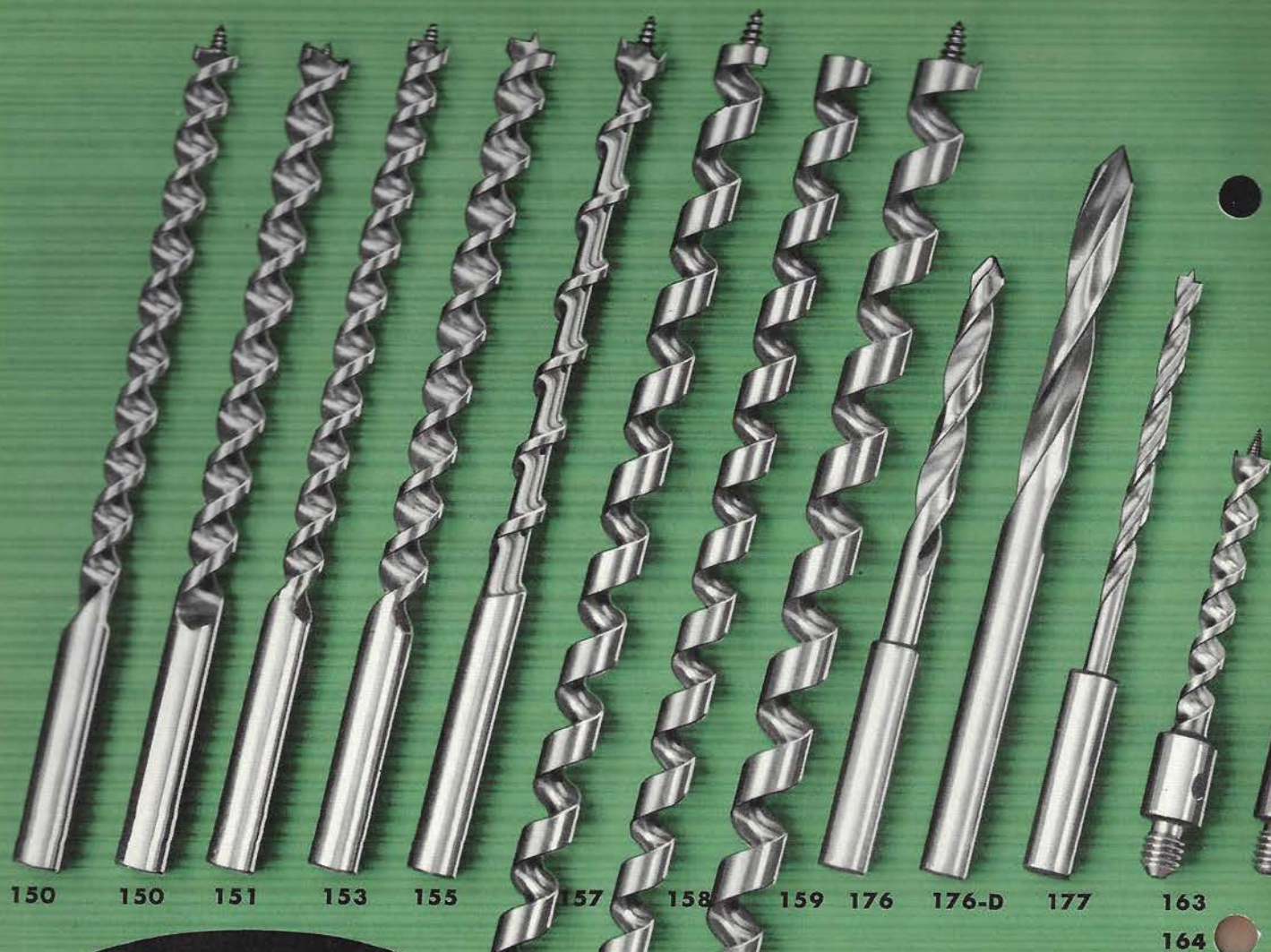


**WOODWORKING TOOLS
FOR MORTISING,
BORING, ROUTING**



GREENLEE BORING TOOLS

Boring holes smoother, faster is standard procedure with GREENLEE tools. The years of experience behind their manufacture have earned GREENLEE tools a reputation for dependability and durability. Each tool is made to exact specifications from the best material available, heat-treated to proper hardness, and ground or polished, depending on the individual tool, to assure best results.

This circular includes most of the tools made for boring, mortising, and routing. Details for these and information on special tools will be sent on request.

No. 150 DOUBLE-SPUR MACHINE BIT (With Screw Point). A fast-boring, general purpose bit for practically all uses. Wide range of sizes carried in stock.

No. 150 DOUBLE-SPUR MACHINE BIT (With Brad Point). Identical to the No. 150 above, but with a brad point reworked from a screw point.

No. 151 EXTENSION-LIP MACHINE BIT. A smooth-boring tool for exacting requirements. Spurs outline hole by severing fibers thereby loosening stock so cutters can remove stock without tearing. Not regularly carried in stock.

Nos. 161 and 162 RELISHING BITS have 3/8 and 1/2-inch shanks respectively. They are identical to the No. 151 except for having a twist length of only 2-1/4 inches. Regularly carried in 6, 7, 8, 9, 10, and 12/16-inch sizes.

No. 153 FLAT-CUT MACHINE BIT. Principally used in end-grain boring, the tool does not have outlining spurs since there are no cross fibers to cut. Provided with brad point or screw point.

No. 155 SOLID-CENTER MACHINE BIT. A general purpose bit with a cutting edge of the Extension-Lip pattern with two cutters. The single spiral or twist offers great strength and rigidity with increased room for chip clearance.

No. 157 SHIP-AUGER MACHINE BIT. The single twist or spiral with single cutter makes a strong tool, with ample room for chip clearance, which is particularly suited for boring to extreme depths. Excellent for use in portable boring machines for all construction work. Twist lengths and sizes: 12-inch, 7/16 to 17/16-inch inclusive by sixteenths; 18 and 24-inch, 9/16 to 17/16-inch inclusive.

MORTISES are made easily, smoothly, and economically with **GREENLEE** Hollow Chisels and Bits. A pioneer in the manufacture of Hollow Chisel Mortisers and Hollow Chisels and Bits, **GREENLEE** has a complete line of these tools.

Chisels and Bits for regular work, for work in hard woods, and Oblong Chisels for oblong mortises in soft wood, shown below, are examples taken from the **GREENLEE** line. Information on sizes, shank dimensions, etc., on the complete line of hollow chisels and bits will be sent on request.

No. 120-T SINGLE-TWIST HOLLOW CHISEL BIT. This bit is for the smaller sizes of chisels up to 3/8". The single-spiral twist will bring out the chips twice as fast as the conventional double-twist tools. This increases the speed when working with smaller sizes.

No. 120-B REGULAR HOLLOW CHISEL BIT. Recommended for use in soft woods and those easily mortised.

No. 120-H HARD-WEAR HOLLOW CHISEL BIT. Recommended for mortising in extremely hard wood. The broad-faced chisel type spurs actually remove the stock rather than severing and spreading the fibers.

No. 101-H HARD-WEAR HOLLOW CHISEL has two openings for chip clearance, eliminating clogging and burning. Recommended for difficult mortising and for work in extremely hard wood.

No. 101-B REGULAR HOLLOW CHISEL has single opening for chip clearance. Handles ordinary mortising in all woods as in the manufacture of sash, doors, and furniture.

No. 100-B OBLONG BAR HOLLOW CHISEL. Permits use of larger bit in making extremely oblong mortises in soft wood. Commonly used in sash and door work.

GREENLEE MORTISING TOOLS

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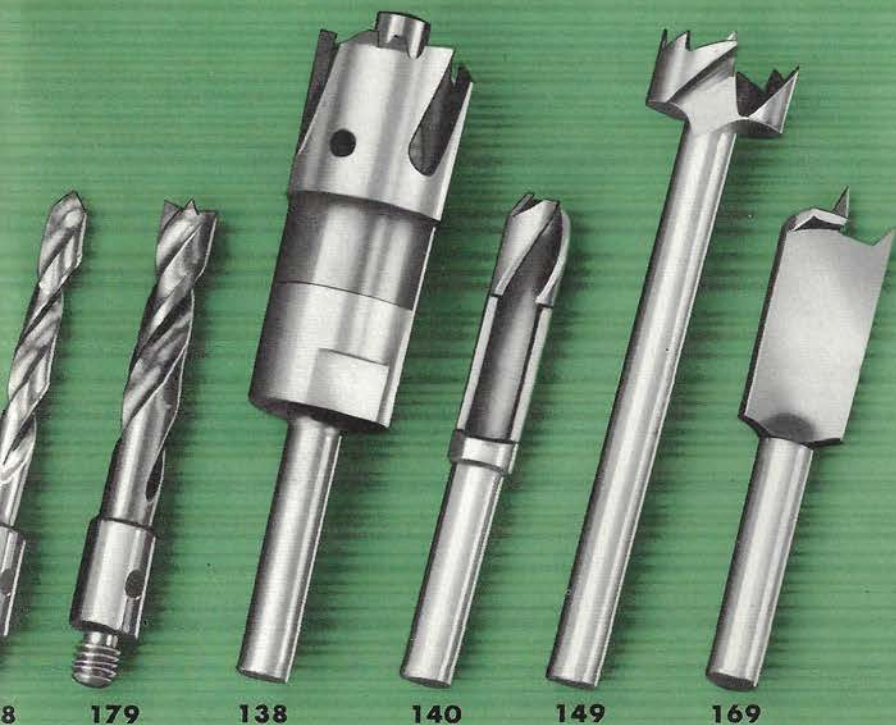
120-B

120-H

101-H

101-B

100-B



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8-A 179-A

No. 158 SHIP-AUGER MACHINE BIT WITHOUT SCREW. Except for not having the screw point, this bit is identical with the No. 157. Without the screw point the bit has less tendency to lead off with the grain in deep boring.

No. 159 SINGLE-SPUR MACHINE BIT. Especially designed for boring deep, smooth holes in bridge, dock, and other construction work. Fitted with medium screw point and ship auger twist this tool is recommended for use with portable electric or air-driven boring machines. Twist lengths and sizes: 12-inch, 7/16 to 17/16-inch inclusive by sixteenths; 18 and 24-inch, 9/16 to 17/16-inch inclusive.

No. 176 TAPER-HEAD DRILL. Completely heat-treated and easily kept in good condition, these tools are long-lived and are adaptable to a wide variety of work.

No. 176-D DOOR DOWEL DRILL. Designed for boring dowel holes in doors. Made of high-speed steel for long wear, they are heat-treated and ground all over for perfect straightness. Available for right and left-hand operation. In sizes 1/2 and 5/8-inch only.

No. 177 SPUR MACHINE DRILL (With Brad Point). Recommended for all general requirements, they are widely used for cross-grain boring. The head, twist, and shank are ground after hardening to insure accuracy. Flute design provides long life.

Nos. 163 and 164 SCREW-SHANK DOWEL BITS (With Extension-Lip Head). Bits are ground, after hardening, to exact indicated diameter. No. 163, 5/16" shank x No. 20 thread; No. 164, 7/16" shank x No. 14 thread.

Nos. 178 and 178-A SCREW-SHANK DOWEL DRILLS. Used chiefly for end-grain boring, cutting parts are easily sharpened due to construction of tool. Made of tough alloy steel they are ground after hardening to insure accuracy. No. 178, 5/16" shank x No. 20 thread; No. 178-A, 7/16" shank x No. 14 thread.

Nos. 179 and 179-A SCREW-SHANK DOWEL DRILLS (With Brad Point). Recommended for cross grain boring. Ground to exact size after hardening. No. 179, 5/16" shank x No. 20 thread; No. 179-A, 7/16" shank x No. 14 thread.

No. 138 PLUG CUTTER. Easily and quickly cuts plugs up to 1-inch thick with 1-1/8 to 2-inch diameters. Consists of two parts, the adapter and the cutting barrel. The adapter has spring plug ejector and handles all sizes of cutting barrels.

No. 140 SPIRAL PLUG CUTTER. A smooth cutting tool, ground internally and externally to insure proper clearance. Cuts cross or end-grain plugs up to 2 inches in length, and cross-grain plugs up to 1 inch thick can be cleared through the 1-1/8-inch opening. Regularly stocked in sizes 3/8 to 1 inch.

No. 149 MULTI-SPUR MACHINE BIT. A smooth, easy boring tool for hand or power feed machines. Bores equally well in cross or end-grain work. Will not split stock or tear veneer, and when drilling through work, it comes out the back with a minimum of splintering. Excellent for boring overlapping holes. Sizes 3-inch and smaller stocked.

No. 169 MACHINE CENTER BIT. Excellent for boring shallow holes of large diameter in light stock. Sizes range from 3/4 to 4-inch.

BIT HEADS GREENLEE MACHINE BITS



No. 150



No. 150
(Brad Point)



No. 151



No. 153



No. 155



No. 157



No. 158



No. 159



174 175 180 174-A 175-A

COUNTERSINKING tools include those for drilling beveled countersinks for the tapered section under the head of flat-head wood screws, drilling flat-bottom countersinks, and for counterboring holes already bored. Fixed or adjustable types are available. A setscrew holds the counter on the lead drill of the adjustable type. Therefore, the counter can be set at any point along the lead drill to control the depth of boring. Lead drills on this type of countersink can be replaced easily if damaged saving the expense of buying a whole new tool.

When ordering or writing for information concerning these tools, please specify length and diameter of large counter and small lead, and shank.

Nos. 174 and 174-A STRAIGHT-SHANK TAPER-POINT DRILL. Made especially for GREENLEE Countersinks to bore tapered holes for wood screws. Stocked in 3/16, 7/32, and 1/4-inch sizes.

Nos. 175 and 175-A STRAIGHT-SHANK DRILLS have full diameter throughout twisted section. Taper-head is that of a standard wood drill. The No. 175 is used with Nos. 192, and 195 countersinks, while No. 175-A is used with Nos. 191, 198, and 199 countersinks.

No. 180 COUNTERSINK MACHINE BIT. An economical tool for boring concentric holes of different diameters. Eliminates at least one handling of stock and usually results in better work being done. Only made special to order for any requirement.

No. 184 MULTI-SPUR COUNTERSINK CUTTER. Designed to fit on 1/2-inch shanks of standard machine bits and held in place by a setscrew. Eliminates necessity of buying solid countersinks which are not standard. Bores easily. Range: 1-1/8 to 2-1/2".

No. 185 COUNTERSINK DRILL. For boring and countersinking holes for wood screws. Bevel corresponds to taper on a screw head.

No. 186 COUNTERSINK DRILL. Has both counter and lead of the spur machine drill type for boring flat-bottom holes. Wide margins on both twists allow cutting parts to be worn substantially for extra long life.

No. 189 COUNTERBORE MACHINE BIT. Designed especially for enlarging holes already bored. Counter is of double-spur type for boring a flat-bottom hole. Not carried in stock.

No. 191 ADJUSTABLE COUNTERSINK CUTTER. Designed to bore holes for flat-head wood screws with taper beneath head. Setscrew holds countersink in place on the drill and allows for setting depth of boring.

No. 192 ADJUSTABLE COUNTERSINK CUTTER has extension-lip pattern on counter for drilling flat-bottom holes. Counter is adjustable on lead drill and is held in place by a setscrew.

No. 195 ADJUSTABLE COUNTERSINK. Has extension-lip-type counter for smooth boring of flat-bottom holes and double-fluted twist.

No. 198 ADJUSTABLE COUNTERSINK. Has two cutting edges beveled at an included angle of 82 degrees, corresponding to the taper on a flat-head screw. Lead drill is adjustable for various depths of boring.

No. 199 ADJUSTABLE COUNTERSINK is particularly recommended to countersink for screw holes below the surface of the wood. Counter is adjustable on the lead drill for various depths of boring.

GREENLEE COUNTERSINKING TOOLS



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GREENLEE ROUTING TOOLS

No. 141 LEFT-HAND ROUTING BIT. Has double flutes and square cutting end. Flutes, shank, and back clearance are all accurately ground to insure cutting by both edges.

No. 142 RIGHT-HAND ROUTING BIT. Has double flutes and square cutting end. Flutes, shank, and back clearance are all accurately ground to insure cutting by both edges.

No. 143 SINGLE-FLUTE ROUTER. A right-hand router made of high-speed steel with a single flute. Accurately ground for clearance and size.

No. 145 LEFT-HAND ROUTING BIT. For working in extremely hard woods or laminated stock at fast spindle speeds. Made of high-speed steel, heat-treated, entire tool ground. Has double flutes. Not carried in stock.

No. 146 RIGHT-HAND ROUTING BIT. For working in extremely hard woods or laminated stock at fast spindle speeds. Made of high-speed steel, heat-treated, entire tool ground. Has double flutes.

No. 143-D DOUBLE-END ROUTER. Has single-flute cutters and is made of high-speed steel with both ends accurately ground and cleared.



TECO GROOVING TOOLS FOR TIMBER CONNECTORS

Tools for cutting grooves and recesses for timber connectors are made by GREENLEE for the Timber Engineering Company, Washington, D.C. *These tools are stocked and sold only by that company* ... for complete information on either the grooving tools or connectors, all requests should be addressed to that company.

GREENLEE TOOL CO.



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