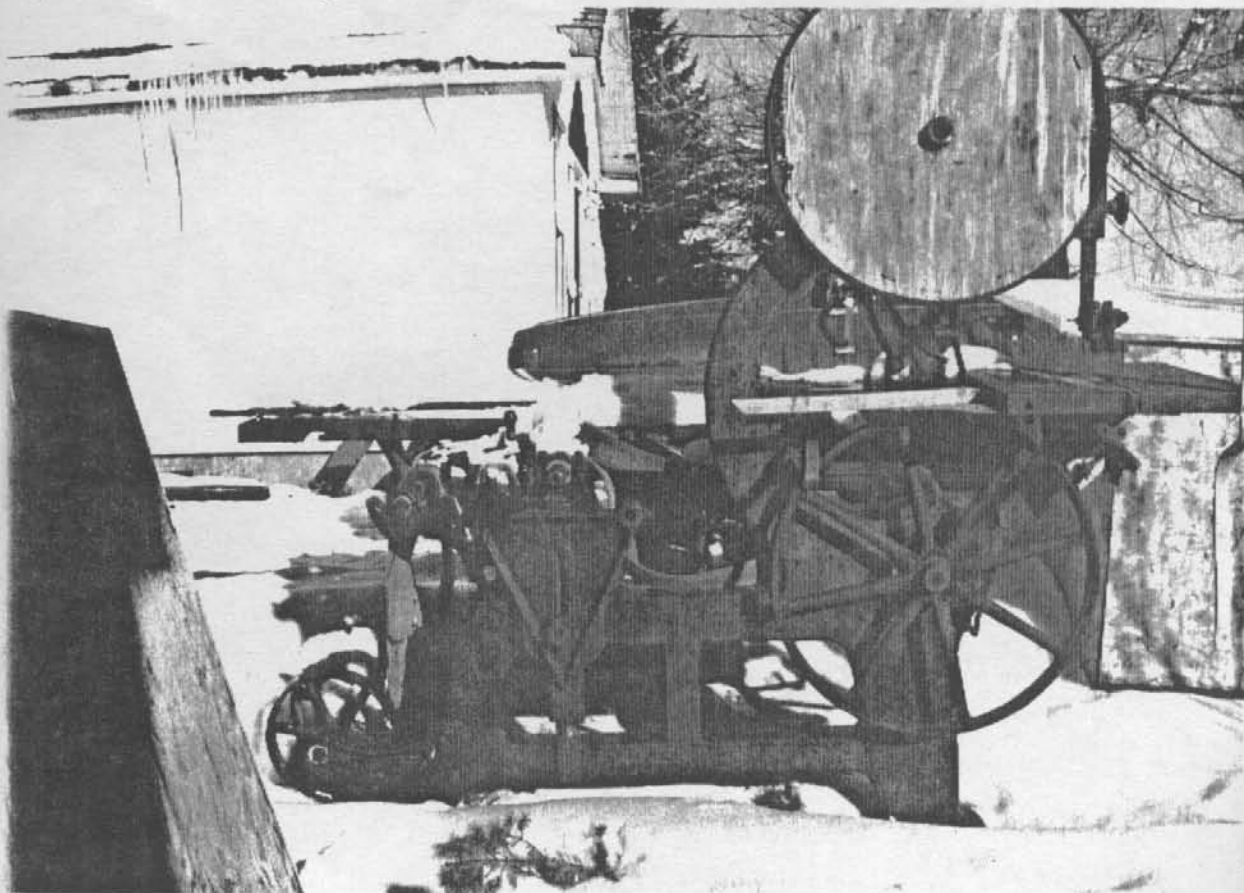
IF you want to get in touch with me directly, I'm at 22900 Circle J Ranch Rd, APT 56, Santa Clarita, CA 91350. (805) 254-3547, I am mostly at work (805) 254-8970.

Again thank you for being patient, Sincerely,

walt.

Sale: a Crescent universal woodworker, in good condition. with belts and a 5Hp single phase motor. Ron Hays (800) 426-4859.

Sale: a Sidney Tool Co, (Sidney, Ohio) multimachine. The machine has four tools; a 24" bandsaw, an 8" 3-bladed jointer, a 12"-16" 1" arbor saw and a horizontal boring arbor. It is missing a fence for the jointer and the table saw and a fixture for the horizontal boring arbor. Otherwise the unit is complete. Wayne Harfman Box 352, Oroville, WA 98844). There is some surface rust but no pits, please see the photo below:

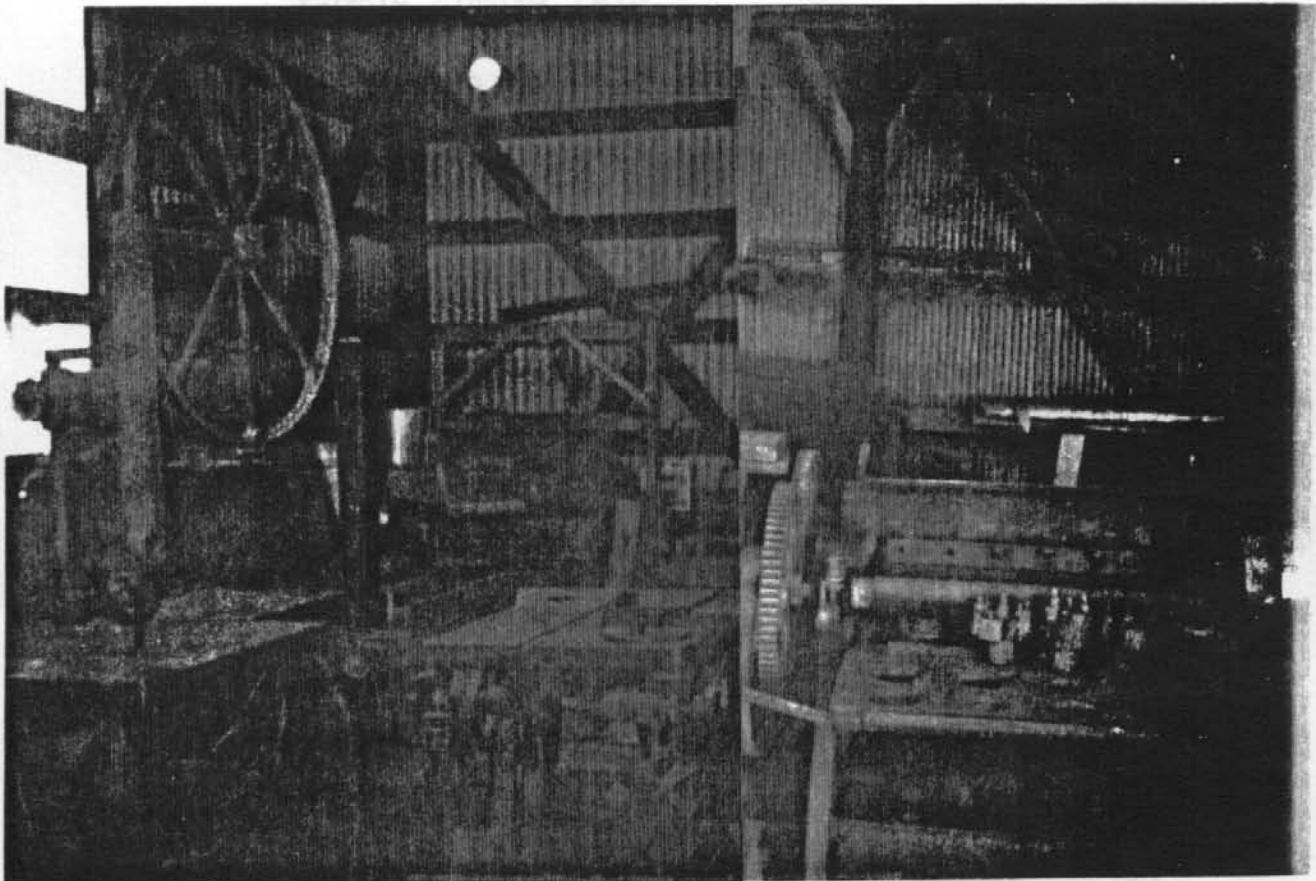


Wanted: 8" - 12" jointer, 16" - 20" planer, and 16" - 20" bandsaw.
Send info to Wnslow Kosior 219 Belden Hui Rd, Wilton CT 06897.

Sale: An Oliver, double 14" arbor saw #290, serial 348228.
Powered by a 3 phase motor 220v, 5 or 7 Hp. Abelardo Saavedra,
6001 Cattail, Corpus Christy, TX 78414.

Yates American table saw! Michael Santos is looking for some
material or a 1945 - 1950 vintage YA table saw. The saw has a
unique table with cast iron arms and wooden inserts. 541 Arizona
Street, Lawrence, KS 66049.

Sale: Crescent UWW w/ 12" Jointer, and table saw. 24" planer, in
good working condition. If you are interested please call Dale
Green @ (515) 464-2932.



Mr. Dana Martin Batory
402 E. Bucyrus St.
Crestline, OH 44827
(419) 683-2817

BOICE-CRANE

PART ONE 1910-1949

BY

DANA MARTIN BATORY

Copyright 1991 By Dana Martin Batory

"Shop-Tested," reads Catalog B-102 (circa 1967) of The Boice-Crane Company, a then division of Wilton Tool Manufacturing Co., Inc.

"Boice-Crane of Toledo was one of the pioneers in medium size or capacity woodworking machines," writes former company executive Myron H. Buehrer in personal correspondence, "and patented a number of features still prevailing in machines of various makes. These machines were of ideal size and capacity for home craftsmen, high school shops, contractors making store fixtures, cabinetry, special millwork, etc. In the homecraft category they were all Cadillacs."

The first Boice-Crane power tools were the inspiration of spare-time craftsman and full-time instructor Harold G. Crane. A graduate of M.I.T. with a degree in electrical engineering, Crane taught at M.I.T. and Harvard. Beginning in 1910, the machines were designed and built in his little home shop at Brookline, Massachusetts.

Crane relocated to Adrian, Michigan and established a power tool factory at 251 West Church Street. In 1921, he became partners with his brothers-in-law William B. Boice and John E. Boice of Toledo, Ohio. Crane, owner and manager of the Adrian plant, also became a director in the local Adrian Finance Co., Bassett Foundry Co., and Lenawee Textiles, Inc.

William was a University of Michigan graduate with a degree in electrical engineering. Co-owner of the Toledo plant he was also in charge of production and design (later president).

John, also co-owner of the plant, was a University of Michigan graduate holding a degree in mechanical engineering. In charge of sales management and finance he assisted in supervising machine design and trouble-shooting questions and problems from customers (later he became vice-president).

James R. Rettie, superintendent of the Adrian plant had longtime experience in manufacturing steam engines, shoe machinery, rifles, and precision instruments in the U.S. and Canada. Kettie had been associated with Crane since 1913 in making the woodworking machinery.

The company's start was small indeed. The Boices began selling the small tablesaw developed and built in Adrian by Crane out of their basement. By advertising in such magazines as Popular Science, Popular Mechanics, and Scientific America in the early 1920's the brothers created a mailorder business that served customers over the entire U.S.--mainly home woodworkers. Soon they were wholesaling to several of the largest U.S. hardware dealers and began to design new additions to the tablesaw line. They introduced saws, jointers, bandsaws, jigsaws, and lathes. This expanded sales dramatically and mandated a move out of the basement and into a small plant at 1730 Norwood Avenue, Toledo, in the mid 1920's. Toledo became the headquarters for the firm and remained so until 1963.

In 1927 Buehrer joined Boice-Crane and remained associated with the company under three ownerships or managements. In fact, Buehrer was one of the three owners of the original firm.

The Depression, though slowing the sales of production equipment, increased the demand for small tools and machines as more and more homeowners began to do their own repairs and remodeling or to make ends meet by doing work for others more fortunate. As companies turned to light industrial equipment because of lower initial costs they found a strong competitor in Boice-Crane who had been selling such machines for years. Formed officially as Boice-Crane in 1929, they proceeded to enlarge their line further.

Catalog D (circa 1929) offered eighteen machines featuring a liberal use of cast iron and ribbed frames, almost all with flat belt drives, jointers and a bench shaper with ball bearings, and the rest with bronze bearings.

The machines consisted of the 4-Inch and 6-Inch Ball Bearing Handi Jointer; a bench spaper with a circular table; the 7-Inch Handi Lathe; a wood or metal turning lathe (17", 30", and 40" centers); a 11-inch lathe (43" and 66" centers); the Model 2 Utility Lathe; the 10" Universal Jig Saw; a 20-inch jig saw; a 14-inch bandsew; the 12-Inch Handi Band Saw; a hollow chisel bench mortiser; the 9-Inch Universal Handisaw (tilting table), the 8-Inch Utility Saw; and the Model 2 Handisaw (with a hinged table allowing straight cuts

Boice-Crane Hollow Chisel Bench Mortiser

Mortises.

Five Chisel Sizes

Adjustable Stroke

Depth Gauge

Repulsion-Induction
Ball-bearing Motor

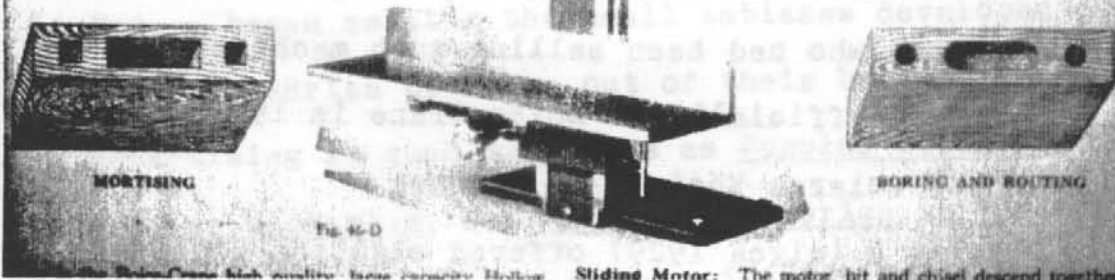
Bores and Routs.

Adjustable Table.

Two Hold Downs.

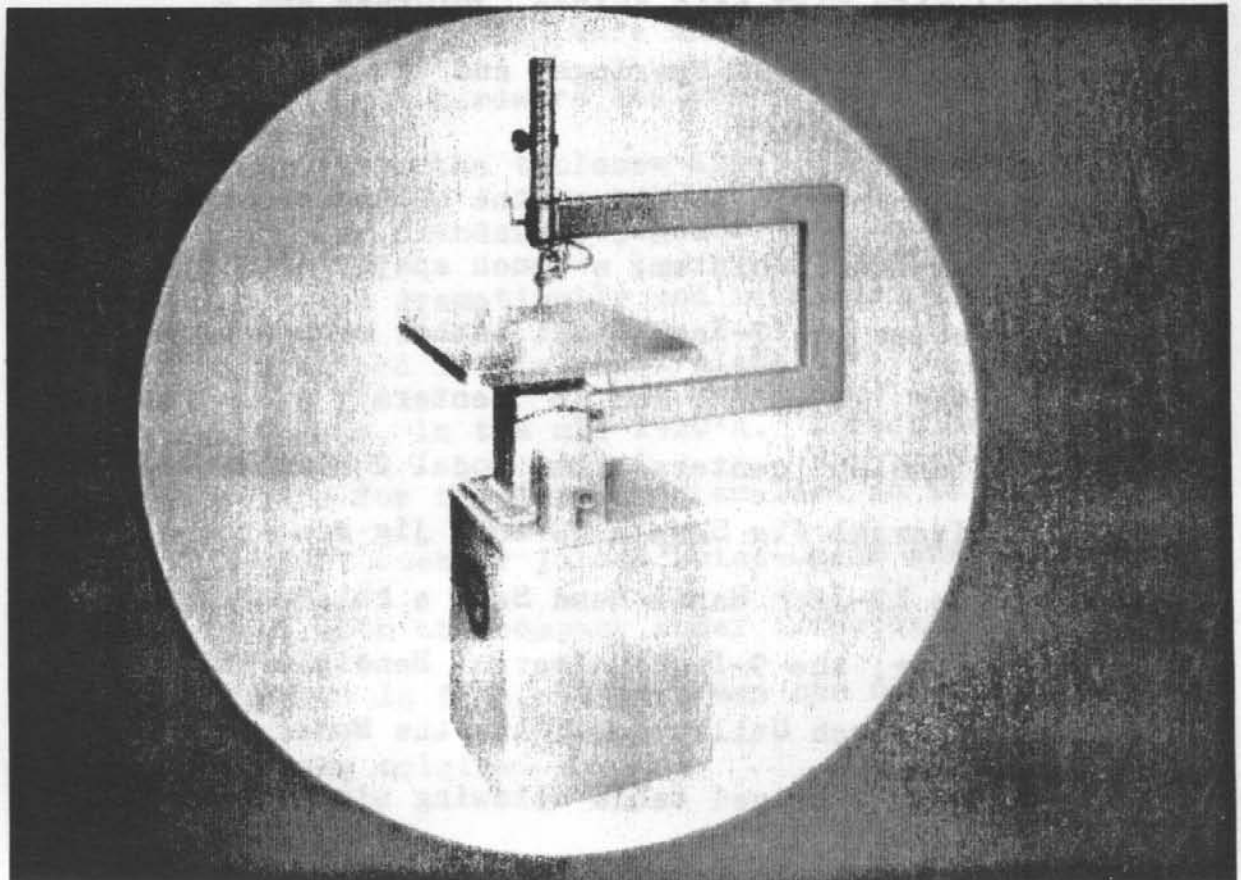
Heavy Construction.

Large Capacity.
Low in Price.



Sliding Motor: The motor, bit and chisel descend together

Circa 1929 Boice-Crane Hollow Chisel Bench Mortiser:



New Boice-Crane 26" x 5" Scroll Saw.

but no bevels).

Four years later as revealed in Catalog G (Spring 1933) major changes had taken place. Still making use of cast iron, flat belts had been replaced by v-belts. Ball bearings were standard in almost every machine. The catalog listed the following: 7" x 36" Handi Lathe with adjustable cast iron bearings (\$12.85); 7" x 30" "Junior" Lathe with adjustable cast iron bearings (\$6.95); 11-Inch Ball Bearing Handi Lathe (\$21.75); 4-Inch Ball Bearing Handi Jointer--also available with bronze bearings (\$24.50); 6-Inch Ball Bearing Handi Jointer--also available with bronze bearings (\$50.00); Bench Shaper with circular or rectangular table (\$56.10 and \$55.00 respectively); 14-Inch Band Saw with bronze bearings and ball bearing roller guides (\$43.75); 12-Inch Handi Band Saw with bronze bearings and ball bearing roller guides (\$27.85); and a re-designed 10-Inch Jig Saw with bronze bearings (\$4.50).

Not seen in 1929's catalog were an oscillating ball bearing Spindle Sander (\$45.00); a 9-Inch Tilting and Lowering Arbor Handisaw with ball or bronze bearings (\$28.85)--introduced in 1931 this was supposedly the first bench type tablesaw to feature a tilting arbor; 4-Inch Jointer-Saw-Mortiser on Stand (\$127.05); a Tilting and Lowering Arbor Saw with Large

Table (\$41.85); 6-Inch Jointer-Large Table Saw-Mortiser (\$168.25); and the 8-Inch "Junior" Handisaw--the re-named Model 2 Handisaw (\$9.90). Introduced in Catalog G was a new 24-inch Scroll and Jig Saw developed after a year of designing and testing (\$27.85).

As a leader in the medium power tool industry which blossomed between 1925 and 1950, Boice-Crane captured a large part of the market by its permanent policy of incorporating industrial quality engineering, precision, and construction into machines compact enough for small shops such as those in homes, schools, aboard ships, and in experimental and model building departments of industry.

Throughout the late 1930's the product line was continually enlarged. When the United States entered the Second World War the line included 11 different basic types of machines for wood and metal working--tablesaws, jointers, bandsaws, scroll saws, planers*, shapers, 2 types of abrasive machines, tool grinders, lathes, and drill presses--all in a wide variety of models. According to Catalog B-102 thousands of the 15" drill presses installed during W.W. II were still in hard use everywhere with little reported down-time and negligible repair costs.

*There will be a future article on Boice-Crane planers.

The industrial and military build-up of W.W. II made heavy demands for more and more machines-- especially drill presses. Soon after Lend-Lease shipments began to Britain in 1939 machine orders forced Boice-Crane to acquire more plant space. The Adrian plant was sold, and all operations consolidated in a new 50,000 square feet facility in Toledo, large enough to quadruple an already large output.

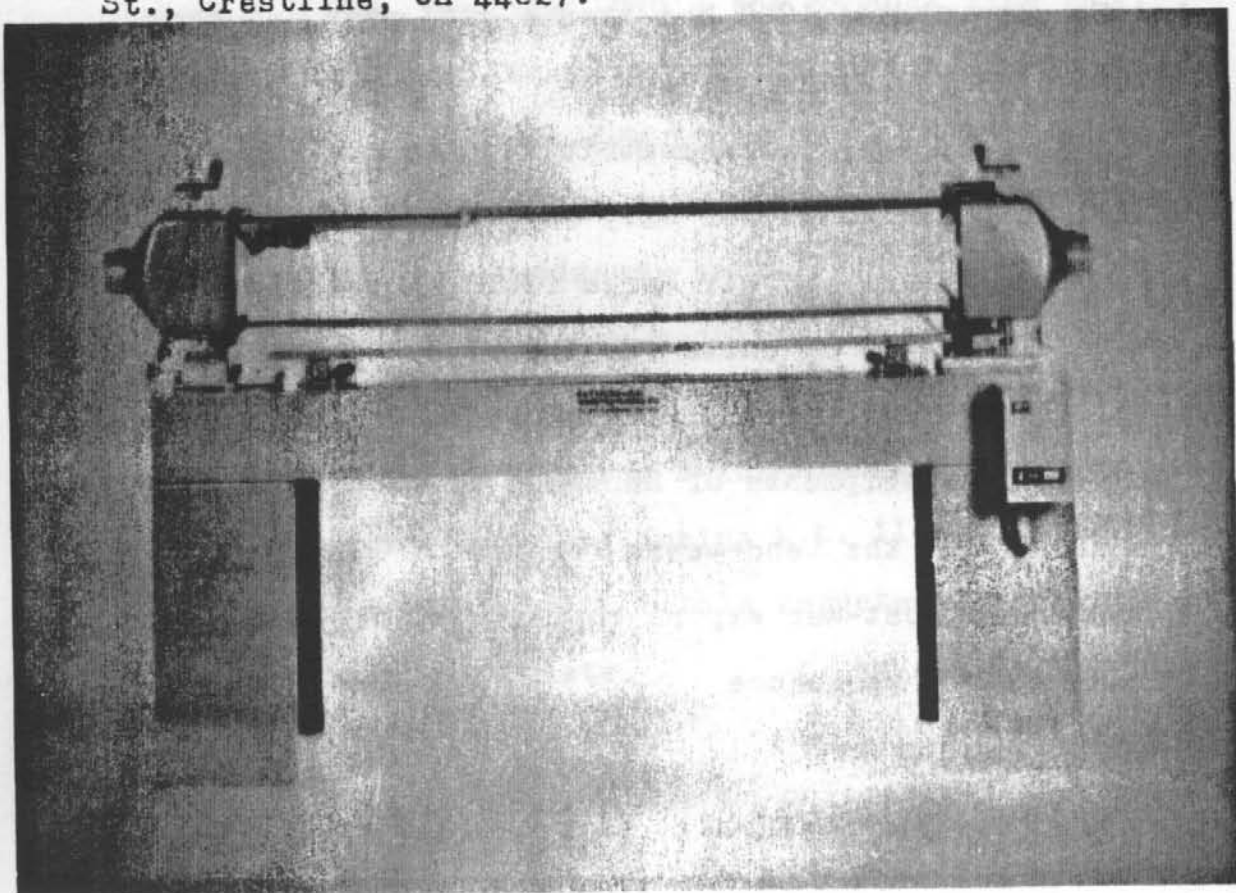
In January 1941 the Adrian division moved its entire operation into the new Toledo plant at 930 Central Avenue. Kettie (in December 1940) said the move was made because a new building had been constructed where all the units could be combined. Several Adrian employees would make the move also. Kettie also stated 1940 had been a good year and they were behind in filling orders.

The company's main contribution to the war was efficient power tools for Navy shipboard, Seabee, and shore shops, Army and Air Force field shops, plus tens-of-thousands of units for industrial production.

Along with a diversified domestic market Boice-Crane's shipments of hundreds of power tools to England during the Lend-Lease program of 1941 lead to a substantial post-war export business which the company pursued with a vengeance

In 1947 Boice-Crane was incorporated in Columbus, Ohio, with a capital of \$400,000 and issued 2,500 shares of no par value stock. Frank H. Geer, of Geer, Land & Downing, who handled the legal details said the move merely converted the concern from a partnership to a corporation. The partners--John E. Boice, William Boice, and Myron Buehrer (then plant manager) owned all the shares in the new corporation.

In order to prepare a definitive history on American manufacturers of woodworking machinery, Dana is interested in acquiring by loan, gift, photocopy, or purchase (as a last resort!) any and all documents, catalogs, manuals, photos, etc. pertaining to Boice-Crane. Write Mr. Dana Martin Batory, 402 E. Bucyrus St., Crestline, OH 44827.



Present Boice-Crane Belt-Stroke Sander-Finisher.

LIGHT INDUSTRIAL SHAPERS

by

Cameron Brown © 1991

When I commenced to equip my millwork shop 11 years ago, in my love for industrial history I sought the oldest and funkiest machines I could find. For the woodworker who must produce at a commercial pace, this strategy often as not proves to be a mistake. It is the intention of my articles to help the Association members find classic machine models that can still pull their weight in the modern shop.

Making raised panels and cope-and-stick doors has long been a bottleneck in my millwork shop, so when I found a Yates American J-151 shaper at an attractive price, I snapped it up. This shaper looks very similar to the Delta and Powermatic heavy-duty shapers of today. The castings and machining are exquisite, but I believe you will conclude after reading this article that it is a model to avoid.

Upgrading the electricals goes with the territory. The 1½ HP A.O. Smith original equipment motor is superb, with cast iron end bells and a highly maintainable design, but it is open frame and underpowered. Bearing in mind utility and resale value, I installed a magnetic starter, reversing switch, and 3 HP TEFC motor. These are not low-ticket items.

The under-table assembly is very massive, riding on gibbed dovetail ways. The table opening is slightly larger than 6 inches, so that large cutters can be buried beneath the workpiece (with very old Delta shapers this is not the case). The fences are simple but incorporate a clever design; studs machined to function like eccentric cams project through the table. They can be rotated and locked with below-table jam nuts and

thus, riding in slots machined in the fences, assure perfect alignment of the fences.

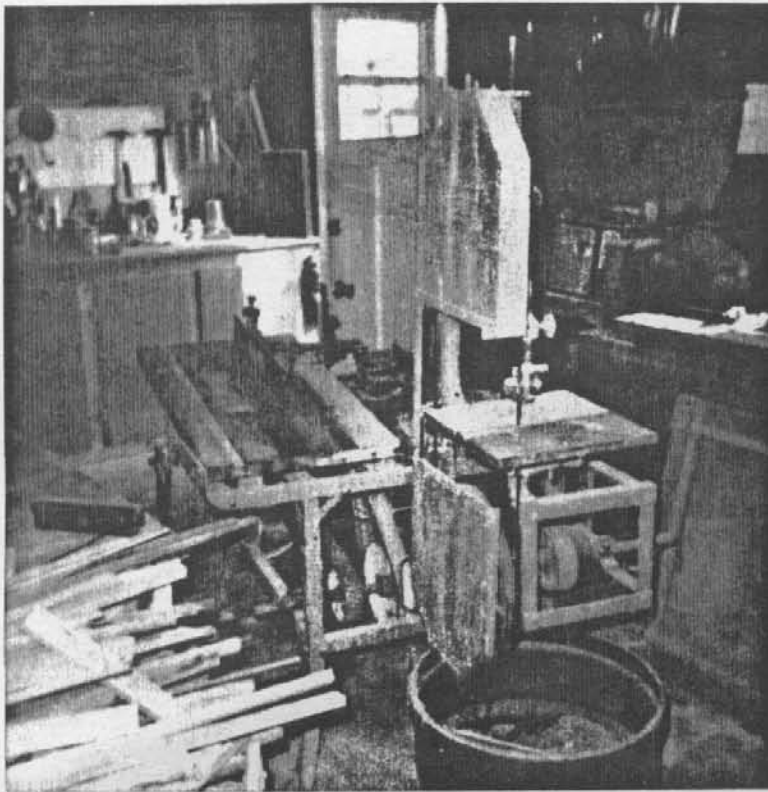
The table slot is, infuriatingly, 3/4 inches wide and 5/16 inches deep, so that Delta miter gages and holddowns cannot be used. The machine is effectively single-speed (ca. 9300 rpm).

Quill design appears to me to be a vital consideration in shopping for a shaper. In replacing the quill bearings on the J-151, I found them to be class 7 shielded 207 ball bearings. Such a bearing is almost unobtainable today and very expensive; I replaced them with class 3 bearings, the class commonly referred to as "electric motor grade". The quill on the J-151 is pressed into a machined housing: it is hard to remove and hard to reinstall. On Delta and Powermatic shapers, the quill can be removed or exchanged by loosening one bolt. The Delta shaper bearings are grease-lubricated. In a 1977 catalog the Powermatic shaper bearings were characterized as being oil-mist lubricated, which I feel is definitely superior practice in a bearing rotating at close to 10,000 rpm.

Based on parts and accessory availability, multi-speed capability, and quill design, I feel it is senseless, when purchasing a light-duty industrial shaper, to depart from the old standbys of Delta and Powermatic.

Wanted: A small Steam engine 3 to 5 Hp. Thaine Allison, POB 286, Chico, CA 95927.

Sale: A multimachine w/ band saw, table saw, and jointer. Contact Frank Robidou, (316) 443-5146 or (316) 343-3790.



le: An Oliver #66 is for sale in Denver CO, at Mountain Plains machinery. 5Hp and they are asking approx. \$1,000. give or take.

wood¹ (wɒd), *n.* 1. the hard, fibrous substance composing most of the stem and branches of a tree or shrub, and lying beneath the bark; xylem. 2. the trunks or main stems of trees as suitable for architectural and other purposes; timber or lumber. 3. firewood. 4. the cask, barrel, or keg, as distinguished from the bottle: *aged in the wood*. 5. *Music*. a. a woodwind instrument. b. **woods**, such instruments collectively in a band or orchestra. 6. Usually, **woods**, a large and thick collection of growing trees; a grove or forest: *They picnicked in the woods*. 7. *Golf*. a club with a wooden head, as a driver, brassie, or spoon, for hitting long shots. Cf. **iron** (def. 6). 8. **out of the woods**, out of a dangerous, perplexing, or difficult situation; secure; safe. —*adj.* 9. made of wood; wooden. 10. used to store, work, or carry wood: *a wood chisel*. 11. dwelling or growing in woods: *wood bird*. —*v.t.* 12. to cover or plant with trees. 13. to supply with wood; get supplies of wood for. —*v.i.* 14. to take in or get supplies of wood (often fol. by *up*): *to wood up before the approach of winter*. [ME; OE *wudu*, earlier *widu*; c. Icel *vithr*, OHG *witu*, OIr *fid*] —*Syn.* 6. See **forest**.

wood² (wɒd), *adj.* Archaic. wild, as with rage or excitement. [ME; OE *wōd*; c. Icel *ōthr*; akin to G *Wut*, rage, OE *wōth* song, L *vātēs* seer]

ve-neer (və nēr/), *n.* 1. a very thin layer of wood or other material for facing or inlaying wood. 2. any of the thin layers of wood glued together to form plywood. 3. *Building Trades*. a facing of a certain material applied to a different one or to a type of construction not ordinarily associated with it. 4. a superficially valuable or pleasing appearance. —*v.t.* 5. to overlay or face (wood, etc.) with thin sheets of some material. 6. to give a superficially valuable or pleasing appearance to. [earlier *fineer* by dissimilation < G *furni(e)-ren* to FURNISH] —**ve-neer**'er, *n.*

Antique Woodworking Power
Tool Association
P.O. Box 1027
Connellsville, PA 15425

Our Subscription
is \$14.00