

Most
Complete Line
of
ELECTRICIANS'
TOOLS

via

GraybaR

*GraybaR



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A New

GRAYBAR SERVICE

FOR THE ELECTRICAL CONTRACTOR

Going all the way back to the beginning of the electrical industry and the earliest installation problems, Graybar has served the **ELECTRICAL CONTRACTOR** in many ways and on many lines of electrical materials.

From service entrance to current-using equipment, Graybar supplies the **ELECTRICAL CONTRACTOR** with all materials needed for home, office or industrial installations. We also supply motors and control, ventilating equipment, lighting, signaling and other types of current-using equipment installed by contractors.

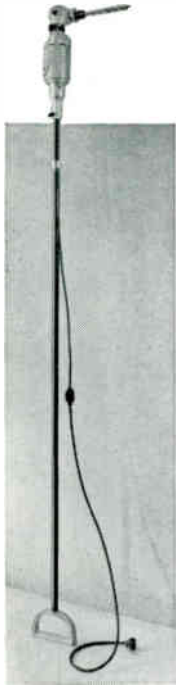
Now we are enlarging our service to the **ELECTRICAL CONTRACTOR**. We are substantially adding to our line of hand and power tools. In the pages of this booklet you will find the largest variety of Electricians' Tools listed in any one publication. If you don't see the tool you need listed, call your nearby Graybar office and warehouse.

GOOD QUALITY has always been associated with Graybar-distributed lines and our tool line will carry on that tradition. Jobs will be done more easily, more quickly and better with the kind of tools listed in this bulletin.

Buy all your job requirements, including tools, from one source . . . **Graybar.**

\$ GOOD TOOLS SAVE MONEY \$

Kett Tall Reach Joist Borer



Here, in a single tool, is all needed for drilling holes, anywhere at any angle, and through any material.

Requiring less than eight inches clearance, the wood borer operates between joists and studs. Users report that often this new tool pays for itself on one or two wiring jobs. Saves climbing up and down ladders, giving a big saving in time and money.

The rugged Tall Reach Borer has ample power for every job and stands up under severe use. It has ball-bearing construction with sealed in lubrication. Takes standard 1/2-in. shank machine bits with 3/8-in. flat. Total weight with 9-ft. extension is less than 18 lbs. Supplied with 12-ft. cord.

Removed from extension with a twist of the wrist, the head becomes a light, easy to use hand borer.

No.	Description	Each
KU-21	Complete with extension.....	\$139.50
KU-21	Less extension.....	127.50

Kett Joist Boring Auger Bits

Diam. in.	Machine Auger Bit Length Twist In.	Each
11/16	2 1/2	\$2.50
11/16	4	2.75
11/16	6	3.00
12/16	2 1/2	2.75
12/16	4	3.10
12/16	6	3.35
16/16	2 1/2	3.35
16/16	4	3.75
16/16	6	3.95

No. 230-XB	Kett machine expansive bit, boring range 1/8 to 3-inch.....	\$ 8.50
No. 230-BS	Small cutter, 1/8 to 1 3/4-inch for Kett expansive bit.....	1.15
No. 230-BL	Large cutter, 1 3/4 to 3-inch for Kett expansive bit.....	1.30
No. JC-2	1/2-inch capacity Jacobs chuck and adapter for KU-21.....	10.00
No. 251-3	Metal carrying case for KU-21.....	5.95

Greenlee No. 87 Power Pipe Bits

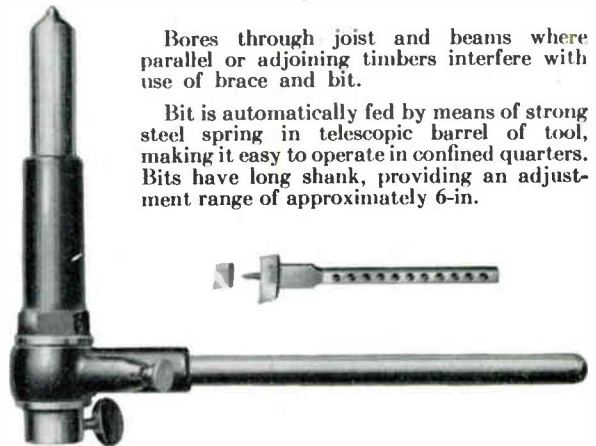


Designed for electricians to bore holes for pipe or conduit. Double twist type, having twist lengths ranging from 7 1/4 to 8 1/2 inch. Overall dimensions, 14 to 17 in. Shanks are 2 inches long milled with three flats, milled 120° apart for securely gripping by 3-jaw chuck. Flat cut heads permit boring with minimum of power. Screw points have a lead of 24 turns to the inch to accommodate power driven equipment. The elimination of spurs makes regrinding easy if damage occurs from nails or other obstructions.

Size, In.	Each	Size, In.	Each
1 1/4	\$ 4.85	2	\$ 7.90
1 1/2	5.80	2 1/4	12.10
1 3/4	6.85	...	.....

Toledo Ratchet Boring Tools

1 to 3-in. Expansive Bit



Bores through joist and beams where parallel or adjoining timbers interfere with use of brace and bit.

Bit is automatically fed by means of strong steel spring in telescopic barrel of tool, making it easy to operate in confined quarters. Bits have long shank, providing an adjustment range of approximately 6-in.

	WL, Lbs.	Each
Ratchet Boring Tool, without bit.....	5	\$12.00
Expansive bit for tool.....	1	7.00

Greenlee Joist Borers



For easy operation on overhead joists or those located below the operator. Ball-bearing construction. Bore holes rapidly for cable, conduit or knob-and-tube wiring.

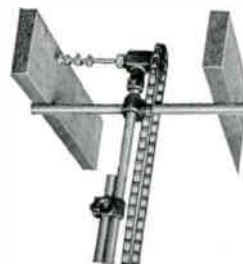
The self centering chuck is strong enough to drive a wide range of bits up to 1 1/4-in. The machined square socket assures positive drive at all times.

It is easily assembled on two pieces of standard 1/2-in. conduit. A foot rest is provided for supporting the frame on the floor. Shipped ready for assembly in metal edged box. Complete assembly instructions enclosed.

Weight 13 pounds.

No. 750 Joist Borer.....	\$28.00
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Ideal Joist Borers



Sold knocked down, less pipe. Assembled on the job using 1/2-inch pipe or rigid conduit.

For floor or overhead work.

It is quickly adjustable to any height from 7 to 11 feet on overhead work.

No.	Description	Each
36-001	With 1 1/16 in. Bit	\$26.90

No. 403 Greenlee Tang Butt Chisels



Lightweight, well-balanced chisel with thin, bevel-edged blade that is tempered for hard usage and polished overall. Green plastic handle with yellow bank at tang end. Blade lengths vary from 2 1/4 in. to 2 3/4 in. overall lengths from 7 5/8 in. to 8 3/4 inch.

Size In.	Each	Size In.	Each	Size In.	Each
1/4	\$2.10	5/8	\$2.40	1 1/4	\$3.10
3/8	2.10	3/4	2.50	1 1/2	3.60
1/2	2.10	1	2.60	2	4.40

No. 261 Greenlee Socket Framing Chisels



Sturdily built blade with cross-section of steel withstands long, rugged use. Bevel-edged blade, socket and handle fully polished. Long hardwood handle with nickel-plated, pressed steel ring. Blade length 8 in. overall length 16 to 17 1/2 inch according to size.

Size In.	Each	Size In.	Each	Size In.	Each
1/4	\$2.85	3/4	\$3.20	1 1/2	\$3.90
1/2	2.85	1	3.40	2	4.70
		1 1/4	3.60		

No. 948 Ryan Wood Chisels



Tough, unbreakable plastic handle. Blade hot forged of finest quality alloy tool steel, scientifically heat treated. Bevels precision ground. Thin, blade butt. All blades are 3-in. long.

Blade, in.	Overall Length, inch	Each
1/4	7 5/8	\$1.55
3/8	7 5/8	1.60
1/2	7 5/8	1.60
3/4	8	1.70
1	8	1.75
1 1/2	8 3/8	2.75

**Greenlee Stripping Knives
Extra Heavy**



No.	Size In.	Each
625X	14	\$7.50

Has 2 1/2" blade of solid steel. Hardwood handles with enlarged ends. Heavy steel ferrules. Adapted for peeling bark from poles and similar uses.

Ryan Scratch Awls



A general utility tool for scratching metals, punching or lining-up.

Hot-forged tool steel blade, heat-treated and polished; extends through handle.

Blade length, 3 1/2 in. Overall length, 6 1/2 in. Diameter of shank, 1/4 in.

No. 800	Wood Handle Scratch Awl	Each	\$0.60
No. 800P	Plastic Handle Scratch Awl	Each	.75

Greenlee Automatic Push Drills



All exposed metal parts, except drill points, are chromium plated. Working parts are fully enclosed. Drive nut is phosphor bronze. Handle serves as magazine for drill points. 8 drill points, 1/16 to 1/16 included with drill.

No.	Description	Each
482	Hardwood Handle	\$4.25
483	Transparent Handle	4.70

No. 900 Greenlee Bit Extensions



Strong enough to drive a bit up to 1-in. diameter, yet small enough to follow 5/8-in. size. Positive locking insures absolute grip on shank at all times to prevent holding sleeve from loosening while boring or withdrawing. Packed one-third dozen in a box.

Length Inch	Each	Length Inch	Each
15	\$3.75	21	\$4.00
18	3.90	24	4.15

No. 925 Greenlee Bit Extensions

Similar to No. 900 but made extra heavy to follow a 13/16-in. bit and drives tools up to 2-in. Packed one-third dozen in a box.

Length In.	Each	Length In.	Each
18	\$5.00	24	\$5.40

No. 902 Greenlee Bit Extensions



Has a 2 1/2-in. body section 1 1/2 in. in length provided with two set screws to hold bits with a 2 3/4-in. shank. Three flats milled 120° apart on the shank of the extension fit the standard 3-jaw chuck, one flat has two set screw holes to allow two or more extensions to be locked together for a longer reach. Shaft portion between body and shank is 3/8 in. in diameter.

Length In.	Each	Length In.	Each
18	\$2.25	24	\$2.40

No. 902-1 Greenlee Brace Adapters



Permits the use of No. 18 or No. 45 power bits, or the No. 902 extension, in any standard brace. 4 1/2 in. long with standard brace shank and 2 1/2-in. diameter head provided with two set screws for positive coupling.

No. 902-1	Brace Adapter	Each	\$1.70
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"Yankee" Ratchet Braces



Ball-bearing, quick centering chuck, 1/2" capacity. Dust-proof ratchet case, quick positive shifter.

No.	Size	Each
2101-10	10" Sweep	\$14.00
2101-12	12" Sweep	14.30

Greenlee Auger, Car and Bell Hanger Drills

No. 44 Short Unispur Auger Bits



Specially designed with a short twist and the proper overall length for electrician's use in boring holes for pipe and conduit. Medium pitch screw point for smaller sizes, finer point for larger sizes. Sizes up to 1-in. have 3-in. twist and 5½-in. overall length. Larger sizes, 2½-in. twist and 5½-in. overall length.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
11	\$1.80	16	\$2.50	24	\$ 4.75
12	1.80	18	3.20	28	5.90
13	2.20	20	3.70	32	7.00
14	2.20	22	4.30	40	10.00

No. 16 Unispur Electricians' Auger Bits



Smooth boring, fast double twist bit with long twist and single cutter head. 10-pitch single screw point for boring one inch in ten turns. Twist 5½-in. long for 10/16 and larger. Smaller sizes standard auger bit dimensions.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
4	\$1.30	9	\$1.60	14	\$2.20
5	1.30	10	1.60	15	2.50
6	1.30	11	1.80	16	2.50
7	1.45	12	1.80	18	3.20
8	1.45	13	2.20	20	3.70

No. 21 Solid Center Electricians' Auger Bits



Solid center to provide full strength for heavy use. Single spiral for positive chip clearance. Single screw point for feeding 10 turns to the inch. Twist, 5½-in. Overall length, 10 inches.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
10	\$1.35	11	\$1.55	12	\$1.55

No. 22 Solid Center Auger Bits



Double cutter head with extension lips. Medium pitch screw point. Center stem adds stiffness. Single spiral cleanly elevates chips. Fully polished. Ideal for general wood-working requirements.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
4	\$.80	10	\$.95	16	\$1.30
5	.80	11	1.05	17	1.65
6	.80	12	1.05	18	1.65
7	.85	13	1.15	20	1.85
8	.90	14	1.15	22	2.15
9	.95	15	1.30	24	2.35

No. 56 Solid Center Car Bits



Provides greater range than an ordinary length auger bit. Single spiral and center stem gives a broad channel for clearance and elevation for chips. Head is extension lip pattern and is fitted with medium coarse screw. Fully polished. Excellent for general woodwork.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
6	\$1.55	11	\$2.00	16	\$3.00
7	1.55	12	2.20	17	3.40
8	1.60	13	2.40	18	3.70
9	1.70	14	2.60	20	4.20
10	1.85	15	2.85		

No. 48 Bell Hangers' Drills



Made of high grade alloy steel, heat treated for additional strength so that drill will not damage if metal is encountered. Twist length, 3¾-in. A ¾-in. hole is drilled about 1-in. from point of drill. Available in three lengths.

12-inch		18-inch		24-inch	
Size, 32nd In.	Each	Size, 32nd In.	Each	Size, 32nd In.	Each
6	\$1.40	10	\$1.65	14	\$2.05
8	1.55	12	1.80	16	2.30
6	1.90	14	2.45	22	3.70
8	2.05	16	2.75	24	4.60
10	2.10	18	3.00	..	....
12	2.30	20	3.35	..	....
6	2.35	10	2.55	14	3.00
8	2.45	12	2.75	16	3.25

No. 64 Ship Auger Car Bits



Highly recommended for its strength, rigidity, easy cutting and free clearance. Has 12-in. twist and measures 17 to 18 inches overall. Fully polished.

Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
4	\$2.10	10	\$2.20	16	\$2.80
5	2.10	11	2.30	17	3.10
6	2.10	12	2.30	18	3.10
7	2.15	13	2.45	20	3.50
8	2.15	14	2.45	24	4.50
9	2.15	15	2.80	..	....

No. 57 Single Spur Car Bits



Designed for pole, bridge, dock and other heavy wood construction. Made of tough alloy steel, heat treated. Head fitted with single cutter with outlining spur to insure smooth boring and long life. Single spiral twist provides smooth chip clearance. Fully polished.

12-inch Twist		18-inch Twist		24-inch Twist	
Size, 16th In.	Each	Size, 16th In.	Each	Size, 16th In.	Each
6	\$2.70	10	\$2.80	14	\$3.75
7	2.75	11	2.95	15	4.05
8	2.75	12	3.25	16	4.30
9	2.75	13	3.50	17	4.55
9	3.75	12	4.45	15	5.55
10	3.85	13	4.85	16	5.95
11	4.15	14	5.20	17	6.25
9	4.75	12	5.60	15	6.95
10	4.90	13	6.05	16	7.40
11	5.20	14	6.50	17	7.85



Greenlee Brace Countersinks

For soft metals and wood. 4½-in. overall length and will countersink up to ⅝-in. Clearance for cutting edge is water ground for accuracy.

No. 701 Countersink.....each \$0.70

Acrobore Electricians Bits



Full polished, 6-in. twist, 10-in. overall. Single spur and double cutting edges provide faster cutting; particularly efficient for deep-hole boring.

Packed in a sturdy individual tube type reinforced cardboard container.

No.	Size Inches	Each
600	5/8	\$1.25
600	11/16	1.40
600	3/4	1.40

No. 18 Greenlee Electricians' Unispur Power Bits



Twist length, 5 1/2-in., shank diam. 23/64-in., overall length, 8 1/2-in. Three milled flats 120° apart to eliminate slippage in 3-jaw chuck. One flat has two recesses which fit set screws in extension to prevent loss of bit when withdrawing from bored hole. Feeds 16 turns to inch.

Size, 16th	Each	Size, 16th	Each	Size, 16th	Each
11	\$2.15	13	\$2.50	16	\$2.90
12	2.15	14	2.50	..	....

No. 45 Greenlee Short Unispur Power Bit

Head and shank details same as No. 18. Twist length, 3-in. Overall length, 6-in.

Size, 16th	Each	Size, 16th	Each	Size, 16th	Each
11	\$2.15	13	\$2.50	16	\$2.90
12	2.15	14	2.50	..	....

Greenlee Pipe Bit Set

No. 1440

Specially designed for boring holes in wood for pipe and conduit. Six bits in set for following pipe sizes:

- Bit diam., 7/8-in. for 1/2-in. pipe.
- Bit diam., 1 1/8-in. for 3/4-in. pipe.
- Bit diam., 1 3/8-in. for 1-in. pipe.
- Bit diam., 1 3/4-in. for 1 1/4-in. pipe.
- Bit diam., 2-in. for 1 1/2-in. pipe.
- Bit diam., 2 1/2-in. for 2-in. pipe.

Bits have overall length of 6-in.

Have 1/2-in. milled shanks for use in portable electric or pneumatic drills or stationary boring machines.

Adapter is provided for using standard auger-bit brace.

In metal set box with carrying handle. Weight, 7 pounds.

No.	Each
1440 Pipe Bit Set Complete	\$43.00

No. 720 Diamond Di-Forge Twist Drills



A tough and durable drill forged from a solid bar of Vanadium tool steel. Use with hand or electric hammer. May be used with Diamond Drill Holders Styles A, B, and C.

Diam. In.	Length Overall In.	Depth Hole In.	Wt. Lbs. Per Doz.	Per Dozen
3/16	2 3/4	1 3/8	1/2	\$10.80
1/4	3 3/8	1 3/4	3/4	10.80
5/16	4 3/8	2 1/2	1	12.80
3/8	5 1/8	3	1 1/4	14.80
7/16	5 1/4	3 1/4	1 1/2	18.80
1/2	5 1/2	3 1/4	2	22.80
9/16	5 7/8	3 3/4	2 1/2	26.80
5/8	6 1/8	4	2 1/2	28.80

Greenlee Setfast Expansive Bits



Patented quick adjusting-locking feature—quarter turn with screw driver tightens and loosens parts—cutter set by adjusting barrel with thumb. The No. 5 bores 5/8 to 1 3/4-in. and the No. 6, 7/8 to 3-in. Extra length cutter can be supplied for No. 6 to bore up to 4-in. diameter.

No.	Description	Size, Inches	Each
5	Bit	5/8 to 1 3/4	\$3.40
5A	Cutter	5/8 to 1 1/8	.50
5B	Cutter	1 1/8 to 1 3/4	.65
Extra Adjusting Barrels			.30
Extra Eccentric Pins			.30
6	Bit	7/8 to 3	\$4.00
6A	Cutter	7/8 to 1 3/4	.90
6B	Cutter	1 3/4 to 3	1.00
6C	Cutter	2 1/2 to 4	1.50
Extra Adjusting Barrels			.35
Extra Eccentric Pins			.35

Greenlee Nos. 3 and 4 Expansive Bits



Equipped with new wide, open throat to insure positive clearance. The No. 3 bores up to 1/2 to 1 1/2-in. and the No. 4, 7/8 to 3-in. For boring holes up to 4-in. diameter an extra cutter can be supplied for No. 4.

No.	Description	Size, Inch	Each
3	Bit	1/2-1 1/2	\$2.40
3A	Cutter	1/2- 7/8	.40
3B	Cutter	7/8-1 1/2	.40

Extra Clamps	Each	\$.25
Extra Clamp Screws	Each	.10

No.	Description	Size, Inch	Each
4	Bit	7/8-3	\$3.00
4A	Cutter	7/8-1 3/4	.65
4B	Cutter	1 3/4-3	.75
4C	Cutter	2 1/2-4	1.15

Extra Clamps	Each	\$.30
Extra Clamp Screws	Each	.10

Ryan Screw Drivers



Handles are tough unbreakable plastic. Blades are of high quality steel, manufactured to precision requirements.

Phillips Type

No.	Size, In.	Each
PH	6	\$1.30
PH	4	1.00
PH	3	.80

Pocket Type

B18	3	\$.25
B18	2	.25

Stubby Type

S141	1 1/2	\$.60
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Cabinet Type

3/16-in. Diameter

C316	2	\$.60
C316	4	.70
C316	6	.75
C316	8	.90

Square Blade

S14	4	\$.95
S516	6	1.15
S38	8	1.55

Round Blade

No.	Blade Length Inch	Diam. Inch	Each
R14	2	1/4	\$.70
R14	4	1/4	.75
R14	6	1/4	.85
R14	8	1/4	1.00
R516	4	5/16	.95
R516	6	5/16	1.05
R516	8	5/16	1.10
R38	8	3/8	1.30
R38	10	3/8	1.70

Ryan No. 45 Screw Driver Bits



Best quality, heat treated and polished.

Point Width, In.	Overall Length, In.	Diam. In.	Per Doz.
1/4	4	1/4	\$4.00
5/16	4 1/2	3/16	4.00
3/8	5	3/8	4.60
7/8	5	3/8	4.60
1/2	5 1/2	3/8	5.40

No. 723 Greenlee Screw Driver Bits



Finest grade steel, heat treated to insure long life. Overall lengths, 4 1/2 to 5 1/2 inches.

Size, In.	Each	Size, In.	Each
1/4	\$.40	5/16	\$.40
3/8	.45	1/2	.50

Greenlee Electric Drill Bits

Specially designed for use in portable electric drills. Have fine-pitch screw points to compensate for high rpm of electric drills.

Bits are heat-treated for extra strength and the shanks are accurately machined for precise alignment of the tool throughout. High quality assuring fast, accurate boring and long life.

No. 28-PT Single-Twist Bits



Available in sizes from 1/16 inch to 1 1/8 inch with 3 3/8 in. to 4 3/4 in. twist and over-all length approximately 5 to 7 inch. Bits up through 5/8 in. size have 1/4 in. shank, other sizes have 23/64 in. shank. Has single-cutter head with one outlying spur.

Size 16th	Each	Size 16th	Each	Size 16th	Each
4	\$1.10	9	\$1.60	14	\$2.50
5	1.20	10	1.70	15	2.65
6	1.30	11	1.80	16	2.80
7	1.40	12	2.10		
8	1.50	13	2.30		

No. 53-PT Solid-Center Electric-Drill Bit



Available in sizes from 1/16 to 1 1/8 in. with 8 in. twist and over-all length approx. 10 to 10 1/2 inch. Sizes 3/16 in. and smaller have 1/4 in. shank, 5/16 in. size has 3/32 in. shank, 10/16 in. size has 5/16 in. shank and sizes 1 1/16 in. and above have 23/16 in. shank. Solid-center construction and single spiral twist; head is of the extension-lip type with double cutters and two outlying spurs.

Size 16th	Each	Size 16th	Each	Size 16th	Each
6	\$1.65	10	\$2.10	14	\$2.70
7	1.70	11	2.30	15	2.90
8	1.75	12	2.40	16	3.00
9	1.95	13	2.60		

No. 56-PT Solid-Center Electric-Drill Bits



Available in sizes from 3/16 in. through 1 1/8 in. with 12 in. twist and over-all length of approx. 16 in. 3/16, 1/8 and 5/16 in. bits have 1/4 in. shanks, 9/16 in. bit has 3/32 in. shank, 19/16 in. bit has 5/16 in. shank, and bits in 1 1/16 in. size and larger have 23/64 in. shanks. Same as No. 53-PT except longer length.

Size 16th	Each	Size 16th	Each	Size 16th	Each
6	\$1.95	10	\$2.40	14	\$3.30
7	2.00	11	2.60	15	3.60
8	2.10	12	2.85	16	3.80
9	2.20	13	3.10		

No. 64-PT Ship-Auger Electric Drill Bits



Available in sizes from 3/16 in. through 1 1/8 in. with 12 in. twist and over-all length approx. 16 in. Shank sizes same as for No. 56-PT. Has single twist and a single-cutter head, no outlying spur.

Size 16th	Each	Size 16th	Each	Size 16th	Each
6	\$2.40	10	\$2.80	14	\$3.40
7	2.45	11	3.00	15	3.60
8	2.50	12	3.10	16	3.80
9	2.70	13	3.25		

Capewell Technite Highspeed Hack Saw Blades



Recommended for high speed, stainless and other hard to cut alloy steels. Hard and tough and unequalled for wear.

No.	Length In.	Width In.	Thickness In.	Teeth Per Inch	Wt., Lbs. Per 100	Per 100
1018T	10	1/2	.025	18	3 3/4	\$51.00
1024T	10	1/2	.025	24	3 3/4	51.00
1032T	10	1/2	.025	32	3 3/4	51.00
1214T	12	1/2	.025	14	4 1/2	61.00
1218T	12	1/2	.025	18	4 1/2	61.00
1224T	12	1/2	.025	24	4 1/2	61.00
1232T	12	1/2	.025	32	4 1/2	61.00

Capewell Tungsten Highspeed Hack Saw Blades



For mechanics who prefer a tungsten blade, serving the same use as the Technite blade.

No.	Length Inch	Thickness Inch	Teeth Per Inch	Wt., Lbs. 100 Blades	Per 100
1018H	10	.025	18	4	\$54.00
1024H	10	.025	24	4	54.00
1032H	10	.025	32	4	54.00
1214H	12	.025	14	4 3/4	64.00
1218H	12	.025	18	4 3/4	64.00
1224H	12	.025	24	4 3/4	64.00
1232H	12	.025	32	4 3/4	64.00

Capewell Flex-Tung Hack Saw Blades

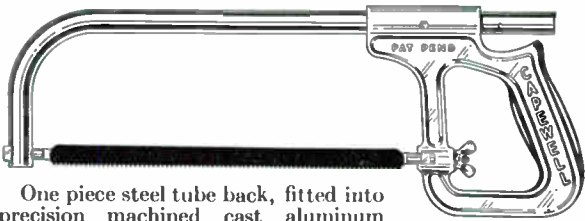


This blade is all-hard, yet so flexible it is practically unbreakable when used in

a hack saw frame. It is the economical blade for electricians and other mechanics.

No.	Length, Inch	Thickness, Inch	Teeth Per Inch	Wt., Lbs. 100 Blades	Per 100
1018F	10	.025	18	3 1/4	\$13.00
1024F	10	.025	24	3 1/4	13.00
1032F	10	.025	32	3 3/4	13.00
1214F	12	.025	14	4	16.00
1218F	12	.025	18	4	16.00
1224F	12	.025	24	4	16.00
1232F	12	.025	32	4	16.00

Capewell Hack Saw Frames



One piece steel tube back, fitted into precision machined cast aluminum handle, permits tightening of blade to high tension and maintenance of true alignment without twisting blade or distorting frame. Weight, 1 1/2 lbs.

No. 1—Capewell Hack Saw Frame..... Each \$4.55

Champion De Arment Electrician's Hammer Drop Forged



Designed for working over conduit to secure clamps, for nailing junction boxes, outlet boxes, etc.

Polished black enamel neck under claw; hickory handle. Weight 18 oz.

No. 88..... Each \$3.00

K-D Convertible Hack Saw Frames

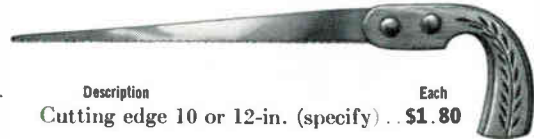
Spans Obstructions and Projections on Difficult Jobs. Cuts Around Corners.



A finely balanced, solid steel frame. Quick, easy adjustment for 3, 4 1/2, 6, 8, 10, or 12-inch blades. One 3-inch and one 12-inch blade furnished. Net weight, 1 lb., 7 oz.

No. 99..... Each \$3.75

Fowle Compass Saws Set and Filed Ready for Use



No. 8 Description Each
8 Cutting edge 10 or 12-in. (specify) .. \$1.80

Three-In-One Saw Set

One handle and three saws. One 10-in. keyhole saw; one 12-in. compass saw and one 16-in. stud and nail cutting saw.

No. 8S—Complete set..... Per Set \$3.50

Capewell All-Purpose Saw Blades

Dafiles—Cut in Any Direction



Cuts any material in any direction. Can be used for high-speed cutting in a power jig. Manufactured from a mild steel, cyanide hardened and water quenched.

Case hardened to a depth of approximately .005-in., the core remaining relatively soft to give pliability and tensioning strength. Fits any standard hack saw frame when used with Dafile links. Blades: rough, medium and smooth. Specify when ordering.

No.	Description	Per Doz.
D-10	10-in. Dafiles blades.....	\$3.80
D-12	12-in. Dafiles blades.....	4.50
D-L	Dafiles, links (pair).....	2.00

Capewell Nail Hammers



16-oz. bell face. Head slightly polished. Black neck and underclaw. Oval handle of grade A hickory, clear white finish.

Standard package, 6.

No. C-131 1/2..... Each \$2.20

Champion De Arment Linemen's Double-Faced Hammers



A short, heavy, double faced hammer, one face flat, one face rounded. Black enamel body. Selected hickory handle. Weight 2 1/4 lbs.

No. 85..... Each \$3.50

Key-Hak Portable Power Saws



Does the work of a keyhole saw, hacksaw or scroll saw faster, better and easier. Enters directly into the material without the need for a starting hole.

Balanced for easy handling. In-line drive gives complete control for cutting in any direction. Cuts 1/8 in. and heavier steel, stainless steel, transite, pipe, wood and all kinds of building material.

Fits any heavy-duty 1/4 in. drill — air, electric or motor driven flexible shaft. Recommended for use with drills having chuck speeds of 2000 to 3000 rpm.

Mechanism sealed in a special lubricant.

No.	Wt. Lbs.	Lgth., In.	Each
Key-Hak	3 3/4 lbs.	11 1/2	\$57.50

Metal Scroll Blades

No.	Sheet Metal Min. Radius, In.	Teeth Per In.	Set	Per Doz.
30S14R	3/4 in. 10 gage	14	Raker	\$3.75
30S18R	5/8 in. 12-16 gage	18	Raker	3.75
30S24W	1/2 in. 16-20 gage	24	Wave	3.75
30S32W	1/2 in. 20-22 gage	32	Wave	3.75

Metal Entrance Blades

No.	Description	Teeth Per In.	Set	Per Doz.
30ME14R	for 1/8 to 1/2-in. plate	14	Raker	\$3.50
30ME18R	for 12-16 gage metal	18	Raker	3.50
30ME24W	for 16-20 gage metal	24	Wave	3.50
30ME32W	for 20-22 gage metal	32	Wave	3.50
40ME14R	for pipe or conduit	14	Raker	3.75

Wood Entrance Blades

No.	Wood Cutting Depth, In.	Teeth Per In.	Set	Per Doz.
35WE10R	2	10	Raker	\$2.85
40WE10W	2 1/2	10	Wave	3.00
45WE8W	3	8	Wave	3.15
50WE8R	3 1/2	8	Raker	3.35
55WE10W	4	10	Wave	3.55
60WE10R	4 1/2	10	Raker	3.75

Fowle Compass Saw Blades



Have slot and hole; will fit any standard handle. Complete with blade; set, filed and ready for use.

No.	Lgth., In.	Std. Pkg.	Per Doz.
9-10	10	12	\$8.00
9-12	12	12	9.00

Fowle Keyhole Saw Blades



Set and filed; ready to use. Fit any standard handle.

No.	Lgth., In.	Std. Pkg.	Per Doz.
12-10	10	12	\$7.00
12-12	12	12	8.00

Marvel High-Speed-Edge Hole Saws



Saw Attached to Arbor



Hole Saw



No. 1 Arbor



No. 2 Arbor



No. 3 Arbor



12" Arbor Extension

For use in portable power tools, drill presses, or in lathe tail stock. Cuts holes from 5/8" to 4 1/2" diameter through sheet metal or solid material up to a thickness of 1 1/8". Used on any machinable material.

Hole Saws (Less Arbors)

No.	Saw Diam. In.	For Arbor No.	Each	No.	Saw Diam. In.	For Arbor No.	Each
10	5/8	1	\$ 6.00	41	2 9/16	2, 3	\$10.60
12	3/4	1	6.00	42	2 5/8	2, 3	10.60
14	7/8	1	6.00	44	2 3/4	2, 3	10.60
16	1	1	6.00	46	2 7/8	2, 3	10.60
17	1 1/16	1	6.00	48	3	2, 3	10.60
18	1 1/8	1	6.00	50	3 1/8	2, 3	10.60
20	1 1/4	2, 3	6.00	52	3 1/4	2, 3	10.60
22	1 3/8	2, 3	6.00	54	3 3/8	2, 3	10.60
24	1 1/2	2, 3	6.00	56	2 1/2	2, 3	10.60
26	1 5/8	2, 3	6.00	58	3 5/8	2, 3	14.00
28	1 3/4	2, 3	8.00	60	3 3/4	2, 3	16.00
30	1 7/8	2, 3	8.00	62	3 7/8	2, 3	17.00
32	2	2, 3	8.00	64	4	2, 3	18.00
33	2 1/16	2, 3	10.60	66	4 1/8	2, 3	20.00
34	2 1/8	2, 3	10.60	68	4 1/4	2, 3	26.00
36	2 1/4	2, 3	10.60	70	4 3/8	2, 3	31.00
38	2 3/8	2, 3	10.60	72	4 1/2	2, 3	36.00
40	2 1/2	2, 3	10.60				

Arbors

Have a 1/4" high-speed steel pilot drill and solid hexagon shank to fit any 1/2" or larger 2 or 3 jaw chuck.

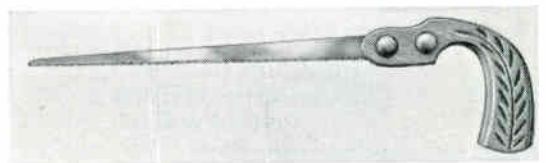
No.	Size Hexagon Shank, In.	Fits Hole Saws, In.	Arbors Each	Extra Pilot Drills Each
1	1/2	5/8 to 1 1/8	\$ 8.00	\$3.00
2	1/2	1 1/4 to 4 1/2	12.00	3.00
3	3/4	1 1/4 to 4 1/2	12.00	3.00

Arbor Extensions

Use with Nos. 1 or 2 arbors to reach inaccessible places. Have 1/2" shank.

No.	Lgth., In.	Each
7	12	\$8.00

Fowle Keyhole Saws



For cutting small holes in hard-to-get-at places. Flexible. Furnished complete with blade; set, filed and ready to use.

No.	Lgth., In.	Each
11-10	10	\$1.45
11-12	12	1.50

Kett Universal Saws

Cuts Practically Any Sheet Material



This Kett saw cuts mild steel, cast iron, copper, lead, zinc, aluminum, Masonite, plywood, plastic, Fiberglas and other similar materials. It is compact, sturdy, powerful and easy to use. It cuts plastics and other soft materials up to 1/4-in., aluminum up to 3/16-in. and mild steel up to 12 gauge. Specially designed lead guide enables operator to follow contours and cut shapes of 6-in. radius or larger. Starts anywhere without starting holes. Cuts to any desired depth up to 1/4-in. Cuts over ribs and supporting structures without fear of damage. Standard equipment includes three 1 1/4-in. x 44 tooth blades, three 1 1/2-in. x 44 tooth blades. Weight, 8 1/2 lbs.

No. **KS-1AM**, with a-c/d-c Universal Motor and Standard Equipment... Each **\$98.50**

Kett Attachments

KS-1. Kett 1/4-in. capacity saw unit complete with geared angle head, portable tool connectors and six blades... Each **\$52.50**

JC-1. Kett Jacobs chuck adapter with 1/4-in. capacity No. 7B Jacobs chuck for use with Kett universal cutting tools to instantly convert them into portable electric drills... Each **\$ 7.50**

JA-1. Kett Jacobs chuck adapter only (without chuck) for 3/8-in. 24 threaded chuck spindle... Each **\$ 2.50**

Kett Saw Blades

For Kett Cutting Tools

No. of Teeth	Diam., in.	Max. Depth of Cut, in.	For Use With	Per Doz.
22	1 1/4	1/8	KS-1 & KS-2	\$10.20
22	1 1/2	1/4	KS-1 & KS-2	10.80
22	2	1/2	KS-2	11.40
44	1 1/4	1/8	KS-1 & KS-2	10.80
44	1 1/2	1/4	KS-1 & KS-2	11.40
44	2	1/2	KS-2	12.00
60	1 1/4	1/8	KS-1 & KS-2	11.40
60	1 1/2	1/4	KS-1 & KS-2	12.00
60	2	1/2	KS-2	12.60

Tec Combination Drill-Saws "Drilsaws"



Drills its own hole, then saws rapidly in any direction. Fine steel blade has fast-boring tip; main portion of blade is sharply toothed spirally. Works without clogging on plywood, hardwood, plaster, wallboards and plastic.

Blade of tough alloy steel, hollow-ground; will take rough usage, but is not brittle. Set securely in lacquered hardwood handle.

Drilsaws

No.	Lgth., in.	Diam., in.	Each
1	7	3/16	\$1.60
2	10	1/4	2.15
3	13	3/16	2.60
4	15	3/8	2.95

Saw Rasp

Similar to Drilsaws, but without boring tip. Specify coarse or fine tooth.

5	13	1/2	\$1.98
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Tec One-Hander Wrenches For Nuts and Pipes



One-hand operation. Just slap it on the pipe or nut. One side of jaw, actuated by a spring, is

moving part. No adjustments to wear or loosen. Gives a positive and instant grip.

Double-leaf spring. Wrench available in special alloy steel or chrome vanadium.

For Nuts

Lgth. In.	Range In.	Carbon Steel		Chrome Vanadium	
		No.	Each	No.	Each
6	3/16-3/8	15-6	\$ 1.75	17-6	\$1.85
8	5/16-5/8	15-8	2.15	17-8	2.45
10	3/8-3/4	15-10	2.95	17-10	3.50
12	1/2-1	15-12	4.50	17-12	5.25
15	3/4-1 1/4	15-15	7.95	.....	.....
20	1-1 5/8	15-20	11.95	.....	.....

For Pipes

6	1/8-3/8	16-6	\$ 1.75	18-6	\$1.85
8	1/4-3/4	16-8	2.15	18-8	2.45
10	3/8-1	16-10	2.95	18-10	3.50
12	1/2-1 1/4	16-12	4.50	18-12	5.25
15	1-1 1/2	16-15	7.95	.....	.....
20	1 1/4-2 1/4	16-20	11.95	.....	.....

Champion De Arment Pliers "Channel-Lock" Diagonal Cutting



No. 437..... Each **\$3.30**

Standard pattern.

Box joint. Polished steel finish, with knurled grips. Length 7-in.; wt. 6 1/4 lbs. per dz.

"Channel-Lock" Curved Diagonal Cutting



No. 447..... Each **\$3.40**

Standard pattern. Lap joint. Polished steel finish. Length 7-in.; weight 7 lbs. per dozen.

Champion De Arment Pliers
"Channel-Lock" Gripping Pliers



A heavy duty self gripping plier which will hold work of any shape with a positive pipe wrench grip. Will exceed a pipe wrench in usefulness because of its light weight and streamline design.

Four adjustments. Polished steel finish. Length, 9½ in. Capacity ⅜ to 1⅛ in. Weight per dozen, 12½ lbs.
 No. 410..... Each \$3.20

"Channel-Lock" Pump Pliers



The wide range of adjustments make it adaptable to a multitude of uses.

Five adjustments. Interlocking channels and lugs prevent slipping. Wide base lugs provide maximum cross section strength. New strength added by the design of the tension edge. Length 9½-in. Capacity 1¼-in. Weight per dozen, 9 lbs.

No. 420..... Each \$2.90

"Channel Lock" Ignition Pliers



With Channel-Lock adjustment to eliminate wear on the joint bolt. A midget plier. Length, 4½ in. Capacity, ½ in. Four adjustments. Polished steel finish. Wt. per dozen, 16 oz.

No. 424..... Each \$2.00

Klein Long Nose Side Cutting Pliers
With Cutting Knives



For stripping insulated wire ends. Point, ⅜-¹/₂-inch round.

No.	Size, In.	Wt., Lbs. Per Doz.	Each
203-5	5	3¼	\$3.10
203-6	6	3¾	3.25
*203-7	7	4¼	3.40

Klein Long Nose Pliers
Without Cutters



For stripping insulated wire ends. Point, ⅜-¹/₂-inch round.

No.	Size, In.	Wt., Lbs. Per Doz.	Each
301-5	5	3¼	\$2.65
301-6	6	3¾	2.75
*301-7	7	4¼	2.95

Klein Side Cutting Pliers
N.E. Type



Nose and all edges rounded and shoulder of head removed.

No.	201-5NE	201-6NE	201-7NE	201-8NE	201-9NE
Wt. per Doz., Lbs.	3	5¼	7¼	11¼	13½
Size, Inches	5	6	7	8	9
Each.....	\$3.25	\$3.60	\$4.05	\$4.85	\$5.10

Klein Oblique Cutting Pliers



Useful for pulling cotter pins, for choke wires, etc. Hammer forged from high grade tool steel of special analysis. Knives

are close cutting and carefully matched for their full length. Individually fitted, tempered, adjusted and tested. Handform handles provide full leverage and comfort. Polished head, handle temper blued.

Size, 7 In. Wt. per Doz., 7 lbs.
 No. 220-7 with Handform Handles..... Each \$3.65

Klein Narrow Nose Oblique Cutting Pliers



Cuts close, knives accurately fitting at all points. Narrow nose permits use in confined places.

No.	Size, In.	Wt., Lbs. Per Doz.	Each
202-5	5	3¾	\$3.00
202-6	6	4	3.15

With W Stripping Notches, Sleeve Openings and Skinning Hole—Bell System Type



An all-purpose cutting tool for telephone installation and maintenance work. The W notches will slit acetate cellulose and other insulations from wires up to .058-inch O.D. A

stripping hole .052-inch diameter is provided in blades which also provides means to crimp on .032 and .025 single tube copper sleeves. Sleeve openings in handles. Polished head, handle temper blued. Size, 5½ inches, Wt. per doz., 3¾ lbs.
 No. 202-5SW..... Each \$3.60

Klein Leather Plier Pockets



No. 5112



No. 5117

Made of good quality leather. Has slits for belt. Wt. per doz., 2½ lbs.

Each
 No. 5107
 3½ x 8½ in... \$1.15
 No. 5112
 3½ x 9 in.... 2.05

Utica Lubring Pliers

Precision machined with patented lubrication ring floating in the joint to assure a smooth-working, long-life joint action. The porous iron ring holds a supply of oil, releasing it as the pliers are used.

Lubring construction has been tested and proved in the field.

**Utica Side Cutting Pliers
"Lubring"**



New England Head Lineman's

No.	Lgth. In.	Each
259-P-6	6	\$3.50
259-P-7	7	3.86
259-P-8	8	4.50

With Splicing Grooves

259-S	8	\$4.80
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Long Nose

254	6 1/2	\$3.20
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**Utica Diagonal Cutting Pliers
"Lubring"**



Standard

No.	Lgth. In.	Each
241-5	5	\$2.86
241-6	6	3.10



With Wire Stripping Hole in Blade, Sleeve Grooves on Wire Twisters With W-shaped Notches On Back of Head

242-SW-5 1/2	5 1/2	\$3.16
242-SW-6	6	3.30

**Utica Long Needle Nose Pliers
"Lubring"**



No.	Lgth. In.	Each
227	6 1/2	\$2.70

Utica Chain Nose Pliers

"Lubring"



Without Cutters

No.	Lgth. In.	Each
226-P	6 1/2	\$2.64



With Sleeve Grooves

226-S	6 1/2	\$2.90
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Utica Adjustable Wrenches

Thin pattern; designed by mechanics for mechanics. Fit with ease in tight spots where ordinary wrenches won't fit. Movable jaw has wide bearing on frame for greater support, eliminating spring and unnecessary strain.



Alloy Steel—Drop Forged



Carbon Steel—Black Finish—Polished Head

Lgth. In.	Max. Jaw Opening In.	No.	Alloy Steel		Carbon Steel	
			Each		No.	Each
4	1/2	91-4	\$ 1.98		90-4	\$1.56
6	3/4	91-6	1.98		90-6	1.56
8	15/16	91-8	2.34		90-8	1.90
10	1 1/8	91-10	3.00		90-10	2.34
12	1 3/16	91-12	4.40		90-12	3.54
15	1 3/4	91-15	6.50		.....	.....
18	2 1/16	91-18	10.78		.....	.....

Neo Tool Kit Pouches

For Electricians and Maintenance Men



Made of tough, durable polyethylene to last longer than leather.

Flexible; expands when filled with tools, but comes back to original shape when empty. Designed for attaching to a belt.

Resistant to oil and most chemicals; can be washed with soap and water. Hole at bottom for attaching roll of tape to a chain. Large pocket is 6-in. deep, 4 3/4-in. wide. Two smaller pockets are 4-in. deep, 1 1/2-in. wide.

Description	Std. Pkg.	Each
Tool Kit Pouch	12	\$1.95

Utica Utility Pliers

"Rib-Joint"



Forged ribs give added strength to jaws.

No.	Lgth. In.	Each
507	10	\$2.85

Utica Side Cutting Pliers



Electrician's Standard

No.	Lgth. In.	Each
50-4	4	\$2.30
50-5	5	2.44
50-6	6	2.62
50-7	7	3.00
50-8	8	3.30



Lineman's Heavy Duty

1950-6	6	\$2.90
1950-7	7	3.40
1950-8	8	4.20



Long Chain Nose

654-6	6	\$3.00
654-7	7	3.50

Utica Diagonal Pliers



Midget

No.	Lgth. In.	Each
46	4	\$2.50



Heavy Duty

39	7	\$3.30
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Utica Ignition Pliers



No.	Lgth. In.	Each
517	5	\$1.25

Utica-Smith Armor Cutters
Pocket Style—For BX and Greenfield



No.	Lgth. In.	Each
100BX	7	\$4.40

Wiss Armor Cutters
For BX and Armored Cable



Have cutter edges, insulation crusher, scraper edge and circular form for crimping.

High-carbon blade combined

with tough forged steel frame for strength and keenness. Hardened and tempered.

Available, when specified on order, with stripping notch at \$0.25 extra.

No.	Lgth. In.	Cut Lgth. In.	Std. Pkg.	Each
BX	7	1	12	\$3.50

Miller Wire Stripper-Cutters

For Use On All Commonly Used Standard Wire



Blades hardened and ground to cut wire cleanly and neatly with a smooth shearing action.

Stripping jaws take stranded wire

with no difficulty. Save time and effort.

Adjusting stop on gripping handles provides proper setting for wire size.

No. 100	Each \$0.89
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Miller Wire Stripper-Cable Slitters

Slits Romex and Service Entrance Cable—Strips Wire



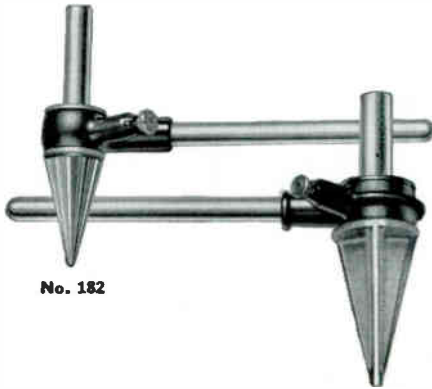
A handy combination tool that slits, strips and cuts.

Wirestripper cuts and strips solid or stranded wire up to No. 10. Has stripper gage for adjustment to wire size.

Adjustable slitting knife has safety thumb guard. No cut fingers. Replaceable slitting blade.

No.	Description	Each
105	Combination Stripper-Slitter-Cutter	\$2.25
...	Replacement Slitting Blade	.15

Toledo Ratchet Pipe Reamers



No. 182

No. 383

No. 182 is a small, compact, all steel pipe or conduit reamer. Multiple tooth reamer head made from heat treated alloy steel. Ratchet handle, 16 1/2-in. long. No. 383 has cutter blades of high speed steel cast solidly in the head. Blades can be resharpened or entire head replaced at moderate cost.

No.	Pipe Size Inches	Weight Lbs.	Each
182	1/8 to 2	5	\$10.00
383	3/8 to 3	8	13.00

Armstrong Ratchet Reamers



No. 210R

No. 244R

Ratchet burring reamers that save effort and money. Speedy and easy workers. Built for rough, hard usage. Heads easily removed. Worn heads are replaceable.

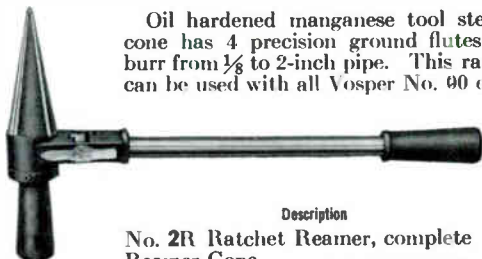
No.	Reams Pipe Inches	Weight Lbs.	Reamer Head Only Each	Collar and Handle Each	Reamer Complete Each
210R	1/4 to 3	8 1/2	\$5.90	\$4.35	\$12.60
244R	1/4 to 2	8	3.95	4.05	11.00

All parts of the above Ratchet Burring Reamers are interchangeable.

All Reamer Heads fit the same Ratchet Collar.
244R Bit Brace Adapter \$1.75.

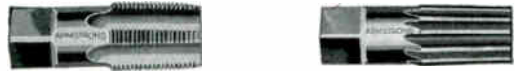
Vosper Ratchet Reamers

Oil hardened manganese tool steel. Reamer cone has 4 precision ground flutes. Removes burr from 1/8 to 2-inch pipe. This ratchet handle can be used with all Vosper No. 90 die heads.



Description	Weight Lbs.	Each
No. 2R Ratchet Reamer, complete	6	\$9.35
Reamer Cone.....	1 1/2	4.40
Reamer Handy Grip.....	1	1.65
Ratchet Handle.....	3 1/2	3.65

Armstrong Pipe Taps and Pipe Reamers



Nominal Size Pipe Inches	Threads to Inch		Right-hand Taps Each	Reamers Each
	American Standard	British Standard		
1/8	27	28	\$0.65	\$1.50
1/4	18	19	.80	1.80
3/8	18	19	1.05	2.40
1/2	14	14	1.30	3.00
3/4	14	14	1.85	4.20
1	11 1/2	11	2.90	6.60
1 1/4	11 1/2	11	4.10	8.15
1 1/2	11 1/2	11	5.45	10.75
2	11 1/2	11	8.25	16.30

Right-hand NPT or BSP Taper Taps supplied at regular price.

Right-hand NPT Taper Taps shipped unless otherwise specified.

Left-hand Taps are Special.

Armstrong Carbon Steel Hand Taps



Diam. Inches	NC		NF	Each	Diam. Inches	NC		NF	Each
	20	28				7	12		
1/4	20	28		\$ 0.50	1 1/8	7	12		\$3.45
5/16	18	24		.55	1 1/4	7	12		4.00
3/8	16	24		.60	1 3/8	6	12		4.60
7/16	14	20		.70	1 1/2	6	12		5.40
1/2	13	20		.85	1 5/8	...	...		6.45
9/16	12	18		.95	1 3/4	5	..		7.70
5/8	11	18		1.10	1 7/8	...	...		8.95
11/16	..	..		1.30	2	4 1/2	..		10.30
3/4	10	16		1.50	...	...	..		....
7/8	9	14		2.00	...	...	..		....
1	8	14		2.55	...	...	..		....

These taps are supplied in taper, plug or bottoming style at regular prices. National Special (NS) Threads are supplied in plug or bottoming style only. Right-hand NC Plug Taps shipped unless otherwise specified.

Sizes and dimensions not listed are special.

Left-hand taps are special.

No. 050 Armstrong Flanging Tools



A convenient set of tools for flanging soft copper tubing. Cadmium plated.

No. 050—3/8, 1/2, 5/8, 7/8, 1 1/8-in.....Set \$3.63

Armstrong Bit Brace Burring Reamers



Spiral Fluted Burring Reamers, remove burrs from pipe and conduit. Blades cut smoothly and rapidly.

No.	Reams Pipe Inches	Diameter, Inches		Each
		at Point	at Large	
242	1/8 to 1	3/16	1 1/4	\$1.65
243	1/4 to 1 1/4	1/4	1 15/32	2.00
244	1/4 to 2	1/4	2 17/64	3.95

Nye Spiral Flute Bit Brace Reamers



Made with tapered shank to fit any standard brace.

Spiral flutes give a shearing action assuring a clean and accurate cut.

No.	Size, Inches	Weight, Lbs.	Each
N42	1/8 to 1	3/4	\$2.20
N42 1/2	1/8 to 1 1/4	3/4	2.75
N44	1/4 to 2	1 1/4	5.20

Armstrong Tube Cutters



Two roller type with knife blade wheel and bevel ground reamer.

Both sets of rolls are separated so that cuts can be made close to flared end of tube.

Thin edge of cutter wheel is protected by a positive stop, preventing it from pressing against the rollers. Will not cut spiral or scratch threads.

No.	Cuts Tube Inches, D.D.	Weight Lbs.	Each	Rolls (2 halves)	Wheels Each
100	1/8 to 1 1/8	1/2	\$2.55	\$0.20	\$0.45

Nye Tube Cutters With Rollers



Used for cutting copper, brass and lead tubing.

Roller reduces friction and prevents marring and tearing of tube.

No.	D.D. In.	Weight Lbs.	Each
N10C	3/8 to 7/8	1 1/2	\$2.70
N25C	1/2 to 2 1/8	2 1/2	5.40

No. 10C.W. Cutter Wheel for No. N10C..... Each .50
 No. 25C.W. Cutter Wheel for No. N25C..... Each .50

Nye Pipe Wrenches



A wrench of life time service. Unconditionally guaranteed. Have hardened forged jaws and alloyed handles. Straight or offset patterns.

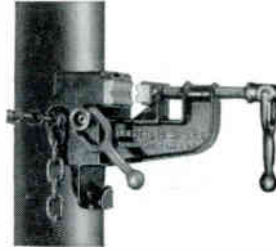
6-In. to 36-In. Straight or Offset at same price

Size, In.	Each	Size, In.	Each
6	\$1.90	8	\$2.20
10	2.85	14	3.85
18	5.50	24	9.50
48	\$30.00	..	....

48-In. in Straight Only

Armstrong Post Vises

With Frictionless Disk



Post vise with pipe bender for on-the-job use. Sturdy chain wraps around lally column or post and hooks into slot. I-Beam structure throughout. Fits round posts from 4 to 10-in. diameter, square posts from 2 1/2 to 10-in. diameter. Equipped with 3/4-in. pipe bender, frictionless disk and frictionless cup to assure easy operation and long wear. No. 152X, side opening. No. 163X hinged.

No.	Holds Pipe Inches	Weight Lbs.	Post Vise Each	Upper Jaw	Lower Jaw
152X	1/8 to 2	16 1/2	\$17.90	\$1.15	\$2.05
163X	1/8 to 2 1/2	20	20.85	1.15	2.05

Armstrong Integral Vistands Pipe Vise and Stand



No. 833BX With Broad Jaw, Hinged Vise



No. 833C With Chain Vise



No. 934C Heavy Duty With Chain Vise



No. 933 Heavy Duty With Broad Jaw Hinged Vise

Armstrong Integral Vistand is three units in one, vise, 3-legged stand and pipe bender. Light and well balanced. Can be easily carried in one hand.

The three legs, correctly adjusted for height and 3-point suspension, are bolted to platform so that each Vistand is completely assembled when received.

Nos. 833BX and 933 are equipped with the regular No. 233 Armstrong hinged pipe vise tops.

No. 833BX and 833C have 3/4-in. pipe benders and slots for tools. The platform provides space for oil can and loose fittings.

Nos. 933 and 934C heavy duty have all the features of the Nos. 833BX and 833C, plus 2 extra benders, 1/2 and 3/4-in. for reverse bends, more slots for tools, a ceiling brace and a cast-in dope pot.

No.	Holds Pipe Inches	Weight Lbs.	Each	Upper Jaw	Lower Jaw
833BX	1/8 to 2 1/2	42	\$26.05	\$1.15	\$2.05
833C	1/8 to 2 1/2	36	26.05	.....	2.30
933	1/8 to 2 1/2	48	29.30	1.15	2.05
934C	1/8 to 4	42	31.35	.....	3.65

Nye Convertible Combination Vises and Stands

Capacity up to 4-inch Pipe



Base designed so yoke vise parts (1/8 to 2 1/2-in.) can be alternated with chain vise parts (1/2 to 4-in.)

Stands have double socket efficiency benders for 1/2 and 3/4-in. pipe.

Slots for holding tools. Hole in rear of base is tapped for 1-in. pipe to take extension pipe rest arrangement.

Each leg of stand has locking arrangement for open and closed positions, no chain required.

No.	Description	Size, Inches	Weight, Lbs.	Each
N88A	Stand with Yoke Vise (Convertible to N88B and N88C).....	1/8 to 2 1/2	45	\$29.55
N88C	Stand complete with all parts for Nos. N88A and N88B.....		47	37.20
N88B	Stand with Chain Vise....	1/2 to 4	43	31.65
N88AP	Parts to convert Nos. N88B to N88A.....		4 1/2	7.80
N88BP	Parts to convert No. N88A to 88B.....		2 1/2	8.60
N88PR	Extension Pipe Rest Yoke.....		1 1/2	2.15

Armstrong Broad Jaw Pipe Vises

With Frictionless Disk



Full length broad jaws, single upper and single lower, grip pipe along their entire length assuring a tight, firm and sure grip without marring the pipe. Mis-use cannot loosen, bend or separate the two bolts holding upper jaw in place. Has double pitch feed screw and upset lower jaw.

No.	Holds Pipe Inches	Weight Lbs.	Each	Upper Jaw	Lower Jaw
231	1/8 to 1 1/2	3 1/2	\$7.50	\$0.95	\$1.60
232	1/8 to 2	8	8.80	1.15	2.05
233	1/8 to 2 1/2	12 1/2	10.40	1.15	2.05
234	1/8 to 3 1/2	15 3/4	15.60	1.60	2.45



Nye Improved Self Locking Pipe Vises

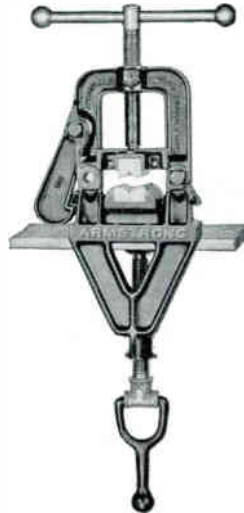
Capacity, 1/8 to 4 1/2 inches.

Long jaws of hardened tool steel.

No.	Takes Pipe Inch	Weight Lbs.	Each
700	1/8 to 1 1/2	6	\$ 7.15
70	1/8 to 2	8 3/4	8.75
71	1/8 to 2 1/2	12	10.45
72	1/8 to 3 1/2	21 1/2	14.00
73	1/8 to 4 1/2	27 1/2	19.00

Armstrong Kit Vises

Clamp Type



Clamps onto plank, bench or post.

Husky and serviceable. Has frictionless disk and four point bearing slide. 1-beam structure and light-weight.

No.	Holds Pipe Inch	Weight Lbs.	Kit Vise Each	Upper Jaw	Parts Lower Jaw
241	1/8 to 1 1/2	4	\$ 9.75	\$0.95	\$1.60
142BX	1/8 to 2	11 1/2	11.00	1.15	2.05
143BX	1/8 to 2 1/2	15 1/2	14.25	1.15	2.05

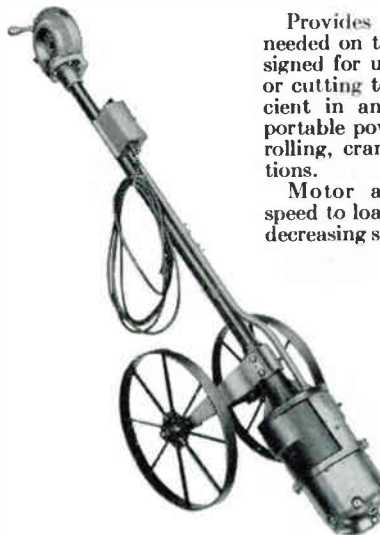
Toledo Open-Side Pipe Vises



Eliminates unlatching and tipping back yoke for lengths of pipe. Handles are extra long, permitting easier setting of pipe jaws. Both upper and lower jaws are heat treated steel, full overlapping for perfect pipe hold. Frame is made of iron, extra heavy.

No.	Jaws, Inches	Weight, Lbs.	Each
00	2 1/4	6 3/4	\$ 8.00
0	2 1/2	12	10.00
3	3 1/4	27	20.00

Toledo Universal Power Drives



Provides power right where it is needed on the job. Particularly designed for use with hand threading or cutting tools, but is equally efficient in any application where a portable power source is needed for rolling, cranking or turning operations.

Motor automatically adjusts speed to load, increasing power and decreasing speed on heavy loads and increasing speed on light loads. Under load, bushing rotates about 30 rpm.

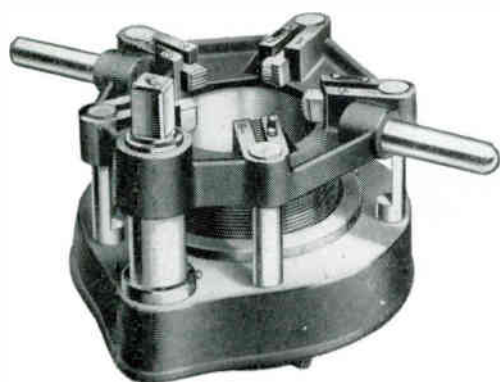
Has 1/2 hp. universal motor. Operates from light socket on 115 volt current, or can be furnished with 230 volt universal motor. Motor is reversible to back off dies.

Weighs only 165 lbs. Furnished with 20-ft. rubber-covered cable. In ordering, be sure to specify whether 115 or 230 volt motor is desired. Shipping wt., 245 lbs.

Universal Power Drive.....Each \$280.00

Toledo Geared Adjustable Threading Devices

Capacity, 2½ to 4 In. Pipe



Receding die principle produces a perfect tapered thread. Net weight only 57 lbs. Easily handled by one man. Consists of tool body, complete set of 2½ to 4 in. dies and bushings, set screw wrench and ratchet handle.

No. 2 BR same as No. 2 except equipped with new type 3-jaw pipe holder. No bushings needed; action is more positive than cam operated mechanism. Either model can be furnished to produce straight running conduit threads for electrical work.

For Pipe

No.		Size Range Inches	WL. Lbs.	Each
2	R.H. complete	2½ to 4	88	\$86.00
2	R.H. complete	2½, 3, 4 only	84	82.00
2 BR	R.H. complete	2½ to 4	85	92.00
2 BR	R.H. complete	2½, 3, 4 only	83	88.00

Dies R.H., 2½, 3, 3½, 4 in., single set, \$5.50.

For Conduit

No. 2. Complete for conduit, 2½ to 4 in. Shipping weight, 100 pounds. Each \$98.00

No. 2 BR. Complete for conduit, 2½ to 4 in. Shipping weight, 99 pounds. Each \$104.00

Electric Conduit Dies. R.H., 2½, 3, 3½, 4-in. Shipping weight, 3 pounds. Each \$8.00

Toledo 3-Way Pipe Threading Devices



Capacities: No. 30—¾, ½, ¼-in. Pipe.
No. 31—½, ¼, 1-in. Pipe.

A very easy tool to use. Tool bodies are about the size of a baseball, each die head being on center.

Handles projecting from both sides produce a balanced tool. Die segments easily removable for regrinding or replacing. No adjustments necessary and no loose parts. Tool body is designed to readily clear itself of chips and will not become clogged with dirt. No. 31 excellent for conduit.

No.	Size Range Inches	WL. Lbs.	Each
30 complete	¾ to ¾	5¼	\$10.50
31 complete	½ to 1	8¼	12.50

¾, ½, ¼ in. R.H. dies, set, \$2.20—1 in., set \$2.60.

Armstrong Adjustable Stocks and Dies For Pipe or Conduit



Set consists of adjustable stock with "Kalarized" adjustable pipe or conduit dies and ring bushings for each threading size, with screws, handles and wrench.

Armstrong "Kalarized" dies are stronger, tougher, yet slide smoothly around the pipe. The full sizes leading threads in the throat pull the dies on the pipe, even over the meanest burrs. No wavy threads.

Set No.	For Threading Pipe Sizes, Inches	WL Lbs.	Dies Per Pair	Each
1	1/8, 1/4, 3/8, 1/2	4¾	\$2.11	\$12.24
1	1/4, 3/8, 1/2		2.11	10.33
1½	Any one size	4	2.11	6.80
1½	1/2, 3/4	4½	2.11	8.43
1½	3/8, 1/2, 3/4	5	2.11	10.33
1½	1/4, 3/8, 1/2, 3/4	5½	2.11	12.24
1½	1/8, 1/4, 3/8, 1/2, 3/4	6	2.11	14.14
2	1/4, 3/8, 1/2, 3/4, 1	12½	2.64	16.32
2	1/8, 1/4, 3/8, 1/2, 3/4, 1	13½	2.64	19.04
2	3/8, 1/2, 3/4, 1	11½	2.64	14.28
2	1/2, 3/4, 1	10½	2.64	11.90
2½	1½x¾, 1x1¼	12½	4.75	19.04
2½	1¼, 3/8, 1/2x¾, 1x1¼	16	4.75DE	25.84
2½	1½x¾, 1x1¼, 1½	14	3.30SE	22.44
3	1¼, 1½, 2	28	4.75	24.75
3	1, 1¼, 1½, 2	32	4.75	28.90
3	¾, 1, 1¼, 1½, 2	36	4.75	33.04
3	1/2, ¾, 1, 1¼, 1½, 2	40	4.75	37.19
6	2½x3	62	22.44	68.00
7	2½x3, 3½x4	96	26.40	
7	3½x4	85	26.40	

x between two sizes indicates the dies are double ended. Left-hand dies are twice the price of standard dies.

Bushings

No. 1 and 1½	each \$.40	No. 2	each \$.54
No. 2½	each .81	No. 3	each 1.02
No. 6	each 2.72	No. 7	each 4.08

Armstrong Adjustable Stocks and Dies

For Bolts and Rods

Set No.	For Threading Bolts and Rods Sizes, Inches	Weight Lbs.	Each
1	1/4, 3/8, 1/2, 5/8, 3/4	4¾	\$18.48
1	1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	5½	23.76
1½	1/4, 3/8, 1/2, 5/8, 3/4	6¼	18.48
1½	1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	7	23.76
1½	1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1	7	23.76
2	1/2, 5/8, 3/4, 7/8, 1	14	23.76
2	1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1	16	31.68
2	1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1	18½	39.60
2	1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1½, 1¼	20½	47.52
3	1, 1¼, 1½, 1¾, 2	37	52.80
3	7/8, 1, 1½, 1¼, 1¾, 1½	41½	60.72
3	1, 1½, 1¼, 1¾, 1½, 1¾, 2	45	68.64
3	1/2, 5/8, 3/4, 7/8, 1, 1½, 1¼, 1¾, 1½	54	84.48

Left-hand dies are twice the price of standard dies.

Bushings

No. 1 and 1½	each \$.40
No. 2	each .54
No. 3	each 1.02

Armstrong Adjustable Ratchet Diestocks

For Pipe or Conduit

Particularly designed for use in close quarters, in corners and other hard to get at places.



With Ring Bushings

Set No.	For Threading Pipe Sizes, Inches	Weight Lbs.	Each	Dies Per Pair
2BR	1/8, 1/4, 3/8, 1/2, 3/4, 1.....	13	\$23.49	\$2.64
2BR	1/4, 3/8, 1/2, 3/4, 1.....	12	20.85	2.64
2BR	3/8, 1/2, 3/4, 1.....	11	18.87	2.64
2BR	1/2, 3/4, 1.....	10	16.89	2.64
3BR	1/2, 3/4, 1, 1 1/4, 1 1/2, 2.....	36	40.39	4.75
3BR	3/4, 1, 1 1/4, 1 1/2, 2.....	32	35.64	4.75
3BR	1, 1 1/4, 1 1/2, 2.....	28	31.15	4.75
3BR	1 1/4, 1 1/2, 2.....	24	27.45	4.75

No. 2BR—Adjustable Ratchet Diestock, less Dies....\$10.91

No. 3BR—Adjustable Ratchet Diestock, less Dies.... 17.45

Left-hand Dies are twice the price of right-hand Dies.

Bushings

No. 2BR.....each \$.54 No. 3BR.....each \$1.02



With Adjustable Guide

Set No.	For Threading Pipe Sizes, Inches	Weight Lbs.	Each
2R	1/8, 1/4, 3/8, 1/2, 3/4, 1.....	12 3/4	\$23.94
2R	1/4, 3/8, 1/2, 3/4, 1.....	12	21.42
2R	3/8, 1/2, 3/4, 1.....	11 1/4	19.53
2R	1/2, 3/4, 1.....	10 1/2	17.64

No. 2R—Adjustable Ratchet Diestock, less Dies.....\$13.09

Left-hand Dies are twice the price of right-hand Dies.

Dies, Pair....No. 2R, \$2.64; No. 3R, \$4.75.

Armstrong 3-Way Diestock

For Pipe or Conduit



With "Kalized" Segmental Dies

Set No.	Threading Pipe Sizes, Inches	Weight Lbs.	Each
170	3/8, 1/2, 3/4	6 1/2	\$11.00
171	1/2, 3/4, 1	9 3/4	12.70

Diestock less Dies: No. 170, \$7.15
No. 171, 8.00

Extra Dies per set: 3/8, 1/2, 3/4 in., \$2.60
1 in., \$3.10

Armstrong Solid Stocks and Dies For Pipe



Set consists of solid stock with "Kalized" solid pipe dies and ring bushings for each threading size, with screws and handles.

Because of double taper lead the full size leading threads pull the dies onto pipe without pushing.

Set No.	For Threading Pipe Sizes, Inches	WL Lbs.	Each
OS	1/8, 1/4, 3/8, 1/2.....	5 1/2	\$12.30
OS	1/8, 1/4, 3/8, 1/2, 3/4.....	6	14.20
1S	1/8, 1/4, 3/8, 1/2, 3/4, 1.....	12 1/4	18.40
1S	1/4, 3/8, 1/2, 3/4, 1.....	11	16.10
1S	3/8, 1/2, 3/4, 1.....	9 3/4	13.80
1S	1/2, 3/4, 1.....	8 3/4	11.50
1 1/2	1/4, 3/8, 1/2, 3/4, 1, 1 1/4.....	21 3/4	23.80
1 1/2	1/2, 3/4, 1, 1 1/4.....	18	17.60
1 1/2	3/4, 1, 1 1/4.....	16 1/4	14.55
2	1/2, 3/4, 1, 1 1/4, 1 1/2, 2.....	31 3/4	33.75
2	1, 1 1/4, 1 1/2, 2.....	25 1/2	26.10
2	1 1/4, 1 1/2, 2.....	22 1/2	22.25

Sets with Adjustable Guides are available.

Right-hand NPT Dies shipped unless otherwise specified. Left-hand dies are twice the price of right-hand dies.

Armstrong Drophead Ratchet Diestocks With Segmental Dies



A quick changing threader. No guides or bushings required. Ratchet pawls quickly reversed. A fine tool for hard to get at places.

Sets Consist of Dies, Heads and Collars Complete

For Pipe or Conduit Sizes, Inches	No. 190R Each	No. 191R Each	Weight Lbs.
1/8 to 1	\$26.40	.....	11 1/2
1/8 to 3/4	21.90	.....	10 1/4
1/4 to 1	23.00	.....	10 1/4
1/4 to 3/4	18.50	.....	9
3/8 to 1	19.50	.....	9
3/8 to 3/4	15.00	.....	7 3/4
1/2 to 1	16.00	.....	7 3/4
1/2 & 3/4	11.50	.....	5 1/4
3/4 & 1	11.50	.....	8
1/8 to 1 1/4	.....	\$31.90	20 3/8
1/8 to 1	.....	27.20	18 3/4
1/4 to 1 1/4	.....	28.45	18 1/4
1/4 to 1	.....	23.75	16 1/2
3/8 to 1 1/4	.....	24.85	16
3/8 to 1	.....	20.15	14 1/4
1/2 to 1 1/4	.....	21.15	13 3/4
1/2 to 1	.....	16.45	12 1/2
Ratchet Collar and Handle	2.50	2.85	.....

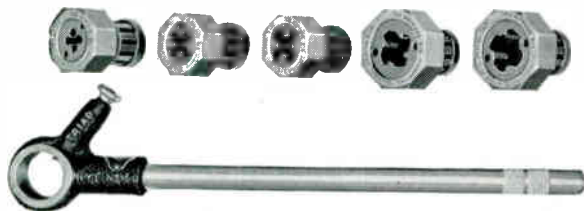
Die Heads and Dies Only

For Pipe or Conduit	Complete	Dies Only	Complete	Dies Only
1/8"	\$3.40	\$2.60	\$3.45	\$2.60
1/4"	3.50	2.60	3.60	2.60
3/8"	3.50	2.60	3.70	2.60
1/2"	4.50	2.60	4.50	2.60
3/4"	4.50	2.60	4.50	2.60
1"	4.50	3.10	4.60	3.10
1 1/4"	.....	.....	4.70	3.10

Dieheads for "BRASS PIPE ONLY"—Regular.

Right-hand NPT Dies shipped unless otherwise specified.

Nye Triad Ratchet Stocks



One-piece dies assure perfect alignment and size. Die is locked into place by threaded screw cap, easily removed by a few right hand turns. Same dies are used with all Triad Stocks, but die head diameters are different for each ratchet stock.

Capacities: Nos. N50, 1/8 to 3/4-in.; N55, 1/8 to 1-in.

No. 50 Nye Triad Ratchet Stocks

No.	Complete with R.H. Dies	Wt. Lbs.	Each
N50-5	1/8, 1/4, 3/8, 1/2, 3/4 in.	9 1/2	\$21.90
N50-4	1/4, 3/8, 1/2, 3/4 in.	8 1/4	18.50
N50-3	3/8, 1/2, 3/4 in.	7 1/4	15.10
N50-2	1/2, 3/4 in.	6	11.70

N50-R. Ratchet with handle. Weight, 2 3/4 pounds. Each \$2.70.

N50-II. Die head with die (specify size). Weight, 1 1/4 pounds. Size 1/8, 1/4, 3/8 Each \$3.40. Size 1/2, 3/4 Each \$4.50.

N50-P. Pawl only with spring. Weight 1/4 pounds. Each \$1.05.

No. 60B Nye Triad Ratchet Stocks

No.	Complete with R.H. Dies	Wt. Lbs.	Each
N60B-6	1/8, 1/4, 3/8, 1/2, 3/4, 1 in.	19	\$27.00
N60B-5	1/4, 3/8, 1/2, 1 in.	17 1/4	23.65
N60B-4	3/8, 1/2, 3/4, 1 in.	15 1/4	20.20
N60B-3	1/2, 3/4, 1 in.	13 1/4	16.75

N60B-R. Ratchet only with handle. Weight 4 1/4 pounds. Each \$2.95.

N60B-II. Die head with die 1/8, 1/4, 3/8". Weight, 2 pounds. Each \$3.45.

N60B-II2. Die head with die, 1/2, 3/4" size. Weight 2 pounds. Each \$4.55.

N60B-II1. Die head with die 1". Weight 2 1/2 pounds. Each \$4.70.

N60B-P. Ratchet pawl spring. Weight 1/4 pound. Each \$1.15.

No. 60 Nye Triad Ratchet Stocks

No.	Complete with R.H. Dies	Wt. Lbs.	Each
N60-7	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4 in.	21 1/2	\$31.80
N60-6	1/4, 3/8, 1/2, 3/4, 1, 1 1/4 in.	19 3/4	28.45
N60-5	3/8, 1/2, 3/4, 1, 1 1/4 in.	17 3/4	25.00

N60-4	1/2, 3/4, 1, 1 1/4 in.	15 3/4	\$21.55
N60-41	3/8, 1/2, 3/4, 1 in.	14 1/4	20.20
N60-31	1/2, 3/4, 1 in.	12 1/2	16.75

N60-R. Ratchet only with handle. Weight 4 1/4 pounds. Each \$2.95.

N60-II. Diehead with dies, sizes 1/8 to 3/8". Weight 2 pounds. Each \$3.45.

N60-II1. Diehead with die, sizes 1/2, 3/4 in. Each \$4.55. Size 1 in. Each \$4.70. Size 1 1/4 in. Each \$4.80.

N60-P. Pawl only with spring. Weight 1/4 pound. Each \$1.05.

Toledo Pipe Threading Devices

No. 00—Capacity 1/8 to 3/4 Pipe



Light, compact, and will thread pipe in corners. Cuts threads of full taper. Cover on each die head protects dies from damage. Die segments can be removed from die heads with screw driver for regrinding or replacing. Complete tool consists of ratchet handle, 17 in. long, 1/8, 1/4, 3/8, 1/2 and 3/4-in. die heads with R.H. dies.

Complete

No.	Cap. In.	Shipping Wt. Lbs.	Each
00	1/8 to 3/4	9	\$21.40
00	1/4 to 3/4	8 1/4	17.90
00	3/8 to 3/4	7	14.40
00	1/2 to 3/4	5 1/2	10.90

Accessories

No. 00. Ratchet Handle complete. Ship. weight, 3 lbs. Each \$3.00.

No. 00. Die Heads with R.H. Dies, 1/8, 1/4 or 3/8-in. Each size \$3.30.

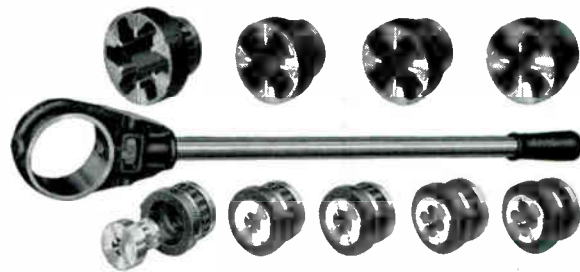
No. 00. Die Heads with R.H. Dies, 1/2 or 3/4-in. Each size \$3.50.

Steel Carrying Case (holds ratchet and 7 dies). Ship. Weight, 4 lbs. Each \$3.50.

Vosper Drophead Ratchet Threaders

Ratchet handles are longer for greater leverage. Straight line pawl mechanism mounted on ground steel tubing for greater overall strength. Diehead incorporates large chip pockets to assure free movement of cuttings. Enclosed head design distributes thread cutting on the die segments.

In ordering specify number of dieheads desired.



No. 12 Standard Vosper Drophead Ratchet Threader

No.	No. of Dieheads	Size Range Inches	Wt. Lbs.	*Each
12	4	1 to 2	23 3/4	\$28.15
12	5	3/4 to 2	27	33.30
12	6	1/2 to 2	30 3/4	38.45
12	9	1/8 to 2	43 1/2	53.90

Accessories

Ratchet Handle—Weight 6 3/4 lbs. Each \$4.00

Diehead—With 2-inch R.H. pipe or conduit dies, weight 4 3/4 lbs. Each 7.25

Dieheads—1, 1 1/4-inch R. H. pipe or conduit dies, weight 4 lbs. Each 5.40

Adapter and No. 00 Diehead—With 1/8, 1/4, 3/8, 1/2, 3/4-inch R.H. pipe or conduit dies, weight 1 1/4 lbs. Each 5.15

Die Segments—2-inch R.H. pipe or conduit, per set 3.90

Die Segments—1, 1 1/4, 1 1/2-inch R.H. pipe or conduit, per set 3.10

*Price includes threader and die head with right-hand pipe dies; conduit dies substituted at no extra cost.

Armstrong Heavy Duty Pipe Cutters

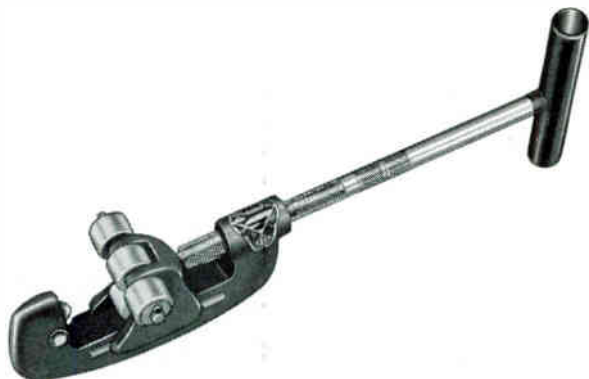


Designed for heavy duty use, pipe cutter wheels are made from special alloy steel, hardened and tempered. Knurled speed twirler allows fast adjustment. Handle shaped to fit the hand.

No.	Cuts Pipe Inches	Wt. Lbs.	Cutter Each	Wheels Each	Rolls Each	Pins Each
2A	1/8 to 2	7	\$9.80	\$0.75	\$0.45	\$0.30
4A	2 to 4	20	32.80	1.30	.60	.35

Nye Pipe Cutters

For Use with Power Units



Three roller balancing.

Self aligning, assuring square cuts and eliminating spirals. Can be applied to pipe while pipe is in motion. Cuts with less effort and saves half the usual cutting time.

No.	Size Inches	Wheels Used	Weight Lbs.	Each
2NP	1/8 to 2	2N or 2R	6	\$11.50

Nye Heavy Duty Pipe Cutters



Solid malleable construction and all steel handle make this an exceptionally dependable and durable tool. Wheel blocks travel on extra wide-ways which assures continued alignment. Every pipe cutter is checked for alignment and tested at the factory.

No.	Size Inches	Wheels Pins Rollers Used	Weight Lbs.	Each
1N	1/8 to 1 1/4	1 and 2N	6	\$ 7.35
2N	1/8 to 2	1 and 2N	7	9.85
4N	2 to 4	1N	17	33.00

Beaver Ratchet Threaders

1 Set of Dies Threads 1 to 2 In.



The only fully adjustable tool that will cut under or over standard lengths.

The only threader that will cut either standard taper threads or electric conduit straight threads with same dies.

The only threader with radio dial setting. Dies easily removable from outside in few seconds. Very rugged and easy working. Low upkeep cost.

No. 26-R. Ratchet Threader, 1 to 2-in. Each **\$32.50**

Beaver Geared Threaders

1 Set of Dies Threads 2 1/2 to 4 In.



Will cut standard, oversize or undersize threads of standard length.

Being adjustable, it is always possible to compensate for variations in off-standard or reused pipe fittings, still giving tight joints. Very rugged and easy working. Threads pipe or conduit with same set of dies.

No. 41-E. Geared Threader, 2 1/2 to 4-in. Each **\$ 88.00**

No. 61-E. Geared Threader, 2 1/2 to 6-in. Each **176.00**

No. 61-EX. Geared Threader, 4 to 6-in. Each **154.00**

Beaver Pipe and Conduit Threaders

DeLuxe with Fully Enclosed Ratchet



Finest set available. Ratchet mechanism fully enclosed, prevents wear on teeth and thereby eliminates danger of slipping which might result in serious injury to workman. Dieheads available for pipe, bolt, conduit, right or left.

No. 3. Ratchet with handle. Each **\$4.00**

Diehead with Dies. 1/8, 1/4, 3/8, 1/2, 3/4, 1-in., R. or L. Each **\$4.00.**

Die Segments Only. R. or L. any size. Per Set **\$3.00**

Beaver 3-Way Threaders



Many advantages.

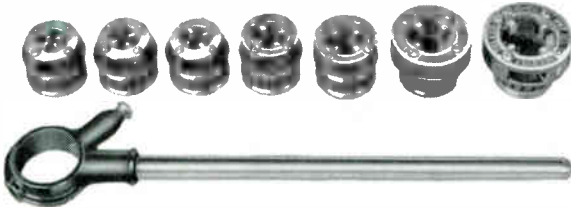
Oil holes between dies for oiling and chip clearance.

Dies square, no offset to break.

Dies easily removed for resharp-ening. Extra long handle bosses give great strength.

No. 34. 1/2 to 1 in. pipe or conduit (specify which). 3-Way threaders. Each **\$12.75**

Toledo Ratchet Type Threading Devices
Capacity, 1/8 to 1 1/4 in. Pipe



Light and compact, reaches corner jobs. Right hand only. Die heads instantly changed by pulling ratchet pawl knob, dropping out one head and inserting another. Ratchet handle, 24 in. long. Die segments can be reground or replaced at small expense. Complete tool consists of ratchet handle, 1/2, 3/4, 1 and 1 1/4 in. right hand die heads with dies, and is so furnished unless otherwise specified. Any combination of die heads may be ordered. Conduit dies same cost as pipe dies.

Complete						
No.	Cap. In.	Shipping Wt. Lbs.	Each	Cap. In.	Shipping Wt. Lbs.	Each
11	1/2 to 1 1/4	13	\$21.00	1/4 to 1 1/4	15	\$29.00
11	1/2 to 1	10	16.50	1/4 to 1	14	24.50
11	3/8 to 1 1/4	18	33.00	3/8 to 1 1/4	14	25.00
11	3/8 to 1	15 1/2	28.50	3/8 to 1	14	20.50

Nye Receding Stocks With Separate Dies

No. 2—Capacity 2 1/2 to 4 In. Pipe



No.	Description	Wt. Lbs.	Each
N2-R4	Stock complete with ratchet handle, guides and R.H. dies, 2 1/2, 3, 3 1/2, 4-in.	100	\$88.00
N2-RO	Stock, less ratchet handle guides and dies.	67 1/4	72.60
N2-RII	Ratchet and handle complete.	14	8.80
N2-RG	Guides (bushings) 2 1/2, 3, 3 1/2, 4-in.	2 3/4	2.20*
N2-RS	Set Screws, Each.	1/4	.30

*Each size.

Nye Ratchet Receding Die Stocks

Regular Bushings
No. 1R—Capacity 1 to 2 In.



No.	Description	Wt. Lbs.	Each
N1-R-4	Receding stock (ratchet) complete with bushings and dies, 1, 1 1/4, 1 1/2, 2 in.	23	\$23.00
N1R-O	Stock, less dies and handle.	16 1/2	16.30

Nye Three Way Triad Stocks
With Reversible Die



Dies may be reversed in holder to thread close nipples.

- No. N3W-30. Complete with R.H. dies, 3/8, 1/2, 3/4 in. dies. Weight 7 1/2 pounds. Each **\$10.95**
- No. N3W-31. Complete with R.H. dies, 1/2, 3/4, 1-in. Weight 11 1/4 pounds. Each **\$12.75**
- No. N3W-30-0. Stock only. Weight 2 pounds. Each **\$7.25**
- No. N3W-31-0. Stock only. Weight 3 pounds. Each **\$7.25**
- ND-T. Triad dies only, 1/8, 1/4, 3/8-in. pipe or conduit. Weight 1/4 pound. Each **\$2.60**
- ND-T. Triad dies only, 1/2, 3/4-in. pipe or conduit. Weight 1/2 pound. Each **\$2.95**
- ND-T. Triad dies only, 1, 1 1/4 in. pipe or conduit. Weight 1/2 pound. Each **\$3.30**

Nye Triplex Solid Die Stocks

Capacity, 3/8 to 1 In.



Lightweight one-piece combination stock holds three dies. Large openings in body give ample chip clearance and oiling space.

- No. NT-30. Complete with R.H. skip-tooth dies, 3/8, 1/2, 3/4-in. Weight 11 1/4 pounds. Each **\$14.90**
- No. NT-31. Complete with R.H. skip-tooth dies, 1/2, 3/4, 1-in. Weight 11 1/4 pounds. Each **\$14.90**
- No. NT-0. Stock less dies and bushings. Weight 8 1/2 pounds. Each **\$7.25**
- No. NT-G. Extra guides. Each **\$0.55**
- No. NT-TPS. Top plate with screws and springs. Each **\$1.05**
- No. NT-II. Handles only. Weight 2 pounds. Each **\$1.15**
Extra solid skip-tooth dies. Each **\$3.30**

Nye No. 1 Solid Bolt Dies



Size In.	Threads Per In.	Size In.	Threads Per In.
1/4	20	5/8	11
5/16	18	3/4	10
3/8	16	7/8	9
1/2	14	1	8
5/8	13	1 1/8	7
3/4	12		

Can be used in any stock accommodating No. 1; 2 1/2 x 2 1/2 x 3/4-in. die.

- No. ND-1B. Solid bolt dies. Each **\$3.20**

Nye Solid Skip-Tooth Dies



Featuring the removal of every alternate tooth in back of die to reduce friction and permit more chip clearance when backing off.

No. ND-1. Die dimension, 2 1/2 x 2 1/2 x 3/4-in. sizes 1/8, 1/4, 3/8, 1/2, 3/4, 1-inch. Weight, 1 lb. Each **\$3.30**

No. ND-2. Die dimension, 4 x 1 7/8-in. sizes 1/2, 3/4, 1, 1 1/4, 1 1/2, 2-in. Weight, 2 1/2 lbs. Each **\$5.50**

Solid Skip-Tooth Conduit Dies

For use in any stock accommodating No. 1: 2 1/2 x 2 1/2 x 3/4-in. die.

No. ND-1C, 1/2, 3/4, 1 in. Each size **\$3.30**

Nye Die Chasers



For Receding Die Stocks. Made of high grade alloy steel or high speed steel, hardened and tempered in oil.

Set consists of 4 segments of one size only.

Stock No. Dies Fit, and Sizes Included

(Specify size when ordering)

No.	Per Set
N1-DC No. 1, 1A, 1R. Four Segments per set	\$2.20
N1-DS 1", 1 1/4", 1 1/2" (Alloy Steel)	2.20
2" (High speed steel)	2.75
N2-DC No. 2—Five Segments per set. 2 1/2", 3", 3 1/2", 4" (Alloy Steel)	6.00

Armstrong Solid Ratchet Diestocks For Pipe



With Ring Bushings

Set No.	For Threading Pipe Size, Inches	Weight Lbs.	Diestock Each	Dies Each
151BR	1/8, 1/4, 3/8, 1/2, 3/4, 1....	13	\$20.45	\$2.75
151BR	1/4, 3/8, 1/2, 3/4, 1.....	11 1/2	18.50	2.75
151BR	3/8, 1/2, 3/4, 1.....	10 1/2	16.70	2.75
151BR	1/2, 3/4, 1.....	9 1/2	14.85	2.75
152BR	1/2, 3/4, 1, 1 1/4, 1 1/2, 2...	32 1/2	29.25	4.20
152BR	3/4, 1, 1 1/4, 1 1/2, 2.....	28 1/2	26.20	4.20
152BR	1, 1 1/4, 1 1/2, 2.....	24 1/2	23.15	4.20
152BR	1 1/4, 1 1/2, 2.....	20 1/2	21.30	4.20

Solid Ratchet Diestocks Less Dies

No. 151BR	\$10.36
No. 152BR	17.05

Left-hand dies are twice the price of standard dies.

No. 1 Bolt Dies listed above fit No. 151BR and No. 151R Diestocks.

Oster "Bull Dog" Stocks and Dies



Plain Type Bull Dog



Ratchet Type Bull Dog

The tools with five big features. Lever-locking, adjustable dies, self-locking, self-centering guides. No backing off, dies open and release tool from pipe. Dies reset to size instantly. Big range of sizes, right and left hand threads. The self-centering universal guides with which all Bull Dog die stocks are equipped accurately center all sizes of pipe and eliminate pipe bushings and set screws. The guides which are controlled by a lever handle, will pass a coupling so that short nipples as well as longer lengths of pipe can be threaded.

Bull Dog dies are made of high quality tool steel, properly hardened and ground to size on all sides.

Equipment furnished as standard consists of tool body, self-centering guides, 1 set handle and one complete set of R.H. pipe dies to cover the designated range. Made in plain and ratchet types.

Plain	Number	Range, Inches	Bolts	Plain	Ratchet
111	.....	1/4 to 3/4	1/4 to 3/4	\$21.50	.....
111 1/2	.....	1/8 to 3/4	1/4 to 3/4	25.00	.....
112	112R	1/4 to 1 1/4	1/4 to 4	27.50	\$30.00
113	113R	1 to 2	1/4 to 1 1/4	30.00	34.00
114	114R	1/4 to 2	1/4 to 1 1/4	35.00	39.00
114 1/2	114 1/2 R	1/4 to 2	1/4 to 1 1/4	40.00	44.00
.....	115R	1 1/2 to 3	.....	.....	72.00
.....	115 1/2 R	1 to 3	.....	.....	79.50
.....	117R	2 1/2 to 4	.....	.....	78.00
.....	117 1/2 R	1 1/2 to 4	.....	.....	88.50

Extra Dies

Single sets of extra dies consists of these size combinations: 1/8 in.; 1/4 & 3/8 in.; 1/2 & 3/4 in.; 1 & 1 1/4 in.; 1 1/2 & 2 in.; 2 1/2 & 3 in.; 3 1/2 & 4 in.

Extra Dies for Bull Dog

Ratchet No.	Extra Pipe Dies Single Set	Extra Bolt Dies Single Sets
111	\$3.50	\$5.25
111 1/2	3.50	5.25
112 — 112R	4.00	6.00
113 — 113R	5.00	7.00
114 — 114R	5.00	7.00
114 1/2 — 114 1/2 R	5.00	7.00
115R	7.50	.....
115 1/2 R	7.50	.....
117R	10.50	.....
117 1/2 R	10.50	.....

Armstrong Adjustable Guides

For Adjustable and Solid Stocks



To Fit Stock	No. Adj.	Solid	Each	Jaws Each	Bottom Plate Each	Body Each
1	OS		\$4.20	\$.38	\$1.22	\$1.76
2	IS		4.50	.40	1.36	2.17
2 1/2	1 1/2		5.40	.47	1.70	2.72
3	..		7.20	.61	2.17	4.08

Armstrong Handy Threaders

A practical tool for the home mechanic or maintenance man. Light in weight. Easy to handle. Equipped with regular "Kolorized" solid dies. Slotted handle permits storing on nail or peg.



**No. 70B With Ring Bushings
For Threading Pipe**

Sizes, Inches	Weight Lbs.	Each	Dies Each	Bushings
1/2, 3/4	4 1/4	\$ 6.30	\$ 2.35	\$.40
3/8, 1/2, 3/4	4 3/4	8.30	2.35	.40
1/4, 3/8, 1/2, 3/4	5 1/4	10.15	2.35	.40
1/8, 1/4, 3/8, 1/2	5 1/2	10.15	2.35	.40
1/8, 1/4, 3/8, 1/2, 3/4	5 3/4	11.85	2.35	.40

For Threading Bolts and Rods

1/2, 5/8, 3/4	5	\$ 8.56	\$ 2.35	\$.40
3/8, 7/16, 1/2, 5/8, 3/4	6 1/4	12.09	2.35	.40
1/4, 3/8, 1/2, 5/8, 3/4	6 1/4	12.09	2.35	.40
1/4, 5/16, 3/8, 7/16, 1/2	6 1/2	12.09	2.35	.40

Armstrong Cutting Oil

Absorbs heat. Dies cut easier and last longer. Does not gum pipe. Light or dark, specify.

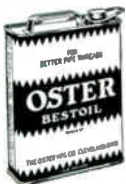


Quart can	50.60
1 gal. can	1.25
5 gal. can	5.35
30 gal. drum, per gal.	1.00
50 gal. drum, per gal.	1.00

Plus Federal Tax.

Oster Cutting Oil

Absorbs and throw off heat. Flows freely in cold weather. Sterile with no tendency to cause infection.



Quart	\$.60
Gallon	1.15
5 gal.	5.00
30 gal.	24.00
55 gal.	38.50

Plus Federal Tax.

If the Tool You Need

Is Not Listed in this Catalog

... Call Your Nearest

Graybar Office and Warehouse

Thread-Ezy Power Pipe Threaders

Port-A-Pony



Provide portable power for on-the-job conduit and pipe threading. Faster and easier than hand threading. Lightweight magnesium alloy frame makes one-man operation easy. Compact; can be used wherever working area is 12-in.

Makes clean, strong threads on pipe from 1/4 to 4-in. Specially designed 1/2-hp., 110 v. motor turns dies at proper speed for each pipe size; reversible for speedy removal after threading. Adaptors available for all popular hand stocks. Dies are easily and quickly changed.

Case-hardened gears run in oil. Control-switch is a fingertip button. Unit is thoroughly insulated for safe operation.

Furnished with 25-ft. of heavy-duty, neoprene-jacketed cord and locking, non-pull-out plug. Die stocks and adaptors not included.

No.	Lgth.	Dimensions, Inches HL	*Width	WL, Lbs.	Each
20	32	11	6	26	\$169.50

*Less dies and adaptor.

Adaptors

No.	For Die Stock	Size, In.	Each
201-2	Toledo No. 00; Nye No. 50	1/8 to 3/4	\$14.50
200-7	Toledo No. 11	1/8 to 1 1/4	14.50
201-8	Toledo No. 12	1/8 to 2	14.50
203-1	Nye No. 55	1/8 to 1	14.50
203-5	Beaver No. 3	1/8 to 3/4	14.50
200-2	Armstrong No. 1 and 1A	1 to 2	10.00
201-9	Capwell Vosper No. 12	1/8 to 2	14.50
200-3	Oster No. 112R	1/4 to 1 1/4	10.00
200-6	Any gear-driven stock	2 1/2 to 4	14.50

Adaptors for many other die stocks are available. Call us for complete information.

Nye Pipe Threading Oil

Has a sulphur base. Furnished in regular dark, unless otherwise specified. Clear is available.



	Dark	Clear
1 gal. can	\$1.38	\$1.38
5 gal. cans, per gallon	1.17	1.17
55 gal. drums, per gallon	1.02	1.02

Plus Federal Tax.

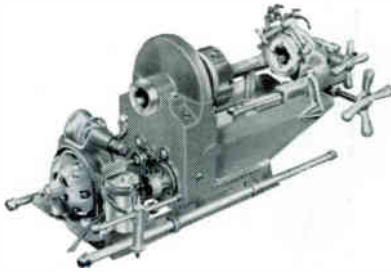
Beaver Pipe and Bolt Machines

Beaver Model A Pipe and Bolt Machines

Model A—Heavy Duty—Capacity, 1/8- to 2-In. Pipe or Bolts

A powerful, rugged machine, yet readily portable. Is standard equipment in many shops. Right-hand operation like a lathe. All controls at finger tips. Safety switch lock prevents starting before removing chuck wrench. Ring type die heads, no backing off over threads. Die segments adjust as single unit, without tools, insuring even cutting by all segments. 110 or 220-volt universal motor for a-c or d-c current, 25 to 60-cycle. Also special motors.

Range may be increased to cover 2 1/2 to 12-in. pipe with Beaver geared tools and drive shaft. Net weight, 365 lbs. Ask for bulletin.



Model A

Model A, Complete

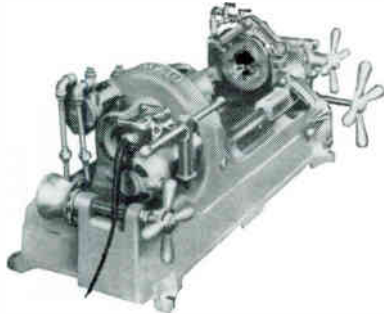
6 quick opening adjustable mono-type die heads (for one size only) and 6 sets high speed steel dies to thread 1/2 to 2-in. pipe.....	each	\$660.00
7 dieheads 3/8 to 2-in.....	each	690.00
8 dieheads 1/4 to 2-in.....	each	720.00
2 quick opening adjustable mono-type dieheads (1 large, 1 small size), 6 sets high speed mono-type dies (one size only) to thread 1/2 to 2-in. pipe.....	each	570.00
8 sets, 1/4 to 2-in.....	each	585.00
9 sets, 1/8 to 2-in.....	each	592.50

Beaver Model B Pipe and Bolt Machines

Utility Model, Capacity, 1/8- to 2-In.

Same general characteristics as Model A, but uses geared type motor. Cuts, reams and threads 1/8 to 2-in. pipe. Threads bolts 1/4 to 1 1/2-in. 110 or 220-volt a-c or d-c universal motor, 25 to 60 cycle. Develops 1.6 Hp. Net weight, 235 lbs.

With drive shaft and geared tools cut and thread 2 1/2 to 8-in. pipe. Ask for bulletin.



Model B

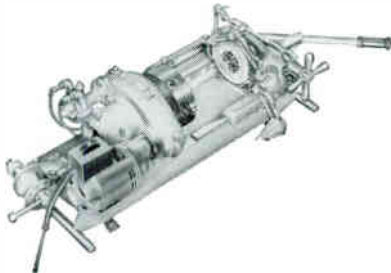
Model B, Complete

3 adjustable duo-type dieheads, 3 sets high speed steel dies, 1/2 to 2-in.....	each	\$480.00
With 4 dieheads, 1/4 to 2-in.....	each	510.00
With 5 dieheads, 1/8 to 2-in.....	each	540.00
6 adjustable mono-type dieheads, 6 sets high speed steel dies, 1/2 to 2-in.....	each	570.00
With 8 dieheads, 1/4 to 2-in.....	each	630.00
With 9 dieheads, 1/8 to 2-in.....	each	660.00

Beaver Model E Pipe and Bolt Machines

Economy Model, Capacity, 1/8- to 2-In.

A light weight, low priced and easy to use machine. Weighs only 185 lbs. Actually a junior edition of Model A. For pipe 1/8 to 2-in. Bolts, 1/4 to 1 1/2-in., 110/115 or 220/230-volt universal motor, reversible at switch, for either a-c or d-c current. 2 1/2 to 8-inch capacity with drive shaft and geared tools. Ask for bulletin.



Model E

Model E, Complete

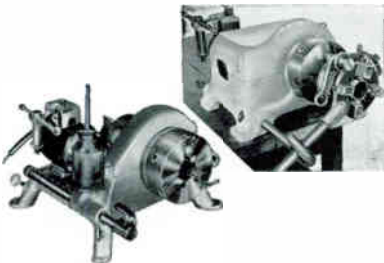
1 adjustable diehead and alloy steel dies to thread 1/2 to 2-in. pipe.....	each	\$385.00
With extra die heads and dies to thread 1/8, 1/4 and 3/8-in. pipe.....	each	417.50
3 adjustable duo-type dieheads, 3 sets steel alloy dies to thread 1/2 to 2-in. pipe.....	each	430.00
With 5 dieheads and dies 1/8 to 2-in.....	each	485.00

Beaver Model C-1 and D Power Units

Model C-1 — 140 lbs., Model D — 105 lbs.

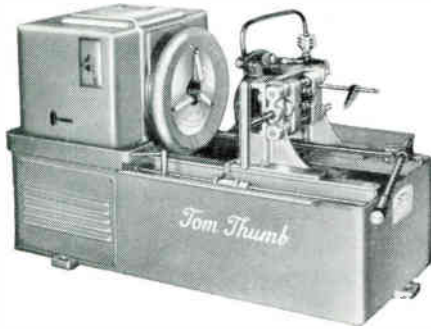
Light enough to be readily portable, heavy enough to be thoroughly dependable. Will drive geared threaders up to 8-in. Heavy-duty weather-proof motor. Switch lock and chuck wrench holder. Full size heavy-duty 1/2 to 2-in. chuck. Safety latch to prevent rotation of tools, gears fully enclosed, run in oil. C-1 housings steel iron. Model D aluminum alloy. Makes pipe machine of any make of hand tools.

Model C-1 Power Drive (no vise).....	each	\$180.00
Model D Power Drive (no vise).....	each	190.00
Model D Power Drive (with vise).....	each	200.00



Models C-1 and D

Oster "Tom Thumb" Portable Pipe Machines



Equipped with ball-bearing mounted spindle and worm drive, giving it suitable speeds for most every requirement. New "Auto Grip" chuck speeds up operation and eliminates the use of chuck bar or wrench. Nipples as short as 1½-in. in the 2-in. size can be held in the regular chuck and threaded on both ends without using a nipple chuck. Pipe or studs as short as 3½-in. can be held and threaded on one end. Standard range ½ to 2-in. pipe. Extra range ⅛-in. pipe. Range with drive shaft 2½ to 8-inch pipe. Bolt range ¼ to 1½-in.

Standard equipment includes detachable reamer, roller type cutter, self-centering with length gauge, auto grip wrenchless type front chuck, universal centering rear chuck, universal variable speed 110 volt, a-c or d-c motor, reversing switch, gauge for thread length, reversible oil pump with relief valve, 5-gal. Oster cutting oil. Weight. 525 lbs.

No. 582 Complete with Standard Equipment

Dieheads	Set of Dies	Die Range, In.	Each
2	3	½ to 2	\$790.00
3	3	½ to 2	815.00
4	4	¼ to 2	845.95
6	6	½ to 2	929.95
8	8	¼ to 2	991.85

No. 582R "Tom Thumb" Portable Pipe Machine

Differs from No. 582 by having revolving diehead. Its revolving dieheads and open type vise make it possible to thread long or short, straight or bent pipe, as well as nipples, rods, studs and bolts. Standard range ¼-to 2-in. pipe. Extra range ⅛-in. pipe. Range with drive shaft 2½ to 8-in. pipe. Bolt range ¼ to 1½-in.

No. 582R. With standard equipment and four sets of dies to cover standard pipe ranges, carbon steel ¼ to ¾-in.—high speed steel 1 to 2-in., each \$905.00.

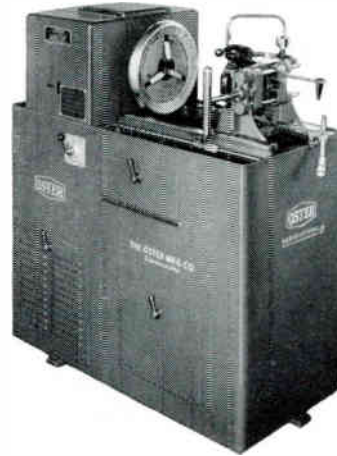
Nos. 581A and 582A "Tom Thumb" Portable Bolt Machines

These machines embody all the basic quality features of the Tom Thumb line plus the added advantages of the semi-automatic opening and closing of the dieheads which give greater production. Nos. 581A and 582A are identical with the exception that the bore of the diehead of the No. 582A and its spindle speeds permit pipe up to 2 in. to be handled. No. 581A standard bolt range ¼ to 1½-in. pipe or nipple range ⅛ to 1¼ in. No. 582A standard bolt range ¼ to 1½-in. Pipe or nipple range ¼ to 2-in.

No. 581A. With standard equipment and carbon steel bolt dies, set for each size and high speed steel pipe dies, 1 set for each size, each \$1060.00.

No. 582A. With equipment as for No. 581A, ea. \$1080.00.

Oster "Rapiduction Jr." Pipe Machines



For general purpose work and long run production threading. Well suited to the requirements of pipe threading in reasonable quantities.

Capable of sustained production at good speeds. Has ball bearing spindle. Sturdily constructed of fabricated steel. Standard equipment includes detachable reamer. Roller type self-centering cutter with length gauge, auto type wrenchless front chuck, universal centering rear chuck, 2 speed, single voltage, 3 phase, 60 cycle motor. Non-reversing motor control with magnetic starter, start-stop switch and speed selector switch, gauge for thread length, internal gear type oil pump with relief valve, 10-gal. Oster cutting oil. Wt., 900 lbs. Standard range ½ to 2-in. pipe. Extra range ⅛-in. pipe. Bolt range ¼ to 1½-in.

No. 782 Complete with Standard Equipment

Dieheads	Set of Dies	Die Range, In.	Each
2	3	½ to 2	\$1250.00
3	3	½ to 2	1275.00
4	4	¼ to 2	1311.00
6	6	½ to 2	1395.00
8	8	¼ to 2	1467.00

"Rapiduction Jr." Pipe Machine with Revolving Diehead

For a class of threading not possible to handle in other types of machines. This machine does a speedy and good threading job on pipe and rods already bent. Also for threading short nipples, rods, studs and bolts . . . in and out of the machine without stopping the motor.

Standard equipment includes revolving type diehead, manually operated, 4 sets of dies to cover standard pipe range—¼ to ¾-in., carbon steel, 1 to 2-in., high speed steel, quick acting, open type vise with hardened steel insert gripping jaws, 2 speed, single voltage, 3 phase, 60 cycle motor, non-reversing motor control with magnetic starter, start-stop switch and speed selector switch, gauge for thread length, internal gear type oil pump with relief valve, 10-gal. Oster cutting oil.

No. 782. Complete with standard equipment, wt., 875 lbs., each \$1250.00. Extra for reversing electrical control \$25.00.

"Rapiduction Jr." Bolt Machine

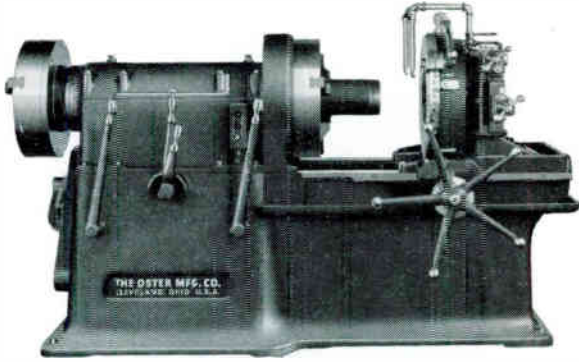
With Semi Automatic Revolving Diehead.

Diehead opens and resets to size automatically by movement of the vise carriage. This feature together with open type vises permit quick handling of stock and greatly increases production output. Standard equipment includes one revolving semi-automatic adjustable type diehead (less all dies) diehead control device, semi-automatic tripping and resetting, quick acting, open type vise with hardened steel insert gripping jaws, automatic, adjustable stock stop, 2 speed, single voltage, 3 phase, 60 cycle motor, non-reversing motor control with magnetic starter, start-stop switch and speed selector switch, 10-gal. Oster cutting oil.

No. 782-A. Standard bolt range ¼ to 1½-in. Pipe or nipple range ¼ to 2-in. Complete with standard equipment. Each \$1650.00

Extra for reversing electrical control. each \$25.00.

Oster "Rapiduction" Pipe Machines



No. 6A

High production machines for shops having large quantities of pipe to thread. A wide selection of spindle speeds permits every size to be threaded at maximum speed for low cost production. One diehead and one set of dies thread all sizes of the same pitch, right hand, American National Standard, without change. As additional equipment, a two-speed motor can be supplied to increase cut-off speed.

Standard equipment includes one quick opening diehead to handle all sizes in standard ranges; dies of high speed steel, 2 sets with No. 6A and 1 set with No. 8, covering all standard pipe range; 1 set of die holders to cover all standard pipe range; blade type cut off device with V-block steady rest; reaming and chamfering tool mounted on cut-off slide; universal three jaw gripping front chuck; universal three flange jaw gripping rear chuck; 3-phase, 60-cycle motor; reversing magnetic motor control; gauge for thread length; internal gear type, automatic reversing oil pump and 20-gal. Oster cutting oil.

No. 6A

Standard range 1 to 6-inch pipe.
Bolt range 1 to 4-inch.

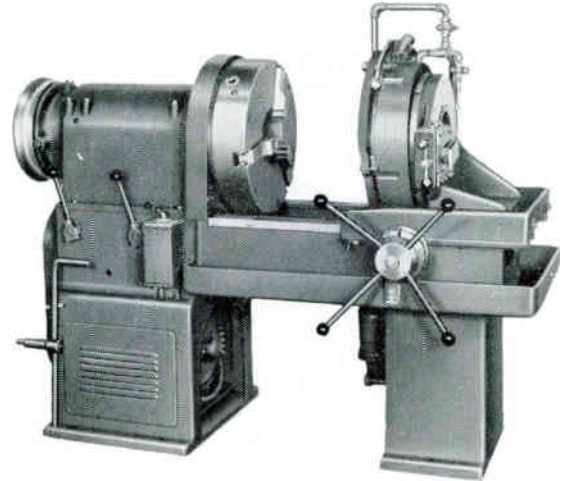
Description	Each
Complete with standard equipment.....	\$5350.00
Arranged for, but less motor and controls.....	\$100.00

No. 8

Standard range 2½ to 8-inch pipe.

Description	Each
Complete with standard equipment.....	\$5790.00
Arranged for, but less motor and controls.....	\$430.00

Oster "Wilco" Pipe Machines



A single diehead covers the entire range of each Wilco machine and one set of holders and dies thread all sizes, right hand American National Standard of the same pitch, without change. A movement of a cam lever sets the dies to any size within the range of the machine. Correct speeds for threading and cutting off the various sizes are obtained through the transmission and two-speed motor, the cutting-off being approximately three times the threading speed.

Wilcos are in high favor as shop maintenance machines. Standard equipment includes one quick opening diehead, adjustable to handle all sizes in standard range; two die sets of high-speed steel to cover standard pipe range; two sets of die holders to cover standard pipe range; blade type cut-off device with self-centering guides; ream and chamfer tool mounted on cut-off slide; universal three jaw gripping front chuck; universal centering, hand wheel operated rear chuck; two speed, single voltage, 3-phase, 60-cycle motor; reversing motor control, magnetic with push-pull selector switch to give 2 speeds forward and 1 speed reverse and plugging; gauge for thread length; individual motor drive centrifugal oil pump and 10-gal. Oster cutting oil.

No. 714

Standard range 1 to 4-in. pipe. Extra range ½ and ¾-in. pipe.
Bolt range ¾ to 3-inch.

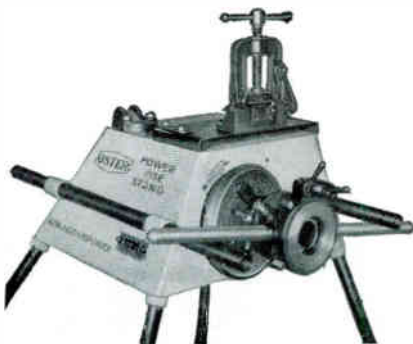
No.	Description	Each
714	Complete with standard equipment.....	\$3250.00
714	Arranged for, but less motor and controls....	2950.00

No. 716

Standard range 1-in. to 6-in. pipe.
Bolt range 1 to 4-in.

No.	Description	Each
716	Complete with standard equipment.....	\$3650.00
716	Arranged for, but less motor and controls....	3300.00

Oster Portable Power Vise Stands



**No. 422
Pipe Vise Extra**

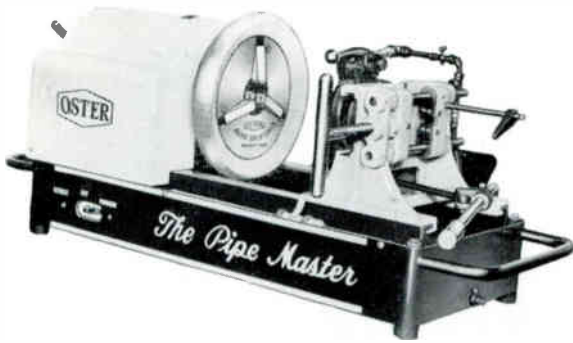
Standard range ½ to 2-inch pipe.

Range with Drive Shaft 2½ to 8-inch pipe.

Converts hand tools to power tools for threading, cutting-off and reaming pipe. Pipe is held in the new wrenchless automatic gripping chuck and is revolved by the power unit concealed in the stand. Power is furnished by a universal, reversible, variable speed motor of the geared head type which operates on 110 volt a-c or d-c. Regular equipment includes reversing switch, front and rear chucks, arms for carrying and taking torque of pipe tools, feet for front legs, plate for mounting pipe vise, fixture for pipe bending, one quart of oil. No legs, vise, or pipe tools included. Weight, 140 lbs.

No. 422 Machine with regular equipment... Each **\$195.00**

Oster "Pipe Master" Portable Pipe Machines



"Pipe Master" is a low priced, complete portable power pipe machine. Equipped with "Auto-Grip" chuck which eliminates the use of a chuck bar or wrench and quick opening adjustable diehead. Nipples as short as 1½-in. in the 2-in. size can be held in the regular chuck and threaded on both ends without using special nipple holder. Pipe or studs as short as 3½-in. can be threaded on one end.

Standard equipment includes detachable reamer; roller type cutter; self-centering with length gauge; auto grip wrenchless front chuck; universal centering rear chuck; universal geared type motor, 110 volts either a-c, single phase or d-c; reversing switch; gauge for thread length; reversible oil pump with relief valve and 5-gal. Oster cutting oil. Weight, 370 pounds.

No. 502

- Standard range ½ to 2-in. pipe.
- Extra range ⅛-in. pipe.
- Range with drive shaft 2½ to 8-in. pipe.
- Bolt range ¼ to 1½-in.

- Complete with standard equipment, with 1 diehead and 4 sets of dies, ½ to 2-in. each **\$405.00**
- With 1 diehead and 3 sets of dies, ½ to 2-in. **455.00**
- With 4 dieheads and 1 sets of dies, ¼ to 2-in. **485.95**
- With 6 dieheads and 6 sets of dies, ½ to 2-in. **547.85**
- With 8 dieheads and 8 sets of dies, ¼ to 2-in. **609.75**

Oster "Pipe Master" Portable Pipe Machines With Revolving Diehead



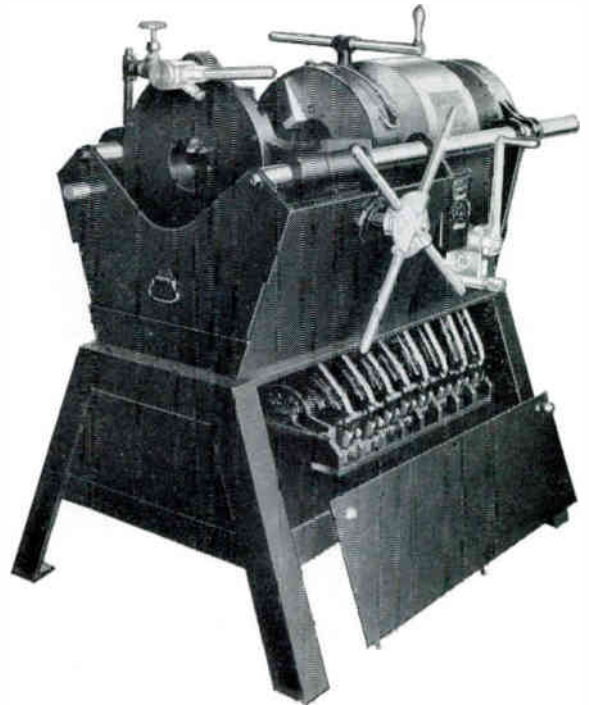
Embodies all the desirable basic features of No. 502, but is equipped with revolving diehead and open type vise for those who require a machine capable of threading bent pipe as well as straight pipe or where nipple, bolt and rod threading is of prime importance. Has revolving type diehead, manually operated and four sets of carbon steel dies to cover standard pipe range. Weight, 310 pounds.

No. 502R

- Pipe range ¼ to 2-in. pipe. Extra range, ⅛-in. pipe.
- Range with drive shaft 2½ to 8-in. pipe.
- Bolt range ¼ to 1½-in.

Complete with standard equipment. each **\$525.00**

Toledo No. 1-2-4 Power Pipe Machines



An efficient high speed, high production power pipe machine to cut, thread and ream pipe up to 4 inches. Frame is all steel which gives maximum strength and minimum weight. Bed is strong, rigid and unusually deep. Bed and head stock are one unit, assuring strength, simplicity and perfect alignment. Bolts from ⅜ to 2-in. can be produced. One head takes bolts from ⅜ to 1½-in., second from 1¼ to 1½-in. and third from 1¾ to 2-in. Special chuck jaw extension for the front chuck can be furnished for holding rods from ⅜ to 7⁄8-in. An adapter fits on the diehead and die to thread ½ to ¾-in. pipe.

Regular equipment for No. 1-2-4 includes 8 separate quick opening die heads and 8 sets of high speed steel dies; one set high speed cutter knives; reamer; wrenches; adjustable pipe support; 5-gal. cutting oil and 3 hp. heavy duty motor. Overall dimensions, 40x58x56-in. high. Machine weight, 1750 lbs.

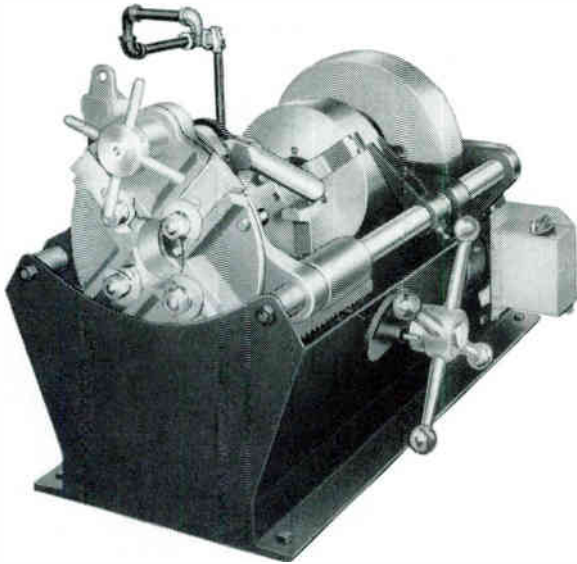
- No. 1-2-4, with 220-440 volt 3-Ph., 3 hp. motor. Each **\$2990.00**
- No. 1-2-4, with 230 volt. 1-Ph., 60-C motor. Each **2990.00**

Above prices include pipe dies only.

- 1 set, 1 or 1¼-in. R.H. high speed steel conduit dies. Each size **15.40**
- 1 set, 1½ or 2-in. R.H. high speed steel conduit dies. Each size **22.00**
- 1 set, 2½, 3, 3½ or 4-in. high speed steel conduit dies. Each size **24.00**



Toledo Super Power Pipe Machines



Compact, portable, light enough to be carried by two men. Ideal for either shop or job use. Cuts, threads and reams pipe up to 2-in., and bolts from 3/8 to 1 1/2-in. Machine is extremely easy to operate. No gear shifting levers. All controls are centralized in the forward and reversing switch of special design. 115-volt motor, reversible. Speed automatically adjusts to load.

Each machine is furnished with quick opening die heads and dies as specified; complete set of four cutting blades; wrench; 10-ft. of cable with connectors, and 1-gal. cutting oil. Net weight, complete machine, 370 lbs.

Additional equipment includes steel stand, adjustable pipe support, quick opening left hand die heads and 1/2 to 2-in. left hand dies, 1/2 to 2-in. electrical conduit dies.

No.	Description	Each
999	6 Q.O. die heads and 1/2 to 2-in. R.H. dies.....	\$660.00
999	3 Q.O. die heads and 1/2 to 2-in. R.H. dies.....	582.00
999	3 Q.O. die heads and 3/8 to 2-in. R.H. dies.....	601.50
999	9 Q.O. die heads and 1/8 to 2-in. R.H. dies.....	757.50

Single Set

Q.O. electric conduit dies only, 1/2 or 3/4-in.....	\$5.50
Q.O. electric conduit dies only, 1, 1 1/4, 1 1/2 or 2-in.....	6.60

If the Tool You Need

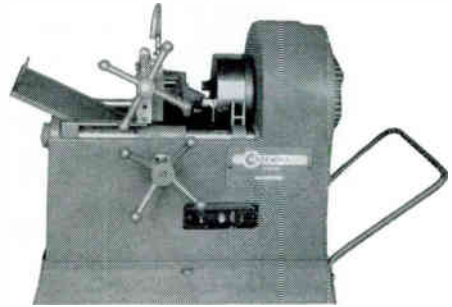
Is Not Listed in this Catalog

... Call Your Nearest

Graybar Office and Warehouse

Vosper Pipe and Bolt Threading Machine

2-Inch Papoose, Portable Heavy Duty



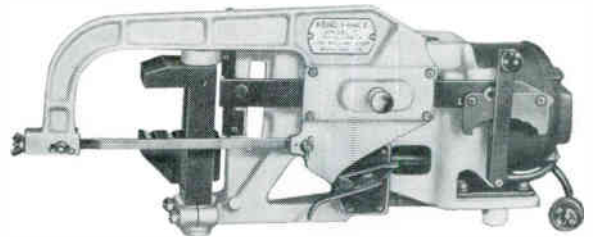
All welded light-weight steel frame. Compact power unit for operation in the shop or on the job. Dimensions: 29 1/2 inches long, 16 1/2 inches wide, 22 inches high. Weight 285 lbs., less die heads.

Standard equipment comprises twin flute drop arm type reamer, heavy duty floating cut off mechanism with center locating ball, thread length indicator, heavy duty roundways, three jawed 7 1/2-inch universal chuck, light-weight chuck wrench, chuck wrench ejectors, heavy-duty spindle bearings, protected wick oiler, standard roller chain drive, rear end adjustable centering device with locking nuts, forward, stop and reverse push button control switch, 10 foot flexible rubber cable with twist lock connector, 110 volt 1/2 hp. a-c/d-c motor, constantly primed centrifugal cooling pump, one universal quick opening diehead and six sets of universal high speed steel die segments for cutting 1/2 through 2-inch national pipe threads.

Vosper 2-inch Papoose Portable power pipe machine, complete with standard equipment.....Each **\$437.20**

Open or enclosed stands available. Contact Graybar.

"Hand-I-Hack" Portable Power Hack Saw



Use in the shop. Use on the job. Eliminates fatigue. Cuts true.

A genuinely portable machine to do with power all the many metal sawing jobs done by hand. It is so light it can be carried in one hand. It will cut downward, horizontally, vertically and even upside down. Vise may be clamped to pipe or stanchion in any position.

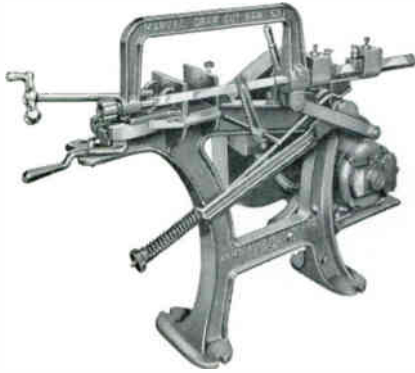
Sawing capacities are: square cut—3x3-in.; 45° cut—1 1/2x3-in.; 30° cut—2 5/8x3-in.; 22 1/2° cut—3x3-in.

Uses standard 18-tooth all hard high speed steel blade, 10x1/2x.025 inches for ordinary work.

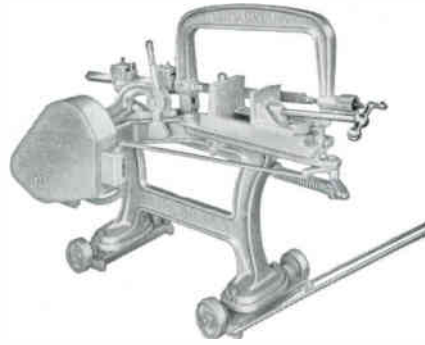
Vise is semi-steel with sliding jaw grooved for round material, adjustable for cutting angles up to 15°. Saw frame is aluminum alloy. Drive is steel worm and bronze worm gear, fully enclosed and running in oil. Main frame is cast aluminum alloy, rust-proof finish. Motor is 1/4-hp., a-c-60-cycle. Weight, 18 pounds.

No. 1111 "Hand-I-Hack," complete.... each **\$165.00**

Marvel Draw-Cut Hacksaw Machines



No. 1/M1 Motor Driven



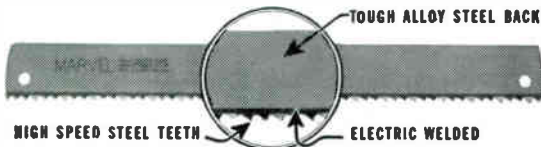
No. 2/M1 Motor Driven

Stationary or mounted on Portable truck

Specifications

No.	Nom.	Capacity Max. Round	Speed	Hp.	RPM	Ship. Wt.
1M1	4" x 4"	4 1/8"	80	1/4	1800	225
2M1	6" x 6"	8"	65	1/2	1800	450

Marvel Hacksaw Blades
Unbreakable—High Speed Edge



For No. 1 Saw

No.	Nominal Length, In.	Teeth Per In.	Width In.	Each
1214-L	12	14	1	\$1 92
1214-N	12	14	5/8	1 14
1218-N	12	18	5/8	1 14

For No. 2 Saw

1414-L	14	14	1	\$2 13
1710-L	17	10	1	2 41
1714-L	17	14	1	2 41

Blade for Marvel Hacksaw Frame

1218-N	12	18	5/8	\$1 14
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Marvel Hacksaw Frames
Heavy Duty



Practically indestructible frame made of heat-treated hot-forged aluminum alloy. Blades cannot twist or buckle in the clamping type blade holders.

Many users report tremendous savings with this frame and Marvel Unbreakable High-Speed-Edge Hack Saw Blades.

One unbreakable high-speed-edge hack saw blade furnished with each frame.

No.	Length Blade, In.	Depth Throat, In.	Wt., Lbs.	Each
12	12	4 1/2	4	\$30 00

The Most Practical Saws For the Contractor . . .

Simple and rugged design, no skill required to get accurate cuts on any type of material, pipe, conduit, structural steel or solid bars. Most economical when unbreakable high-speed-edge blades are used.

Incorporates all desirable features of power hack saw machine. Feed pressure applied only on cutting stroke. Feed mechanism is sensitive so that even thin and light sections can be cut without stripping teeth.

Machine and motor automatically stop at completion of cut. Quick action vise for convenience in chucking. No. 2 Saw only has vise mounted separately on machine bed, can be swiveled for mitre cutting.

	Description	No. 1M1 Motor Drive	No. 2M1 Motor Drive
A-C	110 or 220 V. 60 cy. single ph.	\$227 75	\$372 75
A-C	220 V. 25 cy. single phase	249 90	396 90
A-C	440 V. 60 cy. 2 phase	233 10	368 55
A-C	440 V. 60 cy. 3 or 2 phase	236 25	368 55
A-C	220 V. 25 cy. 3 or 2 phase	259 35	399 00
D-C	115 or 230 volts	248 85	388 50

Marvel Drill Press Vises



Well made, quick action type drill press vise for rugged service.

Complete machine finished, parallel and square on all sides.

Note large capacities and liberal size jaws.

No.	Opening Cap., In.	Width of Jaws, In.	Ht. of Jaws, In.	Each
40	5	5 5/8	2 1/2	\$ 75 60
41	8	7	4	109 20

Marvel Rod Cutters



Just a single stroke . . . cuts round rods 1/8" to 1/8".

Made in three models and capacity ranges.

No.	For Round Rods Sizes, In.	Each
5	3/8, 5/16, 1/4, 3/16, 1/8	\$ 53 50
6	5/8, 9/16, 1/2, 7/16, 3/8	86 00
7	1/8, 3/4, 5/8, 1/2, 3/8	142 80

Marvel Splitting Shears

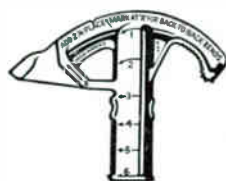


Cuts off, splits or trims flat steel plates and bars.

Shear blade is forced down by lever operated eccentric. No. 2 shear has added advantage of instant high-low leverage adjustment for heavy or light work.

No.	Mild Steel, Cap., In.	Lgth. of Shear Bl.	Lgth. of Lever	Each
1	1/8	4	30	\$157 50
2	1/4	6	51	94 80

Republic Electrunit E.M.T. Benders



Cast in one piece from tough malleable iron.

Conveniently marked on side for making accurate stubs, offsets and back-to-back bends.

No.	Size In.	Pipe Handle Size, In.	Std. Pkg.	Wt., Lbs. Per 100	Each
1472	1/2	3/4	10	250	\$2.95
1473	3/4	3/4	10	420	5.00
1474	1	1	2	800	8.50

Republic Electrunit Mandrel Springs



Used inside E.M.T. when making bends, permitting short-radius bends to be made with Hickey Type benders without "inching" bender.

Spring serves as a mandrel, supporting the tube wall and preventing crimping. Easily removed by twisting.

No.	Size, In.	WL, Lbs.	Each
50	1/2	1/2	\$0.45
75	3/4	1	.60



Republic Hickey Benders

For making bends of any desired radius; particularly useful for making short or close bends or for stubbing-up in concrete work.

Standard package, 1.

No.	Size, In.	Pipe Handle Size, In.	WL, Lbs.	Each
2195	1/2	3/4	1 3/4	\$ 2.64
2196	3/4	1	2 3/4	3.30
2197	1	1	4	6.59
2198	1 1/4	1 1/4	10	8.25
2199	1 1/2	1 1/4	12 1/2	9.75
2200	2	1 1/2	15	15.00

Appleton Tiger-Grip Hickeys And Couplings

Schedule CF



No. CF-7290 Hickey



No. CF-7295 Coupling



No. CF-7291 Hickey

Cadmium finish. Sharp steel teeth in lower jaw grips conduit and prevents slipping. Coupling attachment strengthens hold on handle to prevent breakage. No. 7291 combines coupling and hickey in one casting.

No.	Description	For Conduit Inches	Car-ton	Std. Pkg.	WL, Lbs. Std. Pkg.	Each
7290	Hickey	1/2 and 3/4	1	10	19	\$2.80
7291	Hickey	1	1	10	55	7.80
7295	Coupling	1/2 and 3/4	1	10	16	2.10
7296	Jaws for Tiger-Grip Hickey					0.70

Appleton Bending Tools

Schedule TW

For Electrical Metallic Tubing

The special design of this tool makes it easy to bend electrical metallic tubing in exactly the right place with very little effort.



No.	Size Inches	Std. Pkg.	WL, Lbs. Each	Each
14195	1/2	1	2 1/2	\$2.95
14196	3/4	1	4 1/8	5.00
14197	1	1	7	9.70

Appleton Bending Hickeys

Schedule TW

For Electrical Metallic Tubing

A special design for making short bends, tight corners and for stubbing up in concrete work.



No.	Size Inches	Use Pipe Handle Size, Inches	Std. Pkg.	WL, Lbs. Std. Pkg.	Each
12195	1/2	3/4	1	1 3/4	\$ 2.90
12196	3/4	1	1	2 3/4	4.00
12197	1	1	1	4	6.60
12198	1 1/4	1 1/4	1	10	8.25
12199	1 1/2	1 1/4	1	12 1/2	9.75
12200	2	1 1/2	1	15	15.00

Steel City Allen Conduit Benders

Schedule S

For Thinwall Conduit



No. 4 and 5



No. 3

Alloy-steel. Nos. 4 and 5 for true offsets, accurate stubs and perfect back-to-back bends on thinwall. No. 3 is a combination bender for thin or heavy wall.

No.	Description	Size Inches	WL, Lbs. Each	Each
3	For EMT, or 1/2" Heavy Wall	1/2-3/4	1 3/4	\$4.20
4	End Threaded 3/4" Male	1/2	2	3.85
5	End Threaded 1" Male	3/4	4	5.00

Ideal BX Armor Cutters

Cuts BX Armor of any make, two or three wire, in one operation. Hardened steel cutting blade is removable for sharpening or replacement.



No. 45-079 BX Armor Cutter.....Each \$3.60

Ideal Cable Ripper and Wire Gages

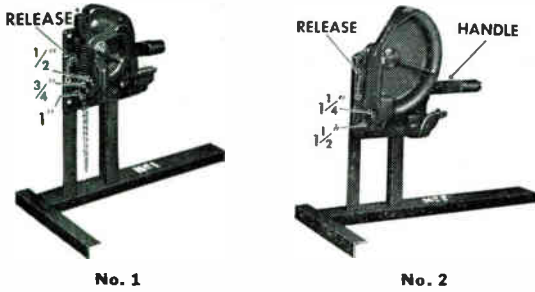
For use on non-metallic sheathed duplex cable or lead-covered cable where outside diameter is 5/8 inches or smaller.



No. 45-018.....Each \$0.43

Lidseen Chicago Pipe Benders

Hand Portable



These pipe benders may be attached to any brace, beam, or 2x4 on the job and used without stand. When ordering without stand, plates (see list of parts) are necessary for attaching.

For 1/2, 3/4 and 1-inch Pipe

No. 1 Chicago Pipe Bender for regular 1/2, 3/4 and 1-inch conduit or pipe. Makes 4-inch diameter bends with 1/2-inch pipe, 8-inch diameter bends with 3/4-inch pipe, 11-inch diameter bends with 1-inch pipe. No. 1T Chicago Pipe Bender for 1/2, 3/4 and 1-inch thinwall conduit.

Both the No. 1 and No. 1T pipe benders each have two operating handles. No. 1 handle is direct acting. Only one draw necessary for all kinds of uniform bends or offsets with 1/2 or 3/4-inch pipe. No. 2 handle operates toggle attachment for 1-inch pipe. 4 or 5 strokes required for a 90° bend.

No.	Shipping Wt., Lbs.	Each
1 or 1T With Stand.....	88	\$86.25
1 or 1T Without Stand.....	68	78.32

For 1 1/4 and 1 1/2-inch Pipe

No. 2 Chicago Pipe Bender for regular 1 1/4 and 1 1/2-inch conduit or pipe. Makes 11-inch diameter bends with 1 1/4-inch pipe, 17-inch diameter bends with 1 1/2-inch pipe.

No. 2T Chicago Pipe Bender for 1 1/4 and 1 1/2-inch thinwall conduit.

These benders are toggle operated. 12 to 14 strokes necessary for a 90° bend.

No.	Shipping Wt., Lbs.	Each
2 or 2T With Stand.....	118	\$143.75
2 or 2T Without Stand.....	98	133.06

Parts

For either No. 1 or No. 2 Benders

Part Name	Shipping Weight	Each
Stand.....	20 lbs.	\$12.83
Chain Assembly.....	3 oz.	.41
Pawl Release Assembly.....	2 oz.	1.24
Spring.....	1 oz.	.41
Chain Bracket.....	2 oz.	.41
Sector Shaft.....	2 lbs.	2.07
Sector Shaft Spring Clip.....	2 oz.	.83

For No. 1 Pipe Benders

Handle Shaft.....	1 lb.	2.07
Pawl and Pin.....	6 oz.	2.90
Jaw.....	5 lbs.	7.87
Handle (No. 1).....	6 lbs.	7.04
Handle (No. 2).....	7 lbs.	11.04
Sector.....	21 lbs.	36.43
Back Plate.....	25 lbs.	30.64

For No. 2 Pipe Benders

Handle Shaft.....	1 lb.	2.07
Pawl and Pin.....	10 oz.	3.31
Jaw.....	5 lbs.	9.11
Sector.....	38 lbs.	51.75
Back Plate.....	28 lbs.	45.68

T & B Standard Conduit Elbow Formers

For 1/2-Inch and 3/4-Inch Conduit



Not merely a pipe bender; this practical conduit Elbow Former forms standard shaped elbows perfectly and accurately, exactly where wanted.

Saves time over old methods and saves material by eliminating the waste of conduit.

No.	Wt., Lbs. Each	Each
339	38	\$250.00

T&B Lakin Hickeys



Extra-long shank assures great strength. Shank has bushed hole designed to slip over end of conduit for making short bends at end of conduit.

Bushed opening in shank fits snugly over end of conduit; prevents damaging threads while bend is being made.

No.	Size in.	Std. Pkg.	Each
335	1/2	10	\$ 6.00
336* 346	3/4	10	9.60
337	1	2	16.80

*Can also be used to bend 1/2-inch conduit.

T&B Benders and Hickeys

For E.M.T.



No.	Size	Std. Pkg.	Wt., Lbs.	Each
4195	1/2 Bender	1	2.5	\$ 7.50
4196	3/4 Bender	1	4.2	12.50
4197	1 Bender	1	7	24.50
4185	1/2 Hickey	1	2	7.50
4186	3/4 Hickey	1	3.5	10.00

Steel City Allen Conduit Benders

Schedule S

For Heavy Wall Conduit



Heat treated, case hardened. Made from electric steel. Will not crush or deform conduit.

Nos. 1 and 6: For conduit sizes 1/4-, 3/8-, 1/2- and 3/4-in.

Nos. 2 and 7: For conduit sizes 3/4-, 1- and 1 1/4-in.

No.	Ends Size Inches		Std. Pkg.	Wt., Lbs. Each	Each
	Tapped Female	Threaded Male			
1	1	...	10	2 1/2	\$4.95
6	1 1/4	...	10	2 1/2	6.25
2	...	1 1/2	5	3 3/4	7.30
7	1 1/2	...	5	3 3/4	9.25

Tal Prestal Portable Hydraulic Pipe and Rigid Conduit Benders



2PH or 2C Bender
Up to 2" for 0° to 90° Bends



3PH/X Bender
Up to 3" for 0° to 180° Bends

Outstanding Features of Pipe and Rigid Conduit Benders:

Unique bend indicator for predetermining exact bends. Assures accurate repeat bends. No experience necessary to produce perfect bends or offsets, cold, without filling. Any degree bend from 0° up to 90° or 180° made in one setting, without shifting pipe, assuring maximum speed of job. Packed in sturdy wooden tool box.

Tal Prestal benders have only two main parts: One hydraulic unit and one frame. Assembled in less than one minute. Changeover from one size to another, 30 seconds.

Hydraulic units are interchangeable in all 2" and 3" models, and on the Thin Wall tube bender.

***90° Benders for Rigid Conduit**

No.	Bender Size, In.	90° Shoes Inc. Size, In.	Ship. Wt. Lbs.	Each
2C	2	1, 1 1/4, 1 1/2, and 2	117	\$205.45
3C	3	1, 1 1/4, 1 1/2, 2, 2 1/2 and 3	188	278.65

***90° Benders for Plumbing and Heating Pipe**

2PH	2	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2	125	\$220.80
3PH	3	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 and 3	191	294.00

***90° Bender Combination for Rigid Conduit and Pipe**

2PH/C	2	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2	139	\$273.80
3PH/C	3	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2, 1 1/4, 1 1/2 and 2, 2 1/2 and 3	217	\$347.00

*If use of the 180° attachment is anticipated, the universal 2X or 3X frame may be had in place of standard frame at a slight additional cost for the above models Nos. 2 and 3.

Tal Prestal 4, 5 and 6 Inch Benders

These benders have same outstanding features as incorporated in the 2 in. and 3 in. models above. Only three pieces to assemble. Assembly time five minutes.

Have powerful hydraulic units and are supported on casters. Radiant heat attachment available for all benders. Shoes not included, must be ordered separately.

Hydraulic Benders For Pipe or Rigid Conduit

No.	Bender Size In.	Capacity, In.	Ship. Wt. Lbs.	Without Electric Motor	With Electric Motor
400	4	3/8 to 4	617	\$ 488.00	\$ 808.00
500	5	3/8 to 5		1045.00	1365.00
600	6	3/8 to 6		1669.00	1989.00

90° Shoes—Prices Per Set

No.	Size In.	Per Set
Set No. 0	3/8, 1/2 and 3/4 for pipe (PH)	\$ 15.35
Set No. 1	1, 1 1/4, 1 1/2 and 2 for pipe (PH)	53.00
Set No. 2	1, 1 1/4, 1 1/2, 2 for conduit (C)	53.00
Set No. 3	2 1/2 and 3 for pipe and conduit (PH/C)	69.00
Set No. 4	3 1/2 and 4 for pipe and conduit (PH/C)	149.60
Set No. 5	5 for pipe and conduit (PH/C)	275.00
Set No. 6	6 for pipe and conduit (PH/C)	457.50

Tal Hydraulic Pipe and Rigid Conduit Attachments and Accessories



Motor Attachment



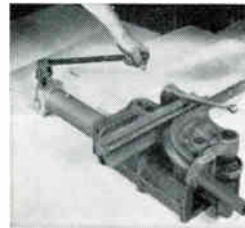
Bus Bar Bending Dies No.



Tube Attachment

No.	Description	Each
	Complete hydraulic pump unit.....	\$126.00
MAT2	Attachment for motorizing (without motor) for 2" bender.....	196.00
MAT3	Attachment for motorizing (without motor) for 3" bender.....	196.00
MAT4	Attachment for motorizing (without motor) for 4" bender.....	255.00
BB3	Bus bar bending dies for 3 in. bender.....	25.80
BB4	Bus bar bending dies for 4 in. bender.....	52.80
Tal Prestal Oil—Gallon Cans.....		2.50
CL-90	Set of 4 shoes with extra long radius for lead coated cable in sizes 1, 1 1/4, 1 1/2 and 2 inches.....	138.00

Tal Thin Wall Tube Benders

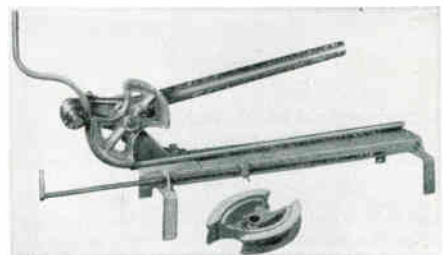


Make offsets, 90° or any other degree bends quickly, free from kinks, in one single setting, in various types of tubing. They are sold complete, or as attachment only (to be used with the interchangeable hydraulic unit of the Nos. 2PH and 2C or 3PH and 3C), including a full set of formers or with single formers.

For Conduit C		For Copper PH		Description	Bending Formers Size, Inches	Shipping Weight
No.	Each	No.	Each			
2202C	\$314.50	2202PH	\$347.00	Complete	1, 1 1/4, 1 1/2 and 2	205
2230C	218.55	2230PH	252.80	Less Hydraulic Unit	1, 1 1/4, 1 1/2 and 2	170
2240	98.50	2240	98.50	Attachment Only	None	103
2250	213.50	2250	213.50	Attachment with hydraulic unit	None	143
2222C	410.85	2222PH	458.30	Combination: Tubing and Conduit or Pipe:	1, 1 1/4, 1 1/2 and 2	311
2223C	470.00	2223PH	519.80	Same up to 2" Tubing: 3" Conduit or Pipe:	1, 1 1/4, 1 1/2 and 2 & 3	403

Prices of single bending formers on application.

Tal "Handy-Bendy"

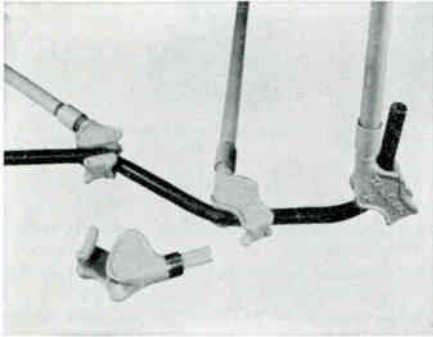


No. HB 2100

The new TAL Handy-Bendy makes perfect kink-free, uniform offset and bends in 1/2-inch and 3/4-inch thin-wall and rigid conduit. Is rugged, simple and fast. For shop or on the job. Set on any desired distance and degree makes uniform, streamlined bends in less than one minute. No experience necessary. Weight, 30 lbs.

HB2100 Complete, with 1/2" and 3/4" thin-wall and rigid formers.....	Each	\$73.70
Attachment for Bench Work.....	Each	13.20

Tal Six-Way Benders



No. 75

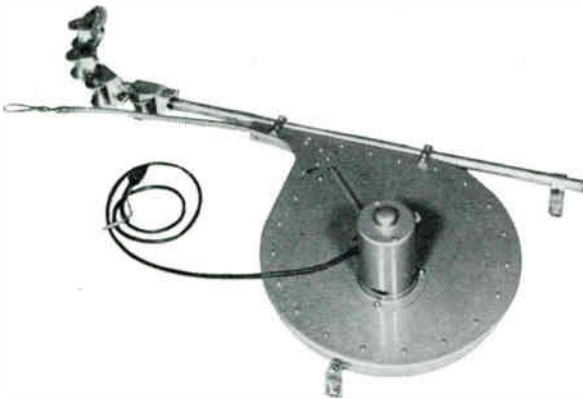
Exclusive design of non-slip bending jaws assures perfect elbows, offsets, loops, saddles, stubs and sets in close quarters or on open slab work.

Bending jaw grooves are slip-proof, and the long safety neck prevents it from breaking at the threads.

Has extra stub hold for bending conduit protruding from concrete. Guaranteed for life against breakage.

No.	Size, In.	Wt., Lbs.	Each	Each
50	1/2	3 1/2	\$3.70	10 @ \$3.10
75	3/4	5	4.65	10 @ 3.90
100	1	8 1/2	7.95	3 @ 6.65

Barth Cable Pullers



A power driven tool which pushes the tape into the conduit and then pulls the cable through. It will push around 30% more bends than the code allows and at a speed of 25 feet per minute.

Has a safety control which stops the pushing if an obstruction is encountered, and is overload protected. Will pull 1200 pounds dead weight (approximate pull of 8 men) which is sufficient for all normal runs of 3/4" through 2" conduit sizes at 15 feet per minute full load. Can be used in any position on 115 volt a-c or d-c.

Useable tape length is 175 feet of .060 x 1/4" best quality. Light weight and compact for easy set up. Complete with attachments ready to use.

No.	Wt., Lbs.	Each
1-CP	65	\$469.00

Tal Copper Tube Benders
180° — 3/8- to 1-inch



No. CT-1

Tal Tube Bender for Hard and Soft Copper Tubing, especially recommended for radiant heat, (complete 180° bends or less), to be used on floor flush to wall or corner. Produces perfectly smooth bends in less than one minute. Bends on the job or in the shop, on straight or coiled tubing.

Packed in specially designed, sturdy tool box for on the job or in the shop storage.

Gross weight, 71 lbs.
Heaviest part, 27 lbs.

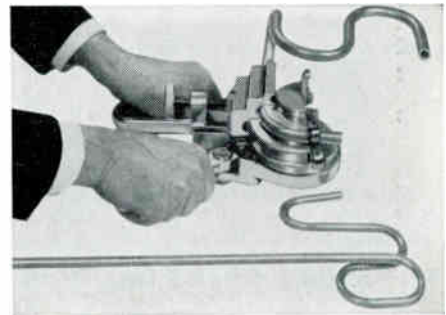
CT-1 Copper Tube Bender — floor model.....	Each	\$69.00
Attachment for Bench Work.....	Each	4.85

Crank handle available for bench use.
Rollers and formers in the following sizes:
Standard Bending Formers and Rollers for CT-1.

*Tube Sizes (Nom.) Inches	Formers				Rollers Each
	4 Each	6 Each	9 Each	12 Each	
3/8	\$8.70				\$16.25
3/8		\$12.95			14.60
1/2		15.70	\$18.45	\$21.90	15.00
3/4		16.80	19.25	23.65	17.90
1			21.20	26.00	19.15

*Copper tube sizes and centers shown are those recommended by tube manufacturers and H. P. & A. C. Others available to order.

Tal Three-In-One Benders



No. 1200

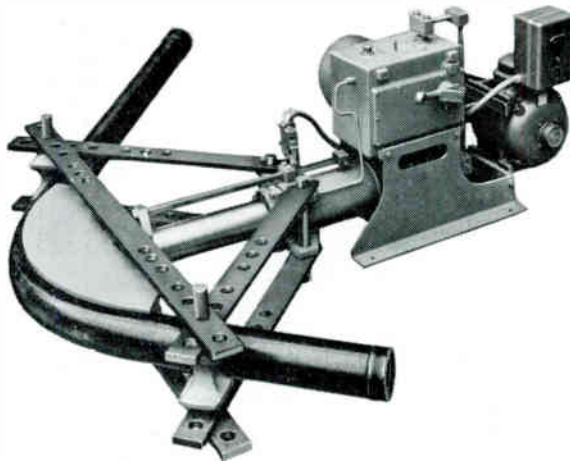
No. 1200 For bending Copper, Type K and L Aluminum and other Tubing. Net Wt. 5 lbs.. Each \$38.00

Sizes of 1/4-inch nom. — 3/8-inch O.D. — Radius 1-inch
3/8-inch nom. — 1/2-inch O.D. — Radius 1 1/2-inch
1/2-inch nom. — 5/8-inch O.D. — Radius 2-inch

Has all three sizes in one tool without any loose parts.



**Greenlee Power Pipe Benders
For Bending Pipe or Rigid Conduit**



A powerful portable bender capable of licking the toughest pipe bending job. Handles rigid conduit or standard pipe 1 1/4 to 5 in. diam. Is rugged enough to bend 5-in. extra heavy material. Hydraulically operated. Gives fast smooth bends. 100-ton ram pressure. 20-in. stroke permits 90° bends in one setting. Can be driven by any suitable electric or gasoline motor.

Furnished complete with 2 upper connecting bars; 2 lower connecting bar assemblies; 1 upper cross bar; 1 lower cross bar assembly; 1 piston insert; 4 pipe supports, range 1 1/4- to 5-in.; 2 pipe support pins and 2 cylinder head pins. Weight, 609 pounds.

No. 785-BE Hydraulic Bender (without Motor or Shoes)..... Each **\$1390.00**

Bending Shoes for Greenlee Power Pipe Bender

No.	Size In.	Radius In.	WL Lbs.	Each
785-BE-23	1 1/4	5	12	\$ 38.75
785-BE-24	1 1/2	7 1/2	14	44.50
785-BE-25	2	10	26	56.50
785-BE-26	2 1/2	12 1/2	37	75.00
785-BE-27	3	15	71	105.00
785-BE-28	3 1/2	17 1/2	96	135.00
785-BE-29	4	20	144	170.00
785-BE-30	5	25	199	190.00

Greenlee Hand Pipe Benders

For Hand Bending Steel, Iron and Non-Ferrous Pipe, Conduit and Tubing



Makes small radius bends without flattening or kinking and especially designed to make neat bends for sharp corners. Save up to 75% in time and material on many jobs. For the larger sizes of pipe and conduit, the bender is clamped in a vise. The smaller sizes can be bent without using a vise. No. 761 is for pipe and rigid conduit. No. 764 is for thinwall conduit (EMT-Electrical Metallic Tubing).

For Pipe and Rigid Conduit

No.	Nominal Size In.	Center Radius In.	WL Lbs.	Each
761	1/8 pipe	19/16	5 1/4	\$13.30
	1/4 pipe	1 1/4	7	15.55
	3/8 pipe	1 1/16	8 3/4	19.45
	1/2 pipe & rigid conduit	2 3/16	15 1/4	23.90

For Thin Wall Conduit

764	3/8	1 1/16	8 3/4	\$15.60
	1/2	1 7/8	12 1/4	19.45
	3/4	2 1/2	17	25.00

Blackhawk Porto-Power Hydraulic Equipment

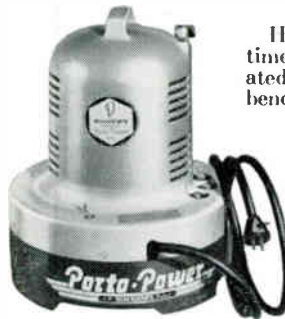
Knock-Out Punches



For pull boxes, cabinets, troughs, panels. Work in cramped quarters and punch clean holes exactly where you want them. No distortion or loosening of boxes. Kit includes punches and "pull-ram" for use with the same "Porto-Power" hydraulic pump and pressure hose serving Blackhawk Benders.

No. SB-40 Kit—punch six conduit openings from 1/2 to 2-inches. Weight, 25 lbs..... Each **\$104.20**
 No. SB-41 Kit—punch ten conduit openings from 1/4 to 4-inches. Weight, 55 lbs..... Each **\$209.90**

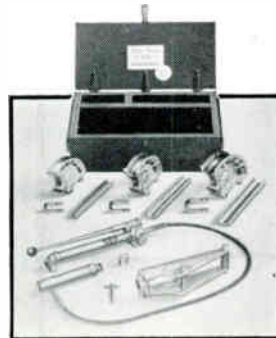
Electrically Driven Pumps



Helps you install conduit up to 3 times faster. Converts hand-operated hydraulic equipment (such as benders and knock-out punches) into speedy, electrically - driven equipment. Can be used on benders other than the Blackhawk type. Prevents fatigue and loss of efficiency. Push-button action permits continuous output. Can be equipped with casters. Adaptable to all popular types of current. Weight, 106 pounds.

No. P-182, with a-c motor..... Each **\$305.00**
 No. P-182, with d-c motor..... Each **\$353.00**

Thin-Wall Conduit Benders



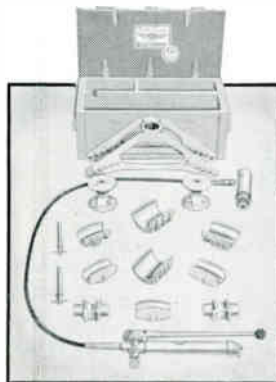
Remote operation enables you to sight the job from the most convenient spot. Makes kinkless, neat, rigid installations. Saves materials. Saves time.

No. S-34—Thin-Wall Bender 10-ton "Porto-Power" hydraulic unit, plus attachments for bending 1 1/4-, 1 1/2-, and 2-in. thin - wall conduit. Weight, 166 lbs.

Each..... **\$233.80**

The hydraulic unit also works with attachments supplied in the S-30A rigid pipe bender.

Rigid Pipe and Conduit Benders



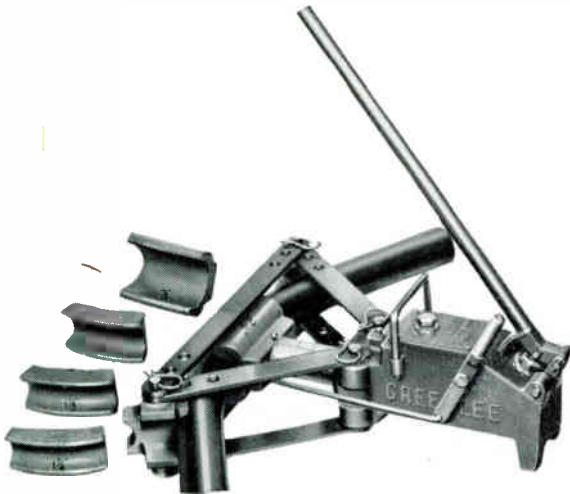
Remote operation permits convenient sighting of the job. The ram works in any position — upright — horizontally — all angles! The hydraulic unit is also a pulley puller, machinery lifter, special jack — with standard attachments.

No. S-30A—10-ton hydraulic unit and attachments for bending 1, 1 1/4, 1 1/2, and 2-in. rigid pipe and conduit. Weight, 92 pounds.

Each..... **\$135.45**

No. S-36—20-ton hydraulic unit and attachments for bending 1 1/4, 1 1/2, 2, 2 1/2, 3, 3 1/2, and 4-in. diameters. Weight, 252 pounds..... Each **\$297.00**

**Greenlee Hydraulic Benders
For Pipe, Conduit and Bus-Bars**



Greenlee Hydraulic Benders greatly speed conduit and pipe installations. One-man operated. Pumping the handle produces a powerful hydraulic force resulting in smooth, accurate bends without kinks or damage to pipe or conduit. No. 770 Series has a 25-ton hydraulic power unit. No. 775 Series has a 40-ton hydraulic power unit.

- No. 770 For 1 1/4, 1 1/2, 2, 2 1/2 and 3-inch rigid conduit and pipe. Weight, 205 pounds... Each **\$188.00**
- No. 770T For bending thin wall electric metallic tubing 3/4, 1, 1 1/4, 1 1/2 and 2-inch. Weight, 350 lbs..... Each **\$305.50**
- No. 770R For bending small conduit and pipe in 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2-inch sizes. Especially adaptable for radiant heating installations. Weight, 360 lbs..... Each **\$367.20**
- No. 770BB For making U-bends in a wide range of sizes up to 4 inches wide and 3/4 inches thick. Wt., 155 lbs..... Each **\$172.20**
- No. 775 For bending larger size pipe and conduit — 3, 3 1/2, 4 and 5-inch pipe. Weight, 402 pounds..... Each **\$261.00**
- No. 775R For bending small pipe (including full 90° bend). For pipe sizes, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3-inch. Weight, 760 pounds. Each **\$698.00**
- No. 775BB Bus-Bar Bender. For making U-bends in material up to 5 3/4-in. wide by 1-in. thick. Wt., 235 lbs..... Each **\$236.00**



Thinwall bending attachments are available for No. 775 benders.

May be purchased complete with this larger size power unit or may be ordered separately for attachment to any No. 775 unit now in use.

- No. 775-T Thinwall conduit bender complete for 1 1/4 to 2 inch capacity. Weight 460 pounds. Each..... **\$333.30**
- No. 775-T Thinwall conduit bender complete for 3/4 to 2 inch capacity. Weight 500 pounds. Each..... **\$383.30**
- No. 775-T Attachment only for 1 1/4 to 2 inch capacity. Weight 300 pounds..... Each **\$181.00**
- No. 775-T Attachment only for 3/4 to 2 inch capacity. Weight 340 pounds..... Each **\$231.00**

Greenlee Portable Power Pump



A powerful, easily carried power pump for driving Greenlee Nos. 770 and 775 hydraulic pipe benders, No. 790 hydraulic pipe pusher, No. 7646 hydraulic knockout punch driver.

Base and top of pump made of cast aluminum. Toggle switch located at top of pump.

Built-in vertical 1/2 hp., 110 volt single phase electric motor has sealed, permanently lubricated bearings.

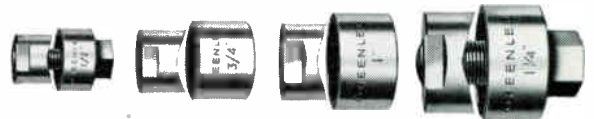
Pump delivers 36 cubic inches of oil per minute through a 4 way valve that operates 2 way cyl-

inders for maximum intermittent pressure of 9,000 to 10,000 psi. and continuous pressure of 5,000 psi.

10 feet of cord and 6-foot high-pressure hose and fittings included. Weight 62 pounds. 1725 rpm's.

No. 798 Portable Power Pump..... Each **\$310.00**

Greenlee Knockout Punch Sets



For cutting or enlarging holes and knockouts for conduit in metal boxes or cabinets. Cuts metals through 10-gauge easily and quickly; leaves neat smooth holes. Furnished complete with leather case.

No.	Description	Wt., Lbs.	Each
735	Set, with Punches and Dies for Conduit sizes 1/2, 3/4, 1 and 1 1/4-in.....	2 3/4	\$11.00
737	Set, with Punches and Dies for Conduit sizes 1 1/2 and 2-in.....	4 1/4	10.00

Greenlee Hydraulic Knockout Drivers



Specifically designed for driving the standard Greenlee Punches. Develops over eleven tons of ram pressure and easily cuts holes up to 4 1/2-in. in 10-gauge metal. Can be used even in tight places.

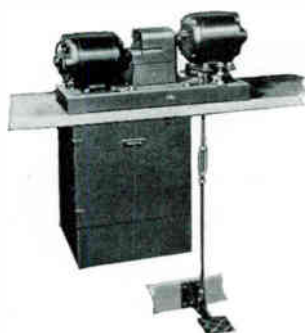
Consists of hand hydraulic pump, high pressure hose, 1 1/8-in. threaded sleeve, 3/8-in. stud and bushing. Pump body machined from single piece of steel with attached reservoir of steel tubing. Air locks eliminated by plastic sack to enclose hydraulic fluid.

Will handle knockout punches for cutting 1/2 to 4-in. conduit holes and all Greenlee radio punches using 3/8-in. diameter screws. Packed in strong metal case. Priced without punches. Weight, 20 pounds.

No. 7646..... Each **\$96.00**

Ideal Production Wire Strippers

Ideal Brush Type



Strips and cleans enamel, cotton, silk, string asbestos and similar types of light insulation from round, flat, or rectangular wires—solid or stranded. Removes coating from "Formex" or "Formvar" wire—cleans fibre glass insulation — removes gummy insulation embedded in stranded wires.

No.	Description	Each
45-070	115 v., 60 cy., Unit complete.....	\$245.00
45-072	230 v., 60 cy., a-c Unit.....	261.50

Ideal Hot Blade Wire Stripper

Burns off insulation. Strips cotton, silk, synthetic (plastic) insulation or rubber coverings from stranded or solid conductors, that do not exceed 3/8-inches. Stripping length adjustable from 1/4-to 1 1/2-inch. Except for foot pedal, all parts are in a single unit. (Note: this unit is not suited for stripping asbestos, metallic, or other weather-proof covering.)



No. 45-073 115 v., 50-60 cy..... Each \$275.00

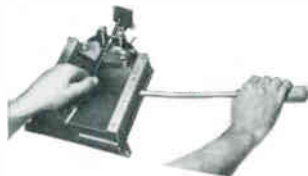
Ideal Bench Type Wire Stripper



Strips solid or stranded wire up to 5/16" diam. For single conductor plastic, cotton or rubber covered wire where quantities are limited. Has 8-hole dial wire guide to center different sized wire between cutting blades.

No. 45-069 Complete..... Each \$27.50

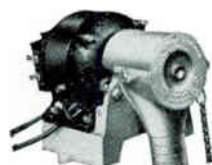
Ideal Lever Type Cable and Wire Stripper



Production Stripper strips single and parallel conductors and cables up to 5/8" diam. Recommended for Type S, SJ and Power Cables. Blades are available in 15 standard sizes to accommodate other sizes and types of wire.

No. 45-064 Complete..... Each \$99.00

Ideal Rotary Type Wire Stripper



Strips all types of solid or stranded wire up to a maximum of 1/2 inch outside diameter. Motor is reversible, stripping according to natural twist of wire. Wire is properly twisted and polished after stripping. Furnished with 1/8, 1/4 and 3/8-inch guide bushings.

No. 45-009 Complete, 115 v. 60 cy. . . . Each \$137.50

Ideal Stripmaster Wire Strippers



The only hand type Wire Stripper with automatic single-squeeze operation. Exclusive automatic feature holds jaws open after stripping to permit removal of wire and prevent crushing. A single squeeze of the handles strip wire clean up to a full 7/8 inch. No nicking or fraying. Blades can be changed with the removal of only two screws.

Strips building, fixture or telephone wire. Automotive, radio and aviation wire, also FM and TV down lead wire.

No.	Wire Ga.	Weight	Each
45-090	8 to 12	10 oz.	\$5.25
45-091	10 to 18	10 oz.	5.25
45-092	10 to 22	10 oz.	5.25
45-093	14 to 22	10 oz.	5.25
45-095	16 or 18, and POSJ	10 oz.	5.25

Ideal Automatic E-Z Wire Strippers

All-steel, heavy duty stripper, recommended for all types of common solid and stranded wire. Provided with a lever to stop the return of the arms until the wire is removed after stripping. Prevents crushing of stranded wire. Use for those "tough" stripping jobs and in general rough service.



See prices below.

Automatic Model No.	Wire Ga. No.	No. of Holes	Extra Blade No.
45-200	Nos. 16 to 26	6	L-4940
45-030	Nos. 12 to 18	3	L-2587
45-201	Nos. 10 to 18	5	L-4941
45-203	Nos. 8 to 14	4	L-4943
45-046	Nos. 16 to 22	4	L-2586
*45-202	Nos. 10 to 22	6	L-4942
*45-204	Nos. 16, 18, 20 and 300 ohm twin TV wire		L-4944

*No cutting edge. Auto. Model, each \$5.25

Greenlee Knockout Punches



Cuts clean holes quickly and easily with a few turns of the drive nut.

Packed and sold individually in boxes.

No. 738—Cuts hole 2 5/8-in. diameter for 2 1/2-in. conduit.

No. 739—Cuts hole 3 1/2-in. diameter for 3-in. conduit.

No. 741—Cuts hole 4-in. diameter for 3 1/2-in. conduit.

No. 742—Cuts hole 4 1/2-in. diameter for 4-in. conduit.

No.	738	739	741	742
Weight.....Lbs.	5 3/4	7 1/4	10 3/8	12 1/8
Each.....	\$15.50	\$21.00	\$43.00	\$53.00

Greenlee Knockout Cutters



Enlarges knockouts to take 1 1/2, 2, 2 1/2 and 3-in. conduit by cutting holes 1 1/8, 2 3/8, 2 7/8 and 3 1/2-in. respectively.

Cutting is done by drive action of two wheel cutters. Operation is simple; an ordinary wrench drives the tool. Packed in leather case. Weight, 4 1/2 lbs.

No. 740..... Each \$16.50

Greenlee Radio Chassis Punches

Round



Cuts clean accurate round holes in radio chassis for connectors and other receptacles. Operates simply with ordinary wrench for drive power. No reaming or filing. Hole is smooth and perfect.

Thirteen sizes from 1/2 to 2 1/4-in. diameter. Packed individually in boxes.

No.	Punch Sizes, Inch	Each
730	1/2, 5/8, 3/4, 7/8	\$2.40
	1	2.60
	1 1/16, 1 1/8, 1 1/2, 1 3/8 and 1 1/4	2.75
	1 3/8	3.15
	1 1/2	3.55
	1 5/8	4.10
	1 3/4	4.65
	1 7/8	5.80
	2	6.25
	2 1/4	6.80

Square



For quickly cutting square and oblong holes in radio chassis. Available in three sizes for making 5/8, 3/4 and 1-in. square holes. Punch has 4 cutting edges. Simple to operate with ordinary wrench.

Packed individually in metal edged box.

No.	Description	Each
731	5/8-in. Size, Complete	\$3.70
	3/4-in. Size, Complete	4.30
	1-in. Size, Complete	5.00

Key Punch

For cutting holes for keyed sockets.



No.	Description	Each
732	15/16-in., Complete	\$4.15
	1 1/64-in., Complete	4.45
	1 17/64-in., Complete	4.75
	1 21/64-in., Complete	5.00

"D" Punch

Simplifies and speeds the work of making "D" shaped opening for high frequency miniature tube sockets and other equipment using this type opening.



No.	Description	Each
733	1/2-in., Complete	\$3.90

Appleton Utility Tools

Schedule TW

For use with Compression-type Couplings, Connectors, and Appleton 2-Piece Connectors.



Combines a unique non-slip wrench and a handy de-burring tool for smoothing

both inside and outside of freshly cut thin wall conduit.

All steel, smoothly finished for comfortable gripping and scientifically balanced for proper leverage. Has case hardened replaceable plate for the de-burring and non-slip sections.

The non-slip plate holds wrench positively on the individual nut to be tightened and will not slip from one nut to another. Rough edges of pipe are rotated in the V-shaped slots of the de-burring plate.

No.	For Conduit, In.	Length, In.	WL Each, Lbs.
WS075	1/2 and 3/4	8 1/4	1
W1125	1 and 1 1/4	14	1 1/2

Prices on application.

T & B Combination Wrench and Reamer For E. M. T.



A combination tool, extremely handy for all 1/2-inch and 3/4-inch E. M. T. installations. The same tool tightens the glands on couplings and connectors, removes burrs from tubing, and reams edge of conduit. Drop-forged steel, heat-treated and tempered.

No. 33..... Each \$3.50

T&B Fish Tapes



Furnished with patented ball-points which enable the wire to turn sharpest bends with ease.

Wire has rounded edges; made of best grade of tempered steel, insuring strength and flexibility.

Furnished in 50, 100, 150, or 200-ft. coils. Standard package, 1000 feet.

No.	Size Inches	Per 100 FL	No.	Size Inches	Per 100 FL
3600	1/8 x .030	\$12.25	3602	3/8 x .060	\$26.50
3601	1/8 x .060	21.25	3603	1/4 x .060	34.50

T&B Fish Tape Balls



For use with any standard make of fish tape. Consists of threaded insert and ball. Tape is installed in slot in insert; ball is then screwed onto insert.

Unit quantity, 10; Standard package, 50.



No.	Description	WL, Lbs. Per 100	Each
3615	1/8 x .060	3	\$1.25
3616	1/8 x .060	5	1.50
3617	1/2 x .060	6	1.50

Klein Fish Tape Pullers



A light-weight strong puller which can be carried in the vest pocket.

Weight, 3 1/2 oz.

No.	Description	Each
1629	For Fish Tape (Standard)	\$1.75
1629-A	For No. 12 Iron Wire	1.75

Steel City Fish Wire Pullers

Schedule S

Red Head



Operates on lever principal, guard holds wire in place and it is not necessary to remove wire to secure new grip. 6 1/2-inches long, 2 1/4-inches wide.

No.	Std. Pkg.	WL, Lbs. Each	Each
15	5	1	\$1.45

Ideal Fish Tape Reels and Pullers



For building construction and industrial work. Reel serves as handle to give firm grip in pulling on fish tape, eliminating special pullers, or dangerous bare-hand pulling.

Keeps tape fully protected. Tape is locked in reel when not in use and can not spring loose. Nine stock sizes of complete Fish Tape, Reels, and Pullers.

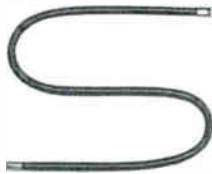
No.	Length and Size of Tape	Each
31-007	50 ft. x 1/8 x .045 (3/64")	\$2.55
31-008	50 ft. x 1/8 x .060 (1/16")	3.75
31-009	100 ft. x 1/8 x .060 (1/16")	6.40
31-011	100 ft. x 1/4 x .060 (1/16")	7.70
31-016	200 ft. x 1/8 x .060 (1/16")	9.45

Ideal Fish Tape

Highest grade tempered spring steel is used. No curling. Flexible and easy to use on long runs of conduit having several bends.

No.	Length and Size of Tape	Each
31-004	50 ft. x 1/8 x .060 (1/16")	\$1.30
31-036	100 ft. x 1/8 x .060 (1/16")	2.50
31-038	200 ft. x 1/8 x .060 (1/16")	4.95
31-050	100 ft. x 1/4 x .060 (1/16")	4.00
31-052	200 ft. x 1/4 x .060 (1/16")	8.00
31-078	50 ft. x 1/8 x .045 (3/64")	1.15
31-079	100 ft. x 1/8 x .045 (3/64")	2.15

Ideal Fish Tape Leaders



"Guides" flat fish tape easily around bends in conduit—allows the tape to slide without jamming or binding around 90° bends. Leader fastens easily to flat tape. Factory tested for 400-lb. pull.

No. 31-082	20 in. Leader	Each \$3.70
No. 31-083	Fish Tape Ball	Each .65

Ideal Coil-Flex Fish Tape



For all types of conduit. The Ideal Coil-Flex is extremely flexible; can be pushed or pulled with little effort through any and all bends allowed by the electrical code. Positively prevents cutting or damaging of aluminum. Ends are smooth and round to avoid catching or snagging.

The Coil-Flex consists of a 25-ft. length of steel spring 1 1/32 inch in diameter with a rustproof inner steel cable. A male fitting on one end and a female fitting on the other makes it easy to join together two or more lengths for jobs requiring a longer tape. Easy on the hands, it gives a safe, positive grip. Every Coil-Flex is factory inspected and tested at 400 pounds pull.

No. 31-081	25-ft. length	Each \$7.65
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Steel City Fish Wire

Schedule S



Flat shape increases flexibility. Efficient for conduit having several bends and is stiff enough for pushing through long runs.

Tempered wire does not have tendency to curl after constant use. Furnished in an assortment of cut lengths, in coils of 100 feet or more, or in reels holding from 2,000 to 4,000 feet according to size of wire. Various sizes may be combined to obtain lowest price.

Heavy — For Hand Fishing

Packed in individual cartons

No.	Size Inches	Approx. Wt. Lbs. Per M FL	Per 100 Ft.
1000	1/8 x .060	24	\$2.99
1001	3/16 x .060	35	3.70
1002	1/4 x .060	46	4.66
1009	3/8 x .060	55	8.80

Light — for Conduit Fishing Machines

1003	1/8 x .030	13	2.11
1004	3/16 x .030	19	2.99
1005	1/4 x .030	25	3.08

Extra Heavy

1006	1/2 x .090	65	10.56
1007	5/8 x .090	75	14.52
1008	3/4 x .090	85	19.36

Appleton Fish Tape

Schedule CF



Furnished in thicknesses of 0.030-inch or 0.060-inch.

Stock lengths of fish tape are 50, 100, 150 and 200 feet. Can be furnished longer lengths if desired. Put up in coils, packed in individual cartons.

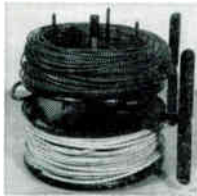
Unless otherwise specified, 100-ft. lengths will be furnished.

Width Inches	.030-Inch			.060-Inch		
	No.	Coil Lgth. Feet	Per 100 FL	No.	Coil Lgth. Feet	Per 100 FL
1/8	7130-50	50	\$2.65	7133-50	50	\$3.90
1/8	7130-100	100	2.65	7133-100	100	3.90
1/8	7130-150	150	2.65	7133-150	150	3.90
1/8	7130-200	200	2.65	7133-200	200	3.90
3/16	7131-50	50	3.90	7134-50	50	4.70
3/16	7131-100	100	3.90	7134-100	100	4.70
3/16	7131-150	150	3.90	7134-150	150	4.70
3/16	7131-200	200	3.90	7134-200	200	4.70
1/4	7132-50	50	3.95	7135-50	50	6.10
1/4	7132-100	100	3.95	7135-100	100	6.10
1/4	7132-150	150	3.95	7135-150	150	6.10
1/4	7132-200	200	3.95	7135-200	200	6.10

**If the Tool You Need Is Not Listed in this Catalog
... Call Your Nearest Graybar Office and Warehouse**

Hyton Wiring Reels

Keep wire free from kinks and snarls; maintain correct tension. Save time, effort and wire on any wiring job. Wire may be reeled off top or bottom from any angle. Adjustable to different sizes of wire rolls. Furnished with holes, in edge of face plate, into which free wire end may be anchored. Turns easily, but will not coast. Available in gang units, or individually.



Finished in durable black enamel.
 ◀ **Showing simple method of loading Hyton reels.**

Reel Specification

Hyton 15-inch reels take wire up to No. 8 A.W.G.; 18-inch takes larger diameter coils, such as loom wire, heavy wire and light cable.

	15-Inch Reel	18-Inch Reel
Disc Diameter (In.)	15	18 3/4
Coil Eye Adjustment (In.)	4 1/2 to 12 1/2	4 1/2 to 13 3/4
*Coil Width (In.)	Up to 5 1/2	Up to 6

*Coil width can be increased if desired.

In addition to standard sizes, larger sizes made up to meet special requirements.

Individual Reels



Fastens on any framework, on service trucks or in the storeroom.

Reel Size, In.	Ship. Wt. Lbs.	Each
15	11	\$9.50
18	13	11.00

Single Unit Reels



Handles unwieldy metallic cable or non-metallic cable. Cable comes off reel without a twist, ready to be laid.

Framework takes up little space, will take the heaviest roll of wire.

Reel Size	Ship. Wt. Lbs.	Each
15 In.	16	\$14.85
18 In.	19	18.25

Double Unit Reels

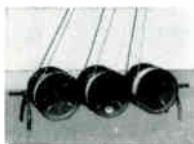


Reels work independently of each other.

Can be used on all wiring jobs. Easily carried by a convenient handle.

Reel Size, In.	Ship. Wt. Lbs.	Each
15	25	\$20.75
18	30	23.95

Gang Reels

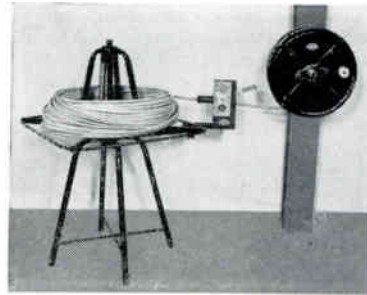


Particularly valuable on jobs where a number of wires are pulled into conduit. Handles at ends provide easy holds for carrying.

Furnished in 4-gang and 6-gang units.

Reel Size, In.	4-Gang Unit		6-Gang Unit	
	Ship. Wt. Lbs.	Each	Ship. Wt. Lbs.	Each
15	16	\$37.75	72	\$54.50
18	58	45.00	90	65.50

Hyton Wire Measuring Equipment



Unit, consisting of storeroom reel, wire meter and take-up reel, facilitates measuring and recoiling of wire, in the storeroom or in the field. Portable, easily handled by one man.

Wire Meter: For wire, BX, loom, etc., up to 1-inch diameter. Registers up to 1000 feet. Easy to read dials, instantly reset to zero. Eliminates errors and guesswork.

Storeroom Reel: Takes any size wire or cable without adjustment. Will not tip, but easily moved. Wire pulls off without kinks or tangles. Welded construction. Available with or without wire meter.

Take-up Reel: Unwinds wire from storeroom reel, through meter, making a neat, compact coil. Outer disc slides off for easy removal of measured coil.

No.	Description	Ship. Wt. Lbs.	Each
SRM-18	Complete Unit, Incl. Wire Meter, Take-up Reel and Storeroom Reel	59	\$81.00
WM	Wire Meter, less Stand, 3 1/4 in x 4 in.	6	27.50
WMS	Wire Meter Stand, 21 in. high.	3	3.75
SRR	Storeroom Reel, 39 in. high, 33 in. wide.	40	42.50
TU	Take-up Reel, 18 in.	13	11.00
TUS	Take-up Reel Floor Stand, 20 in. high.	6	4.50



Hyton Reelift

A timesaving, easy way to handle bulky, heavy cable reels. A simple lift on the Reelift handles sets reel up, ready for unrolling the cable.

Quick, Simple Loading

To load Reelift, insert axle through reel; slip fitting on the axle. Tilting the base lets handles be slipped through axle fittings to proper height. A lift on the handles sets up reel, ready to pull wire.

Reel revolves on axle; broken flanges, or otherwise damaged reels, cause no trouble.

No.	Max. Reel Dimensions (In.)		Weight Lbs.	Each
	Width	Diam.		
RL 25	25	36	60	\$34.25
RL 31	31	42	85	40.75



Hyton Dispensing Reels

Keep broken coils compact and ready for immediate dispensing. Save time, money and material.

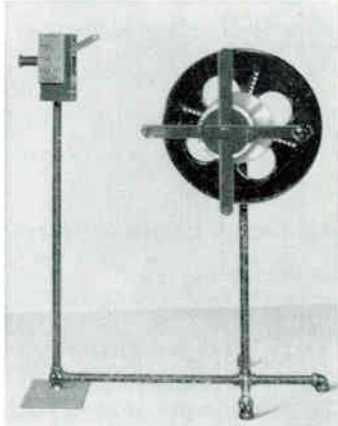
Wire is easily pulled off without kinks or tangles.

Takes up no more space than coils themselves. Can be used with Hyton Wire Meter as either pay-out or take-up reel.

Available only in 15-inch size, for coils of No. 8 and smaller wire. Adjustable for various size coils.

No. Reels	Ship. Wt. Lbs.	Each
4	44	\$37.75
6	68	54.50

Hykon "Tums" Wire Measuring Units



Consists of meter and take-up reel mounted on a light weight but sturdy steel framework. Takes wire, rope and other flexible material up to 1" diameter. Accurate measurement guaranteed. Registers up to 1,000 feet. Instantly reset to zero.

Take-up reel has tapered cone for easy removal. Reel dimensions, 18 3/4" diameter, 7" wide. Capacity 1500 feet of No. 14 wire. Other sizes accordingly.

No.	Each
TUMS	\$45.50

**Bernz-O-Matic Portable Torches
With Replaceable Fuel Cylinders
Master**

Portable torch unit that burns in any position at 2300° F.

Lights instantly without priming or pre-heating. Fuel Cylinder made of high quality steel and loaded with propane gas. Overall length 10"; diameter 2 3/4". Complete unit with fuel weighs less than 3 lbs.

Pencil flame type for concentrated heat; fuel cylinder lasts for 15 hours burning time.

General utility type for enveloping flame; fuel cylinder lasts for 10 hours burning time.



No.	Description	Each
TX10	Pencil Burner Unit with Fuel Cylinder.....	\$6.95
TX11	Utility Burner Unit with Fuel Cylinder.....	6.95
TX9	Disposable Cylinder only...	1.95
TX1	Pencil Burner Unit only...	5.00
TX2	Utility Burner Unit only...	5.00
1351-BP	Pencil Burner Head only...	3.60
1352-BU	Utility Burner Head only...	3.60
TX300	Flame Spreader for TX2...	1.95
TX400	Small Soldering Tip for TX1	1.75
TX401	Large Soldering Tip for TX1	1.95
TX405	Spark Lighter.....	.30
TX406	Box of 6 Lighter Flints.....	.60
TX410	Torch Stand.....	1.25

Bantam



Does light soldering quickly and without extensive preparations. Ideal for close work; precision-tipped flame gives concentrated heat.

Fuel cylinder gives 15 hours burning time. Entire unit with fuel weighs only 1 lb. 6 oz.

No.	Description	Each
TX101	Bantam Torch and Fuel Cylinder.....	\$4.95
TX109	Disposable Fuel Cylinder	1.49
TX115	Bantam Burner only...	3.45

Prepo Torches

Have many uses—for the hobbyist, farmer, shopman, housewife, maintenance man and many others.

Gives extremely hot, clean and odorless heat (2200° F.) suitable for flowing silver solder—no pumping or priming—just open the valve and light.

May be used in any position, indoors or outdoors. Long life—8500 B.T.U. in a single container. Height, 11 in.

Caution—Torches are designed for use with Prepo fuel only and will not operate on any other fuel—do not attempt to refill empty container.

Master Torch Kit



An outstanding tool item. Kit consists of: One Prepo Model TA-606 Professional Torch; One each Heavy Duty, Pin Point and Utility burners; one each paint remover, chisel point and diamond point solder tips; one tank Prepo fuel; one all-metal fitted carrying case with space for extra fuel.

No.	Description	Each
TA-605	Master Torch Kit.....	\$19.95
TA-600	Torch Base Kit, with 1 fuel tank (without burner).....	5.50
TA-601	Standard Torch Kit, with Utility Burner, 1 Fuel Tank.....	7.50

Interchangeable Burners and Tips



All burners and tips fit the same torch base.

No.	Description	Each
TA-612	Pin Point Burner.....	\$2.95
TA-613	Utility Burner.....	2.00
TA-615	Heavy Duty Burner.....	4.45
TA-620	Paint Remover Tip.....	1.25
TA-621	Diamond Point Solder Tip.....	1.95
TA-622	Chisel Point Solder Tip.....	1.95

Conversion Adapters



For using new burners on earlier model Prepo torches.

No.	For Torches	Each
TA-652	TA-612, TA-613	\$0.50
TA-655	TA-615	.60

Accessories

No.	Description	Each
TA-632	Prepo Orifice for No. TA-612.....	\$0.50
TA-633	Prepo Orifice for No. TA-613.....	.50
TA-635	Prepo Orifice for No. TA-615.....	.50

Orifices are packed 12 in a package, weight 4 oz.

Prepo Fuel

Seamless steel throw-away tank contains Prepo, a self-pressurizing hydrocarbon blend. Non-poisonous, non-toxic. Tested and shipped in compliance with ICC regulations.

One container of fuel will give many hours of constant service under average use.



No.	Description	Each
TA-690	Weight 12 oz. Weight per carton of six, 4 lb., 5 oz.....	\$0.79

Six in a carton. Also available in cases of 36 and 72 containers.

G-E *Calrod Soldering Irons

Soldering irons are highly efficient for all work requiring soft soldering. Because of the outstanding reserve-heat capacity these irons are recommended for continuous-production soldering as well as for intermittent duty.

Heat-resistant shell provides high corrosion resistance and low heat loss. Easy to grip, cool, plastic handle. Cord strain insulator will withstand pull of 35 pounds.

Calorized Copper Tips: Durable, interchangeable and designed for extra long life. The calorized coating retards corrosion and oxidation, also prevents freezing of tips to tip holder.

Ironclad Copper Tips: For high-speed, repetitive soldering. For greater protection in use with solder having a minimum of 35 per cent tin. Prevents amalgamation of tin with copper for extra-long life.

Industrial Soldering Irons

6A161 and 6A162 Series



Assembled view



Cutaway view

Soldering Iron, Less Tip

Renewal Heater

Cat. No.	Volts	Rating		Each	Cat. No.	Each
		Watts				
6A161	115	75		\$12.00	6A31	\$3.70
6A161G3	230	75		12.00	6A31G3	3.70
6A162	115	100		12.00	6A32	3.70
6A162G2	230	100		12.00	6A32G3	3.70
6A162G6	115	110		12.00	7C342	3.70
6A162G30	230	110		12.00	7C249	3.70
6A162G3	115	125		12.00	8A88	3.70
6A162G8	230	125		12.00	7A76G21	3.70
6A162G23	64	100		12.00	7C208	3.70

Interchangeable Tips

Cat. No.	Size, Inches	Type	Each
6851732P21	3/8	Calorized	\$0.80
6851732P22	3/8	Ironclad	1.50
6808345AAP2	1/2 short	Calorized	.80
6851775P21	1/2 short	Ironclad	1.50
6808345AAP3	1/2 long	Calorized	1.40
6851775P22	1/2 long	Ironclad	2.85
9817171P22	15/64	Ironclad	1.50

6A200, 6A201 and 6A202 Series



Assembled view



Cutaway view

Soldering Iron, Less Tip

Renewal Heater

Cat. No.	Volts	Rating		Each	Cat. No.	Each
		Watts				
6A200	115	100		\$13.20	6A32	\$3.70
6A200G2	230	100		13.20	6A32G3	3.70
6A201	115	200		15.10	9A77	4.80
6A201G2	230	200		15.10	9A77G2	4.80
6A202	115	300		17.30	9A78	5.50
6A202G2	230	300		17.30	9A78G2	5.50

Interchangeable Tips

No.	Size, Inches	Type	Each
6827994P21	3/4	Calorized	\$1.45
8381902P21	3/4	Ironclad	3.90
6827994P22	1	Calorized	2.10
8381902P22	1	Ironclad	4.50
6827994P23	1 1/4	Calorized	4.00
8381902P23	1 1/4	Ironclad	6.10

*Registered trade-mark of General Electric Co.

Lightweight Soldering Irons



Cat. No. 6A273



Cat. No. 6A283



Disassembled view of lightweight soldering iron

Soldering Iron Including Tip and Heater Assembly

Cat. No.	Volts	Rating	Watts	Std. Pkg. Quantity	Each
6A273	120		60	6	\$11.40
6A283	120		60	6	11.40

Tip and Heater

Tip Only †

Cat. No.	Each	Cat. No.	Inches	Each
6A300	\$5.60	326A964P21	1/4	\$1.60
6A301	5.60	326A964P22	3/16	1.60

†Must be brazed on.

Midget Soldering Irons



No. 6A212—1/8 In. Diameter tip



No. 6A210 1/4 In. Diameter tip



No. 6A214—3/16 In. Diameter tip

G-E Calrod heater built into Tip.



Tip and Heater Assembly



Disassembled Midget Iron, showing Handle Assembly pulled out of Handle. Tip and Heater Assembly is unscrewed from Handle Assembly.

Soldering Iron Including Tip and Heater Assembly

Cat. No.	Volts	Rating	Watts	Tip Diam. In.	Std. Pkg. Quantity	Each
6A210	6		25	1/4	6	\$6.90
6A212	6		25	1/8	6	6.90
6A214	6		25	3/16	6	6.90

Renewal Tip and Heaters Only

Cat. No.	Volts	Rating	Watts	Tip Diam. In.	Std. Pkg. Quantity	Each
6A211	6		25	1/4	6	\$3.60
6A213	6		25	1/8	6	3.60
6A215	6		25	3/16	6	3.60

G-E *Calrod Soldering Irons

For Extra Heavy Duty



Specially designed to meet the difficult requirements of heavy continuous soldering.

Has a G-E Calrod unit cast directly into copper heating head. Chisel type, calorized copper tip brazed to copper heating head providing efficient heat transfer. (Tip can be renewed by unbrazing it from heating head and brazing on a new one with silver-solder.)

Cat. No.	Volts	Rating Watts	Diam. of Tip Inches	Net Weight Lbs.	Each
6A318	115	650	1 5/8	6	\$46.00
6A318G2	230	650	1 5/8	6	46.00
6A319	115	1250	2	8 1/2	66.00
6A319G2	230	1250	2	8 1/2	66.00

G-E Special Soldering Iron Transformers

For Use With Midget Soldering Irons



Single Tap
Cat. No. 6A362

Four Tap
Cat. No. 6A364

Specially designed, 115-volt transformers available as optional equipment. Single-tap used where only one soldering heat is required. Four-tap gives wide range of heats (from 20 to 30 watts) for close temperature control of tips.

Cat. No.	Description	Each
6A362	Single-tap transformer	\$5.70
6A364	Four-tap transformer	7.60

IRONCLAD TIPS

- Mean
- No Corroding or Pitting
 - No Filing
 - Lower Upkeep Cost
 - Less Maintenance
 - Longer Life.

The effect of solder (250°C. for 363.5 hours) on plain copper (left) and Ironclad Copper (right) soldering tips.



*Registered trade-mark of General Electric.
 Note—We can furnish 230-volt irons at same price—Contact your nearest Graybar office or warehouse.
 Ask for a copy of G-E Bulletin GEA-4519.

Vulcan Electric Soldering Irons

Approved by Underwriters' Laboratories, Inc.

These high powered irons are light in weight and have the hang or balance which makes them convenient to use. Very efficient; will produce maximum work for current used.

Made of the best grade materials obtainable for the purpose; finest forged copper tips; steel element housing and tube; selected birch handles shaped to fit the hand; fire-proof terminals. Fitted with 6-ft. heater cord and unbreakable rubber plug.



Screw Tip Type



Plug Tip Type

Nos. 20 and 25—For fine instruments, small fuses, light telephone repairs, radio and all very light soldering.

Nos. 30 and 35—For radio and home use, fuses, instruments, inspectors' or linemen's tool kits, etc.

Nos. 40 and 45—High speed tools; for telephone switchboards, electrical instruments, light manufacturing, fuses and radio apparatus.

No. 453—For high speed soldering for radio, television and electronic assembly and parts.

No. 50—For fast telephone work, art glass, light tinware and general home use.

Nos. 55 and 60—For light automobile repairs, light tinware, general utility and home use.

Nos. 70 and 75—For medium tinware, general manufacturing, metal patterns, automobile work, etc.

No. 80—For heavy tinware, sheet steel and galvanized iron, metal boats, refrigerators, automobile radiators, roofing, etc.

No. 90—For automobile radiators, copper sinks, roofs, leaders, heavy metal patterns and all heavy soldering.

No. 900—For extra heavy soldering.

For Operation on A-C or D-C—Specify Voltage

Screw Tip Type					Plug Tip Type				
No.	Watts	Diam. Tip, In.	Net WL, Lbs.	Each	No.	Watts	Diam. Tip, In.	Type WL, Lbs.	Each
20	50	7/16	3/8	\$ 6.25	25	50	1/4	5/8	\$ 5.50
30	60	1/2	3/4	7.50	35	100	3/8	1 1/8	7.75
40	90	1/2	7/8	8.50	*453	150	3/8	1 1/4	8.50
50	130	7/8	1 1/8	9.50	45	150	1/2	1 1/4	8.50
60	175	1	1 3/8	10.75	55	200	5/8	1 5/8	9.75
70	220	1 1/8	1 3/4	12.50	75	300	3/8	2 3/8	13.00
80	310	1 3/8	2 3/8	14.50					
90	430	1 5/8	3 1/8	16.50					
900	700	1 3/4	5 1/4	29.50					

*Made to take 3/8-in. tip for high speed radio production.

Vulcan Safety Soldering Iron Holders

With Thermostatic Control



No. 2100-T

Holds and guards the soldering iron and keeps the tip at soldering temperature while in the stand.

Prevents overheating, tips retain tinning, saves current and assures long life of iron.

When iron is removed from holder full current is automatically applied. Adjusting screw on bottom of holder for setting thermostat to maintain proper temperature for iron used. Complete with cord and attachment plug for connection to current, and receptacle for plugging in soldering iron.

Cast iron stand, with slip-proof feet. Protecting cage made of expanded steel.

For Use on A-C Only

No. 2100-T—As described; weight 4 lbs.	each	\$6.50
No. 2100—Without Thermostatic Control; weight 3 3/4 lbs.	each	4.00

Drake Electric Soldering Irons

For 110 Volts A-C and D-C

General Purpose and Radio Types

Heating element nichrome wire, wound on amber mica. Copper tip. Blued finish. Complete with 6 ft. Underwriters' Laboratories Inc. approved heater cord, rubber plug and stand.



For general purpose light radio work.

No.	Description	Each
225	80 Watts; 3/8 in. Tip. Shipping weight 1 1/2 lbs.	\$6.00



Recommended for general radio work.

No.	Description	Each
325	100 Watts; 3/8 in. Tip. Shipping weight 1 1/2 lbs.	\$6.50



An extra hot iron for service men.

No.	Description	Each
326	125 Watts; 3/8 in. Tip. Shipping weight 2 lbs. . . .	\$7.00



Recommended for medium heavy work.

No.	Description	Each
425	200 Watts; 5/8 in. Tip. Shipping weight 2 lbs. . . .	\$12.00

Heating Elements, With Housing

For No.	Each	For No.	Each
225	\$3.40	225	\$0.60
325	4.00	325	.60
326	5.00	326	.60
425	9.00	425	2.00

Copper Tips

Automotive and Home Types

Heating element nichrome wire. Copper tip. *Large baffle plates. Blued finish. Complete with Underwriters' Laboratories Inc. approved heater cord, rubber plug and stand.



For light automotive work. Element sealed in ceramic housing.

No.	Description	Each
700	60 Watts; 5/8 in. Tip. Shipping weight 1 lb.	\$3.25



For medium automotive work. Element sealed in ceramic housing.

No.	Description	Each
701	100 Watts; 7/8 in. Tip. Shipping weight 1 1/4 lbs. . .	\$3.65



For garages, machine shops, etc. Element wound in amber mica and sealed in steel housing.

No.	Description	Each
703	150 Watts; 1 1/8 in. Tip. Shipping weight 1 5/8 lbs.	\$6.00

Heating Elements

For No.	Each	For No.	Each
700	\$1.00	700	\$0.90
701	1.50	701	1.00
703	3.75	703	3.75

Copper Tips

*Baffle plates will be furnished if steel is available.

Drake Electric Soldering Irons

Heater element nichrome wire, wound on amber mica; Copper tip. Blued Finish. Complete with Underwriters' Laboratories Inc. approved heater cord, rubber plug, and stand. Baffle plates radiate heat away from handle.



A small, continuous duty iron for close industrial work. Length 9 in., weighs 3 ozs.

No.	Description	Each
400	60 Watts; 1/4-in. Tip. Shipping Weight 1 lb.	\$6.50
	Replacement Element	4.50
	Replacement Tips . . . . .	.40

American Beauty Electric Soldering Irons

Sturdily constructed of fine material. Will withstand for long periods the hard service of industrial usage.

Solid steel rod core wound with chrome-nickel ribbon resistance wire, mica insulated. Metal outer casing and shank. Complete with 6 ft. super-flexible cord and attachment plug cap; also with heat insulating stand.

Copper tips are plated to reduce oxidation to a minimum. Pyramid-shaped tips are regularly supplied with Nos. 3128, 3138 and 3158; chisel-shaped tips with other numbers. A screw-driver type tip, No. 3738-S can be furnished for No. 3138 for telephone and switchboard work.

All sizes are equipped with terminal connector assembly designed for use with either 2- or 3-conductor cord either of SJ or HPD type.



No. 3128



No. 3138



No. 3158



No. 3178



No. 3198

No. 3128: For servicing TV, electronic and radio equipment and similar light work.

No. 3138: For TV, electronic and radio production; also for telephone, telegraph and similar work.

No. 3158: For the same purposes as the No. 3138, but for work requiring an iron of greater capacity.

No. 3178: For use on still heavier work than that for which the Nos. 3138 and 3158 are adapted.

No. 3198: For use on very heavy soldering operations of all kinds.

No.	Diam. Tip, In.	Watts	Length Overall, In.	Diam. Casing, In.	Net Wt., Lbs.	Ship. Wt., Lbs.	Each
3128	1/4	60	12 1/4	9/16	1/2	1	\$ 5.50
3138	3/8	100	12 7/8	7/8	1	2	8.75
3158	5/8	200	13 5/8	1 1/4	1 3/4	3	10.25
3178	7/8	300	14 3/8	1 1/16	2 5/8	4	13.50
3198	1 1/8	550	15	1 3/4	3 3/4	5 3/4	17.50

**Ideal Thermo-Grip Soldering Tools
1,000-Watt Standard Model**



**Faster
Safer
Easier**

1000-watt model Thermo-Grip is adaptable to practically all soldering jobs—closely grouped parts, difficult positions, cramped spaces, inflammable surroundings. Does all type of soldering quicker, safer and easier. Heats instantly and concentrates heat only on the part to be soldered. Eliminates fire hazard and danger of melting nearby joints or burning other parts. Does not oxidize the tin in solder, weaken the solder, or discolor the finished job. Reaches soldering temperature in less than one minute. Handy thumb-switch permits close heat control for better soldering. All parts are fully insulated. Current is reduced to harmless low voltage. Operates on resistance heating principle. Can be used for long periods of time without overheating.

Attachments

Plier Attachment (Illustrated above with Power Unit)—for soldering applications—where work may be held in jaws and heated; i.e., removing or applying solder lugs, sweating and unsweating copper tubing and fittings. Carbons are replaceable. Rating: 1000 volt amps.

Fork Attachment—for soldering in restricted spaces—where straight tools cannot be used; i.e., soldering lugs, terminals or connections in switch boxes, switchboards, inside machines, etc. The electrode holders can be turned and locked in any position. Rating: 600 volt amps.

Pencil Attachment—for spot soldering—where ground clamp may be attached to a metal part of work to complete secondary circuit; i.e., spot soldering, soldering sheet metal, wire joints, commutator risers, etc. Includes "C" type ground clamp. Rating: 600 volt amps.



No.	Description	Each
12-106	Unit complete with Plier Attach. and Switch, 115 v., 50-60 cy.	\$47.80
12-108	Unit less Plier Attach., 115 v., 50-60 cy.	41.15
12-067	Plier Attachment only.	11.75
12-068	Fork Attachment only.	13.20
12-069	Pencil Attachment only.	9.25

Ideal Heavy Duty Model Thermo-Grips

For big soldering jobs. 2500 watt capacity. Complete with pliers for soldering lugs up to 1050 ampere size, making stator connections, sweating and unsweating copper pipe and fittings up to 2½ inches diameter or up to 4 inches diameter with soft solder. Has Hi-Lo heat switch; Hi—2500 watts intermittent, Lo—2125 watts.



No.	Description	Each
12-048	115 v., 50-60 cy., complete.	\$125.00
12-049	230 v., 50-60 cy., complete.	125.00

Ideal 450-Watt Model Thermo-Grips



Heats ½-inch copper tubing to soldering temperature in 40 seconds using 40-60 solder. Handles solder lugs up to 225 amperes.

Heats quickly — has thumb-switch for close heat control — modern in design, light-weight, compact — can be used with ease and safety on small parts, wires, terminals, lugs, copper tubing up to ¾-inch, etc.

Safe — all current carrying parts fully insulated—no open flame.

Attachments—identical to 1000 Watt Unit except proportionately smaller in size.

When ordering specify (1) Power Unit; (2) Secondary Leads; (3) Attachments desired.

No.	Description	Each
12-072	Power Unit only, 115 v., 50-60 cy.	\$38.45
12-074	Power Unit only, 230 v., 50-60 cy.	41.35
12-076	Secondary Lead Assembly Set.	6.30
12-077	Plier Attachment only.	8.10
12-078	Fork Attachment only.	10.25
12-079	Pencil Attachment only.	7.25

Ideal Thermo-Tip Soldering Tools



New, light weight soldering tool for miniature and sub-miniature work. Consist of step-down transformer connected to small soldering pencil.

Heat confined to relatively small area where it will be effective. Possibility of damaging nearby circuit components such as resistors and insulators are reduced. A variety of tips and attachments include carbon elements, metallic elements and small conventional soldering irons. These are readily interchanged by means of screw-base sockets and disconnect plugs.

No.	Description	Each
12-125	Consist of Power Unit, 115V. 50-60 cy. L-4854 Pencil Assembly, L-4862 ¾ in. Bicarbonelement.	\$18.50

General Machine Folding Soldering Copper Rests



No. 8526

This patented, fireproof device consists of a molded plastic base with a stainless steel wire stand which flips up to hold a soldering copper safely and handily away from table or work bench. The stainless steel wire is correctly tensioned in the base so that it will remain in either upright or closed position 2 inches wide by 3½ inches long. Finish: Special heat-proof aluminum finish. Weight, 1 ounce.

No. 8526.....Price on application

American Beauty Temperature Regulating Stands



A thermostatically controlled device for the regulation of the temperature of an electric soldering iron while at rest. When iron is placed in this stand, soldering heat is maintained at working temperature, ready for instant use, or if desired at a lower temperature.

An adjustment on bottom of stand makes it possible to set thermostat for maintenance of any desired temperature—from very low, or warm, to full temperature.

Molded plastic base. Soldering iron cradle is metal. Complete with attached cord and attachment plug cap for connection to current and with receptacle for connection of soldering iron.

Can be used with soldering irons up to 660 watts capacity and on circuits up to 240 volts.

One in a carton; Shipping weight 2½ lbs.

No. 475..... Each \$6.25

Heating Elements

For American Beauty Electric Soldering Irons

No.	For Iron Nos.	Weight Ozs.	Each
9272	3128	3	\$3.00
9273	3138	4	3.60
9275	3158	8	4.80
9277	3178	12	6.50
9279	3198	18	8.55

Copper Tips

For American Beauty Electric Soldering Irons



No. 3728

Shown are the standard shaped tips with which the various models are equipped.



No. 3738

Made from commercially pure, drawn bar, copper rod—each one designed to fit into, and to the full length of, core of heating unit of the particular iron for which it is intended.



No. 3738-S



No. 3758

Tip No.	For Iron No.	Wt. Oz.	Each
3728	3128	1	\$0.43
3738	3138	2½	.53
3738S	3138	2½	.53
3758	3158	7	1.22
3778	3178	16	2.31
3798	3198	28	3.93



No. 3778



No. 3798

Unique Soldering Copper Handles

Air-Cooled

Hardwood handle, cool and safe. Clings to the soldering copper shank. Piano wire grip, expands and contracts as the iron heats and cools and prevents charring of wood. Ample air circulation over the entire length of shank. Easy to attach—simply drive the handle over the pointed shank.

Handle 6 in. long, ¼ in. diameter.

No.	For Shanks, In.	Each
1	7/32 to 3/8	\$1.00
2	3/8 to 1/2	1.25

Chromalox Electric Metal Melting Pots



P-100A to P-750 Inclusive have lifting lugs. Shows Model MR Thermostat for automatic control (Not included)



Shows 3-Heat Switch and Flexible Conduit Furnished with P-15, P-25 and P-50

Type P—For Soft Metals

For melting solder, lead, bab-bitt metal, tin and type metal (other than zinc).

High grade nickel-chrome cast iron pot, with heating elements clamped to bottom or sides totally enclosed by sheet metal jacket and insulating material. The location of heaters leaves interior of pot free for maximum capacity.

Maximum safe operating temperatures: Type P8 to P50, 750°F with or without control; larger sizes 900°F.

Controls—Types P15 to P50 have 3-heat manual switch mounted on a conduit box, with 3 ft. flexible conduit. Type P8 is supplied with 3 ft. flexible conduit and an armored attachment plug for single heat operation only.

Type P100A to P750 must be controlled by a thermostat and magnetic contactor to prevent excessive temperature. (For prices of Model MR Control and Magnetic Contactor contact Graybar).

For 115, 230 and 460 Volts, Single Phase, A-C or D-C

No.	Watts	Voltage	Capacity, Lbs. (Max. Contents)			Single Heat Each	3-Heat Switch Each
			Tin	50-50	Lead		
P-8	250	115	3	3.5	4.5	\$17.45	
P-15	500	115-230	12	15	18	28.30	\$31.60
P-25	750	115-230	22	27	34	36.30	42.95
P-50	1380	115-230	41	52	64	65.35	72.90
*P-100A	3000	115-230-460	90	113	144	123.40	
*P-350	5000	115-230-460	280	355	435	195.80	
*P-750	9000	230-460	725	930	1125	312.40	

*Available in 230 and 460 volts, 3 phase.

Dimensions, Inches

No.	Inside		Outside		Ship. Wt. Lbs.
	Diam.	Depth	Diam.	Depth	
P-8	2 3/8	2 1/2	5 1/8	5 3/4	15
P-15	3 3/4	4	7 1/8	8 3/8	20
P-25	5	4 1/4	7 5/8	8 1/4	26
P-50	6 3/8	5	11 1/8	11 1/2	54
P-100A	7 5/8	8	14 1/16	15 1/2	118
P-350	10 3/8	14 1/4	18 1/4	20 3/16	280
P-750	14	20 1/16	22 5/8	26	390

Rate of Melting (Lbs. per Hour) Maximum Operating Temperatures

No.	500°F.			650°F.		
	Tin	50-50	Lead	Tin	50-50	Lead
P-8	11	14	7	9	11	14
P-15	22	28	14	18	26	38
P-25	32	41	20	26	46	54
P-50	75	110	50	80	115	150
P-100A	160	245	120	175	265	360
P-350	275	405	210	300	470	630
P-750	525	750	410	580	870	1160

No.	750°F.			900°F.		
	Tin	50-50	Lead	Tin	50-50	Lead
P-8	3	4	7	...	...	...
P-15	7	9	16	...	...	...
P-25	9	12	20	...	...	...
P-50	35	50	70	...	...	...
P-100A	80	115	160	50	60	80
P-350	140	200	310	90	125	190
P-750	300	410	595	215	285	400

G-E Metal *Melting and Glue Pots

For Soft Metals



No. 2881146



Nos. 2666404 and 2666407

For melting lead, babbitt, tin, solder, type metal and similar metals at a temperature up to 950°F.

Zinc (spelter) should not be used in these pots as that metal will erode cast-iron. For these metals the jacketed-type pot is recommended. Lead is usually used in the jacket with cast-in heaters immersed in lead.

Some of the applications are dip soldering of subassemblies, pretinning before soldering, can soldering, remelting metal, curing rubber hose, storing molten metal, etc.

Other applications—railway repair shops, electric service shops, newspaper and printing plants, tin-plating shops, storage battery manufacturing plants, auto-body repair shops, bearing and fitting manufacturing plants and foundries.

Heating units used in these pots are G-E Calrod cast-in immersion-type, suspended from rim of pot, and extend directly into metal to be melted.

Maximum Operating Temperature, 950° F

Cat. No.	Approx. Capacity, Lbs.				Wattage				Approx. Ship. Wt., Lbs.	Each	Approximate Dimensions, Inches						Melting Pot Heating Units			
	Volts	50-50 Solder	Lead	‡Babbitt	Tin	High	Med.	Low			Inside Crucible	Inside Clearance	Outside		Cat. No.	Rating, Watts	Single Units Approx. Ship. Wt., Lbs.	Each		
2881146G3	230	28	35	†	25	750	....	....	50	\$ 53.00	6	6	3 7/8	4	9	10	3A227G4	750	12	\$ 33.50
2881146G2	115	28	35	†	25	750	....	....	50	\$ 53.00	6	6	3 7/8	4	9	10	3A227G3	750	12	\$ 33.50
2881146G5	230	28	35	33	25	1000	....	....	50	\$ 53.00	6	6	3 7/8	4	9	10	3A228G4	1000	12	\$ 35.50
2881146G4	115	28	35	33	25	1000	....	....	50	\$ 53.00	6	6	3 7/8	4	9	10	3A228G3	1000	12	\$ 35.50
2666404G1	230	100	135	125	90	2500	1500	1000	130	\$ 155.00	8	9	6 1/2	6	14	14	3A229G4	1000	14	\$ 35.50
2666404G2	115	100	135	125	90	2500	1500	1000	130	\$ 155.00	8	9	6 1/2	6	14	14	3A230G4	1500	14	\$ 42.00
2666407G1	230	330	425	390	270	5000	3000	2000	250	\$ 221.00	12	13	10	8 1/4	18 3/4	20 1/2	3A229G3	1000	14	\$ 35.50
2666407G2	115	330	425	390	270	5000	3000	2000	250	\$ 221.00	12	13	10	8 1/4	18 3/4	20 1/2	3A230G3	1500	14	\$ 52.00
2887186G2	230	1200	1600	1400	1000	15000	....	....	600	\$ 523.00	18	20	12	14 1/2	29	31	3A231G4	2000	30	\$ 46.00
																	3A232G4	3000	30	\$ 56.00
																	3A231G3	2000	30	\$ 46.00
																	3A232G3	3000	30	\$ 56.00
																	3A233G4	5000	40	\$ 107.00

*Larger sizes to 3000-lb. capacity are also standard.

†When this size pot is wanted for melting babbitt, it is necessary to use either Cat. No. 2881146G4 or 2881146G5.

‡None of these pots is recommended for use with babbitt alloy containing more than 4 per cent copper.

Small Portable Pots for Solder and Lead

Maximum Operating Temperature, 750F



This pot is similar in construction to those listed above.

The heater is of the G-E Calrod construction, utilizing heavy-wall steel tubing, and provided with a terminal cup. Complete with bail.

Fitted with 6-foot cord, with suitable attach-plug cap.

Approximate capacity: 50/50 solder, 12 lbs.; lead, 16 lbs. Consumes 550 Watts.

Inside dimensions: Diameter, 4 1/4 in.; Depth, 3 7/8 in.

Outside dimensions: Diameter, 7 3/8 in.; Depth, 6 1/8 in.

Cat. Nos.	Volts	Approx. Ship. Wt. Lb.		Each	Cat. Nos.	Single Units Approx. Ship. Wt. Lb.		Each
		18	\$30.50			3	\$13.10	
3887185G2	115	18	\$30.50		48X260	3	\$13.10	
3887185G3	230	18	30.50		48X261	3	13.10	

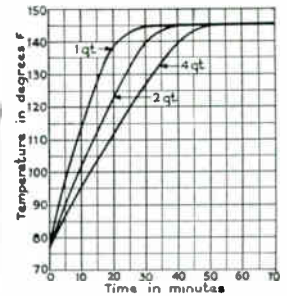
Automatic Glue Pots

These glue pots are very efficient, have a removable copper glue container in contact with heated copper jacket and steel protecting casing.

Heater unit surrounds jacket and is completely mica-insulated. Insulation is placed between heated jacket and outer casing.

A sensitive snap-action thermostat is mounted on jacket and maintains a glue temperature of 140°-150°F.

Complete with contact plug, 8 feet of rubber-covered cord and socket attachment plug.



Cat. No.	115 Volts A-C	Capacity		Outside Dimen., In.		Approx. Ship. Wt., Lbs.	Each
		Qts.	Watts	HL	Diam. Casing		
6A126G22		1	150	5 1/4	7 1/4	7	\$29.40
6A111G26		2	250	7 1/4	7 1/4	8	\$33.50
6A139G21		4	350	9	8 3/4	10	\$39.60

Vulcan Electric Solder Pots

For Fast Dip-Soldering of Small Parts

Ideal for tinning parts, leads and fast dip soldering. The rate of speed of pot soldering depends on correct size of pot, size of parts and the melting point of solder used. Elements are replaceable — when ordering specify number of pot and voltage.



No. 1600



No. 1606

For a-c or d-c (Specify Voltage).

All numbers have cast iron pots and heat-resisting base. All have Underwriters' Laboratories Inc. approved cord.

No. 1700 to 1740 inclusive have heavy sheet steel outer casings.

Flat Type Elements — Nos. 1600, 1606, 1701, 1703, 1713.

Cartridge Type Elements — Nos. 1700, 1702, 1704, 1704S, 1706, 1716-30 incl. Band Type Elements — No. 1740.

Cords, Plugs and Switches — Nos. 1600, 1606, 1701, Detachable cord and plug only. Nos. 1703, 1713, 1716, 1740, Attached



No. 1700



No. 1706

cord, plug and switch. Nos. 1700, 1702, 1704, 1704S, 1706, 1730, Attached cord, plug and 3-heat switch.

Single Heat

No.	Cap. Solder Lbs.	Watts	Dimensions In.				Shp. WL Lbs.	Each
			Inside Diam.	Inside Dpth.	Outside Diam.	HL		
1600	7/8	150	1 5/8	1 3/8	3 5/16	3 5/16	4 1/2	\$ 7.65
1606	3	350	3	1 1/2	5	4 1/8	7 1/2	8.45
1701	4	250	3 1/4	1 1/2	5	5 3/4	6 3/4	16.25
1703	7/8	200	2	7/8	4 3/8	4 3/16	6	11.85
*1713	7/8	300	1 5/8	1 3/8	4 3/8	4 3/16	5	16.50
1716	45	1600	8	4	12	7	55	76.50
1740	368	6000	10 3/8	14	15	18 3/4	300	189.75

Three-Heat

No.	Cap. Solder Lbs.	High Watts	Med. Watts	Low Watts	Dimensions In.				Shp. WL Lbs.	Each
					Inside Diam.	Inside Dpth.	Outside Diam.	Dpth.		
1700	1 1/4	200	120	80	2	1 3/8	5	5 3/4	6 3/4	\$ 20.90
1702	5	250	150	100	3 3/8	2 1/2	5	5 3/4	7 1/2	24.20
1704	10	500	250	125	3 3/8	4 1/2	7 1/2	8	17	27.80
*1704S	10	800	400	200	3 3/8	4 1/2	7 1/2	8	18	36.70
1706	20	750	375	187.5	5	4 3/8	7 1/2	8	23 1/2	30.60
1730	100	2500	1395	1095	7 1/2	7 3/4	13	10 3/4	99	139.15

*These are high-powered types and are insulated to reach Temperatures of No. 1704S, 1000° F; No. 1713, 850° F.

Vulcan Electric Glue Pots

Water Jacket Type, with Thermostat Control



Will hold glue to a maximum temperature of 150° F. The liquid heating medium used in these pots permits controlled transfer of heat to the glue without danger of localized overheating which safeguards the quality of the adhesive.

Heavy cast aluminum with attached base. Aluminum inside pot or bowl. Heated with long-life, flat, enclosed replaceable heating elements. Complete with 6-ft. Underwriters' listed heater cord.

For 110-120 or 220-230 Volts A-C or D-C

(Please specify voltage and whether for A-C or D-C)

No.	Glue Cap. Qts.	Watts	*Min-utes Req.	Size Outside, Inches		Shp. WL Lbs.	Each
				Diam.	HL		
1809	1/2	200	45	6 1/4	6 1/2	8	\$15.20
1810	1	250	45	7	7 1/4	10	19.20
1811	2	450	45	8 1/2	8 1/2	15	29.60
1812	4	700	50	8 3/4	11 1/8	30	48.40

*Average time required to heat from 70 to 145° F.

Unique Balanced Ladles



Air-Cooled

Makes it possible to pour metal drop by drop or in a steady stream, exactly where wanted. The positive "close-to-bowl" grip on the cool wood handle reduces overhang to a minimum, eliminates strain, and makes it easy to direct and control flow of the molten metal.

Pressed steel ladle, treated to prevent sticking of solder. Wood handle inexpensive and easy to replace.

Diam. Bowl, In	Capacity, Pints	Weight Each, Lbs.	Each
2 1/2	1/8	5/8	\$2.09
3	1/4	3/4	2.20
3 1/2	3/8	7/8	2.37
4	1/2	1	2.48

General Machine Solder Pans



No. 6877

A lightweight sheet-steel pan made for catching solder drippings when wiping joints in cable-splicing operations. Pan has folded corners, a folding loop handle at each end, and eyelets near each corner for safely suspending the pan under the cable.

Dimensions: Length, 18 inches; width, 12 inches; depth, 2 1/4 inches. Weight, 2 1/4 pounds.

No. 6877 Price on application

Dayton Safety Ladders



Type "A" and 6 ft. sizes

Type A

Constructed of tested airplane spruce reinforced with steel supports. Steel hand-rails guard safety platform. Half of platform can be raised to form an extra step. Folds compactly for storing. Automatic locking feature insures safety when in use. 3 feet to 16 feet in height. Equipped with renewable treated rubber safety ladder shoes.

"Roll-Along" Ladders

Equipped with rubber tired swivel casters on back risers; have quick and easy mobility. They are ideal for stock room or other work requiring frequent moving of ladder. They are recommended in 3 ft., 4½ ft. and 6 ft. sizes. Add \$4.00 net per pair for casters.

Type A Height	Each	Type A Height	Each
3 ft.....	\$25.00	8 ft.....	\$42.00
4½ ft.....	30.00	10 ft.....	48.00
6 ft.....	36.00	12 ft.....	54.00



Type H

Ruggedly built platform ladders featuring mill wright type back construction that will stand a maximum of abuse.

Have tool shelf on top; 18 x 16-in. platform provides a safe place to work. Furnished with ladder shoes. Non-slip treads reinforced with heavy steel truss rods.

Spreaders are pinch-proof; all hardware zinc-plated for corrosion resistance. Ladders fold flat for easy handling.

HL, FL	WL, Lbs.	Each	HL, FL	WL, Lbs.	Each
4	33	\$34.00	10	63	\$57.00
5	36	37.00	12	77	62.00
6	42	42.00	14	93	68.00
7	45	45.00	16	101	79.00
8	53	51.00			

"Run-About"



"Run-About"

An efficient ladder similar to the "Roll-Along" with the added feature of a hard rubber compression spring caster which is attached to the first tread on the risers. The compression casters raises the front of the ladder from the floor so that it is freely movable in any direction. When ladder is mounted, the user's weight compresses the spring, permitting the risers to rest on the floor and act as a brake that effectively prevents movement of the ladder in any direction. Renewable tread Safety Ladder Shoes on the front risers.

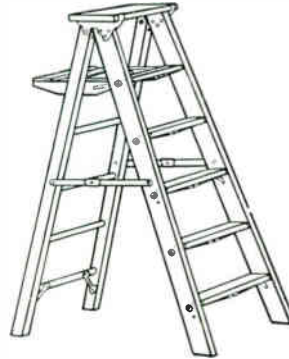
Available in 3 ft., 4¼ ft., and 6 ft. sizes.

Size	Each
3 ft.....	\$25.00
4½ ft.....	30.00
6 ft.....	36.00

Add \$7.50 net for casters.

Babcock Mechanics' Step Ladders

For use by electricians, carpenters, painters, masons and mechanics generally.



These ladders are made of light, durable air-dried lumber, with strong hickory rungs on back legs.

Front risers 1⅞ x 3¼ in.; back legs 1⅞ x 2¼ in., with 1⅞ in. rungs. Complete with bucket shelf.

Steps are 1⅞ x 3¾ in., reinforced with a strong steel rod with wood block in center to form a truss. Strong, durable hinges or ears, securely riveted. All metal parts are zinc plated to prevent rust.

Back section rung braced each 4 ft. of ladder length. Front section every other step braced.

Lengths; 4, 5, 6, 7, 8, 10, 12, 14 and 16 feet. For prices contact Graybar

Safety Type



Light, durable air-dried 1¼ in. lumber, with strong oval hickory bars on back legs.

Front risers 1⅞ x 3¼ in.; back legs 1⅞ x 2½ in., with bars 1⅞ x 1¼ in. Steps 1 x 3¾ in.

All steps are reinforced with a strong steel rod with wood block to form a truss. All parts are heavily riveted. Hinges and spreaders 1¼ in. iron.

Back section rung braced each 4 ft. of ladder length. Front section bottom step braced.

Lengths: 4, 5, 6, 7, 8, 10, 12, 14, 16, 18 and 20 Feet.

Length, Feet..... 4 to 14 16 to 20
Per Foot..... \$1.76 2.00

Babcock Platform Step Ladders

Heavy Duty



A safe, practical ladder for overhead work, especially in schools, churches, stock rooms and theaters. Also for sign work and on ships.

Light, durable, air-dried lumber with strong oval hickory bars on back legs.

Front risers 1⅞ x 3¼ in.; back legs 1⅞ x 3¼ in., with bars 7⁄8 x 1¼ in. Steps 1 x 3¾ in.

All steps are reinforced with a strong steel rod with wood block to form a truss. All metal parts are heavily riveted, zinc plated to prevent rust.

No. 28

Height to Platform, Feet.....	4	6	8	10	12	14	16	18
Height over all, Ft.....	6	8	10	12	14	16	18	20
Each.....	\$16.50	20.50	25.00	29.50	32.50	35.30		

Shipping weight 3½ lbs. per foot.

Ideal Motor Maintenance Products

Ideal Electric Tachometer

Two sizes for speeds up to 5000 rpm. Accurate to plus or minus 1 per cent of full scale deflection.



Consists of small generator coupled to electric meter, which is capable of withstanding a momentary overload up to four times the maximum speed. The meter has two scales—"high" and "low" easily changed from one to the other with a switch. The units may be used together as a "Hand Type" Tachometer, or for many applications including permanent mounting.

No.	Description	Wt. Lbs. Each	Each
50-001	0-2500 rpm.....	3	\$78.00
50-002	0-5000 rpm.....	3	78.00

Ideal Electric Etchers

"Universal" Etcher marks iron, steel and their alloys, such as tools, parts and material. Four etching heats—120, 240, 420 and 700 watts—give a wide range of marking control. Cover forms work plate for small tools and parts. Unit includes 4 oz. etching tool, ground clamp with 4-ft. leads. Size, 8³/₈ in. x 5³/₈ in. x 7 in. Shipping weight 19 lbs. Standard unit for lighter work; "Machine Shop" for heavy duty service.



No.	Description	Each
11-009	Standard, 115 v., 50-60 cy.....	\$32.70
11-048	Machine Shop, 115 v., 50-60 cy.....	81.70
11-081	Universal, 115 v., 50-60 cy.....	58.35

Ideal Insulation Tester



Detects grounds, shorts and broken wires. Tests up to 2500 volts. Seven test voltages: 500, 1000, 1250, 1500, 1750, 2000, and 2500.

Operates from any electrical outlet. All current carrying parts are fully and carefully insulated. Spring operated safety sleeves, conceal the test points, which can

only be bared by pressing forward the buttons on side of handles. Has three wire safety type cord. Rating 600-volt amp. (maximum).

No.	Description	Each
41-001	115 v., 50-60 cy.....	\$62.00

Ideal Test-Glo



Test motors, fuses, spark plugs, electrical and radio circuits from 80 to 250 volts, a-c.

No.	Description	Each
61-040	Test-Glo.....	\$2.50

Ideal Precision Grinders

For Commutators and Slip Rings



Portable. For truing commutators and slip rings in their own bearings at normal operating speeds. Accurate to 1/1000-inch. Inherent "slaps" and bearing eccentricities automatically allowed for. New bracket supports make possible use on practically every type of machine. Carrying case at no extra charge.

No.	Description	Each
24-004	"Perfect" Grinder, 12-in. bedplate.....	\$107.80
24-020	"Ideal" Grinder, 12-in. bedplate.....	137.50
24-033	"Midget" Grinder, 6 in. overall length....	79.75

Ideal Universal Commutator Mica Undercutters

For field and shop use—heavy duty service. Used for large or small commutators. Undercuts in narrow, confined spaces and to within 1/4-inch of risers; works in spaces only 2 3/4 inches wide. Undercuts without removing brush rigging. Speedy, accurate and easily controlled. Carrying case at no extra charge.



No.	Description	Each
25-029	Complete with 115 v., 60 cy. motor.....	\$137.50
25-032	Complete with 230 v., 60 cy. motor.....	140.25

Ideal Direct Drive Undercutters



The Direct Drive Model for medium service in the field and shop requires no dismantling of brushes or motor. The Cutter Head only 2 1/2 inches wide cuts to within 3/16 inch of the riser. Designed for use with 2 3/32 inch diam. x 5/16 inch bore Ideal Saws and Milling Cutters.

Overall length, 14 1/2 inches; width of head 2 1/2 inches; cutter spindle speed approximately 3,000 rpm. Motor is "universal" type for either a-c or d-c. Shipping weight 9 pounds.

No.	Rating	Each
25-001	115 volt, a-c, d-c.....	\$85.25
25-002	230 volt, a-c, d-c.....	96.25

Ideal Small Motor Undercutter

For fractional horsepower motors having armature 1-in. to 7-in.

No.	Description	Each
25-048	115 volts, a-c, d-c.....	\$60.50

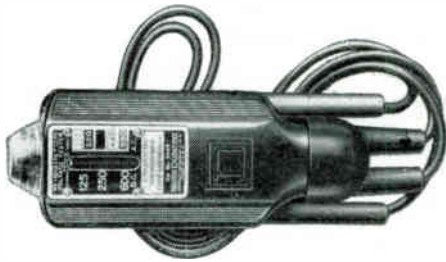
Ideal Commutator Slotting Saws and Milling Cutters



High speed steel and special high speed steel. Available in all types and sizes.

Specifications and prices on request to Graybar.

Square D Voltage Testers



Tests without lamps—eliminate breakage.
Individual Calibration—Voltage directly indicated on easily read, colored scale.
Compact—May be operated using one or both hands. Can be carried in pocket.
Safe—Heavy fibre case withstands 10,000 volts. Lead wires have vulcanized oil resisting insulation and 4" fibre grips covering insulation—piercing prongs.
Range—Testers cover the a-c and d-c scale up to 600 volts and from 25 to 400 cycles. Polarity cap indicates d-c polarity and is optional on all testers.

Voltage Tester Complete with Leads, Prongs, and Grips (Not Including Case)

No.	Description	Each
5008	Tester (complete with polarity cap). 110-220-440-550V. A-C, 60 cycle, 125-250-600V. D-C.....	\$22.55
5006	Tester (with polarity cap). 12-24-36-48-60V. A-C, 60 cycle, 10-20-30-40V. D-C..	22.55
5007	Tester (with polarity cap). 110-220-440-550V. A-C, 400 cycle, 30-60-90-120V. D-C.....	22.55
SK-3986	Polarity Indicating Cap (for any Square D Voltage Tester—10 in std. pkg.)	3.35
5002	Case, Imitation Leather.....	2.65

Ideal Voltage Tester

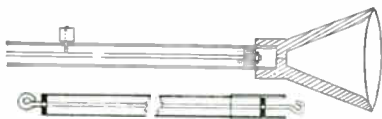
Safe, easy to use voltage tester that tests 110 to 600 volts a-c/d-c, blown fuses, grounded side of lines or motors, excessive leakage to ground, frequency (25 or 60 cy.) d-c polarity.

The solenoid voltage indicator and the neon test lamp provide a double protection—either will function in case the other fails.

Prod handle made of molded rubber and equipped with "no-slip" safety rings. Space is provided for prod storage. Case made of seamless plastic with covered fog-free window. Special layer-wound coil on nylon spool firmly secured at both ends. Plastic nameplate is bonded to case—no metallic contacts between inside and outside of case. Voltage tester is available with or without carrying case.

No.	Description	Each
61-004	Tester with carrying case	\$11.90
61-005	Tester only	10.90

**RITEoLITE Bulb Changers
Vac-A-Bulb**



Positive vacuum assures quick, safe convenient removal or replacement of lamp bulbs. Rubber bulb holder fits all types of bulbs from 15 to 1500 watts. Operates by placing bulb holder against lamp and forming vacuum by withdrawing plunger with operating rod running through the changer shaft. Bulb cannot fall. Eliminates bulb breakage in handling.

Shaft of aluminum for light weight. Extensions allow necessary lengths to be formed.

No.	Description	Lgth., FL	Each
Vac-A-Bulb	Bulb Holder & Shaft	4	\$11.95
Extension	Extension Shaft	4	4.25

**McGill Adaptable Lamp Changers
With Rubber Covered Fingers and Coil Spring**



Insulated for Safety. For convenient replacement of light bulbs in any location. A coil spring around the ends of the rubber covered fingers grips the bulb firmly.

The angle adjustment on the No. 150-CA and No. 151-CA, permits tilting of the head for bulbs in horizontal position.

Steel Lamp Changer poles are furnished in interchangeable 5-foot sections. Opposite ends telescope and lock to complete desired multiple length.

Each section is insulated for positive protection against shock should Lamp Changer come in contact with live wires.

With Angle Adjustment

No.	Description	Lamp Size	WL, Dz. Each	Each
150-CA	Coil Spring	15- 75-w	8	\$5.50
151-CA	Coil Spring	100- 200-w	9	5.50

No Angle Adjustment

152-C	Coil Spring	300- 500-w	10	6.00
153-C	Coil Spring	750-1500-w	10	6.50
154-C	Coil Spring	100-w Merc. Lamp	8	6.50
156-C	Coil Spring	PAR-38, R-40	12	6.00

McGill Adaptable Lamp Changers



With Rubber Suction Cup Assembly

Fits 200-w or spot and flood lamps for which mounting requires bottom contact.

No.	Weight Each	Each
157-C	5 oz.	\$6.00

No. 157-C

Lamp Changer Poles



No. 160-P

No.	Description	Weight Each	Each Section
160-P	Steel Interchangeable Poles, insulated, 24 oz. 5 ft. Sections.		\$4.10

Rubber Bumper for Pole End furnished with each Changer Head.

Lamp Base Removers

Fibre Insulated

Fits Lamp Changer Pole

For Standard and Mogul Lamp Bases.



No. 200

No.	Weight Each	Each
200	4 oz.	\$1.70

Whitney Punches

Hand Lever Punches

Built for the hardest kind of service according to their rated capacity. Fine balance and simple construction make these punches easy to use and keep maintenance at a minimum.

All main parts of the punches are made of drop-forged high-grade alloy steel, with wearing parts heat-treated. Punches and dies are of A-1 grade tool steel, heat-treated and tempered, and are guaranteed against defects in material and workmanship.

May be furnished with button (tip) punches.



No. 1
For Punching $\frac{3}{8}$ -In. Hole Through $\frac{1}{4}$ -In. Iron

Has insertable pipe handles. Furnished complete with one punch and one die of specified size, and with die adjusting key.

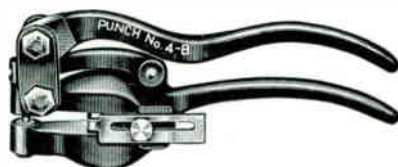
Supplied with $\frac{1}{8}$ -inch punch and die, unless otherwise specified. Extra punches and dies made in squares and ovals on specification; largest size, $\frac{3}{4}$ -in. square.



No. 2
For Punching $\frac{5}{16}$ -In. Hole Through $\frac{1}{4}$ -In. Iron

Furnished complete with one punch and one die of specified size, and with die adjusting key.

Supplied with $\frac{1}{4}$ -in. punch and die unless otherwise specified. Extra punches and dies made in square and oval on specification; largest size, $\frac{3}{8}$ -in. square.



No. 4-B
Tinner's Punch
For Punching $\frac{1}{4}$ -In. Hole Through 16 Gauge Iron

Furnished complete with three punches and three dies of specified size, and with die adjusting key in cardboard carton or seven punches and dies in metal box.

Unless otherwise specified, supplied with $\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{2}$ -in. punches and dies.



No. 8-B
For Punching $\frac{1}{4}$ -In. Hole Through $\frac{1}{8}$ -In. Iron

Has side gauge marked in fractions of inches. Upper lever does not throw back to right-angle.

Furnished complete with three punches and three dies ($\frac{3}{16}$, $\frac{1}{2}$ and $\frac{1}{4}$ -in. unless otherwise specified) and with die-adjusting key.

Special square or oval punches and dies on specification; largest size, $\frac{1}{8}$ -inch square.

No.	Stock Sizes of Punches, Inches	Depth of Throat, In.	Lgh. In.	Wt. Lbs.	Each
1	$\frac{1}{8}$ to $\frac{9}{16}$ by 1/64ths	$1\frac{7}{8}$	34	23	\$27.03
2	$\frac{3}{32}$ to $\frac{1}{2}$ by 1/64ths	$1\frac{11}{16}$	23	14	20.05
*4-B	$\frac{1}{16}$ to $\frac{9}{32}$ by 1/64ths	2	$8\frac{1}{2}$	3	7.72
8-B	$\frac{1}{16}$ to $\frac{1}{4}$ by 1/64ths	2	$18\frac{1}{2}$	$7\frac{1}{2}$	14.16

*Also available with seven punches and dies and a metal box, complete \$10.64.

Skylight, Ventilating and Tank Flange Punch



No. 6
For Punching $\frac{1}{4}$ -In. Hole Through $\frac{3}{16}$ -In. Iron

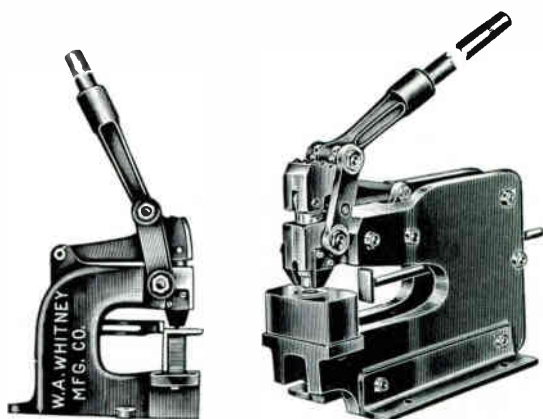
Particularly adapted for button punching, fastening standing seams without making a hole.

Punches within $\frac{3}{8}$ -in. of inside corner of angle iron; punch will strip where handle cannot be opened to 90 degrees.

Supplied complete with three punches and dies of specified sizes, and with die adjusting key. Unless other sizes are specified, $\frac{3}{16}$, $\frac{1}{2}$ and $\frac{1}{4}$ -in. dies and punches will be furnished.

No.	Stock Sizes of Punches, Inches	Depth of Throat, In.	Lgh. In.	Wt. Lbs.	Each
6	$\frac{1}{8}$ to 9/32 by 1/32nds	$1\frac{3}{4}$	$26\frac{1}{2}$	$10\frac{1}{2}$	\$17.70

Lever Type Bench Punches



No. 91

No. 92

Provide powerful punching action for work on heavier angles and channels. Available with 5 or 10-in. throat depth.

Will punch $\frac{1}{2}$ -in. hole through $\frac{1}{4}$ -in. iron, $\frac{3}{4}$ -in. hole through $\frac{3}{8}$ -in. iron or a 2-in. hole through $\frac{1}{8}$ -in. iron. Will also punch oval holes $\frac{1}{2}$ -in. wide by 1-in. long in $\frac{3}{8}$ -in. iron.

Made of drop forged steel, with chrome-nickel cast steel jaw.

Furnished complete with one round punch and die for any one size up to $\frac{1}{8}$ -in. round, and with one bolster plate. Special shape punches and dies available on request.

Bench Punches

No.	Stock Sizes of Punches, Inches		Depth of Throat, In.	Wt. Lbs.	Each
	By 32nds, In.	By 16ths, In.			
91	$\frac{1}{8}$ to 1	$1\frac{1}{8}$ to 2	5	82	\$70.20
92	$\frac{1}{8}$ to 1	$1\frac{1}{8}$ to 2	10	165	105.30
93	$\frac{1}{8}$ to 1	$1\frac{1}{8}$ to 2	18	500	140.40
94	$\frac{1}{8}$ to 1	$1\frac{1}{8}$ to 2	24	675	227.20

Bolster Plates for Bench Punches

*Size In.	For Hole Sizes, In.	Each	Size In.	For Hole Sizes, In.	Each
$\frac{7}{8}$	†Up to $\frac{5}{8}$	\$6.50	$1\frac{1}{8}$	$\frac{1}{8}$ to $1\frac{1}{2}$	\$6.50
$1\frac{1}{8}$	$\frac{1}{16}$ to $\frac{7}{8}$	6.50	$2\frac{1}{8}$	$1\frac{1}{8}$ to 2	6.50

*Bolster sizes denote outside diameter of dies.

†Also for angles and channels.

Notching Attachment: For making right-angle bends in angle iron up to $1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8}$ -in. each \$35.20.

Ryan Chisel and Punch Sets

Ryan cold chisels and machinists punches are hot forged of fine quality octagon tool steel. They are heat treated in automatic equipment, and will give excellent service. Kits are of durable plastic in attractive red; pockets are transparent edged with silver braid.



No. 11 Ryan Kit

Contains 1 each of following pin punches:

- $\frac{3}{16} \times \frac{3}{32} \times 4\frac{1}{2}$
- $\frac{3}{16} \times \frac{1}{8} \times 4\frac{1}{2}$
- $\frac{3}{8} \times \frac{3}{16} \times 5$
- $\frac{1}{16} \times \frac{1}{4} \times 6$
- $\frac{1}{16} \times \frac{3}{16} \times 6$

Kit weight, 1 lb.
 Kit, Complete
 Each..... \$2.00



No. 10

No. 10 Ryan Kit

Contains chisels and punches as listed.

- 1 Cold Chisel $\frac{1}{2} \times \frac{5}{8} \times 6$
- 1 Cold Chisel $\frac{3}{8} \times \frac{1}{16} \times 5$
- 1 Solid Punch $\frac{1}{2} \times \frac{3}{16} \times 6$
- 1 Pin Punch $\frac{3}{8} \times \frac{3}{16} \times 5$
- 1 Center Punch $\frac{3}{8} \times 4$

Kit Weight, 1 lb.
 Kit, Complete
 Each..... \$2.00



No. 12 Ryan Kit

Contains 1 each of the following Cold Chisels:

- $\frac{1}{4} \times \frac{1}{4} \times 4\frac{1}{2}$
- $\frac{5}{16} \times \frac{5}{16} \times 5$
- $\frac{3}{8} \times \frac{1}{16} \times 5$
- $\frac{1}{16} \times \frac{1}{2} \times 5\frac{1}{2}$
- $\frac{1}{2} \times \frac{5}{8} \times 6$

Kit weight, 1 lb.
 Kit, Complete
 Each..... \$2.00

No. 948K Kit

Contains 4 popular size wood chisels.

1 each of the following sizes:

- $\frac{1}{4}$ -inch
- $\frac{1}{2}$ -inch
- $\frac{3}{4}$ -inch
- 1-inch

Kit weight, $1\frac{1}{4}$ lbs.
 Kit, Complete
 Each..... \$6.60



**Bartlett Shears
 For Heavy Metal Cutting**



Snips are forged with solid blades of crucible tool steel heat treated. All pivots and parts made for the most trying work on metal.

Compound lever action gives an evenly distributed cutting strain from a close throat start to the finish at the point of the blade. In difficult cutting it is not necessary to start with blades open to the full span, because of the even pressure at all positions. The short cutting blade is connected to the short lever handle by links on each side with close fitting shoulder rivets, making a rigid connecting frame without side springing tendencies.

No. 10: Length $10\frac{1}{2}$ -in., cut 20 gauge or multiples of thinner gauges.

No. 12: Length 12-in., cuts seams or multiples of thicknesses: is used for splitting large sheets and for many classes of work that usually require bench shears.

No. 14: Length 14-in., is capable of much heavier work than the usual hand shear of the same length and in many ways takes the place of a bench shear for heavy cutting.

No.	Wt., Lbs.	Each
10	$1\frac{1}{8}$	\$ 9.90
12	$1\frac{3}{8}$	13.20
14	$2\frac{1}{2}$	15.40

Simonds Red Tang Files



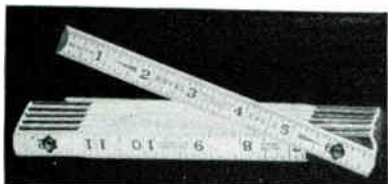
MILL files . . . are single cut used in sharpening saws and knives and for draw filing.

FLAT files . . . are double cut, a utility file for general use.

ROUND files . . . are used for enlarging round holes and on curved surfaces.

Kind Length	Cut Inches	Price Per Dozen						
		4	6	7	8	10		
MILL	Bastard	\$ 4.10	\$ 4.70	\$ 5.30	\$ 5.80	\$ 7.60		
	2nd cut	5.40	6.10	6.60	7.30	8.60		
	Smooth	6.10	7.30	8.90	11.80			
FLAT	Bastard	5.00	5.80	7.20	9.50			
	2nd cut	5.80	6.50	8.20	10.90			
	Smooth	6.40	7.20	8.90	11.80			
ROUND	Bastard	4.10	4.70	5.30	5.80	7.60		
	2nd cut	4.70	5.40	6.60	8.60			
	Smooth	5.30	6.10	7.30	9.50			
Length	Inches	12	14	16	18	20		
		MILL	Bastard	10.10	14.50	19.90
			2nd cut	11.60	16.50
			Smooth	12.70	17.70
		FLAT	Bastard	13.10	18.00	24.00	32.30
2nd cut	14.90		20.70	27.20	.....	.....
Smooth	16.30		22.60	30.10	.....	.....
ROUND	Bastard	10.10	14.50	19.90	.....	.....
	2nd cut	11.60	16.50	.....	.....	.....
	Smooth	12.70	17.70	.....	.....	.....

Eagle 6-Ft. Rules



Marked consecutive inches in 16ths on both edges of both sides.

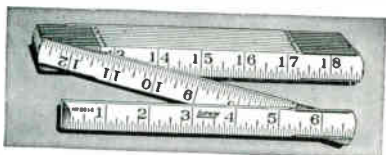
Folding Rules: Selected highest grade hard maple, white enamel finish, heavily lacquered.

Have riveted Strike-Plate joints.

Extension Rule: Made of extra-thick hardwood throughout. Seven-inch brass slide in end for inside measurements. Natural wood color, heavily lacquered. Has non-corroding concealed spring joints and strike plates.

No.	Description	Each
672W	Regular Marking	\$1.60
672WF	Inside Marking	1.60
X-672	Extension Rule With Slide	\$2.40

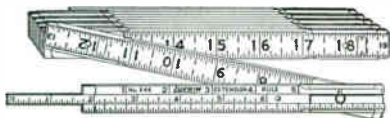
Lufkin Flexible Spring Joint Rules



5/8-in. wide, white enameled. Six-inch folds. Marked consecutive inches to 16ths, both sides. 6-ft. length.

No. 8616..... Each **\$1.30**

Lufkin Folding Extension Rules



For inside measurements. A six-inch graduated brass slide fitted into first section. Rule is hardwood, 1/8-in. thick for durability. Marked both sides consecutive inches to 16ths. Length, 6-ft.

No. X 46..... Each **\$2.40**

Lufkin Sterling Linen Tapes



Two color markings, one side only, to feet, inches and half inches. Case is genuine leather over rust resisting metal case. Folding flush handle. Nickel plated trimmings.

No.	400	403	405	406
Weight, Ounces	8	12	19	24
Length, Feet	25	50	75	100
Each	\$7.40	\$9.80	\$12.60	\$15.40

Lufkin Michigan Chain Tapes



Line is of extra tough steel, white metal coated. Graduations and figures are deeply stamped into babbit metal. Line is detachable from reel, and has heavy brass end clips, and is furnished with a pair of leather thongs. Sturdy metal reel

is dull nickel plated finish with polished hardwood handle.

No. 3100, 100-Ft. Length, with Reel..... Each **\$19.60**
 No. 03100, Tape Only, 100-Ft. Length..... Each **12.70**

Lufkin Leader Chrome-Clad Steel Tapes



Chromium plated; resists rust and is easily kept clean.

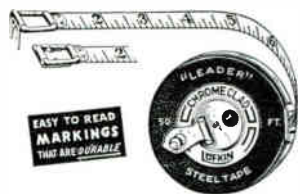
Markings are extremely easy to read, being jet black against the cream white chrome. Has stainless steel ring at end of tape. Markings are inches and 8ths.

The case is covered with maroon-colored vinyl over a substantial plated steel very easy to read tape at a

liner. A strong, durable and moderate price. Width, 3/8-in.

No.	Length Feet	Weight Ounces	Each
C-250	25	9	\$6.10
C-253	50	15	7.50
C-255	75	20	10.20
C-256	100	25	12.60

Lufkin Anchor Chrome-Clad Steel Tapes



This is a high grade chrome-plated steel tape in genuine leather case.

The heavy chrome plate is extremely durable and the jet black markings make for great ease in reading. Blade is 3/8-in. wide. The case is finest grade genuine leather, hand sewed over a heavy steel plated inner case.

Choice of markings: feet, inches and 8ths; or 10ths, and 100ths.

No. Feet, In. and 8ths	No. Feet, 10ths and 100ths	Length Feet	Weight Ounces	Each
C-210	C-210 D	25	9	\$8.40
C-213	C-213 D	50	15	10.20
C-215	C-215 D	75	21	13.30
C-216	C-216 D	100	26	17.50

Lufkin Mezurall Chrome-Clad Tape Rules



1/2 steel blade, chrome plated to resist rust and wear. Non glare black markings against chrome white background. Has end hook

for butt end and hooked-over measurements. Blade marked inches to 16ths, on bottom edges, first six inches to 32nds. The blades are replaceable.

Tape Rules

No.	Lgh., Ft.	Each
C-926	6	\$1.75
C-928	8	1.95
C-9210	10	2.25

Replaceable Blades Only

No.	Lgh., Ft.	Each
RC-6	6	\$0.95
RC-8	8	1.10
RC-10	10	1.25

Lufkin Mezurall Tape Rule

Nickel Plated Blades



This rule is identical to the chrome clad rule with the exception that the blades are nickel plated instead of chrome plated which permits a lower price.

Tape Rules

No.	Lgh., Ft.	Each
926	6	\$1.50
928	8	1.70
9210	10	2.00

Replaceable Blades Only

No.	Lgh., Ft.	Each
RN-6	6	\$0.70
RN-8	8	.80
RN-10	10	1.00

Thor Portable Electric Drills

Equipped with A-C/D-C Universal Motors—Standard Voltage, 115 Volts
Also Available in 220 and Special Voltages on Specification

1/4-Inch—Standard Duty

1/4-Inch Silver Line



For general use in maintenance and production service. Available in seven speeds and right-angle model. Has pistol-grip handle and plunger switch with locking pin. Right-Angle: Supplied with 1/2-in. chuck as standard; 3/4-in. collet optional. Head length, 3 11/16 inch with chuck; 2 5/16 inch with collet.

Standard Specifications

No.	Type	Free Speed RPM	WL Lbs.	Overall Lgth., In.	Each
ED2	Straight	1800	3	7 7/16	\$42.00
ED111	Rt. Angle	2250	3 7/8	10	57.00

Optional Speed Models

No.	RPM	Each
ED5	5000	\$42.00
ED0	3700	42.00
ED1	2500	42.00

Low Speed Models

No.	RPM	Each
ED3	1100	\$48.00
ED7	800	48.00
ED4	550	48.00



1/4-Inch Copper Line

For home workshops and other intermittent service. Die cast aluminum housing. Has self-lubricating bearings and alloy steel gears. Available with keyless chuck or with geared chuck. Standard speed, 2000 rpm. Overall length, 7 5/8 inches; weight, 2 3/4 lbs.

No. 4CL With Keyless Chuck..... Each **\$19.95**
No. 4CLJ With Geared Chuck..... Each **22.95**

1/4-Inch—Heavy Duty

1/4-Inch Silver Line—Pistol Grip



Particularly efficient for production work. Easy handling, with convenient pistol-grip handle and trigger switch. Also supplied with side handle. Available in seven speeds.

No. Pistol Grip	No. Side Handle	Free Speed RPM	WL Lbs.	Overall Lgth., In.	Each
U14F	U14FS	2500	3 7/8	8 3/4	\$45.00
U12F	U12FS	3750	3 3/4	8 9/16	45.00
U13F	U13FS	5000	3 3/4	8 9/16	45.00

Stainless Steel Drilling Speed Models

Available with speeds of 500 rpm. (No. U22FD); 750 rpm. (No. U16 FD); 1000 rpm. (No. U18FD) and 1500 rpm. (No. U17FD).

Each..... **\$53.50**

1/4-Inch—Heavy Duty

1/4-Inch Silver Line—Grip Handle



For continuous service in either metal or wood work. Grip handle has momentary trigger switch. Furnished with geared chuck, cable with ground wire, and plug. Free speed, 2000 rpm. Overall length, 12 5/16 in.; weight 6 1/2 lbs.

No. EJ0..... Each **\$55.00**

1/4-Inch Thorite—Plastic Housed



Ruggedness for heavy duty applications and lightness for convenience are achieved by the inner skeleton frame design of this drill and by the use of a strong plastic housing. Furnished with trigger switch.

No. Pistol Grip	No. Side Handle	Free Speed RPM	WL Lbs.	Overall Length, In.	Each
U14K	U14KS	2500	3 3/4	8 3/16	\$45.00
U12K	U12KS	3750	3 3/4	8 3/16	45.00
U13K	U13KS	5000	3 3/4	8 3/16	45.00

5/16 and 3/8-Inch—Heavy Duty

Silver Line



Ball bearings used throughout. Recommended for continuous performance heavy duty drilling.

EJ1, EJ2 and EJ3 furnished with grip handle and momentary trigger switch. All other sizes furnished with momentary side switch handle and dead handle.

No.	Capacity Inches	Free Speed RPM	WL Lbs.	Overall Length Inches	Each
EJ1	5/16	1500	6 5/8	12 7/16	\$57.50
*	5/16	1000	7 3/4	13 3/8	60.50
†EJ6	5/16	1500	6 5/8	12 7/16	57.50
EJ2	3/8	1000	7 3/4	13 3/8	64.50
EJ3	3/8	750	7 3/4	13 3/8	64.50
†EJ7	3/8	1000	7 3/4	13 3/8	64.50
†EJ8	3/8	750	7 3/4	13 3/8	64.50

†Have side handle.

*Specify "Code EJ2 with 5/16" Chuck."

Thor Portable Electric Drills and Tappers

1/2-Inch—Heavy Duty

Silver Line



Compact, powerful design develops stall-proof drilling torque at rated capacity.

Full ball-bearing construction.

Polished die-cast aluminum housing has steel inserts at points of stress.

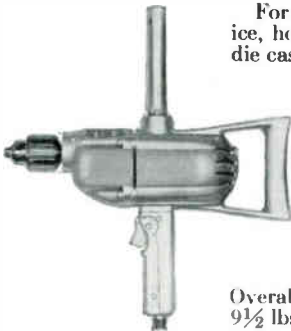
Slotted ventilating ports and new design fan maintain lower operating temperature.

Free speed, 500 rpm. Overall length, 11 inches; weight, 8 lbs.

No. EJ9..... Each **\$64.50**

1/2-Inch—Standard Duty

Copper Line



For standard duty, intermittent service, home workshops, etc. Housing of die cast aluminum.

Furnished with self-lubricating bearings, alloy steel gears, geared chuck and key.

Has side switch handle with trigger switch and locking pin for continuous or intermittent operation. Free speed, 420 rpm.

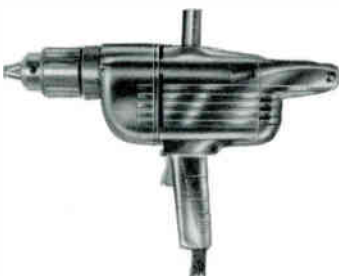
Overall length, 14½ inches; weight, 9½ lbs.

No. C8..... Each **\$42.00**

1/2-Inch—Extra Heavy Duty

Silver Line

Equipped with a.c./d.c. Universal motors. Standard voltage, 115 volts; also available in 220 and special voltages upon specification.



Designed for deep drilling where dependable power and strength are required.

Furnished with highest grade alloy steel gears and chuck.

Has safety switch side handle, spade handle and dead handle.

Standard with 3-conductor cable with ground wire, and with plug.

Feed screw assembly **\$10.00** extra.

Available in two speeds.

No.	Free Speed RPM	Weight Pounds	Overall Length, In.	Each
E15	*525	15	14¼	\$84.00

*Available at 750 R.P.M., **\$5.00** extra. (Specify No. E14)

5/8- and 3/4-Inch Standard and Extra Heavy Duty Silver Line



Furnished with momentary switch, side handle, spade handle, dead handle and 3-conductor cable with ground wire and plug.

Gearred chuck and key supplied as standard. Extra equipment: Feed Screw Assembly Complete. **\$10.00** extra.

Standard Duty: Designed for general purpose work; has ample power for momentary overloads.

Extra Heavy Duty: Reserve power and sturdy construction for continuous production service and maintenance work. Minimum upkeep under extreme service conditions.

Minimum upkeep under extreme service conditions.

Standard Duty

No.	Capacity In.	Free Speed RPM	WL Lbs.	Overall Length, In.	Each
E17	¾	350	15⅞	14⅝	\$88.00

Heavy Duty

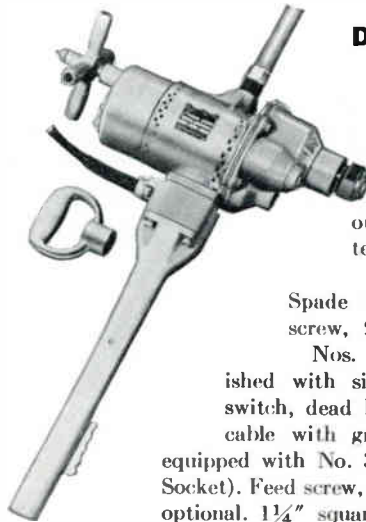
E16	5/8	425	15¼	14¼	\$85.00
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Extra Heavy Duty

UFD	5/8	430	21¾	17	\$105.00
UFH	¾	350	25¾	18¾	115.00

Drills and Reamers

7/8-, 1- and 1½-Inch Heavy Duty



Constructed to withstand the hardest kind of continuous production and maintenance service.

Nos. UFS and UFA: Spade handle, standard; feed screw, **\$10.00** extra.

Nos. U3Z and U3S: Furnished with side handle, momentary switch, dead handle and 3-conductor cable with ground wire. (All sizes equipped with No. 3 Internal Morse Taper Socket). Feed screw, standard. Spade handle, optional. 1¼" square hole, chuck optional.

No.	Capacity In.	Free Speed RPM	Weight Pounds	Overall Length, In.	Each
UFS	7/8	350	25¼	16⅞	\$120.00
UFA	1	300	29	18⅞	132.00
U3Z	1¼	350	49½	19⅞	200.00
U3S	1½	78	93	25¾	250.00

Thor Electric Tappers

For 1/4- and 3/8-Inch Tapping With Mechanical Reverse



For tapping thread holes in all types of metal work.

A slight pull on the tool disengages the forward action and mechanically reverses the motion.

Furnished with tapping chuck.

No.	Tap Size In.	Free Speed RPM	WL Lbs.	Overall Length, In.	Each
UKS	1/4	460	8¼	11¾	\$ 85.00
UBR	3/8	500	11½	16¼	107.00

Thor Electric Tools

Thor Bench Grinders



Suited for all-round service in grinding, buffing, and wire wheel work. All ball-bearings are over-size and dust tight, requiring only annual greasing attention. Adjustable tool rests.

No.	Std. Duty	Heavy Duty			
	B634	B6S	B7S	B8S	B10
Voltage	Specify for 115 or 220 volt service.				
Wheel Diam., In.	6	6	7	8	10
Wheel Width, In.	1/2	3/4	1	1	1
Spindle Thread, In.	1/2	1/2	5/8	5/8	3/4
Load Speed, RPM.	3150	3150	3150	3150	1750
*Each	\$42.00	\$63.00	\$88.00	\$96.00	\$150.00

*Prices for a.c., single phase, 60 or 50 cycles. For prices on additional models, contact Graybar.

Bench Grinder Pedestals

Pedestal Stand: For use with 6, 7 and 8-in. bench grinders. Height, 31 1/4 in.; weight, 56 1/2 lbs.
No. BGS Pedestal Stand.....Each **\$32.00**

Thor Impact Wrenches



3/8- and 5/8-Inch
Reversible, all purpose power wrenches. For drilling in wood, steel, stone, tapping, etc., as well as driving and removing screws and nuts. No kicking or twisting.

Motor runs continuously, even when spindle is stopped—cannot stall or burn out because of overload.

No.	Nut Running Capacity, In.	Free Speed RPM	Spindle Drive Square, In.	WL Lbs.	Each
EW 6	3/8	2150	1/2	6 7/8	\$130.00
EW10	5/8	2000	5/8	12 1/4	195.00

Kits—With Carrying Case

No.	Description	Each
EW6KC	With No. EW6 Wrench, 6 nut-running sockets.	\$145.50
EW10KC	With No. EW10 Wrench, 4 nut-running sockets.	213.50

Additional kits available with complete impact wrench accessories.

Thor Electric Drill Stands



Extend the application of Thor electric drills to stationary as well as portable service.

Rigid clamping and proper leverage allows easy application of tremendous pressures and handling of many stationary jobs where the extreme sensitivity of the drill press is not required.

Drill Capacities

No. 8: All drills up to 1/2-in.
No. 26: All drills 1/2 to 1-in.
*No. 30: All drills 1/2 to 1-in.
No. 4CLDS: Copper Line, 1/4-in.
No. C8DS: Copper Line, 1/2-in.
*Post type.

To obtain correct drill yoke for Stand ordered, specify size drill to be used.

No.	Vertical Movement Inches	Adjusted Vertically Inches	Bench Space Inches	WL Lbs.	Each
8	3	12	13 x 8 3/16	30	\$28.50
26	5	14	15 x 9	50	44.00
30	5	11	11 1/2	68	49.50
4CLDS	3	11 3/4	12 3/4 x 8 1/2	11 3/4	12.95
C8DS	5	14	12 1/4 x 8 1/16	32	19.95

†Distance: Wall or Post to center of drill.

Thor Screwdrivers and Nut Setters

For fast, convenient driving of screws and secure nut setting. Compact, easy to handle.

Available in straight or right angle designs.

Class 8 Screwdrivers



Takes up to No. 8 screw; 3/16-inch nut capacity.

Equipped with double slip clutch for uniform driving to predetermined tension. Weight range, 3 3/4 to 4 1/4 lbs.

Equipment: One finder and three 1/4-in. hexagon shank screwdriver bits, or one standard length socket wrench shank, 1/4, 5/16 or 3/8-in. square drive and one socket. Reversing switch in cord, \$7.50 extra.

No.	With Lever Type Switch Speed RPM	Each	† Straight Type	
			No.	With Bonnet Type Switch Speed RPM
ULTW	1000	\$77.00	ULT	1000
ULPW	550	77.00	ULP	550
ULNW	1500	77.00	ULN	1500

Right-Angle Type
Furnished With Bonnet Type Switch

ULP-481	440	\$108.00	*ULP-492	440	\$100.00
ULT-481	800	108.00	*ULT-492	800	100.00
ULN-481	1200	108.00	*ULN-492	1200	100.00

†25 degree double slip clutch attachment furnished on straight models, \$16.50 extra.

*Equipped as nut setter only.

Class 12 Screwdrivers
Silver Line



Takes up to No. 12 screw; 1/4-inch nut capacity.

All models have pistol grip and momentary trigger switch with lock for continuous or intermittent operation. Weight range, 3 to 4 1/2 lbs.

Equipment: One finder and three 1/4-in. hexagon shank screwdriver bits, or one standard length socket wrench shank, 1/4, 5/16 or 3/8 in. square drive, and one socket.

Reversing switch in cord, \$7.50 extra.

Straight Type

No.	With Positive Attachment Speed RPM	Each	With Double Slip Attachment	
			No.	Speed RPM
ED17	800	\$61.00	ED12	800
ED16	1100	61.00	ED11	1100
ED18	500	61.00	ED13	500

No.	With Double-Slip Attachment Speed RPM	Right-Angle Type	
		No.	Speed RPM
ED47	800	§ED41	880
ED46	1100	§ED42	660
ED48	500	†ED51	880
		†ED52	660

§Has double slip attachment.

†Has kickout attachment. Equipped as nut setter only.

Thor Nut Setters
1/2-Inch Class
Silver Line



Takes 1/2-inch nut or No. 24 screw.

Furnished with socket wrench shank (1/2" square drive) and socket; or 1/16" hexagon shank screwdriver bit and finder assembly. Reversing switch, \$10.00 extra.

No.	Type Attachment	Speed RPM	Weight Pounds	Length Inches	Each
EI23	Kickout	525	15	15 1/4	\$160.00
EI28	Positive	525	11 3/4	11 3/4	143.00
EI24	Kickout	350	15	15 1/4	160.00
EI29	Positive	350	14 3/4	14 3/4	143.00

Thor Screwdrivers and Nut Setters

Class 14 Screwdrivers
Silver Line



Takes up to No. 14 screw; 5/16-inch nut capacity.

All have pistol grip with momentary trigger switch except U18FL, which is lever handle type; and U18FF, foot switch type. Weight range 4 5/8 to 4 3/4 lbs.

Equipment: One finder and three 1/4-inch hexagon shank screwdriver bits, or one standard length socket wrench shank, 3/8-in. or 1/2-in. square drive and one socket. Reversing switch in all sizes, \$7.50 extra.

No.	Attach. Type	Angle	Speed RPM	Each
U18FL	**Dbl. Slip	Straight	1000	\$ 85.00
*U18FF	Dbl. Slip	Straight	1000	115.00
U22F	**Dbl. Slip	Straight	500	85.00
U16F	**Dbl. Slip	Straight	750	85.00
U18F	**Dbl. Slip	Straight	1000	85.00
U22F-P	Positive	Straight	500	72.50
U16F-P	Positive	Straight	750	72.50
U18F-P	Positive	Straight	1000	72.50
U19F	Dbl. Slip	Rt. Angle	† 600	135.00
‡U19FN	Kickout	Rt. Angle	†† 375	125.00

*Furnished with reversing type foot switch.

**Available with 25° double slip clutch attachment \$22.50 extra.

†Can also be furnished at 400 or 800 rpm at no extra charge.

‡Furnished only as a nut setter, 3/8 or 1/2-inch square drive.

††Can also be furnished at 250 or 500 rpm at no extra charge.

Class 18
Silver Line



Available with grip handle and momentary switch as illustrated; or with side handle, spade handle and dead handle (similar to Thor 1/2-in. Silver Line Drill). Can be supplied with positive or kickout clutch.

Equipment: One standard 1/16" hexagon socket wrench shank (1/2-in. square drive) and one socket; or one 1/16-in. hexagon shank screwdriver bit and finder assembly. Reversing switch in cord, \$10.00 extra.

No.	Type Clutch	Type Handle	Speed RPM	Each
EJ18	Positive	Side	500	\$ 90.00
EJ23	Kickout	Grip	500	110.00
EJ12	Positive	Grip	750	85.00
EJ22	Kickout	Grip	750	108.00
EJ27	Kickout	Side	750	108.00

Thor 4 1/2-Inch Electric Belt Sanders

Silver Line—Heavy Duty

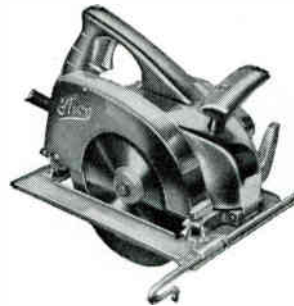


Features direct gear drive; delivers 20% extra power to the belt. New heat radiating system helps belts cut cleaner, last longer.

Belt size, 4 1/2 in. wide x 26 in. long. Belt speed, 1800 feet per minute. Overall dimensions, 6 3/4 in. x 14 1/2 in. x 9 1/4 in. high. Available with or without dust collector.

No.	Description	Weight	Each
T45	Without Dust Collector.....	20 lbs., 12 oz.	\$150.00
T45V	With Dust Collector.....	22 lbs., 6 oz.	178.00

Thor Silver Line Electric Saws



Long-shaft transverse motor mounting, shock-absorber gears and ball bearing supports assure trouble-free performance.

Automatic blade guard, wide safety base, doublelock switch and other features of this saw provide ease of handling and safety for the user.

All sizes furnished with one combination blade, 10 feet of 3-conductor cord with 2-prong connectors, wrench and lubricant.

No.	Blade Size In.	Free Speed RPM	Weight Pounds	Wood Cutting Capacity In. VerL	45°	Each
T6	6 1/4	5000	13 1/2	2 1/32	1 3/8	\$ 65.00*
T7	7 1/4	4500	17 1/4	2 1/2	1 7/8	125.00†
T8	8 1/4	4500	18	2 15/16	2 5/32	145.00†
T10	10	3000	35	3 5/8	2 5/8	190.00†
T12	12	3000	36 1/2	4 7/16	3 1/4	225.00†

*With steel carrying case, \$69.95.

†Price includes steel carrying case.

Saw Blades

Combination

No.	Diam., In.	Each
73863	6 1/4	\$ 2.25
73875	7 1/4	2.50
73881	8 1/4	2.65
73894	10	3.65
73899	12	4.85

Cut-Off

No.	Diam., In.	Each
73865	6 1/4	2.25
73876	7 1/4	2.50
73883	8 1/4	2.65
73895	10	3.65
73900	12	4.85

Mitrc

No.	Diam., In.	Each
73867	6 1/4	3.25
73877	7 1/4	4.50
73885	8	4.45
73896	10	7.95

Metal Cutting

No.	Diam., In.	Each
73874	5 7/8	6.05
73888	8	6.55

Fine Tooth

No.	Diam., In.	Each
73869	6 1/4	2.25
73879	7	2.50
73887	8	2.65

Rip

No.	Diam., In.	Each
73898	10	\$ 3.65
73901	12	4.85

Flooring

No.	Diam., In.	Each
73873	6 1/4	2.25
73878	7 1/4	2.50
73886	8	2.65
73897	10	3.65

Ice Scoring

No.	Diam., In.	Each
75344	6 1/4	2.25
75345	7 1/4	2.50
75346	8 1/4	2.65

Friction

No.	Diam., In.	Each
73871	6 1/4	4.85
73884	8	6.05

‡Carbide Tipped

No.	Diam., In.	Each
22315	6	16.45
22313	7	17.50
22314	8	19.50

§Diamond Edge

No.	Diam., In.	Each
22486	6x.040	10.80
22489	7x.040	16.40
22492	8x.050	17.80
22496	10x.064	26.10
22499	12x.075	42.40

‡For abrasive composition materials—cemesto board, transite and other asbestos cement boards and all kinds of wood.

§Recommended for general use in cutting tile, glass, brick, concrete, etc. Additional thicknesses available.

Thor Electric Hammers

Well-balanced, easy to handle. Designed for star drilling, channelling, chipping, cleaning, cutting and numerous other jobs in stone, wood or metal.

Over-capacity motor, housed at right-angle to the barrel, delivers power to "slingshot" drive through heavy duty helical gears.



For use in concrete, takes up to 1 1/8-inch star drill.

Blows per minute, 1600.

Net weight, 14 lbs. Overall length, 13 1/2 inches.

Equipment: 1 turning handle; 1 ejector pin; 1 extra rubber slingshot connector; 3-conductor cable with ground wire and plug; momentary grip switch with lock; carrying case; dust shield.

No. U100.....Each **\$130.00**

Star Drills

Recommended for use with Thor Electric Hammer.



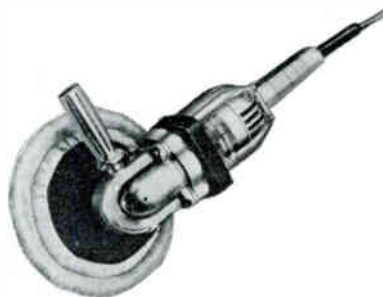
Point Size Inch	5-in. Drilling Depth		Taper Shank 9-in. Drilling Depth		12-in. Drilling Depth	
	No.	Each	No.	Each	No.	Each
1/4	70336	\$1.20	.....	.....	.....	.....
5/16	70337	1.20	70445	\$1.65	.....	.....
3/8	70338	1.20	70345	1.65	70446	\$1.80
7/16	70339	1.20	78645	1.65	70353	1.80
1/2	70340	1.20	70346	1.65	70354	1.80
9/16	70447	1.20	70347	1.65	.....	.....
5/8	70341	1.20	70348	1.65	70355	1.80
1 1/16	.....	.....	70349	1.85	.....	.....
3/4	70342	1.45	70350	1.70	70356	2.05
7/8	70343	1.55	70351	1.90	70357	2.15
1	70344	1.70	70352	2.00	70358	2.35
1 1/8	74842	2.60	74843	2.65	74844	3.15

Drilling depths of 18 to 24 inches also available.

Quantity discounts on all sizes upon application to Graybar.

Thor Electric Polishers

7-In.—Silver Line



Compact, powerful design.

Light-weight for ease of handling.

Equipped with 7-in. flexible rubber pad, rubber tool guard, lambs wool polishing bonnet.

No. EL92, Standard duty.

No. EN92, Heavy duty.

No.	Free Speed RPM	Weight Pounds	Overall Length, In.	Each
EL92	1400	9	14 1/4	\$75.00
EN92	1400	15 1/4	17 3/4	83.00

Thor Sanders and Grinders
Silver Line—Standard and Heavy Duty



Sanders: Available in 7-in. and 9-in. sizes. Designed for every abrasive application. Furnished with flexible rubber pad and box of three assorted abrasive discs.

Grinder: Right-angle, heavy duty 6-in. cup wheel capacity.

Equipped with wheel guard and 6-in. cup wheel. Speed, 1,000 rpm; overall length, 17-in.

Silver Line Sanders

	Std. Duty 7-inch	Heavy Duty	
		7-inch	9-inch
No.	*EL82	EN82	EN87
Free Speed, rpm.	4500	4500	4500
Weight, lbs.	8 1/2	14 1/4	14 1/4
Overall Length, inches.	13 1/2	17	17
Each.	\$73.00	\$82.00	\$85.00

Right-Angle Grinder

No. EN72.....Each **\$95.00**

*Can be equipped with 4 in. cup wheel and guard. Specify No. EL72.....Each **\$80.00**

Straight Portable Grinders
Silver Line—Heavy Duty



Shaped grips on the spindle housing and straight end handle prevent tool turning in operator's hand. Furnished with adjustable wheel guard, straight horizontal handle with trigger type switch, 3-conductor cable, ground wire and plug. Wheel included.

No.	Wheel Size In.	Free Speed RPM	Weight Pounds	Overall Length, In.	Each
EL60	1	6000	10	18 3/4	\$ 77.50
EL62	5	4500	10 1/4	18 3/4	90.00
EN62	6	4000	15 1/4	23 3/4	112.00

Thor Silver Line Electric Nibblers



Cuts sheet metal and tubing up to No. 20 gage (.035 in.) sheet metal and No. 16 gage aluminum.

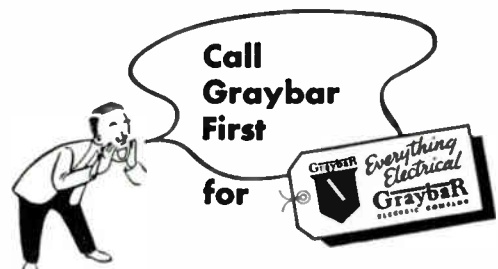
The Nibbler cuts curved and corrugated

sheets without distortion. Cutting punch and edge may be removed for sharpening.

Weight, 3 3/4 lbs.; overall length, 9 inches.

Equipment: Adjustable yoke type front head and recessed toggle switch, 3-conductor cable, ground wire and plug, extra cutting punch, adjusting wrench, wrench for clamp screw.

No. U1N.....Each **\$80.00**



Call Graybar First

for



Thor Tool Suspension Balancers



Provide a safe, convenient method of suspending screwdrivers and other tools over the work. Keeps tools out of way when not in use, yet within easy reach of the operator. A slight pull brings the tool down; upon release it rises out of the way.

No.	Capacity, Lbs. Max.	Range of Travel Feet	Hook-to-Hook Distance, In. *Std.	†Min.	Weight Pounds	Each
0X	10	3	19	13	13½	\$30.00
10B	10	5	35	16	16¾	65.00
10BX	20	10	35	16	16¾	70.00
20B	20	10	54	17½	44	70.00
30B	30	20	54	17½	44	75.00

*As shipped with standard length cable.

†Obtainable by shortening cable.

**Tilden Rotary
Konkrete Kore Drills**



Drills concrete up to 6" per minute and up to 300 inches in concrete before resharpening is required. Free factory sharpening and repair service. Interchangeable shanks for any depth hole on the 5/8" drills and over.

Centerless Type

No.	Drill Size, In.	Overall Length, In.	Each
3	3/16	4	\$ 1.80
4	1/4	5	2.80
5	5/16	5	3.00
6	3/8	5	3.30
7	7/16	5	3.50

Core Type

No.	Drill Size, In.	Overall Length, In.	Each
8	1/2	6	\$ 6.80
9	9/16	6	7.80
10	5/8	8	8.80
11	11/16	8	9.00
12	3/4	8	9.80
13	13/16	8	11.00
14	7/8	10	14.80
16	1	10	15.80
18	1 1/8	12	17.80
20	1 1/4	12	19.80
22	1 3/8	12	22.00
24	1 1/2	12	24.80
26	1 5/8	12	26.00
28	1 3/4	12	27.00
30	1 7/8	12	28.00
32	2	12	29.80
36	2 1/4	15	30.70
40	2 1/2	15	32.70
44	2 3/4	15	39.00
48	3	15	49.00
52	3 1/4	18	59.00
56	3 1/2	18	65.00
60	3 3/4	18	67.00
64	4	18	77.00

Truco Diamond Drill Attachments

For Use with Standard Drill Chucks



Water Swivel



Diamond Drill Bit



Shut-Off



Hose and Connections

Permit the ease and speed of diamond-drilling to be applied to electrical, construction and maintenance jobs. Designed for the most difficult drilling jobs in hard, brittle, non-metallic materials. Installation work can follow right behind the drill.

Unit consists of water swivel and attachments, and drill bits. Bits are set with fine industrial diamonds and designed upon the same principles as large mining and oil-field drills.

Water swivels available for 1/2, 3/4 or 1-in. standard drill chucks. Furnished with water shut-off and 10-ft. rubber coolant hose which connects to any faucet tap. Anti-splash attachment available at extra cost for catching waste coolant water where spillage might cause damage.

Water Swivel Units, Less Drills

No.	Type	For Drill Size, In.	Each
T-110	Standard Duty	1/2	\$38.50
T-115	Medium Duty	3/4	50.00
T-120	Heavy Duty	1	70.00

Diamond Drill Bits

Standard free cutting length 3-in. Other lengths and O.D. sizes available at extra cost. Call us for information.

D.D.	Size, In. I.D.	Bit Each	Adaptor Each	D.D.	Size, In. I.D.	Bit Each	Adaptor Each
1/4	3/32	\$21.45	None	2 1/8	1 7/8	\$67.60	\$ 9.50
5/16	1/8	22.25	None	2 1/4	2	70.75	9.50
3/8	3/16	22.90	None	2 3/8	2 1/8	74.20	9.50
7/16	3/8	23.70	None	2 1/2	2 1/4	77.35	9.50
1/2	1/2	24.65	None	2 3/4	2 1/2	84.40	12.00
9/16	5/8	25.55	None	3	2 3/4	91.95	13.00
5/8	3/4	26.50	None	3 1/4	3	98.50	14.00
11/16	7/8	27.95	\$ 4.00	3 1/2	3 1/4	105.00	15.00
3/4	1	29.00	4.00	3 3/4	3 1/2	111.50	16.00
13/16	1 1/8	30.70	4.00	4	3 3/4	118.50	17.00
7/8	1 1/4	32.40	4.00	4 1/4	4	124.60	18.00
15/16	1 1/2	34.15	4.00	4 1/2	4 1/4	131.90	19.00
1	1 3/4	35.90	4.00	4 3/4	4 1/2	138.40	20.00
1 1/8	1 7/8	39.80	6.00	5	4 3/4	144.30	21.00
1 1/4	2	43.00	6.00	5 1/4	5	150.80	22.00
1 3/8	2 1/8	46.85	6.00	5 1/2	5 1/4	156.70	23.00
1 1/2	2 1/4	50.05	6.00	5 3/4	5 1/2	164.60	24.00
1 5/8	2 3/8	53.95	6.00	6	5 3/4	171.90	25.00
1 3/4	2 1/2	57.15	6.00	6 1/4	6	179.20	26.00
1 7/8	2 5/8	60.60	6.00	6 1/2	6 1/4	186.50	27.00
2	3	64.10	6.00				

Anti-Splash Attachment with 10-Ft. Hose.

Each \$15.00

**Termite Concrete Drills
Rotary Type**

Termite drills are patented multiple insert tools for drilling in concrete; (U. S. Patent No. 2425132); Their design and principle embodies three main parts of the drill bit — the grinders or inserts, the worm body and the shank.

The principle of these drills is to pulverize the material being drilled and to clean the hole at the same time without the use of a coolant such as water, and at the same time hold a tolerance within 1/32 in. of the drill diameter.



Where a great number of perfect, accurate holes in concrete and other masonry are needed these drills will be found most satisfactory. They drill faster, last longer and maintain accuracy at very low cost per hole.

Simple to use, no complicated attachments and no expensive air compressor — fit any 1/2-in. electric drill, no ear-shattering noise. Their vibrationless action permits drilling close to sides and edges of concrete members without fracturing concrete.

Made of highest quality wear-resistant material and are fully guaranteed by the maker for material and workmanship.

**Concrete Termites
Standard Lengths**

Drill No.	Diam. Drill In.	Diam. Shank In.	Standard Lengths		
			3 In. Each	5 In. Each	8 In. Each
1-R	3/16	3/16	\$2.50	.....	.....
2-R	3/16	3/16	2.50	.....	.....
3-A	3/16	3/16	2.50	.....	.....
4	1/4	1/4	.....	\$4.60	.....
4-R	9/32	1/4	.....	4.90	.....
5	5/16	1/4	.....	5.20	.....
6	3/8	1/4	.....	6.00	.....
7	7/16	1/4	.....	7.50	.....
8	1/2	1/2	.....	.....	\$8.90
9	9/16	1/2	.....	.....	10.50
10	5/8	1/2	.....	.....	12.00
11	11/16	1/2	.....	.....	13.50
*12	3/4	1/2	.....	.....	15.00
*13	13/16	1/2	.....	.....	16.00

Special Lengths

Diam. Drill In.	Diam. Shank In.	12 In. Each	18 In. Each	24 In. Each	36 In. Each
1/4	1/4	\$6.25	\$7.75	\$8.25	.....
3/8	1/4	8.50	8.75	9.00	.....
1/2	1/2	11.50	11.75	12.00	\$13.00
5/8	1/2	13.50	13.75	14.00	15.25
*3/4	1/2	16.50	16.80	17.20	18.45

*Core Termite with non-removable shank.

No. 1-R for No. 8 Rawlplug and Rawl-Drive; No. 2-R for No. 10 Rawlplug; No. 4-R for No. 14 Rawlplug.

Peirce Hand Chucks



Allow the use of Peirce Drill Points for hand-and-hammer drilling. Sturdy drive head and chuck body. Will fit any Peirce Drill Points.

No. 55—Ship. Wt., 285 pounds.....per 100 \$319.81

In Addition to

ELECTRICIAN'S TOOLS

... Call Graybar for

EVERYTHING ELECTRICAL

**Termite Concrete Core Drills
Rotary Type**



Provided with holes so that the core material can be removed from the drill and yet not weaken its structure nor impair its threadlift to hinder the removal of pulverized material.

Drill No.	Diam. Drill In.	Diam. Shank In.	Std. Lgth. 9 1/2 In. Each	12 In. Each	18 In. Each	Special Lengths:		
						24 In. Each	36 In. Each	.....
14C	7/8	1/2	\$ 17.00	\$ 17.50	\$ 18.10	\$ 18.70	\$ 19.95	.....
15C	1 1/16	1/2	17.50	18.00	18.60	19.20	20.45	.....
16C	1	1/2	18.00	18.50	19.10	19.70	20.95	.....
17C	1 1/16	1/2	18.50	19.00	19.60	20.20	21.45	.....
18C	1 1/8	1/2	19.00	19.50	20.10	20.70	21.95	.....
19C	1 1/16	1/2	19.50	20.00	20.60	21.20	22.45	.....
20C	1 1/4	1/2	20.00	20.50	21.10	21.70	22.95	.....
21C	1 5/16	1/2	21.20	21.70	22.30	22.90	24.15	.....
22C	1 3/8	1/2	22.40	22.90	23.50	24.10	25.35	.....
23C	1 7/16	1/2	23.60	24.10	24.70	25.30	26.55	.....
24C	1 1/2	1/2	24.80	25.30	25.90	26.50	27.75	.....
25C	1 5/8	1/2	26.00	26.50	27.10	27.70	28.95	.....
26C	1 3/4	1/2	27.20	27.70	28.30	28.90	30.15	.....
27C	1 7/8	1/2	28.40	28.90	29.50	30.10	31.35	.....
28C	2	3/4	29.60	30.30	30.95	31.60	32.90	.....
29C	2 1/4	3/4	30.80	31.50	32.15	32.80	34.10	.....
37C	2 3/8	3/4	31.80	32.50	33.15	33.80	35.10	.....
30C	2 1/2	3/4	32.80	33.50	34.15	34.80	36.10	.....
31C	2 3/4	3/4	39.00	39.70	40.35	41.00	42.30	.....
38C	2 7/8	3/4	42.10	42.80	43.45	44.10	45.40	.....
32C	3	1	45.20	45.90	46.65	47.65	49.45	.....
33C	3 1/4	1	51.40	52.10	52.85	53.85	55.65	.....
40C	3 3/8	1	54.50	55.20	55.95	56.95	58.75	.....
34C	3 1/2	1	57.60	58.30	59.05	60.05	61.85	.....
35C	3 3/4	1	63.80	64.50	65.25	66.25	68.05	.....
36C	4	1	70.00	70.70	71.45	72.45	74.25	.....
39C	4 1/4	1	77.00	77.70	78.45	79.45	81.25	.....
41C	4 1/2	1	86.70	87.40	88.15	89.15	90.95	.....
42C	5	1	100.00	100.70	101.45	102.45	104.25	.....

**Diamond Drill Holders
To Fit Di-Forge and Diamond "N" Points
Style A**



Forged from solid bar of Vanadium tool steel. Has a rubber guard.

Shipping weight per dozen, 9 pounds.
No. 745.....Per Dozen \$27.00*

Style B



Shipping weight per dozen, 8 1/2 pounds.
No. 750.....Each \$2.00*

**Rubber Grip
Style C**



Shipping weight per dozen, 10 1/2 pounds.
No. 755.....Per Dozen \$48.00*
*Does not include Drill.

Diamond N Drills



No. 700 4-Point or Star Type Drill



No. 710 Diamond or Single Point Drill

Highest grade octagon drill rod. Quality of steel is tested for uniformity. Heat treatment is scientifically conducted; heats for hardening and drawing the temper are determined by pyrometer and thermometer. Actual tests on various kinds of stone are made from each batch of drills.

Diam. Drill In.	8-In. Length		12-In. Length		18-In. Length		24-In. Length	
	Wt. Lbs. per Doz.	Per Doz.	Wt. Lbs. per Doz.	Per Doz.	Wt. Lbs. per Doz.	Per Doz.	Wt. Lbs. per Doz.	Per Doz.
1/4	1 1/8	\$ 8.25	1 3/8	\$ 8.50	3	\$ 11.00	3 1/2	\$ 13.50
5/16	1 1/8	8.25	2 1/8	8.50	3 3/8	11.00	5 1/2	13.50
3/8	2 1/8	8.25	3 1/8	8.50	5	11.00	7 1/2	13.50
7/8	3 1/8	8.70	4 3/8	9.00	7	11.50	9	14.00
1 1/8	3 3/8	9.65	4 3/8	10.00	7 3/8	12.50	10 1/4	15.00
5/16 & 3/8	5 1/2	11.65	8 1/2	12.00	13 3/4	15.00	18 1/4	17.50
11/16 & 3/4	6 3/4	13.70	10 1/2	14.00	16 3/4	17.50	22 1/4	20.00
1 1/16 & 7/8	8 1/4	15.30	12 1/2	16.00	20 1/2	20.00	27 1/2	22.50
1	10	17.00	19	18.00	30	22.50	40	25.00
1 1/8	16	23.00	25	24.00	42	28.00	54	32.00
1 1/4	.....	.....	25	30.00	42 1/2	35.00	57	40.00
1 3/8	.....	.....	33	40.00	53	45.00	72	50.00
1 1/2	.....	.....	33	50.00	54	56.00	72	62.00
1 5/8	.....	.....	40	60.00	63	66.00	84	72.00
1 3/4	.....	.....	44 1/2	75.00	70	81.00	93	87.00
1 7/8	.....	.....	50	90.00	80	97.00	106	104.00
2	.....	.....	52	105.00	81	112.00	108	120.00
2 1/8	.....	.....	53	135.00	83	145.00	110	165.00
2 1/4	.....	.....	75	165.00	119	175.00	158	195.00

Can be furnished with tapered shanks to fit electric hammers. Supplied on order in lengths up to 6 feet for rock drilling. Prices on application.

No. 730 Diamond N Drill Points



Point is carefully tempered to sufficient hardness to withstand the wear of cutting and the temper is drawn away toward the shank, to produce a softer steel where it enters the handle to prevent its breaking off at that point.

May be used with Diamond Drill Holders Styles A, B and C.

Size In.	Length In.	Depth Hole In.		Per Dozen	Wt. Lbs. Per Dozen	Per Dozen	Size In.	Length In.	Depth Hole In.	Wt. Lbs. Per Dozen	Per Dozen
		2	1 1/2								
1/4	4 1/2	2	1 1/2	2	\$ 8.50	2	5/8	6 1/2	5	3 3/4	\$12.00
5/16	4 1/2	2	1 1/2	2	8.50	2	11/16	6 1/2	5 1/2	4 1/2	14.00
3/8	4 1/2	2	1 1/2	2	8.50	2	13/16	7	6	6	16.00
7/8	4 7/8	3 3/4	2	2	9.00	2	1	7 1/4	7	7 3/4	18.00
1 1/2	5	4	2	2	10.00						

Peirce Hammer Drills



Holes are neatly and quickly drilled in masonry in about one quarter of the time required by ordinary methods. The hazard of injured hands is also completely eliminated. Jammed drill points are quickly removed. The outer end of the hammer drill is hollow for tamping lead sleeves. Chuck takes all sizes of drills.

No.	Tamping End for	Approx. Shipping Wt. Lbs., Per 100	Per 100
50	1/4-inch bolts	825	\$2345.21
53	3/8-inch Bolts	880	2497.88

Diamide Masonry Drills

Spiral Twist Carbide Tipped



Does not bind. Drills full length without stopping or removing drill. Carbide tip and drill shank are same diameter eliminating bent shanks and overhang on tip to cause snagging, reduces breakage, drills faster and runs cooler.

For 1/4-Inch Chuck

No.	Nominal Diameter Inches	Overall Length Inches
7703	3/16	3
7704	1/4	4
7705	5/16	4
7706	3/8	4
7707	7/16	4
7708	1/2	6
7709	9/16	6

For 1/2-Inch Chuck

No.	Nominal Diameter Inches	Overall Length Inches
7710	5/8	6
7711	1 1/16	6
7712	3/4	6
7714	7/8	6
7716	1	6
7718	1 1/8	6
7720	1 1/4	10
7724	1 1/2	10

Prices on application.

Peirce Drill Points



Made of fine tool steel, carefully tempered to the proper hardness and toughness. Two inches of the point is contained in the chuck.

Special sizes up to 1 inch diameter and any length can be furnished to fit Peirce Hammer Drill Chucks.

No.	Drill Diam. In.	Overall Drill Length In.	Bolt Diam. In.	Shipping Wt. Lbs. Per 100	Per 100
56	3/8	4	3/16	22	\$140.41
56-A	7/16	4	3/16	22	167.07
57	1/2	4	1/4	25	140.48
58	1/2	6	1/4	36	160.11
59	1/2	12	1/4	72	344.19
60	5/8	6	3/8	42	258.90
61	5/8	12	3/8	90	517.79
62	3/4	6	7/16	52	361.71
63	3/4	14	7/16	148	724.59
64	7/8	6	1/2	63	476.65
65	7/8	12	1/2	150	954.56

Peirce Tamping Tools



No. 67

Used for tamping lead sleeves into masonry.

Straight slotted type is for use on hooks and similarly shaped items.

Straight type is for standard straight bolts or screws.

No.	Type	Dimensions—Inches		Approx. Shipping Wt. Lbs. Per 100 Pcs.	Per 100
		Diam. Expansion Bolt	Overall Length		
47	Straight-Slotted	1/4	6	30	\$ 46.11
48	Straight-Slotted	3/8	6	64	66.97
49	Straight-Slotted	1/2	8	110	98.56
67	Straight	1/4	6	37	99.06
68	Straight	3/8	6	54	102.47
69	Straight	1/2	8	132	114.87
2970	Offset-Slotted	1/4	5 3/4	30	228.33
3815	Offset-Slotted	1/2	8	165	295.13

Diamond Multi-Size Screw Anchors



Designed to accommodate in one anchor several diameters of wood screws. Made of non-corroding rust-proof composition metal. Packed 100 in a box.

No.	Size No. & In.	Drill Size, Inches	Wt. Lbs. Per 100	Per 100
5212	6-8x 3/4	1/4	1	\$ 5.00
5216	6-8x1	1/4	1 3/8	5.30
5224	6-8x1 1/2	1/4	1 3/4	5.60
5312	10-11x 3/4	5/16	1 1/2	5.60
5316	10-11x1	5/16	1 3/4	5.60
5324	10-11x1 1/2	5/16	2 1/2	8.00
5516	16-18x1	3/8	2 3/4	6.25
5524	16-18x1 1/2	3/8	4	9.00
5628	20-24x1 3/4	7/16	5 1/4	10.00

**Diamond N. Y. Screw Anchors
For Use with Wood Screws**



Made of non-corroding, rust-proof composition metal. Packed 100 in a box. Screws not furnished.

No.	Diam. of Screw In.	Length Anchor In.	Drill Size	Size Screws	Wt. Lbs. Per 100	Per 100
6208	1/8	1/2	1/4	5-6-7	1	\$ 4.40
6212	1/8	3/4	1/4	5-6-7	1	4.40
6216	1/8	1	1/4	5-6-7	1 1/2	4.40
6308	3/16	1/2	3/16	8-9-10-11	1 1/2	5.00
6312	3/16	3/4	3/16	8-9-10-11	2	5.00
6316	3/16	1	3/16	8-9-10-11	3	5.00
6320	3/16	1 1/4	3/8	8-9-10-11	5	5.50
6326	3/16	1 5/8	5/16	8-9-10-11	3 1/2	6.25
6412	1/4	3/4	7/16	12-13-14	3	5.60
6416	1/4	1	7/16	12-13-14	4	5.60
6424	1/4	1 1/2	7/16	12-13-14	6	8.00
6432	1/4	2	7/16	12-13-14	8 1/4	10.00
6440	1/4	2 1/2	7/16	12-13-14	10 1/2	12.00
6512	5/16	3/4	7/16	15-16-17-18	3	6.25
6516	5/16	1	7/16	15-16-17-18	3 1/2	6.25
6524	5/16	1 1/2	7/16	15-16-17-18	6 1/4	9.00
6532	5/16	2	7/16	15-16-17-18	8 1/4	9.50
6616	3/8	1	9/16	20-22-24	6 1/2	9.00
6620	3/8	1 1/4	9/16	20-22-24	8 1/2	9.00
6632	3/8	2	9/16	20-22-24	11	10.00
6832	1/2	2	3/4	26-28-30	21 3/4	25.00
6840	1/2	2 1/2	3/4	1/2-in. Lag	28	30.00
6932	5/8	2	7/8	5/8-in. Lag	25	30.00
6956	5/8	3 1/2	7/8	5/8-in. Lag	42	50.00

**Diamond Crimp Nuts
The Sheet Metal Fastener**



Screws are not furnished. Packed 100 in a box.

No.	Screw Size	Length Inches	Hole Diam. Inches	Wt. Lbs. Per 100	Per 100
7620	6-32	9/16	3/8	.07	\$ 7.50
7625	8-32	9/16	3/8	.07	7.50
7630	10-24	9/16	3/8	.07	7.50
7631	10-24	1 1/16	3/8	1.4	10.00
7632	10-32	9/16	3/8	0.7	7.50
7640	1/4-20	1 1/2	15/32	0.9	8.50
7650	3/16-18	1 1/2	17/32	1.0	9.00

When fastening is complete the Crimp-Nut is crimped tightly to the metal and it will not turn when screw is entered or removed. This is particularly essential where provision must be made for removing and replacing work.

Diamond P Lag Screw Expansion Shields



Malleable iron except 1/4 and 3/16 in. Prices do not include lag screws.

Series 1000 Short

No.	Diam. of Lag Inches	Length Inches	Drill Size Inches	No. Per Box	Wt. Lbs. Per 100	Per 100
†1004	1/4	1	7/16	100	2	\$15.00
†1005	5/16	1	1/2	100	2 1/2	18.00
†1006	3/8	2	5/8	50	7 1/2	25.00
††1008	1/2	2	3/4	50	10	38.00
†1010	5/8	2	7/8	50	13	45.00
†1012	3/4	2	1 1/8	25	21	65.00

Series 1100 Long

No.	Diam. of Lag Inches	Length Inches	Drill Size Inches	No. Per Box	Wt. Lbs. Per 100	Per 100
†1104	1/4	1 1/2	1/2	100	4	\$ 15.00
†1105	5/16	1 3/4	9/16	100	5	18.00
††1106	3/8	2 3/4	5/8	50	11	25.00
††1108	1/2	3 1/2	3/4	50	18	38.00
†1110	5/8	3 1/2	7/8	25	23	45.00
†1112	3/4	3 1/2	1 1/8	25	35	65.00
†1114	7/8	5	1 3/8	25	75	95.00
†1116	1	5	1 1/2	25	90	110.00
†1120	1 1/4	8	1 7/8	20	270	250.00

†These sizes furnished in die cast only.
††Can be supplied in die cast as well as malleable.

Di-En-Key Expansion Shields

Interlocking Key



INTERLOCKING KEY

Malleable iron. Closed back or bottom bearing. For making attachments where direct bearing of the work against the surface is not required. Smaller

sizes are particularly adapted to opera chairs and school furniture work.

Prices do not include machine bolt.

Closed Back No.	Bolt Diam. In.	Length In.	Drill Size In.	No. Per Box	Wt. Lbs. Per 100	Per 100
1604	1/4	1	7/16	100	2	\$15.00
1605	5/16	1 3/4	9/16	100	6	18.00
1606	3/8	2	1 1/16	50	9	25.00
1608	1/2	2 1/2	7/8	50	17	38.00
1610	5/8	2 1/2	1	50	21	45.00
1612	3/4	3 3/4	1 1/4	25	34	65.00

Open back available. Complete information on request.

Keystone Single Expansion Shields

For Machine Bolts



No.	Diam. Bolt Inches	Length Inches	Drill Size Inches	No. Per Pkg.	Wt. Lbs. Per 100	Per 100
1504	1/4	1 3/8	1/2	100	3	\$15.00
1505	5/16	1 3/8	9/16	100	4	18.00
1506	3/8	1 5/8	1 1/16	50	9	25.00
1508	1/2	1 7/8	7/8	50	14	38.00
1510	5/8	2	1	25	19	45.00
1512	3/4	2 3/4	1 1/8	25	38	65.00

Diamond Toggle Bolts and Drive Anchors

Toggle Bolts



For making attachments to hollow brick, tile, or lath walls.

Furnished with steel toggles and steel bolts. Brass toggles and brass bolts at extra cost.

Threaded bolt riveted to toggle.

No.	Size, Inches	Shipping Wt., Lbs. Per 100	Steel, Per 100	No.	Size, Inches	Shipping Wt., Lbs. Per 100	Steel, Per 100
7123	1/8x3	3	\$ 9.00	7154	5/16x4	12 1/2	\$17.00
7124	1/8x4	3 1/4	10.00	7156	5/16x6	16 1/2	23.00
7133	3/16x3	4 1/4	9.50	7163	3/8x3	17 1/2	21.00
7134	3/16x4	4 3/4	10.00	7164	3/8x4	19 1/2	23.00
7135	3/16x5	5 3/4	12.00	7165	3/8x5	22 1/2	28.50
7136	3/16x6	6	12.50	7166	3/8x6	24 1/4	30.00
7143	1/4x3	7	10.50	7183	1/2x3	33	37.00
7144	1/4x4	9	11.00	7184	1/2x4	40	40.50
7145	1/4x5	10	14.00	7185	1/2x5	44 1/2	52.00
7146	1/4x6	10 1/4	15.50	7186	1/2x6	52	59.00
7153	5/16x3	11	16.00				



Furnished with round, flat head (specify type head). Steel bolts, brass toggle heads and brass bolts at extra cost.

Special bolt heads and lengths can be furnished.

No.	Size, Inches	Shipping Wt., Lbs. Per 100	Steel, Per 100	No.	Size, Inches	Shipping Wt., Lbs. Per 100	Steel, Per 100
7523	*1/8x3	2	\$ 9.00	7546	1/4x6	10 1/2	\$15.50
7524	*1/8x4	2 1/4	10.00	7553	5/16x3	12	16.00
7533	3/16x3	4 1/4	9.50	7554	5/16x4	13 3/4	17.00
7534	3/16x4	4 3/4	10.00	7555	5/16x5	15 1/2	21.50
7535	3/16x5	5 1/2	12.00	7556	5/16x6	17 3/4	23.00
7536	3/16x6	6	12.50	7563	3/8x3	14 3/4	21.00
7543	1/4x3	7	10.50	7564	3/8x4	17 1/2	23.00
7544	1/4x4	8	11.00	7565	3/8x5	20	28.50
7545	1/4x5	9 1/2	14.00	7566	3/8x6	23 1/4	30.00

*Mushroom head bolts on these sizes only.

Types of Heads available on No. 7500 series and No. 7000 series toggle bolts.

Type F—With flat head screws.

Type R—With round head screws.

Type M—With mushroom head—1/8" diameter only.

Type N—Revere R & F screw and add nut.

Nickel-plated or chrome heads are available at extra cost.

For prices on Brass bolts and steel heads, multiply the steel price by 2.

For prices on Brass Bolts and Brass Toggle Heads, multiply the steel price by 2.8.

Toggle Heads Only

Bolt Size	Per 100	
	Steel	Brass
1/8—(6-32)	\$ 7.00	\$22.40
3/16—(10-24)	7.50	23.10
1/4—20	8.50	24.50
3/16—18	12.00	33.60
3/8—16	16.00	44.80
1/2	25.00	.....

Steel Spring Toggle Bolts



Gives a fast, sure-fit in making attachments to Hollow Brick, Tile, or Lath Walls. Both wings align on uneven surfaces.

Has patented anti-turning feature. wings do not turn on the bolt, preventing damage to threads.

No.	Size, In.	Size Drill Required In.	Shipping Wt., Lbs. Per 100	Steel Per 100
7023	1/8x3	3/8	1 3/4	\$ 9.00
7024	1/8x4	3/8	2 1/4	10.00
7033	3/16x3	1/2	1	9.50
7034	3/16x4	1/2	1 1/2	10.00
7035	3/16x5	1/2	5	12.00
7036	3/16x6	1/2	5 1/2	12.50
7043	1/4x3	11/16	7	10.50
7044	1/4x4	11/16	8	11.00
7045	1/4x5	11/16	9	14.00
7046	1/4x6	11/16	10	15.50
7053	5/16x3	7/8	11	16.00
7054	5/16x4	7/8	13	17.00
7055	5/16x5	7/8	15	21.50
7056	5/16x6	7/8	17	23.00
7063	3/8x3	7/8	17	21.00
7064	3/8x4	7/8	19	23.00
7065	3/8x5	7/8	22	28.50
7066	3/8x6	7/8	25	30.00
7084	1/2x4	1 1/8	42	40.50
7086	1/2x6	1 1/8	51	59.00

DHD Hammer Drive Anchors



For attaching trim, partitions, flooring and fixtures to concrete structures.

Aluminum. Steel nails, hot galvanized by the patented Diamond Process. Holds a greater load when fastened to stone than a wood screw of same diameter screwed into wood. No special skill or tools needed, drill hole, place shield through hardware and hammer nail in.

Anchors are packed with nails in same containers.

Use same diameter drill as diameter of anchor.

Double headed nails for temporary installations can be supplied at no extra cost.

No.	Diameter and Lgth. of Shield In.	Diameter Drill to Use In.	Std. Pkg.	Wt., Lbs. Per 100	Per 100
4314	3/16x 7/8	3/16	100	1	\$ 8.00
4320	3/16x 1 1/4	3/16	100	1 1/8	9.00
4416	1/4x1	1/4	100	1 1/2	10.00
4420	1/4x 1 1/4	1/4	100	2	11.00
4424	1/4x 1 1/2	1/4	100	2 1/8	12.00
4520	5/16x 1 1/4	5/16	100	2 3/4	14.00
4528	5/16x 1 3/4	5/16	100	3 1/2	16.00
4536	5/16x 2 1/4	5/16	100	4 1/2	18.00
4544	5/16x 2 3/4	5/16	100	5	20.00
4632	3/8x2	3/8	100	6 1/2	20.00
4652	3/8x 3 1/4	3/8	100	8 1/4	25.00
4836	1/2x 2 1/4	1/2	25	11 1/2	30.00
4856	1/2x 3 1/2	1/2	25	15 1/2	35.00

Keystone Interlocking Expansion Shields
Double—For Use with Machine Bolts



Interlocking feature prevents nut being drawn out of shield when heavy loads are applied.

No.	Bolt Diam. In.	Length In.	Drill Size In.	No. Per Box	WL, Lbs. Per 100	Per 100
1404	1/4	1 1/2	1/2	100	4	\$ 15.00
1405	5/16	1 3/4	9/16	100	6	18.00
1406	3/8	2	11/16	50	7	25.00
1408	1/2	2 1/2	7/8	50	12	38.00
1410	5/8	2 7/8	1	25	18	45.00
1412	3/4	3 1/4	1 1/8	25	35	65.00
1414	7/8	4	1 1/2	25	85	95.00
1416	1	4 1/4	1 5/8	25	100	110.00
1420	1 1/4	6	2 1/8	20	240	250.00

Diamond Super-Grip Expansion Bolts
Furnished Complete with Galvanized Bolts



Style B

Style B Super-Grip Bolts are sold complete and not separately. The shield is expanded by the long, tapered cone-shaped end of the bolt.

The bolts and nuts are "Diamond" Intergalvanized.

No.	Size, In. Diam.	Length In.	Drill Size In.	No. Per Box	Length of Sleeve In.	Per 100
2041A	1/4x	1 1/2	7/16	100	7/8	\$ 9.30
2042		2				9.50
2042A		2 1/2				9.70
2043		3				9.90
2052	5/8x	2	1/2	100	1	11.40
2052A		2 1/2				11.80
2053		3				12.20
2062A	3/8x	2 1/2	9/16	100	1 3/8	16.10
2063		3				16.70
2063A		3 1/2				17.30
2064		4				18.00
2065		5				19.40
2066		6				20.10
2083	1/2x	3	3/4	100	1 15/16	35.00
2084		4				39.00
2085		5				43.00
2086		6				47.00
2103	5/8x	3	7/8	50	2 1/4	57.00
2104		4				63.00
2105		5				69.00
2106		6				75.00

One Calking Tool furnished in each box of Style B Bolts.

Diamond Calking Anchors
For Use with Machine Screws



No.	Screw Size	Drill Size In.	Anchor Length In.	Std. Pkg.	WL, Lbs. Per 100	Without Screw Per 100
3020	6-32	1/4	3/8	100	3 1/4	\$ 6.00
3025	8-32	5/16	1/2	100	1 1/2	6.50
3030	10-24	3/8	5/8	100	2	7.50
3035	12-24	7/16	3/4	100	3 1/2	9.50
3040	1/4-20	1/2	7/8	100	5 1/2	11.00
3050	5/16	5/8	1	50	10 1/2	15.00
3060	3/8	3/4	1 1/4	50	16	20.00
3070	7/16	7/8	1 1/2	50	21	26.00
3080	1/2	7/8	1 1/2	50	21	26.00
3100	5/8	1 1/8	2	50	41	50.00
3120	3/4	1 1/4	2 1/4	50	64	75.00

All anchors, sizes 1/4-20 and smaller furnished with brass nuts.

Diamond Calking Tools



One tool packed in each box of anchors. Additional tools at nominal charge.

Lyon Steel Equipment

Cabinet Benches



No. 3000

Heavy steel top makes sturdy mounting for small grinders, vises, and office machines. 12 square feet of storage space. Double swinging doors, 3-point locking device. Adjustable center shelf. Lyon Green baked-on enamel finish. Back and end stops detachable. 36-inches wide, 24-inches deep, 34-inches high (plus 3-inch backstop). Shipping weight, 148 pounds.

No. 3000 Each \$43.20

Tool Stand Cabinets



No. 3010

Furnishes small working surface and space to lock up blueprints, valuable tools, precision instruments, etc. 3 shelves adjustable every 2 inches. Top reverses to give flat working surface. Lyon Green baked-on enamel finish. 21 1/2-inches wide, 15 1/2-inches deep.

No. 3010, 34 inches high. Shipping weight, 63 pounds. Each \$23.30
No. 3011, (with Casters) 37 inches high. Shipping weight, 65 pounds. Each \$25.55

Tool Stands



No. 3107

With drawer, and top, bottom and center trays. Lyon Green baked-on enamel finish. 37 1/8 inches high. (With glide feet 34-inches.)

No. 3107, 20 x 28 inches. Shipping weight, 83 pounds. Each \$25.00
No. 3105, w/o drawer. Shipping weight, 65 pounds. Each \$17.75
No. 3127, 24 x 36 inches. Shipping weight, 118 pounds. Each \$31.10
No. 3125, w/o drawer. Shipping weight, 98 pounds. Each \$23.80

Tool Toters



No. 3160

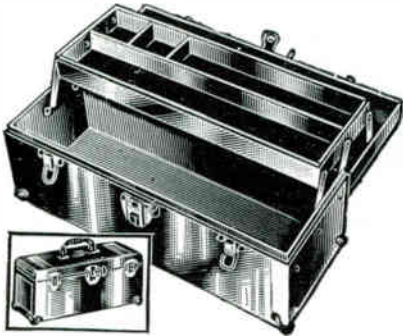
Used in machine shops, assembly lines, garages, laboratories, etc. Riveted construction. 2 built-in drawers, 15 inches wide, 23 inches deep, 4 5/8 inches deep. Padlock hasp on cross piece locks both drawers at one time. Toter is 18 inches wide, 24 inches deep, 34 1/2 inches high. Lyon Green baked-on enamel finish.

Shipping weight, 75 pounds. No. 3160 Each \$22.30

Union Steel Tool Chests

Heavy-gauge steel, with hard baked enamel inside and out. All corners are rigidly reinforced. Steel handles. Continuous hinge, welded to cover and case to prevent springing cover.

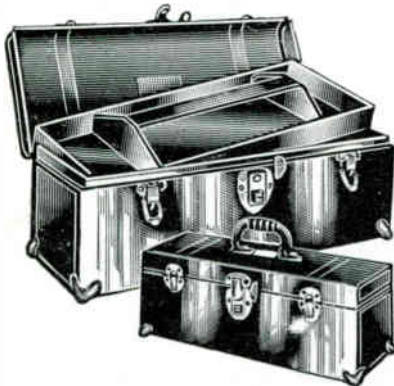
Cantilever Tray Chests



Double lock-seam construction. Rounded cover embossed to provide extra strength. Built-in padlock eye, double-draw bolts and lock plated to resist rust. Double-enamelled outside. Inside finish green; outside gray.

No.	Lock	Size, Inches	Each
6316	Yes	16x7x7	\$5.60
6322	No	22x9x8	8.48

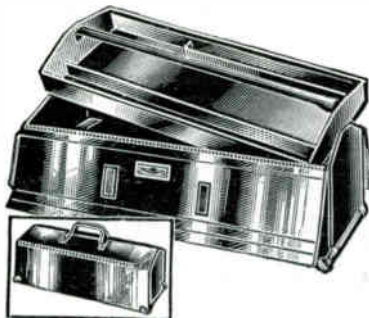
Tote Tray Chests



Same construction as cantilever tray chests above, except for full-width tote tray.

No.	Lock	Size, Inches	Each
6116	Yes	16x7x7	\$5.38
6122	No	22x9x8	8.30

Tote Tray Mechanics' Box



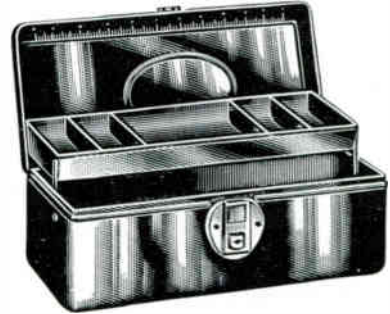
All-welded construction. A heavy-duty box for maximum protection of tools. Handle device prevents accidental spilling of tools. 3-compartment tray. Finished in hard-baked green enamel.

No.	Size, Inches	Each
7121	21x8½x7¼	\$5.96

Union Steel Utility Chests

Drawn steel, seamless, one-piece construction. Returned edged on cases, cover and tray. Finished inside and out in hard-baked green enamel. Keylocks brightly plated.

With Key Lock



Single cantilever tray conveniently compartmented. Comfortably shaped wire handle, with handleplate.

No.	Size, Inches	Each
5313	13½x6½x4½	\$1.84

With Key Lock and Catches



Waterproof, single cantilever tray has 2 long and 2 short compartments. Heavy metal handle. Spill-proof bolt catches brightly plated.

No.	Size, Inches	Each
5314	14½x7¼x6	\$2.68

If the Tool You Need Is Not Listed in this Catalog . . . Call Your Nearest Graybar Office and Warehouse.

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