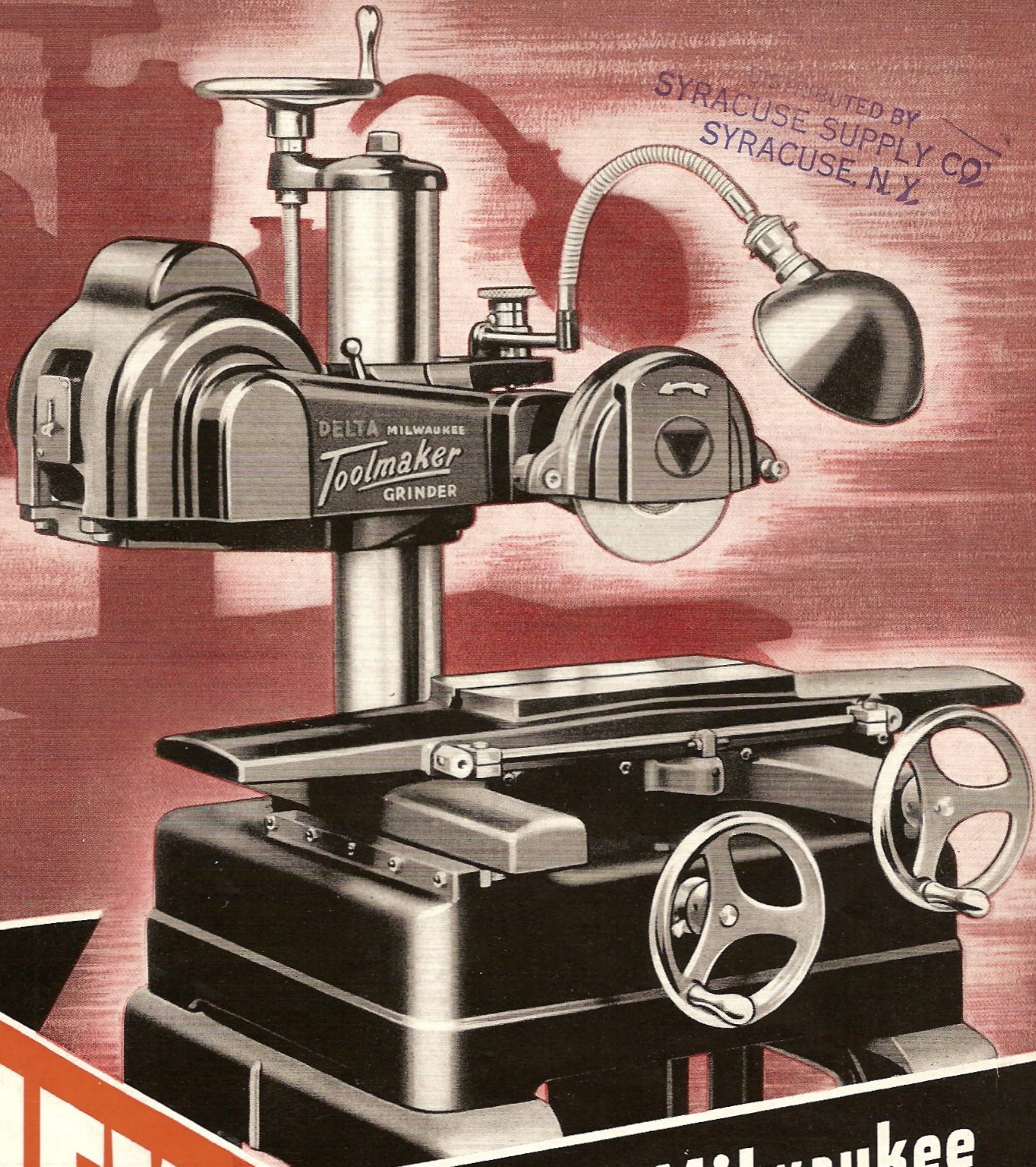


DISTRIBUTED BY
SYRACUSE SUPPLY CO.
SYRACUSE, N.Y.



DELTA MILWAUKEE
Toolmaker
GRINDER

NEW

**DELTA • Milwaukee
TOOLMAKER
GRINDER**

New DELTA-Milwaukee TOOLMAKER Combines Accuracy and Many Other

HAVE you been looking for an accurate, husky surface grinder of big capacity and wide application yet at an exceptionally low cost? Here is your answer—the new DELTA-Milwaukee Toolmaker grinder.

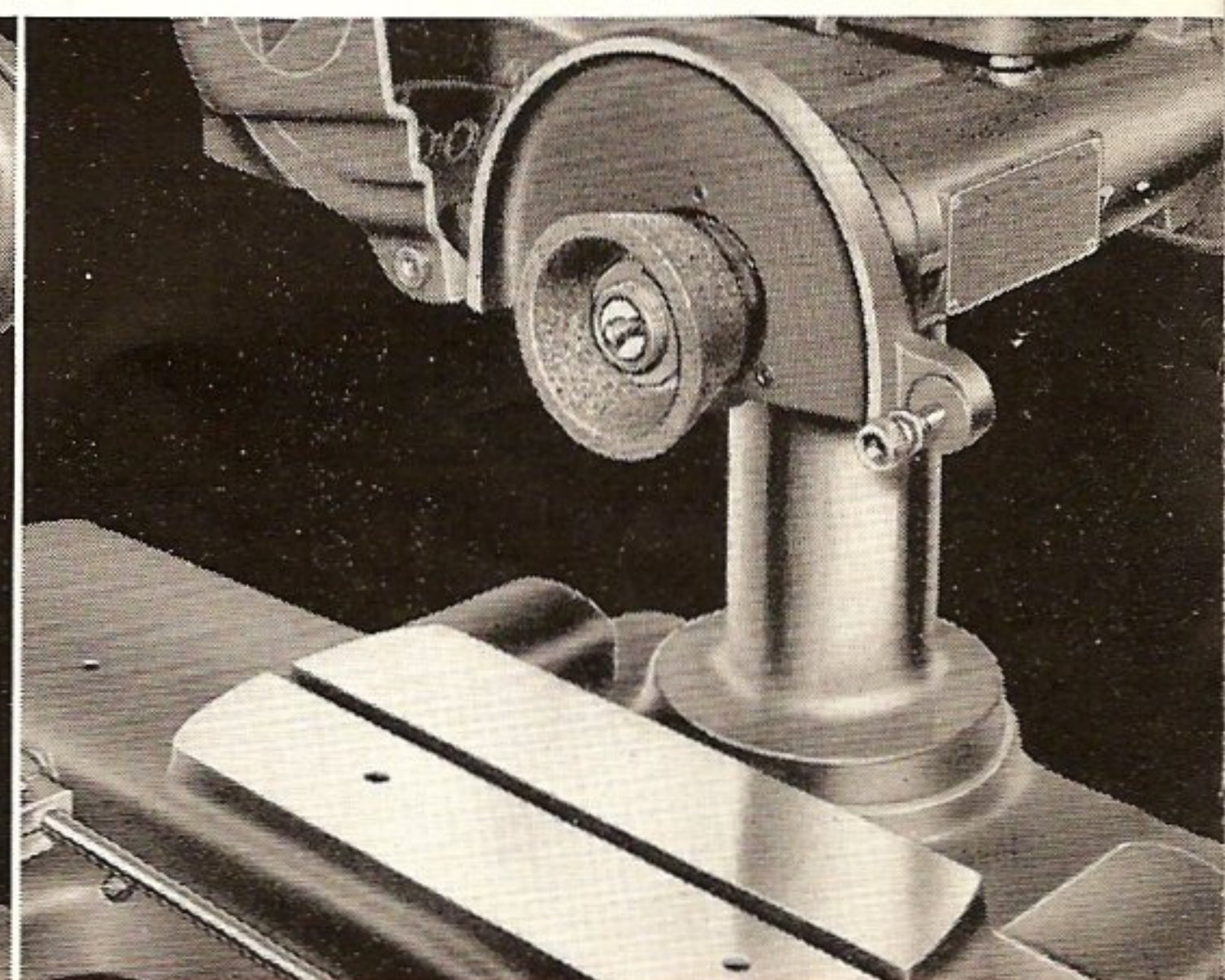
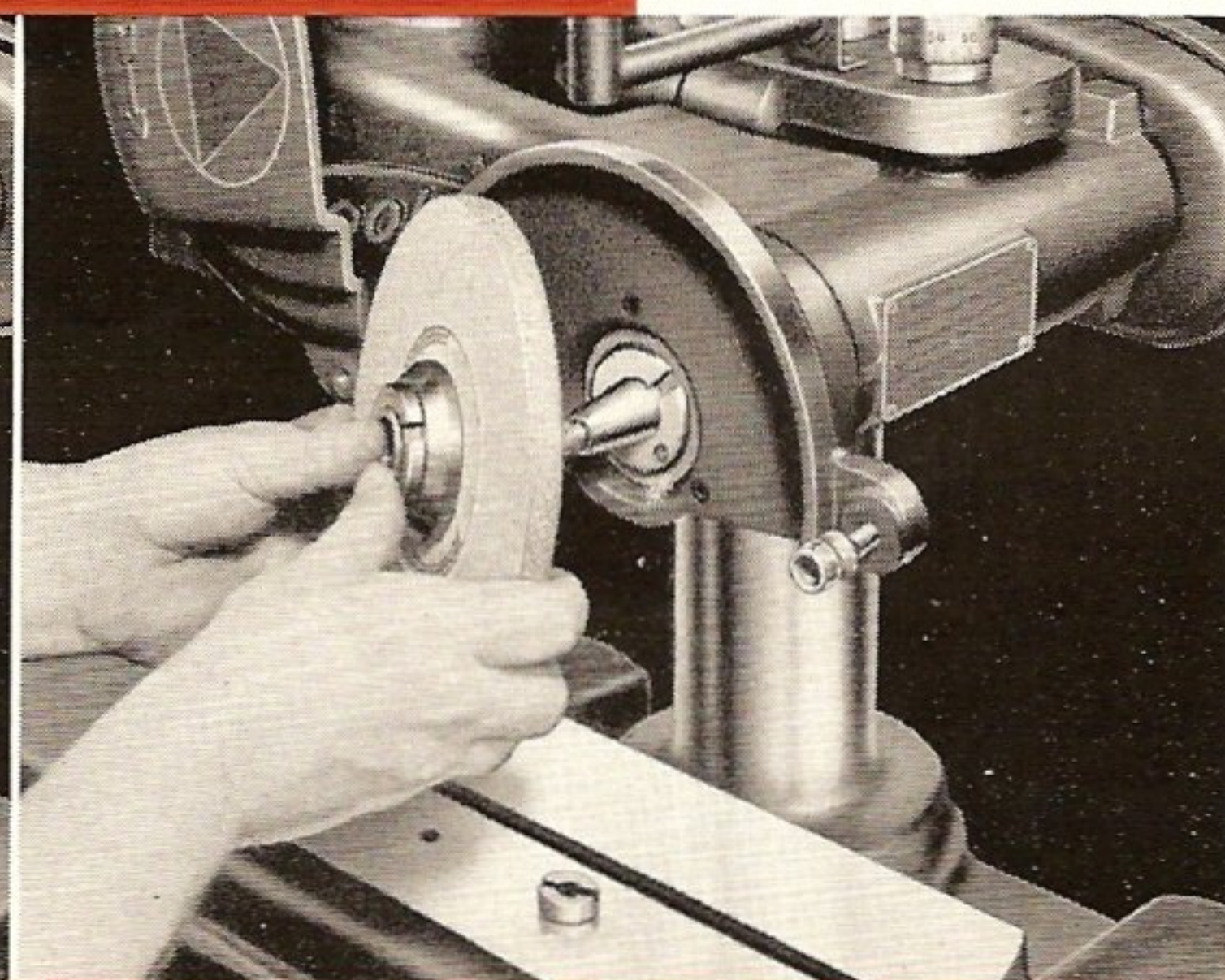
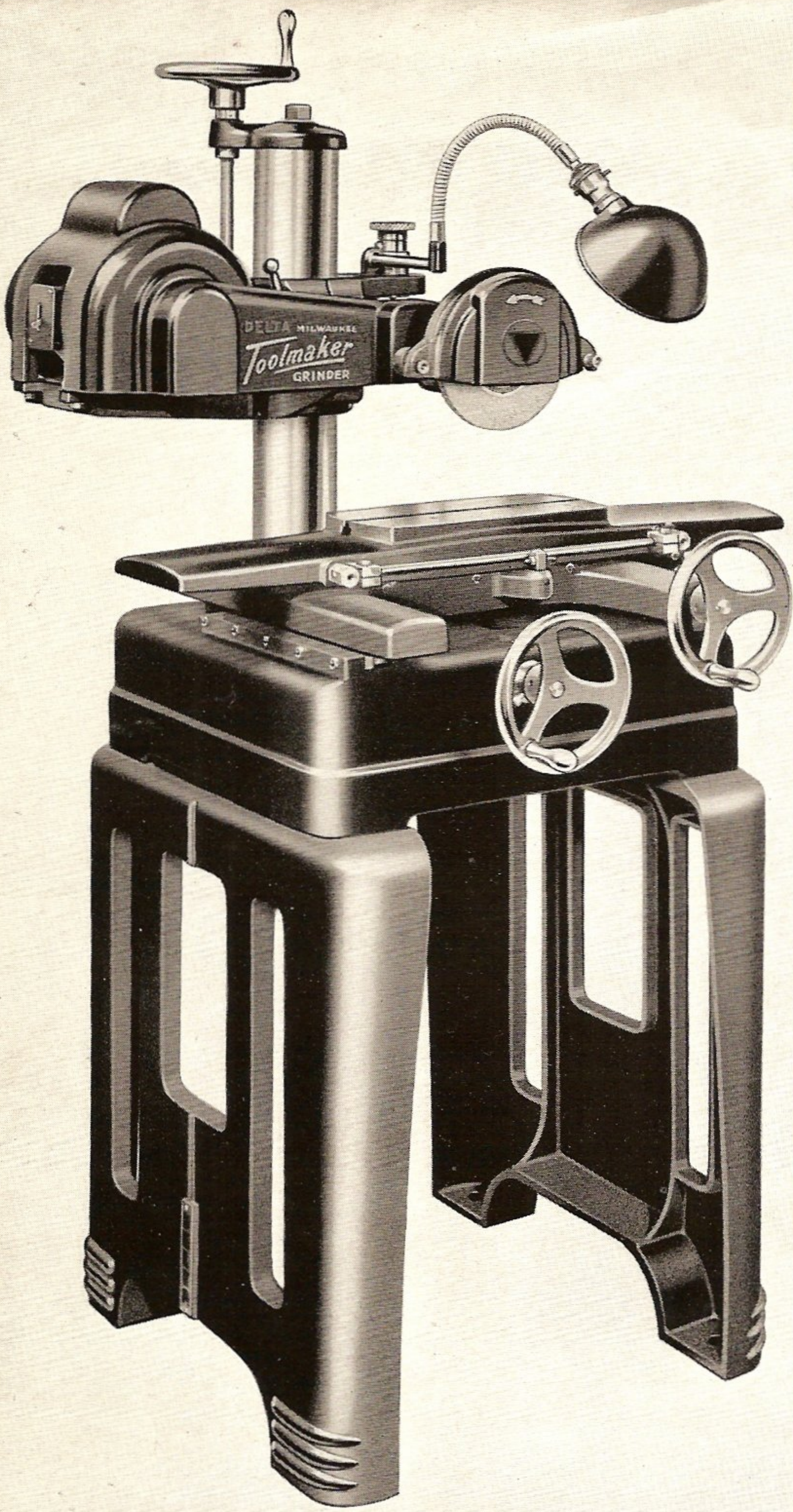
Nothing like it has previously been available at its price. The many different kinds of jobs that can be done on it—its accuracy—its positive controls—its ease of operation, are but a few of the advantages of this new machine tool. For surface grinding, for tool sharpening, in fact, for any grinding operation within its range this new unit does an exceptional job—a quality job that heretofore could only be done on a grinder costing many times as much.

Great attention has been paid to the details of the spindle—the heart of any good grinder. The spindle is extra long with bearings at either end, widely spaced. The forward bearing at the wheel end is a large surface, precision taper bearing of design usually found in only much more expensive grinders. A take-up is provided to eliminate all play. The rear bearing is a sealed-for-life ball bearing for which DELTA-Milwaukee machines are famous.

The mounting of the wheel on the spindle is unique in that the grinding wheel itself mounts into a two-piece adapter. The wheel is clamped into the adapter by means of a large nut. The adapter itself is held to a ground taper seat on the spindle by means of a small nut. Thus the wheel itself may be removed by loosening the large nut, or if desired, the wheel together with the adapter can be removed. The advantage of this is that when a wheel has once been trued up, by removing it with the adapter, it can be replaced and will run true without any further dressing.

The spindle is mounted in the heavy bracket which also carries the motor. Rapid vertical adjustment of the wheel to the work is effected by means of an Acme thread screw and large handwheel at the top of the column. When close to the work, final fine adjustment is made by a micrometer screw, the micrometer having wide graduations for close settings. The bracket is clamped to the column by means of a strong, positive hand clamp.

The maximum size of straight grinding wheel is 7" in diameter, $\frac{1}{2}$ " wide with a $1\frac{1}{4}$ " hole. Maximum diameter cup wheel is $3\frac{1}{2}$ ", any Delta $\frac{1}{3}$ or $\frac{1}{2}$ H.P. motor in a 6" frame is recommended for this grinder. The maximum distance under a 7" wheel to table top is $9\frac{1}{2}$ "—to the top of B & S No. 510 magnetic chuck it is 6". A 1750 R.P.M. motor with a 7" wheel produces a surface speed of 5600 feet per minute. A V-belt drive is used. The column too, has many special features. It is of one piece construction, cast of hi-tensile



By loosening the large nut, one flange of the wheel adapter may be removed, allowing the wheel to be replaced. The adapter itself remains on the spindle held by the small nut. Maximum wheel size is 7" in diameter, $1\frac{1}{4}$ " hole.

The wheel after it is trued, together with the adapter, may be easily removed by loosening the small nut. This saves redressing of wheels—saves time and prolongs the wheel life. Extra adapters are available so that complete wheel assemblies can be kept on hand.

Cup wheels too, can be used. Minimum diameter is $3\frac{1}{2}$ " by $1\frac{1}{2}$ " wide. These wheels can also have individual adapters so that they can be replaced without additional truing or dressing.

TOOLMAKER SURFACE GRINDER IDEAL FOR ANY SHOP

Operating Advantages with Unusually Low Cost!

iron, accurately ground to close tolerances. A steel gib guides the bracket yoke so that it is always in perfect alignment. The entire column, together with the bracket may be rotated 360°—an outstanding advantage of this grinder. Single nut clamps the column in place.

The table is smooth operating with conveniently located control wheels. It has long ways so that the table never "hangs" over the end of the machine—but is always riding solidly on the ways. Gibs are provided so that all play due to wear can be eliminated assuring accurate operation at all times.

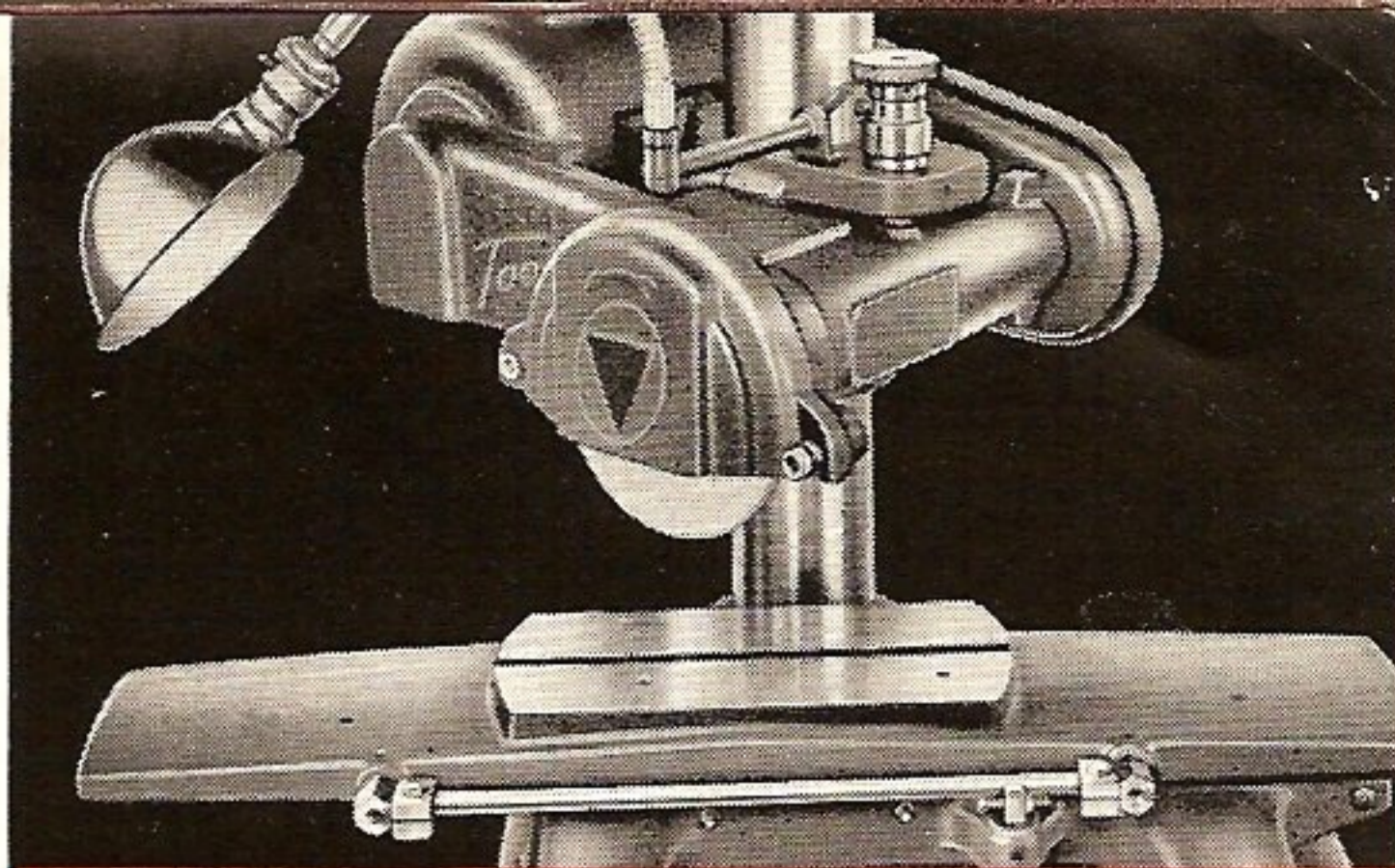
Longitudinal table travel is effected with a rack and pinion—maximum travel is 13½". Convenient adjustable stops limit the table travel. Traverse adjustment is made with an Acme thread and screw. A micrometer collar on the traverse, with wide graduations, permits accurate settings.

The table is provided with a T slot and bolts for clamping fixtures or a magnetic chuck in

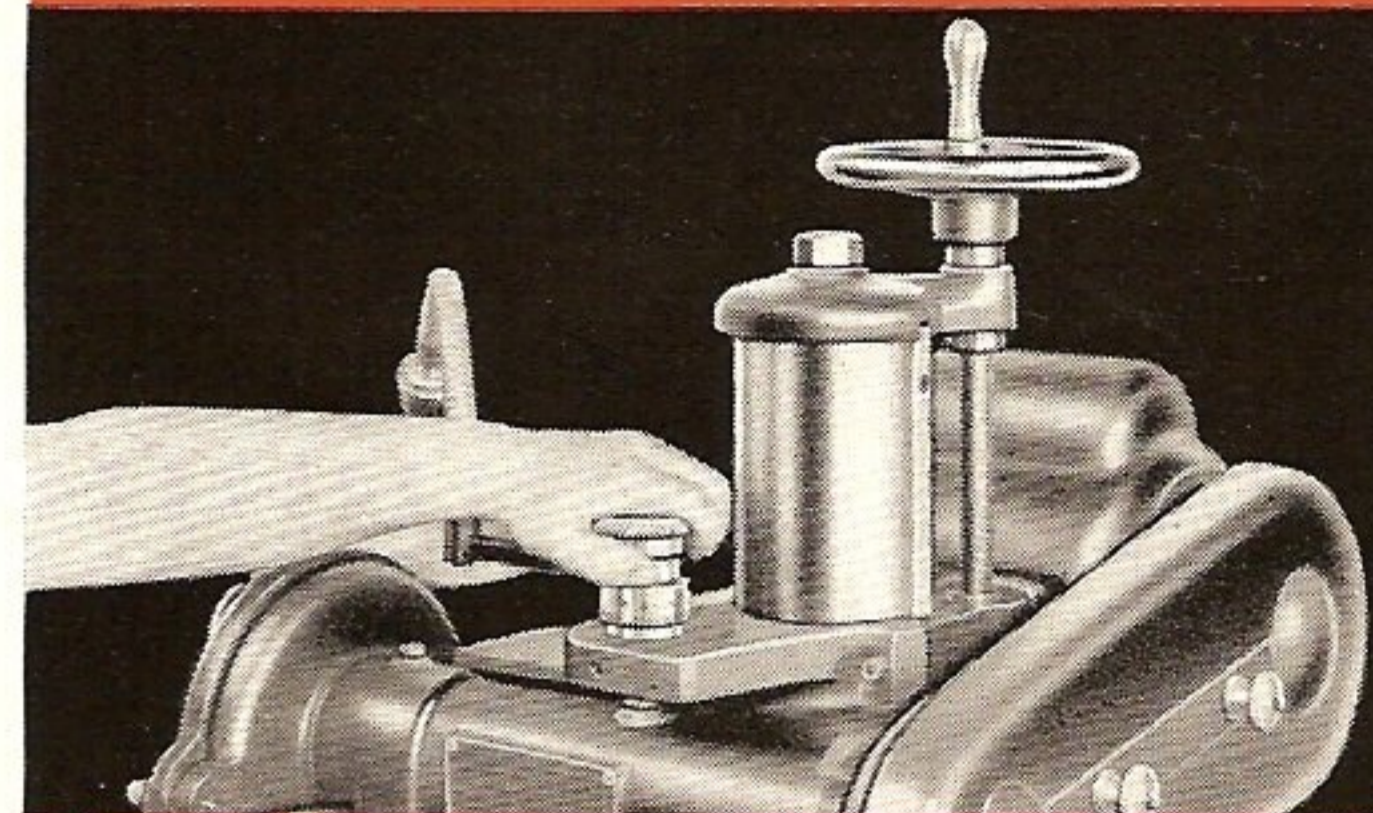
place. These are but a few of the most obvious advantages of this new grinder. Its low cost enables wider use of this kind of grinder in all types of shops where accurate grinding must be done. It means more "grinder per dollar" can be obtained. Thus the Toolmaker Grinder can release other machines costing ten times as much but now, tied up with work that can be economically and speedily handled on the Toolmaker.

The Toolmaker Grinder like other famous DELTA-Milwaukee machines is portable. At a moment's notice it can be moved to any spot in the shop where needed. Thus quick set-ups can be made and time saved.

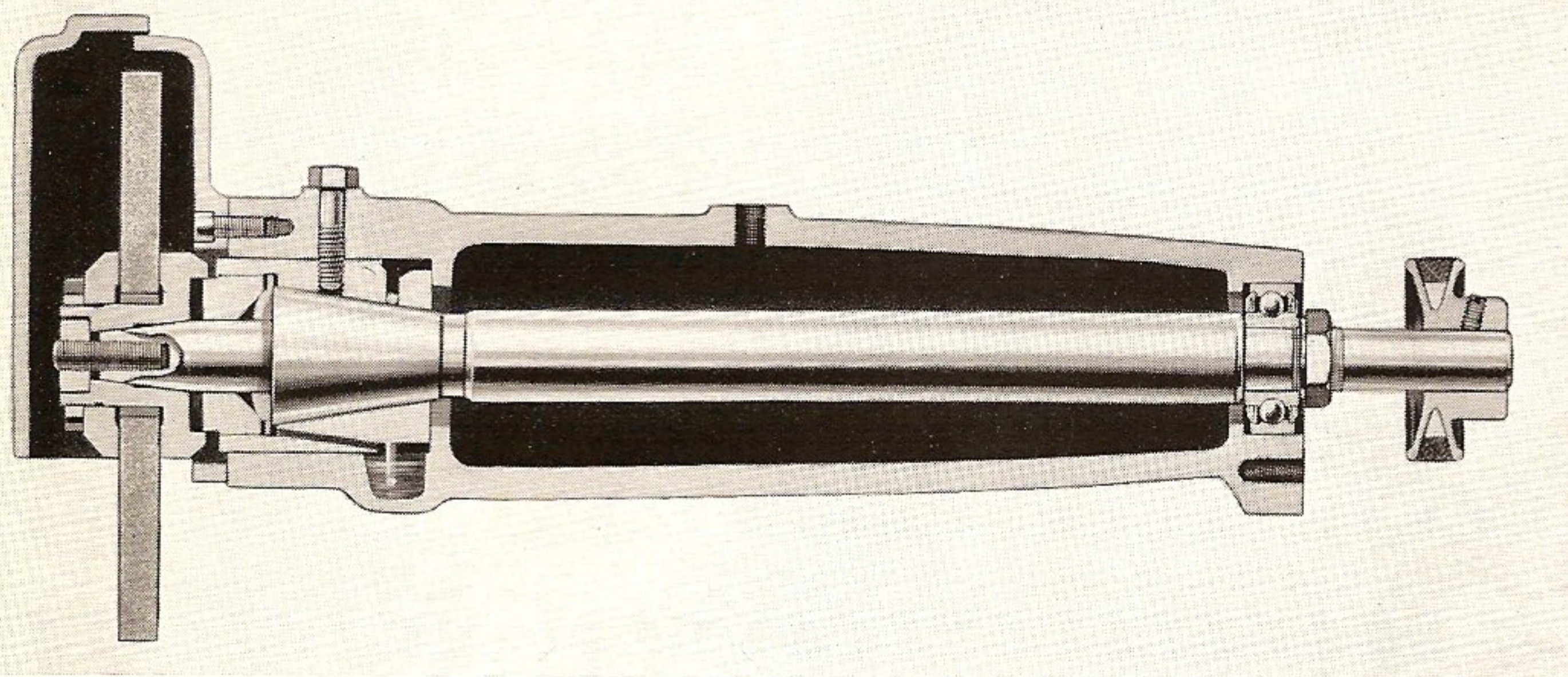
All in all, this new DELTA-Milwaukee Toolmaker Grinder has the "feel" and balance recognized by experienced shop men and found in only the finest machine tools. It is a well designed, accurately built grinder capable of producing the finest work in the shops where the best is needed.



By loosening nut on top of column (see below) entire column and bracket may be revolved 360 degrees. Column is 4" in diameter, of hi-tensile cast iron, normalized and ground to accurate tolerances. Grinder can be supplied with adjustable light.



Fast "coarse" adjustment of the bracket carrying the spindle is effected by means of the hand wheel and Acme thread screw. Fine setting is made by the large knurled micrometer hand knob which has graduations of .0005". Note steel gib on column.



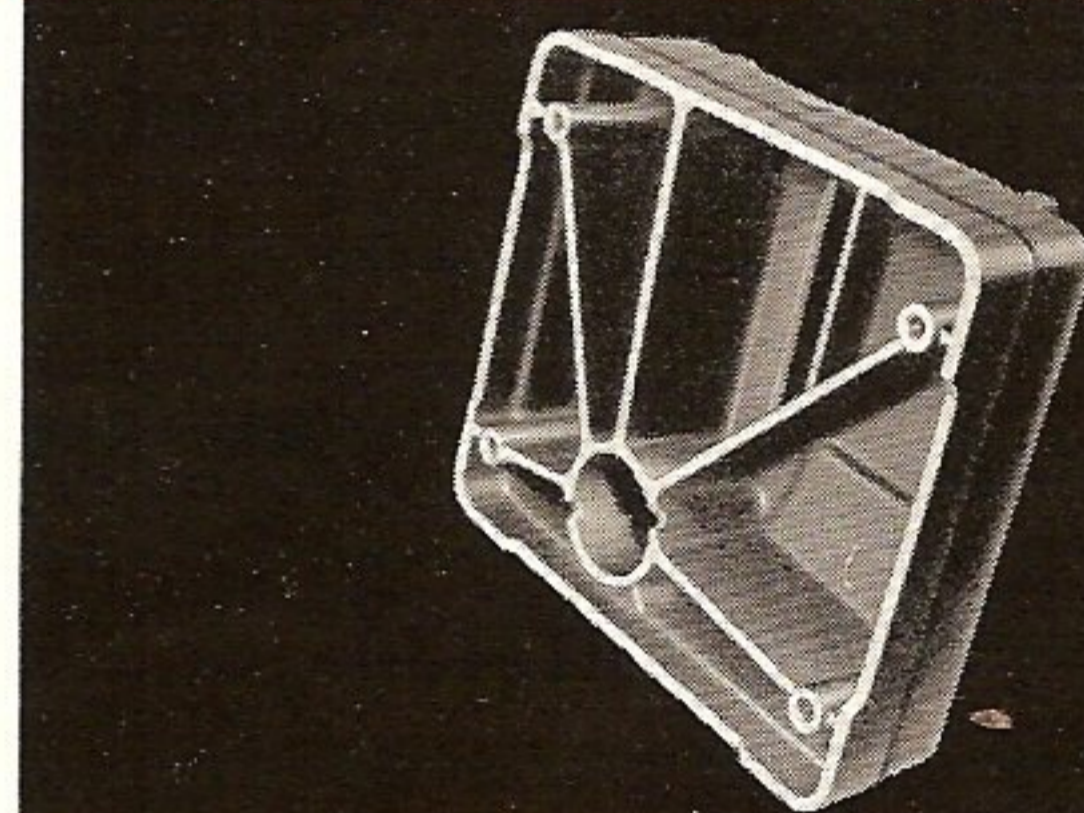
SPINDLE DESIGN INSURES SMOOTH, ACCURATE OPERATION

THE spindle shaft itself is designed to preserve its initial accuracy. It is precision ground to extremely close tolerances. The bearing at the wheel end is a large precision taper bearing of the type only found in much more expensive grinders. It runs in a continuous bath of oil. The other bearing is a sealed-for-life ball bearing which requires no lubrication, and is held in a precision bored seat. The two bearings are widely spaced to provide permanent, true alignment.

These features all contribute to the smooth, vibrationless operation of this New DELTA-

Milwaukee Toolmaker grinder which results in accurate work.

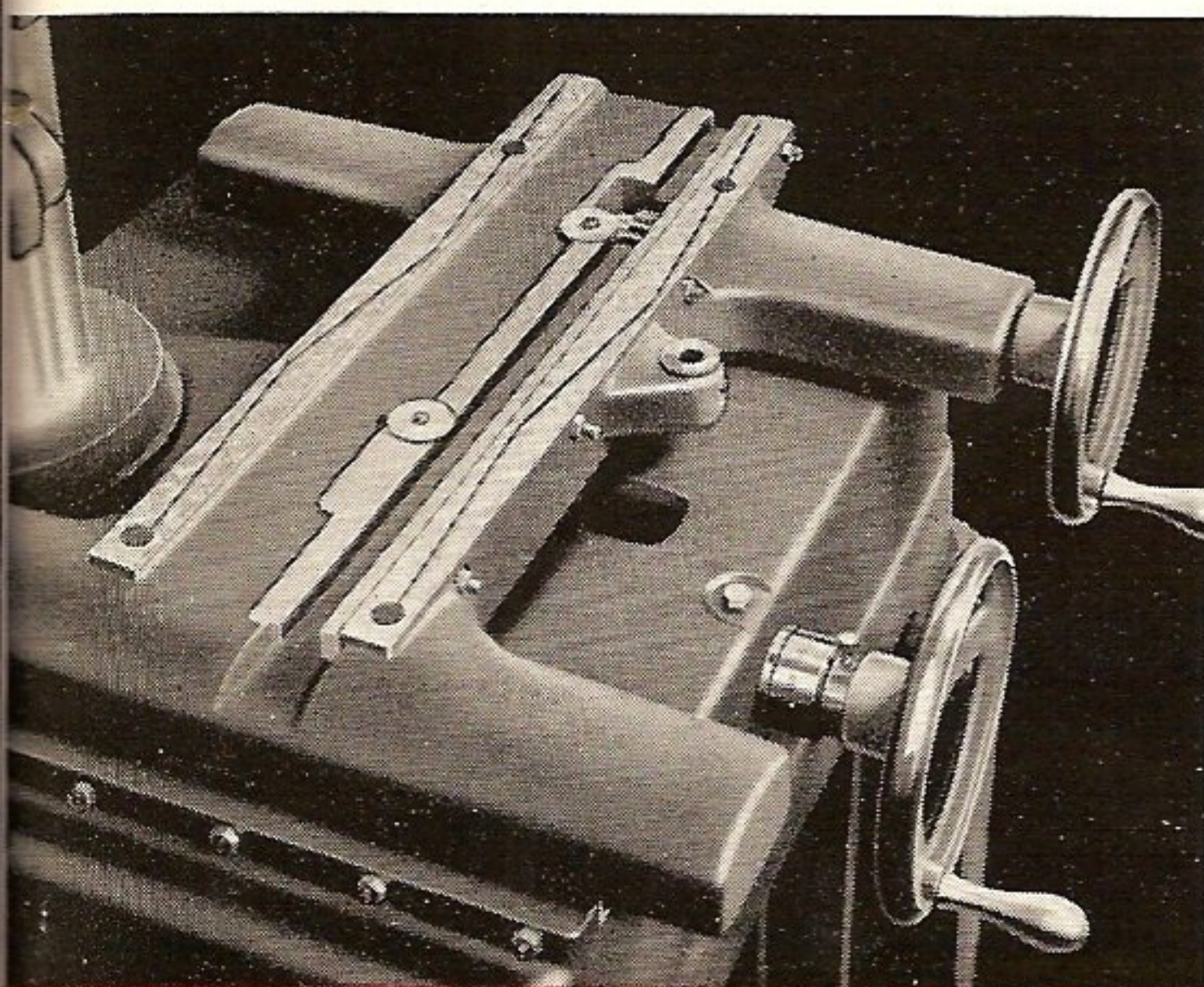
Note also the details of the wheel adapter. Its design and construction allows the entire adapter and wheel to be removed as a unit or replaced without affecting its accuracy. This is particularly desirable when wheels of various forms are used, as a wheel, when removed with the adapter, need not be re-trued when replaced. Extra adapters are available if desired. Or if desired, the wheel only may be removed by loosening the large retaining nut.



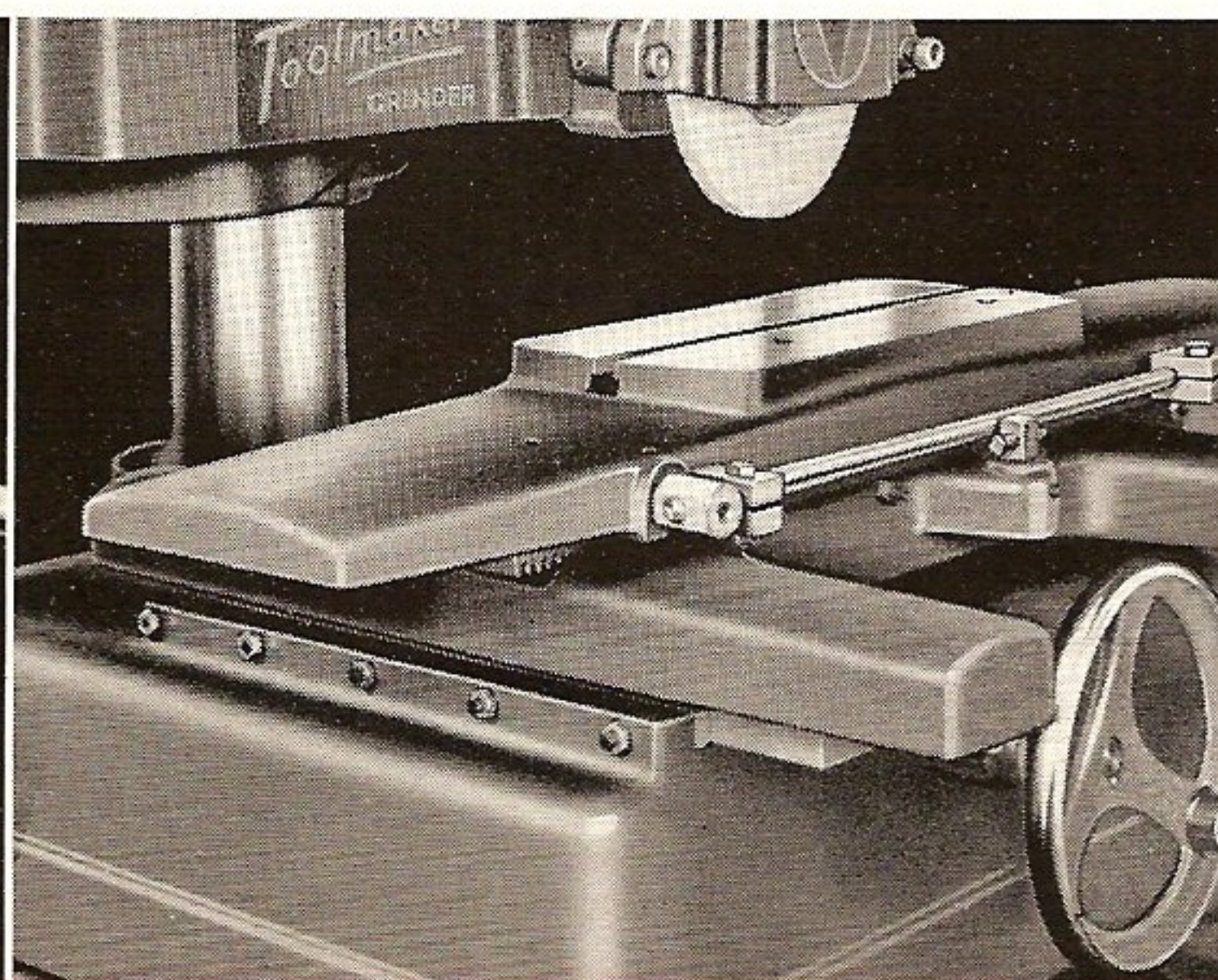
This bottom view of the base shows its extremely heavy construction. Cast of hi-tensile iron, it is normalized and accurately machined. Its heavy ribs assure permanency and rigidity.



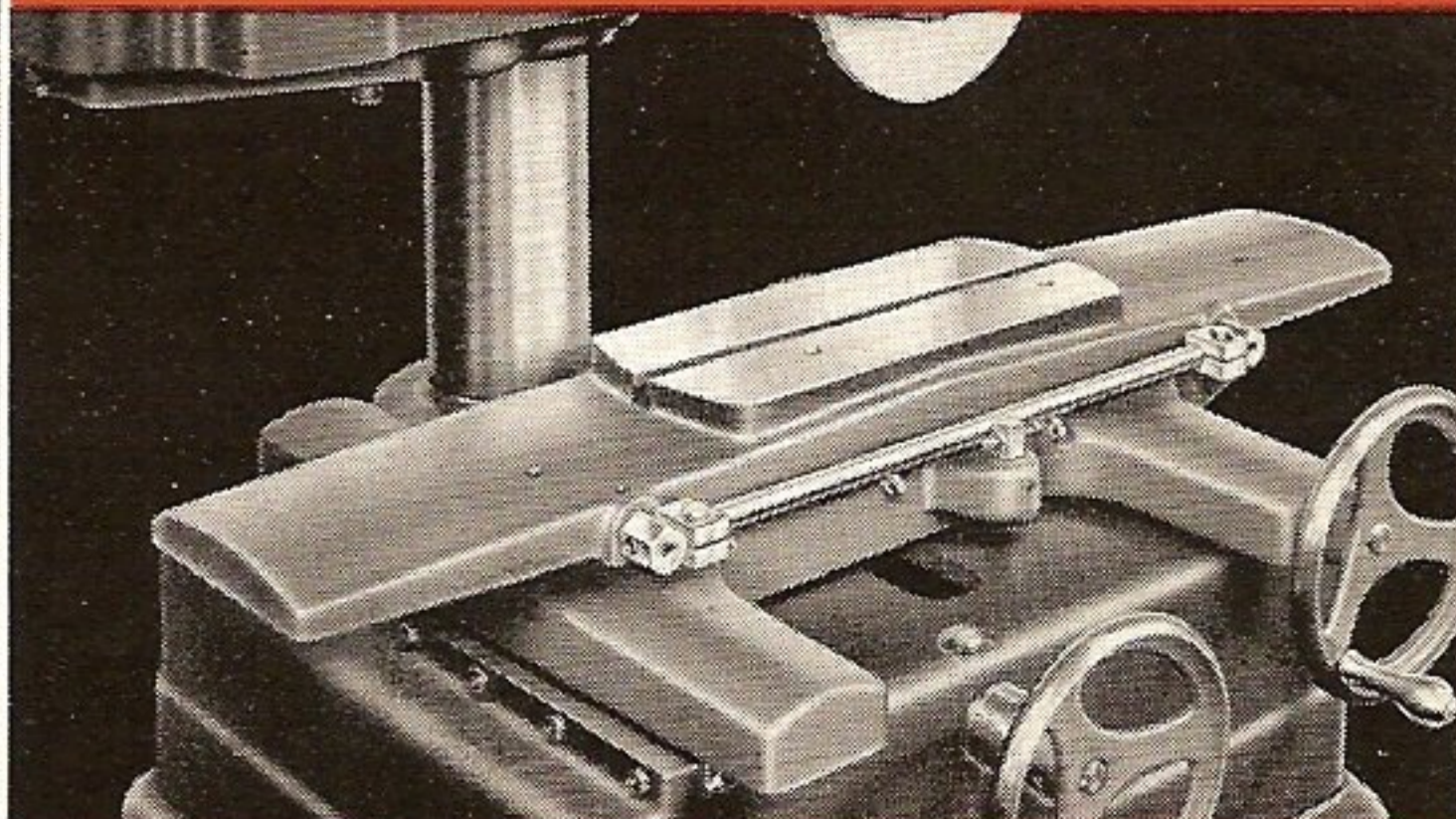
Readily accessible clamp blocks and set screw allow accurate setting of longitudinal table travel. Maximum travel is 13½". Removal of block holding set screws allows table to be completely removed.



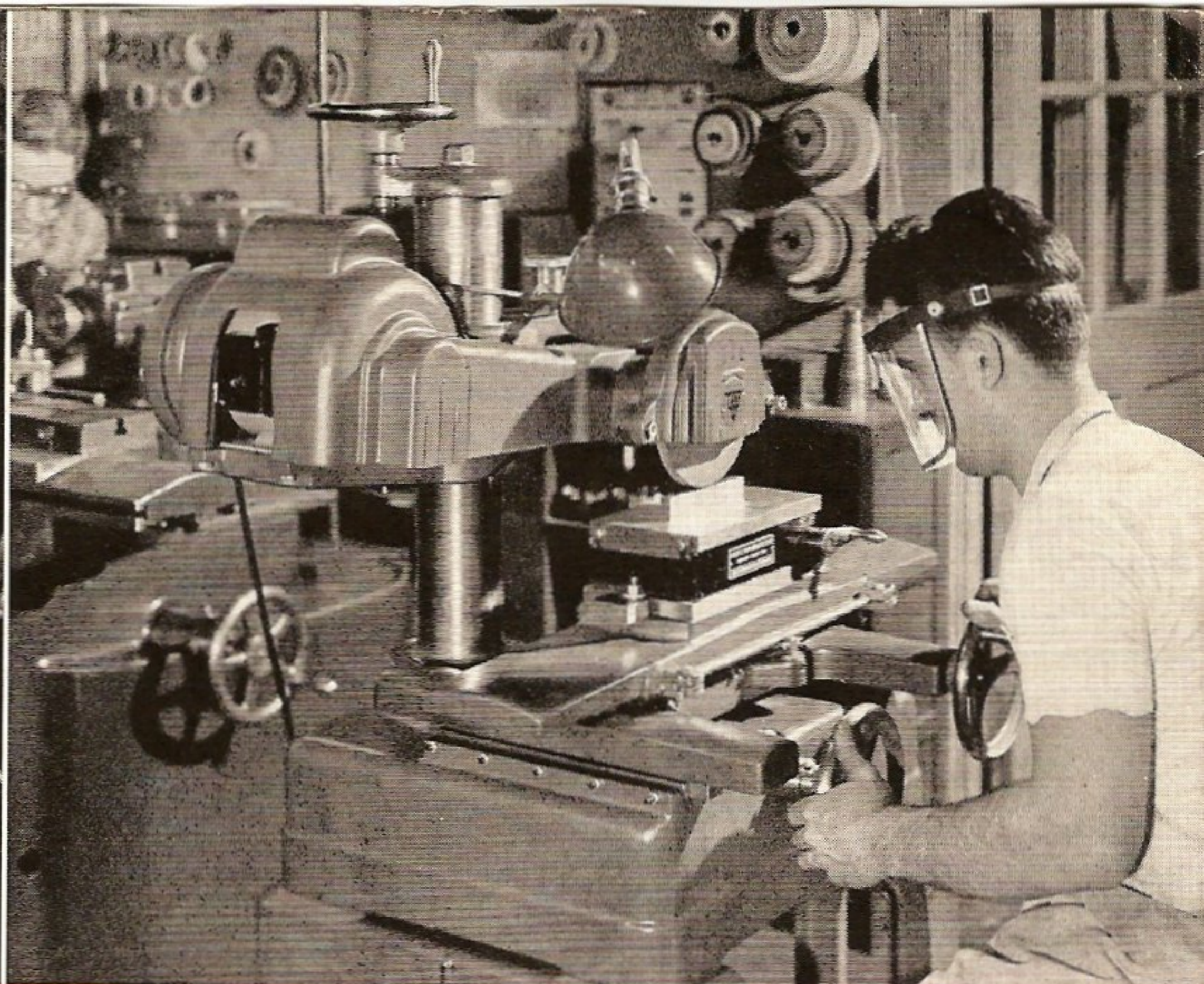
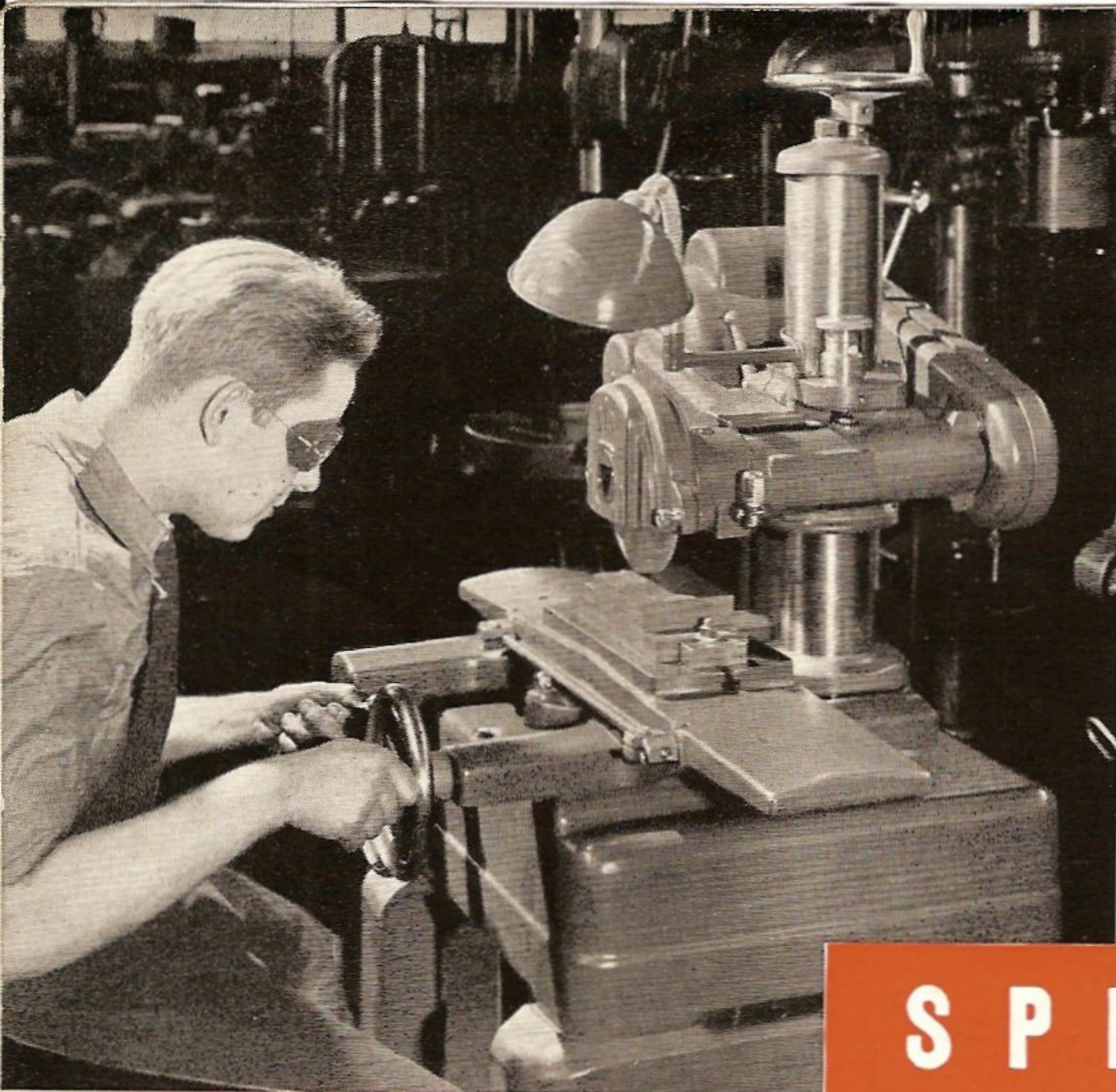
The table rides on accurate ways fitted with adjustable gibs so that all play due to wear can be eliminated. Note the oil wicks and the oil grooves. Ways are over-long so that the table is always firmly seated—it never "hangs".



This shows the take-up gib on the traverse adjustment of the table. Table traverse is smooth and positive. The 6½" traverse adjustment is actuated by Acme screw.



General view of table arrangement. Adjustable stops limit longitudinal travel of table. Micrometer with wide graduations on traverse feed assures accurate settings. T slot in table fitted with two T clamp bolts.



SPECIFICATIONS

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SYRACUSE SUPPLY CO.
 SYRACUSE, N.Y.

DELTA
 MILWAUKEE

TOOLMAKER GRINDER

Maximum length that can be ground... 13½"
 Maximum width that can be ground... 6"
 Maximum space under 7" wheel to table 9½"
 Maximum space under 7" wheel to B & S No. 510 Magnetic Chuck... 6"
 Minimum diameter cup wheel with standard guard in place 3½"
 Maximum diameter wheel 7"
 Wheels must have 1¼" hole.

No. 14 610—Toolmaker Grinder for 1725 R.P.M. Delta Motors, with cast iron legs, one wheel adapter, one holder for wheel dresser, one No. 387 V-belt and one No. 5500 pulley with ½" bore. Without wheel, Wheel dresser, Light attachment, Motor or Switch. Code Word SURGR. Shipping Weight 670 lbs.

No. 14 611—Toolmaker Grinder for 1425 R.P.M. Delta motors with cast iron legs, one wheel adapter, one holder for wheel dresser, one No. 387 V-belt and one No. 5550 pulley with ½" bore. Without wheel, Wheel dresser, Light attachment, Motor or Switch. Code Word SURGS. Shipping Weight 670 lbs.

Wheel, diamond wheel dresser or Light attachment not furnished with machine.
 No. 510 B & S Magnetic Chuck not carried in stock and should be obtained direct from manufacturer or his distributors.
 Table surface 5¾" x 13".
 Traverse feed, one graduation is .001".
 Maximum adjustment of wheel by means of micrometer is ⅜". Each graduation is .0005".

No. 14 960—7" diameter x ½" face wheel for soft material, Bore 1¼". Code Word SURGW. Shipping Weight 2 lbs. . . .

No. 14 961—7" diameter x ½" face wheel for hard material. Bore 1¼". Code Word SURGV. Ship. Weight 2 lbs.

No. 14 964—Light Attachment complete for attaching to separate 115V single phase line. Code SURGL. Ship. Wt. 8 lbs. . . .

No. 14 966—Extra Wheel Adapter for 1¼" bore wheels. Arranged to fit on tapered spindle for holding up to ½" wide wheels and arranged with extra washer so a 3½" x 1½" cup wheel may be used. Code Word SURGA. Shipping Weight 2 lbs.

MOTORS RECOMMENDED

- 62 510**—Capacitor, ½ HP., 110/220, 60 Cy., 1725 RPM. ½" shaft.
- 62 520**—Capacitor, ½ HP., 110/220, 50 Cy., 1425 RPM. ½" shaft.
- 66 320**—3 Phase, ½ HP. 220/440, 50/60 Cy., 1425-1725 RPM. ½" shaft

For 3 Phase Motors use No. 1320 or No. 1329 3 Phase Starters.

1320—3 Phase Manual Starter, 6 lbs.

1329—3 Phase Magnetic Starter, 8 lbs.

The cast iron motor cover furnished with machine will cover any 6" frame Delta Motor and most 6 to 7" frame motors of other manufacture. The motor bracket is arranged with holes for fastening any 6" Delta motor, but ample pads are provided so holes can be drilled to suit other makes. When it is necessary to use larger frame motors of other makes the motor cover can be omitted without effecting other parts of machine or its efficiency.

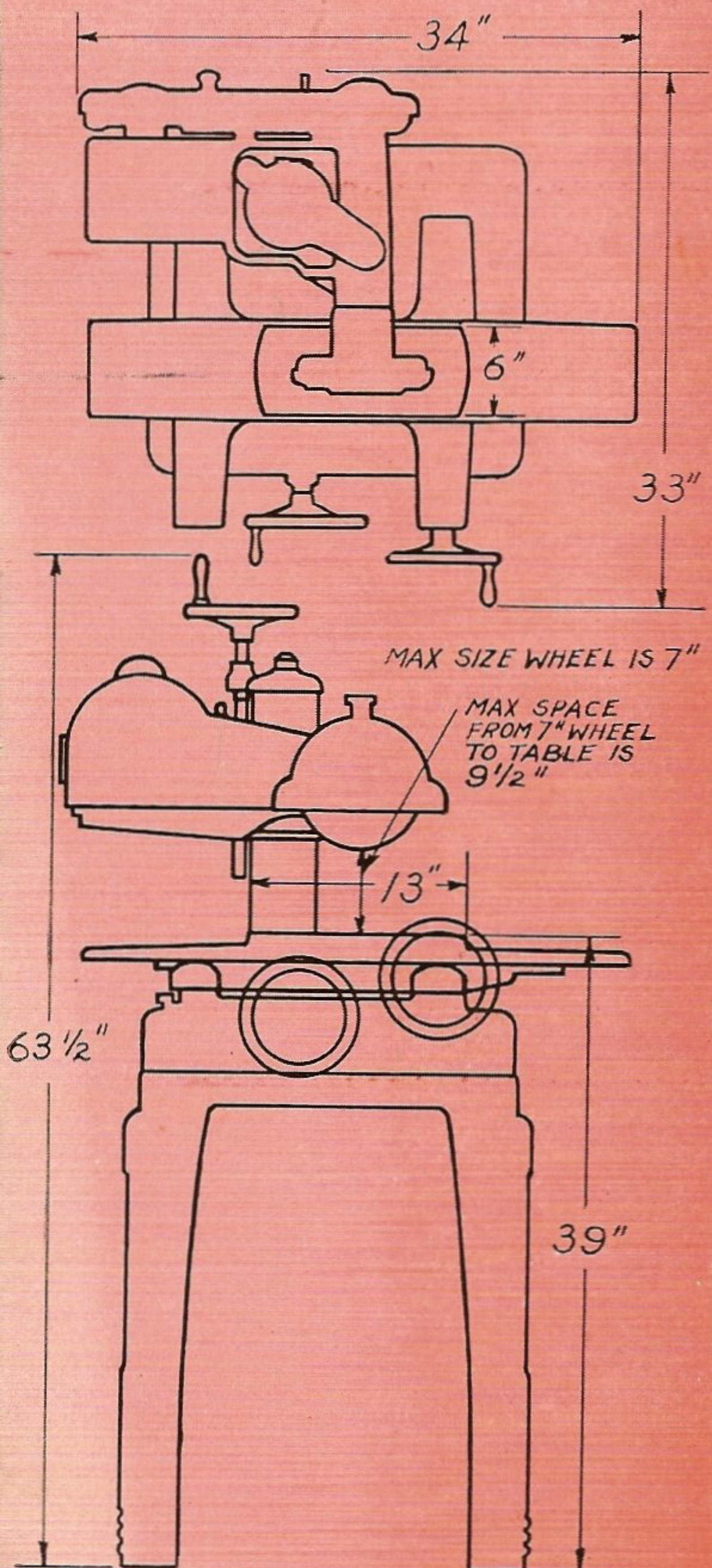
THE DELTA MANUFACTURING COMPANY

600-634 EAST VIENNA AVENUE

MILWAUKEE, WISCONSIN

Form AD-216

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Price List

FOR THE NEW DELTA TOOLMAKER SURFACE GRINDER AND ITS ACCESSORIES

No. 14-610	Surface grinder for use with 60 cycle, 1725 RPM motors.....	\$295.00
No. 14-611	Surface grinder for use with 50 cycle, 1425 RPM motors.....	295.00
No. 14-960	General purpose grinding wheel for soft material	3.25
No. 14-961	General purpose grinding wheel for hard material.....	3.25
No. 14-964	Light attachment	5.50
No. 14-966	Extra wheel adapter	6.00
No. 62-510	1/2 H.P. 60 cycle, ball bearing, 110/220 volts, capacitor type, 1725 RPM motor	32.00
No. 62-520	1/2 H.P. 50 cycle, ball bearing, 110/220 volts, capacitor type, 1425 RPM motor	33.00
No. 66-320	1/2 H.P. 3 phase, ball bearing, 220/440 volts, 50/60 cycle, 1425/1725 RPM motor	29.50
No. 1320	3 phase manual starter providing overload protection for the motor.....	8.25
No. 1329	3 phase magnetic starter providing overload and under-voltage protection for the motor	16.00

Magnetic chucks are not furnished by us. We suggest that they be obtained directly from the chuck manufacturer or from one of the manufacturer's distributors. Any permanent or electro magnetic chuck similar to the Brown & Sharpe No. 510 can be used.

PRICES QUOTED ARE F.O.B. MILWAUKEE, WISCONSIN
TERMS 2% 10TH PROXIMO, NET 25TH PROXIMO

PRIORITY DATA REQUIRED

1. Governing Order: General Preference Order E-1-b
2. Extension From: PD-1A, PD-3A, PD-408 or P-19-H
3. Form of Extension: Simplified or PD-3A
4. Additional Information Required:
 - A. On extensions from PD-3A certification
 1. Preference Rating
 2. Urgency Standing (if one has been assigned)
 3. ANMB Code Number
 4. Serial Number of Certificate
 5. Initiating Government Agency
 6. Prime Contract Number
 7. Prime Contractor's Name
 8. Required delivery date
 9. End use code number
 10. Purchaser's symbol
 - B. On extensions from PD-1A or P-19-H
 1. Preference rating
 2. Serial number of certificate
 3. Required delivery date
 4. End use code number
 5. Purchaser's symbol

THE DELTA MANUFACTURING CO., MILWAUKEE, WIS.