Delta

QUALITY TOOLS

MOTOR DRIVEN

KNOWN BY THEIR DISTINCTIVE GRAY COLOR

1934

CATALOG K-1

Delta Co-operates with N. R. A. to Fullest Extent

Delta Quality Tools are the product of a modern factory, and are built by skilled craftsmen, working under conditions and with such manufacturing methods as insure the highest possible standard of accuracy.

The Delta Manufacturing Company signed the blanket NRA code immediately following the President's proclamation, and complied with all its provisions concerning hours and wages, without waiting until a specific code was formulated for the industry. In fact, this company has always operated on standards of wages far above those set by the NRA, because we believe that it is only by the payment of fair wages and by proper treatment of employees that we can maintain the high standard of craftsmanship demanded in the manufacture of our machines.

It is this policy that insures you that you are receiving the very utmost in machine value for your dollar when you purchase Delta machines, and is one reason why Delta Quality Tools have acquired the reputation of being the unquestioned leaders in their field.

— INDEX —

Abrasive wheels 11

Band Saws:
- 10-inch Band Saw 31
- 10-inch Band Saw Unit 32
- 14-inch Band Saw 33
- 14-inch Band Saw Unit 36

Band Saw—Mortiser Unit 46
Band Saw Blades 36
Band Saw Sanding Attachment 53
Band Saw—Circular Saw—Jointer Combination 47
Belts 45
Belt Sander for Band Saw 53
Benches 44
Bench Legs 44

Bits:
- Machine Spur 20
- Router 20
- Mortising 20

Blades:
- Band Saw 36
- Circular Saw 11
- Moulding Cutter 18
- Scroll Saw 52

Buffing Wheels 42

Casters for Portable Units 53
Chisels; Hollow 20
Centers; Lathe 40-42
Circular Saw 3
Circular Saw—Portable Unit 8
Circular Saw—Jointer Unit 14
Circular Saw—Jointer—Mortiser 17

Combination Workshops:
- De-Luxe Shop 56
- Shops No. 565 and 575 47
- Shops No. 650 and 652 46
- No. 580 Combination 47

Couplings: Line-Shaft 45
Cup Centers: Lathe 40-42
Cutting Wheels 11

Dado Heads 11
Delta-Grip Chuck 30-40
De-Luxe Workshop 56

Drill Press:
- "Triple-Duty" No. 970 21
- "Double-Duty" No. 620 29
- Chucks and Spindles 25-30
- Shaper Cutters 25
- Mortising Attachments 28-30

Drive Centers; Lathe 40-42

Faceplates; Lathe 40-42
Files; Scroll-Saw 52

Grinding Wheels 42
Grinding Wheel Arbors 40-42
Guards; Circular Saw 10-11
Guard; Jointer 12
Guard; Shaper 28

Hangers; Line-Shaft 45
Hold-Downs; Shaper 27
Hold-Downs; Circular Saw 11
Hollow Chisels 20

Jeweler's Blades 52
Jointer 12
Jointer Unit; Portable 13

Lathes:
- No. 930, 11-inch 37
- 11-inch Lathe Units, four and eight-speed 39
- No. 955, 9-inch 41
- 9-inch Lathe Unit 41

Lathe Accessories 40-42
Lathe Tools 42

Miter Gage 6
Miter Gage Clamp Attachment 9
Mortiser Attachments; Drill-Press 26-30
Mortising and Routing Machine 15
Mortiser Accessories 20
Motors 54-55
Moulding Cutters 18
Moulding-Cutter Work 19
Moulding-Cutter Blades 18

Portable Units:
- Circular Saw 8
- Jointer 13
- Circular Saw—Jointer 14
- Circular Saw—Jointer—Mortiser 17
- Band Saw—Mortiser 46
- Scroll Saw—Mortiser 46
- 10-inch Band Saw 32
- 14-inch Band Saw 34
- Four-Speed Lathes 39-41
- Eight-Speed Lathe 39

Pulleys, V-Type 45

Router Bits 20

Sabre Blades 52

Sanding Attachments:
- Band Saw 53
- Scroll Saw 52
- Lathe 43
- Disks 40-43
- Drums 40-43

Sanding Table 43
Sanding Sleeves 43
Screw Centers; Lathe 40-42
Scroll Saw 48
Scroll Saw Unit 51
Scroll-Saw Accessories 52
Shaper Cutters 25-27
Shaper Hold Downs 25-27
Shaper Table 25-27
Shaper Fence 25-27
Shaper Guard 25-27
Switch Rods 56
Stands; Lathe 39

Tapping Attachment 25
Tool Supports; Lathe 40-42
Tool-Support Bases 40-42
Tool-Support Floor Stand 40

Wheels; Metal Cutting 11
Wire Scratch-Brush Wheels 42

Workshops:
- De-Luxe 56
- No. 650 Shop 46
- No. 652 Shop 46
- No. 565 Shop 47
- No. 575 Shop 47
- No. 580 Combination 47

Prices shown in this catalog supersede those quoted previous to Sept. 25, 1933. All prices subject to change without notice. All prices F. O. B. Milwaukee.

DELTA MANUFACTURING CO., 3775 N. Holton St., Milwaukee, Wis.

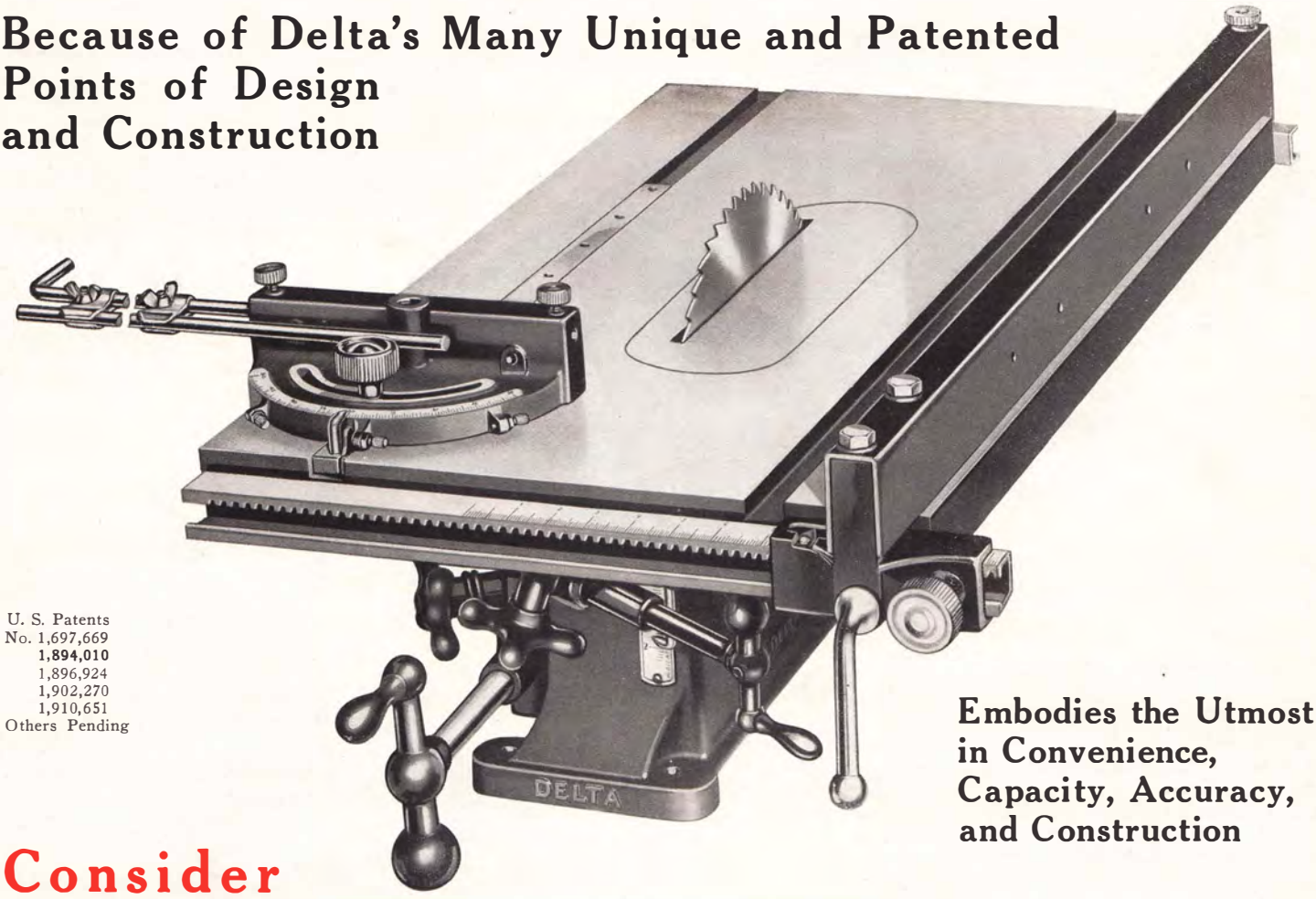
The right is reserved to make changes in design or equipment at any time, without incurring any obligation to install these on machines previously sold. Any sales tax imposed subsequent to the publication of this catalog will be additional to quoted prices.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Printed in U. S. A.

Only Delta Can Offer You a Saw with All These Revolutionary Features!

Because of Delta's Many Unique and Patented Points of Design and Construction



U. S. Patents
No. 1,697,669
1,894,010
1,896,924
1,902,270
1,910,651
Others Pending

Embodies the Utmost in Convenience, Capacity, Accuracy, and Construction

Consider These Unusual and Important Advantages:

1 Enormous Capacity in Front of Saw:

Pat. Pending).

This great capacity in front of the blade—where you need it most—together with the tremendous ripping capacity afforded by the Delta rip-gage extension, can be offered you only by Delta, because twenty-five claims have already been allowed by the U. S. Patent Office on the application covering these features. (This patent will issue about the time this catalog is off the press). See page 4.

2 All Advantages of Very Large Table:

(Pat. No. 1,896,924).

The rip-gage extension, which gives the user all the advantages of a four-foot table, without the weight and expense, is fully protected by the above patent and by other patents still pending. You cannot obtain these advantages in any other manner. See page 5.

3 Automatically Set Miter Gage:

(Pat. No. 1,902,270).

No other manufacturer can offer you the wonderful Delta "Auto-Set" miter gage, because not only is the actual design patented, but the automatic stops, which make this the most convenient gage ever offered, are also fully protected by patent. See page 6.

4 Accuracy Insured by Clamp Attachment:

(U. S. Pat. No. 1,894,010).

If you insist on absolute accuracy in your work you can obtain it only with a clamp attachment for the miter gage, which absolutely prevents any creep of the work away from the blade. The Delta clamp attachment is fully protected by patent. See page 9.

5 A Real Micrometer Rip Gage:

(Pat. Pending).

The Delta rip gage has a number of important advantages, amongst which are its self-alignment, its graduations and adjustable pointer, its rear clamp and its micrometer adjustment, disengaged at will, with fine teeth to permit a real close adjustment for accurate work. See page 6.

6 Patented Trunnion Construction:

(U. S. Pat. No. 1,697,669 & 1,910,651).

The patented Delta table trunnion construction has a number of superior features; it permits the use of a very narrow table slot for the blade, and avoids the necessity of removing the table insert when the table is tilted. When the table is raised and tilted the rip gage is not thrown out of alignment with the saw blade. See page 7.

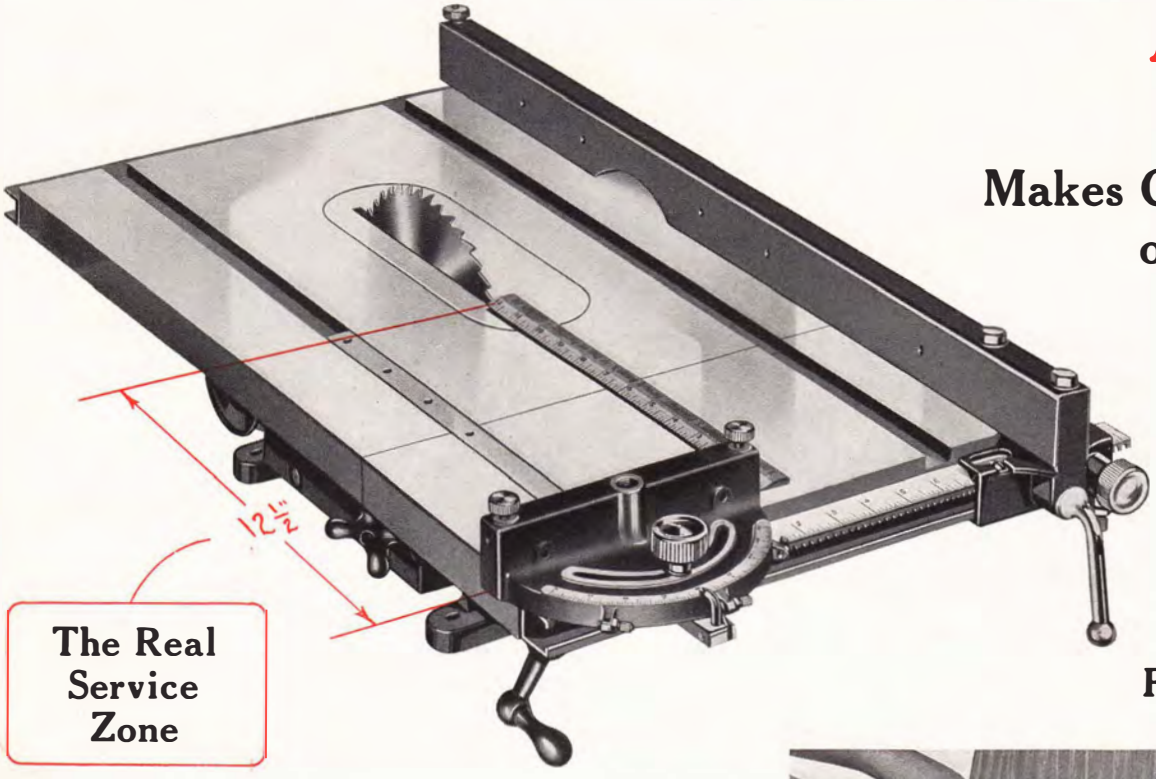
7 Exclusive Constructional Features:

In addition to the patented Delta features, the 860 circular saw has a number of other important constructional advantages, which are fully described in the following pages.

No. 860	8-inch Delta Circular Saw, with 8″ blade, "Auto-Set" Miter Gage, "Micro" Adjustment Rip Gage and Arbor Pulley, complete as shown in photo above..... Shipping Weight 75 lbs. Code Word NECSA.	$32.85
No. 5500	5″ Motor Pulley, drives saw at correct speed. Made with ½″, ⅝″ or ¾″ bore. Specify bore wanted. ½″ bore furnished unless otherwise specified.... Shipping Weight 1½ lbs. Code Word PULOH.	.75
No. 560	V-Belt, 22¾″ center to center..... Shipping Weight 10 oz. Code Word EICVB.	1.00

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Extension Gives More Table Space In Front of Saw Blade—*Where You Need It Most!*



Makes Cross-Cutting of 12" Boards as Easy as 1" Strips

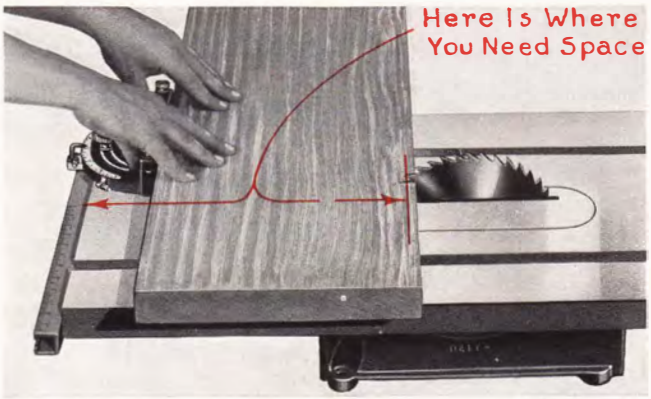
Miter Gage Always Rests Firmly on Table

Every craftsman who owns a circular saw is faced with the necessity occasionally of doing work that is beyond the capacity of his machine. Then he wishes that he had a larger saw—but the cost of such a machine makes it entirely out of the question for the small shop.

It was to eliminate this condition that Delta incorporated into the design of the circular saw the radically new idea that gives the owner of this saw all the convenience and capacity of a large, factory-type saw, at only a small fraction of the cost.

The cross-cutting of wide boards has always been a problem. As soon as he attempted to cross-cut a board wider than a few inches the miter gage projected beyond the edge of the table, and gave no support to the work, making it impossible to do accurate work. All saws, no matter how built or designed, lacked a firm support for cross-cutting wide work—none of them had enough room **in front of the saw blade**—the real "Service Zone".

The new Delta Table Extension eliminates this completely, and does so in the only practical way. Side wings added to increase the width of the table are of no value for this, as the problem of adequate room for a wide board still remains. Only by extending the **front** of the table can the problem be met satisfactorily, and this is what the Delta table extension does.

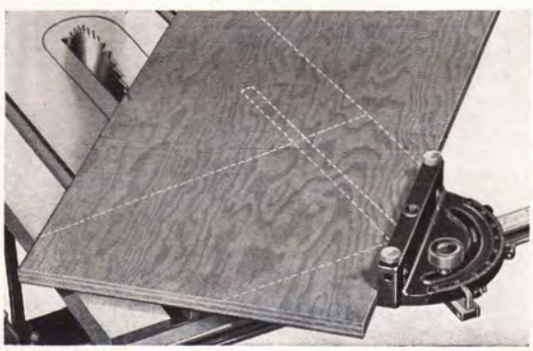


Invaluable for Wide Miters

The photo above shows how simple cross-cutting of wide, heavy boards becomes with the table extension, and how both work and gage are fully supported during the whole cut. The addition of the Delta miter-gage clamp (see page 9) makes child's play of cross-cutting even the heaviest boards within the capacity of the saw.

The real utility of this extension becomes even more apparent when it is necessary to miter a wide board accurately—a job that cannot be done at all on most saws. As the photo at the left shows, the mitering of a panel 13" or 14" wide would be impossible without the extension, because neither work nor gage would have any support from the table, and accurate work would be out of the question.

With the extension in place, however, accurate work is easily done—just as easily as on narrow work in fact. A study of this photo will show why the space in front of the saw blade is so important, and why we call this the Real Zone of Service.



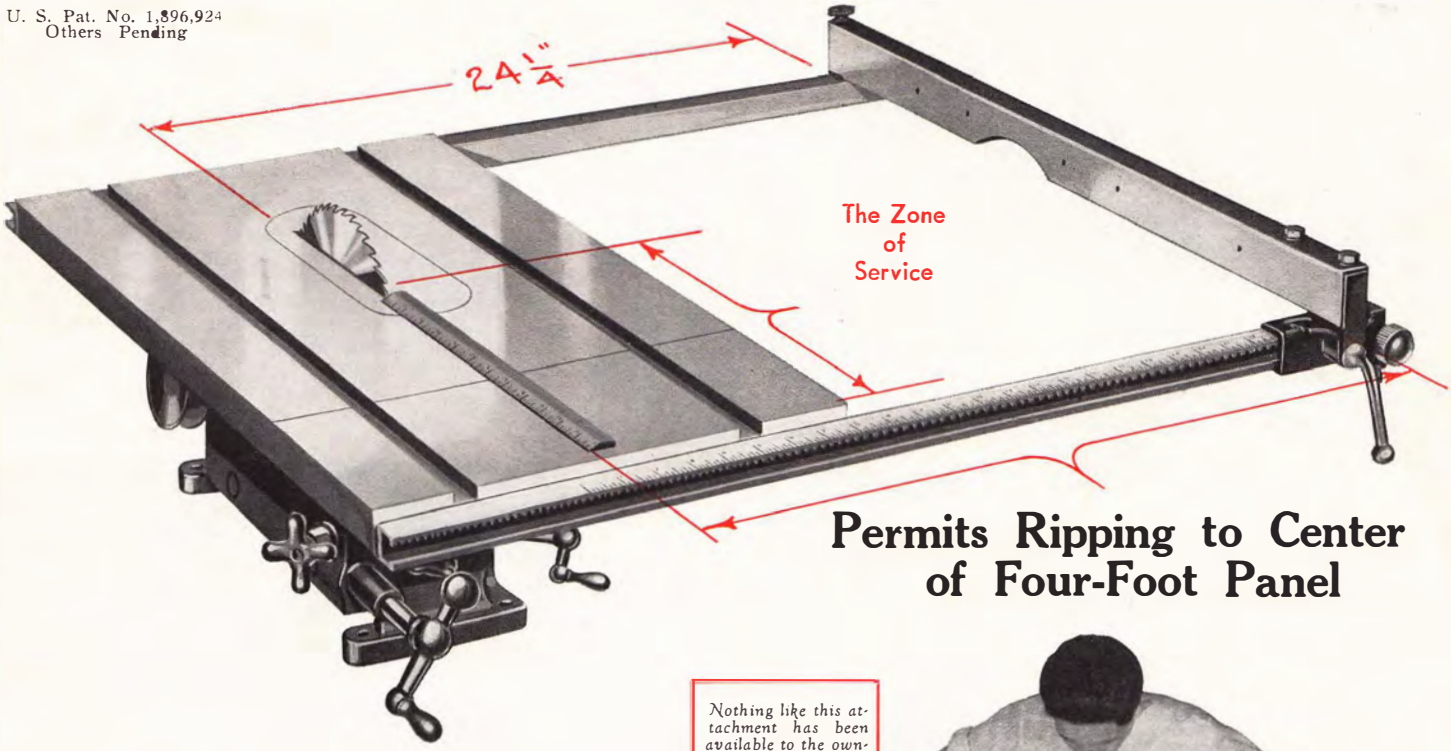
Here is a panel 13 inches wide being mitered on the Delta Circular Saw with Front Table Extension, a job that would be absolutely impossible to do accurately on the ordinary saw with limited room in front of the saw blade. The dotted lines show how both miter gage and work receive complete support from the table, thus insuring an accurate cut without trouble.

The Delta Front Table Extension is sold as a part of the Delta Extension Attachment (U. S. Patent No. 1,896,924 and others pending). Prices on opposite page.

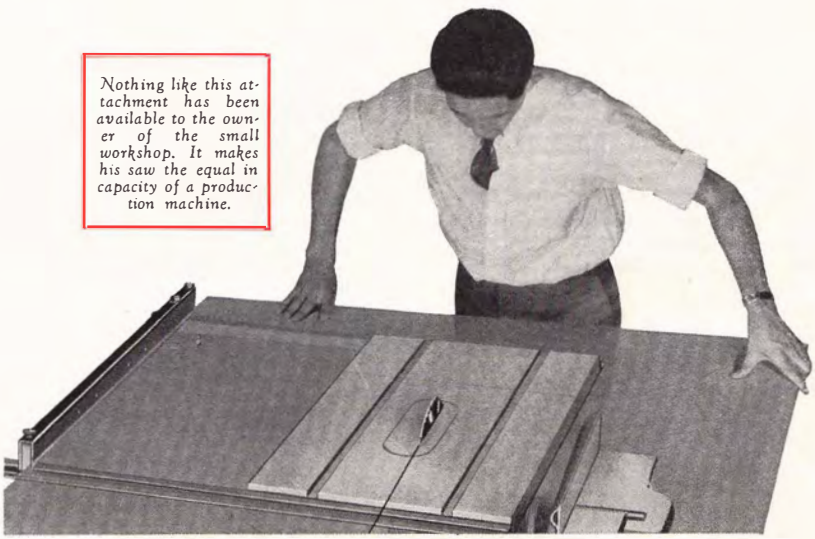
[Please Order by Catalog Number to Avoid Mistakes and Delay]

Offers Capacity of Very Large Table at a Fraction of Large Table Cost

U. S. Pat. No. 1,896,924
Others Pending



Permits Ripping to Center of Four-Foot Panel



Nothing like this attachment has been available to the owner of the small workshop. It makes his saw the equal in capacity of a production machine.

Attached or Removed in a Jiffy

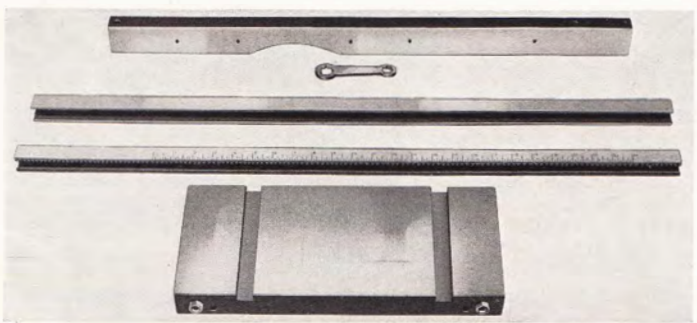
Next to cross-cutting, the greatest problem for the user of the small circular saw, when doing large work, is that of ripping wide panels and similar work. Heretofore, the only way in which he could do this was to scribe a line on the work, remove the rip gage, and saw the work "by eye", which is very unsatisfactory and inaccurate. Or else he was forced to build some kind of an extension table, which usually interfered with other operations.

Universal In Use

All this bother, again, is eliminated by the Delta Ripping Extensions. These consist of two long bars which replace the regular rip-gage guide bars furnished with the standard saw. The extension bars may be attached or removed in a moment and they may be permanently left in place if necessary.

The bars fit either on the front and rear of the regular saw table, or on the extension table. A longer rip-gage body is furnished for use when the bars are used in conjunction with the extension table.

The extensions can be used either on the regular table or in connection with the front extension table, so that the user can have exactly the type of saw he desires at any time.



Work Accurately Guided

With these extensions in place panels as wide as four feet can be ripped down the center, since it is 24½" from the saw blade to the rip gage when the gage is fully extended. And the work is accurately guided and fully supported during the operation.

These extensions, simple and low in cost as they are, give the purchaser of the new No. 860 Circular Saw a machine which has all the capacity of one having a four-foot table—a machine that would cost hundreds of dollars otherwise.

No. 866 Delta Circular Saw Extension Attachment, including Front Table Extension, Extension Rip-Gage Guide Bars, Long Rip-Fence Bar, Screws and bolts..... **$8.85**

Shipping Weight 25 lbs. Code Word NECXT.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Patented "Auto-Set" Miter Gauge is Most Practical Ever Made

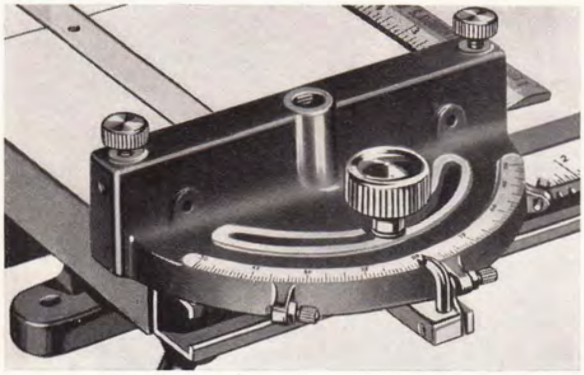


Photo above shows "Auto Set" Miter Gage in place on saw and shows the stop screws at the 90 and 45-degree positions on the head.

Instant Setting

The principle of this remarkable gage is a new one, and very effective. The outer end of the bar carries a link, which can be swung into or out of engagement with knurled-head stop screws carried by the miter-gage head. The first time the user has to cut an accurate square, he sets the gage at 90 deg. adjusts the stop screw against the link, then makes a trial cut and tests the angle. If the cut is slightly "off" he re-adjusts the stop screw and tests the setting again. Once the screw is accurately set **the setting is always accurate,** no matter how often the head is moved.

Stop screws are furnished at both the 45-degree positions also, and here again, once the screws have been set, no further attention is necessary. The user simply proceeds to cut—**knowing** that his angles will be correct to a fraction.

Cutting of the two most-used angles—45 and 90 degrees—is thus rendered almost automatic. No fussing with trial settings every time the gage may be moved; no wondering if the cut is right. And, in addition to this patented feature, which you can find on no other gage, the accurately graduated arc makes the cutting of any other angle easy.

Note the very husky design of the Delta Miter Gage; it is not only more convenient, but actually larger than furnished on many production saws.

This unusual Miter Gage (U. S. Patent No. 1,902,270 and Des. Patent No. 89,818) makes a precision job of the ordinary work of cross cutting and mitering.

Every craftsman knows the limitations of the ordinary gage. Even when the gage is graduated accurately it is impossible to set the gage close enough for fine work. The craftsman who does close work, therefore, must check and re-check his setting of the gage by repeated trial cuts on scrap stock before he can be sure his gage is accurately set at 45 or 90 degrees. **And this process of trial-and-error setting must be done every time the gage is moved.**

All this is rendered completely unnecessary by the design of the new Delta Miter Gage, because, once the stop screws are set and locked, no further attention is necessary to insure absolutely accurate setting, no matter how often the gage may have to be adjusted after cutting odd angles.

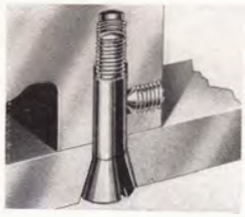
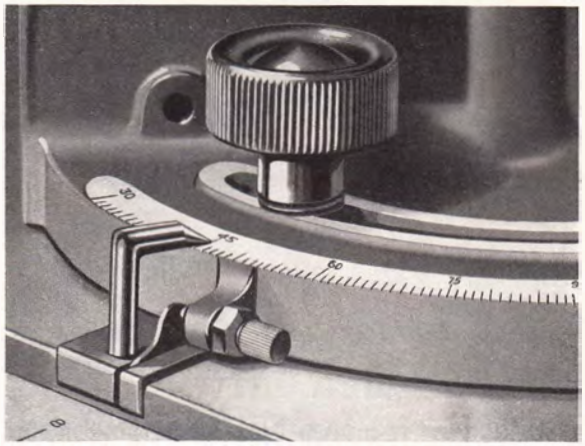


Illustration at left shows tapered-head pivot screw of gage, which enables head to pivot on bar with exact degree of freedom user desires, and provides takeup for wear.

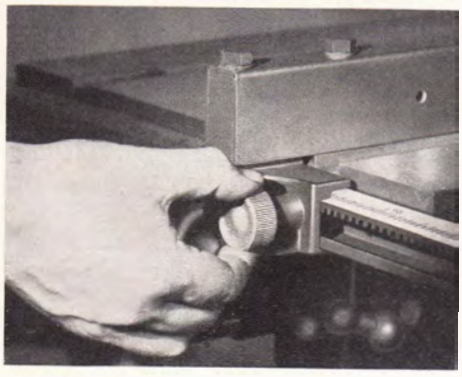


A closeup of the link, and stop screw of the "Auto-Set" Miter Gage (U. S. Pat. No. 1,902,270). Once the stop screws are set, all square and miter cuts are made with assurance of accuracy.

"Micro-Set" Rip Gauge Permits Accurate Adjustment

The rip-gage of the Delta Circular Saw has many unusual features. To begin with, the body is of heavy gage-steel formed and ribbed to prevent any possibility of spring or twist, while avoiding excess weight (Patent Pending). The body is 1" thick, 2" high and 20¾" long. The gage is self-aligning, and a turn of the long-handled locking bolt brings it positively parallel with the saw blade.

Even though the heavy front bracket prevents any possibility of spring when the gage is locked, absolute freedoom from any danger of spring is assured by a rear clamp, operated by a large knurled nut on top of the gage bar.



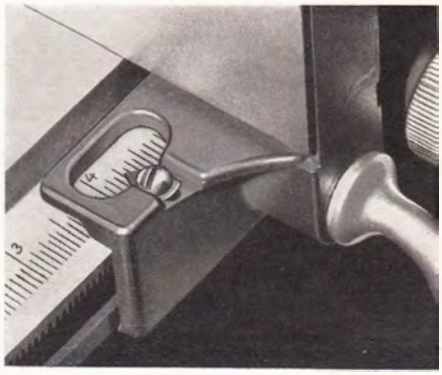
A touch of the knob moves the gage to the right or left the slightest fraction necessary for fine adjustments. The pinion can be snapped out of engagement for quick settings of the gage.

A Real Fine Adjustment

No other rip gage, so far as we know, offers the unusual "Micro-Set" adjustment built into the Delta gage, and which is invaluable for fine, close work. It should be noted that this is not a coarse-tooth rack and pinion for moving the gage across the table, although it can be used in that manner if desired. It is a **fine** adjustment, for **fine** work, and this cannot be obtained with coarse teeth. For quick adjustment of the gage across the table the pinion can be snapped out of engagement with the fine-tooth rack, and a touch of the finger then moves the gage across the table to the desired position. Then the "Micro-Set" adjustment is snapped in again for the final close adjustment.

Since the Delta rip gage is engineered to fit the saw, it can be used on either side of the blade, which cannot be done on many saws using a "jointer" type of fence.

Note that the pointer in the "window" of the rip-gage bracket is adjustable to compensate for various thicknesses of blades, so that use of the rip-gage scale may always be accurate and convenient.



The graduated front bar of the saw table, together with the adjustable pointed set in the "window" of the rip gage bracket, make quick setting of the rip gage easy. And it is accurate, too.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

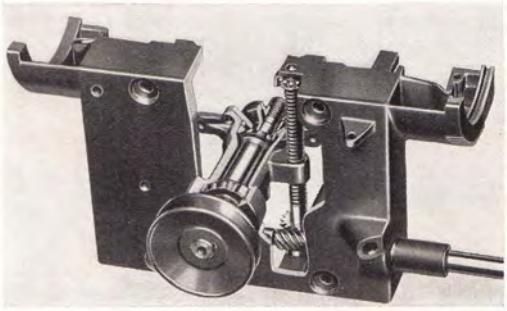
Many Real Constructional Advantages

Patented Trunnion Construction Permits Ideal Mounting of Table

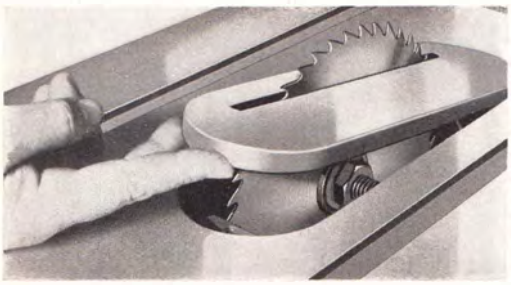
(U.S. Patents No. 1,697,669 and 1,910,651)

The massive trunnion construction of the Delta Circular Saw has two functions: First, due to their very large radius and precise construction, they provide a very smooth tilting action. Second, their very large contact surface makes the table very rigid when clamped. Third, and most important, their design permits the use of a very narrow saw slot, due to the fact that the table tilts in the plane of the saw-blade center.

In many other saws, pivoted on pins below the table surface, the worker is forced to have a large, dangerous opening in the table insert, otherwise the table cannot be tilted. On the Delta saw the table tilts accurately around the table top surface, permitting the use of a very narrow and safe slot in the insert, and enabling very narrow strips of wood to be ripped with perfect safety.

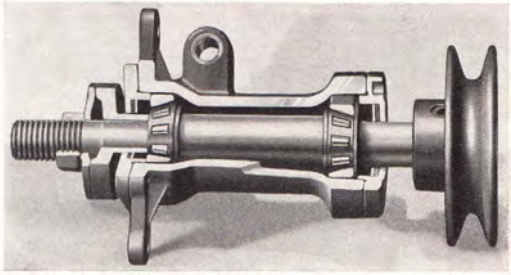


Very Convenient Insert: No Screws to Loosen — Sturdy Timken Bearings



A touch of the finger removes the table insert—no screws to loosen—yet it is perfectly solid when in use.

On many saws, removal of the table insert for saw changing, use of the dado head, etc., is a tiresome job, because the insert is fastened by screws, which are often in very awkward positions to get at. On the Delta Saw, a flip of the finger takes the insert out of the way, yet it is perfectly solid when in use. Saws can be inserted and removed through the insert opening, without the necessity of raising the table.



A close-up of the sturdy bearing housing of the circular saw, with its modern Timken bearings for heavy duty.

A large, easily grasped ball handle raises and lowers the table through a helical gear and Acme thread.

Heavy Dovetail Guides:

The table is guided, while being raised and lowered on heavy dovetail bars or gibs, working in dovetail slides milled in the heavy cast-iron frame. This construction insures absolute accuracy and freedom from wear.

The table is locked at any desired height by forcing one of the gibs tightly into its slide, which has the effect of making the table bracket and frame practically one solid piece and makes the whole assembly absolutely rigid. The locking is done by means of a convenient star wheel on the left-hand side of the machine.

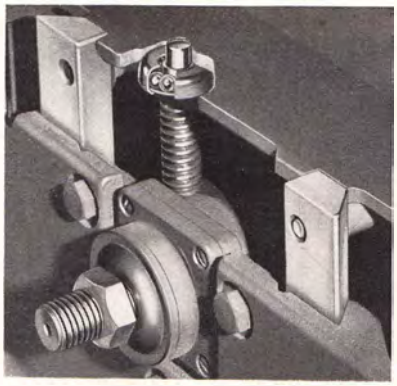


Table is raised and lowered by means of ball-bearing screw, on heavy dovetail slides and gibs which insure accuracy at any height.

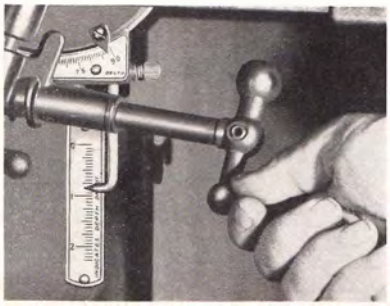


Table tilting is accomplished with worm-gear mechanism, through another convenient ball-crank handle.

Worm-Gear Tilting Mechanism:

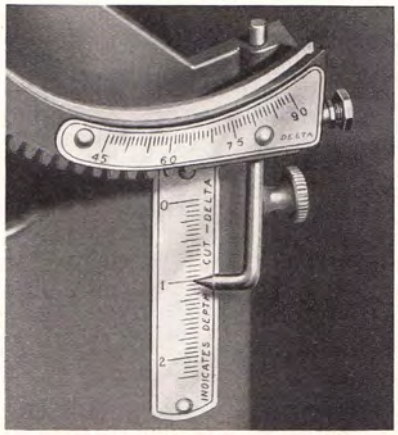
The table-tilting mechanism is of unusual convenience, fully equal to the rest of the machine, and far in advance of the usual elementary means of tilting found on most saws. The table is positively tilted by means of a ball-crank handle at the right of the machine, which quickly runs the table to the exact degree of tilt required.

The ball-crank handle actuates a worm, which meshes with a rack under the front trunnion seat. While this operation is fast enough for ordinary purposes, very fast tilting is obtained merely by releasing the worm from the rack.

Heavy trunnion clamps lock the table at the level position or at any degree of tilt; very rigid and strong construction.

Handy Scales for Fast Work:

An accurate scale with an adjustable pointer shows the exact height of the table, the pointer being invaluable for moulding and dado work. Since each turn of the raising handle raises or lowers the table exactly $\frac{1}{16}$" the scale is needed only for fine work. An equally accurate scale indicates the exact degree of table tilt, and adjustable stops are provided to locate the table at the much-used 90 and 45-degree positions.



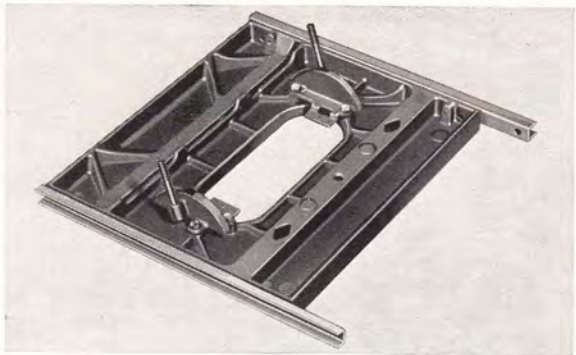
Height scale with adjustable pointer is invaluable for sawing, moulding and dado work. Another accurate scale shows exact degree of tilt.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Better Design—More Convenience

Positive Clamps . . Heavy, Rigid Table . . Massive Frame

A convenient star wheel locks the table rigidly at any height.

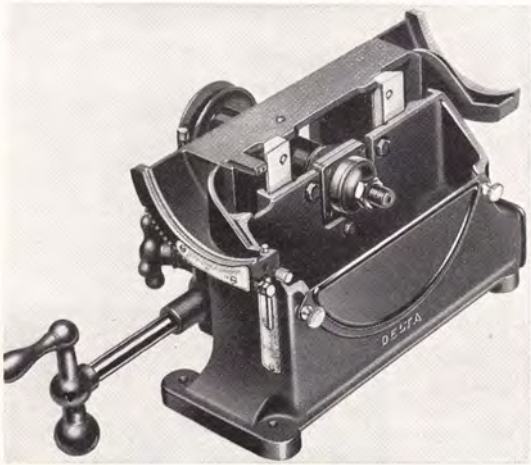


Bottom view of massive table, showing stiffening rib and large, smooth-working trunnions on which the table is cradled.

The table of the No. 860 Delta saw is 15″ by 18″ in size, which is ideal for all-around work. It is a very strong casting and is made especially strong and free from twist by a hollow cast rib extending clear from front to back.

The table is cradled on massive trunnions (U. S. Patent No. 1,697,669), smooth and easy working, which work in accurate seats in the frame. The front trunnion has a Vee, which fits in a V-groove in the seat, and thus prevents any end motion.

The surface of the table is ground flat and true to close limits of accuracy.



No. 878 Circular-Saw Unit

The No. 860 Circular Saw mounted on its individual stand is a very popular unit. It is especially convenient in the professional and school shop, as it is completely portable.
Our No. 820 ½ H. P. Repulsion-Induction Motor is recommended for use with this unit.

No. 878 8″ Timken-Bearing Circular Saw Unit includes:

No. 860	Circular Saw	$32.85
No. 5500	V-Pulley, ¾″ bore	.75
No. 560	V-Belt, 22¾″ cent. to cent.	1.00
No. 329	Steel stand (without chute), with bolts and directions	5.75
	Total	$40.35

Shipping Weight 110 lbs. Code Word NECUN.

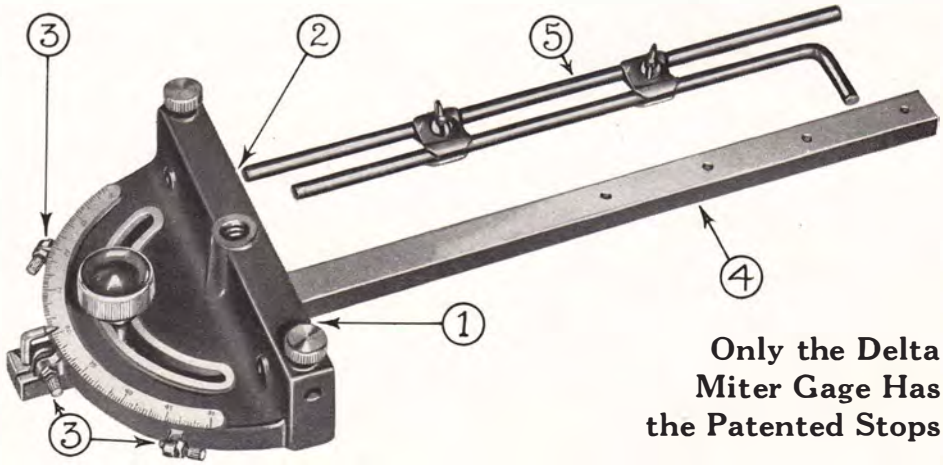
See page 54 for motors.

Delta "Auto-Set" Miter Gage

(Des. Pat. No. 89,818) (U. S. Pat. No. 1,902,270)

This gage sets new standards of accuracy, huskiness, convenience and practical utility. Nothing like it has ever been offered to the craftsman. Note the following points:

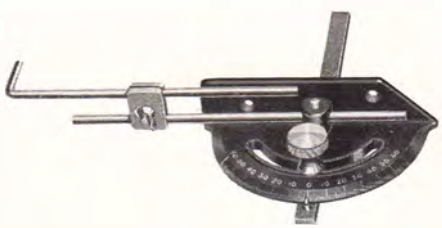
1. Unique tapered pivot insures close fit for entire life of gage.
2. Massive body, heavier than many gages on production machines, gives full support to work and will not spring.
3. Automatic stops (U. S. Pat. 1,902,270) make precision job of cross-cutting and mitering. Read the full description of these stops on page 6.
4. Heavy ⅜″ by ¾″ bar, 17″ long, very strong and stiff.
5. Stop rods are full $\frac{5}{16}$″ diameter, not flimsy wires that are useless for accurate repetition work. Fitted with two clamps. Note that this gage will fit tables with ⅜″ by ¾″ groove only.



Only the Delta Miter Gage Has the Patented Stops

Delta No. 180 Miter Gage

This miter gage, which was the first practical gage furnished with small circular saws, has been a favorite for years. It will fit any circular saw with $\frac{3}{16}$″ by ½″ table grooves. Accurate graduations, 0 to 60 degrees on both sides, holes for special fences, stop rod and clamp for cutting work to length; used on either side of saw. Also used as protractor.

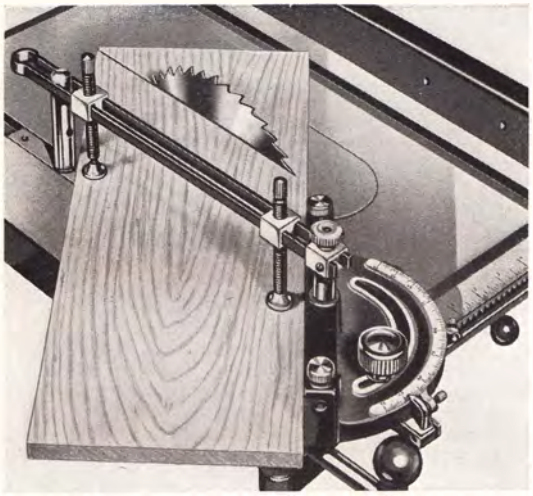


No. 864 Delta "Auto-Set" Miter Gage, complete with ⅜″ by ¾″ bar, two $\frac{5}{16}$″ stop rods and clamps. Fits any table with ⅜″ by ¾″ groove..... $3.25
Shipping Wt. 5 lbs. Code Word NECMI.

No. 180 Delta Miter Gage, fits any table with $\frac{3}{16}$″ by ½″ groove $1.25
Ship. Wt. 1½ lbs. Code Wd. DELMI.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Miter-Gage Clamp Attachment



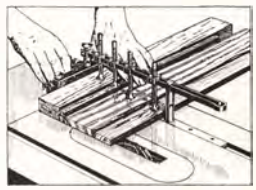
Cutting a Miter with the New Clamp Attachment, which Results in a cut of Absolute Precision. The Work Cannot Possibly Creep or Slip Away from the Saw Blade.

Insures Utmost Accuracy

Here is another Delta attachment (U. S. Pat No. 1,894,010) which solves problems encountered by every craftsman. Even with an accurate miter gage and with the utmost care in cutting, it is often found that a cut—especially on a wide board—is inaccurate. The reason for this is that the board has a tendency to creep away from the blade, especially on angular cuts. No matter how firmly the board may be held against the gage, occasionally it will be found to have "crept" enough to spoil the accuracy of the cut.

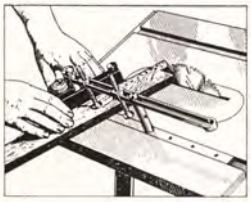
The new Delta Miter-Gage Clamp Attachment eliminates this trouble completely, and in addition is useful for many other purposes. It consists of a clamp bar that may be attached to the miter-gage bar and head instantly, and that can be detached just as quickly. Sliding on the bar are two clamp screws, which may be set at any point along the bar to suit the work. When these are tightened down against the work they practically make the gage and work as one piece, and it is impossible for the work to slip or creep away from the blade.

So accurate is the cut made with this attachment that, after a piece has, been cut off, pushing it back and forth past the saw blade still clamped in the attachment will cause the blade to ring, every time the piece passes, showing that there has been absolutely no creep or slip.



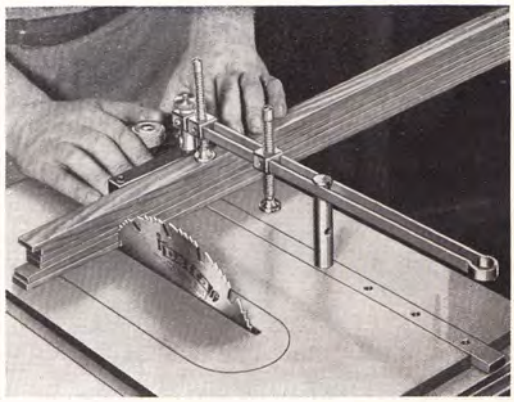
No Waste of Time or Effort

It can easily be seen that this insures absolute accuracy of cutting, and that it saves a tremendous amount of time and energy, especially when it is used in connection with the automatic stops on the Delta "Auto-Set" miter gage, because, once the gage is set and the work clamped in place, there is no wondering if the cut is going to be accurate — you **know** it is.



The clamp screws may be used singly or in pairs, as desired. They may be used to clamp a number of pieces as shown at the right, for cutting to exact length; they may be used as shown in the small line drawing above for clamping a number of pieces of varying thickness when cutting to length; it is not necessary that the pieces be of the same thickness. Extra clamp screws may be purchased if desired, in addition to the two supplied with the attachment. For cutting compound miters, as shown at the left, the clamp is invaluable.

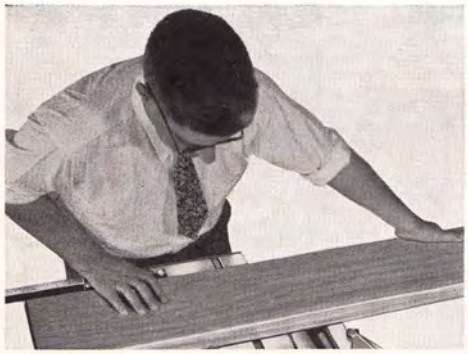
Once the value and use of this attachment is discovered, no craftsman will willingly do without it, because it makes accurate work so much easier.



The Clamp Attachment can be used for cutting a number of strips to exact length, where extreme accuracy is required, or for grooving pieces varying shape and thickness all at one time, as shown in the illustrations above.

Leaves Hands Free for Supporting the Work

No More of This!



But This Instead

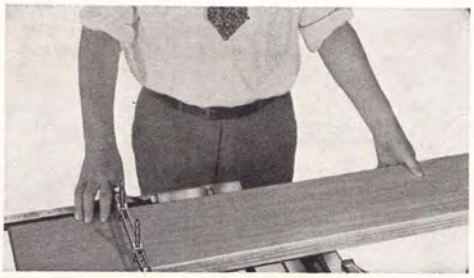
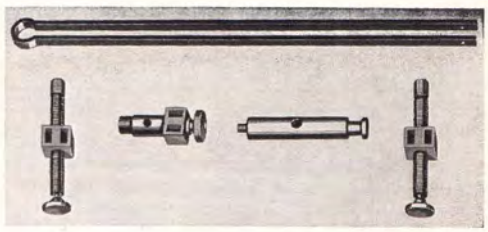


Photo at left shows how hard it is to hold long, heavy board for cross-cutting without clamp attachment. Contrast with photo at center, which shows how easy the attachment makes the job.

Every craftsman knows what a job it is to support the end of a long, heavy board that projects to the left of the saw. The board must not only be pressed against the head of the miter gage, but also must be pressed down hard on the table while the left hand awkwardly tries to hold up the overhanging end. Look at the left-hand picture Every craftsman has experienced just such a problem when trying to cut a long, heavy board'



Now contrast this with the picture in the center. The Delta clamp attachment holds the board firmly in contact with the face of the miter gage, leaving the user of the saw nothing to do but to support the end of the work with the left hand, while the right easily pushes the gage and work up to the saw blade. No trouble or awkwardness at all. You stand easily and naturally, and saw off a wide, heavy board as easily as a narrow strip.

No 865	Delta Miter Gage Clamp Attachment, consisting of Clamp Bar, two Sliding Clamp Screws, Front and Rear Posts, to fit No. 864 Miter Gage only..... Shipping Weight 1½ lbs. Code Word NECLA.	**$1.95**
No 873	Extra Clamp Screw and Block for Clamp Attachment ..... Shipping Weight 8 oz. Code Word NECCS.	**$ .35**

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Guards Completely Safeguard Operation of Circular Saw

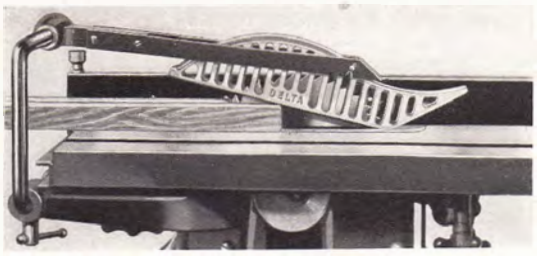
A Swing Guard that Really Protects

The Delta No. 863 Circular-Saw Guard offers for the first time a guard that really protects the user and which at the same time does not in the least interfere with his work.

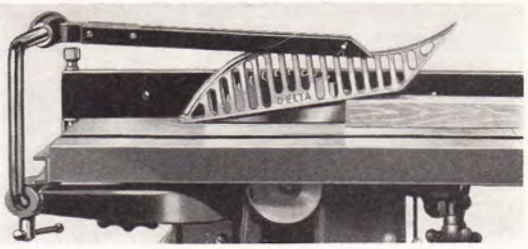
Designed to meet the exacting specifications of a State Industrial Commission, this guard meets every requirement of safety. The heavy alloy basket is swung on heavy steel pivots, and is so pivoted that, when the work strikes it, the front end lifts up while the rear end remains on the table, thus covering the saw blade at the rear.

As the work passes through the basket swings down level on the upper surface of the work, and as the end of the piece passes clear of the saw blade the front end of the basket drops to cover the front of the saw. The whole basket swings around the rear pivot to accommodate work of any thickness within the range of the saw.

The sturdy basket is wide enough to cover the widest dado cutters, and the front of the guard is open so that the line of the cut can be seen at all time. One of the outstanding features of the Delta guard is the fact that it need never be removed. The whole support rod is pivoted in the cast-iron bracket, and, if it is ever necessary to take the support out of the way of an unusually wide piece of work, the whole guard is swung back out of the way—but not removed from the saw.



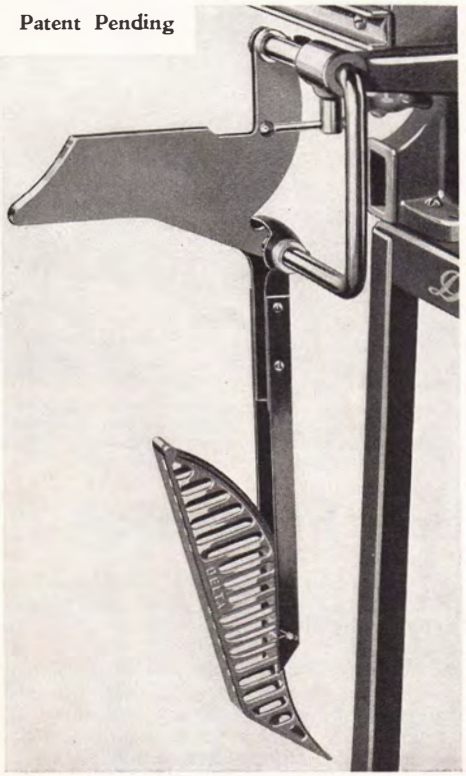
The front of the basket tilts downward as the work leaves the blade, thus protecting the front of the blade.



The front of the guard basket tilts upward as the work approaches the blade, while the rear covers the saw blade.

The whole construction of the guard, from the heavy cast-iron bracket that fastens it to the frame to the pivot arms and basket, is of the sturdiest possible construction, so that the guard will really be of service to the user of the saw. The guard remains vertical at all times regardless of the tilt of the table. The back of the basket is slotted to clear the No. 867 splitter attachment described below. No. 863 guard fits No. 860 saw only. Note that the lower arm of the U-shaped support rod, in the new model guard, is extended to carry No. 867 Splitter Attachment.

Patent Pending



Both the splitter attachment and the regular swing guard can be swung backward and completely out of the way of any kind of work; it is never necessary to remove the guard.

Out of the Way When Not Needed, Yet Instantly Available

The ordinary guard, supported by a so-called "splitter", must be removed when grooving or moulding is done on the saw, and it usually is never replaced. On many saws, also, the work strikes the guard support before the cut has been completed and again the guard must be removed, and seldom replaced.

The Delta Guard need never be removed, for any reason. And—very important—whereas the removal of the ordinary combination splitter and guard in order to do grooving work leaves the saw without any protection at all, with the Delta guard the removal of the splitter attachment leaves the regular basket guard in place, to do its job of guarding the dado head or moulding cutter. So, no matter whether you are grooving, moulding, or cutting through a piece of work, you always have an adequate guard available, which is not the case on any other saw of this type, so far as we know.

And, if an extra-wide board would strike the support, all that is necessary is to loosen the support arm and let it down completely out of the way. After the board has been cut a touch of the finger brings the guard back into position again.

For the First Time - - A Practical Splitter

The ordinary splitter has some very outstanding faults. The first is that it is usually called upon to support the guard basket, which is a poor construction because the splitter naturally is thin and makes the whole guard "wobbly". The second is that in order to carry the basket and at the same time clear the table is must be set far back from the blade, whereas, to be of real service, it should be as close to the blade as possible. The third objection is that one size of splitter cannot possibly serve all kinds of blades of different thicknesses and differing sets and yet, if the splitter does not suit the blade, it is useless.

The purpose of the splitter is to enter the cut and spread the wood slightly, so that a warped or springy piece of wood will not seize on the blade and be thrown backward against the operator. Naturally, if a "splitter" is thinner than the saw kerf it cannot do any spreading, and so it is almost useless.

A further drawback is that the ordinary splitter, like the ordinary guard, must always be removed for dado or moulding-cutter work, which is very inconvenient.

Fits Wide Variety of Blades

The Delta Splitter Attachment avoids all these drawbacks and inconveniences. The three splitters furnished will fit the kerfs made by practically any blade that is used on the saw, and the proper splitter can be selected and attached in a jiffy.

The splitter has no function other than its own; it does not have to carry anything else, and, as it floats slightly on the support rod, it automatically centers itself in the saw kerf.

Since it rests close behind the blade, it enters the kerf almost as soon as it leaves the blade, and thus affords the utmost efficiency.

One Guard Always Available

A splitter must always be removed from the saw whenever moulding or grooving work is to be done, because the splitter naturally can only be used when the cut goes through the wood. This means, with the ordinary guard on which the basket is carried by the splitter, that, when the splitter is removed, the user is left without any guard at all.

This is not the case on the Delta saw. For moulding or grooving work the splitter is removed merely by loosening one collar and slipping the splitter off the support arm. This leaves the swing guard in place to guard the dado head or moulding cutter in the regular manner. Attaching the proper splitter or removing it from the guard is a matter of a second's work only. Only a guard with these features can really protect the operator.

The Splitter Attachment may be used alone, on the regular guard support rod without the basket, or it may be used with the regular guard as shown above. Either guard may be used alone or in combination, the splitter fitting into a slot in the rear of the regular guard basket. No more convenient or fool-proof arrangement can be devised.

No. 863 Delta Swing Guard for No. 860 Circular Saw only, complete with bracket, support rod, pivot arms, guard basket, collars and screws for attachment **$4.85**
Ship. Wt. 8 lbs. Code Word NECGA.

No. 867 Splitter Attachment for No. 860 Delta Circular Saw only, consisting of three splitters and two collars to fit support rod **2.50**
Ship. Wt. 1 lb. Code Word NECSB.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

8-inch Circular Saw Accessories

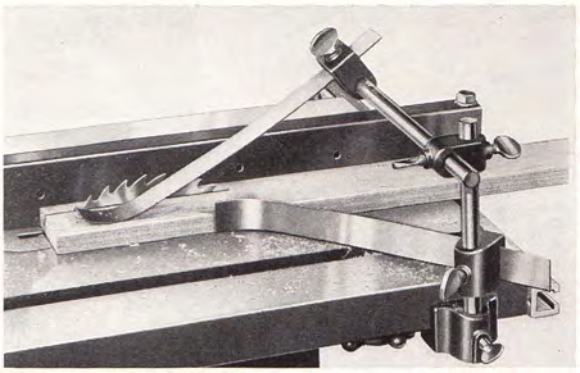
Delta Hold-Down Attachment

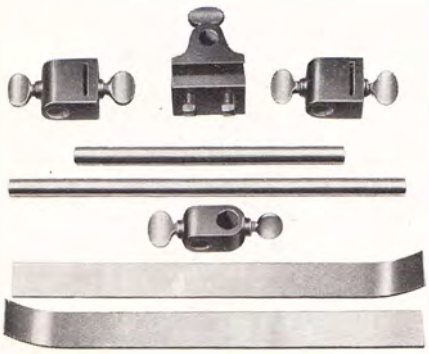
Here is another Delta attachment that circular-saw users have been demanding. It is very useful for certain types of work.

The attachment consists of a clamp that fits on either side of the saw table, and which carries rods and brackets for springs that bear on the work. One spring is adjusted to bear down on top of the work, keeping it pressed to the table, while the other holds the work against the fence.

With this attachment, the fingers need never come at all near the saw blade, as the springs perform the work ordinarily done by the hands, of keeping the work pressed against table and fence. All the hands have to do is to push the work through.

The springs hold the work so perfectly that, when work is partly ripped through, the operator may walk around the machine and pull it through the rest of the way if he desires to do so for safety's sake. desires to do so for safety's sake. The hold-down attachment can be used in connection with the splitter attachment, and, for most work, with the swing guard also.





No. 871	Delta Hold-Down Attachment for 860 Circular Saw, complete with clamps, bracket and springs Shipping Weight 2 lbs. Code Word NECHO.	$2.25
	NOTE: Those who already have the No. 983 set of holddowns for shaper table need purchase only the following parts to adapt their hold-downs to the circular saw. One bracket, NCS-315-S; one short rod, DP-331; one long rod, NCS-316.	
NCS-315-S	Clamp bracket ..... each	.75
DP-331	Short Rod (½" x 6¼") ..... each	.20
NCS-316	Long Rod (½" x 10") ..... each	.25

Delta Abrasive Cutting Wheels

Delta Abrasive Cutting Wheels are very valuable accessories for the 8-inch circular saw. They will cut freely and fast all of the materials mentioned in the table below, and many other materials difficult to cut by ordinary means. All Delta wheels are $\frac{3}{32}$" thick, 8" diameter and have ⅝" hole to fit the arbor of No. 860 saw. These wheels are bonded with genuine Bakelite, and should not be confused with cheap and unsatisfactory shellac-bond wheels. Furnished in ⅝" hole only.

No. 223	8" Cutting Wheel, $\frac{3}{32}$" thick, ⅝" hole, for cutting vitrified brick, cast iron, sand cores, slate and plain or glazed tile Shipping Weight 1 lb. Code Word BAKEC.	$1.50
No. 225	8" Cutting Wheel, $\frac{3}{32}$" thick, ⅝" hole, for cutting monel metal, steel tubing, hardened steel, stellite, stainless steel, aluminum tubes, etc. Shipping Weight 1 lb. Code Word BAKED.	1.50
No. 227	8" Cutting Wheel, $\frac{3}{32}$" thick, ⅝" hole, for cutting porcelain, hard rubber, brass tubing, copper, brass and bronze Shipping Weight 1 lb. Code Word BAKEF.	1.50
No. 228	8" Cutting Wheel, $\frac{3}{32}$" thick, ⅝" hole for cutting soft steel and wrought iron Shipping Weight 1 lb. Code Word BAKEH.	1.50
No. 230	Delta Abrasive Wheel Guard, with bracket and arm, to fit No. 860 Circular Saw Shipping Weight 7 lbs. Code Word BAKEJ.	3.90
No. 231	Top Guard casting only. Used whenever saw is already fitted with circular-saw guard. Fits either No. 318 or No. 860 Circular Saw Shipping Weight 3 lbs. Code Word GURDA.	2.10

Cutting a steel bar in the No. 860 saw with an abrasive cutting wheel. Note the sturdy Delta guard.

High Grade Saw Blades

Combination Blades

The Delta Combination Blade for 8-inch Circular Saw is a double-purpose blade, which rips and cross-cuts equally well. Serves a very useful purpose for ordinary work, where the user does not wish to change blades frequently. Teeth have proper set for free cutting. Made of high-grade steel, properly tempered and tensioned.

No. 325 Delta Combination Rip and Cross-Cut Blade for Nos. 318 and 860 Circular Saws **$3.00**
Shipping Weight 1½ lbs. Code Word EICBL.

Hollow-Ground Blades

Ideal for fine and accurate work. Teeth have no set and the work comes from the saw ready to put together, without any further work, unless the work is of such fine character that it requires jointing. This blade should be kept for fine work; it is not suitable for rough cutting. Properly used and cared for it will do the highest class of work.

No. 326 Delta Hollow Ground Blade for Nos. 318 and 860 Circular Saws **$4.95**
Shipping Weight 1½ lbs. Code Word EICSP.

Delta High-Quality 6-inch Dado Head

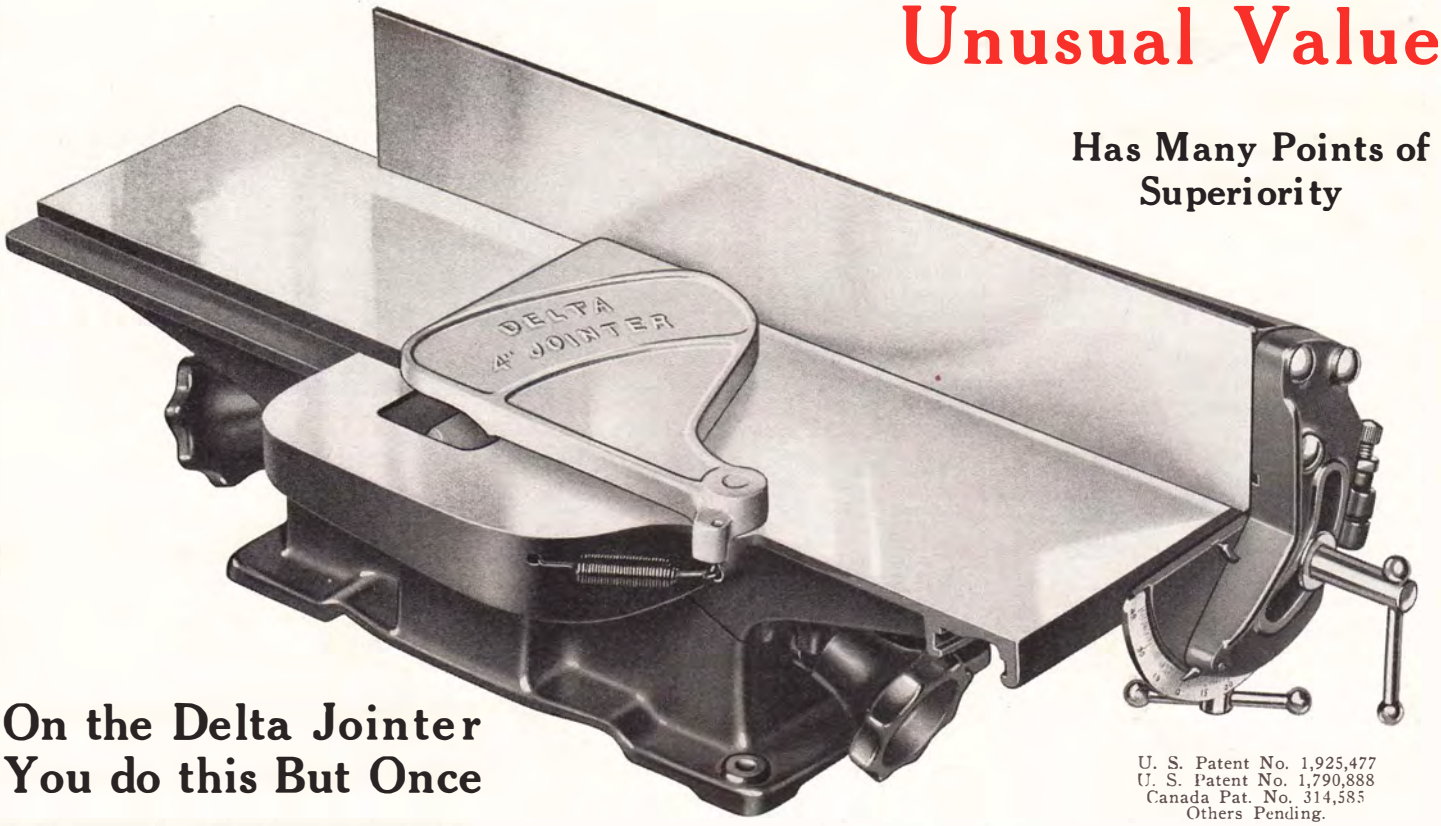
Nearly all cabinet making calls for grooves of one kind or another, either with or against the grain. When making such grooves the Delta Dado Head will be found indispensable, as grooves varying in width from ⅛" to $\frac{13}{16}$" can be cut simply by assembling the outside blades with various inside cutters. The Delta Dado Head is made of the finest selected steel, carefully hardened, tempered, jointed and sharpened ready for use. It saves hours of the craftsman's time.

No. 333	Delta 6" Dado Head, consisting of two outer blades ⅛" thick, two inside cutters ⅛" thick, one inside cutter ¼" thick and one $\frac{1}{16}$" thick. To cut grooves from ⅛" to $\frac{13}{16}$", advancing by $\frac{1}{16}$". With ⅝" holes to fit No. 860 Circular Saw Shipping Wt. 3½ lbs. Code Word EICDA.	$9.85
No. 874	Table Insert for No. 860 Circular Saw Shipping Wt. 1½ lbs. Code Word NECDA.	.80

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta 4-Inch Ball-Bearing Jointer Offers Unusual Value

Has Many Points of Superiority



U. S. Patent No. 1,925,477
U. S. Patent No. 1,790,888
Canada Pat. No. 314,585
Others Pending.

On the Delta Jointer You do this But Once

Once Set—Always Set

A very valuable feature of the Delta Jointer (Patent No. 1,925,477) is the automatic stop for the fence, which insures absolute accuracy of 90-degree cuts, with absolutely no attention on the part of the user, once the stop has been set. See how simple the operation is. The fence is set to a try square as shown in the illustration above, by means of the easily adjusted stop screw, then a trial cut is run to check the adjustment, and the job is done—for good.

No More Trial Cuts Necessary

Once the stop has been set, no further trial cuts are necessary; it is always set. On a jointer without this stop feature (Patent No. 1,925,477) it is necessary to go through the job of resetting the fence and making trial cuts every time the adjustment of the fence is changed to some other angle than 90 degrees. On the Delta Jointer, no matter how many angular cuts you make, as soon as you wish to return to the square position a flip of the finger insures absolute squareness of the fence!

Why Delta Jointers are Worth More

Every craftsman who knows anything about woodworking machines knows that two things are essential if a Jointer is to be of the greatest value to the user. The Jointer must be absolutely accurate and it must be convenient in operation. These conditions are completely fulfilled in the Delta Jointer.

In fact, although this is a strong statement, we do not know of any Jointer on the market, regardless of price or size, that is built to higher standards than the Delta, and we do not know of any Jointer that can approach the Delta in ease and convenience of operation.

Extra Operations Insure Accuracy

To insure the accuracy that is absolutely necessary in a jointer, Delta performs operations that are considered unnecessary in the manufacture of the ordinary jointer. These extra operations are expensive, of course, but since they insure absolute satisfaction with the operation of the jointer we consider them a good investment. Absolute alignment and parallelism of the tables is assured by these extra operations, which means that work done on this jointer is done to precision limits.

Edge Jointing Important

The pivoted fence construction (Patented) and the Delta stop link (Patent No. 1,925,477) make accurate setting of the fence a matter of a few seconds work, and the fence always comes back to the absolute square position. When you realize how an error of a few thousandths of an inch in the squareness of an edge can be multiplied many times in the making of such work as a table top, you can see how important it is to have a fence that not only can be set to absolute squareness, but one that will stay that way.

Perfect Pivot Essential

The Delta fence pivots on a separate bracket sliding across the front of the table; it does not use the top of the table as a pivot for the edge of the fence. This patented construction insures not only smooth, effortless action, but it also means that the setting of the fence is always accurate.

Simplest Construction

Practical and accurate as the Delta fence is, this accuracy goes hand in hand with simplicity and consequent sturdiness. There are no overhanging links to wear and cause error in setting; no awkward arrangements for setting the fence to an angle. Simple and positive, there is no better fence made for any machine, regardless of size.

Built-In Handiness

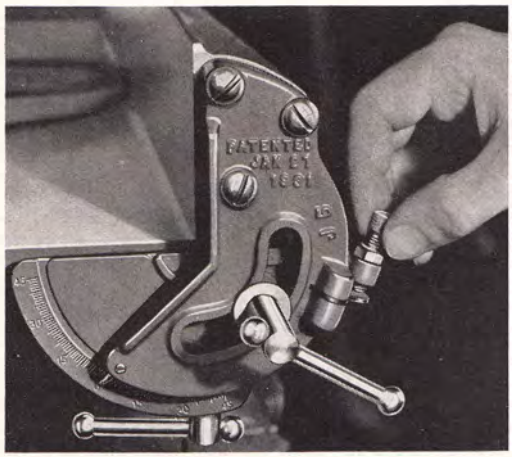
Notice particularly how each Delta adjusting mechanism is "built-in"—it is not a makeshift or an afterthought. Tilt the fence, both in and out, and see how smoothly it operates on the pivot bracket. Note how fast it returns to the square position after tilting. See how easily the fence is moved across the table, and how it aligns itself square automatically. Note how convenient the graduations and the adjustable index pin, which, once set, cannot accidentally be knocked out of adjustment.

No. 301	Ball Bearing Jointer, with three high-speed knives, 2¾" arbor pulley, 2 way tilting and graduated fence, wrench but without guard ..... Shipping Weight 50 lbs. Code Word JOIBL.	$24.50
No. 5500	5" dia. motor pulley; drives Jointer at correct speed. (½" bore).. Shipping Weight 1½ lbs. Code Word PULOH.	.75
No. 510	V-belt. Center to center distance 20¼", ½" wide, 38° angle..... Shipping Weight 8 oz. Code Word JOIVB.	1.00
No. 303	Aluminum guard with pin and spring..... Shipping Weight 1¼ lbs. Code Word JOIGU.	1.50
No. 302	Extra set of 3 high-speed knives 4" wide..... Shipping Weight 8 oz. Code Word JOIKI.	2.75

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Jointers Offer More Convenience

In addition to being carefully aligned and set at the factory, the cutter heads and knives are tested for balance and for alignment with the tables.



The setting of the fence square with the table is accomplished with the utmost ease on the Delta Jointer

Instant Adjustments

Next to the accuracy of the construction, the features of most importance in a jointer are the quickness and handiness with which adjustments are made, and the unvarying precision of these adjustments, once made. If these features are not present the jointer is robbed of half its value.

Automatic Alignment

The Delta fence is instantly moved to any point on the table without the use of a wrench, by loosening one ball-crank, and it automatically aligns itself square with the cutter head the moment the ball-crank is tightened.

Patented Pivot

The fence tilts on a *patented* pivot bracket which not only insures free, smooth action, but also positively eliminates variations in the setting of the stops, something that is a nuisance on machines where there is no positive pivot for the fence. On many machines, there is no assurance, once the fence is set square, that it will stay so, for as soon as the fence is tilted the design allows the stop to shift slightly, so that when the fence is again brought against the stop, it is out of square. This cannot happen with the Delta fence.

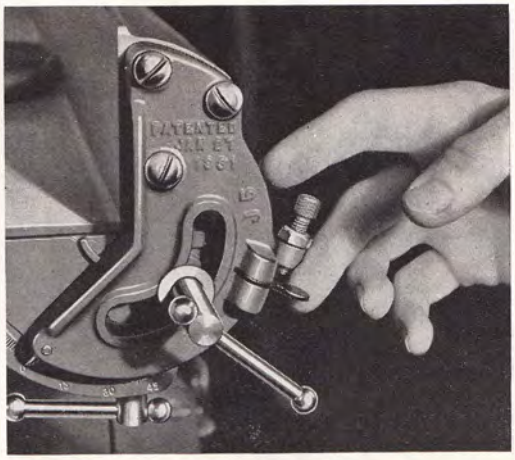
Patented Stop Link

The Delta fence tilts both in and out, thus making for the utmost possible convenience in beveling. In many cases it is essential to be able to tilt the fence in as well as out. When the fence is tilted inward, a flip of the finger takes the *patented* stop link out of the way; when the work is finished and the fence is to be set square again, an equally simple movement turns the link against the stop screw—and the fence is set absolutely square again.

Once Set — Always Set

Once the fence has been set square with the table, and the adjustable pointer has been set to the zero mark on the accurately graduated scale, neither stop nor pointer need ever be touched again. Nor can the pointer ever be accidentally moved from its setting, as it is well guarded from accidental knocks.

The tables are also carefully inspected to insure that they are in alignment and absolutely parallel. This insures complete absence of trouble due to spoiled work.



A flip of the finger takes the stop link out of the way when it is desired to tilt the fence to the left for beveling.

No Better Jointer Made—At Any Price

The Delta Jointer is a big machine—not a toy suitable only for the lightest work. It is 23″ long overall, by 9½″ wide and 7½″ high. Nothing has been skimped in design or construction in order to make a "low-priced" machine.

The front table is 5¼″ wide and carries an additional 3″ rabbeting arm at the left. The rear table is 4½″ wide, with a ¼″ by ¾″ rabbeting ledge, making it 5¼″ wide.

The *solid-steel cutter head* is equipped with *high-grade ball bearings* of the self-sealed type, fitted into metal cases which retain the lubricant and protect the bearings from dirt. With this type of bearing the alignment of the cutter head is assured at all times.

Tables are adjustable for any depth of cut up to ¼″, and both are adjusted by large, easily reached hand knobs.

The Delta guard covers the cutter head effectively and is INSTANTLY REMOVABLE, a feature of great importance, as it is absolutely necessary to remove the guard on any jointer when rabbeting. No bolts or nuts to loosen. Guard, when removed, hangs by its own spring.

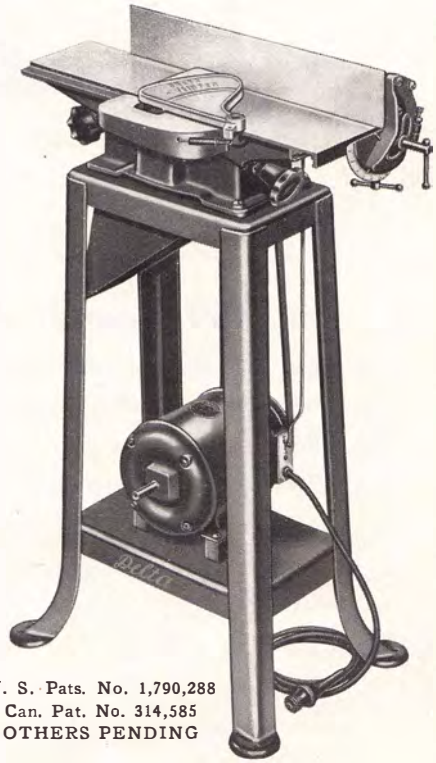
Fence tilts both in and out. To tilt to the left, a flip of the finger takes the stop link out of the way; an equally simple motion restores the fence to the square position after tilting. Tilting to the right is done in the usual manner. Stop mechanism adjusts fence to accuracy of within .001″. All controls are of the utmost convenience.

Wide rabbet arm integral with front table supports wide boards when rabbeting.

No. 296 Jointer Unit includes:

No. 301	Jointer	$24.50
No. 5500	5″ Dia. Motor Pulley (½″ bore)	.75
No. 510	V-Belt (20¼″ center to center) .	1.00
No. 304	Steel Stand (with Chute)	6.25
		$32.50

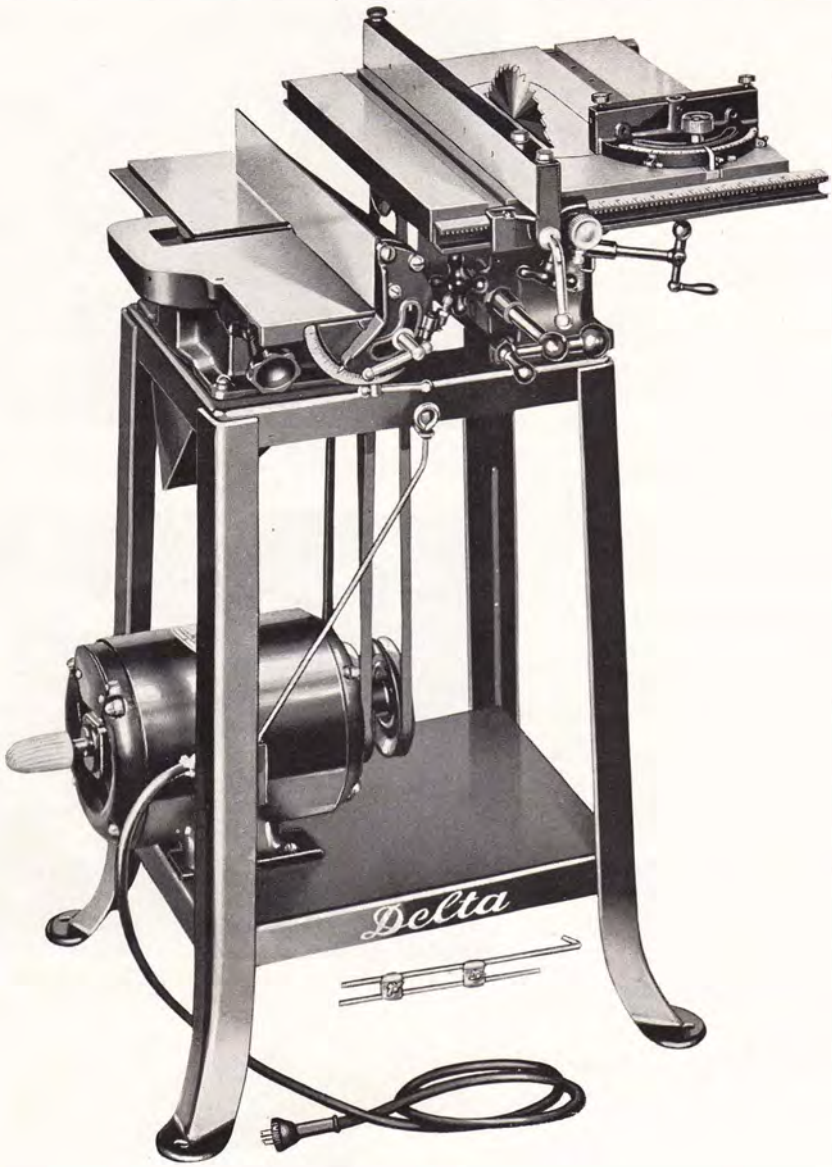
Shipping Weight 80 lbs. Code Word JOIUN.
Motor, Guard and Switch Rod not included.
See page 47 for Motors and Rods.



U. S. Pats. No. 1,790,288
Can. Pat. No. 314,585
OTHERS PENDING

[Please Order by Catalog Number to Avoid Mistakes and Delay]

The Most Popular Combination Unit



U. S. Patents
No. 1,697,669 No. 1,896,924
No. 1,790,288 No. 1,902,270
No. 1,910,651

U. S. Des. Patent
No. 89,818

Canadian Patent
No. 314,585

Other Patents Pending

No. 360 Combination Unit includes:

No. 860	8-inch Timken-Bearing Circular Saw	$32.85
No. 301	4-inch Ball-Bearing Jointer	24.50
No. 356	Steel stand with chute	7.50
No. 5500	V-pulleys (two) ¾" bore, unless otherwise specified	1.50
No. 560	V-belt for Saw (22¾" center to center)	1.00
No. 510	V-belt for Jointer	1.00
	Total	$68.35

Shipping Weight 165 lbs. Code Word COMBA.

For guards see pages 11 and 12. For motor and switch rod see page 54

Especially Adapted for Production Work

Here is a portable unit that is not only thoroughly practical, but which has many advantages for professional and production work. Many factories are discovering the varied uses to which this versatile unit may be put. In pattern shops, cabinet shops, novelty-furniture factories, contractor's and many other shops, this unit is demonstrating its economy and usefulness.

Unique in Many Respects

Eighty per cent of the common woodworking operations can be performed on this machine alone. When equipped with the Delta Table and Ripping Extensions it has a capacity equal to many factory machines costing many times its modest price. Ripping, cross-cutting, dadoing, moulding, pointing—all of the ordinary work of the professional shop, as well as the amateur's, is performed with ease and speed.

Portability

The jointer and saw comprising the unit are mounted on a very strong stand of heavy steel, welded into a homogeneous structure that makes it as strong and solid as though formed in one piece. No laminated-wood top, but steel throughout. The unit can be used anywhere in the shop that is most convenient, or loaded on a truck for transportation to an outside job.

No Interference

The machines are so designed and placed that there is no interference between them when in use. Either machine can be used separately, or both may be used together. It is the utmost in convenience to be able to rip a board and then to joint the edge without moving a step.

Reserve Power

Most circular saws are under-powered, and that is why we recommend the No. 820 ½ H.P. Repulsion-Induction Motor for this machine, or any similar ½ H.P. motor. While this costs somewhat more than a ⅓ H.P. motor, it will prove a profitable investment, since it provides the reserve power that enables the heaviest cuts to be taken with ease. A ⅓ H.P. motor will drive the unit, but should be used only for the lightest work.

Thoroughly Practical

One of the great conveniences of this unit for the smaller shop is the fact that it can instantly be moved anywhere to suit the work. It may be placed in the center of the shop to facilitate the handling of large pieces, or opposite a doorway to make the ripping of very long boards easy. Collecting boxes may be placed under the saw and jointer chutes to make disposal of the shavings easy.

Correct Height

Operators like this unit because both machines are at the proper height to insure ease of operation, convenience in handling and minimum fatigue.

Study the many advantages of this unit, and you will see that we have rather understated than overstated them.

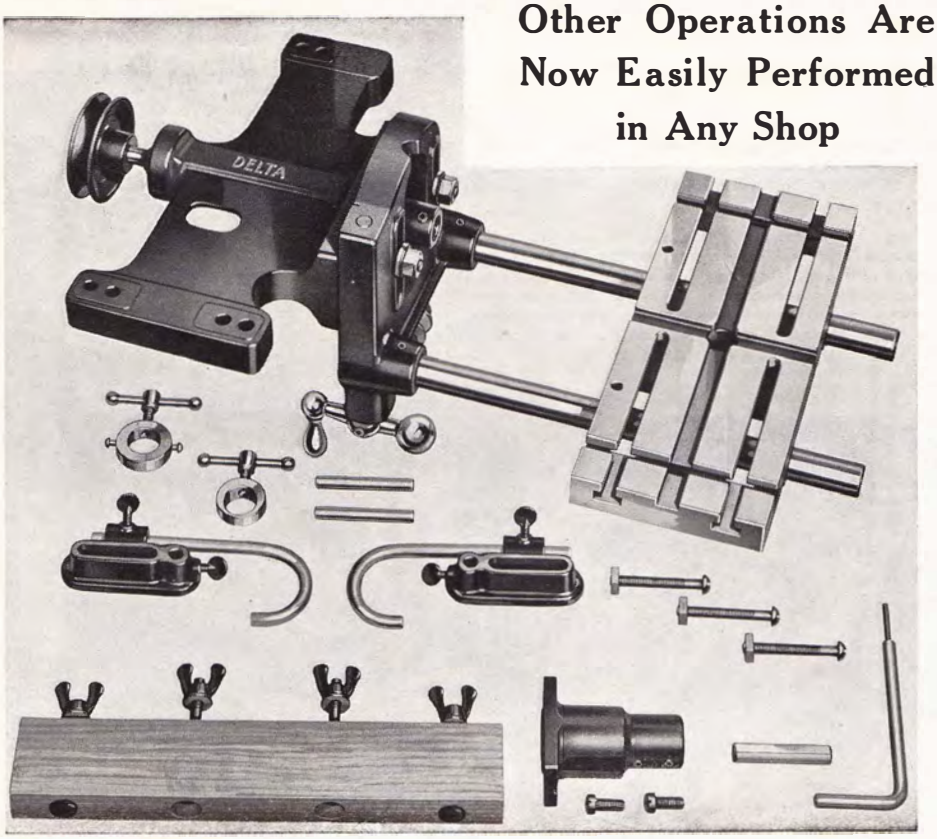
Patented Features

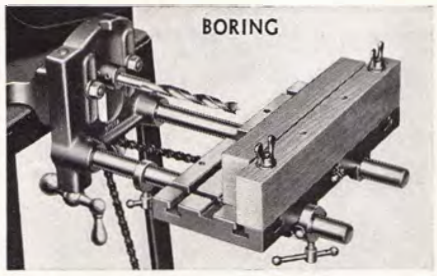
Only on Delta machines will you find the patented Delta trunnion construction, the unique Delta extension rip gage, the "Auto-Set" miter gage, and the combination of the simple, positive-acting Delta jointer fence with Automatic Stops for the 90-degree position. These are exclusive Delta developments and are thoroughly covered by patents already issued and pending.

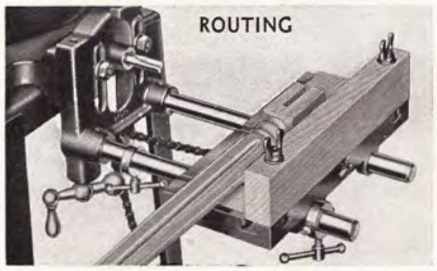
[Please Order by Catalog Number to Avoid Mistakes and Delay]

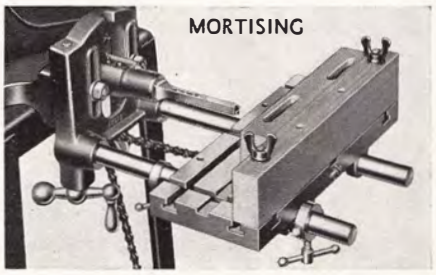
Delta Mortising and Routing Attachment

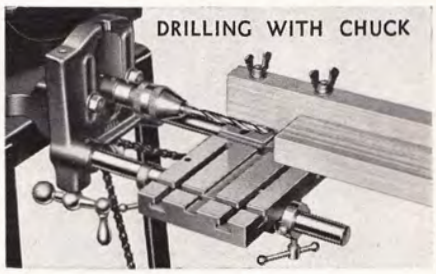
Difficult Boring, Routing, Mortising, Grooving, Counterboring, Inlaying and Many Other Operations Are Now Easily Performed in Any Shop

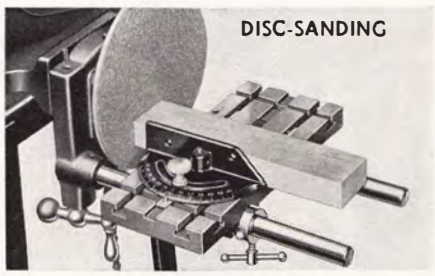


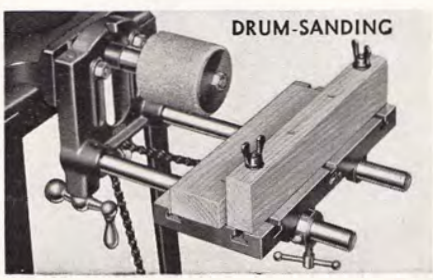












Completely Independent Ball-Bearing Spindle

Ball Bearings

Because of the heavy side thrusts encountered in routing work, the spindle of the mortiser is carried in high-grade Ball Bearings of the self-sealed type. Lubricated at the factory, they never need be attended to or oiled.

Ground Spindle

The Spindle is made of high-grade steel, accurately turned and ground. Has ½" bore for routing bits, drill bits, etc.

Fine Adjustment

The sliding bracket that carries the table is adjusted vertically by means of a ball crank and screw, which affords a very fine and accurate adjustment. Two bolts lock bracket firmly.

Very Convenient Table

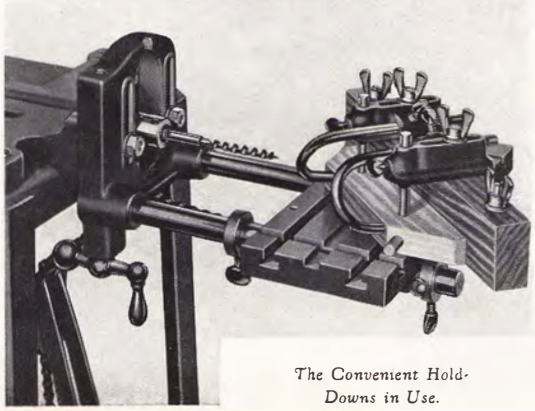
The Table measures 5" by 12", is heavily ribbed for strength and has good size T-slots, which permit quick removal, attachment or adjustment of the back fence at any angle. Special back fences or rests may be made of wood to suit special work. Table slides on two ⅞" dia. ground steel bars. Two stop collars stop table travel at any point. Grooves for No. 180 mitergage are provided in both directions.

Holddown Attachments

The Holddown Attachments are thoroughly worked out and very versatile. The curved arms can be used either in the table casting or in the sliding arms on the back rest. They serve both as stop rods or to hold the work against the rest. Vertical rods in sliding brackets hold the work down against the table. All parts are adjustable in any direction, and locked with special thumb nuts so there are no wrenches to look for.

Foot-Power Feed

The Foot Feed can quickly be attached to any Delta stand, or to the end of any lower shelf of a work bench. The addition of the foot feed leaves the hands free to guide the work on the machine. The lever can be folded upward when not in use, so it is not in the way.



The Convenient Hold-Downs in Use.

No. 458 Mortiser and Router only includes everything shown in the above picture $26.25
Ship. Wt. 45 lbs. Code Word MORBO.

No. 453 V-Belt for above. Center to center distance, 17⅜"..... $ 0.90
Ship. Wt. 1 lb. Code Word MORBL.

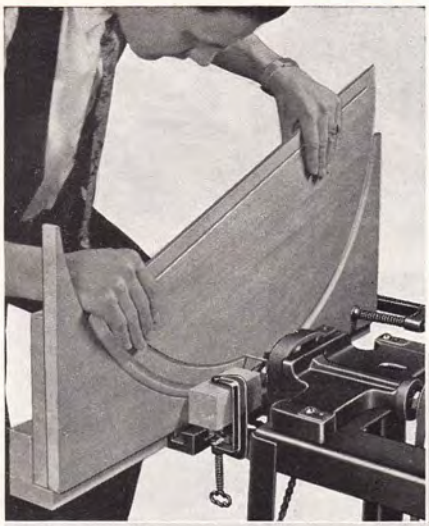
No. 583 V-Belt for circular saw, when Mortiser is used with Units No. 360 or 878 (No. 560 belt is then too short). Center to center distance 24" ..... $ 1.10
Ship. Wt. 8 oz. Code Word FORBL.

No. 461 Foot-Power Feed, fits any Delta Stand. $ 4.25
Ship. Wt. 8 lbs. Code Word MORFE.

See page 20 for bits and chisels.

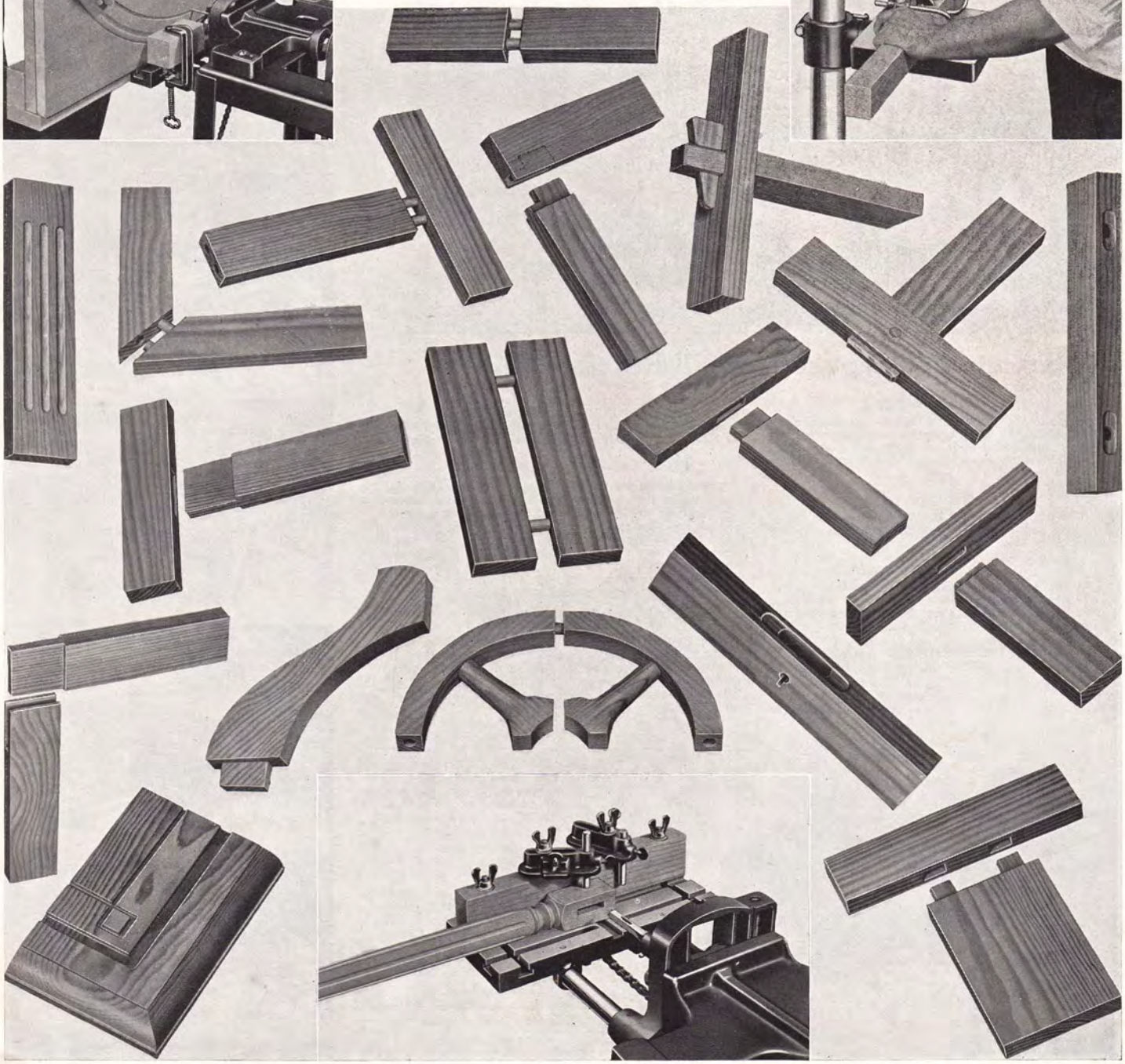
[Please Order by Catalog Number to Avoid Mistakes and Delay]

A Few Samples of Work Made With the Delta Mortising Attachments



Mortising, one of the most difficult and tedious of woodworking operations, is made absurdly easy by the Delta Mortising Attachments, both for circular saw and drill press. They enable the user to make difficult joints far more accurately and efficiently than they can be made by hand.

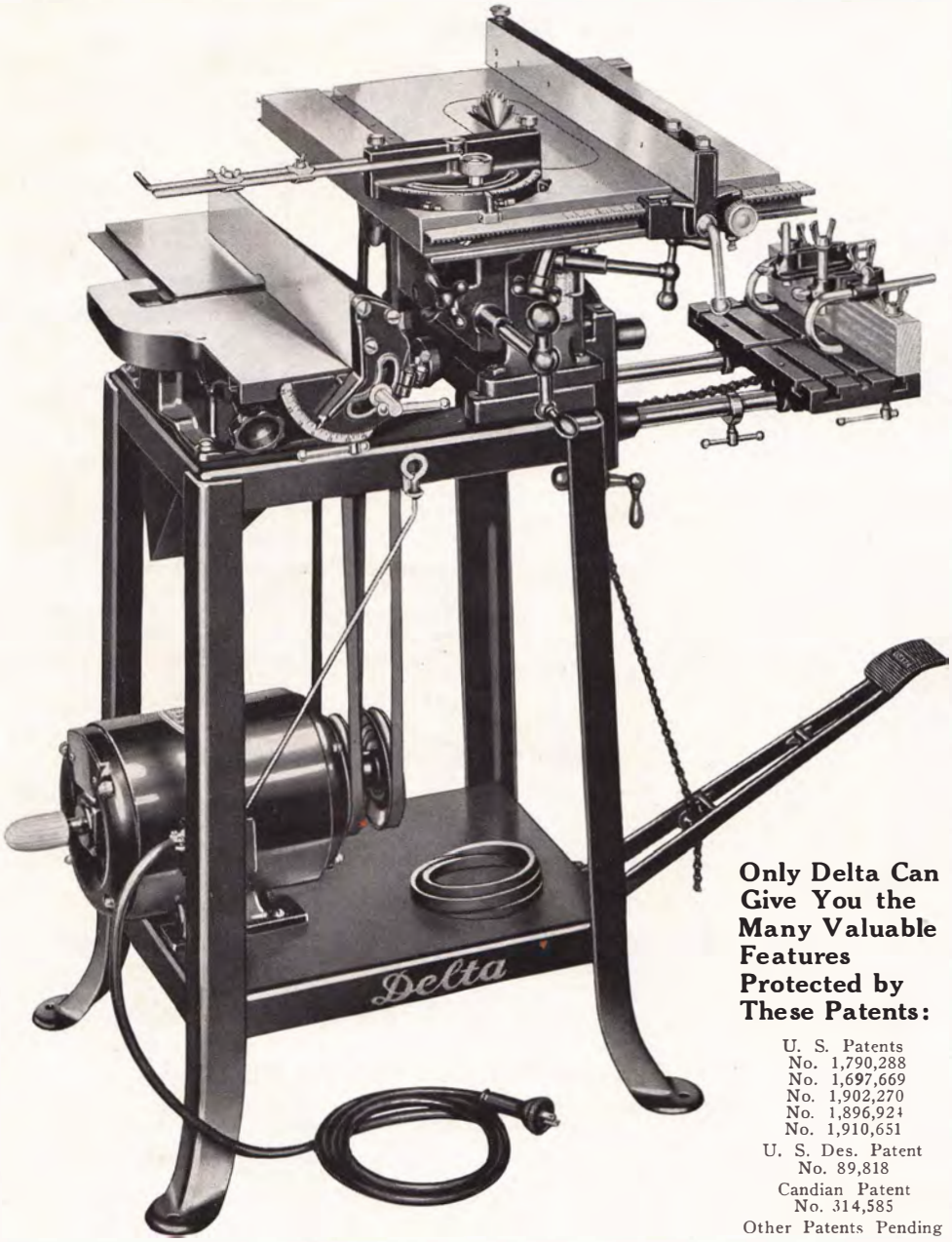
In addition to mortising, the No. 458 attachment for the circular saw will do routing, boring, drilling plug cutting, grooving, beading, counterboring, inlaying, countersinking—these are but a few of the operations that make this attachment invaluable to the circular-saw owner. All of them, of course, can also be done on Delta Drill Presses, as described elsewhere.



[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Circular-Saw--Jointer--Mortiser Unit

Affords Utmost in Convenient Operation



Only Delta Can Give You the Many Valuable Features Protected by These Patents:

U. S. Patents
No. 1,790,288
No. 1,697,669
No. 1,902,270
No. 1,896,924
No. 1,910,651
U. S. Des. Patent
No. 89,818
Candian Patent
No. 314,585
Other Patents Pending

When this machine was introduced it was hailed by thousands of woodworkers as the most practical combination ever offered in this field.

It was especially welcomed by those craftsmen and professional mechanics who had difficulty in making the accurate joints so essential in first-class joinery.

Many Operations Possible

In addition to the many operations made possible by the versatile Circular Saw-Jointer Combination, the Routing and Mortising Attachment permits many others.

Drum sanding, disk sanding, grinding, boring, buffing, drilling, routing, inlaying, veining, mortising and many other operations are made easy, which are difficult, if not impossible to do by any other method.

No Interference

The Circular Saw—most used machine in any workshop — is always ready for use, because the Mortiser has its own separate ball bearing spindle, driven by a separate belt. It is not a part of the saw arbor.

Either machine may instantly be disconnected by slipping off the belt. The Jointer also, as in the No. 360 unit, may either be used at the same time, or may be disconnected in the same simple manner. If desired the mortiser carriage with table can be removed or attached in less than one minute. Foot lever tilts upward entirely out of the way.

Practically Universal

All operations necessary in woodworking, with the single exception of lathe work, may be done on this versatile and practical unit, an extremely valuable feature where workshop space is at a premium, or where the utmost in portability is desired.

Completely Portable

Contractors and others whose work demands speed and accuracy, not only in the shop but out on the job, find this unit a problem solver. There is hardly any job that comes up in the course of the day's work that cannot be handled on this machine.

Many men who are now successfully operating their own businesses have started in with only this unit, and have found it to be the most practical ever designed, when its accuracy, power, flexibility, and portability are taken into consideration.

No. 668 **Combination Unit consists of the following:**

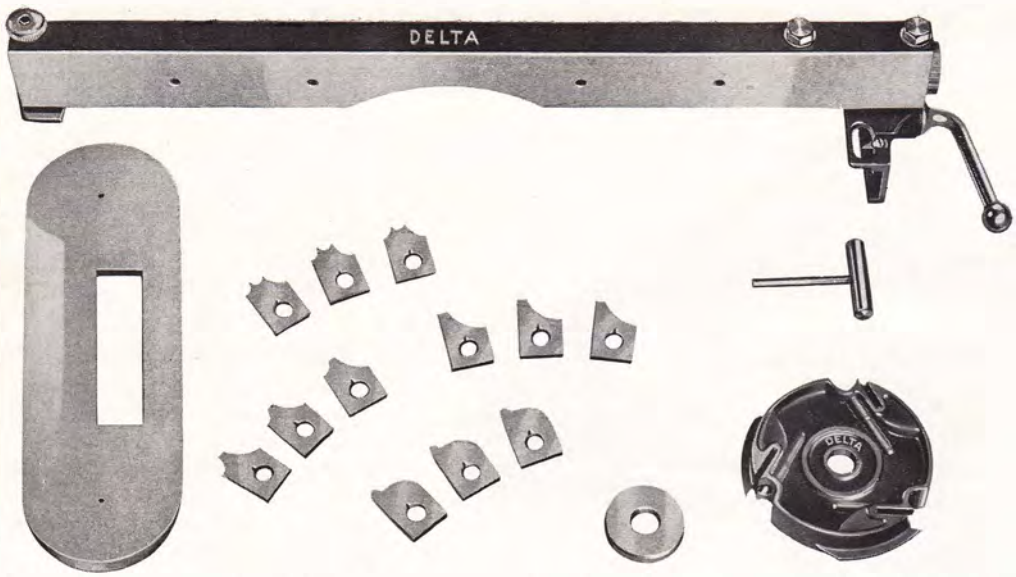
No. 860	Delta 8-inch Timken Bearing Circular Saw	$32.85
No. 301	4-inch Ball Bearing Jointer	24.50
No. 458	Mortising and Routing Attachment	26.25
No. 356	Steel Stand, with Chute	7.50
No. 5500	V-Pulleys, (two). (¾" Bore unless otherwise stated)	1.50
No. 583	V-Belt for Saw	1.10
No. 510	V-Belt for Jointer	1.00
No. 453	V-Belt for Mortiser	.90
No. 461	Foot Feed for Mortiser (Fits any Delta Stand)	4.25

Shipping Weight 210 lbs. Code Word MORUO.
For motors and switch rods, see page 54
For guards, see pages 11 and 12.

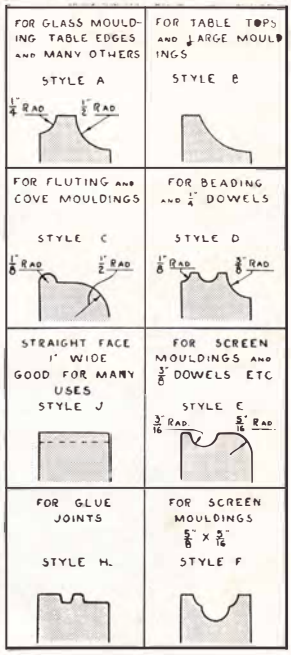
Complete $99.85

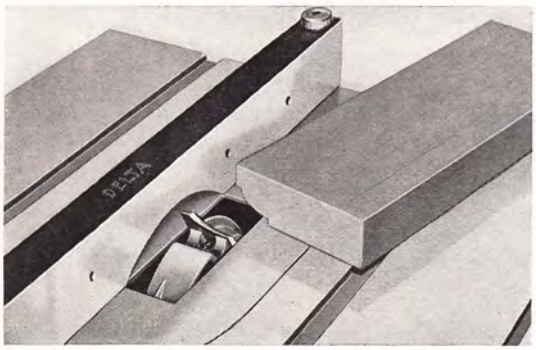
[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Moulding Cutter is Unique



The illustration above shows the famous Delta Moulding Cutter Set complete. Hundreds of moulding shapes can be made with this efficient attachment for the Delta Circular Saw with only the four sets of knives shown.





Above are the eight standard styles of Cutters for the Delta Moulding-Cutter Head. Styles A, B, C, and D are furnished with the Moulding-Cutter set shown in the photo. Cutters are placed in the head with the ease of changing a safety-razor blade.

Craftsmen seeking a practical, economical way of making the many beautiful moulding and decorative effects so widely in demand for modern furniture and cabinetmaking, and for the reproduction of antique pieces, have hailed the Delta Moulding Cutter as the greatest step forward in this respect of the last decade.

Nothing Else Like It

There have been moulding cutters on the market before, but they have been very expensive, clumsy in operation and very limited in scope, since each cutter would produce but one shape or a slight variation of that shape, or else they have been made of cheap steel that cannot hold an edge. With the Delta Moulding Cutter, on the other hand, well over 200 shapes have been produced with only four sets of knives, and the number is being added to every day!

How It Works!

The photo above shows the Delta Moulding Cutter mounted on the arbor of the Circular Saw, with its special fence that covers the portion of the knives not in use. The table is adjusted to the proper height and the fence adjusted to the cutter to suit the moulding shape to be cut. Note that the biggest part of the cutter is protected by the table, and that the portion above the table is well protected by the combination fence and guard. The fence can be used on either side of the cutter.

The Last Word In Simplicity

There is nothing complicated about the Delta Moulding Cutter or its operation. There is a strong, well-designed head, in which a set of three high-speed knives is locked by a simple, yet positive means, so that they are perfectly safe in operation. This head is used on the arbor of No. 860 or No. 318 Circular Saw. As the work is run past the knives a perfect moulding is produced in one pass of the work, or, if the cut is a deep one, in two or more passes. Nothing in the least complicated. Nothing to get out of order. Extremely safe in operation because only the part that does the actual cutting is exposed.

Over Ten Thousand Cuts Per Minute

With the saw arbor running at 3400 R.P.M., the three knives of the Moulding Cutter produce over 10,000 cuts per minute. This high speed produces smooth, satiny cuts that often need no subsequent finishing. And, due to the precision methods used in manufacturing the saw and the cutter, there is no chatter! Moulding cutters that produce chatter marks on the work are practically useless, because of the labor necessary to finish the mouldings.

You owe it to your pride of craftsmanship to investigate the many advantages of this remarkable tool!

No. 858 Moulding Cutter Set, to fit 5/8" arbor of No. 860 circular saw. Complete with four sets of high-speed cutters, styles A, B, C and D, oval table insert, micro-guide fence, collar, wrench and complete instructions **$15.75**
Shipping Weight 10 lbs. Code Word MOLDY.

No. 248 Moulding Cutter Set to fit arbor of No. 318 circular saw. Same as above, but with square table insert and cast guide fence..... **$13.75**
Shipping Weight 8 lbs. Code Word MOLDX.

No. 262 Moulding Cutter Set for other makes of circular saws with arbor up to 7/8" diameter. Price includes boring up to 1/2", 5/8", 3/4" or 7/8" diameter. Does not include table insert or guide fence. Specify bore wanted **$12.85**
Shipping Weight 6 lbs. Code Word MOUHJ.

No. 868 Moulding Cutter Fence, 20¾" long, complete as shown above ..... **$ 3.25**
Shipping Weight 6 lbs. Code Word NECFE.

No. 872 Moulding Cutter Insert only, to fit No. 860 circular saw ..... **$ .80**
Shipping Weight 1½ lbs. Code Word NECIO.

NOTE: Customers who already have a moulding cutter set to fit No. 318 saw need only purchase the fence and insert to adapt the set to fit the No. 860 saw.

Extra Sets of Moulding Cutters

These extra cutters come in matched sets of three blades each, and are made of the finest High-Speed Steel. They are priced low enough to be replaced like the blades of a safety razor, although they will cut thousands of feet of mouldings.

No. 250 Cutters. Style A. Fits any Delta Moulding Heads. Set of 3 (Matched). Code word MOULA. **$2.15**

No. 251 Same, but Style B. Code word MOULB **2.15**

No. 252 Same, but Style C. Code word MOULC **2.15**

No. 253 Same, but Style D. Code word MOULD **2.15**

No. 254 Same, but Style E. Code word MOULE **$2.15**

No. 255 Same, but Style F. Code word MOULF **2.15**

No. 257 Same but Style H. Code word MOULH **2.15**

No. 259 Same, but Style J. Code word MOULJ. **2.15**

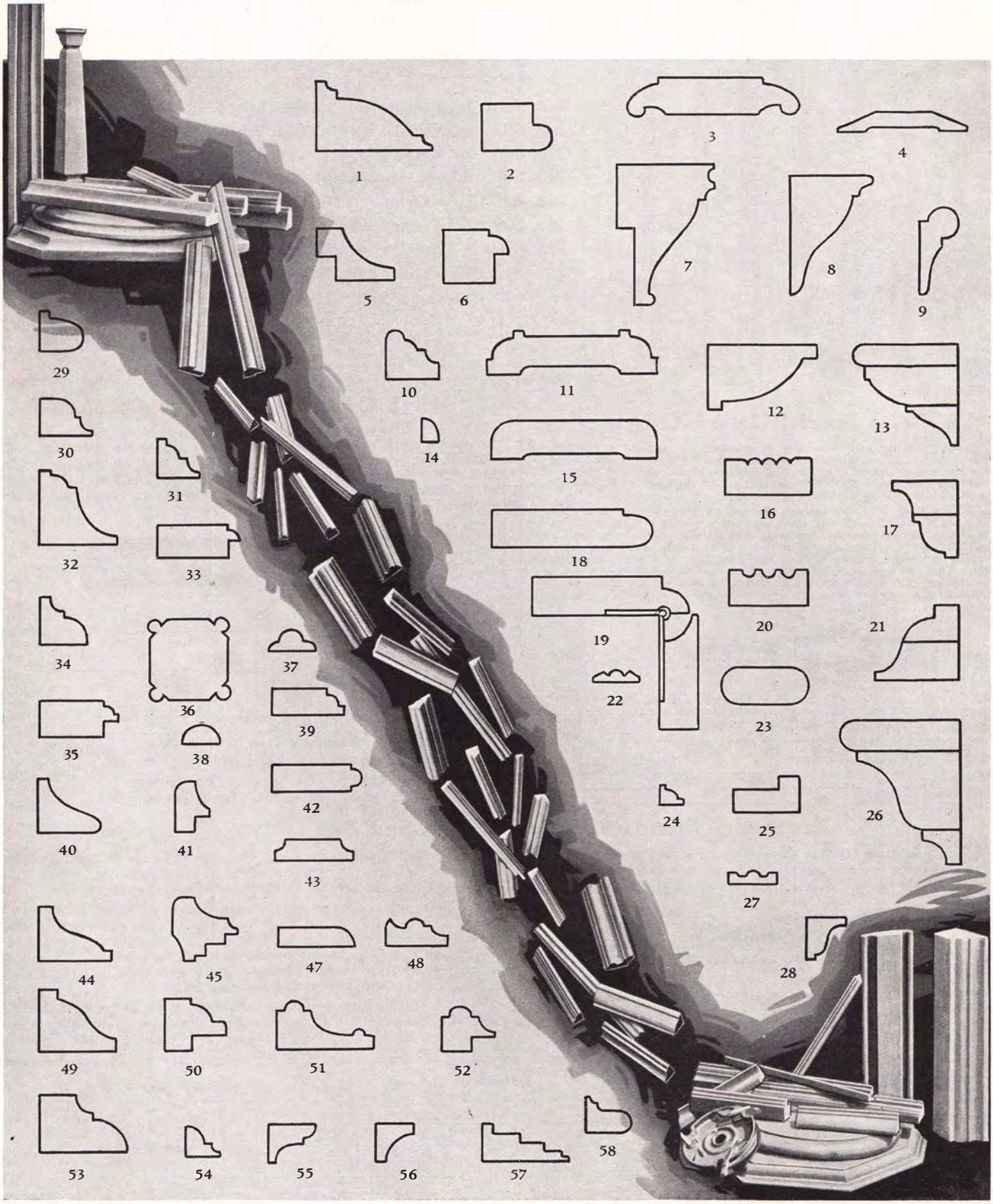
Shipping Weight 4 oz.

No. 260 Set of three Moulding Cutter Heads Only, to fit No. 318 and No. 860 Circular Saws, 5/8" bore. Does not include collar or wrench (each head $1.50)..... **$4.50**
(Add $1.20 to above price for boring 1/2", 3/4" or 7/8")
Shipping Weight 4 lbs. Code Word MOUHB.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Cutter Produces Hundreds of Mouldings

Below are Shown a Few Samples of the Hundreds of Shapes That Can Be Produced With a Delta Moulding Cutter



[Please Order by Catalog Number to Avoid Mistakes and Delay]

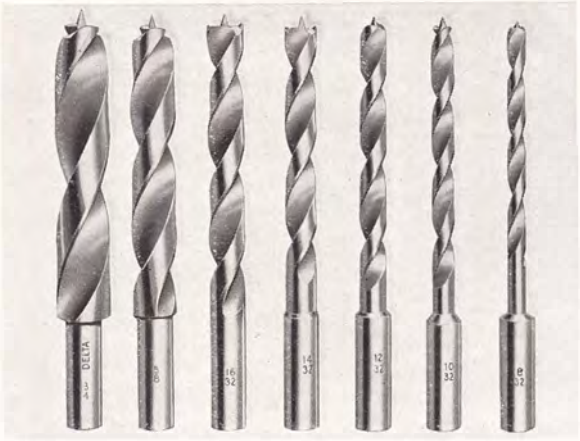
Mortiser and Drill Press Bits and Chisels

Machine Spur Bits

These Machine Bits have all ½" diameter shanks, and will fit any of the Delta mortiser spindles; also in the special spindle No. 624 as supplied for the new Delta Drill Press.

The Bits have a diamond point, and two outside cutting lips, which sever the fibers of the wood and produce clean holes without any chipping of the edges. They are valuable for deep drilling, and can also be used for boring out mortises, where a regular mortiser or router is not available.

The overall length is approximately 6¼", and they are made of carefully selected steel, properly hardened and tempered for keen cutting qualities and long life. They will be found to be of very high quality, and to give exceptionally long life.



No. 804	¼" Machine Spur Bit. Code Word SPURA.....	**$1.00**
No. 805	5/16" Machine Spur Bit. Code Word SPURB.....	**1.05**
No. 806	3/8" Machine Spur Bit. Code Word SPURC.....	**1.10**
No. 807	7/16" Machine Spur Bit. Code Word SPURD.....	**1.30**
No. 808	½" Machine Spur Bit. Code Word SPURE.....	**1.45**
No. 809	9/16" Machine Spur Bit. Code Word SUPRF.....	**1.65**
No. 810	5/8" Machine Spur Bit. Code Word SPURG.....	**1.85**
No. 812	¾" Machine Spur Bit. Code Word SPURK.....	**2.35**

Shipping Weight, each 10 oz.

No. 818 Complete Set of 8 Machine Spur Bits, from ¼" to ¾" **$11.50**

Shipping Weight 3 lbs. Code Word SPURL.

Delta Special Hollow Chisels

Made for the man who only occasionally has use for a mortising chisel these Hollow Chisels will be found an excellent value. They are the same sizes as the standard hollow chisels, and take the same bits and bushings. Not recommended for production work. Approximate Shipping Weight 10 oz. each.

Note that these chisels have the cutting portion made from high-grade HIGH-CARBON tool steel, carefully hardened and tempered, and that they should not be confused with chisels made from ordinary machine steel and merely carburized. Our chisels will stand up in regular workshop service without any crumbling at the cutting edges, since they are similar in cutting properties and in hardness and temper to regular production tools. The only difference is that the shank is made of a low-carbon steel, in order to produce a high-grade chisel at a low cost.

Special Hollow Chisels Only

Cat. No.	Size	Depth of Mortise	Code	Price Each
634	¼"x¼"	1⅞"	HOLOA	$1.35
636	⅜"x⅜"	2¾"	HOLOC	1.35
638	½"x½"	3¼"	HOLOD	1.35

High Grade Router Bits *(Shown Below)*

These Bits are invaluable for routing, carving, mortising and grooving work of all kinds. They are a high-grade product, and should not be confused with cheap tools that are poorly made and that will not produce good, clean work. The shank diameter of all Bits is ½", and they can be held in the mortiser spindle or in special drill press spindle No. 624.

Delta Router Bits

Cat. No.	Size	Shank Dia.	Lg. of Flute	Code	Price Each
474	¼"	½"x1½"	1¼"	ROUTA	$1.00
475	5/16"	½"x1½"	1¼"	ROUTB	1.00
476	⅜"	½"x1½"	1¼"	ROUTC	1.00
477	7/16"	½"x1½"	1¼"	ROUTD	1.00
478	½"	½"x1½"	1¼"	ROUTE	1.00

Shipping Weight 4 oz. each.

No. 480 Set of five Router Bits, sizes as above **$4.50**

Shipping Weight 2 lbs. Code Word ROUTO.

Standard Hollow Chisels and Bits

Delta Standard Hollow Chisels and Bits are made to produce mortises having square ends. Made of selected steel, they are precision tools throughout suitable for the highest class of work.

The Bit operates inside the chisel, and is held in the mortiser spindle by means of a special bushing, while the Hollow Chisel is held stationary by a special chisel holder.

The work is forced against the Chisel with the foot-power feed, and the Bit, being slightly ahead of the Chisel, drills a round hole in the wood, removing most of the stock. The Chisel, following the Bit, cuts the corners of the hole square. The Bit is withdrawn, the work fed sidewise about two-thirds the width of the Chisel, and the operation repeated.

The sizes given below will take care of 90 percent of the average cabinet-shop work. Outside diameter of bushings, ½" Shank of Chisel ⅝"x1½". Shipping Weight per set 1¼ lbs.

Details of Standard Chisel Only					Details of Bit					Details of Bushings			
Cat. No.	Size	Depth of Mortise	Code	Price Each	Cat. No.	Size	Dia. Shank	Code	Price Each	Cat. No.	Size Hole	Code	Price Each
504	¼"x¼"	1⅞"	CHISA	$3.95	514	¼"	3/16"	BITOA	$1.25	524	3/16"	BUSHA	$ .40
505	5/16"x5/16"	1⅞"	CHISB	3.95	515	5/16"	¼"	BITOB	1.25	525	¼"	BUSHB	.40
506	⅜"x⅜"	2¾"	CHISC	4.85	516	⅜"	19/64"	BITOC	1.25	526	19/64"	BUSHC	.40
508	½"x½"	3¼"	CHISE	5.50	518	½"	19/64"	BITOE	1.25	526	19/64"	BUSHC	.40

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta "Triple-Duty" Drill Press Offers You Six Tools in One!

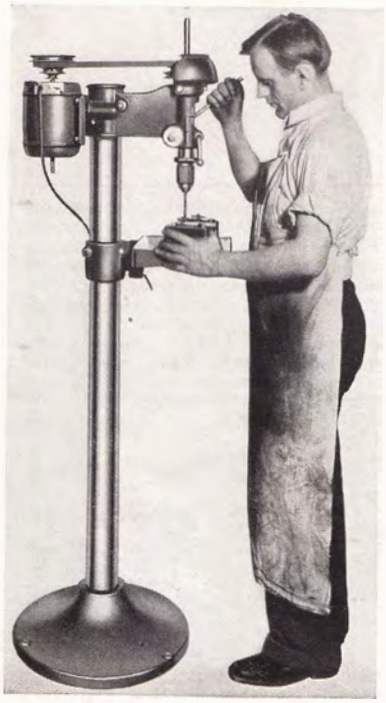
A Large Floor-Type Drill Press:- at the Price of a Small Bench Machine!

Visualize to yourself the dimensions of this husky machine. It stands 5 feet 8 inches high from floor to top of spindle—the height of an average man. The diameter of the column is 2¾", almost a full inch larger than that furnished with the average small bench drill press.

It is hard to convey by means of pictures and inadequate words the size and huskiness of this wonderful machine. Every craftsman who has ever seen this machine tells us that they have been astonished at the size and power of this tool; that they gained but a very slight idea of it from the catalog description. So you will have to get out your rule and just try to visualize for yourself what a real machine this drill press actually is.

High Capacity

The maximum distance from chuck to table, when the latter is completely lowered, is 43 inches—over three and a half feet! Think what this means in capacity, when handling large work on the table. It will drill to the center of a 14" circle, which gives plenty of capacity for practically every job that comes up in the ordinary shop. The table size is 10" by 10", which is ideal for average work. The diameter of the heavy quill is 1¾", which gives you some idea of the huskiness of the head construction.



"Delta-Grip" Chuck

The new "Delta-Grip" chuck (Patent Pending), which is fitted to the standard machine, will take drills up to $\frac{17}{32}$" (not merely ½") so that holes may be drilled for ½" bolts with assurance that the bolts will fit. This chuck offers, for the first time, accurate chuck equipment for the drill press at low cost, and hundreds of users have expressed their admiration for its qualities of strength and accuracy.

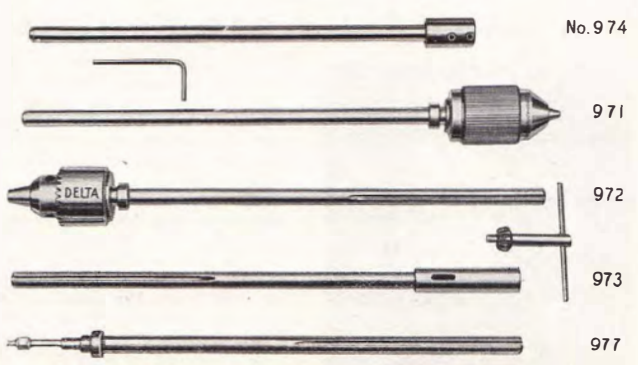
Free-Floating Spindle

The spindle of this drill press is of the typical Delta Free-Floating design, in which the entire pull of the belt is taken by the pulley bearing. Since none of the belt pull is taken by the spindle, free, sensitive operation together with absence of wear and freedom from alignment troubles is assured to the user. The double-keyway design of the spindle aids in balance at high speeds, and prevents "edging" in the pulley.

Ball-Bearing Design

High-grade self-sealed ball bearings are used throughout this drill press. The seals on these bearings prevent the escape of lubricant and the entrance of dirt and are one of the factors that make the Delta interchangeable spindles practical. The ball bearing used in the drive pulley is of extremely large size—over 2 inches in diameter, fitted in the center of the pulley to distribute the belt pull equally.

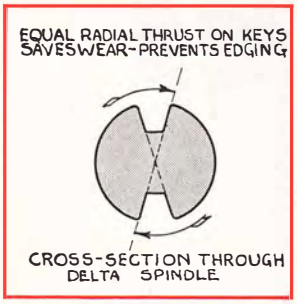
No. 970	Delta Triple-Duty Drill Press, with belt and motor pulley (½" bore) but without motor ..... Shipping Weight 145 lbs. Code Word NEWDP.	$32.85
No. 971	Standard spindle with Delta-Grip Chuck ..... Shipping Weight 3½ lbs. Code Word NESPA.	3.25
No. 972	Special Spindle with balanced Jacob's chuck ..... Shipping Weight 3½ lbs. Code Word NESPB.	7.75
No. 973	Special Spindle with No. 1 Morse taper hole ..... Shipping Weight 2 lbs. Code Word NESPC.	2.85
No. 974	Special Spindle with ½" hole for router bits ..... Shipping Weight 2½ lbs. Code Word NESPD.	2.00
No. 977	Special Spindle for $\frac{5}{16}$" hole shaper cutters ..... Shipping Weight 2 lbs. Code Word NESPF.	1.75



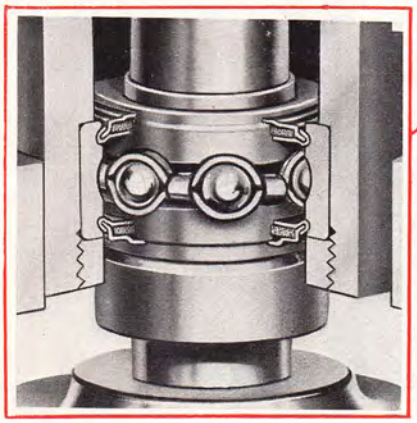
[Please Order by Catalog Number to Avoid Mistakes and Delay]

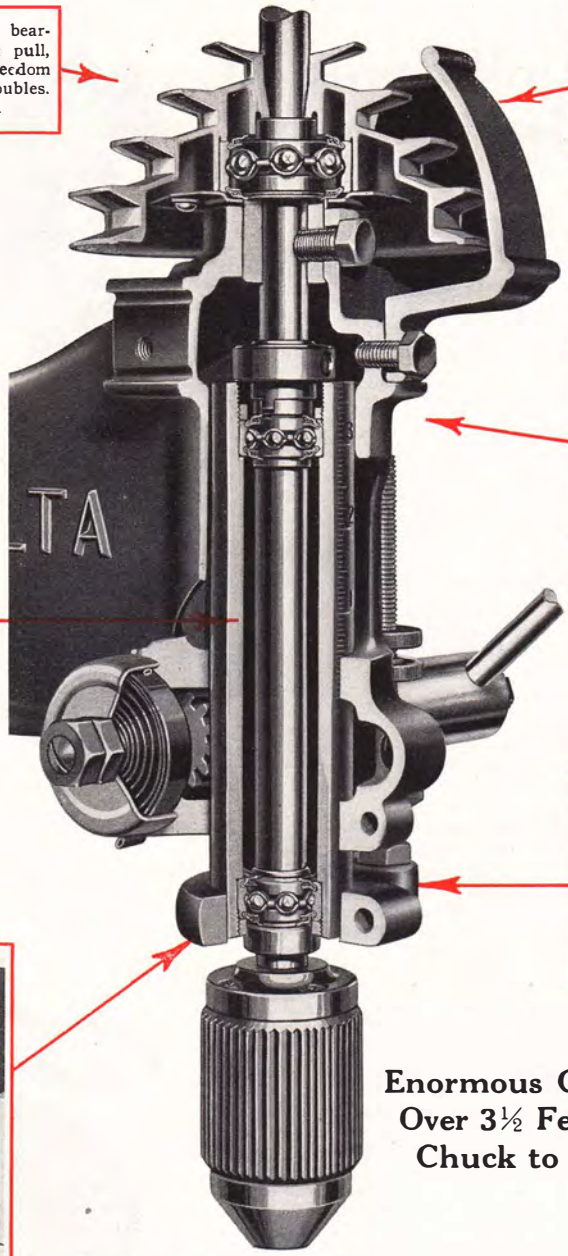
Never Before Has So Much Value Been Offered in a Drill Press—at Such a Low Price!

Entire pull of belt is taken by pulley bearing. Spindle does not take any of belt pull, thus assuring free, sensitive operation, freedom from wear and absence of alignment troubles. Double keys in pulley prevent "Edging".



Many types of spindles available, to make drill press exactly suited to type of work it is called upon to do either in wood or metal.





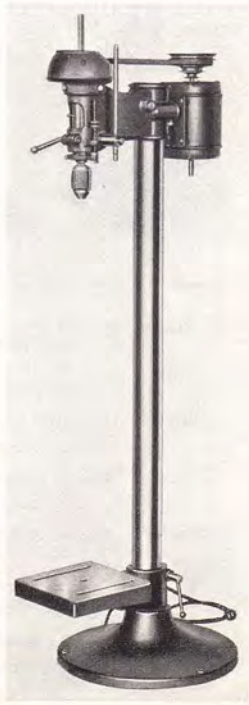
Extremely large pulley bearing—over 2" in diameter. Bearing is in center of pulley to distribute belt pull equally. Entire assembly quickly detachable. High-grade precision-type ball bearing with built-in seals on both sides to prevent entrance of dirt and escape of lubricant.

"Free-floating" spindle carried in two high-grade precision-type ball bearings of the double self-sealed type. Spindle is of precision-ground stock, and has two keyways, not only to prevent "edging" of drive-pulley keys, but also to insure balance at high speeds — an important point. Heavy, massive quill, with milled rack teeth. Built-in stop to prevent excess spindle travel.

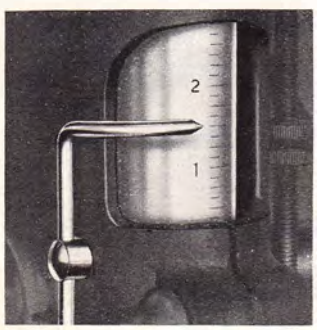
Spindles quickly interchangeable; entrance of dirt prevented by double seals on ball bearings even when spindles are completely withdrawn. Inner races of ball bearings positively driven on all types of spindles. Standard spindle furnished with "Delta-Grip" Keyless Chuck (see page 23) is regular equipment on every machine. Key-type chuck available if desired. Heavy clamp carries stop rod; interchangeable with chisel holder for mortising attachment.

Enormous Capacity; Over 3½ Feet from Chuck to Table

The picture at the right gives a good idea of the tremendous capacity of the Delta Drill Press. From chuck to table, when the table is dropped to the lowest point, is 43"—over three and a half feet. Gives user the advantages of a radial drill press also, as head can be swung to one side or lowered to suit odd-shaped and low, heavy work.

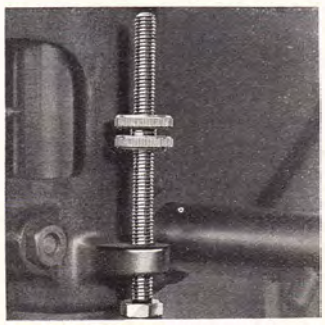


Graduated Quill and Positive Stop Aid Depth Drilling



The quill is graduated in inches and sixteenths for convenience in drilling and routing to depth. An adjustable pointer is provided which can instantly be set to any graduation without the necessity of loosening any screws. A touch of the finger sets the pointer, yet it is firmly held and positively will not slip.

The graduations on the quill and the adjustable pointer are supplemented by a positive depth stop, consisting of a threaded rod carried by a sturdy casting, and provided with two knurled stop nuts. When the first hole of a series has been drilled to depth with the assistance of the graduations, the stop nuts may be set to insure that all the remaining holes will be of exactly the same depth. Stop rod may be transferred to mortising attachment.



[Please Order by Catalog Number to Avoid Mistakes and Delay]

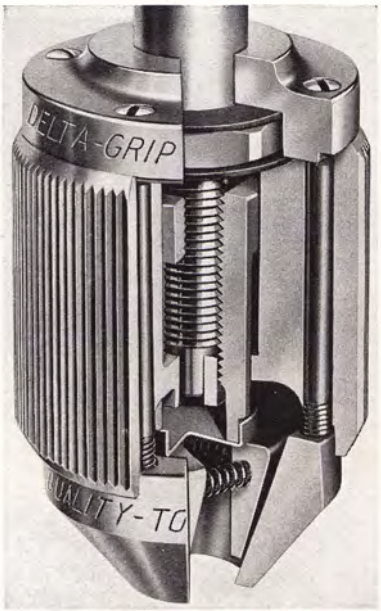
No Other Low-Priced Drill Press Can Offer You All These Quality Features

New "Delta-Grip" Chuck Offers Accuracy at Low Cost (U. S. Pat. No. 1,930,022)

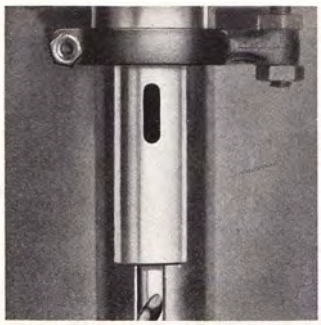
The "Delta-Grip" chuck (U. S. Patent No. 1,930 022) which is standard equipment on the Delta 14-inch Drill Press, is an entirely new departure. In the ordinary chuck furnished with low-price drill presses and which is mounted on a threaded spindle, there is but one bearing—the thread itself, and this is very difficult to keep accurate and true. Not only that, but, as larger drills are used, the chuck must be run out to the end of the thread, thus increasing the overhang and making accurate work still more difficult.

In the new Delta-Grip chuck all the threaded part of the spindle has to do is to actuate the sleeve that moves the jaws. The body of the chuck itself is mounted on two widely separated bearings, which are accurately ground and in perfect alignment. This means that the accuracy of the chuck is not impaired by slight inaccuracies in the thread, even if these are present. To make assurance doubly sure, however, the threads in Delta chucks are made to the closest possible limits.

All parts of the chuck that are likely to receive unusual wear are of steel, carefully hardened to insure the longest possible life. Modern design and manufacturing methods have been taken full advantage of to insure that this chuck, while low in price will give complete satisfaction to the user. Experienced mechanics have marvelled at the precision and accuracy of this chuck, even when tested against chucks costing three times as much.

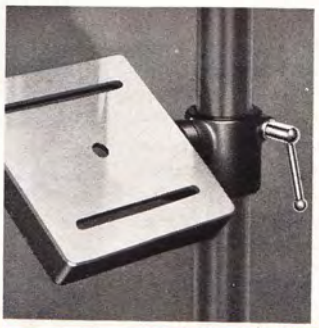


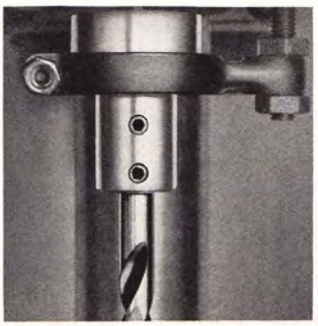
Cut-away view of the "Delta-Grip" chuck, showing the unique interior construction which enables a high-grade chuck to be furnished at a remarkably low price.



Production Spindles . . .

A threaded spindle for shaper cutters with $\frac{5}{8}$" hole, a spindle with a Jacob's chuck for those who prefer the key type of chuck and one with a No. 1 Morse taper hole for the production shop are amongst the interchangeable spindles available for the No. 970 Drill Press. The Morse-taper hole spindle is especially valuable in the shop where quick changing of drills and attachments is essential.





Tilting Table . . .

Heavy massive table is 10" by 10" in size, slotted for holding of fixtures, work, etc. It can be tilted through 360 degrees and positively located and locked at level and vertical positions. Surface is ground to a high degree of accuracy, and table is carried on a sturdy bracket, locked to the column by a large ball-end lever.

Router Spindles . . .

A feature pioneered by Delta is the interchangeable spindles. This has many advantages. When using router bits and mortising chisels, for example, it is of great value to have a short "overhang" under the quill, in order to provide the utmost stiffness for the tool and to prevent chatter. The special Delta router spindle, which holds all types of bits with ½" shanks, permits a very short overhang, and consequently better and more accurate work.

NEW! Delta Precision Tapping Attachment

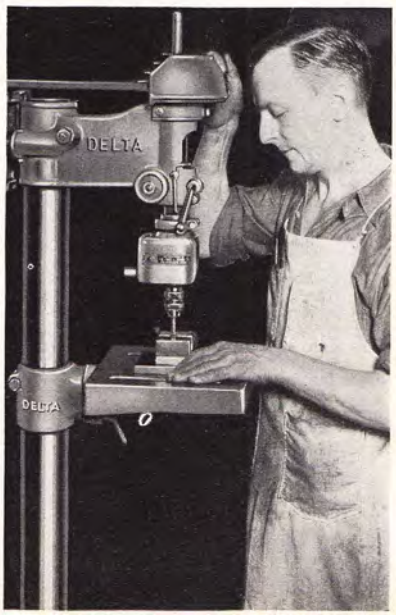
The new Delta No. 990 Tapping Attachment was developed for use in our own shop, and has been tested day after day, month after month, tapping thousands of holes in all kinds of materials with perfect satisfaction.

It is a full ball-bearing model, (six ball bearings used) even the idler gear being mounted on high-grade ball bearings. It is fitted with self-adjusting Textolite clutches and is exceptionally sensitive in action. Reverse is double-speed and double-friction and gears are all of Chrome-Nickel steel, hardened and ground. The capacity is from No. 2-56 to ¼" in steel.

The housing is an exceptionally clean design, which permits a clear view of the work, and a unique feature of the Delta design is that the housing clamps directly to the quill.

The ordinary tapping attachment must be used in a Morse taper spindle, which not only means a springy arm to keep the attachment from revolving, but also means a long overhang, with its resultant "wobbling" of the tap and danger of tap breakage. The Delta attachment, being fastened directly to the quill, needs no arm, is compact and stiff, and insures absolutely minimum tap breakage, even on bottom tapping. Built-in depth stop enables tap to be stopped at any depth.

The chuck is a high-grade Jacobs Double-Grip Chuck, which holds the square of the tap as well as the shank.



No. 990 Delta Tapping Attachment with spindle and Jacobs chuck, to clamp to quill of No. 970 Delta Drill Press only . . **$42.50**

Shipping Weight 9 lbs. Code Word NEWTA.

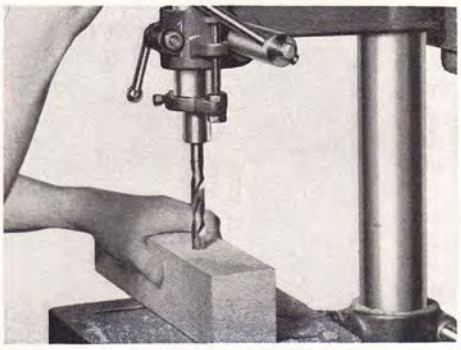
Write for bulletin No. TA-50 for complete details of this attachment.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

"Complete Workshop All by Itself"

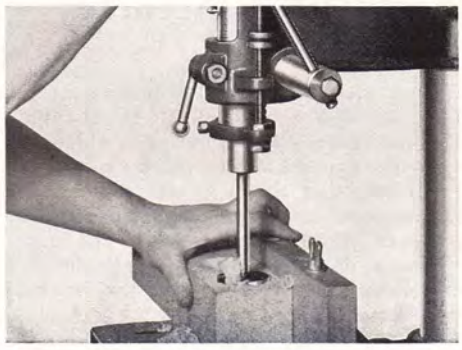
Says Enthusiastic User of Delta Drill Press

Drilling



Hundreds of hours of use in manufacturing plants have proved its value as a production machine, equal to drill presses costing many times as much.

Boring

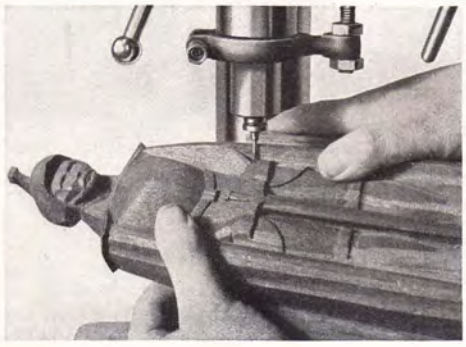


Heavy boring in wood with multi-spur bits, up to 3" in diameter, is just as easy as boring with regular spur bits. The high speed makes boring fast.

Routing

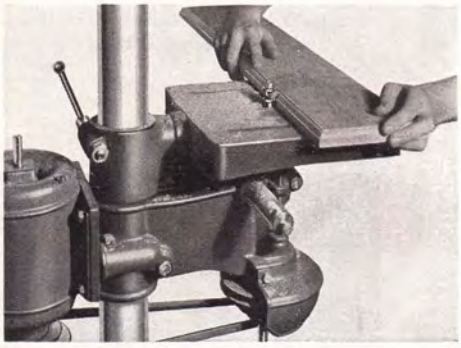
Routing of all kinds, line or background, is done with ease and speed. Outline routing, using a jig, enables the reproduction of patterns with fidelity.

Carving



Carving in the round can be done also, using small burrs and carving bits. Saves hours of time and much patient labor for the carver.

Shaping



Shaping, too, is now one of the drill press's major jobs. This photo shows the drill press used without auxiliary table or shaper fence.

The shaper cutters and other shaping accessories now offered for the Delta Triple-Duty Drill Press have enormously increased the utility of this versatile tool. In the illustration above, the head of the drill press is shown reversed, for use when shaping in his position may be more convenient. For ninety-nine per cent of shaping work, however, it will be found quite unnecessary to reverse the head, as the work can be done quite as conveniently with the head in the regular position, and shaping thus does not interfere with the normal use of the drill press.

In the illustration above, the shaping is shown as being done on the regular table, and without the fence, running the work against the depth collar. This can be done quite well on the Delta Drill Press, but, where any amount of shaping work is done, the auxiliary shaper table and the ingenious Delta Shaper Fence should be purchased, as they will return their modest cost many times over in utility and convenience.

And Dozens of other Uses

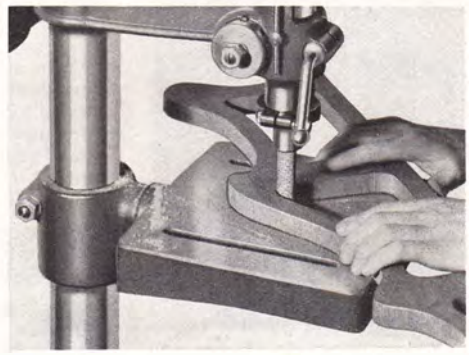
"Truly the Delta Drill Press, with attachments, is a complete home workshop in itself," says Mr. W. F. Estes, of Dallas Texas, in describing a stand he has made. And this is typical of the comments we receive every day on both the Delta drill presses, from users in home shops, manufacturing shops, garages—everywhere that a drill press is used.

We ourselves cannot say anything more about this machine than has already been said by enthusiastic users like Mr. Estes. We know that we have put into it the best design and workmanship that can be obtained in this field; we know that it represents more value for the money than has ever before been offered in a drill press. but it is the verdict of the user that determines the value of a machine.

And we have no hesitation whatever in saying of the Delta Drill Press, as of every other Delta tool—"Ask the man who owns one."

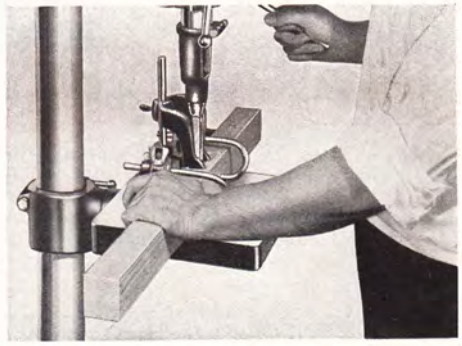
Surface Grinding

Sanding



Sanding the edges of scroll-sawed and band-sawed work is now easy and speedy. The sanding drum with a garnet sleeve rapidly cuts the edge to smoothness.

Mortising



Mortising becomes a revelation when done on the modern Delta Drill Press Mortising Attachment. Heavy column and sturdy table make mortising an accurate job.

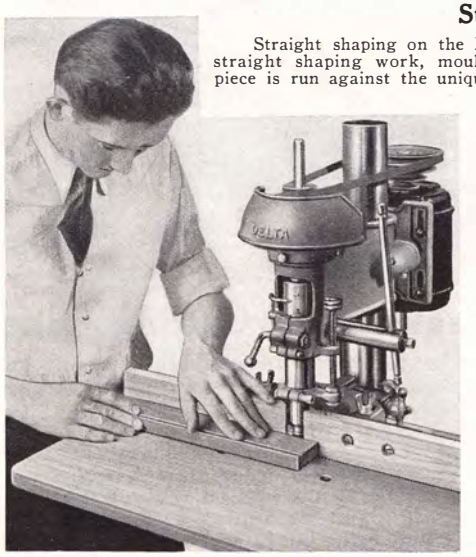
Mortising, too, is now made a pleasure on the drill press by the use of the Mortising Attachment. Due to the use of the extremely heavy column, there is not the slightest possibility of spring when using the heavier mortising chisels, and use of the ½" chisel —the heaviest the ordinary shop ever needs to use— will be found to be a revelation. The stiff, husky table design of the Delta Drill Press also aids in making mortising an operation of real precision and speed.

Another feature of the Delta Drill press is the use of the No. 924 router spindle for use with the mortising attachment. This reduces the overhang of the attachment, bringing it right up under the quill as closely as possible, thus adding further to the accuracy of the mortising operation.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Drill-Press Shaping Made Really Practical

High-Grade Cutters and Accessories Permit Many More Operations



The shaper table shown above is described at the lower right. Price will be found on page 26.

Straight Shaping

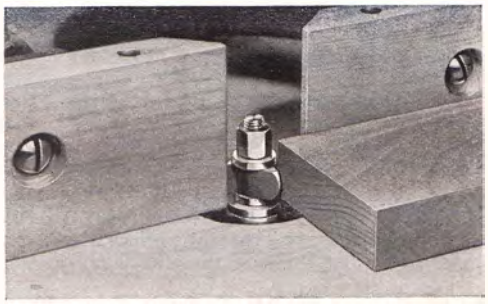
Straight shaping on the No. 970 Drill Press is simple, fast and easy. For straight shaping work, mouldings for picture frames and similar work, the piece is run against the unique Delta Shaper Fence. The design of this fence, which is the result of much study and experiment, assures complete safety to the operator, as well as complete flexibility in adjustment. Even at the highest standard speed—5,000 R.P.M.—the special Delta cutters produce clean-cut, smooth work. Spindle is easily speeded up to 8,000 R.P.M. by a simple change in pulleys.

Curved Work

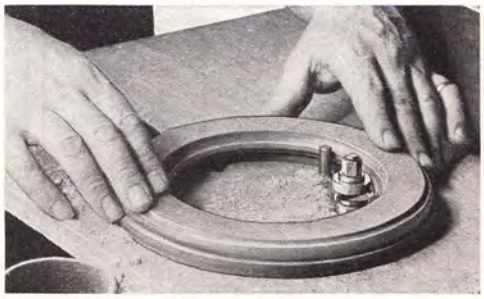
Curved and fancy shaper work is just as easy and as safe as straight work. Small circular and scroll or band-sawed picture or photo frames, curved arms and legs, curved mouldings, bases or pediments; all varieties of curved work are finished easily and smoothly. The cutters will shape inside corners as small as $\frac{9}{32}$" radius, which permits the moulding of a wide variety of work. Note that, while the photos on this page show the guard removed for the sake of clearness, the use of the new Delta Shaper Guard makes the shaping of curved work absolutely safe.

Irregular Work

Irregular-shaped frames, too, and other irregular work, provided there are no corners smaller than $\frac{9}{32}$" radius, can be done on the drill press with the same facility as circular work.



Plain Moulding



Circular Work

Irregular Work

Square Frames

Plain, Fancy or Carved Mouldings; Square, Round or Oval-Shaped Frames; You Can Make Them on the Drill Press

There are hundreds of jobs made in the workshop that would be improved by the addition of a moulded edge; by a few flutes or reeds; by just that touch of add artistry that most home-made products lack, and this is where the Delta Drill Press and the Delta shaper cutters prove their added value.

There is practically no job of shaping or moulding that cannot be handled on this machine with the same facility as on a regular shaper. Frames of any size; square, round, oval or irregular in shape can be made in infinite variety, and moulded or shaped both inside and out—a job that can be done on no other machine except the shaper.

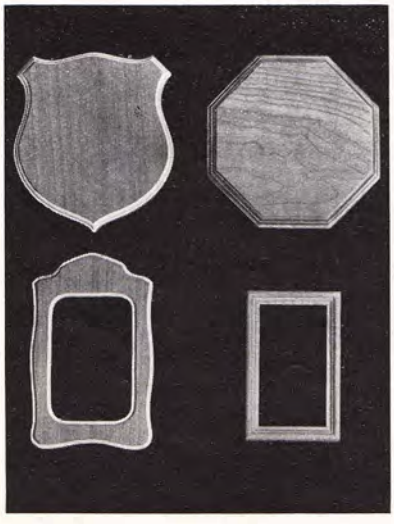
Even "carved" mouldings, one or two samples of which are shown below, become a simple job with the Delta shaper equipment and a few simple jigs.

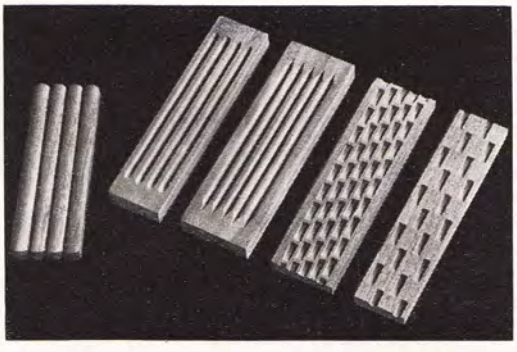
Drill-Press Head Reversible if Desired

For practically all shaper work it is unnecessary to reverse the head of the Delta No. 970 Drill Press. As may be seen from the illustration above, shaping is invariably done on the front side of the table, and there is no need to reverse the head. For greater convenience, the head of the drill press may be lowered on the column to bring the table to convenient working height. Then, when the shaping job is over, the head is merely lifted to the top of the column again and the drill press is ready for its regular work of drilling or boring.

Adjustment of the cutters to the work is effected quickly and easily by merely moving the spindle up or down by the regular feed handle, thus giving a very delicate adjustment.

It will be noticed that in all the pictures on this page showing circular or curved work the shaper guard has been omitted. This is merely for the sake of clearness in showing the operations, as a careful operator will always use a guard.





Above are but a few of the many varieties of work that can be done with Delta shaping equipment on the No. 970 Drill Press. It is not possible to show all the shapes that can be made with these cutters, but see page 27.

Practical Shaper Table

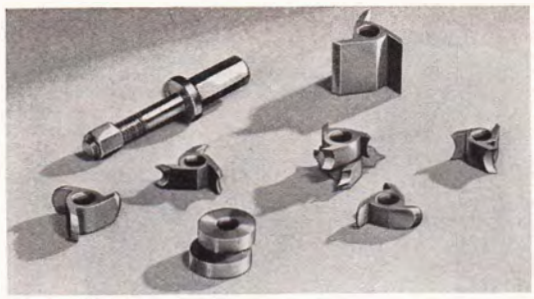
The craftsman who does a lot of shaper work will find the Delta No. 984 Shaper Table to be of great convenience, especially if he is handling work of any size. It is made of 5-ply wood, ¾" thick, and is 18" by 24" in size, thus affording a very large working surface; one that affords a maximum of support to large work, and that makes the handling of any piece a pleasure. It is well-finished and comes complete with bolts and starting pin. It is drilled to suit the Delta Shaper Guard and Fence, but can be used on other tables also.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

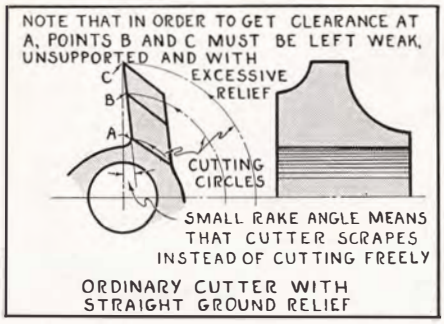
Delta Cutters Designed for Real Work:
Made of High-Grade Chrome-Vanadium Tool Steel

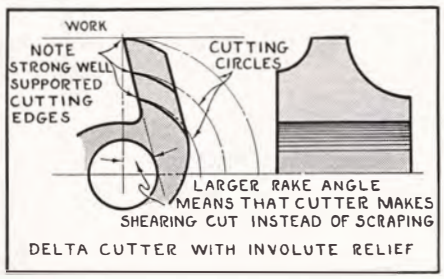
Delta shaper cutters are not merely machine steel, case hardened, as are some cutters on the market. Machine-steel cutters may not stand up under long use, as the edges begin to crumble and the corners to chip off under the strain of long use. Not only that, but, as soon as they require resharpening the first grinding may go down under the thin casehardened layer and the cutter is then rendered useless.

Delta cutters, on the other hand, are made of a high-grade chrome vanadium steel, which combines effectively the toughness of vanadium steel with the deep-hardening qualities of steels containing chromium. They are hardened and tempered in oil, as are all good tools, so that they will not only stand up under sever service, but can also be resharpened without using their cutting qualities. They are resharpened merely by grinding across the face of the cutting edge on a straight, flat grinding wheel, or a cup wheel, if one is available.



Involute Relief Insures Free Cutting and Prevents Weakness at Cutting Edge



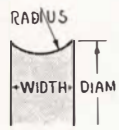
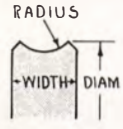
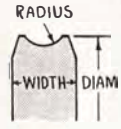
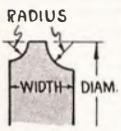


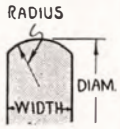
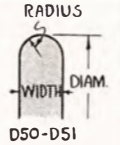
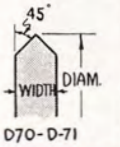
These two drawings show graphically why Delta cutter design is superior to that of ordinary cutters.

One of the great advantages of the Delta Cutter design is the involute relief of the cutting edge, shown at the left. This design, which requires special machinery to produce, is important because it insures adequate clearance at the cutting edge in order to get a true shaving cut, **without at the same time weakening the cutting edge and permitting it to chip and crumble under the cut.**

Contrast this with the manner in which the ordinary cutter is relieved, as shown in the outer drawing. Being merely ground straight across, the outer cutting edges are left weak and unsupported because this is necessary in order to prodvide clearance on the inner cutting edges. Also, such cutters usually have a very small rake angle, which means that they scrape instead of shaving the wood as a wood-cutting tool should do.

New Delta Shaper Cutters

	No.	Diam.	Width	Radius
 D1-D4	D-1	950	.177	.125
	D-2	950	.264	.187
	D-3	950	.354	.250
	D-4	950	.442	.312
 D20-D21	D-20	994	.221	.125
	D-21	1 03	442	.250
 D40-D41	D-40	1.09	.303	.093
	D-41	1.16	.388	.125
D60-D63	D-60	.950	.125	
	D-61	.950	.156	
	D-62	.950	.187	
	D-63	.950	.250	
 D-80	D-80	1.25	.442	1/8-3/16

	No.	Diam.	Width	Radius
 D10-D13	D-10	1.02	.177	.125
	D-11	1.06	.264	.187
	D-12	1.09	.354	.250
	D-13	1.13	.442	.312
D30-D31	D-30	1.18	.282	.125
	D-31	1.24	.344	.156
 D50-D51	D-50	1.13	.194	.093
	D-51	1.20	.260	.125
 D70-D-71	D-70	1.12	.177	
	D-71	1.21	.282	

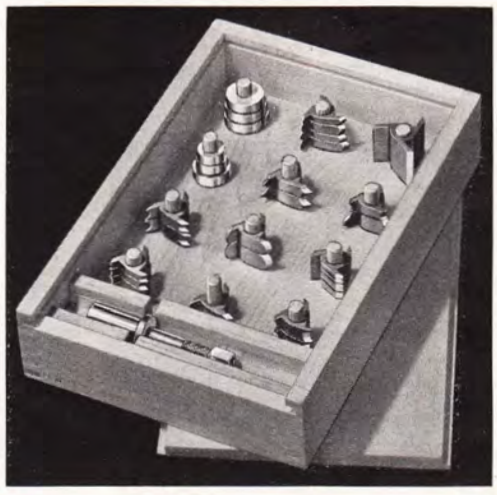
Price of all Cutters listed above, each.. $ .55
(All cutters have 5/16" hole)

D-69 Blank cutter, similar to above, but 1¼" diameter, 1" wide.
Each ..... .75

No. 978 Adapter for 5/16" hole cutters. Fits No. 624 and 974 drill-press spindles. With nut. Each..... .80
Shipping Weight 8 oz. Code Word NESSA.

Careful Design Enables Cutters to be Combined

Delta cutters are made to very close limits, and, since the base diameters of all cutters is exactly the same, they can be combined as shown on page 27 for various cuts, two or more cutters being used on the spindle at the same time, in order to make a moulding in one cut. Note the illustration on page 27.



No. 980 Complete Set of Cutters listed above, including D-69 blank cutter. 24 cutters, 5/16" hole, with No. 978 adapter, No. 979 depth collars, packed as shown..... $14.85
Shipping Weight 2 lbs. Code Word NESSC.

No. 979 Set of six depth collars, 5/16" hole.. $ .75
Shipping Weight 8 oz. Code Word NESDC.

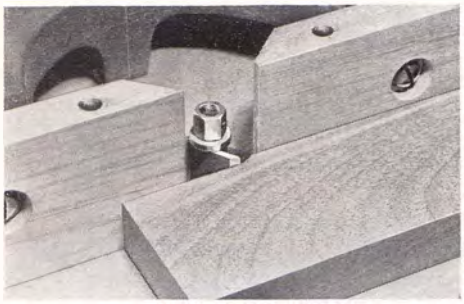
No. 981 Box for cutters only..... $ .85
Shipping Weight 1¼ lbs. Code Word NESBO.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Shaper Fence Revelation in Convenience

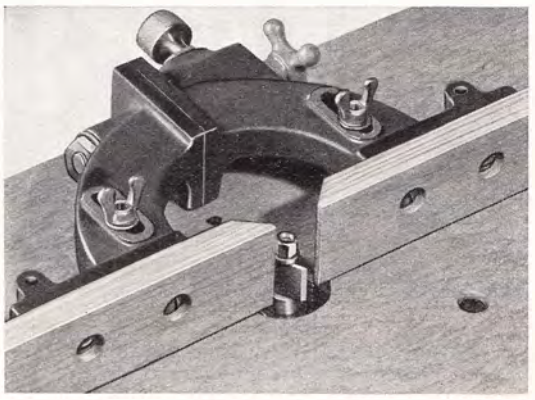
Fully Adjustable - - Thoroughly Safe - - Permits Jointing of Boards

Nothing just like the No. 982 Delta Shaper Fence has ever before been available to the user of small shaper accessories. Here for the first time is a fence that is not only thoroughly safe to use, but one that is unequalled for convenience of operation, heaviness of design and construction and accuracy of adjustment all in one.



A closeup of the Delta Shaper Fence in use for jointing the edge of a board, which can be done only with an adjustable fence.

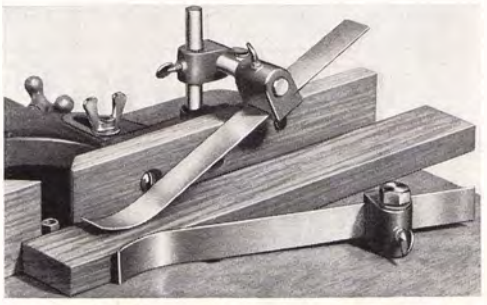
For ordinary shaper work the two faces of the guide fence are set in line, which may be done with absolute accuracy by means of the screw adjustment. For jointing or for moulding work where all of the edge of the material is cut away, one face of the fence may be adjusted forward to support the stock as it leaves the cutter, which cannot be done with a non-adjustable fence. Either face of the fence can be adjusted forward or backward with relation to the other, thus making the adjustment universal.



Note the exceptionally heavy construction of this unique shaper fence. Each section of the fence can be adjusted independently. Faces can be moved close to cutter.

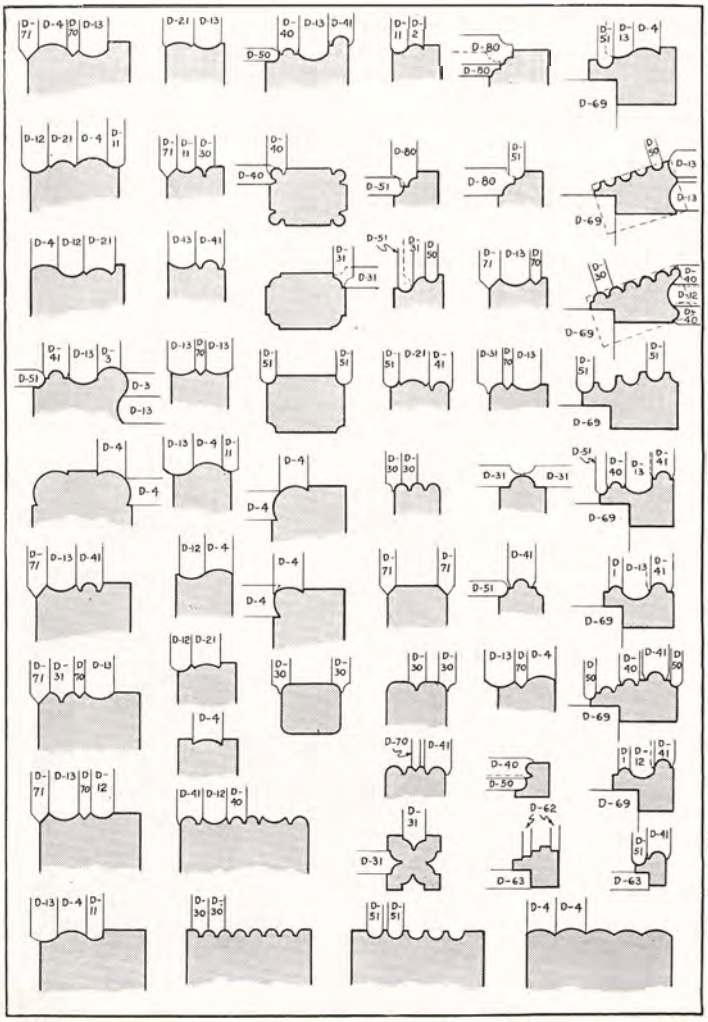
Can Be Used on Any Type of Shaper

While designed especially for the No. 970 Delta Drill Press when used as a shaper, the Delta Shaper Fence can be used on any type and size of shaper. It is actually more massive and much more convenient than many shaper fences used on heavy production shapers. Long slots in the heavy castings provide a wide range of adjustment, and the fence can easily be used on any type of machine for which it is adapted, and other facings substituted for the regular ones.



Spring Hold-downs for the fence add to its convenience and safety.

Just a Few of the Hundreds of Shapes You Can Make with Delta Shaper Cutters

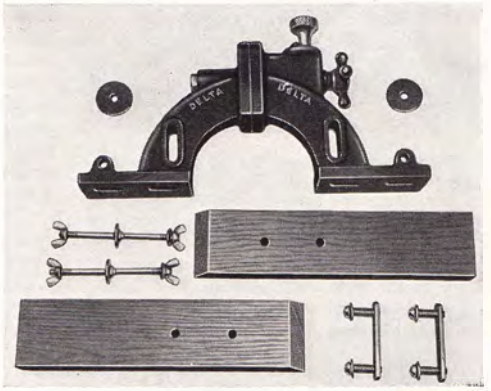


How Cutters are Combined for Various Cuts

Hold-Downs Add to Fence Convenience

Spring Hold-downs are available for use with the No. 982 Shaper Fence, which add still further to the convenience and safety of shaping on the Delta drill press. These hold the work not only against the table, but also against the guide fence face, allowing the operator to devote all of his time to the feeding of the stock into the cutter, and to keep his fingers as far away from the cutter as possible.

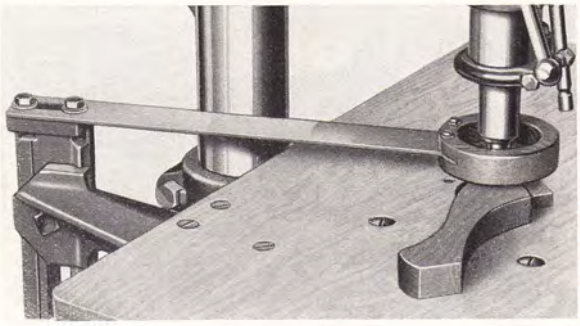
The hold-downs can be used on either side of the fence, and are carried on a post threaded into a boss on the fence castings. Universal arms, brackets and long, adjustable springs enable the hold-downs to accommodate work of any thickness up to 3½", and up to almost the full width of the table.



No. 982	Delta Safety Shaper Fence, complete as shown above, with wood facings, bolts and wingnuts.... Shipping Weight 12 lbs. Code Word NESSF.	$5.75
No. 983	Set of Delta Shaper Hold-Downs, with two posts, two springs, two spring brackets, one post bracket and bolt, for use with No. 982 shaper fence..... Shipping Weight 2 lbs. Code Word NESHD.	1.50
No. 984	Auxiliary Shaper Table, ¾" x 18" x 24", 5-ply, with bolts and starting pin. See page 25..... Shipping Weight 9 lbs. Code Word NESTA.	$2.50

[Please Order by Catalog Number to Avoid Mistakes and Delay]

A New and Practical Shaper Guard
and a Thoroughly Satisfactory Mortising Attachment



No. 987 Delta Safety Shaper-Table Guard, for curved and circular work, with table bracket, sliding bracket, steel bar, wood guard ring and screws **$3.85**

Shipping Weight 7 lbs. Code Word NESGA.

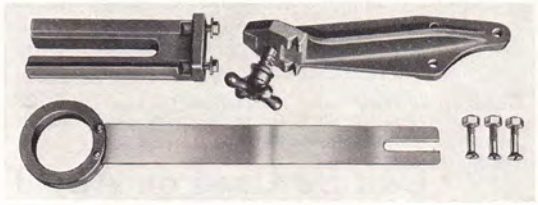
Delta No. 987 Guard Serves Also as Hold-Down

Delta has always led the way in the furnishing of adequate guards for machines, believing that the elimination of any danger not only adds to the enjoyment of a hobby, but that guards are a necessity where machines are to be used by younger members of the family. For school use, of course, adequate guards are essential.

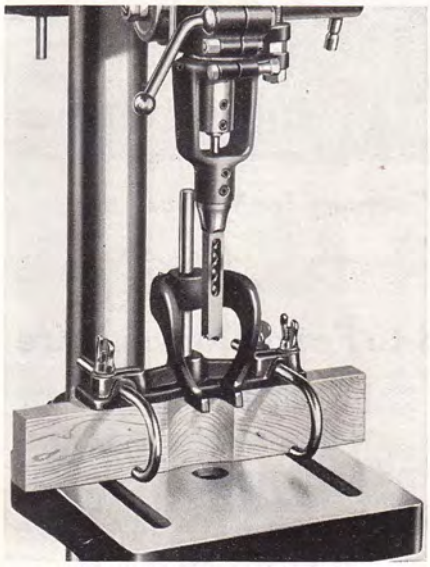
While there is but slight risk attached to the use of the Delta shaper cutters on the drill press, the use of the No. 987 Safety Guard avoids even this. This practical guard is adaptable not only to the Delta Drill Press, but to many other machines also, including regular shapers.

A sturdy cast-iron bracket is screwed to the underside of the table, and carries a sliding bracket which enables the guard ring to be adjusted for work up to 3″ thick. The guard ring, carried by a heavy steel spring bar, acts as a hold down also, allowing the operator's attention to be concentrated on guiding the work into the cutter. Wood guard ring is detachable, and special guard rings may be made and attached to suit the work. The ring completely surrounds the cutter, and is so designed as to prevent all danger to the fingers should the work be seized by the cutters.

This guard is intended for circular, curved and "freehand" work only; it cannot be used with the shaper fence, but the Delta fence is so safe that such a guard is not essential with it.



Mortising is Made Child's Play with No. 976 Attachment



The illustration above shows the No. 976 mortising attachment in place on the No. 970 Drill Press. Note particularly the husky hold-down, which prevents the work from lifting on the back stroke of the hollow chisel; the maple fence, which is replaceable by special high or long fences when required, and the curved arms which hold the work against the fence, leaving the operator's attention free for feeding the stock and cutting the mortise.

The making of mortise and tenon joints, probably the most difficult operation in joinery for the amateur to do well, is rendered absurdly easy by the Delta No. 976 mortising attachment. It enables anyone, without previous experience, to make straight, true, square-ended mortises in all woods, and of almost any width, in a fraction of the time necessary by hand methods, and with assurance of accuracy.

Indispensable to the Craftsman

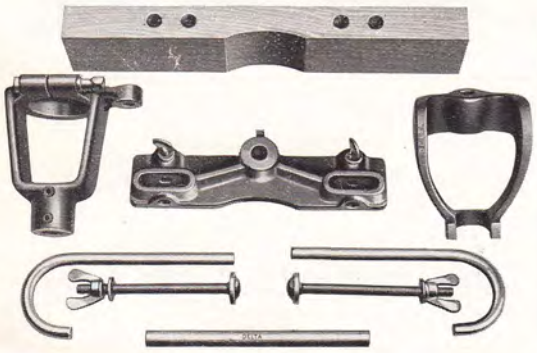
No craftsman who does any real work can afford to be without this attachment for his Delta drill press, because, in a few moments, it transforms the drill into a first-class mortising machine. Used in connection with the No. 974 router spindle, the bit is held in a bushing in the spindle. This spindle, with its short overhang under the quill, enables the whole attachment holding the chisel to be quite short and stiff, thus adding greatly to the accuracy of the operations performed with it. The chisel holder, which clamps to the end of the quill in place of the regular stop-rod collar, is a sturdy casting of heavy design. The stop rod is transferred from the regular stop casting, so that mortises can be accurately gauged to uniform depth.

Hold-Down Included

A strong and convenient hold-down and fence, indispensible for use with the mortising attachment, is included with it. The hold-down is raised and lowered on a vertical rod carried in a casting on top of the fence, and is adjustable from ¾″ to 4¾″ stock; thinner stock can be mortised by using a shim under it. The fence is of hard maple, 1⅛″ thick by 2¼″ high and 12″ long, drilled to fit the table of the No. 970 Drill Press.

Curved rods hold the work against the fence, thus allowing the operator to concentrate his attention on feeding the work sidewise. Capacity between curved ends of rods and fence is 2¾″; wider work can be mortised merely by turning the curved ends of the rods out of the way.

The fence is adjustable across the table in the regular table slots, and a longer fence, with "shelves" for supporting the ends of long work, can be substituted for the regular fence at any time. Higher fences can also be used by drilling the proper holes



No. 976 Mortising Attachment for No. 970 Drill Press only, complete with fence, hold-down bracket and rod, hold-down, chisel holder curved arms and bolts, but without mortising chisels or bits **$3.75**

Shipping Weight 8 lbs.

Code Word NEMOR.

For hollow chisels and bits see page 20.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Latest Delta Double-Duty Drill Press

An All-Around Tool

Designed for the small workshop, the latest type of Delta Double-Duty Drill Press is not a makeshift intended only for the lightest kind of work, nor is it a tool designed for one kind of work only. It is a real sensitive machine tool, which will not only handle all the metal drilling within its capacity, but which will fill all the requirements of the home shop both for wood and metal work. It offers the owner of the small shop, who needs a drill press, but who does not need a heavy machine, to purchase a real, high-grade tool at low cost.

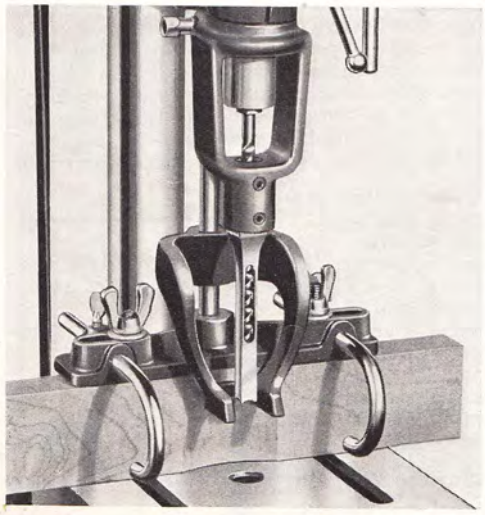
Drilling; Boring; Sanding; Mortising; Routing and Many Other Operations

Due to its unique design, the Delta Double-Duty Drill press will handle many operations impossible for the ordinary slow speed, limited capacity bench drill. It will not only drill metal up to ½", even to $\frac{17}{32}$", but will handle large multi-spur boring bits, regular machine-spur bits, router bits, carving bits, will do mortising with precision and speed; makes a first-class edge sander for scroll-sawed work when used with the sanding drum, and will do many other operations that save time and labor in the small shop.

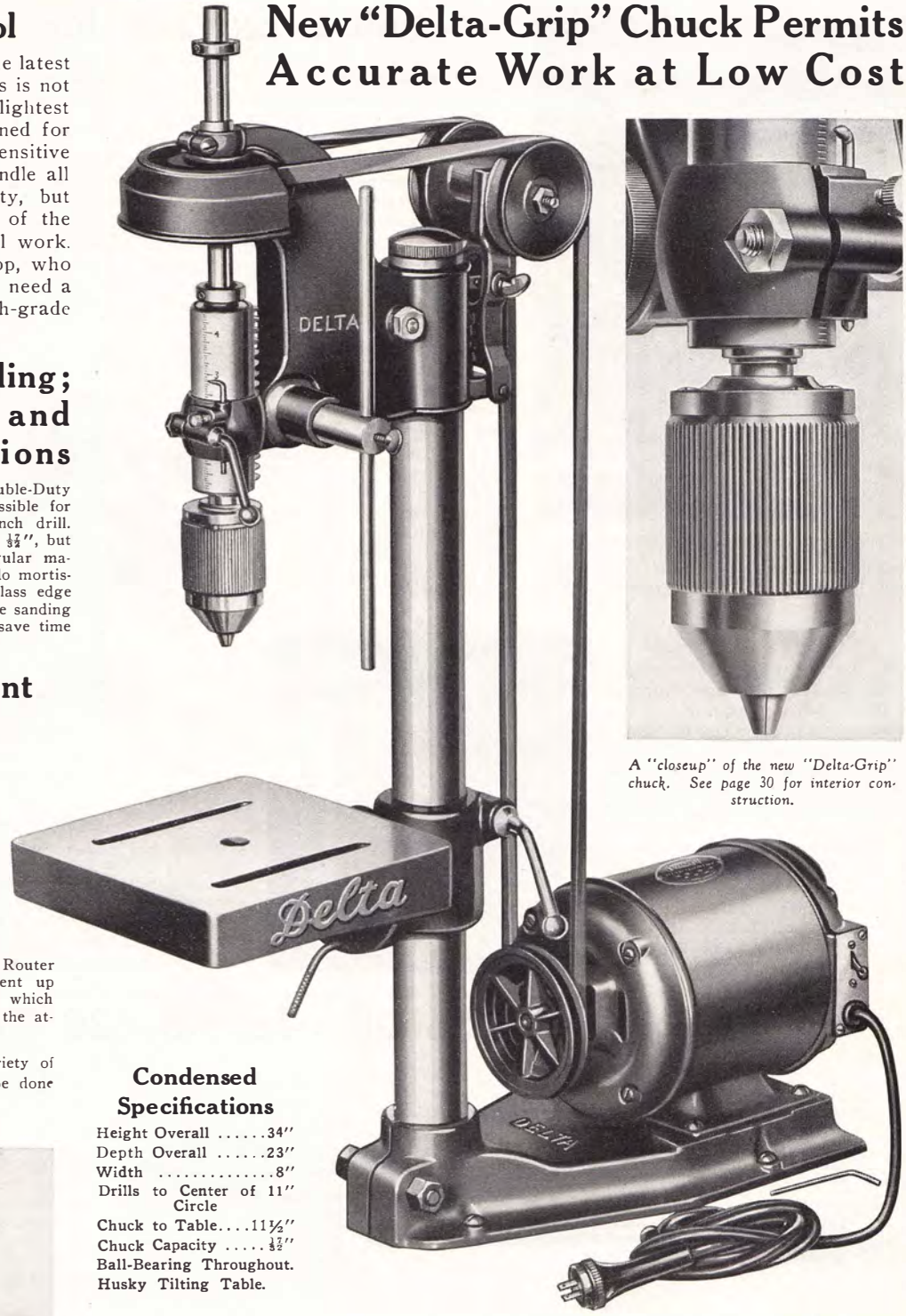
Mortising Attachment Adds to Utility

The addition of the No. 626 Mortising Attachment converts the Double-Duty Drill Press into a first-class mortising machine for the home shop. With this attachment (shown below) mortises of any length, and in widths up to ½" can easily and quickly be cut. The cutting of mortises has always been one of the most difficult operations encountered in the home shop, but with this attachment it becomes child's play. The attachment is used with the No. 624 Router Spindle, and this brings the whole attachment up close to the quill with minimum overhang, which permits much more accurate work than when the attachment projects a long way below the quill.

See page 16 for examples of the wide variety of mortising work that can easily and speedily be done with the No. 626 Mortising Attachment.



New "Delta-Grip" Chuck Permits Accurate Work at Low Cost



A "closeup" of the new "Delta-Grip" chuck. See page 30 for interior construction.

Condensed Specifications

Height Overall .....34"
Depth Overall .....23"
Width .....8"
Drills to Center of 11" Circle
Chuck to Table....11½"
Chuck Capacity .....$\frac{17}{32}$"
Ball-Bearing Throughout.
Husky Tilting Table.

No. 620 Delta Double-Duty Drill Press, with No. 673 $\frac{7}{16}$" V-Belt and Special V-Pulley (½" bore only). Motor not included..... **$18.75**
Shipping Weight 50 lbs. Code Word PRESA.

Drill Press comes equipped with belt and motor pulley. If V-belt requires renewal, order as below.

No. 673 Special V-Belt **$1.00**
Shipping Weight ¾ lb. Code Word PREBL.

No. 626 Mortising Attachment for No. 620 Drill Press only, complete with fence, hold-downs and chisel holder, but without chisels or bits..... **$3.75**
Shipping Weight 5 lbs. Code Word PREMO.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Utility First in Design of 620 Drill Press

The drill press shown above has been tested for over two years on steady eight-hour a day service in a pattern shop, although not designed for such severe service—an instance of the built-in quality of Delta drill presses.

Built-in Extra Value

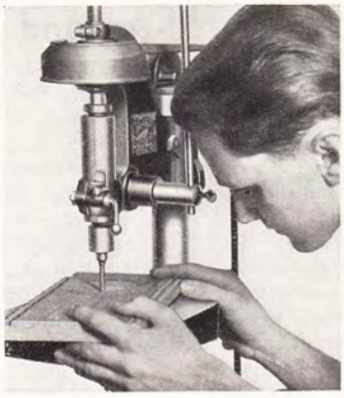
In spite of its low price, the Delta Double-Duty No. 620 Drill Press is a quality machine throughout. Every care is taken at the factory in assembling and testing the tools to insure that the user will get a first-class tool in every respect.

The drill press shown at the left has been in steady use in a pattern shop for over two years, running at twice its rated speed, without the slightest evidence of wear or trouble developing.

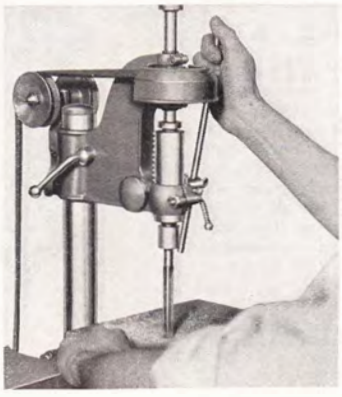
This shows the "hidden value" in Delta tools, because this tool was not designed for professional work, and the fact that it stands up under such severe service indicates what the amateur craftsman may expect of it in his service.

There is no surface polish or glitter to fool the eye of the inexperienced purchaser in Delta machines, but instead there is built-in value for every dollar invested.

This is the reason why users of Delta drill presses are enthusiastic in their praise—the real foundation for the fact that Delta tools are the choice of the *experienced* craftsman.



Routing the background from an intricate pattern for carved work and similar jobs is an easy matter for the versatile drill press.



Boring with machine-spur and multi-spur bits, sanding, routing and many other jobs may be done on the drill press.

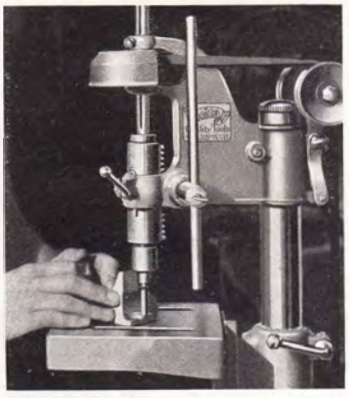
Delta-Grip Chuck

Every Double-Duty Drill Press is fitted with a standard spindle with the "Delta-Grip" chuck (U. S. Patent No. 1,930,022)—the chuck which, for the first time, enabled accuracy to be combined with low cost to the purchaser. Despite its low cost, this chuck is designed to give the utmost satisfaction to the purchaser, both in regard to commercial accuracy, operation and long wear. See page 23 for description of principle of this unique chuck.

Thoroughly Tested

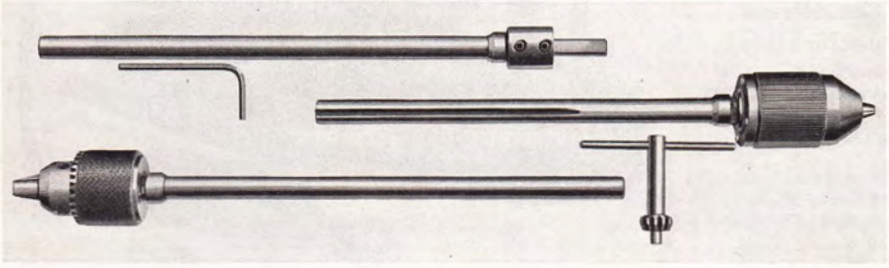
Every Delta Double-Duty Drill Press is assembled and thoroughly tested before shipment. It must perform up to the Delta standard before shipment, and the chuck must come up to the Delta standard of accuracy. Every spindle must run true within close limits, and to insure that it does so with all sizes of commercial drills, it is tested with accurate ⅛", ¼", ⅜" and ½" test bars.

These tests insure that every drill press will satisfy its owner as to performance, accuracy and long life.



Interchangeable spindles may be had; one with a balanced Jacobs chuck for those who prefer the key type, and one with ½" hole for router bits, machine bits and for use with the No. 626 Mortising attachment. The low overhang of the router spindle prevents chatter and inaccurate work. Note that spindles for No. 620 Drill Press are not interchangeable with spindle for No. 970 Drill Press, although the principle of their construction is the same.

Chucks and Spindles for No. 620 Drill Press



The No. 621 Spindle is fitted with the new Delta-Grip Chuck (Chuck cannot be supplied without Spindle). Spindle No. 622 is equipped with a ½" capacity geared Jacob's Chuck for those who prefer this type.

Spindle No. 624 is extremely valuable for heavy mortising and routing work. Prevents chattering and permits accurate work. Holds all bits with ½" shank, also sanding drum, etc.

No. 621	Regular Spindle with $\frac{17}{32}$" Delta-Grip Chuck..... Shipping Weight 2½ lbs. Code Word PRESC.	**$3.25**
No. 622	Special Spindle, with ½" Jacob's Chuck and Key..... Shipping Weight 4 lbs. Code Word PREJA.	**$7.75**
No. 624	Special Spindle with ½" bore, including ½" auxiliary shaft and wrench ..... Shipping Weight 3 lbs. Code Word PREHO.	**$2.00**

NOTE: These spindles for No. 620 Drill Press only: not interchangeable on No. 970 Drill Press.

Every Drill Press User Needs This Book

Few people realize how immensely valuable a tool the Drill Press really is until they read this book. Thoroughly illustrated, with the kind of illustrations that really show you how, this book is an indispensible aid to getting the most out of your drill press, and in aiding to solve the "how to do it" of the unfamiliar job.

Written for the practical man, it tells how to sharpen drills efficiently, how to lay out work, how to set it up and drill it, how to inlay, vein and carve with the drill press and dozens of other important and interesting things to know.

"Getting the Most Out of Your Drill Press". Postpaid 10c

[Please Order by Catalog Number to Avoid Mistakes and Delay]

New Delta 10-inch Ball-Bearing Band Saw

Gives Long Service and Smooth, Accurate Performance

The Delta 10-inch Band Saw was designed to give the home-workshop owner a Band Saw that would be built to the same high standards of quality as a regular production machine, yet which could be sold at a much lower price than a larger machine. It had to be small enough to fit into the average workshop, where there is not a great deal of room to spare for a heavy machine, and yet it had to have practically all the capacity of a much larger Band Saw. All these requirements have been met in the Delta 10-inch Ball Bearing Band Saw.

Ball Bearing Throughout

Both the upper and lower wheels run on ball bearings, which are felt sealed to prevent leakage of lubricant. These ball bearings need no attention whatever for long periods of use, and when re-lubrication becomes necessary the job is very easily performed.

Fully Adjustable Guides

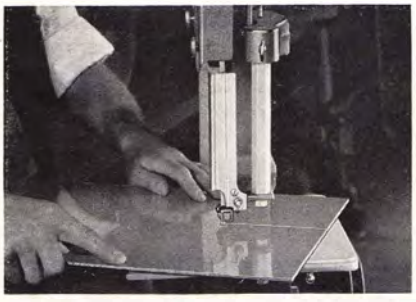
The Delta 10-inch Band Saw is fitted with fully adjustable guides that have proved very satisfactory in service. Ball bearing blade supports, both above and below the table, are supplied as standard equipment, as well as fully adjustable steel guide pins. Guides are fully adjustable in every direction.

Perfect Balancing

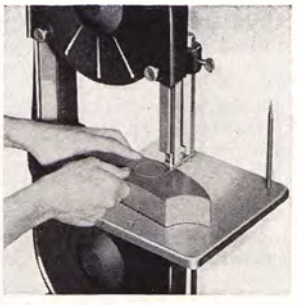
The simple test shown at the bottom of this page is an extremely rigid one for any Band Saw. A pencil is stood on end on the machine table while the machine is in operation, and remains standing without the slightest tendency to fall, while a heavy cut is made. Perfect balance makes this possible.

Safe Operation

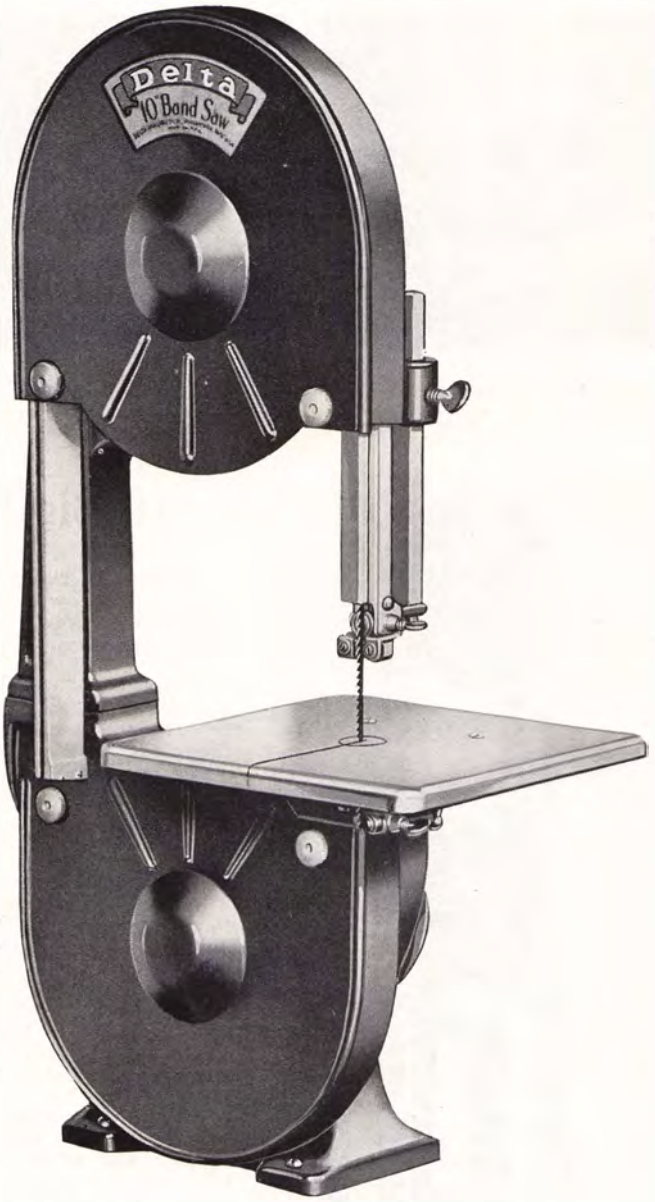
Just as in the most up-to-date of production machines, adequate guards protect the operator from any injury. So carefully are these guards worked out that only the portion of the blade actually doing the cutting is ever exposed, and even that is covered by the work while cutting. A sliding guard, attached to the guide bracket and moving up and down with the guide as it is adjusted to the work, covers the front of the blade at all times. At the rear the blade travels between regular wooden guard plates, while heavy steel guards cover the wheels and the remainder of the blades.



In addition to its regular job of wood-working, the 10-inch Band Saw is easily adaptable to the sawing of soft metals such as brass, aluminum, etc. For metal sawing the speed should be slowed down and a metal-cutting blade (No. 781) used.



The pencil stands on end, without the slightest tendency to wobble or fall, while the operator takes a heavy cut through 2" stock, an extremely rigid test.



Note the clean-cut, thoroughly practical design of this whole machine. Observe how thoroughly the blade is guarded throughout its entire length, only the portion actually doing the cutting being exposed.

No. 785 Delta 10-inch Ball Bearing Band Saw, complete with guards, 5" drive pulley and ¼" blade..... **$19.50**
Shipping Weight 75 lbs. Code Word TENBA.

No. 5275 2¾" Pulley, drives 10-inch Band Saw at correct speed, ½" bore..... .45
Shipping Weight 8 oz. Code Word PULOD.

No. 560 V-Belt, center to center distance 22¾", ½" wide, 38° angle, 11/32" thick..... 1.00
Shipping Weight 10 oz. Code Word EICVB.

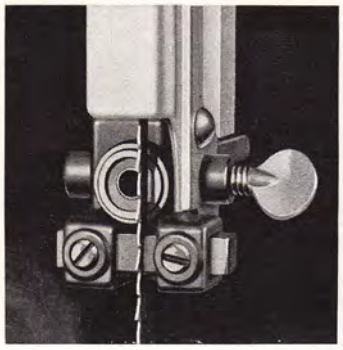
Blades for 10-inch Band Saw 66" Long

Cat. No.	Width	Cut Radius	Code	Price Each
732	⅛"	¼"	BABLK	$1.00
733	3/16"	½"	BABLL	1.00
734	¼"	¾"	BABLM	1.00
736	⅜"	1"	BABLP	1.00
781	¼"	¾"	BAMEU	1.50

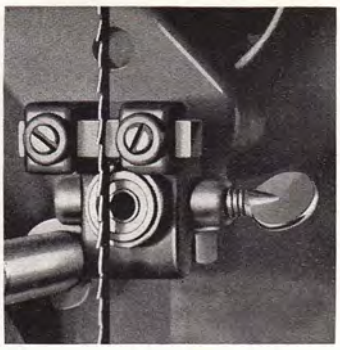
Shipping Weight 12 oz. each
(No. 781 Blade is for soft metals.)

[Please Order by Catalog Number to Avoid Mistakes and Delay]

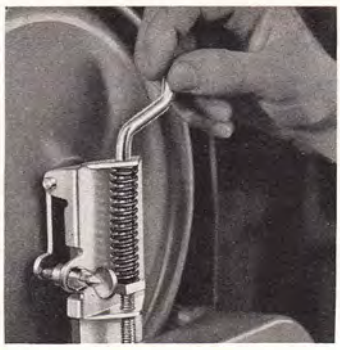
Offers High Value at Very Low Cost



Here is a "closeup" of the Delta Ball-bearing Guide, which shows how the square guide pins may be adjusted to suit any blade.

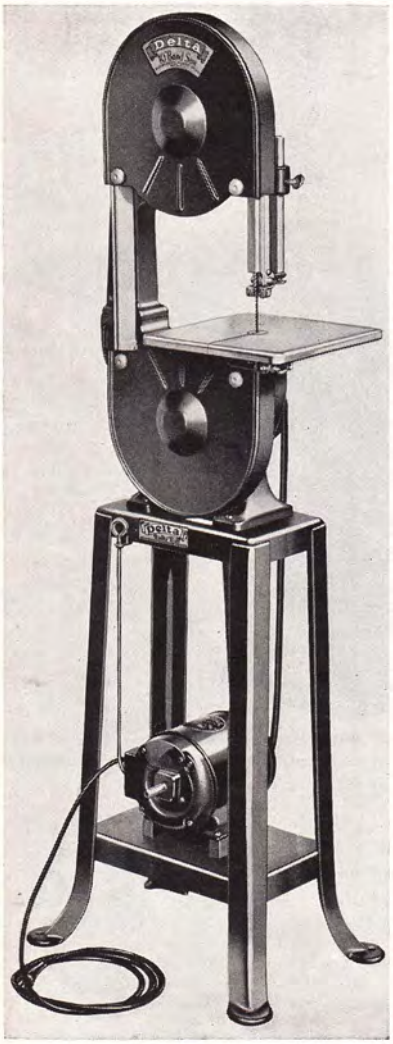


Below the table of the saw is exactly the same high-grade guide as above, with fully adjustable hardened-steel guide pins and adjustable ball-bearing blade support.



Note the simple design of the wheel-tilting and wheel-tension adjusting mechanism. The crank enables the speedy tightening or loosening of the blade.

The accurately graduated segment and indicator that determines the degree of tilt of the saw. A stop screw is provided to return table to level position.



No. 766 unit includes:

No. 785	10-inch Band Saw	$19.50
No. 5275	2¾" V-Pulley, ½" Bore	.45
No. 560	V-Belt	1.00
No. 329	Steel Stand	5.75
	Total	$26.70

For motor and switch rods see p. 54.
Ship. Wt. 110 lbs. Code Wd. TENUN.

10 Big Points of this Practical Band Saw

1. Unusually rugged frame, cast in only two sections. Hollow cast upper arm is an important feature, preventing all springing and twisting of the frame.

2. Table measures 10" by 10" and is made of very heavy steel. It has a removable aluminum throat piece or insert which prevents damage to the blade where it passes through the table. Table can be tilted to 45 degrees, an accurately graduated segment and indicator showing the exact degree of tilt. Adjustable stop screw returns table to level position.

3. Upper and lower wheels run on ball bearings which reduce friction to the minimum and allow the full power to be applied to the saw. Bearings are of the sealed type, which require lubrication only about twice a year.

4. Upper and lower guides fully adjustable, with square steel pins similar to those on the most expensive saws. Blades supports are ball-bearing and double ended, so that either end can be used.

5. The mechanism for adjusting the blade tension, for raising and lowering the upper blade support and guide, for tilting and locking the table and for setting the table square with the blade, while simple and foolproof, perform their functions just as on the most expensive saws.

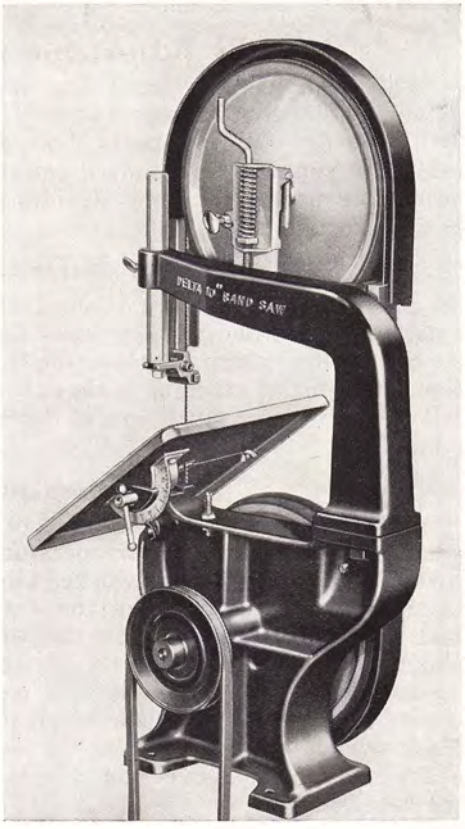
6. The blade is thoroughly guarded, both front and rear, and the saw is thoroughly safe to operate even by the most inexperienced amateur.

7. Disk wheels, formed from steel and electrically welded, are used in this saw, as they are lighter than spoked wheels, while at the same time being many times stronger. They are also safer and offer less air resistance. Nothing can wedge into them as is the case with spoked wheels.

8. Capacity under the guide is a full 6" and the saw will take a 6" cut in hardwood with ease. Very soft metals are cut almost as easily as wood, and somewhat harder ones handled merely by cutting down the speed. Metal cutting blades can be furnished.

9. Compact in design, taking up but little space in the home workshop, yet at practically no sacrifice in capacity.

10. Quality of the work turned out by this machine is fully equal to that produced by machines costing many times as much, and the work is done just as easily and quickly.



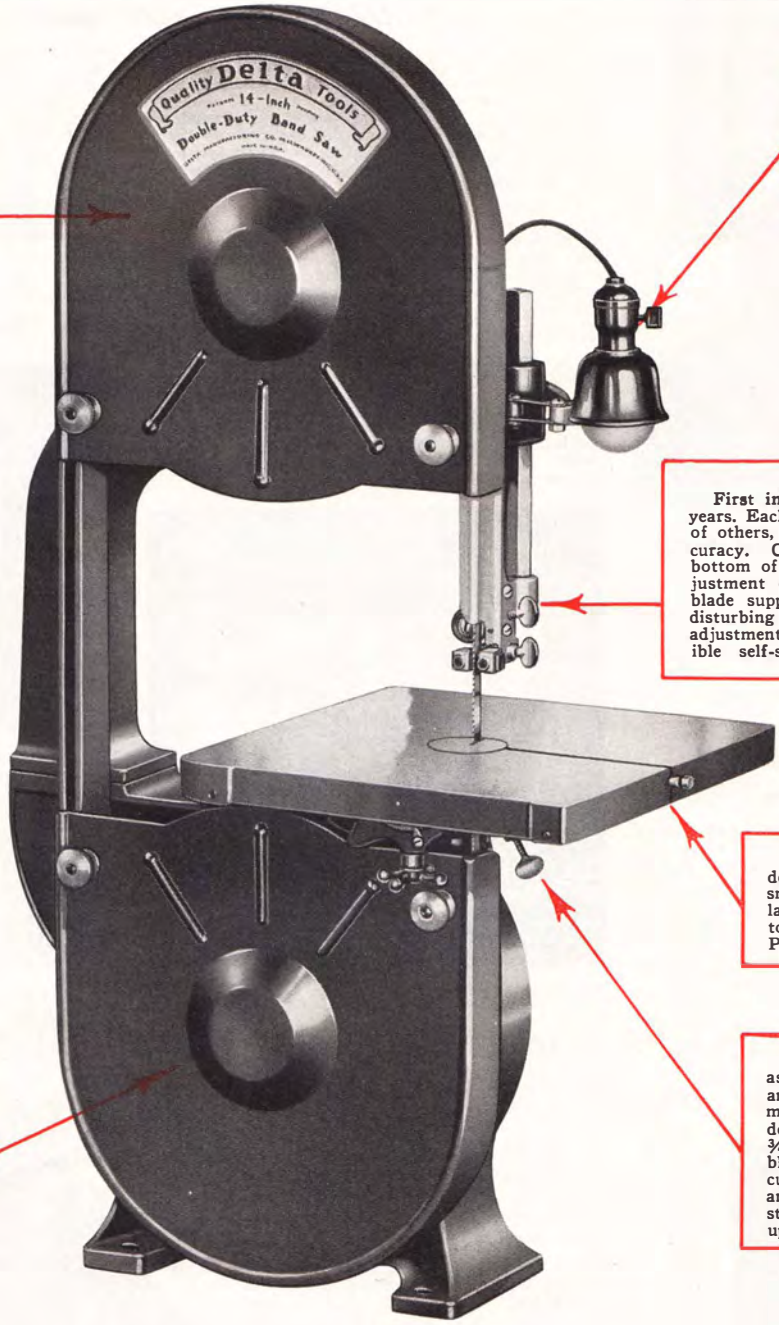
Notice, in this rear view of the Delta 10-inch Band Saw, the heavy, rugged design of the base casting, and the strong design of the hollow cast arm that carries the upper wheel. A frame of this kind produces a machine that is free from twist or spring, and that will produce accurate work under all conditions.

Unit No. 766, which consists of the No. 785 Band Saw and the No. 329 Steel Stand, is shown at the left. If you contemplate the eventual purchase of a mortising and routing machine No. 458, we recommend that you purchase a No. 494 stand, which cost only $1.25 more. The band saw and mortiser may then be mounted on the same stand, which forms an ideal combination. See unit No. 747, on page 23.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

NEW Delta 14-Inch Band Saw Has Many Advantages Important to You!

Heavy pressed-steel safety-type disk wheels, running on high-grade precision-type self sealed ball bearings. This means minimum power consumption as bearings are practically frictionless. Bearing seals prevent entrance of dirt and escape of lubricant and insure trouble-free service for entire life of bearing. Unique Delta rimmed wheels make tire renewal easy.



Light attachment permits machine to be moved wherever it is most convenient for the job in hand, and assures plenty of light on the work. Wiring for light runs through hollow cast arm, and is led through rubber bushings.

First improvement in band-saw guides in years. Each adjustment absolutely independent of others, and each set with micrometer accuracy. Guide pins can be set accurately to bottom of blade teeth without disturbing adjustment of ball-bearing blade support, and blade support can be similarly set without disturbing adjustment of guide pins. Screw adjustment for precision. High-grade reversible self-sealed ball-bearing blade support.

Hollow-cast upper arm, which provides stiffness where needed and heavy, strong ribbed base casting permits use of height attachment which increases capacity of machine to permit cutting of stock over 12" thick.

Very heavy and massive table design, 14" 14" in size. Swings smoothly on double trunnions. Very large table insert. Tilts 45 degrees to right and 10 degrees to left. Positive stops. Rip-gage attachment.

Lower wheel of same high-grade construction as upper wheel, with same self-sealed ball-bearings (six precision ball bearings are used in this machine). Heavy drive shaft with tapered end, keyed to wheel to prevent slippage. Wheels run light as a sewing machine. Cementless rim.

Lower guide of same construction as upper one. Independent guide-pin and blade-support adjustment, with micrometer-screw traverse. Unique design enables guide to come within ¾" of table top, thus supporting blade close to work, enabling accurate ripping to be done with ½" and ¾" blades. ¼" square hardened-steel guide pins permit use of blades up to ¾" wide.

Not Mere "Gadgets" Made to Talk About; But Real Improvements of Importance to Every Band-Saw User

Study the points of this band saw, as described in the following pages, very carefully, and you will agree with us that here is a real improvement in band saws. You will agree even more enthusiastically when you see the machine itself, for never before has such a machine been offered to the craftsman.

The improvements in this machine are real improvements. It has never been Delta's policy to add "gadgets" merely for the sake of having something to talk about. Every addition to a Delta machine; every improvement made, must be of real value to the user, or else it is weeded out at once. And, as in all the course of Delta pioneering in the workshop-machine field, this band saw represents the utmost in value in the field. We do not know of any other saw that can offer you all the features of this one, nor one that can compare with it, when size, convenience, accuracy, design, ease of handling, precision of adjustments and moderate cost are all considered.

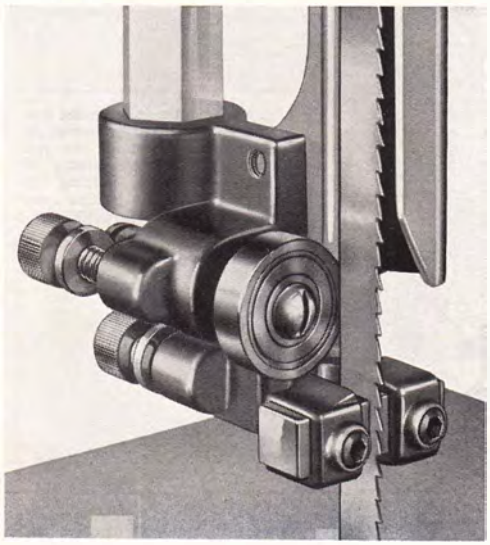
No. 890 Delta 14-inch Band Saw, with guards and 8" arbor pulley, but without light Attachment **$43.85**
Shipping Weight 195 lbs. Code Word LABAN.

No. 5275 Delta 2¾" V-Pulley. ¾" bore..... .45
Shipping Weight 8 oz. Code Word PULOD.

No. 568 Delta V-Belt (24 5/16" cent. to cent.)..... **1.00**
Shipping Weight 10 oz. Code Word FORVD.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

New Delta Guides Solve All Adjustment Problems:- Independent Setting—Micrometer Accuracy



Now-for the First Time-Guides Can Be "Set to a Hair" -with Precision and Speed. (Patent Pending)

Realizing the deficiencies of the ordinary band-saw guides and blades supports, Delta engineers, in designing the new 14" band saw, made a special study of these important items, with a view to eliminating all the faults of the ordinary guides. the result of this study and the experiments that followed are embodied in the new Delta guides, which offer the very utmost in the way of efficiency and convenience.

The ordinary guide is slow and inefficient. If the adjustment of the blade supports is changed the setting of the guide pins is disturbed at the same time, since they are usually carried on the same bracket, and one adjustment cannot be changed without throwing the other "off".

On the new Delta guide, on the contrary, each adjustment is absolutely independent. Both the blade support and the guide pins are carried in a heavy bracket, but the guide pins can be set accurately to the bottom of the blade teeth without affecting the adjustment of the blade support in any way, and the blade support can similarly be adjusted or re-adjusted at any time without in the least disturbing the adjustment of the blade support. And each adjustment is effected with precision and micrometer accuracy by means of the knurled-head adjustment screws which move the guide-pin slides or the supports the slightest fraction of an inch required. No other guide can offer you this feature.

Precision-Type Self-Sealed Ball-Bearing Blade Support

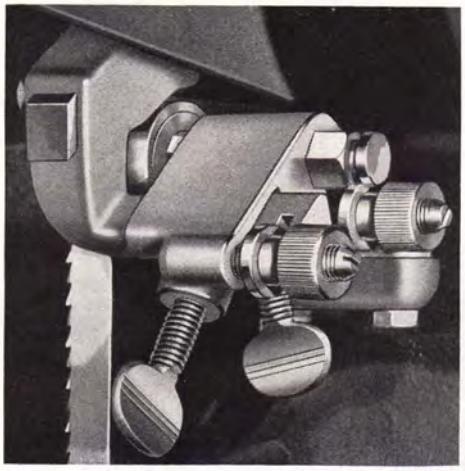
Like the other ball bearings used in the 14" band saw, the ball-bearing blade supports are of the self-sealed type, which prevents entrance of dirt on either side and escape of lubricant. They never need attention or oiling for the life of the bearing, as they are lubricated at the factory. The supports are reversible if necessary, although this should not be necessary until after years of service, if at all.

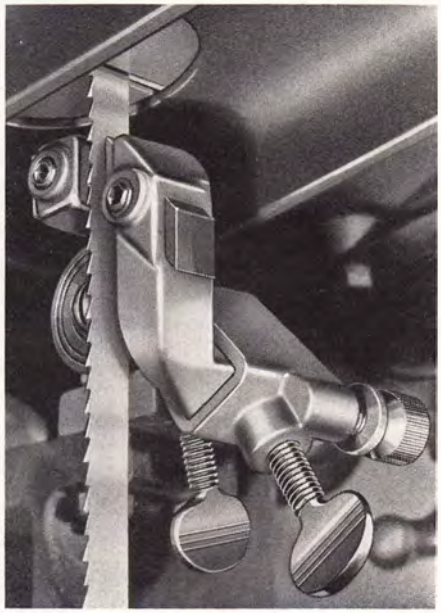
Takes ¾" Blades

Note the massive appearance of the upper guide and support in the photo above, with the heavy ½" hardened-steel guide pins, which permit the use of blades up to ¾" wide with a full range of adjustment. Visualize how easily and accurately you can set the guide pin and blade supports by means of the micrometer nuts, and you will see why we believe that this is the greatest improvement in band-saw guides in many years.

Lower Guide Supports Blade Close to Table

In the ordinary band saw the lower guide is usually far below the table in order to allow the the table to tilt, and this, of course, means that a long length of blade is left between upper and lower guide. In he new Delta saw, the lower guide comes within 1/16" of the top surface of the table. This means much more accurate work, especially when ripping.





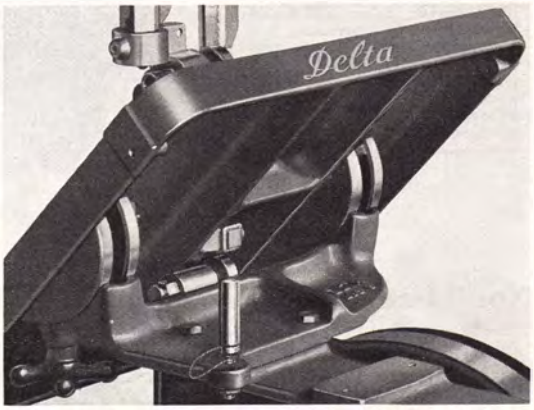
Two views of the lower guide. Note how close to the table the guide pins are brought to support the blade right below the work. Left; the micrometer-screw adjustments.

Massive Table, Cradled on Double Trunnions, Tilts 45 Degrees to Right and 10 Degrees to Left . . . .

The table of the 14-inch Band saw is a heavily ribbed and very strong casting 14" by 14" in size. It is of unique design, because it is cradled on double trunnions, and this has been accomplished without the awkward expedient of splitting the front trunnion, as has been done on some saws in the past. The blade slot is run through from the right side of the table and this permits the use of heavy and accurate trunnions, operating very smoothly on machined seats and clamped by strong clamp nuts.

A large aluminum table insert, 2½" in diameter, fits the opening in the center of the table and enables a clear view of the lower guide when setting, besides aiding in blade installation and removal. A taper pin with hexagon head, faster in operation than the usual screw, aligns the table slot.

The table tilts a full 45 degrees to the right and 10 degrees to the left. The tilt to the left, while especially useful for pattern work, will be found of great advantage in other work also. A positive stop with a removable sleeve sets the table level; removing the sleeve then enables the table to be tilted the 10 degrees to the left. A finely graduated scale, with an adjustable pointer, is provided on the front trunnion.



A view of the heavily ribbed table tilted to the right, showing the sturdy double trunnions and the stop screw with its removable screw. Photo at left shows closeup of front trunnion and graduated tilt dial.

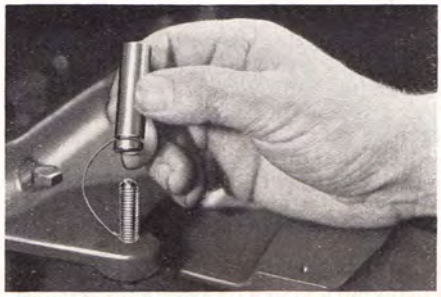
[Please Order by Catalog Number to Avoid Mistakes and Delay]

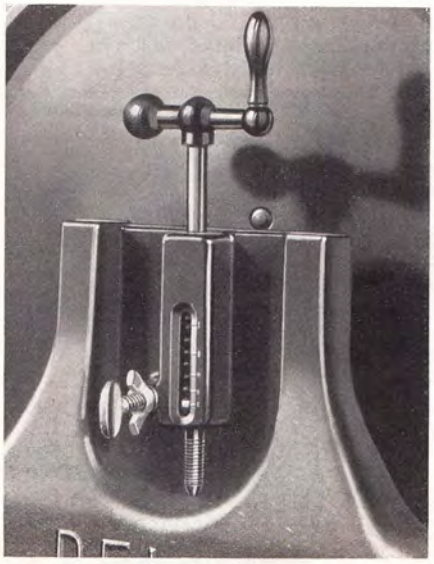
Many Improvements Make This Finest Band-Saw Value Ever Offered!

Ingenious Table Stop

The table stop on the new Delta 14-inch Band Saw, while simple, is ingenious and time saving. It consists of a screw with a removable sleeve on its end, the screw being threaded through the base casting and provided with a lock nut. The screw is set to bring the table absolutely square with the blade and then locked. Thereafter, when the table has been tilted for angular cuts, it is only necessary to return the table against the screw to be sure it is square with the blade.

To tilt the table to the left for pattern work, the removable sleeve is lifted off as at the right, and the table can then be tilted over to the limit. Sleeve is fastened to screw and cannot be lost.





Tension Gage for Blades

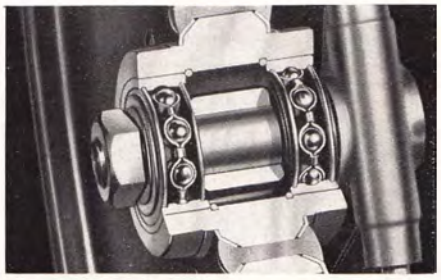
Many blades are broken or badly strained because the amateur or inexperienced band sawer does not know how much tension to put on the blade. On this band saw, a tension gage on the rear of the upper-wheel slide shows where the tension nut should be for each size of blade from ⅛" to ¾", and thus avoids the danger of overstraining the blade.

This gage indicates the proper tension even after the blade has been re-brazed.

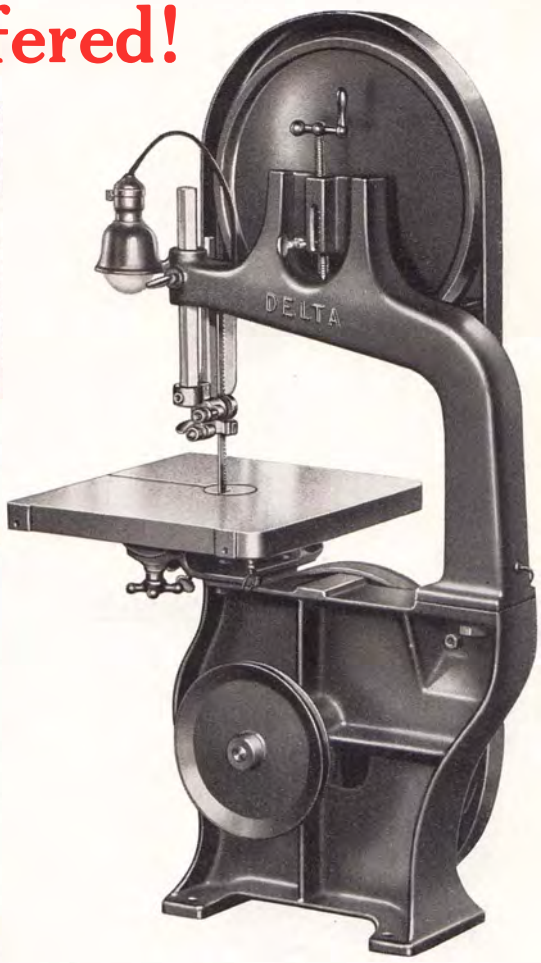
Th travel of the wheel slide enables blades to be re-brazed to the limit before it is necessary to piece them.

Self-Sealed Ball Bearings

Both upper and lower wheels on the new 14-inch Band Saw run on high-grade precision-type ball bearings, with double seals built in.



These enable the machine to be run, for average work—say up to about 3" hardwood—with a motor of the power of the Delta ⅓ H.P. motor.



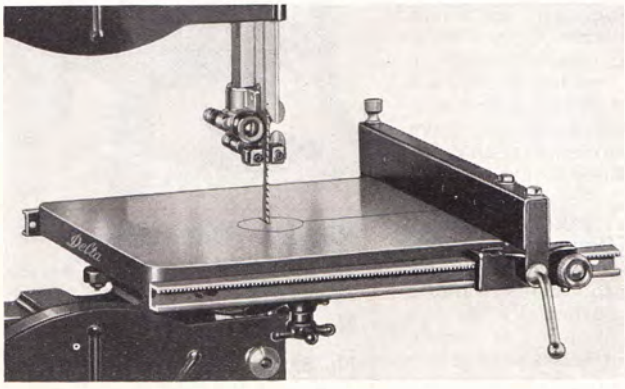
The machine runs as easily and effortlessly as a sewing machine.

The safety type disk wheels have the regular Delta type of rims, shown at the left, which need no cement to hold the tires. Anyone who has ever applied a tire to the ordinary band-saw wheel knows what a messy, unsatisfactory job it is. This is eliminated by the special design of the Delta wheel rim.

The welded wheel design on this band saw is immensely strong, and the wheels are designed and machined to run very true.

Closeup of the bearing hub and ball bearing in the safety type steel wheels. The upper wheel is shown here. Left, closeup of the Delta cementless rim.

Delta "Micro-Set" Rip Fence Adds Greatly to Utility of 890 Band Saw



Two rip-gage attachments are available, the No. 893 with 18" front and rear guide bars and the No. 895 with 32" front and rear guide bars. The rip fence in both attachments is identical, and the only difference is the difference in capacity. Front and rear guide bars are attached to the table with screws fitted into tapped holes, and need never be removed. Fence has same "Micro-Set" adjustment and all other features of circular-saw gage fully described on page 6.

Due to the adequate support that the blade receives from the guides on the Delta band saw, and especially to the fact that the lower guide comes so close to the work, ripping on this saw is really a satisfactory operation, even with fairly narrow blades. The table is machined so that a rip fence can be attached at any time, and this is further combined with the advantage that extension rip-gage bars, similar to those furnished for the Delta Circular Saw, can be added at any time.

The standard guide bars furnished with the No. 893 Rip-Gage Attachment are long, and enable ripping to be done to the full capacity of the table, that is: to the center of a 28" panel. If Rip-Gage Attachment No. 895 is used, the capacity can be extended so that the saw will rip 23 inches wide.

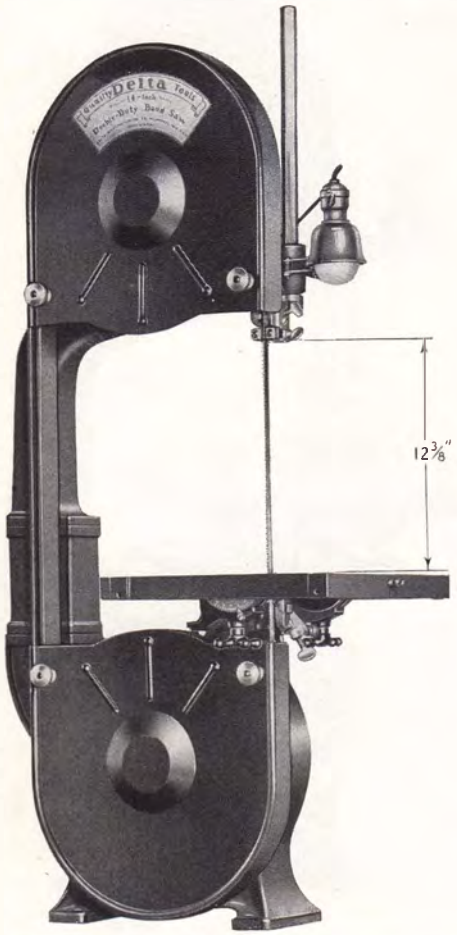
The rip fence can be used on either side of the blade, and the guide bars may be left permanently attached if desired, as they do not interfere with other operations. When the user wants to remove them this can be done in a few seconds.

No. 893	Rip-Gage Attachment for No. 890 14-inch Band Saw, with 18-inch front and rear guide bars, "Micro-Set fence and screws for attaching guide bars..... Shipping Weight 10 lbs. Code Word LABGA.	$3.85
No. 895	Rip-Gage Attachment for No. 890 14-inch Band Saw, same as above but with 32-inch guide bars instead of 18" ..... Shipping Weight 12 lbs. Code Word LABGB.	4.55

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Unique Attachment Cuts Materials

Up to 12 Inches Thick with Ease and Speed



The unique design of the Delta Band Saw, with its separate hollow cast upper arm and its massive, heavily ribbed base, permits the introduction of another typical Delta improvement — a raising block and accessories that permit the cuting of material up to 12¼" thick.

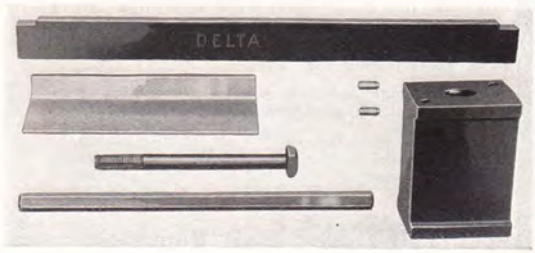
The attachment consists of a block 6" high, which is dowelled to fit accurately between the bottom of the hollow cast arm and the base, a longer wood guard for the back of the blade, which takes the place of the regular guard, a longer bolt and an extension guard for the front of the blade.

Since the block is accurately drilled and dowelled to the same close limits as the regular machine, putting the attachment in place is a very simple matter. Once in place, the capacity of the machine is increased to 12⅜" under the guide, which permits the cutting of material up to 12¼" thick with ease.

One of the uses for which this is ideal is the cutting of "dry ice", where a 12" capacity is essential. It is also of great advantage in the cutting of cork slabs for refrigerator linings and similar insulation requirements, for cutting sheets of balsa wood from heavy thicknesses and for many similar requirements.

The advantage of this attachment is that it gives the man who requires a band saw which will cut thick material, but who does not need a large machine, exactly what he requires, at a very low cost.

NOTE: A longer blade is necessary with this attachment. Order 105" blades from list below.



No. 894 Height Attachment for 14-inch Band Saw, including raising block, dowels, bolts, extension front blade guard and long hexagon guide-support bar $6.00

Shipping Weight 25 lbs. Code Word LABHA.

Band-Saw Blades

Made of high-grade Swedish steel, accurately spaced, set and jointed, these blades will be found to give splendid service and to stand up under hard work. Standard blades for 14" band saw are 93" long; special blades for use with height attachment are 105" long. Blades for 12-inch saw are 78" long.

14-inch Band-Saw Blades; 93 inch

Cat. No.	Width	Cut Radius	Code	Price Each
1032	⅛"	¼"	BLABA	$1.25
1033	3/16"	½"	BLABB	1.25
1034	¼"	¾"	BLABC	1.25
1936	⅜"	1"	BLABD	1.25
1038	½"	1¼"	BLABE	1.50
1040	¾"	1¾"	BLABF	1.50

Shipping Weight 15 oz. each.

14-inch Band-Saw Blades; 105 inch

Cat. No.	Width	Cut Radius	Code	Price Each
1045	⅛"	¼"	BLABJ	$1.50
1046	3/16"	½"	BLABK	1.50
1047	¼"	¾"	BLABL	1.50
1048	⅜"	1"	BLABM	1.50
1050	½"	1¼"	BLABO	1.75
1052	¾"	1¾"	BLABP	1.75

Shipping Weight 18 oz. each.

Blades for Model 385 12-inch Band Saw; 78 inch

Cat. No.	Width	Cut Radius	Code	Price Each
532	⅛"	¼"	BABLA	$1.10
533	3/16"	⅜"	BABLB	1.10
534	¼"	¾"	BABLC	1.10
536	⅜"	1"	BABLE	1.10
381	¼"	¾"	BAMET	1.50

Shipping Weight 12 oz. each.
No. 381 Blade is for cutting soft metals.

No. 892 14-Inch Band-Saw Unit

Mounted on the No. 891 Steel Stand, the 14-inch Band Saw becomes a completely portable unit, which may easily be taken to the job if desired. If fitted with the No. 882 Lamp Attachment (see page 53) it becomes independent of the shop lighting, and can be set up and operated anywhere that current is available. Costing much less than heavy mill-type band saws, it will do practically the same work and leave more money available for other additional equipment.

For average work the ⅓ H. P. Delta Motor, with built-in switch, will be found to furnish ample power, especially in the home shop. For heavy and continuous production work we recommend the use of the No. 820 ½-H.P. Repulsion - Induction motor. Both of these motors may be fitted with switch rod to bring control of the machines to the finger tips.

No. 892 Unit consists of:

No. 890	14" Band Saw...	$43.85
No. 568	V-Belt	1.00
No. 5275	2¾" V - Pulley (½" bore).....	.45
No. 891	Steel Stand	6.85

Shipping Weight of Stand 30 lbs.
Code Word LABST.

Total $52.15

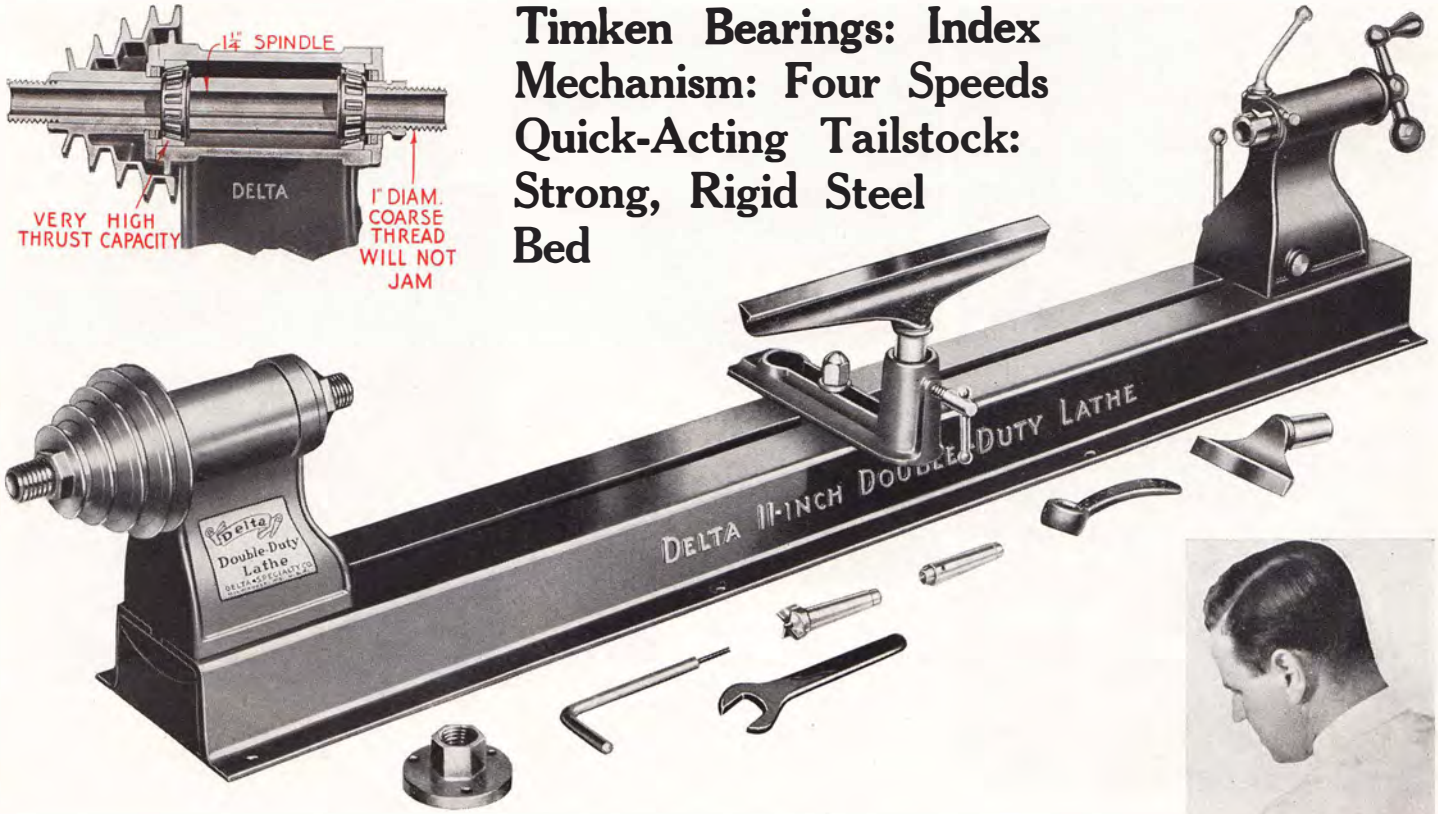
Ship. Wt. 225 lbs. Code Word LABUN.

For motors and switch rods see pages 54-55.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

New! Delta Double-Duty 11-inch Lathe

Timken Bearings: Index Mechanism: Four Speeds Quick-Acting Tailstock: Strong, Rigid Steel Bed



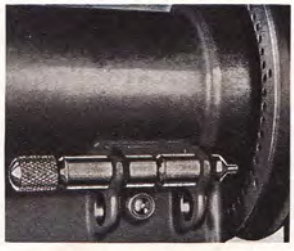
Finest Lathe Ever Made for any Workshop
Ideal for Manual-Training Classes

All the vast experience we have gained in manufacturing thousands of lathes was brought into play in designing the new Delta Double Duty Four-Speed Lathe, and the result is, we believe, the ultimate in design of lathes for the small workshop. To begin with this is a real lathe — not a toy. It is 56" in length overall. It will swing pieces 11" in diameter over the bed. The standard length of the bed is 48" and pieces 37" long can be turned between centers. Pieces of practically unlimited diameter can be turned on the left hand end of the headstock.

The superiority of this lathe starts with the bed. Delta engineers have not been content merely to follow tradition by using lengths of structural steel or cast iron, but have designed a lathe bed on an entirely new principle.

Built like a modern steel bridge, the Delta lathe bed is formed from very heavy $\frac{5}{16}$" steel, with crosspieces of the same heavy material welded in every 6". This design produces a bed that is unusually rigid and free from springing. To understand how strong this bed really is in comparison with other designs, look at the photo on page 38.

Study the advantages of this lathe, with its superb bed, its Timken-bearing headstock, its built-in index mechanism (another pioneer Delta development): its graduated tailstock, Morse taper centers, hollow spindle (full $\frac{5}{8}$" bore) and other unusual features, and you will understand why discriminating users say that this is the finest lathe ever offered for the small shop.



Note double row index holes: One row 60 holes gives widest range of division; the other row—8 holes—enables quick indexing of most often used divisions.

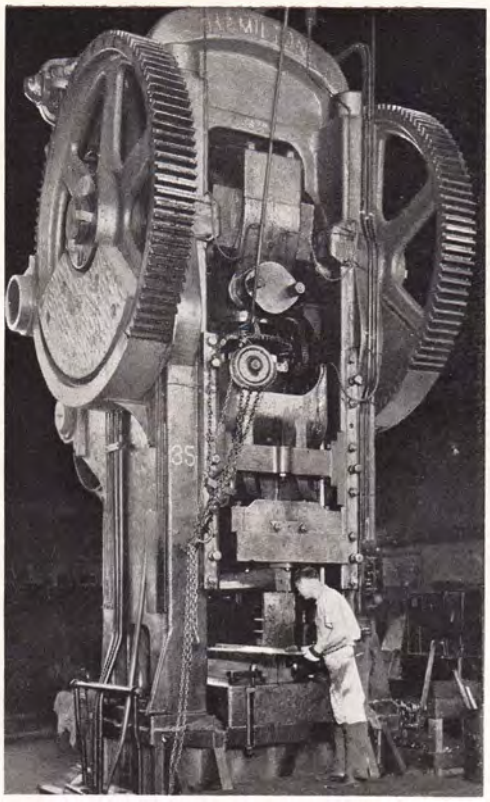
No. 930 Delta "Double-Duty" 11-inch Four-Speed Lathe, Including 3" faceplate, special Allen wrench, faceplate wrench, taper-shank spur center, taper-shank cup center, tool support and tool-support base..... **$28.85**
Shipping Weight 70 lbs. Code Word DUBLA.

No. 932 Four-Speed Pulley for motor ($\frac{1}{2}$" bore) **$1.25**
Shipping Weight 3 lbs. Code Word DUBLC.
Note: This pulley can also be furnished in $\frac{5}{8}$" and $\frac{3}{4}$" bore.

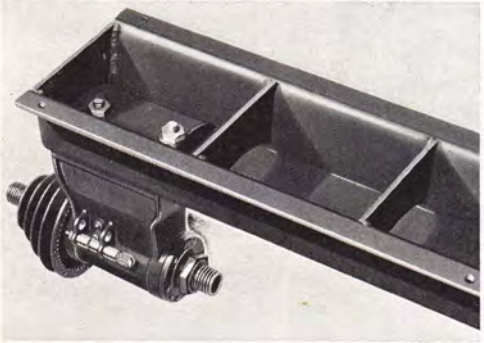
No. 588 V-Belt, 25$\frac{5}{16}$" center to center..... **$1.10**
Shipping Weight 8 oz. Code Word FORVC.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Many Unusual Features in Delta Lathe



Some idea of the tremendous strength of the beds of Delta Lathes may be obtained from the photos above. The one on the left shows the enormous size of the press that is required to form the heavy steel that forms the members of the bed, and the



A view of the underside of the radically new Lathe Bed Welded cross members every six inches make this bed tremendously strong and rigid, assuring permanent alignment and accuracy of the Lathe.

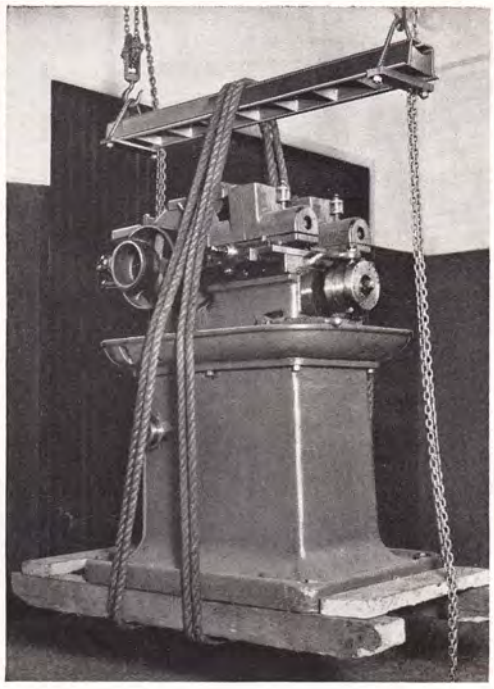
center photo shows one of the members being removed from the massive die after forming. To form the heavy strips of $\frac{3}{16}$" steel into the graceful reverse curves that distinguish the Delta Lathe requires tons of pressure and the use of enormous machines.

This method of forming a lathe bed is much more expensive than ordinary methods, of course, but it is characteristic of Delta thoroughness in design and manufacture.

The headstock is also unusual. The spindle (see cut-away view on previous page) is a full 1¼" diameter at the center, and runs on Timken tapered roller bearings, which were adopted on account of their large load and thrust capacity, familiar to every mechanic. A ⅝" hole is drilled through the spindle from end to end, which is very useful not only for metal work but also for repetition work in wood, where the stock is held in the chuck and is allowed to project through the spindle. Note that it is unnecessary to dismantle the spindle and pulley in order to install the belt, as it is on some lathes.

Both the spindle nose and the rear end are threaded with a heavy, steep-pitch thread of U.S.S. form. This makes attachments easy to remove, and prevents the danger of jamming and breaking which is present when a fine thread is employed. The nose is threaded right-hand and the rear end left hand. The Delta 6" faceplate, due to its unique form of thread, can be used on either end. The front of the spindle hole is reamed for No. 2 Morse-taper shanks, making all attachments with this form of shank instantly attachable and removable, and guaranteeing that they will run true.

A throw of the ball-end lever to one side or the other instantly clamps the tailstock rigidly in place or loosens it ready to be slid along the bed. No wrench needed.



The index mechanism — pioneered by Delta—offers an advantage not obtainable in others patterned after it. The pulley is provided with two rows of holes (not merely a single row); one of eight and one of sixty holes. This permits the widest possible range of division, as the knurled-head index pin can be used in either row, and this wide range cannot be secured with a single row. This simple and fool-proof mechanism enables all kinds of index and dividing work to be done on the lathe itself, instead of necessitating a separate machine for the work.

Using a surface gauge, work in the lathe may be accurately laid out in halves, quarters, etc., by the use of the index, and for fluting and beading legs and other parts of furniture in connection with a portable router or flexible shaft the index feature is invaluable. The two rows of holes provide any required division of the work, and the pin holds it absolutely rigid while the operations are being performed.

The tailstock sleeve is also reamed No. 2 Morse taper so that all attachments that fit the headstock will also fit in the tailstock. The sleeve is moved to and from the work by a convenient ball-crank handle, and is graduated in inches and sixteenths. It is also provided with an adjustable pointer, which, in connection with the graduations on the sleeve, affords a very convenient means of drilling to accurate depth.

No wrench is required to lock the tailstock to the bed. A simple movement of the ball lever at the rear, where it is convenient to the hand, locks and releases the whole tailstock, so it can be instantly slid to any position along the bed. Note that the tailstock is very sturdy and massive.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Double-Duty Lathe Units Are Unique

No. 950 Four-Speed Lathe Unit

Compact, portable, convenient and efficient, the Delta Double-Duty Lathe Unit is an ideal tool for all serious craftsmen. It is especially adapted for manual-training, and its low price enables the school to install enough machines for the largest classes, at a fraction of the cost of three or four heavier machines. Speeds 900, 1,400, 2,200 and 3,400 R. P. M.

For pattern shops, small cabinet shops, furniture repair shops; in fact, for general woodworking shops of all kinds, no better or more practical lathe has ever been offered. Its portability makes it especially useful where space is at a premium.

The unit consists of the No. 930 Double-Duty Lathe, mounted on No. 947 Lathe Stand. Legs are of heavy cast iron. Bench top and motor shelf are of clear pine, oiled and varnished.

No. 950 Lathe Unit includes:

No. 930	Double Duty 11-inch Speed Lathe	$28.85
No. 947	Lathe Stand with Legs and Bolts	19.85
No. 588	V-Belt	1.10
No. 932	Four-speed Motor Pulley (½ Bore)	1.25
	Total	$51.05

Shipping Weight 190 lbs. Code Word DUBUN.

No. 945	Lathe Legs only, (no Bolts) per pair	$13.25

Shipping Weight 65 lbs. Code Word DULEG.

No. 947	Lathe Stand complete with Legs, Top, Shelf and full set of bolts, ready for assembly	$19.85

Shipping Weight 110 lbs. Code Word DUSTA.

No. 950

No. 952

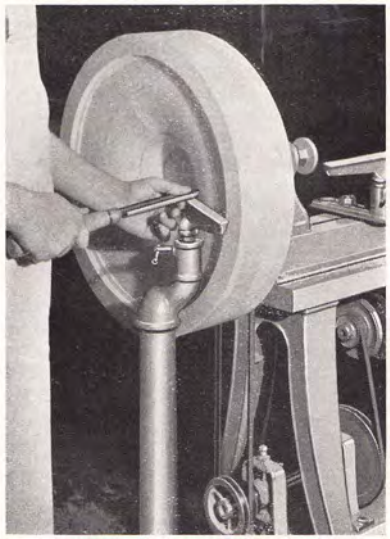
No. 952 Eight-Speed Lathe Unit

The No. 952 Double-Duty Lathe Unit represents the most versatile lathe unit ever produced for a low price. When fitted with a countershaft and a No. 820 half-horsepower motor eight speeds are available: 3400, 2200, 1400, 1300, 900, 820, 525 and 340 R. P. M.

This means that the lathe is suitable for a wide range of work as well as ordinary wood turning. The slower speeds are especially suitable for heavy faceplate work in patternmaking, as the photo on this page shows. Here is a pattern 20 inches in diameter by 6 inches wide being turned on the outside faceplate, without the slightest suggestion of chatter.

The wide range of speeds enables work to be done that cannot possibly be handled on the ordinary woodworking lathe. For example, the addition of a slide rest will turn this machine into an ideal speed lathe for the tool-room or small experimental shop, for practically everything in the way of lathe work, with the exception of screw cutting, can be done on a lathe of this type. For light turning in brass and cold-rolled steel, for truing commutators, etc., it will be found to perform just as well as a standard toolroom speed lathe, due to its exceptionally rigid construction and to the accurate work that is built into the head and tailstocks.

The index feature on the headstock makes it especially useful for layout work when used as a toolroom or experimental shop speed lathe, as it is surprising what a vast amount of time can be saved on dividing jobs simply by the use of the index mechanism and the surface gage.



Turning a pattern 20 inches in diameter by 6 inches wide on the left end of the spindle of the Double-Duty Lathe, and using the new Delta floor stand for the tool support.

No. 952 Lathe Unit includes:

No. 930	Double Duty 11-inch Speed Lathe	$28.85
No. 947	Lathe Stand, complete	19.85
No. 588	V-Belt	1.10
No. 932	Four Speed Motor pulley (¾ Bore)	1.25
No. 370	Hangers (Two)	4.50
No. 378	Countershaft ¾″ diameter x 20″ long	.60
No. 5800	V-Pulley for Lower Shaft (¾ Bore)	1.50
No. 5500	V-Pulley for Motor (¾ Bore)	.75
No. 5600	V-Pulley for Lower Shaft (¾ Bore)	.90
No. 5275	V-Pulley for Motor (¾ Bore)	.45
No. 374	¾″ Collar (Two)	.60
No. 355	V-Belt	.80
	Total	$61.15

Shipping Weight 215 lbs. Code Word DUBUS.

For prices of stand and legs only see No. 950, above.

For motor and switch rods, see page 47.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta 11-in. Lathe Accessories

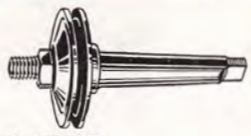
No. 163 3" by 3" sanding drum with No. 2 Morse taper shank to fit 11-inch Lathe. The combination of the patented Delta sanding-drum construction with the taper shank makes an exceptionally true-running drum. With one garnet sleeve **$2.50**

Shipping Weight 2½ lbs. Code Word SATAP.

No. 164 1¾" by 2 " sanding drum, with No. 2 Morse taper shank to fit 11-inch Lathe. Same construction as No. 163. Fits any lathe with No. 2 Morse taper hole in spindle. With one sleeve..... **$1.85**

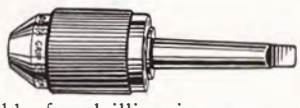
Shipping Weight 1¾ lbs. Code Word SATAQ.

No. 165 Grinding wheel arbor with No. 2 Morse taper shank. Holds all grinding wheels with ½" hole, as well as buffing wheels, wire brushes, etc. See page 36. A very high-grade arbor..... **$1.10**



Shipping Weight 1 lb. Code Word ARTAP.

No. 166 Delta-Grip Chuck with No. 2 Morse taper shank to fit headstock or tailstock of 11-inch Lathe. See page 28 for description of this chuck. Invaluable for drilling in lathe. Holds drills up to $\frac{17}{32}$"..... **$3.25**



Shipping Weight 2½ lbs. Code Word CHTAP.

No. 695 Right-angle tool support. Fits both 9-inch and 11-inch Lathes. Has 1" diameter shank to fit No. 696 and No. 941 bases. Extremely useful for faceplate work..... **$1.50**

Shipping Weight 3 lbs. Code Word TOSRA.

No. 933 Drive Center for 11-inch Lathe. With No. 2 Morse taper shank. Has replaceable center pin and four accurately milled teeth. Can be used on any lathe with No. 2 Morse taper hole in headstock spindle..... **.90**

Shipping Weight 6 oz. Code Word DUBLD.

No. 934 Cup center for 11-inch Lathe. With No. 2 Morse taper shank. Has replaceable center pin. Hardened and polished. Fits any tailstock with No. 2 Morse taper hole..... **.90**

Shipping Weight 6 oz. Code Word DUBLE.

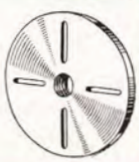
No. 935 Adapter for 11-inch Lathe. Has No. 2 Morse taper shank on one end with ½" diameter on the other. Enables all lathe attachments with ½" bore to be used on 11-inch Lathe..... **.80**

Shipping Weight 6 oz. Code Word DUBLF.

No. 936 3" Faceplate for 11-inch Lathe. 3" in diameter for small and medium faceplate work. Faced true and provided with four holes for screws. Threaded to fit spindle of No. 930 Lathe. R. H. thread only.... **.95**

Shipping Weight 1½ lbs. Code Word DUBLG.

No. 937 6" Faceplate for 11-inch Lathe. 6" in diameter for large faceplate work. Has special form of thread so it can be used *either on front or rear* of lathe spindle; fits both right and left-hand thread.. **$2.10**



Shipping Weight 3 lbs. Code Word DUBLH.

No. 938 Hand wheel for 11-inch Lathe. 5" in diameter, fits left-hand end of lathe spindle (left-hand thread only). Useful for quick stopping of lathe, for indexing, etc. Most professional woodturners prefer a hand wheel on their lathes **$1.85**

Shipping Weight 2 lbs. Code Word DUBLI.

No. 941 Tool-support base for 11-inch Lathe only. Note that this base is higher than the No. 696, shown on the opposite page, and that it will not fit the 9-inch Lathe. V-shaped hole for ½" to 1" shanks. Clamp-plate spring, washer, bolt and nut included. 3⅜" high. **$1.00**

Shipping Weight 3 lbs. Code Word DUBLK.

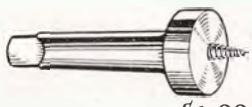
No. 951 Sanding disk for 11-inch Lathe. 8½" in diameter, and threaded to fit spindle of No. 930 Lathe only. Will not fit 9-inch Lathe. With one garnet disk. R. H. thread only... **$2.25**

Shipping Weight 3 lbs. Code Word DUBLM.

No. 939 60-degree plain center for metal turning. With No. 2 Morse taper shank for 11-inch Lathe only. Hardened and ground..... **$ .90**

Shipping Weight 6 oz. Code Word DUBLO.

No. 940 Screw center, with No. 2 Morse taper shank for 11-inch Lathe only. Has replaceable center screw, No. 14, 1½" long..... **$1.00**



Shipping Weight 7 oz. Code word DUBLJ.

No. 943 4-Jaw Independent Chuck. Holds metal rods of all kinds; small castings, regular and irregular in shape; wood dowels for repetition work, etc. A high-grade chuck at a low cost. Fitted with back plate ready for installation on nose of 930 lathe spindle..... **$6.25**

Shipping Weight 3 lbs. Code Word DUCHU.

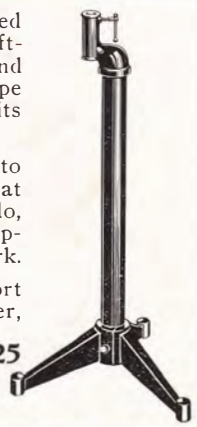
No. 948 Steady rest for 11-inch Lathe. Prevents spring and vibration of long and slender work. Indispensable for slender turnings. Takes work up to 2¼" diameter. Heavy, well-designed cast-iron body, wide steel shoes.. **$3.25**

Shipping Weight 5 lbs. Code Word DUBRE.

No. 697 Floor stand for tool-supports. Used for turning faceplate work on left-hand end of lathe spindle. Very heavy and substantial cast tripod legs, with heavy pipe standard and cast tool-support socket. Fits No. 690, 692 and 695 tool supports.

This floor stand will prove of great value to patternmakers and others who have a great deal of large diameter faceplate work to do, as it does away with all makeshift tool supports, and insures accurate, chatterless work.

It can also be used as an extension support for long work on the circular saw and jointer, by making a rest to fit the hole in the socket. Shipped knocked down.... **$8.25**



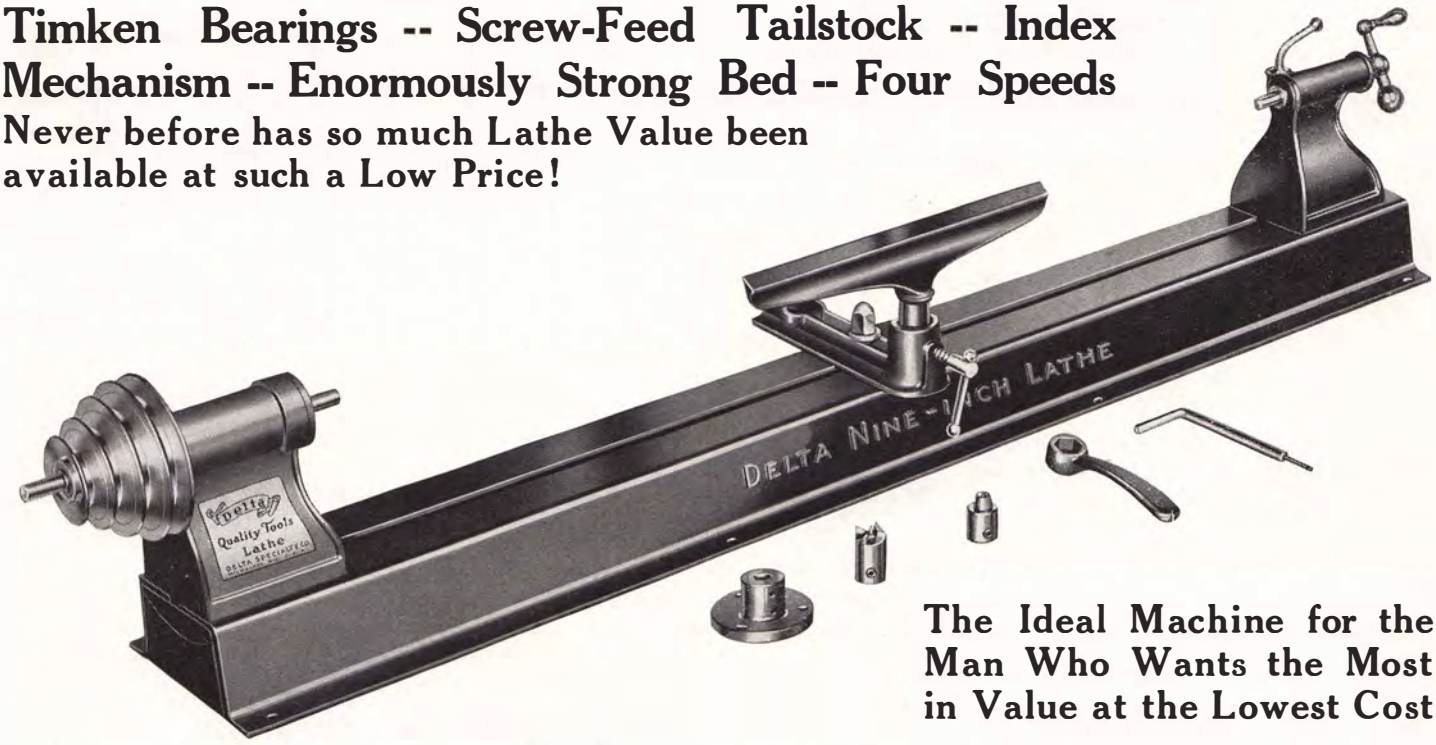
Shipping Weight 40 lbs. Code Word TOSTA.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta 9-inch Timken-Bearing Lathe

Timken Bearings -- Screw-Feed Tailstock -- Index Mechanism -- Enormously Strong Bed -- Four Speeds

Never before has so much Lathe Value been available at such a Low Price!



The Ideal Machine for the Man Who Wants the Most in Value at the Lowest Cost

Built to the Same Exacting Standards as the 11-inch Lathe

For the man who wants to equip his shop at the lowest possible cost consistent with the purchase of good tools, we do not know of any Lathe on the market than can compare with this one. It is built to exactly the same high-grade standards of accuracy and sound construction as the 11-inch Lathe, and will give exactly the same long, satisfactory service.

Strong Bed

Consider these features, and compare them with that of any other Lathe on the market selling at anywhere near the same price: The bed is exactly the same as that used on the 11-inch Lathe, rigid, strong and built for lasting accuracy. The arbor runs on Timken tapered-roller bearings, insuring long life and freedom from trouble.

Index Mechanism

The headstock pulley has same indexing mechanism as on the larger Lathe, thus bringing to the user of the small Lathe all the convenience in layout and in fluting, grooving, etc., as described for the larger model. The Lathe will swing stock 9" in diameter over the bed, and 37" long between centers. Arbor extensions on each end are ½" in diameter, enabling the use of many standard attachments.

Screw-Feed Tailstock

The tailstock is of the modern screw-feed type, with convenient ball-crank handle for operation and ball-end lever for quick locking of the quill.

In capacity, in ease of operation, in convenience and service this Lathe will out-perform Lathes selling at two or three times its price.

The addition of the new No. 947 Lathe Stand, at any time, makes a sturdy, handsome, completely portable unit out of the 9-inch Lathe. Never before have units of this type been vailable to the craftsman at such a reasonable price.

No. 955	Delta 9-inch Four-Speed Timken Bearing Lathe, including 3" faceplate, spur center, cup center, 12" tool-support, tool-support wrench and special Allen wrench, as shown. 4" tool support and tool support base..... Shipping Weight 70 lbs. Code Word NEWLA.	$19.85
No. 932	Four-speed Motor Pulley (½ Bore)..... Shipping Weight 3 lbs. Code Word DUBLC.	1.25
No. 568	V-belt, 24 5/16" cent. to cent..... Shipping Weight 10 oz. Code Word FORVD.	1.00
No. 960	9-inch Four-speed Lathe Unit, including No. 955 Lathe, No. 947 Lathe Stand, No. 932 four-speed pulley, ½" Bore and No. 568 V-belt, similar to No. 950 unit shown on page 35.... Shipping Weight 185 lbs. Code Word NEWUN.	$41.95

See page 47 for motors and switch rods.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Turning Tools and 9-in. Lathe Accessories

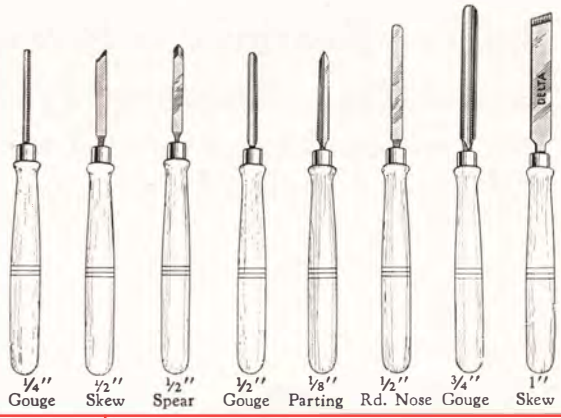
Woodturning Tools

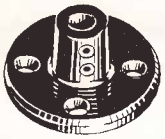
Delta wood-turning tools are made of the very best grade of Crucible Steel, and are sharpened ready for use. They are fitted with extra-long hardwood handles (1¼" diameter x 10½" long). The overall length of each tool is approximately 15".

No. 121 1" Skew Chisel. Code word SKERE $1.35
No. 122 ¾" Couge. Code word GOUGU 1.35
No. 123 ¼" Gouge. Code word GOUSA ..... .90
No. 124 ½" Skew Chisel. Code word SKEWO ..... .80
No. 125 ⅛" Parting Tool. Code word PARTO.. $ .80
No. 126 ½" Gouge. Code word GOUGO..... 1.00
No. 127 ½" Spear Point, Code word SPEAR ..... .80
No. 128 ½" Round-Nose, Code word RONOS ..... .85

Shipping Weight 14 oz. each.

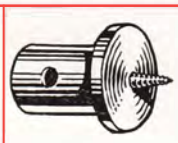
No. 130 Set of Eight Turning Tools, styles and sizes as above.. $7.50
Shipping Weight 5 lbs. Code Word TOSET.





For small and large face plate work, fits any ½" dia. shaft. With 2 Allen set screws.

No. 143 3" face plate..... $ .70
Shipping Wt. 1 lb. Code Word FACEO.



Excellent for turning small delicate work. Fits any ½" dia. shaft, 1½" dia. body.

No. 140 Screw center plate... $ .80
Shipping Wt. 8 oz. Code Word SCREC.

Special Allen extension wrench. Fits only $\frac{5}{16}$" dia. Allen hollow head set screws. 6" long, 2½" wide.

No. 192 Special Allen wrench. $ .25
Shipping Wt. 5 oz. Code Word AWREN.

High quality fast-cutting grinding wheel. 5" dia. by ½" wide. Has ½" dia. hole to fit No. 118 and No. 165 grinding-wheel arbors.

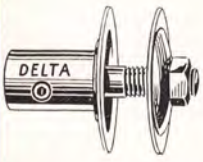
No. 111 5" emery wheel..... $1.25
Ship. Wt. 1¼ lbs. Code Word GRIND.

Buffing wheel, for polishing plated parts and cleaning and buffing metal parts of all kinds. Consists of two section, 6" dia., with ½" hole to fit arbor.

No. 113 6" buffing wheel..... $ .50
Ship. Wt. 8 oz. Code Word BUFFO.

Wire wheel for scrubbing rust from metal, removing burrs from metal parts, etc. Consists of two sections, 6" dia., with ½" hole to fit arbor.

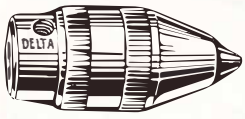
No. 116 6" wire wheel..... $1.50
Ship. Wt. 12 oz. Code Word WIRRO.



Rugged and strong arbor to carry grinding wheels, buffing wheel, wire brushes, etc. Flanges trued to compel wheels to run true sidewise. Fits any ½" dia. shaft.

No. 118 Grinding wheel arbor.... $ .75
Ship. Wt. 12 oz. Code Word ARBOR.

No. 958 Steady rest for 9inch Lathe only. Prevents spring and vibration of long stock. Very heavy and rugged cast-iron base, with sliding arms of steel. Complete with clamp, stud, etc. $3.25
Ship. Weight 5 lbs.
Code Word NEWRS.



New high-grade and accurately made chuck. Holds drill up to ½" dia. (Yes, even 33/64").

No. 120 ½" Drill chuck... $1.45
Ship. Wt. 1¼ lbs. Code Word CHUKO

High-grade drive center for lathe. Has replaceable center pin and four accurately milled teeth. Fits any ½" dia. shaft.

No. 138 Drive center..... $ .80
Ship. Wt. 4 oz. Code Word SPURO.

Hardened and well-made cup center, for tail stock of lathe. Center pin is replaceable. Fits anly ½" tail stock spindle.

No. 141 Cup center..... $ .70
Ship. Wt. 4 oz. Code Word CUPPO.

Tool-support base; has V-shaped hole for ½" to 1" shanks. Clamp plate spring, washer, bolt and nut also included. For 9-inch Lathe only.

No. 696 Tool support base $1.00
Ship. Wt. 3 lbs. Code Word TOSUB

Narrow tool support. Has 1" diameter shank to fit No. 696 and No. 941 bases. Very strong and well made. No interference with hands or tools when turning.

No. 690 4" Tool support..... $ .70
Ship. Wt. 1¾ lbs. Code Word TOSUP.

Wide tool support. Is 12" wide and has 1" dia. shank to fit No. 696 and No. 941 bases.

No. 692 12" Tool support.. $1.10
Ship. Wt. 3 lbs. Code Word TOSUM.

Extra-wide tool support for long turnings. 24" wide, and has two 1" dia. shanks. Requires extra base. No. 696 or No. 941 to suit lathe.

No. 694 24" Tool support..... $2.05

Ship. Wt. 5 lbs.
Code Word TOSUL.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

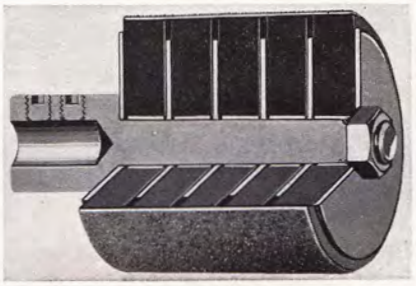
Delta Sanding Accessories

Delta Rubber Cushion Sanding Drums

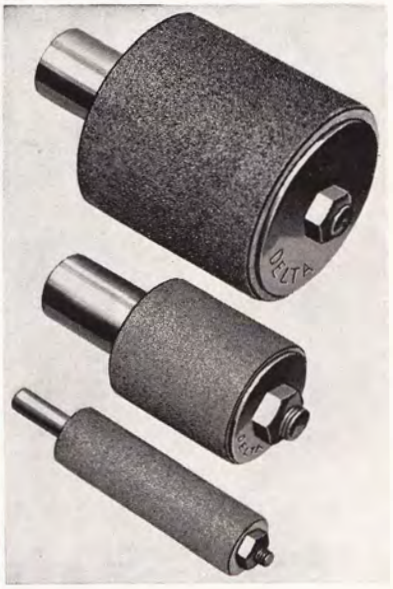
The Delta Rubber-Cushion Sanding Drum employs an entirely new principle, which insures that every part of the drum is evenly expanded. Many sanding drums expand more at the center than at the ends, which means the perfectly flat work cannot be produced with them. Others, have fastening arrangements for the sandpaper which "bump" ever time the fastening passes the work.

Perfect Sanding

In the Delta drum each rubber section is separated from its neighbor by non-corrosive bakelite washers, with metal brushings next to the arbor. The solid-rubber disks, afford an extremely large cushioning area, and as they are expanded perfectly uniformly, they produce perfect work, and run absolutely true. No. 840 drum has ½" diameter stem to fit into ½" hollow spindle or drill chuck. Others have ½" bore.



Note how the drum is assembled in sections, which expand uniformly under the action of the tightening nut. This provides a cushion of the utmost resiliency.



Three sizes of sanding drums to suit all classes of work. The two upper drums shown are bored ½" to suit any ½" shaft or spindle. The lower drum, No. 840, has a ½" stem which fits in the drill press or mortiser hollow spindle, or in the regular drill chuck.

See page 37 for drums with taper shank to fit 11-inch Lathe.

No. 830	3" dia. x 3" long Sanding Drum with one sleeve. Fits any ½" dia. spindle. Shipping Weight 1½ lbs. Code Word SADRA.	$2.50
No. 831	6 extra 3" x 3" sleeves (coarse garnet). Code Word SASLA, per ½ doz.	$0.85
No. 832	6 extra 3" x 3" sleeves (medium garnet). Code Word SASLB, per ½ doz.	.85
No. 833	6 extra 3" x 3" sleeves (aloxite; for metal). Code Word SASLC, per ½ doz.	1.00
No. 835	1¾" dia. x 2" long Sanding Drum with one sleeve. Fits any ½" dia. spindle. Shipping Weight 1¼ lbs. Code Word SADRB.	$1.60
No. 836	6 extra 1¾" x 2" Sleeves (medium garnet). Code Word SASLE, per ½ doz.	$0.70
No. 837	6 extra 1¾" x 2" Sleeves (fine garnet). Code Word SASLF, per ½ doz.	.70
No. 838	6 extra 1¾" x 2" Sleeves (aloxite; for metal). Code Word SASLG, per ½ doz.	.85
No. 840	1 1/16" dia. x 2½" Sanding Drum with one sleeve. Has ½" dia. shank. Fits into ½" hollow spindle or ½" chuck. Shipping Weight 8 oz. Code Word SADRC.	$1.25
No. 841	6 extra 1 1/16" x 2½" Sleeves (medium garnet). Code SASLK, per ½ doz.	.60
No. 842	6 extra 1 1/16" x 2½" Sleeves (fine garnet. Code SASLM, per ½ doz.	.60

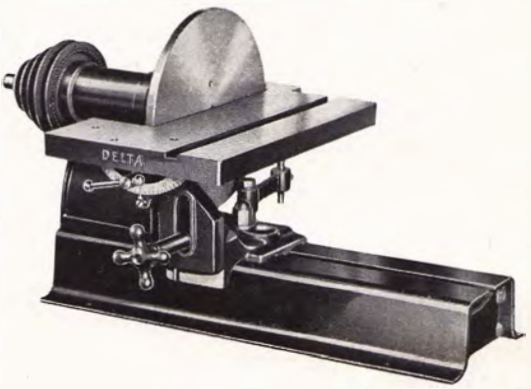
NOTE: Shipping weight of packages of 6 sleeves approximately 6 oz.

Delta Sanding Disc and Sanding Table

The new Delta Sanding Disk and Table forms one of the most useful tools in the craftsman's workshop. The improved table offers perfect support for the work being finished, and it is absolutely solid and free from spring, due to the support front and rear. The table is graduated to show the angle of tilt, and raises and lowers to suit the work.

Table has ½" grooves to suit No. 180 Delta Miter Gage, for sanding plain and compound miters. It may also be used for boring and routing work. Fits any Delta lathe bed.

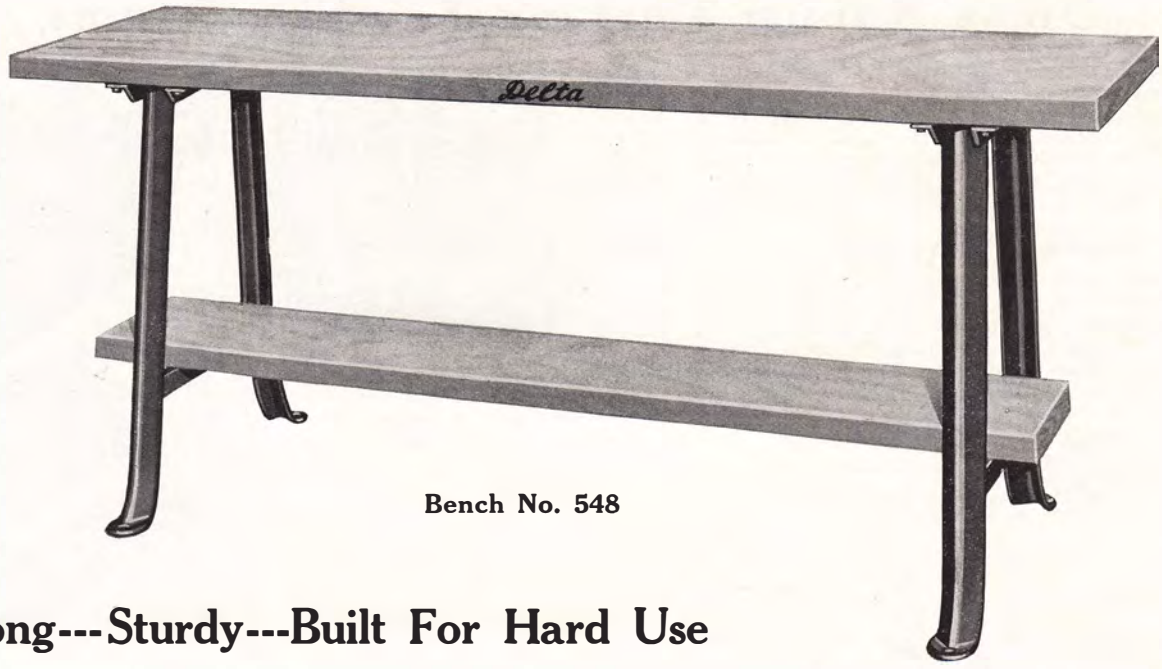
The table proves very useful in connection with short U-bed No. 946, and provides a compact machine upon which a large number of jobs can be done without upsetting a set-up on a larger machine.



No. 347	5" x 12" Sanding and Boring Table only, without disk, miter gage, headstock or bed. Shipping Weight 15 lbs. Code Word DESAT.	$5.25
No. 956	Four-speed 9-inch lathe headstock only, with ½" shafts. Shipping Weight 18 lbs. Code Word NEWHE.	7.85
No. 932	Four-step motor pulley, ½" bore. Shipping Weight 3 lbs. Code Word DUBLC.	1.25
No. 946	Short U-Bed for Headstock. Shipping Weight 15 lbs. Code Word DUBSB.	3.00
No. 151	8½" Sanding Disk, fits any ½" shaft, with one disk. Shipping Weight 3 lbs. Code Word DISSA.	2.10
No. 155	Coarse Garnet-Paper Disks, 8¾" dia. Shipped in packages of 12. Shipping Weight 1¼ lbs. Code Word DISGA.	per doz. 1.20
No. 157	Fine Garnet Disks (No. 0). Shipped in packages of 12 only. Shipping Weight 1¼ lbs. Code Word DISGB.	per doz. 1.20
No. 149	Delta "Distic" for applying disks, per stick. Shipping Weight 1½ lbs. Code Word DISIC.	.60

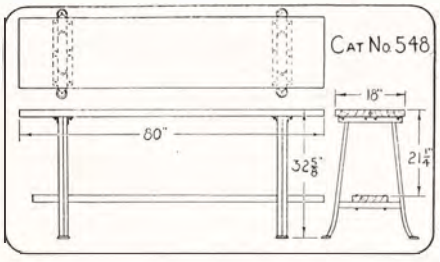
[Please Order by Catalog Number to Avoid Mistakes and Delay]

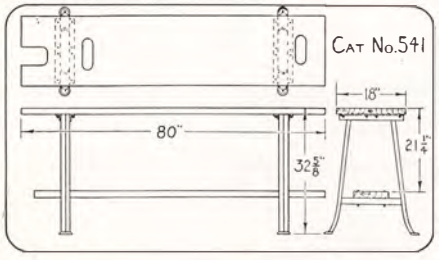
New Delta "Ready Made" Benches

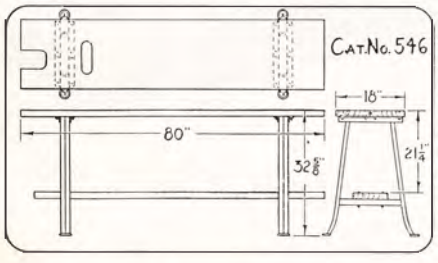


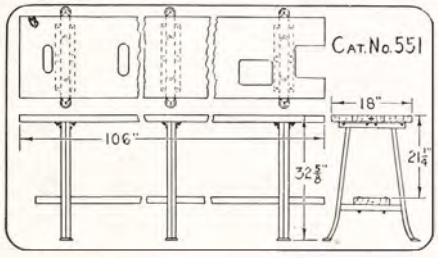
Bench No. 548

Strong---Sturdy---Built For Hard Use









The benches furnished with the Delta Work shops have been so admired that we have decided to list them separately for the convenience of Delta machine owners who want a sturdy rugged bench.

Heavy Steel Legs

The legs used for all Delta benches are the heavy steel ones shown below. When the bench top and shelf are bolted to these, the result is a bench so rigid that no bracing is necessary. Tops and shelves are made of 2" selected Western pine.

Standard Height

The distance from the bottom shelf to the top of the bench is identically the same as the distance from the bottom shelf to the top shelf of any Delta Steel Stand. This means that any of the belts which are used to operate machines such as the jointer, saw, router, etc., on the stands, may be used with the same machines on the benches.

Motor Shaft Height

The new Delta ½ H. P. motor measures 4½" from the bottom of the feet to the center of the shaft. Delta line-shaft hangers measure the same. The Delta ⅓ H. P. motor measures 3¼" from feet to shaft center, but blocks 1¼" high are furnished with every motor to bring the shaft to the standard 4½" dimension.

No. 548 Plain bench, as shown in photo. Dimensions as in drawing. Can be used for any combination of machines or tools **$17.50**
Shipping Weight 100 lbs. Code Word BENPL.

No. 541 Bench as used for No. 639 workshop combination. Slotted and drilled ready for assembly **19.95**
Shipping Weight 108 lbs. Code Word BENCH.

No. 546 Bench as used for new No. 90 "De-Luxe" Workshop, top slotted ready for assembly **19.50**
Shipping Weight 100 lbs. Code Word DELUB.

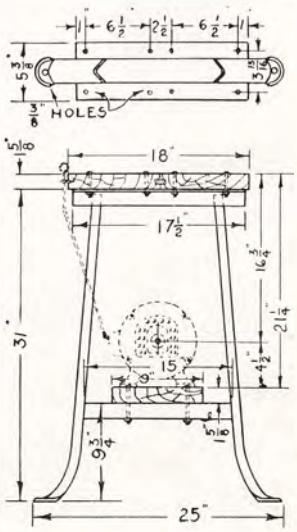
No. 551 Bench as used for new No. 652 Line-shaft Combination Shop **29.85**
Shipping Weight 110 lbs. Code Word BENLS.

No. 344 Steel Bench Legs only, as shown....each **3.00**
Shipping Weight 22 lbs. Code Word LEGSO.

Steel Bench Legs

The hardest part of the building of a bench—the making of the legs, is now unnecessary. With Delta bench legs, the building of a bench is now made easy, and the bench is stronger, more rigid and at the same time lighter than if clumsy wooden legs had been used. All that is needed is three 2" planks, 9½" wide, of good select stock. Fasten them to the Delta legs, and you'll have a bench that will astonish you with its strength and rigidity.

(Such a bench can be readily dismantled too).



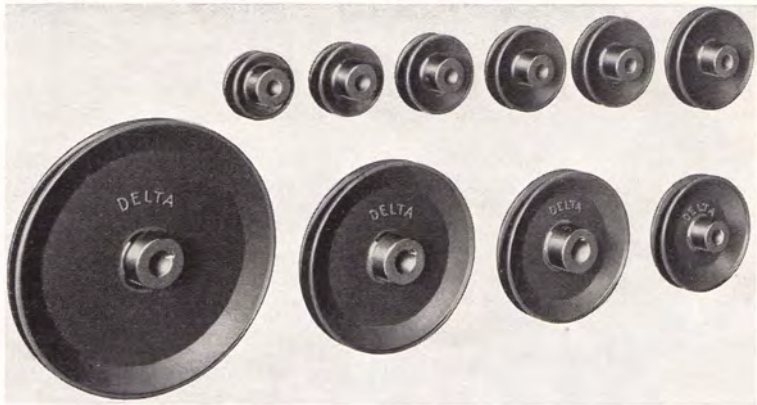
[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Line-Shaft Equipment

Delta V Pulleys

Delta V-Pulleys are designed for belts measuring ½" wide, $\frac{11}{32}$" thick and angle of 38°. The width, angle and general shape are all scientifically designed, and the result of many years experience with V-Belt Drives. All are of the Safety Disk Type —no spokes—and can be had with ½", ⅝" or ¾" bores. ⅝" and ¾" bores have $\frac{3}{16}$" keyway. All have $\frac{5}{16}$" hollow-head set-screw. These are not ordinary stamped pulleys. They run true and are balanced perfectly. ½" bore furnished unless otherwise specified.

Cat. No.	Outside Diam.	Code Word	Price Each
5200	2"	PULOA	.35
5225	2¼"	PULOB	.40
5250	2½"	PULOC	.45
5275	2¾"	PULOD	.45
5300	3"	PULOE	.50
5350	3½"	PULOF	.55
5400	4"	PULOG	.55
5500	5"	PULOH	.75
5600	6"	PULOJ	.90
5800	8 '	PULOK	1.50
6100	10"	PULOM	2.00



Delta Cone Pulleys

Useful for a wide variety of power drives. Nos. 718 and 720 can be used in any combination with each other. Two No. 718 pulleys used together provide speeds of 900, 1500, 2200 and 3450 R.P.M. Two No. 720 pulleys used together provide 1200, 1545, 1980 and 2575 R.P.M. A No. 718 and a No. 720 pulley used together provide the following ranges: 650, 1000, 1300, 1750 R.P.M. or 1750, 2400, 3400, 5000 R.P.M., depending upon which pulley is used as the driver.

No. 932 cone pulley should be used only paired with another 932, and will provide speeds of 900, 1400, 2200 and 3400 R.P.M. All speeds figured for 1750 R.P.M. motor.

All cone pulleys supplied in ½", ⅝" and ¾" bores. ½" furnished unless otherwise specified.

No. 718 Four-step cone pulley (small).....each **$ .75**
Code Word CONPA. Shipping Weight 2½ lbs.

No. 720 Four-Step cone pulley (large).....each **$1.10**
Code Word CONPB. Shipping Weight 3 lbs.

No. 932 Four-speed cone pulley.....each **$1.25**
Code Word DUBLC. Shipping Weight 3 lbs.

Delta-V Belts

The finest and most satisfactory V-Belts obtainable. Moulded into one endless piece —no lacings or joints to hammer pulleys. Easily and quickly slipped on pulleys. Ideal for short-center drives. Transmit an unusually large amount of power, and are capable of very high speeds. Run with very little tension.

Cat. No.	Inside Circumference	Width	Thickness	Angle	Code Word	Price Each
284	28¼"	½"	$\frac{11}{32}$"	38°	BELTA	.75
355	35½"	½"	$\frac{11}{32}$"	38°	FORVB	.80
387	38⅜"	½"	$\frac{11}{32}$"	38°	FORDP	.85
453	45¼"	½"	$\frac{11}{32}$"	38°	MORBL	.90
510	51"	½"	$\frac{11}{32}$"	38°	JOIVB	1.00
560	56"	½"	$\frac{11}{32}$"	38°	EICVB	1.00
568	56¾"	½"	$\frac{11}{32}$"	38°	FORVD	1.00
583	58¼"	½"	$\frac{11}{32}$"	38°	FORBL	1.10
588	58¾"	½"	$\frac{11}{32}$"	38°	FORVC	1.10
595	59½"	½"	$\frac{11}{32}$"	38°	BABEL	1.25
670	67"	½"	$\frac{11}{32}$"	38°	BELTU	1.60
673	72¼"	$\frac{7}{16}$"	¼"	38°	PREBL	1.00
750	75"	½"	$\frac{11}{32}$"	38°	JOBAS	1.85

¾" Line Shafting

Ground and polished to precision limits, this accurate shafting must not be confused with the cheap cold-rolled shafting sometimes offered. Carried in stock in 6', 8' and 10' length. Net weight per foot 1½ lbs.

No. 372 ¾" Ground Shafting, per foot..... **$0.30**
Shipping Weight per ft. 22½ lbs. Code Word LISHA.

¾" Shaft Collars

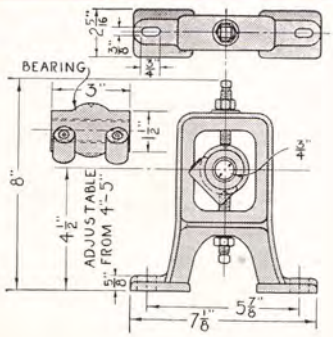
Delta Shaft Collars are of steel, with ¾" bore to fit line shaft. Equipped with special $\frac{5}{16}$" x $\frac{5}{16}$" Hollow-Head Set-screw. Used to keep shaft in proper position lengthwise, also at side of loose pulley.

No. 374 ¾" Shaft Collar, each..... **$0.30**
Shipping Weight 4 oz. Code Word LICAL.

Delta Flexible Couplings

Flexible couplings are necessary where motors are connected directly to the end of line shafts or to the shafts of machines, without the use of pulleys and belts. One side of the new Delta Flexible Coupling is bored ¾" to suit line shaft. The other side may be bored ½", ⅝" or ¾". Be sure to specify size wanted. ¾" bore furnished unless otherwise specified.

No. 379 Flexible Coupling, as shown. Each..... **$1.00**
Shipping Weight 1½ lbs. Code Word LICOP.



Self-Aligning Hangers

This sturdy, practical Line Shaft Hanger is one of the finest ever produced. It is self-aligning in every direction, and is adjustable up and down from 4" to 5" height. Once properly adjusted it will give years of quiet, trouble-free service. Oil wells hold a supply of lubricant sufficient for many weeks of operation. Made for ¾" shafting only.

No. 370 Line-Shaft Hanger, as shown..... **$2.25**
Shipping Weight 6 lbs. Code Word LIHAN.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Practical, Convenient Workshop Units

Delta Workshop Unit No. 652

This unit is a very popular one amongst craftsmen who like to have all of their tools mounted on the bench. Comprising 11-inch Lathe, 10-inch Band Saw, 4-inch Jointer and 8-inch Circular Saw, practically every type of woodworking operation can be performed on it.

No. 955 9-inch Lathe may be substituted for the 11-inch Lathe if desired. Deduct $9.10 from the total shown at the right if this is done, and be sure to specify the 9-inch Lathe.

Photo shows how this shop is adapted either for gasoline-engine or electric-motor drive.

Unit No. 650 and 652

This shop may be ordered for gasoline-engine drive if desired. If this is done, omit the No. 379 Flexible Coupling and add the following:

No. 376	6″ Tight Pulley for 1¼″ belt	$2.10
No. 377	6″ Loose Pulley for 1¼″ belt.	2.70
No. 374	Additional collar to keep loose pulley in place	.30
		$5.10

Shifter bar, motor or engine not included in these workshops. For gasoline engine drive order as below:

No. 650	Workshop, complete as above but without shifter bar, motor or engine	$159.95

Shipping Weight 360 lbs. Code Word WOCEO.

No. 652 Unit includes:

8-inch Circular Saw Group

No. 860	8-inch Circular Saw	$32.85
No. 560	V-Belt, 22¾″ cent. to cent.	1.00
No. 5500	V-Pulley, ¾″ Bore	.75
		$34.60

11-inch Lathe Group

No. 930	11-inch Double Duty Lathe.	$28.85
No. 932	Four-Step Drive Pulley	1.25
No. 588	V-Belt, 25 5/16″ cent. to cent.	1.10
		$31.20

10-inch Band Saw Group

No. 785	10-inch Ball Bearing Band Saw	$19.50
No. 560	V-Belt	1.00
No. 5275	2¾″ V-Pulley, ¾″ Bore	.45
		$20.95

4-inch Jointer Group

No. 301	4-inch Ball Bearing Jointer.	$24.50
No. 510	V-Belt, 20¼″ cent. to cent.	1.00
No. 5500	V-Pulley, ¾″ Bore	.75
		$26.25

Line-Shafting Group

No. 370	Four Hangers (each $2.25).	$9.00
No. 372	¾″ Shafting, 8′ long.	2.40
No. 374	Two ¾″ collars.	.60
No. 379	Flexible Coupling	1.00
		$13.00
No. 551	Special Bench, Complete	$29.85

Price Complete $155.85

Shipping Weight 350 lbs. Code Word WOCEM.

No. 747 Band-Saw Mortiser Unit

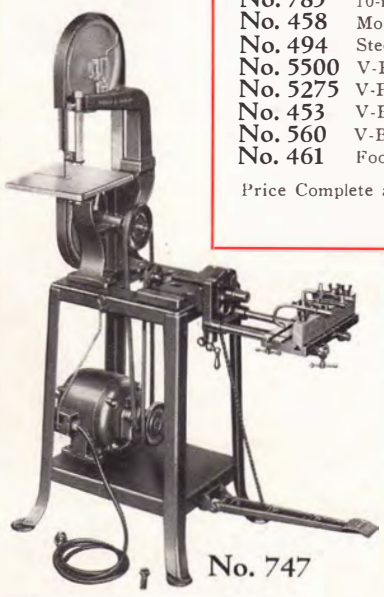
This forms a very practical unit for the man who already has a circular saw and jointer, for by adding this unit he will have a complete workshop in two handy units, each of which is the acme of convenience. This machine is mounted on the same heavy steel stand as the No. 360 unit, which makes it completely portable, and places the machines at a convenient operating height.

For average work with this unit the No. 800 ⅓ H. P. motor may be used. For heavy, continuous duty the No. 820 ½ H. P. Repulsion-Induction motor is recommended. Any standard motor may be used. When fitted with the two V-pulleys shown, either machine may be used separately, or both may be operated at the same time.

No. 747 Band Saw-Mortiser Unit includes:

No. 785	10-inch Band Saw	$19.50
No. 458	Mortising Attachment	26.25
No. 494	Steel Stand (no chute)	7.00
No. 5500	V-Pulley for mortiser, ¾″ bore	.75
No. 5275	V-Pulley for band saw, ¾″ bore	.45
No. 453	V-Belt for mortiser	.90
No. 560	V-Belt for band saw	1.00
No. 461	Foot-power feed for mortiser	4.25
	Price Complete as shown but without motor	$60.10

Shipping Weight 125 lbs. Code Word MIBRA.
For Motors and Switch rods see page 54.



No. 747

No. 745

No. 745 Scroll Saw-Mortiser Unit

The Delta 24″ Scroll Saw, combined with the Mortiser makes another practical combination. As with other combination units, one motor serves for both drives. All that is necessary is to transfer the belt from one pulley to the other. There is not the slightest interference between the two machines, and the operation of the mortiser is especially convenient.

No. 745 Unit includes:

No. 700	Scroll Saw	$19.95
No. 718	Four-Step Pulley	.75
No. 510	V-Belt	1.00
No. 458	Mortising Attachment	26.25
No. 716	Steel Stand	7.85
No. 461	Foot-Power Feed	4.25
	Price complete as shown but without motor or switch rod	$60.05

Shipping Weight 165 lbs. Code Word SCROM.
For motors and switch rods see page 54.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Three Popular, Practical Combinations

No. 580 Combination Unit

This is a combination that has proved to be a very popular one, because of its unusually handy and fool-proof arrangement. A study of the photo will show that there is not the slightest interference between any of the three machines.

The Band Saw is placed back of the No. 360 Unit in exactly the right position to clear all pieces being worked on either the Circular Saw or Jointer. Also, as the table of the Band Saw is above those of the other machines, large pieces can be handled on it without interfering with either of the other machines.

The Delta ½ H. P. Repulsion-Induction Motor drives all three machines conveniently, and with plenty of reserve power for the heaviest work.

No. 580 Combination Includes:

No. 360	Circular Saw Jointer Unit	$68.35
No. 785	10-inch Band Saw	19.50
No. 329	Steel Stand (no Chute)	5.75
No. 750	V-Belt, 32¼" center to center	1.85
No. 5275	2¾" Pulley for Band Saw, ¾" Bore	.45
	Total	$95.90

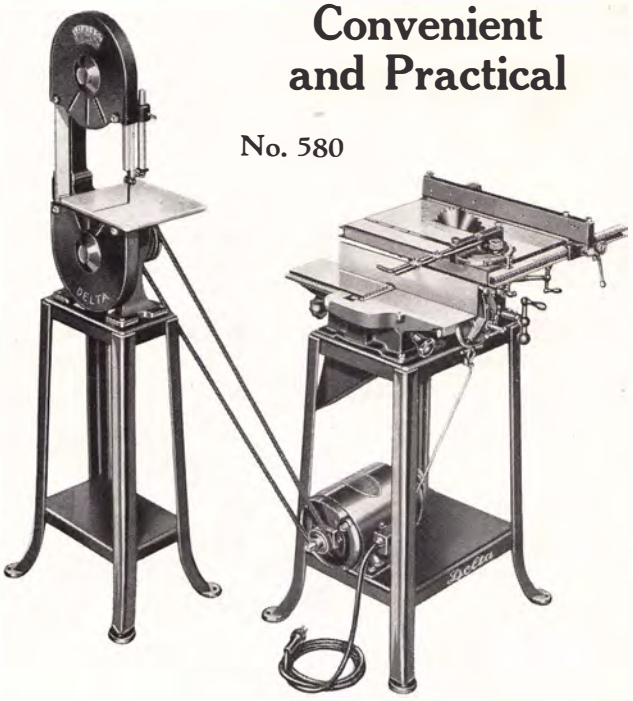
Shipping Weight 285 lbs. Code Word UNIBC.

No. 892 Band Saw Unit may be substituted for the No. 766, if desired. Add $25.45 to above price if this is done.

For motor and switch rods see page 54.

Convenient and Practical

No. 580



Scroll Saw —Disk Sander—Drill Press Combination No. 565

No. 565

Here is another combination that has proved very practical. The Sanding Disk makes a very popular addition to the Drill Press and Scroll Saw, as not only can a large variety of disk sanding jobs be done on it, but sanding drums and a grinding arbor can be used on the ½" headstock shafts.

The ⅓ H. P. Delta No. 800 motor is sufficient to drive all three tools, although it is recommended that only two be used at a time. Scroll Saw and Sander are both driven from the rear shaft of the motor on the Drill Press.

No. 565 Combination Includes:

No. 700	Scroll Saw	$19.95
No. 620	Drill Press	18.75
No. 956	Headstock	7.85
No. 347	Sanding Table	5.25
No. 946	Short U-Bed	3.00
No. 151	Sanding Disk	2.10
No. 750	V-Belt, (two)	3.70
No. 718	Cone Pulley ½" bore	.75
No. 800	⅓-H.P. Motor, with Cord and Plug	12.85
No. 548	Bench	17.50

Shipping Weight 289 lbs. Code Word LADSA. Total $91.70

Scroll Saw—Drill Press—Band Saw Shop No. 575

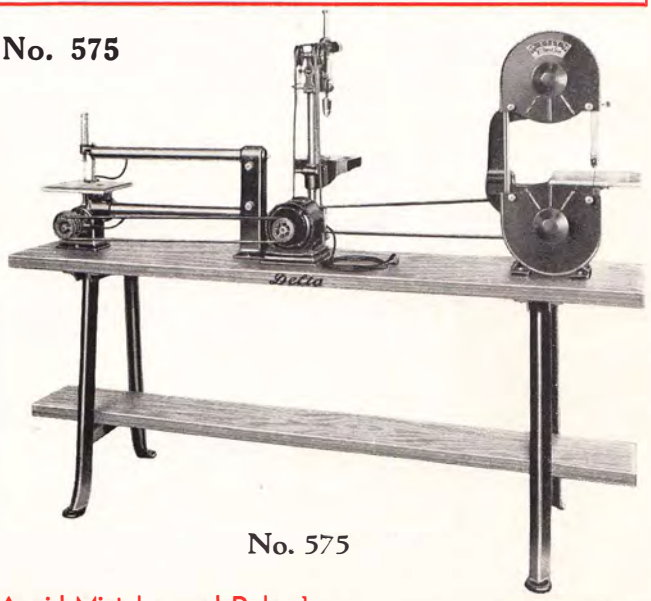
For drilling and routing and for all varieties of Scroll Saw work this shop combination is unique. The ordinary run of Scroll Saw work up to 1¾" thick is handled easily on the Scroll Saw, while the 10-inch Band Saw handles work up to 6" thick. It is an unusual job indeed that cannot be handled by this combination.

Drilling for interior scroll work, routing, carving, and sanding of the edges of Scroll and Band Saw work are handled on the versatile Delta No. 620 Drill Press, in addition to all general drilling work. The Drill Press forms an ideal complement for the Scroll Saw.

No. 575 Combination Includes:

No. 700	Scroll Saw	$19.95
No. 620	Drill Press	18.75
No. 785	Band Saw	19.50
No. 548	Bench	17.50
No. 750	V-Belt (Two)	3.70
No. 718	Cone Pulley, ½" Bore	.75
No. 800	⅓-H.P. Delta Motor	12.85
	Total	$93.00

Shipping Weight 322 lbs. Code Word LADBA.



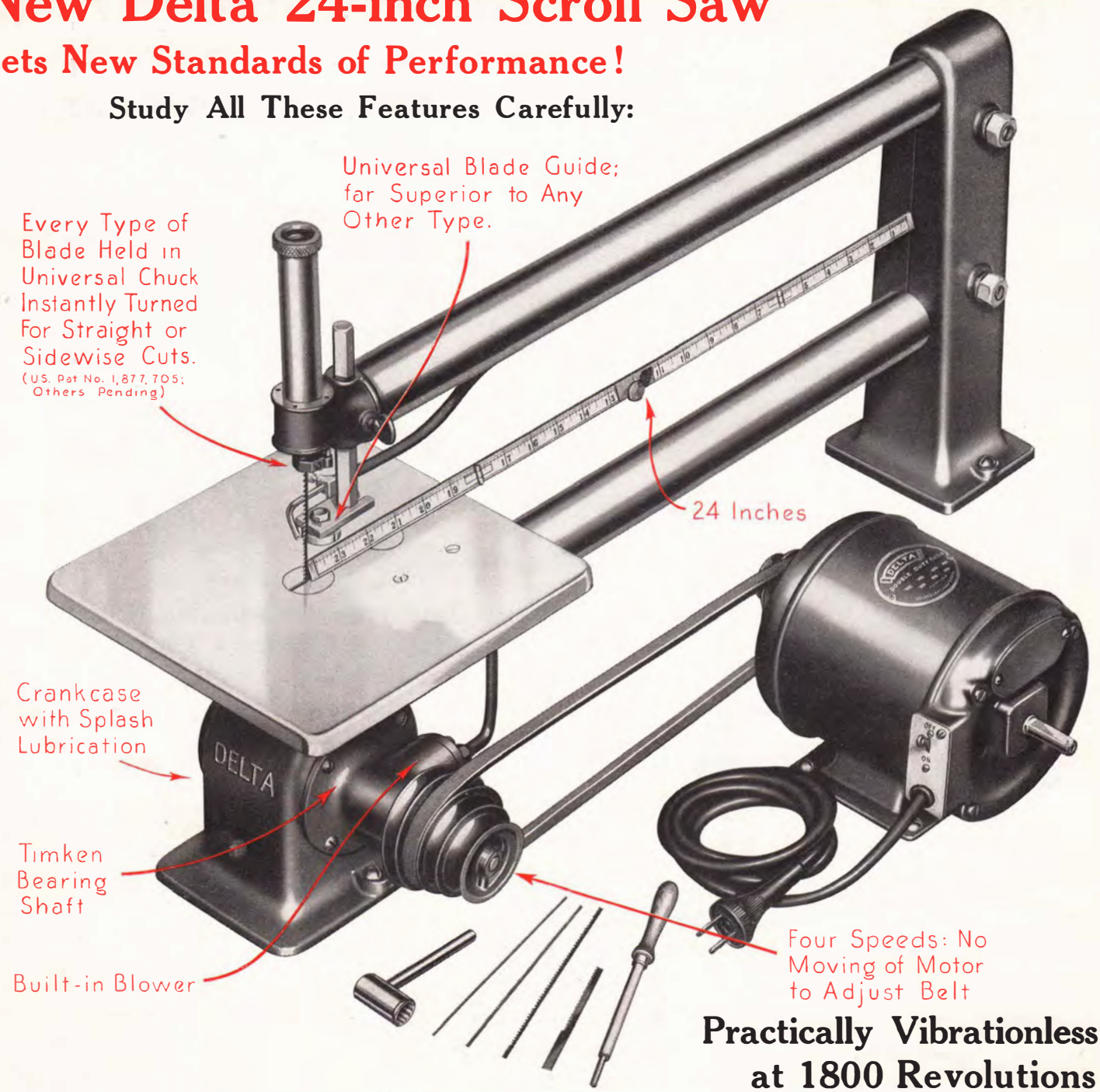
No. 575

[Please Order by Catalog Number to Avoid Mistakes and Delay]

New Delta 24-inch Scroll Saw

Sets New Standards of Performance!

Study All These Features Carefully:



Practically Vibrationless at 1800 Revolutions per Minute

No. 700	Delta 24" Scroll Saw, with 1 sabre blade, 3 jeweler's blades, No. 720 four-speed cone pulley on shaft, socket wrench and box wrench. Without motor, belt or motor pulley	$19.95
	Shipping Weight 60 lbs. Code Word LASAW.	
No. 284	V-Belt, 9" center to center.....	.75
	Shipping Weight 8 oz. Code Word BELTA.	
No. 718	Four speed motor pulley, ½" bore, gives speeds of 650; 1,000; 1,300 and 1,750 r.p.m. without moving motor	.75
	Shipping Weight 18 oz. Code Word CONPA.	

The most serious weaknesses of scroll saws, before the introduction of the pioneer Delta 24-inch Scroll Saw, were their extremely limited capacity and their destructive vibration. With this saw, Delta for the first time provided a saw that could be run at full motor speed without any vibration and springing within the machine itself, and also a machine that had a tremendous capacity—24 inches from blade to rear column—that had automatic lubrication of the mechanism, universal blade chucks (U. S. Patent No. 1,877,705 and others pending), a unique and practical design (U. S. Des. Patent No. 85,847), in short, a revolutionary machine.

Since its introduction, the Delta Scroll Saw has found its way into thousands of shops, and it has actually opened up unlimited fields of accomplishment for full-time, spare time and hobby woodworkers—and everywhere it has won enthusiastic praise from practical men for its excellent performance under a very wide variety of conditions, and on a great variety of work.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

An All-Around Machine for Every Shop

Here Are Only a Few of Its Hundreds of Uses

Jig-Saw Puzzles

The Delta Scroll Saw is the instant choice of makers of jig-saw puzzles. Quiet and smooth running, it enables the puzzle cutter to concentrate on his pattern without being distracted with machine troubles. This saw is rapidly becoming the standard saw for jig-saw puzzle work, as it is used by practically every important jig-saw puzzle maker in the country. As many as fifty-two of these machines are in use in one plant, and hundreds of individual owners are adding to their income by selling jig-saw puzzles made on the Delta Scroll Saw. The extra-fine blades shown on page 52 are of great value in this work.

Mortising Engravings

Engravers and electrotypers find that the Delta Scroll Saw does exactly the same work as machines costing many hundreds of dollars. One engraving plant, after several months' use of their Delta saw, writes: "We have found it such a great improvement over any of the previous saws we have used that we cannot help but comment on it. It is more practical than many of the heavier and larger Scroll Saws built for engravers' use, and for which we would have made five or six times the investment."

For Sign Makers

Sign makers immediately realized the possibilities that the enormous reach of the Delta Scroll Saw opened up for them. Since on this saw they could reach to the center of a standard 48" panel; they could cut out thousands of designs heretofore impossible without the purchase of expensive tools.

Many New Uses Are Found Every Day

When we say that the new Delta 24-inch Scroll Saw is the most versatile Scroll Saw ever produced we are not voicing our own opinion. We are merely repeating what our customers tell us. When the Delta saw was introduced we knew it was revolutionary, and that it could be used for many jobs beyond the reach of any other scroll saw, but every day we are learning of new uses to which this remarkable tool is put.

Paper Cutting

Delta Scroll Saws have been on the job for months in one nationally known organization, cutting paper patterns for model-coach parts to be used in a national contest for model coach builders. The patterns are made up into a pad about ½" thick so that a number can be sawed at one time. Naturally, these designs are very intricate, and must be cut with very clean edges. In this case the saw took the place of a die set up that would have cost several hundred dollars, and it turns out a first-class job. Manufacturers of parchment lamp shades and many similar products have found this saw to be ideally adapted to their purpose.

Cutting Box Dies

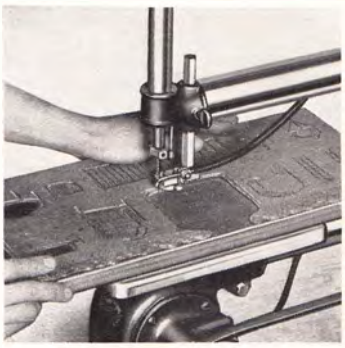
Enterprising paper-box manufacturers have been quick to see in the Delta Scroll Saw an opportunity to save money on equipment without sacrificing anything in accuracy or convenience. Practically any size of die can be cut on this remarkable saw with speed and accuracy.

Cuts Heavy Wood

Cutting 1¾" thick wood on the new Delta Scroll Saw is almost as easy as cutting paper patterns. The unequalled range of the Delta makes it an ideal tool for the pattern shop, the cabinet shop, the repair shop—in fact, any shop where there is a great variety of jobs to be handled.

Experimental Work

Experimental workers, also, are finding that the Delta Scroll Saw makes a splendid filing machine. Regular machine files with ¼" and ⅛" shanks are held in the universal chuck just like a saw blade, and held vertical, which is not the case with most other chucks.



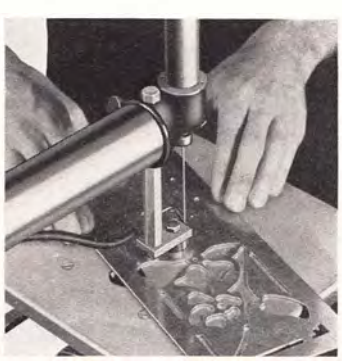
Printers and engravers find it invaluable for mortising cuts and electros, both for inside and outside mortises.

Sanding the edges of Scroll Saw work is made handy for the first time by means of the Delta Sanding Attachment.

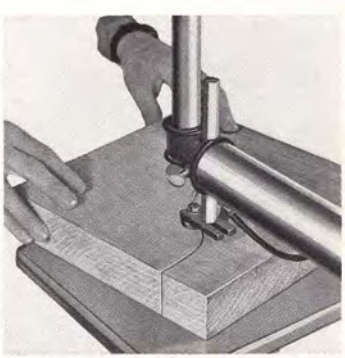
Sign makers find the Scroll Saw with extension tubes to be ideal for their work, as it handles very large panels.

This Scroll Saw cut all the lumber for a filling station.

Cutting paper patterns for coach models in a national contest.



Light metal templates and patterns are cut as easily as wood.



Very heavy work is handled just as easily as the lightest plywood.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Patented Chucks—Universal Blade Guide

Delta Chuck Offers Many Advantages

The chucks on the Delta Scroll Saw (U. S. Patent No. 1,877,705) are the result of many experiments to produce the very best clamping mechanism for scroll blades and other tools used in the scroll saw. It consists of a body having a series of hardened-steel jaws, operated by means of a hollow-head screw. The pressure of the jaws is proportioned so that, while they will hold the largest sabre blades rigidly, they will not break the finest puzzle blades.

Holds All Blades

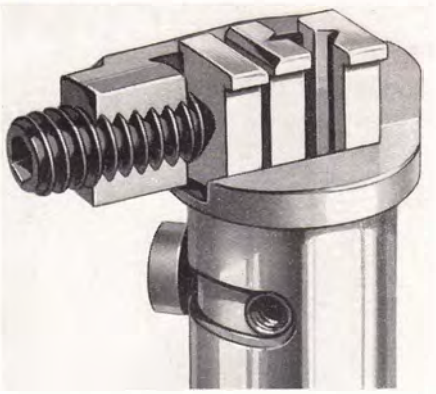
Every type of blade from the finest to the coarsest can be held in these chucks, without changes of any kind, ordinary blades being held between the flat chuck jaws and sabre blades between the V-jaws of the lower chuck, as shown below.

Holds Files; Sanding Attachment

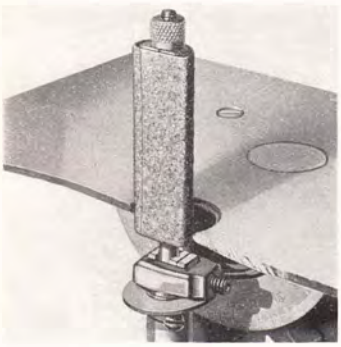
Files, sanding attachments and other accessories with ¼" round shanks are also held in the V-jaws of the lower chuck, which holds them *perfectly vertical and rigid.* Pressure can be exerted in any direction without changing the alignment of the tools, which cannot be done with chucks of inferior design.

Faced in Any Direction

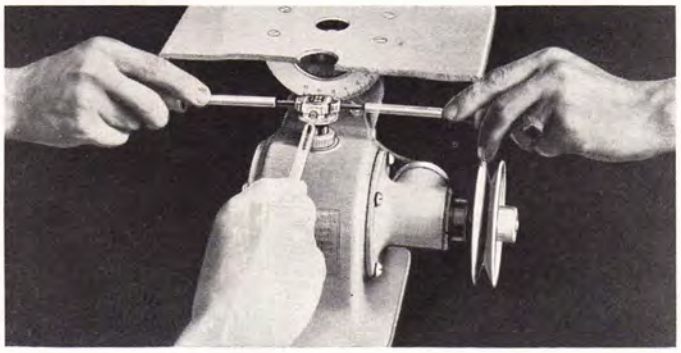
The lower chuck can be faced in any direction, right, left or front, almost instantly, and the upper one is changed even faster. There is absolutely no interference with the lower chuck, as the photo below shows, because the trunnions are behind the chuck; not in front of it.



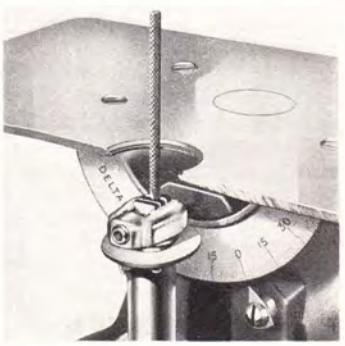
A cut-away view of the lower chuck, without the dust ring, showing the three hardened-steel jaws. Note the Vees in the rear jaws.



Sanding attachment held in V-jaws of lower chuck.



The lower chuck is reached from all directions, without the slightest interference from any other part.



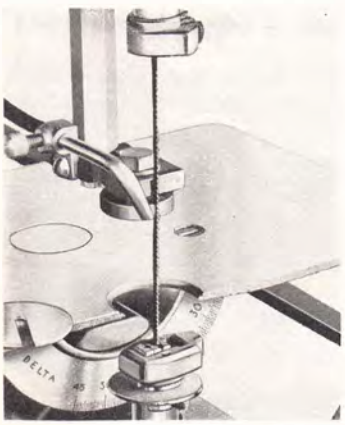
Files with ⅛" and ¼" shanks are held in the V-jaws of the lower chuck.

Delta Universal Blade Guide is Far More Efficient than Any Other Type

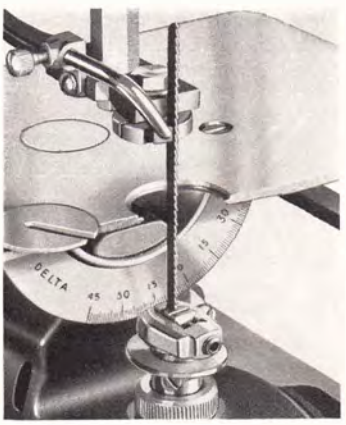
There is no more efficient or universal blade guide made than the standard one furnished with the Delta Scroll Saw. Like the chuck, its design is the result of constant experiment to find the best, and the consequence is that the guide can be used for the widest variety of work and with any type of blade, with perfect satisfaction. It is infinitely preferable to a roller type of guide, as it supports the blade right at the cutting point, instead of some distance above it, and much more convenient and satisfactory than a modified band-saw type of guide.

The guide consists of a hardened-steel disk with a series of slots and one V-groove, the width of the slots being graduated to suit a great variety of blades. The disk is carried by a hardened-steel plate. The plate is set to support the back of the blade, and the disk, with the proper slot forward, is used to support the blade sidewise. Since both disk and plate can be adjusted independently, the depth of the guide slot can always be adjusted to suit the teeth of any blade that is used, so that the teeth are not worn off as in some guides.

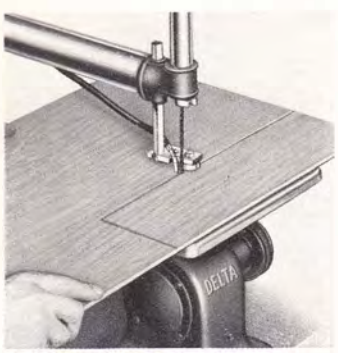
The infinite variety of adjustment possible with the Delta guide is impossible with a roller guide, because naturally a roller guide can accommodate but a few grooves, and these of fixed depth, so that they will fit only a few blades properly. The Delta guide, on the other hand, may be adjusted to fit any size and type of blade correctly.



Jewelers' blades held in the flat jaws of both chucks, and supported by the universal blade guide.

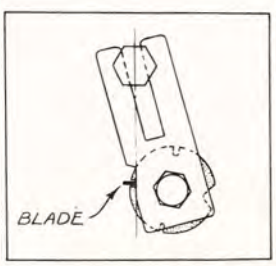


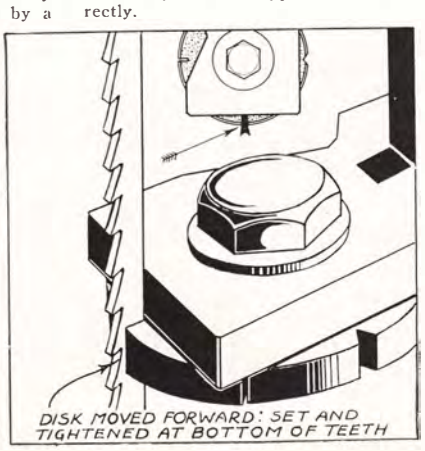
Sabre blades held in the V-jaws of lower chuck; also supported to the work by blade guide.

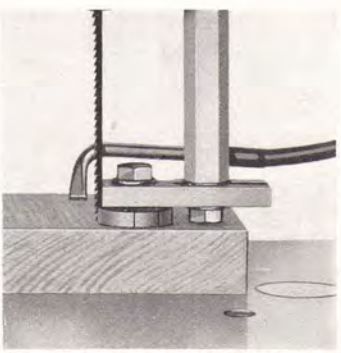


Changing direction of cut for ripping large panels can be done in a moment. Blade supported as for straight work.

Independent adjustment of blade guide gives perfect back and side support for blade, without destructive wear on teeth. Adjustable for any blade, either front or sidewise.





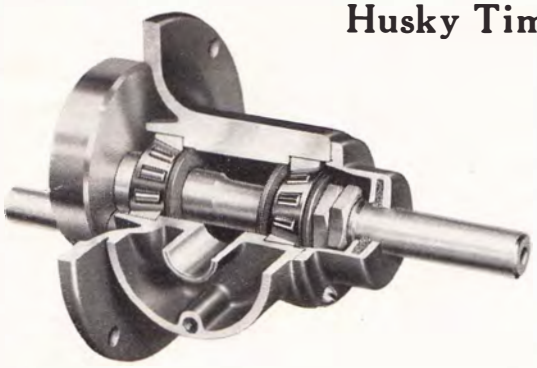


The blade guide fits down close to work, supporting blade where most necessary, and acting as hold-down also.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Offers Features Found in No Other Machine

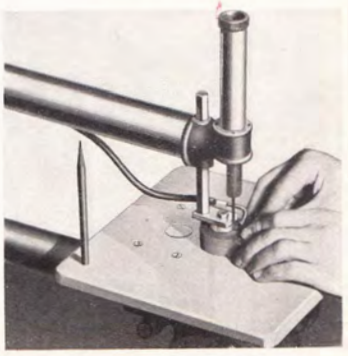
Husky Timken Bearings for Long Life



Roller bearings carry the shock incidental to the operation of a fast-moving reciprocating mechanism far better than any other type of bearing, so the husky shaft of the Delta scroll saw is carried in Timken tapered-roller bearings. This means exceptionally long life and freedom from trouble. In fact, of the thousands of Delta scrolls saws now in operation, we have yet to encounter a single case of bearing wear or trouble.

These bearings are lubricated at the factory, and require no further attention from the user for the life of the bearing.

Read About Novel Pencil Test

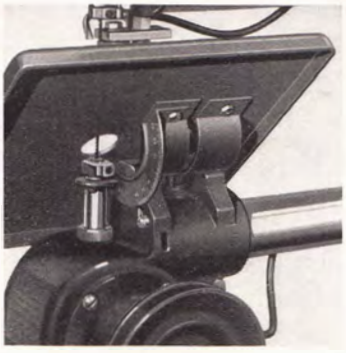


So perfect is the balance of the working parts of the Delta scroll saw, and so complete the elimination of destructive vibration, that an ordinary pencil may be stood on end on the table while it is running at full-motor speed—1750 R.P.M. Try this test on any other scroll saw; but be sure that it is running at a speed of 1750 R.P.M. This perfect balance at high speed insures smoothness of cut, even in materials ordinarily difficult to work.

Built-In Conveniences

In addition to the built-in wearing qualities of every part of the scroll-saw mechanism, there are a number of conveniences built-in also. The sawdust blower, of neat and fool-proof design, is so placed that cleaning, if ever needed, is accomplished with ease and speed. If it is necessary to suit the drive of a shop where other machines are already in place, the pulley housing of the saw can be moved from the right to the left side with no trouble.

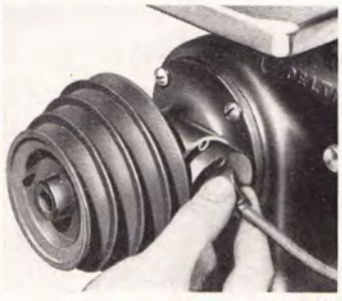
The heavy double-trunnions, which keep the table rigid and firm even under heavy work, carry at the front a graduated plate which, with the adjustable pointer, shows the exact angle of table tilt for angular work. Rear opening in table closed with solid aluminum insert. Saw opening provided with easily removable slotted insert.

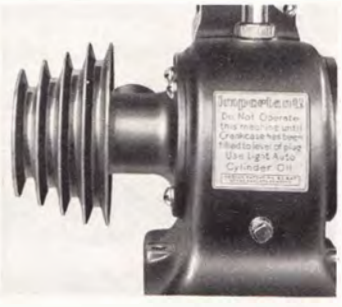


Due to the unique design of the Delta frame (U. S. Des. Patent No. 85,847) utmost rigidity and freedom from "shimmy" is assured even at full speed—1750 R.P.M.—and, in addition, the user can shorten or lengthen the machine to suit his convenience.

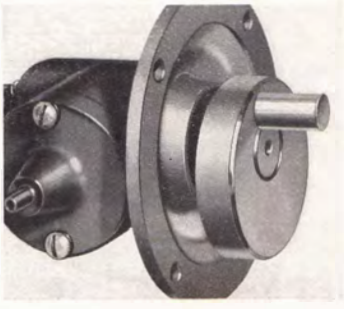
The very heavy cast-iron housing, which permits keeping all the working parts in a continuous supply of oil, just as in the automobile engine, further insures absence of trouble and freedom from wear.

The Delta scroll saw has met the test of severe service in many lines, and has earned the unqualified approval of ever user.





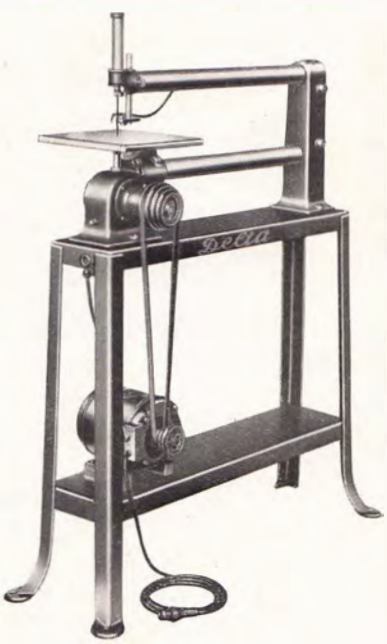
Left; blower is readily accessible for cleaning at any time.
Right; Pulley may be used on either side of machine, as desired.



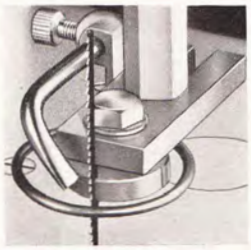
A closeup of the Sturdy steel crank and counterbalance, with hardened crankpin.

Only Delta Offers You These Many Advantages:

1. Four standard speeds without moving motor: 650, 1,000, 1,300 and 1,750 R.P.M.
2. Patented design of machine insures utmost rigidity even at high speeds necessary for production work.
3. Universal blade guide and hold-down supports blade right at the cutting point; not too far above it or too far below it. Hardened steel disk has grooves to fit practically all blades.
4. Universal chuck (patented) holds any type of blade, or files and tools with ¼" shanks rigidly and perfectly central. No other type of chuck is so simple and positive.
5. Tremendous capacity; 24" from blade to rear column; capacity may be increased by using longer tubes if necessary.
6. Heavy steel table, smooth and free from obstructions, with two removable throat pieces. Tilts to 45 degrees either side. Has graduated quadrant and pointer. Mounted on double trunnions.
7. Extra-heavy precision-ground shaft runs on Timken bearings. Large and accurately balanced crankshaft. Drive fitted to either side of machine.
8. Built-in sawdust blower, readily accessible for cleaning if ever necessary. Driven directly from crankshaft and guaranteed not to pump oil.
9. Files and other tools with ¼" shanks held in chuck without any changes or other attachments.
10. Heavy steel floor stand available, making machine completely portable and self-contained.



Special Delta Scroll-Saw Guard



New guard-protects fingers from running into saw blade at end of cut. Required by law in some states on saws used industrially. Does not interefere with adjustments of hold-down or blower nozzle.

No. 710 Wire Guard for 24" Scroll saw $0.10

Shipping Weight 2 oz.
Code Word LAGUA.

No. 714 Scroll-Saw Unit

Consists of:

No. 700	24" Scroll Saw.....	$19.95
No. 716	Steel Stand	7.85
No. 510	V-Belt	1.00
No. 718	Cone Pulley	.75

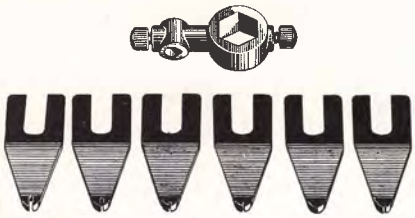
Price complete, but without motor or switch rod..... $29.55

Motors and switch rods page 54.
Ship. Wt. 110 lbs. Code Wr. LASUN.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Scroll-Saw Accessories

Individual Guides



Where close following of a line or pattern is important, these new and practical guides will prove worth their cost many times over. They supplement the regular guide and holddown, and aid in producing perfect work. They are ideal for jig-saw puzzle work. The set consists of six hardened steel guides and a blower-nozzle bracket to replace the one supplied with the scroll saw.

No. 712 Set of 6 individual guides for 24" Scroll Saw, complete with bracket for air-pump nozzle **$1.35**

Shipping Weight 15 oz. Code Word SAGID.

Sabre Blades for Wood

Close to 80% of all scroll saw work, except the finer work in wood and metal, can be done with sabre blades, due to the fact that the free end is properly backed up and supported close to the point where the cutting strain takes place. Made of the best steel, accurately hardened and set. These blades are 4½" long over all.

No. of Blade	Thickness & Width	No. Teeth per inch	Code Word	Price per ½ Doz.
No. 703	.025" x .187"	9 per inch	SABLA	$0.75
No. 704	.035" x .250"	7 per inch	SABLB	.75

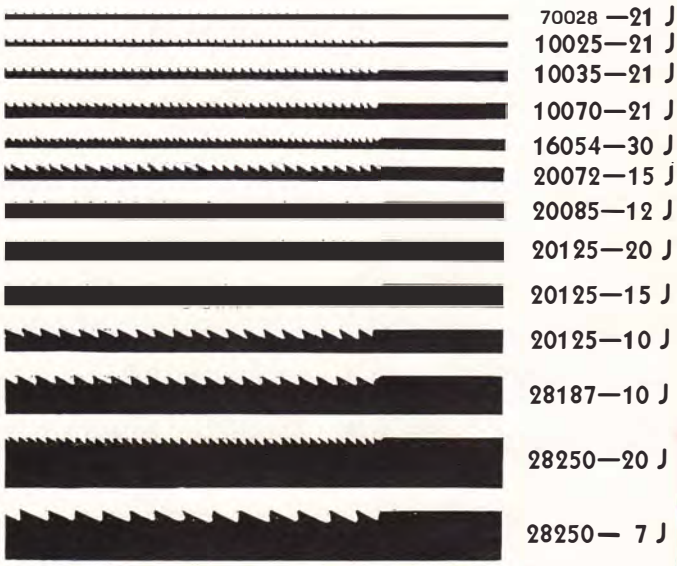
Shipping weight per package of six approximately 5 oz.

Jeweler's and Puzzle Blades

These blades are the finest obtainable; 5" long and accurately spaced, hardened, set and carefully tempered. Nos. 70028, 10025 and 10035 are especially made for jig-saw puzzle work. The other blades can be used in wood, metal and many other materials. For cutting thin metal, use No. 20125-20J and No. 28250-20J. Gross price applies only to lots of 1 gross or more.

No. of Blade	Thickness & Width	No. Teeth per inch	Code Word	Price per Doz.	Price per Gross
No. 70028-21J	.007" x .028"	21	JIGSD	$0.40	$3.00
No. 10025-21J	.010" x .025"	21	JIGSB	.40	3.00
No. 10035-21J	.010" x .035"	21	JIGSC	.40	3.00
No. 16054-30J	.016"x .054"	30	JEWBA	.40	3.00
No. 20072-15J	.020" x .072'	15	JEWBB	.40	3.00
No. 20085-12J	.020" x .085"	12	JEWBC	.40	3.00
No. 20125-20J	.020" x .125"	20	JEWBD	.50	4.00
No. 20125-15J	.020" x .125"	15	JEWBE	.50	4.00
No. 20125-10J	.020" x .125"	10	JEWBF	.50	4.00
No. 28187-10J	.028" x .187"	10	JEWBG	.90	10.60
No. 28250-20J	.028" x .250"	20	JEWBH	1.00	11.25
No. 28250-7J	.028" x .250'	7	JEWBK	1.00	11.25

Approximate weight 2 oz. per pkg.



Machine Files for Scroll Saw

Excellent for finishing edges of metal and other materials. Enables neat, accurate work and eliminates costly and tedious hand work. Recommended speed for filing steel about 500 strokes per minute. Other materials 1000 to 1800 strokes. Ideal for experimental work.

No. 726 (Square). ¼" Shank. Code FILEA. Each ..... $ .55

No. 727 (Crochet). ¼" Shank. Code FILEB. Each ..... .55

No. 728 (½-Rd.). ¼" Shank. Code FILEC. Each ..... .55

No. 729 (Round). ¼ " Shank. Code FILED. Each ..... .55

No. 730 (3-Sq.). ¼" Shank. Code FILEE. Each ..... .55

No. 731 (Pillar). ¼" Shank. Code FILEF. Each ..... .55

Approximate Shipping Weight 4 oz.

No. 740 Set of 6 Assorted Files, ¼" Shank **$3.00**

Shipping Weight 15 oz. Code Word FILEX.

No. 751 (⅛" Square. Code SAFIL. Ea. $ .45

No. 752 (Crochet). Code SAFIM. Ea. .45

No. 753 (½ Round). Code SAFIN. Ea. .45

No. 754 (Round). Code SAFIO. Ea. .45

No. 755 (3-Square). Code SAFIP. Ea. .45

No. 756 (Pillar). Code SAFIR. Ea. .45

No. 757 (Lozenge). Code SAFIS. Ea. .45

No. 758 (Knife). Code SAFIT. Ea. .45

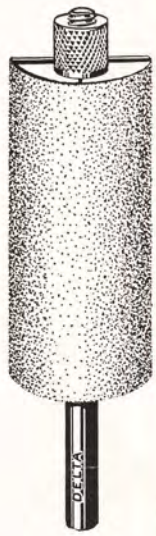
Approximate Shipping Weight 3 oz.

No. 760 Set of 8 Assorted ⅛" Shank Files **$3.25**

Shipping Weight 15 oz. Code Word SAFIV.

Unique Sanding Attachment

Built so that it will sand both concave and flat or convex surfaces, this unique attachment saves hours of labor in finishing the edges of scroll-saw work. It does away with the annoyance of makeshift sanding rigs, using pieces of sandpaper. The knurled knob expands the body of the attachment and tightens the garnet sleeve securely. $\frac{15}{16}$" wide, ½" thick and 2½" long on body. Shank ¼" diameter, fits in lower chuck on scroll saw.



No. 711 Sanding Attachment fits 24" Scroll Saw with 1 Sleeve.. **$1.35**

Shipping Weight 8 oz.
Code Word SANAT.

No. 841 Extra Garnet paper sleeves (medium). Code word SASLK. Per ½ doz. .60

No. 842 Extra Garnet Paper Sleeves (Fine). Code word SASLM. Per ½ doz. .60

Shipping Weight 8 oz. approx.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta Lamp Attachment Has Many Uses

Here is an attachment that will be welcomed by every machine user, especially those who, due to limitations of space, must move their machines from place to place in their workshops, or those whose work requires their machines to be portable.

No Shop Perfectly Lighted

Every shop owner knows that no matter how well equipped his workshop is with respect to lights, there are always some machines that are not properly lighted; some machines at which the user is almost compelled to stand in his own light, or else to rig up an extension cord in order to see properly. Or, even if every machine is equipped with its own drop cord, a problem arises every time a new machine is added to the shop.

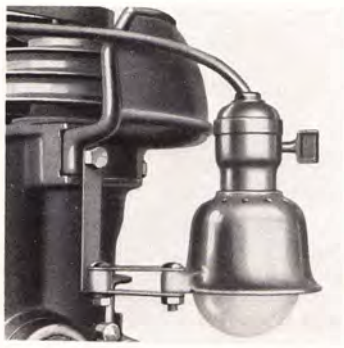
Attachment Solves Problem

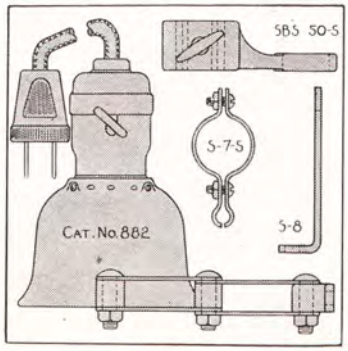
The new Delta Lamp Attachment solves this problem for almost every machine—drill press, band saw, scroll saw—and can be adapted for many other uses besides. Its double linkage enables it to be swung around over the work to just the spot desired, although for most machines the single linkage shown in the photos will be found adequate. A neat bracket supplied with the attachment enables it to be attached to older Delta models, machines on which provision has not already been made for mounting. Latest Delta drill presses and band saws have brackets cast in place and drilled for the attachment.

The Shade is formed from heavy Zamak alloy, and is fitted with a high-grade nickled key-type solid and a high-grade rubber-covered cord, with a soft-rubber plug—not a cheap cord with a composition plug.

Useful for Workbench

Few workbenches are as well lighted as they should be, and the new lamp attachment enables a light to be placed right where it is wanted. Any number of links and collars can be purchased to make up a linkage of any required length so that the light can be moved to the point where it is most needed, and pushed back out of the way when no longer required.





Many Other Uses

Nor is the usefulness of the lamp confined to the lighting of workshop machines; it can be adapted as a sewing-machine light, fitted to dental and surgical equipment, used as a drafting board or a desk light, and for dozens of other uses, as the bracket can be screwed to any surface, wood or metal.

Photos show the lamp attachment in use on scroll saw, band saw and drill press, but it can be used in many other places.

We have gone to a great deal of expense to produce a lamp attachment that would be really solid and substantial, and that would be free from the faults of cheap, flimsy stamped attachments.

The heavy, solid shade of the Delta attachment will not overheat, as adequate ventilation has been provided. It is intended for use with 25 watt lamps which provide plenty of illumination at low cost.

No. 882	Lamp attachment, with shade, socket and cord, four flat links, three bolts, spacer and attachment bracket ..... Shipping Weight 2 lbs. Code Word LAMPA.	$1.50
S-3-S	Extra support links, with spacer, screw and nut per pair	.15
S-7-S	Lamp Attachment Clamp for 700 scroll saw, each	.20
S-8	Lamp Attachment Bracket for 970 drill press, each	.15
SBS-50-S	Lamp Attachment Bracket for 785 and 385 band saws, each	.35

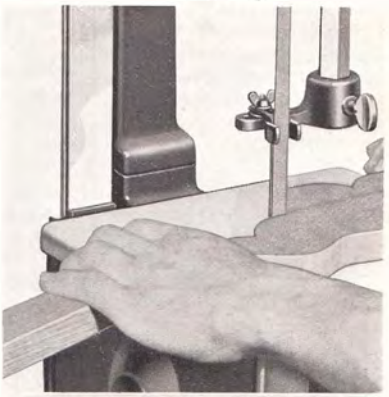
Delta Band-Saw Sanding Attachment

One of the "meanest" jobs around the shop is the finishing of the edges of scroll and band-saw work. Heretofore the only way in which this could be done was by laborious hand finishing with sandpaper folded over a stick.

With the Delta Sanding Attachment (Patent Pending) all this tedious hand labor is eliminated. Instead, you merely pass the edges of the work across a rapidly running sanding belt and the work is finished smooth in a fraction of the time required for hand sanding. The attachment consists of a belt ½" wide and of the same length as the regular 10" band-saw blade. This runs in a special guide which replaces the regular blade guides; two guides are furnished—one for flat and one for curved work.

With this attachment sanding of scrolled work becomes as easy and as fast as sawing. The properties of the modern garnet sanding belt are such that it is actually a cutting tool.

Note: This attachment is furnished at present for 10" band saw only. Another attachment to fit the new No. 890 14-inch Delta Band Saw will be announced shortly.



No. 782	Sanding Attachment for 10-inch band saw, consisting of two guides, guide bracket and 66" garnet belt ..... Shipping Weight 2 lbs. Code Word BELBA.	$2.00
No. 783	Fine garnet band, 66" long, for 10-inch band saw ..... Shipping Weight 8 oz. Code Word BANTF.	1.25
No. 784	Medium Garnet Band, 66" long for 10-inch band saw ..... Shipping Weight 8 oz. Code Word BANTM.	1.25

Casters for Portable Units

Here is an attachment that greatly increases the usefulness of Delta Portable Units. With this caster outfit you can instantly wheel your unit to any part of the shop you desire, yet it is solid and steady the moment it is set down.

The attachment consists of two clamps, attached to the upper shelf of the Delta steel stand, two pads for the front legs, two casters for the rear legs and two lengths of cadium-plated pipe with a coupling.

To use, the pipe is inserted through the clamps and the whole unit tipped forward onto the casters and wheeled to its new position. When the machine is lowered to its normal position the casters are automatically lifted from the floor and the machine sits solid and firm on the pads. Attachment fits any Delta steel stand.

No. 351 Caster Attachment as shown at right. **$3.25**

Shipping Weight 25 lbs.
Code Word CASTA.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta ⅓-H. P. Ball-Bearing Motor

No. 800 ⅓ H.P. Delta Double-Duty Split-Phase Ball-Bearing Motor, 110 volt, 60-cycle A. C., complete with 8-ft. cord, two 1¼" blocks and soft-rubber plug. Speed 1725 R.P.M. **$12.85**
Shipping Weight 33 lbs. Code Word BALMO.

No. 800 Double-Duty ⅓ H. P. Ball-Bearing Motor

The Delta No. 800 Split-Phase ⅓ H. P. Ball-Bearing Motor is a revelation in motor performance at low cost. It is built for us to our own design and rigid specifications, and represents exceptionally high value at low cost.

It has an unusually high overload capacity, because no attempt has been made to cut down material or workmanship in order to produce a "cheap" motor, at a sacrifice in capacity or efficiency.

On the contrary, no effort has been spared to make this a motor that will give craftsmen the utmost in quality and efficiency for their money. Those who want a really fine motor will not be disappointed in any of the Delta motors.

As an instance of the capacity of these motors, it should be pointed out that, although they are rated conservatively at ⅓ H.P., they will actually deliver close to ⅞ H. P. before stalling.

It is fitted with a fool-proof starting-winding switch capable of 1,000,000 starts and stops without failure. It is provided with self-sealed New Departure ball bearings, which need no attention for the life of the bearing. Due to the ball-bearing construction of this motor, it may be installed in any position, horizontal, vertical or upside down, without bearing trouble or any special installation such as is necessary for many bronze-bearing motors.

The casing is of heavy Delta arc-welded construction with heavy steel feet which cannot be broken off like cast-iron feet.

It has a strong and neatly built-in switch which insures convenient starting and stopping, as, by means of the Delta switch rods control is brought within reach of the operator's finger tips.

Double shafts, full ½" diameter by 1½" long.

NOTE: This motor is for 110-volt current only. It cannot be used on both 110 and 220-volt lines.

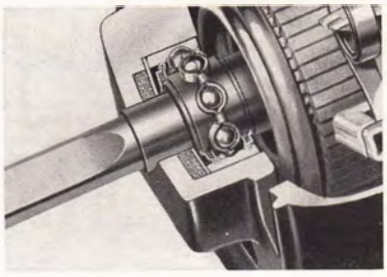
No. 900 Ball-Bearing ⅓-H. P. Repulsion-Induction Motor

Repulsion-Induction motors, while their cost is a little higher than that of the split-phase type, have certain advantages in operation. They will start easily with very little current, even when connected to machines that are hard to start. They are capable of operating under a heavy overload and stand quite a lot of abuse.

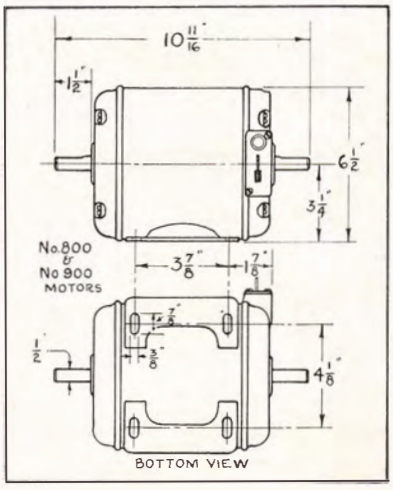
Since their efficiency is higher, they consume less current for a given output and they are consequently much more economical in the long run. In many localities, electric light and power companies require the use of repulsion-induction motors for operating machinery, because their low starting current does not cause the flickering of the lights that a split-phase motor may cause on an overloaded circuit.

The Delta No. 900 Repulsion-Induction Motor is built to the same rigid specifications as the No. 800. It has double shafts, self-sealed New Departure ball bearings, which require no attention during their entire life, the same high-grade built-in switch and 8-ft. cord with soft-rubber plug.

No. 900 ⅓ H.P. Delta Repulsion-Induction Motor, 1725 R.P.M., 110-220 volts, 60-cycle A. C., complete with 8-ft. cord, soft-rubber plugs and two raising blocks..... **$18.95**
Ship. Wt. 30 lbs. Code Wd. REPMO.



A close-up of the sturdy New Departure ball-bearing used in all Delta motors. This bearing is self sealed on both sides, which guards against leakage of lubricant and entrance of dirt, and insures against trouble for the life of the bearing.



Base dimensions are the same as those of the No. 800 motor, and it is interchangeable with it on all Delta stands, machines and benches. It uses the same switch rods as specified for No. 800 motor.

It can be used on either 110-volt or 220-volt lines, changing from one voltage to the other being accomplished very simply. It is reversible in direction of rotation merely by loosening one screw and moving the brush carrier to the proper index mark. Very flexible and convenient.

We can furnish motors to suit any requirement as to voltage, frequency, etc. specify exactly what type and voltage your current is, and we shall quote prices.

[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta ½-H. P. Motors for Heavy Duty

No. 820 Ball-Bearing ½-H. P. Repulsion-Induction Motors

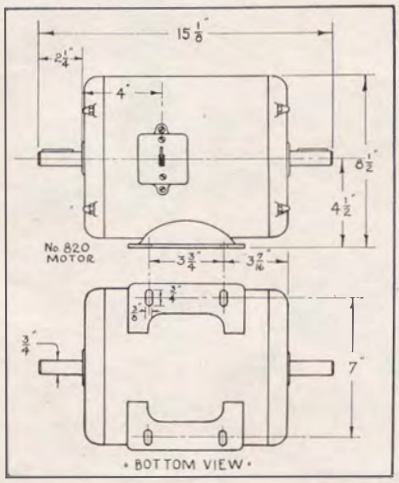
Massive and powerful, the No. 820 Delta Repulsion-Induction motor must not be confused with some other motors running at high speeds, which, although technically "repulsion-induction" motors, act like a series-wound type, as they have no short-circuiting device and consequently no speed control.

Such motors may run about 1,000 R.P.M. above rated speed when idle and slow down to about half this speed when the rated load is momentarily exceeded.

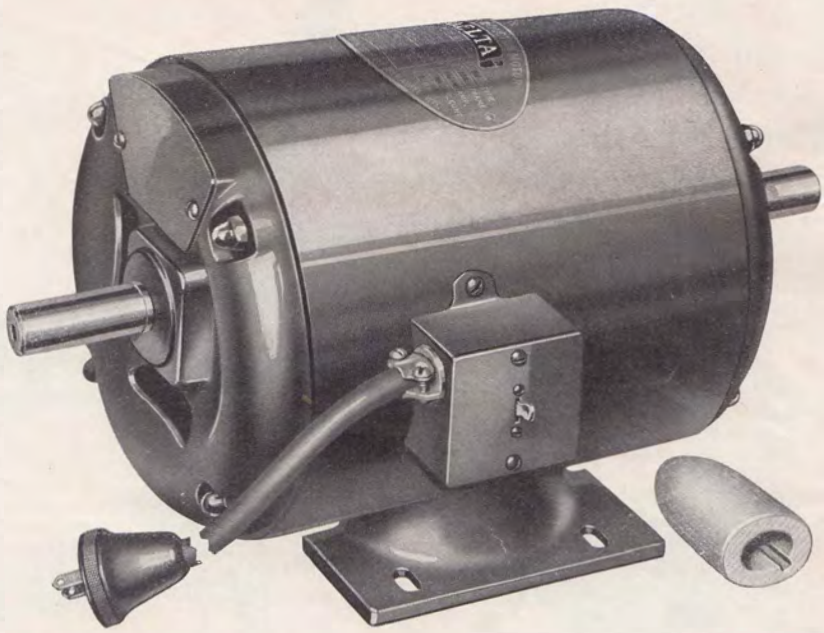
The Delta ½-H.P. Motor, on the contrary, will actually deliver almost 1¼ H.P. before stalling, and, in addition to this, their design insures that they will perform at practically constant speed, regardless of load.

No. 820 Motors are built to run on either 110-volt or 220-volt current simply by changing connections, the change being very simple and being graphically shown on the nameplate of the motor. Reversal of direction of rotation is also accomplished very simply by loosening two screws and moving the brush-carrier ring to the proper index mark. Brushes are easily changed by moving the ring until brush comes opposite inspection opening in frame.

These motors are of very high efficiency, and consume very little starting current; they will not flicker lights even when starting. They will conform to all light and power companies requirements, and will operate from any light socket. They are made with the very highest grade of insulation and have forced air cooling.



They are fitted with self-sealed New Departure ball bearings, of the same type as those shown for the No. 800 and 900 motors, and which insure freedom from trouble and absence of any attention for the life of the bearing. They have husky double shafts, ¾" diameter by 2¼" long, with ⅜" square keys, and are provided with a shaft protector which slips over the end of the unused shaft and protects the user from any danger of accidental injury.



All No. 820 motors have a heavy built-in double-pole switch, for easy connection to Delta switch rods, and which shuts current off completely from motor and have extra-heavy cord, 8-ft. long, anchored to switch box and fitted with soft-rubber plug.

No. 820 Delta Ball-Bearing ½-H.P. Double-Shaft Repulsion-Induction Motor for 110-220 volt, 60-cycle A. C., 1725 R.P.M. Complete with built-in switch, 8-ft. extra-heavy cord with soft-rubber plug and shaft protector..... **$29.50**

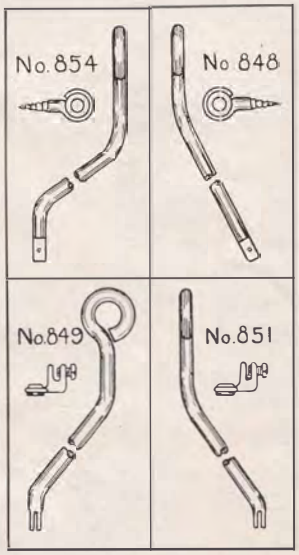
Shipping Weight 70 lbs. Code Word DOUMO.

Delta Switch Rods

The new Delta Switch Rods were designed for use with the built-in switches on the Delta Electric Motors. The rods slip through a rubber bushing in a clamp which attaches to the top shelf frame of any Delta stands. The lower end is attached to the switch lever with a cotter pin.

Switch rod No. 848 is used on Delta benches (other benches as well). A screweye with rubber bushing is used to hold rod in position.

NOTE: All switch rods specified for No. 800 motor also fit No. 900.



No. 848 Switch Rod for No. 800 and No. 820 Motor in Units No. 90, and 652. With screw eye, also fits No. 800 motor in units No. 950 and 960..... **$0.45**
Code Word RODSA.

No. 849 Switch rod for No. 820 Motor in Units No. 360 668 and 747. With clamp.... .45
Code Word RODSB.

No. 851 Switch Rod for No. 800 and No. 820 in Units No. 296, 668, 747, 766, 360 and 878. With clamp..... .45
Code Word RODSD.

No. 854 Switch Rod for No. 820 Motor in Units 950 and 960, with Screweye ..... .45
Code Word RODSO.

No. 855 Switch Rod for No. 800 and No. 900 motor in Unit No. 714. Similar to rod No. 848, but with clamp instead of screweye ..... .45
Code Word RODSP.

Shipping Weight 15 oz. each set.

No. 920 ½-H. P. Three-Phase Motors in Same Frame as No. 800 Motor

When a number of machines are to be used in a gang, as for production work, they should be provided with ½-H.P. three-phase motors, for the following reasons: Three-phase motors will save from 30 to 40 per cent of the power consumed by ordinary split-phase motors, besides delivering much more power.

Since they have no brushes, commutators, starting switches or starting windings, they are practically trouble-free and this reduces upkeep cost. They are installed on a power line, and thus cannot flicker lights.

A large gang of machines should never be operated with split-phase motors, taking their current from the lighting circuit. In many localities lighting companies prohibit this, as the use of a large number of motors of this type overheats the transformer.

Three-phase motors cannot be operated on the lighting circuit. They are usually built for 220-volts—the voltage of the ordinary power line—and should be installed by an electrician and provided with a regular switch, as they have no built-in switches.

Delta Three-Phase ½-H.P. Motor is particularly well adapted for the No. 970 Drill Press, as it is built into the same frame as the **No. 800** and **No. 900** motors, and is interchangeable with these motors. It is a ball-bearing, double-shaft motor, built to the same rigid specifications and design as the No. 800 and No. 900. Speed is 1725 R.P.M. See dimensions on page 54.

NOTE: We can furnish motors to suit any requirements as to voltage, frequency, etc. If the current in your shop is different from the regular 110-volt, 60 cycle A. C., please specify exactly what type and voltage your current is. We shall then be pleased to quote prices of suitable motors.

No. 920 Delta ½-H.P. Three-Phase Ball-Bearing Double Shaft Motor. 1725 R.P.M. For 220-volt, 60-cycle A. C. Complete with 8-ft. cord, soft rubber plug and raising blocks **$18.65**

Ship. Wt. 30 lbs. Code Wd. PHAMO.

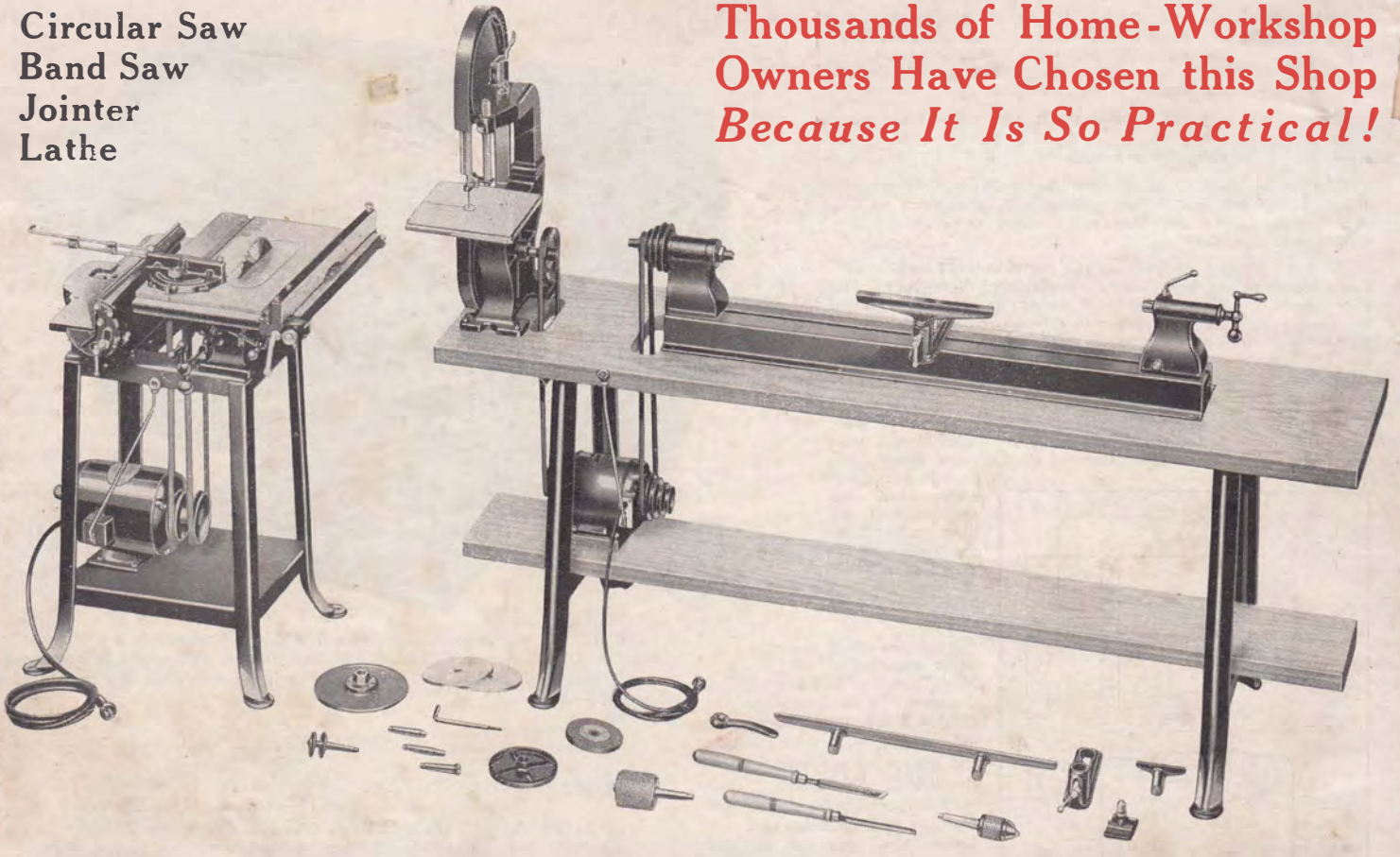
[Please Order by Catalog Number to Avoid Mistakes and Delay]

Delta De-Luxe Workshop Combination

No Interference—Plenty of Power—Always Ready for Work—Finger Tip Control—Flexibility

Circular Saw
Band Saw
Jointer
Lathe

Thousands of Home-Workshop Owners Have Chosen this Shop *Because It Is So Practical!*



The advantages and features of the Delta No. 90 "De-Luxe" are so numerous that we do not hesitate to make the statement that this is the finest shop to be found anywhere. It has proved to be one of the most popular combinations ever offered.

At a touch of the switch rods, placed within easy finger-tip distance, and one of the four husky machines is humming, ready for action. Any one may be used independently, or any of them may be used in combination with any other. Two of the most-used machines, the circular saw and jointer, are mounted together on a portable stand, so that they may be used anywhere in the workshop.

Two husky motors, with built in switches, provide plenty of power right where it is needed. There are no line shafts, and there is no necessity to move motors. The motors operate from any light socket and the modern V-belt drives transmit all of the power without slipping.

No matter which one of the machines is used, there is no interference with any other. You use any machine just as freely as though it were a single unit, yet the other machines are right at hand, ready for instant use when required. The band saw does not interfere with the lathe in any way, and the fact that thousands of the circular-saw jointer combinations are in constant use testifies to the convenience and practicality of this popular unit.

The purchaser of the "De-Luxe" shop is not limited to the exact layout shown, although experience has shown this to be ideal for all-around work. A scroll saw may be substituted for the band saw, for example, or a mortising attachment may be added to the saw and jointer unit, if desired.

Workshop Combination No. 90 Includes:

Saw-Jointer Unit Group

No. 301	Ball Bearing Jointer	$24.50
No. 860	8" Timken Bearing Circular Saw	32.85
No. 5500	5" V-Pulleys (two), ¾" bore	1.50
No. 560	V-Belt, 22¾" cent. to cent.	1.00
No. 510	V-Belt, 20¼" cent. to cent.	1.00
No. 356	Large Stand, with Chute	7.50
		$68.35
No. 820	½ H. P. Rep. Induction Motor, 110 volt 60 cycle A. C., with cord and plug	$29.50
No. 849	Switch Rod for No. 360 Combination	.45
		$29.95

Sanding Attachment Group

No. 951	Sanding Disk, 8½" diameter	$ 2.25
No. 163	3" x 3' Sanding Drum with Taper Shank	2.50
		$ 4.75

11-inch Lathe Group

No. 930	11" Double-Duty Lathe and attachments	$28.85
No. 588	V-Belt, 25 5/16" cent. to cent.	1.10
No. 932	Four-step Motor Pulley, ½" Bore	1.25
		$31.20
No. 800	⅓ H.P. Double-Shaft Motor, 110 Volt A. C., 60 Cycle, with Cord and Plug	$12.85
No. 848	Switch Rod	.45
		$13.30

Lathe Attachment Group

No. 166	Delta Grip Chuck with No. 2 Taper Shank	$ 3.25
No. 122	Turning Tool, (¾" Gouge)	1.35
No. 121	Turning Tool, (1" Skew)	1.35
No. 694	Tool Support (24" Long)	2.05
No. 941	Extra Tool-Support Base for No. 694	1.00
No. 937	6" Faceplate (threaded)	2.10
		$11.10

Grinding and Buffing Group

No. 165	Grinding-Wheel Arbor with Taper Shank	$ 1.10
No. 113	Buffing Wheel, 6", Two Sections	.50
No. 111	5" Emery Wheel	1.25
		$ 2.85

10-inch Band Saw Group

No. 785	10-inch Ball Bearing Band Saw	$19.50
No. 5275	V-Pulley, 2¾" Diameter, ½" Bore	.45
No. 560	V-Belt, 22¾" cent. to cent.	1.00
		$20.95
No. 546	Special Bench for No. 90 Combination	$19.50

Price Complete $201.95

Ship. Weight complete 415 lbs. Code Wd. DELUY. NOTE: If you use your own motors, deduct $42.35 from the price given above for the complete workshop. If switch rods are not required either, deduct an additional $ .90.