

BLOW TORCHES

CLAYTON & LAMBERT

For Gasoline
Top Fill

Non-corrosive sturdy steel tank, coated both inside and out through a tin lead hot dip method. Full sized bronze burner with super heating vein produces a hot blue flame 6 inches long. Automatic pump with single spring check valve. Cool bakelite handle and removable burner hook. Filled by removing pump. Safety features.

Diameter 4 1/4 inches. Height overall 9 1/8 inches.

Capacity One Quart

Each 6-800-G X11D25★.....\$16.90
One in ctn. Wt. ctn. 4 lbs.

TURNER
For Gasoline

Special Economy

All joints furnace brazed. Cast bronze burner produces hot blast in all weather. Oversized drip cup positioned for quick generation.

Detachable cleaning needle for automatic adjustment and orifice cleaning. Solid wood tank handle and ribbed valve wheel designed for a sure grip and to remain cool in operation. Sprayed bronze steel tank, top fill.

Capacity One Quart

Each 6-115-G X8D00.....\$11.95
One in ctn. Wt. ctn. 4 lbs.

BERNZ-O-MATIC

For laying asphalt tile, spot burning weeds, starting fires, leading gutters, and sweating copper fittings.

Extra large flame, big enough to sweat large copper soil pipe fittings. Hot enough for brazing.

Flame cuts back instantly when button is released. Brass burner unit assures years and years of dependable use.

Each F7350G (TX65) X6D60.....\$9.84
One in box. Wt. box 4 lbs.



BERNZ-O-MATIC

Convenient and economical for many uses in the home, work shop or trade. Lights instantly without priming or preheating. Burns in any position at 2300 degrees F. up to 10 hours burning time.

High quality steel fuel cylinder with safety valve, fully loaded with Propane Gas and ready to operate. Pencil flame type burner unit. Threaded aluminum head with control valve screwed to top of fuel chamber. Non-clogging orifice. Cleans itself in 30 seconds. Length of cylinder 10 inches. Diameter 2 3/4 inches. Over all length 16 1/2 inches.

No Filling—No Spilling

Each F7380G (TX10) X4D65★.....\$6.95
One in box. Wt. box 2 3/4 lbs.

▲ Each

Each F7379G (TX9) X1D33★.....\$1.94
FX7379G (TX9) X1D33★—(Case lots 12)
Twelve in ctn. Wt. ctn. 26 lbs.

▲ Each

FUEL CYLINDERS
For No. TX10 Blow Torches

Each F7379G (TX9) X1D33★.....\$1.94
FX7379G (TX9) X1D33★—(Case lots 12)
Twelve in ctn. Wt. ctn. 26 lbs.

▲ Each

Direct Shipment

Torches No. TX10—Lots of 36

Refills No. TX9—Lots of 48

May be Shipped Direct from Factory, Rochester, N. Y., with Full Freight Allowed to Destination.

Cannot be Assorted for Quantity

NOTE—Cannot be Shipped by Parcel Post.

BURNER UNITS

For No. TX10 Blow Torches

Pencil Flame Type

For Concentrated Heat

Each F7377G (TX1) X3D50.....\$5.26
One in box. Wt. box 1/8 lb.

▲ Each



General Utility

For Enveloping Flame

Each F7378G (TX2) X3D50.....\$5.26
One in box. Wt. box 1/8 lb.

▲ Each



BERNZRITE

Approved by Underwriters' Laboratories.

Features:

1. Instant lighting propane cylinder.
2. Positive "easy-action" regulating knob.
3. Turn on cylinder—no extra locking devices.
4. Plated steel burner.

In a self-selling package.

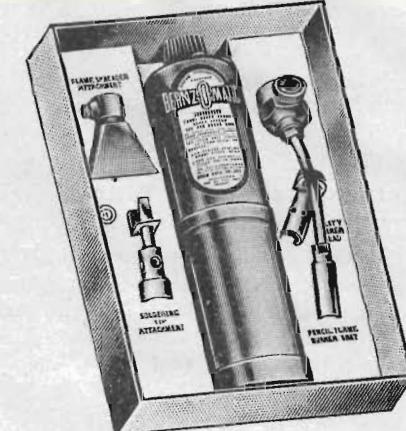
Bernzrite Torches also operate on Bernz-o-matic propane cylinders.

Each F7356G (BZ210) X3D80.....\$5.69
One in display box.

▲ Each



BERNZ-O-MATIC



Approved by Underwriters' Laboratories, Inc.
Three color display package with acetate window, sells on sight.

Pencil burner makes it ideal for jewelry making, antiquing furniture, wire splicing, etc.

Utility burner is suited for copper sweat fitting, bending, tubing and heavy duty soldering.

Flame Spreader—Adapts torch for burning paint, tiling floors.

Soldering Tip—Converts it for electrical repairs, mending toys.

Quantity Kit Contains: Retail Each
1 F7377G-TX1 Pencil burner unit.....\$5.26
1 1352-BU Utility burner head and orifice.....1.95
1 F9515G-TX300 Flame spreader...1.00
1 F9516G-TX400 Soldering tip (small—Use with TX1).....1.75
1 F7379G-TX9 Bernz-o-matic disposable fuel cylinder.....1.94
Regular Retail Price.....\$13.35

Per Kit F7373G (TX888) X5D95★.....\$11.90
One kit in box. Twelve in ctn. Wt. ctn. 50 lbs.

▲ Per Kit

BERNZ-O-MATIC



Carry-All

Torch and accessories for home or shop—sweating copper tubing, paint removing, soldering, tile setting, lighting charcoal fires, etc.—in a handsome metal, all-purpose carrying case.

Kit includes one each of the following:

Cylinder.....	\$1.94
Pencil Burner Unit.....	5.26
Utility Burner Head.....	1.95
Soldering Tip.....	1.75
Flame Spreader.....	1.00
Flint Sparklighter.....	.30

Regular Price.....\$12.20

Per Kit F7381G (TX25) X6D65.....\$9.95
Twelve kits in ctn. Wt. ctn. 62 lbs.

STAR ★ DENOTES BEST SELLER

BLOW TORCHES

SUPREME—FLAT TANK

For Gasoline

Top Fill



Designed for hard to get at places.

Tank drawn from heavy gauge sheet steel, bottom brazed to tank shell. Cannon type burner, cast from special alloy bronze. Needle—valve square shoulder seat or valve shaft prevents orifice enlargement. Slender pin type cleaning needle automatically cleans orifice. Black bakelite valve wheel, stays cool. Pump has blow-proof construction. Long stroke and positive action for ample pressure quickly. Check valve completely enclosed. Steel handle with hardwood pistol grip. Pump, burner and filler inlets brazed into place. Tank and burner cup finished in gilt with red enameled handle.

Capacity One Pint

Each 6-61-G X8D10.....▲Each \$13.50

One in ctn. Wt. ctn. 4 lbs.

CLAYTON & LAMBERT

For Gasoline

Top Fill



Non-corrosive sturdy steel tank, coated both inside and out through a tin lead hot dip method. Full sized bronze burner with super heating vein produces a hot blue flame 6 inches long. Automatic pump with single spring check valve. Cool bakelite handle and removable burner hook. Filled by removing pump. Safety features.

Diameter 4 1/4 inches. Height overall 9 1/8 inches.

Capacity One Quart

Each 6-800-G X11D25★.....▲Each \$16.90

One in ctn. Wt. ctn. 4 lbs.

TURNER

For Gasoline

General Utility
Tank-top Fill

Unsurpassed for the occasional user, for farm, home and shop work. Cast bronze burner produces hot blue blast in any weather.

Seamless tank construction of terne-coated (rust-resistant) steel, with eye-appealing sprayed bronze finish.

Detachable cleaning needle for automatic adjustment. Ribbed valve wheel built for sure grip.

Capacity One Quart

Each 6-T16-G X9D00.....▲Each \$13.50
One in ctn. Wt. ctn. 4 1/4 lbs.



Special Economy

All joints furnace brazed. Cast bronze burner produces hot blast in all weather. Oversized drip cup positioned for quick generation.

Detachable cleaning needle for automatic adjustment and orifice cleaning. Solid wood tank handle and ribbed valve wheel designed for a sure grip and to remain cool in operation. Sprayed bronze steel tank, top fill.

Capacity One Quart

Each 6-T15-G X8D00.....▲Each \$11.95
One in ctn. Wt. ctn. 4 lbs.



STAR ★ DENOTES BEST SELLER

BERNZ-O-MATIC



Trade-In Plan

Give \$1.00 allowance on any old torch toward TX888 "Trade-in" package. Sell the free TX10 torch for \$5.95 and get back the \$1.00 allowed on each of the six TX888 Kits.

"Trade-in" Pak includes:

Qty.	Item	Each
6	TX888 Torch Kits with special "Trade-in" wrapper.....	\$8.88
1	Free TX10 Torch.....	5.95
1	Dealer Merchandising kit containing Ad mats and window banner.	

Per Deal
61-TX8500-G X35D70.....\$53.28
One deal in ctn. Wt. ctn. 25 1/2 lbs.

BERNZRITE
Approved by Underwriters' Laboratories

Features:

1. Instant lighting propane cylinder.
2. Positive "easy-action" regulating knob.
3. Turn on cylinder—no extra locking devices.
4. Plated steel burner.

In a self-selling package.

Bernzrite Torches also operate on Bernz-o-matic propane cylinders.

(BZ210)

Each F7356G X3D80.....▲Each \$5.69

One in display box. 24 in ctn. Wt. ctn. 68 lbs.

BLOW TORCHES

BERNZ-O-MATIC



Convenient and economical for many uses in the home, work shop or trade. Lights instantly without priming or preheating. Burns in any position at 2300 degrees F. up to 10 hours burning time.

High quality steel fuel cylinder with safety valve, fully loaded with Propane Gas and ready to operate. Pencil flame type burner unit. Threaded aluminum head with control valve screwed to top of fuel chamber. Non-clogging orifice. Cleans itself in 30 seconds. Length of cylinder 10 inches. Diameter $2\frac{3}{4}$ inches. Over all length $16\frac{1}{2}$ inches.

No Filling—No Spilling

(TX10)

Each **F7380G X4D65★**.....
\$6.95

One in box. Wt. box $2\frac{3}{4}$ lbs.

FUEL CYLINDERS

For No. TX10 Blow Torches

(TX9)

Each **F7379G X1D33★**.....
\$1.94
FX7379G X1D33★—(Case lots 12)

Twelve in ctn. Wt. ctn. 26 lbs.

Direct Shipment

Torches No. TX10—Lots of 36
Refills No. TX9—Lots of 48

May be Shipped Direct from Factory,
Rochester, N. Y., with Full Freight Allowed
to Destination.

Cannot be Assorted for Quantity

NOTE—Cannot be Shipped by Parcel Post.

BURNER UNITS

For No. TX10 Blow Torches

Pencil Flame Type
For Concentrated Heat

(TX1)

Each **F7377G X3D50**.....
\$5.26

One in box. Wt. box $\frac{1}{8}$ lb.General Utility
For Enveloping Flame

(TX2)

Each **F7378G X3D50**.....
\$5.26

One in box. Wt. box $\frac{1}{8}$ lb.

BLOW TORCH KITS

BERNZ-O-MATIC



Carry-All

Torch and accessories for home or shop—sweating copper tubing, paint removing, soldering, tile setting, lighting charcoal fires, etc.—in a handsome metal, all-purpose carrying case.

Kit includes one each of the following:

Cylinder	\$ 1.94
Pencil Burner Unit	5.26
Utility Burner Head	1.95
Soldering Tip	1.75
Flame Spreader	1.00
Flint Sparklighter	.30

Regular Price.....\$12.20

(TX25)

Per Kit **F7381G X6D65**.....
\$9.95

Twelve kits in ctn. Wt. ctn. 62 lbs.

Torch Kit

BLOW TORCHES

BERNZ-O-MATIC



For laying asphalt tile, spot burning weeds, starting fires, leading gutters, and sweating copper fittings.

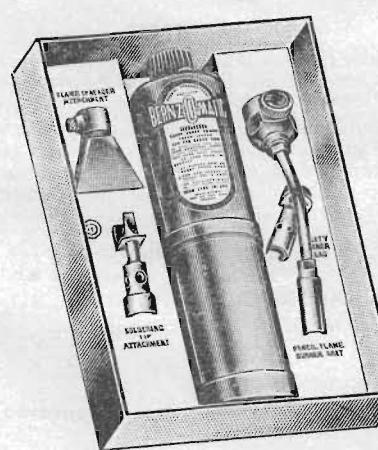
Extra large flame, big enough to sweat large copper soil pipe fittings. Hot enough for brazing.

Flame cuts back instantly when button is released. Brass burner unit assures years and years of dependable use.

(TX65)

Each **F7350G X6D60**.....
\$9.84

One in box. Wt. box 4 lbs.



BERNZ-O-MATIC

Approved by Underwriters' Laboratories, Inc.

Three color display package with acetate window, sells on sight.

Pencil burner makes it ideal for jewelry making, antiquing furniture, wire splicing, etc.

Utility burner is suited for copper sweat fitting, bending, tubing and heavy duty soldering.

Flame Spreader—Adapts torch for burning paint, tiling floors.

Soldering Tip—Converts it for electrical repairs, mending toys.

Quantity	Kit Contains:	Retail Each
1	F7377G-TX1 Pencil burner unit.....	\$ 5.26
1	1352-BU Utility burner head and orifice.....	1.95
1	F9515G-TX300 Flame spreader.....	1.00
1	F9516G-TX400 Soldering tip (small—Use with TX1).....	1.75
1	F7379G-TX9 Bernz-o-matic disposable fuel cylinder.....	1.94

Regular Retail Price.....\$13.35

▲Per Kit
\$11.90Per Kit **F7373G X5D95★ (TX888)**.....

One kit in box. Twelve in ctn. Wt. ctn. 50 lbs.

STAR ★ DENOTES BEST SELLER

4-44-B

1-14-59

SHAPLEIGH HARDWARE COMPANY, ST. LOUIS

TORCH DISPENSER DISPLAY

Bernz-O-Matic -- Panoramic

Per Display

FX-TX6510-G

X23D25

Per Display

\$41.70

One display in carton. Wt. Ctn. 31 Lbs.

PANORAMIC

4-44C
1-14-59

TORCH DISPENSER DISPLAY



This Display Features

BOB CROSBY who says:

*"This torch is terrific...
every homeowner like
myself should have one!"*

- Uses 1 sq. foot of space
- Torches and FREE display shipped completely assembled—ready to use
- Adapted to increase impulse sales in Tool, Paint, Plumbing, Floor Covering, Do-it-yourself departments
- 360° Visibility • Field tested
- Beautiful 4-color Display with photographs illustrating torch uses taken on location
- Display Size: 23 $\frac{3}{8}$ " high, 12" wide



Model TX-6510
Shipping Weight 31 lbs. • Packed 1 to Carton

**BUY FIVE TX-10 TORCHES
GET ONE FREE!**

**Pays a Fabulous
44% PROFIT**

BERNZ-O-MATIC

OTTO BERNZ CO., INC. • ROCHESTER, N.Y.

ELECTRIC SOLDERING IRONS

DRAKE



Designed for household and radio work. Highest quality nichrome wire wound on amber mica. Fully nickel plated. Listed as standard with Underwriters Laboratories. Complete with 6-foot heater cord, rubber plug and soldering iron stand. $\frac{3}{8}$ -inch adjustable plug tip. Consumes 100 watts. Operates on 110 to 120 volts, A. C. or D. C. Length over all 13 inches.

Each **F7361G (325) X3D46** \$6.50
One in box. Wt. box $1\frac{1}{2}$ lbs.



Recommended for light, medium work. Highest quality nichrome wire used in porcelain element. Fully nickel plated. Has $\frac{3}{8}$ -inch removable copper tip. Specially designed radiating fins keep handles cool. Complete with 6-foot heater cord, rubber plug and 7-inch soldering iron stand. Operates on 110-120 volts, A. C. or D. C. and consumes 100 watts. Listed as standard by the Underwriters Laboratories. Length over all 13 inches.

Each **F7369G (701) X2D24** \$4.20
One in box. Wt. box $1\frac{1}{4}$ lbs.



An ideal iron for light soldering in automotive work.

Highest quality nichrome wire used in porcelain element. Comfortable wood handle with metal ferrule. Large radiator type cooling fins keep handle cool. $\frac{3}{8}$ -inch tip. Length over all 13 inches.

Complete with 6 foot heater cord, rubber plug and small stand.

Operates on 110 to 120 volts, A. C. or D. C. and consumes 60 watts.

Each **F7367G (700) X1D97** \$3.70
One in box. Wt. box 1 lb.



Excellent for light household and general purpose radio work. Listed as standard with Underwriters' Laboratories.

Nichrome porcelain element. $\frac{3}{8}$ inch tip. Complete with stand. Cord 6 feet long, with rubber plug. Length over all $10\frac{1}{2}$ inches.

Operates on 110-120 volts, A. C. or D. C., 60 watts.

Each **F7359G (315) X1D49** \$2.80
One in box. Wt. box 1 lb.



Extra hot iron for service men. Highest quality nichrome wound on amber mica. $\frac{3}{8}$ -inch tip. Black enameled wood handle. Gun metal finish. Large radiator type cooling fins keep handles cool.

Complete with 6 foot heater cord, rubber plug and large stand.

Operates on 110 to 120 volts, A. C. or D. C. and consumes 125 watts.

Each **F7362G (326) X3D72** \$7.00
One in box. Wt. box 2 lbs.

LENK



Super DeLuxe

Heavily chrome plated swaged tube. Special alloy copper standard tip. Metal clad heating element encased in sturdy metal jacket. Sure grip handle with sturdy rubber covered cord, resists wear, moisture and oil. Eliminates "short" trouble and adds years of service. Fin type heat dissipators. Ruggedly built.

Operates on A. C. or D. C. 110-120 volts.

Each	Tip Diam., Lgth., (730)	Box, in. in.	Wt. Watts lbs.	Each
F7366G X1D88 \star	$\frac{3}{8}$ 12 $\frac{1}{2}$	80	$\frac{3}{4}$ \$3.15	
	(740)			
F7368G X2D10 \star	$\frac{3}{4}$ 13 $\frac{3}{8}$	110	1 3.49	
	(750)			
F7370G X2D94 \star	$\frac{3}{8}$ 13 $\frac{3}{4}$	150	$1\frac{1}{8}$ 4.89	
		One in box.		



Super DeLuxe

New compact sales catching yellow and black display board for the counter. Free booklets of tips on soldering.

Heavily chrome plated swaged tube. Special alloy copper standard tip. Metal clad heating element encased in sturdy metal jacket. Sure grip handle with sturdy rubber covered cord, resists wear, moisture and oil. Eliminates "short" trouble and adds years of service. Fin type heat dissipators. Ruggedly built.

Quantity	Nos.	Contents:			
		Tip Diameter, inches	Length, inches	Watts	Each
1	730	$\frac{3}{8}$	12 $\frac{1}{2}$	80	\$3.15
1	740	$\frac{3}{4}$	13 $\frac{3}{8}$	110	3.49
1	750	$\frac{3}{8}$	13 $\frac{3}{4}$	150	4.89

Operates on A. C. or D. C. 110-120 volts.

Three Soldering Coppers

Per Asst.

FX-CB95-G X6D90 \star

One asst. in ctn. Wt. ctn. 4 lbs.

LENK



Instant IH Heat

Tough, long life case of laminated phenolic resin-impregnated cloth plastic. Special alloy adjustable swivel tip, permits any angle soldering. Advanced transformer design, melts solder in $3\frac{1}{2}$ seconds. Long life, heavy duty 180 watt transformer. Positive trigger. Automatically focussed light always follows work. Perfectly balanced. Cool handle. Length over all 11 inches.

Operates on A. C., 110 volts, 180 watts.

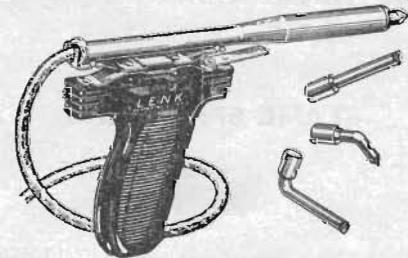
Each	▲ Each
F7398G (501) X8D65 \star	\$12.98

Wt. each $1\frac{3}{4}$ lbs.

One in display ctn., twelve in case

Wt. case 24 lbs.

LENK



Gun Grip

The perfect tool for all soldering purposes. Solders in any position with three special tips straight, 45° , 90° and heavy duty.

Tube chrome plated over nickel and copper with U. L. approved 3000 cycle, 6 foot heater cord with unbreakable rubber plug. Long life heating element. Spring construction cushions pressure for delicate work, keeps gun grip handle cool, protects handle and unit and insure perfect soldering. Built-in stand for resting iron.

Complete with four tips and tip bushing. Size $9\frac{1}{2} \times 4\frac{3}{4}$ inches.

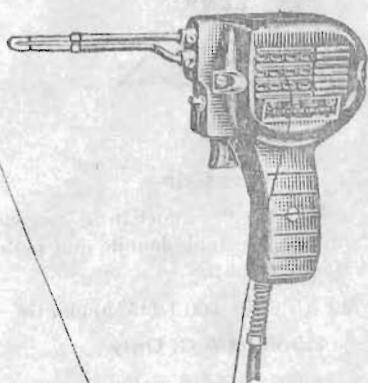
Operates on A. C. or D. C. 110-120 volts.

Each	Wt.	Watts	Box, lbs.	▲ Each
F7364G (504) X3D60	75	75	1	\$6.00

One in box.

ELECTRIC SOLDERING GUN

WEN



Working hot in less than five seconds. Silver plated tip and connectors to insure positive electrical contact.

Extra rigid (removable) tip. Extra long reach tip and long life heavy gauge steel nose tip. Built-in spotlight angled to focus light on work without shadow.

High impact shatter-proof plastic handle and case. Hi-luster ebony black finish.

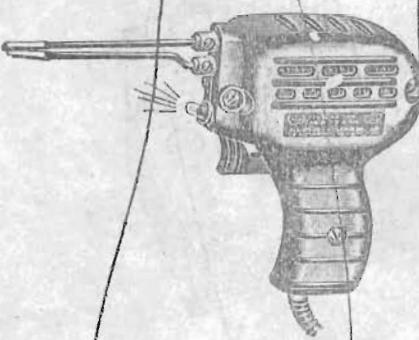
Specifications:

110-120 volts, 60 cycles A.C. only, 2 amperes maximum. 6 foot Prenex cord with molded plug. U.L. approved.

Over all length without tip 4 1/2 inches. With tip 9 inches. Over all height 6 1/4 inches.

(288)

Each F7445G X6D64 ▲ Bach \$9.95
One in box. Three in ctn. Wt. ctn. 10 lbs



The Quick-Hot

Working hot in 2 1/2 seconds. Cools quickly when trigger is released.

Extra long narrow new type steel nose life-time tip. Built-in spotlight angled to focus light on work at tip. Cherry red sturdy plastic handle and case. Six foot Prenex cord and molded plug.

Length without tip 5 inches. Operates on A.C., 60 cycle.

(199)

Each F7424G X5D30 ★ ▲ Each \$7.95
One in display box. Wt. box 2 1/4 lbs.

TIPS

For F7424G (199) Soldering Iron
(19B4)

Each F7425G D3C3 ▲ Each \$0.50
One in envelope. Wt. envelope 1 oz.

ELECTRIC SOLDERING IRONS

DRAKE



Designed for household and radio work. Highest quality nichrome wire wound on amber mica. Fully nickel plated. Listed as standard with Underwriters Laboratories. Complete with 6-foot heater cord, rubber plug and soldering iron stand. 3/8-inch adjustable plug tip. Consumes 100 watts. Operates on 110 to 120 volts, A. C. or D. C. Length over all 13 inches.

Each (325)
F7361G X3D46 ▲ Each \$6.50
One in box. Wt. box 1 1/2 lbs.



Recommended for light, medium work. Highest quality nichrome wire used in porcelain element. Fully nickel plated. Has 3/8-inch removable copper tip. Specially designed radiating fins keep handles cool. Complete with 6-foot heater cord, rubber plug and 7-inch soldering iron stand. Operates on 110-120 volts, A. C. or D. C. and consumes 100 watts. Listed as standard by the Underwriters Laboratories. Length over all 13 inches.

Each (701)
F7369G X2D24 ▲ Each \$4.20
One in box. Wt. box 1 1/4 lbs.



An ideal iron for light soldering in automotive work.

Highest quality nichrome wire used in porcelain element. Comfortable wood handle with metal ferrule. Large radiator type cooling fins keep handle cool. 3/8-inch tip. Length over all 13 inches.

Complete with 6 foot heater cord, rubber plug and small stand.

Operates on 110 to 120 volts, A. C. or D. C. and consumes 60 watts.

Each (700)
F7367G X1D97 ▲ Each \$3.70
One in box. Wt. box 1 lb.



Excellent for light household and general purpose radio work. Listed as standard with Underwriters' Laboratories.

Nichrome porcelain element. 3/8 inch tip. Complete with stand. Cord 6 feet long, with rubber plug. Length over all 10 1/2 inches.

Operates on 110-120 volts, A. C. or D. C., 60 watts.

Each (315)
F7359G X1D49 ★ ▲ Each \$2.80
One in box. Wt. box 1 lb.

DRAKE



Extra hot iron for service men.

Highest quality nichrome wound on amber mica. 3/8-inch tip. Black enameled wood handle. Gun metal finish. Large radiator type cooling fins keep handles cool.

Complete with 6 foot heater cord, rubber plug and large stand.

Operates on 110 to 120 volts, A. C. or D. C. and consumes 125 watts.

Each (326)
F7362G X3D72 ▲ Each \$7.00
One in box. Wt. box 2 lbs.

STANLEY HANDYMAN



For light, intermittent soldering jobs in the home, garage or service shop.

Compressed pure copper tips. Nichrome heating element solidly embedded in electrical insulating materials. Cool comfortable wood handle. Six foot cord and plug. Length 12 ins.

	Diam. Tip in.	Wgt. Watts lbs.	▲ Each
Each F7416G X2D87	3/8	50	7/8 24.30
	(420)		
	(435)		
Each F7418G X3D73	3/4	80	1 1/8 5.60
			One in box

ELECTRIC SOLDERING IRONS

LENK



Super DeLuxe

Heavily chrome plated swaged tube. Special alloy copper standard tip. Metal clad heating element encased in sturdy metal jacket. Sure grip handle with sturdy rubber covered cord, resists wear, moisture and oil. Eliminates "short" trouble and adds years of service. Fin type heat dissipators. Ruggedly built.

Operates on A. C. or D. C. 110-120 volts.

Tip	Wt.
Diam., Lgth., in.	Box, in. Watts lbs.

Each F7366G X1D88 (730) $\frac{3}{8}$ 12 $\frac{1}{4}$ 80 $\frac{1}{2}$ \$3.15

Each F7368G X2D10 (740) $\frac{3}{8}$ 13 $\frac{1}{4}$ 110 1 3.49

Each F7370G X2D94 (750) $\frac{3}{8}$ 13 $\frac{1}{4}$ 150 1 $\frac{1}{2}$ 4.89

One in box



Super DeLuxe

New compact sales catching yellow and black display board for the counter. Free booklets of tips on soldering.

Heavily chrome plated swaged tube. Special alloy copper standard tip. Metal clad heating element encased in sturdy metal jacket. Sure grip handle with sturdy rubber covered cord, resists wear, moisture and oil. Eliminates "short" trouble and adds years of service. Fin type heat dissipators. Ruggedly built.

Contents:

Quantity	Nos.	Tip	Diameter, inches	Length, inches	Watts	List Each
1	730	$\frac{3}{8}$	$12\frac{1}{4}$	80	$\frac{1}{2}$	\$3.15
1	740	$\frac{3}{8}$	$13\frac{1}{4}$	110	1	3.49
1	750	$\frac{3}{8}$	$13\frac{1}{4}$	150	$1\frac{1}{2}$	4.89

Operates on A. C. or D. C. 110-120 volts.

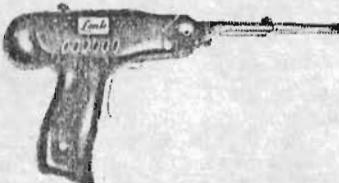
Three Soldering Coppers

Per Asst.

F7365G X6D90 ★

One asst. in ctn. Wt. ctn. 4 lbs.

LENK



Instant IH Heat

Tough, long life case of laminated phenolic resin-impregnated cloth plastic. Special alloy adjustable swivel tip, permits any angle soldering. Advanced transformer design, melts solder in 3 $\frac{1}{2}$ seconds. Long life, heavy duty 180 watt transformer. Positive trigger. Automatically focussed light always follows work. Perfectly balanced. Cool handle. Length over all 11 inches.

Operates on A. C., 110 volts, 180 watts.

(501)

Each F7398G X6D65 ★

Wt. each $1\frac{1}{4}$ lbs.

One in display ctn., twelve in case.

Wt. case 24 lbs.

LENK



Gun Grip

The perfect tool for all soldering purposes. Solders in any position with three special tips straight, 45°, 90° and heavy duty.

Tube chrome plated over nickel and copper with U. L. approved 3000 cycle, 6 foot heater cord with unbreakable rubber plug. Long life heating element. Spring construction cushions pressure for delicate work, keeps gun grip handle cool, protects handle and unit and insure perfect soldering. Built-in stand for resting iron.

Complete with four tips and tip bushing. Size 9 $\frac{1}{2}$ x 4 $\frac{3}{4}$ inches.

Operates on A. C. or D. C. 110-120 volts.

Each	Weight	Watts	Box, lbs.	Each
F7364G X3D60 (504)	75	1	\$6.00	

Each F7365G X4D20 (555) 125 $1\frac{1}{4}$ 7.00

One in box

LENK



Easy Grip

Instant heating—melts solder in 5 $\frac{1}{2}$ seconds. Bakelite body. Comfortable handle and perfect balance. Automatic light.

Complete with 1 No. 560-1 (45° angle) tip.

110 Volts A.C. Only

Packed in counter display carton.

Length 6 $\frac{1}{2}$ inches

Complete with 6 foot attached cord.

(560)

Each	Each
F7358G X4D65	\$6.98

One in box. Twelve in ctn. Wt. ctn. 15 lbs.

SOLDERING KIT

LENK

UL Approved



Complete kit in self-sealing display. For all general home and shop soldering.

Kit Contains:

Quantity	Item
1	Pistol grip 80-watt soldering iron with all-purpose tip, heavy duty neoprene cord and sturdy Lenk heating element.
1	Lenk "Little Giant" liquefied petroleum instant lighting torch, throw-away fuel container equipped with safety valve.
3	Kinds of solder—For all soldering needs, acid core, rosin core, special formula aluminum.
1	Complete instruction booklet. Steel wool for proper cleaning.
Per Kit	(45K)
F7442G	\$5.98

One in box, twelve in ctn. Wt. ctn. 24 lbs.

ELECTRIC SOLDERING KITS

WELLER



250-Watt

Everything required for hundreds of homecraft and hobby jobs.

Kit Contains:

250-watt gun—instant heat and dual spotlight features.
Long-life soldering tip—designed for tight difficult places.
Handy smoothing tip—for heat-sealing and mending plastic articles.
Special cutting tip—cuts plastic cleanly, removes hard putty from broken windows.
Tip interchange wrench.
Kester solder—general purpose acid core.
How-to-do-it booklet.
Sturdy metal case.

120 Volts, 60 Cycles, A. C. Only

Per Kit Per Kit
F7352G (8250AK) X9D97..... \$14.95
Three kits in ctn. Wt. ctn. 21 lbs.

ELECTRIC SOLDERING GUNS

WELLER



250-Watt

For home repairs, electrical jobs, hobbycraft, etc. Instant heat. Dual spotlights. Streamlined design reaches tight, difficult spots. Rugged plastic housing. On and off trigger switch. With long life, low cost replaceable soldering tip.

120 Volts, 60 Cycles, A. C. Only

Each Each
F7355G (8250A) X8D64..... \$12.95
Three in ctn. Wt. ctn. 12 lbs.

ELECTRIC SOLDERING KITS

WELLER



"Expert" Dual Heat—90/125 Watts

Complete set of equipment for fast, efficient soldering.

Kit Contains:

90/125-watt gun—instant heat and dual spotlight features.
Long-life soldering tip—designed for tight, difficult places.
Soldering aid—for making tight wire twists and opening old soldered joints.
Wire soldering brush.
All-purpose solder.
Heavy cardboard storage case.

120 Volts, 60 Cycles, A. C. Only

Per Kit Per Kit
F7354G (8200K) X5D30..... \$7.95
Six kits in ctn. Wt. ctn. 19 lbs.

ELECTRIC SOLDERING GUN TIPS

WELLER

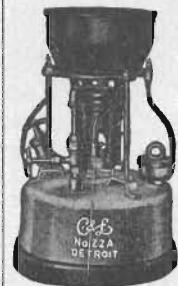
Per Pkg.	For Guns, Nos.	Per Pkg.
F7423G (8125)	D2C5	8200 \$0.35
F7425G (7250)	D3C5	8250A .50
F7424G (7135)	D2C5	8100 .35

Two tips in pkg., 25 pkgs. in box. Wt. box 1 lb.

STAR ★ DENOTES BEST SELLER

FIRE POTS

CLAYTON & LAMBERT



Equipped with quick detachable coil unit. Easy to start and simple to operate in any kind of weather. Generates a large powerful blast flame which quickly melts a pot of solder or babbitt. Designed to handle a full 6-inch metal pot. Burns gasoline.

Tank is drawn from heavy gauge seamless steel, hot dipped in a molten alloy which forms a protection against rust inside and out. Broad base with sturdy uprights. All fitting are inserted under heavy hydraulic pressure. Proper size pump for working pressure, positive action and long wear.

For Gasoline—Capacity One Gallon

Each	▲ Each
6-22A-G X21D35.....	\$32.00 One in ctn. Wt. ctn. 13 3/4 lbs.

SOLDERING COPERS



Regular Pattern, Pointed Without Wood Handles

Each	Length	Size	Wt.
	Overall, Rod,	ins.	lbs. Each
F7340G (1/8LB)	D2C8	9 $\frac{5}{16}$	$\frac{1}{8}$ \$0.45
F7341G (1/4LB)	D3C8★	10 $\frac{3}{16}$	$\frac{1}{4}$.60
F7342G (1/2LB)	D6C1★	10 $\frac{3}{16}$	$\frac{1}{2}$.95
F7343G (3/4LB)	D9C2★	11 $\frac{1}{2}$ $\frac{3}{8}$	$\frac{3}{4}$ 1.40
F7344G (1LB)	D9C4★	12 $\frac{3}{8}$	1 1.45
F7345G (1 1/2LB)	X1D35★	13 $\frac{1}{16}$	1 1/2 2.00
F7346G (2LB)	X1D75	14 $\frac{1}{16}$	2 2.65
		Loose	

SOLDERING COPPER HANDLES



Select Hardwood

Well seasoned. Shaped to fit the hand. Smooth wax finish, bored. Length 4 1/4 inches.

Each	Diam., ins.	Soldering Ctn., (SCH1)	For Copper No.	Wt. lbs. Each
F5292G D0C9	1 1/4	1 to 2 lbs.	5 1/4	\$0.15
F5293G D1C0	1 3/8	3 lbs. & larger	6 1/4	.15

Thirty-six in ctn.

SOLDERING LIQUID

ALLEN



For all metals except aluminum or stainless steel.

Double strength. Makes strong dependable joints. No gumming, fumes, or corrosion. Non-evaporating. High electrical conductivity. Easy to work with.

In 4-oz. Screw Top Bottles

Each **FX-A4-J D1C6★** Each \$0.25
Twelve in ctn. Wt. ctn. 4 lbs.

Sold Only In Full Cartons

SOLDER

NEW YORK SOLDER CO.

Handi-Tube

Air-tight container, every unit remains permanently saleable. Container may be used for storage of small parts such as nails, screws, etc. after solder is removed.

Size 1 1/4 ozs.



Acid Core

Per Ctn. (12) Each
F7412J (HTAS) X1D20 \$0.15

Rosin Core

Per Ctn. (12) Each
F7431J (HTRS) X1D20 \$0.15
Twelve tubes in ctn. Wt. ctn. 25 lbs.

SOLDER

GARDINER

Airline Solder



20-80 Grade

Per Lb.		Size	Spool	Per
	Core	lb.	lb.	lb.
F7403J (GSL1)	D7C2★	Acid	1	\$1.10
F7404J (GSL5)	D6C9	Acid	5	1.05

One spool in box

GARDINER



Self-Fluxing
For General
Soldering

Used by mechanics, repairmen, manufacturers, tinsmiths, farmers, householders, etc. Standard gauge.

Contains 40%
tin, 60% lead.

40-60 Grade

Per	Diam.,	Spool, About, Feet,	Per
Pound	lb.	in. lb.	Core Pound
		(GA1)	
F7399J X1D00★	1	1/8	30 Acid \$1.50
		(GA5)	
F7400J D9C8	5	1/8	30 Acid 1.50
		(GR1)	
F7401J X1D03	1	1/32	45 Rosin 1.55

One spool in box



For electrical and other small work. Solders seams rapidly, without waste. 10 gauge. Continuous length.

(W5)

Per Pound	Parts	Parts	Parts	Per
	Tin	Lead	on Spool	Pound
F7417J D7C4★	30	70	5	\$1.20

STAR ★ DENOTES BEST SELLER

SOLDER

KESTER



Aluminum Solder

Made from cored solder. The solder is cored with a special patented flux. Can be used to repair all articles made of aluminum. Coil of solder and small piece of steel wool in each can.

3/32-lb. Coils
10 Cans

Per ctn. (10) Per can
F7397J (AKS) X2D33 \$0.35
Ten cans in ctn. Wt. ctn. 1 1/2 lbs.

So'd Only In Full Cartons

KESTER

TV-Radio Solder

"Resin-Five"
Flux Core



Solder in the practical round wire size of .062 inch (1/16 inch). Ideal for serviceman's kit, for everything electrical or electronic.

Per Ctn. (10) Each
F7443J (KTV) X1D67 \$0.25
Ten in ctn. Wt. ctn. 2 1/2 lbs.

So'd Only In Full Cartons

KESTER



Metal Mender

40-60 Grade

Hollow wire filled with a soldering flux. Made from pure tin and lead. Solder tube is a series of cells, therefore no excess flux can flow from remaining cells. Contains 40% tin, 60% lead.

Can be used without soldering iron. Especially well adapted for automobile repair work.

3/16-lb. Coils

Per Ctn. (10) Per Can
F7410J (KMM) X1D67★ \$0.25
Ten cans in ctn. Wt. ctn. 2 1/2 lbs.

So'd Only In Full Cartons

SOLDER**KESTER****Self-Fluxing
40-60 Grade**

Hollow wire filled with a soldering flux. Made from pure tin and lead. Solder tube is a series of cells, therefore no excess flux can flow from remaining cells. Diameter $\frac{1}{8}$ inch. Can be used without soldering iron.

Especially well adapted for automobile repair work. Contains 40% tin, 60% lead.

Per Pound	Size	Per Roll	Per Roll
Core lb.	Roll.	Core lb.	Roll.
F7408J (KA)	X1D10★ Acid	1	\$1.65
Lots of 100 lbs. asstd.	X1D00★		
F7409J (KA5)	X1D05 Acid	5	7.95
Lots of 100 lbs asstd.	D9C5		
F7411J (KR)	X1D10★ Rosin	1	1.65
Lots of 100 lbs. asstd.	X1D00★		
One roll in box			

SHAPLEIGH'S BOSS

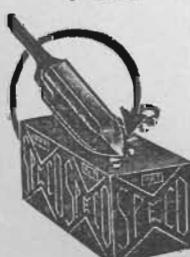
Highest grade for first class work. Insures bright, strong, well bonded joint. Contains 50% tin, 50% lead. In $1\frac{1}{8}$ -lb. bars.

Per lb.	Per Pound
F7396J (5050)	D9C0★.....

Commercial. For large seams and heavy work. Also a high grade wiping solder. Contains 40% tin, 60% lead. In $1\frac{1}{8}$ -lb. bars.

Per lb.	Per Pound
F7395J (4060)	D7C6.....

Gross case wt. 113-115 lbs.
Net case wt. 104-106 lbs.

SOLID SAL AMMONIAC**SPECO**

Fused into a solid cake as hard as marble without a binder or undesirable foreign substance. Unaffected by atmosphere. Will not rust tools in kit, nor slack. Contains many times its bulk of crude Sal Ammoniac.

Per Cake	Size	Per
Cake, lb.	Cake	
F7388G (SA1/2)	D3C0★	$\frac{1}{2}$
F7389G (SA1)	D4C5	1

One cake in pkg

SOLDERING PASTE**KESTER**

A homogeneous or non-varying paste. All fluxing ingredients are finely divided and uniformly distributed.

High grade flux body with viscosifying process for greater efficiency.

In 2-oz. Cans

Per Ctn. Per Ctn.

F7387J (K2) **X1D10.....** **\$1.65**

Sold Only in Full Cartons**BURNLEY**

One of the most popular brands on the market. It offers the surest method of permanent solder.

Per Can	Size	Per
Can, ozs.	Can,	Can
F7385J (BSP2)	D1C0★	2
Lots of 36	D0C9½	\$0.15

Twelve in ctn. Wt. ctn. 2 lbs.

Per Can	Size	Per
Can, ozs.	Can,	Can
F7386J (BSP4)	D1C7	4
Lots of 36	D1C6	.25

Thirty-six in ctn. Wt. ctn. 18 lbs.

ANTI-FRICTION METAL**MAGNOLIA**

For all steady high speed and heavy pressure. Particularly economical in installations subject to extremes of grit and dirt. For 90 percent of all lined bearings—up to 6,000 R. P. M.

A graphite-treated metal with extremely high anti-friction qualities. Runs cool, pours as freely as water, and requires remarkably little oil. Tensile strength 15,000 lbs. per square inch at 68 degrees Fahrenheit.

Suggested pouring range 825° to 900 Fahrenheit, depending on size of bearings.

Per Pound Per Pound

F7391J (32) **D4C6★.....** **\$0.70**

In bars of approximately 7 lbs.

In boxes of 8 or 16 bars—8 bars net weight 56 lbs., shipping weight 60 lbs. 16 bars net weight 112 lbs., shipping weight 117 lbs.

Note: When ordering—state number and specify quantity of bars in box

BABBITT METALS

True economy in the use of babbitt metal is determined by the service given, rather than the cost per pound. Service is determined by the length of time a bearing will continue to wear without deterioration. This desirable quality is dependent upon the higher percentages of copper, tin and antimony used. It is therefore important to select only high grade metal.

**LONGWEAR**

(REGISTERED)

Longwear babbitt. An ideal copper hardened babbitt for lining bearings, such as on flour mills, brick and clay plants, mixers, road machinery, tractors, line shafting, conveyors, and similar bearings.

LONGWEAR

Per Pound	Per Pound
F7413J	N-D4C1★.....
FX7413J	N-D4C1 (Case lots 55 lbs)

Unit bars 4 lbs.

Net case 52-55 lbs. Gross case 58-61 lbs.



XCD babbitt. A fine well balanced alloy. Moderately priced. For bearings operating at medium speeds, pressures, and temperatures.

Per Pound	Per Pound
F7419J (XCD)	N-D3C1.....
FX7419J (XCD)	N-D3C0—(Case lots 55 lbs.)

Unit bars 6½ lbs.

Net case 52-55 lbs. Gross case 58-61 lbs.



A low priced babbitt for slow speeds and light pressures. Made to standard formula for this grade.

Per Pound	Per Pound
F7390J (4)	N-D2C7★.....
FX7390J (4)	N-D2C5—(Case lots 55 lbs.)

Unit bars 6½ lbs.

Net case 52-55 lbs. Gross case 58-61 lbs.

GENERAL TAP INFORMATION



Recent developments in manufacturing have resulted in several new classifications of taps, in addition to the old method of classifications by type: Such as hand taps, nut taps, machine screw taps, etc.

Because of the increase in the use of high speed steels and the development of thread grinding, taps are further divided into classifications as follows:

- Carbon steel cut thread taps.
- High speed steel cut thread taps.
- High speed steel "Tru-Lede" commercial ground thread taps.
- High speed steel precision ground thread taps.

On account of the limited demand at this time high speed steel precision ground taps will not be carried in stock in any type.

The individual problem will largely govern the class of tap to be used. Selection of the proper tap to use is dependent on many factors, such as the kind of materials to be tapped, speed of operations, length of thread, depth of hole and the desired tolerance.

In the matter of tolerance, the individual manufacturer is at liberty to make the selection of a fit best suited to his particular requirements. However, the recommendations of the national Screw Thread Commission in general usage today definitely establishes four distinct classes of screw thread fits. Two of these, Class 2 for free fit and Class 3 for medium fit, are in most common use.

The following description of the classes of taps mentioned above will serve to give the purchaser a general idea of what tap will fill his requirements.

CARBON STEEL TAPS

Taps made of carbon steel, when used under normal conditions, will produce holes, in the majority of cases, within the National Screw Thread Commissions Class 2 tolerances. Carbon steel taps are entirely suitable for work to these limits, where the speed and the material warrant the use of carbon steel tools.

HIGH SPEED STEEL CUT THREAD TAPS

High speed steel cut thread taps are made to the same thread dimensions as carbon steel taps, and are generally used when alloy steels and greater speed of operation make the use of carbon steel taps uneconomical. When used under normal conditions these taps will, in the majority of cases, produce threaded holes within National Screw Thread Commission's Class 2 tolerances.

HIGH SPEED STEEL "TRU-LEDE" COMMERCIAL GROUND THREAD TAPS

These taps, identified by a single ring around the shank and by the name "Tru-Lede" are ground in the threads after hardening, which insures a true lead and a thread accuracy not found in cut thread taps.

They are held to a pitch diameter tolerance of .001 inch, and a lead tolerance of plus or minus .0005 inch in one inch of tread.

The shanks of "Tru-Lede" taps are also ground concentric with the threads, and this prevents the taps from wobbling and cutting oversize because of eccentricity. This one feature alone will save many tapped pieces, which a "Not Go" gauge would reject for no other reason than that the tap did not run true with the spindle.

When used under normal conditions, these taps will produce Class 2 National Screw Thread Commission fits.

SCREW THREAD DESIGNATIONS

Recognizing the need for a standard system of screw thread designation, there has been adopted the "National Screw Thread Series" recommended by the National Screw Thread Commission, as follows:

N. C.—Indicating American National Coarse Thread—formerly known as "U. S. S."

N. F.—Indicating American National Fine Thread—formerly known as "S. A. E."

N. P. T.—Indicating American National Taper Pipe Thread—formerly known as "Briggs' Standard."

TAP AND DIE SETS

ACE

Highest quality tools, ideal for mechanics or home owners. Neatly arranged in hardwood, hinged cases with separate depressions for each unit.



Combination

N. C. and N. F. Thread

Set consists of one 10-inch adjustable die stock. One 7½-inch adjustable tap wrench, 10 round one-inch outside diameter dies, 10 bolt taps and one ½-inch pipe tap and die.

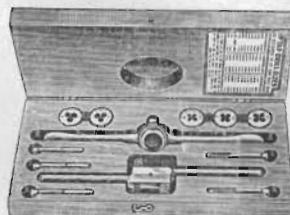
Die and Tap Size

N. C. { Size, inches.... $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$
Threads to inch. 20 18 16 14 13

N. F. { Size, inches.... $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$
Threads to inch. 28 24 24 20 20

Per Set ▲ Per Set
F7802G (4G) X9D90★..... \$16.50

One set in box. Wt. box 6 lbs.



N. C. Threads

Set consists of one 9-inch die stock, one 7½-inch adjustable tap wrench, 5 round one-inch outside diameter dies and 5 bolt taps.

Die and Tap Sizes

Size, inches.....	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Threads to inch....	20	18	16	14	13

Per Set ▲ Per Set
F7854G (H1) X5D37★..... \$8.95

One set in box. Wt. box 2½ lbs.

N. F. Threads

Set consists of one 9-inch die stock, one 7½-inch adjustable tap wrench, 5 round one-inch outside diameter dies and 5 bolt taps.

Die and Tap Sizes

Size, inches.....	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Threads to inch ...	28	24	24	20	20

Per Set ▲ Per Set
F7855G (H2) X5D37..... \$8.95

One set in box. Wt. box 2½ lbs.

STANDARD HAND TAPS

GREENFIELD

Taper Taps



(303TNC)

Factory No. 303

National Coarse (NC) Thread
(Specify Diameter and Thread Wanted)

Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
	F8667G	D7C3	24	4	26	2 $\frac{3}{8}$	$\frac{1}{8}$	\$1.10
	F8668G	D7C3	20	4	7	2 $\frac{1}{2}$	$\frac{3}{8}$	1.10
	F8669G	D8C1	18	4	F	2 $\frac{3}{4}$	$\frac{5}{8}$	1.25
	F8670G	D9C4	16	4	$\frac{5}{16}$	2 $\frac{15}{16}$	$\frac{3}{4}$	1.45
	F8671G	X1D15	14	4	U	3 $\frac{5}{16}$	$\frac{3}{4}$	1.75
	F8672G	X1D34	13	4	$\frac{27}{64}$	3 $\frac{3}{8}$	1	2.05
	F8673G	X1D53	12	4	$\frac{31}{64}$	3 $\frac{19}{32}$	$\frac{3}{4}$	2.30
	F8674G	X1D89	11	4	$\frac{17}{32}$	3 $\frac{13}{16}$	1	2.85
	F8675G	X2D70	10	4	$\frac{21}{32}$	4 $\frac{1}{4}$	$1\frac{5}{8}$	4.05
	F8676G	X3D59	9	4	$\frac{9}{64}$	4 $\frac{11}{16}$	2 $\frac{3}{8}$	5.40

(303TNF)

National Fine (NF) Thread

(Specify Diameter and Thread Wanted)

Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
	F8678G	D7C3	28	4	3	2 $\frac{1}{2}$	$\frac{1}{8}$	\$1.10
	F8679G	D8C1	24	4	I	2 $\frac{29}{32}$	$\frac{5}{8}$	1.25

Carbon Steel

Plug Taps

(303PNC)

National Coarse (NC) Thread

(Specify Diameter and Thread Wanted)

Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
	F8645G	D7C3	24	4	26	2 $\frac{3}{8}$	$\frac{1}{8}$	\$1.10
	F8646G	D7C3	20	4	7	2 $\frac{1}{2}$	$\frac{3}{8}$	1.10
	F8647G	D8C1	18	4	F	2 $\frac{23}{32}$	$\frac{5}{8}$	1.25
	F8648G	D9C4	16	4	$\frac{5}{16}$	2 $\frac{15}{16}$	$\frac{3}{4}$	1.45
	F8649G	X1D15	14	4	U	3 $\frac{5}{32}$	$\frac{3}{4}$	1.75
	F8650G	X1D34	13	4	$\frac{27}{64}$	3 $\frac{3}{8}$	1	2.05
	F8651G	X1D53	12	4	$\frac{31}{64}$	3 $\frac{19}{32}$	$\frac{3}{4}$	2.30
	F8652G	X1D89	11	4	$\frac{17}{32}$	3 $\frac{13}{16}$	1	2.85
	F8653G	X2D70	10	4	$\frac{21}{32}$	4 $\frac{1}{4}$	$1\frac{5}{8}$	4.05

(303PNF)

National Fine (NF) Thread

(Specify Diameter and Thread Wanted)

Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
	F8656G	D7C3	28	4	3	2 $\frac{1}{2}$	$\frac{3}{8}$	\$1.10
	F8658G	D9C4	24	4	Q	2 $\frac{15}{16}$	$\frac{3}{4}$	1.45

Up to $\frac{1}{2}$ -inch, twelve in a box. $\frac{5}{16}$ to 1-inch, six in box.

We show standard thread for each size tap listed. Special sizes are subject to special prices. Left hand taps are special. If other than standard is wanted, we will ship from factory only, F. O. B., Greenfield, Mass., N. F. A.

STANDARD HAND TAPS

GREENFIELD
Bottoming Taps

303BNC

National Coarse (NC) Thread
(Specify Diameter and Thread Wanted)

Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
Each								
F8624G	D7C3	$\frac{3}{16}$	24	4	26	$2\frac{3}{8}$	$\frac{1}{8}$	\$1.10
F8625G	D7C3	$\frac{1}{4}$	20	4	7	$2\frac{1}{2}$	$\frac{3}{8}$	1.10
F8626G	D8C1	$\frac{5}{16}$	18	4	P	$2\frac{3}{32}$	$\frac{5}{8}$	1.25
F8627G	D9C4	$\frac{3}{8}$	16	4	$\frac{5}{16}$	$2\frac{15}{16}$	$\frac{3}{4}$	1.45
F8628G	X1D15	$\frac{7}{16}$	14	4	U	$3\frac{5}{32}$	$\frac{3}{4}$	1.75
F8629G	X1D34	$\frac{1}{2}$	13	4	$2\frac{7}{64}$	$3\frac{3}{8}$	1	2.05
F8631G	X1D72	$\frac{5}{8}$	11	4	$1\frac{7}{32}$	$3\frac{3}{16}$	1	2.60

303BNF
National Fine (NF) Thread
(Specify Diameter and Thread Wanted)

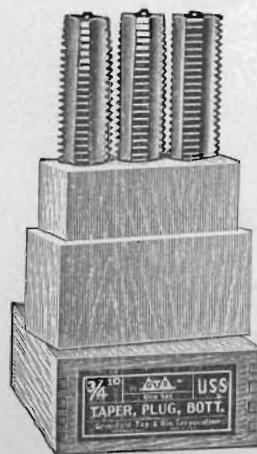
Each		Diameter, inch	Threads to inch	Number of Flutes	Tap Drill, Size	Length Over All, inches	Weight Box, lbs.	▲ Each
Each								
F8635G	D7C3	$\frac{1}{4}$	28	4	3	$2\frac{1}{2}$	$\frac{3}{8}$	\$1.10
F8636G	D8C1	$\frac{5}{16}$	24	4	I	$2\frac{23}{32}$	$\frac{5}{8}$	1.25
F8637G	D9C4	$\frac{3}{8}$	24	4	Q	$2\frac{15}{16}$	$\frac{3}{4}$	1.45
F8638G	X1D15	$\frac{7}{16}$	20	4	$2\frac{5}{64}$	$3\frac{5}{32}$	$\frac{3}{4}$	1.75
F8639G	X1D34	$\frac{1}{2}$	20	4	$2\frac{9}{64}$	$3\frac{3}{8}$	1	2.05

Up to $\frac{1}{2}$ inch, twelve in a box. $\frac{9}{16}$ to 1 inch, six in box.

STANDARD HAND TAPS

GREENFIELD

In Sets of Three



Carbon Steel

Four Flutes

Each set consists of three hand taps
—one each, taper, plug and bottoming.

National Coarse Thread

(NC)

(Specify diameter and thread wanted)

Per Set of 3	Diam. inch	Threads to inch	Tap Drill, Size	Length, inches	Wt. Box, ozs.	▲ Per Set
F8506G	X2D19	$\frac{1}{4}$	20	7	$2\frac{1}{2}$	2 \$3.30
F8507G	X2D43	$\frac{5}{16}$	18	F	$2\frac{23}{32}$	$3\frac{1}{2}$ 3.65
F8509G	X3D45	$\frac{7}{16}$	14	U	$3\frac{5}{32}$	5 5.20

One set in wood box

STANDARD MACHINE SCREW TAPS
GREENFIELD

High Speed Steel

Cut Thread

National Coarse (NC) Thread

6305PMSNC—Plug

(Specify gauge and thread wanted)

Each		Screw Gauge Nos.	Threads to inch	Diam., inch	Top Drill, Size	Number of Flutes	Length Over All, inches	Weight Pkg. ozs.	Each
	F8735G	D9C1	6	.32	.138	35	3	2	\$1.40
	F8736G	D9C1	8	.32	.164	29	4	2 $\frac{1}{8}$	1.40
	F8737G	D9C2	10	.24	.190	25	4	2 $\frac{5}{8}$	1.40
	F8738G	D9C7	12	.24	.216	16	4	2 $\frac{3}{8}$	1.50

Twelve in pkg.

STANDARD MACHINE SCREW PLUG TAPS
GREENFIELD

Carbon Steel

(305)

(Specify gauge and thread wanted)

Each		Screw Gauge Nos.	Threads to inch	Thread	Diam., inch	Drill Nos.	Number of Flutes	Length Over All, inches	Weight Box, ozs.	Each
	F8611G	D5C8	4	40	.112	44	3	1 $\frac{1}{2}$	1 $\frac{1}{2}$	\$0.90
	F8613G	D5C2	6	32	.138	36	4	2	3	.80
	F8614G	D5C2	8	32	.164	29	4	2 $\frac{1}{8}$	3	.80
	F8615G	D5C8	10	24	.190	25	4	2 $\frac{3}{8}$	4	.90
	F8616G	D5C8	10	32	.190	21	4	2 $\frac{3}{8}$	4	.90
	F8617G	D6C6	12	24	.216	16	4	2 $\frac{3}{8}$	4	1.00

(303P)

(Specify diameter and thread wanted)

	F8646G	D7C3	$\frac{1}{4}$	20	NC	$\frac{1}{4}$	7	4	2 $\frac{1}{2}$	6
	F8656G	D7C3	$\frac{1}{4}$	28	NF	$\frac{1}{4}$	3	4	2 $\frac{1}{2}$	6
	F8647G	D8C1	$\frac{5}{16}$	18	NC	$\frac{5}{16}$	F	4	2 $\frac{29}{32}$	9
	F8657G	D8C1	$\frac{5}{16}$	24	NF	$\frac{5}{16}$	I	4	2 $\frac{23}{32}$	9
	F8648G	D9C4	$\frac{3}{8}$	16	NC	$\frac{3}{8}$	$\frac{5}{16}$	4	2 $\frac{15}{16}$	12
	F8658G	D9C4	$\frac{3}{8}$	24	NF	$\frac{3}{8}$	Q	4	2 $\frac{15}{16}$	12

Twelve in box.

TAPER PIPE TAPS

GREENFIELD



Carbon Steel

American National Taper (NPT) Thread

For use in socket, monkey or tap wrench

(320)

(Specify Size Wanted)

Each		Pipe Size, ins.	Threads to inch	Number of Flutes	Drill Size	Length, inches	Weight Box, lbs.	Each
	F8597G	X1D11	$\frac{1}{8}$	27	$\frac{11}{32}$	2 $\frac{1}{8}$	$\frac{13}{32}$	\$1.70
	F8598G	X1D33	$\frac{1}{4}$	18	$\frac{7}{16}$	2 $\frac{7}{16}$	$\frac{1}{2}$	2.00
	F8599G	X1D78	$\frac{3}{8}$	18	$\frac{9}{16}$	2 $\frac{9}{16}$	$\frac{1}{2}$	2.65
	F8600G	X2D40	$\frac{1}{2}$	14	$\frac{45}{64}$	3 $\frac{1}{8}$	$\frac{1}{2}$	3.60
	F8601G	X3D70	$\frac{3}{4}$	14	$\frac{51}{64}$	3 $\frac{1}{4}$	$\frac{1}{2}$	5.60
	F8602G	X5D54	1	11 $\frac{1}{2}$	1 $\frac{1}{8}$	3 $\frac{1}{8}$	$\frac{7}{8}$	8.35

 $\frac{1}{8}$ to $\frac{1}{4}$ in. twelve in box. $\frac{3}{8}$ and $\frac{1}{2}$ in. six in box. $\frac{3}{4}$ in. and larger one in box.

TAP AND REAMER WRENCHES

ACE



Quick action, sure grip. Can be taken apart for cleaning.

Drop forged steel. Knurled handle grips. Hardened jaws. Polished nickel finish. Length 9 inches.

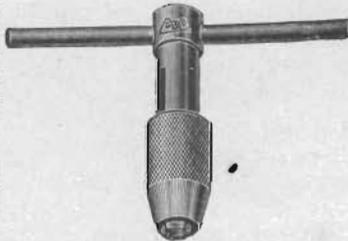
Capacity 4x36 to $\frac{1}{2}$ inch taps inclusive.

Each ▲ Each
F8264G (88) X1D26★..... \$2.10

Six in box. Wt. box $\frac{3}{8}$ lb.

TAP WRENCHES

GREENFIELD



Carbon Steel

Highest quality steel throughout, highly polished. Knurled sleeve. One piece split jaws hardened and tempered.

With Stationery "T" Handles

Each			For Hand Plug Taps, in.	For Machine Screw Taps, ins.	Length, ins.	Wt. Box, lbs.	Each
	F8265G	(329)	X1D32	$\frac{1}{16}$ to $\frac{1}{4}$	0 to 14	$2\frac{1}{2}$	$\frac{3}{16}$
	F8266G	(333)	X2D21	$\frac{1}{4}$ to $\frac{1}{2}$	No. 14	$3\frac{5}{8}$	$\frac{1}{2}$
One in box							

With Ratchet and Sliding "T" Handle

The sliding handle enables the user to completely rotate the wrench when working in close quarters where the rigid handle would not have sufficient space to turn.

Each			For Hand Plug Taps, in.	For Machine Screw Taps, ins.	Length, ins.	Wt. Box, lbs.	Each
	F8267G	(338)	X4D24	$\frac{1}{16}$ to $\frac{9}{32}$	0 to 14	4	$\frac{3}{8}$
One in box							

Items marked ~~★~~ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Elyria, Ohio. Full Freight Allowed.

STAR ★ DENOTES BEST SELLER

PIPE TOOL POWER DRIVES

RIDGID



"400"

Turns the pipe for your hand pipe tools. A real work saver. Easily portable. Bolts to bench or sets up as a stand.

Rugged alloy case. Ridgid patented speed chuck with replaceable insert jaws, rocker action. Self-centering work holder in rear that turns with pipe. Sealed in lubrication. Universal motor, $\frac{1}{2}$ horsepower, forward or reverse. Operates on A. C., 110 volts, 25-60 cycle.

Capacity: **$\frac{1}{8}$ to 2-inch Pipe— $\frac{1}{4}$ to $1\frac{1}{2}$ -inch Bolts****With Steel Legs****Tray and Fittings****Dimension:**

Height over all 42 inches. Height from floor to center of chuck $37\frac{1}{4}$ inches. Height from floor to top of tray 24 inches. Length of tray $20\frac{1}{2}$ inches. Width of tray, at front 24 inches, at rear $20\frac{1}{2}$ inches. Spread of legs, at front 46 inches, at rear $29\frac{1}{2}$ inches, from front to rear 48 inches.

Each **$\frac{1}{2}$ 400A with kit "C"—G X305D00**

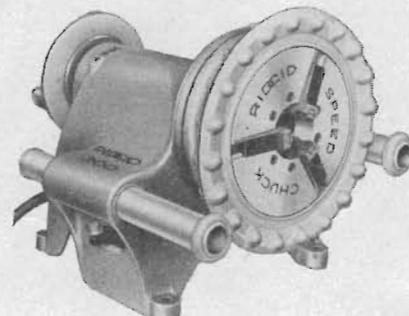
Packed in two ctns. Wt. ctns. 183 lbs.

Without Legs, Tray or Fittings

Height $12\frac{1}{2}$ inches. Width: front $19\frac{3}{4}$ inches, rear $17\frac{5}{8}$ inches. Length $21\frac{1}{2}$ inches.

Each **$\frac{1}{2}$ 400A-G X285D00**

One in ctn. Wt. ctn. 152 lbs.



"300"

Heavy Duty— $\frac{1}{8}$ to 2-Inch Capacity

One-piece lightweight cast aluminum housing. One-piece all-metal handwheel. Steel tubing centerless ground drive shaft. Full size main bearings with grease fittings. Heat treated hardened gears.

Ridgid patented speed chuck with replaceable insert jaws—rocker action. 3-jaw, universal type rear centering device turns with chuck. Two heavy duty sliding tool support bars.

Heavy duty, universal, reversible motor develops up to $1\frac{1}{2}$ H.P.—longer commutator, easily removed, large brushes. Heavy duty, bump-proof switch with protected switch lever and positive stop between forward and reverse. 15-foot oil-resisting power cord.

One gallon Ridgid cutting oil and two Allen wrenches included.

Capacity **$\frac{1}{8}$ to 2-inch Pipe and Conduit.** **$\frac{1}{4}$ to 2-inch Bolts and Rod.** **$2\frac{1}{2}$ to 12-inch Pipe (with Auxiliary Equip.)****115-120 Volts, 25-60 Cycles,****Single Phase, AC-DC****(Specify with or without stand)**

Each	Wt., lbs.
With Stand (Integral Folding Tray and Legs)	

$\frac{1}{2}$300-G X226D50	128
--	-----

Without Stand

$\frac{1}{2}$300-G X199D50	100
--	-----

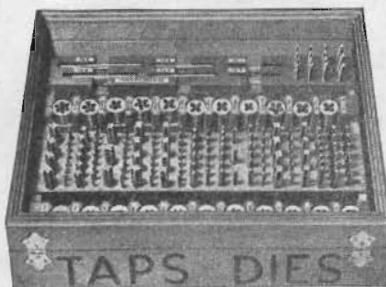
One in ctn.

Items marked **$\frac{1}{2}$** not carried in stock. Can only be furnished by shipping direct from factory. F. O. B. Elyria, Ohio. Freight allowed on 100 lbs.

STAR ★ DENOTES BEST SELLER

TAP AND DIE DISPLAY

ACE SELF SELLER



Contains an assortment of popular sizes of taps, dies, screw extractors, die stocks and tap wrenches.

Attractively and efficiently displayed in a hinged glass cover cabinet with storage compartment in the back with hinged door for extra stock. Practically dust-proof. Counter space required 18x13 inches.

All made of carbon steel. Solid dies, 1 inch O.D. Well made and will give excellent service.

Consists of:

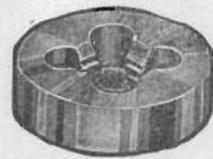
Quantity	Taps	▲Each	Size	Quantity	Dies	▲Each
6	\$0.35		4x36	3	\$0.49	
6	.35		4x40	3	.49	
6	.35		5x40	3	.49	
6	.35		6x32	4	.49	
6	.35		8x32	4	.49	
6	.40		10x24	3	.49	
6	.40		10x32	3	.49	
4	.40		12x24	3	.49	
3	.40		14x20	3	.49	
5	.45		1/4x20	4	.49	
4	.55		5/16x18	3	.49	
4	.65		3/8x16	3	.49	
3	.70		7/16x14	3	.49	
3	.85		1/2x13	3	.49	
4	.40		5/16x32	3	.49	
4	.45		1/4x28	3	.49	
4	.55		5/16x24	3	.49	
4	.65		3/8x24	3	.49	
3	.70		7/16x20	3	.49	
3	.85		1/2x20	3	.49	
4	.64		1/8 Pipe	3	.49	
4	.82		1/4 Pipe	2	.55	

Quantity	Nos.	Items	▲Each
2	9	Die Stocks	\$0.70
1	25	Die Stocks	2.50
3	1E	T Tap Wrenches	.60
1	1 1/2E	T Tap Wrenches	.85
2	2E	T Tap Wrenches	1.10
3	21	Tap and Reamer	.75
2	88	Tap Wrenches	2.50
4	2	Screw Extractors	.30
4	3	Screw Extractors	.35
4	4	Screw Extractors	.40
3	5	Screw Extractors	.45
195 Tools			
Each			▲Each
FX-196-G	X61D94		\$103.24
One in ctn. Wt. ctn. 32 lbs.			

OPEN STOCK

For Ace Tap and Pipe Displays

SOLID ROUND DIES



Good quality steel, diameter 1 inch outside. American National threads. Right hand thread. Will cut a clean thread and give excellent service.

Non-Adjustable

National Coarse Thread

Each		Cutting Size, in.	Threads per inch	Weight Box, ozs.	▲Each
F9109G	D2C9★	3/16	24	5 1/2	\$0.49
F9110G	D2C9★	1/4	20	5	.49
F9111G	D2C9★	5/16	18	5	.49
F9112G	D2C9★	3/8	16	4 1/2	.49
F9113G	D2C9★	1/2	14	4	.49
F9114G	D2C9	1/2	13	4	.49
Six in box					

National Fine Thread

Each		Cutting Size, in.	Threads per inch	Weight Box, ozs.	▲Each
F9102G	D2C9	3/16	32	5 1/2	\$0.49
F9103G	D2D9★	1/4	28	5	.49
F9104G	D2C9★	5/16	24	5	.49
F9105G	D2C9★	3/8	24	4 1/2	.49
F9106G	D2C9	1/2	20	4	.49
F9107G	D2C9★	1/2	20	4	.49
F9108G	D2C9★	1/2	24	4	.49
Six in box					

Machine Screw Sizes

Each		Basic Diam., in.	Threads per inch	Weight Box, ozs.	▲Each
F9117G	D2C9	.112	36	6	\$0.49
F9118G	D2C9★	.138	32	6	.49
F9119G	D2C9★	.164	32	6	.49
F9120G	D2C9★	.190	24	6	.49
F9121G	D2C9★	.190	32	5 1/2	.49
F9122G	D2C9	.216	24	5 1/2	.49
F9123G	D2C9	.242	20	5 1/2	.49
Six in box					

SOLID ROUND PIPE DIES



Good quality steel, diameter 1 inch outside. Right hand thread. Will cut a clean thread and give excellent service.

Non-Adjustable

N.P.T. Tapered Thread (APD)

Each		Cutting Size, in.	Threads per inch	Weight Box, ozs.	▲Each
F9115	D2C9★	1/8	27	5	\$0.49
F9116	D3C3★	1/4	18	5	.55
Six in box					

HAND PLUG TAPS



High carbon alloy steel, heat treated. Clean accurate threads. American National thread form. Right hand threads.

National Coarse Thread

Each		Cutting Size, in.	Threads per in.	Weight Box, ozs.	▲Each
F8589G	D2C4★	3/16	24	2 1/2	\$0.40
F8590G	D2C7★	1/4	20	3	.45
F8591G	D3C3★	5/16	18	4	.55
F8592G	D3C9★	3/8	16	6	.65
F8593G	D4C2	7/16	14	9	.70
F8594G	D5C1	1/2	13	12	.85
Six in box					

National Fine Thread

Each		Cutting Size, in.	Threads per inch	Weight Box, ozs.	▲Each
F8555G	D2C4★	3/16	32	2 1/2	\$0.40
F8556G	D2C7★	1/4	28	3	.45
F8557G	D3C3★	5/16	24	4	.55
F8558G	D3C9★	3/8	24	6	.65
F8559G	D4C2	7/16	20	9	.70
F8560G	D5C1	1/2	20	12	.85
F8561G	D5C1	1/2	24	9	.85
Six in box					

STAR ★ DENOTES BEST SELLER

OPEN STOCK

For Ace Tap and Die Displays

MACHINE SCREW TAPS



American National thread form. Right hand threads.

National Coarse Threads
(AMS)

Each		Screw, ins.	Threads to inch	Diam., in.	Length, 1 $\frac{1}{2}$ inches	Weight Box, ozs.	▲Each
Each	F8562G	D2C1	4	.36	.112	1 $\frac{1}{2}$	\$0.35
	F8563G	D2C1★	6	.32	.138	2	.35
	F8564G	D2C1★	8	.32	.164	2 $\frac{1}{2}$	.35
	F8565G	D2C4★	10	.24	.190	2 $\frac{1}{2}$	.40
	F8567G	D2C4	10	.32	.190	2 $\frac{1}{2}$	.40
	F8566G	D2C4	12	.24	.216	2 $\frac{1}{2}$	.40
	F8568G	D2C4	14	.20	.242	2 $\frac{1}{2}$	.40

Six in box

PIPE TAPS



American National thread form. Right hand thread.

N. P. T. Tapered Thread
(HPT)

Each		Pipe, in.	Threads per inch	Weight Box, lbs.	▲Each	
Each	F8606G	D3C8★	1/8	27	3/4	\$0.64
	F3607G	D4C9	1/4	18	1 1/2	.80
	F8608G	D6C0	3/8	18	2	1.00
	F8609G	D9C0	1/2	14	3 1/2	1.51

Twelve in box

SCREW EXTRACTORS



For quick and easy removal of broken set and cap screws, studs, stay bolts, pipe fittings, etc.

Scientifically treated tough alloy steel. Practically unbreakable.

Each		Diam. Shank, in.	Point	Size Drill	Length, inches	Weight Box, ozs.	▲Each
Each	F8549G	D1C8★(A2)	3/16	.080	No. 35	2 3/8	\$.30
	F8550G	D2C1★(A3)	1/4	1/8	5/32	2 11/16	.35
	F8551G	D2C4★(A4)	5/16	3/16	7/32	2 1/8	.40
	F8552G	D2C7★(A5)	7/16	1/4	19/64	3 3/8	.45

Twelve in box

DIE STOCKS



Drop forged. Without guides. Rugged construction for long service.

Length over all 9 inches. Holds dies 1 inch diameter outside. Threading range No. 6 to 1/2 inch.

(9)

Each	F7792G	D4C2★	▲Each
			\$0.70

Twelve in box. Wt. box 4 1/2 lbs.



Drop forged steel. With adjustable guide for the full range. Nickel plated. Holds dies 1 inch outside diameter. Threading range 1/4 to 3/4 inch. Length over all 10 inch.

(25)

Each	F7790G	X1D50	▲Each
			2.50

Twelve in box. Wt. box 7 lbs.

TAP WRENCHES



High quality steel throughout. Nickel plated body and blued nuts. Sliding T handle with spring tension to hold handle in any desired position. Knurled sleeve.

Each		Tap Size	Lgth., ins.	Weight Box, lbs.	▲Each	
Each	F8251G	D3C6 (0E)	0 to 8	2 1/4	1 1/2	0.60
	F8252G	D3C6★ (1E)	0 to 10	2 3/8	5	.60
	F8253G	D5C1★ (1 1/2 E)	12 to 5/16 in.	2 7/8	1 1/2	.85
	F8254G	D6C6 (2E)	1/4 to 1/2 in.	3 1/2	5	1.10

Twelve in box



Cadmium plated carbon steel. Straight handle. Will hold taps or reamers from 3/16 to 5/8 inch. Length 7 1/2 inches.

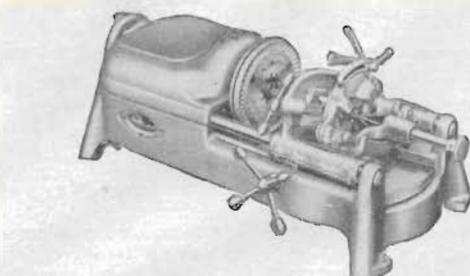
(21)

Each	F8257G	D4C5★	▲Each
			\$0.75

Twelve in box. Wt. box 4 1/2 lbs.

PIPE AND BOLT THREADING MACHINES

RIDGID



No. 500-A



On Wheel Stand

Compact Pipe Workshop
Threads—Cuts—Reams
Capacity, $\frac{1}{8}$ to 2 inch Pipe, $\frac{1}{4}$ to 2 inch Bolts
Wrenchless Speed Chuck

Positive grip holds pipe, conduit or rod without slipping—forward or reverse. Quick-opening die heads adjust to size right in machine. Threading, cutting and reaming operate independently of each other and swing out of way when not in use. Short pipe can be chucked from front. Efficient right-hand, lathe-type operation and easy-to-read length gauge give fast, accurate tool control.

BENCH MODEL WITH STANDARD EQUIPMENT

Without Die Heads, Dies or Stand
Equipment Includes:

Roller-type cut-off with self-centering full-floating cutter— $\frac{1}{8}$ to 2 inch capacity. Five-Flute cone reamer— $\frac{1}{8}$ to 2 inch capacity. Universal type single phase, $\frac{1}{2}$ H. P. Motor, reversible at switch, 25-60 cycle, A. C. or D. C. 15-foot Oil resistant cord—Plugs into any light socket. Reversible vane-type pump. Lathe-type adjusting handle to move carriage and gauge. Three Allen type wrenches. One tube grease. Three gallons Ridgeoil. One extra cutter wheel.

Each

X500A-G X450D00

One in crate. Wt. crate 315 lbs.

ACCESSORIES FOR NO. 500A MACHINE

How to Figure Price on Complete Machine

The No. 500A machine listed is a bench model with **standard equipment** as described but **without die heads, dies, stand or other accessory**.

For complete machine select and order **die heads, dies and stand** from listings below and **Add to price of No. 500A machine**.

NOTE—Show department letter "G" on all orders.

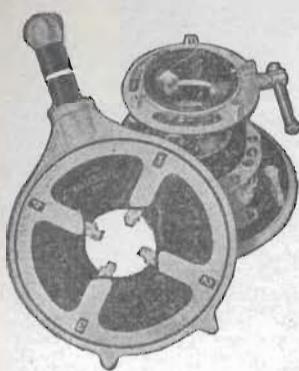
PIPE LEG STANDS		Wt. lbs.	DUAL DIE HEADS (LESS DIES)		BOLT DIE HEADS (LESS DIES)
Per Kit	Set of 4 Legs Only		Each	$\frac{1}{4}x\frac{3}{8}$ in. X21D85	
X-L-1-G X8D50	Stand with Tray	17	$\frac{1}{2}x\frac{3}{4}$ in. X21D85	DUAL PIPE DIES	Each
X-2-T-G X22D50	Stand with Tray and Two 16 inch Steel-Rimmed Wheels	37	Per Set	$\frac{1}{4}x\frac{3}{8}$ in., R.H. X7D15	Small (1/4 to 1 inch) X25D40
X-3-S-G X33D00	Stand with Tray and Two 16 inch Rubber-Tired Wheels	63		$\frac{1}{2}x\frac{3}{4}$ in., R.H. X7D15	Large (1/8 to 2 inch) X25D40
X-4-R-G X41D00	QUADRI DIE HEADS (LESS DIES)	66		$\frac{1}{4}x\frac{3}{8}$ in., R.H. X7D15	BOLT DIES
Each	Adjustable for 1, 1 1/4, 1 1/2, 2 inch pipe			$\frac{1}{2}x\frac{3}{4}$ in., R.H. X7D15	(Specify Size)
X-RH or LH X29D20	QUADRI PIPE DIES			MONO DIE HEADS (LESS DIES)	Per Set
Per Set				9 Sizes, $\frac{1}{8}$ to 2 inch	N.C. (USS) or N.F. (SAE) 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 1/8 or 1 1/2 inch X8D80
X-RH X8D80				(Specify Size)	X-N.C. (USS) 1 1/4, 2 in. X11D00
X-LH X15D00					High Speed X13D20
X-RH High Speed X13D20					LH (Alloy Steel) X15D00
X-LH High Speed X17D50					LH (High Speed) X17D20
					5 1/2 TP1 (Disc. USS 1 1/8 in.) X15D40
					American National (Alloy Steel)
					8TP1, 1 1/8—2 1/2 inch X15D40
					12TP1, 1 1/2—2 1/2 inch X15D40
					16TP1, 1 1/16—2 1/2 inch X15D40

Conduit Dies available same price as R.H. Pipe Dies.

Items marked **X** not carried in stock. Can only be furnished by shipping direct from factory. Full Freight allowed on 100 lbs. or more excluding oil. F. O. B. Elyria, Ohio.

PIPE THREADING TOOLS

RIDGID



Self Contained Die Stocks

Cut perfect threads on iron, steel, brass or copper pipe and conduit. One set of dies. Closed chaser slots on die face can't stretch. Pull of handle directly over chasers, no cock or wobble. Thumb lever releases dies for quick back-off. Handy stand-up feet. No bushings. Automatic cam type work holder.

Rugged steel and malleable construction with drop forged hardened steel cam plate work holder. Chaser dies of high speed steel are precision cut.

Adjustable to 1, 1 1/4, 1 1/2 and 2 inch pipe.

Ratchet with cam type work holder.

Length over all 32 inches.

Each
F7815G (65RC) X48D00.....\$72.00
One in ctn. Wt. ctn. 23 lbs.



Handy ratchet dies that save time and work.

Steel ratchet head and handle with convenient carriers. Rugged steel and malleable dies. Separate set of steel chaser dies quickly removed for regrinding or reversed for close to wall threads.

With Exposed Ratchet

Die heads lock in or release by pull of ratchet knob.

For 1/4, 3/8, 1/2, 3/4 and 1 inch pipe. Length over all 22 1/4 inches.

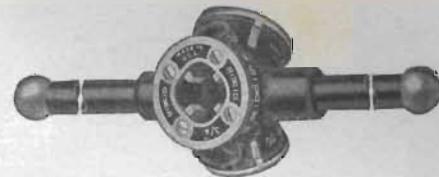
Each
F7798G (00R) X32D30.....\$48.50
One in ctn. Wt. ctn. 11 1/4 lbs.

For 1/2 and 3/4 inch pipe. Length over all 22 1/4 inches.

Each
F7799G (00R2) X15D00★.....\$22.00
One in ctn. Wt. ctn. 8 lbs.

For 1/2, 3/4, 1 and 1 1/4 inch pipe. Length over all 27 1/2 inches.

Each
F7818G (111R) X30D80★.....\$46.25
One in ctn. Wt. ctn. 21 1/4 lbs.



Three Way

Convenient compact threaders with alloy steel chaser dies, quickly removed for regrinding or reversed for close to wall threads.

Each die head on center and handles projecting from either side, produces a perfectly balanced tool.

Strong steel and malleable construction. High Speed steel chaser dies, precision cut.

For	Weight
Pipe, in.	Ctn., lbs. Each
Each	Each
F7857G (R31A) X18D95	1/2, 3/4, 1 11
One in ctn.	\$28.50

PIPE DIES

RIDGID

Alloy Steel

Set consists of four segments.

Per Set	Size, ins.	Will Fit Nos.	Weight Box, ozs.	Per Set
F8972G (R1/2) X3D95	1/2	00R, 11R, 0R, 11R, 30A, 31A	2 1/2	\$5.95

One set in box.

Alloy Steel

Set consists of four segments

Per Set	Size, ins.	Will Fit Nos.	Weight Box, ozs.	Per Set
F8973G (R3/4) X3D95	3/4	00R, 11R, 0R, 11R, 30A, 31A	2 1/2	\$5.95
F8974G (R1) X4D75	1	00R, 11R, 0R, 11R, 31A	4	7.15

One set in box.

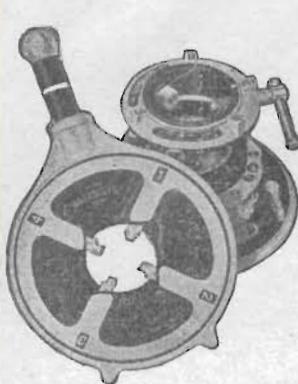
High Speed Steel

For No. 65RC Pipe Threading Tools

Set consists of four segments.

PIPE THREADING TOOLS

RIDGID



Self Contained Die Stocks

Cut perfect threads on iron, steel, brass or copper pipe and conduit. One set of dies. Closed chaser slots on die face can't stretch. Pull of handle directly over chasers, no cock or wobble. Thumb lever releases dies for quick back-off. Handy stand-up feet. No bushings. Automatic cam type work holder.

Rugged steel and malleable construction with drop forged hardened steel cam plate work holder. Chaser dies of high speed steel are precision cut.

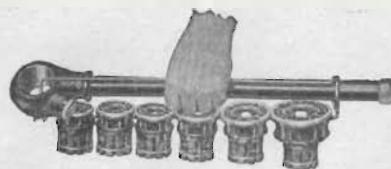
Adjustable to 1, 1 1/4, 1 1/2 and 2 inch pipe.

Ratchet with cam type work holder.

Length over all 32 inches.

Each
F7815G (65RC) X48D00.....\$72.00

One in ctn. Wt. ctn. 23 lbs.



Handy ratchet dies that save time and work.

Steel ratchet head and handle with convenient carriers. Rugged steel and malleable dies. Separate set of steel chaser dies quickly removed for regrinding or reversed for close to wall threads.

With Exposed Ratchet

Die heads lock in or release by pull of ratchet knob.

For 1/4, 3/8, 1/2, 3/4 and 1 inch pipe. Length over all 22 1/4 inches.

Each
F7798G (00R) X32D30.....\$48.50
One in ctn. Wt. ctn. 11 1/4 lbs.

For 1/2 and 3/4 inch pipe. Length over all 22 1/4 inches.

Each
F7799G (00R2) X15D00★.....\$22.00
One in ctn. Wt. ctn. 8 lbs.

For 1/2, 3/4, 1 and 1 1/4 inch pipe. Length over all 27 1/2 inches.

Each
F7818G (111R) X30D80★.....\$46.25
One in ctn. Wt. ctn. 21 1/4 lbs.



Three Way

Convenient compact threaders with alloy steel chaser dies, quickly removed for regrinding or reversed for close to wall threads.

Each die head on center and handles projecting from either side, produces a perfectly balanced tool.

Strong steel and malleable construction. High Speed steel chaser dies, precision cut.

	For Pipe, in.	Weight Ctn., lbs. Each
F7857G (R31A) X18D95 1/2, 3/4, 1	11	\$28.50
One in ctn.		

PIPE DIES

RIDGID

Alloy Steel

Set consists of four segments.

Per Set	Size, ins.	Will Fit Nos.	Weight Box, ozs.	Per Set
F8972G (R1/2) X3D95	1/2	00R, 11R, 0R, 11R, 30A, 31A	2 1/2	\$5.95

One set in box

Alloy Steel

Set consists of four segments

Per Set	Size, ins.	Will Fit Nos.	Weight Box, ozs.	Per Set
F8973G (R3/4) X3D95	3/4	00R, 11R, 0R, 11R, 30A, 31A	2 1/2	\$5.95
F8974G (R1) X4D75	1	00R, 11R, 0R, 11R, 31A	4	7.15

One set in box

High Speed Steel
For No. 65RC Pipe Threading Tools

Set consists of four segments.

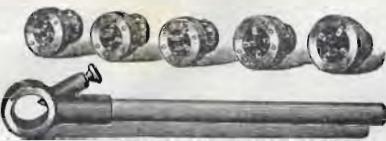
Per Set	Per Set
F8938G (65/12) X5D95	\$8.95

One set in box. Wt. box 1/2 lb.

STAR ★ DENOTES BEST SELLER

PIPE THREADING TOOLS

TOLEDO



Carbon Steel

Ratchet

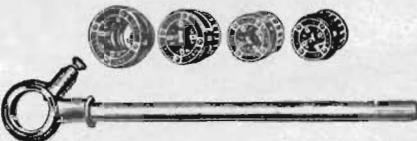
A small compact threader, consisting of ratchet handle for holding a series of die heads. Head includes a ratchet gear that forms a bushing for the size of pipe being threaded; cuts standard size threads of full taper, accurately and without undue effort. Complete outfit includes die heads, for threading pipe; to change from one size to the other, simply pull on the pawl button, allowing one head to drop out and another to be inserted.

Ratchet stock with 5 die heads for threading pipe $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{5}{8}$ inch; length over all 16 $\frac{1}{2}$ inches; diameter of die heads 2 $\frac{1}{8}$ inches.

Per Set

F7859G (T00) X32D95.....\$49.42

One set in ctn. Wt. ctn. 9 $\frac{1}{2}$ lbs.



Carbon Steel

Ratchet

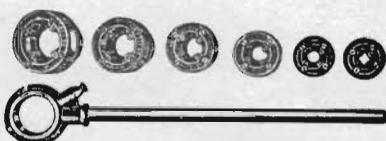
A small compact threader, consisting of ratchet handle for holding a series of die heads. Head includes a ratchet gear that forms a bushing for the size of pipe being threaded; cuts standard size threads of full taper, accurately and without undue effort. Complete outfit includes die heads, for threading pipe; to change from one size to the other, simply pull on the pawl button, allowing one head to drop out and another to be inserted.

Ratchet stock with 4 die heads for threading pipe $\frac{1}{2}$, $\frac{3}{4}$, 1 and 1 $\frac{1}{4}$ inch; length over all 24 inches; diameter of die heads 2 $\frac{1}{2}$, 3 $\frac{1}{4}$, 3 $\frac{5}{8}$ inches.

Per Set

F7860G (T11) X32D65★.....\$49.00

One set in ctn. Wt. ctn. 13 lbs.



Carbon Steel

Ratchet, 1/2 inch to 2 inch Capacity

Light and compact and reaches the difficult corner jobs; threads pipe easily and produces perfect taper threads.

Die heads are changed instantly by pulling the ratchet pawl knob; die segments can be removed when dull and be easily reground or replaced.

Complete tool consists of the ratchet handle, $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{4}$, 1 $\frac{1}{2}$ and 2 inch die heads with dies; length over all 28 $\frac{1}{2}$ inches.

Per Set

FX-T12-G X63D20★.....\$94.80

One set in ctn. Wt. ctn. 26 $\frac{1}{4}$ lbs.

PIPE THREADING TOOLS

TOLEDO

Carbon Steel

EXTRA DIES

Set consists of four segments—WILL NOT BREAK SETS.

(TD)

Per Set		Size, ins.	Will Fit Stock No.	Wt. Box, lbs.	Set
F8999G	X4D20	$\frac{3}{8}$	T00, T11, T12, T30	$\frac{1}{8}$	\$6.30
F9000G	X4D20	$\frac{1}{2}$	T00, T11, T12, T30, T31	$\frac{1}{8}$	6.30
F9001G	X4D20	$\frac{3}{4}$	T00, T11, T12, T30, T31	$\frac{3}{16}$	6.30

One set in box

EXTRA DIES

Carbon Steel

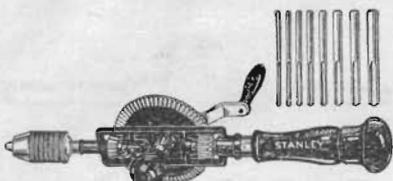
For Nos. T1A and T1R—Set consists of four segments. Will not break sets.

Per Set		Size, in.	Per Set
F9007G	(EDT1A1)	X4D30	1 $\frac{1}{4}$ \$6.45

Loose. Wt. set $\frac{3}{8}$ lb.

HAND DRILLS

STANLEY

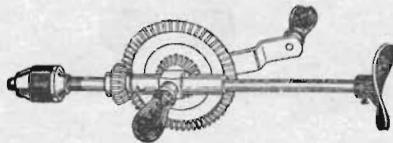


One Speed

Malleable iron black enameled frame. Solid steel orange enameled large gear, with cut gears. Steel drive pinion and equalizer idler pinion. Steel nickel plated crank. Black enameled tropical wood handles and removable knob. Hollow end handle with screw cap for drill points. Nickel plated ferrules. Bright finish knurled steel $\frac{3}{8}$ -inch chuck with three jaws for round shanks. Length $13\frac{1}{2}$ inches.

Complete with 8 drill points, $\frac{1}{16}$ to $\frac{1}{4}$ inch.
Each ▲ Each
F5953G (624) X7D00 \$10.50
One in box. Wt. box $2\frac{1}{2}$ lbs.

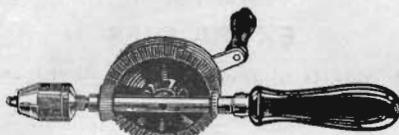
STANLEY DEFIANCE



Three-jaw chuck takes round shank drills up to $\frac{1}{2}$ -inch. Steel frame. Machine cut gear and pinion. Natural color handles. Bright red gear and breast plate and bright steel parts.

Two speeds, high and low, are quickly changeable. Length 16 inches.
Each ▲ Each
F5960G (1247 $\frac{1}{2}$) X6D20 \$9.30
One in box. Wt. box $4\frac{1}{2}$ lbs.

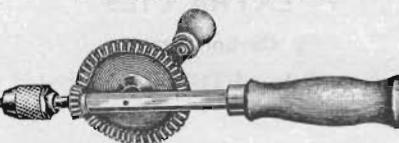
STANLEY DEFIANCE



Solid gray iron wide flange gear and two steel pinions with machine cut teeth. All steel frame. Three-jaw steel chuck, $\frac{1}{4}$ -inch capacity. Natural color solid handles. Steel parts nickel plated with polished chuck and red gear. Length 11 $\frac{1}{2}$ inches.

Each ▲ Each
F5959G (1221) X2D63 \$3.95
One in box. Wt. box $1\frac{1}{4}$ lbs.

STANLEY HANDYMAN

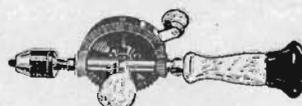


Hexagon steel frames. Smooth running gears and single pinions. Three-jaw chucks with $\frac{1}{4}$ -inch capacity. Natural color hardwood handles and knobs. Red gears. Bright steel parts. Length 12 inches.

Solid Handle and Knob

Each ▲ Each
F5957G (H1214) X2D00★ \$2.98
One in box. Wt. box $1\frac{1}{8}$ lbs.

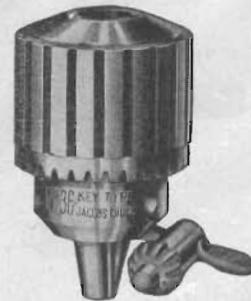
STANLEY HANDYMAN



Solid gray iron wide flange, gear and two steel pinions with machine cut teeth. All steel frame. Three-jaw steel chuck, $\frac{1}{4}$ -inch capacity. Natural wood color knobs and hollow handle with large red screw cap and eight drill points. Steel parts nickel plated with polished chuck and red gear. Length 11 $\frac{1}{2}$ inches.

With Eight Drill Points

Each ▲ Each
F5958G (H1220) X3D29★ \$4.95
One in box. Wt. box $1\frac{1}{4}$ lbs.

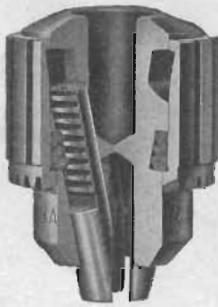


JACOBS CHUCKS

These chucks are designed to meet varied requirements of modern machine practice. They can be used for drilling machines and portable drills and by means of threads, arbors and adapters for work and tool holding on lathes, grinders, milling and other metal and woodworking machines.

Hardened steel body, accurately machined, milled and heat treated for increased strength and wearing qualities. All parts practically unbreakable.

The new method of thread generation assures increased grip and faster generation. Jaws are easily opened and closed by key.



(Showing Interior Construction)

Light Duty Models—Key Type

Plain bearing correctly balanced for sensitive drilling.

For Threaded Spindles

Each	Capacity, ins.	No. of Taper Hole	Length Over All, ins.	Diam., ins.	Wt. Box, lbs.	▲ Each
(B)						
F6455G X5D90★	0 to $\frac{1}{4}$	{ $\frac{3}{8}$ in. } (24 Thread)	1 $\frac{1}{8}$	3 $\frac{3}{16}$	$\frac{1}{4}$	\$8.85
(33B)						
F6464G X7D90	$\frac{5}{16}$ to $\frac{1}{2}$	{ $\frac{1}{2}$ in. } (20 Thread)	2 $\frac{1}{16}$	1 $\frac{13}{16}$	1	11.85
One in box						

CHUCK KEYS

For Jacobs Chucks

Each	For Chuck Nos.	▲ Each
F6444G	D4C0 (JK0) 0.....	\$0.60
F6445G	D4C0★ (JK1) 1, 1A, 1B, 1BB, 1BS.....	.60
F6446G	D5C8 (JK2) 2, 2A, 2B, 2AD.....	.87
F6447G	D6C7 (JK3) 3, 3A, 3B, 3AE, 6, 6A-2A, 6A-33, 6B, 6AE, 14, 34, 34B, 54B, 55B, 56B, 58B.....	1.00
F6448G	D8C4 (JK4) 4, 16, 18, 36, 36B, 59B.....	1.25
F6450G	D4C9 (JK7) 7, 7B, 7-1A, 7D, 7BB, 255.....	.74
F6451G	D5C4 (JK30) 8 $\frac{1}{2}$, 30, 30B, 30BB, 30-1A, 30D, 31BB.....	.81
F6452G	D5C8 (JK32) 9, 11, 32, 32B, 32BB, 33, 33B, 33BB, 381.....	.87
Loose		

DRILL CHUCKS

JACOBS



Rubber-Flex Hex-Key

Threaded Model

Designed especially for popular priced tools.

Hardened steel body, accurately machined, milled and heat treated. Threaded body which screws into a threaded hole in the spindle. Rubber-flex collet. Rugged one piece construction. Toggle like self tightening action. Nickel molybdenum alloy steel jaws, internally ground after moulding.

Specifications:

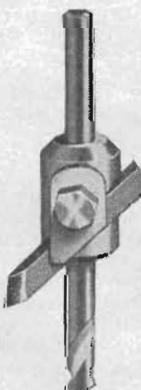
Nos.	For Drill Nos.	Holds Drill, Diam. in.	Thread Diam. in.	Dimen- sions	Length, in. Open Close
F6471G- 6141	HU1-518	0 to $\frac{1}{4}$	1 $\frac{1}{8}$	$\frac{3}{8}$ x24	2 $\frac{1}{16}$ 1 $\frac{1}{4}$

D3C3 $\frac{1}{4}$ % Each	Weight Box, lbs.	▲ Each
F6471G X2D27 (6141)	4	\$3.40

One in box

HOLE CUTTERS

CLARK



Hardened steel lug with hexagon head bolt for securing blade.

Adjustable

Round Shank

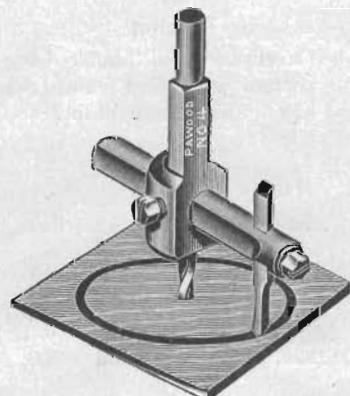
For electric drills, drill presses, portable motor and hand drills.

Each	Cut Holes (100)	Thickness in. (100)	Capacity in. Metals, in.	Shank and Pilot Drill Size, in.	Length, inches	Wt. Box, ozs.	▲ Each
F6000G X3D00★	5 $\frac{1}{2}$ to 1 $\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	4	3	\$4.50
F6002G X3D83★	1 to 2 $\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	5	9	5.75

Note—Deeper holes can be cut in plastics, wood and compressed materials.

CIRCULAR CUTTERS

GENERAL



Adjustable

For cutting round holes in sheet steel, brass plastic, wood, etc.

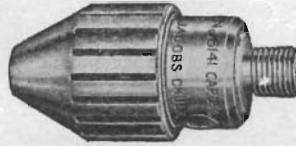
Sturdy construction. Combination square and $\frac{1}{4}$ inch round shank. Cuts holes from $\frac{1}{8}$ to 4 inches diameter.

Each	▲ Each
F5999G (4) X1D42★.....	\$2.34

One in box. Wt. box $\frac{1}{2}$ lb.

DRILL CHUCKS

JACOBS

Rubber-Flex Hex-Key
Threaded Model

Designed especially for popular priced tools. Hardened steel body, accurately machined, milled and heat treated. Threaded body which screws into a threaded hole in the spindle. Rubber-flex collet. Rugged one piece construction. Toggle like self tightening action. Nickel molybdenum alloy steel jaws, internally ground after moulding.

Specifications:

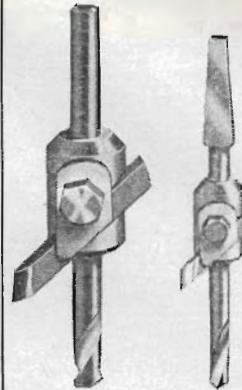
For Nos.	Drill Nos.	Holds Drill, in.	Thread Diam. in.	Dimen- sions	Length, in. Open Close
F6471G-		0 to $\frac{1}{4}$	$1\frac{1}{8}$	$\frac{3}{8} \times 24$	$2\frac{1}{16}$ $1\frac{1}{8}$
6141	HU1-518				

D3C3 $\frac{1}{3}\%$ Each		Weight Box, lbs.	▲ Each
F6471G	X2D27 (6141)	4	\$3.40

One in box

HOLE CUTTERS

CLARK

Round Shank Square Bit
Stock Shank

Hardened steel lug with hexagon head bolt for securing blade.

Adjustable

Round Shank

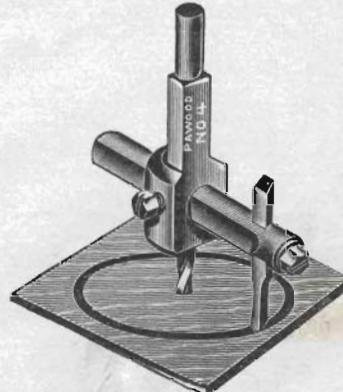
For electric drills, drill presses, portable motor and hand drills.

Each	Cut Holes, (100)	Thickness Capacity in Metals, in.	Shank and Pilot Drill Size, in.	Length, inches	Wt. Box, ozs.	▲ Each
F6000G X3D00★	$\frac{5}{8}$ to $1\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{4}$	4	3	\$4.50
(101)						
F6002G X3D83★	1 to $2\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	5	9	5.75

Note—Deeper holes can be cut in plastics, wood and compressed materials.

CIRCULAR CUTTERS

GENERAL



Adjustable

For cutting round holes in sheet steel, brass, plastic, wood, etc.

Sturdy construction. Combination square and $\frac{1}{4}$ inch round shank. Cuts holes from $\frac{3}{8}$ to 4 inches diameter.

Each	▲ Each
F5999G (4) X1D42★.....	\$2.34

One in box. Wt. box $\frac{1}{2}$ lb.

EXPANSIVE BITS

KEEN KUTTER



Stem and Head One Piece Solid Forging

Forged from the highest grade tool steel. Specially oil tempered. Head and cutters sharpened and finished by hand. Single thread on screw for quick, easy starting. Cutter is held securely by top plate and screw and is accurately adjusted by screw on side. Full polished finish. Complete with two cutters.

Each	Size (KCS)	Cuts 1/8 to 1 1/4	Wt. lbs.	Wt. lbs.	Wt. lbs.
F6029GK X2D27★	Small	5/8 to 1 1/4	3/8	\$3.40	
F6028GK X2D55★	Large	1/8 to 3	3/4	3.80	

One in box

EXTRA CUTTERS

Each	For Nos.	Cuts ins.	Each
F6049GK D5C7 (KC1)	KCS	5/8 to 1 1/8	\$0.90
F6051GK D6C7 (KC2)	KCS	1 1/8 to 1 1/4	1.00
F6053GK D8C0 (KC3)	KCL	7/8 to 1 1/4	1.25
F6055GK D8C7 (KC4)	KCL	1 1/4 to 3	1.30

Twelve in box. Wt. box 1/2 lb.

SHAPLEIGH'S



CLARK'S PATTERN

Forged steel. Full polished. Cutters are interchangeable, with all properly made Clark Pattern Bits.

Small size. With cutters No. 01 and 02. Cutters cut 1/2 to 1 1/2 inches.

Each	Each
F3333G X1D80★	\$2.70

Twelve in box. Wt. box 3 lbs.

Large size. With cutters Nos. 03 and 04. Cutters cut 1/8 to 3 inches.

Each	Each
F3332G X2D15★	\$3.25

Twelve in box. Wt. box 9 lbs.

CONNECTICUT VALLEY



The Hobbyist

Diamond point for centering.

Equi-spaced flats on shank provide firm contact with jaws on chuck to prevent slippage.

Contains:

No. 1, or Small Cutter—Bores holes 1/2 to 7/8 inch diameter.

No. 2, or Large Cutter—Bores holes 7/8 to 1 1/2 inch diameter.

For best results use in drills with 1/3 H.P. Cutters are kept sharp with any 1/2 inch round 2nd. cut file. Overall length 6 1/4 inches.

Size Range 1/2 to 1 1/2 inch

Diameter of Shank—1/4 inch

Each	Each
F5972G X2D15	(220) \$3.25

One in plastic tube. Twelve tubes in ctn. Wt. ctn. 3 lbs.

EXPANSIVE BITS



Micro-Dial

Micrometer dial adjustment and positive lock device. Drop forged from special bit steel and heat treated full length. All parts carefully machined to within proper tolerances. Cutting edges are machined and sharpened for clean easy boring. Screw points designed with proper pitch, cut clean and sharp for the right pulling power. Fully polished.

Each	Wt. Bore, Lgth., Box, ins. ins. lbs. ▲ Each
F6030G X2D27	5/8 to 1 1/4 7 1/2 3/8 \$3.40
F6031G X2D54★	1/8 to 3 8 1/2 1/16 3.80

One in box

EXTRA CUTTERS

For Micro-Dial Expansive Bits

Each	For Expansive Bit Nos.	Wt. oz. ▲ Each
F6034G D4C4 (21S)	M21	1/2 \$0.66
F6035G D5C5 (22S)	M21	3/8 .82
F6036G D6C2 (23L)	M22	3/8 .92
F6037G D7C7 (24L)	M22	3/4 1.14

Loose

STANLEY HANDYMAN



Simple positive adjustment for size of hole. Wedging action holds cutter firm.

Tempered tool steel body. Two interchangeable hardened tool steel cutters. Tapered square shank with red tang.

Each	Cuts holes 1/8 to 3 inches. (129) ▲ Each
F6069G X2D39	..... \$3.59

One in box. Wt. box 1/2 lb.

EXPANSIVE BITS

CLARK'S



Tool steel. Adjusted by one screw. Cutters are bevel on edge to hold them rigid and prevent slipping. Single thread screw. Carefully ground, sharpened and tempered with two cutters.

MIRROR POLISHED

Small Size

Each	Cutter Cuts, inches	Box, lbs.	Wt. lbs. (P2)
F6033G X1D90	1/2 to 7/8 7/8 to 1 1/2	1/4	\$2.85

Large Size

Each	Wt. (P1)
F6032G X2D30★	1/8 to 1 1/4-1 1/4 to 3 5/8 3.45

One in box

EXTRA CUTTERS

For Nos. F6033G-PZ, F6032-P1, F3333G-B2 and F3332-B1 Expansive Bits.

Each	Cuts, ins. ozs.	Box, Wt. ozs. Each
F6042G D4C4 (CC1)	1/2 to 7/8 1 1/2	\$0.65
F6043G D5C3 (CC2)	1/8 to 1 1/2 2	.80
F6044G D6C0 (CC3)	1/8 to 1 1/4 4	.90
F6045G D7C3 (CC4)	1 1/4 to 3 9	1.10

Twelve in box

ROBERT H. CLARK



Chrome-Moly steel with square shank. Two heat treated chromium vanadium steel blades with easy to read calibrations for quick, accurate adjustments. Standard 1/4-28 heat treated set screw. Self clearing lead screw. Positive lock.

Cuts in hard or soft wood.

Each	Cutter Lgth., Cuts, inches	Box, lbs.	Wt. lbs. (250)
F6024G X2D32	7 3/4 1/2 to 1 1/2	1/4	\$3.49
F6025G X2D58★	8 1/4 1/8 to 3	1/2	3.89

One in box, twenty-four in case

EXTRA CUTTERS

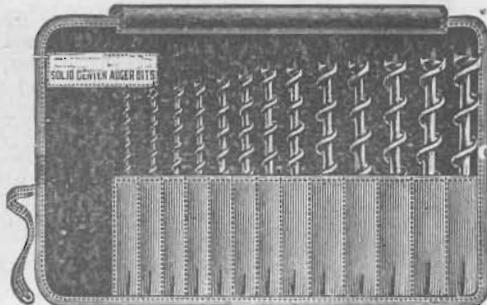
Each	Type Blade	Cut, ins.	Box, ozs. Each
F6041G X1D00 (251S)	Short	1/8 to 1 1/2	1 1/2 1.50
F6040G X1D16 (251L)	Long	1 1/2 to 3	3/4 1.75

Loose

AUGER BITS

IRWIN PATTERN—Solid Center

Forged throughout from one solid piece of highest grade tool steel. Highly polished twist and shank. Natural forged steel finish square. Double cutter extension lip; sizes $\frac{3}{16}$ to $1\frac{1}{16}$. Bit is wrapped in moistureproof cellophane, protecting it against rust. The head is guarded with a natural color cork, assuring the head is not damaged and in perfect cutting condition.



KEEN KUTTER

Sets in Rolls

Handy protective cloth roll of heavy durable black duck, with red binding. Dimensions when closed $11\frac{1}{2}$ inches long, $3\frac{1}{2}$ inches in diameter.

Contains 6 bits, one each 4, 5, 6, 8, 10 and $1\frac{1}{16}$ ths inch.

(KSR116)

Per Set ▲ Per Set

F5993GK X4D90..... \$7.35

One set in roll. Wt. roll 1 lb.

Contains 9 bits, one each 4, 5, 6, 7, 8, 10, 12, 14 and $1\frac{1}{16}$ ths inch.

(KSR9)

Per Set ▲ Per Set

F5991GK X7D70★..... \$11.60

One set in roll. Wt. roll 3 lbs.

Contains 13 bits, one each 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and $1\frac{1}{16}$ ths inch.

(KSR13)

Per Set ▲ Per Set

F5992GK X11D40★..... \$17.15

One set in roll. Wt. roll 4 lbs.



KEEN KUTTER

Straight Sizes

F6112GK-(KS)—Specify Size

Each Size, inch		Av. Lgth. in.	Av. Lgth. Over All. in.	Wt. Box, lbs.	▲ Each
$\frac{4}{16}$	D6C7★	$3\frac{5}{8}$	$7\frac{1}{2}$	$\frac{1}{2}$	\$1.00
$\frac{5}{16}$	D6C7★	$3\frac{1}{2}$	$7\frac{5}{8}$	$\frac{5}{8}$	1.00
$\frac{6}{16}$	D6C7★	$3\frac{5}{8}$	$7\frac{3}{4}$	$\frac{3}{4}$	1.00
$\frac{7}{16}$	D7C0★	$3\frac{3}{4}$	$7\frac{7}{8}$	$\frac{7}{8}$	1.04
$\frac{8}{16}$	D7C2★	$3\frac{7}{8}$	8	1	1.08
$\frac{9}{16}$	D7C5	$3\frac{7}{8}$	$8\frac{1}{8}$	$1\frac{1}{8}$	1.12
$\frac{10}{16}$	D7C8★	4	$8\frac{1}{4}$	$1\frac{1}{4}$	1.16
$\frac{11}{16}$	D8C2	$4\frac{1}{8}$	$8\frac{3}{8}$	$1\frac{1}{2}$	1.22
$\frac{12}{16}$	D8C3★	$4\frac{1}{4}$	$8\frac{1}{2}$	$1\frac{1}{16}$	1.24
$\frac{13}{16}$	D8C8	$4\frac{3}{8}$	$8\frac{5}{8}$	$1\frac{3}{4}$	1.32
$\frac{14}{16}$	D8C1★	$4\frac{1}{2}$	$8\frac{3}{4}$	1	1.36
$\frac{15}{16}$	X1D00	$4\frac{5}{8}$	$8\frac{7}{8}$	1	1.50
$\frac{16}{16}$	X1D02★	$4\frac{3}{4}$	9	$1\frac{3}{8}$	1.52
$\frac{17}{16}$	X1D18	$4\frac{3}{4}$	9	$1\frac{1}{4}$	1.76
$\frac{18}{16}$	X1D18	$4\frac{7}{8}$	$9\frac{1}{4}$	$1\frac{3}{8}$	1.76
$\frac{20}{16}$	X1D34	$4\frac{7}{8}$	$9\frac{1}{4}$	$1\frac{5}{8}$	2.00
$\frac{22}{16}$	X1D54	5	$9\frac{3}{8}$	2	2.30
$\frac{24}{16}$	X1D74	5	$9\frac{3}{8}$	$2\frac{1}{4}$	2.60

$\frac{1}{16}$ to $1\frac{1}{16}$ ths, six in ctn.

Larger sizes, three in ctn.

SHAPLEIGH



Irwin Pattern Solid Center

High quality forged tool steel. Oil tempered. Polished twist and stem. Natural finish shank. Double spur. Extension lip.

Straight Sizes

F6117G-(S100)

Specify Size

Each Size, inch	Av. Length Twist, ins.	Av. Length Over All, inches	Wt. Box, lbs.	Wt. Each
$\frac{5}{16}$ D5C8	$4\frac{1}{16}$	$7\frac{5}{8}$	$\frac{5}{8}$	.90
$\frac{7}{16}$ D6C2	$4\frac{1}{8}$	$7\frac{5}{8}$	$\frac{7}{8}$	.95
$\frac{11}{16}$ D7C3	$4\frac{1}{4}$	$8\frac{3}{8}$	$1\frac{1}{16}$	1.10
$\frac{13}{16}$ D7C9	$4\frac{11}{16}$	$8\frac{5}{8}$	$1\frac{11}{16}$	1.20
$\frac{15}{16}$ D8C0	$4\frac{13}{16}$	$8\frac{7}{8}$	$2\frac{1}{8}$	1.35

Six in box

AUGER BITS

IRWIN MAINBOR

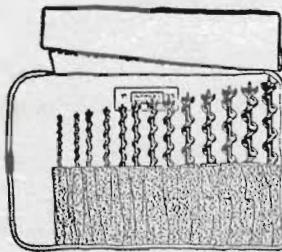


Solid Center Double Cutter—Hi-Lite Polish—Sellopak Wrapped

Forged throughout from one solid piece of special analysis steel. Natural forged finish square. Double cutter. Extension lip. Average length of twist $4\frac{1}{2}$ inches. Length over all $7\frac{1}{4}$ to $9\frac{1}{2}$ inches. Each bit is wrapped in moisture-proof paper, protecting it against rust. The head is guarded with a colorful cork. No more dull cutting lips and spun or bent screw points.

Each Size, inches	Specify Size	Weight Box, lbs.	▲ Each
$\frac{4}{16}$	D6D7★	$\frac{1}{2}$	\$1.00
$\frac{5}{16}$	D6C7★	$\frac{5}{16}$	1.00
$\frac{6}{16}$	D6C7★	$\frac{3}{4}$	1.00
$\frac{7}{16}$	D7C0★	$\frac{7}{8}$	1.04
$\frac{8}{16}$	D7C2★	1	1.08
$\frac{9}{16}$	D7C5★	$1\frac{1}{8}$	1.12
$\frac{10}{16}$	D7C8★	$1\frac{1}{16}$	1.16
$\frac{11}{16}$	D8C2★	$1\frac{1}{16}$	1.22
$\frac{12}{16}$	D8C3★	$1\frac{1}{2}$	1.24
$\frac{13}{16}$	D8C8	$1\frac{3}{4}$	1.32
$\frac{14}{16}$	D9C1★	$1\frac{1}{8}$	1.36
$\frac{15}{16}$	X1D00	2	1.50
$\frac{16}{16}$	X1D02★	$2\frac{1}{4}$	1.52
$\frac{17}{16}$	X1D18	$1\frac{3}{8}$	1.76
$\frac{18}{16}$	X1D34	$1\frac{1}{16}$	2.00
$\frac{19}{16}$	X1D54	$1\frac{5}{8}$	2.30
$\frac{20}{16}$	X1D74	$1\frac{1}{4}$	2.60

$\frac{1}{16}$ to $16\frac{1}{16}$ six. Larger sizes, four in box



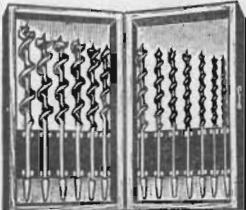
IRWIN
Sets in Leatherette Rolls
Solid Center, Double Cutter,
Bits No. 62T

Lined with cotton fleece. Canvas pocket. Sewed to give a separate compartment for each bit, protecting the bits and keeping them in order. Well sewed, with edges turned in and hemmed. Secured by web strap.

(RF13)

▲ Per Set

Per Set
F5997G X11D00★—Contains 13 bits. One each: 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, $1\frac{1}{16}$ -inch. Weight per set $3\frac{1}{4}$ lbs... \$16.50
One set in roll



Sets in Hardwood Boxes
Double Cutter Bits No. 62T

Hardwood box, brass hinges and fastenings.

(F13)

▲ Per Set

Per Set
F5984G X11D93—Contains 13 bits. One each: 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, $1\frac{1}{16}$ -inch. Weight per set 5 lbs..... \$17.90
(F9)

F5983G X9D47★—Contains 10 bits. One each: 4, 5, 6, 7, 8, 10, 12, 14 and $1\frac{1}{16}$ -inch auger bits, and one 6-inch screw driver bit. Weight per set 4 lbs..... 14.20
One set in box

AUGER BIT MERCHANDISER UNIT

IRWIN



Complete unit consists of 13 hand brace bits in self-selling Sillopak dress-up jackets with FREE display panel.

One each of Sizes $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $1\frac{1}{16}$, $\frac{3}{4}$, $1\frac{3}{16}$, $\frac{7}{8}$, $1\frac{5}{16}$, and 1 inch.

Display complete unit in only $14\frac{3}{4}$ inches space on wall, door peg board, end of island tables.

All metal construction with 3-color baked-on enamel finish.

Displays stock on permanent hooks.

Per
Merchandiser
F5994G (M62T) X10D37.....
One in ctn. Wt. ctn. 4 lbs.
Per
Merchandiser
\$15.56

WOOD BITS

STANLEY HANDYMAN

For Power Drills



Carefully heat treated to hold keen edges. Solid center style. 50-50 brad-screw point leads bit into wood, flat side permits intermediate withdrawal.

Short shank permits work in close quarters. Fits all $\frac{1}{4}$ -inch chucks. Length over all $4\frac{1}{4}$ inches.

Five-Piece Set

One each $\frac{1}{16}$, $\frac{5}{16}$, $\frac{6}{16}$, $\frac{7}{16}$, and $\frac{8}{16}$ inch

Per Set

▲ Per Set

F5987G (125A) X3D50.....\$5.25

One set in pkg. Wt. pkg. $\frac{1}{2}$ lb.

Set of 6—In Plastic Case

Molded plastic display case with solid red bottom and transparent lid.

Contents of Set:

1 each— $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.

Per Set

Per Set
F6021G (886M) X3D00★.....\$4.50

One set in ctn. Wt. ctn. 1 lb.



Set of 6—In Plastic Roll

Contents of Set:

1 each— $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.

Per Set

Per Set
F5979G (886R) X3D00★.....\$4.50One set in box. Wt. box $\frac{3}{4}$ lb.

WOOD AUGER BITS

IRWIN SPEEDBOR 88

For All Electric Drills

Up to five times faster boring. Exclusive hollow ground point. Hardened full length. 3-flat shank fits in $\frac{1}{4}$, $\frac{3}{16}$, $\frac{5}{8}$ and $\frac{1}{2}$ inch electric drills and drill presses. Sizes marked on head. Hang-a-Bit hole.

Display Assortment

Display includes 20 bits in self-selling Sellopak dress-up jackets and free, three-color metal display panel that takes only $14\frac{3}{4}$ inches of space on wall, door, peg board or end of island table.

Contents of Assortment:

2 each— $\frac{1}{4}$, $\frac{5}{16}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.1 each— $\frac{5}{16}$, $\frac{7}{16}$, $\frac{9}{16}$, $\frac{11}{16}$, $\frac{13}{16}$, $\frac{15}{16}$ inch.

Per Asst.

F5974G (M88) X10D06.....\$15.00

One asst. in ctn. Wt. ctn. 3 lbs.



OPEN STOCK

(88)

F6092G—Specify Size

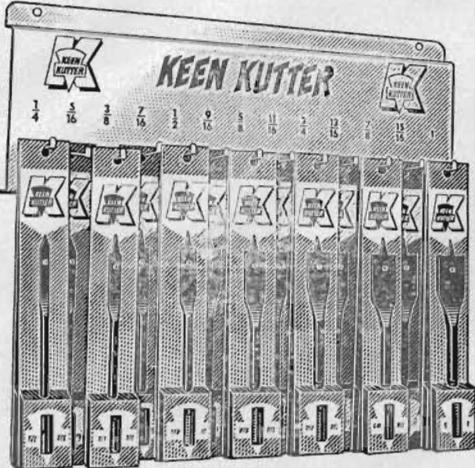
Size, ins.	Wt. Box, lbs.	Each
$\frac{1}{4}$	D5C0	1
$\frac{5}{16}$	D5C0	.75
$\frac{3}{8}$	D5C0★	.75
$\frac{7}{16}$	D5C0	.75
$\frac{8}{16}$	D5C0★	.75
$\frac{9}{16}$	D5C0	$1\frac{1}{4}$
$\frac{10}{16}$	D5C0★	$1\frac{1}{4}$
$\frac{11}{16}$	D5C0	$1\frac{1}{4}$
$\frac{12}{16}$	D5C0★	$1\frac{1}{4}$
$\frac{13}{16}$	D5C0	$1\frac{1}{2}$
$\frac{14}{16}$	D5C0★	$1\frac{1}{2}$
$\frac{15}{16}$	D5C0	$1\frac{1}{2}$
$\frac{16}{16}$	D5C0★	$1\frac{1}{2}$
Six in box		
$\frac{18}{16}$	D8C3	2
$\frac{20}{16}$	D8C3	2
$\frac{22}{16}$	D8C3	2
$\frac{24}{16}$	D8C3	2

Three in box

STAR ★ DENOTES BEST SELLER

WOOD AUGER BITS

KEEN KUTTER



Spade Type Bit

Display Assortment

Bores in any wood, any angle, any speed. Heat-treated, tempered — easily resharpened. Non-slip hex shank chucks in any $\frac{1}{4}$ inch electric drill or larger.

20 bits on metal display, individually carded:

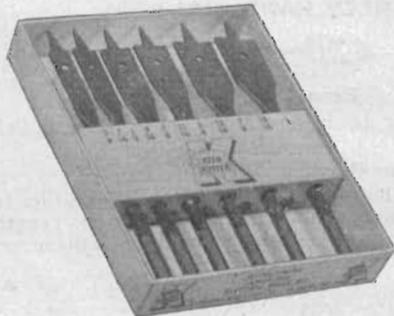
1 Each $\frac{5}{16}$, $\frac{7}{16}$, $\frac{9}{16}$, $\frac{11}{16}$, $\frac{13}{16}$, $\frac{15}{16}$ inch.

2 Each $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 inch.

Per Asst. Per Asst.
FX-KK1285-GK X8D57.....\$12.85

One asst. in ctn. Wt. ctn. 5 lbs.

KEEN KUTTER



Spade Type

Set of 6—In Metal Rack

Contents of Set:

1 each— $\frac{5}{16}$, $\frac{7}{16}$, $\frac{9}{16}$, $\frac{11}{16}$, $\frac{13}{16}$, 1.

Each set in colorful display box with clear acetate cover.

Per Set Per Set
F9539GK X2D60.....\$3.90

One set in box. Wt. box 1 lb.

KEEN KUTTER



Spade Type

Fits Electric Drills $\frac{1}{4}$ inch and larger.

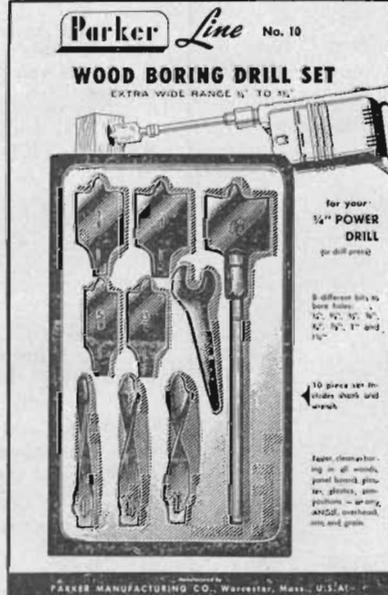
Bores in any wood, any angle, any speed. Cutting edges easily resharpened by filing or grinding. Hex shank for positive, non-slip drive. Individually carded for hang-up or counter display.

F9538GK—Specify Size

Size in.	Each	Weight Box, lbs.	Each		
$\frac{1}{4}$	D4C0.....	\$0.60	X1D23★	1	\$1.85
$\frac{5}{16}$	D4C0.....	.60	X1D23	$1\frac{1}{8}$	1.85
$\frac{3}{8}$	D4C0.....	.60	X1D27★	$1\frac{1}{4}$	1.90
$\frac{7}{16}$	D4C0.....	.60	X1D33	$1\frac{3}{8}$	2.00
$\frac{1}{2}$	D4C0.....	.60	X1D43★	$1\frac{3}{4}$	2.15
$\frac{9}{16}$	D4C0.....	.60	X1D60	2	2.40
$\frac{5}{8}$	D4C4.....	.65	X1D70★	$2\frac{1}{8}$	2.55
$\frac{11}{16}$	D4C4.....	.65			
$\frac{3}{4}$	D4C4.....	.65			
$\frac{13}{16}$	D4C7.....	.70			
$\frac{7}{8}$	D4C7.....	.70			
$\frac{15}{16}$	D4C7.....	.70			
1	D4C7.....	.70			

Six in box, Wt. box 2 lbs.

PARKER

Fits All $\frac{1}{4}$ -Inch Power Drills or Drill Presses.

Faster, cleaner cuts in all woods, plaster, plastics, etc.—at any angle, overhead, into end grain. Hardened tool steel.

Set includes universal shank, wrench and 8 bits—one each drill sizes $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, 1 and $1\frac{1}{16}$ inch—in clearview plastic case on hang-up display card.

Per Set Per Set
F6289G (10) X1D80.....\$2.75

One set in ctn. Wt. ctn. $3\frac{1}{2}$ lb.

CAR BITS

KEEN KUTTER



Bit forged from highest grade tool steel. Specially oil-tempered. Head and Cutters sharpened and finished by hand. Double extension lips and cutters. Single thread on screw. Twist and shank highly polished. Natural finish square. Length twist 12 inches. Length over all 18 inches.

F6114GK-(KSC)

Specify Size

Each Size, inch	Weight Box, lbs.	Each
$\frac{5}{16}$	X1D23★	1
$\frac{7}{16}$	X1D23	$1\frac{1}{8}$
$\frac{9}{16}$	X1D27★	$1\frac{1}{4}$
$\frac{11}{16}$	X1D33	$1\frac{3}{8}$
$\frac{13}{16}$	X1D43★	$1\frac{3}{4}$
$\frac{15}{16}$	X1D60	2
1	X1D70★	$2\frac{1}{8}$

Four in ctn.

SHIP AUGER CAR BITS

KEEN KUTTER



Forged from highest grade tool steel, specially oil tempered. Head and Cutters sharpened and finished by hand. Single thread on screw. Highly polished twist and shank. Natural finish square.

Length twist about 12 inches. Length over all about $16\frac{1}{2}$ inches.

F6111GK-(KCB)

Specify Size

Each Size, inch	Weight Box, lbs.	Each
$\frac{5}{16}$	X1D77★	$1\frac{1}{8}$
$\frac{7}{16}$	X1D80★	$1\frac{1}{2}$
$\frac{9}{16}$	X1D83★	$1\frac{5}{8}$
$\frac{11}{16}$	X1D87★	$1\frac{3}{4}$
$\frac{13}{16}$	X1D90★	$2\frac{5}{8}$
$\frac{15}{16}$	X2D00	$2\frac{3}{8}$
1	X2D07	$3\frac{1}{4}$
$\frac{17}{16}$	X2D27	$3\frac{5}{8}$
$\frac{19}{16}$	X2D36	$4\frac{1}{8}$

Four in ctn.

STAR ★ DENOTES BEST SELLER

CAR BITS

IRWIN



Forged throughout from one solid piece of special steel. Highly polished twist and shank.

Hex adapter shank permits use in both hand brace and electric drill.

Length of twist 12 inches. Length over all 18 inches.

Solid Center. Double Cutter. Extension Lip

F6100G-(65T)

Each	Specify Size	Weight	Each
Size, inch		Box, lbs.	Size, inch
1/16	X1D34	1 1/2	1/16
5/16	X1D20★	2	5/16
7/16	X1D20	2	7/16
8/16	X1D23★	2 1/2	8/16
9/16	X1D26	3	9/16
10/16	X1D36★	3 1/2	10/16
11/16	X1D46★	3 1/2	11/16
12/16	X1D59	4	12/16
13/16	X1D96	5 1/2	X1D79★

Six in box

Solid Center—Single Cutter—Ship Head

F6096G-(55T)

Each	Specify Size	Weight	Each
Size, inch		Box, lbs.	Size, inch
1/16	X1D46★	2 1/2	1/16
5/16	X1D55	3	5/16
7/16	X1D64★	3 1/2	7/16
9/16	X1D68★	3 1/2	9/16
11/16	X1D79★	4	11/16

Six in box

AUGER HANDLES

PRATT—Adjustable



Will hold and center correctly augers of any size. A steel band 3 inches long and $\frac{3}{16}$ -inch thick is fitted to the handle and cut lengthwise into two sections, which are adjusted by two steel screws with thumb nuts. 17-inch selected and polished ash. Polished steel band and adjusting screws. Adjustable to fit any size auger.

Each

▲ Each

F5280G (P) X2D00★.....\$3.00

Six in box. Wt. box 8 lbs.

GIMLET BITS

GERMAN



Forged steel. Straw colored twist and shank. Natural finish square.

Each	Size, inch	Avg. Lgth. inches	Weight Box, lbs.	Each
F6269G (22A/8)	D3C1	5 1/2	1/8	\$0.50

Twelve in box

F6271G (22A/4/8) X3D70— $\frac{1}{2}$ to $\frac{5}{8}$ per asst.
Twelve in box

Sold Only in Full Boxes

STAR ★ DENOTES BEST SELLER

COUNTERSINK BITS

STANDARD



Rose Head—For Wood or Metal

High grade steel tempered and sharpened. Polished bit and shank. Natural finish square. Diameter shank $\frac{1}{16}$ -inch. Length over all $3\frac{3}{8}$ inches. Seven cutting edges. Cuts countersinks up to $\frac{5}{8}$ -inch in diameter.

Each	F6255G (381) D3C4★.....	Each
	Twelve in box. Wt. box 1 1/2 lbs.	\$0.55

STANLEY HANDYMAN



Rose Type

Specially designed for use in any 3-jaw chuck, such as in hand drills, breast drills, etc.

For Wood or Metal

Nickel-molybdenum alloy steel, hardened and tempered for toughness. Cutting edges are clean and sharp. Polished finish. Length $1\frac{1}{8}$ inches. Cuts countersinks up to $\frac{1}{2}$ inch. Shank $\frac{1}{4}$ inch diameter.

Each	F6253G (137) D4C3★.....	Each
	Six in box. Wt. box $\frac{1}{2}$ lb.	\$0.65

DEUSE



Rose Head

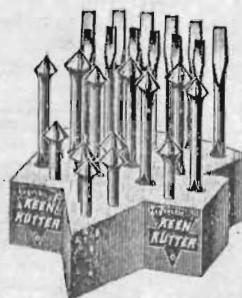
For breast or hand drills. For wood or soft metals. High grade tool steel, polished. Round shank. Will cut countersinks up to $\frac{5}{8}$ -inch. Length $2\frac{3}{4}$ inches.

Each	F6254G (425) D3C4★.....	Each
	Twelve in box. Wt. box $\frac{3}{8}$ lb.	\$0.55

SCREW DRIVER AND COUNTERSINK BIT SILENT SALESMAN

Attractive hardwood display stand displays 13 countersink and 12 screw driver bits as listed. Back of display stand provides space for retail pricing and identification.

KEEN KUTTER



Contains:

SCREW DRIVER BITS

Flat Blade

Highest grade forged steel. Polished bit and shank.

Quantity	No.	Width Bit, in.	Length in.	Each
6	F6278GK-KA1/4	1/4	4 1/4	\$0.45
3	F6279GK-KA5/16	5/16	4 1/4	.45
3	F6280GK-KA3/8	3/8	4 1/4	.50

COUNTERSINK BITS

Rose head for metal or hardwood. Forged from highest grade tool steel, oil tempered. Polished bit and shank.

Quantity	No.	Size in.	Shank	Length in.	Each
4	F6261GK-K31	1/2	Square	3 3/8	\$0.65
2	F6262GK-K41	5/8	Square	4	.75
1	F6263GK-K51	3/4	Square	4	.80
6	F6264GK-K61	5/8	Round	2 1/2	.65

Red enameled Keen Kutter display stand 5x6 1/2x1 3/4 inches high.

Display Stand with 13 countersinks and 12 screw driver bits.

(KBA)

Per Asst.

F6285GK X9D90

One in. ctn. Wt. ctn. 2 lbs.
STAR ★ DENOTES BEST SELLER

SCREW DRIVER BITS

KEEN KUTTER



Flat Blade

Highest grade forged steel. Polished bit and shank.

Each	Width Bit, in.	Length, ins.	Weight Box lbs.	Each
F6278GK-D2C9 (KA1/4) ★	1/4	4 1/4	3/4	\$0.45
F6279GK-D2C9 (KA5/16) ★	5/16	4 1/4	1	.45
F6280GK-D3C1 (KA3/8) ★	3/8	4 1/4	1 1/4	.50
F6281GK-D3C8 (KA1/2)	1/2	4 1/4	1 1/2	.60

Twelve in box

COUNTERSINK BITS

KEEN KUTTER



Each	Size, ins.	Shank	Length, ins.	Weight Box lbs.	Each
F6261GK-D4C3 (K31) ★	1/2	Square	3 3/8	1 1/4	.65

F6262GK-D4C8 (K41) ★	5/8	Square	4	1 1/2	.75
F6263GK-D5C3 (K51)	3/4	Square	4	1 1/4	.80
F6264GK-D4C3 (K61)	5/8	Round	2 1/2	1	.65

Twelve in box

COMBINATION DRILL AND COUNTERSINK BITS

STANLEY—SCREW MATE



Time saving accessories for $\frac{1}{4}$ -inch drills. Make screw pilot holes, holes for screw shank and countersinks.

Made of tough, durable high tungsten steel, hardened and ground.

Set of Five

For wood screws $\frac{1}{4} \times 7$ inches, 1×8 inches, $1\frac{1}{4} \times 8$ inches, $1\frac{1}{4} \times 10$ inches, $1\frac{1}{2} \times 12$ inches.

(1525A)

Per Set F6283G X2D45 ★ \$3.70

One set in pkg. Wt. pkg. $\frac{1}{2}$ lb.

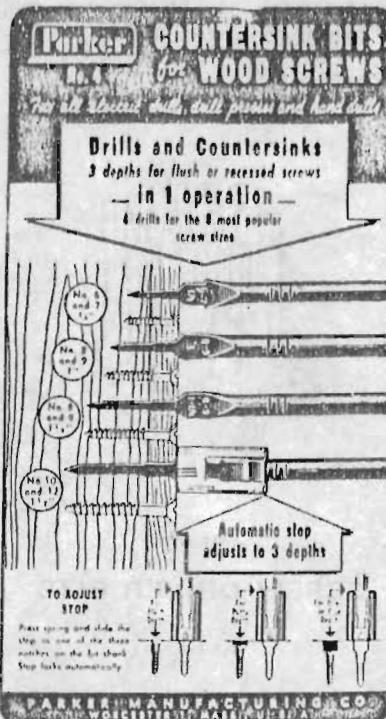
▲ Per Set \$3.70

OPEN STOCK

(SM)

		No.	Wt.	
Each	Size, ins.	in Box, ins.	Box ozs.	▲ Each
F8908G	D5C0	$6 \times \frac{3}{4}$	6	2 \$0.75
F8909G	D5C0	$7 \times \frac{3}{4}$	6	$1\frac{1}{4}$.75
F8910G	D5C0	$8 \times \frac{3}{4}$	6	2 .75
F8911G	D5C0	8×1	6	2 .75
F8912G	D5C0	$8 \times 1\frac{1}{4}$	6	2 .75
F8913G	D5C0	$8 \times 1\frac{1}{2}$	6	2 .75
F8914G	D5C0	10×1	6	3 .75
F8915G	D5C0	$10 \times 1\frac{1}{4}$	6	3 .75
F8916G	D5C0	$10 \times 1\frac{1}{2}$	4	2 .75
F8919G	D5C0	$12 \times 1\frac{1}{2}$	4	2 .75
F8921G	D5C0	12×2	4	2 .75

PARKER



Depth-a-dapter adjusts easily and automatically on each bit. Four cold forged bits mounted on black and yellow "tells-all" self-selling card.

24 countersinking combinations. 4 bits drill and countersink perfect holes for 8 most popular screw sizes and to three different depths. Fast multiple boring of holes exactly alike.

Equally easy to use in electric drills, drill presses and hand drills.

Per Set F6257G X1D15 \$1.75

Five sets in box. Wt. box $1\frac{1}{2}$ lbs.

ATLANTIC SCREW WORKS, INC.—PILOT HOLER



Speeds up any wood screw operation. Drills thread, shank and countersink pilot hole in one quick easy operation.

Tool steel insures long lasting sharpness. Ideal for wood, plastics, masonite, plywood, etc.

5 different sizes on display card showing pilot holes in action. Cards are punched for rack display.

Size	For Screw Size
$1\frac{1}{4}$ inch.....	No. 8 and 12
$1\frac{1}{2}$ inch.....	No. 8 and 9
1 inch.....	No. 8 and 9
$\frac{3}{4}$ inch.....	No. 6 and 7
$\frac{5}{8}$ inch.....	No. 4 and 5

Fits any $\frac{1}{4}$ Inch Power Drill

(PH5)

Per Card F8926G D6C3

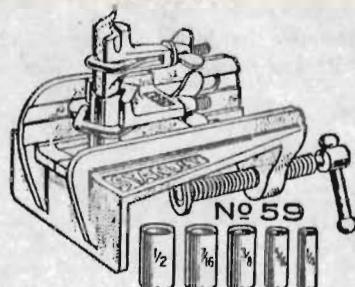
▲ Per Card \$0.98

5 on card, 5 cards in box. Wt. box $\frac{1}{2}$ lbs.

STAR ★ DENOTES BEST SELLER

DOWELING JIGS

STANLEY



To bore dowel holes in the edge end of surface of work with the greatest ease and accuracy. It will take any thickness of material up to 3 inches.

It also will be found an excellent bit guide for mortising. Furnished with five steel guides $1\frac{1}{4}$ inches long. One each $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$ and $\frac{1}{2}$ inch To allow for variations in size of bits the guides are made $\frac{1}{100}$ -inch larger than the sizes given. Nickel plated cast iron body $5\frac{1}{4}$ inches long.

(59)

Each F4414G X4D67 ★

▲ Each \$7.00

One in box. Wt. box $1\frac{1}{2}$ lbs.

*MACHINE BITS

GREENLEE

Special grade tool steel, oil tempered. Hand sharpened and polished.
Single thread screw. $\frac{1}{2} \times 2\frac{1}{4}$ inch straight shank.



*All No. 150 Machine Bits in the Following List are Carried in Stock by the Factory and Can be Shipped Promptly, F. O. B., Rockford, Ill.

4-inch Twist, $\frac{1}{2} \times 2\frac{1}{4}$ Shank Size $\frac{1}{4}$ to $\frac{21}{16}$ inclusive by 16 ths.
6-inch Twist, $\frac{1}{2} \times 2\frac{1}{4}$ Shank Size $\frac{5}{16}$ to $\frac{32}{16}$ inclusive by 16 ths.
12-inch Twist, $\frac{1}{2} \times 2\frac{1}{4}$ Shank Size $\frac{9}{16}$ to $\frac{20}{16}$ inclusive by 16 ths.
also $\frac{23}{16}$, $\frac{25}{16}$, $\frac{28}{16}$ and $\frac{32}{16}$
12-inch Twist, $\frac{3}{4} \times 2\frac{1}{4}$ Shank Size $\frac{9}{16}$ to $\frac{20}{16}$ inclusive by 16 ths.
also $\frac{23}{16}$, $\frac{25}{16}$, $\frac{28}{16}$ and $\frac{32}{16}$

} List Less D3C3 1/3%

TOOLS NOT STANDARD CAN BE QUOTED ON REQUEST

Machine bits under 6 inch twist charged at 6 inch twist list

NOTE—List prices shown below apply to standard shanks. When necessary to supply bits with taper or threaded shanks, or shanks of unusual size or length, an extra charge will be made.

Diameter inch	*150/6-G 6-inch Twist	*150/12-G 12-inch Twist
	List Each	List Each
$\frac{4}{16}$	\$3.90	.....
$\frac{5}{16}$	3.90	.....
$\frac{6}{16}$	3.90	\$5.95
$\frac{7}{16}$	3.95	6.10
$\frac{8}{16}$	4.05	6.25
$\frac{9}{16}$	4.15	6.35
$\frac{10}{16}$	4.25	6.50
$\frac{11}{16}$	4.30	6.65
$\frac{12}{16}$	4.45	6.90
$\frac{13}{16}$	4.60	7.15
$\frac{14}{16}$	4.85	7.45
$\frac{15}{16}$	5.15	7.90
$\frac{16}{16}$	5.50	8.40
$\frac{17}{16}$	5.85	8.90
$\frac{18}{16}$	6.15	9.40
$\frac{19}{16}$	6.50	9.90
$\frac{20}{16}$	6.80	10.40
$\frac{21}{16}$	7.15	.....
$\frac{22}{16}$	7.45	11.40
$\frac{23}{16}$	7.80	.....
$\frac{24}{16}$	8.10	12.30
$\frac{25}{16}$	8.45	.....
$\frac{26}{16}$	8.90	.....
$\frac{27}{16}$	9.30	.....
$\frac{28}{16}$	9.75	14.85
$\frac{29}{16}$	10.20	.....
$\frac{30}{16}$	10.50	.....
$\frac{31}{16}$	10.95	.....
$\frac{32}{16}$	11.40	17.35
$\frac{33}{16}$		
$\frac{34}{16}$		
$\frac{35}{16}$		
$\frac{36}{16}$		
$\frac{37}{16}$		
$\frac{38}{16}$		
$\frac{39}{16}$		
$\frac{40}{16}$		
$\frac{41}{16}$		
$\frac{42}{16}$		
$\frac{43}{16}$		
$\frac{44}{16}$		
$\frac{45}{16}$		
$\frac{46}{16}$		
$\frac{47}{16}$		
$\frac{48}{16}$		

Prices on
Application

Prices on
Application

COMPARATIVE NUMBERS OF TWIST DRILLS

CLEVELAND	GREENFIELD	MORSE	NATIONAL	PRATT & WHITNEY	STANDARD	UNION	WHITMAN & BARNES
Carbon Drills							
12	132	450	104	...	114D	180	102B
21	142	454	105	633	114F	190	102C
24	134	452	106	...	114E	185	104B
25	144	456	107	631	114G	195	104G
106	102	302	93	611	104	100	102
108	105	330	95	617	105	115	105
108A	205	340	97	621	107	125	107
109	305	332	96	619	106	120	106
110	104	314	94	615	104B	110	104
111-1	209	400	98	...	104A	135	109E
111-2	309	401	102	...	104½A	140	109E
112	495	447	185	...	107J	117	105R
112A	496	...	186	...	107L	127	104R
113	...	...	116A	...	...	...	...
113A	165	360	111	...	...	...	113
114	109	390	109	...	108	130	109
114A	169	392	110	...	109A	133	109B
114E	179	393	110A	...	109B	...	109C
115A	600	...	...	...	135A	...	109F
116	108	418	101	...	110	145	110
118	207	413	100	...	111	150	111
120	107	412	99	...	112	155	112
122	184	355	...	...	109C	225	108
122A	287	356	...	...	109D	230	108C
122B	162	357	...	...	109E	220	...
123	...	367	...	...	...	305	105W
125	505	440	123	...	107	235	108A
High Speed Drills							
907	632	1450	202	...	511	580	402B
909	634	1452	204	...	513	585	404B
914-1	709	1400	211	...	507	535	507
914-2	809	1401	212	...	508	540	507
917	605	1330	206	617	504	515	405B
918	705	1340	208	621	506	525	407B
919	805	1332	207	619	505	520	406B
920	625	1333	...	...	504M	1280	405EB
924	765	1361	...	...	...	623	405C
925	...	1362	...	...	...	623	407C
926	...	...	...	...	...	...	...
926A	...	1474	...	...	509	1171	555H
929	...	...	...	...	...	...	...
929A	...	1480	...	...	510	1174	444H
931	608	418	210	...	519	545	506
936	607	1412	209	...	517R	555	412
938	642	1454	203	633	512	590	402C
939	644	1456	205	631	514	595	404C
940	602	1302	200	611	550	500	555
941	601	1302	200C	612	500	502	555
942	603	1302	200B	613	500A	505	555
943	...	1305	...	...	550M	1270	555E
944	905	1446	262	...	522	516	508
945	...	...	...	...	500M	1272	...
946	...	1460	229	419	...	935	80A
948	...	...	...	...	...	...	505
950	604	1314	201	615	501	510	444
951	996	...	265A	...	521	527	444R
952	995	1447	265	...	520	517	405R
953	...	1448	...	...	...	...	404R
954	...	1317	...	...	501M	1275	444E
957	...	1363	...	...	...	...	405Q
958	...	...	...	...	...	...	...
1152	...	305	...	...	115	270	102E
1153	...	317	...	...	115½	275	104E
1154	125	333	...	...	115A	280	105E
1196	410	604	...	411	122M	804	115E
1207	...	345	...	...	105H	324	...
1208	...	344	...	...	107H	321	...
1308	...	363	...	...	...	...	...
Special Drills							
145	175	432	...	...	113	210	105A
147	172	425	...	...	114	...	102A
160	174	428	...	...	114A	...	...
166	275	430	...	...	113A	215	107A
Oil Tube Drills							
91	...	...	...	...	...	...	...
91A	...	474	...	...	...	171	...
95	405	446	182	...	112½	116	...
99	...	...	...	...	...	...	...

COMPARATIVE NUMBERS OF TWIST DRILLS

Cleveland	Greenfield	Morse	National	Pratt & Whitney	Standard	Union	Whitman and Barnes
OIL HOLE DRILLS							
99A	....	480	....	....	....	174	....
CARBON DRILLS IN SETS							
1 Set	1	1	....	....	1	1	....
2	2	2	....	....	2	2	....
3	3	3	....	....	3	3	....
5	5	5	....	....	5A	5	....
6	6	6	....	....	6	6	6
7	7	7	....	....	7	7	....
8	8	8	....	....	8A	8	....
9	9	9	....	....	9	9	....
10	....	10	....	....	10	10	30
11	15	15	....	....	15	15	18A
13	13	14	13A	....	13	13	13
13A	....	....	14A	....	13A	133B	14
13B	....	26	14	....	13B	133A	14A
14B	14	....	13	....	14A	14A	13A
18	18	40	18	....	18	22	....
19	....	50	15	....	780	21	114S
22	19	....	....	....	....	....	....
26	....	....	....	....	....	....	....
50	5M	....	5	....	5	18	5A
51	11	....	....	....	....	118	22
52	12	....	....	....	....	119	24
60	....	....	....	....	16	....	....
80	8M	....	8	....	8	19	8A
HIGH SPEED DRILLS IN SETS							
54	605M	5H	6	....	5½	18½	5B
55	....	....	....	....	15½	....	18B
56	....	....	....	....	....	....	....
57	....	....	....	....	....	....	....
58	611	....	....	....	....	218	23
59	612	....	....	....	....	219	25
84	608M	8H	9	....	8½	19½	8B
DRILLS AND COUNTERSINKS COMBINED							
96	....	....	124C	....	....	....	....
98	160	495	124	625	107D	245	114
20 Set	1820	....	....	....	....	....	520
49	....	50H	....	....	780½	....	414S
996	....	....	266C	....	....	805	414B
998	560	1495	266	625	779	645	414
MACHINE BITS FOR WOOD							
169	....	358	....	....	....	222	....
SOCKETS							
100	74	200	128	605	116	410	100
102	72	201	129	601	117	400	100A
103	....	251	....	....	....	....	....
104	62	202	130	603	118	409	100B
DRIFTS							
105	....	210	....	609	118A	430	100C
TOOL BITS							
850	....	....	....	....	....	....	....
COUNTERBORES							
876	....	....	....	....	....	....	....
877	....	....	....	....	....	....	....
878	....	....	....	....	....	....	....
879	....	....	....	....	....	....	....
CARBON COUNTERBORES							
176	....	....	....	....	....	....	....
177	....	....	....	....	....	....	....
LATHE CENTER							
890	....	1295	....	....	535	....	....
CARBON REAMERS							
125A	535	750	157A	465	128B	837	120M
....	539	....	....	....	....	....	....
126	3139	717	....	410	128E	838	121S
128A	400	601	135	411	122	800	115
128B	409	617	136	413	122B	808	116
128C	401	602	137	412	122E	801	115S
129	415	715	....	409	128D	828	121
130A	421	625	142	415	123	810	117B
130C	422	627	144	416	123½A	811	117S

COMPARATIVE NUMBERS OF REAMERS

Cleveland	Greenfield	Morse	National	Pratt & Whitney	Standard	Union	Whitman and Barnes
CARBON REAMERS							
133	486	505	156	421	130	404	120J
133A	487	506	156A	423	130½	405	120T
134	2216	655	140	429	124	850	119B
134A	2217	656	140A	431	124B	855	119A
136	2215	662	141	433	124A	851	...
137	404	680	150	459	126	845	120D
137A	...	692	...	...	128	840	120B
139	405	684	150A	460	...	847	120S
140	...	683	152	458	...	857	131
141	431	686	...	437	127	...	120A
142	...	...	...	...	128R	...	136
143	...	570	...	703	121	401	154
144	455	636	139	451	125	825	118
144A	451	637	139A	449	125A	820	118A
144B	...	640	...	455	125B	826	118C
144C	...	641	...	453	125C	821	118D
148	1128	728	...	...	...	...	...
150A	...	697	151	443	129A	871	120L
151	2214	663	141A	435	124C	856	...
154	...	678	...	...	...	...	...
157	430	687	...	439	127A	...	124
158	...	...	...	445	...	...	...
159	...	...	...	446	...	...	...
BURRING REAMERS							
232	232	...	...	...	...	...	1132
233	233	...	...	...	...	...	1133
234	234	...	...	...	...	...	1134
241	241	...	...	...	128½A	...	1141
242	242	...	...	...	128½A	...	1142
242½	242½	...	...	...	128½A	...	1142½
244	244	...	...	...	128½A	...	1144
PARADOX REAMERS							
301	...	...	...	...	...	...	...
306	...	...	...	...	...	...	...
312	...	...	...	...	...	...	...
317	...	...	...	...	...	...	...
PEERLESS REAMERS							
501	...	...	...	...	...	...	...
502	...	...	...	...	...	...	...
503	...	...	...	...	643	...	...
504	6543	1733	...	406	644	...	...
509	...	...	...	...	...	...	...
510	...	...	...	...	...	...	...
515	...	...	...	...	645	...	...
516	6541	1734	...	408	642	...	...
517	...	...	...	...	...	...	...
518	...	...	...	...	...	...	...
519	...	...	...	...	...	...	...
520	...	...	...	...	...	...	...
521	...	...	...	...	...	...	...
ADJUSTABLE REAMERS, HIGH SPEED							
601	...	...	...	...	...	...	...
602	...	...	...	...	...	...	...
603	...	...	...	...	...	...	...
604	...	...	...	...	...	...	...
606	...	...	...	...	...	...	...
REAMERS, HIGH SPEED							
607	...	...	...	...	685	...	...
608	...	...	...	...	686	...	...
610	6535	1750	271A	465	664	1037	120N
...	6539	...	...	...	...	...	...
613	...	1702	...	...	...	...	273
615	...	1697	232	443	627	971	269
616	6407	1701	232A	444	629	974	270
617	3761	1699	232C	447	630	976	271
618	3762	1700	232D	448	631	975	272
620	6421	1625	226	415	615	910	260B
624	6400	1601	220	411	600	900	250
628	6409	1617	221	413	603	908	251
630	6216	1655	224	429	618	950	262-B
632	6217	1656	224A	431	619	955	262A
634	6215	1662	225	433	620	951	...
636	6214	1663	225A	435	621	956	...
638	6431	1686	...	437	782	...	...
640	6430	1687	...	439	783	...	...
645	6401	1602	222	412	604	901	250S

COMPARATIVE NUMBERS OF REAMERS AND MILLS

Cleveland	Greenfield	Morse	National	Pratt & Whitney	Standard	Union	Whitman and Barnes
REAMERS, HIGH SPEED							
646	6422	1627	228	416	617	911	260S
647	225
648	226
649	1728	....	....	....	957	....
650	3599	1683	279	458	....	....	231
651	445	....	....	222
652	446	....	....	223
654	1678	....	....	....	....	....
657	6404	1680	275	459	680	945	120E
659	1684	276	460	....	947	230S
SETS OF REAMERS, CARBON STEEL							
30	9 1/2A	33	60A
32	10	35	....
35
36
42	G-6	....	....	....	....	....	....
44	G-11	....	....	....	....	....	....
45	G8	....	....	....	....	....	....
46
SETS OF REAMERS, HIGH SPEED							
26C	3018C	....	....	....	3	27	....
27A	3018A	....	....	....	1	25	....
27B	3018B	....	....	....	2	26	....
27E	3018E	....	....	....	5	29	....
27F
27G
REAMER ARBORS							
78
79
532
533
534
535
536
537
MILLS, HOLLOW AND END							
660	K50-69	....
661	K50-69	....
662
663
671	1871	E125 E138	355	826	NL697	86
674	1891	D101	349	770	NL712	360
675	1907	D112 D50 D64	340	763	H350	365
676	1908	D1 D16	342	762	H145	315
677	1805	....	....	....	H170	316
678	1911	D210	347	773	H51	316
679	1912	D222 D210	348	773	H90	319A
680	1913	D222 D250	346	....	H301	319A
681	1914	D256 D250	346	....	H326	358
....	D256	....	....	H401	358
....	H420	....
....	H204	....
....	H212	....
....	H374	....
....	H382	....
ARBORS FOR SHELL END MILLS							
196	362	....	NS20	....
....	NS35	....
CARBON MILLS							
180	K50	....
181	69	....
182	K50	....
183	69	....
184	891	....	349	138 1/2D	H350	....
185	907	....	339	138 1/2	H365	....
186	908	....	341	138	H145	....
....	H170	....
....	H51	....
....	H90	....

CARBON STEEL BIT STOCK DRILLS

For Metal or Wood



KEEN KUTTER

Forged tool steel, oil tempered and polished.

F8788GK-(K109)

Specify Size

Size, inch	Length	Over All, ins.	Wt. Box, lbs.	▲Each
2/32	D3C2	3 1/4	3/8	\$0.48
3/32	D3C4	3 1/2	1/2	.50
4/32	D3C6★	4	1/2	.55
5/32	D4C0★	4 1/4	1/2	.60
6/32	D4C6★	4 1/2	5/8	.70
7/32	D5C2★	5	5/8	.78
8/32	D6C0★	5 1/4	7/8	.90
10/32	D8C5★	5 1/2	1 1/8	1.30
12/32	X1D10★	6	1 1/2	1.65
13/32	X1D20	6 1/2	1 3/4	1.80
14/32	X1D30	6 1/2	2	1.95
16/32	X1D60	7	2 5/8	2.40

Twelve in box

Size, inch	Length	Over All, ins.	Wt. Box, lbs.	▲Each
18/32	X2D00	7 1/2	1 3/4	2.65
20/32	X2D25	7 1/2	2	3.05

Six in box

CLEVELAND

Forged tool steel, oil tempered and polished.

F8745G-(114)

Specify Size

Size, inch	Length	Over All, ins.	Wt. Box, lbs.	▲Each
1/16	D3C2	3 9/16	3/8	\$0.48
3/32	D3C4	4	1/2	.50
1/8	D3C6★	4	1/2	.55
5/32	D4C0	4 1/4	1/2	.60
3/16	D4C6★	4 1/2	5/8	.70
7/32	D5C2	4 3/4	5/8	.80
1/4	D6C0★	5	7/8	.90
5/16	D8C5★	5 1/2	1 1/8	1.30
3/8	X1D10	6	1 1/2	1.65
7/16	X1D30	6 1/2	2	1.95
1/2	X1D60	7	2 5/8	2.40

Twelve in box

Size, inch	Length	Over All, ins.	Wt. Box, lbs.	▲Each
3/4	X3D00	7 1/2	2 3/4	4.10

Six in box

CARBON STEEL BRACE DRILLS

CLEVELAND

Electricians' and Bell Hangers'
For Wood and Soft Metals



Length Over All 18 inches
Specify Number, Diameter and
Length Wanted
F8768G-(114/18E)

Size, inch	Weight	Box, lbs.	▲Each
1/4	X2D05	2 1/4	\$3.10
5/16	X2D15	3	3.20
3/8	X2D40	2 3/4	3.60
1/2	X2D90	6 3/4	4.30

Twelve in box

CARBON STEEL TWIST DRILLS

CLEVELAND

For Use in Blacksmith's Drill Presses
with 1/2-inch Chuck



Forged from carbon steel. Shank length 2 1/4 inches. Diameter 1/2 inch.

Specify Number and Size Wanted

F8895G-(120)

Size, inch	Length	Over All, ins.	Wt. Pkg., lbs.	▲Each
3/16	X1D30	2 5/8	2 1/4	\$1.95
1/4	X1D60★	2 1/8	6	2.40
9/32	X1D70	3	6	2.55
3/8	X2D05★	3 1/4	6	3.15
7/16	X2D50	3 1/4	6	3.75
1/2	X2D90	3 1/4	6	4.35
9/16	X3D30★	3 5/16	6	4.95
5/8	X3D70★	3 1/4	6	5.55
11/16	X4D15	3 5/16	6	6.25
3/4	X4D55★	3 5/16	6	6.85
7/8	X5D40	3 1/4	6	8.10
1	X7D05	3 5/16	6	10.60

One in pkg.

CARBON STEEL TWIST DRILLS

KEEN KUTTER

KEEN KUTTER
F8901GK-(K105)
Short Set—Straight Shank
Specify Number and Size Wanted

Size, inch	Length	Over All, ins.	Wt. ozs.	▲Each
1/16	D1C8★	1 7/8	1/2	\$0.30
5/64	D1C8★	2	1/2	.30
3/32	D1C9★	2 1/4	1	.30
7/64	D2C2★	2 5/8	1	.35
1/8	D2C6★	2 3/4	2	.40
9/64	D2C6★	2 7/8	2	.40
5/32	D3C0★	3 1/8	2 1/2	.45
11/64	D3C2	3 1/4	3	.50
3/16	D3C8★	3 1/2	4	.60
13/64	D4C2	3 5/8	4 1/2	.65
7/32	D4C7★	3 3/4	5 1/2	.70
15/64	D5C1	3 7/8	6 1/2	.75
1/4	D5C6★	4	7 1/2	.85
17/64	D5C7	4 1/8	8 1/2	.90
9/32	D6C2	4 1/4	9 1/2	.95

Twelve in env.

CLEVELAND

Short Set—Straight Shank
Specify Number and Size Wanted

F8893G-(108)

Size, inch	Length	Over All, ins.	Wt. ozs.	▲Each
1/64	D3C6	3/4	1/8	\$0.55
1/32	D2C6	1 3/8	1/8	.40
3/64	D1C9	1 3/4	1/8	.30
1/16	D1C8	1 7/8	1/4	.30
5/64	D1C8	2	1/4	.30
3/32	D1C9★	2 1/4	1/2	.30
7/64	D2C2★	2 5/8	1/2	.35
1/8	D2C6★	2 3/4	1	.40
9/64	D2C6★	2 7/8	1	.40
5/32	D3C0★	3 1/8	1 1/4	.45
11/64	D3C2	3 1/4	1 1/2	.50
3/16	D3C8★	3 1/2	2	.60
13/64	D4C2	3 3/8	2 1/4	.65
7/32	D4C7	3 3/4	2 3/4	.70
15/64	D5C1	3 7/8	3 1/4	.75
1/4	D5C6★	4	3 3/4	.85
17/64	D5C7	4 1/8	8 1/2	.90
9/32	D6C2	4 1/4	9 1/2	.95

Twelve in envelope

Size, inch	Length	Over All, ins.	Wt. ozs.	▲Each
19/64	D6C8	4 3/8	11 1/2	1.00
5/16	D7C5	4 1/2	12 1/2	1.10
21/64	D8C3	4 5/8	14	1.25
11/32	D9C0	4 3/4	16	1.35
23/64	X1D00	4 7/8	9	1.50
3/8	X1D10	5	10	1.65
25/64	X1D20	5 1/8	11	1.80
13/32	X1D30	5 1/4	12	1.95
27/64	X1D45	5 5/8	13	2.20
7/16	X1D50	5 1/2	14	2.25
29/64	X1D60	5 5/8	16	2.40
15/32	X1D75	5 3/4	18	2.65
31/64	X1D85	5 7/8	19	2.80
1/2	X1D95	6	20	3.00

Six in envelope

HIGH SPEED STEEL TWIST DRILLS

KEEN KUTTER

CLEVELAND

CLEVELAND



F8902GK-(K917)

Short Set—Straight Shank—Bright Finish
Specify Number and Size Wanted

Diam. ins.	Length Over-all, ins.	Wt. Env., lbs.	En.
1/16	D2C0★	1 7/8	1/16
5/64	D2C0★	2	1/16
3/32	D2C1★	2 1/4	1/16
7/64	D2C4	2 5/8	1/8
1/8	D2C9★	2 7/8	1/8
9/64	D2C9★	2 7/8	1/8
5/32	D3C3★	3 1/8	1/4
11/64	D3C6★	3 1/4	1/4
3/16	D4C2★	3 1/2	1/2
13/64	D4C7	3 5/8	3/8
7/32	D5C2	3 3/4	3/8
15/64	D5C7★	3 7/8	1/2
1/4	D6C2★	4	1/2
17/64	D7C6	4 1/8	5/8
9/32	D8C3	4 1/4	3/4

Twelve in env.

CLEVELAND

F8898G-(967)

**Straight Shank—Home Length
Bright Finish**

Specify Number and Size Wafer

Diam. ins.		Length Over-all, ins.	Wt. Env., ozs.	▲Each
ins.	Each	ins.	ozs.	
1/16	D1C8★	1 5/8	1/2	\$0.27
5/64	D1C8	1 11/16	1/2	.27
3/32	D1C9★	1 3/4	1/2	.27
7/64	D2C2★	1 13/16	1	.33
1/8	D2C6★	1 7/8	1	.40
9/64	D2C6★	1 13/16	1	.40
5/32	D3C0	2 1/16	2	.45
3/16	D3C8★	2 3/16	4	.57
13/64	D4C2	2 1/4	3	.63
7/32	D4C7	2 3/8	3	.70
15/64	D5C1	2 7/16	4	.76
1/4	D5C6	2 1/2	4	.85
9/32	D7C5	2 11/16	6	1.15

Twelve in envy

Six in envy

One in pkg

STAR ★ DENOTES BEST SELLER

HIGH SPEED, STEEL TWIST DRILLS

CLEVELAND



F9532G-(918)

Straight Shank—Short Series—Wire Gauge, Black Finish

Specify Number and Size Wanted

Wire Ga. Nos.	Decimal Diameter, ins.	Length Over-all, ins.	▲Each	Wire Ga. Nos.	Decimal Diameter, ins.	Length Over-all, ins.	▲Each
1 D5C7	.2280	3 $\frac{1}{8}$	\$.85	42 D2C1★	.0935	2 $\frac{1}{4}$	\$.30
2 D5C7	.2210	3 $\frac{7}{8}$	.85	43 D2C1	.0890	2 $\frac{1}{4}$	.30
3 D5C2	.2130	3 $\frac{3}{4}$	.78	44 D2C0	.0860	2 $\frac{1}{8}$	.30
4 D5C2	.2090	3 $\frac{3}{4}$	.78	45 D2C0	.0820	2 $\frac{1}{8}$	.30
5 D5C2	.2055	3 $\frac{3}{4}$	.78	46 D2C0	.0810	2 $\frac{1}{8}$	.30
6 D5C2	.2040	3 $\frac{3}{4}$	.78	47 D2C0	.0785	2	.30
7 D4C7★	.2010	3 $\frac{5}{8}$	.70	48 D2C0	.0760	2	.30
8 D4C7	.1990	3 $\frac{5}{8}$	.70	49 D2C0	.0730	2	.30
9 D4C7	.1960	3 $\frac{5}{8}$	.70	50 D2C0★	.0700	2	.30
10 D4C7	.1935	3 $\frac{5}{8}$	.70	51 D2C0	.0670	2	.30
11 D4C7	.1910	3 $\frac{1}{2}$	.70	52 D2C0★	.0635	1 $\frac{7}{8}$	.30
12 D4C7	.1890	3 $\frac{1}{2}$	.70	53 D2C0	.0595	1 $\frac{7}{8}$	.30
13 D4C2	.1850	3 $\frac{1}{2}$	.65	54 D1C9	.0550	1 $\frac{7}{8}$	.30
14 D4C1	.1820	3 $\frac{3}{8}$	.67	55 D1C9★	.0520	1 $\frac{7}{8}$	.30
15 D4C1	.1800	3 $\frac{3}{8}$	.67	56 D1C9★	.0465	1 $\frac{3}{4}$	.30
16 D4C0	.1770	3 $\frac{3}{8}$	.60	57 D2C4	.0430	1 $\frac{3}{4}$	.36
17 D3C9	.1730	3 $\frac{3}{8}$	.60	58 D2C5	.0420	1 $\frac{5}{8}$	.38
18 D3C6	.1695	3 $\frac{1}{4}$	.55	59 D2C5	.0410	1 $\frac{5}{8}$	.38
19 D3C6★	.1660	3 $\frac{1}{4}$	.55	60 D2C6★	.0400	1 $\frac{5}{8}$	.40
20 D3C6	.1610	3 $\frac{1}{4}$	.55	61 D2C6	.0390	1 $\frac{5}{8}$	.40
21 D3C6★	.1590	3 $\frac{1}{4}$	.55	62 D2C6	.0380	1 $\frac{1}{2}$	.40
22 D3C3★	.1570	3 $\frac{1}{8}$	.50	63 D2C6	.0370	1 $\frac{1}{2}$	.40
23 D3C3	.1540	3 $\frac{1}{8}$	.50	64 D2C6	.0360	1 $\frac{1}{2}$	.40
24 D3C3	.1520	3 $\frac{1}{8}$	.50	65 D2C6	.0350	1 $\frac{1}{2}$	.40
25 D3C2★	.1495	3	.48	66 D2C6	.0330	1 $\frac{3}{8}$	.40
26 D3C1★	.1470	3	.46	67 D2C6	.0320	1 $\frac{3}{8}$	.40
27 D3C1	.1440	3	.46	68 D2C6	.0310	1 $\frac{3}{8}$	.40
28 D2C9★	.1405	2 $\frac{7}{8}$	.45	69 D3C3	.0292	1 $\frac{3}{8}$	.50
29 D2C9★	.1360	2 $\frac{7}{8}$	.45	70 D3C3	.0280	1 $\frac{1}{4}$	.50
30 D2C9★	.1285	2 $\frac{3}{4}$	.45	71 D3C3	.0260	1 $\frac{1}{4}$	.50
31 D2C6★	.1200	3 $\frac{3}{4}$	.40	72 D3C3	.0250	1 $\frac{1}{8}$	.50
32 D2C5★	.1160	3 $\frac{3}{4}$	.38	73 D3C3	.0240	1 $\frac{1}{8}$	.50
33 D2C4	.1130	2 $\frac{5}{8}$	.36	74 D3C3	.0225	1	.50
34 D2C4	.1110	2 $\frac{5}{8}$	.36	75 D3C6	.0120	1	.55
35 D2C4	.1100	2 $\frac{5}{8}$	.36	76 D3C6	.0200	$\frac{7}{8}$	.55
36 D2C4★	.1065	2 $\frac{1}{2}$	.36	77 D3C6	.0180	$\frac{7}{8}$	.55
37 D2C3	.1040	2 $\frac{1}{2}$	.35	78 D3C6	.0160	$\frac{7}{8}$	.55
38 D2C3	.1015	2 $\frac{1}{2}$	.35	79 D3C6	.0145	$\frac{3}{4}$	.55
39 D2C2	.0995	2 $\frac{3}{8}$	.35	80 D3C6	.0135	$\frac{3}{4}$	.55
40 D2C2	.0980	2 $\frac{3}{8}$	.33				
41 D2C2	.0960	2 $\frac{3}{8}$	.33				

Twelve in env.

Twelve in env.

Average wt. env.—1 to 9.....7 ozs. 10 to 19.....4 ozs. 20 to 30.....2 ozs. 31 to 60.....1 to $\frac{1}{4}$ oz. 61 to 80..... $\frac{1}{8}$ oz.

STAR ★ DENOTES BEST SELLER

HIGH SPEED STEEL DRILLS

CLEVELAND



Metalworking Set

Especially designed for use in sheet metal with good performance in other types of metal and wood. For use in portable electric drills or drill press. Centers easily and requires a minimum of feed pressure.

Steel container with a smooth fitting slide cover and compartments for each drill. Attractive and convenient.

Consists of 1 each:

Diameter, in.	Length Flute, ins.	Length over all, ins.
5/16	1 3/8	2 13/16
3/8	1 11/16	3 1/8
7/16	2	3 1/16
1/2	2 1/4	3 3/4

Four Drills and Container

1/4 inch Shank

Per Set **F8830G (97) X5D85** \$8.65 ▲ Per Set

One set in box. Wt. box 12 ozs.

OPEN STOCK



F8896G-(972)

1/4 inch Shank

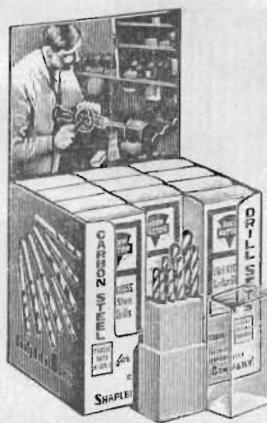
Diam- eter	Length Flute, Each	Length, ins.	Pkg., ozs.	Wt. ▲ Each
5/16 D9C5	1 3/8	2 13/16	1	\$1.45
3/8 X1D15	1 11/16	3 1/8	2	1.75
7/16 X1D55	2	3 1/16	2 1/2	2.35
1/2 X2D90	2 1/4	3 3/4	3	2.85

One in pkg.

CARBON STEEL DRILLS

IN SETS

KEEN  KUTTER



Set consists of 8 straight shank twist drills—one each $1/16$, $5/32$, $1/8$, $5/16$, $3/16$, $7/32$, $1/4$ and $9/32$ inch.

Put up in a new plastic container with solid base with holes for each drill and transparent cover. Size $1\frac{1}{2} \times 4\frac{5}{8} \times \frac{7}{8}$ inches.

With 8 Drills

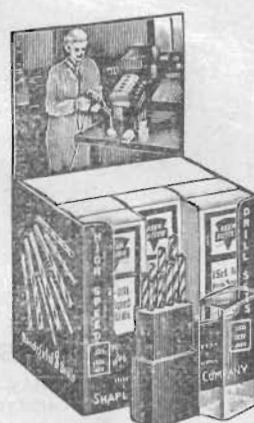
Per Set **F8840GK (K105S) X3D40** \$5.10 ▲ Per Set

Twelve sets in ctn. Wt. ctn. 3 lbs.

HIGH SPEED STEEL DRILLS

IN SETS

KEEN  KUTTER



Set consists of 8 straight shank twist drills—one each $1/16$, $5/32$, $1/8$, $5/16$, $3/16$, $7/32$, $1/4$ and $9/32$ inch.

Put up in a new plastic container with solid base with holes for each drill and transparent cover. Size $1\frac{1}{2} \times 4\frac{5}{8} \times \frac{7}{8}$ inches.

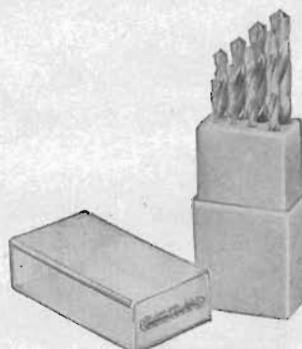
With 8 Drills

Per Set **F8839GK (K91) X3D90** \$5.85 ▲ Per Set

Six sets in ctn. Wt. ctn. $1\frac{1}{2}$ lbs.

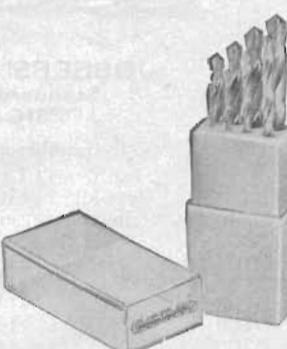
CLEVELAND

In Sets



CLEVELAND

In Sets



Set consists of 8 straight shank twist drills—one each $1/16$, $5/32$, $1/8$, $5/16$, $3/16$, $7/32$, $1/4$ and $9/32$ inch.

Put up in new plastic container with solid base with holes for each drill and transparent cover. Size $1\frac{1}{2} \times 4\frac{5}{8} \times \frac{7}{8}$ inches.

With 8 Drills

Per Set **F8815G (26) X3D40** \$5.10 ▲ Per Set

Twelve sets in display ctn. Wt. ctn. 3 lbs.

Set consists of 8 straight shank twist drills—one each $1/16$, $5/32$, $1/8$, $5/16$, $3/16$, $7/32$, $1/4$ and $9/32$ inch.

Put up in new plastic container with solid base with holes for each drill and transparent cover. Size $1\frac{1}{2} \times 4\frac{5}{8} \times \frac{7}{8}$ inches.

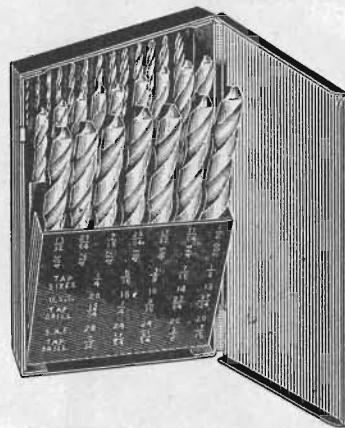
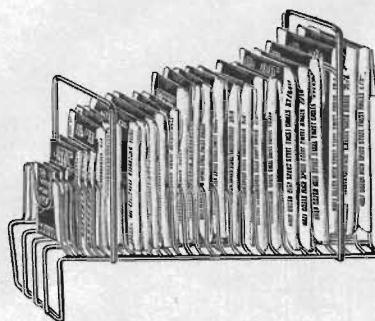
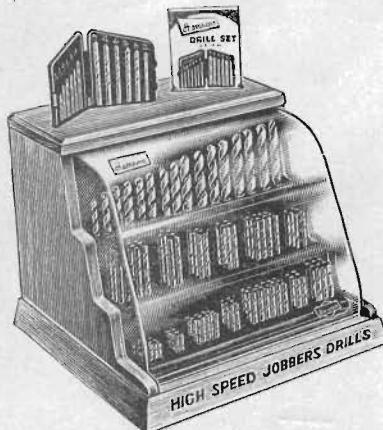
With 8 Drills

Per Set **F8817G (57) X3D90** \$5.85 ▲ Per Set

Twelve sets in display box. Wt. box 3 lbs.

HIGH SPEED STEEL TWIST DRILLS

HANSON



JOBBERS' LENGTH

Self-Seller Display Cabinet Assortment Standard Shank

Natural oak cabinet with crystal clear cover displays drills against pastel green background—requires only 14 square inches of space. Supporting holes serve as drill gauge. Sizes and prices legibly marked. Controlled inventory storage rack with 29 compartments, holds extra stock—accessible through hinged cover on front of display.

Contents:

Qty.	Size, in.	Qty.	Size, in.	Qty.	Size, in.
12	1/16	6	7/32	3	3/8
6	5/64	6	15/64	2	25/64
12	3/32	12	1/4	3	13/32
6	7/64	2	17/64	2	27/64
18	1/8	3	9/32	3	7/16
6	9/64	2	19/64	2	29/64
9	5/32	3	5/16	3	15/32
6	11/64	2	21/64	2	31/64
12	3/16	3	11/32	3	1/2
6	13/64	2	23/64	1 Set No. 113	

Per Asst. **FX-157-G X71D94**.....\$119.90

One asst. in ctn. Wt. ctn. 22 lbs.



JOBBERS' LENGTH

Standard Shank F8891G (601)

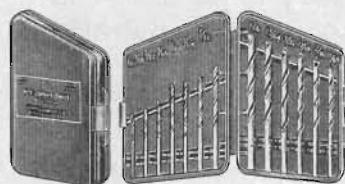
Specify number and size wanted.

Size, in.	Each	Lgth. Over-all	Lgth. Flute,	No. in Pkg.	Wt. Pkg., ozs.	Wt. Each
1/16	D1C2	1 1/8	7/8	12	1	\$0.20
5/64	D1C3	2	1	12	1	.22
3/32	D1C4	2 1/4	1 1/4	12	1	.23
7/64	D1C6	2 5/8	1 1/2	12	2	.26
1/8	D1C9	2 3/4	1 5/8	12	2	.31
9/64	D2C0	2 7/8	1 3/4	12	2	.33
5/32	D2C1	3 1/8	2	12	3	.35
11/64	D2C4	3 1/4	2 1/8	12	4	.40
3/16	D3C1	3 1/2	2 5/16	12	5	.52
13/64	D3C4	3 5/8	2 7/16	12	5	.56
7/32	D3C7	3 3/4	2 1/2	12	6	.62
15/64	D3C8	3 7/8	2 5/8	12	7	.64
1/4	D4C2	4	2 3/4	12	8	.70
11/64	D5C0	4 1/8	2 7/8	6	5	.83
9/32	D5C4	4 1/4	2 15/16	6	6	.90
19/64	D5C9	4 3/8	3 1/16	6	6	.99
5/16	D6C5	4 1/2	3 3/16	6	7	1.09
21/64	D7C1	4 5/8	3 2/16	6	7	1.18
11/32	D7C9	4 3/4	3 1/16	6	8	1.31
23/64	D8C5	4 7/8	3 1/2	6	9	1.41
3/8	D9C1	5	3 5/8	6	10	1.51
25/64	X1D00	5 1/8	3 3/4	6	11	1.67
13/32	X1D09	5 1/4	3 7/8	6	12	1.81
27/64	X1D17	5 3/8	3 15/16	6	14	1.95
7/16	X1D25	5 1/2	4 1/16	6	15	2.09
29/64	X1D34	5 5/8	4 3/16	6	17	2.23
15/32	X1D42	5 8/4	4 5/6	6	18	2.37
31/64	X1D52	5 7/8	4 3/8	6	20	2.54
1/2	X1D62	6	4 1/2	6	22	2.70

JOBBERS' LENGTH

15-Piece Set—Standard Shank

One each sizes $1/16$ through $1/2$ inch by 32nds. in metal drill index. Per Set **F8820G (15) X11D85**.....\$19.75
One set in box. Wt. box $2\frac{1}{2}$ lbs.



13-Piece Set—Standard Shank

One each $1/16$, $5/64$, $3/32$, $7/64$, $1/8$, $9/64$, $5/32$, $11/64$, $3/16$, $13/64$, $7/32$, $15/64$, and $1/4$ inch drills in unbreakable polyethylene case with rounded edges—ideal for carrying in pocket. Per Set

F8819G (113) X3D75.....\$6.25
One set in box. Wt. box $1\frac{1}{2}$ lbs.



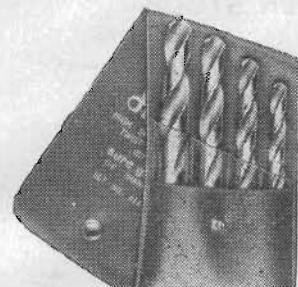
1/4 inch "Sure-Grip" Shank

"Sure-Grip" shank prevents drill from turning in chuck.

F8890G (701)

Size, in.	Each	Lgth. Over-all	Lgth. Flute,	Wt. 12	Wt. Each
5/16	D6C6	3 1/8	2 1/8	11	\$1.10
3/8	D9C0	4 1/4	2 2/16	17	1.50
7/16	X1D26	4 5/8	2 5/8	26	2.10
1/2	X1D62	4 7/8	2 3/4	36	2.70

One in plastic screw top tube



5-Piece Set—1/4 inch "Sure-Grip" Shank

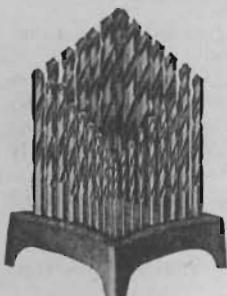
One each size $1/4$, $5/16$, $3/8$, $7/16$ and $1/2$ inch in green plastic, snap fastener case. Per Set **F8821G (145) X5D13**.....\$8.55
One set in box. Wt. box $\frac{1}{16}$ lbs.

TWIST DRILLS

CLEVELAND

In Sets

Straight Shank—Short Set

**Carbon Steel Drills No. 108
With Stand**

Per Set ▲ Per Set
F8798G (50S) X26D80 \$40.20
 One set in cardboard box. Wt. box 4 lbs.

Without Stand

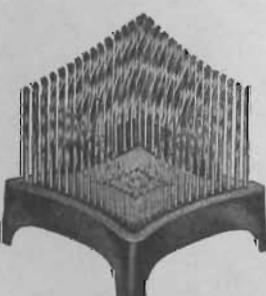
F8797G (50) X23D30 34.95
 One set in cardboard box. Wt. box 2 3/4 lbs.

**High Speed Steel Drills No. 917
With Stand**

Per Set ▲ Per Set
F8800G (54S) X33D50 \$50.25
 One set in box. Wt. box 4 lbs.

Without Stand

F8799G (54) X30D00 45.00
 One set in box. Wt. box 2 3/4 lbs.

**Straight Shank
—Wire Gauge**

Set consists of 60 drills — gauges 1 to 60.

**High Speed Steel Drills No. 918
With Stand**

Per Set ▲ Per Set
F8806G (84S) X22D40 \$33.60
 One set in box. Wt. box 4 lbs.

Without Stand

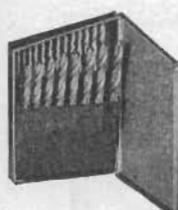
F8805G (84) X18D90 28.35
 One set in box. Wt. box 1 3/4 lbs.

TWIST DRILLS

CLEVELAND

High Speed Steel Drills

In Sets



High speed steel drills in steel Huot boxes, always ready for instant selection. Drill sizes are prominently marked on the face of the hinged compartment.

Straight Shank—Home Length

Shorter drills for portable electric drill use. Set consists of thirteen No. H967 drills, sizes $\frac{1}{16}$ to $\frac{1}{4}$ x 64ths.

Per Set ▲ Per Set
F8825G (273) X4D95 \$7.45
 One set in box. Wt. box $\frac{7}{16}$ lb.

Set consists of twenty-one No. H967 drills, sizes $\frac{1}{16}$ to $\frac{3}{8}$ x 64ths.

Per Set ▲ Per Set
F8826G (274) X13D70 \$20.55
 One set in box. Wt. box $1\frac{7}{8}$ lbs.

TWIST DRILLS

CLEVELAND

**Woodworking Set**

Increases capacity of work shop. For drill presses, electric breast and ratchet drills with $\frac{1}{4}$ -inch chuck. For wood and soft metals, including soft sheet steel. Chrome alloy steel, tempered, polished. Shank $\frac{1}{4}$ inch.

One each as follows:

Size	Over-all Lgth., ins.	Size	Over-all Lgth., ins.
$\frac{1}{4}$	4	$\frac{1}{16}$	$5\frac{1}{2}$
$\frac{5}{16}$	$4\frac{1}{2}$	$\frac{1}{2}$	6
$\frac{3}{8}$	5		

Complete with stand with drill sizes marked.

Per Set ▲ Per Set
F8813G (14) X3D60 \$5.40
 One set in box. Wt. box $\frac{5}{8}$ lb.

OPEN STOCK**F8772G-(124)**

Size, in.	Each	Length Over-all, ins.	Wt. Pkg., ozs.	▲ Each
$\frac{1}{4}$	D2C9	4	$1\frac{1}{2}$	\$0.45
$\frac{5}{16}$	D4C4★	$4\frac{1}{2}$	$\frac{3}{4}$	.65
$\frac{3}{8}$	D5C9★	5	$1\frac{1}{2}$	.90
$\frac{7}{16}$	D8C7	$5\frac{1}{2}$	2	1.30
$\frac{1}{2}$	X1D25★	6	$2\frac{1}{2}$	1.90

One in pkg.

ELECTRIC DRILL BIT SETS

IRWIN



Specially designed $\frac{1}{4}$ inch electric drills.

High grade steel, heat treated full length. Brightly polished. New specially designed cutting head. Will bore clean, fast holes. Length of twist 4 inches. Over all length 6 $\frac{1}{4}$ inches.

Colorful red plastic rolls with individual pockets and tie strings.

Set of 5 Drills

One each $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{11}{64}$ and $\frac{13}{64}$ inch.

Per Set ▲ Per Set
F5970G (62RB2) X4D07★..... \$6.10

One in box. Wt. box $\frac{3}{4}$ lb.

DRILL AND SAW BITS

BEAVER

1/4 Inch High Speed Side Cutting

After drilling its own starting hole, side cutting section can be used to cut, saw or ream in any direction.

It cuts circles, ovals, squares, scrolls, etc. Converts electric drill, drill press or lathe into a much more versatile tool.

Finest high speed steel and designed to withstand severe continuous use without dulling or breaking.

Length 3 $\frac{1}{2}$ inches. Side cutting section 2 inches.

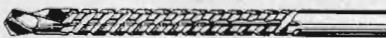
ALL-PURPOSE BIT



For use on steel, brass, aluminum, copper, lead, zinc, bronze, silver, pipe sheet metal, wood, plastic, etc.

Each ▲ Each
F8807G (1) X1D47..... \$2.45
One on card. Wt. card 2 ozs.

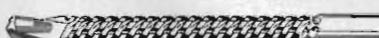
WOOD BIT



For use on plywood, plastic, sheet rock, masonite, mild steel and all types of wood.

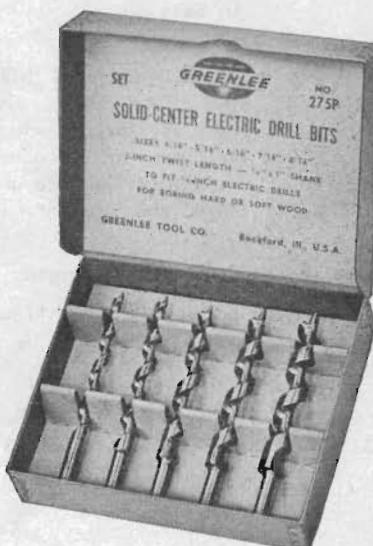
Each ▲ Each
F8808G (2) X1D47..... \$2.45
One on card. Wt. card 2 ozs.

HEAVY METAL BIT



For use on heavy iron, steel, angle iron, bakelite, etc.

Each ▲ Each
F8809G (3) X1D47..... \$2.45
One on card. Wt. card 2 ozs.

ELECTRIC DRILL BIT SETS
GREENLEE

Designed to meet the needs of any woodworker for use in a $\frac{1}{4}$ inch electric drill for boring $\frac{1}{2}$ inch or smaller holes in hard or soft wood without pressure.

Made with a solid center twist. Single cutter head. Extension lip with one outlining spur for smooth boring.

Length of twist 3 inches. Shank $\frac{1}{4} \times 1$ inch.

Consists of:

One each $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{11}{64}$ and $\frac{13}{64}$ inch drill. Complete set in a metal edge display box.

Per Set ▲ Per Set
F5971G (275P) X3D50★..... \$5.25
One set in box. Wt. box $\frac{1}{2}$ lb.

ELECTRIC DRILL BITS

IRWIN



For 1/4 inch Drill

High grade steel, heat treated full length. New specially designed cutting head. Brightly polished.

Length of twist 4 inches. Over all length 6 $\frac{1}{4}$ inches.

F6060G-(62RB)

Specify Size

Size, in.	Wt.	Each	Wt. each, ozs.	▲ Each
$\frac{1}{4}$	1	D6C8★	1	\$1.02
$\frac{5}{64}$	$1\frac{1}{3}$	D6C8★	$1\frac{1}{3}$	1.02
$\frac{3}{32}$	$1\frac{1}{3}$	D6C8★	$1\frac{1}{3}$	1.02
$\frac{11}{64}$	$1\frac{1}{3}$	D7C1★	$1\frac{1}{3}$	1.06
$\frac{1}{2}$	2	D7C2★	2	1.08
$\frac{9}{64}$	$2\frac{1}{3}$	D7C5	$2\frac{1}{3}$	1.12
$\frac{5}{8}$	$2\frac{2}{3}$	D8C3★	$2\frac{2}{3}$	1.24
$\frac{11}{64}$	$2\frac{2}{3}$	D8C6	$2\frac{2}{3}$	1.28
$\frac{3}{4}$	3	D8C7★	3	1.30

Loose

ELECTRIC DRILL BIT SETS
CLEVELAND

In Plastic Containers

Easy and profitable way to sell drills. Compact, convenient and fast-selling.

For the farmer, home owner, electrician, repairman, machinist, radio service and mechanic.

Each set contains a wide range of the most wanted drill sizes, in plain view and clearly marked.

Genuine Cle-forge high speed drills, engineered to drill more holes per grind and cut faster. Will withstand abrasive action.

Attractively packaged in sturdy plastic containers

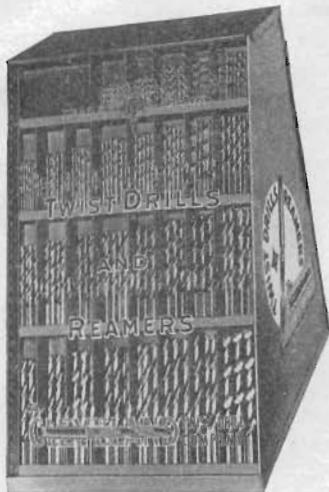


Contains—One each $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{11}{64}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{11}{64}$, $\frac{3}{16}$ and $\frac{1}{4}$ inch drills.

11 High Speed Drills

Per Set ▲ Per Set
F8816G (56) X4D00..... \$6.00
One set in box. Wt. box 5 ozs.

DRILL CABINETS



CLEVELAND

Drill Selector

Durably constructed of heavy sheet steel with attractive gray finish. Clear plastic lid gives perfect visibility. Space for 29 sizes straight shank drills from $\frac{1}{16}$ inch to $\frac{1}{2}$ inch by 64ths.

Size 12x15 in.

Without Drills

Each **FX-015-G X16D00**.....
\$24.00

One in cardboard box. Wt. box 16 $\frac{1}{2}$ lbs.

CLEVELAND

Designed especially for convenient storage of drills.

Heavy sheet metal construction. Individual parts electrically welded for rigidity and durability. Finished in gray lacquer. Lettering on outside in red, black and silver. Drawers are labeled with list number for proper drill location

Drawers divided for drills, tools and sets, as follows:

Drawer Nos.	Drill Nos.	Drawer Nos.	Drill Nos.
1	108	4	917
2	108A	5	114
3	918	6	Tools and Sets

Length 23 $\frac{1}{2}$ inches Depth 18 $\frac{1}{2}$ inches. Height 16 inches.

Ea **FX-03-G X50D00**.....
\$75.00

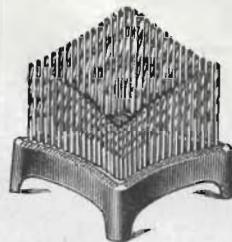
One in ctn. Wt. ctn. 160 lbs.

DRILL STANDS

CLEVELAND

(Without Drills)

For shop, garage and home workshop. Saves time looking for the right size drill.



Drill holes correctly spaced and size of drill stamped in stand so that any drill can be unerringly selected and removed quickly and easily.

Composition metal stand, oxidized, rust-proof finish. Size 4 $\frac{5}{8}$ x4 $\frac{1}{2}$ inches.

Holds 29 fractional size drills ($\frac{1}{16}$ to $\frac{1}{2}$ x 64ths. For sets Nos. 50 and 54).

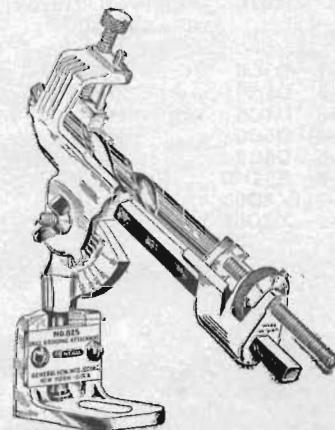
Each **F8795G (B50) X3D50**.....
\$5.25
One in box. Wt. box 1 $\frac{1}{2}$ lbs.

Holds 60 wire gauge drills (Nos. 1 to 60) for sets Nos. 80 and 84.

Each **F8796G (B80) X3D50**.....
\$5.25
One in box. Wt. box 1 $\frac{1}{4}$ lbs.

DRILL GRINDING ATTACHMENTS

GENERAL



Has the required skill and care designed and built into it, so that the average craftsman can re-point his drills to factory accuracy and to whatever angle point his work requires.

For correctly resharpening drills from $\frac{1}{8}$ to $\frac{3}{4}$ inch fractional size. No. 80 to No. 1 number size A to Z letter size. 3.0 to 19.0 metric size.

Precision built, silver lustre finish.

Each **F5677G (825) X4D40★**.....
\$6.60
One in box. Wt. box 2 lbs

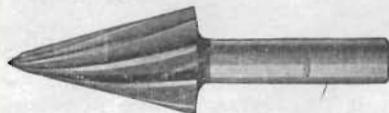
Items marked ★ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Cleveland, Ohio.

Freight allowed to destination.

STAR ★ DENOTES BEST SELLER

BURRING REAMERS

CLEVELAND



Each		Style	Shank
F9246G	(232)	X3D55	Round $\frac{3}{8}$ in.
F9248G	(233)	X4D30	Round $\frac{1}{2}$ in.
F9249G	(234)	X7D90	Round $\frac{3}{4}$ in.
F9250G	(241)	X2D30	Bit Brace
F9251G	(242)	X2D85★	Bit Brace
F9252G	(242 1/2)	X3D40★	Bit Brace
F9253G	(244)	X6D85	Bit Brace

Cap'ty Pipe, ins.	at Point	Diam., ins.	Large End	▲ Each
$\frac{1}{8}$ to 1	$\frac{3}{16}$	$\frac{1}{4}$	$1\frac{1}{4}$	\$5.35
$\frac{1}{4}$ to $1\frac{1}{4}$	$\frac{1}{4}$	$1\frac{15}{32}$	$1\frac{17}{64}$	6.45
$\frac{1}{4}$ to 2	$\frac{1}{4}$	$2\frac{17}{64}$	$2\frac{17}{64}$	11.85
$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{3}{16}$	$\frac{47}{64}$	$\frac{47}{64}$	3.45
$\frac{1}{8}$ to 1	$\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{1}{4}$	4.25
$\frac{1}{4}$ to $1\frac{1}{4}$	$\frac{1}{4}$	$1\frac{15}{32}$	$1\frac{15}{32}$	5.10
$\frac{1}{4}$ to 2	$\frac{1}{4}$	$2\frac{17}{64}$	$2\frac{17}{64}$	10.35

One in metal edgebox.

TAPER REAMERS

CLEVELAND



Each		Diam., ins.	at Point	Flute ins.	Lghth. over all, ins.	▲ Each
F9254G	(1421)	X2D40	$\frac{1}{2}$	$3\frac{1}{2}$	$5\frac{1}{2}$	\$3.60
F9255G	(1422)	X3D60	1	$4\frac{1}{2}$	$6\frac{1}{2}$	5.40

One in pkg.

SCREW EXTRACTORS
CLEVELAND EZY-OUT

For the quick and easy removal of broken set and cap screws, studs, stay bolts, pipe fittings, etc.

It is only necessary to drill a hole in the broken screw, insert proper size extractor and start a left-hand twist. This causes the cork-screw-like spirals to grip the sides of drilled hole and broken screw can be turned out on its own threads—and without injury to threads of the hole.



(192)	Diameter, ins.	Length	Length Over All,	For Screws and Bolts, in.	For Pipe in.	Use Drill Size, in.	Wt. Each, lbs.	▲ Each
Each	Small End	Large End	Flutes, in.	in.	in.	in.	lbs.	
F8533G-1	D3C6	.054	.117	$\frac{1}{2}$	$\frac{3}{16}$ to $\frac{1}{4}$	$\frac{5}{64}$	$\frac{1}{16}$	\$0.55
F8534G-2	D4C0	.080	.174	$\frac{3}{4}$	$\frac{1}{4}$ to $\frac{5}{16}$	$\frac{7}{64}$	$\frac{1}{16}$	.59
F8535G-3	D4C5	$\frac{1}{8}$	$\frac{1}{4}$	1	$2\frac{11}{16}$	$\frac{5}{16}$ to $\frac{7}{16}$	$\frac{5}{64}$	.70
F8536G-4	D5C0	$\frac{9}{16}$	$\frac{21}{64}$	$1\frac{1}{8}$	$2\frac{7}{8}$	$\frac{7}{16}$ to $\frac{9}{16}$	$\frac{13}{64}$	.75
F8538G-5	D6C0	$\frac{1}{4}$	$\frac{1}{16}$	$1\frac{1}{2}$	$3\frac{3}{8}$	$\frac{9}{16}$ to $\frac{3}{4}$	$\frac{17}{64}$	.90
F8539G-6	X1D30	$\frac{3}{8}$	$\frac{19}{32}$	$1\frac{3}{4}$	$3\frac{3}{4}$	$\frac{9}{16}$ to 1	$\frac{13}{64}$	1.95
F8540G-7	X2D00	$\frac{1}{2}$	$\frac{3}{4}$	2	$4\frac{1}{8}$	1 to $1\frac{3}{8}$	$\frac{17}{64}$	3.00
F8541G-8	X2D60	$\frac{3}{4}$	1	2	$4\frac{3}{8}$	$1\frac{3}{8}$ to $1\frac{3}{4}$	$\frac{13}{16}$	3.90

In Sets—These sets are put up in Slide-cover Wood Boxes and meet the requirements of many classes of work.

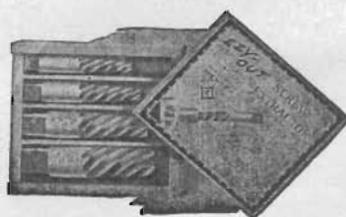
Set of Six

For general use around the garage
Will handle practically any broken
threaded piece.Consists of one each extractor Nos.
1, 2, 3, 4, 5 and 6.Per Set ▲ Per Set
F8543G (15A) X3D45★.....\$5.20
Wt. set $\frac{5}{8}$ lb.

Set of Five

Designed for tool room and light
repair work. For removing the
smaller broken cap or set screws,
bolts, etc.Consists of one each extractor,
Nos. 1, 2, 3, 4 and 5.

Per Set	▲ Per Set
F8542G (15) X2D10★.....	\$3.15

Wt. set $\frac{1}{2}$ lb.Per Set ▲ Per Set
F8545G (16) X10D40.....\$15.60
Wt. set 3 lbs.

Set of Four

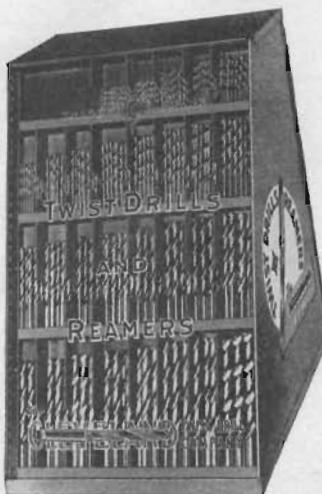
The heavy shop set.

Will handle any broken bolt
from $\frac{1}{2}$ to $1\frac{1}{2}$ inches. Particularly
adapted for railroad, steel
and structural work.Consists of one each extractor
Nos. 6, 7, 8 and 9.▲ Per Set
\$15.60Per Set ▲ Per Set
F8546G (17) X2D30.....\$3.15
Wt. set $\frac{1}{2}$ lb.

Set of Three

For general machine shop use
will handle any bolt, cap or set
screw from $\frac{5}{16}$ to 1 inch.Consists of one each extractor
Nos. 4, 5 and 6.▲ Per Set
\$3.15

STAR ★ DENOTES BEST SELLER



DRILL ASSORTMENTS

CLEVELAND

Drill Selector

A complete range of drills in a minimum amount of counter space. Stocks 29 sizes of straight shank drills from $\frac{1}{16}$ to $\frac{1}{2}$ in. by 64ths.

Durably constructed of heavy sheet steel with attractive gray finish. Clear plastic lid gives perfect visibility.

Size 12x15 in.

Consists of:

High Speed or Carbon Drills

Quantity	Size	Each	Hi-Speed	Carbon	Quantity	Size	Each	Hi-Speed	Carbon
36	$\frac{1}{16}$	\$0.16	\$0.16		6	$\frac{19}{64}$	\$0.82	\$0.38	
24	$\frac{5}{64}$	.18	.16		6	$\frac{5}{16}$	.89	.40	
24	$\frac{3}{32}$	.19	.17		6	$\frac{21}{64}$	.97	.45	
12	$\frac{7}{64}$	.20	.17		6	$\frac{11}{32}$	1.09	.50	
48	$\frac{1}{8}$	.25	.18		6	$\frac{23}{64}$	1.17	.53	
12	$\frac{9}{64}$	.25	.18		6	$\frac{3}{8}$	1.25	.58	
24	$\frac{5}{32}$	.27	.18		3	$\frac{25}{64}$	1.37	.62	
12	$\frac{13}{64}$	.31	.19		3	$\frac{11}{32}$	1.49	.68	
24	$\frac{3}{16}$	.41	.22		3	$\frac{27}{64}$	1.60	.75	
12	$\frac{15}{64}$	.43	.25		3	$\frac{7}{16}$	1.73	.82	
12	$\frac{7}{32}$	.49	.26		3	$\frac{29}{64}$	1.84	.90	
6	$\frac{15}{64}$	.51	.28		3	$\frac{15}{32}$	1.96	.99	
24	$\frac{1}{4}$	.55	.29		3	$\frac{31}{64}$	2.10	1.10	
6	$\frac{17}{64}$	.67	.31		3	$\frac{1}{2}$	2.24	1.18	
12	$\frac{9}{32}$	.74	.36						

With High Speed Drills

Each

FX-3917H-G X172D41

One in cardboard box. Wt. box 28 lbs.

Each

FX-108C-G X97D24

One in cardboard box. Wt. box 28 lbs.

DRILL SELECTOR ONLY

Without Drills

Each

FX-015-G X16D00.....

One in cardboard box. Wt. box 16 $\frac{1}{2}$ lbs.

▲Each

\$24.00



CLEVELAND

Designed especially for convenient storage of drills.

Heavy sheet metal construction. Individual parts electrically welded for rigidity and durability. Finished in gray lacquer. Lettering on outside in red, black and silver. Drawers are labeled with list number for proper drill location.

Drawers divided for drills, tools and sets, as follows:

Drawer Nos.	Drill Nos.	Drawer Nos.	Drill Nos.
1	108	4	917
2	108A	5	114
3	918	6	Tools and Sets

Length 23 $\frac{1}{2}$ inches. Depth 18 $\frac{1}{2}$ inches. Height 16 inches.

Each

X-010-G X50D00.....

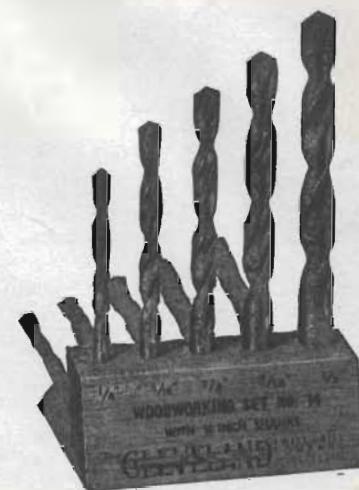
One in ctn. Wt. ctn. 160 lbs.

▲Each

\$75.00

TWIST DRILLS

CLEVELAND



Woodworking Set

Increases capacity of work shop. For drill presses, electric breast and ratchet drills with $\frac{1}{4}$ -inch chuck. For wood and soft metals, including soft sheet steel. Chrome alloy steel, tempered, polished. Shank $\frac{1}{4}$ inch.

One each as follows:

Over-all Size Lgth., ins.	List Each	Over-all Size Lgth., ins.	List Each
$\frac{1}{4}$ 4	\$0.42	$\frac{1}{16}$ 5 $\frac{1}{2}$	\$1.27
$\frac{5}{16}$ 4 $\frac{1}{2}$	.64	$\frac{1}{2}$ 6	1.78
$\frac{3}{8}$ 5	.87		

Complete with stand with drill sizes marked.

Per Set

▲Per Set

F8813G (14) X3D23.....\$4.85

One set in box. Wt. box $\frac{5}{8}$ lb.

OPEN STOCK

F8772G-(124)

Size, in.	Each	Length Over-all, ins.	Wt. Pkg., ozs	▲Each
$\frac{1}{4}$	D2C6	4	$\frac{1}{2}$	\$0.39
$\frac{5}{16}$	D4C0★	4 $\frac{1}{2}$	$\frac{3}{4}$	.60
$\frac{3}{8}$	D5C4★	5	1 $\frac{1}{2}$	.81
$\frac{7}{16}$	D7C9	5 $\frac{1}{2}$	2	1.18
$\frac{1}{2}$	X1D11★	6	2 $\frac{1}{2}$	1.65

One in pkg.

Items marked ★ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Cleveland, Ohio.

Freight allowed to destination.

STAR ★ DENOTES BEST SELLER

ELECTRIC DRILL BIT SETS

IRWIN



Specially designed $\frac{1}{4}$ inch electric drills. High grade steel, heat treated full length. Brightly polished. New specially designed cutting head. Will bore clean, fast holes. Length of twist 4 inches. Overall length 6 $\frac{1}{4}$ inches.

Colorful red plastic rolls with individual pockets and tie strings.

Set of 5 Drills

One each $\frac{1}{16}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{1}{8}$ and $\frac{5}{16}$ inch.

Per Set

F5970G (62RB2) X4D07★.....\$6.10

One in box. Wt. box $\frac{3}{4}$ lb.

DRILL AND SAW BITS

BEAVER

 $\frac{1}{4}$ Inch High Speed Side Cutting

After drilling its own starting hole, side cutting section can be used to cut, saw or ream in any direction.

It cuts circles, ovals, squares, scrolls, etc. Converts electric drill, drill press or lathe into a much more versatile tool.

Finest high speed steel and designed to withstand severe continuous use without dulling or breaking.

Length 3 $\frac{1}{2}$ inches. Side cutting section 2 inches.

ALL-PURPOSE BIT



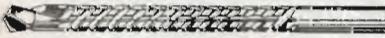
For use on steel, brass, aluminum, copper, lead, zinc, bronze, silver, pipe sheet metal, wood, plastic, etc.

Each

F8807G (1) X1D47.....\$2.45

One on card. Wt. card 2 ozs.

WOOD BIT



For use on plywood, plastic, sheet rock, masonite, mild steel and all types of wood.

Each

F8808G (2) X1D47.....\$2.45

One on card. Wt. card 2 ozs.

HEAVY METAL BIT



For use on heavy iron, steel, angle iron, bakesite, etc.

Each

F8809G (3) X1D47.....\$2.45

One on card. Wt. card 2 ozs.

ELECTRIC DRILL BIT SETS

GREENLEE



Designed to meet the needs of any woodworker for use in a $\frac{1}{4}$ inch electric drill for boring $\frac{1}{2}$ inch or smaller holes in hard or soft wood without pressure.

Made with a solid center twist. Single cutter head. Extension lip with one outlining spur for smooth boring.

Length of twist 3 inches. Shank $\frac{1}{4}$ x 1 inch.

Consists of:

One each $\frac{1}{16}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{1}{8}$ and $\frac{5}{16}$ inch drill. Complete set in a metal edge display box.

Per Set

F5971G (275P) X3D50★.....\$5.25

One set in box. Wt. box $\frac{1}{2}$ lb.

ELECTRIC DRILL BITS

IRWIN

For $\frac{1}{4}$ inch Drill

High grade steel, heat treated full length. New specially designed cutting head. Brightly polished.

Length of twist 4 inches. Overall length 6 $\frac{1}{4}$ inches.

F6060G-(62RB)

Specify Size

Size, in.	Each	Wt. each, ozs.	▲ Each
$\frac{1}{4}$	D6C8★	1	\$1.02
$\frac{5}{32}$	D6C8★	$1\frac{1}{3}$	1.02
$\frac{3}{8}$	D6C8★	$1\frac{1}{3}$	1.02
$\frac{7}{32}$	D7C1★	$1\frac{2}{3}$	1.06
$\frac{1}{2}$	D7C2★	2	1.08
$\frac{9}{32}$	D7C5	$2\frac{1}{3}$	1.12
$\frac{5}{8}$	D8C3★	$2\frac{2}{3}$	1.24
$\frac{11}{32}$	D8C6	$2\frac{2}{3}$	1.28
$\frac{3}{4}$	D8C7★	3	1.30

Loose

Items marked ★ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Montpelier, Ohio.

STAR ★ DENOTES BEST SELLER

EXPANSION HAND REAMERS

CLEVELAND COMMON SENSE



Primarily designed for enlarging holes by a few thousandths of an inch. All are slightly tapered at front to facilitate starting.

Recommended limits of expansion— $\frac{1}{4}$ to $\frac{15}{32}$, .006 inch; $\frac{1}{2}$ to $\frac{31}{32}$, .010 inch; 1 to $1\frac{1}{2}$, .012 inch; $1\frac{9}{16}$ to 2, .015 inch.

CARBON STEEL

+ 129-G—Eccentric Flutes

Specify Number and Size Wanted

Diam., ins.	Length Each	Length Flutes, ins.	Length Over-All, ins.	Weight Each, lbs.	Diam., ins.	Length Each	Length Flutes, ins.	Length Over-All, ins.	Weight Each, lbs.	▲ Each
$\frac{1}{4}$	X7D32	$1\frac{1}{2}$	$3\frac{3}{4}$	$\frac{1}{16}$	X11D75	$2\frac{13}{16}$	$6\frac{5}{8}$	$5\frac{7}{8}$	$\frac{5}{8}$	\$17.65
$\frac{9}{32}$	X7D57	$1\frac{5}{8}$	$3\frac{7}{8}$	$\frac{1}{16}$	X12D84	3	$6\frac{7}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	19.25
$\frac{5}{16}$	X7D57	$1\frac{13}{16}$	4	$\frac{1}{16}$	X12D84	$3\frac{1}{16}$	$7\frac{1}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	19.25
$1\frac{1}{32}$	X7D80	$1\frac{13}{16}$	$4\frac{1}{8}$	$\frac{1}{16}$	X14D06	$3\frac{1}{4}$	$7\frac{3}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	21.10
$\frac{3}{8}$	X7D80	$1\frac{7}{8}$	$4\frac{1}{4}$	$\frac{1}{8}$	X14D06	$3\frac{3}{8}$	$7\frac{9}{16}$	1	1	21.10
$1\frac{3}{32}$	X8D06	$1\frac{7}{8}$	$4\frac{3}{8}$	$\frac{1}{8}$	X15D29	$3\frac{1}{2}$	$7\frac{13}{16}$	$1\frac{1}{8}$	$1\frac{1}{8}$	22.95
$\frac{7}{16}$	X8D06	$1\frac{7}{8}$	$4\frac{1}{2}$	$\frac{1}{8}$	X15D29	$3\frac{5}{8}$	$8\frac{1}{16}$	$1\frac{1}{4}$	$1\frac{1}{4}$	22.95
$1\frac{5}{32}$	X8D30	$1\frac{7}{8}$	$4\frac{3}{4}$	$\frac{3}{16}$	X16D54	$3\frac{13}{16}$	$8\frac{9}{32}$	$1\frac{1}{4}$	$1\frac{1}{4}$	24.80
$\frac{1}{2}$	X8D30	$1\frac{7}{8}$	5	$\frac{1}{4}$	X16D54	$3\frac{7}{8}$	$8\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	24.80
$1\frac{7}{32}$	X8D93	$1\frac{15}{16}$	$5\frac{3}{16}$	$\frac{1}{4}$	X18D98	$4\frac{1}{8}$	$9\frac{1}{4}$	2	2	28.60
$\frac{9}{16}$	X8D93	$2\frac{1}{16}$	$5\frac{3}{8}$	$\frac{3}{8}$	X20D35	$4\frac{3}{16}$	$9\frac{9}{16}$	$2\frac{3}{8}$	$2\frac{3}{8}$	30.50
$1\frac{9}{32}$	X9D79	$2\frac{3}{16}$	$5\frac{9}{16}$	$\frac{3}{8}$	X21D80	$4\frac{1}{4}$	$9\frac{7}{8}$	$2\frac{3}{4}$	$2\frac{3}{4}$	32.70
$\frac{5}{8}$	X9D79	$2\frac{5}{16}$	$5\frac{3}{4}$	$\frac{3}{8}$	X23D27	$4\frac{1}{16}$	$10\frac{1}{8}$	3	3	34.90
$2\frac{1}{32}$	X10D76	$2\frac{1}{2}$	6	$\frac{1}{2}$	X25D73	$4\frac{7}{16}$	$10\frac{3}{8}$	$3\frac{5}{8}$	$3\frac{5}{8}$	38.60
$1\frac{11}{16}$	X10D76	$2\frac{11}{16}$	$6\frac{1}{4}$	$\frac{1}{2}$	X28D20	$4\frac{7}{16}$	$10\frac{5}{8}$	$3\frac{7}{8}$	$3\frac{7}{8}$	42.30
$2\frac{3}{32}$	X11D75	$2\frac{3}{4}$	$6\frac{7}{16}$	$\frac{5}{8}$	X30D64	$4\frac{1}{2}$	$10\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	45.95

Individually wrapped. All sizes and dimensions not listed are special and subject to special prices.

CLEVELAND PEERLESS



HIGH SPEED STEEL

+ 502-G—Straight Flute

Specify Number and Size Wanted

Low alloy steel body of maximum toughness, with high speed steel blades. This combination of steels produces a reamer that is extremely tough at a price considerably below that of high-speed steel reamers.

The expanding feature of these reamers make it an ideal low cost, high production tool, because when it becomes dull it can be expanded and resharpened many times and put in its original serviceable condition.

All sizes and dimensions not listed are special and subject to special prices.

Diam., ins.	Length Each	Length Flutes, ins.	Length Over All, ins.	Weight Each, lbs.	▲ Each
$\frac{1}{2}$	X10D22	3	6	$\frac{3}{8}$	\$15.35
$\frac{5}{8}$	X12D50	$3\frac{1}{2}$	7	$\frac{1}{2}$	18.75
$2\frac{1}{32}$	X13D06	$3\frac{11}{16}$	$7\frac{3}{8}$	$\frac{5}{8}$	19.60
$1\frac{11}{16}$	X13D65	$3\frac{7}{8}$	$7\frac{3}{4}$	$\frac{3}{4}$	20.50
$\frac{3}{4}$	X14D78	$4\frac{3}{16}$	$8\frac{3}{8}$	$\frac{7}{8}$	22.15

Individually wrapped

For Greatest Satisfaction
Buy
KEEN KUTTER

FLUTED CHUCKING REAMERS

CLEVELAND



High Speed Steel

*No. 630-G—Straight Shank—Eccentric Flutes

Specify Number and Size Wanted

Diam., ins.	Diam. Each	Diam. Shank, ins.	Length Shank, ins.	Length Over-All, ins.	Weight Each, lbs.	▲Each
1/8	X1D52	7/64	7/8	3 1/2	1/16	\$ 2.30
5/32	X1D91	9/64	1	4	1/16	2.85
3/16	X1D91	11/64	1 1/8	4 1/2	1/16	2.85
7/32	X2D28	13/64	1 1/4	5	1/16	3.45
1/4	X2D28	15/64	1 1/2	6	1/16	3.45
9/32	X2D47	15/64	1 1/2	6	1/16	3.70
5/16	X2D47	9/32	1 1/2	6	1/8	3.70
1 1/32	X2D86	9/32	1 1/2	6	1/8	4.30
3/8	X2D86	5/16	1 3/4	7	3/16	4.30
13/32	X3D24	5/16	1 3/4	7	3/16	4.85
7/16	X3D24	3/8	1 3/4	7	1/4	4.85
15/32	X3D62	3/8	1 3/4	7	1/4	5.45
1/2	X3D62	7/16	2	8	3/8	5.45
17/32	X4D41	7/16	2	8	3/8	6.60
9/16	X4D41	7/16	2	8	3/8	6.60
19/32	X4D81	7/16	2	8	1/2	7.20
5/8	X4D81	9/16	2 1/4	9	5/8	7.20
2 1/32	X5D52	9/16	2 1/4	9	3/4	8.30
11/16	X5D52	9/16	2 1/4	9	3/4	8.30
23/32	X5D96	9/16	2 1/4	9	3/4	8.95
3/4	X5D96	5/8	2 1/2	9 1/2	1/8	8.95
25/32	X6D39	5/8	2 1/2	9 1/2	1	9.60
13/16	X6D39	5/8	2 1/2	9 1/2	1	9.60
27/32	X7D06	5/8	2 1/2	9 1/2	1 1/4	10.60
7/8	X7D06	3/4	2 5/8	10	1/4	10.60
29/32	X7D95	3/4	2 5/8	10	1 1/2	11.95
15/16	X7D95	3/4	2 5/8	10	1 1/2	11.95
31/32	X8D83	3/4	2 5/8	10	1 3/8	13.25
1	X8D83	7/8	2 3/4	10 1/2	1 3/4	13.25
11/16	X9D94	7/8	2 3/4	10 1/2	1 7/8	14.90
11/8	X11D06	7/8	2 7/8	11	2	16.60
13/16	X12D15	1	2 7/8	11	2 7/8	18.25
11/4	X13D47	1	3	11 1/2	2 7/8	20.20
15/16	X15D03	1	3	11 1/2	3 5/8	22.55
13/8	X16D58	1	3 1/4	12	4	24.90
17/16	X18D12	1 1/4	3 1/4	12	4 1/4	27.20
1 1/2	X19D67	1 1/4	3 1/2	12 1/2	4 1/2	29.55

Individually wrapped

Reamers for brass or bronze require special clearance and can be furnished on request.

All sizes and dimensions not listed are special and subject to special prices.

EXPANSION CHUCKING REAMERS

CLEVELAND PEERLESS



Low alloy steel body of maximum toughness, with high speed steel blades. This combination of steels produces a reamer that is extremely tough at a price considerably below that of full high-speed steel reamers.

High Speed Steel
*No. 504-G Straight Shank
Specify Number and Size Wanted

Diam., ins.	Diam. Each	Diam. Shank, ins.	Length Flutes, ins.	Length Over-All, ins.	Weight Each, lbs.	▲Each
1/2	X8D10	7/16	1	8	3/8	\$ 12.15
1 1/32	X8D39	7/16	1	8	3/8	12.60
9/16	X8D58	7/16	1 1/8	8	3/8	12.90
19/32	X8D86	7/16	1 1/8	8	1/2	13.30
5/8	X9D06	9/16	1 1/4	9	5/8	13.60
21/32	X9D32	9/16	1 1/4	9	5/8	14.00
11/16	X9D54	9/16	1 1/4	9	3/4	14.25
23/32	X10D00	9/16	1 1/4	9	3/4	15.00
3/4	X10D48	5/8	1 3/8	9 1/2	7/8	15.75
25/32	X10D97	5/8	1 3/8	9 1/2	7/8	16.45
13/16	X11D46	5/8	1 3/8	9 1/2	7/8	17.20
27/32	X11D92	5/8	1 3/8	9 1/2	7/8	17.90
7/8	X12D41	3/4	1 1/2	10	1 1/4	18.40
29/32	X12D98	3/4	1 1/2	10	1 1/4	19.50
15/16	X13D53	3/4	1 1/2	10	1 1/4	20.30
31/32	X14D12	3/4	1 1/2	10	1 5/8	21.20
1	X14D88	7/8	1 5/8	10 1/2	1 7/8	22.30
11/32	X15D65	7/8	1 5/8	10 1/2	1 7/8	23.50
11/16	X16D42	7/8	1 5/8	10 1/2	1 7/8	24.65
13/32	X17D18	7/8	1 5/8	10 1/2	1 7/8	25.75
11/8	X17D94	7/8	1 3/4	11	2	26.90
15/32	X18D51	7/8	1 3/4	11	2	27.75
13/16	X19D10	1	1 3/4	11	2 1/2	28.65
17/32	X19D67	1	1 3/4	11	2 5/8	29.50
11/4	X20D41	1	1 7/8	11 1/2	2 3/4	30.60
15/16	X21D19	1	1 7/8	11 1/2	2 3/4	31.75
13/8	X21D98	1	2	12	3	33.00
17/16	X22D91	1 1/4	2	12	4 1/4	34.35
11/2	X23D88	1 1/4	2 1/8	12 1/2	4 1/2	35.80
19/16	X25D02	1 1/4	2 1/8	12 1/2	4 5/8	37.55
15/8	X26D17	1 1/4	2 1/4	13	4 7/8	39.25
11 1/16	X27D32	1 1/4	2 1/4	13	5	40.80
13/4	X28D67	1 1/4	2 3/8	13 1/2	5 1/4	43.00
11 3/16	X29D98	1 1/2	2 3/8	13 1/2	7	45.00
1 7/8	X31D32	1 1/2	2 1/2	14	7 3/8	47.00
11 5/16	X32D85	1 1/2	2 1/2	14	7 1/2	49.25
2	X34D39	1 1/2	2 1/2	14	7 3/8	51.60
2 1/16	X35D92	1 1/2	2 3/4	14 1/2	8 1/4	53.90
2 1/8	X37D62	1 1/2	2 3/4	14 1/2	8 1/4	56.40
2 3/16	X41D27	1 3/4	2 3/4	14 1/2	10 1/4	61.90
2 1/4	X43D00	1 3/4	2 3/4	14 1/2	10 1/2	64.50
2 5/16	X44D70	1 3/4	3	15	11 1/4	67.05
2 3/8	X46D62	1 3/4	3	15	11 3/8	69.95
2 7/16	X48D72	1 3/4	3	15	11 3/8	73.08
2 1/2	X50D84	1 3/4	3	15	11 3/4	76.25
2 9/16	X53D13	2	3 1/4	15 1/2	14 7/8	79.70
2 5/8	X55D42	2	3 1/4	15 1/2	15	83.15
2 11/16	X57D71	2	3 1/4	15 1/2	15 1/4	86.55
2 3/4	X60D22	2	3 1/4	15 1/2	15 3/8	90.35
2 13/16	X62D67	2	3 1/2	16	16	94.00
2 7/8	X65D34	2	3 1/2	16	16 3/4	98.00
2 15/16	X68D22	2	3 1/2	16	17	102.35
3	X71D30	2	3 1/2	16	17 1/4	106.95

Individually wrapped

TAPER PIN REAMERS

CLEVELAND



Taper $\frac{1}{4}$ inch per foot. These reamers all have the same taper. The point of any one reamer will enter the hole reamed by the next size smaller.

•137-G Carbon Steel—Straight Flutes

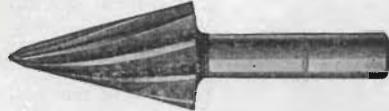
Specify Number and Size Wanted

Size		Diam. Large End, ins.	Diam. Small End, ins.	Length Flute, ins.	Diam. Shank, ins.	Length Over All, ins.	Weight Pkg. lbs.	▲ Each
•7/0	X2D97	.0666	.0497	1 $\frac{3}{16}$	$\frac{5}{64}$	1 $\frac{13}{16}$	$\frac{1}{16}$	\$4.45
•6/0	X2D97	.0806	.0611	1 $\frac{5}{16}$	$\frac{3}{32}$	1 $\frac{5}{16}$	$\frac{1}{14}$	4.45
•5/0	X2D75	.0966	.0719	1 $\frac{3}{16}$	$\frac{7}{64}$	2 $\frac{3}{16}$	$\frac{1}{13}$	4.15
•4/0	X2D75	.1142	.0869	1 $\frac{5}{16}$	$\frac{1}{8}$	2 $\frac{3}{16}$	$\frac{1}{11}$	4.15
•2/0	X2D55	.1462	.1137	1 $\frac{9}{16}$	$\frac{5}{32}$	2 $\frac{9}{16}$	$\frac{1}{7}$	3.85
•4	X2D75	.2604	.2071	2 $\frac{9}{16}$	$\frac{17}{64}$	4 $\frac{1}{16}$	1	4.15
•9	X7D05	.6066	.4805	6 $\frac{1}{16}$	$\frac{3}{16}$	8 $\frac{5}{16}$	6	10.60
•10	X7D70	.7216	.5799	6 $\frac{13}{16}$	$\frac{5}{8}$	9 $\frac{5}{16}$	10	11.55

One in pkg.

BURRING REAMERS

CLEVELAND



For the removal of burrs from cut pipe and conduit, enlarging holes, countersinking and smoothing edges of holes in various materials.

Carbon steel, with special flutes. Accurately machined and tempered. Carefully ground.

Each		Style Shank	Cap'ty Pipe, ins.	— Diam., ins. —	▲ Each
			at Point	Large End	
F9246G	(232)	X2D84	Round $\frac{3}{2}$ in.	$\frac{1}{8}$ to 1	$\frac{1}{16}$
F9248G	(233)	X3D42	Round $\frac{3}{2}$ in.	$\frac{1}{4}$ to $1\frac{1}{4}$	$1\frac{15}{32}$
F9249G	(234)	X6D87	Round $\frac{3}{2}$ in.	$\frac{1}{4}$ to 2	$2\frac{7}{16}$
F9250G	(241)	X2D28	Bit Brace	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{47}{64}$
F9251G	(242)	X2D84★	Bit Brace	$\frac{1}{8}$ to 1	$\frac{1}{16}$
F9252G	(242½)	X3D42★	Bit Brace	$\frac{1}{4}$ to $1\frac{1}{4}$	$1\frac{15}{32}$
F9253G	(244)	X6D87	Bit Brace	$\frac{1}{4}$ to 2	$2\frac{7}{16}$

One in metal edgebox.

TAPER REAMERS

CLEVELAND



Repairman's

For farmers and workshop. Also electricians, telephone linemen, auto repairmen, plumbers, carpenters, machinists, blacksmiths, etc.

Each		Diam., ins.	Flute ins.	Lgth. over all, ins.	▲ Each
		Large End	Point		
F9254G	(1421)	X2D50	$\frac{1}{2}$	$\frac{1}{8}$	$3\frac{1}{2}$
F9255G	(1422)	X3D77	1	$\frac{3}{8}$	$4\frac{1}{2}$

One in pkg.

Items marked ★ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Cleveland, Ohio

STAR ★ DENOTES BEST SELLER

SCREW EXTRACTORS

CLEVELAND EZY-OUT

For the quick and easy removal of broken set and cap screws, studs, stay bolts, pipe fittings, etc.

It is only necessary to drill a hole in the broken screw, insert proper size extractor and start a left-hand twist. This causes the cork-screw-like spirals to grip the sides of drilled hole and broken screw can be turned out on its own threads—and without injury to threads of the hole.



NOTE—Always use largest possible extractor. Under ordinary conditions use size drill listed in table. However, use smaller or larger drill, depending on length of broken part or its depth in hole.

Carbon Steel—Specify Number and Size Wanted

(192)	Diameter, ins.	Length	Length	For Screws	For	Use	Wt.	▲ Each
Each	Small End	Large End	Flutes, in.	Over All, in.	and Bolts, in.	Pipe in.	Drill, in.	Each, lbs.
F8533G-1	D3C6	.054	.117	1/2	2	3/16 to 1/4	5/64	1/16 \$0.55
F8534G-2	D3C9	.080	.174	3/4	2 3/8	1/4 to 5/16	7/64	1/16 .59
F8535G-3	D4C2	1/8	1/4	1	2 1/16	5/16 to 1/16	5/32	1/16 .61
F8536G-4	D5C0	3/16	21/64	1 1/8	2 7/8	7/16 to 9/16	1/4	1/16 .75
F8538G-5	D5C5	1/4	7/16	1 1/2	3 3/8	9/16 to 3/4	17/64	1/8 .83
F8539G-6	D8C4	3/8	19/32	1 3/4	3 3/4	3/4 to 1	13/32	1/4 1.28
F8540G-7	X1D59	1/2	3/4	2	4 1/8	1 to 1 3/8	17/32	3/8 2.40
F8541G-8	X2D21	3/4	1	2	4 3/8	1 3/8 to 1 3/4	13/16	3/4 3.30

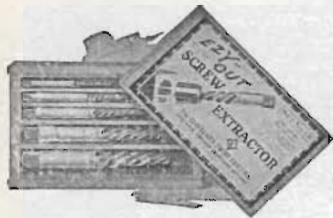
(+192-G)

Direct Shipment

Size		Diameter, ins.	Length	Length	For Screws	For	Use	Wt. Each, lbs.	▲ Each
+9	X3D30	1	19/32	2 1/4	4 5/8	1 3/4 to 2 1/8	1	1 1/16	1 1/4 4.95
+10	X5D23	1 1/4	19/16	2 1/2	5	2 1/8 to 2 1/2		1 1/16	1 1/8 7.85
+11	X7D02	1 1/2	1 7/8	3	5 5/8	2 1/2 to 3		1 1/16	2 7/8 10.55
+12	X8D72	1 7/8	2 5/16	3 1/2	6 1/4	3 to 3 1/2		1 15/16	4 3/4 13.10

One in pkg.

In Sets—These sets are put up in Slide-cover Wood Boxes and meet the requirements of many classes of work.



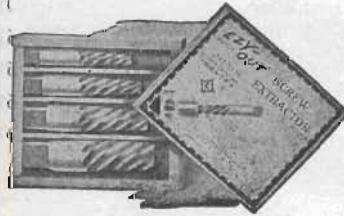
Set of Five

Designed for tool room and light repair work. For removing the smaller broken cap or set screws, bolts, etc.

Consists of one each extractor, Nos. 1, 2, 3, 4 and 5.

Per Set F8542G (15) X2D01★..... ▲ Per Set \$3.00

Wt. set 1/2 lb.



Set of Four

The heavy shop set. Will handle any broken bolt from 1/2 to 1 1/2 inches. Particularly adapted for railroad, steel and structural work.

Consists of one each extractor Nos. 6, 7, 8 and 9.

Per Set F8545G (16) X7D94..... ▲ Per Set \$11.90

Wt. set 3 lbs.



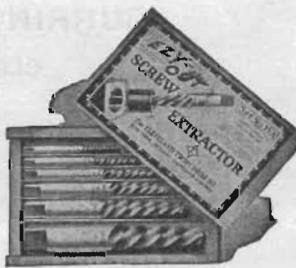
Set of Three

For general machine shop use will handle any bolt, cap or set screw from 5/16 to 1 inch.

Consists of one each extractor Nos. 4, 5 and 6.

Per Set F8546G (17) X1D77..... ▲ Per Set \$2.65

Wt. set 1/2 lb.



Set of Six

For general use around the garage Will handle practically any broken threaded piece.

Consists of one each extractor Nos. 1, 2, 3, 4, 5 and 6.

Per Set F8543G (15A) X2D87★..... ▲ Per Set \$4.30

Wt. set 5/8 lb.



Set of Six

For garage or general use. Will handle every size bolt, cap or set screw from small electrical parts to 1 inch studs.

Consists of one each extractor Nos. 1, 2, 3, 4, 5 and 6, with the proper straight shank drill to use with each extractor.

Per Set F8547G (20) X6D42..... ▲ Per Set \$9.63

Wt. set 1 1/4 lbs.

Items marked ★ not carried in stock. Can only be furnished by shipping direct from factory, F. O. B., Cleveland, Ohio.

STAR ★ DENOTES BEST SELLER

Loose