

BOXED FLINT PAPER



B-A STAR

- Best quality selected fibre paper.
- Gauged, seasoned and tested quartz, properly glued for satisfactory duty.

Sheets $8\frac{3}{4} \times 10\frac{1}{2}$ inches.
In unit packages.

Nos.	Per Box	Grit Nos.	Sheets in a Box	Weight Per Box, Lbs.	Std. List, Per Box
TB SFB00	\$0.95	00	100	$3\frac{1}{4}$	\$1.40
TB SFB0	.95	0	100	$3\frac{3}{4}$	1.40
TB SFB $\frac{1}{2}$	1.00	$\frac{1}{2}$	100	$4\frac{1}{8}$	1.50
TB SFB1	.90	1	75	4	1.25
TB SFB1 $\frac{1}{2}$	.80	$1\frac{1}{2}$	50	$3\frac{5}{8}$	.95
TB SFB2	.85	2	50	4	1.10
TB SFB2 $\frac{1}{2}$	.90	$2\frac{1}{2}$	50	$5\frac{1}{4}$	1.20

Ten boxes in a carton.



CLOVER BRAND—GREEN STRIPE

- High quality fibre paper. Properly gauged, seasoned and tested. Quartz coating, glued on, assures reliable service.

Sheets $8\frac{3}{4} \times 10\frac{1}{2}$ inches.

Nos.	Per Box	Grit Nos.	Sheets in a Box	Wt. Per Box, Lbs.	Std. List, Per Box
TB CFB00	\$0.90	00	100	$3\frac{1}{4}$	\$1.40
TB CFB0	.90	0	100	$3\frac{3}{4}$	1.40
TB CFB $\frac{1}{2}$	.95	$\frac{1}{2}$	100	$4\frac{1}{8}$	1.50
TB CFB1	.85	1	75	4	1.25
TB CFB1 $\frac{1}{2}$	.75	$1\frac{1}{2}$	50	$3\frac{5}{8}$	.95
TB CFB2	.80	2	50	4	1.10

Ten boxes in a carton.

WETORDRY TRI-M-ITE PAPER

Sandpaper used with water for smoother, finer finishes—no dusting.



- Not affected by hot or cold water. Will not shed the mineral nor wear down the backing because it is water-proofed front and back.

In the finer numbers it rivals the results produced by pumice flour and water on the last coat of rubbing varnish and lacquer.

Tri-M-ite abrasive is a manufactured mineral with a degree of hardness approximating that of the diamond. Always uniform and of the exact temper to give maximum cutting efficiency. Especially recommended for use in paint and machine shops, garages, furniture factories—wherever repainting is done.

Sheets 9×11 Inches

Nos.	Per Sheet	Grit Nos.	Equals Garnet Size No.	Back- ing Wt.	Wt. Per Ream, Lbs.	List, Per Quire
TB 400A	\$0.10	400	10/0	A	12	\$1.50
TB 320A	.10	320	9/0	A	12	1.50
TB 280A	.10	280	8/0	A	13	1.50
TB 240A	.10	240	7/0	A	15	1.50
TB 220C	.10	220	6/0	C	18	1.50

24 sheets in a quire.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

FLINT PAPER



BAEDER, ADAMSON & CO.

- Tough, durable, selected fibre paper.
- Gauged, seasoned, tested and sifted quartz, properly glued for long wear.

In reams of 20 quires (480 sheets), $\frac{1}{2}$ ream in a package. Sheets 9×11 inches.

Nos.		Reams in Bundle	Weight Per Ream, Lbs.	Std. List, Per Ream
TB AF00	3 for 5c	5	16	\$7.50
TB AF0	3 for 5c	5	18	7.50
TB AF $\frac{1}{2}$	3 for 5c	4	20	7.95
TB AF1	3 for 5c	3 $\frac{1}{2}$	26	9.00
TB AF1 $\frac{1}{2}$	3 for 5c	3	30	10.50
TB AF2	3 for 5c	2 $\frac{1}{2}$	40	12.15
TB AF2 $\frac{1}{2}$	3 for 5c	2	46	13.95
TB AF3	5 for 10c	1 $\frac{1}{2}$	55	15.90



STAR

- Long-lasting, high grade fibre paper.
- Glue and quartz coating.

In reams of 20 quires (480 sheets); $\frac{1}{2}$ ream in a package. Sheets $8\frac{3}{4} \times 10\frac{1}{2}$ inches.

		Weight		Std.
		Reams in	Per	List,
Nos.		Bundle	Ream, Lbs.	Per Ream
TB BF00	3 for 5c	5	15	\$6.75
TB BF0	3 for 5c	5	17	6.75
TB BF½	3 for 5c	5	15	7.20
TB BF1	3 for 5c	4	23	8.10
TB BF1½	3 for 5c	3	25	9.15
TB BF2	3 for 5c	3	32	10.34
TB BF2½	3 for 5c	2	34	11.70
TB BF3	3 for 5c	2	44	13.20

GARNET PAPER

BAEDER, ADAMSON & CO.

- Tough, strong fibre paper.
- Carefully seasoned and tested garnet flint, crushed and sifted, is glued on—gives lasting performance.

In reams of 20 quires (480 sheets); $\frac{1}{2}$ ream in a package. Sheets 9×11 inches.

Nos.	Each	Reams in Bundle	Wt. Per Ream, Lbs.	Std. List, Per Ream
TB AG0	5c	$3\frac{1}{2}$	39	\$25.00
TB AG $\frac{1}{2}$	6c	3	45	29.00
TB AG1	7c	3	40	33.00

WATER PROOF

For finishing automobiles, furniture—anything with a varnished surface. Particularly handy for interior decorating uses.

Strong fibre paper with selected crushed and sifted garnet flint abrasive. Carefully seasoned and tested. Water-proof composition glue holds abrasive securely to paper.

Nos.	Each	Grit Nos.	Reams in Bundle	Wt. Per Ream, Lbs.	Std. List, Per Ream
TB WG50	5c	180	$\frac{1}{2}$	15	\$16.75
TB WG40	6c	150	$\frac{1}{2}$	15	19.00
TB WG30	7c	120	$\frac{1}{2}$	15	21.00

GARNET PAPER IN ROLLS

THREE-M (CLOSED COAT)

- For use on drum, belt, spindle disc or other wood sanding machines.
- Meets most severe sanding conditions.
- Cutting efficiency balanced in the backing to assure maximum life.
- Hugs spindle, drum or disc machines snugly.
- Free from wavy edges and wrinkles.

Heavy rope paper backing (130 lbs.) gives proper reinforcement to cutting surface. Crushed and sifted garnet flint coating—carefully seasoned and tested.

In 50-yard Rolls



Width 24 Inches				
Grade Nos.	Grain Nos.	Nos.	Weight Per Roll, Lbs.	Std. List, Per Roll
20	100	TB 3MG2024	30	\$20.50
10	80	TB 3MG1024	34	27.50
1/2	60	TB 3MG 1/2 24	44	26.30
1	50	TB 3MG124	54	30.00
1 1/2	40	TB 3MG1 1/2 24	63	34.00
2	36	TB 3MG224	76	38.20
2 1/2	30	TB 3MG2 1/2 24	85	42.30

Width 30 Inches				
Grade Nos.	Grain Nos.	Nos.	Weight Per Roll, Lbs.	Std. List, Per Roll
20	100	TB 3MG2030	28	\$25.60
10	80	TB 3MG1030	43	28.35
1/2	60	TB 3MG 1/2 30	55	32.85
1	50	TB 3MG130	68	37.50
1 1/2	40	TB 3MG1 1/2 30	79	42.50
2	36	TB 3MG230	95	47.75
2 1/2	30	TB 3MG2 1/2 30	107	52.85

Width 36 Inches				
Grade Nos.	Grain Nos.	Nos.	Weight Per Roll, Lbs.	Std. List, Per Roll
20	100	TB 3MG2036	46	\$30.75
10	80	TB 3MG1036	52	34.05
1/2	60	TB 3MG 1/2 36	65	39.45
1	50	TB 3MG136	81	45.00
1 1/2	40	TB 3MG1 1/2 36	94	51.00
2	36	TB 3MG236	114	57.30
2 1/2	30	TB 3MG2 1/2 36	129	63.45

Width 42 Inches				
Grade Nos.	Grain Nos.	Nos.	Weight Per Roll, Lbs.	Std. List, Per Roll
20	100	TB 3MG2042	54	\$35.85
10	80	TB 3MG1042	60	39.70
1/2	60	TB 3MG 1/2 42	77	46.00
1	50	TB 3MG142	95	52.50
1 1/2	40	TB 3MG1 1/2 42	110	59.50
2	36	TB 3MG242	132	66.85
2 1/2	30	TB 3MG2 1/2 42	150	74.00

Definition of "units"—As applied to garnet paper in rolls. A single unit comprises one roll 24 inches wide, 50 yards long or its equivalent in square inches (43,200 square inches); this covers rolls wider than 2 inches.

THREE-M-ITE CLOTH

For Sanding, Grinding and Finishing Metal Products.

- Coated with aluminous oxide, an abrasive grain made expressly to meet requirements of metal working industry.
- Hard, sharp and uniform—cuts with great speed without heating.
- Backings selected for specific uses and have proved best for different jobs as recommended.

CLOTH REAMS

Backing of ream stock is flexible—especially designed to give most satisfaction when used on hand sanding operations.

Sheets 9x11 Inches
In Quires (24 Sheets) and Quarter Ream Packages

Nos.	Each	Grit No.	Reams in Bundle	Wt. Lbs.	Std. List, Per Ream
TB TMC180	12c	180	2 1/2	28	\$54.70
TB TMC150	12c	150	2 1/2	30	54.70
TB TMC120	12c	120	2 1/2	34	54.70
TB TMC80	13c	80	2	44	58.10
TB TMC60	14c	60	2	50	63.10
TB TMC36	15c	36	1	91	78.40



WORKSHOP UTILITY ROLLS

Especially recommended for general metal sanding use in metal sanding shops, machine shops and garages.

Clean-cut, even strip wound on wooden spools and protected on sides with heavy pressboard shield. Spool may be hung above work bench to permit operator to tear off the desired length quickly without waste or ragged edges.

In 50-Yard Rolls

Nos.	Per Foot	Width, Inches	Diameter, Roll, Inches	Wt. Per Roll, Lbs.	Std. List, Per Roll
TB 3MC1180	3c	1	6 1/2	1 1/4	\$2.90
TB 3MC1150	3c	1	6 5/8	1 1/4	2.90
TB 3MC1120	3c	1	6 3/4	1 1/2	2.90
TB 3MC180	3c	1	7 1/2	1 3/4	3.00
TB 3MC160	3c	1	9	2 1/4	3.25
TB 3MC1 1/2 180	4c	1 1/2	6 3/8	1 3/4	4.05
TB 3MC1 1/2 150	4c	1 1/2	6 3/4	1 3/4	4.05
TB 3MC1 1/2 120	4c	1 1/2	6 3/8	2 1/8	4.05
TB 3MC1 1/2 80	4c	1 1/2	7 3/4	2 3/4	4.20
TB 3MC1 1/2 60	4c	1 1/2	9	3 3/4	4.50

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

EMERY CLOTH



Highest quality made to give long, satisfactory duty.

In reams of 20 quires (480 sheets); ½ ream in a package. Sheets 9x11 inches.

Nos.		Reams in Bundle	Wt. Per Ream, Lbs.	Std. List, Per Ream
*TB ACC	2 for 15c	2	26	\$30.00
TB AC00	2 for 15c	2½	28	30.00
TB AC0	2 for 15c	2½	35	30.00
TB AC½	2 for 15c	2	45	31.20
TB AC1	2 for 15c	1¾	50	32.75
TB AC1½	2 for 15c	1½	54	34.30
TB AC2	2 for 15c	1¼	60	36.50

*Crocus.

CLOVER BRAND—RED-STRIPE, TURKISH

For cutting soft metals and polishing hard metals. In reams of 20 quires (480 sheets); ½ ream in a package. Sheets 9x11 inches.

Nos.	Each	Reams in Bundle	Wt. Per Ream, Lbs.	Std. List, Per Ream
TB CEC00	5c	2½	28	\$30.00
TB CEC0	5c	2½	35	30.00
TB CEC½	5c	2	45	31.20
TB CEC1	6c	1¾	50	32.75
TB CEC1½	6c	1½	54	34.30
TB CEC2	6c	1¼	60	36.50

SANDPAPER

HOUSEHOLD PACKAGE



Assortment permits selection of correct grade for the job. Very handy in the kitchen. Ideal for scouring and polishing steel, iron, tin and aluminumware—removes rust stains and corrosion. Also handy for odd jobs of carpentry around automobile and other similar uses.

Each package consists of 20 sheets of sand paper 4¼x5¼ inches. Assorted

grits in paper wrapper.

TB H10—Weight per dozen cartons 30 lbs. Per Package \$0.10

One dozen packages in an attractive display carton. Six cartons in a fibre case.

CUTTING AND POLISHING CLOTH

HOUSEHOLD PACKAGE



Pots and pans easily kept like new!

Indispensable for scouring and cleaning steel, iron, tin and aluminumware—quickly removes rust, corrosion and stains. Also for general use around home.

Each package contains 6 sheets assorted grits of emery and aluminum oxide cloth. Sheets 4¼x5¼ inches.

TB CHP—Weight per dozen cartons 26 lbs. Per Package \$0.10

One dozen packages of 6 sheets each in an attractive display carton. Three display cartons in a standard carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

STEEL WOOL



AMERICAN
1 Lb. in a
Cardboard
Tube

- Mass of fine fibre of steel for long wear. Does not scratch. Cuts as smoothly as finest abrasive material.
- Unrivalled for rubbing off varnish, shellac, and other coatings.
- Handy to use instead of sandpaper, pumice stone and other rubbing material.
- Soft and pliable—adapts itself to shape of carvings, mouldings, and similar uneven surfaces, going into places where sandpaper does not get in.

TB 0001—Size 000; very fine.....\$0.59

TB 001—Size 00; equals sandpaper No. 3/0..... .39

TB B01—Size 0; equals pumice stone surface..... .25

TB 10—Size 1; equals sandpaper No. 0..... .25

TB 20—Size 2; equals sandpaper Nos. ½ and 1..... .25

TB 30—Size 3; equals sandpaper Nos. 1½ and 2.... .25
Weight per dozen 14 lbs.

25 1-lb. tubes in a cardboard carton; weight per carton 27 lbs.



AMERICAN
FLEX-FOLD
PADS

Fresh surfaces for
speedy cleaning!

Unsurpassed as a cleaner, polisher or abrasive. More economical, cleaner and easier to use because long, strong strands won't crumble or break up. This material is cut with scientific precision. These new large, closely compressed Flex-Fold pads are made up of one long, strong strand of steel wool and are far more efficient to use than bulk wool because the "Flex-Fold" construction affords fullest use of the steel and the possibility of exposing a fresh surface provides excellence and speed in the work to be done.

Each package contains 16 pads and weighs approximately one pound.

Nos.	Per Package	Grades	Equals Sandpaper No.
TB 00P	\$0.39	00 Fine	3/0
TB 0P	.25	0 Fine	0
TB 1P	.25	1 Medium	1
TB 2P	.25	2 Medium Coarse	2
TB 3P	.25	3 Coarse	3

24 packages in a case; weight per case 26 lbs.

SAND PAPER HOLDERS

RED DEVIL



This sturdy tool holds the new handy size sheet of sand paper, emery paper—also holds one-quarter sheet standard size.

Holds paper taut, has slight bulge in bottom, making a wonderful block for painters, woodworkers, pattern makers and any one using sand paper.

Heavy steel bottom plate 3¼x4¼ inches. Natural finish. Handle red enameled. Easy operating lever control of grip and release.

TB 9—Weight per dozen 8 lbs.....Each \$0.23

One dozen in a display carton.

COMBINATION SHARPENING STONES

Sharpens Quick, Easy!

• Made of a selected artificial abrasive, skillfully bonded and specially oil-treated. Cuts freely—will not glaze. Leaves smooth edge. One side medium grain for sharpening, the other side fine grain for finishing.



Size 5½x2x¾ inches.
TB 5½—Weight per dozen 9 lbs.
Each \$0.29

One-half dozen in a carton.



Exceptional value at this low price!
Size 7x2x¼ inches.

TB L10—Weight per dozen 6¼ lbs.....Each \$0.10

Wrapped in cellophane—one dozen in a carton.

EMERY STONES



Carpenters' Combination Emery Oil Stone

Sharpens knives, chisels and other tools to keen, fast-cutting edge. One side coarse for removing nicks, Other side fine for finishing. Carefully made for long life, satisfactory service.

Size 8x2x1 inches.

TB PO1—Weight per dozen 18 lbs.....Each \$0.39

One in a carton.

CUTLER'S STONES



CARBORUNDUM

Makes keen sharp cutting edge without glazing. Use no oil. Combination—one side coarse for sharpening, other side fine for finishing.

Size 12x2½x1½ inches.

TB CCC—Weight per dozen 35 lbs. Std. List, Per Dozen \$42.00.....Each \$3.25

One in a carton.

AXE AND UTILITY STONES



LUTHER-OIL TEMPERED COMBINATION GRIT, MEDIUM AND FINE

For sharpening axes, chisels, hoes, cleavers and similar tools.

High - grade oil - tempered utility sharpening stone—convenient size and shape. Made of selected artificial abrasive grain, skillfully bonded, specially oil-treated. Exceptionally smooth-cutting for keen edge—will not glaze.

TB 3X—Diameter 3 inches, thickness ¾ -inch. Weight per dozen 5 lbs.....Each \$0.39

One-half dozen in an attractive counter display box.

AXE STONES



KEEN KUTTER

Highest grade white Hindustan grit, free from imperfections. Will not glaze. Handy size and shape. Sharpens to fine Keen-Cutting Edge.

TB KA3—Size, 3x2x¾ inches. Weight per dozen 4 lbs.....Each \$0.10

One-third dozen in a carton.

Twenty-five dozen in a case.

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OIL STONES

SIMMONS

UNMOUNTED

Assures keen, smooth-cutting edge!

It's easy to keep knives, chisels and other straightedge tools sharp with this stone. Select, smooth gray grit, free from imperfections.



Nos.	Each	Size, Inches	Weight Per Dozen, Lbs.
TB S6	\$0.39	6x2x1	12
TB S8	.49	8x2x1	15

Wrapped in paper; one-twelfth dozen in a cardboard carton; six dozen in a case.

CARBORUNDUM

This manufactured abrasive is extremely hard—assures long, dependable service. Affords keen, quick-cutting edge. Handy for sharpening cutlery and straightedge tools. Can be used dry, with water or oil.

COMBINATION



One side coarse grain for sharpening. Other side fine grain for finishing.

Can be used dry, with water or oil.

Nos.	Each	Size, Inches	Wt. Per Dozen, Lbs.	List Per Dozen
TB 108	\$1.75	8x2 x1	14	\$21.00
TB 109	1.25	6x2 x1	11	15.00
TB 110	1.50	7x2 x1	12	18.00
TB 111	1.00	5x1½ x ¾	6	12.00
TB 112	.85	4x1½ x ⅝	6	10.20

REGULAR



Fine grain for keen finishing. Can be used dry, with water or oil.

Nos.	Each	Size, Inches	Wt. Per Dozen, Lbs.	List Per Dozen
TB 118	\$1.35	8x2 x ¾	10	\$16.20
TB 124	.95	6x2 x ⅝	7	11.40
TB 142	.80	4x1¾ x ½	3	8.40

One-twelfth dozen in a cardboard box.

UNMOUNTED



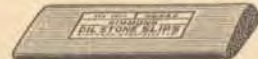
For use with oil or water.

TB 1L—8x2x1 Inches. Weight per dozen 15 lbs.Each \$0.25

Six dozen in a case.

OIL STONE SLIPS

SIMMONS



Select smooth gray grit—free from imperfections. Smooth, round edge beveled slips about 3¼ inches long, 2 inches wide.

TB SBS—Weight per dozen 3 lbs.....Each \$0.15

One-quarter dozen in a carton.

HOW TO USE OIL STONES FOR BEST RESULTS

Choose an oil stone to conform to your own particular task. Keep it clean and moist . . . because exposure to the air hardens it. That is why we package SIMMONS oil stones in individual boxes. For maximum sharpening efficiency, the surface should be kept level and smooth as possible.

POCKET HONES

KEEN KUTTER



- Light, compact, pocket-size—easy to carry.
- Finest quality corundum.

Size $3\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ inches.

TB KCPH—Weight per dozen $1\frac{1}{2}$ lbs. Each \$0.20

One in an individual carton; one dozen in an attractive display box.



SIMMONS

A light, easy-to-carry pocket size stone for sharpening pocket knives and small tools.

Good quality corundum, extremely hard and fast-cutting.

Size $3\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ inches.

TB S10—Weight per dozen $1\frac{1}{2}$ lbs. Each \$0.10

One dozen on an easel counter card $10 \times 12\frac{1}{2}$ inches.

CARBORUNDUM

Made of finest powdered silicon carbide, a specially manufactured abrasive of extreme hardness. Especially useful for sharpening pocket knives, ink scratchers, scissors and small tools. Carefully constructed to assure long, satisfactory service. Handy size.



Each hone in convenient leather case—easily carried in pocket.

One dozen on a very attractive display card.

Size $3 \times \frac{3}{4} \times \frac{3}{4}$ inches.

TB 149L—Weight per dozen $1\frac{1}{4}$ lbs.

List per dozen \$3.00
Each 0.25

One dozen in a standard package.

Sold only in full packages.



Each hone in an individual carton.

One dozen on an attractive display card.

Size $3 \times \frac{3}{4} \times \frac{3}{4}$ inches.

TB 149—Weight per card $\frac{3}{4}$ lb. Each \$0.20

Two cards in a package.

PIKE'S FASTCUT

Here's a fast-cutting natural stone that will keep pocket knives and small tools sharp.

Size $3\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$ inches.

TB P—Assorted colored pocket hones. Weight per assortment $1\frac{1}{2}$ lbs. Each \$0.10

One dozen in an attractive cardboard display box.

* Goods marked thus (*) are not carried in stock and can only be furnished by shipment direct from factory.

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OIL STONE ASSORTMENTS



CARBORUNDUM COMBINATION

- This manufactured abrasive is extremely hard—offers long, reliable service.
 - Sharpens cutlery and straightedge tools quickly and easily.
 - Coarse side takes out the nicks.
 - Fine side finishes edge.
 - Choice of 6 popular sizes.
- Assortment consists of 12 Carborundum oil stones, 6 sizes, one of which is securely attached to display board, plainly numbered. Steel display 23 inches high, $12\frac{1}{2}$ inches wide, lithographed in 4 colors and fitted with easel.

Consists of the Following Stones:

	No.	Each	Size
$\frac{1}{6}$ Dozen	107	\$1.25	4 inches in diameter, 1 inch thick.
$\frac{1}{6}$ Dozen	112	.85	$4 \times 1\frac{1}{2} \times \frac{5}{8}$ inches.
$\frac{1}{6}$ Dozen	111	1.00	$5 \times 1\frac{1}{2} \times \frac{3}{4}$ inches.
$\frac{1}{6}$ Dozen	109	1.25	$6 \times 2 \times 1$ inches.
$\frac{1}{6}$ Dozen	110	1.50	$7 \times 2 \times 1$ inches.
$\frac{1}{6}$ Dozen	108	1.75	$8 \times 2 \times 1$ inches.

TB 10—Weight per assortment 14 lbs.

One assortment in a case.

EMERY

- Highest quality abrasive—assures most satisfactory performance.



GRAIN EMERY

Nos.	In 10-Lb. Tin Cans Per Lb.	Grain
TB 60C	\$0.20	60
TB 80C	.20	80
TB 90C	.20	90

In 100-Lb. Kegs

Nos.	Per Lb.	Grain
#TB 60K	\$0.12	60
#TB 80K	.12	80
#TB 90K	.12	90

In 350-Lb. Barrels

Nos.	Grain	Nos.	Grain
#TB 16B	16	#TB 60B	60
#TB 20B	20	#TB 70B	70
#TB 24B	24	#TB 80B	80
#TB 30B	30	#TB 90B	90
#TB 36B	36	#TB 100B	100
#TB 40B	40	#TB 120B	120
#TB 50B	50	#TB 150B	150

FLOUR EMERY

In 1-Lb. Cans

Nos.	Per Lb.	Grade
TB CF1	\$0.30	CF (coarsest)
TB F1	.30	F (regular)
TB FF1	.30	FF (1 grade finer than F)

PRECISION GRINDING WHEELS

HY-TENS



- Generally used for grinding materials of high tensile strength ... carbon steel, hardened steel and similar metals.
- Abrasive from which these wheels are made is aluminum oxide or synthetic corundum.
- Perfectly balanced. Completely dressed on face and sides.
- Hard, fast - cutting, water-resistant.

HY-TENS — VITRIFIED

Nos.	Each	Thick- ness, Inches	Grain and Grade	Wt. Each, Lbs.	Std. List
Diameter Wheel 6 Inches Diameter Hole 1 Inch					
TB P6 1/4 60M	\$1.30	1/4	60-M Med.	1/2	\$2.50
TB P6 1/2 60M	1.40	1/2	60-M Med.	1 1/8	3.00
TB P6 3/4 46M	1.80	3/4	46-M Med.	1 3/4	3.50
TB P6 3/4 60M	1.80	3/4	60-M Med.	1 3/4	3.50
TB P6136P	2.00	1	36-P Hard	2 1/4	4.00
TB P6146M	2.00	1	46-M Med.	2 1/4	4.00
TB P6160M	2.00	1	60-M Med.	2 1/4	4.00

Diameter Wheel 8 Inches Diameter Hole 1 Inch

TB P8 1/4 60L	1.65	1/4	60-L Med.	1	3.45
TB P8 3/8 60L	1.95	3/8	60-L Med.	1 1/2	3.90
TB P8 1/2 60L	2.20	1/2	60-L Med.	2 1/4	4.30
TB P8 3/4 60L	2.65	3/4	60-L Med.	3 1/4	5.15
TB P8 3/4 46M	2.65	3/4	46-M Med.	3 1/4	5.15
TB P8136P	3.00	1	36-P Hard	4 1/2	6.00
TB P8146M	3.00	1	46-M Med.	4 1/2	6.00
TB P8160M	3.00	1	60-M Med.	4 1/2	6.00

Diameter Wheel 10 Inches Diameter Hole 1 Inch

TB P10 1/4 60L	2.40	1/4	60-L Med.	1 3/4	4.75
TB P10 1/2 46M	3.00	1/2	46-M Med.	3 1/2	6.05
TB P10146M	4.25	1	46-M Med.	6 3/4	8.45

HY-TENS—VITRIFIED

Nos.	Each	Thick- ness, Inches	Grain and Grade	Wt. Each, Lbs.	Std. List
Diameter Wheel 10 Inches Diameter Hole 1 Inch					
TB P101 1/2 36P	\$5.85	1 1/2	36-P Hard	9 3/4	\$11.65
TB P101 1/2 24Q	5.85	1 1/2	24-Q Hard	9 3/4	11.65
TB P101 1/2 46M	5.85	1 1/2	46-M Med.	9 3/4	11.65
TB P101 1/2 60M	5.85	1 1/2	60-M Med.	9 3/4	11.65
TB P10236P	7.40	2	36-P Hard	14	14.80
TB P10246M	7.40	2	46-M Med.	14	14.80

Diameter Wheel 12 Inches Diameter Hole 1 1/4 Inches

TB P121 1/2 36P	8.00	1 1/2	36-P Hard	15	15.95
TB P121 1/2 46M	8.00	1 1/2	46-M Med.	15	15.95
TB P12224Q	10.25	2	25-Q Hard	19	20.45
TB P12236P	10.25	2	36-P Hard	19	20.45
TB P12246M	10.25	2	46-M Med.	19	20.45

Diameter Wheel 12 Inches Diameter Hole 1 1/2 Inches

TB P12260M	10.25	2	60-M Med.	19	20.45
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Diameter Wheel 14 Inches Diameter Hole 1 1/2 Inches

TB P14224Q	13.65	2	24-Q Hard	19	27.25
TB P14236P	13.65	2	36-P Hard	19	27.25
TB P14246M	13.65	2	46-M Med.	19	27.25

Diameter Wheel 16 Inches Diameter Hole 1 1/2 Inches

TB P16224Q	17.75	2	24-Q Hard	19	35.20
TB P16236P	17.75	2	36-P Hard	19	35.20
TB P16220Q	17.75	2	20-Q Hard	19	35.20

HY-TENS—RESINOID BOND—HIGH SPEED

- Intended for use on very high speed grinding machines running at 7000 to 9000 surface feet a minute. Where grinding machines run slower use regular Hy-Tens vitrified wheels (see above).

Thickness 1 Inch—Diameter 5/8 Inch

Nos.	Each	Diam- eter, In.	Grain and Grade	Wt., Each, Lbs.	Std. List, Each
TB P61 5/8 24BX	\$3.00	6	24BX	4	\$4.05
TB P81 5/8 24BX	3.30	8	24BX	6	6.00
TB P81 7/8 24BX	3.30	8	24BX	6	6.00

Packing—bulk.

There Is a Difference in Kitchenware

Polly-Prim

KITCHENWARE

Is Unusually Good—But Modest in Price

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

GRINDING WHEELS

CARBORUNDUM CO.'S ALOXITE BRAND

FLAT FACE

For faster, easier grinding!



- For general grinding work in the garage, repair shop and manufacturing plant—for steels and their alloys, for malleables and for the majority of tool room grinding operations. This accurate-size, uniformly smooth wheel cuts fast and holds its shape. It is long-wearing and retains its flat face and edge.
- The Aloxite used in these grinding wheels is an electric furnace product made by fusing bauxite, a highly aluminous clay, in an electric arc furnace under heat of approximately 3000 degrees Fahrenheit. This product is then ground into various grains and powders, mixed with proper bonding agents, and loaded into molds and compressed with heavy hydraulic pressure. Wheels are placed in immense kilns and vitrified. After kiln-drying process, they are carefully inspected and finished.



Nos.	Each	Size Wheel, Inches	Grain Aloxite	Wt. Each, Lbs.	Std. List, Each
TB A8M	\$0.55	3x 1/4 x 3/8	100J-Medium	1/8	\$0.90
TB A10M	.60	3x 1/2 x 1	100J-Medium	1/4	1.05
TB A12M	.90	4x 1/4 x 1/2	100J-Medium	1/4	1.55
TB A16F	1.00	4x 1/2 x 1	100J-Fine	1/2	1.75
TB A16M	1.00	4x 1/2 x 1	60J-Medium	1/2	1.75
TB A18F	1.15	4x 3/4 x 1	100J-Fine	3/4	2.05
TB A18M	1.15	4x 3/4 x 1	60J-Medium	3/4	2.05
TB A20F	1.35	4x1 x1	100J-Fine	1 1/8	2.35
TB A20M	1.35	4x1 x1	60J-Medium	1 1/8	2.35
TB A22F	1.65	5x 3/4 x 1	100J-Fine	1 1/4	2.90
TB A22M	1.65	5x 3/4 x 1	60J-Medium	1 1/4	2.90
TB A24F	1.90	5x1 x1	100J-Fine	1 3/4	3.30
TB A24M	1.90	5x1 x1	60J-Medium	1 3/4	3.30
TB A28F	1.75	6x 1/2 x 1	100J-Fine	1 1/2	3.00
TB A28M	1.75	6x 1/2 x 1	60J-Medium	1 1/2	3.00
TB A28C	1.75	6x 1/2 x 1	40J-Coarse	1 1/2	3.00
TB A30M	2.00	6x 3/4 x 1	60J-Medium	1 3/4	3.50
TB A30C	2.00	6x 3/4 x 1	40J-Coarse	1 3/4	3.50
TB A3030G	2.00	6x 3/4 x 1	30G-Medium	1 3/4	3.50
TB A32F	2.30	6x1 x1	100J-Fine	2 1/2	4.00
TB A32M	2.30	6x1 x1	60J-Medium	2 1/2	4.00
TB A32C	2.30	6x1 x1	40J-Coarse	1 1/4	4.00
TB A3224G	2.30	6x1 x1	24G-Coarse	2 1/2	4.00
TB A38M	2.50	8x 1/2 x 1	60J-Medium	2	4.30
TB A38C	2.50	8x 1/2 x 1	40J-Coarse	2	4.30

Nos.	Each	Size Wheel, Inches	Grain Aloxite	Wt. Each, Lbs.	Std. List, Each
TB A40M	\$3.00	8x 3/4 x 1	60J-Medium	3 1/4	\$5.15
TB A40C	3.00	8x 3/4 x 1	36J-Coarse	3 1/4	5.15
TB A4030G	3.00	8x 3/4 x 1	30G-Medium	3 1/4	5.15
TB A42F	4.00	8x1 x1	60J-Fine	4 1/2	6.00
TB A42M	4.00	8x1 x1	40J-Medium	4 1/2	6.00
TB A4224G	4.00	8x1 x1	24G-Coarse	4 1/2	6.00
TB A52F	4.90	10x1 x1	60J-Fine	7	8.45
TB A52M	4.90	10x1 x1	40J-Medium	7	8.45
TB A5224G	4.90	10x1 x1	24G-Coarse	7	8.45
TB A5230G	4.90	10x1 x1	30G-Medium	7	8.45
TB A5242G	5.75	10x1 1/4 x 1 1/4	24G-Coarse	8 1/2	10.05
TB A5430G	5.75	10x1 1/4 x 1 1/4	30G-Medium	8 1/2	10.05
TB A56F	6.65	10x1 1/2 x 1 1/4	60J-Fine	10	11.65
TB A56M	6.65	10x1 1/2 x 1 1/4	40J-Medium	10	11.65
TB A58F	8.45	10x2 x1 1/4	60J-Fine	13	14.80
TB A58M	8.45	10x2 x1 1/4	40J-Medium	13	14.80
TB A66F	9.15	12x1 1/2 x 1 1/4	60J-Fine	15	15.95
TB A66M	9.15	12x1 1/2 x 1 1/4	40J-Medium	15	15.95
TB A6624G	9.15	12x1 1/2 x 1 1/4	24G-Coarse	16 1/2	15.95
TB A6630G	9.15	12x1 1/2 x 1 1/4	30G-Medium	16 1/2	15.95
TB A68F	11.75	12x2 x1 1/4	30H-Fine	19 1/4	20.45
TB A68M	11.75	12x2 x1 1/4	24H-Medium	19 1/4	20.45
TB A70F	15.50	12x2 x1 1/2	30H-Fine	27	27.15
TB A70M	15.50	14x2 x1 1/2	24H-Medium	27	27.15

Packing: Nos. TB A8M to TB A52M—One in a carton. Others—bulk.

One pair of metal reducing bushings are furnished no charge with all wheels having 1-inch arbor holes, if requested. Wheels with holes larger than 1 inch will be furnished with wood reducing bushings. Specify size of reducing bushing wanted.

METAL BUSHINGS

FOR REDUCING ARBOR HOLES OF GRINDING WHEELS

Skillfully milled from high-grade steel to assure long wear. They center wheel accurately. Consists of two parts—one for each side of wheel.

Nos.	Per Pair	To Reduce Hole in Wheel
TB MB1	\$0.15	1 inch to 1 1/8 inch
TB MB2	.15	1 inch to 3/8 inch
TB MB3	.15	1 inch to 1/2 inch
TB MB4	.15	1 inch to 5/8 inch
TB MB5	.15	1 inch to 3/4 inch
TB MB6	.15	1 inch to 7/8 inch
TB MB10	.20	1 1/4 inch to 5/8 inch
TB MB11	.20	1 1/4 inch to 3/4 inch
TB MB12	.20	1 1/4 inch to 7/8 inch
TB MB13	.20	1 1/4 inch to 1 1/8 inch
TB MB14	.20	1 1/4 inch to 1 inch

Packing—bulk.

GRINDING WHEEL DRESSERS



HUNTINGTON

- Particularly efficient for shaping, truing, dressing and removing glaze from practically all kinds of grinding wheels.
- Best quality gray iron frame, black enameled finish. Equipped with sturdy, hardened steel bushings and 1/4-inch hardened steel pin, accurately machined.
- Complete with two sets of selected steel cutters—uniformly hardened and tempered to exact degree of hardness and toughness to do the work required. Cutters 1 1/2 inches in diameter and have 18 teeth. Length over all 11 inches.

TB HP—Weight each 1 1/2 lbs. Each \$0.75

One in a carton.

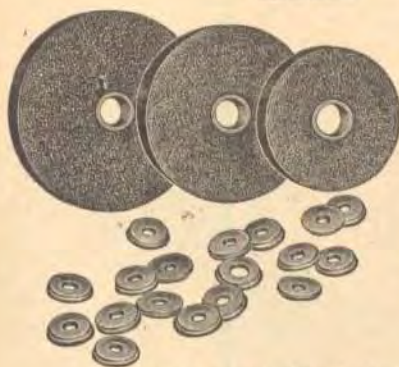
Extra cutters for TB HP Emery Wheel Dresser; weight per set 2 ounces. Per Set \$0.15

Packing—bulk.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

GRINDING WHEEL ASSORTMENTS

LUTHER



- These two assortments consist of good quality, fast-cutting, popular-size, abrasive wheels—expertly made for long life.
- Medium grit.
- Perfectly balanced.
- Completely dressed on face and sides.

- Patented steel arbor hole reducers.
- Exceptional values at these low prices.

TB L101—Assortment of 12 medium grit abrasive wheels as below, and 10 sets of patented steel arbor hole reducers. Weight per assortment 24 lbs.

Per Assortment

Quantity	Each	Size Wheels, Inches
4	\$0.49	4x1x1
4	.89	5x1x1
4	1.10	6x1x1

10 Sets Steel Bushings—Free.

TB L605—Assortment of 6 medium grit abrasive wheels as below, and 5 sets of patented steel arbor hole reducers. Weight per assortment 12 lbs.

Per Assortment

Quantity	Each	Size Wheels, Inches
2	\$0.49	4x1x1
2	.89	5x1x1
2	1.10	6x1x1

5 Sets Steel Bushings—Free.

One assortment in a carton.

GRINDING WHEELS

LUTHER

Extra wheels or open stock for above assortment.

Nos.	Each	Size Wheels, Inches	Wt. Each, Lbs.
TB L41	\$0.49	4x1x1	1 1/8
TB L51	.89	5x1x1	1 3/4
TB L61	1.10	6x1x1	2 1/2

Packing—bulk.

SKILLED CARPENTERS

Know and
PREFER

KEEN KUTTER

S A W S

SAW GUMMING WHEELS

(Round Face)

- Handy for deepening and enlarging gullets of worn cord wood and cross-cut saws.



CARBORUNDUM CO.'S ALOXITE BRAND

REDMANOL BONDED

- Hard, rugged and fast-cutting.

The ALOXITE used in these grinding wheels is an electric furnace product and is made by fusing

bauxite, a highly aluminous clay, in an electric arc furnace under a heat estimated at 3000 degrees Fahrenheit. This product is then ground and mixed with redmanol, loaded into molds and subjected to heavy hydraulic pressure. The wheels are then placed in immense kilns and vitrified. After the kiln-drying process they are carefully inspected and finished ready for use.

Grade 365K-D841

Diameter Hole 1 1/4 Inches

Nos.	Each	Diam., Inches	Thick-ness, Inch	Wt. Each, Lbs.	Std. List, Each
TB A655	\$1.65	6	1/4	3/4	\$2.85
TB A695	1.80	6	3/8	1	3.10
TB A705	1.95	6	1/2	1 1/4	3.35
TB A725	2.45	8	3/8	1 3/4	4.35
TB A745	2.70	8	1/2	2	4.75
TB A765	3.75	10	1/2	3 1/2	6.60
TB A785	4.95	12	1/2	5	8.75
TB A805	5.45	12	5/8	6 1/2	9.60
TB A825	5.95	12	3/4	7 1/2	10.45

One in a carton.



LUTHER— DIMO-GRIT

- Highest grade vitrified wheels.
- Accurately balanced.
- Fast-cutting, long-wearing.

Consists of—

	Each
1 6x1/4x1 inch wheel	\$1.95
1 6x3/8x1 inch wheel	2.15
1 8x3/8x1 inch wheel	2.75
1 10x3/8x1 inch wheel	3.95
5 Sets of steel bushings for 3/8, 1/2, 5/8, 3/4 and 7/8 inch arbor holes	Free

TB SG1—Weight per assortment 8 lbs.

Per Assortment

One assortment in a carton.

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TOOL GRINDERS

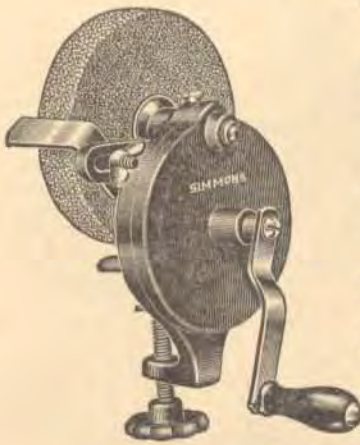
SIMMONS LEADER

Good Quality at a Low Price

- Ideal for sharpening tools and cutlery. Useful in workshop and kitchen. Handy clamp for attaching to bench or table.
- Vitrified grinding wheel cuts fast.
- Properly balanced adjustable tool rest.

Smooth-action machine cut helical gears. Cast dust-proof gear case, red enameled finish.

Wrought steel handle with black enameled wood grip. Wheel type clamp screw.



Nos.	Each	Size Wheel, Inches	Weight Each, Lbs.	Std. List, Each
TB SBB11	\$1.99	4x1	4 1/2	\$1.99

LUTHER

MASTER

- Quiet, smooth-running, gives keen edge!

Carborundum Aloxite grinding wheel—especially bonded for use with hand tool grinders... insures excellent cutting ability and long wear. Chisel and plane iron attachment permits any novice to do an

expert job of hollow grinding on any fine edge tool. Adjustable tool rest for either right or left-hand operation.

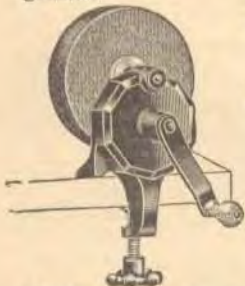
Wide spur cut gears operate in oil—eliminate end thrust and reduce friction and tendency to wear. Double crankshaft bearings. Self-closing oil cups. One-piece oil-tight, dustproof gear case. Malleable iron frame and crank handle with large wood grip. Frame clamp and crank red enameled. Other parts brightly nickel plated.

Nos.	Each	Size Wheel, Inches	Weight Each, Lbs.
TY 114	\$3.35	4x1 x 7/8	6 3/4
TY 115	4.39	5x1 x 3/8	9 1/4
TY 116	5.85	6x1 x 3/8	11 3/4

One in a carton.

HOUSEHOLD AND TOOL GRINDERS

Keep cutlery and tools sharp with this handy, efficient grinder!



- Every home and shop will find this sharpening device useful. Cuts quickly and evenly—makes a keen, smooth edge.
- Rugged construction—Fine grit abrasive grinding wheel 4x3/8 inches. One-piece cast case and frame with sturdy gear and pinion, completely enclosed. Wrought steel handle with hard-wood grip. Wheel-operated clamp opens 1 1/2 inches. Red enameled finish.

TY JS4—Weight each 2 1/4 lbs. Each \$0.89

Six in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

TOOL GRINDERS

For sharpening knives and small tools.

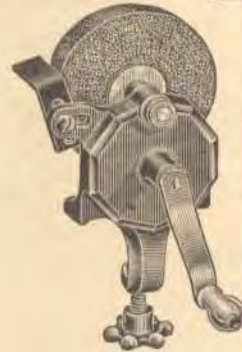


MARVEL

Vitrified grinding wheel—will not burn tools or draw temper. Adjustable tool rest. Machine-cut helical gears—eliminate end thrust. All bearings permanently aligned in gear case to provide fast, easy running. One-piece cast-iron dustproof gear case. Slip-proof iron crank with wood handle. Wide base with clamp screw. Attractive red baked enamel finish.

Nos.	Each	Size Wheel, Inches	No. in a Carton	Wt. Each, Lbs.
TB 164	\$1.59	4x 3/4 x 7/8	6	4
TB 165	2.15	5x 3/4 x 7/8	1	4 1/2
TB 166	2.85	6x1 x 7/8	1	7 1/2

One in a wood box.



Nos.	Each	Size Wheel, Inches	Weight Each, Lbs.
TY X4L	\$1.10	4x 7/8	4
TY X5S	1.49	5x1	5

Wrapped in paper; six in a carton.

TOOL GRINDER ASSORTMENT

LUTHER

Sharpens quick, easy!

- Extraordinary combination of value at these low prices.

- Carborundum Aloxite medium grit grinding wheel, especially bonded for use with hand tool grinders—assures good cutting and long wear. Adjustable tool rest. Accurate spur cut, wide, cast-iron gears, prevent end thrust. Long bearings drilled and reamed out of solid metal. Large, strongly built one-piece cast case and frame. Heavy wrought

steel handle with red enameled grip—attached with nickel-plated acorn nut, heavy clamp and adjustable screw. Beautiful red and black baked-on enamel finish.

Assortment consists of:

1—No. 414	With 4x 7/8 x 7/8 inch wheel	Each \$2.50
2—No. 415	With 5x1 x 7/8 inch wheel	Each 3.70
1—No. 416	With 6x1 x 3/8 inch wheel	Each 4.80

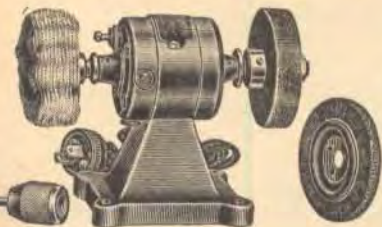
TB 400—Weight per assortment 33 lbs.

One assortment in a case.

ELECTRIC TOOL SHARPENERS

LUTHER, JR.

- Designed especially for light-duty sharpening, buffing and polishing.
- Ideal for carpenters, house-holders, dentists, jewelers, etc. Produces keen cutting



edge quickly or cleans and polishes silverware and other metals.

- Specially constructed motor creates plenty of power for all light-tool grinding jobs.

Sturdy cast base is rubber-cushioned—eliminates vibration. Base extends under wheels—prevents tipping. High-grade Universal motor with long $\frac{3}{4}$ -inch special white metal and high-speed bearings... packed with wick for self-oiling. Toggle switch on motor case. Wheel flanges grooved—may be used as pulley. Approximate wheel speed—without load, 9000 r.p.m., with load 3000 to 6000 r.p.m.

Equipped with $2\frac{3}{4}$ -inch buffing wheel and special high-grade vitrified grinding wheel $3\frac{3}{4} \times 1\frac{7}{8}$ inches, made to withstand high speed. (CHUCK AND WIRE BRUSH NOT INCLUDED.) Complete with 6-foot extension cord and plug cap.

Base red, motor casing black—baked-on enamel. Height $5\frac{1}{4}$ inches. Length over all $7\frac{3}{4}$ inches.

For 110 Volts Alternating and Direct Current.

TB E12—Weight each 4 lbs. Each \$9.95

One in a carton.

EXTRAS FOR No. TBE12

ELECTRIC TOOL SHARPENERS

TB E12C—Chuck: Capacity $\frac{1}{4}$ -inch; weight each $\frac{3}{4}$ lbs. Each \$0.85

TB E12W—Wire Polishing Brush: Diameter 3 inches; weight each $\frac{3}{4}$ lbs. Each .95

Packing—bulk.

*Modernize Your Living Room
with*

**SIMMONS
FURNITURE**

Highest Quality

Materials and Workmanship Assure

Years of Continuous Comfort,

New Modern Styling

and

Fabrics Will Make Your Home

Most Attractive

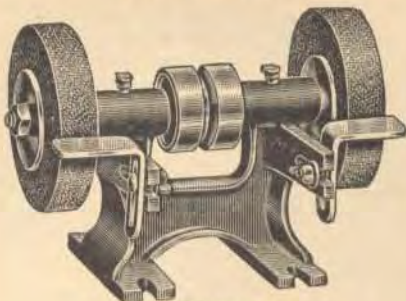
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POWER GRINDER HEADS

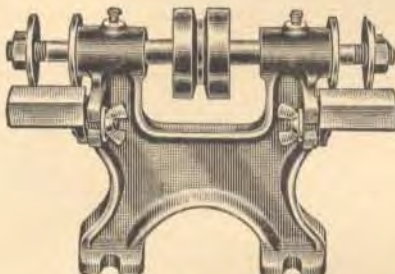
LUTHER

- Ideal for home workshops, farms, garages and small shops. Remarkable value, long service.

- Expertly built of high-grade material... finished in wear-resisting red enamel. Long, sturdy bearings. Pulley $2\frac{3}{4} \times 1\frac{1}{2}$ inches—easily accommodates V, round, or flat belt drive from any direction. Pulley crowned for flat belt. Adjustable tool rests for both wheels. Spring cover oil cups. Legs shaped for easy bolting to work-bench.



No. TB P226S



No. TB P220S

Height from base to center of spindle $5\frac{1}{2}$ inches.

Distance between wheels 7 inches. Bench space $4 \times 6\frac{1}{2}$ inches. Diameter of spindle: in bearings $\frac{3}{8}$ -inch, between flanges $\frac{1}{2}$ -inch. Length of spindle $10\frac{1}{2}$ inches.

TB P226S—Power Grinder Head: With two fast-cutting high-grade abrasive wheels $6 \times 1\frac{1}{2}$ inches. One each medium and coarse; weight each $13\frac{1}{2}$ lbs. Each \$5.45

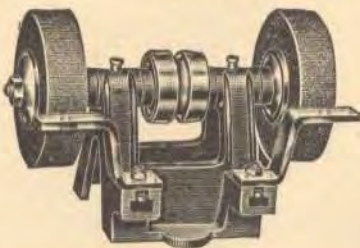
TB P220S—Power Head Only: Without wheels; weight each $9\frac{1}{2}$ lbs. Each 2.95

One in a carton.

POWER GRINDERS

LUTHER—
LIGHT-DUTY

- An all-around, inexpensive power head that answers every grinding need!
- Unusually attractive and readily adaptable to the many needs of the small tool user.



Strong, sturdy, all-metal construction; finished in durable red enamel. Iron pulley $1\frac{1}{2} \times 1\frac{1}{2}$ inches—for flat or V belt, running best at 2500 to 3000 r.p.m. Two adjustable tool rests $1\frac{3}{4}$ inches. Bearings, oiled directly with self-closing oil cups. Spindle 9 inches long, $\frac{1}{2}$ -inch in diameter. Height $5\frac{1}{2}$ inches. Base 4×4 inches. Distance between wheels when in position $5\frac{1}{2}$ inches.

POWER HEAD COMPLETE WITH WHEELS

TB P214—With one coarse and one medium grinding wheel $4 \times 1 \times 1$ inches; weight each $6\frac{3}{4}$ lbs. Each \$3.45

TB P215—With one coarse and one medium grinding wheel $5 \times 1 \times 1$ inches; weight each $7\frac{3}{4}$ lbs. Each 4.25

TB P215B—With one medium grinding wheel and one buffing wheel $5 \times 1 \times 1$ inches; weight each $6\frac{1}{2}$ lbs. Each 4.25

One in a carton.

SICKLE AND TOOL GRINDERS



• Here's the greatest buy in sickle and tool grinders!

Equipped with special sickle holder which sharpens 5 or 6 sections without reclamping sickle bar—simply by sliding forward. Sickle cone and tool wheel made of electric furnace process fast-cutting abrasive and will produce smooth edges. Guard over sickle cone keeps sparks and dirt away from operator. Easily clamped to bench or mower wheel. Heavy, massive

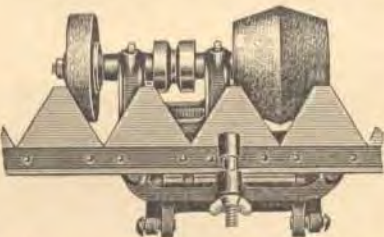
frame. High speed—geared in ratio of 20 turns of wheel to 1 of crank.

Frame, large gears and parts for sickle holder made of good grade gray iron. Steel small drive pinion. Malleable iron clamp. Steel clamp screw. Sickle wheel $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{1}{2}$ inches. Tool wheel $4 \times 1 \times \frac{3}{8}$ inches. Attractively finished in black and red.

TY LX3—Weight each 14 lbs.....Each \$5.45

One in a carton.

SICKLE AND TOOL POWER GRINDERS



LUTHER

Every farm should have one of these popular - priced sharpeners!

• General, light-duty farm power sharpener—one of the handiest grinders offered today.

• For sharpening sickles, axes, hoes, chisels, plane irons... all other farm tools.

Equipped with 2 vitrified abrasive wheels—1 sickle wheel $4\frac{1}{2} \times 3\frac{1}{2} \times \frac{1}{4}$ inches, and 1 tool wheel $4 \times 1 \times \frac{3}{8}$ inches. Convenient sickle holding attachment and adjustable tool rest. Pulley $1\frac{1}{2} \times 1\frac{1}{2}$ inches, for flat, round or V belt. Height from base to center $3\frac{1}{2}$ inches. Distance between wheels $4\frac{1}{4}$ inches. Spindle is $\frac{1}{2}$ inch in diameter—making it handy for using other wheels, buffers, etc. with $\frac{1}{2}$ -inch holes. Strong and well constructed from fine material. Attractively finished in red and black enamel.

TB P216S—Weight each 13 lbs.....Each \$5.75

One in a carton.

SICKLE GRINDING WHEELS



Here's a good grade abrasive wheel that assures long, satisfactory service and keen, quick sharpening. Length $3\frac{1}{2}$ inches. Diameter: $3\frac{1}{2}$ inches at center, $2\frac{1}{2}$ inches at ends. Holes for $\frac{1}{2}$ -inch shaft.

TB 100SGW—Weight each 3 lbs.....Each \$1.10

Packing—bulk

BE TRULY ECONOMICAL—

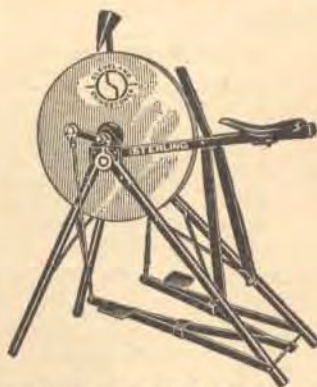
Use Durable Fine Quality

SIMMONS

FARM TOOLS—

Correctly Balanced to Make Work
Easier and Faster

MOUNTED GRINDSTONES



STERLING Ball Bearing

Very substantial and light running. Has a double treadle frame embracing the bicycle feature bitreadle. Each stone tested on the shaft bearings and frame with which it is shipped.

Frame $1\frac{1}{8}$ and $1\frac{1}{4}$ -inch heavy steel tubing, well braced. Threaded rods and bolts. Large comfortable seat and clothes protector. Sheet steel drip cup and water guard. All castings malleable iron. Electro gal-

vanized cold rolled hardened steel shaft and electro galvanized cranks and crankshaft are fitted with casings to avoid rust. Best quality improved ball bearings in dust-proof casings. Hardened steel shaft bearings.

Enameled Rich Vermilion

Fitted with genuine Berea grit stone 19 to 22 inches in diameter, $1\frac{3}{4}$ to $2\frac{1}{4}$ inches thick.

TY T100—Weight complete 100 lbs.....Each \$11.25

One in a crate, knocked down.



Ball Bearing

Low priced! Dependable! Frame is angle steel $1 \times \frac{5}{8}$ -inch. Substantially braced. Comfortable sheet steel seat, Sheet steel drip cup and water guard. Fitted with ball bearings on shaft and crank. Detachable cold rolled steel shaft.

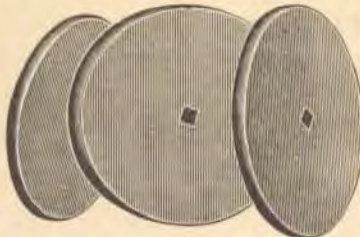
Painted Black

Fitted with a good Ohio stone 20 inches in diameter, $1\frac{3}{4}$ to 2 inches thick, weighing about 50 lbs.

TY 115—Weight complete 75 lbs.Each \$8.25

Stone crated and attached to knocked down frame.

GRINDSTONES



Berea medium grit, unmounted, without fittings. Square hole cut in center for shaft.

**Wt. Each
Assorted,
Lbs.**

**Per
Pound**

**Diameter,
Inches**

**Thickness,
Inches**

40 to 50

\$0.06

19

$1\frac{3}{4}$ to $2\frac{1}{4}$

60 to 70

.06

22

2 to $2\frac{1}{2}$

Packing—bulk.

Note: All the above stones are sold by actual weight (or "cut weight"), which is the exact scale weight as the stones come from the lathe. This weight is always cut into the stone. Stones weighing 200 lbs. and over (not carried in stock), are sold by estimated weight, called "measurement weight."

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

GRINDSTONE FIXTURES

KLICHER

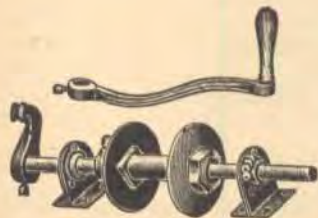


Double Roller Bearings

Japanned cast iron with threaded shaft. Average length of hand crank 9 inches. Average length of lever crank 3 inches. Bearing cap 6½ inches long, 2½ inches high. Diameter of washers 3¼ inches.

Nos.	TB 15K	TB 17K
Length Axle, Inches	15	17
Diameter Axle, Inches	1½	1½
Weight per Dozen, Lbs.	80	85
Each	\$0.95	1.00

One-half dozen in a case.



Ball Bearing

Suitable for stones 2 to 3 inches thick.

Japanned. Cast iron washers. Stamped steel axle bearings, with ball bearing journals adjustable on shaft. Shaft 12 inches long, ¾-inch in diameter. Hand crank 9 inches long. Length of

treadle crank 3 inches. Axle bearings 7 inches long, 2¼ inches high. Diameter of washers 4 inches.

TB 01—Weight per dozen sets 95 lbs. Each \$2.25

One dozen sets in a wood box.

GRINDSTONE CRANKS

KLICHER

TB 1CK—Japanned cast iron; wood grips; length 7½ inches; for Klicher grindstone fixtures; weight per dozen 6 lbs. Each \$0.15

GRINDSTONE AXLES

KLICHER

Japanned cast iron; for Nos. TB 15K and TB 17K grindstone fixtures.

Nos.	TB 15AK	TB 17AK
Length, Inches	15	17
Each	\$0.35	.40

Weight per dozen 28 lbs.

GRINDSTONE WASHERS

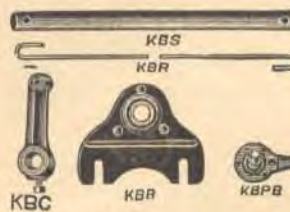
KLICHER

Japanned cast iron; for Klicher grindstone fixtures.

TB 1WK—Diameter 3 inches; diameter of hole 1 inch; weight per dozen 2 lbs. Per Dozen \$0.05

Packing—bulk.

EXTRAS FOR GRINDSTONES



FOR Nos. KB AND AYT100 GRINDSTONES

When ordering parts for Nos. KB or TY T100 Grindstones, state whether they are for the ¾-inch or the 1-inch axle.

TB KBC—Extra Cranks, with set screw; 4½ inches long; weight each 10 ozs. Each \$0.35

TB KBS—Extra Shafts or Axles; 9 inches long; ½-inch diameter; weight each 13 ozs. Each .85

TB KBR—Treadle Rods; ¾-inch round, steel 22 inches long; weight each 5 ozs. Each .35

TB KBB—Extra Axle Bearings, with balls; weight per set 1 lb. Per Set of 2 1.15

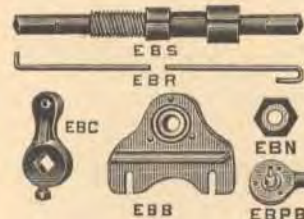
TB KBPB—Pitman Bearings, with balls; weight per set 1 lb. Per Set of 2 .70

TB KBBS—Extra Bushed Stones Only; about 1¼ inches thick; average diameter 19 inches; average weight each 50 lbs. Each 6.00

Packing—bulk.

FOR Nos. EBGs AND AY 115 GRINDSTONES

When ordering repairs for Nos. EBGs and TY 115 Grindstones, state whether they are for ¾-inch or 1-inch axle.



TB EBC—Extra Cranks with set screw; 4½ inches long; weight each 10 ozs. Each \$0.35

TB EBS—Extra Shafts, or axles; 7½ inches long; weight each 1½ lbs. Each \$0.85

TB EBN—Extra Nuts for shaft; weight each 3½ ozs. Each \$0.20

TB EBR—Extra Treadle Rods; ¼-inch round steel, 24¼ inches long; weight each 5 ozs. Each \$0.35

TB EBB—Extra Axle Bearings, with balls; weight per set 1 lb. Per Set of 2 1.10

TB EBPB—Extra Pitman Bearings, with balls; weight per set 1 lb. Per Set of 2 .70

TY EBBS—Extra Bushed Stones Only; about 2 inches thick; average diameter 22 inches; average weight each 60 lbs. Each 5.95

Packing—bulk.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

GENERAL DESCRIPTION OF FILES AND RASPS



Dbl. Cut Second Cut.



Double Cut Smooth.



Rasp Second Cut.



Rasp Coarse.



Single Cut Coarse.



Single Cut Bastard.



Rasp Bastard.



Rasp Smooth.



Sin. Cut Second Cut.



Single Cut Smooth.



Double Cut Coarse.



Double Cut Bastard.

Files and Rasps have Three Distinguishing Features.

FIRST—THEIR LENGTH—Which is always measured exclusive of their Tang.

SECOND—THEIR KIND OR NAME—Which has reference to the shape or style.

THIRD—THEIR CUT—Which has reference not only to character, but also to relative degrees of coarseness of Teeth.

THE LENGTH—Of a File is the distance between its Heel or part of the File where the Tang begins and the point or end opposite. The Tang or portion of the File prepared for the reception of the Handle is never included in the Length. In general, the Lengths of Files bear no fixed proportion to either their Width or Thickness, even though they be of the same kind.

THE KIND—By Kind we mean the varied shapes or styles of Files which are distinguished by certain technical names, as, for instance, FLAT, MILL, HALF-ROUND, etc. The Kinds are divided, from the form of their Cross Sections into Three Geometrical Classes, namely, Quadrangular Sections, Circular Sections and Triangular Sections; Odd and Irregular Forms are collected under Miscellaneous Sections. These Sections are in turn sub-divided according to their general contour or outline, into Taper and Blunt.

TAPER—Designates a File, the Point of which is more or less reduced in size, both in Width and Thickness by a gradually narrowing Section extending from One-half to Two-thirds the Length of the File, from the Point; Custom has also established it as a short name for the Three Square Hand Saw File.

BLUNT—Designates a File that preserves its Sectional Shape throughout, from Point to Tang.

THE CUT of Files is divided, with reference to the character of the Teeth, into Single Cut, Double Cut and Rasp Cut, and with reference to the Coarseness of the Teeth into Rough, Coarse, Bastard, Second Cut, Smooth and Dead Smooth. Regarding the latter we may say very briefly that the Coarse and Bastard Cuts are used upon the coarser, heavier classes of work, while the Second Cut and Smooth are used for the finer grades and for finishing the work started by the Coarse and Bastard. The Rough and Dead Smooth are seldom called for, but correspond to the above use.

THE SINGLE CUT FILE—Is one in which a Single, Unbroken Course of Chisel Cuts is made across its Surface, arranged parallel to each other, but with a horizontal obliquity to the Central Line.

THE DOUBLE CUT FILE—Has Two Courses of Chisel Cuts crossing each other, the Second Course, with rare exceptions, being finer than the first.

RASP CUT—Differs from Single or Double Cut in the respect that the Teeth are disconnected from each other, each Tooth being made by a single pointed punch.

SUPERFINE, OR SUPER, CUT—A term applied by the Lancashire File-makers to designate a grade of Cut designated by us as Dead Smooth.

SAFE EDGE, OR SIDE—Terms used to denote that a File has one or more of its Edges or Sides Smooth or Uncut, that it may be presented to the work without injury to that portion which does not require to be Filed.

Price List of Files and Rasps

Factory List Price Per Dozen Effective On and After January 1, 1939

List of April 2, 1923

Price Per Dozen

INCH	MILL			MILL 1 R. E.		MILL 2 R. E.		MILL BLUNT		INCH	INCH	TAPERS		SLIM TAPERS	EXTRA SLIM TAPERS	Double Extra Slim Tapers	HAND-SAW BLUNT	BANDSAW BLUNT & TAPER		PITSAW	INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	BAST.	2d CUT	BAST.	2d CUT			SGL. CUT	DBL. CUT					REGULAR	SLIM		
3	3.00									3	3	2.10		2.10							3
4	3.00	3.50								4	3½	2.10		2.10							3½
5	3.20	3.80								5	4	2.20	2.90	2.20	2.20	2.20	2.60	2.90		4.80	4
6	3.50	4.00	4.50	3.90	4.50	4.40	5.00	3.90	4.60	6	4½	2.40	3.10	2.30	2.30	2.30	3.00	3.10		5.40	4½
7	3.90	4.60		4.40	5.20	4.90		4.30	4.90	7	5	2.60	3.50	2.50	2.50	2.50	3.40	3.50		5.40	5
8	4.30	4.90	5.40	4.80	5.50	5.40	6.10	4.90	5.80	8	5½	3.00		2.90	2.90	2.90				6.10	5½
9	4.90	5.80		5.50	6.50	6.10				9	6	3.40	4.70	3.10	3.10	3.10	4.30	4.70	3.90	6.10	6
10	5.60	6.40	7.00	6.30	7.20	7.00	8.00	6.70	7.80	10	7	4.30	5.60	3.80	3.80	3.80	5.40	5.60		7.00	7
12	7.50	8.60	9.40	8.40	9.70	9.40	10.80			12	8	5.40	6.70	4.50	4.50	4.50	6.60	6.70	5.30	7.50	8
14	10.70	12.20	13.10	12.00						14	10	8.10		6.40				9.70			10
16	14.70	16.80	17.90							16	12	12.50		9.50							12
18	20.20									18											
INCH	FLAT			HAND			SQUARE			INCH	INCH	THREE SQUARE			HALF ROUND			ROUND			INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH			BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	
4	3.70	4.30	4.70	3.70	4.30	4.80	3.80	4.60	4.90	4	4	4.80	5.60	6.10	4.80	5.60	6.10	3.00	3.50	3.90	4
5	3.90	4.60	4.90	3.90	4.70	5.30	4.10	4.80	5.30	5	5	5.40	6.10	6.40	5.40	6.10	6.40	3.20	3.80	4.10	5
6	4.30	4.80	5.30	4.30	5.10	5.60	4.60	5.10	5.50	6	6	6.10	6.70	7.10	6.10	6.70	7.10	3.50	4.00	4.50	6
7	4.80	5.50	6.10	4.90	5.80	6.30	5.10	5.80	6.30	7	7	7.00	7.70	8.20	7.00	7.70	8.20	3.90	4.60	4.90	7
8	5.30	6.10	6.60	5.40	6.30	6.70	5.50	6.30	7.00	8	8	7.50	8.30	8.90	7.50	8.30	8.90	4.30	4.90	5.40	8
9	6.30	7.20	7.90	6.70	7.80	8.30				9	9							4.90	5.80	6.30	9
10	7.00	8.10	8.70	7.50	8.70	9.40	7.40	8.50	9.10	10	10	9.10	10.10	10.70	9.10	10.10	10.70	5.60	6.40	7.00	10
12	9.70	11.00	12.10	10.70	12.30	13.50	10.20	11.50	12.80	12	12	11.80	13.00	13.90	11.80	13.00	13.90	7.50	8.60	9.40	12
14	13.30	15.30	16.70	15.00	17.00	18.20	13.90	16.10	17.50	14	14	15.50	17.00	18.30	15.50	17.00	18.30	10.70	12.20	13.10	14
16	17.80	20.10	22.30	20.10	22.80	24.20	18.70	21.20	23.30	16	16	20.60	22.50	24.20	20.60	22.50	24.20	14.70	16.80	17.90	16
18	23.90	26.80	29.20	26.80	29.90	31.50	25.10	28.20	30.40	18	18	27.50	29.90	32.00	27.50	29.90	32.00	20.20	22.70	24.30	18
20	31.50			35.10			32.80			20	20							27.40			20
INCH	WARDING			KNIFE			INCH	INCH	PILLAR			SQUARE BLUNT BAST.	ROUND BLUNT BAST.	LEAD FLOAT and WOOD FILES		INCH	INCH	HANDSAW BLUNT SLIM	DOUBLE ENDER	CANT SAW	INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH			BAST.	2d CUT	SMOOTH			Flat	HIF. RD.						
4	4.00	4.80	5.40	5.40	6.10	6.40	4	6	4.30	5.10	5.60			4.80	7.00	6	4	2.50			4
5	4.50	5.30	5.80	6.10	6.70	7.10	5	8	5.40	6.30	6.70	7.40	5.60	6.30	8.50	8	5	3.10		4.70	5
6	4.90	5.90	6.40	6.90	7.50	7.90	6	10	7.50	8.70	9.40	10.20	7.50	8.60	10.70	10	6	3.80		5.40	6
8	6.40	7.50	8.20	8.50	9.10	9.50	8	12	10.70	12.30	13.50	13.90	10.70	11.80	14.10	12	7		3.50	6.10	7
10	8.70	10.10	11.00	10.10	11.50	12.30	10	14	15.00			18.70	14.70	16.00	18.50	14	8	5.40	3.90	6.40	8
12				13.70	15.20	16.10	12	16	20.10			25.10		21.50	24.70	16	9		4.40		9
								18				32.80				18	10		4.90	8.70	10
																18	12		6.00	11.40	12
INCH	CABINET FILES	CABINET RASPS		HALF RD. WOOD RASPS		FLAT WOOD RASPS		HAND FINISHING		INCH	INCH	SHOE RASPS		PLANER KNIFE	CROSS CUT	SPECIAL CROSS CUT		INCH			
		2d CUT	SMOOTH	BAST.	SMOOTH	BAST.	SMOOTH	2d CUT	SMOOTH			FLAT	HIF. RD.								
6	8.10	10.10	11.70	8.10	10.10					6	6							6			
8	10.10	12.80	15.50	10.10	13.70	9.40	12.80			8	7				6.10	3.90		7			
10	13.70	17.50	20.70	13.70	18.70	12.80	17.50			10	8	10.10	10.10	6.40		4.30		8			
12	18.70	22.80	26.80	18.70	24.80	17.50	23.20	15.20	16.20	12	9	12.20	12.20		7.50	4.90		9			
14	24.80	29.60	33.90	24.80	32.90	23.20	30.80	20.60	21.70	14	10	13.70	13.70	8.60	9.10	6.70		10			
16				32.90	43.60	30.80	40.90			16	12				11.80			12			
INCH	HORSE RASPS PLAIN			HORSE RASPS, TANGED			INCH	INCH													
	½ FILE	SLIM	¾ FILE	REGULAR	SLIM	THIN															
12	12.80			16.80		1.531"x .270"	12	16.00													
13				19.60		1.594"x .275"	13	18.20													
14	17.80			23.10	13" stock	1.750"x .280"	14	21.90													
15	20.90			27.30	13" stock	1.812"x .285"	15	25.20													
16	24.40	14" STH.	21.50	32.20	14" stock	1.875"x .290"	16	29.70													
18	32.90	15" STH.	25.90				18														
20		16" STH.	32.90				20														

KEEN KUTTER Files Cut Easier, Faster and Last Longer

- Expertly forged from highest grade tool steel—assures finest value and best service.
- Natural gas tempered to correct degree of hardness—tough, durable.

• Wide selection of lengths, kinds and cuts—a file for every need.

For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth.

Carpenters' Special Slim Taper

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KCSS4	\$0.13	4	$\frac{3}{16}$	\$2.20
TB KCSS4½	.14	4½	$\frac{1}{4}$	2.30
TB KCSS5	.15	5	$\frac{1}{8}$	2.50
TB KCSS5½	.17	5½	$\frac{3}{8}$	2.90
TB KCSS6	.19	6	$\frac{1}{2}$	3.10
TB KCSS7	.23	7	$\frac{3}{4}$	3.80
TB KCSS8	.28	8	1½	4.50

Extra Slim Taper

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KEST4	\$0.13	4	$\frac{1}{4}$	\$2.20
TB KEST4½	.14	4½	$\frac{5}{16}$	2.30
TB KEST5	.15	5	$\frac{1}{8}$	2.50
TB KEST5½	.17	5½	$\frac{1}{2}$	2.90
TB KEST6	.19	6	$\frac{3}{4}$	3.10
TB KEST7	.23	7	1½	3.80
TB KEST8	.28	8	2	4.50

Slim Taper Saw

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KST3	\$0.12	3	$\frac{1}{8}$	\$2.10
TB KST3½	.12	3½	$\frac{1}{8}$	2.10
TB KST4	.13	4	$\frac{1}{8}$	2.20
TB KST4½	.14	4½	$\frac{1}{8}$	2.30
TB KST5	.15	5	$\frac{1}{2}$	2.50
TB KST5½	.17	5½	$\frac{3}{4}$	2.90
TB KST6	.19	6	1	3.10
TB KST7	.23	7	1¾	3.80
TB KST8	.28	8	2¾	4.50
TB KST10	.39	10	5	6.40

Regular Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KRT5	\$0.15	5	1½	\$2.60
TB KRT5½	.18	5½	1¾	3.00
TB KRT6	.20	6	2	3.40
TB KRT7	.27	7	3½	4.30
TB KRT8	.33	8	4¼	5.40

One dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

- Sturdy, sharp teeth cut in latest improved machines for easy, fast work.
- Carefully tested, selected and stamped KEEN KUTTER.

Reversible Taper Saw, Handled—Single Cut

Nos.	Each	Full Length, Inches	Size Regular Tapers	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB KDE7	\$0.19	7	3½	¾	\$3.50
TB KDE8	.24	8	4	1¾	3.90

One dozen files and one-half dozen handles in a cardboard box.

Blunt Extra Slim

Preferred by carpenters and expert saw filers for filing hand saws.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KBES6	\$0.28	6	1	\$4.50
TB KBES7	.35	7	1½	5.40

One dozen in a cardboard box.

Mill Bastard

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as, garden, field and cotton hoes.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KM4	\$0.17	4	¾	\$ 3.00
TB KM6	.19	6	1¼	3.50
TB KM7	.23	7	2	3.90
TB KM8	.25	8	2¾	4.30
TB KM10	.34	10	5¼	5.60
TB KM12	.48	12	9	7.50
TB KM14	.67	14	13½	10.70
TB KM16	.90	16	20¾	14.70

Packing: 4-inch to 10-inch—one dozen in a cardboard box; 12-inch and over—one-half dozen in a cardboard box.

Straight Mill

Specially intended for use in filing cross cut saws. Single cut. Parallel in width and thickness, and does not taper at point. Can be used for filing buck and wood saws without removing blade from frame.

No.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KMC7	\$0.27	7	2	4.30

One dozen in a cardboard box.

KEEN KUTTER Files Cut Easier, Faster and Last Longer

Mill Bastard—One Round Edge

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes. Round edge makes it suitable for filing gullet between saw teeth.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KMO8	\$0.29	8	2½	\$4.80
TB KMO10	.39	10	5¼	6.30
TB KMO12	.53	12	9	8.40

Safety Mill—Bastard Cut

Regular mill file except that end is a straight blank with rounded ends, instead of sharp pointed tang, which makes it easy and safe to be carried by a man in the field or in the pocket of a workman. Has hole for hanging.

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as, garden, field and cotton hoes.

No.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KNSM8	\$0.27	8	2½	\$4.30

Flat Bastard

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KFB6	\$0.25	6	1½	\$ 4.30
TB KFB8	.33	8	3¾	5.30
TB KFB10	.43	10	7	7.00
TB KFB12	.63	12	11½	9.70
TB KFB14	.80	14	18½	13.30
TB KFB16	1.10	16	27	17.80

Square Bastard

Square in section. Used principally for filing slots, key-seats, and general surface filing. Preferred by many to flat files because it is heavier in section and has four filing surfaces.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KSB4	\$0.25	4	¼	\$ 3.80
TB KSB6	.29	6	¾	4.60
TB KSB8	.33	8	2	5.50
TB KSB10	.47	10	3¾	7.40
TB KSB12	.62	12	8½	10.20
TB KSB14	.85	14	15	13.90

Packing: 4 to 10 inch—one dozen in a cardboard box; 12 inch and longer—one-half dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

Flat Smooth

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Fine double cut.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KFS6	\$0.33	6	1½	\$5.30
TB KFS8	.43	8	3¾	6.60
TB KFS10	.53	10	7	8.70
TB KFS12	.77	12	11½	12.10

Half Round Bastard

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KHR4	\$0.30	4	¾	\$ 4.80
TB KHR6	.35	6	1½	6.10
TB KHR8	.49	8	3¾	7.50
TB KHR10	.55	10	5¾	9.10
TB KHR12	.75	12	10	11.80
TB KHR14	.95	14	16	15.50
TB KHR16	1.29	16	22¾	20.60

Half Round Smooth

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory. Fine smooth cut.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KHRS8	\$0.53	8	3¾	\$ 8.80
TB KHRS10	.67	10	5¾	10.70
TB KHRS12	.85	12	10	13.90

Half Round Cabinet

Used by cabinet makers and other wood workers generally.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Doz.
TB KHRC10	\$0.85	10	5¾	\$13.70
TB KHRC12	1.15	12	10	18.90

Packing: 4 to 10 inch—one dozen in a cardboard box; 12 inch and longer—one-half dozen in a cardboard box.

KEEN KUTTER FILES



Round Bastard

Circular in section. Principally used for filing and enlarging circular openings and concave surfaces. Also valuable for filing gullets between saw teeth.

Nos.	Each	Length, Inches	Diam. Center, Inches	Weight Dozen, Lbs.	Std. List, Doz.
TB KRB4	\$0.19	4	$\frac{5}{16}$	$\frac{1}{4}$	\$3.00
TB KRB5	.21	5	$\frac{3}{8}$	$\frac{1}{2}$	3.20
TB KRB6	.24	6	$\frac{1}{4}$	$\frac{3}{4}$	3.50
TB KRB8	.29	8	$\frac{1}{2}$	1 $\frac{1}{4}$	4.30
TB KRB10	.33	10	$\frac{3}{4}$	3 $\frac{1}{4}$	5.60
TB KRB12	.47	12	$\frac{1}{2}$	6 $\frac{3}{4}$	7.50
TB KRB14	.67	14	$\frac{5}{8}$	12	10.70
TB KRB16	.90	16	$\frac{3}{4}$	19 $\frac{1}{2}$	14.70



CANT SAW

Used chiefly for filing cross cut saws having "M" shaped teeth.

Nos.	Each	Size, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KCS6	\$0.33	6	1 $\frac{5}{8}$	\$5.40
TB KCS8	.39	8	2 $\frac{3}{4}$	6.40
TB KCS10	.52	10	5 $\frac{3}{8}$	8.70



Great American Cross Cut Saw

Specially adapted for filing special shaped teeth and gullets in Great American cross cut saws.

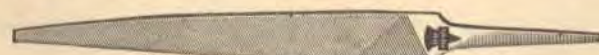
Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KGA8	\$0.47	8	3 $\frac{3}{8}$	\$7.50
TB KGA10	.53	10	6	9.10



Knife Bastard

Knife shaped. Particularly adapted for use on special forms, die-work, etc. The included angle of sharp edge is 10 degrees and tapers in width and thickness to point. Double cut on both flat sides and single cut on both edges.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KKB4	\$0.35	4	$\frac{1}{16}$	\$5.40
TB KKB5	.37	5	$\frac{5}{8}$	6.10
TB KKB6	.45	6	1	6.90



Warding-Bastard Cut

Rectangular in section. Principal use is for locksmiths in repairing or filing ward notches in keys; also suited for use in narrow spaces where other files would be too thick. Double cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KWB4	\$0.25	4	$\frac{1}{16}$	\$4.00
TB KWB5	.29	5	$\frac{1}{2}$	4.50
TB KWB6	.30	6	$\frac{3}{4}$	4.90



Half Round Wood Files

Used by wood workers generally and occasionally for filing coarser kinds of brass work.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KHRW10	\$0.65	10	5 $\frac{7}{8}$	\$10.70
TB KHRW12	.85	12	10	14.10

Packing: 4 to 10 inch—one dozen in a cardboard box; 12 inch—one-half dozen in a cardboard box.

KEEN KUTTER RASPS

• Expertly forged from highest grade tool steel. Natural gas tempered—rugged, long-lasting. Sharp teeth cut in latest improved machines to assure fast, easy cutting. Carefully tested and selected.



Half-Round Wood

Used by wood workers generally and also employed by wheelwrights, plumbers, etc.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KHRWR8	\$0.59	8	3 $\frac{1}{4}$	\$10.10
TB KHRWR10	.85	10	6	13.70
TB KHRWR12	1.10	12	10 $\frac{3}{8}$	18.70
TB KHRWR14	1.49	14	16 $\frac{3}{4}$	24.00



Flat Wood

Flat on both sides. Used by wood workers generally and also employed by wheelwrights, plumbers, etc.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KFWR10	\$0.75	10	7	\$12.80
TB KFWR12	1.09	12	11 $\frac{1}{2}$	17.50
TB KFWR14	1.39	14	18 $\frac{3}{4}$	23.20

Packing: 8 and 10 inch—one dozen in a cardboard box; 12 and 14 inch—one-half dozen in a cardboard box.



Half-Round Shoe

For use by shoe last and shoe pattern makers; also adapted for use on golf clubs and for wood filing where a smooth finish is desired.

No.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KRSS	\$0.59	8	4	\$10.10



Plain Horse

Rectangular in section. Has file teeth on one side and rasp teeth on other. Made especially for horseshoers.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KP12	\$0.75	12	13 $\frac{3}{4}$	\$12.80
TB KP14	1.10	14	17 $\frac{1}{2}$	17.80
TB KP16	1.45	16	26 $\frac{3}{4}$	24.40



Plain, Slim, Extra-Light Horse

Extra light. Rectangular in section. Has file teeth on side and rasp teeth on other. Made especially for horseshoers.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB KPS16	\$1.35	16	21	\$21.50
TB KPS18	1.49	18	26	25.90

One-half dozen in a cardboard box.

All horse rasps made regular—one side all rasp; reverse side all file.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SIMMONS FILES

For Smooth, Easy Cutting.

• Forged from high-grade tool steel. Natural gas tempered—rugged, sturdy.

For filing and sharpening hand saws, or any type saw

Carpenters' Special Slim Taper

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SCSS5	\$0.14	5	$\frac{1}{8}$	\$2.50
TY SCSS5½	.15	5½	$\frac{3}{8}$	2.90
TY SCSS6	.17	6	$\frac{3}{4}$	3.10
TY SCSS7	.20	7	$\frac{3}{4}$	3.80

Extra Slim Taper

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SEST5	\$0.14	5	$\frac{1}{8}$	\$2.50
TY SEST5½	.15	5½	$\frac{1}{2}$	2.90
TY SEST6	.17	6	$\frac{3}{4}$	3.10

Slim Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SST5	\$0.14	5	$\frac{1}{2}$	\$2.50
TY SST5½	.15	5½	$\frac{3}{4}$	2.90
TB SST6	.17	6	1	3.10

Regular Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TY SRT6	\$0.18	6	2	\$3.40
TB SRT7	.23	7	3½	4.30

One dozen in a cardboard box.

Half Round Wood

Used by wood workers generally and occasionally for filing coarser kinds of brass work.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SHRW10	\$0.59	10	5½	\$10.70
TB SHRW12	.75	12	10	14.10

Packing: 10-inch—one dozen in a cardboard box. 12-inch—one-half dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth.

• Sharp teeth insure quick, easy cutting. Carefully tested and selected.

Mill Bastard

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TY SM6	\$0.17	6	1¼	\$3.50
TY SM8	.23	8	2	4.30
TB SM10	.29	10	5¼	5.60
TB SM12	.40	12	9	7.50
TB SM14	.59	14	13½	10.70

Flat Bastard

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SFB10	\$0.37	10	7	\$7.00
TY SFB12	.49	12	11½	9.70
TY SFB14	.69	14	18½	13.30

Round Bastard

Circular in section. Principal use is for filing and enlarging circular openings and concave surfaces. Also valuable for filing gullet between saw teeth.

Nos.	Each	Length, Inches	Diam. at Center, Inch	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SRB4	\$0.17	4	$\frac{5}{8}$	¼	\$3.00
TB SRB6	.19	6	$\frac{3}{4}$	$\frac{3}{4}$	3.50
TB SRB8	.23	8	$\frac{1}{2}$	1¾	4.30
TB SRB10	.27	10	$\frac{3}{8}$	3¼	5.60
TB SRB12	.40	12	$\frac{1}{2}$	6¾	7.50

Half Round Bastard

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TY SHR8	\$0.39	8	3½	\$7.50
TY SHR10	.49	10	5¾	9.10
TY SHR12	.59	12	10	11.80

Packing: 4 to 10-inch—one dozen in a cardboard box. 12-inch and over—one-half dozen in a cardboard box.

SIMMONS FILES



Warding—Bastard Cut

Rectangular in section. Principal use is for locksmiths in repairing or filing ward notches in keys, also suited for use in narrow spaces where other files would be too thick. Double cut.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SWB4	\$0.23	4	$\frac{5}{16}$	\$4.00



Cant Saw

Used chiefly for filing cross cut saws having "M" shaped teeth.

Nos.	Each	Length, Inches	Weight Per Dozen, Lbs.	Std. List, Per Dozen
TB SCS8	\$0.35	8	2 $\frac{3}{4}$	\$6.40

One dozen in a carton.

SIMMONS LEADER FILES

Good Quality at a Low Price

• Skillfully made to do good work. High quality steel. For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth. Length 6 inches.

TY SZ2—Slim Taper. Weight per carton (6) 7 ozs. Std. List, Each \$0.15.....Each \$0.15

TY SZ3—Extra Slim Taper. Weight per carton (6) 5 $\frac{1}{2}$ ozs. Std. List, Each \$0.15....Each \$0.15

Six in a carton.



Mill Bastard

For filing mill or circular saws, planes and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Length, Inches	Wt. Per Carton (4), Lbs.	Std. List, Each
TY SZ4	\$0.15	6	$\frac{1}{2}$	\$0.15
TY SZ5	.20	8	$\frac{3}{4}$	.20
TY SZ6	.25	10	1 $\frac{3}{4}$	.25

Four in a carton.

A New
KEEN KOOKER
CAST IRON RANGE
Will Give You
BETTER, FASTER COOKING

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SIMMONS RASPS

For Smooth, Easy Cutting

• Forged from high-grade tool steel. Natural gas tempered—rugged, sturdy. Sharp teeth insure quick, easy cutting. Carefully tested and selected.



Half-Round Wood Rasps

Used by woodworkers generally and also employed by wheelwrights, plumbers, etc.

Nos.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB SHRWR10	\$0.73	10	6	\$13.70
TB SHRWR12	1.00	12	10 $\frac{3}{8}$	18.70



Half-Round Shoe Rasps

For use by shoe last and shoe pattern makers; also adapted for use on golf clubs and for wood filing where smooth finish is desired.

No.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB SRS8	\$0.69	8	4	\$10.10



Plain, Slim, Extra-Light Horse Rasps

Extra light. Rectangular in section. Has file teeth on one side and rasp teeth on other. Made especially for horseshoers.

Width 1 $\frac{1}{2}$ inches, thickness $\frac{5}{16}$ -inch.

No.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB SPS18	\$1.39	18	26	\$25.90

KLICKEER RASPS

• Forged from good grade tool steel. Tempered to degree of hardness that provides endurance and toughness.



Plain Horse Rasps

Rectangular in section. Has file teeth on one side and rasp teeth on other. Made especially for horseshoers.

Nos.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TY P12K	\$0.39	12	13 $\frac{3}{4}$	\$12.80
TB P14K	.57	14	17 $\frac{1}{2}$	17.80
TY P16K	.75	16	26 $\frac{3}{4}$	24.40

One-half dozen in a cardboard box.

All horse rasps made regular—one side all rasp, reverse side all file.

KLICKER FILES

KLICKER

Good Files at a Low Price!

• Forged from good grade tool steel. Tempered to degree of hardness that provides endurance and toughness.

For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth.



Extra Slim Taper Saw—Single Cut		Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
Nos.	Each			
TB EST5K	\$0.10	5	$\frac{1}{16}$	\$ 2.50
TB EST6K	.13	6	$\frac{3}{16}$	3.00



Slim Taper Saw—Single Cut		Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
Nos.	Each			
TB ST4K	\$0.10	4	$\frac{5}{16}$	\$ 2.20
TB ST4½K	.10	4½	$\frac{1}{8}$	2.30
TY ST5K	.10	5	$\frac{1}{2}$	2.50
TB ST6K	.12	6	1	3.10



Mill Bastard

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB M6K	\$0.10	6	1¼	\$ 3.50
TB M8K	.13	8	2¾	4.30
TB M10K	.17	10	5¼	5.60
TB M12K	.25	12	9	7.50
TB M14K	.39	14	13½	10.70



Safety Mill—Bastard Cut

Regular mill file except that end is a straight blank with rounded ends instead of sharp-pointed tang, which makes it easy and safe to be carried by a man in the field or in the pocket of a workman. Has hole for hanging.

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

No.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB MNSBK	\$0.17	8	2¾	\$ 4.30



Great American Cross-Cut Saw

Specially adapted for filing special shaped teeth and gullets in Great American cross-cut saws.

No.	Each	Lgth., In.	Wt. Per Doz., Lbs.	Std. List, Per Doz.
TB GA8K	\$0.35	8	3¾	\$ 7.50

Packing: 6 to 10-inch—one dozen in a cardboard box; 12 and 14-inch—one-half dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

HANDY FILE



NICHOLSON

One of the most practical files for use on the farm, in the garage, around the home or wherever tools must be sharpened and general filing work done. Combination mill and flat file. Single cut on one side and double cut on the other, with one cutting edge and one safe edge.

Forged from tool steel, tempered. Tested and selected. Orange colored safety handles with hole for hanging. Length of file 8 inches. Length over all 11¼ inches.

TB NH810—Weight per dozen 6 lbs. Each \$0.35

Each file cellophane wrapped and packed one dozen in a counter display box with display card to attach to box.

FILE ASSORTMENTS



NICHOLSON

- This display contains 66 sharp, durable, tested files.
- Popular lengths, kinds and cuts.
- Each kind and size in special compartment, plainly labeled.

Display is made in attractive, brilliant colors. Compact—takes up very little counter space—size 13½ x 8½ x 1½ inches. Stands on easel. Each file wrapped in moisture-proof cellophane.

Assortment consists of:

	Each
12 6-inch slim taper files	\$0.20
12 6-inch extra slim taper files	.20
12 6-inch mill bastard files	.20
18 8-inch mill bastard files	.25
12 10-inch mill bastard files	.35

TB N—Weight each 15 lbs.

Women Know Good Stoves:

The **SIMMONS**

CAST IRON RANGE

Is a Winner

NICHOLSON FILES

MAKE HARD FILING EASY

- Forged from special analysis high-carbon tool steel. Tempered to stand great strain.

For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth.



Extra Slim Taper

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NEST4	\$0.14	4	$\frac{1}{4}$	\$2.20
TB NEST4½	.15	4½	$\frac{1}{2}$	2.30
TB NEST5	.16	5	$\frac{1}{2}$	2.50
TB NEST5½	.18	5½	$\frac{1}{2}$	2.90
TB NEST6	.20	6	$\frac{3}{4}$	3.10
TB NEST7	.25	7	1½	3.80
TB NEST8	.30	8	2	4.50

Double Extra Slim Taper

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NDST6	\$0.20	6	$\frac{1}{2}$	\$3.10
TB NDST7	.25	7	$\frac{3}{4}$	3.80
TB NDST8	.30	8	1	4.50



Regular Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NRT4½	\$0.16	4½	1	\$2.40
TB NRT6	.22	6	2	3.40
TB NRT8	.35	8	4¼	5.40



Slim Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NST5	\$0.16	5	$\frac{1}{2}$	\$2.50
TB NST5½	.18	5½	$\frac{3}{4}$	2.90
TB NST6	.20	6	1	3.10
TB NST7	.25	7	1¾	3.80
TB NST8	.30	8	2¾	4.50

One dozen in a cardboard box.



Flat Smooth

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut, fine cut.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NFS6	\$0.35	6	1½	\$5.30
TB NFS8	.45	8	3½	6.60
TB NFS10	.55	10	7	8.70
TB NFS12	.80	12	11½	12.10
TB NFS14	1.10	14	18½	16.70

Packing: 6- and 8-inch—one dozen in a cardboard box; 10-inch and over—one-half dozen in a cardboard box.

- Every file tested and selected.



Mill Bastard

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TY NM4	\$0.18	4	$\frac{3}{8}$	\$3.00
TY NM5	.19	5	$\frac{3}{4}$	3.20
TY NM6	.20	6	1½	3.50
TY NM8	.25	8	2¾	4.30
TB NM10	.35	10	5¼	5.60
TB NM12	.50	12	9	7.50
TB NM14	.70	14	13½	10.70
TB NM16	.95	16	20½	14.70



Flat Bastard

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NFB6	\$0.27	6	1½	\$4.30
TB NFB8	.35	8	3½	5.30
TB NFB10	.45	10	7	7.00
TB NFB12	.65	12	11½	9.70
TB NFB14	.85	14	18½	13.30
TB NFB16	1.15	16	27	17.80



Mill Bastard—One Round Edge

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes. Round edge makes it suitable for filing gullet between saw teeth.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NMO8	\$0.30	8	2¾	\$4.80
TB NMO10	.40	10	5¼	6.30
TB NMO12	.55	12	9	8.40



Cant Saw

Used chiefly for filing cross-cut saws having "M"-shaped teeth.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB NCS8	\$0.40	8	2¾	\$6.40
TB NCS10	.55	10	5¾	8.70

Packing: 4- to 10-inch—one dozen in a cardboard box; 12-inch and over—one-half dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

NICHOLSON FILES

- Expertly forged from special analysis high carbon tool steel. Tempered, tested and selected.



Half Round Bastard

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB NHR6	\$0.37	6	1½	\$ 6.10
TB NHR8	.50	8	3½	7.50
TB NHR10	.57	10	5¾	9.10
TB NHR12	.78	12	10	11.80
TB NHR14	1.00	14	16	15.50
TB NHR16	1.35	16	22¾	20.60



Half Round Smooth

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory. Smooth cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB NHRS4	\$0.37	4	5	\$ 6.10
TB NHRS6	.45	6	1½	7.10
TB NHRS8	.55	8	3½	8.90
TB NHRS10	.70	10	5¾	10.70
TB NHRS12	.90	12	10	13.90



Square Bastard

Square in section. Used principally for filing slots, key-seats, and general surface filing. Preferred by many to flat files because it is heavier in section and has four filing surfaces.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB NSB6	\$0.30	6	7	\$ 4.60
TB NSB8	.35	8	2	5.50
TB NSB10	.50	10	3¾	7.40
TB NSB12	.65	12	8½	10.20
TB NSB14	.90	14	15	13.90

Packing: 4 to 10-inch—one dozen in a cardboard box; 10-inch and over—one-half dozen in a cardboard box.

FILE ASSORTMENTS



BLACK DIAMOND

- This display contains 66 sharp, durable, tested files.
- Popular lengths, kinds and cuts.
- Each kind and size in special compartment, plainly labeled.
- Display is made in attractive, brilliant colors. Compact—takes up very little counter space—size 13¾ x 8¾ x 1½ inches. Stands on easel.

Each file wrapped in moisture-proof cellophane.

Assortment consists of:	Each
12— 6-inch slim taper files.....	\$0.20
12— 6-inch extra slim taper files.....	.20
12— 6-inch mill bastard files.....	.20
18— 8-inch mill bastard files.....	.25
12— 10-inch mill bastard files.....	.35
TB BD—Weight per dozen 15 lbs.	

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

NICHOLSON FILES

- Expertly forged from special analysis high carbon tool steel. Tempered, tested and selected.



Knife Bastard

Knife-shaped. Particularly adapted for use on special forms, die-work, etc.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB NKB6	\$0.47	6	1	\$6.90



Round Bastard

Circular in section. Principal use is for filing and enlarging circular openings and concave surfaces.

Nos.	Each	Length, Inches	Diam. Center, Inches	Weight Dozen, Lbs.	Std. List, Doz.
TB NRB4	\$0.20	4	3/8	1¼	\$ 3.00
TB NRB5	.22	5	1/8	1½	3.20
TB NRB6	.25	6	1/4	¾	3.50
TB NRB8	.30	8	3/8	1¾	4.30
TB NRB10	.35	10	3/4	3¼	5.60
TB NRB12	.50	12	7/8	6¾	7.50
TB NRB14	.70	14	1	12	10.70
TB NRB16	.95	16	3/4	19½	14.70



Warding—Bastard Cut

Rectangular in section. Principal use is for locksmiths in repairing or filing ward notches in keys. Double cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB NWB4	\$0.25	4	1½	\$4.00
TB NWB5	.30	5	1½	4.50
TB NWB6	.33	6	¾	4.90

BLACK DIAMOND FILES

- Forged from special analysis high carbon tool steel for long life. Tempered—durable, tough. Teeth designed for sharp, easy filing. Tested and selected. For filing and sharpening hand saws, or any type saw having 60-degree angle teeth.



Extra Slim Taper Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB BDXST4	\$0.14	4	¼	\$2.20
TB BDXST4½	.15	4½	1/8	2.30
TB BDXST5	.16	5	7/8	2.50
TB BDXST5½	.18	5½	1½	2.90
TB BDXST6	.20	6	¾	3.10



Slim Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB BDST5½	\$0.18	5½	¾	\$2.90
TB BDST6	.20	6	1	3.10



Mill Bastard

For filing mill or circular saws, planer and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TY BDM6	\$0.20	6	1¼	\$ 3.50
TY BDM8	.25	8	2¾	4.30
TB BDM10	.35	10	5¼	5.60
TB BDM12	.50	12	9	7.50
TB BDM14	.70	14	13½	10.70

Packing: 4- to 10-inch—one dozen in a cardboard box; 12-inch and over—one-half dozen in a cardboard box.

AMERICAN FILES AND RASPS

• Forged from good quality steel—assures dependable service. Tempered to proper hardness—tough, sturdy.

Extra Slim Taper

For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AEST4	\$0.12	4	$\frac{1}{4}$	\$2.20
TB AEST5	.15	5	$\frac{7}{16}$	2.50
TB AEST6	.18	6	$\frac{3}{4}$	3.10

Slim Taper Saw—Single Cut

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AST4	\$0.12	4	$\frac{5}{16}$	\$2.20
TB AST5	.15	5	$\frac{1}{2}$	2.50
TB AST6	.18	6	1	3.10

Mill Bastard

For filing mill or circular saws, planes and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AM4	\$0.17	4	$\frac{3}{8}$	\$3.00
TB AM6	.18	6	$1\frac{1}{4}$	3.50
TB AM8	.25	8	$2\frac{3}{4}$	4.30
TB AM10	.30	10	$5\frac{1}{4}$	5.60
TB AM12	.43	12	9	7.50
TB AM14	.60	14	$13\frac{1}{8}$	10.70

Flat Bastard

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AFB4	\$0.19	4	1	\$ 3.70
TB AFB6	.25	6	$1\frac{5}{8}$	4.30
TB AFB8	.30	8	$3\frac{5}{8}$	5.30
TB AFB10	.39	10	7	7.00
TB AFB12	.50	12	$11\frac{5}{8}$	9.70
TB AFB14	.73	14	$18\frac{1}{2}$	13.30
TB AFB16	.95	16	27	17.80

Flat Smooth

Rectangular section (proportion 4 to 1). In common use by machinists, machinery builders, ship and engine builders, repair men, etc. Double cut, fine cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AFS6	\$0.30	6	$1\frac{5}{8}$	\$ 5.30
TB AFS8	.37	8	$3\frac{5}{8}$	6.60
TB AFS10	.49	10	7	8.70
TB AFS12	.69	12	$11\frac{5}{8}$	12.10
TB AFS14	.95	14	$18\frac{1}{2}$	16.70

Packing: 4 to 10-inch—one dozen in a cardboard box; 12-inch and over—one-half dozen in a cardboard box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

• Tested and selected—a file for every job.

Half Round Bastard

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AHR4	\$0.27	4	$\frac{5}{8}$	\$ 4.80
TB AHR6	.35	6	$1\frac{1}{2}$	6.10
TB AHR8	.40	8	$3\frac{1}{4}$	7.50
TB AHR10	.50	10	$5\frac{3}{4}$	9.10
TB AHR12	.60	12	10	11.80
TB AHR14	.89	14	16	15.50

Round Bastard

Circular in section. Principal use is for filing and enlarging circular openings and concave surfaces. Also valuable for filing gullet between saw teeth.

Nos.	Each	Length, Inches	Diam. Center, Inches	Weight Dozen, Lbs.	Std. List, Doz.
TB ARB4	\$0.18	4	$\frac{3}{8}$	$\frac{1}{4}$	\$3.00
TB ARB6	.20	6	$\frac{1}{4}$	$\frac{3}{4}$	3.50
TB ARB8	.25	8	$\frac{7}{16}$	$1\frac{3}{4}$	4.30
TB ARB10	.29	10	$\frac{3}{8}$	$3\frac{1}{4}$	5.60
TB ARB12	.43	12	$\frac{1}{2}$	$6\frac{3}{4}$	7.50

Round Smooth

Nos.	Each	Length, Inches	Diam. Center, Inches	Weight Dozen, Lbs.	Std. List, Doz.
TB ARS6	.27	6	$\frac{1}{4}$	$\frac{3}{4}$	4.50
TB ARS8	.29	8	$\frac{7}{16}$	$1\frac{3}{4}$	5.40
TB ARS10	.30	10	$\frac{3}{8}$	$3\frac{1}{4}$	7.00
TB ARS12	.45	12	$\frac{1}{2}$	$6\frac{3}{4}$	9.40

Square Bastard

Square in section. Used principally for filing slots, key-seats, and general surface filing. Preferred by many to flat files because it is heavier in section and has four filing surfaces.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB ASB6	\$0.27	6	$\frac{7}{8}$	\$ 4.60
TB ASB8	.30	8	2	5.50
TB ASB10	.45	10	$3\frac{3}{4}$	7.40
TB ASB12	.60	12	$8\frac{1}{2}$	10.20

Half Round Smooth

Generally used by machinists, engineers, repair men, etc. Has rounded section on one side and flat on other, permitting variety of uses where any other type file would be unsatisfactory. Smooth cut.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB AHRS4	\$0.35	4	$\frac{5}{8}$	\$ 6.10
TB AHRS6	.40	6	$1\frac{1}{2}$	7.10
TB AHRS8	.55	8	$3\frac{1}{8}$	8.90
TB AHRS10	.69	10	$5\frac{3}{4}$	10.70
TB AHRS12	.89	12	10	13.90

AMERICAN RASPS

Half-Round Cabinet Smooth Rasp

Used by cabinet makers and other wood workers generally.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
TB ARCS10	\$1.25	10	$5\frac{5}{8}$	\$20.70
TB ARCS12	1.45	12	10	26.80

Packing: 10-inch—one dozen in a cardboard box; 12-inch—one-half dozen in a cardboard box.

NICHOLSON X. F. SWISS FILES

PROVIDE EXTRA FINE CUTTING

- Expertly made in accordance with original Swiss designs or patterns. For jewelers, watch and fine tool makers. Also handy for die making and similar fine work requiring superior workmanship and extra fine tools.

Cuts in files are designated by numbers ranging from No. 00, the coarsest, to No. 6, the finest.



Hand

These files are equaling or parallel in width and tapering in thickness. Double cut on two flat sides and single cut on one edge.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $2\frac{3}{32}$ inch, greatest thickness $\frac{5}{32}$ inch				
TB XFH600	\$0.50	6	2 $\frac{1}{4}$	\$4.90
TB XFH62	.55	6	2 $\frac{1}{4}$	5.40
Greatest width $2\frac{9}{32}$ inch, greatest thickness $\frac{3}{16}$ inch				
TB XFH800	.70	8	4 $\frac{1}{2}$	7.00
TB XFH82	.75	8	4 $\frac{1}{2}$	7.00



Pillar

Similar in shape to hand files but about two-thirds as wide. Double cut on two flat sides only. Both edges safe.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $1\frac{1}{64}$ inch, greatest thickness $\frac{5}{32}$ inch				
TB XFP600	\$0.37	6	1 $\frac{5}{8}$	\$3.40
TB XFP60	.37	6	1 $\frac{5}{8}$	3.40
TB XFP62	.39	6	1 $\frac{5}{8}$	3.70
Greatest width $3\frac{3}{64}$ inch, greatest thickness $1\frac{1}{64}$ inch				
TB XFP800	.50	8	3 $\frac{1}{2}$	4.80
TB XFP80	.50	8	3 $\frac{1}{2}$	4.80
TB XFP82	.55	8	3 $\frac{1}{2}$	5.20



Pillar Narrow

Same as pillar files except narrower. Double cut on two flat sides only. Both edges safe.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $2\frac{3}{64}$ inch, greatest thickness $\frac{5}{32}$ inch				
TB XFPN600	\$0.37	6	1 $\frac{1}{4}$	\$3.40
TB XFPN60	.37	6	1 $\frac{1}{4}$	3.40
TB XFPN62	.39	6	1 $\frac{1}{4}$	3.70
Greatest width $2\frac{9}{64}$ inch, greatest thickness $\frac{7}{32}$ inch				
TB XFPN800	.50	8	2 $\frac{5}{8}$	4.80
TB XFPN80	.50	8	2 $\frac{5}{8}$	4.80
TB XFPN82	.55	8	2 $\frac{5}{8}$	5.20



Pillar Extra Narrow

Same as pillar narrow files except narrower. Cut on two flat sides only. Both edges safe.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $1\frac{5}{64}$ inch, greatest thickness $\frac{5}{32}$ inch				
TB XFXN600	\$0.37	6	$\frac{7}{8}$	\$3.40
TB XFXN60	.37	6	$\frac{7}{8}$	3.40
TB XFXN62	.39	6	$\frac{7}{8}$	3.70
Greatest width $1\frac{1}{64}$ inch, greatest thickness $\frac{7}{32}$ inch				
TB XFXN800	.50	8	2	4.80
TB XFXN80	.50	8	2	4.80
TB XFXN82	.55	8	2	5.20

One dozen in a carton.

- Manufactured in accordance with Swiss designs or patterns.
- Cuts in files designated by numbers ranging from No. 00, the coarsest, to No. 6, the finest.



Warding

Rectangular in section with thickness approximately $\frac{1}{16}$ of width. Tapers to point in width and tapers slightly in thickness. Double cut on two flat sides. Single cut on both edges.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $\frac{7}{16}$ inch, greatest thickness $\frac{3}{64}$ inch				
TB XFW400	\$0.33	4	$\frac{1}{8}$	\$3.20
TB XFW40	.33	4	$\frac{1}{8}$	3.20
TB XFW42	.38	4	$\frac{1}{8}$	3.20
Greatest width $\frac{7}{16}$ inch, greatest thickness $\frac{1}{16}$ inch				
TB XFW500	.40	5	$\frac{1}{2}$	3.80
TB XFW50	.40	5	$\frac{1}{2}$	3.80
TB XFW52	.45	5	$\frac{1}{2}$	4.40
Greatest width $1\frac{19}{32}$ inch, greatest thickness $\frac{5}{64}$ inch				
TB XFW600	.49	6	$\frac{3}{4}$	4.60
TB XFW60	.49	6	$\frac{3}{4}$	4.60
TB XFW62	.57	6	$\frac{3}{4}$	5.30
Greatest width $\frac{3}{4}$ inch, greatest thickness $\frac{3}{32}$ inch				
TB XFW800	.65	8	1 $\frac{5}{8}$	6.20
TB XFW80	.65	8	1 $\frac{5}{8}$	6.20
TB XFW82	.69	8	1 $\frac{5}{8}$	6.90



Knife

Knife-shaped. The included angle of sharp edge is 10 degrees, tapering in width and thickness to point. Double cut on two flat sides. Single cut on both edges.

Nos.	Each	Length, Inches	Weight Doz., Lbs.	Std. List, Doz.
Greatest width $2\frac{3}{64}$ inch				
TB XFK400	\$0.45	4	$\frac{1}{2}$	\$4.40
TB XFK40	.45	4	$\frac{1}{2}$	4.40
TB XFK42	.50	4	$\frac{1}{2}$	5.00
Greatest width $3\frac{5}{64}$ inch				
TB XFK500	.50	5	$\frac{3}{4}$	4.80
TB XFK50	.50	5	$\frac{3}{4}$	4.80
TB XFK52	.57	5	$\frac{3}{4}$	5.60
Greatest width $4\frac{11}{64}$ inch				
TB XFK600	.63	6	1 $\frac{1}{8}$	6.00
TB XFK60	.63	6	1 $\frac{1}{8}$	6.00
TB XFK62	.70	6	1 $\frac{1}{8}$	7.00
Greatest width $2\frac{7}{32}$ inch				
TB XFK800	.89	8	2 $\frac{1}{4}$	8.60
TB XFK80	.89	8	2 $\frac{1}{4}$	8.60
TB XFK82	1.00	8	2 $\frac{1}{4}$	9.80

One dozen in a carton.

KEEN TONE RADIO

Gives You

Matchless Performance and
Exquisite Design

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

NICHOLSON X. F. SWISS FILES

Provide Extra Fine Cutting

Square

Square in section. Tapers on all four sides to fine point. Double cut on four sides.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
Greatest section $\frac{1}{8}$ inch square				
TB XFS400	\$0.40	4	$\frac{1}{4}$	\$3.80
TB XFS40	.40	4	$\frac{1}{4}$	3.80
TB XFS42	.42	4	$\frac{1}{4}$	4.00
Greatest section $\frac{5}{32}$ inch square				
TB XFS500	.43	5	$\frac{5}{16}$	4.20
TB XFS50	.43	5	$\frac{5}{16}$	4.20
TB XFS52	.47	5	$\frac{5}{16}$	4.50
Greatest section $\frac{3}{16}$ inch square				
TB XFS600	.53	6	$\frac{3}{8}$	5.00
TB XFS60	.53	6	$\frac{3}{8}$	5.00
TB XFS62	.57	6	$\frac{3}{8}$	5.40
Greatest section $\frac{1}{4}$ inch square				
TB XFS800	.63	8	$1\frac{1}{2}$	6.00
TB XFS80	.63	8	$1\frac{1}{2}$	6.00
TB XFS82	.69	8	$1\frac{1}{2}$	6.80

Round

Circular section, tapering throughout their length to fine point. Double cut.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
Greatest diameter $\frac{1}{8}$ inch				
TB XFR400	\$0.27	4	$\frac{1}{4}$	\$2.80
TB XFR40	.27	4	$\frac{1}{4}$	2.80
TB XFR42	.32	4	$\frac{1}{4}$	3.00
Greatest diameter $\frac{3}{16}$ inch				
TB XFR600	.42	6	$\frac{3}{4}$	4.00
TB XFR60	.42	6	$\frac{3}{4}$	4.00
TB XFR62	.45	6	$\frac{3}{4}$	4.40
Greatest diameter $\frac{1}{4}$ inch				
TB XFR800	.59	8	$1\frac{1}{4}$	5.80
TB XFR80	.59	8	$1\frac{1}{4}$	5.80
TB XFR82	.65	8	$1\frac{1}{4}$	6.20

One dozen in a carton.

Half-Round

Half-round in section, tapering in width and thickness to point. Double cut on both flat and half-round sides.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
Greatest width $2\frac{7}{64}$ inch, greatest thickness $\frac{1}{8}$ inch				
TB XFHR400	\$0.55	4	$\frac{1}{2}$	\$5.10
TB XFHR40	.55	4	$\frac{1}{2}$	5.10
TB XFHR42	.63	4	$\frac{1}{2}$	6.00
Greatest width $1\frac{7}{32}$ inch, greatest thickness $\frac{9}{64}$ inch				
TB XFHR600	.69	6	$1\frac{1}{4}$	6.80
TB XFHR60	.69	6	$1\frac{1}{4}$	6.80
TB XFHR62	.80	6	$1\frac{1}{4}$	8.00
Greatest width $2\frac{3}{32}$ inch, greatest thickness $1\frac{3}{64}$ inch				
TB XFHR800	1.00	8	$2\frac{3}{4}$	10.00
TB XFHR80	1.00	8	$2\frac{3}{4}$	10.00
TB XFHR82	1.10	8	$2\frac{3}{4}$	11.30

- Especially designed for jewelers, watch and tool makers.
- Ideal for die making and similar fine work requiring superior workmanship and extra fine tools.

Three Square

Triangular in section with angles of 60 degrees, tapering to point. Sharp corners. Double cut on three sides. Single cut on edges.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
Greatest width $1\frac{9}{64}$ inch, all sides				
TB XF3S500	\$0.45	5	$\frac{3}{4}$	\$4.30
TB XF3S50	.45	5	$\frac{3}{4}$	4.30
TB XF3S52	.49	5	$\frac{3}{4}$	4.70
Greatest width $2\frac{5}{64}$ inch, all sides				
TB XF3S600	.50	6	$1\frac{1}{2}$	4.80
TB XF3S60	.50	6	$1\frac{1}{2}$	4.80
TB XF3S62	.55	6	$1\frac{1}{2}$	5.20

One dozen in a carton.

A New
KEEN KOOKER Cast Iron Range
Will Give You Better, Faster Cooking

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

FILES



WEEDS

WEED

Special Blunt—Single Cut

- Forged from tool steel to provide long, satisfactory duty. Tempered to proper hardness—strong, durable. Tested and selected. Designed especially for quick, easy filing of extremely hard tempered saws.
- Preferred by carpenters and expert saw filers for filing hand saws.

Nos.	Each	Length, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB WB5	\$0.23	5	$\frac{3}{4}$	\$3.80
TB WB5½	.25	5½	$\frac{3}{4}$	4.40
TB WB6	.27	6	1	4.70

One dozen files and one-third dozen handles in a box.

NICHOLSON

- Chisel point permits opening contact points without disturbing adjustments.



TB 12C—Weight per dozen 5 ozs. Each \$0.15

One dozen on an easel back display card 9½x10½ inches.



Tungsten or Iridium Contact Point

Highest grade steel, specially hardened and finely milled.

Double cut. Length 6 inches; width $\frac{5}{16}$ inch; thickness $\frac{3}{32}$ inch. Length of cut 3 inches.

Flat shank, orange enameled.

Superior—Platinum Magneto, Spark Plug or Coil

Highest grade steel. Hardened and finely milled. For filing and cleaning platinum points.

Length 5¼ inches; width $\frac{5}{16}$ inch; thickness $\frac{1}{16}$ inch. Length of cut 2¼ inches.

Flat shank, orange enameled.

TB 6C—Single cut. Weight per dozen 5 ozs. Each \$0.10

One dozen on an easel back display card.

TB 5½DC—Double cut. Weight per dozen ¾ lb. Each \$0.07

One dozen in a cardboard box.

AUGER BIT FILES



Made especially for sharpening auger bits.

Forged from tool steel. Tempered to correct toughness and polished. One end cut on edges, reverse end cut on sides only. Length 6½ inches. Cutting edges 2 inches long, cutting sides 2½ inches long. Width $\frac{1}{8}$ inch, tapering to point.

TB 21—Weight per dozen ¾ lb. Each \$0.25

One dozen in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

FILE HANDLES

KLICHER



- Plain finish basswood shaped to fit the hand. Steel ferrule attached to handle.

Assortment of 3 dozen—assorted small, medium and large sizes.

TB 234K—Weight per assortment 2 lbs. Each \$0.10

One assortment in a carton.



Japped iron handle and clamp. Steel set screw adjustable to hold any size small shank tool. Length 5 inches.

TB 118—Weight per dozen 4 lbs. Each \$0.10

One dozen in a carton.



LUTZ

Particularly adapted for heavy duty. Guaranteed against splitting under severe use and to outlast many ordinary file handles.

Straight grained hardwood, natural finish. Heavy polished steel ferrules that cannot be lost. Files remain rigid in handle.

Nos.	Each	For Files, Inches	Largest Diam. of Handle, Inches	Length Over All, Inches	Weight Per Dozen, Lbs.
TB L2	\$0.10	3 to 6	1 $\frac{1}{8}$	4½	1¼
TB L3	.10	6 to 8	1 $\frac{5}{16}$	4¾	2
TB L4	.10	12 to 16	1 $\frac{7}{8}$	5½	2¾
TB L5	.15	16 to 20	1 $\frac{7}{8}$	5¾	3¼

Three dozen in a carton.

FILE CLEANERS



NICHOLSON

Combination wire brush, bristle brush and scorer.

Especially adapted for cleaning fine cut files.

One-piece hardwood block, nicely varnished. Hardened and tempered steel wire teeth securely attached to heavy canvas firmly glued to block. Good grade bristle brush stapled in block. Soft iron scorer easily and quickly removes pins which fill up and clog file teeth. Size of faces 4½x1½ inches. Length over all 10 inches.

TB NFB3—Weight per dozen 3½ lbs. Each \$0.89

EXCELSIOR



Natural finish hardwood back and handle. Hardened steel wire brush firmly attached to thick canvas face.

Length of wire teeth ¼ inch. Size of face 4x1½ inches. Length over all 8½ inches.

TB 2—Weight per dozen 2 lbs. Each \$0.45

One-half dozen in a carton.



Here's a practical brush for general use. Very effective for removing solder, roughing

fabric, cleaning files and similar work.

Smoothly finished hardwood block. Hardened and tempered round steel wire teeth, $\frac{1}{8}$ inch long. Size of face of brush 3¼x1½ inches. Length over all 8½ inches.

TB 1680—Weight per dozen 1½ lbs. Each \$0.10

One dozen in a carton.

AGRICULTURAL WRENCHES



SIMMONS LEADER

Knife Handle
Forged steel
bar and head.
Tough malle-

able iron handle frame. Head and jaw hardened. Bar extends to end of handle and is riveted. Selected hardwood grip secured by two rivets and countersunk washers. Knurled adjusting screw.

Nos.	Each	Length, Inches	Jaws Open, Inches	Weight Per Carton (4), Lbs.	Std. List, Each
TB SG1	\$0.89	8	1 1/4	6 1/4	\$0.89
TB SG2	1.10	10	1 3/4	8 5/8	1.10

Four in a carton.

GENUINE COE'S



BLACK FINISH

Forged tool
steel. Case-
hardened jaws.
Shank extends
through to end

of handle. Polished malleable iron ferrules. Varnished hardwood grip riveted to handle with heavy iron rivet. Knurled steel adjusting screw.

Nos.	Each	Length, Inches	Jaws Open, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TY C8	\$0.98	8	1 1/4	15	\$18.00
TY C10	1.19	10	2 1/4	25	22.00
TY C12	1.59	12	2 3/4	38	28.00
TY C15	2.19	15	2 5/8	57	38.00



AGRICULTURAL
Wrought iron.
Case - hardened
jaws. Shank ext-
ends through to
end of handle.

screwed to cap at end. Polished malleable iron ferrules. Plain hardwood grip. Wrought iron adjusting screw.

Nos.	Each	Length, Inches	Jaws Open, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
TB 86	\$0.65	6	1 1/8	9	\$10.00
TB 88	.79	8	1 1/4	14	12.00
TB 810	.89	10	1 5/8	21	14.00
TB 812	1.19	12	1 3/4	28	18.00
TB 815	1.49	15	2 1/4	41	24.00

One-half dozen in a package.



ADJUSTABLE "S" Westcott pattern

"S" shaped for places hard
to reach. Polished and
hardened steel jaws. Ja-
panned finish handle.

Knurled adjusting nut. Sliding jaw works on grooved
surface in hollow part of head.

Nos.	Each	Length, Inches	Extreme Width of Openings, Inches	Wt. Per Doz., Lbs.
TB 488	\$0.89	8	1	13
TB 4810	1.10	10	1 3/8	23

One-half dozen in a carton.

ANGLE WRENCHES

KEEN KUTTER

Chrome-plated Alloy Steel—Thinner and Stronger
Designed to Provide Perfect Balance

* Patterned by mechanics for mechanics—extra thin
jaws will get into places inaccessible with an ordinary
wrench.

The full deep throat straight all the way back to the
frame gives a greater bearing and a better bite on either
square or hex nuts, which means they are much less
apt to slip and will prevent what mechanics popularly
call "Knuckle Busting."

The wide bearing movable jaw rests on the frame, gives
greater support in any position, but particularly at the
full opening of the wrench, eliminating spring and un-
necessary strain on the movable jaw.

The handle is widest at the end to fit the hand in its
natural grasping position, and gives perfect balance to
the wrench under pressure.

Movable jaws and frame drop forged alloy steel. Smooth-
operating knurled adjusting nut.



Assortment of 12
Angle wrenches
mounted on an at-
tractive red enameled
wood display easel.

Assortment Includes:
Each

2 No. TB K4AW— 4 inches.....	\$0.89
3 No. TB K6AW— 6 inches.....	.89
3 No. TB K8AW— 8 inches.....	1.10
2 No. TB K10AW— 10 inches.....	1.39
2 No. TB K12AW— 12 inches.....	1.95

Per Assortment

TB K412AW—Weight per assortment
11 lbs.

One assortment in a carton.

OPEN STOCK



Nos.	Each	Length Inches	Capacity, Inches	Wt. Per Doz., Lbs.
TB K4AW	\$0.89	4	5/8	1 3/4
TB K6AW	.89	6	3/4	3 3/4
TB K8AW	1.10	8	1 1/8	7 1/4
TB K10AW	1.39	10	1 1/2	12 3/4
TB K12AW	1.95	12	1 7/8	19 1/4

One in a carton.

Note: We will not carry in stock extra parts for these
wrenches, but we will guarantee to replace free of
charge any broken parts that have not been broken by
use of a hammer.



SIMMONS LEADER

Good Quality at a
Low Price

* Easily adjusted
with free-action
Jaws and frame

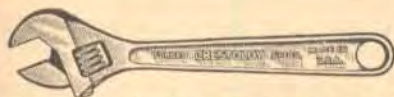
knurled screw. Special forged steel.
polished. Cadmium finish handle.

Nos.	Each	Length, Inches	Capacity, Inches	Wt. Each, Lbs.	Std. List, Each
TB SF1	\$0.44	6	3/4	3/8	\$0.44
TB SF2	.66	8	1 1/8	5/8	.66
TB SF3	.88	10	1 1/2	1 1/4	.88
TB SF4	1.09	12	1 3/4	2	1.09

One in a cardboard box. Six in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CRESCENT ANGLE WRENCHES



CRESCENT CRESTOLOY ADJUSTABLE

Chromium-Plated

Entirely made of "Crestoloy," a steel that is hard, strong and tough. Stands strain of over twice that required to break a regular steel Crescent wrench—yet it is one-third thinner, much lighter, easier to handle and has wider range of usefulness. Can be used in places where regular type wrench will not work. Forged "Crestoloy" steel handle and jaws; knurled edge adjusting nut.

Nos.	Each	Length, Inches	Cap., Inches	Thick- ness of Head, Inches	Wt. Per Doz., Lbs.
TY AC16	\$0.79	6	$\frac{3}{4}$	$\frac{1}{16}$	3 $\frac{3}{4}$
TY AC18	.98	8	$1\frac{1}{8}$	$\frac{1}{8}$	6
TY AC110	1.19	10	$1\frac{1}{4}$	$1\frac{1}{32}$	10
TY AC112	1.69	12	$1\frac{5}{8}$	$2\frac{1}{32}$	18

One in a carton.

Assortment Consists of 9 Wrenches:

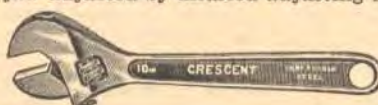
3—TY AC16 — 6-inch.....	Each	\$0.79
3—TY AC18 — 8-inch.....	Each	.98
3—TY AC110—10-inch.....	Each	1.19

TB DB16—Weight per assortment 6 lbs.

One each mounted on display card. One assortment in a carton.

CRESCENT—ADJUSTABLE

Handle and stationary jaws drop forged from one-piece high-grade tool steel. High-grade tool steel movable jaw adjusted by knurled adjusting nut.



Polished jaws and frame. Black oil finished handle with polished raised edges.

Nos.	Each	Length, Inches	Cap., Inches	Wt. Per Doz., Lbs.	Std. List Per Doz.
TY A14	\$0.59	4	$\frac{1}{2}$	2	\$ 7.80
TY A16	.59	6	$\frac{3}{4}$	4	7.80
TY A18	.75	2	$1\frac{1}{8}$	7	9.60
TY A110	.95	10	$1\frac{1}{8}$	13	12.00
TY A112	1.39	12	$1\frac{1}{2}$	24	18.00
TY A115	2.19	15	$1\frac{1}{2}$	52	27.00



Double End

Polished through-out except web in handle, which is black oil finish.

TB B1810—Length 10 inches. Capacity $\frac{1}{8}$ and $1\frac{1}{8}$ inches. Weight per dozen 14 $\frac{1}{2}$ lbs.

List Per Dozen \$18.00 Each \$1.59

One-twelfth dozen in a cardboard box.

WRENCH PARTS ASSORTMENTS

FOR CRESCENT WRENCHES



Contains jaws, thumb nuts, pins and springs having largest sales volume. Enables dealer to give customers

prompt service; saves time and effort in ordering parts singly as needed.

Contains the Following:

For Wrenches, Nos.....	TY A14	TY A16	TY A18	TY A110	TY A112
Jaws—Quantity	2	5	4	2	1
Each	\$0.25	\$0.25	\$0.35	\$0.45	\$0.65
Thumb Nuts—Quantity..	2	3	4	2	1
Each	.10	.10	.15	.25	.35
Pins—Quantity	2	3	3	2	1
Each	.05	.05	.05	.05	.10
Springs—Quantity	2	3	3	3	2
Each	.05	.05	.05	.05	.05

TZ CA50—Weight per assortment 2 $\frac{1}{2}$ lbs.

One assortment in a carton 4 $\frac{1}{4}$ x6 $\frac{1}{4}$ x1 $\frac{1}{2}$ inches.

Modernize Your Living Room with

SIMMONS FURNITURE

Highest Quality Materials and Work-
manship Assure Years of Continuous Comfort,
New Modern Styling and Fabrics Will Make Your Home Most Attractive

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ENGINEERS' WRENCHES

KEEN KUTTER

15° ANGLE—DOUBLE
END

• You can do better, faster work with this handy tool!

Openings are expertly ground to proper shape and are correctly milled to fit nuts exactly.

Drop forged from highest grade tool steel for heavy duty and long life. Case hardened black enameled body. Bright heads and milled openings. Heads or jaws are correct thickness for strength and easy handling.

Nos.	Each	Length Over All, Inches	Size of Openings, Inches	For Nuts, Inches	Wt. Per Doz., Lbs.
TB K23	\$0.29	4	$\frac{11}{16}$, $\frac{1}{2}$	$\frac{3}{16}$, $\frac{1}{4}$	2
TB K25	.30	4 $\frac{7}{8}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{4}$, $\frac{3}{16}$	2 $\frac{1}{2}$
TB K27	.37	5 $\frac{1}{8}$	$\frac{11}{16}$, $\frac{1}{2}$	$\frac{3}{16}$, $\frac{1}{4}$	4
TB K29	.45	6 $\frac{7}{8}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{3}{8}$, $\frac{1}{2}$	5 $\frac{1}{2}$
TB K31	.55	7 $\frac{3}{4}$	$\frac{11}{16}$, $\frac{1}{2}$	$\frac{1}{2}$, $\frac{3}{8}$	7 $\frac{1}{2}$
TB K33	.59	8 $\frac{3}{4}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{2}$, $\frac{3}{8}$	11
TB K34	.75	9 $\frac{3}{4}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{2}$, $\frac{3}{8}$	15

One-half dozen in a carton.



VILCHEK PARABOLIC 15° ANGLE—DOUBLE END

Drop forged carbon steel, semi-finished.

Parabolic (or pear-shaped) heads. Heads or jaws are proper thickness for strength and advantages of narrow conical head.

U.S.S.
& S.A.E.
Hex. Head
Cap
Screws,

Nos.	Each	Length, Inches	Openings, Inches	Hex. Head Cap Screws, Size, In.	Wt. Doz., Lbs.
TB V21	\$0.23	3 $\frac{1}{2}$	$\frac{5}{16}$, $\frac{3}{8}$	$\frac{1}{8}$, $\frac{3}{8}$	1 $\frac{1}{2}$
TB V23	.25	4	$\frac{5}{16}$, $\frac{1}{2}$	$\frac{1}{8}$, $\frac{1}{4}$	2
TB V25	.29	4 $\frac{7}{8}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{4}$, $\frac{3}{8}$	2 $\frac{1}{2}$
TB V27	.35	5 $\frac{1}{8}$	$\frac{11}{16}$, $\frac{1}{2}$	$\frac{3}{8}$, $\frac{1}{2}$	4
TB V29	.40	6 $\frac{7}{8}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{3}{8}$, $\frac{1}{2}$	5 $\frac{1}{2}$
TB V31	.47	7 $\frac{3}{4}$	$\frac{11}{16}$, $\frac{1}{2}$	$\frac{1}{2}$, $\frac{3}{8}$	7 $\frac{1}{2}$
TB V33	.55	8 $\frac{3}{4}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{2}$, $\frac{3}{8}$	11
TB V34	.69	9 $\frac{3}{4}$	$\frac{1}{2}$, $\frac{11}{16}$	$\frac{1}{2}$, $\frac{3}{8}$	11

Packing—bulk.

J. H. WILLIAMS AND CO.'S FINISHED WRENCHES

- Drop forged from high-grade carbon steel, case hardened.
- Surface and edges smoothed.

- Openings milled to fit nuts correctly. Sizes stamped on head.
- Baked-on black enamel finish and bright heads.



Single End—15° Angle



Double End—15° Angle

Nos.	Each	Milled Openings, In.	Extreme Length Approx., In.	Approx. Thick- ness Head, In.	For U. S. Std. Nuts (Size Bolts, In.)	For Hex. Head Cap Screws (Diam. Screws, In.)	For S.A.E. Std. Nut and Cap Screws (Size Bolts, In.)	For Amer. Std. Nuts (Reg.) and Find. Bolts, In.	Weight Each, Lbs.	Std. List, Each
SINGLE END—15° ANGLE										
TB 701	\$0.29	$\frac{1}{16}$	4 $\frac{5}{8}$	$\frac{5}{16}$	---	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	.13	\$0.36
TB 1	.29	$\frac{1}{16}$	4 $\frac{5}{8}$	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{1}{16}$	$\frac{1}{16}$	---	.13	.36
TB 702	.35	$\frac{1}{8}$	5 $\frac{1}{2}$	$\frac{5}{16}$	---	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{16}$	.21	.44
TB 703	.45	$\frac{5}{8}$	6 $\frac{3}{4}$	$\frac{11}{16}$	---	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{8}$	.32	.52
TB 704	.55	$\frac{3}{4}$	7 $\frac{3}{4}$	$\frac{3}{8}$	---	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	.44	.64
TB 705	.65	$\frac{11}{16}$	8 $\frac{1}{8}$	$\frac{1}{2}$	---	$\frac{1}{2}$	---	$\frac{1}{2}$	.65	.76
TB 5	.65	$\frac{7}{8}$	8 $\frac{1}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	.65	.76
TB 706	.75	1	9 $\frac{1}{4}$	$\frac{1}{2}$	---	$\frac{3}{4}$	$\frac{11}{16}$	$\frac{5}{8}$	.92	.92

DOUBLE END—15° ANGLE										
TB 21	.29	$\frac{5}{16}$, $\frac{11}{16}$	4	$\frac{1}{4}$	$\frac{1}{8}$, $\frac{1}{16}$	$\frac{1}{8}$	-----	-----	.08	.34
TB 723	.35	$\frac{3}{8}$, $\frac{1}{2}$	4 $\frac{1}{4}$	$\frac{5}{16}$	-----	$\frac{5}{16}$, $\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	.11	.42
TB 23	.35	$\frac{11}{16}$, $\frac{1}{2}$	4 $\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{16}$, $\frac{1}{4}$	$\frac{1}{16}$	$\frac{1}{16}$	-----	.15	.42
TB 725	.43	$\frac{1}{2}$, $\frac{1}{2}$	5	$\frac{1}{4}$	$\frac{1}{4}$, $\frac{1}{16}$	$\frac{1}{4}$, $\frac{1}{16}$	$\frac{1}{4}$, $\frac{1}{16}$	$\frac{1}{4}$	.18	.50
TB 725B	.43	$\frac{1}{2}$, $\frac{1}{16}$	5 $\frac{1}{2}$	$\frac{11}{16}$	$\frac{1}{4}$	$\frac{1}{16}$, $\frac{3}{8}$	$\frac{1}{16}$, $\frac{3}{8}$	$\frac{1}{16}$	.23	.50
TB 25	.43	$\frac{1}{2}$, $\frac{1}{16}$	5 $\frac{1}{2}$	$\frac{11}{16}$	$\frac{1}{4}$, $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	-----	.23	.50
TB 727	.50	$\frac{5}{8}$, $\frac{3}{4}$	6	$\frac{11}{16}$	-----	$\frac{3}{8}$, $\frac{1}{2}$	$\frac{3}{8}$, $\frac{1}{2}$	$\frac{1}{16}$, $\frac{3}{8}$	.30	.62
TB 27C	.50	$\frac{5}{8}$, $\frac{1}{2}$	6 $\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{16}$	.34	.62
TB 27	.50	$\frac{11}{16}$, $\frac{1}{2}$	6 $\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{16}$, $\frac{3}{8}$	-----	-----	-----	.34	.62
TB 729	.59	$\frac{3}{4}$, $\frac{3}{4}$	7	$\frac{3}{8}$	-----	$\frac{1}{16}$, $\frac{1}{2}$	$\frac{1}{16}$, $\frac{1}{2}$	$\frac{3}{8}$, $\frac{1}{16}$	.40	.74
TB 28S	.59	$\frac{3}{4}$, $\frac{11}{16}$	7	$\frac{3}{8}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{3}{8}$	.40	.74
TB 29	.59	$\frac{11}{16}$, $\frac{11}{16}$	7 $\frac{1}{2}$	$\frac{11}{16}$	$\frac{3}{8}$, $\frac{1}{16}$	-----	-----	-----	.49	.74
TB 30	.75	$\frac{11}{16}$, $\frac{3}{4}$	8	$\frac{1}{2}$	$\frac{3}{8}$, $\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	.61	.90
TB 731	.75	$\frac{3}{4}$, $\frac{11}{16}$	8 $\frac{3}{4}$	$\frac{11}{16}$	-----	$\frac{1}{4}$, $\frac{1}{16}$	$\frac{1}{2}$	$\frac{1}{16}$, $\frac{1}{2}$	.61	.90
TB 731A	.75	$\frac{3}{4}$, $\frac{1}{2}$	8 $\frac{3}{4}$	$\frac{11}{16}$	$\frac{1}{2}$	$\frac{1}{2}$, $\frac{5}{8}$	$\frac{1}{2}$, $\frac{1}{16}$	$\frac{1}{16}$, $\frac{1}{16}$	.76	.90
TB 31	.75	$\frac{11}{16}$, $\frac{3}{4}$	8 $\frac{3}{4}$	$\frac{11}{16}$	$\frac{1}{16}$, $\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{16}$	$\frac{5}{8}$	.76	.90
TB 33	.90	$\frac{3}{4}$, $\frac{11}{16}$	9 $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$, $\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{16}$	$\frac{1}{16}$	1.03	1.10
TB 733	.90	$\frac{3}{4}$, 1	9 $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$, $\frac{3}{4}$	$\frac{5}{8}$, $\frac{1}{16}$	$\frac{1}{16}$, $\frac{3}{8}$	1.03	1.10
TB 34A	1.15	$\frac{11}{16}$, $\frac{1}{16}$	10 $\frac{3}{4}$	$\frac{1}{16}$	$\frac{5}{8}$	-----	$\frac{5}{8}$, $\frac{3}{4}$	-----	-----	1.36
TB 37	1.45	$\frac{1}{16}$, $\frac{1}{16}$	12	$\frac{11}{16}$	$\frac{5}{8}$, $\frac{3}{4}$	1	$\frac{3}{4}$, $\frac{7}{8}$	-----	2.28	1.92

Six in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

DOUBLE END WRENCHES

SIMMONS LEADER



"S" PATTERN

Forged steel, cadmium plated to resist rust. Polished heads.

Set of 5 wrenches—10 openings (no duplicates) ranging from $\frac{3}{8}$ to $\frac{1}{2}$ inch. Handy metal clip holds wrenches compact.

TB S5F04—Weight per set 2 $\frac{1}{2}$ lbs.

Std. List Per Set \$0.99.....Per Set \$0.99



ENGINEERS' STRAIGHT PATTERN

Forged steel, cadmium plated to resist rust. Polished heads.

Set consists of 6 wrenches with 12 openings (no duplicates) from $\frac{1}{16}$ to $\frac{7}{8}$ inch. Handy metal clip holds wrenches compact.

TB S6F03—Weight per set 1 $\frac{1}{2}$ lbs.

Std. List Per Set \$0.89.....Per Set \$0.89



STAR "S"—GENERAL SERVICE

Drop-forged steel, properly hardened and tempered, milled openings. Natural finish.

Set consists of 5 wrenches, with 10 openings (no duplicates) from $\frac{3}{8}$ to 1 inch, and handy permanent metal holder.

TB 2087—Weight per set 3 lbs.....Per Set \$0.98

Packing—bulk.

OFFSET BOX-END WRENCHES

LECTROLITE CORPORATION
DEFIANCE, OHIO



LECTROLITE

- Popular style. Light in weight but exceptionally strong.
- Chrome - vanadium steel with highly polished ends and smoothly finished oval handle.
- Double hexagon (12 point) openings are carefully broached and accurately machined.

Set of 6 wrenches, one each as listed below.

TB 3000—Weight per set 4 lbs.....Per Set \$2.15

Each set in a canvas bag.

Nos.	Each	Size Opening, Inch	Length Over All, Inches	Weight Per Doz., Lbs.
TY 3001	\$0.23	$\frac{3}{8}$ and $\frac{7}{8}$	7	2 $\frac{1}{8}$
TY 3002	.27	$\frac{1}{2}$ and $\frac{9}{16}$	8	3 $\frac{3}{8}$
TB 3003	.33	$\frac{5}{8}$ and $\frac{1}{2}$	9	5 $\frac{1}{2}$
TB 3004	.37	$\frac{3}{4}$ and $\frac{23}{32}$	11	7 $\frac{3}{4}$
TB 3005	.45	$\frac{1}{2}$ and $\frac{7}{8}$	13	9 $\frac{3}{4}$
TB 3006	.50	$\frac{1}{2}$ and 1	14	13 $\frac{1}{4}$

Packing: 7 to 9 inches—one dozen in a package. Other numbers—one-half dozen in a package.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

VLCHEK



No. TB 2153

Drop-forged new "Parabolic" carbon steel, milled openings. Tempered, natural finish. Each set securely held in all-metal, side-hinged positive locking container.

TB 2153—Set of 6 wrenches with 12 openings (no duplicates) from $\frac{3}{8}$ to 1 inch. Weight per set 2 $\frac{1}{2}$ lbs.....Per Set \$0.89

TB 2163—Set of 5 wrenches with 10 openings (no duplicates), $\frac{5}{16}$ to $\frac{3}{4}$ inch. Weight per set 1 $\frac{1}{4}$ lbs.....Per Set \$0.49



FITZ-ALL

Narrow jaw permits work in closest corners...yet strength of round head is retained—jaws will not spread under severe strain.

Here's a high-grade set at a low price!

Drop-forged tempered steel, rust-proof cadmium

finish, milled openings.

Set consists of 6 wrenches with 12 openings from $\frac{1}{16}$ to $\frac{3}{4}$ inch (no duplicates), and convenient black enameled steel holder.

TB X2572—Weight per set 1 $\frac{1}{2}$ lbs.....Each Set \$0.69

Packing—bulk.

INDIVIDUAL WRENCHES

Following wrenches contained in set TY X2572.

Nos.	Each	Length, Inches	Opening, Inch	Weight Per Doz., Lbs.
TB X21	\$0.10	3 $\frac{3}{4}$	$\frac{5}{16}$ — $\frac{1}{2}$	$\frac{3}{4}$
TB X723	.12	4 $\frac{1}{8}$	$\frac{3}{8}$ — $\frac{7}{16}$	1 $\frac{1}{2}$
TB X725B	.15	5	$\frac{1}{2}$ — $\frac{9}{16}$	2 $\frac{1}{4}$
TB X27	.17	6	$\frac{5}{8}$ — $\frac{1}{2}$	3 $\frac{3}{4}$
TB X729	.20	7 $\frac{1}{8}$	$\frac{3}{4}$ — $\frac{3}{4}$	6 $\frac{3}{4}$
TB X31	.25	8	$\frac{7}{8}$ — $\frac{7}{8}$	7 $\frac{1}{2}$

One-half dozen in carton.

FLAT BOX-END WRENCHES

INDESTRUCTO

- Rust-proof.

Here's a handy set of light, strong and serviceable wrenches with double hexagon (12 point) openings from $\frac{3}{8}$ to 1 inch. High grade steel, hardened and tempered to stand severe strain. Rustproof cadmium finish.



Set held together with bolt and wing nut and is very compact—easy to carry or store.

Specifications			
Length, Inches	Openings, Inch	Length, Inches	Openings, Inch
5	$\frac{3}{8}$, $\frac{1}{2}$	6 $\frac{1}{2}$	$\frac{3}{4}$, $\frac{23}{32}$
5 $\frac{1}{2}$	$\frac{1}{2}$, $\frac{9}{16}$	7	$\frac{1}{2}$, $\frac{23}{32}$
6	$\frac{3}{4}$, $\frac{1}{2}$	7 $\frac{1}{2}$	$\frac{1}{2}$, 1

Set of 6 wrenches, one each as listed above.

TB 147—Weight per set 1 $\frac{1}{4}$ lbs.....Each Set \$0.49

Packing—bulk.

SOCKET WRENCHES

- Will fit securely on nuts and cap screws of automobile cylinder head, crank case, connecting rod, rear axle housing, demountable rims and many other parts most often removed.



DOUBLE HEX (12-POINT) SOCKETS

Extra deep, thin-wall sockets reach into places usually inaccessible to ordinary type sockets.

Wrench, handle, adapter and sockets high grade steel, heat treated—rust-proof cadmium finish.

Set consists of:

One wrought steel reversible ratchet socket wrench handle 8 inches long.

One 1/2-inch hexagon adapter with friction ball at each end to hold sockets.

One 1/2-inch hexagon "L" handle 9 inches long, with friction ball at each end to hold sockets.

Eight round sockets with double hex (12-point) openings—1 each 1/16, 1/8, 3/16, 1/4, 5/16, 3/8, 7/8 and 1 1/8 inch, carefully broached.

Each set in heavy steel red-enameled case 8 1/4 inches long, 1 7/8 inches wide. Sockets locked in case by handle.

TB 8001—Weight per set 2 1/2 lbs. Each Set \$1.19

Packing—bulk.

SOCKET WRENCHES

Hexagon "L" handle and sockets are high grade heat-treated steel, rust-proof cadmium finish. Hexagon "L" handle has friction ball at each end to hold sockets. Sockets carefully broached.



DOUBLE HEX (12-POINT) SOCKETS

Consists of one 1/2-inch hexagon "L" handle 7 3/4 inches

long, and six round sockets—one each 1/2, 5/8, 3/4, 7/8, 1, and 1 1/8 inch.

Each set in a red-enameled steel case 6 1/2 inches long, 1 1/8 inches wide. Sockets locked in case by handle.

TB 1001—Weight per set 1 3/4 lbs. Each Set \$0.59

HEXAGON SOCKETS

Consists of one 1/2-inch hexagon "L" handle 7 1/2 inches long, and 6 round sockets—1 each 1/2, 5/8, 3/4, 7/8, 1, and 1 1/8 inch.

Each set in a heavy steel red-enameled hinged case 7 3/4 inches long, 2 inches wide.

TB 3—Weight per set 2 1/4 lbs. Each Set \$0.67

Packing—bulk.

**BETTER TOOLS
for
BETTER WORK
means
KEEN KUTTER**

WRENCH SETS



COMBINATION OPEN END AND 12-POINT OPENING

- Made according to S. A. E. specifications. Set will fit practically every nut on an automobile. Very thin, extra-strong heads are convenient to use in narrow spaces. Handy for general purposes.

Vanadium alloy steel, cadmium plated, with polished and buffed ends, 12-point openings are cleanly and correctly broached, assuring firm positive grip. Thin, open-end heads accurately machined.

Wrenches held together with strong, machined bolt and nut—easily, quickly taken apart and assembled.

Length, Inches	12-Point Opening	Open End
4	1 1/8	1 1/8
4 1/2	1 1/8	1 1/2
5	1 1/2	1 3/8
6	1 3/8	5/8
6 1/2	5/8	3/4
7 1/2	3/4	7/8

TB 100—Set of 6 wrenches, one each as above.

Weight per set 1 lb. Per Set \$0.89

One set in a carton.

PIPE CUTTERS



BARNES TYPE—3-WHEEL PATTERN

Designed especially for work where cutter cannot be revolved entirely around pipe.

Cutters are in permanent alignment and cannot wobble.

Hardened and polished steel frame and movable block. Forged tool steel smooth-edge, knife-blade cutter wheels. Polished steel adjusting rod with machined threads. Japanned cast-iron handle.

Length Over

Nos.	Each	Cuts Pipe, Inches	All, Closed, Inches	Weight, Each, Lbs.
TB 1B	\$4.35	1/8 to 1	13	3
TB 2B	4.95	1/2 to 2	16	4 1/4

Packing—bulk.

EXTRA CUTTER WHEELS FOR BARNES' PATTERN PIPE CUTTERS

Nos.	Each	Diameter, Inches	Weight Per Doz., Lbs.
TB BW1	\$0.45	1	1 1/2
TB BW2	.70	1 1/8	1 1/2

One dozen in a carton.



RIDGID

Frame or housing unconditionally guaranteed against breakage or distortion and

will be replaced without charge.

Reinforced tempered tool steel frame will not break or warp. Tool steel movable block with hardened rollers. New, thin super-steel blade with solid hub. Cuts quickly and easily and practically without burr. Heavy steel adjusting rod with metal cross handle.

Nos.	Each	Cuts Pipe, Inches	Length, Closed, Inches	Wt., Lbs.	Std. List, Each
TB R1	\$3.60	1/8 to 1 1/4	13 1/2	5	\$ 4.00
TB R2	5.45	1/2 to 2	16 1/4	6	6.00
TB R3*	8.95	1 to 3	20 1/4	12 1/2	10.00

Packing—bulk.

* Included with TB R3 is an extra 15-inch length of threaded pipe with round end which can be inserted in end of frame when extra leverage is necessary for cutting large pipe.

PIPE WRENCHES

KEEN KUTTER—STILLSON PATTERN

Teeth grip firmly—won't slip or crush!

- Highest grade drop forged tool steel means mightier performance, more years of reliable service.
- Milled hardened jaws grip pipe securely. Frame fastened to handle with steel pin—can't come loose. Easy-action knurled steel adjusting nut.
- Double springs brace jaws for quick bite. Full polished. Yellow enameled adjusting nut and handle tip.



firmly secured by steel nut at end.

**E B O N I Z E D
H A R D W O O D
H A N D L E** with heavy steel ferrule. Shank extends through handle and is

Nos.	Each	Length, Inches	Adjustable for Pipe, Inches	Wt. Each, Lbs.
TB KSPW6	\$0.59	6	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{1}{4}$
TB KSPW8	.75	8	$\frac{1}{8}$ to $\frac{3}{4}$	$\frac{1}{2}$
TB KSPW10	.95	10	$\frac{1}{8}$ to 1	$1\frac{1}{2}$
TB KSPW14	1.35	14	$\frac{1}{4}$ to $1\frac{1}{2}$	$2\frac{1}{2}$

Six in a carton.



STEEL HANDLE

Nos.	Each	Length, Inches	Adjustable for Pipe, Inches	Wt. Each, Lbs.
TB KSPS14	\$1.15	14	$\frac{1}{4}$ to $1\frac{1}{2}$	$2\frac{1}{2}$
TB KSPS18	1.69	18	$\frac{1}{4}$ to 2	$4\frac{1}{2}$
TB KSPS24	2.98	24	$\frac{1}{4}$ to $2\frac{1}{2}$	$7\frac{1}{2}$
TB KSPS36	5.95	36	$\frac{1}{2}$ to $3\frac{1}{2}$	15

Packing: 14 and 18-inch—six in a carton; 24-inch—six in a wood case; 36-inch—burlrapped.



SIMMONS LEADER

Good quality at a low price.

STEEL HANDLE

- Milled jaws provide positive grip. High-grade material and workmanship assure long performance.
- Drop forged steel jaws and handle. Polished steel frame. Smooth-working knurled adjusting nut.

Nos.	Each	Lgth., Inches	Adjustable For Pipe, Inches	Wt. Per Carton, Lbs.	Std. List, Each
TB SR10	\$0.59	8	$\frac{1}{8}$ to $\frac{3}{4}$	$4\frac{1}{2}$	\$0.59
TB SR1	.69	10	$\frac{1}{8}$ to 1	$8\frac{1}{2}$	.69
TB SR2	.99	14	$\frac{1}{4}$ to $1\frac{1}{2}$	$16\frac{1}{4}$	.99
TB SR3	1.39	18	$\frac{1}{4}$ to 2	$17\frac{1}{2}$	1.39
TB SR4	2.19	24	$\frac{1}{4}$ to $2\frac{1}{2}$	24	2.19

Packing 8 to 14-inch—six in a carton;
18 and 24-inch—four in a carton.

PIPE AND FITTING TONGS



WILLIAMS' VULCAN SUPERIOR FLAT CHAIN PATTERN Two Tools in One!

A universal service tong with reversible, double-service pipe and fittings jaws. When one set of teeth wears, simply unscrew bolt and turn jaws end for end. The

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.



TRIMO-ALLOY

Forged Trimmo-Alloy steel handle and jaws. Pressed steel frame and nut guards. Polished and hardened jaw, frame and inserted jaw. Knurled, smooth-working nut. Japanned handle. Inserted jaw and frame fastened to handle by movable steel pin.

Nos.	Each	Length Open, Inches	Adjustable for Pipe, Inches	Wt. Each, Lbs.	Std. List, Each
TB T6	\$0.89	6	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{1}{2}$	\$1.90
TB T8	.98	8	$\frac{1}{8}$ to $\frac{3}{4}$	$\frac{3}{4}$	2.20
TB T10	1.29	10	$\frac{1}{8}$ to 1	2	2.85
TB T12	1.45	12	$\frac{1}{8}$ to $1\frac{1}{4}$	$2\frac{1}{2}$	3.35
TB T14	1.65	14	$\frac{1}{4}$ to $1\frac{1}{2}$	3	3.85
TB T18	2.35	18	$\frac{1}{4}$ to 2	5	5.50
TB T24	4.25	24	$\frac{1}{4}$ to $2\frac{1}{2}$	8	9.50
TB T36	8.75	36	$\frac{1}{2}$ to $3\frac{1}{2}$	16	20.00

Packing: 6 to 24-inch—six in a carton; 36-inch—bulk.



GENUINE STILLSON

Drop forged tool steel. Bar and jaws heat-treated and oil tempered. Frame fastened to jaw by movable steel pin. Jaw adjusted by steel nut. Frame and shank polished. Double springs. Red lacquered steel handle.

Nos.	Each	Length Open, Inches	Adjustable for Pipe, Inches	Wt. Each, Lbs.	Std. List, Each
TB GSPS8	\$0.79	8	$\frac{1}{8}$ to $\frac{3}{4}$	$\frac{1}{2}$	\$2.20
TB GSPS10	1.10	10	$\frac{1}{8}$ to 1	$1\frac{1}{2}$	2.85
TB GSPS14	1.45	14	$\frac{1}{4}$ to $1\frac{1}{2}$	$2\frac{1}{2}$	3.85
TB GSPS18	2.00	18	$\frac{1}{4}$ to 2	$4\frac{1}{2}$	5.50
TB GSPS24	3.49	24	$\frac{1}{4}$ to $2\frac{1}{2}$	$7\frac{1}{2}$	9.50
TB GSPS36	7.45	36	$\frac{1}{2}$ to $3\frac{1}{2}$	15	20.00
TB GSPS48	10.75	48	1 to 5	24	30.00

Packing: 8 to 24-inch—six in a wood case;
36 and 48-inch—bulk.



RIDGID

- Housing unconditionally guaranteed by the maker against breakage or distortion and will be replaced without charge.
 - Cast-in pipe scale on hook jaw for setting wrench to various pipe sizes.
- Solid one-piece special forged steel housing and handle. Alloy steel hook jaw, hardened throughout. Removable rear jaw. Knurled steel free-action adjusting nut. Black enameled with polished jaws.

Nos.	Each	Length Open, Inches	For Pipe, Inches	Wt. Each, Lbs.	Std. List, Each
TB R6	\$0.79	6	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{1}{2}$	\$1.90
TB R8	.98	8	$\frac{1}{8}$ to $\frac{3}{4}$	$\frac{3}{4}$	2.20
TB R10	1.19	10	$\frac{1}{8}$ to 1	1 $\frac{1}{4}$	2.85
TB R14	1.65	14	$\frac{1}{4}$ to $1\frac{1}{2}$	$3\frac{1}{4}$	3.85
TB R18	2.35	18	$\frac{1}{4}$ to 2	5	5.50
TB R24	3.59	24	$\frac{1}{4}$ to $2\frac{1}{2}$	$8\frac{1}{4}$	8.50
TB R36	7.95	36	$\frac{1}{4}$ to $3\frac{1}{2}$	$16\frac{1}{4}$	20.00

One-half dozen in a carton.

V recess in jaws assures quick and positive grip on fittings. All parts interchangeable. Fully guaranteed. Drop forged tool steel. Natural finish handle. Red-enameled jaws. Flat link steel chain . . . proof-tested and certified.

TB 13V—For pipe $\frac{1}{4}$ to 4 inches. Length over all 37 inches. Chain $22\frac{1}{2}$ inches long. Average breaking strain of chain, 12,500 lbs. Weight each 17 lbs. **Each \$10.95**

Packing—bulk.

STOCKS AND DIES

REED—RIGHT HAND—STANDARD THREADS

- Highest quality polished tool steel dies with double-threaded throat—starts threading easily and without any pushing effort . . . makes entire cutting operation quick and accurate.



Adjustable Dies Complete With Dies

- Wing screws for holding dies enable you to change dies quickly and easily.

Nos.	Per Set	Lgth., Ins.	Pairs, Dies	Size, Inches	Wt. Per Set, Lbs.	Std. List, Per Set
TB 2A	\$12.00	35	5	$\frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{3}{4}, 1$	11½	\$12.00
TB 2½A	14.00	37½	4	$\frac{1}{2}, \frac{3}{4}, 1, 1\frac{1}{2}$	13	14.00

One set in a fibre box.

ADJUSTABLE PIPE DIES

SINGLE END PATTERN

- Polished tool steel.

Nos.	Each	Cutting Weight, Size, Inches	Per Pair, Ozs.
For No. TB 1A Stocks			
#TB 1A ¼	\$1.65	$\frac{1}{8}$	3
#TB 1A ¼	1.65	$\frac{1}{4}$	3
#TB 1A ⅜	1.65	$\frac{3}{8}$	3
#TB 1A ½	1.65	$\frac{1}{2}$	3
For No. TB 2A Stocks			
#TB 2A ¼	2.10	$\frac{1}{4}$	11
#TB 2A ⅜	2.10	$\frac{3}{8}$	11
#TB 2A ½	2.10	$\frac{1}{2}$	11½
#TB 2A ¾	2.10	$\frac{3}{4}$	11½
#TB 2A 1	2.10	1	11¾
For No. TB 2½A Stocks			
#TB 2½A ½	2.65	$\frac{1}{2}$	11
#TB 2½A ¾	2.65	$\frac{3}{4}$	11
#TB 2½A 1	2.65	1	11½
#TB 2½A 1¼	2.65	1¼	12
For No. TB 3A Stocks			
#TB 3A 1¼	4.75	1¼	37
#TB 3A 1½	4.75	1½	35
#TB 3A 2	4.75	2	33
For No. TB 3C Stocks			
#TB 3C ¾	4.75	$\frac{3}{4}$	40
#TB 3C 1	4.75	1	38
#TB 3C 1¼	4.75	1¼	35
#TB 3C 1½	4.75	1½	34
#TB 3C 2	4.75	2	33

Packing—bulk.

- Malleable iron frame, with quick-action clamps, black japanned. Seamless tubular steel detachable arms with rounded ends. Each bushing or ring guide carefully machined to exact size inside and outside . . . marked with pipe size and size of stock it fits.



Solid Dies Complete With Dies

Nos.	Per Set	Length, Inches	Fitted With Dies to Cut Pipe, Inches	Weight Each, Lbs.	Std. List, Per Set
TB 1	\$10.50	35	$\frac{1}{4}$ to 1	14	\$10.50
TB 1½	9.50	43	$\frac{3}{4}$ to 1¼	17	9.50
TB 2	14.50	51	1¼ to 2	27	14.50

One in a wood box.

SOLID PIPE DIES

REED

For Standard Pipe Stocks

In ordering, always specify whether right or left hand dies are wanted.



Right Hand

- Made of electrically heat-treated, carefully tempered, high quality alloy tool steel for longer duty. Double-threaded-throat, a patented improvement causing die to start threading easily without any pushing effort and contributing materially to ease the whole threading operation.

Dies for No. TB 0 Stocks

Size, inches $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}; 2$ inches square.

Weight each $\frac{1}{2}$ lb. Std. List, Each \$1.40...Each \$1.40

Dies for No. TB 1 Stocks

Size, inches $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{3}{4}, 1; 2\frac{1}{2}$ inches square. Weight each 1 lb. Std. List,

Each, \$1.60Each \$1.60

Dies for No. TB 1½ Stocks

Size, inches $\frac{1}{2}, \frac{3}{4}, 1, 1\frac{1}{4}; 3$ inches square. Weight

each $1\frac{1}{2}$ lbs. Std. List, Each \$2.00.....Each \$2.00

Dies for No. TB 2 Stocks

Size, inches $\frac{3}{4}, 1, 1\frac{1}{4}, 1\frac{1}{2}, 2; 4$ inches square. Weight

each $2\frac{3}{4}$ lbs. Std. List, Each \$2.50.....Each \$2.50

#Left Hand. For standard stocks, same sizes but with list prices double those of right hand.

Packing—bulk.

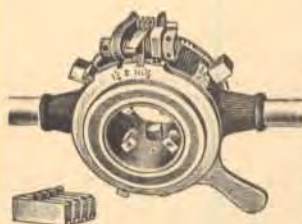
**A New
KEEN KOOKER
Cast Iron Range
will give you
BETTER
FASTER COOKING**

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

HART'S DUPLEX DIE STOCKS

For Threading Pipe



• Saves time and effort—no wrench thumb screw or collets to bother with.

• Complete in itself.

Fitted with adjustable dies and guide or centering jaws. Dies set to size accurately by simply using your hand. Dies held in position by positive lock—no frictional clamps, screws or nuts. Re-

leasing of dies at end of cut accomplished instantly—avoids turning back over threads.

Dies—The dies are of the chaser form which is the most readily adjusted and sharpened. They do their work while held stationary. Their quick adjustment enables the operator to at once alter the size of the threads, so as to suit any variation in the pipe fittings.

Guide Jaws—These center the pipe accurately to the dies; they are adjusted simultaneously to all sizes of pipe. The mechanism for accomplishing it is self-locking, and its adjustment cannot be accidentally disturbed.

Cutting-off Device—This, as has been customary, is also furnished in the equipment of the tools, unless its omission be specified. It cuts the pipe squarely and cleanly.

COMPLETE WITH DIES

Length 60 inches. For 2½, 3, 3½ and 4-inch pipe.

#TY 45—Without Cut-off Each \$59.75

#TY 45W—With Cut-off Each 64.75

Weight each 55 lbs.
One in a wood box.

#EXTRA DIES FOR HART'S DUPLEX DIE STOCKS

• Tempered tool steel.

COMPLETE SETS

#TY 1—Composed of single sets of 4 pieces each: 1 set each (½, ¼, ⅜), and (½, ¾).
Weight each 1½ lbs. Each Set \$10.95

#TY 2—Composed of 3 single sets of 4 pieces each: 1 set each (¼, ⅜), (½, ¾), and (1, 1¼). Weight each 2½ lbs. Each Set 11.75

#TY 3—Composed of 2 single sets of 4 pieces each: 1 set each (1, 1¼), and (1½, 2). Weight each 2 lbs. Each Set 10.50

#TY 3½—Composed of 3 single sets of 4 pieces each: 1 set each (½, ¾), (1, 1¼), and (1½, 2). Weight each 3 lbs. Each Set 13.50

#TY 4—Composed of 2 single sets of 4 pieces each: 1 set each (1½, 2) and (2½, 3). Weight each 3½ lbs. Each Set 15.85

#TY 5—Composed of 2 single sets of 4 pieces each: 1 set each (2½, 3) and (3½, 4). Weight each 4½ lbs. Each Set 19.75

In ordering always specify whether Right or Left Hand dies are wanted.

One set in a wood box.

#Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ADJUSTABLE DIES



GREENFIELD

• Ruggedly constructed of carbon steel to insure many years of dependable service.

LITTLE GIANT

Fractional Sizes

U. S. S. Standard thread (American National Coarse). Will fit collets 2¼ inches in diameter.

Nos.	Each	Cutting Size, Inches	Threads Per Inch	Std. List, Each
TB LG ¼	\$1.45	¼	20	\$1.00
TB LG ⅜	1.45	⅜	18	1.00
TB LG ½	1.85	½	16	1.25
TB LG ⅝	1.85	⅝	14	1.25
TB LG ¾	2.25	¾	13	1.50
TB LG ⅞	2.25	⅞	12	1.50
TB LG 1	2.50	1	11	1.75
TB LG 1 ¼	3.00	1 ¼	10	2.00
TB LG 1 ½	4.25	1 ½	9	2.75
TB LG 1 ¾	4.25	1 ¾	8	2.75

One dozen in a carton; weight each: ¼ inch, 1½ ounces; ⅜ inch, 1½ ounces; ½ inch, 3 ounces; 1 inch, 5 ounces.

TAPER PIPE TAPS

GREENFIELD



AMERICAN STANDARD
REGULAR THREAD
CARBON STEEL

Nos.	Each	Nominal Size, Inch	Threads to Inch	Length Over All, Inches	Std. List, Each
TB 320 ⅛	\$0.60	⅛	27	4 2 ⅜	1.00
TB 320 ¼	.75	¼	18	4 2 ⅞	1.20
TB 320 ⅜	.95	⅜	18	4 2 ⅞	1.60
TB 320 ½	1.20	½	14	4 3 ⅜	2.00
TB 320 ¾	1.70	¾	14	5 3 ⅜	2.80
TB 320 1	2.65	1	11 ½	5 3 ⅜	4.40
TB 320 1 ¼	3.75	1 ¼	11 ½	5 4	5.00
TB 320 1 ½	4.95	1 ½	11 ½	6 4 ¼	6.60
TB 320 2	7.50	2	11 ½	6 4 ½	10.00

⅛ inch to ½ inch, one dozen; ¾ inch and 1 inch, one-half dozen in a carton; 1¼ to 2 inches, bulk. Weight each: ⅛ inch, 1 ounce; ¼ inch, 3½ ounces; ⅜ inch, 3 ounces; ½ inch, 1½ lbs.; ¾ inch, 3 lbs.

KEEN KUTTER

Is the Symbol of

FINE QUALITY

in

TOOLS and CUTLERY

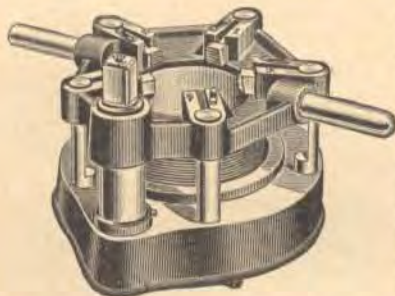
TOLEDO PIPE THREADING TOOLS

Threads Iron Pipe Quickly, Accurately—Insures Tight Joints

Receding Die Principle—Instantly Adjusted for Over, Under or Standard Threads!

Makes pipe threading so easy even a boy can operate the tool. No cams to wear out. Changing of dies from one size to another is made quickly and easily by slipping die into proper series of tapered steps.

- Ruggedly constructed . . . made of iron and steel . . . designed for many years of hard, exacting service.



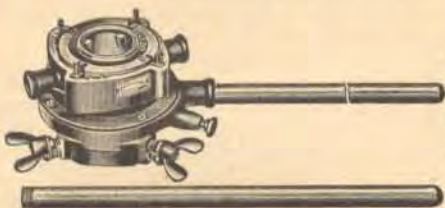
Geared Adjustable
This model has established a reputation of being the most practical, most durable, most easily operated pipe threader in use today. Weighs only 57 lbs., nearly 30 lbs. lighter than similar tools.

Complete tool consists of body, full set of 2 1/4 to 4-inch

right hand dies and bushings, set screw and ratchet handle. Four dies—each 2 1/2, 3, 3 1/2 and 4 inches.

TY 2—For 2 1/2 to 4-inch pipe. Weight each 57 lbs. Std. List, Each \$50.00 Each \$62.75

One in a wood box.



Adjustable Ratchet

Entirely self-contained—has no loose parts. Designed for operator who wants one set of dies to thread several sizes of pipe.

Exceedingly desirable for oil field work. Dies made from high speed steel, easily reground when dull.

No bushings needed with three-jaw pipe holder. Large wing-head thumb screws with micrometer line guide bars make it easy to center tool. The three broad-faced chuck jaws hold tool rigidly to pipe, assuring clean-cut threads. Black enameled body.

Adjustable die cutting sizes 1, 1 1/4, 1 1/2 and 2 inches. Each handle 18 1/2 inches long, 1 inch in diameter. Length over all 28 inches.

TY 10BR—For 1 to 2-inch pipe. Weight each 29 lbs. Std. List, Each \$15.00 Each \$19.00

One set in a carton.

EXTRA DIES FOR TOLEDO THREADING TOOLS

For No. TY 10BR

TY 10BRD—Adjustable for 1, 1 1/4, 1 1/2 and 2-inch iron pipe. Weight each 5 1/2 lb.

Std. List, Each \$2.75 Each \$3.45

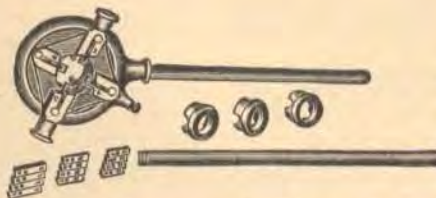
Packing—bulk.

Polly Prim
ENAMELWARE

Is Long Wearing, Easy to Clean and Attractive

Die head holding die segments is surrounded by step case having four steps against which dies rest. When threading pipe, dies move down these steps, gradually receding to produce perfectly true long tapered threads.

- Steel handles, polished. Right hand dies.



Adjustable Ratchet

Here's the easiest operating 1 to 2-inch pipe threader made! Equipped with ratchet that makes it easy to thread pipe

in restricted places. May be used with two handles as ordinary die stock. Black enameled body. Can also be furnished (reversed in all parts) for cutting left hand threads—neither tool will do both.

Consists of three sets of dies and bushings—1 each 1, 1 1/4 and 1 1/2 inches. Each handle 18 1/2 inches long. Length over all 30 inches.

TY 1A—For 1 to 2-inch pipe. Weight each 24 lbs. Std. List, Each \$11.25 Each \$14.25



"Three-Way"

Easiest to operate of any tool of its type! Perfectly balanced because handles project from either side

of baseball-size body, each die head being "on center." Patented design tool body permits use of segmented dies possessing "Toledo" easy-cutting quality. Die segments are removable and can be reground or replaced at slight cost.

When assembled, there are no loose parts . . . no adjustments are necessary. Tool body designed to quickly clear itself of chips and will not become clogged with dirt. Black enameled body.

Consists of three dies—1 each 3/8, 1/2 and 3/4 inches. Handle 13 inches long, 7/8-inch in diameter. Length over all 26 1/2 inches.

TY 30—For 3/8 to 3/4-inch pipe. Weight each 5 1/2 lbs. Std. List, Each \$6.00 Each \$7.75

Consists of three dies—1 each 1/2, 3/4 and 1 inch. Handle 16 1/2 inches long, 1-inch in diameter. Length over all 39 1/4 inches.

TY 31—For 1/2 to 1-inch pipe. Weight each 8 1/2 lbs. Std. List, Each \$6.75 Each \$8.50

One set in a carton.

EXTRA DIES FOR TOLEDO THREADING TOOLS

For No. TY 1A

Nos.	Each	Weight Each, Lbs.	Std. List, Each
TB 1A1	\$1.15	3/8	\$0.75
TB 1A1 1/4	1.15	3/8	.75
TB 1A1 1/2	1.15	3/8	.75
TB 1A2	1.90	1 1/8	1.25

Packing—bulk.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

PIPE THREADING TOOLS

(TOLEDO) RATCHET

This light and compact ratchet threader will thread pipe in corners where other tools are useless. It cuts standard threads of full taper with a few easy strokes of the handle. Die heads instantly changed from one size to another. Die segments easily removed and re-ground when dull or replaced at small expense without purchasing complete new heads. Black enameled ratchet head.



Consists of five die heads and dies—1 each $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{3}{4}$ inches. Handle 12 inches long, $\frac{7}{8}$ inch in diameter. Length over all $16\frac{1}{4}$ inches.

TY 00—For $\frac{1}{8}$ to $\frac{3}{4}$ -inch iron pipe; weight each 9 $\frac{3}{4}$ lbs. Std. List, Each \$12.35 Each \$15.60



Consists of four die heads and dies—1 each $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{4}$ inches. Handle 19 inches long, 1 inch in diameter. Length over all $24\frac{1}{4}$ inches.

TY 11—For $\frac{1}{2}$ to $1\frac{1}{4}$ -inch iron pipe; weight each 13 lbs. Std. List, Each \$12.00 Each \$15.50

One set in a carton.

EXTRA DIES FOR TOLEDO THREADING TOOLS

For No. TY 00

Nos.	Each	Weight Each, Lbs.	Std. List, Each
TB 00 $\frac{1}{8}$	\$1.95	$1\frac{1}{4}$	\$1.30
TB 00 $\frac{1}{4}$	1.95	$1\frac{1}{8}$	1.30
TB 00 $\frac{3}{8}$	1.95	$1\frac{3}{8}$	1.30
TB 00 $\frac{1}{2}$	1.95	$1\frac{3}{8}$	1.30
TB 00 $\frac{3}{4}$	1.95	$1\frac{3}{8}$	1.30

For No. TY 11

TB 111	\$2.45	$\frac{1}{4}$	\$1.63
TB 111 $\frac{1}{4}$	2.45	$\frac{1}{4}$	1.63

Packing—bulk.

STOCKS AND DIES

GREENFIELD PUMP MAKERS'



- Especially designed for pump installation and repair work to thread ends of pump rods ready for couplings.
- Double stock. Complete with 2 adjustable round split dies, one each $\frac{3}{8}$ -inch, 14 threads to inch and $\frac{1}{2}$ -inch, 12 threads to inch—"V" thread $\frac{1}{2}$ -inch oversize. The guide is part of stock. Stock $14\frac{1}{2}$ inches long.

TB 920—Weight each $1\frac{1}{2}$ lbs. Each \$3.95

Packing—bulk.

DIE STOCKS

For Adjustable Round Dies

GREENFIELD



Single Screw Type

- Accommodates all round dies of internal screw adjustment type. Set screw is threaded into body to enter spot in side of die—because die fits stock closely, only a small amount of pressure on set screw secures die solidly.
- Selected malleable iron body, accurately machined, highly polished and attractively finished. Handles are knurled to insure firm grip.

Nos.	Each	For Dies Length Diameter, Inches	Over All, Inches	Weight Each, Lbs.	List, Each
TB 1851	\$1.25	$\frac{11}{16}$	$6\frac{1}{4}$	$\frac{1}{8}$	\$1.00
TB 1853	2.50	$1\frac{1}{2}$	14	$1\frac{1}{4}$	2.00

Packing—bulk.

ADJUSTABLE DIES



GREENFIELD

Designed for use in both hand stocks and machine holders. Carbon steel.

MACHINE SCREW SIZES

Diameter of die $\frac{11}{16}$ inch, thickness $\frac{1}{4}$ inch.

Nos.	Each	Screw Gauge, Nos.	Basic Diameter, Inches	Threads Per Inch	List, Each
TB 381/4/40	\$0.85	4	.112	40	\$0.60
TB 381/4/32	.85	4	.112	32	.60
TB 381/6/32	.85	6	.138	32	.60
TB 381/8/32	.85	8	.164	32	.60
TB 381/10/24	.85	10	.190	24	.60
TB 381/10/32	.85	10	.190	32	.60
TB 381/12/24	.85	12	.216	24	.60

FRACTIONAL SIZES

Diameter of die $1\frac{1}{2}$ inches; thickness $\frac{1}{2}$ inch.

U. S. Standard thread.

Nos.	Each	Cutting Size, Inch	Threads Per Inch	List, Each
TB 382 $\frac{1}{4}$	\$1.80	$\frac{1}{4}$	20	\$1.25
TB 382 $\frac{5}{16}$	1.80	$\frac{5}{16}$	18	1.25
TB 382 $\frac{3}{8}$	1.80	$\frac{3}{8}$	16	1.25
TB 382 $\frac{7}{16}$	1.80	$\frac{7}{16}$	14	1.25
TB 382 $\frac{1}{2}$	1.80	$\frac{1}{2}$	13	1.25

Weight each 1 ounce.

Packing—bulk.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SCREW PLATES

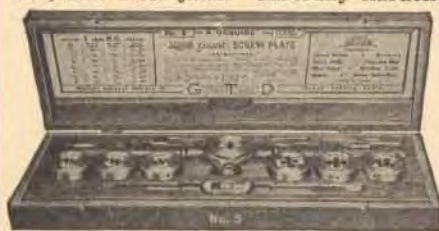
Cut Clean, Accurate, Easy-action Threads That Assure Secure, Tight Connections

GREENFIELD LITTLE GIANT

High quality and practical design, they are extremely simple to use. Full instructions in box.

Stock—selected malleable iron body, accurately machined, beautifully mottled and polished, with polished steel knurled handles.

Tap wrench—drop forged solid steel body, beautifully mottled and polished, with polished steel knurled handles, tool steel jaws. Carefully hardened and tempered.



AMERICAN NATIONAL COARSE THREAD (U. S. S. Standard Thread).

Set consists of 1 stock 14½ inches long, 1 tap wrench 11

inches long, 5 dies (each with 2-inch collet), 5 taps and bit brace shank guide.

Five Dies and Taps

Size, inch	¼	⅝	¾	⅞	1½
Threads to inch	20	18	16	14	13

List,

Each

TY 1—Weight per set 9 lbs. \$18.50 18.50



AMERICAN NATIONAL FINE THREAD

Set consists of 1 stock 23 inches long, 1 tap wrench 15 inches long

and 7 dies (each with 2¾-inch collet) and 7 taps.

Seven Dies and Taps

Size, inch	¼	⅝	¾	⅞	1½	5/8	¾
Threads to inch	28	24	24	20	20	18	16

List,

Each

TY 35—Weight per set 20 lbs. \$27.50 27.50

Dies and collets—highest quality. Consists of adjustable two-piece die, cap and guide.

Taps—carbon steel.

Neatly grouped in oiled and varnished hardwood box, which will not split, warp or fall apart.

Set consists of 1 stock 23 inches long, 1 tap wrench 15 inches long, 7 dies (each with 2¾-inch collet) and 7 taps

Seven Dies and Taps

Size, inch	¼	⅝	¾	⅞	1½	5/8	¾
Threads to inch	20	18	16	14	13	11	10

List,

Each

TY 5—Weight per set 20 lbs. \$27.50 27.50

Set consists of 1 stock 26 inches long, 2 tap wrenches (one each 11 and 19 inches long), 9 dies (each with 2¾-inch collet) and 9 taps.

Nine Dies and Taps

Size, inch	¼	⅝	¾	⅞	1½	5/8	¾	7/8	1
Threads to inch	20	18	16	14	13	11	10	9	8

List,

Each

TY 7—Weight per set 27 lbs. \$42.00 42.00

Set consists of 1 stock 26 inches long, 2 tap wrenches (one each 11 and 19 inches long), 9 dies (each with 2¾-inch collet) and 9 taps.

Nine Dies and Taps

Size, inch	¼	⅝	¾	⅞	1½	5/8	¾	7/8	1
Threads to inch	28	24	24	20	20	18	16	14	14

List,

Each

TY 37—Weight per set 27 lbs. \$42.00 42.00

One set in an oiled and varnished hardwood box.

GREENFIELD "O. K." JR.

Popular priced . . . but of the same high quality as other Greenfield products!

This sensational value is made possible by re-designing and simplifying a number of tools in the sets—namely, the simpler and less expensive O. K. Jr. round split dies, which are held and adjusted in the stock by 3 tapered screws, and the O. K. Jr. taps.

Stock—malleable iron red-enameled body with 3 adjusting screws and polished steel handles.

Tap wrench—drop forged solid steel, polished finish, with 2-screw adjustments.

Dies—round split pattern 1½ inch in diameter.

Taps—carbon steel.

• Includes small screw driver for turning screws in stock.



MACHINE SCREW SIZES

Set consists of 1 stock 6¼ inches long, 1 tap wrench, 5 dies, 5 taps and 1 screw driver.

Five Dies and Taps

Screw, Nos.	4	6	8	10	12
Threads to inch	36	32	32	24	24

List,

Each

TR B5—Weight per set 1¾ lbs. \$4.00 4.00

Set consists of 1 stock 6¼ inches long, 1 tap wrench, 7 dies, 7 taps and 1 screw driver.

Seven Dies and Taps

Screw, Nos.	4	6	8	10	10	12	¼
Threads to inch	36	32	32	24	32	24	20

List,

Each

TR B7—Weight per set 2 lbs. \$5.00 5.00

SMALL FRACTIONAL SIZES NATIONAL FORM THREAD

Set consists of 1 stock 6¼ inches long, 1 tap wrench, 5 dies, 5 taps and 1 screw driver.

Five Dies and Taps

Size, inch	¼	⅜	⅝	¾	1
Threads to inch	40	36	24	24	20

List,

Each

TR BB5—Weight per set 1¾ lbs. \$4.00 4.00

One set in a hardwood case.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SCREW PLATES

CHAMPION EASY—FOR BOLTS

- Expertly constructed of high quality materials for heavy-duty service and long life.
- Drop forged stocks, mottled finish, with seamless steel tubing knurled handles polished and knurled. High-grade tool steel adjustable dies. Machine relieved taper taps.



Set complete with: 2 stocks, 1 each 15½ and 26 inches long; 9 adjustable dies (first 4 sizes 1½, others 1½ inches in diameter) and 9 taps; adjustable tap wrench 20 inches long.

Cutting sizes, in... ¼ ⅜ ½ ⅞ 1 1 ¼ 1 ½ 1 ¾ 2
Threads to inch... 20 18 16 14 13 11 10 9 8

TB 7B—U. S. standard thread. Weight per set 18 lbs.....Std. List, Each \$31.00 Each \$31.00



Set complete with: 2 stocks, 1 each 15 and 23 inches long; 7 adjustable dies (first 4 sizes 1½, others 1½ inches in diameter) and 7 taps; adjustable tap wrench 15 inches long.

Cutting sizes, inches..... ¼ ⅜ ½ ⅞ 1 1 ¼ 1 ½ 1 ¾ 2
Threads to inch..... 20 18 16 14 13 11 10

TB 5B—U. S. standard thread. Weight per set 14 lbs.....Std. List, Each \$21.00 Each \$21.00



Set complete with: stock 15½ inches long; 5 adjustable dies 1½ inches in diameter and 5 taps; adjustable tap wrench 10 inches long.

Cutting sizes, inches..... ¼ ⅜ ½ ⅞ 1 1 ¼ 1 ½ 1 ¾ 2
Threads to inch..... 20 18 16 14 13

TB 1B—U. S. standard thread. Weight per set 7½ lbs.....Std. List, Each \$13.50 Each \$13.50

One set in a polished hardwood box.

Build Up Your Home Work Shop
with

**KEEN KUTTER
TOOLS**

—They

**DO FINE WORK
and**

LAST A LONG TIME

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

STAR TAP AND DIE SETS

- Each set an outstanding value!
- All units made of good quality material to meet the growing, popular demand for low-priced practical tools.
- Neatly arranged in hardwood hinged cases with separate depressions for each unit.



COMBINATION U. S. STANDARD AND S. A. E. THREAD

Set consists of one 8-inch die stock, one 7-inch adjustable tap wrench, 10 round dies and 10 bolt taps.

TB 2CV—Weight per set
4 lbs.Each Set \$3.25

Die and Tap Sizes

	U. S. S.	Size, Inches				
		¼	⅜	½	⅞	1
		Threads to Inch	20	18	16	14
	S. A. E.	Size, Inches				
		¼	⅜	½	⅞	1
		Threads to Inch	28	24	24	20



U. S. STANDARD THREAD
Set consists of one 8-inch die stock, one 7-inch adjustable tap wrench, 5 round dies and 5 bolt taps.

TB 2V—Weight per set
2¼ lbs.Each Set \$1.95

Die and Tap Sizes

Size, Inches	¼	⅜	½	⅞	1
Threads to Inch	20	18	16	14	13



S. A. E. THREAD

Set consists of one 8-inch die stock, one 7-inch adjustable tap wrench, 5 round dies and 5 bolt taps.

TB 2AV—Weight per set
2¼ lbs.Each Set \$1.95

Die and Tap Sizes

Size, Inches	¼	⅜	½	⅞	1
Threads to Inch	28	24	24	20	20

One set in a polished hardwood box.

EXTRA HAND TAPS

For Star Tap and Die Sets TB 2V, TB 2AV and TB 2CV.

U. S. STANDARD THREAD

Nos.	Each	Size, Inches	Threads to Inch
TB VU ¼	\$0.12	¼	20
TB VU ⅜	.12	⅜	18
TB VU ½	.12	½	16
TB VU ⅞	.15	⅞	14
TB VU 1	.15	1	13

S. A. E. THREAD

TB VS ¼	\$0.12	¼	28
TB VS ⅜	.12	⅜	24
TB VS ½	.12	½	24
TB VS ⅞	.15	⅞	20
TB VS 1	.15	1	20

One dozen in a carton.

Approximate weight per dozen 1½ lbs.

STANDARD HAND TAPS

GREENFIELD

• Forged from carbon steel to assure long, reliable service.

• Cuts clean, sharp threads that provide secure, firm connections.



Taper



Plug



Bottoming

U. S. S. Standard Thread										S.A.E. Thread									
Taper					Plug					Bottoming					Plug				
Dia. Tap.	Lgth. Over All.	Thds. Per In.	Nos.	Each	Std. List, Each	Nos.	Each	Std. List, Each		Nos.	Each	Std. List, Each			Thds. Per In.	Nos.	Each	Std. List, Each	
1/4	2 1/2	20	TB T303 1/4	\$0.45	\$0.45	TB P303 1/4	\$0.45	\$0.45		TB B303 1/4	\$0.45	\$0.45			28	TB PS303 1/4	\$0.45	\$0.45	
5/16	2 3/8	18	TB T303 5/16	.50	.50	TB P303 5/16	.50	.50		TB B303 5/16	.50	.50			24	TB PS303 5/16	.50	.50	
3/8	2 1/2	16	TB T303 3/8	.55	.55	TB P303 3/8	.55	.55		TB B303 3/8	.55	.55			24	TB PS303 3/8	.55	.55	
7/16	3 1/8	14	TB T303 7/16	.60	.60	TB P303 7/16	.60	.60		TB B303 7/16	.60	.60			26	TB PS303 7/16	.60	.60	
1/2	3 3/8	13	TB T303 1/2	.70	.70	TB P303 1/2	.70	.70		TB B303 1/2	.70	.70			20	TB PS303 1/2	.70	.70	
5/8	3 1/2	12	TB T303 5/8	.80	.80	TB P303 5/8	.80	.80		TB B303 5/8	.80	.80			18	TB PS303 5/8	.80	.80	
3/4	3 1/2	11	TB T303 3/4	.90	.90	TB P303 3/4	.90	.90		TB B303 3/4	.90	.90			18	TB PS303 3/4	.90	.90	
7/8	4 1/4	10	TB T303 7/8	1.20	1.20	TB P303 7/8	1.20	1.20		TB B303 7/8	1.20	1.20			16	TB PS303 7/8	1.20	1.20	
1	5 1/4	9	TB T303 1	1.60	1.60	TB P303 1	1.60	1.60		TB B303 1	1.60	1.60			14	TB PS303 1	1.60	1.60	
		8	TB T3031	2.00	2.00	TB P3031	2.00	2.00		TB B3031	2.00	2.00			14	TB PS3031	2.00	2.00	

Note—1/4 to 3/8 inch have shanks full diameter of thread, 1/2 inch and larger have shanks smaller than the root diameter of thread.

Packing: 1/4 inch to 3/4 inch—one dozen in a carton. 7/8 inch and 1 inch—one-half dozen in a carton.
Weight each: 1/4 inch—1/2 ounce. 1/2 inch—1 ounce. 3/4 inch—4 ounces. 1 inch—10 ounces.

STANDARD HAND TAPS

GREENFIELD



PLUG TAP
High Speed Steel

Nos.	Each	Diam. Tap, Inch	Thrds. Per Inch	Lgth., Ins.	Weight, Each Ozs.	Std. List, Each
TB P6303 1/4 20	\$0.85	1/4	20	2 1/2	1 1/2	\$0.85
TB P6303 5/16 18	.95	5/16	18	2 3/8	3/4	.95
TB P6303 3/8 16	1.10	3/8	16	2 1/2	1	1.10
TB P6303 1/2 13	1.55	1/2	13	3 3/8	2	1.55
TB P6303 5/8 11	2.20	5/8	11	3 1/2	2 1/2	2.20
TB P6303 3/4 10	3.10	3/4	10	4 1/4	4	3.10

One dozen in a carton.

STOVE BOLT TAPS

GREENFIELD



Carbon Steel
"Manufacturers Standard" form of thread—plug style only.

Nos.	Each	Diam. Tap, Inch	Thrds. Per Inch	No. All, Flutes	Length Over, Ins.	Std. List, Each
TB314 3/16 24	\$0.40	3/16	24	4	2 3/8	\$0.40
TB 314 1/4 18	.45	1/4	18	4	2 1/2	.45

Average weight each 1/2 ounce.
One dozen in a carton.

STANDARD MACHINE SCREW TAPS



Nos.	Each	Bas. Sew. Maj. Ga. Dia., No.	Length Over, All, Ins.	Thds. Per Inch	Flutes	Std. List, Each
TB 6305440	\$0.70	4 .112	40	3	1 7/8	\$0.70
TB 6305632	.70	6 .138	32	3	2	.70
TB 6305832	.70	8 .164	32	4	2 1/4	.70
TB 63051024	.75	10 .190	24	4	2 3/8	.75
TB 63051032	.75	10 .190	32	4	2 3/8	.75
TB 63051224	.80	12 .216	24	4	2 3/4	.80

HIGH SPEED STEEL

TB 6305440	\$0.70	4 .112	40	3	1 7/8	\$0.70
TB 6305632	.70	6 .138	32	3	2	.70
TB 6305832	.70	8 .164	32	4	2 1/4	.70
TB 63051024	.75	10 .190	24	4	2 3/8	.75
TB 63051032	.75	10 .190	32	4	2 3/8	.75
TB 63051224	.80	12 .216	24	4	2 3/4	.80

CARBON STEEL

TB 305440	\$0.40	4 .112	40	3	1 7/8	\$0.40
TB 305436	.40	4 .112	36	3	1 7/8	.40
TB 305632	.35	6 .138	32	3	2	.35
TB 305832	.35	8 .164	32	4	2 1/4	.35
TB 3051024	.40	10 .190	24	4	2 3/8	.40
TB 3051032	.40	10 .190	32	4	2 3/8	.40
TB 3051224	.45	12 .216	24	4	2 3/4	.45

Average weight each 1/4 ounce to 1/2 ounce.

One dozen in a carton.

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ADJUSTABLE TAP AND REAMER WRENCHES

GREENFIELD

- Compact, light, strong. Solid steel drop-forged body, mottled finish. Steel tubing handle has knurled ends to provide sure, easy grip. Jaws made of carefully hardened and tempered tool steel. They will not break or get out of line.



Capacity (Tap Sizes)

Nos.	Each	Length, Inches	Hand, Inches	Machine Screw	Pipe, Inches	Hand Reamer, Inches	Wt. Each, Lbs.	Std. List, Each
TB 4TR	\$3.50	9	$\frac{1}{8}$ to $\frac{1}{4}$	0 to 14	----	$\frac{1}{8}$ to $\frac{1}{4}$	$\frac{1}{2}$	\$3.00
TB 5TR	4.25	11	$\frac{3}{8}$ to $\frac{1}{2}$	7 to 14	$\frac{1}{8}$	$\frac{1}{2}$ to $\frac{3}{4}$	$\frac{3}{4}$	3.50
TB 6TR	4.75	15	$\frac{1}{2}$ to $\frac{3}{4}$	7 to 14	$\frac{1}{4}$ - $\frac{3}{4}$	$\frac{3}{4}$ to 1	1 $\frac{1}{2}$	4.00
TB 7TR	5.95	19	$\frac{3}{4}$ to 1 $\frac{1}{2}$	-----	$\frac{3}{8}$ - $\frac{3}{4}$	$\frac{1}{2}$ to $\frac{3}{4}$	2 $\frac{3}{8}$	5.00

Packing—bulk.

TAP WRENCHES



GREENFIELD

- High-grade tool steel, carefully selected for its toughness. Hardened and tempered chuck jaws.
- Rigid steel T handle. Simple design—no delicate springs or pins.

Nos.	Each	Length, Hand, Machine, Inches	Weight, Each, Ounces	List, Each
TB 329	\$0.90	2 $\frac{1}{2}$ $\frac{1}{8}$ - $\frac{3}{8}$ 0-14	3	\$0.75
TB 333	1.45	3 $\frac{3}{8}$ $\frac{1}{2}$ -1 $\frac{1}{2}$ 12-14	8	1.25

Packing—bulk.

SCREW EXTRACTORS



EZY-OUT

It is only necessary to drill a hole in center of broken section large and deep enough to permit extractor (largest size possible) to enter well beyond point without bottoming. This permits the corkscrew type spirals to grip sides of the drilled hole. By exerting an untwisting action (to the left) the broken section is extracted.



Fine quality tempered tool steel.

Nos.	Each	Lgth. Over All, Inches	Lgth. Spiral, Inches	Tapers, Inches	Weight, Each, Ounces	Std. List, Each
TB 1	\$0.30	2	$\frac{1}{2}$	$\frac{1}{8}$ to $\frac{1}{4}$	$\frac{1}{4}$	\$0.55
TB 2	.33	2 $\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{4}$ to $\frac{1}{2}$	$\frac{1}{2}$	.60
TB 3	.35	2 $\frac{1}{2}$	1	$\frac{1}{4}$ to $\frac{3}{8}$	$\frac{1}{2}$	.65
TB 4	.39	3	1 $\frac{1}{4}$	$\frac{1}{2}$ to $\frac{3}{4}$	1	.75
TB 5	.45	3 $\frac{3}{8}$	1 $\frac{1}{2}$	$\frac{3}{4}$ to 1	1 $\frac{3}{4}$	.85
TB 6	.55	3 $\frac{3}{4}$	1 $\frac{3}{4}$	1 to 1 $\frac{1}{2}$	3 $\frac{1}{2}$	1.00

Packing—bulk.

Most Popular Sizes

TB 15—Set of five. Consists of one each Nos. 1, 2, 3, 4 and 5; weight per set $\frac{3}{4}$ lb. Std. List, Per Set \$3.00 Each Set \$1.49



TB 17—Set of three. Consists of one each Nos. 4, 5 and 6; weight per set $\frac{1}{2}$ lb. Std. List, Per Set \$2.35 Each Set 1.19

One set in a dove-tailed, slide-covered wood box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SCREW EXTRACTORS

GREENFIELD—LITTLE GIANT



Due to its unique design, it will feed itself into a hole drilled in object to be extracted instead of having to be "hammered" in. It takes a quick and positive grip, which will start the most deeply embedded screw or stud, and turn it out on its own threads. This useful high quality tool is forged from finest steel and designed for long service.

Nos.	TB 801	TB 802	TB 803
Diameter inches, Small end	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$
Large end	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
Length thread, inches	$\frac{1}{2}$	$\frac{3}{4}$	1
Length over all, inches	2	2 $\frac{3}{8}$	2 $\frac{1}{2}$
Size drill required, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
For screws and bolts, inches	$\frac{3}{8}$ - $\frac{1}{4}$	$\frac{1}{4}$ - $\frac{1}{2}$	$\frac{1}{2}$ - $\frac{3}{4}$
Standard List, Each	\$0.55	.60	.65
Each	\$0.30	.33	.35

Nos.	TB 804	TB 805	TB 806
Diameter inches, Small end	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
Large end	$\frac{1}{2}$	$\frac{3}{4}$	1
Length thread, inches	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$
Length over all, inches	3	3 $\frac{3}{8}$	3 $\frac{3}{4}$
Size drill required, inches	$\frac{1}{2}$	$\frac{3}{4}$	1
For screws and bolts, inches	$\frac{1}{2}$ - $\frac{3}{8}$	$\frac{3}{8}$ - $\frac{1}{2}$	$\frac{1}{2}$ - $\frac{3}{4}$
Standard List, Each	\$0.75	.85	1.00
Each	\$0.39	.45	.55

Average weight 1 ounce to 4 ounces.
Packing—bulk.



Most Popular Sizes

Size range sufficient for most broken screws and studs that have to be removed in garage and machine shop. Neatly grouped in wood stand.

TB 1815—Set of five. Consists of 1 each TB 801, TB 802, TB 803, TB 804 and TB 805. Weight per set $\frac{1}{2}$ lb. List, Per Set \$3.00 Per Set \$1.49

TB 1817—Set of three. Consists of 1 each TB 804, TB 805 and TB 806. Weight per set $\frac{5}{8}$ lb. List, Per Set \$2.35 Per Set 1.19

One set in a carton, with natural finish wood stand.

CLEVELAND CLE-FORGE HIGH SPEED DRILLS

• In these drills are united all the best features of both forged and milled drills—such as strength, penetrating ability, cutting quality and accuracy.

• Made of the finest selected forged steel, heat-treated, accurately machined, milled and finely finished—to assure long, outstanding service.

TB 940—TAPER SHANK

TAPER SHANK No. 1

Diam., In.	Length Over Each	List, Per Doz.	Diam., In.	Length Over Each	List, Per Doz.
1/4	\$0.95	6 3/8	1/2	\$1.15	6 3/8
17/64	1.09	6 1/4	21/64	1.20	7 1/8
9/32	1.09	6 1/4	11/32	1.20	7 1/8
19/64	1.15	6 3/8	23/64	1.37	7 1/4

Twelve in a package. Average weight each 1 1/4 ozs.

TAPER SHANK No. 2

3/8	\$1.49	7 7/8	33/64	\$2.35	8 1/2
25/64	1.35	7 1/2	17/32	2.35	8 1/2
13/32	1.35	7 5/8	35/64	2.69	8 3/4
27/64	1.75	7 3/4	9/16	2.69	8 3/4
7/16	1.75	7 3/4	37/64	2.85	8 3/4
29/64	1.90	7 7/8	19/32	2.85	8 3/4
15/32	1.90	7 11/8	39/64	3.10	8 3/4
31/64	2.10	8 1/8	5/8	3.10	8 3/4
1/2	2.10	8 1/8			

Six in a package. Average weight each 2 1/4 to 4 1/4 ozs.

TAPER SHANK No. 3

41/64	\$3.69	9 7/8	53/64	\$5.45	10 3/4
21/32	3.69	9 7/8	27/32	5.45	10 3/4
43/64	4.10	9 7/8	55/64	5.75	10 3/4
11/16	4.10	9 7/8	7/8	5.75	10 3/4
45/64	4.45	10 3/4	57/64	6.00	10 7/8
23/32	4.45	10 3/4	29/32	6.00	10 3/4
47/64	4.85	10 3/4	59/64	6.30	10 3/4
3/4	4.85	10 3/4	15/16	6.30	10 3/4
49/64	4.95	10 3/4	61/64	6.95	11 1/4
25/32	4.95	10 3/4	31/32	6.95	11 1/4
51/64	5.20	10 3/4	63/64	7.30	11 1/4
13/16	5.20	10 3/4	1	7.30	11 1/4

One in a package. Average weight each 16 to 24 ozs.

TAPER SHANK No. 4

11/64	\$7.60	12 5/8	113/64	\$11.85	14
113/64	7.60	12 5/8	17/32	11.85	14
13/64	9.15	12 5/8	115/64	12.85	14
111/64	9.15	12 5/8	11/4	12.85	14
15/64	9.45	13 1/4	19/32	13.50	14 1/2
133/64	9.45	13 1/4	15/16	14.95	14 1/2
17/64	10.00	13 1/4	111/32	15.30	14 1/2
111/8	10.00	13 1/4	113/8	15.85	14 1/2
19/64	10.65	13 1/4	113/32	16.40	15
153/64	10.65	13 1/4	17/16	16.95	15
111/64	11.25	13 1/4	115/32	17.50	15
131/16	11.25	13 1/4	111/2	17.95	15

One in a package. Average weight each 2 3/8 to 4 1/4 lbs.

TAPER SHANK No. 5

117/32	\$20.45	16 1/2	129/32	\$31.95	17 3/4
19/16	21.95	16 1/2	115/16	33.45	17 3/4
119/32	23.35	17 1/4	131/32	34.50	17 3/4
15/8	24.45	17 1/4	2	35.45	17 3/4
121/32	25.15	17 1/4	21/16	36.75	17 3/4
111/16	25.95	17 1/4	21/8	38.75	17 3/4
123/32	26.90	17 1/4	23/16	42.75	17 3/4
13/4	27.85	17 1/4	21/4	45.40	17 3/4
125/32	28.75	17 3/4	40/25	47.75	17 3/4
113/16	29.50	17 3/4	23/8	49.95	17 3/4
127/32	30.45	17 3/4	27/16	61.75	18 3/4
17/8	31.75	17 3/4	21/2	64.25	18 3/4

One in a package. Average weight each 6 1/2 to 13 3/4 lbs.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

TB 917—STRAIGHT SHANK, SHORT SET

Diam., In.	Length Over Each	List, Per Doz.	Diam., In.	Length Over Each	List, Per Doz.
1/16	\$0.25	2 1/2	19/64	\$0.70	4 3/8
5/64	.25	2 5/8	5/16	.77	4 1/2
3/32	.25	2 3/4	21/64	.85	4 5/8
7/64	.30	2 7/8	11/32	.95	4 3/4
3/8	.30	3	23/64	1.05	4 7/8
9/64	.30	3 1/8	3/8	1.15	5
5/32	.30	3 1/4	25/64	1.25	5 1/8
11/64	.35	3 3/8	13/32	1.35	5 1/4
3/16	.35	3 1/2	27/64	1.40	5 3/8
13/64	.40	3 5/8	7/16	1.50	5 1/2
7/32	.45	3 3/4	29/64	1.60	5 5/8
15/64	.47	3 3/8	15/32	1.70	5 3/4
1/4	.50	4	31/64	1.80	5 7/8
17/64	.55	4 1/8	1/2	1.95	6
9/32	.65	4 1/4			

1/8 inch—48 in a package. Weight per dozen 6 ozs.

1/16 inch to 5/8 inch—12 in a package. Average weight per dozen 6 to 12 ozs.

11/16 to 1/2 inch—6 in a package. Average weight per dozen 12 to 25 1/2 ozs.

TB 918—STRAIGHT SHANK, WIRE GAUGE

Wire Gauge Nos.	Length Over Each	List, Per Doz.	Wire Gauge Nos.	Length Over Each	List, Per Doz.
1	\$0.55	4	31	\$0.30	2 3/4
2	.55	3 1/8	32	.30	2 1/4
3	.55	3 1/8	33	.30	2 1/4
4	.55	3 3/8	34	.30	2 5/8
5	.55	3 1/8	35	.30	2 3/8
6	.55	3 1/8	36	.30	2 3/8
7	.50	3 3/4	37	.25	2 1/2
8	.50	3 1/8	38	.25	2 3/8
9	.50	3 1/8	39	.25	2 7/8
10	.45	3 5/8	40	.25	2 3/8
11	.45	3 5/8	41	.25	2 3/8
12	.45	3 5/8	42	.25	2 3/8
13	.40	3 1/2	43	.25	2 1/4
14	.40	3 7/8	44	.25	2 3/8
15	.40	3 7/8	45	.25	2 3/8
16	.35	3 5/8	46	.20	2 1/8
17	.35	3 5/8	47	.20	2 1/8
18	.35	3 5/8	48	.20	2 1/8
19	.35	3 1/4	49	.20	2
20	.35	3 5/8	50	.20	1 11/8
21	.35	3 5/8	51	.20	1 11/8
22	.35	3 1/8	52	.20	1 7/8
23	.35	3 5/8	53	.20	1 11/8
24	.35	3 5/8	54	.20	1 11/8
25	.30	3	55	.20	1 3/4
26	.30	2 5/8	56	.20	1 11/8
27	.30	2 5/8	57	.20	1 11/8
28	.30	2 7/8	58	.20	1 5/8
29	.30	2 11/8	59	.20	1 5/8
30	.30	2 11/8	60	.20	1 5/8

Weight per dozen: No. 1—7 ozs.; No. 10, 4 ozs.; No. 20 to 30—4 ozs.; 31 to 37—1 oz.; No. 40—1/2 oz.

Packing—bulk.

CLEVELAND TAPER SHANK DRILLS

For Quick, Even Cutting



No. TB 106—Carbon Steel

Fit sockets Nos. 100/1, 102/1/2 and 104/1/2.

Diam., Inch	Each	Length Over All, Inches	Weight Each, Lbs.	Std. List, Each
# 1/8	\$0.45	5 1/8	1/8	\$0.45
# 9/64	.45	5 1/4	1/8	.45
# 5/32	.45	5 3/8	1/8	.45
# 11/64	.45	5 3/4	1/8	.50
# 3/16	.45	5 3/4	1/8	.50
# 13/64	.55	5 7/8	1/4	.55
# 7/32	.55	5 7/8	1/4	.55
# 15/64	.55	6 1/8	1/4	.60
# 1/4	.55	6 1/8	1/4	.60
# 17/64	.65	6 1/4	1/4	.65
# 9/32	.65	6 1/4	1/4	.65
# 19/64	.65	6 3/8	1/4	.70
# 5/16	.65	6 3/8	1/4	.70
# 21/64	.67	6 1/2	1/4	.75
# 11/32	.67	6 1/2	1/4	.75
# 23/64	.80	6 3/4	1/4	.80
# 3/8	.80	6 3/4	1/4	.80
# 25/64	.80	7	1/4	.90
# 13/32	.80	7	1/4	.90
# 27/64	1.00	7 1/4	3/4	1.00
# 7/16	1.00	7 1/4	3/4	1.00
# 29/64	1.00	7 1/2	3/4	1.10
# 15/32	1.00	7 1/2	3/4	1.10
# 31/64	1.15	7 3/4	3/4	1.20
# 1/2	1.15	7 3/4	3/4	1.20
# 33/64	1.15	8	3/4	1.30
# 17/32	1.15	8	3/4	1.30
# 35/64	1.25	8 1/4	3/4	1.40
# 9/16	1.25	8 1/4	3/4	1.40

Fit sockets Nos. 100/2, 102/2/3 and 104/2/3.

Diam., Inch	Each	Length Over All, Inches	Weight Each, Lbs.	Std. List, Each
# 37/64	\$1.45	8 1/2	3/4	\$1.50
# 19/32	1.45	8 1/2	3/4	1.50
# 39/64	1.45	8 3/4	3/4	1.60
# 5/8	1.45	8 3/4	3/4	1.60
# 41/64	1.60	9	3/4	1.70
# 21/32	1.60	9	3/4	1.70
# 43/64	1.60	9 1/4	3/4	1.80
# 11/16	1.60	9 1/4	1 1/2	1.80
# 45/64	1.80	9 1/2	1 1/2	1.90
# 23/32	1.80	9 1/2	1 1/2	1.90
# 47/64	1.80	9 3/4	1 1/2	2.00
# 3/4	1.80	9 3/4	1 1/2	2.00
# 49/64	2.00	9 3/8	1 1/2	2.10
# 25/32	2.00	9 7/8	1 1/2	2.10
# 51/64	2.00	10	1 1/2	2.20
# 13/16	2.00	10	1 1/2	2.20
# 53/64	2.35	10 1/4	1 1/2	2.40
# 27/32	2.35	10 1/4	1 1/2	2.40
# 55/64	2.35	10 1/2	1 1/2	2.60
# 7/8	2.35	10 1/2	1 1/2	2.60
# 57/64	2.50	10 3/8	1 1/2	2.80
# 29/32	2.50	10 5/8	1 1/2	2.80

* Forged from carbon steel for excellent performance.

No. TB 106—Carbon Steel

Fit sockets Nos. 100/3, 102/3/4 and 104/3/4.

Diam., Inches	Each	Length Over All, Inches	Weight Each, Lbs.	Std. List, Each
# 59/64	\$2.70	10 3/4	1 1/2	\$3.00
# 15/16	2.70	10 3/4	1 1/2	3.00
# 61/64	2.95	10 3/4	2 1/4	3.25
# 31/32	2.95	10 3/4	2 1/4	3.25
# 63/64	3.15	11	2 1/4	3.50
# 1	3.15	11	2 1/4	3.50
# 1 1/64	3.40	11 1/8	2 1/4	3.75
# 1 1/32	3.40	11 1/8	2 1/4	3.75
# 13/64	3.60	11 1/4	2 1/4	4.00
# 1 1/16	3.60	11 1/4	2 1/4	4.00
# 15/64	3.85	11 1/2	2 1/4	4.25
# 13/32	3.85	11 1/2	2 1/4	4.25
# 17/64	4.00	11 3/4	2 1/4	4.50
# 1 1/8	4.00	11 3/4	2 1/4	4.50
# 19/64	4.25	11 7/8	2 1/4	4.75
# 15/32	4.25	11 7/8	2 1/4	4.75
# 11 1/64	4.50	12	2 1/4	5.00
# 13/16	4.50	12	2 1/4	5.00
# 11 3/64	4.75	12 1/8	2 1/4	5.25
# 17/32	4.75	12 1/8	2 1/4	5.25
# 115/64	4.95	12 1/2	2 1/4	5.50
# 1 1/4	4.95	12 1/2	2 1/4	5.50

Fit sockets Nos. 100/4, 102/4/5 and 104/4/5.

Diam., Inches	Each	Length Over All, Inches	Weight Each, Lbs.	Std. List, Each
# 117/64	\$5.15	14 1/8	4	\$5.75
# 19/32	5.15	14 1/8	4	5.75
# 119/64	5.40	14 1/4	4	6.00
# 15/16	5.40	14 1/4	4	6.00
# 121/64	5.65	14 3/8	4	6.25
# 111/32	5.65	14 3/8	4	6.25
# 123/64	5.85	14 1/2	4	6.50
# 1 3/8	5.85	14 1/2	4	6.50
# 125/64	6.30	14 5/8	4	7.00
# 113/32	6.30	14 5/8	4	7.00
# 127/64	6.75	14 3/4	4	7.50
# 17/16	6.75	14 3/4	4	7.50
# 129/64	7.20	14 7/8	4	8.00
# 115/32	7.20	14 7/8	4	8.00
# 131/64	7.65	15	4	8.50
# 1 1/2	7.65	15	4	8.50
# 133/64	8.00	15 1/8	5	9.00
# 117/32	8.00	15 1/8	5	9.00
# 135/64	8.50	15 1/4	5	9.50
# 19/16	8.50	15 1/4	5	9.50
# 137/64	9.00	15 3/8	5	10.00
# 119/32	9.00	15 3/8	5	10.00
# 139/64	9.45	15 1/2	5	10.50
# 1 5/8	9.45	15 1/2	5	10.50
# 141/64	9.90	15 5/8	5	11.00
# 121/16	9.90	15 5/8	5	11.00
# 143/64	10.35	15 3/4	5	11.50
# 111/16	10.35	15 3/4	5	11.50
# 145/64	10.80	15 7/8	5	12.00
# 123/32	10.80	15 7/8	5	12.00
# 147/64	11.25	16	7	12.50
# 1 3/4	11.25	16	7	12.50
# 125/32	12.00	16 1/8	7	13.25
# 113/16	12.60	16 1/4	7	14.00
# 127/32	12.95	16 3/8	7	14.75
# 1 7/8	13.25	16 3/8	7	15.50
# 129/32	13.65	16 1/2	7	16.25
# 115/16	15.30	16 1/2	7	17.00
# 131/32	16.00	16 3/2	7	17.75
# 2	16.75	16 1/2	7	18.50

Packing—bulk.

* Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.
Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

STRAIGHT SHANK DRILLS



KEEN KUTTER

The finest straight shank drill on the market.

• Forged from highest grade tool steel, oil tempered to proper hardness to insure better performance and more satisfactory service. Polished shanks and points. Rust-proof. Sharp cutting edge drills quicker, with less effort.

No. TB K105—FRACTIONAL SIZES

Diam., Inch	Each	Length Over All, Inches	Weight Per Doz., Oz.	Std. List, Per Doz.
1/16	\$0.12	2 1/2	1 1/2	\$1.60
5/64	.12	2 3/8	1 1/2	1.65
3/32	.12	2 3/4	1	1.70
7/64	.12	2 7/8	1	1.75
1/8	.12	3	2	1.80
9/64	.12	3 1/8	2	1.85
5/32	.13	3 1/4	2 1/2	1.90
11/64	.13	3 3/8	3	2.00
3/16	.15	3 1/2	4	2.25
13/64	.17	3 3/8	4 1/2	2.50
7/32	.19	3 3/4	5 1/2	2.75
15/64	.21	3 7/8	6 1/2	3.00
1/4	.22	4	7 1/2	3.25
17/64	.25	4 1/8	8 1/2	3.50
9/32	.27	4 1/4	9 1/2	3.80
19/64	.29	4 3/8	11 1/2	4.00
5/16	.30	4 1/2	12 1/2	4.35
21/64	.33	4 5/8	14	4.70
11/32	.37	4 3/4	16	5.05
3/8	.43	5	20	6.00
13/32	.53	5 1/4	24	7.00
7/16	.63	5 1/2	28	8.50
15/32	.75	5 3/4	36	10.00
1/2	.90	6	40	12.00

One dozen in an envelope.



CLEVELAND

Forged from carbon steel for long performance.

TB 108—SHORT SET. FRACTIONAL SIZES

Diam., Inch	Each	Length Over All, Inches	Weight Per Doz., Lbs.	Std. List, Per Doz.
# 1/32	\$0.10	1 1/2	1 1/8	\$1.50
# 3/64	.10	1 3/4	1 1/8	1.55
1/16	.10	2 1/2	1 1/8	1.60
5/64	.10	2 5/8	1 1/2	1.65
3/32	.10	2 3/4	1 1/2	1.70
7/64	.11	2 7/8	1 1/2	1.75
1/8	.11	3	1 1/2	1.80
9/64	.11	3 1/8	1 1/2	1.85
5/32	.12	3 1/4	1 1/2	1.90
11/64	.12	3 3/8	1 1/2	2.00
3/16	.14	3 1/2	1 1/2	2.25
13/64	.16	3 5/8	1 1/2	2.50
7/32	.18	3 3/4	1 1/2	2.75
15/64	.20	3 7/8	1 1/2	3.00
1/4	.21	4	1 1/2	3.25
17/64	.23	4 1/8	1 1/4	3.50
9/32	.25	4 1/4	1 1/4	3.80
19/64	.27	4 3/8	1 1/4	4.00
5/16	.28	4 1/2	1 1/4	4.35
21/64	.31	4 5/8	1 1/4	4.70
11/32	.35	4 3/4	1 1/4	5.05
23/64	.37	4 7/8	1 1/4	5.50
3/8	.40	5	1 1/4	6.00
25/64	.47	5 1/8	2 5/8	6.50
13/32	.50	5 1/4	2 5/8	7.00
27/64	.55	5 3/8	2 5/8	7.75
7/16	.59	5 1/2	2 5/8	8.50
29/64	.65	5 5/8	2 5/8	9.25
15/32	.70	5 3/4	2 5/8	10.00
31/64	.75	5 7/8	2 5/8	11.00
1/2	.80	6	2 5/8	12.00

Packing—bulk.

STRAIGHT SHANK DRILLS



CLEVELAND

Used by many skilled machinists.

Forged from carbon steel for long performance. Tempered and polished.

TB 108A—WIRE GAUGE SIZES

Nos.	Each	Length Over All, Inches	Weight Per Doz., Oz.	Std. List, Per Doz.
1	\$0.19	4	6	\$2.75
2	.19	3 1/8	6	2.75
3	.19	3 1/8	6	2.75
4	.19	3 7/8	6	2.75
5	.19	3 1/8	6	2.75
6	.18	3 1/8	6	2.50
7	.18	3 3/4	6	2.50
8	.18	3 1/8	6	2.50
9	.18	3 1/8	6	2.50
10	.18	3 5/8	5	2.50
11	.15	3 5/8	5	2.25
12	.15	3 5/8	5	2.25
13	.15	3 1/2	5	2.25
14	.15	3 5/8	5	2.25
15	.15	3 5/8	5	2.25
16	.14	3 3/8	5	2.00
17	.14	3 5/8	5	2.00
18	.14	3 5/8	5	2.00
19	.14	3 1/4	5	2.00
20	.14	3 5/8	4	2.00
21	.13	3 5/8	4	1.90
22	.13	3 3/8	4	1.90
23	.13	3 5/8	4	1.90
24	.13	3 1/8	4	1.90
25	.13	3	4	1.90
26	.12	2 1/8	4	1.80
27	.12	2 1/8	4	1.80
28	.12	2 7/8	4	1.80
29	.12	2 1/8	4	1.80
30	.12	2 1/8	2	1.80
31	.12	2 3/4	2	1.75
32	.12	2 1/8	2	1.75
33	.12	2 1/8	2	1.75
34	.12	2 5/8	2	1.75
35	.12	2 5/8	2	1.75
36	.12	2 5/8	2	1.75
37	.12	2 1/2	2	1.75
38	.12	2 5/8	2	1.75
39	.12	2 5/8	2	1.75
40	.12	2 3/8	2	1.75
41	.12	2 5/8	2	1.70
42	.12	2 5/8	2	1.70
43	.12	2 1/4	2	1.70
44	.12	2 5/8	2	1.70
45	.12	2 5/8	2	1.70
46	.12	2 3/8	2	1.65
47	.12	2 5/8	2	1.65
48	.12	2 5/8	2	1.65
49	.12	2	2	1.65
50	.12	1 1/8	1	1.65
51	.12	1 1/8	1	1.60
52	.12	1 7/8	1	1.60
53	.12	1 1/8	1	1.60
54	.12	1 1/8	1	1.60
55	.12	1 3/4	1	1.60
56	.12	1 1/8	1	1.55
57	.12	1 1/8	1	1.55
58	.12	1 5/8	1	1.55
59	.12	1 5/8	1	1.55
60	.12	1 1/8	1	1.55

Packing—bulk.

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STRAIGHT SHANK DRILLS

- Will fit any standard hand, breast, post or bench drill.



CLEVELAND

Used by many skilled machinists. Forged from carbon steel for long performance.

TB 110—LONG SET

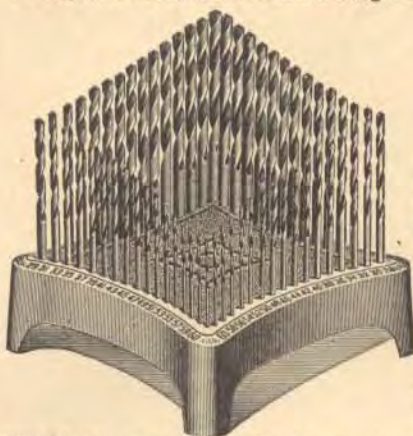
Diam., Inch	Each	Length Over All, Inches	Weight Per Doz., Ozs.	Std. List, Each
$\frac{3}{16}$	\$0.45	5 $\frac{1}{4}$	1	\$0.50
$\frac{7}{32}$	.50	5 $\frac{3}{8}$	1	.55
$\frac{1}{4}$	.55	6 $\frac{1}{8}$	1	.60
$\frac{9}{32}$	.59	6 $\frac{1}{4}$	4 $\frac{3}{4}$	.65
$\frac{5}{16}$	.63	6 $\frac{3}{8}$	4 $\frac{3}{4}$	.70
$\frac{11}{32}$	.67	6 $\frac{1}{2}$	4 $\frac{3}{4}$	.75
$\frac{3}{8}$	.73	6 $\frac{3}{4}$	4 $\frac{3}{4}$	.80
$\frac{13}{32}$	.80	7	4 $\frac{3}{4}$	.90
$\frac{7}{16}$	.90	7 $\frac{1}{4}$	4 $\frac{3}{4}$	1.00
$\frac{15}{32}$	1.00	7 $\frac{1}{2}$	4 $\frac{3}{4}$	1.10
$\frac{1}{2}$	1.10	7 $\frac{3}{4}$	4 $\frac{3}{4}$	1.20
$\frac{17}{32}$	1.17	8	13	1.30
$\frac{9}{16}$	1.25	8 $\frac{1}{4}$	13	1.40
$\frac{19}{32}$	1.35	8 $\frac{1}{2}$	13	1.50
$\frac{5}{8}$	1.45	8 $\frac{3}{4}$	13	1.60
$\frac{21}{32}$	1.55	9	13	1.70
$\frac{11}{16}$	1.60	9 $\frac{1}{4}$	13	1.80
$\frac{23}{32}$	1.70	9 $\frac{1}{2}$	13	1.90
$\frac{3}{4}$	1.80	9 $\frac{3}{4}$	13	2.00
# $\frac{13}{16}$	2.00	10	28	2.20
# $\frac{7}{8}$	2.35	10 $\frac{1}{2}$	28	2.60
# $\frac{29}{32}$	2.50	10 $\frac{3}{4}$	28	2.80
# $\frac{15}{16}$	2.75	10 $\frac{15}{16}$	28	3.00
# 1	3.15	11	28	3.50

Packing—bulk.

STRAIGHT SHANK DRILLS

CLEVELAND—IN SETS

- Will fit any standard hand, breast, post or bench drill.
- Forged from carbon steel for long life.



SHORT SET

- Assures fast, accurate cutting and long service.

Mounted With Oxidized Copper Finish Composition Metal Stand. Will not rust. Especially useful in tool rooms and on mechanics' benches. Size of drill each hole will hold stamped in stand. Selection is made easy because even numbers are

placed on one side and odd on the other.
60 drills, steel wire gauge. Nos. 1 to 60.

TB 80—Weight per set 2 $\frac{1}{4}$ lbs.

Std. List Per Set \$14.35 Per Set \$11.75

Drills in a wood box; stand in a carton.



Here's a compact, handy set of drills to use around the home and farm. Ideal for radio repairs and minor auto work.

- Drills neatly encased in a wooden cylinder 1 $\frac{1}{4}$ x4 $\frac{3}{8}$ inches with knurled edge nicked cap which can be rotated so that the size drill you want can be easily and quickly found. Cylinder protects drills from dust and moisture.

Set of 8 drills—each $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$ and $\frac{5}{8}$ inches.

TB 26—Weight per set $\frac{1}{2}$ lb.

Std. List Per Set \$1.90 Per Set \$1.50

Six sets in a carton.

FLUTED SHANK DRILLS



KEEN KUTTER

Expertly constructed for quick, easy cutting.

- For use in blacksmiths' drill presses. Drills metal or wood.

Forged from highest grade tool steel, oil tempered to proper hardness to insure better performance and more satisfactory service. Polished shanks and points. Rust-proof.

Shank length 2 $\frac{1}{2}$ inches, diameter $\frac{1}{2}$ inch.

TB K112—FRACTIONAL SIZES

Size, Inch	Each	Length Over All, Inches	Weight Each, Oz.	Std. List, Each	Size, Inch	Each	Length Over All, Inches	Weight Each, Oz.	Std. List, Each
$\frac{1}{8}$	\$0.40	4 $\frac{7}{8}$	2 $\frac{1}{4}$	\$0.45	$\frac{19}{32}$	1.09	6	4 $\frac{3}{4}$	\$1.20
$\frac{5}{32}$	.40	4 $\frac{7}{8}$	2 $\frac{1}{4}$	.45	$\frac{3}{8}$	1.09	6	5	1.30
$\frac{3}{16}$	.45	5 $\frac{1}{8}$	2 $\frac{1}{2}$	.50	$\frac{21}{32}$	1.25	6	5 $\frac{1}{4}$	1.40
$\frac{7}{32}$	.49	5 $\frac{1}{8}$	2 $\frac{1}{2}$	.55	$\frac{11}{16}$	1.35	6	5 $\frac{1}{2}$	1.50
$\frac{1}{4}$	.55	6	2 $\frac{1}{2}$	.60	$\frac{23}{32}$	1.45	6	5 $\frac{3}{4}$	1.60
$\frac{9}{32}$	.60	6	2 $\frac{3}{4}$	.65	$\frac{3}{4}$	1.50	6	6	1.70
$\frac{5}{16}$	.63	6	2 $\frac{3}{4}$	.70	$\frac{25}{32}$	1.60	6	6 $\frac{1}{2}$	1.80
$\frac{11}{32}$	.67	6	3	.75	$\frac{13}{16}$	1.70	6	7	1.90
$\frac{3}{8}$	.72	6	3	.80	$\frac{27}{32}$	1.80	6	7 $\frac{1}{4}$	2.00
$\frac{13}{32}$	.75	6	3 $\frac{1}{4}$	.85	$\frac{7}{8}$	1.89	6	7 $\frac{3}{4}$	2.10
$\frac{7}{16}$	.80	6	3 $\frac{1}{2}$	.90	$\frac{29}{32}$	1.98	6	8	2.20
$\frac{15}{32}$	.85	6	3 $\frac{3}{4}$	.95	$\frac{15}{16}$	2.10	6	8 $\frac{1}{2}$	2.30
$\frac{1}{2}$	.90	6	4	1.00	$\frac{31}{32}$	2.15	6	9	2.40
$\frac{17}{32}$	.95	6	4	1.05	1	2.25	6	9 $\frac{1}{2}$	2.50
$\frac{9}{16}$	.98	6	4 $\frac{1}{2}$	1.10					

Individually wrapped and labeled. Twelve in a wood box.

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FLUTED SHANK DRILLS

- For use in blacksmiths' drill presses. Drills metal or wood.



CLEVELAND

Forged from carbon steel to assure long duty.
Shank length 2½ inches, diameter ½ inch.

TY 120—Fractional Sizes

Diam., Inches	Each	Length Over All, Inches	Weight Per Doz., Oz.	Std. List, Each
1/8	\$0.35	4 7/8	3 1/3	\$0.45
5/32	.37	4 7/8	4	.45
3/16	.39	5 5/8	4	.50
7/32	.45	5 5/8	4	.55
1/4	.48	6	4	.60
9/32	.52	6	4 1/2	.65
5/16	.55	6	4 1/2	.70
11/32	.60	6	4 1/2	.75
3/8	.65	6	4 1/2	.80
13/32	.69	6	5 1/4	.85
7/16	.73	6	5 1/4	.90
15/32	.77	6	5 1/4	.95
1/2	.80	6	5 1/4	1.00
17/32	.85	6	6 1/2	1.05
9/16	.89	6	6 1/2	1.10
19/32	.95	6	6 1/2	1.20
5/8	1.00	6	6 1/2	1.30
21/32	1.10	6	8	1.40
11/16	1.20	6	8	1.50
23/32	1.30	6	8	1.60
3/4	1.35	6	8	1.70
# 25/32	1.45	6	9 1/2	1.80
# 13/16	1.50	6	9 1/2	1.90
# 27/32	1.60	6	9 1/2	2.00
# 7/8	1.70	6	9 1/2	2.10
# 29/32	1.75	6	11 1/2	2.20
# 15/16	1.85	6	11 1/2	2.30
# 31/32	1.95	6	11 1/2	2.40
# 1	2.10	6	11 1/2	2.50
# 1 1/32	2.20	6	16	2.60
# 1 1/16	2.30	6	16	2.70
# 1 3/32	2.40	6	16	2.80
# 1 1/8	2.50	6	16	2.90
# 1 5/32	2.65	6	16	3.00
# 1 3/16	2.75	6	16	3.10
# 1 7/32	2.85	6	16	3.20
# 1 1/4	2.95	6	16	3.30
# 1 5/16	3.25	6	24	3.60
# 1 3/8	3.50	6	24	3.90
# 1 7/16	3.75	6	24	4.20
# 1 1/2	4.00	6	24	4.50

Packing—bulk.

BIT STOCK DRILLS

- Will fit all bit braces. Will drill steel, iron or other metals as well as wood.

KEEN KUTTER

Here's the Best Bit Stock Drill Money Can Buy

- Forged from highest grade tool steel, oil tempered to proper hardness to insure better performance and more satisfactory service. Full polished. Rust-proof finish. Sharp cutting edges drill quicker and with less effort.



No. TB K109

Diameter, Inch	Each	Length Over All, Inches	Wt. Per Doz., Lbs.	Std. List, Per Doz.
2/32	\$0.15	3 1/4	1/2	\$2.50
3/32	.17	3 1/2	1/2	2.70
4/32	.17	4	1/2	3.00
5/32	.19	4 1/4	1/2	3.50
6/32	.22	4 3/4	1/2	4.00
7/32	.24	5	7/8	4.50
8/32	.27	5 1/4	7/8	5.00
9/32	.33	5 1/2	7/8	6.00
10/32	.39	5 1/2	1 1/2	7.00
11/32	.43	6	1 1/2	8.00
12/32	.47	6	1 1/2	8.50
13/32	.55	6 1/2	1 1/2	9.25
14/32	.60	6 1/2	2 1/4	10.50
15/32	.70	7	2 1/4	11.75
16/32	.75	7	2 1/4	13.00
17/32	.80	7 1/2	4 1/4	14.25
18/32	.87	7 1/2	4 1/2	15.00
20/32	1.10	7 1/2	4 1/2	18.00
22/32	1.25	7 1/2	4 1/2	21.00
24/32	1.40	7 1/2	4 1/2	24.00

Packing: 2/32 to 1 1/2—One dozen in a carton.
1 7/8 and larger—bulk.



IN SETS

In compact varnished hardwood cylindrical box that protects drills from dirt and rust and prevents loss of drills when not in use.

Consists of 1 each: 2, 3, 4, 5, 6, 7, 8, 10, 12/32 drills.

TB K109M—Weight
per set 1 1/4 lbs.

Each Set \$2.75

One set in a wood box.

Modernize Your Living Room with **SIMMONS** Furniture.
Highest Quality Materials and Workmanship Assure Years of
Continuous Comfort. New, Modern Styling and Fabrics
Will Make Your Home Most Attractive

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BIT STOCK DRILLS



SIMMONS

Will give long satisfactory service.

- Forged from high grade tool steel, oil tempered and polished.

No. TB S109

Diameter, Inch	Each	Length Over All, Inches	Weight Per Doz., Lbs.
$\frac{3}{32}$	\$0.15	$3\frac{1}{2}$	$\frac{1}{2}$
$\frac{4}{32}$	.15	4	$\frac{1}{2}$
$\frac{5}{32}$	.17	$4\frac{1}{4}$	$\frac{1}{2}$
$\frac{6}{32}$	.20	$4\frac{3}{4}$	$\frac{1}{2}$
$\frac{7}{32}$	.22	5	$\frac{7}{8}$
$\frac{8}{32}$	.25	$5\frac{1}{4}$	$\frac{7}{8}$
$\frac{9}{32}$	.29	$5\frac{1}{2}$	$\frac{7}{8}$
$\frac{10}{32}$	.35	$5\frac{1}{2}$	$1\frac{1}{2}$
$\frac{12}{32}$	.40	6	$1\frac{1}{2}$
$\frac{14}{32}$	.55	$6\frac{1}{2}$	$2\frac{1}{4}$
$\frac{16}{32}$	.65	7	$2\frac{1}{4}$
$\frac{20}{32}$	.90	$7\frac{1}{2}$	$4\frac{1}{2}$

Packing: $\frac{3}{32}$ to $1\frac{1}{32}$ —One dozen in a carton.
 $2\frac{3}{32}$ —bulk.



CLEVELAND

Forged tool steel, oil tempered and polished.

No. TB 114

Diameter, Inches	Each	Length Over All, Inches	Wt. Per Doz., Lbs.	Std. List, Per Doz.
$\frac{1}{16}$	\$0.15	$3\frac{1}{8}$	$\frac{1}{2}$	\$2.50
$\frac{3}{32}$	.17	4	$\frac{1}{2}$	2.70
$\frac{1}{8}$	.17	4	$\frac{1}{2}$	3.00
$\frac{5}{32}$	.19	$4\frac{1}{4}$	$\frac{1}{2}$	3.50
$\frac{3}{16}$	.22	$4\frac{1}{2}$	$\frac{7}{8}$	4.00
$\frac{7}{32}$	.24	$4\frac{3}{4}$	$\frac{7}{8}$	4.50
$\frac{1}{4}$	.27	5	$\frac{7}{8}$	5.00
$\frac{9}{32}$	.33	$5\frac{1}{4}$	$\frac{7}{8}$	6.00
$\frac{5}{16}$	.39	$5\frac{1}{2}$	$1\frac{1}{2}$	7.00
$\frac{11}{32}$	.43	$5\frac{3}{4}$	$1\frac{1}{2}$	8.00
$\frac{3}{8}$	.47	6	$1\frac{1}{2}$	8.50
$\frac{13}{32}$	.55	$6\frac{1}{4}$	$1\frac{1}{2}$	9.25
$\frac{7}{16}$	.60	$6\frac{1}{2}$	$2\frac{1}{4}$	10.50
$\frac{15}{32}$	.70	$6\frac{3}{4}$	$2\frac{1}{4}$	11.75
$\frac{1}{2}$	.75	7	$2\frac{1}{4}$	13.00
$\frac{17}{32}$	.80	$7\frac{1}{4}$	$4\frac{1}{2}$	14.25
$\frac{9}{16}$	.87	$7\frac{1}{2}$	$4\frac{1}{2}$	15.50
$\frac{19}{32}$	.95	$7\frac{1}{2}$	$4\frac{1}{2}$	16.75
$\frac{5}{8}$	1.10	$7\frac{1}{2}$	$4\frac{1}{2}$	18.00
$\frac{11}{16}$	1.25	$7\frac{1}{2}$	$4\frac{1}{2}$	21.00
$\frac{3}{4}$	1.40	$7\frac{1}{2}$	$4\frac{1}{2}$	24.00
$\frac{13}{16}$	1.55	$7\frac{1}{2}$	5	27.00
$\frac{7}{8}$	1.70	$7\frac{1}{2}$	5	30.00
$\frac{15}{16}$	1.90	$7\frac{1}{2}$	5	33.00
1	2.10	$7\frac{1}{2}$	5	36.00

Packing—bulk.

COMBINED DRILLS AND COUNTERSINKS



GREENFIELD

Carbon steel.

Included angle 60°.

Nos.	Each	Diameter Drill Body, Inches	Point, Inches	Length Over All, Inches	Std. List, Per Doz.
TB 160D1	\$0.39	$\frac{1}{16}$	$\frac{3}{16}$	2	3.25
TB 160E1	.45	$\frac{3}{16}$	$\frac{3}{8}$	$2\frac{1}{8}$	3.50
TB 160E2	.45	$\frac{3}{16}$	$\frac{1}{8}$	$2\frac{1}{8}$	3.50
TB 160F1	.55	$\frac{1}{8}$	$\frac{3}{8}$	$2\frac{3}{4}$	4.50
TB 160F2	.55	$\frac{1}{8}$	$\frac{3}{8}$	$2\frac{3}{4}$	4.50

One dozen in a carton; average weight each $\frac{1}{4}$ ounce to $1\frac{1}{4}$ ounces.

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STEEL SLEEVES



CLEVELAND

For taper shank drills.

- Designed to prevent battering or upsetting of corners of drill tangs. Bevel in upper surface of drift-slot gives wedge-shaped drift flat bearing surfaces above and below, without lessening driving powers of tang by having to bevel it. Insures increased efficiency and least possible wear.

Nos.	Each	No. of Hole and Outside Skt. Fitting No.	Weight Each, Lbs.	Std. List, Each
TB 104/1-2	\$0.79	1 2	$\frac{1}{2}$	\$1.80
TB 104/1-3	.98	1 3	$\frac{1}{2}$	2.40
TB 104/2-3	.98	2 3	$\frac{1}{2}$	2.40
TB 104/2-4	1.29	2 4	$\frac{1}{2}$	3.00
TB 104/3-4	1.29	3 4	1	3.00
TB 104/3-5	3.29	3 5	1	4.40
TB 104/4-5	3.29	4 5	$1\frac{1}{4}$	4.40

Packing—bulk.

DRILL CHUCKS

JACOBS—PLAIN BEARING

IMPROVED TYPE



Medium duty model. For machine use and all portable tools.

For tapered arbors and spindles.

Light in weight, well balanced and durable. Key operation provides easy tightening and release without rotating spindle.

Hardened steel body. All parts accurately machined and milled. Practically unbreakable. Complete with key.

Nos.	Std. List and Retail Price, Each	Cap., In.	Taper Hole	Lgth., In.	Dia., In.
TY 7	\$4.50	0 to $\frac{1}{4}$	2	$2\frac{1}{8}$	$1\frac{1}{8}$
TY 30	5.50	0 to $\frac{1}{8}$	2	$2\frac{3}{8}$	$1\frac{1}{16}$
TY 32	5.50	0 to $\frac{3}{8}$	2	$2\frac{7}{8}$	$1\frac{3}{4}$
TY 34	7.50	0 to $\frac{1}{2}$	6	$3\frac{1}{8}$	$2\frac{1}{8}$

Approximate weight each $\frac{1}{2}$ to $1\frac{3}{4}$ lbs.

EXTRA KEYS FOR JACOBS DRILL CHUCKS

Nos.	Each	For Chuck, Nos.	Std. List, Each
TY 7K	\$0.30	TY 7	\$0.30
TY 30K	.40	TY 30	.40
TY 32K	.40	TY 32	.40
TY 34K	.50	TY 34	.50

Weight $\frac{1}{8}$ lb.

One in a box.

EXPERIENCED HOUSEWIVES

Go for

Polly Prim

KITCHENWARE

HAND REAMERS

GREENFIELD

Precision Built of Highest Grade

For producing smooth, accurate finished holes to a pre-determined size, removing but a few thousandths of metal at a cut.

Highest grade carbon steel, correctly hardened.



Nos.	Each	Diam., In.	Lgth. Flute, In.	Lgth. Over All, In.	Wt. Each, Ozs.	Std. List, Each
TY 400 ³ / ₁₆	\$1.20	³ / ₁₆	1 ³ / ₈	3 ¹ / ₂	1	\$1.20
TY 400 ¹ / ₈	1.40	¹ / ₈	1 ⁷ / ₈	3 ³ / ₈	1	1.40
TY 400 ¹ / ₄	1.40	¹ / ₄	2	4	1	1.40
TY 400 ³ / ₃₂	1.50	³ / ₃₂	2 ¹ / ₈	4 ¹ / ₄	1 ¹ / ₄	1.50
TY 400 ⁵ / ₁₆	1.50	⁵ / ₁₆	2 ¹ / ₄	4 ¹ / ₂	1 ¹ / ₂	1.50
TY 400 ¹¹ / ₃₂	1.60	¹¹ / ₃₂	2 ³ / ₈	4 ³ / ₄	1 ³ / ₄	1.60
TY 400 ³ / ₈	1.60	³ / ₈	2 ¹ / ₂	5	2 ³ / ₄	1.60
TY 400 ¹³ / ₃₂	1.75	¹³ / ₃₂	2 ⁵ / ₈	5 ¹ / ₄	3	1.75
TY 400 ⁷ / ₁₆	1.75	⁷ / ₁₆	2 ³ / ₄	5 ¹ / ₂	3 ¹ / ₄	1.75
TY 400 ¹⁵ / ₃₂	1.90	¹⁵ / ₃₂	2 ⁷ / ₈	5 ³ / ₄	3 ¹ / ₂	1.90
TY 400 ¹ / ₂	1.90	¹ / ₂	3	6	4	1.90
TY 400 ¹⁷ / ₃₂	2.00	¹⁷ / ₃₂	3 ¹ / ₈	6 ¹ / ₄	5	2.00
TY 400 ⁹ / ₁₆	2.00	⁹ / ₁₆	3 ¹ / ₄	6 ¹ / ₂	7	2.00
TY 400 ¹⁹ / ₃₂	2.20	¹⁹ / ₃₂	3 ³ / ₈	6 ³ / ₄	8	2.20
TY 400 ⁵ / ₈	2.20	⁵ / ₈	3 ¹ / ₂	7	9	2.20
TY 400 ²¹ / ₃₂	2.40	²¹ / ₃₂	3 ¹ / ₂	7 ¹ / ₈	10	2.40
TY 400 ¹¹ / ₁₆	2.40	¹¹ / ₁₆	3 ⁷ / ₈	7 ³ / ₄	12	2.40
TY 400 ²³ / ₃₂	2.60	²³ / ₃₂	4 ¹ / ₈	8 ¹ / ₈	13	2.60
TY 400 ³ / ₄	2.60	³ / ₄	4 ³ / ₈	8 ³ / ₄	15	2.60
TY 400 ¹³ / ₁₆	2.80	¹³ / ₁₆	4 ⁹ / ₁₆	9 ¹ / ₄	16	2.80
TY 400 ⁷ / ₈	3.10	⁷ / ₈	4 ⁷ / ₈	9 ³ / ₄	23	3.10
TY 4001	3.70	1	5 ¹ / ₈	10 ⁷ / ₈	34	3.70

Packing—bulk.

BIT STOCK REAMERS

KEEN KUTTER—Fluted

- Forged from highest grade tool steel, oil tempered. Straw color finish.



Length flute 4³/₈ inches. Length over all 6¹/₄ inches.
Cuts from ¹/₈ to ¹/₂ inch.

TB K116—Weight each 2¹/₂ ounces.....Each \$0.85

Twelve in a carton.



Length flute 3¹/₈ inches. Length over all 5¹/₄ inches.
Cuts from ³/₈ to ⁷/₈ inch.

TB K126—Weight each 4 ounces.....Each \$1.25

Six in a carton.

Nos.	Each	Length, Inches	Width Top, Inches	Height, Inches	Size Hardie Hole, Inch	Weight Each, Lbs.
TB 6V	\$11.50	17 ¹ / ₂	3 ¹ / ₄	7 ¹ / ₄	⁵ / ₈	60
TB 8V	13.50	19 ¹ / ₄	3 ¹ / ₄	8 ⁷ / ₈	³ / ₄	80
TB 10V	15.50	20 ¹ / ₄	3 ¹ / ₂	9 ¹ / ₂	⁷ / ₈	100
*TB 12V	17.95	20 ³ / ₄	3 ³ / ₄	10 ¹ / ₂	1	120
*TB 15V	23.50	22 ⁵ / ₈	4	11 ¹ / ₄	1	150

Packing—bulk.

* Goods marked thus (*) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SPIRAL FLUTED BURNING REAMERS



For Pipe and for Countersinking.

With Bit Brace
Square Shank

- Designed especially for removing burrs caused by cutting pipe.
- Ideal for countersinking and enlarging holes in sheet metal.
- Forged from finest tool steel for long duty. Special flutes will not clog, chip or crack.

Length flute 2³/₈ inches. Length over all 4⁷/₈ inches. Size, at point ¹/₈ inch, at large end 1¹/₈ inches.

Capacity pipe ¹/₄ to 1¹/₄ inches.

TR 242¹/₂—Weight each 2 lbs.

Std. List, Each \$1.50 Each \$1.50

Packing—bulk.

RATCHET PIPE REAMERS



TOLEDO

- Here's a high grade quality reamer at a low price.
- High speed steel cutter blades cast solidly in head. Easily resharpened when dull.
- Blades ground with proper clearance for each pipe size, assuring easier cutting.

Polished steel handle 11¹/₄ inches long, 1 inch in diameter. Black enameled iron head.

Capacity ³/₈ to 3 inches. Length over all 16¹/₄ inches.

TY R382—Weight each 8 lbs.

Std. List, Each \$5.60 Each \$7.95

Packing—bulk.

ANVILS



With Solid One-Piece Tool Steel Face

Thoroughly serviceable for machine shops, farms, garages, general repair shops and industrial plant repair shops.

Gray cast-iron body with tool steel face correctly tempered, accurately ground and highly polished—thoroughly welded to body. Horn covered with, and its extremity entirely made of tough untempered steel — assuring greater strength and longer life.

POST DRILLS

- Ideal for general use around shop or farm. Meets requirements of every skilled mechanic. Precision built for a long life of full service. Insures accurate drilling, reaming and countersinking in plates, angles, girders, castings, etc. Ball-bearing construction provides free-action working parts. Takes straight shank drill bits. Adjustable round table, slotted. Securely bolted to strong natural finish hardwood upright.

BUFFALO

Simple to operate. Rigid and durable design, careful attention being given to distribution of metal along lines of greatest strain. Firmly bolted to natural finish hardwood upright. Ball-bearing spindle assures easy action. Painted cast-iron frames, gears, feed wheel, fly wheel and table. Sturdy steel shafts, axles, chucks and cranks.



Ball Bearing, With Double Geared Self-Feed

Feed has 2 $\frac{1}{4}$ -inch run. Will drill holes up to one inch, to center of 12-inch circle. Chuck fitted for drills with $\frac{1}{4}$ -inch straight shank. Diameters, inches: shaft 1 $\frac{1}{4}$, chuck 1 $\frac{1}{4}$, table 7, feed wheel 5, drive wheel 6, fly wheel 12. Crank length 14 inches. Upright: length 30 inches, width 4 $\frac{1}{2}$ inches, thickness 1 $\frac{1}{2}$ inches. Height over all 36 inches. Run of table 10 inches.

TY 151—Weight each 65 lbs. Each \$14.45

Ball Bearing—Hand and Automatic Feed—Single Speed

Designed and built to provide a practical, sturdy, accurate small drill at a reasonable price. Operating crank adjustable for heavy drilling, has smooth wood grip. Adjustable table. Fly wheel grooved for V or $\frac{1}{4}$ -inch flat belt.

Feed has 1 $\frac{1}{2}$ -inch run. Will drill holes up to $\frac{1}{2}$ inch, to center of 7-inch circle. Chuck fitted for drills with $\frac{1}{2}$ -inch straight shank. Diameters, inches: shaft $\frac{3}{4}$, chuck 1 $\frac{1}{4}$, table 4 $\frac{1}{2}$, feed wheel 4, fly wheel 6 $\frac{1}{2}$. Crank length 13 inches. Upright: length 26 inches, width 2 $\frac{1}{2}$ inches, thickness 1 $\frac{3}{8}$ inches. Height over all 26 inches. Run of table 8 inches.

TR 50—Weight each 27 lbs. Each \$5.95



CHAMPION

Ball Bearing; Automatic Feed Adjustable to 4 Speeds and Hand Feed

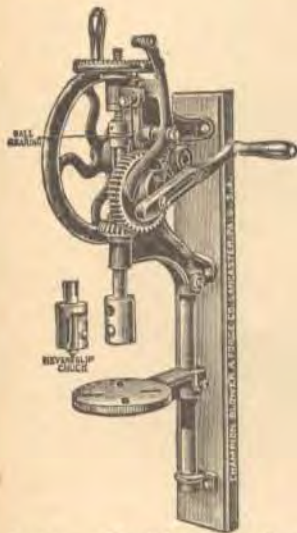
Back-geared, self-feed. Highest grade lathe-turned tool steel spindle with end-thrust ball bearings, saves 50% in power. Adjustable crank has smooth wood grip. All parts machine-jigged and interchangeable. Painted cast-iron frames, gears, feed wheel, fly wheel crank and table.

Feed has 3-inch run. Will drill holes up to $\frac{5}{8}$ inch, to center of 12-inch circle. Champion Never Slip chuck fitted for drills with $\frac{1}{2}$ -inch straight shank. Diameters, inches: shaft $\frac{3}{4}$, chuck 2, table 6, feed wheel 5 $\frac{1}{4}$, drive wheel 5 $\frac{1}{4}$, fly wheel 12. Crank length 9 $\frac{1}{2}$

inches. Upright: length 29 inches, width 4 $\frac{1}{2}$ inches, thickness 1 $\frac{1}{4}$ inches. Run of table 8 $\frac{1}{4}$ inches. Height over all 31 inches.

TR 146—Weight each 60 lbs. Each \$10.45

One in a crate.



PORTABLE FORGES

KLICKER

Ideal for light or heavy duty work.

- Heavy one-piece drawn steel bowl. Perfectly formed pressed sheet steel hood or shield. Three steel legs securely braced at center.
- Easy-action hand crank type blower. Oil- and dust-proof one-piece sheet steel case 7 $\frac{1}{2}$ inches in diameter.
- Steel spur gears throughout with gear ratio of 36 to 1.
- Straight blade pressed steel fan powerful enough to provide high pressure white heat blast with little effort.



With Wind Guard

Height over all 42 inches, to top of bowl 30 inches.

Diameter of bowl 18 inches.

TY 100K—Weight each 48 lbs. Each \$9.95



With Half Hood

Height over all 49 inches, to top of bowl 33 inches.

Diameter of bowl 18 inches.

TY 161K—Weight each 52 lbs. Each \$12.50

One in a crate.



COLD CHISELS

Silicon manganese alloy steel.

Nos.	Each	Size of Square at Eye, Inches	Cutting Edge, Inches	Length, Inches	Wt., Each, Lbs.
TB 12901 $\frac{1}{4}$	\$1.10	1 $\frac{1}{4}$	1 $\frac{1}{4}$	6 $\frac{1}{2}$	2
TB 12901 $\frac{3}{8}$	1.19	1 $\frac{3}{8}$	1 $\frac{3}{8}$	6 $\frac{3}{4}$	2 $\frac{1}{2}$
TB 12901 $\frac{1}{2}$	1.39	1 $\frac{1}{2}$	1 $\frac{1}{2}$	7	3



HOT CHISELS

Carbon tool steel.

Nos.	Each	Size of Square at Eye, Inches	Cutting Edge, Inches	Length, Inches	Wt., Each, Lbs.
TB 13001 $\frac{1}{4}$	\$1.10	1 $\frac{1}{4}$	1 $\frac{5}{8}$	7 $\frac{3}{4}$	2
TB 13001 $\frac{3}{8}$	1.19	1 $\frac{3}{8}$	1 $\frac{3}{4}$	7 $\frac{3}{4}$	2 $\frac{1}{2}$
TB 13001 $\frac{1}{2}$	1.39	1 $\frac{1}{2}$	2	8 $\frac{1}{4}$	3

Packing—bulk.

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REGULAR HARDIES

Carbon tool steel.

Nos.	Each	Size of Shank, Inches	Width Bit, Inches	Length, Inches	Wt. Each, Lbs.
TB 1310 $\frac{5}{8}$	\$0.65	$\frac{5}{8}$	1 $\frac{5}{8}$	6 $\frac{1}{8}$	1
TB 1310 $\frac{3}{4}$	.75	$\frac{3}{4}$	1 $\frac{7}{8}$	6 $\frac{3}{8}$	1 $\frac{1}{4}$
TB 1310 $\frac{7}{8}$	.85	$\frac{7}{8}$	2	6 $\frac{1}{2}$	1 $\frac{3}{4}$
TB 13101	.95	1	2 $\frac{1}{4}$	6 $\frac{3}{4}$	2

Packing—bulk.

BLACKSMITHS' TONGS STANLEY—ATHA—HORSESHOE BRAND



Straight Lip

"V" notch in each jaw—firmly hold square or round work.

Nos.	Each	Size Square, Inches	Length, Inches	Weight Each, Lbs.
TB 11C	\$1.19	$\frac{3}{8}$	20	2 $\frac{7}{8}$
TB 11D	1.19	$\frac{1}{2}$	20	2 $\frac{7}{8}$
TB 11E	1.30	$\frac{5}{8}$	22	3
TB 11G	1.39	$\frac{3}{4}$	22	3 $\frac{1}{4}$



Curved Lip—Fluted Jaws

For holding bolts or other round stock. Opening between jaws and hinge sufficient for bolt head.

Nos.	Each	Holds Rounds, Inches	Length, Inches	Weight Each, Lbs.
TB 12C	\$1.30	$\frac{3}{8}$	20	2 $\frac{7}{8}$
TB 12D	1.35	$\frac{1}{2}$	20	2 $\frac{7}{8}$
TB 12E	1.49	$\frac{5}{8}$	22	3
TB 12F	1.59	$\frac{3}{4}$	22	3
TB 12G	1.65	$\frac{7}{8}$	24	3 $\frac{1}{4}$

These tools are used mainly in connection with anvils. The quality and finish are unexcelled and entirely distinctive. All are attractively finished, with faces or bits polished.



REGULAR—WITH STRAIGHT LIPS

For holding thin flat work. Provides firm, secure grip. Easy action.

Solid wrought steel drop forged, oil finished.

TB 10—Length 20 inches. Weight per dozen
34 lbs. Each \$1.10

Packing—bulk.

BOLT CLIPPERS

NEW EASY—SWIVEL HEAD

Compound leverage assures easier clipping!



Highest quality materials and workmanship throughout. Japanned malleable iron compound lever handles with socket joints. Detachable drop forged, oil tempered steel cutting jaws clip smoothly, quickly.

High test special alloy steel swivel ball. Ball and socket joints and a positioning spring hold cutter head rigid in any position you want up to 90° either side of tool axis. It will cut easily in positions ordinarily inaccessible. It is also a more convenient tool to use in all usual positions.

Clipper cut jaws are beveled almost entirely from one side for close cutting. Withstands rough usage. By swiveling the head to a right angle, tool can be carried over shoulder—leaving the hands free to hold other tools, or to climb a pole or ladder. Can be stood upright on shop floor for quick use.

Nos.	Each	Length, Inches	Cuts Bolts up to, Inch	Cuts Soft Rods up to, Inch	Weight Each, Lbs.
TB 0SH	\$6.50	19	$\frac{5}{16}$	$\frac{1}{4}$	4
TB 1SH	7.95	25	$\frac{3}{8}$	$\frac{7}{8}$	6 $\frac{1}{4}$
TB 2SH	9.95	31	$\frac{1}{2}$	$\frac{3}{8}$	9 $\frac{3}{4}$

Packing—bulk.

PORTER'S NEW EASY



Compound Leverage for Clipping with Minimum Effort!

Highest quality materials and workmanship

throughout. Japanned malleable iron compound lever handles with socket joints. Rubber bumpers between handles. Detachable drop forged, tempered oil finish steel cutting jaws provide clean, quick clipping.

Nos.	Each	Length, Inches	Cuts Bolts up to, Inch	Weight Each, Lbs.
TB 1NE	\$5.75	24 $\frac{1}{2}$	$\frac{3}{8}$	5 $\frac{3}{4}$
TB 2NE	7.45	30	$\frac{1}{2}$	8 $\frac{3}{4}$
TB 3NE	9.95	36	$\frac{5}{8}$	11 $\frac{1}{2}$

EXTRA JAWS FOR "NEW EASY PATTERN" BOLT CLIPPERS

Nos.	Each	Weight Per Pair, Lbs.
TB 1NEJ	\$2.95	1 $\frac{1}{2}$
TB 2NEJ	3.75	2
TB 3NEJ	4.75	3

Compound Leverage for Easy Cutting!



Japanned malleable iron compound lever handles with steel pin bumper. Sharp-snipping cast steel cutting jaws, tempered oil finish.

TB 12—Cuts bolts up to $\frac{1}{4}$ inch. Length 12 inches. Weight each 1 $\frac{1}{2}$ lbs. Each \$2.75

Packing—bulk.

Buy and Try Anything with the
KEEN KUTTER
TRADEMARK
on it
You'll Be More Than Pleased

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

• Ideal for every workshop and home.

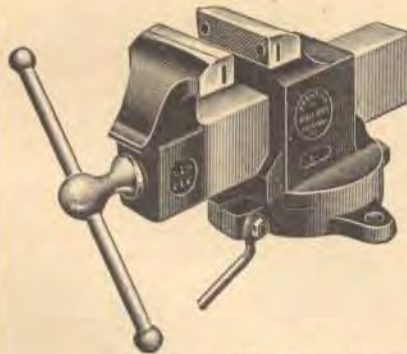
Patent Detachable and Interchangeable Alloy Steel Jaw Faces

- ## Precision Construction

A detailed illustration of a bench vice, showing its heavy cast-iron body, adjustable sliding jaw, and a long, polished metal handle with a spherical grip. The brand name 'W. & A. M.' is visible on the side of the fixed jaw.

**STATIONARY
BASE—
SOLID JAW**

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Length Closed, Inches	Weight Each, Lbs.
TB 513	\$14.75	3½	5	15¾	23
TB 514	16.45	4	6	17¼	42
TB 515	19.95	4½	7	19	55
TB 516	25.95	5	8	20¾	72



**SWIVEL BASE—
SOLID JAW**

New swivel base is a split ring squeezed against hub on body. Has great holding power and free action. Operates easily—a quarter turn on lever will let vise rotate freely through 360 degrees... or tighten immovably.

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Length Closed, Inches	Weight Each, Lbs.
TB 524	\$21.75	4	6	17¼	52
TB 525	25.75	4½	7	19	65
TB 526	38.75	5	8	20½	85

One in a carton.

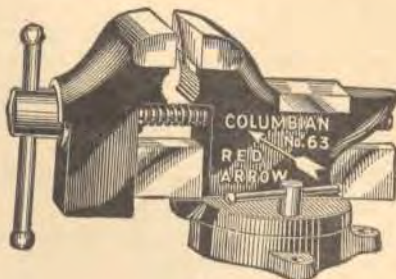
A detailed illustration of a heavy-duty bench vice. The word "KLICKE" is embossed on the fixed jaw. The sliding jaw has a threaded rod with a large, knurled handle. The base of the vice is mounted on a flat surface.

Here's a useful tool for every workshop! Vise grips work securely. Smooth-face anvil handy for flattening, forging, shaping. Hardened face and jaws. Sliding steel lever handle. Parallel and pipe jaws. Jaws 3 inches wide, of anvil 3x7 inches.

TB 3AK—Weight each 24 lbs.....Each \$4.59

Packing—bulk.

● Strong balanced cast-iron frame and heavy steel beam. Well supported anvil back jaw. Wide polished jaws. Heavy built-in pipe jaws. Cold rolled steel screw. Slip-proof screw collar. Forged ball ends on handle. Red enameled finish.



SWIVEL BASE

Swivel lock nut has adjustable handle for drawing lock bolt to any desired tightness.

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Holds Pipe, Inches	Weight Each, Lbs.
TB 63	\$1.95	3	3	¼ to 1¼	11
TB 63½	2.59	3½	3½	¼ to 1½	13

One in a carton; six in a case.

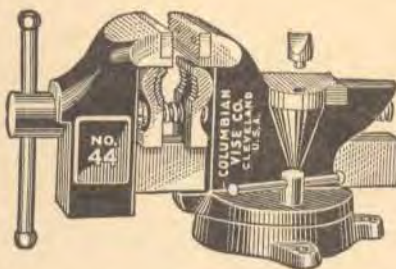


STATIONARY BASE

Width jaws 3 inches. Jaws open 3 inches. Holds pipe $\frac{1}{4}$ to $1\frac{1}{4}$ inches. Length closed 10 inches.

TB 53 — Weight
each 9½ lbs.
Each \$1.79

Packing—bulk.



COLUMBIAN SWIVEL BASE

Red enameled with polished metal jaws and anvil. Properly designed castings of close-grained gray iron. Heavy steel sliding bar cast into front jaw for extra support and strength.

Replaceable steel jaw faces—correct hardness and strength from heat-treating. Removable pipe jaws—designed with interlocking grip to hold smallest rounds. Hardened steel cut-off tool. Cone-shaped side anvil. Large anvil horn and support. Cold rolled steel screw and handle. Ball ends forged from handle stock itself. Positive locked collar cannot slip from screw under pressure. Swivel lock nut with adjustable handle. Lock bolt can always be drawn tight.

Nos.	TB 43	TB 43½	TB 44
Width Jaws, Inches	3	3½	4
Jaws Open, Inches	3½	4	4½
Holds Pipe, Inches	0 to 1¼	0 to 1½	0 to 2
Length Closed, Inches	10	11	12½
Weight Each, Lbs.	14	17	28
Each	\$2.95	3.69	6.59

One in a box.

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VISES

LUTHER WONDER ASSORTMENT

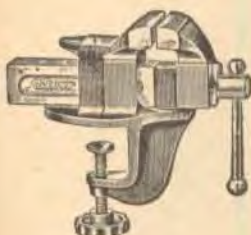
- Cast from special mixture of iron with unusually high tensile strength—tough, rugged, stands greater strain. Expertly constructed and accurately machined. Attractively finished in smooth enamel. Oversize jaws.



WARREN CUB

Two cold rolled steel guides. Accurately cut one-piece screw with cross bar. Anvil on stationary jaw. Attractive green baked enamel finish. Polished jaws.

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Weight Each, Lbs.
V 22½	\$1.35	2½	2¾	4¼
V 23	1.95	3	3½	7



MIDDLEWEIGHT

Special panel-type, movable, milled slide jaw. Large malleable guide nut. One-piece machine-cut steel feed screw. Anvil on stationary jaw. Heavy square threads. Polished jaws. Glossy dark green baked enamel finish, orange striped jaw sides.

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Weight Each, Lbs.
V 72	\$1.95	2	2½	4¼
V 72½	2.49	2	2¾	6½
V 73	3.19	3	3	9



CHAMPION—SWIVEL BASE

Same general description as Middleweight except heavier and stronger. Swivels and locks at any angle. Complete with removable hardened malleable iron pipe jaws.

V 73½P—Width jaws 3½ inches, open 3 inches. Weight 14 lbs. Each \$4.19

With each deal is included free 1 No. V 22½ vise and display stand (See No. L32 assortment) and cards.

Assortment Contains:

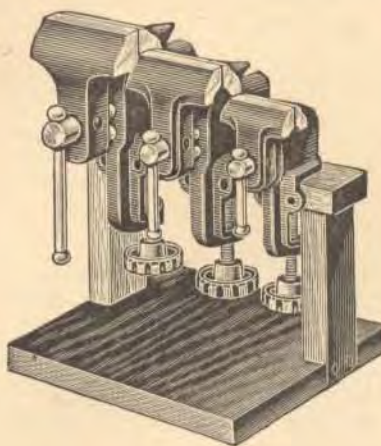
- 2 Warren Cub Vises—1 each Nos. V 22½ and V 23.
- 3 Luther Middleweight Vises—1 each Nos. V 72, V 72½ and V 73.
- 1 Luther Champion Vise No. V 73½P.
- 1 Warren Cub Vise No. V 22½—free.
- 1 Display Stand and Cards—free.

TB 17—Weight per assortment 60 lbs.

One assortment in a case.

SOLD ONLY IN FULL ASSORTMENTS

LUTHER SAMPLER ASSORTMENT



- Made for light-duty work but ruggedly constructed and accurately machined. Two cold rolled steel guides. Close grain cast-iron oversize jaws, handy anvil on stationary jaw. Accurately cut one-piece feed screw with cross bar. Portable, adjustable clamp screw and bolt holes provide temporary or permanent mounting. Green baked enamel finish, polished jaws.

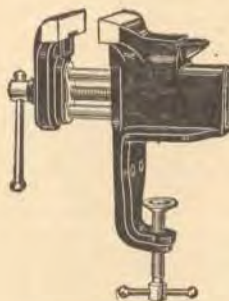
Complete with attractive wood display stand.

Assortment consists of 1 each:

	Each
V 22—Jaws 2 inches wide, open 1¾ inches.....	\$1.19
V 22½—Jaws 2½ inches wide, open 2¾ inches....	1.35
V 23—Jaws 3 inches wide, open 3½ inches.....	1.95
TB L32—Weight per assortment 17 lbs.	

One assortment in a carton.

SOLD ONLY IN FULL ASSORTMENTS



DEFIANCE—BENCH

- Handy for wood and moderately heavy metal work. Sturdily built, attractively finished.
- Red enameled cast frame and front section. Polished jaws. Machine-cut feed screw with two polished steel supporting rods.
- Anti-slack spring on rods and screw takes up all play in jaws.
- Fastening clamp opens from ½ to 2½ inches. Pockets under regular jaws for detachable pipe jaws to hold round work

(pipe jaws not included). Jaws 2½ inches wide. Jaws open 2¾ inches.

All steel parts polished.

TY 1209—Weight each 3½ lbs. Each \$0.98

One in a carton.

Polly Prim

KITCHEN ACCESSORIES

Make Housework Lighter
and Easier

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

PIPE VISES

Holds Round Work Tight



Malleable iron frame and base, japanned finish. Polished steel sliding handle and screw. Hardened jaws with milled teeth.

Two lower jaws stationary. One upper jaw movable. Malleable iron latch holds frame rigid when closed.

Frame hinged on one side for easy insertion of pipe. Holes in base for screwing to bench, wall or pillar.

Nos.	TB 0E	TB 1E	TB 3E
For Pipe, Inches	1/8 to 1 1/4	1/8 to 2	1/8 to 2 1/2
Height Over All, Inches	7 3/8	9 1/4	11
Length Sliding Handle, Inches	5	6	8 3/4
Size Base, Inches	3 3/8 x 4 5/8	4 1/4 x 5 3/8	4 1/2 x 6 1/2
Weight Each, Lbs.	4	5 1/4	8 3/4
Each	\$2.79	5.00	5.50



Malleable iron base, frame, hook and upper jaw guides, black enameled finish. Machine milled tool steel jaws.

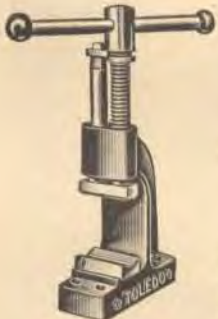
Solid cold rolled steel screw and cross arm. Hook holds frame rigid when closed.

Frame hinged on one side for easy insertion of pipe. Holes in base for screwing to bench, wall or pillar.

Nos.	TB 100	TB 200	TB 300
For Pipe, Inches	1/8 to 1 1/4	1/8 to 2	1/8 to 2 1/2
Height Over All, Inches	7	8	9
Length Sliding Handle, Inches	5 3/4	5 3/4	8
Size Base, Inches	4 x 5	4 x 5	6 1/2 x 5
Weight Each, Lbs.	4	5	9 1/2
Each	\$1.45	2.00	2.98

Packing—bulk.

TOLEDO—OPEN SIDE



• It's practical and convenient. All you do is slip pipe in open side and tighten down jaws—eliminates need of unlatching and tipping back a yoke in order to insert long lengths of pipe.

• Expertly built of high quality materials. You can set jaws easier because the handles are extra long. Ideal for brass, copper pipe and fitting make-up work.

Extra heavy malleable iron frame. Upper and lower jaws are heat-treated steel—they are full overlapping and will hold all pipe perfectly. Jaw construction permits

working close to the face of the vise. Jaws easily replaced when dull.

Nos.	Each	Length Cap., Ins.	Jaws, Ins.	Ht., Ins.	Cross Handle, Ins.	Wt., Lbs.	Std. List, Each
TB 0	\$3.60	1/8 to 2 1/2	2 1/2	11 1/4	11	12	\$3.60
TB 3	8.40	1/8 to 4 1/2	3 3/4	14	12	27	8.40

One in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

BLACKSMITHS VISES

SOLID BOX

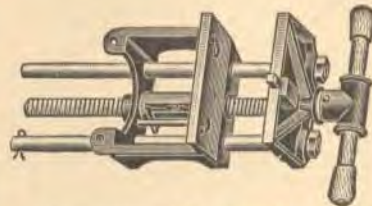


Forged steel body, jaws and hinge plate, japanned finish, japanned malleable box. Malleable iron bench plate. Polished steel screw and sliding lever handle. Steel spring between jaws.

Nos.	Each	Width Jaws, Inches	Jaws Open, Inches	Height, Inches	Weight Each, Lbs.
TY 35	\$5.95	3 3/4	3 3/4	40	35
TY 50	7.59	4 1/2	4 1/2	41	50
TY 70	12.75	5 1/4	5 1/4	41	70

Packing—bulk.

WOODWORKERS' VISES



WILCOX—RAPID ACTING

• Nut released and completely disengaged when pressure on work is removed by slight reverse movement of handle—vise can be moved backward or forward without

using screw. No stripping or cutting of threads.

When pressure is applied, nut engages and locks on screw more firmly—nut not held in position by any external mechanism. Screw cut with single thread, 4 to an inch, with sharp pitch.

Designed to set flush with bench. Steel screw works smoothly between two cold rolled steel slide guides. Phosphor bronze nut engages entire circumference of screw and operates full length. No pawls, racks or triggers to break or wear.

Jaws are best grade gray iron—working surfaces ground and finished. Front jaw fitted with brass stop. Polished hardwood sliding handle.

Nos.	Each	Width Jaws, Inches	Depth Jaws, Inches	Jaws Open, Inches	Diam. Screw, Inches	Wt. Each, Lbs.
TB 430S1	\$10.95	7	4	10	1	29 1/2
TB 430S2	12.75	10	5	12	1	39 1/2

No Home Kit Complete Without One!



This useful vise gives the carpenter or any man who is handy with tools an extra pair of hands to hold his work! Fastens to anything from 3/8 to 2 1/4 inches thick—will hold work in almost any position.

Sturdy, compact construction. Malleable iron, black enameled. Jaws ground smooth and square. Screw holes in each jaw permit fastening in wooden jaws if necessary. Fine tool steel

screws and lever handles. Heavy steel guide keeps jaws aligned. Spread of jaws 3 inches. Length of jaws 5 inches.

TB 555—Weight each 4 1/2 lbs. Each \$1.98

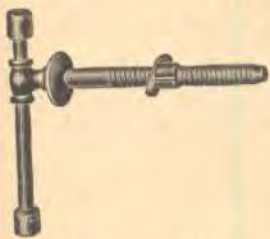
Packing—bulk.

BENCH SCREWS

- Handy for making bench vise.

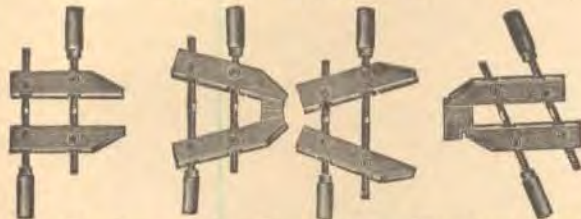
WROUGHT IRON— JAPANESE DOUBLE THREAD

Plain finish hickory handle. Bar 12 inches long. Diameter screw $1\frac{1}{8}$ inches. Length from inside of collar to screw end 13 inches. Length over all 16 inches.



TB W1 $\frac{1}{8}$ —Weight per dozen 81 lbs. Each \$1.19
One dozen in a wood box.

HAND SCREWS



As Regular
Hand Screw

Positions for
Beveled Work

One Jaw Over-
lapping Other

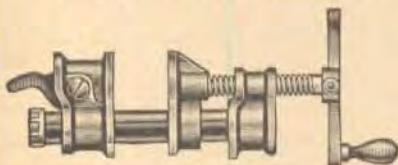
ADJUSTABLE

Seasoned maple jaws and steel spindles. Jaws adjustable to any angle and position. Spindles have right and left-hand threads, insuring rapid adjustment. Spindles work in steel sockets. Length of jaws 12 inches. Jaws open 8 inches apart.

TB J2—Weight per dozen 50 lbs. Each \$1.98

Packing—bulk.

STEEL BAR CLAMP FITTINGS



STEARNS'

- Make your own clamp the length you want—with these sturdy units! These fittings, when assembled to a length of $\frac{3}{4}$ -

inch pipe threaded at both ends, provide an inexpensive yet thoroughly practical steel bar clamp. Various lengths of pipe, of either standard or extra heavy weight, may be used and easily interchanged with a single set of fittings. Milled teeth of the hardened tool steel cam grip pipe at any point where slide is set. Cam is positive in action as grip on pipe tightens with increasing screw pressure. Slide quickly released and moved to any position by merely lifting handle of cam.

All steel with black enameled finish. Acme thread $\frac{5}{8}$ -inch steel screw. Clamping surfaces $2 \times 1\frac{3}{4}$ inches.

Set of fittings consists of all parts illustrated, except pipe.

TB 15—Weight per dozen sets 48 lbs. Each \$1.49

One-sixth dozen sets in a carton.

CLAMPS



CARPENTERS'

Steel I-bar, $1\frac{1}{2} \times \frac{5}{8} \times \frac{1}{8}$ inches—notched slide can be quickly set and won't slip. Wrought iron screw with acme thread. Tool

steel cam. Malleable iron slides, screw guide and crank. Clamping surfaces 2×2 inches.

Nos.	Each	Opens, Feet	Weight Per Dozen, Lbs.
TB 3SB	\$2.55	3	108
TB 4SB	2.85	4	120
TR 5SB	3.25	5	135

Packing—bulk.

CARRIAGE MAKERS' CLAMPS



- Swivel head on end of screw, adjusts itself to fit uneven objects.

Plain finish malleable iron frame and screw with large wing. Cut threads.

Nos.	Each	Opens, Inches	Weight Per Dozen, Lbs.
TB 2 $\frac{1}{2}$ P	\$0.38	2 $\frac{1}{2}$	10
TB 4P	.50	4	17
TB 6P	.80	6	30
TB 8P	1.30	8	45

Packing: TB 8P—one-quarter dozen in a carton. All others—one-half dozen in a carton.

CARPENTERS' CLAMPS

- Useful in general carpentry.
- Handy for home workshop.
- Adaptable to jig, pattern, light gluing and airplane work.

Holds work tight—won't slip. Swivel head on smooth-working screw adjusts itself to odd surfaces and uneven shapes.

Strong malleable frame, red enameled. Fine quality steel screw. Steel vise-type sliding pin handle.



TB 558



TB 571



TB 549



TB 550



TB 551



TB 552

Nos.	Each	Opens, Inches	Depth, Inches	Length Closed, Inches	Wt. Doz., Lbs.
TB 558	\$0.10	1	1 $\frac{1}{2}$	2 $\frac{1}{2}$	1 $\frac{1}{4}$
TB 571	.15	1 $\frac{1}{2}$	1 $\frac{1}{2}$	3	2 $\frac{1}{2}$
TB 549	.20	2	1 $\frac{1}{4}$	4 $\frac{1}{8}$	4
TB 550	.23	3	1 $\frac{3}{4}$	5 $\frac{3}{8}$	6
TB 551	.39	4	1 $\frac{5}{8}$	6	10 $\frac{1}{2}$
TB 552	.49	6	1 $\frac{7}{8}$	9	16

Packing: TB 558 and TB 571—one dozen in a carton. Others—one-half dozen in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

"C" CLAMPS



ARMSTRONG For Medium Service

- These clamps are of maximum strength and stiffness consistent with convenient weight. Adapted to the wide field of

work where extreme stiffness is not required. Handy swivel head adjusts itself to fit uneven objects. Drop forged heat-treated steel frame with alloy steel screws and steel vise type sliding handle.

Nos.	Each	Capacity, Ins.,			Weight Each, Lbs.	Std. List, Each
		Maxi- mum	Mini- mum	Depth, Ins.		
#TB 0	\$2.89	2	0	1½	1¼	\$3.50
#TB 1	3.29	3	0	2	2½	4.00
#TB 2	3.75	4	2	2½	4	4.50
#TB 3	4.49	6	3	2½	6	5.50
#TB 4	5.35	8	4	2½	7¼	6.50
#TB 5	6.25	10	6	2½	8½	7.50
#TB 6	6.95	12	8	2½	11½	8.50
#TB 7	8.95	15	10	3¼	14	11.00
#TB 8	11.45	18	12	3¼	18	14.00

Packing—bulk.

QUILT FRAME CLAMPS

SIMMONS LEADER

Good quality at a low price.

- Swivel head on end of screw adjusts itself to uneven shapes. Cast iron frame and screw, rust-resisting cadmium plated. Opens 3 inches.



TB ST1—Weight per carton (12) 5¼ lbs.

Std. List Each \$0.10.....Each \$0.10

One dozen in a carton.



Cast-iron frame and screw, rust-resisting cadmium plated.

Nos.	Each	Type Screw	Opens, Inches	Weight Per Doz., Lbs.
TB A	\$0.10	Plain	2¼	3
TB B	.10	Swivel Head	2¼	4½
TB C	.12	Swivel Head	3	4¾

One dozen in a cardboard box.

TINNERS' STEEL RULES



Showing the first 3 tables on face of one side of the rule.



Showing 3 inches of the length of the rule.

Plain. Polished. Length 3 feet, width 1¼ inches, thickness ¼-inch.

TB TP—Weight each 1¾ lbs.....Each \$4.69

Packing—bulk.

This rule is laid out as follows:

One side—upper line is ordinary rule graduated by eighths of an inch. Lower side shows at a glance the exact circumference of any cylinder by simply ascertaining the diameter.

Reverse side—contains much useful information regarding the sizes of 60 different articles—cans, measures, pails, etc., with straight or flaring side, flat or pitched top—liquid and dry measures in quarts, gallons and bushels.

* Goods marked thus (*) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SOLDERING COPPERS



SIMMONS LEADER

Drawn copper head provides reliable and long-lasting performance. Wrought iron shank. Shaped hardwood handle with wired shank.

Nos.	Each	Wt. Copper, Each, Lbs.		Wt. Each, Complete, Lbs.		Std. List, Each
TB SN10	\$0.38	¾		¾		\$0.38
TB SN11	.41	¾		¾		.41
TB SN12	.44	¾		¾		.44
TB SN1	.49	¾		¾		.49
TB SN2	.59	1		1½		.59
TB SN3	.69	1½		1½		.69

Wrapped in paper.

SQUARE POINT



- Best grade copper head — insures long, satisfactory service.

• Japanned wrought iron shank, without handle.

Note—When 1 only is wanted, order as half-pair.

Nos.	Each	Length of Copper, Inches		Length Over All, Inches		Weight Per Pair, Lbs.
TB 1S	\$0.25	3		11		1
TB 1½S	.29	4¼		12		1½
TB 2S	.39	4½		13		2
TB 3S	.49	5½		14½		3
TB 4S	.69	5¾		16		4
TB 5S	.89	6		16		5
TB 6S	1.09	6¼		17¾		6

Packing—bulk.

SOLDERING COPPER HANDLES



- Shaped for easy grasp.

- Quickly attached to soldering copper shank.

Plain pine wood, natural finish, with wired shank. Length 4½ inches. Diameter 1¼ inches.

TB 15—Weight each 2½ lbs.....Each \$0.10

Packing—bulk.

CUTTING SHEARS

BERRIDGE'S PATENT DOUBLE



The best tool known for cutting and crimping sheet metal and pipe of ordinary weight, round or square. No twisting

of metal during cutting process as experienced with ordinary snips.

Cuts out very narrow strip of the metal and allows it to drop down on side of snip.

Blades can be inserted in metal at any point. Cuts clean and smooth.

Wrought iron handles, black japanned finish. Bright steel blades, cuts 2 inches. Bright steel crimper firmly riveted to side. Length over all 13½ inches. All parts interchangeable.

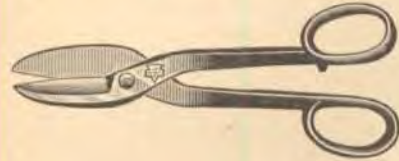
TB 22B—Weight each 2 lbs.....Each \$3.59

One in a cardboard box.

TINNERS' SNIPS

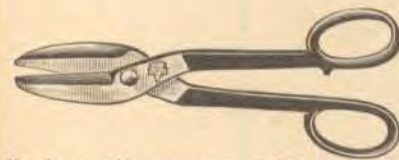
KEEN KUTTER

- Superior in quality and construction—in shape, cutting edge, strength, test and finish.
- Large finger holes provide smooth, easy grasp. Bumper between handles prevents pinching fingers.
- Blue steel drop forged handles. Highest grade tool steel laid blades. Polished head. Heavy bolt at joint.
- Edge will not chew or break the work and remains sharp longer because a piece of the finest tool steel is welded to the inner side of the blades.



STRAIGHT

Nos.	Each	Length of Cut, Inches	Length Over All, Inches	For Cutting Iron, Nos.	Wt. Each, Lbs.
TB K8	\$2.79	3½	13½	26	2¼
TB K9	2.29	3	12¼	27	1¾
TB K10	2.19	2½	11½	28	1



COMBINATION CIRCULAR AND STRAIGHT

Jaws ground and shaped in such a manner that they can be used readily

for cutting curves and irregular shapes as well as for straight work, thus combining all the advantages of both the circular and straight snips in one tool.

Nos.	Each	Length of Cut, Inches	Length Over All, Inches	For Cutting Iron, Nos.	Wt. Each, Lbs.
TB KT8	\$3.19	3½	13½	26	2¼
TB KT9	2.49	3	12¼	27	2

SIMMONS



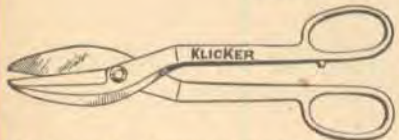
Forged solid steel. Finely ground cutting edges, head polished. Red enameled handles. Heavy bolt at joint.

Length of cut 3 inches. Length over all 12¼ inches. For cutting 27 gauge iron.

TB S130—Weight each 1¾ lbs. Each \$1.19

One in a carton.

KLICHER



Here's a fast-cutting snip at a low price.

Solid forged steel. Dull black lacquered, with polished head. Ground cutting edges. Heavy bolt at joint.

Length of cut 3 inches. Length over all 12¼ inches. For cutting 27 gauge iron.

TB 312¼K—Weight each 1¾ lbs. Each \$0.79

One-third dozen in a carton.

SIMMONS LEADER

Good Quality at a Low Price



COMBINATION, CIRCULAR AND STRAIGHT

Combines advantages of circular and straight snips in one tool! Cut curved and irregular

ular shapes as readily as straight work. Blades special ground and shaped.

Solid forged steel. Red japanned handles. Polished head. Length 12¼ inches. Cut 3 inches.

TB SD7—Weight per carton (2) 3¾ lbs.

Std. List, Each \$0.99 Each \$0.99

Two in a carton.

STRAIGHT



Solid forged steel. Red enameled handles. Polished heads.

Pocket size.

Length 7 inches, cut 2 inches.

TB SD1—Weight per carton (6) 3¾ lbs.

Std. List, Each \$0.49 Each \$0.49



GENERAL PURPOSE

Solid forged steel. Red enameled handles. Polished heads.

Nos.	Each	Length, Inches	Cut, Inches	Weight Per Carton (6), Lbs.	Std. List, Each
TB SD2	\$0.69	12½	3	11¼	\$0.69
TB SD5	.59	10	2½	7½	.59

Six in a carton.



STRAIGHT

Forged from special high grade metal, with steel laid blades. Blue japanned handles. Polished heads.

Nos.	Each	Length, In.	Cut, In.	Will Cut Iron, Gauge	Wt. Per Carton (2), Lbs.	Std. List, Each
TB SD3	\$1.89	12¼	3	27	3¾	\$1.89
TB SD4	1.59	11¼	2½	28	3	1.59

Two in a carton.



WISS—Straight

Drop forged steel. Crucible steel laid blades will not chew or break work. Polished blades. Blued steel handles.

Nos.	Each	Length of Cut, Inches	Length Over All, Inches	For Cutting Iron, Nos.	Wt. Each, Lbs.
TB 8W	\$2.79	3½	13¾	26	2¼
TB 9W	2.29	3	12½	27	2

One in a carton.

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ELECTRIC SOLDERING IRONS

DRAKE

Approved by Underwriters' Laboratories and Bears Their Label

For 110 to 220 Volts A. C. or D. C. Current

- Carefully manufactured and guaranteed against imperfect material and workmanship. Factory will replace any Drake iron that does not give satisfactory service if returned to them.
- Removable solid copper tip. Heating element highest quality nichrome wire. Black enameled wood handle. Spiral spring wire guard. Nickel-plated element housing shank and wire guard. Complete with all-metal stand 7 inches long, 6-foot heater cord and rubber plug.



Soldering Iron Stand

Free—with each Drake electric soldering iron an attractive all-metal stand 7 inches long is included—no charge.



MECHANICS'

For use in garages, machine shops, etc. Tip $1\frac{1}{4}$ inches in diameter. Heating element nichrome wire on lava spool. Nickel-plated ferrule. Consumes 150 watts. Length over all 13 inches.

TB 703B—Weight each 2 lbs.....Each \$5.95



Excellent for radio and other light soldering work. Tip $\frac{5}{8}$ inch in diameter.

Heating element nichrome wire on porcelain. Consumes 60 watts. Length over all $11\frac{1}{8}$ inches.

TB 25—Weight each 1 lb.....Each \$1.29

STANDARD

Carefully made of high-grade material and is guaranteed by maker against defects (defective irons must be returned direct to factory).



Designed for radio and other light soldering work.

Removable solid copper tip $\frac{1}{2}$ inch in diameter, $1\frac{1}{4}$ inches long. High grade heating element encased in nickel-plated steel tubing. Black enameled wood handle, with nickel-plated brass ferrule. Complete with 4-foot cord with attachment plug cap. Consumes 50 watts. Length over all $10\frac{1}{8}$ inches.

TY 121—Weight each $\frac{1}{2}$ lb.....Each \$0.98

One in a carton.

LENK

Operates on 110 volts A. C. or D. C. current. Solid copper tip. Highest grade nichrome wire heating element hermetically sealed in lava tubes. Nickel-plated shank.



Tip $2\frac{1}{4}$ inches. Stained and varnished wood handle. Six-foot Underwriters' Approved flexible heater cord and plug. Consumes 150 watts. Length $13\frac{1}{2}$ inches.

TB 153—Weight each 1 lb.....Each \$1.89



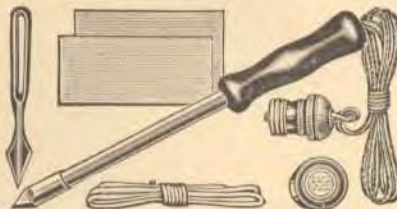
Tip $1\frac{1}{4} \times \frac{1}{2}$ inches. Natural finish wood handle. Five-foot flexible heater cord and approved plug.

Consumes 50 watts. Length $10\frac{1}{8}$ inches.

TY 51—Weight each $\frac{1}{2}$ lb.....Each \$0.59

One in a carton.

SOLDERING KITS



WITH ELECTRIC SOLDERING IRON

Contains everything necessary for ordinary soldering jobs around the home.

Consists of:

Electric soldering iron— $\frac{5}{8}$ inch solid copper tip. Black enameled wood handle, nickel-plated steel shank; length $11\frac{1}{4}$ inches, $5\frac{1}{2}$ -foot cord with separable attachment plug. Operates on 110 volts A. C. or D. C. current.

Metal scraper— $\frac{5}{8}$ inch long, black-enameled.

Can soldering paste.

Piece wire solder (about 30 inches).

Sandpaper—two pieces $1\frac{1}{2} \times 4\frac{1}{2}$ inches.

TB 150—Set as listed above. Weight per set 1 lb.Per Set \$1.59

One set in a carton.

KESTER—HOME



Outfit consists of $\frac{3}{4}$ -lb. forged (Lake Copper) soldering iron with hardwood handle and one $\frac{1}{4}$ -lb. can of Kester Metal Mender. All packed in an attractive display box with soldering instructions. Soldering copper handle 5 inches long, copper head $3\frac{3}{4} \times \frac{7}{8}$ inches. Length over all $13\frac{1}{2}$ inches.

TB HSK—Weight each $1\frac{1}{2}$ lbs.....Each \$0.89

Ten in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CLAYTON AND LAMBERT BLOW TORCHES

For Gasoline

Long-Lasting Construction

Finest quality seamless tank securely screwed to handle shanks. Joints soldered inside, bottom rolled in and sweat soldered. Unbreakable metal control valve handle. Cast bronze burner develops powerful, steady blue needle-point flame that assures intense heat.

Many Uses

Handy for plumbers, tinnern, electricians, painters, home-shop workers and other craftsmen. Ideal for soldering work, pipe thawing and similar duties.

With soldering iron attachment and wind guard. Performs perfectly indoors, or outdoors under severe weather conditions because wind guard protects gasoline generator in cold and windy weather.

Sharp point, self-cleaning needle provided with large shoulder to prevent orifice enlargement. Filled through bottom opening. Concave bottom permits filling without use of funnel. Cast brass filler plug. T pump handle. Cast iron drip cup.

Mechanics' favorite.

Ruggedly constructed and designed for extra severe service. Produces an intensely hot blue blast 7 inches long which may be regulated for lighter work. Greatly improved internal vein construction assures unusually long burning life.

Round handle shanks secured to inside of tank.

Diameter body $4\frac{1}{4}$ inches, bottom $5\frac{1}{2}$ inches. Height to top of burner 10 $\frac{1}{2}$ inches.

Capacity One Quart

TB 32A—Weight each $5\frac{1}{4}$ lbs. Each \$8.59



For workshop, garage or farm. Chromium-plated tank.

Diameter body $4\frac{1}{4}$ inches, bottom $5\frac{1}{2}$ inches. Height, including soldering iron attachment, 10 $\frac{1}{2}$ inches.

Capacity One Quart

TB 158—Weight each $4\frac{1}{4}$ lbs. Each \$5.49



Here's one of the best values ever offered to the occasional user that wants a torch to perform correctly under ordinary weather conditions.

Burner has tapered burner tube closed at the back, producing hot, easily controlled flame. Filled through bottom opening. Concave bottom permits filling without use of funnel. Cast brass filler plug. Highly finished buffed brass tank. Diameter of body $4\frac{1}{4}$ inches. Height to top of burner 9 $\frac{1}{2}$ inches.

Capacity One Quart

TY 600A—Weight each 4 lbs. Each \$3.98

One in a carton.

Safely, Easily Operated

Safe and dependable because it's easily controlled at all times. Double spring check valve pump with lock-down device keeps plunger from rising after you pump pressure. Funnel-shape bottom keeps torch from tipping. Patented interlocking fittings used at all tank openings to prevent leaks. Enameled handle set at comfortable angle and shaped to fit your hand, providing firm, steady grip and assuring more accurate work.



A serviceable blow torch that's ideal for use on odd jobs. Safety features have not been sacrificed to low price in its construction.

Filled through pump opening.

Highly finished buffed brass tank.

Diameter of body $4\frac{1}{4}$ inches. Height to top of burner 10 $\frac{1}{2}$ inches.

Capacity One Quart

TY 800—Weight each

4 lbs. Each \$3.59

One in a carton.

BLOW TORCHES

Self-generating—develops powerful, steady blue flame that assures intense heat.

Handy for plumbers, mechanics, electricians, home-shop workers and other craftsmen. Ideal for soldering work, pipe thawing and similar jobs.



LENK—HIGH HEAT FOR GASOLINE

Many Outstanding Features

- Flame control and shut-off valve.
- Non-clogging burner.
- Self-cleaning orifice.
- Generates quickly from asbestos-filled drip cup.

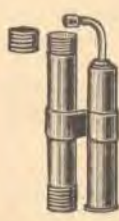
After torch is fully generated size of flame may be controlled by turning valve to right or left. Only clean commercial gasoline should be used. (Do not use ethyl gasoline).

Heavy-gauge seamless drawn brass tank with funnel-shaped bottom for easy filling. All brass burner valve and Bunsen burner tube, with black bakelite knurled edge knob. Heavy flat steel handle, red enameled. Tank highly polished. Diameter: body $2\frac{3}{8}$ inches, base 3 inches. Height over all $7\frac{1}{2}$ inches.

Capacity $\frac{3}{4}$ -Pint

TB 104—Weight per dozen 10 lbs. Each \$1.79

One in a carton.



AUTOMATIC FOR ALCOHOL

Produces flame of approximately 1400° Fahrenheit.

Simple to operate because it has no complicated parts. After filling both cylinders and lighting wick, a force is automatically generated producing a long needle-point flame. Operates on denatured or commercial alcohol.

Brass throughout, high polished and nickel-plated to resist rust. Height over all $5\frac{1}{2}$ inches. Width $2\frac{1}{4}$ inches. Cylinders $\frac{7}{8}$ -inch in diameter.

TBA 2—Weight per dozen $3\frac{1}{2}$ lbs. Each \$0.89

One in a carton. Twelve in a counter display box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CLAYTON & LAMBERT FIRE POTS

For Gasoline

- Seamless tank drawn from heavy steel, thickly coated with tin inside and outside to prevent rust and leakage.
- Steel cushion band protects tank bottom from injury and wear.
- Heavy wire bail with spiral grip.

WITH TINNER'S HOOD Will Not Carbonize

Flame Starts Quickly and Is Ready for Use Within 2 Minutes.

Especially designed for tinner, roofers, sheet metal workers, tool makers and garage mechanics.

Not affected by weather conditions—generator is fully protected by windshield. Capable of heating 2 large soldering coppers and a 6-inch pot of metal at same time.

Noiseless, smokeless and odorless.

Circular shaped burner produces a perfect blue flame of intense heat which may be easily regulated by upper valve from full volume to small low fire.

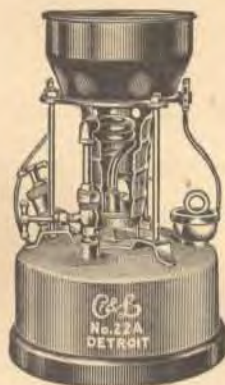
Quick-generating fire pot. Patented preheater, controlled by lower valve, directs an intense blast (1800 degrees) against vaporizing veins of generator. Bottom rolled in and soldered.

Brass fittings. Large brass funnel and filler plug, with dust-proof cap. Unbreakable metal control valve handles with cool covers to protect your hand.

Heavy duty pump. Dust-proof filler plug. Pump bushings and filler have lead washer. Cast iron upper section with lid.

Gasoline capacity one gallon.

TB 85—Weight each 21 lbs. Each \$16.45



IMPROVED OIL

All inlet and outlet fittings are sealed integral with tank under heavy hydraulic pressure.

Easy to start and simple to operate. Burns low gravity gasoline perfectly in any kind of weather. Produces very hot blast flame of large volume. Efficient, fast and economical for melting solder and babbitt in metal pots.

Patented, quick-detachable coil unit, when clogged after long use may be replaced quickly.

Powerful pump in tank produces air pressure quickly—has lock-down feature to prevent pump plunger from rising after pumping pressure.

Gasoline capacity one gallon.

TB 22A—Weight each 16 lbs. Each \$11.95

One in a fibre carton.

Directions for operating accompany each fire pot.

For Long and Satisfactory Wear,

**Select a
KEEN KUTTER
AXE**

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CUTTING ATTACHMENTS

PUROX

FOR WELDING OUTFITS

Cuts up to 2-inch thick steel!



A very convenient, efficient and practical attachment by means of which Purox welding torches may be converted to do cutting. It will take care of all the cutting met in the average shop, as it will cut steel up to about 2 inches in thickness.

Designed to fit welding torches in welding outfits Nos. TY 4008 and TY 4012. Fits directly to handle of No. 11 welding torch (outfit No. TY 4008), and to welding torch No. 35 (outfit No. TY 4012).

Complete with cutting tips Nos. 1 and 2 (type E); one-piece style, hard drawn copper.

TY 21—Length 10½ inches. Weight each

1½ lbs. Each \$23.75

One in a carton.

WELDING RODS

OXWELD

Drawn Iron, Copper Coated

For steel plates, sheets, structural shapes, pipe, etc.

Nos.	Per Lb.	Diameter, Inches	Length, Inches
TB 7 1/8	\$0.23	1/8	36
TB 7 3/16	.23	3/16	36
TB 7 1/4	.23	1/4	36

High-Test Steel

For high strength welds in steel plates, sheets, structural shapes, pipes, steel castings, etc.

Nos.	Per Lb.	Diameter, Inches	Length, Inches
TB 1 1/8	\$0.30	1/8	36
TB 1 3/16	.29	3/16	36
TB 1 1/4	.29	1/4	36

Cast Iron Alloy

For gray iron castings

Nos.	Per Lb.	Diameter, Inches	Length, Inches
TB 9 3/16	\$0.20	3/16	12 to 18
TB 9 1/4	.18	1/4	21 to 24

Bronze

For high strength, wear-resisting welds in copper, brass or bronze; also for welding malleable iron, steel or cast iron. Non-fuming.

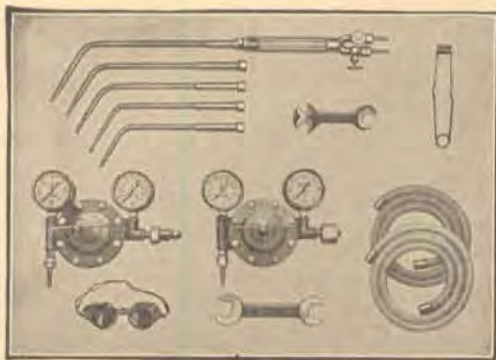
Nos.	Per Lb.	Diameter, Inches	Length, Inches
TB 25M 1/8	\$0.67	1/8	36
TB 25M 3/16	.59	3/16	36
TB 25M 1/4	.55	1/4	36

100 lbs. in a case.*

WELDING OUTFITS

PUROX

Sturdily constructed to assure you safety and complete satisfaction.
Listed as standard and approved by Underwriter's Laboratories.



Here's a standard outfit for general-purpose welding—includes new Purox No. 35 welding torch. Equally adaptable to lightest as well as heaviest work. Its complete range makes it especially suitable for every large job welding shop that has a large variety of work. Also recommended for boiler and machine shops, garages, foundries and manufacturing plants where speedy, economical maintenance of machinery and plant equipment is essential.

- The regulators provide maximum service, efficiency and long life under most severe conditions.
- Extra-large diameter diaphragms insure extreme sensitiveness.
- Oxygen regulators have fibre seats which offer more positive seating surface . . . and built-in dissipators which prevent heat generated by sudden compression of oxygen in inlet passages of regulator from burning out seat.

Both cylinder and large working pressure gauges are 2½ inches in diameter.

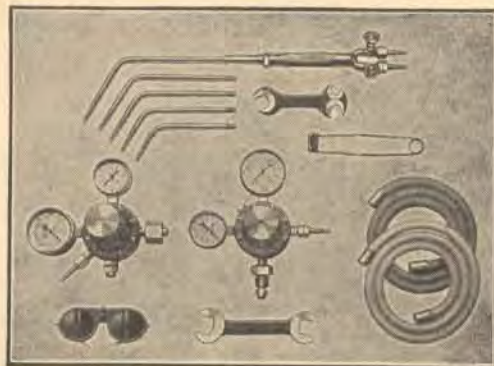
TY 4012—Weight each 25 lbs. Each \$108.75

One in a case.

Specifications

- 1 No. 35 Purox welding torch—light and well balanced; handle is extruded brass with distinctive ribbed design to reinforce handle and make it easy to hold with little effort; length 24½ inches; weight 2½ lbs.
- 5 Welding heads—one each Nos. 3, 5, 7, 9 and 13; due to the novel mixer feature allowing fairly wide pressure variation the actual range of each head is extended, making possible a wider range of application.
- 1 No. 10 oxygen regulator, with 100-lb. and 3,000-lb. gauges.
- 1 No. 30 acetylene regulator with 30 and 500-lb. gauges.
- 1 No. 20 goggles—non-breakable composition frame, ventilated eye cups; large lenses; inexpensive cover glasses protect lenses from flying specks of oxide.

Complete with 12½ feet of ¼-inch green oxygen hose with ferrules, 12½ feet of ¼-inch red acetylene hose with ferrules, spark lighter, 2 wrenches, and manual of instruction.



Contain's Purox No. 11 welding torch and has wider range of application than is usually found in an outfit of this type.

Suitable for welding from light sheet metal up to ½-inch boiler plate. Ideal for every garage and for all plumbing and heating contractors. Also extensively used by job welding shops, machine shops and metal product manufacturers.

Regulators ruggedly built of high-grade materials and with careful workmanship. Diameter of gauges: cylinder pressure 2½ inches, working pressure 2 inches.

TY 4008—Weight each 25 lbs. Each \$75.75

One in a case.

Specifications

- 1 No. 11 Purox welding torch—somewhat smaller in size and capacity than the No. 35 torch and is intended for lighter work, although it will handle all general welding except the unusually heavy jobs. This torch is ideal for the average garage or repair shop. It is light weight and easy to manipulate; with the largest tip, it is only 20 inches long.
- 5 welding tips—one each Nos. 2, 4, 6, 8 and 10.
- 1 No. 14 oxygen regulator with 100-lb. and 3,000-lb. gauges.
- 1 No. 34 acetylene regulator with 50-lb. and 500-lb. gauges.
- 1 No. 203 spectacles—light frame of bakelite formed over canvas. Large diameter lenses.

Complete with 12½ feet of ¼-inch green oxygen hose with ferrules, 12½ feet of ¼-inch red acetylene hose with ferrules, spark lighter, 2 wrenches, and manual of instruction.

CLIMAX WELDING COMPOUND



- A granulated mixture that provides for a lasting bond of all grades of steel.
- Flows at low heat.

Nos.	TB C25	TB C50	TB C100
In wood boxes containing lbs.	25	50	100
Per pound	\$0.21	\$0.20	\$0.19

SOLD ONLY IN FULL BOXES

TB C5—In 5-lb. wooden boxes. Per Lb. \$0.23

WELDING FLUXES

PUROX

In 1-lb. friction top tin cans.

TB BF—Braze; for brass, bronze, copper and malleable iron.

Each Can \$1.19

TB FF—Ferro; for cast iron.

Each Can \$1.09

Fifty cans in a case.



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BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—the motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current, 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

ELECTRIC DRILLS

1/4 INCH JUNIOR "Compo" Oil-less Bearings



Features—Standard Black & Decker construction, with husky aluminum housings, thumb-control switch, ample power and long life.

"Compo" Oil-less Bearings, impregnated with oil at the factory, eliminate dry bearing troubles and assure smooth operation.

Universal Black & Decker motor operates on either alternating or direct current—amply powered for drilling in steel, iron, wood or composition on hundreds of intermittent service jobs.

Applications—An ideal drill for the tool kit in maintenance work—plumbing, automotive repair, electrical, carpentry and cabinet work, and on the work bench. Can be used in horizontal stand for light grinding and wire brushing, or in the bench drill stand as a drill press for more accurate work.

Specifications:

For round shank drills up to 1/4 inch.

Capacity—In steel, up to 1/4 inch.

In hardwood up to 1/2 inch.

Length over all 12 inches.

Speed—No-load 1800 r.p.m.; full load, 1050 r.p.m.

Net weight 3 1/4 lbs.

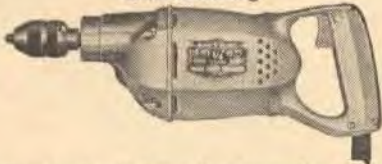
Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-jaw Jacobs chuck and key and 3-conductor cable with plug.

TR 30—Weight each 4 1/4 lbs.

Std. List, Each \$19.95 Each \$19.95

1/4 INCH HEAVY DUTY Ball Bearing



Features—Perfectly balanced streamlined construction. Easy-grip end handle and automatic release trigger switch, with locking pin for optional use. Higher power and heavier mechanical construction than 1/4-inch Special. Powered for continuous production service. Ball bearings on armature shaft and chuck spindle.

Applications—Drilling in metals, wood, compo-board, etc.—driving drill-centric valve seat grinder, carbon cleaning tools, valve seat hones, etc.—wire wheel brushing up to 4-inch wheel—light grinding tool sharpening and buffing up to 3-inch wheel—drilling lead holes for screw driving operations.

Specifications:

For round shank drills up to 1/4 inch.

Capacity—In steel, up to 1/4 inch.

In hardwood, 1/2 inch.

Speed—No-load, 2000 r.p.m.; full load, 1200 r.p.m.

Length over all 14 1/2 inches.

Net weight 7 3/4 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Furnished complete with 3-conductor cable, plug and 3-jaw geared chuck with chuck key.

TR 33—Weight each 9 lbs.

Std. List, Each \$45.00 Each \$45.00

5/16 INCH BALL BEARING



Features—Streamlined design and perfect operating balance. Easy-grip end handle and automatic release trigger switch, with locking pin for optional use. Unusually

light weight and ample power for continuous production service. Ball bearings on armature shaft and chuck spindle.

Applications—Drilling in all metals, wood, composition materials, etc.—especially suited for drill press work when mounted on bench drill stand—production service in sheet metal, body assembly, railway shops, etc.

Specifications:

For round shank drills up to 5/16 inch.

Capacity—In steel, up to 5/16 inch.

In hardwood, 5/8 inch.

Speed—No-load, 1400 r.p.m.; full load, 850 r.p.m.

Length over all 14 1/2 inches.

Net weight 7 3/4 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable and plug, 3-jaw geared chuck with chuck key.

TR 35—Weight each 9 lbs.

Std. List, Each \$50.00 Each \$50.00



1/4 INCH SHORTY Ball Bearing

Combines ample power, compact design, light weight and the ability to work "around corners." Fits snugly in the operator's hand, and requires no extra handle.

Features—Ball-bearing equipped throughout. Removable bakelite cap. Thumb control switch in the line just back of tool. Cool motor operation even though tool is grasped by the head. Tapered end of gear-head extends over chuck, protecting operator's fingers.

Application—"Shorty" is being widely used for "close corner" work as in aircraft and auto-trim plants, radio and other cabinet work—ornamental iron and structural steel work—and as a compact "kit" tool, where size and weight are important considerations.

Specifications:

For round shank drills up to 1/4 inch.

Capacity—In steel, up to 1/4 inch.

In hardwood, up to 1/2 inch.

Speed—No-load, 2500 r.p.m.; full load, 1600 r.p.m.

Length over all—4 1/2 inches in direction of chuck spindle,

7 3/4 inches in direction of motor.

Net weight 3 1/2 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable and plug, Jacobs geared chuck and key.

TR 26—Weight each 4 1/2 lbs.

Std. List, Each \$35.00 Each \$35.00

#If wanted with paddle switch or toggle switch so specify and add...Std. List, Each \$3.00 Each 3.00

One in a carton.

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BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

ELECTRIC DRILLS



**3/8 INCH
Ball Bearing**

Features—Streamlined construction, light weight and perfect operating balance. Automatic release trigger switch in side handle, with locking pin for optional use. Spade handle with chuck key

holder, and detachable pipe handle. Ball bearings on armature shaft.

Applications—Drilling in all metals, wood, composition materials, etc. Especially adapted for continuous production service. An ideal tool for those industrial plants where highly specialized operations call for the drilling of large numbers of 3/8-inch holes, and where the spindle speed of the larger drills would be entirely too slow for economic handling of such an operation.

Specifications:

For round shank drills up to 3/8 inch.

Capacity—In steel, up to 3/8 inch.

In hardwood, up to 3/4 inch.

Speed—No-load, 900 r.p.m.; full-load, 675 r.p.m.

Length over all 16 1/2 inches.

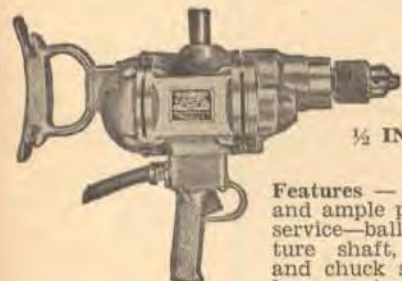
Net weight 12 1/2 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug and 3-jaw geared chuck with chuck key.

‡TR 37—Weight each 16 lbs.

Std. List, Each \$57.00 Each \$57.00



**1/2 INCH HEAVY-DUTY
Ball Bearing**

Features—Rugged construction and ample power for heavy-duty service—ball bearings on armature shaft, intermediate shaft and chuck spindle, guaranteeing long service and maximum efficiency.

Automatic release trigger switch in side handle, with locking pin for optional use. Detachable spade handle with chuck key holder, and detachable pipe handle.

Applications—Heavy-duty drilling in all types of metal, wood, composition materials, etc. Driving spring expanded cylinder grinders and hones—wire wheel brushing up to 8-inch wheel—driving wood augers up to 5/8 inch. Powered for continuous production service.

Specifications:

For round shank drills up to 1/2 inch.

Capacity—In steel, up to 1/2 inch.

In hardwood, up to 1 inch.

Speed—No-load, 500 r.p.m.; full load 330 r.p.m.

Length over all 18 1/2 inches.

Net weight 16 1/2 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug and 3-jaw geared chuck with chuck key.

TR 40—Weight each 20 lbs.

Std. List, Each \$68.00 Each \$68.00



**1/2 INCH JUNIOR
"Compo" Oil-Less
Bearing**

Features—Standard Black & Decker construction, with strong aluminum housings. Automatic-release switch, with locking pin for optional use. Spade handle with chuck-key holder, and detachable pipe handle. Triple gear reduction in spade handle.

"Compo" oil-less bearings, impregnated with oil at the factory, give complete freedom from dry bearings and power loss due to friction. Spindle speed is most practical for an all-purpose drill.

Rounded housings reduce size and weight and make the drill easier to handle.

Applications—Specially designed as an "all-round" drill to meet the varying needs of the job-shop, maintenance crew, garage and service station, lumber and heating contractor, carpenter and mechanic.

The ideal drill for driving hole-saws, cutting clean round holes in wood, sheet metal, cast iron or composition up to 3 1/2 inches.

Amplly powered for drilling in all metals and woods, on intermittent service. Not recommended for constant production work.

Can be mounted in bench drill stand, for drill-press work. Can be used with wire brush or small grinding wheel, with Arbor No. 8449.

Specifications:

For round shank drills up to 1/2 inch.

Capacity—In steel, up to 1/2 inch.

In hardwood up to 1 inch.

Speed—No-load, 375 r.p.m.; full-load 240 r.p.m.

Length over all 16 1/2 inches.

Net weight 9 3/4 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug and 3-jaw Jacobs chuck and key.

TR 38—Weight each 13 lbs.

Std. List, Each \$35.00 Each \$35.00

1/2 INCH SPECIAL Ball Bearing

Features—Streamlined construction, light weight and perfect operating balance. Greater power than any previous 1/2-inch special drill. Automatic release trigger switch in side handle with locking pin for optional use. Spade handle with chuck key holder, and detachable pipe handle. Ball bearings on armature shaft.

Applications—Drilling in all types of metal, wood, composition materials, etc. A most popular general purpose tool for garage, repair shop, plant maintenance, and industrial use—driving hole-saw for cutting clean, round holes in cast iron, brass, aluminum, wood, sheet metal—up to 3 1/2 inches—wire wheel brushing and light grinding up to 6-inch wheel. Powered for intermittent service.

Specifications:

For round shank drills up to 1/2 inch.

Capacity—In steel, up to 1/2 inch.

In hardwood, up to 1 inch.

Speed—No-load, 400 r.p.m.; full-load 300 r.p.m.

Length over all 17 1/4 inches.

Net weight 13 1/4 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug and 3-jaw geared chuck with chuck key.

TR 39—Weight each 17 lbs.

Std. List, Each \$58.00 Each \$58.00

One in a carton.

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BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

ELECTRIC DRILLS

$\frac{3}{8}$ -INCH HEAVY DUTY Ball Bearing



Features—Full anti-friction bearing construction with ball bearings on armature shaft and intermediate shafts. Taper roller bearings on chuck spindle to absorb side and end thrust. Equipped with No. 3 Morse taper socket to take taper shank drill bits. Can be

fitted with a No. 3-2 reducing sleeve, or geared chuck mounted on Morse taper arbor. Designed throughout for all-around heavy duty work; ample ventilating slots assure cool operation. Extended side handle and pipe handle afford ample leverage for perfect control of unit. Safety switch in side handle which automatically cuts off when operator's grasp is released. Detachable spade handle and pipe handle.

Applications—Heavy duty drilling in all metals, wood, ore, composition materials, etc. Especially adapted for heavy construction work, ship building, wood boring in heavy timbers, etc.—reaming in steel and iron up to $\frac{3}{8}$ inch.

Specifications:

For round shank drills up to $\frac{3}{8}$ inch.
Capacity—In steel (with No. 3-2 or 3-1 reducing sleeve range is extended down to $\frac{1}{8}$ inch) $\frac{3}{8}$ inch.
In hardwood up to $1\frac{1}{4}$ inches.
Light reaming up to $\frac{3}{8}$ inch.
Heavy reaming up to $\frac{1}{2}$ inch.
Speed—No-load, 375 r.p.m.; full load, 225 r.p.m.
Length over all $21\frac{1}{4}$ inches.
Net weight 24 $\frac{1}{2}$ lbs.
Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.
Complete with 3-conductor cable, plug and No. 3 Morse taper socket.

*TR 46—As described.
Std. List, Each \$98.00 Each \$ 98.00
*TR 302—With internal spindle.
Std. List, Each \$103.00 Each 103.00

Weight each 33 lbs.
One in a carton.

UTILITY POWER DRILL LINE



Here is a popular-price line of large-size drills, delivering real heavy-duty performance to the thousands of shops that want the combination of "Production Unit" power and "Service Tool" utility.

Every day a tough job comes along that needs the extra margin of power, formerly available only in a heavy duty production drill. However, designed for high-speed production service, such units have too much speed for the average shop, burn up drill bits, and are not adaptable to the use of the many accessories so vital to general maintenance and shop work.

The utility power line is just what the name implies—power enough for any drilling job it meets. A spindle speed adapts it to utility service, such as drilling with carbon bits, driving wood augers, cutting with hole saws, powering cylinder hones and grinders, drilling in hard alloy metals, doing heavy duty and precision work in a bench drill stand.

These new drills are light in weight, perfectly balanced, have true heavy duty bearing construction throughout, and are priced to give the greatest value in drill history. Especially designed for garages, trucks and body shops, fleet owners, railway repair shops, construction crews, maintenance departments, contractors, tree surgeons, ship yards and drydocks, and the thousands of general service shops.

An outstanding feature of the utility power line is the rugged, wear-resisting power-transmitting construction of gears, spindles and bearing. Triple gear reduction, gives increased torque and low spindle speed. Motor is mounted on ball bearing. Chuck spindle operates on tapered roller bearings, insuring smooth full power at the chuck and protecting against wear from thrust in any direction. Removable commutator cover facilitates brush inspection and cleaning.

Universal motor operates on alternating current 110 volts, 25-60 cycles or direct current 110 volts.

Standard Equipment—(All units)—3 wire cable and plug (3rd wire for grounding), automatic-release switch with locking pin in side handle, spade handle with chuck-key holder, detachable pipe handle.

Nos.	TR 238	TR 239	*TR 240
Capacity in Steel, Inch	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{8}$ to $\frac{3}{4}$	$\frac{3}{8}$ to $\frac{3}{4}$
Capacity in Hard Wood, Inches	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{4}$
No-Load Speed, R.P.M.	300	250	200
Full-Load Speed, R.P.M.	175	150	120
Net Weight, Lbs.	17	19 $\frac{1}{4}$	17 $\frac{1}{4}$
Shipping Weight, Lbs.	22 $\frac{1}{2}$	24	24
Chucking Equipment	$\frac{3}{8}$ in.	$\frac{3}{8}$ in.	No. 3
	Geared Chuck and Key	Geared Chuck and Key	Morse Taper Socket
Length Over All, Inches	18	18 $\frac{3}{4}$	19 $\frac{1}{4}$
Each	\$60.00	68.00	73.00
Std. List, Each	\$60.00	68.00	73.00

One in a carton.

Black & Decker Tools have a Good Reputation Gained by Years of Faithful Adherence to a High Standard of Quality.

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Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

ELECTRIC DRILLS

3/4 INCH HEAVY DUTY Ball Bearing



Features — Full anti-friction bearing construction with ball bearings on armature shaft and intermediate shafts. Taper roller bearings on chuck spindle to absorb side and end thrust. Designed and powered for satisfactory heavy duty service under most severe requirements.

Extended side handle and pipe handle—give greater leverage and better control of this powerful tool. Safety switch in side handle which automatically cuts off when operator's grasp is released. Detachable spade handle with chuck key holder and detachable pipe handle.

Applications—Heavy duty drilling in all metals, wood, composition materials, etc. The ideal tool for driving all positive set cylinder grinders and hones. Especially popular with building contractors, heavy machinery plants, railroad construction and maintenance shops, shipyards, etc.

Specifications:

For round shank drills up to 3/4 inch.

Capacity—In steel, 3/8 to 3/4 inch.

In hardwood, up to 1 1/4 inch.

Speed—No-load, 375 r.p.m.; full-load 225 r.p.m.

Length over all 21 inches.

Net weight 27 1/2 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug, and 3-jaw geared chuck with key.

TR 45—Weight each 33 lbs.

Std. List, Each \$94.00 Each \$94.00

1 INCH HEAVY DUTY Ball Bearing



Features—Rugged construction for heavy duty drilling and light reaming. Equipped with No. 3 Morse taper socket. Extended side handle and pipe handle provide ample leverage for easy handling. Safety switch in side handle automatically shuts off when

operator's grip is released. Detachable spade handle and side handle.

Applications—Heavy duty drilling in all metals, wood, ore, composition materials, etc.—light reaming in structural steel, etc.

Specifications:

For round shank drills up to 1 inch.

Capacity—In steel (with No. 3-2 or 3-1 reducing sleeve, range is extended down to 1/2 inch), 1 inch.

In hardwood, up to 2 1/4 inch.

Light reaming, up to 3/4 inch.

Heavy reaming, up to 3/4 inch.

Speed—No-load, 350 r.p.m.; full-load, 180 r.p.m.

Length over all 19 3/4 inches.

Net weight 27 3/4 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug, and No. 3 Morse taper socket.

#TR 301—As described.

Std. List, Each \$110.00 Each \$110.00

#TR 47—With internal spindle.

Std. List, Each 115.00 Each 115.00

Weight each 37 lbs.

One in a carton.

#BENCH DRILL STANDS



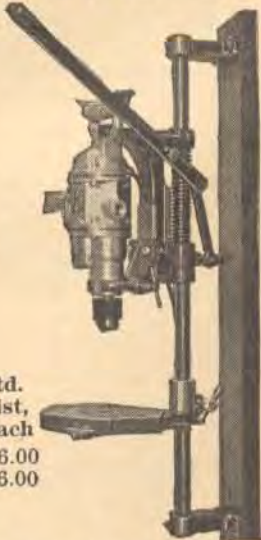
DRILL STANDS

The full flexibility of Black & Decker portable electric drills is made available through the use of Black & Decker drill stands. The portable unit is quickly clamped in the bracket of the stand and converted into a powerful drill press for heavy duty precision work. The handle of the stand has a 6 to 1 leverage, enabling the operator to exert tremendous pressure on the work. The bracket can be raised or lowered on the supporting column and swung in an arc to any desired position. The bracket operates very smoothly, permitting the use of the stand for the most accurate drilling.

Nos.	Each	For Drills	Ship.		
			Net Wgt.,	Std.	Std.
		Nos.	Lbs.	Lbs.	Each
#TR 122	\$22.00	37 and 39	30	50	\$22.00
#TR 125	32.00	40, 45, 46,	59	83	32.00
		47, 301, 302			

One in a carton.

#POST DRILL STANDS



Nos.	Each	For Drills	Ship.		
			Net Wgt.,	Std.	Std.
		Nos.	Lbs.	Lbs.	Each
#TR 123	\$26.00	37 and 39	83	106	\$26.00
#TR 126	36.00	40, 45, 46,	87	110	36.00
		47, 301, 302			

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BLACK & DECKER PORTABLE ELECTRIC TOOLS

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Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

ELECTRIC DRILLS

BLACK & DECKER HOLGUN



A light, compact drill—well constructed for efficient operation at a low initial cost and low running expense.

Standard equipment—2-pole automatic-release trigger switch and locking pin, mounted as a unit with cord protector, 3-wire cable and plug (third wire for grounding).

1/4-INCH HIGH SPEED

Specifications. Drilling capacity in steel—1/4 inch. Standard spindle speed (no-load)—1,700 R. P. M. Spindle offset—3/4 inch. Over-all length (in direction of spindle)—6 3/4 inches.

Three-jaw Jacobs geared chuck with chuck key. Universal motor, which operates on 110 volts, A. C. or D. C. current.

TR 345—Weight each 2 3/4 lbs.

Std. List, Each \$32.50 Each \$32.50

Weight 3 3/4 lbs.

1/4-INCH LOW SPEED

Reduced spindle speed and increased torque makes this the perfect 1/4-inch drill for production work in stainless steel, monel metal and other modern hard alloys.

Specifications. Drilling capacity in steel—1/4 inch. Standard spindle speed (no-load)—500 R. P. M. Spindle offset—3/4 inch. Over-all length (in direction of spindle)—7 1/2 inches.

Three-jaw Jacobs geared chuck and chuck key. Universal motor, which operates on 110 volts, A. C. or D. C. current.

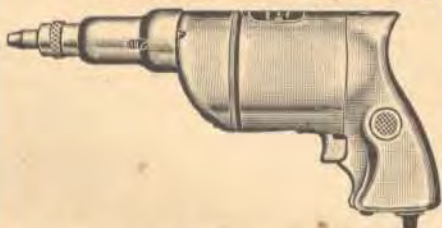
#TR 346—Weight each 3 3/4 lbs.

Std. List, Each \$38.00 Each \$38.00

Weight 4 1/4 lbs.
One in a carton.

ELECTRIC SCREW DRIVERS

BLACK & DECKER SCRUGUN



A highly versatile screw driver for production work on wood and metal.

Adjustable clutch—can be set for any desired

tension, and the free spindle idles until operating pressure engages the clutch jaws. Clutch is quickly adjusted by turning knurled collar with a pin through slot in protecting sleeve. The scrugun is perfectly balanced and comfortably fits the hand for continuous use. An ideal tool for driving self-tapping screws.

Specifications—Screw-driving capacity—from No. 4 to No. 12 screws. Standard spindle speed (no-load)—750 R. P. M. Spindle offset—3/4 inch. Over-all length (including bit)—9 1/2 inches.

One No. 8 bit, with finder and sleeve. Universal motor which operates on 110 volts, A. C. or D. C. current.

TR 347—With single clutch.

Std. List, Each \$47.00 Each \$47.00

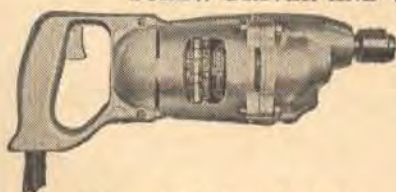
#TR 350—With double clutch.

Std. List, Each \$57.00 Each 57.00

Weight each 4 3/4 lbs
One in a carton.

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#ELECTRIC SCREW DRIVERS SCREW DRIVER AND WRENCH



Ball Bearing UNIT 12

Features—A completely new and up-to-date version of the famous Black & Decker labor saver—the electric

screw driver. Redesigned with greater power, improved mechanism better balance and performance, this unit is amply powered for constant production service. A positive pin-type clutch in the driving spindle permits the spindle to idle until the bit "finds" the screw slot—this type of clutch is more sensitive and produces more uniform production work than former types. Gear and field cases are assembled with through-bolts for added strength and to facilitate inspection.

Applications—The unit is adapted to screw driving in metal or wood, nut tightening, lag screw driving, cabinet and furniture building, boat building, automobile body and aviation assembly. When equipped with reversing switch, it is ideal for assembling and disassembling pieces that are shipped "knocked-down". It is indispensable in the shipping department for crating and uncrating.

Specifications:

Capacity—Hardwood, screws up to No. 12x2 inches long.

Lag screw capacity, up to 3/4x3 inch.

Nut running capacity, up to 1/4-inch diameter.

No-load speed 500 r.p.m.

Length over all (not including bit) 13 1/4 inches.

Net weight 6 1/2 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with quick-change chuck with 7/16-inch hexagon socket, 13° positive clutch, 3-conductor cable and attachment plug, and one each No. 8 and No. 12 standard bits with centering sleeves.

#TR 53—Weight each 9 lbs.

Std. List, Each \$58.00 Each \$58.00

UNIT 22

Features—A rugged, powerful driving unit for screws, nuts and bolts, entirely new in design and construction and embodying latest engineering improvements. For greater strength and service, the switch handle is integral with field case—removable commutator covers afford easy access for inspection and cleaning. Gear and field housings are assembled with through-bolts for added strength and to facilitate inspection.

Applications—This unit also has greater power, improved mechanism and better balance than the former model and is capable of handling constant production work in either wood or metal, screw driving, nut tightening, or construction work, automobile and body work, ship building, railway car building and repair, machinery assembly and crating. Addition of reversing switch greatly expands the uses of this unit for dis-assembling, repair work and preparing "knocked-down" shipments.

Specifications:

Capacity—Hardwood, screws up to No. 16x3 1/4 inches long.

Lag screw capacity, up to 1 1/8x4 inches long.

Nut running capacity, up to 3/8-inch diameter.

No-load speed 500 r.p.m.

Length over all (not including bit) 14 1/4 inches.

Net weight 9 lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with quick-change chuck with 7/16-inch hexagon socket, 13° positive clutch, 3-conductor cable with plug, and one each No. 10 and No. 14 standard bits with centering sleeves.

#TR 54—Weight each 12 lbs.

Std. List, Each \$72.00 Each \$72.00

One in a carton.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

#ELECTRIC SCREW DRIVERS TORSIMETER

ADJUSTABLE CLUTCH



Features—The latest development in adjustable clutch screw driving units. An ingenious clutch arrangement makes it possible to pre-determine the amount of torque or torsion to be applied to each particular screw driving job. Once the adjusting screw is set for the desired tension, the tool will automatically release each screw at the same torsion point, insuring uniform screw driving operation. This feature also eliminates marring of screw head or surrounding surface. It is also equipped with a positive clutch which permits the spindle to idle until the bit "finds" the screw slot. This tool is particularly adaptable to the driving of self-threading screws and can be used with socket wrench for hexagon head screws. The compact size and sturdy construction of this unit make it ideal for continuous production service.

Applications—Driving screws of all types, including slotted and hex heads, in metal or wood. Especially adapted for assembling radio and refrigerator cabinets, airplane and automobile bodies and general production cabinet work.

Specifications:

Capacity—Screws up to No. 8.
No-load speed 750 r.p.m.
Length over all 11 $\frac{1}{4}$ inches.
Net weight 4 $\frac{3}{4}$ lbs.
Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

#TR 52—As described.

Std. List, Each \$57.00 Each \$57.00

#If wanted with paddle switch so specify and add..... Std. List, Each \$3.00 Each 3.00

Weight each 6 lbs.
One in a carton.

#ELECTRIC HAMMERS



Features—Completely self-contained units operated by universal motors and requiring no transformers, rectifiers or other extra equipment. Greatly speed up any drilling or cutting operations requiring a hammer action.

Applications—Drilling and channeling in concrete, stone or brick—caulking joints and seams in tanks, pipe lines, etc.—installing signs, fixtures, theatre seats, etc.—tamping molds and concrete forms—vibrating concrete forms for smooth finish—gouging and shaping wood beams, timbers, etc.—removing form marks from concrete surfaces—removing scale in boilers, tanks, etc.

Complete with turning wrenches, tool retaining spring, drift key and handy fibre carrying case.
Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Nos.	#TR 103	#TR 104
Label Nos.	32	34
Capacity, inches	$\frac{3}{4}$	1 $\frac{1}{8}$
No. blows per minute	2500	2300
With chuck Nos.	0	1 and 2
With star drill, size, inch	$\frac{5}{8}$	1
Length over all, inches	14 $\frac{1}{2}$	17 $\frac{1}{2}$
Net weight, lbs.	9 $\frac{3}{4}$	17
Shipping weight, lbs.	22	30
Each	\$115.00	\$145.00
Std. List, Each	\$115.00	\$145.00

One in a carton.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.
Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

#ELECTRIC NUT RUNNERS



Ball Bearing UNIT 32

Features—A complete new unit for handling more efficiently one of the greatest labor-saving operations accomplished by electric tools—power is materially increased over former

model. Rugged construction of housings and all working parts fit this unit for heavy-duty production work. Pin-type clutch in spindle automatically disengages when driving pressure is released. Sturdy internal gear mechanism, proven so successful on high-cycle production tools, is used in this unit. Spade handle and detachable pipe handle. Instant-release switch improves control, insures safety.

Applications—Driving wood screws, lag screws and running up nuts and bolts; assembling metal frames, shelving, partitions, conveyors, stairways, etc.; erecting scaffolding, concrete forms, etc.; crating and lagging down heavy machinery for shipment; with reversing switch, assembling and disassembling units that are shipped "knocked down"; assembly and maintenance on trucks, buses, railway cars, etc.

Specifications:

Capacity—Wood screws, up to No. 20x4 inches long.
Lag screws, up to $\frac{3}{4}$ x4 $\frac{1}{2}$ inches long.
Nuts and bolts, up to $\frac{1}{2}$ inch in diameter.

No-load speed 500 r.p.m.

Length over all (not including bit) 19 $\frac{1}{2}$ inches.

Net weight 22 $\frac{1}{2}$ lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable, plug, and "quick-change" chuck ($\frac{1}{4}$ inch hexagon), and one hexagon socket wrench $\frac{3}{4}$ inch across flats.

#TR 55—Weight each 31 lbs.

Std. List, Each \$94.00 Each \$94.00

UNIT 42

Features—A completely new, heavy-service unit, with increased power and structural strength for hard driving on production operations. Adapts to universal tool use the successful internal gear mechanism of high-cycle production nut runners. Sensitive pin-type clutch insures more uniform work and gives longer service under constant use—clutch disengages when forward pressure is released. Automatic safety switch in side handle cuts out instantly when operator's grasp is released. Spade handle and detachable pipe handle. Smooth, rounded housing design and assembly is best suited to production work.

Applications—Heavy-duty lag screw driving and nut running on all types of production and maintenance. Especially adapted to marine and railway construction and in steel fabricating plants—structural steel work, bridge, pier and building construction—installing cranes, elevators, conveyor lines, etc.—erecting forms, moulds, scaffolding, etc.

Specifications:

Capacity—Lag screw, up to $\frac{1}{2}$ x5 $\frac{1}{2}$ inches long.

Nuts and bolts, up to $\frac{3}{4}$ inch in diameter.

No-load speed 500 r.p.m.

Length over all (not including bit) 21 $\frac{1}{4}$ inches.

Net weight 31 lbs.

Universal motor operates on alternating current 110 volts, 25-60 Cycles or 110 volts direct current.

Complete with 3-conductor cord and plug, "quick-change" chuck ($\frac{1}{4}$ -inch hexagon), and one hexagon socket wrench $\frac{3}{4}$ inch across flats.

#TR 56—Weight each 44 lbs.

Std. List, Each \$120.00 Each \$120.00

One in a carton.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

PORTABLE ELECTRIC SANDERS

7-INCH HEAVY DUTY



Features—A very powerful Universal motor and sander capable of high-speed production service on any type of metal finishing applications. Unusually sturdy gear construction, housed in steel gear case for longer service under rough handling. Armature mounted on ball bearings. Completely dust-sealed commutator and switch compartments protected from abrasive dust and dirt. Straight line ventilation ports reduce danger of clogging and overheating of motor. Plunger type switch for perfect control and safety in operation. Reversible side handle can be used on either side of tool to suit operator. Flexible pad insures maximum working area and adapts tool to flat or curved surfaces.

Applications—High-speed production sanding and metal finishing of all types. Grinding metal, stone and tile surfaces and finishing concrete with cup or saucer wheel—cleaning metal surfaces, removing scale and rust with wire cup brush—shaping and surfacing timber and other wood surfaces with rotary planer heads.

Specifications:

Diameter sanding disc 7 inches.

Spindle diameter $\frac{1}{2}$ inch, 11-thread.

No-load speed 4200 r.p.m.

Length over all 18 $\frac{1}{2}$ inches.

Net weight 15 $\frac{1}{4}$ lbs.

Universal motor operates on alternating current 110 Volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable and plug, plunger switch, detachable side handle (which can be used on either side of unit), 7-inch flexible felt and metal pad, twelve 7-inch sanding discs (4 coarse, 4 medium, 4 fine).

#TR 93—Weight each 22 lbs.

Std. List, Each \$75.00 Each \$75.00

9-INCH STANDARD

Features—This unit embodies the same characteristic features of performance and design as the 7-inch heavy-duty sanders. Built especially for those shops desiring larger working-area and slower speed on intermittent sanding and metal finishing operations. Dust-sealed commutator and switch compartment are completely protected from abrasive dust and dirt. Plunger-type switch greatly improves control and increases safety in operation. Straight-line ventilation through ample air-slot prevents clogging and assures cool motor operation. Reversible side handle can be used on either side of tool to suit operator.

Applications—Intermittent service sanding, wire brushing and metal finishing on large areas such as settling tanks, ship hulls, steel bins and partitions—shaping and smoothing structural forms with coarse abrasive discs—cleaning large metal surfaces with cup wire brush.

Specifications:

Diameter sanding disc 9 inches.

Spindle diameter $\frac{1}{2}$ inches, 11-thread.

No-load speed 2700 r.p.m.

Length over all 15 $\frac{1}{2}$ inches.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable with plug, plunger switch, detachable side handle (for either side of unit), 9-inch flexible felt and metal pad, twelve 9-inch sanding discs (4 coarse, 4 medium, 4 fine).

#TR 94—Weight each 22 lbs.

Std. List, Each \$78.00 Each \$78.00

One in a carton.

* Goods marked thus (*) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

7-INCH JUNIOR

(Not for Continuous Production Service)



Features—An entirely new light weight unit for intermittent service in shops that do not require the speed, power or weight of a heavy-duty sander. A compact tool, with improved power, reduced housing diameters and smooth surfaces, better balance and less weight than former model. Improved switch—a thumb-operated tumbler switch improves control and handling and increases safety. Straight-line ventilation through ample air-slots—prevents clogging and insures cool motor operation. Moulded rubber pad adapts the sander to flat or curved surfaces—abrasive discs are held on pad by a flange nut.

Applications—Light-duty sanding and metal finishing on all types of metal surfaces—rough sanding of wood surfaces—removing rust and paint—smoothing welds and casting ridges—removing shipping marks from cases. This tool is not recommended for use with cup wire brushes, cup grinding wheels or rotary planer heads, and is designed only for light-duty intermittent service.

Specifications:

Diameter sanding disc 7 inches.

Spindle diameter and thread $\frac{1}{2}$ inch, 11-thread.

No-load speed 3200 r.p.m.

Length over all 14 $\frac{1}{2}$ inches.

Net weight 7 $\frac{1}{4}$ lbs.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Complete with 3-conductor cable with plug, detachable side handle, 7-inch flexible rubber pad, three 7-inch sanding discs (1 coarse, 1 medium, 1 fine).

#TR 91—Weight each 13 lbs.

Std. List, Each \$39.50 Each \$39.50

One in a carton.

*PORTABLE ELECTRIC GLUE POTS

BLACK & DECKER



Features—Automatic thermostat control which maintains a constant temperature for glue. Nichrome heating element hermetically sealed and protected against moisture and foreign substance. Cast aluminum glue pot is carefully machined to fit in the water jacket, conserving heat and reducing current consumption. Iron water pot. Equipped with convenient carrying handle and heavy iron brush wiper.

Applications—Ideal for use in book binderies, printing plants, furniture and cabinet factories, toy factories, piano factories, etc. Especially designed for continuous use where maintenance of constant working temperature is important.

For Alternating Current 110 Volts Only.

Complete with two-wire cable and attachment plug.

#TR 89—Capacity glue container 2 quarts. Net weight 11 $\frac{1}{2}$ lbs. Shipping weight 13 lbs.

Std. List, Each \$19.50 Each \$19.50

One in a carton.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Motors—For single phase alternating current 110 volts, 60 cycles only.

ELECTRIC BENCH GRINDERS

6-INCH JUNIOR

Ball Bearing



Features—A sturdy, well-balanced bench grinder for practical shop use. Perfectly proportioned and handsomely finished in brilliant aluminum. Powered by a Standard Black & Decker constant speed motor of $\frac{1}{4}$ h. p. rating. Carefully balanced rotor and wheel spindle mounted on full-size ball bearings—

special protective sleeves cover these bearings to keep out abrasive dust and dirt. Generous size wheel guards, made extra strong by the use of a new alloy which combines lightness with high tensile strength. Guards are cast integral with motor housings for greater clearance, and provide ample room for use of wire wheel brushes.

A wide, substantial base provides a secure "footing" for the grinder and insures steady, vibrationless operation. A toggle starting switch is conveniently mounted in the base. Sturdy, full-size tool rests, also of the light, strong alloy are firmly locked in base grooves with wing nuts, easily adjusted to compensate for wheel wear. A convenient carrying handle and four rubber feet adapt the Junior Grinder to instant use at any convenient spot—it may also be bolted to the bench, if desired. Full size extra wide grinding wheels—one fine and one medium wheel supplied with the bench grinder.

Complete with 3-conductor cable with plug, toggle switch in base, rubber feet, two adjustable wheel guards with tool rests, two 6-inch grinding wheels—one medium and one fine.

Specifications:

Wheel size $6\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ inches.
No-load speed 3600 r. p. m.
Spindle length $12\frac{1}{4}$ inches.
Motor rating $\frac{1}{4}$ h. p.
Net weight $31\frac{1}{2}$ lbs.

Motor is not Universal—for single phase alternating current 110 volts, 60 cycles only.

TR 66—Weight each 34 lbs.

Std. List, Each \$22.50 Each \$22.50

6-INCH HEAVY DUTY

Ball Bearing



Features—An improved model of this popular "wide-type" grinder, at a most attractive new low price. A full powered grinder for bench or pedestal use, at a price that will make it available to many shops for tool sharpening, wire brushing, polishing, buffing and general shop work. Motor power has been increased to full $\frac{1}{2}$ horsepower. Extended wheel spindle and tapered end housings greatly increase the wheel clearance for grinding large and odd-shaped pieces. Completely enclosed wheel guards and adjustable tool rests combine maximum safety with maximum accessibility. End covers are removable for changing wheels. Guards are adjustable radially for grinding in any position. Tool rests are easily adjusted to compensate for wheel wear or quickly removed for special grinding work. Guards are drilled and tapped for mounting eye shields, which can be furnished at slight extra cost. Convenient carrying handle and rubber feet adapt the grinder to use at any desired point. Grease-sealed ball bearings near ends of spindle insure smooth operation.

Specifications:

Wheel size $6\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ inches.
No-load speed 3600 r.p.m.
Motor rating $\frac{1}{2}$ h. p.
Spindle length 15 inches.
Net weight 45 lbs.

Complete with 3-conductor cable and plug, toggle switch in base, carrying handle, rubber feet, two adjustable wheel guards with tool rest, two 6-inch grinding wheels—one medium, one fine.

Motor is not Universal—for single phase alternating current 110 volts, 60 cycles only.

TR 67—Weight each 50 lbs.

Std. List, Each \$38.00 Each \$38.00

One in a wood case.



Specifications:

Wheel size $10 \times 1 \times \frac{1}{2}$ inches.
No-load speed 1800 r.p.m.
Motor rating 1 h. p.
Spindle length $22\frac{1}{2}$ inches.
Net weight 137 lbs.

Features—A completely new, full powered bench and pedestal grinder, of the popular "wide-type" construction, with many important features. Full 1 horsepower constant speed motor. Strong, completely enclosed wheel guards, with exhaust outlets for connection to exhaust system. Guards can be adjusted radially for grinding in any position. Tool rests and spark shields, mounted on guards, are adjustable for wheel wear. Wire leads are brought out for permanent wiring, with housing drilled and tapped for conduit—and connector furnished for armored cable. Grounding is accomplished through conduit or armored cable cover. Ball-bearing set close to wheels eliminate vibration and insure smooth operation. Long spindle and tapered housing allow ample room for handling large and awkward pieces.

Standard Equipment—Lead wires for permanent connections, toggle switch in base, starting switch on one phase unit, two enclosed wheel guards with exhaust outlets, tool rests and spark shields, two 10-inch grinding wheels—one medium, one coarse.

Motor is not Universal—for single phase 60 cycle alternating current.

TR 83—Weight each 150 lbs. Std. List, Each \$98.00 Each \$98.00

One in a wood case.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.
Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best materials obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

LECTRO-SHEARS



The Lectro-Shear is a brand-new unit in the Black & Becker line, with many features of advanced engineering design and performance.

Versatility—The Lectro-Shear will cut all types of sheet metal quickly, easily and accurately. It will cut on a radius as small as ¼ inch, and easily follows a straight or patterned line. It will cut up to its rated capacity in steel and galvanized iron, 1 gauge thinner in monel metal and stainless steel, and at least 50% greater than rated capacity in copper, tin, aluminum, lead and other non-ferrous metals.

Construction—The shearing action in Lectro-Shear is accompanied by the rapid reciprocating action of a vertical blade against a stationary horizontal blade, set in a special shoe which indicates the correct cutting angle and adapts the tool to all types of cutting work.

The unit is full ball bearing equipped (except the eccentric, which is steel on prosphor-bronze), and powered with a Universal motor, operating on either alternating or direct current.

Smooth, streamlined aluminum housing eliminates all obstructions and unnecessary weight and make the Lectro-Shear most compact and easy to use.

Simplicity of construction reduces service replacements to a minimum and increases the life of the tool.

It is not necessary to adjust blades for varying gauges or type of metal. Blades can be reground without the necessity of special fixtures.

Standard Equipment—Both units—3-wire cable and plug (3rd wire for grounding, thumb control switch, one set Lectro-Shear blades.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current. Cutting speed (strokes per minute), no-load speed 2500; full-load speed 1500.

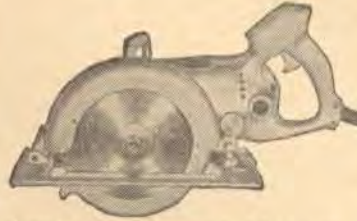
Specifications:

Nos.	#TR 258	TR 259
Capacity in Steel (U. S. Standard Gauge)	18 Gauge	16 Gauge
Minimum Cutting Radius, Inch	¾	¾
Length Over All, Inches	11	11¾
Net Weight, Lbs.	6¾	8
Shipping Weight, Lbs.	7¾	9
Std. List, Each	\$60.00	76.00
Each	\$60.00	76.00

One in a carton.

* Goods marked thus (*) are not carried in stock and can only be furnished by shipment direct from factory.
Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ELECTRIC SAWS



Double power, complete safety, perfect balance, versatility, less weight. This new 7 inch portable electric saw has features that offer an outstanding value to carpenters, builders, contractors, wood-working plants, shipping departments,

freight handlers and other saw users.

Motor power has been increased to double that of former comparable model—and is transmitted by efficient worm gears to deliver maximum power to the blade. Cool motor operation is assured by perfect ventilation with an efficient fan and ample vent slots.

The new 7-inch size is the most widely useful of all portable saw units—with a 2¾ inch maximum depth of cut, handling all popular lumber sizes. Depth can be adjusted and set at any point up to maximum.

The new close-coupled design has materially reduced weight and length in this new saw, offering a compact unit with perfect operating balance and a minimum of operator fatigue. "Saw Grip" switch handle and correctly placed front handle—add to the easy use of this tool.

Many types of work are possible with this new unit. In addition to the adjustable depth of cut, the saw table may be tilted for angle or bevel cutting and locked at any angle from 0° to 45°. The unit is provided with a detachable, adjustable rip-fence, which accurately measures and guides rip-cutting up to 6 inches wide. A "Sight" notch at front of saw table makes it easy to follow pencil mark or other guide. Various types of blades and abrasive discs are available, adapting this tool to rip-sawing, cross cutting, metal cutting, slotting marble, asbestos, transite, tile and porcelain.

Special attention to safety features make this saw practically "Fool-proof." The telescoping guard covers the blade at all times, except when actually cutting. The inner guard, mounted on ball bearings, opens as saw advances into the work, and closes the instant the cut is finished. The outer guard swivels on spindle housing to follow depth-of-cut adjustment. A 2-pole, instant-release switch mounted inside the grip avoids accidental turning-on, and cuts off immediately when the operator's grasp is released.

Standard Equipment—2-pole instant-release switch, 3-wire cable and plug (3rd wire for grounding), adjustable saw table, detachable ripping fence, one 7 inch combination rip and cross cut blade, one 7 inch cross-cut blade, one carrying case, tube of special lubricant for worm gear.

Specifications:

Diameter of saw blade 7 inches.
Diameter of spindle 1½ inches.
Maximum vertical depth of cut—
On vertical cut 2¾ inches.
On 45° cut 1¾ inches.
Speed—No-load, 3,200 r.p.m.
Full load 2,200 r.p.m.
Weight, net, 17¾ lbs.
Length over all 17½ inches.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

TR 260—Weight each 31¾ lbs.
Std. List, Each \$105.00 Each \$105.00

One in a carton.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

All tools in this line are carefully made of the best material obtainable for the purpose and are carefully inspected before leaving the factory—will give satisfactory service over a long period of time.

Universal Motor—The motors in these tools are of the Universal type and are powerful and smooth-running. They operate on alternating current 110 volts, 25-60 cycles or 110 volts direct current, a feature particularly important where tools are taken out on the job.

PORTABLE ELECTRIC GRINDERS



Nos. TR 59 and TR 60



No. TR 61

Features—A complete redesigned line, using the most advanced features of portable grinder construction. Increased power over previous models of similar rated capacity. Full size ball bearings, set at extreme ends of wheel spindle, absorb all side thrust and insure long life. Armature shaft also mounted on ball bearings. Completely enclosed commutator and switch compartments protect these parts from abrasive dust. Improved ventilating system forces air straight through ample slots which prevent clogging and accumulation of dirt. Air is blown against the wheel, not in operator's face. Shaped grip prevents tool turning in operator's hand. Horizontal switch handles on all models improve balance and handling. Adjustable wheel guards can be turned to any desired position.

Applications—Grinding, wire brushing, buffing and polishing all types of metal surfaces, where the grinder must be taken to the work—removing rust, scale, paint, etc., from ships, cars, tanks, bridges, etc.—touching up metal bodies fenders, cabinets and other surfaces before painting—grinding, buffing and polishing large metal frames, windows, doors, partitions and panels—grinding or cutting off rivets, bolts, pins, studs, etc.—smoothing welded surfaces.

Standard Equipment — 3-conductor cable and plug, plunger switch, grip end handle, adjustable wheel guard, and one grinding wheel.

Universal motor operates on alternating current 110 volts, 25-60 cycles or 110 volts direct current.

Nos.	#TR 59	TR 60	#TR 61
Wheel Size, Inches	4x $\frac{3}{4}$ x $\frac{1}{2}$	5x $\frac{3}{4}$ x $\frac{1}{2}$	6x1x $\frac{1}{2}$
No-load Speed, R.P.M.	4500	3800	3300
Length Over All, Inches	23	23 $\frac{3}{4}$	25 $\frac{1}{2}$
Net Weight, Lbs.	12 $\frac{1}{2}$	15 $\frac{1}{2}$	23 $\frac{1}{2}$
Shipping Weight, Lbs.	18	30	35
Each	\$62.00	80.00	100.00
Std. List, Each	\$62.00	80.00	100.00

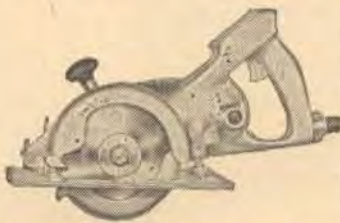
One in a carton.

KEEN KUTTER

TOOLS

ARE FINE TOOLS

#PORTABLE ELECTRIC TRIM SAWS



A very light, handy power saw specially designed for trim work and light crating, idea for builders and ship ping departments.

Power is transmitted by efficient worm gears. Cool motor operation is assured by an efficient fan and ample ventilation slots. The new

close-coupled design has materially reduced weight and length. "Saw grip" switch handle and correctly placed front handle give perfect balance and assure a minimum of operator fatigue. Universal motor operates on 110 volts, 25-60 cycles or 110 volts direct current.

Cutting depth adjustable to any point up to maximum—table can be tilted for bevel cutting at any angle to 45°. A detachable, adjustable rip fence guides rip-cutting up to 6 inches, "sight" notch makes it easy to follow pencil mark. Telescoping guard covers blade except when cutting. Inner guard opens as saw enters cut and springs closed as saw emerges—outer guard swivels to follow depth adjustment. Accidents prevented by 2 pole instant release switch inside grip.

Diameter saw blades—5 inches. Diameter spindle—1 $\frac{1}{4}$ inches. Maximum depth cut: on vertical cut 1 $\frac{3}{4}$ inches—on 45° cut 1 inch. Speed—no-load 4200 R.P.M.; full-load 2800 R.P.M. Net weight 11 $\frac{1}{4}$ lbs., length over all 14 inches.

Complete with 3-conductor cable with plug, one 5 inch combination rip and cross cut blade, one carrying case, $\frac{1}{2}$ lb. can special lubricant for worm gear and T-handle wrench.

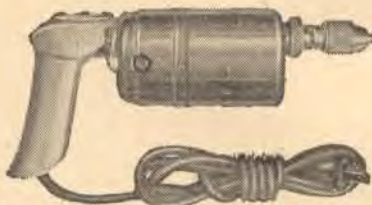
#TR 285—Shipping weight 22 lbs.

Std. List, Each \$75.00 Each \$75.00

One in a carton.

ELECTRIC SPEED DRILLS

KNAPP-MONARCH



* Will prove indispensable to amateurs and professionals for use on wood or metal. Convenient for home, office, radio maintenance and workshop. Light and perfectly balanced for easy

handling. Non-fatiguing pistol grip handle with thumb control switch. Well ventilated motor. Recessed brush holder. Knurled collar for easy removing and inserting of drill bits. Sturdy chuck. Outside diameter of housing only 2 $\frac{1}{8}$ inches, permits drilling $\frac{3}{4}$ inch from corner. Phosphor bronze gears. Mica insulated commutator. Chuck holds drill bit up to $\frac{1}{4}$ inch.

(Operates on 115 volts A. C. and D. C. current.)

TB 22-8—Weight each 28 lbs.

Std. List, Each \$9.95 Each \$9.95

One in an attractive merchandising carton.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory. Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ELECTRIC GRINDERS

BALDOR — "BETTER GRINDERS" FOR LONG, ECONOMICAL SERVICE

- Ball bearing equipped—dynamically balanced—wheels equipped with Baldor patented balancing flanges. Smooth, quiet, steady operation!
- Extra margin of power guaranteed by conservative rating of motors.

- Totally enclosed bearings, sealed in special dust-proof housings for longer life.
- Complete with wheels, adjustable cast iron tool rests, removable cast iron guards, convenient switch in base, and cord with plug.

MODELS WITH SINGLE PHASE CAPACITOR TYPE MOTOR—

GUARANTEED AGAINST BURN-OUT FOR TWO YEARS

The grinder wheels may actually be held in a locked position while the current is turned on for as long as twenty minutes—without serious injury to the motor.

No commutators, brushes nor centrifugal switches to wear out. Will give years of trouble-free operation, without servicing.



6-INCH—PORTABLE

For sharpening small tools and for miscellaneous work.

A "handy," compactly built grinder. Wide clearance between wheels and motor frame gives ample room for grinding operations—guards afford ample space for use of wire wheel brush. Convenient carrying handle.

Distinctively finished in red and black.

Wheel size 6x $\frac{5}{8}$ inches; $\frac{1}{2}$ -inch arbor. Net weight 39 $\frac{1}{2}$ lbs.

$\frac{1}{4}$ H. P. Motor

No-load Speed 3400 R.P.M.

With capacitor type motor, operates on single phase, 110-volt, 60 cycle, A. C. current.

#TY 548—Shipping weight 43 lbs.

Std. List, Each \$19.50 Each \$24.50



6-INCH BENCH TYPE

A general purpose, utility grinder—built to give years of reliable service—at a price anyone can afford to pay.

Wide clearance between wheels and motor frame gives ample room for grinding operations.

Completely enclosed

wheel guards afford maximum safety. Wheels are wide enough for easy use.

Wheel size 6x1 inches, $\frac{1}{2}$ -inch arbor. Net weight 46 lbs.

$\frac{1}{2}$ H. P. Motor

No-load Speed 3440 R.P.M.

With split phase (not capacitor type) motor. Operates on 110-volt, single phase, 60 cycle A. C. current.

#TY 604—Shipping weight 59 lbs.

Std. List, Each \$25.00 Each \$31.75



7-INCH BENCH TYPE

Particularly well-adapted for grinding of oddly shaped or large pieces. Tapered end bells provide wide clearance between wheels and motor frame—wheels extend $\frac{1}{2}$ -inch beyond front of motor.

Completely enclosed guards afford maximum protection combined with easy accessibility for guiding operations. Ruggedly constructed with heavy shaft and $\frac{5}{8}$ -inch arbor.

Wheel size 7x1 inches. Heavy shaft, $\frac{5}{8}$ -inch arbor. Net weight 61 lbs.

$\frac{1}{2}$ H. P. Motor

No-load Speed 3400 R.P.M.

#TY 704—With capacitor type motor. Operates on 110-volt, single phase, 60 cycle, A. C. current Std. List, Each \$40.00 Each \$50.75

#TY 705—With poly phase (not capacitor type) motor. Operates on 220-volt, 2 or 3 phase, 60 cycle, A. C. current..... Std. List, Each \$40.00 Each \$50.75

Shipping weight 74 lbs.



8-INCH—PEDESTAL TYPE

For heavy duty tool grinding or for light production service.

Ruggedly constructed throughout for long, hard service. Heavy shaft, $\frac{3}{4}$ -inch arbor.

Completely enclosed wheel guards with spark shields afford maximum safety combined with easy accessibility for grinding operation.

Wheel size 8x1 inches. Heavy shaft, $\frac{3}{4}$ -inch arbor. Net weight 140 lbs.

With single phase, 110-volt, 60 cycle, capacitor type motor.

$\frac{1}{2}$ H. P. Motor

No-load Speed 1700 R.P.M.

#TY 800—Shipping weight 160 lbs..... Std. List, Each \$63.00 Each \$79.00

$\frac{3}{4}$ H. P. Motor

No-load Speed 3400 R.P.M.

#TY 803—Shipping weight 170 lbs.

Std. List, Each \$69.00 Each \$87.00

One in a crate.

PACKED COMPLETE WITH WHEELS

#Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

STARRETT'S TOOLS

World's Standard for Accuracy—For Craftsmen Who Appreciate Truly Fine Precision Tools

- Starrett's tools are made from finest obtainable materials by skilled mechanics—are carefully tested at every stage of manufacture for accuracy, workmanship, design and finish to insure perfection.
- All markings are perfectly clear—easily and quickly read—all adjustments are easily made.

STEEL RULES

Made to conform with accurate standards furnished by United States Government. These spring tempered rules are finely polished and durable. Distinctive graduations are machine divided for accuracy.



Approximate thickness $\frac{1}{8}$ -inch or No. 18 gauge.

Nos.	Each	Length, Inches	Width, Inches	Wt. per Dozen, Lbs.
TR 603/6	\$0.90	6	$\frac{3}{4}$	1
TR 603/12	1.65	12	1	$1\frac{1}{2}$



Quick Reading Figures
Graduated on both sides: one side, edges in 8ths and 16ths inch, reverse side edges in 32nds and 64ths (quick reading figures). Both ends, one side in 32nds.

Extra Thin—Flexible
Will easily conform to a 2-inch circle. Graduated on one side only in 32nds and 64ths. Length 6 inches, width $\frac{1}{2}$ inch.

TR 320/6—Weight per carton 2 ounces.....Each \$0.90

One in an envelope—six in a carton.

HOOK RULES



(Removable)
Convenient hook for taking measurements from points where you cannot see if rule is even with measuring edge—as around corners, through hubs of pulleys, setting inside calipers. Hook may be quickly removed by turning eccentric stud one-half turn.

Graduated on both sides: one side, edges in 32nds and 64ths inch; reverse side edges in 8ths and 16ths inch. One end, both sides in 32nds inch. Thickness $\frac{1}{8}$ inch or No. 18 gauge.

Nos.	Each	Length, Inches	Width, Inches	Wt. per Ctn., Oz.
TR 419/6	\$1.25	6	$\frac{3}{4}$	4
TR 419/12	2.15	12	1	8

Four in a carton.

COMBINATION SETS



Protractor Head Added to Combination Square for Greater Variety of Uses.

Has more varieties of uses in laying out and testing work than are possible with any other instrument used by mechanics. Is convenient to have—easy to use.

Composed of No. TR 1112 combination square (a hardened polished, strong steel blade and a movable metal stock holding an accurate, protected bevel)—plus a center head with 7-inch bevel protractor which can be accurately adjusted to show any angle. A level, adjustable to show any degree, is attached to one side of protractor head. Blade graduated on both sides: one side edges in 32nds and 64ths inch, reverse side edges in 8ths and 16ths inch. Protractor graduated in degrees from 0 to 180, both left and right. Length 12 inches.

TR 9/12—Weight each 2 lbs.....Each \$6.60

One in a carton.

COMBINATION SQUARES



Complete substitute for whole set of ordinary try squares.

With adjustable blade this forms one of the most convenient tools ever devised for mechanics' use—one of the best gauges made for

transferring exact measurements or laying out work. For a miter it is perfect, while with the auxiliary center head it forms a centering square, both inside and outside, which has no equal for convenience and accuracy. Handy as a depth gauge or to square in a mortise.

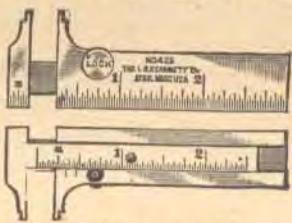
Hardened steel blade—finely polished. Movable metal stock—fitted with accurate protected level. Complete with center head.

Graduated on both sides: one side edges in 32nds and 64ths inch, reverse side edges in 8ths and 16ths inch.

Nos.	Each	Length, Inches	Weight Each, Lbs.
TR 11/6	\$2.40	6	$\frac{1}{2}$
TR 11/12	3.60	12	$1\frac{1}{4}$

One in a carton.

POCKET SLIDE CALIPERS



Can Be Held and Locked by Same Hand

Easily used improved clamping device with left hand thread (see illustration), may be locked by thumb of same hand in which tool is held. Quickly adjusted—two lines on stock (see lower illustration) enable you to get

either inside or outside measurements.

Hardened steel—finely polished and precisely graduated.

Graduations: Stock in 32nds inch, slide in 64ths inch.

Nos.	Each	Size, Inches	Depth, Jaws, Inches	Size Nibs, Closed, Inches	Weight Each, Lbs.
TR 425/3	\$4.00	3	$\frac{1}{2}$	.125	2
TR 425/5	5.00	5	$1\frac{1}{8}$	.250	3

One in a carton.

WORK TEST INDICATORS



UNIVERSAL JUNIOR

Unusually sensitive and flexible — covers about every conceivable application. Easy to use.

Rotating friction sleeve with movable, frictionally held, ball contact point—always permits the .001 graduated plate, with a range of .012 to be maintained in the preferred position. This eliminates physical and eye strain, double graduated scale or mirror. Tool can be used on side of shank at one end or on top of shank at other end.

Durably constructed of case-hardened steel with die-cast parts. Shank size approximately $\frac{1}{4} \times \frac{1}{2} \times 5$ inches. Indicator case thickness about $\frac{1}{4}$ -inch, tapering from $\frac{1}{4}$ -inch to $\frac{1}{8}$ -inch ball diameter—length $2\frac{1}{2}$ inches.

TR 564—Weight each 4 ounces.....Each \$5.00

One in a carton.

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STARRETT'S TOOLS

World's Standard for Accuracy—For Craftsmen Who Appreciate Truly Fine Precision Tools

CENTER GAUGES



Quickly Determines
Threads to the Inch

Speeds work of grinding
and setting screw cutting
tools. Also convenient for
measuring screw threads.

Spring tempered, polished
steel blade. Graduated in 14ths, 20ths, 24ths and 32nds
inch. U. S. standard 60° inclination.

TR 391—Weight per carton 3 ounces.....Each \$0.50

Six in a carton.

WIRE GAUGES



AMERICAN STANDARD
For non-ferrous metals—
adopted by the Brass Man-
ufacturers in January, 1858,
and widely used ever since.
Particularly useful for
gauging sheets, plates and
wire of copper, brass, alumi-
num, etc.—also for elec-
tricians' use.

Has black finish and is
tested after hardening.
Decimal equivalents (ap-
proximately) of each num-
ber stamped on back for
quick reference.

Diameter 3 1/4 inches.

TR 281—Nos. 0 to 36. Weight per box
1/2 lb.Each \$3.00



**U. S. STANDARD FOR
UNCOATED SHEET AND
PLATE IRON AND STEEL**

The recognized commercial
standard for uncoated
metals—adopted by Con-
gress, March 3, 1893—based
on weights in ounces per
square foot.

Black finish, carefully
tested after hardening.
Decimal equivalents (ap-
proximately) of each num-
ber stamped on back for quick reference.

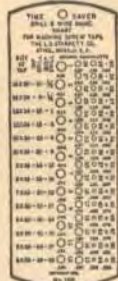
Diameter 3 1/4 inches.

TR 283—Nos. 0 to 36. Weight per box
1/2 lb.Each \$3.00

Two in a box.

TAP AND DRILL GAUGES

TIME SAVER



Enables the user to select at once the right
size drill to suit machine screw taps most
commonly used, leaving just stock enough
to cut as near a full thread as practicable
for one tap without breaking it.

Gauge indicates—number or size of tap—
pitch or size of thread—proper size of drill
to use which will leave the right stock for
proper thread—and proper size of drill to
use to let tap, screw or bolt through freely.
Also has holes indicating numbers of drills
1 to 60—figures designating size of holes in
thousandths of an inch.

Gauge is hardened, ground and rubbed to a
bright finish and is thoroughly tested after hardening.
Approximately 5/16 inch thick, 2 5/8 inches wide and 6 1/4
inches long.

TR 185—Weight per box 1 lb.Each \$2.40

Three in a box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SCREW PITCH GAUGES

Handy—Complete



Sharp, clean teeth readily
determine by comparison the
pitch of a thread.

Reads inside or outside
threads—the free ends of
leaves are made narrow for
insertion into small nuts.

Double depth reading gives
shank dimensions. Decimal
figures stamped on leaves
indicate double depth of

thread—which equals depth of threads on two sides of
a tap having the same pitch. You can thus know at
once what size drill to use to leave a full V-thread for
a tap of the same pitch.

Has 22 leaves—9 to 40, V-thread pitches, including 11 1/2
and 27 pipe thread pitches. Pitches: 9, 10, 11, 11 1/2, 12,
13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38
and 40.

TR 40SP—Weight per carton 3 ounces.....Each \$1.25

One in a box—six in a carton.

THICKNESS GAUGES

OR "FEELERS"

Popular Size for All Trades



This gauge is particularly pop-
ular with machinists and tool
makers in gaging narrow
slots, as well as with the motor
mechanics in adjusting the air
gap for the valves on motors.
The leaves fold in a metal
case to protect them from
kinking.

Nine leaves 3 1/8 x 1/2 inches—measure .0015, .002, .003, .004,
.006, .008, .010, .012 and .015 inch.

TR 172A—Weight per dozen 3/4 lb.Each \$1.50

One in a box—six in a carton.

Made Especially for
Garage Mechanics



Contains a number of leaves for
gauging adjustment of motor tap-
pets—also for gauging of slots from
.0015 to .031 inch.

Leaves fold into metal case which
protects them from kinking.

Six leaves 2 1/4 x 1/2 inches—measure
.0015, .002, .003, .004, .006, and .015
inch.

TR 71—Weight per dozen 1/2 lb.Each \$0.90

Twelve in a box.

DEPTH GAUGES

Easy—Non-Slip Adjustment



Blade conveniently held in a groove in the
head—secured by knurled lock nut. Cannot
slip loose while measuring.

Case-hardened steel head—2 inches wide at
base, 1/4-inch thick. Narrow, flexible blade
of spring tempered steel 6 inches long—can
be used separately from head.

Blade graduated in 32nds and 64ths inch.

TR 237—Weight each
1 ounceEach \$1.50

One in a box.

STARRETT'S TOOLS

World's Standard for Accuracy—for Craftsmen Who Appreciate Truly Fine Precision Tools

MICROMETER CALIPERS

With Ratchet Stop and Lock Nut

Strongly built for enduring accuracy. Anvil and spindle hardened, ground and lapped to assure perfect "feel." Knurled lock nut holds spindle true—locks it firm when desired. Ratchet stop permits quick use of tool without danger of over-tightening spindle. Quick adjusting micrometer. Stain-resisting finishes.

Polished Steel With Cut-Away Frame

Specially designed with short anvil for use in places where ordinary frame cannot be inserted. Width of anvil end of frame approximately $\frac{1}{2}$ inch.



For measurements by thousandths—decimal equivalents clearly marked on frame. Range 0 to 1 inch.

TR 230—Weight each $\frac{1}{2}$ lb. Each \$10.00

Black Enameled Frame Other Parts Polished

Ordinary frame pattern. For measurements by thousandths—decimal equivalents clearly marked on thimble.



Nos.	Each	Range, Inches	Weight Each, Lbs.
TR 436/1RL	\$7.75	0 to 1	$\frac{1}{2}$
TR 436/2RL	8.50	1 to 2	$\frac{3}{4}$
TR 436/3RL	9.25	2 to 3	1
TR 436/4RL	10.00	3 to 4	$1\frac{1}{4}$

One in a wood box.

FIRM JOINT, IMPROVED CALIPERS

Smooth, uniform movement is assured by special construction of joint which is drawn together by means of a screw. The main stud is squared and fitted to one leg, thus preventing stud from turning when loosening or tightening to adjust friction tension.

Tools durably constructed of high-grade steel, tempered and polished. Capacity about one-third greater than length of caliper.

INSIDE

Nos.	Each	Length, Inches	Wt. Per Box, Lbs.
TR 27/8	\$1.00	8	1
TR 27/10	1.10	10	$1\frac{1}{4}$
TR 27/12	1.20	12	$1\frac{1}{2}$



OUTSIDE

Nos.	Each	Lgth., In.	Wt. Per Box, Lbs.
TR 26/8	\$1.00	8	1
TR 26/10	1.10	10	$1\frac{1}{2}$
TR 26/12	1.20	12	2



Three in a box.

SPRING CALIPERS

The stiff spring bow holds legs firmly to the exact adjustment of nut and screw.

Tools strongly made of high-grade steel, polished and tempered—hardened fulcrum for long wear. Solid, easy adjustment nut.

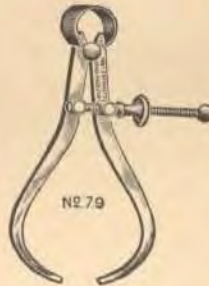
INSIDE TRANSFER

Spring bow feature makes these calipers especially desirable. Tool may be sprung closed for easy removal after taking measurements, and when released will accurately return to original position showing exact size calipered.



Nos.	Each	Lgth., In.	Wt. Per Box, Oz.
TR 73/4	\$0.90	4	5
TR 73/5	1.00	5	6
TR 73/6	1.05	6	9
TR 73/8	1.20	8	15

OUTSIDE



Nos.	Each	Lgth., In.	Wt. Per Box, Oz.
TR 79/4	\$0.90	4	5
TR 79/5	1.00	5	6
TR 79/6	1.05	6	9
TR 79/8	1.20	8	17

Three in a box.

SPRING DIVIDERS

The stiff spring bow holds legs firmly to the exact adjustment of nut and screw—if legs are sprung closed they will, when released, accurately return to original position showing exact size calipered. Tools strongly made of high-grade steel, polished and tempered—hardened fulcrum for longer wear. Solid, easy adjustment nut. Sharp-pointed legs.



Nos.	Each	Length, Inches	Weight Per Box, Lbs.
TR 83/4	\$0.90	4	5
TR 83/5	1.00	5	6
TR 83/6	1.05	6	9

Three in a box.

SCRIBERS

POCKET STYLE

Safe to Carry

Safe as a pen-knife—convenient to carry and use. Scriber is reversible, telescoping into stock—securely held inside by a slight turn of the chuck. Hexagon head prevents rolling off bench.

Sturdy stock made from steel tubing knurled for easy grip and nickel-plated. Scriber is best quality steel—hard tempered, and sharp. Held by knurled chuck.

Nos.	Each	Diameter Handle, In.	Length Blade, In.	Wt. Per Box, Ozs.
TR 70A	\$0.35	$\frac{1}{4}$	$2\frac{3}{8}$	3
TR 70B	.50	$\frac{3}{8}$	$2\frac{7}{8}$	6

Six in a box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SPEED INDICATORS

STARRETT

IMPROVED



Easier counting by touch—no need to watch two dials.

To set—simply move rotating disc to starting point

where raised knobs coincide.

To count—hold spindle against revolving shaft and press raised knob with thumb to prevent turning of rotating disc until you are ready. When hand of watch moves into starting position release knob and counting disc will start rotating. Every one-hundredths revolution of the shaft may be noted by feeling the knob pass under the thumb lightly pressed against disc, thus relieving the eye, which has only to look on the watch to note the time.

As Well Made as a Fine Watch

All working parts enclosed for full protection—precisely and durably made. Full nickel-plated case with rubber handle for safe insulation when used on electrical work. TR 106—Weight each 5 ounces.....Each \$1.85

One in a box.

KEEN KUTTER

Positive, Accurate Register—Easy Operation



Perfect mechanism accurately determines speed of revolving axles or spindles. Registers up to 100 revolutions.

- Right or Left Hand—Dial numbered to count in either direction that the shaft may turn.
 - Easily Set—Indicator plate quickly set by pressing it against dial and turning it with finger.
 - Non-Slip Tips—Eliminate error. Fitted with rubber tips for both pointed and hollow center shafts.
- Excellent, Durable Construction. Fine mechanism entirely enclosed within nickel plated cast steel frame. Nickel plated knurled steel handle is easy to hold.

TB K40—Weight per dozen 3 lbs.....Each \$1.75

One in a carton.

**PICK THE RIGHT TOOL
TO DO THE JOB.
YOU COULDN'T DO
BETTER THAN TO
PICK
KEEN KUTTER**

DIVIDERS

KEEN KUTTER

Lock Tight, Easy Adjustment



Firm joint with brass bearing for even tension—longer life. Easy turning knurled edge adjustment screw.

Forged from high grade tool steel—tempered and polished for long, exacting service.

Nos.	Each	Length, Inches	Wt. Per Doz., Lbs.
TB K16D	\$0.75	6	3½
TB K17D	.85	7	3¾
TB K18D	.95	8	4

One-half dozen in a carton.

SIMMONS LEADER

Good Quality at a Low Price



Brass joints. Smooth-action thumb screw and nut. Forged from good quality steel, polished.

Nos.	Each	Length, Inches	Wt. Per Carton (6), Lbs.	Std. List, Each
TB SP10	\$0.59	6	2	\$0.59
TB SP1	.69	8	2¼	.69

Six in a carton.

CALIPERS

High grade tool steel, polished and tempered for long accurate service.

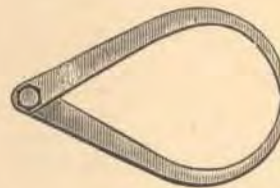


INSIDE Spring Head

Firmly fixed, strong spring clip, makes it possible to spring calipers closed for easy removal—they spring back to exact measurement when released. Solid nut. Length 6 inches.

TB 510—Weight per dozen 3 lbs.....Each \$1.19

OUTSIDE CALIPER Firm Joint



Steady friction, fixed tension joint makes rapid calibration easy—no binding nor slipping to create errors. Length 6 inches.

TB 403—Weight per dozen 2½ lbs.....Each \$0.89

One-quarter dozen in a carton.

SCRIBERS

IMPROVED ACME



Adjustable point and wing nut at joint for positive setting. Polished stamped steel, with steel wing nut.

One leg firmly holds pencil other leg contains steel point that can be adjusted by moving thumb piece. Length 3½ inches.

TB 9—Weight per dozen 1 lb.....Each \$0.11

One dozen in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

THUMB TACKS

MOORE

Keen, Penetrating Point—Easy to Push



High grade steel with colored enameled head. Sharp point.

Diameter head $\frac{1}{16}$ inch. Length of point $\frac{1}{4}$ inch.

5 CENTS PER BOX

Assorted Colors

Nos.	Per Box of 24	Color
TB 82G	\$0.05	Green
TB 82W	.05	White
TB 82R	.05	Red
TB 82I	.05	Ivory
TB 82B	.05	Blue
TB 82Y	.05	Yellow

Weight per carton $1\frac{1}{2}$ lbs.

Twenty-four in a box. Three dozen boxes in a carton.



High grade solid head nickel plated steel. Sharp point.

Diameter head $\frac{3}{8}$ inch. Length point $\frac{1}{4}$ inch.

TB 5136 — Weight per carton $1\frac{1}{4}$ lbs.

Per Box of 36 \$0.05

Thirty-six tacks in a box. Two dozen boxes in a carton.



Superior One-Piece

Solid construction prevents heads from breaking off when tacks are pried loose. Large heads and extra sharp, cut-out swaged points. High-grade steel. Heads $\frac{1}{8}$ inch in diameter, points $\frac{1}{4}$ inch long. Each tin box contains 2½ dozen tacks.

TB 42—Weight per carton 2½ lbs. Per Box \$0.10

Three dozen brightly lithographed tin boxes in a display carton.

Two-piece



Solid steel heads and extra fine quality round steel points. Heads firmly mounted for long service.

In cartons of 100

Nos.	Per Carton	Diameter Head, In.	Length Point, In.	Weight Per 1000, Lbs.
TB 110	\$0.10	$\frac{3}{8}$	$\frac{1}{4}$	2
TB 111	.10	$\frac{1}{2}$	$\frac{1}{4}$	2½
TB 112	.10	$\frac{1}{2}$	$\frac{1}{8}$	3

10 cartons in a cardboard box.

Cut-out Head—Economical



High-grade steel—flat heads $\frac{3}{8}$ inch in diameter. Length of points $\frac{1}{4}$ inch.

TB 17—Weight per box $\frac{1}{4}$ lb. Per Box \$0.10

100 in a box.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ARMSTRONG LATHE TOOLS

Your Guarantee of the Highest Quality

This line comprises tool holders for practically every operation on the lathe, planer, shaper, slotter, turret lathe, etc., with many modifications of shape and size and adapted to all classes of work.

TOOL HOLDERS

Holders are correctly designed and proportioned, drop forged from special steel which combines stiffness and strength, accurately machined, heat-treated and hardened.

Set screws are treated alloy steel with hardened point, practically unbreakable.

Each tool is complete with high-speed cutter bit and wrench.



STRAIGHT SHANK

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, In. Sq.	Wt. Each, Lbs.
TR 00S	\$2.70	$\frac{1}{8}$ x $\frac{3}{4}$ x $4\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{2}$
TR 0S	2.85	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{4}$	$\frac{3}{4}$
TR 1S	3.25	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{5}{16}$	$1\frac{1}{2}$
TR 2S	4.00	$\frac{5}{8}$ x $1\frac{3}{8}$ x 7	$\frac{3}{8}$	$2\frac{1}{4}$
TR 3S	5.40	$\frac{3}{4}$ x $1\frac{5}{8}$ x 8	$\frac{7}{16}$	$3\frac{1}{2}$
TR 4S	6.90	$\frac{7}{8}$ x $1\frac{3}{4}$ x 9	$\frac{1}{2}$	$4\frac{3}{4}$



RIGHT-HAND OFFSET

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, In. Sq.	Wt. Each, Lbs.
TR 00R	\$2.70	$\frac{1}{8}$ x $\frac{3}{4}$ x $4\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{2}$
TR 0R	2.85	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{4}$	$\frac{3}{4}$
TR 1R	3.25	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{5}{16}$	$1\frac{1}{2}$
TR 2R	4.00	$\frac{5}{8}$ x $1\frac{3}{8}$ x 7	$\frac{3}{8}$	$2\frac{1}{4}$
TR 3R	5.40	$\frac{3}{4}$ x $1\frac{5}{8}$ x 8	$\frac{7}{16}$	$3\frac{3}{4}$
TR 4R	6.90	$\frac{7}{8}$ x $1\frac{3}{4}$ x 9	$\frac{1}{2}$	5



LEFT-HAND OFFSET

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, In. Sq.	Wt. Each, Lbs.
TR 00L	\$2.70	$\frac{1}{8}$ x $\frac{3}{4}$ x $4\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{2}$
TR 0L	2.85	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{4}$	$\frac{3}{4}$
TR 1L	3.25	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{5}{16}$	$1\frac{1}{2}$
TR 2L	4.00	$\frac{5}{8}$ x $1\frac{3}{8}$ x 7	$\frac{3}{8}$	$2\frac{1}{4}$
TR 3L	5.40	$\frac{3}{4}$ x $1\frac{5}{8}$ x 8	$\frac{7}{16}$	$3\frac{3}{4}$

One in a carton.

ARMSTRONG LATHE TOOLS

CUTTING-OFF TOOLS

The cutter in this tool is adjustable to any desired clearance and has the greatest possible support under all conditions. It is also beveled on both sides and held at an angle giving the required side clearance and top rake for a clean, smooth cut. Complete with high-speed cutter and wrench.



STRAIGHT SHANK

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, Inches	Wt. Each, Lbs.
TR 19	\$2.85	$\frac{1}{8}$ x $\frac{3}{4}$ x $4\frac{1}{2}$	$\frac{1}{8}$ x $\frac{1}{2}$	$\frac{1}{2}$
TR 20	3.00	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{8}$ x $\frac{5}{8}$	$\frac{3}{4}$
TR 21	3.60	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{1}{8}$ x $\frac{3}{4}$	1 $\frac{1}{4}$
TR 22	4.50	$\frac{5}{8}$ x $1\frac{3}{8}$ x 7	$\frac{1}{8}$ x $\frac{7}{8}$	2 $\frac{1}{4}$



RIGHT-HAND OFFSET

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, Inches	Wt. Each, Lbs.
TR 29R	\$2.85	$\frac{1}{8}$ x $\frac{3}{4}$	$\frac{1}{8}$ x $\frac{1}{2}$	$\frac{5}{8}$
TR 30R	3.00	$\frac{3}{8}$ x $\frac{7}{8}$	$\frac{1}{8}$ x $\frac{5}{8}$	$\frac{3}{4}$
TR 31R	3.60	$\frac{1}{2}$ x $1\frac{1}{8}$	$\frac{1}{8}$ x $\frac{3}{4}$	1 $\frac{1}{2}$
TR 32R	4.50	$\frac{5}{8}$ x $1\frac{3}{8}$	$\frac{1}{8}$ x $\frac{7}{8}$	2 $\frac{1}{4}$

SIDE TOOLS

The design of the Armstrong side tools is typical of the entire Armstrong system of tool holders, embodying the prime needs of a practical lathe tool—convenience, simplicity and strength. Complete with high-speed cutter and wrench.



RIGHT-HAND OFFSET

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, Inches	Wt. Each, Lbs.
TR 69R	\$2.85	$\frac{1}{8}$ x $\frac{3}{4}$	$\frac{1}{8}$ x $\frac{1}{2}$	$\frac{5}{8}$
TR 70R	3.40	$\frac{3}{8}$ x $\frac{7}{8}$	$\frac{1}{8}$ x $\frac{5}{8}$	$\frac{3}{4}$
TR 71R	4.35	$\frac{1}{2}$ x $1\frac{1}{8}$	$\frac{1}{8}$ x $\frac{3}{4}$	1 $\frac{1}{2}$



RIGHT-HAND STRAIGHT SHANK

Straight shank side tools are well adapted to use on the planer and shaper for many classes of work on which they will be found exceptionally convenient and efficient.

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Cutter, Inches	Wt. Each, Lbs.
TR 79R	\$2.85	$\frac{1}{8}$ x $\frac{3}{4}$ x $4\frac{1}{2}$	$\frac{1}{8}$ x $\frac{1}{2}$	$\frac{5}{8}$
TR 80R	3.40	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{8}$ x $\frac{5}{8}$	$\frac{3}{4}$
TR 81R	4.35	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{1}{8}$ x $\frac{3}{4}$	1 $\frac{1}{4}$

One in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

KNURLING TOOLS

Unequalled for Withstanding Great Strain



This tool is self-centering and the knuckle or joint has ample bearing to resist the severe strains of both end and side thrust—in these essentials the Armstrong knurling tool is unexcelled. The knurls and pins are accurately made of tool steel suitably tempered. All other parts are drop forged or bar steel, hardened.

Standard face medium diamond knurls always furnished unless otherwise specified. Can be furnished with straight line knurls when specified.

Shank $\frac{1}{8}$ x $\frac{3}{4}$ x 5 inches; knurls $\frac{5}{16}$ -inch in diameter, with $\frac{1}{16}$ -inch face and $\frac{1}{32}$ -inch hole; knurling capacity $\frac{1}{8}$ -inch and up.

TR 00K—Weight each $\frac{5}{8}$ lb.

Std. List and Retail, Each \$5.65



WITH REVOLVING HEAD—Saves Time!

The advantages of this tool are apparent at a glance. The revolving head is fitted with three pairs of knurls, fine, medium and coarse, either of which can be used without the inconvenience and loss of time caused by changing knurls.

Knurls and pins are accurately made of tool steel suitably tempered. All other parts are drop forged or bar steel, hardened.

Standard face medium diamond knurls always furnished unless otherwise specified. Can be furnished with straight line knurls when specified.

Shank $\frac{1}{8}$ x $\frac{3}{4}$ x 5 inches; knurls $\frac{5}{16}$ -inch in diameter, with $\frac{1}{16}$ -inch face and $\frac{1}{32}$ -inch hole; knurling capacity $\frac{1}{8}$ -inch and up.

TR 3K00—Weight each 1 lb.

Std. List and Retail, Each \$7.50

One in a carton.

YOUR SAFEST
GUIDE IN BUYING—
TAKE THE
KEEN KUTTER
BRAND.

ARMSTRONG LATHE TOOLS

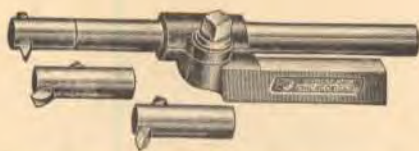
BORING TOOLS

Provides Greatest Rigidity on All Jobs!

The convenience and many practical advantages of this system of boring tools are known and appreciated in almost every modern machine shop. A half-turn of one screw clamps or releases the bar which can be extended from the shank or holder to any desired length, giving the greatest degree of stiffness possible on every job.

The end caps used with this tool lock the cutters rigidly under a tool steel "Automatic Set Screw" which cannot loosen while the tool is cutting, yet instantly releases the cutter for removal. The end caps are interchangeable without removing the bar. They are furnished in three styles; 90° for boring with single or double end cutter; 45° for boring and facing; and 30° for internal threading.

One of these tools with cutters is equal in practical efficiency to a whole set of forged boring and inside threading tools.



Consists of holder and bar, 90°, 45°, and 30° end caps, three high-speed cutters and double head wrench.

Nos.	Std. List and Retail, Each	Size Shank, In.	Size Cut-ter, Ea., In.		Wt. Each, Lbs.
			Bar, In.	Diam. ter Sq.	
TR 00B	\$4.90	$\frac{1}{8} \times \frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	1 1/2
TR 8	4.90	$\frac{3}{8} \times \frac{7}{8}$	$\frac{5}{8}$	$\frac{1}{4}$	1 3/4
TR 9	5.80	$\frac{1}{2} \times 1 \frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	3 3/4
TR 10	7.65	$\frac{5}{8} \times 1 \frac{3}{8}$	$1 \frac{1}{8}$	$\frac{5}{16}$	6 1/2



Especially designed for use on lathes of British and European make having clamp tool rest, and American lathes of similar design.

Consists of holder and bar, 90°, 45°, and 30° end caps, three high-speed cutters and double head wrench.

Shank $\frac{3}{4} \times \frac{7}{8}$ -inch; bar $\frac{5}{8} \times 9$ inches; cutter $\frac{3}{8}$ -inch square.

TR 108—Weight each 1 1/2 lbs.

Std. List and Retail, Each \$4.15

One in a carton.

BORING TOOL HOLDERS

FOR SMALL, LIGHT BORING, THREADING, ETC.

This tool will be found very handy in the tool room or in boring work of small internal diameter, threading, brass turning, etc.; the boring bars furnished are made from the best high-speed steel properly hardened, tempered and ground ready for use; the holder is reversible, and can be used for turning either right or left hand as the floating tool steel gib allows the yoke to clear the end of the holder.



Consists of holder, wrench, two high-speed boring bars and one high-speed cutter.

Nos.	Std. List and Retail, Each	Size Shank, In.	Size of Bars Furnished, Diam., In.		Size of Cut-ter, Ea., In.	Wt. Lbs.
			1/8 and 1/4	1/4 and 3/8		
TR 15	\$4.15	$\frac{3}{8} \times \frac{3}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	1
TY 16	5.25	$\frac{1}{2} \times 1$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	1 3/4
TY 17	6.75	$\frac{5}{8} \times 1 \frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	2 3/4

One in a carton.

THREADING TOOLS

Assures Tight, Firm Connections!



The cutters used in the Armstrong threading tool require grinding on the top edge only, to sharpen, and therefore always remain true to form and of correct angle—its use thus insures perfect fitting threads, and saves much grinding, as well as dispensing entirely with forging and tempering. The cutters are backed off to afford proper clearance. The back of cutter is eccentric in form and bears upon a hardened stop screw. This arrangement assures positive and accurate adjustment. Complete with single point high-speed cutter (V, U. S. or Whitworth Standard) and wrench.

In ordering tools equipped with U. S. or Whitworth cutters be careful to specify pitch or number of threads per inch wanted. Tools equipped with single point sharp V cutters will always be shipped unless otherwise ordered.

Nos.	Std. List and Retail, Each	Size Shank, Inches	Weight Each, Lbs.
TR 00T	\$4.15	$\frac{1}{8} \times \frac{3}{4} \times 5$	$\frac{3}{4}$
TR 50	4.15	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{7}{8}$
TR 51	5.00	$\frac{1}{2} \times 1 \frac{1}{8} \times 6$	1 1/2

One in a carton.

**BE TRULY ECONOMICAL—USE DURABLE FINE QUALITY
SIMMONS FARM TOOLS
CORRECTLY BALANCED TO MAKE WORK EASIER AND FASTER.**

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

ARMSTRONG LATHE TOOLS

EXTENSION SHAPER TOOLS



A Few Internal Shapes for Which This Handy Tool Is Adapted

This is an extremely rigid and convenient tool, well adapted for die work, cutting internal key ways or for any kind of work on the shaper in which extra clearance is needed.

Consists of holder, bar, high-speed cutter and wrench.

Nos.	Std. List and Retail, Each	Size Shank, Inches	Size Bar, Inches	Size Cutter, Inches Square	Wt. Each, Lbs.
TY 47	\$4.50	1/2 x 1 1/2	3/4 x 10	1 1/8	3 1/4
TY 48	5.65	5/8 x 1 3/4	1 1/8 x 12	3/8	6

One in a carton.

PLANER AND SHAPER TOOLS

One of these tools is effectively worth a dozen forged tools.



Fig. 1



Fig. 2

Figure 1—Shows the Armstrong planer tool cutting a keyway with the cutter reversed and the tool turned around, thus throwing the cutting point behind center of tool and working as a "gooseneck" tool.

Figure 2—Shows the Armstrong planer tool at work in close corners, giving a good general idea of clearance obtained. It shows also a few of the angles at which the cutter can be set. A job similar to

one shown could be finished with the Armstrong planer tool without shifting position of the work on bed.

Each tool is complete with high-speed cutter and wrench.

Nos.	Std. List and Retail, Each	Size of Holder, Inches	Size of Cutter, Inches	Weight Each, Lbs.
TR 40	\$4.65	1/2 x 1 x 6	1/4 x 3/8	1 3/4
TY 401	6.00	5/8 x 1 1/4 x 8 1/2	1 1/8 x 1 1/8	3 1/4

One in a carton.

PLANER JACKS

Saves Time and Effort

These jacks are designed to displace the haphazard devices and methods quite generally used for leveling work on machine tools. A set of them on a machine will greatly reduce the proportion of time required for preliminary arrangements as compared with the actual machine time on the job and will also because of their perfect adjustability and solidity, insure efficient, true surfaced work.



Nos.	Std. List and Retail, Each	Height Contracted, Inches	Height Ext., Inches	Weight Each, Lbs.
TR 1	\$1.90	2 3/4	3 3/4	1 1/2
TY 2	3.00	3 3/4	5 1/4	3

One in a carton.

LATHE DOGS

With Bent Tail



• You will find these lathe dogs handier, better balanced, with super design. They are extremely stiff, tough and strong, and will not upset. They never

fail and have double life.

Drop forged from special open hearth steel. Alloy steel square head screws with double wear threads and hardened at the point. Hubs are oversize to permit retapping.

Nos.	Each	Capacity, Inches	Weight Each, Lbs.	Std. List, Each
#TB 1	\$0.83	3/8	1/4	\$1.00
#TB 2	.90	1/2	3/8	1.10
#TB 3	.98	3/4	1/2	1.20
#TB 4	1.15	1	3/4	1.40
#TB 5	1.40	1 1/4	1 1/2	1.70
#TB 6	1.65	1 1/2	2	2.00
#TB 7	1.98	1 3/4	2 3/4	2.40
#TB 8	2.30	2	3 1/2	2.80
#TB 9	2.98	2 1/2	5 1/4	3.60
#TB 10	3.80	3	6 3/4	4.60
#TB 11	4.95	3 1/2	9	6.00
#TB 12	6.45	4	12	9.00
#TB 13	13.25	5	18	16.00
#TB 14	19.85	6	24	24.00

Packing—bulk.

Polly Prim
ENAMELWARE
is long wearing,
easy to clean
and attractive.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory. Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

BOSTROM LEVELS

For Quick, Easy Set-Up and Hairline Accuracy—Protection for All Weather Conditions

CONTRACTORS' AND CONVERTIBLE LEVELS



- **Clear Vision 12 to 14 Power Telescopes** with smooth acting rack and pinion focusing adjustment. Visibility one to two miles—minimum focus four feet.
- **Cross Hairs Always in Focus**—Stationary eye piece with four screws for quick adjustment of optical axis and correction of lines of collimation at all distances.
- **Sensitive—Adjustable Levels**—Vials accurate to four-five minutes. Shifting steel centers and three-point bearings with four leveling screws—for quick adjustment and accurate placing of plumb bobs over given point.
- **Large Graduated Circle**—Four inches in diameter. Divided to degrees and numbered in quadrants—clearly marked.
- **Strong, Sturdy Tripods**—Five feet long with round split, reinforced hardwood legs and pointed metal feet. Aluminum head guards for protection when not in use. Three cast points under level heads serve as trivets when tripods are not used.
- **Both Outfits Complete With:** (1) Hardwood extension leveling rod telescoping to 9½ feet—self-reading—with screw for securing in any position. (2) Open-face adjustable aluminum target with tension spring and screw for securing on rod. (3) Machined brass, accurate plumb bob. (4) Highly finished hardwood case with leather strap for carrying. (5) Complete, easily understood directions for use of instrument.

CONVERTIBLE WYE LEVEL AND TRANSIT COMBINED

Quickly and easily converted from level to transit position. For level work telescope rests in two Wyes—stop pin and Wyes are adjustable to insure positive position of cross

hairs at all times. The graduated circle has adjustable vernier for accurately reading horizontal angles. Telescope has clamp and tangent for setting in any desired position—arc and index for reading vertical angles. Three-point bearing 3¾ inches in diameter.

With Detachable Compass—Quickly mounted on Wyes. Does not interfere with converting instrument. Sensitive 2½-inch jewel-mounted needle with lifter stop. Accurate ring graduated in single degrees—numbered 0° to 90° in each quadrant from N. and S. points. Leveling rod graduated in feet, tenths and hundredths is furnished—unless otherwise specified.

#TY 5C Each \$81.75

Without Compass—The leveling rod furnished is graduated in feet, inches and eighth inches.

#TY 5 Each \$59.50

Weight each 18 lbs.

Extras—(1)—Stadia hairs set at fixed ratio of 1 to 100 (for accurately measuring distances)—with full instructions—\$5.00 extra. (2)—Extension tripod legs instead of straight legs—\$3.00 extra.

Note: When stadia hairs are ordered with instrument leveling rod graduated in feet, tenths and hundredths furnished instead of regular rod—unless otherwise specified.

One in a carton.



Has fixed cross hairs and level vial ground to sensitiveness of four to five minutes.

Three - point bearing is four inches in diameter. Face plate, graduated in degrees and numbered in quadrants, attached to leveling head by center screw

with tension spring. Makes flexible joint and presses plate firmly against ends of three leveling screws—quick, accurate adjustments. Tripod five feet long with round, split reinforced hardwood legs and pointed metal feet.

FARM LEVELS

Simple, Accurate, Complete

- **Achromatic—Clear Vision Telescope**—10 to 12 power. Visibility of ½ mile—minimum focus four feet.
- **Telescope and Level Vial Mounted in Revolving Turret**—Turn on three-point bearings so that once set up instrument can be sighted in any direction without moving or readjusting. Line of sight quickly checked with graduated face plate on which turret is mounted.

Complete with: (1) Hardwood extension leveling rod, telescoping to 9½ feet, with thumb screw for setting—graduated in feet, inches and quarter inches and self-reading. (2) Open face aluminum adjustable target with tension spring and thumb screw for fixing on rod. (3) Hardwood carrying case. (4) Plumb bob. (5) Complete, easily understood directions.

TY 2—Weight each 15 lbs..... Each \$23.50

One in a carton.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

HANDLES

SINGLE BIT AXE

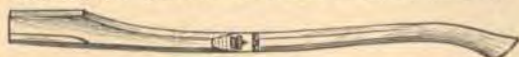
KEEN KUTTER

HIGHEST QUALITY, LONGEST LASTING

- Thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth waxed finish—insures a smooth, comfortable grip.

REGULAR PATTERN—PLAIN END

High grade perfect all white selected hickory.

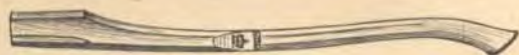


TB K36—Octagon—Length 36 inches.....Each \$0.50



TB KR36—Oval—Length 36 inches.....Each \$0.50

Selected good weight white hickory.



TB K2/36—Octagon—Length 36 inches.....Each \$0.45



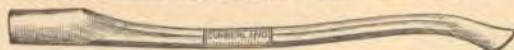
TB KR2/36—Oval—Length 36 inches.....Each \$0.45

Weight per dozen 20 lbs.
Each handle in an individual paper tube.

CUMBERLAND

- Straight grained, thoroughly seasoned good weight hickory—strong and springy.
- Hand shaved, extra belted, waxed finish—insures a smooth, firm grip.

STANDARD PATTERN—MEDIUM SIZE



Plain end—Length 36 inches

TB CXX—OctagonEach \$0.45

TB CA36—OvalEach .45

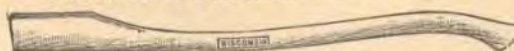


Scroll end—Length 36 inches

TB CSXX36—OctagonEach \$0.45

Weight per dozen 20 lbs.

WISCONSIN PATTERN—EXTRA SLIM



Oval—Length 36 inches

TB R3X34—Weight per dozen 18 lbs.....Each \$0.45

TB R3X36—Weight per dozen 20 lbs.....Each .45

LUMBERMEN'S STRAIGHT PATTERN



Oval—Length 36 inches

TB CAS36—Extra slim—Weight per dozen 19 lbs.....Each \$0.45

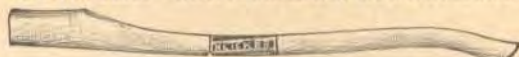
TB CHAS—Extra heavy—Weight per dozen 20 lbs.....Each .45

One dozen in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SINGLE BIT AXE

KLICHER—SERVICEABLE, ECONOMICAL



REGULAR PATTERN, PLAIN END—OVAL

Good grade hickory, smoothly finished. Well made for long, satisfactory service.

Length 36 inches

TB 2/36K—No. 2 quality.....Each \$0.23

TY 3/36K—No. 3 quality.....Each .23

Weight per dozen 20 lbs.
One dozen in a carton.

BLUE OAK

Thoroughly seasoned, second growth oak—strong and durable.

Hand shaved, smooth belted and waxed finish—insures a smooth, firm grip.



Plain end, oval—Length 36 inches

TB A2R—Regular pattern, select.....Each \$0.17

TB A1RS—Slim pattern, extra select, labeledEach .35

Weight per dozen 20 lbs.



LUMBERMEN'S SLIM—STRAIGHT PATTERN, OVAL—LENGTH 36 INCHES

TB A1L—Extra select.....Each \$0.35

Weight per dozen 14 lbs.
One dozen in a crate.

SPECIAL

Unusually low priced—Good grade hickory—nicely finished, with assorted color tips.

REGULAR PATTERN, PLAIN END—LENGTH 36 INCHES



TB SCTO—OctagonEach \$0.25



TB SCT—OvalEach \$0.23

STRAIGHT PATTERN, PLAIN END—LENGTH 36 INCHES



TY SCTS—OvalEach \$0.23

Weight per dozen 20 lbs.
One dozen in a carton. Tips assorted three each—orange, blue, red and green.

HANDLES

DOUBLE BIT AXE

KEEN KUTTER—FINEST FOR BEST WORK

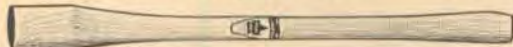
- Thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a smooth, comfortable grip.

REGULAR PATTERN—PLAIN END

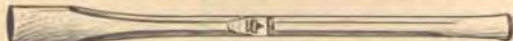
High-grade, perfect, all-white selected hickory.



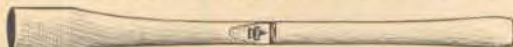
TB KD36—Octagon—Length 36 inches.....Each \$0.50



TB KDR36—Oval—Length 36 inches.....Each \$0.50
Selected good weight white hickory.



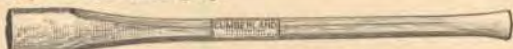
TB KD236—Octagon—Length 36 inches.....Each \$0.45



TB KDR236—Oval—Length 36 inches.....Each \$0.45
Weight per dozen 20 lbs.
Each handle in an individual paper tube.
One dozen in a carton.

CUMBERLAND

Straight grained, thoroughly seasoned, good weight hickory, strong and springy.
Hand shaved, extra belted, waxed finish—insures a smooth, comfortable grip.



Medium size—length 30 inches
(For Cedar Axe No. TB K2½C)

TB CDA30—Oval—Wt. per doz. 18 lbs.....Each \$0.45

Regular size—length 36 inches

TB CDXX—OctagonEach .45

TB CDA36—OvalEach .45

Weight per dozen 20 lbs.

Extra heavy (for the South)—length 36 inches

TB CHDXX—Octagon—Wt. per doz. 25 lbs.....Each .45

One dozen in a fibre carton.

BLUE OAK

Thoroughly seasoned, second growth oak—strong and durable.

Hand shaved, smooth belted and waxed finish—insures a smooth, firm grip.



REGULAR PATTERN, OVAL—LENGTH 36 INCHES

TB AIRDB—Extra select, labeled.....Each \$0.35

TB A2RDB—Good gradeEach .17

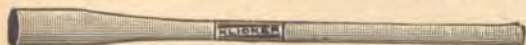
SLIM PATTERN, OVAL—LENGTH 36 INCHES

TB AIRDBS—Extra select, labeled.....Each .35

Weight per dozen 20 lbs.

One dozen in a crate.

CLICKER—SERVICEABLE, ECONOMICAL



Medium size—length 36 inches

Hickory—machine made with plain belted finish.

TB 3KD—No. 3 quality—Wt. per dozen 19 lbs.Each \$0.25

Two dozen in a fibre carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

DOUBLE BIT AXE

SPECIAL

Unusually low priced. Good grade hickory—nicely finished, with assorted color tips.



REGULAR PATTERN—LENGTH 36 INCHES

TB DCTO—Octagon—Wt. per doz. 23 lbs.....Each \$0.25



REGULAR PATTERN—LENGTH 36 INCHES

TB DCT—Oval—Wt. per doz. 23 lbs.....Each \$0.25

One dozen in a carton—tips assorted three each:
Orange, blue, red and green.

BOYS' AXE

CLICKER

SERVICEABLE
Hickory—machine made with plain belted finish.

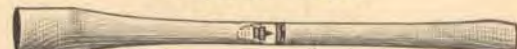


REGULAR PATTERN, PLAIN END, OVAL—LENGTH 28 INCHES

TB 3BK—No. 3 quality. Wt. per doz. 14 lbs.Each \$0.19

One dozen in a carton.

BROAD AXE



KEEN KUTTER—FINEST QUALITY

- High-grade, perfect all-white selected hickory—thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a smooth, comfortable grip.

PLAIN END, OVAL—LENGTH 34 INCHES

TB KBA34—Wt. per doz. 18 lbs.....Each \$0.50

SLEDGE OR SPIKE MAUL



KEEN KUTTER—FINEST QUALITY

- High grade perfect all white selected hickory, thoroughly seasoned and dried for added strength, carefully inspected and warranted uniform.
- Smooth wax finished, comfortable grip.

Oval—Extra Quality

Nos.	Each	Length, Inches	Wt. Per Doz., Lbs.
TB KS32	\$0.40	32	17
TB KS34	.45	34	19
TB KS36	.45	36	20

Each handle in an individual paper tube. One dozen in a fibre carton.



CLICKER—SERVICEABLE, VERY LOW COST

Hickory—machine made, plain belted finish.
Oval No. 1 Quality

Nos.	Each	Length, Inches	Wt. Per Doz., Lbs.
TB 130KS	\$0.15	30	16
TB 134KS	.19	34	19
TB 136KS	.19	36	20

One dozen in a fibre carton.

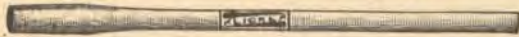
HANDLES

KLICKER

SERVICEABLE, VERY ECONOMICAL

Hickory—machine made, plain belted finish.

WOODCHOPPERS' MAUL



Axe Eye—Length 36 Inches

(For Nos. TB F. Woodchoppers' mauls)

TB 1KWM—Weight per dozen 18 lbs.....Each \$0.40

POST MAUL



No. 2 Quality, Oval—Length 36 Inches

TB 2KPM—Weight per dozen 21 lbs.....Each \$0.29

MATTOCK



Small Eye, Oval—Length 36 Inches

(For Mattocks Nos. TB KJ and TB KX.)

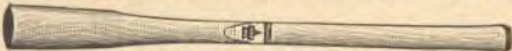
TB 10KM—Weight per dozen 25 lbs.....Each \$0.35

KEEN CUTTER—FINEST QUALITY

• High-grade perfect all white selected hickory, thoroughly seasoned and dried for added strength.

• Smooth wax finished, comfortable grip.

RAILROAD PICK OR MATTOCK



Oval—Length 36 Inches

(For Mattocks Nos. TB KM, TB KS and TB KL.)

TB KRP—Weight per dozen 34 lbs.....Each \$0.69

Each handle in an individual paper tube.

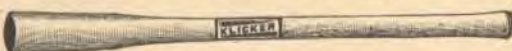
One dozen in a fibre carton.

KLICKER

SERVICEABLE, VERY ECONOMICAL

Hickory—machine made, plain belted finish.

RAILROAD PICK OR MATTOCK



Oval—Length 36 Inches

(For Mattocks Nos. TB KM, TB KS and TB KL.)

Nos.	Each	Quality Nos.	Weight Per Doz., Lbs.
TB 1KRP	\$0.49	1	32
TB 2KRP	.39	2	30
TB 3KRP	.29	3	29

COAL OR DRIFT PICK

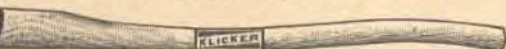


No. 1 Quality—Length 34 Inches

Medium body—medium eye, 3/4x3 inches.

TB 1KCP—Weight per dozen 29 lbs.....Each \$0.39

GRUB AND HAZEL HOE



No. 1 Quality, Oval—Length 36 Inches

TB 10KG—Weight per dozen 27 lbs.....Each \$0.49

One dozen in a fibre carton.

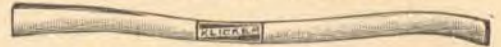
Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CARPENTERS' ADZE

KLICKER

SERVICEABLE, VERY ECONOMICAL

Hickory—machine made, plain belted finish.



No. 1 Quality—Length 34 Inches

TB 134KA—Weight per dozen 20 lbs.....Each \$0.49

One dozen in a fibre carton.

NAIL HAMMER

KEEN CUTTER—HIGHEST QUALITY

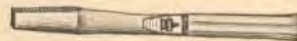
• High-grade perfect all white selected hickory. Thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.

• Smooth wax finish, insuring a comfortable grip.



Oval
Adze Eye

Nos.	Each	Length, In.	For Nail Hammers, Size	Weight Per Dozen, Lbs.
TB K12	\$0.19	12	3 and 4	3 3/4
TB K13	.19	13	2 and 3	4 3/4
TB K14	.19	14	1 and 1 1/2	5 1/2



Octagon—Adze Eye

Nos.	Each	Length, In.	For Nail Hammers, Size	Weight Per Dozen, Lbs.
TB K014	\$0.19	14	1 and 1 1/2	5 1/2
TB K016	.19	16	1 and 1 1/2	6 1/4

One dozen in a carton.

KLICKER

SERVICEABLE, LOWEST COST

MACHINE MADE—PLAIN BELTED FINISH

Adze Eye—Full Neck
Hickory.

Nos.	Each	Length, In.	For A.E. Nail Hammers, Nos.	Weight Per Dozen, Lbs.
TB 13KN	\$0.10	13	2 and 3	4
TB 14KN	.10	14	1 1/2	4 3/4



Adze Eye—Length 14 Inches
(For Nail Hammer Nos. 1 and 1 1/2)

Best selection sound Oak.

TB OH14K—Weight per dozen 5 lbs.....Each \$0.10



Adze Eye, Oval Bell
Shape Grip—Length 14
Inch—Hickory

TB 514K—Weight per dozen 5 lbs.....Each \$0.05

One dozen in a carton.



Adze eye, octagon neck,
oval grip—length 14 inches.

Good grade hickory—no knots, will not crack. Ivory lacquered with assorted color tips.

TB A10—Weight per dozen 5 lbs.....Each \$0.10

One dozen in a carton, with assorted color tips,
four each: blue, orange and green.

HANDLES

MACHINISTS' HAMMER

KEEN KUTTER—FINEST MADE

- High-grade perfect all white selected hickory thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a comfortable grip.



Oval Eye, Spring Neck—
Light

Nos.	Each	Length, In.	For Machinists' Hammers, Nos.	Weight Per Dozen, Lbs.
TB KM10	\$0.19	10	6/0 and 5/0	1½
TB KM12	.19	12	4/0 and 3/0	2
TB KM14	.19	14	00	4¼
TB KM16	.19	16	0	4½
TB KM18	.20	18	1 and 2	4¾
TB KM20	.25	20	3 and 4	5

KLICKER—SERVICEABLE—AT A LOW COST



Oval Eye, Spring Neck,
Light Hickory

Nos.	Each	Length, In.	For Machinists' Hammers, Nos.	Weight Per Dozen, Lbs.
TB 112KM	\$0.10	12	3/0 and 4/0	3
TB 114KM	.10	14	00	3½
TB 116KM	.10	16	0	4
TB 118KM	.10	18	1 and 2	4½

KEEN KUTTER—FINEST MADE

- High-grade perfect all white selected hickory thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a comfortable grip.

BLACKSMITHS' HAND HAMMER



Oval Eye, Spring Neck—
Heavy

Nos.	Each	Length, In.	For Blacksmiths' Hammers, Nos.	Weight Per Dozen, Lbs.
TB KB16	\$0.19	16	1	6½
TB KB18	.19	18	2	6¾

BRICK HAMMER



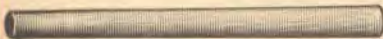
Adze Eye
Length 12 inches. For
brick hammer No.
TB KB15.

TB KBB12—Weight per dozen 5½ lbs. Each \$0.17

One dozen in a carton.

MASONS' HAMMER

KLICKER—SERVICEABLE—AT A LOW COST



Oval eye, straight
tapering pattern—
length 20 inches.
Hickory

(For Stone Masons' Hammers, 5 lbs. and lighter.)

TB 20KTMH—Weight per dozen 6½ lbs. Each \$0.15

Packing—bulk.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

TACK HAMMER

KLICKER—SERVICEABLE—AT A LOW COST



Adze Eye—Spring Neck
Length 11 inches

(For SIMMONS Nos. TB S600 and TB S650 tack hammers.)

Hickory

TB THK—Weight per dozen 2 lbs. Each \$0.10

KEEN KUTTER—FINEST MADE

- High-grade perfect all white selected hickory thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a comfortable grip.

HOUSE AXE



(For KEEN KUTTER and
SIMMONS House Axes.)

Oval—length 18 inches.

TB KH18—Wt. per doz. 9 lbs. Each \$0.25

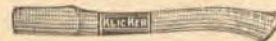
SCOUT AXE



Length 14½ inches

TB KSH—Wt. per doz.
6 lbs. Each \$0.19

KLICKER—SERVICEABLE—AT A LOW COST



Length 14½ inches

Good grade hickory, plain belted finish.

TB 15SK—Wt. per doz. 6 lbs. Each \$0.15

KEEN KUTTER—FINEST MADE

- High-grade perfect all white selected hickory thoroughly seasoned and dried for added strength—carefully inspected and warranted uniform.
- Smooth wax finished, insuring a comfortable grip.

HUNTERS' HATCHET



Oval—Length 14 inches
(For No. TB KPAK and
other KEEN KUTTER Hunters'
Hatchets.)

TB KHH14—Weight per dozen 5 lbs. Each \$0.19

LATHING HATCHET



Slim Neck, Swell End, Oval
Eye—Length 13¼ inches

(For Underhill Pattern Lathing Hatchets.)

TB KL13—Weight per dozen 4½ lbs. Each \$0.19

SHINGLING HATCHET



(For standard patterns,
Size 1 Lathing, Shingling,
Half or Claw Hatchets.)

TB KS13—Length 13 inches. Weight per dozen
4 lbs. Each \$0.17

(For standard patterns, Size 2 Lathing, Sizes 2 and
3 Shingling, Half or Claw.)

TB KS14—Length 14 inches. Weight per dozen
5½ lbs. Each \$0.17

One dozen in a carton.

HANDLES

KEEN KUTTER—FINEST QUALITY

- High grade perfect all-white selected hickory, thoroughly seasoned and dried for added strength, carefully inspected and warranted uniform.
- Smooth wax finished, comfortable grip.

BROAD HATCHET



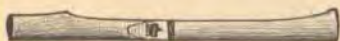
(For Bench Hatchets,
Sizes 1 and 2.)

TB K15BH—Length 15 inches. Weight per dozen 5 lbs. Each \$0.19

(For Bench Hatchets, Sizes 3 and 4.)

TB K16BH—Length 16 inches. Weight per dozen 6 lbs. Each \$0.19

RIG BUILDERS' HATCHET



Slim Grip—Length
18¾ Inches

(For Rig Builders'
Hatchets.)

TB KDH—Weight per dozen 7½ lbs. Each \$0.29

KLICKER—SERVICEABLE, LOW PRICED

Hickory, machine made, plain belted finish.

SHINGLING HATCHET



Oval Eye, Full Neck—
Length 14 Inches

(For No. 2 or Standard
Pattern Shingling, Half or Claw Hatchets.)

TB 14KSH—Weight per dozen 4½ lbs. Each \$0.10

One dozen in a carton.

BROAD HATCHET



Oval Eye, Full Neck—
Length 16 Inches

(For Bench Hatchets
Nos. 1 and 2.)

TB 16KBH—Weight per dozen 6 lbs. Each \$0.10

Packing—bulk.

CANVAS TOOL BAGS

KEEN KUTTER



Light Weight, Durable
Sturdy folding steel frame—
leather covered—securely
riveted.

Reinforced leather bottom—
studded for protection from
scuffing. Extra heavy brown
duck body with stitched,
leather-bound edges for added
strength.

Two comfortable round leather handles securely riveted to frame. Roomy pocket sewed on inside of bag. Frame fitted with padlock eye for locking with padlock. Two stout leather fastening straps securely riveted to body—tinned buckles.

All leather parts made of best quality black leather.
Length 20 inches, width 6 inches, depth 16 inches.

TB K20—Weight per dozen 72 lbs. Each \$8.50

One dozen in a bundle.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

CHISEL HANDLES

KEEN KUTTER—THE FINEST

Leather capped—will not chip or crack under hammer blows.

Comfortable—durable. Selected hardwood—smoothly finished and highly polished.



SOCKET FIRMER CHISEL

TB K40—Assorted four regular sizes. Average length 5½ inches. Weight per dozen 1½ lbs. Each \$0.19

TB K41—Assorted three largest sizes, average length 5½ inches. Weight per dozen 2 lbs. Each \$0.19



SOCKET BUTT CHISEL

TB K45—Assorted three regular sizes, length 4½ inches. Weight per dozen 1 lb. Each \$0.19

Good quality hardwood—smooth finished.



SOCKET FIRMER CHISEL

Natural finish hardwood. Leather capped.

TB 616—Assorted regular sizes, 4¾ to 5½ inches. Weight per dozen 2 lbs. Each \$0.10



SOCKET FRAMING CHISEL

Natural finish hickory—steel ferrule at top for longer life.

TB 620—Assorted regular sizes, 5½ to 6½ inches. Weight per dozen 3 lbs. Each \$0.10



SOCKET BUTT CHISEL

Natural finish hickory. Leather capped.

TB 631—Assorted regular sizes, 2 and 2¼ inches. Weight per dozen 2 lbs. Each \$0.10



Natural finish hickory—steel ferrule at top for longer life.

TB 612—Assorted regular sizes, 5½ to 6 inches. Weight per dozen 3 lbs. Each \$0.10

One dozen in a cardboard box.

CARPENTERS' APRONS

KEEN KUTTER



Extra Well Sewed

Strong 7-ounce white duck. Tie strings and neck loop specially reinforced sewed—will not tear loose under weight of tools in pockets. Two nail pockets and one rule pocket 7 inches deep. Length over all 22 inches, width 18 inches.

TB K1—Weight per dozen 5 lbs. Each \$0.25

One dozen in a package.

WORK BENCHES KEEN KUTTER



Two Visas and
Large Tool Drawer

• Ample storage and working space—bench 54 inches long, 32 inches high, 22 inches wide with glued-up top 14 inches wide, 2 1/4 inches thick. Drawer 28 inches long, 17 1/2 inches wide, 5 inches deep—with brass pulls and special sliding trestle. 7-inch tool well with closed ends. Tool rack on back of bench.

• Solid, strong, convenient vises—one front, one tail. Abernathy roller nut, rapid acting type, with heavy steel dog. Will stand up under abuse.

• Sturdy, durable construction—top, legs and braces of kiln-dried hard maple. Bottom and sides of drawer of pine—front of hardwood. Securely bolted and braced throughout—highly polished and oiled finish.

#TY K15B—Weight each 160 lbs. Each \$46.75

SIMMONS



With One Vise and Large
Tool Drawer

Unusual Quality at a Low Price

Convenient, large top—52 inches long, 32 inches high, 22 inches wide with 1 3/4-inch glued-up top, 2 1/4 inches thick. Large tool storage drawer 32 inches long, 18 1/2 inches wide, 5 inches deep—with handy brass pulls. Tool rack on back of bench and 7 1/2-inch tool well with closed ends. One solid, strong front vise—Abernathy roller nut, rapid acting type, with heavy steel dog for greater strength. Sturdily built of kiln-dried hard maple—securely bolted and braced—highly polished and oiled finish.

#TY S22—Weight each 125 lbs. Each \$33.75

One in a crate.

**Fine Workmanship
Builds Fine
KEEN KUTTER Tools**

UTILITY AND TOOL CHESTS

UNION—STREAMLINED

Economically priced—boxes have all the advantages in design and appearance of expensive one-piece drawn boxes—plus the rigid sturdiness of their inside lock seam construction.

Sturdily built of heavy gauge cold rolled steel. One-piece drawn bottom, with smoothly rounded corners and inside lock seams. Handsome, deep moss green, hard baked (Mar-proof) enamel finish—brightly nickel-plated hardware. Comfortable, sturdy handle. Special spill-proof lock with key. Double section, detachable, automatic tray with movable partitions. Embossed 12-inch rule inside front edge of cover.



Combination
Tackle Box
Cash Box
and
All-Purpose
Utility Chest
One Tray

Length 13 1/2 inches.
Width 6 1/2 inches.
Depth 4 1/2 inches.

TB 5313—Weight per dozen 35 lbs. Each \$0.79



Combination
Tackle Box
Service Box
and
All-Purpose
Utility Chest
Two Trays

Length 14 inches.
Width 6 1/2 inches.
Depth 6 1/2 inches.

TB 5514—Weight per dozen 59 lbs. Each \$1.45

One dozen in a carton.

TOOL KITS

KENNEDY

Heavy Duty—All-Steel

For mechanics, garage men, repair men, electricians, railroad men, etc.



No heavier than other tool kits or grips—but much stronger, more durable.

Will not buckle or change shape with heaviest loads. Overlapping construction features make kits water-proof, weather-proof, dust-proof.

Specially prepared steel throughout. Outer case 26-gauge with three coats of black enamel, leather finish, baked on. Solid brass

corners, side catches and Yale notch locks. Comfortable, genuine leather handle with steel core. Light weight steel tray, 1 3/4 inches deep, with partitions, rests on length on top of case.

Nos.	TB 118	TB 122
Length, In.	18	22
Width, In.	10	11
Height, In.	13	13
Weight Each, Lbs.	7 1/2	11
Each	\$5.85	6.25

Packing—bulk.

Goods marked thus (#) are not carried in stock and can only be furnished by shipment direct from factory. Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

The Greatest Sales Creating Tool Merchandising Help
Ever Offered To Hardware Dealers

SIMMONS
PLAN

Tool Island

a "TREASURE ISLAND" in the sea of hardware



Important

TOOL USERS

Buy guaranteed TOOLS at Hardware Stores
where you can compare GENUINE VALUES
displayed on this **Tool Island**.

The result of 14 months' honest effort to make your selection
and COMPARISON of REAL TOOL VALUES easier

Each Tool GUARANTEED and plainly RETAIL-
PRICE-TAGGED as the outstanding value that it is

Correctly designed Tools for every use
in SHOP or HOME

SIMMONS PLAN GUARANTEED TOOL DEALS

Shipping Weight: # S/11 Deal — 320 lbs.

Shipping Weight: # S/22 Deal - 250 lbs.

Tool Island fits your standard 7ft table. Base offset to protect edges. Over 28 square feet of flat display area plus a bit brace rack. All necessary clips for tools provided, in proper location. Space feature inside frame allows easy access to stock. Height above table to top display shelf, 18 inches (bit brace rack 12 1/4 inches additional). Net weight 105 lbs. Shipping weight 144 lbs.

ITEM	NO	SIZE	Content of		Retail Each	Open Stock Content + Per Package	ITEM	NO.	SIZE	Content of		Retail Each	Open Stock Content + Per Package
			# S/11 Deal Only	# S/22 Deal Only						# S/11 Deal Only	# S/22 Deal Only		
BRACES	Polished SA1	10"	4	2	\$0.99	4	Black, Polished Face SM1	16 oz.	4	4	.33	6	
	Nickel Plated SA5	10"	2	1	1.39	2	Polished SM2	16 oz.	3	2	.69	6	
	Nickel Plated SA6	10"	1	1	1.99	2	Polished Octagon Neck SM3	16 oz.	2	2	.99	4	
	Heavy Shell SA7	10"	1	1	3.19	1	Polished SM4	16 oz.	1	1	1.29	2	
	Heavy Shell SA8	12"	1	1	3.39	1	Polished, Ripping SM5	16 oz.	3	2	.69	4	
	Ball Bearing Chuck SA3	10"	1	1	4.39	1	Engineer or Garage SM6	42 oz.	2	1	1.39	2	
EXPANSIVE BITS with Cutters	SB1	7/8 to 3"	2	2	1.29	1	Machinist SM7	1 lb.	2	1	.75	1	
	SB2	1/2 to 1 1/2"	1	1	.99	1	Machinist SM87	1 1/4 lb.	1	1	.85	1	
SCREW DRIVER BITS	SB5	3/16"	2	2	.17	2	Machinist SM8	1 1/2 lb.	1	1	.95	1	
	SB6	3/8"	2	2	.19	2	Machinist SM9	1 3/4 lb.	1	1	1.05	1	
DRAW KNIVES	SC1	8"	2	2	1.10	2	Ladies' SM14	7 oz.	2	1	.49	2	
	SC2	10"	1	1	1.29	2							
SNIPS	Pocket SD1	7"	2	2	.49	2	COPPERS, Handled	SN1	1 1/2 lb.	2	2	.49	Bulk
	Household SD2	12 1/2"	4	4	.69	4		SN2	2 lb.	2	2	.59	Bulk
	Tinners' Laid Blade SD3	12 3/4"	1	1	1.89	1		SN3	3 lb.	1	1	.69	Bulk
	Tinners' Laid Blade SD4	11 1/2"	1	1	1.59	1	WING DIVIDERS	SP1	8"	2	1	.69	1
	Household SD5	10"	2	2	.89	2		SP10	6"	1	1	.59	1
	Household Combination SD7	12 1/2"	2	1	.99	2		SR10	8"	2	2	.59	4
							PIPE WRENCHES, Steel Handle	SR1	10"	4	2	.69	4
PLIERS	Slip Joint SE1	6"	6	4	.33	1		SR2	14"	3	2	.99	4
	Slip Joint SE2	8"	4	2	.39	1		SR3	18"	2	1	1.39	2
	Slip Joint SE3	10"	2	2	.59	1		SR4	24"	1	1	2.19	1
	Thin Nose SE4	6 1/2"	4	3	.33	1	STEEL SQUARES	SS1	24 x 12"	2	2	.59	2
	Bent Nose SE5	6 1/2"	2	2	.49	1		SS2	24 x 16"	1	1	1.10	2
	Slip Joint Side Cutting SE6	5 1/2"	2	1	.79	1	TRY SQUARES	SS3	7 1/2"	3	1	.59	2
	Slip Joint Side Cutting SE66	7"	2	1	.99	1	COMBINATION SQUARE with Level and Scribe	SS4	12"	1	1	.99	1
	Diagonal SE7	5"	2	1	.99	1		ST1	3"	12	6	.10	12
	Diagonal SE77	6"	2	1	1.29	1	QUILT FRAME CLAMP, Cadmium	SU2	24"	3	3	.39	Bulk
	Electricians' Side Cutting SE8	8"	2	1	1.59	1		SV1	Block 7 x 1 3/8"	2	2	.49	1
	Electricians' Side Cutting SE88	7"	2	1	1.39	1	PLANES	SV2	Smooth 8 x 1 3/4"	1	1	1.29	1
	Chain Nose SE9	5 1/2"	2	1	.99	1		SV3	Smooth 9 x 2"	1	1	1.69	1
	Button SE10	10"	2	1	1.29	1		SV4	Jack 14 x 2"	1	1	1.99	1
	Button SE11	8"	2	1	.99	1	HALF HATCHET	SW1	3 1/4"	2	2	1.09	2
	Slip Joint SE18	6"	6	3	.15	6	HAND DRILL	SX2	12"	2	2	1.29	1
Slip Joint SE17	8"	4	2	.23	4		SY1	Michigan Pattern, Single Bit 3 1/2 lb.	2	2	1.59	2	
Slip Joint SE16	10"	4	2	.33	2		SY2	Michigan Pattern, Double Bit 3 1/2 lb.	1	1	1.99	2	
Side Cutting SE19	6"	2	1	.99	1		SY3	Household 2 1/4 lb.	1	1	1.39	2	
Side Cutting SE20	8"	2	1	1.39	1		SZ2	Slim Taper 6"	4	4	.15	6	
ADJUSTABLE ANGLE WRENCHES	SF1	6"	3	2	.44	1	FILES	SZ3	6"	4	4	.15	6
	SF2	8"	3	2	.66	1		SZ4	6"	1	1	.15	6
	SF3	10"	2	1	.88	1		SZ5	8"	2	2	.20	6
	SF4	12"	1	1	1.09	1		SZ6	10"	1	1	.25	6
MONKEY WRENCHES Knife Handle	SG1	8"	1	1	.89	1		SAA11	Clamp Base 2 1/2"	1	1	1.39	1
	SG2	10"	1	1	1.10	1		SAA12	Swivel Base 3 1/2"	2	1	2.19	1
CHISELS	Socket Firmer SH1	1 1/2"	4	3	.75	4	TOOL GRINDER	SBB11	4"	1	1	1.99	1
	Socket Firmer SH2	3/4"	3	3	.85	4	HAND SAW	SGC11	26"	2	2	1.59	2
	Socket Firmer SH3	1"	3	3	.95	4		SDD11	Center 3/8 x 5"	3	2	.23	2
	Butt SH44	1 1/4"	1	1	.55	4	PUNCHES	SDD44	Drift 3/8 x 5"	3	2	.23	2
	Butt SH45	3/8"	2	1	.59	4		SDD88	Solid 3/8 x 6"	3	2	.29	2
	Butt SH4	1 1/2"	2	1	.69	4	WRENCH SET, Straight Pattern (6 wrenches each)	S6F03	3/16 to 7/8"	3	2	.89	Bulk
	Butt SH5	3/4"	2	1	.79	4	WRENCH SET, "S" Pattern (5 wrenches each)	S5F04	3/8 to 7/8"	2	1	.99	Bulk
Butt SH6	1"	2	1	.89	4	SCRATCH AWL	SHH1	3 1/2"	2	2	.29	1	
Butt SH7	1 1/4"	2	1	.99	4								
COLD CHISELS	SJ1	1 1/2"	6	4	.15	6	TOTAL PIECE						
	SJ2	3/8"	6	4	.23	6	ROSE TOOLS, INC.						
	SJ3	3/4"	4	3	.29	6							
CARPENTERS PINCERS	SK1	8"	2	2	.69	1							
SCREW DRIVERS, Solid Bar	SL1	4"	4	2	.33	4							
	SL2	6"	3	2	.43	4							
	SL3	8"	2	1	.53	2							
SCREW DRIVERS Household	SL14	3"	4	2	.10	6							
	SL15	4"	1	1	.15	1							

SIMMONS LEADER TOOLS

GIVE you long, dependable service at a very economical price. All **SIMMONS LEADER** tools are priced to suit the most modest budgets. The right tool for the job to be done will save you time and effort. **SIMMONS LEADER** tools will do the job well and save you money.

They are all well made, nicely finished tools of standard quality, every one designed and balanced just right for the particular work it has to do.

Only the most popular, best selling tools are included in the **SIMMONS LEADER** assortments. When you choose them, you can be sure that you are getting sturdily built, serviceable tools that will wear amazingly well for the small investment.

These tools are the staple, standard types and sizes, ideal for everyday, all-around use—the kind of tools demanded everywhere by the largest number of users.

SIMMONS LEADER tools are the right choice for those who want good quality at a low price!



SIMMONS LEADER TOOL ASSORTMENTS

—Nos. TB S11 and TB S22—

Items	Size, Inches	Item Nos.	Retail Price, Each	ASSORTMENT No. TB S11		ASSORTMENT No. TB S22	
				Quantity	Total Retail	Quantity	Total Retail
Brace	10	TB SA1	\$0.99	4	\$3.86	2	\$1.98
Brace	10	TB SA5	1.39	2	2.78	1	1.39
Brace	10	TB SA6	1.99	1	1.99	1	1.99
Brace	10	TB SA7	3.19	1	3.19	1	3.19
Brace	12	TB SA8	3.39	1	3.39	1	3.39
Brace	10	TB SA3	4.39	1	4.39	1	4.39
Expansive Bit	7/8 to 3	TB SB1	1.29	2	2.58	2	2.58
Expansive Bit	1 1/2 to 1 1/2	TB SB2	.99	1	.99	1	.99
Screw Driver Bit	5/16	TB SB5	.17	2	.34	2	.34
Screw Driver Bit	3/8	TB SB6	.19	2	.38	2	.38
Draw Knife	8	TB SC1	1.10	2	2.20	2	2.20
Draw Knife	10	TB SC2	1.29	1	1.29	1	1.29
Snip, Pocket	7	TB SD1	.49	2	.98	2	.98
Snip, Household	12 3/4	TB SD2	.69	4	2.76	4	2.76
Snip, Tinnners', Laid Blade	12 3/4	TB SD3	1.89	1	1.89	1	1.89
Snip, Tinnners', Laid Blade	11 1/2	TB SD4	1.59	1	1.59	1	1.59
Snip, Household	10	TB SD5	.59	2	1.18	2	1.18
Snip, Household Combination	12 3/4	TB SD7	.99	2	1.98	1	.99
Pliers, Slip Joint	6	TB SE1	.33	6	1.98	4	1.32
Pliers, Slip Joint	8	TB SE2	.39	4	1.56	2	.78
Pliers, Slip Joint	10	TB SE3	.59	2	1.18	2	1.18
Pliers, Thin Nose	6 1/2	TB SE4	.33	4	1.32	3	.99
Pliers, Bent Nose	6 1/2	TB SE5	.49	2	.98	2	.98
Pliers, Slip Joint Side Cutting	5 1/2	TB SE6	.79	2	1.58	1	.79
Pliers, Slip Joint Side Cutting	7	TB SE66	.99	2	1.98	1	.99
Pliers, Diagonal	5	TB SE7	.99	2	1.98	1	.99
Pliers, Diagonal	6	TB SE77	1.29	2	2.58	1	1.29
Pliers, Electricians' Side Cutting	8	TB SE8	1.59	2	3.18	1	1.59
Pliers, Electricians' Side Cutting	7	TB SE88	1.39	2	2.78	1	1.39
Pliers, Chain Nose	6	TB SE9	.99	2	1.98	1	.99
Pliers, Button	10	TB SE10	1.29	2	2.58	1	1.29
Pliers, Button	8	TB SE11	.99	2	1.98	1	.99
Pliers, Slip Joint	6	TB SE18	.15	6	.90	3	.45
Pliers, Slip Joint	8	TB SE17	.23	4	.92	2	.46
Pliers, Slip Joint	10	TB SE16	.33	4	1.32	2	.66
Pliers, Side Cutting	6	TB SE19	.99	2	1.98	1	.99
Pliers, Side Cutting	8	TB SE20	1.39	2	2.78	1	1.39
Adjustable Angle Wrench	6	TB SF1	.44	3	1.32	2	.88
Adjustable Angle Wrench	8	TB SF2	.66	3	1.98	2	1.32
Adjustable Angle Wrench	10	TB SF3	.88	2	1.76	1	.88
Adjustable Angle Wrench	12	TB SF4	1.09	1	1.09	1	1.09
Knife Handle Monkey Wrench	8	TB SG1	.89	1	.89	1	.89
Knife Handle Monkey Wrench	10	TB SG2	1.10	1	1.10	1	1.10
Chisel, Socket Firmer	1 1/2	TB SH1	.75	4	3.00	3	2.25
Chisel, Socket Firmer	3/4	TB SH2	.85	3	2.55	3	2.55
Chisel, Socket Firmer	1	TB SH3	.95	3	2.85	3	2.85
Chisel, Butt	1/4	TB SH44	.55	1	.55	1	.55
Chisel, Butt	3/8	TB SH45	.59	2	1.18	1	.59
Chisel, Butt	1 1/2	TB SH4	.69	2	1.38	1	.69
Chisel, Butt	3/4	TB SH5	.79	2	1.58	1	.79
Chisel, Butt	1	TB SH6	.89	2	1.78	1	.89
Chisel, Butt	1 1/4	TB SH7	.99	2	1.98	1	.99
Cold Chisel	1 1/2	TB SJ1	.15	6	.90	4	.60
Cold Chisel	5/8	TB SJ2	.23	6	1.38	4	.92
Cold Chisel	3/4	TB SJ3	.29	4	1.16	3	.87
Carpenters' Pincers	8	TB SK1	.69	2	1.38	2	1.38
Screw Driver, Solid Bar	4	TB SL1	.33	4	1.32	2	.66
Screw Driver, Solid Bar	6	TB SL2	.43	3	1.29	2	.86
Screw Driver, Solid Bar	8	TB SL3	.53	2	1.06	1	.53
Screw Driver, Household	3	TB SL14	.10	4	.40	2	.20
Screw Driver, Household	4	TB SL15	.15	4	.60	2	.30
Screw Driver, Household	6	TB SL16	.20	3	.60	1	.20

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SIMMONS LEADER TOOL ASSORTMENTS

—Nos. TB S11 and TB S22—

Items	Size, Inches	Item Nos.	Retail Price, Each	ASSORTMENT No. TB S11		ASSORTMENT No. TB S22	
				Quantity	Total Retail	Quantity	Total Retail
Hammer, Black, Polished Face	16 oz.	TB SM1	\$0.33	4	\$1.32	4	\$1.32
Hammer, Polished Poll and Claws	16 oz.	TB SM2	.69	3	2.07	2	1.38
Hammer, Polished Octagon Neck	16 oz.	TB SM3	.99	2	1.98	2	1.98
Hammer, Polished	16 oz.	TB SM4	1.29	1	1.29	1	1.29
Hammer, Polished, Ripping	16 oz.	TB SM5	.69	3	2.07	2	1.38
Hammer, Engineer or Garage	42 oz.	TB SM6	1.39	2	2.78	1	1.39
Hammer, Machinist	1 lb.	TB SM7	.75	2	1.50	1	.75
Hammer, Machinist	1¼ lb.	TB SM87	.85	1	.85	1	.85
Hammer, Machinist	1½ lb.	TB SM8	.95	1	.95	1	.95
Hammer, Machinist	1¾ lb.	TB SM9	1.05	1	1.05	1	1.05
Hammer, Ladies'	7 oz.	TB SM14	.49	2	.98	1	.49
Coppers, Handled	1½ lb.	TB SN1	.49	2	.98	2	.98
Coppers, Handled	2 lb.	TB SN2	.59	2	1.18	2	1.18
Coppers, Handled	3 lb.	TB SN3	.69	1	.69	1	.69
Wing Divider	8	TB SP1	.69	2	1.38	1	.69
Wing Divider	6	TB SP10	.59	1	.59	1	.59
Pipe Wrench	8	TB SR10	.59	2	1.18	2	1.18
Pipe Wrench	10	TB SR1	.69	4	2.76	2	1.38
Pipe Wrench	14	TB SR2	.99	3	2.97	2	1.98
Pipe Wrench	18	TB SR3	1.39	2	2.78	1	1.39
Pipe Wrench	24	TB SR4	2.19	1	2.19	1	2.19
Steel Square	24x12	TB SS1	.59	2	1.18	2	1.18
Steel Square	24x16	TB SS2	1.10	1	1.10	1	1.10
Try Square	7½	TB SS3	.59	3	1.77	1	.59
Combination Square with Level and Scriber	12	TB SS4	.99	1	.99	1	.99
Quilt Frame Clamp, Cadmium	3	TB ST1	.10	12	1.20	6	.60
Wrecking Bar	24	TB SU2	.39	3	1.17	3	1.17
Block Plane	7x1½	TB SV1	.49	2	.98	2	.98
Smooth Plane	8x1¾	TB SV2	1.29	1	1.29	1	1.29
Smooth Plane	9x2	TB SV3	1.69	1	1.69	1	1.69
Jack Plane	14x2	TB SX4	1.99	1	1.99	1	1.99
Half Hatchet	3¼	TB SW1	1.09	2	2.18	2	2.18
Hand Drill	12	TB SX2	1.29	2	2.58	2	2.58
Axe, Michigan Pattern	3½ lb.	TB SY1	1.59	2	3.18	2	3.18
Axe, Double Bit	3½ lb.	TB SY2	1.99	1	1.99	1	1.99
Axe, Household	2¼ lb.	TB SY3	1.39	1	1.39	1	1.39
Slim Taper File	6	TB SZ2	.15	4	.60	4	.60
Extra Slim Taper File	6	TB SZ3	.15	4	.60	4	.60
Mill Bastard File	6	TB SZ4	.15	1	.15	1	.15
Mill Bastard File	8	TB SZ5	.20	2	.40	2	.40
Mill Bastard File	10	TB SZ6	.25	1	.25	1	.25
Vise, Clamp Base	2½	TB SAA11	1.39	1	1.39	1	1.39
Vise, Swivel Base	3½	TB SAA12	2.19	2	4.38	1	2.19
Grinder	4	TB SBB11	1.99	1	1.99	1	1.99
Saw	26	TB SCC11	1.59	2	3.18	2	3.18
Punch, Center	⅜x5	TB SDD11	.23	3	.69	2	.46
Punch, Drift	⅝x5	TB SDD44	.23	3	.69	2	.46
Punch, Solid	⅞x6	TB SDD88	.29	3	.87	2	.58
Scratch Awl	3½	TB SHH1	.29	2	.58	2	.58
Wrench Set, Straight Pattern	⅝ to ⅞	TB S6F03	.89	3	2.67	2	1.78
Wrench Set, S Pattern	⅝ to ⅞	TB S5F03	.99	2	1.98	1	.99

Total Number of Items

290

206

TOOL ASSORTMENTS No. TB S11

No. TB S22

Total Retail \$187.12

\$141.42

Weight Per Assortment, Lbs. 340

260

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

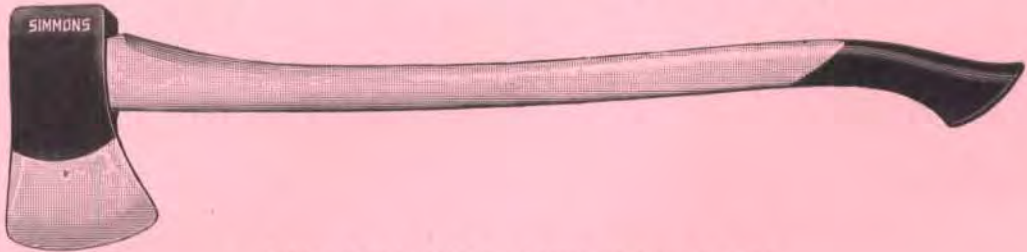
SIMMONS LEADER TOOLS — Quality Tools at Popular Prices

AXES

MICHIGAN PATTERN

• Forged steel, attractive black finish. Properly tempered for lasting edge.

• Good grade hickory handle, ivory finish, with black tip. Securely wedged. Well balanced.



Polished head and bit. Length handle 36 inches.

TBSY1—Weight head $3\frac{1}{2}$ lbs. Weight each 4 lbs. Std. List Each \$1.59.....Each \$1.59



Polished bits. Length handle 32 inches.

TBSY2—Weight head $3\frac{1}{2}$ lbs. Weight each 4 lbs. Std. List Each \$1.99.....Each \$1.99

Four in a package.

HOUSE AXES



Forged steel. Black finish, with polished head and bit. Hickory handle 18 inches long, securely wedged, has ivory finish

with black tip. Width cut $3\frac{3}{4}$ inches.

TBSY3—Weight of head $2\frac{1}{4}$ lbs. Weight each $2\frac{3}{4}$ lbs. Std. List Each \$1.39.....Each \$1.39

Four in a carton.

HOUSEHOLD HATCHET



HALF—PLAIN POLL

• Handy around the home for chopping wood, hammering, pulling nails and similar duties. Handle securely wedged. Beveled nail slot.

Chrome vanadium steel, dead black finish, with polished cutting edge. Punched eye. Ivory lacquered hickory handle with black tip.

TBSW1—Width of cut $3\frac{3}{4}$ inches. Weight per carton (4) $7\frac{1}{2}$ lbs. Std. List Each \$1.09.....Each \$1.09

Four in a carton.

BLACKSMITHS' HAND HAMMERS



• Handy in repair shop and garage. Built for heavy duty.

Drop-forged steel, tempered and hardened head and pein. Full polished. Hickory handle 15 inches long.

TB SM6—Weight head 42 ozs. Weight per carton (4) $11\frac{3}{4}$ lbs. Std. List Each \$1.39.....Each \$1.39

Four in a carton.

MACHINISTS' BALL PEIN HAMMERS



OCTAGON PATTERN

A useful tool for heavy service.

Drop-forged steel, hardened and tempered. Polished face, poll, pein and sides.

Nos.	Each	Weight Head, Ozs.	Length Handle, Inches	Wgt. Per Carton (4),		Std. List, Each
				Length, Inches	Weight, Lbs.	
TB SM7	\$0.75	16	14	5 $\frac{3}{4}$	5 $\frac{3}{4}$	\$0.75
TB SM87	.85	20	15 $\frac{1}{2}$	7 $\frac{1}{4}$	7 $\frac{1}{4}$	.85
TB SM8	.95	24	15 $\frac{1}{2}$	7 $\frac{3}{4}$	7 $\frac{3}{4}$	.95
TB SM9	1.05	28	16	8 $\frac{1}{4}$	8 $\frac{1}{4}$	1.05

Four in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SIMMONS LEADER TOOLS — Quality Tools at Popular Prices

NAIL HAMMERS

- Claws grip nail easily. Smooth-grip handle securely wedged in head and well balanced.



Drop-forged steel, hardened face, tempered claws. Adze eye. Bell face. Black finish, with polished striking face. White ash handle 13 inches long.

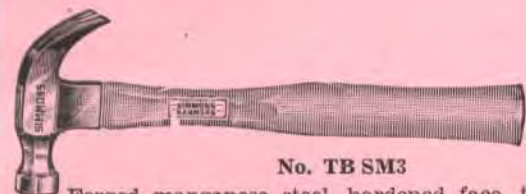
TB SM1—Weight of head 16 ounces. Weight per carton (6) 8½ lbs. Std. List Each \$0.33...Each \$0.33



Forged steel hardened and tempered. Adze eye. Bell face. Black finish, with polished poll and back of claw. Hickory handle 13 inches long.

TB SM2—Weight of head 16 ounces. Weight per carton (6) 8½ lbs. Std. List Each \$0.69...Each \$0.69

Six in a carton.



No. TB SM3

Forged manganese steel, hardened face, tempered claws. Adze eye. Octagon neck. Round poll. Hickory handle 12 inches long.

Polished; black finish under claw and top of eye. Semi-octagon handle.

TB SM3—Weight of head 16 ounces. Weight per carton (4) 6¼ lbs. Std. List Each \$0.99...Each \$0.99

Highly polished and extra heat-treated. Bronze finish under neck and claw. Oval handle.

TB SM4—Weight of head 16 ounces. Weight per carton (4) 6¼ lbs. Std. List Each \$1.29...Each \$1.29

Four in a carton.

NAIL OR RIPPING HAMMERS



- Claws designed for greatest leverage. Forged steel, hardened face, tempered claws.

Adze eye. Bell face. Plain poll and bell face polished. Black finish on neck and under claw. Hickory handle 13 inches long.

TB SM5—Weight of head 16 ounces. Weight per carton (4) 6¼ lbs. Std. List Each \$0.69...Each \$0.69

Four in a carton.

LADIES' HAMMERS



- Light but strong—every housewife will find it useful and easy to handle. Forged steel. Adze eye. Bell face and poll polished.

Black finish on neck. Hickory handle 12 inches long, black tip.

TB SM14—Weight of head 7 ounces. Weight of carton (6) 4½ lbs. Std. List Each \$0.49...Each \$0.49

Six in a carton.

WRECKING BARS



- Tough and sturdy, withstands great strain.
- Handy claw. Gooseneck pattern.

Drop-forged steel, ¾-inch hexagon.

TB SU2—Length 24 inches. Weight each 3¼ lbs. Std. List Each \$0.39...Each \$0.39

Packing—bulk.

EXPANSIVE BITS



- Fits regular bit braces. Screw secures cutter in position at any size you want. Open throat affords free clearance of chips.
- Forged steel, nicely polished. Single thread on screw. Complete with two cutters.

Nos.	Each	Cutters, Nos.	Bores Holes, Inches	Lgth., Inches	Wgt. Each, Lbs.	Std. List, Each
TB SB1	\$1.29	3 and 4	⅞ to 3	9½	¾	\$1.29
TB SB2	.99	1 and 2	½ to 1½	7½	¼	.99

One in a carton.

SCREW DRIVER BITS



Forged steel, tempered. Blade and shank polished. Withstands hard usage.

Nos.	Each	Size Bit, Inch	Length, Inches	Wgt. Per Carton (6), Lbs.	Std. List, Each
TB SB5	\$0.17	⅞	4½	⅝	\$0.17
TY SB6	.19	¾	5	¾	.19

Six in a carton.

HAND DRILLS



Polished steel frame. Smooth cast gray iron gears - running easy - machine cut. Strong steel pinions. Knurled steel

chuck with 3 hardened tool steel jaws, for round shank drills up to ⅝-inch. Hardwood side and crank handles. Hollow handle for holding drills, with extra large screw cap. (Drills not included.)

TB SX2—Single speed. Length over all 12 inches. Weight each 1¼ lbs. Std. List Each \$1.29...Each \$1.29

Six in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

RATCHET BIT BRACES DURABLE—SMOOTH WORKING



Ball-Bearing Head and Chuck

Nickel-plated.

Cocobolo head and sweep handle. Full steel clad ball-bearing head. Sweep handle has concealed brass friction washers and nickel-plated ferrules. Extra heavy, highly polished

and nickel-plated steel bow withstands heavy pressure— $\frac{1}{2}$ -inch in diameter. Box ring ratchet. Ball-bearing knurled chuck with machine-cut threads provides free, easy-action—capacity $\frac{1}{2}$ -inch round or $\frac{7}{16}$ -inch square shank bits. Patent alligator pattern self-centering forged steel jaws, machined and hardened—hold bit tight. Length over all 14 $\frac{1}{4}$ inches.

TB SA3—Sweep 10 inches. Weight per carton (2) 6 $\frac{1}{8}$ lbs. Std. List Each \$4.39.....Each \$4.39

Two in a carton.



Ball-Bearing Head

Highly Nickel-Plated.

Cocobolo head and sweep handle. Steel clad ball-bearing head. Strong steel bow withstands heavy pressure— $\frac{1}{2}$ -inch in diameter. Box ring ratchet. Ex-

tra heavy chuck, knurled, with machine-cut threads. Forged steel self-centering spring pattern alligator jaws hold bit tight.

Nos.	Each	Sweep, Inches	Length Over All, Inches	Weight Per Carton (2) Lbs.	Std. List, Each
TB SA7	\$3.19	10	14	6 $\frac{1}{8}$	\$3.19
TB SA8	3.39	12	15	6 $\frac{1}{2}$	3.39



Ball-Bearing Head

Highly Nickel-Plated

Mahogany finish hardwood head and sweep handle. Steel clad ball-bearing head. Strong steel bow withstands heavy pressure— $\frac{1}{2}$ -inch in diameter. Open

ring ratchet. Knurled chuck with machine-cut threads. Forged steel self-centering spring pattern alligator jaws hold bit tight. Length over all 14 inches.

TB SA6—Sweep 10 inches. Weight per carton (2) 5 $\frac{1}{2}$ lbs. Std. List Each \$1.99.....Each \$1.99

Two in a carton.



Mahogany finished hardwood head and sweep handle. Strong steel bow withstands heavy pressure— $\frac{1}{2}$ -inch in diameter. Open ring ratchet. Knurled chuck with machine-cut

threads. Self-centering alligator jaws hold bit tight. Length over all 13 inches. Sweep 10 inches.

TB SA1—Polished bright. Pin type jaws. Regular head. Weight per carton (4) 9 $\frac{1}{2}$ lbs. Std. List Each \$0.99.....Each \$0.99

Four in a carton.

TB SA5—Nickel-plated and buffed. Spring type jaws. Screw fastened head. Weight per carton (2) 4 $\frac{1}{2}$ lbs. Std. List Each \$1.39.....Each \$1.39

Two in a carton.

SCREW DRIVERS Well constructed for general use.



SOLID BAR

- Special construction for long life. Fluted handle provides firm grip. Round natural finish wood handle secured to shank with 2 heavy flush rivets.

Nos.	Each	Length Blade, In.	Width Point, In.	Lgth. Over All, In.	Wgt. Per Ctn., Lbs.	Std. List, Each
TB SL1	\$0.33	4	$\frac{1}{4}$	8 $\frac{3}{4}$	2 $\frac{3}{8}$	\$0.33
TB SL2	.43	6	$\frac{5}{16}$	10 $\frac{3}{4}$	3 $\frac{1}{4}$	.43
TB SL3	.53	8	$\frac{3}{8}$	13 $\frac{1}{4}$	2 $\frac{1}{4}$	.53

Packing: 8-inch—three in a carton. Others—six in a carton.



HOUSEHOLD

- Steel blade and ferrule brightly polished. Hardwood handle is heavily fluted and has black rubberoid finish that provides non-slip grip.

Nos.	Each	Length Blade, In.	Width Bit, In.	Lgth. Over All, In.	Wgt. Per Ctn., Lbs.	Std. List, Each
TB SL14	\$0.10	3	$\frac{3}{16}$	6 $\frac{3}{4}$	1	\$0.10
TY SL15	.15	4	$\frac{1}{2}$	9	1 $\frac{1}{4}$	.15
TB SL16	.20	6	$\frac{5}{16}$	11 $\frac{1}{2}$	2 $\frac{1}{8}$	.20

Six in a carton.

SCRATCH AWLS



Hardwood handle shaped for smooth, easy grip. Shank extends through handle and headed—cannot come loose. Tapered fine quality steel blade, polished. Handle nicely finished. Blade length, 3 $\frac{1}{2}$ inches. Length over all 6 $\frac{1}{2}$ inches.

TB SHH1—Weight per carton (6) 1 $\frac{1}{8}$ lbs.

Std. List Each \$0.29 Each \$0.29

Six in a carton.

WING DIVIDERS



- Easy acting thumb screw and nut afford quick, easy adjustment.

Forged steel, polished. Brass joints.

Nos.	Each	Length, Inches	Weight Per Carton (6) Lbs.	Std. List, Each
TB SP10	\$0.59	6	2	\$0.59
TB SP1	.69	8	2 $\frac{1}{4}$	.69

Six in a carton.

Retail prices quoted above are those found to be prevailing in the St. Louis area. Freight to destination should be added.

SIMMONS LEADER TOOLS—Quality Tools at Popular Prices

COMBINATION PLIERS

SLIP JOINT

GAS AND FLAT NOSE

- Deep milled teeth grip work securely. Drop forged tool steel, hardened. Knurled handles. Nickel-plated and highly polished

finish. Wire cutter between jaws.

Nickel-Plated and Highly Polished

Nos.	Each	Length, Inches	Weight Per Carton (6) Lbs.	Std. List Each
TB SE1	\$0.33	6	3	\$0.33
TB SE2	.39	8	3 $\frac{3}{4}$	.39
TB SE3	.59	10	6 $\frac{3}{8}$	.59

Cadmium Finish

TY SE18	.15	6	2 $\frac{3}{4}$	.15
TB SE17	.23	8	3 $\frac{3}{4}$	.23
TB SE16	.33	10	6 $\frac{1}{2}$	.33

SIDE CUTTING

- Deep milled teeth grip work securely. Drop forged tool steel, hardened. Knurled handles. Nickel-plated and highly polished finish.

Nos.	Each	Length, Inches	Weight Per Carton (6) Lbs.	Std. List Each
TB SE6	\$0.79	5 $\frac{1}{2}$	1 $\frac{3}{4}$	\$0.79
TB SE66	.99	7	3	.99

THIN BENT NOSE

- Deep milled teeth grip work securely. Drop forged tool steel, hardened. Knurled handles. Nickel-plated and highly polished finish. Particularly handy for automobile and garage men. Useful for work on flat surfaces.

handles. Nickel-plated and highly polished finish. Particularly handy for automobile and garage men. Useful for work on flat surfaces.

TB SE5—Length 6 $\frac{1}{2}$ inches. Weight per carton (6) 2 $\frac{5}{8}$ lbs. Std. List Each \$0.49 Each \$0.49

THIN NOSE

- Deep milled teeth grip work securely. Drop forged tool steel, hardened. Knurled handles. Full polished.

Ideal for places too narrow for flat nose pliers. Wire cutter between jaws.

TB SE4—Length 6 inches. Weight per carton (6) 3 $\frac{3}{8}$ lbs. Std. List Each \$0.33 Each \$0.33

One in a cardboard box; six in a carton.

CARPENTERS' PINCERS

HAMMER HEAD PATTERN

Handy for carpenters. Wire cutter between jaws. Screw driver on one handle. Tack claw on the other. Strong rivet at joint. Forged steel. Polished face. Handles smooth black finish. Length 8 inches.

TB SK1—Weight per carton (4) 3 $\frac{1}{4}$ lbs. Std. List Each \$0.69 Each \$0.69

Four in a carton.

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PLIERS

LAP JOINT

LONG CHAIN-NOSE—SIDE CUTTING

Forged steel, hardened. Knurled handles. Full polished. Ideal for extra narrow places. Length 5 $\frac{1}{2}$ inches; jaws 1 $\frac{1}{4}$ inches.

TB SE9—Weight per carton (6) 1 $\frac{1}{2}$ lbs. Std. List Each \$0.99 Each \$0.99

DIAGONAL CUTTING

- Cuts quickly, accurately. Forged steel, hardened. Knurled handles. Full polished.

Nos.	Each	Length, Inches	Weight per Carton (6), Lbs.	Std. List Each
TB SE7	\$0.99	5	1 $\frac{1}{8}$	\$0.99
TB SE77	1.29	6	2	1.29

ELECTRICIANS' SIDE CUTTING Klein Pattern

Forged steel, tempered and carefully fitted. Knurled handles. Full polished. Large opening at side of cutter for cutting insulated wire.

Nos.	Each	Length, Inches	Weight per Carton (6), Lbs.	Std. List Each
TB SE88	\$1.39	7	4 $\frac{1}{2}$	\$1.39
TB SE8	1.59	8	6 $\frac{1}{4}$	1.59

SIDE CUTTING Heavy Pattern

Forged steel, hardened. Knurled handles. Full polished. Large opening at side of cutter for cutting insulated wire.

Nos.	Each	Length, Inches	Weight per Carton (6), Lbs.	Std. List Each
TB SE19	\$0.99	6	2 $\frac{1}{2}$	\$0.99
TB SE20	1.39	8	5 $\frac{1}{4}$	1.39

BUTTON PATTERN

Forged steel, hardened. Knurled handles. Full polished. Fence plier—combined wire puller. Has positive stop for aligning cutters. Nose is milled to furnish a strong grip for pulling or straightening wire.

Nos.	Each	Length, Inches	Weight per Carton (6), Lbs.	Std. List Each
TB SE11	\$0.99	8	4 $\frac{1}{8}$	\$0.99
TB SE10	1.29	10	6 $\frac{1}{2}$	1.29

One in a cardboard box; six in a carton.

SIMMONS LEADER TOOLS — Quality Tools at Popular Prices

SOCKET FIRMER CHISELS



Forged steel beveled blade, hardened and tempered. Leather capped hardwood handle. Average length of blade 4½ inches.

Nos.	Each	Size, Inches	Weight Per Carton (6), Lbs.	Std. List, Each
TB SH1	\$0.75	½	1¾	\$0.75
TB SH2	.85	¾	2½	.85
TB SH3	.95	1	2¾	.95

Six in a carton.

SOCKET BUTT CHISELS



Forged steel beveled blade hardened and tempered, ground to thin, sharp edge; polished finish. Leather capped varnished hardwood handle. Average length of blade 3¼ inches.

Nos.	Each	Size, Inches	Weight Per Carton (6) Lbs.	Std. List, Each
TB SH44	\$0.55	¼	1¾	\$0.55
TB SH45	.59	¾	1¾	.59
TB SH4	.69	½	1½	.69
TB SH5	.79	¾	1¾	.79
TB SH6	.89	1	2	.89
TB SH7	.99	1¼	2½	.99

Six in a carton.

IRON BLOCK PLANES



Smooth, easy-cutting and serviceable. Japanned cast-iron frame and cap. Tempered and polished steel cutter. Hardwood knob. Lever adjustment. Length 7¼ inches. Cutter 1½ inches.

TB SV1—Weight each 1¼ lbs.
Std. List, Each \$0.49 Each \$0.49

One in a carton.

DRAW KNIVES



• For fast, easy cutting. Handles shaped for firm, non-slip grip. Tangs securely attached to handles.

Forged steel tempered blade and shank, highly polished. Mahogany finish handles with heavy metal ferrules and caps. Blade 1½ inches wide.

Nos.	Each	Length Blade, Inches	Weight Per Carton, Lbs.	Std. List, Each
TB SC1	\$1.10	8	3¾	\$1.10
TB SC2	1.29	10	2¼	1.29

Packing: 8-inch—three in a carton. 10-inch—two in a carton.

ADJUSTABLE PLANES

- Japanned cast-iron frame and cap. Rosewood finish handle and knob shaped to assure steady grip.
- Tempered and polished steel cutter.
- Screw and lever adjustment. Tight-fitting frog prevents chattering.

SMOOTHING



Nos.	Each	Length, Inches	Size Cutter, Inches	Weight Each, Lbs.	Std. List, Each
TB SV2	\$1.29	8	1¾	3½	\$1.29
TB SV3	1.69	9	2	3¾	1.69

JACK



TB SV4 — Length 14 inches. Cutter 2 inches; weight each 4¾ lbs. Std. List Each \$1.99.
Each \$1.99

One in a carton.

PLANE ASSORTMENT



This assortment of planes has been selected to meet the requirements of almost all dealers in hardware and consists of 9 planes of the most called-for styles and sizes. Planes are all **SIMMONS** Leader Quality.

Assortment consists of:

	Each
6 Iron Block planes No. TB SV1.....	\$0.49
1 Smooth plane No. TB SV2.....	1.29
1 Smooth plane No. TB SV3.....	1.69
1 Jack plane No. TB SV4.....	1.99

TB SVA—Weight per assortment 30 lbs.

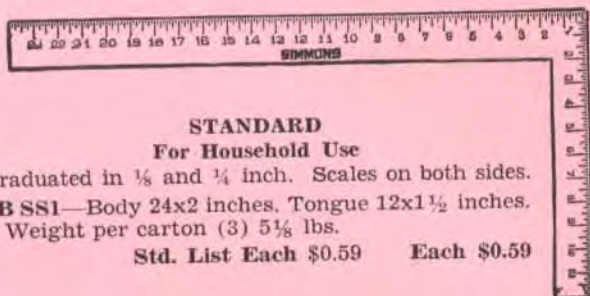
Each plane in an individual box; One assortment in a carton.

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SIMMONS LEADER TOOLS — Quality Tools at Popular Prices

STEEL SQUARES

- Flat steel, polished. Provides accurate measurements. Distinct figures are easy to read.



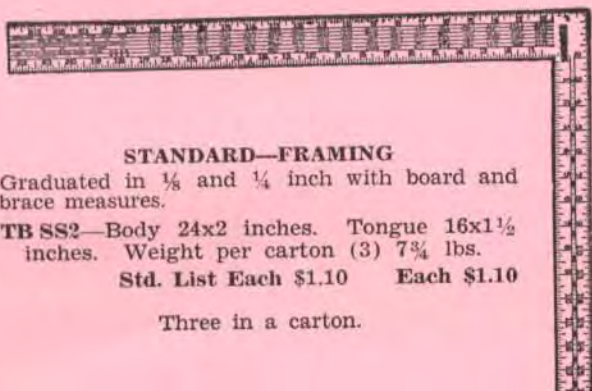
STANDARD

For Household Use

Graduated in $\frac{1}{8}$ and $\frac{1}{4}$ inch. Scales on both sides.

TB SS1—Body 24x2 inches. Tongue 12x1 $\frac{1}{2}$ inches. Weight per carton (3) 5 $\frac{1}{8}$ lbs.

Std. List Each \$0.59 Each \$0.59



STANDARD—FRAMING

Graduated in $\frac{1}{8}$ and $\frac{1}{4}$ inch with board and brace measures.

TB SS2—Body 24x2 inches. Tongue 16x1 $\frac{1}{2}$ inches. Weight per carton (3) 7 $\frac{3}{4}$ lbs.

Std. List Each \$1.10 Each \$1.10

Three in a carton.

TRY SQUARES



- Accurately graduated. Markings easily read. Blued steel blade securely riveted to hardwood back. Brass trim.

TB SS3—Size 7 $\frac{1}{2}$ inches. Weight per carton (3) 1 $\frac{1}{4}$ lbs. Standard List, Each \$0.59 Each \$0.59

Three in a carton.

COMBINATION SQUARES



With Level and Scriber

Bright finish steel blade marked on edges of both sides—one side in 8ths, the other in 16ths inch. Enamelled steel head with square and mitre faces slides in

groove of face and can be secured by thumb nut. Head is removable so blade can be used separately. With 12-inch steel rule.

TB SS4—Weight each 13 ounces.

Std. List Each \$0.99 Each \$0.99

One in a carton.

HAND SAWS



SKEW BACK—4 Screws

- Crucible steel blade, full taper ground, brightly polished and etched. Teeth filed and set to provide fast, smooth sawing. Black and white lacquered handle, firmly attached to blade.

Length cutting edge 26 inches. Width blade, at butt 6 $\frac{3}{8}$ inches, at point 1 $\frac{3}{4}$ inches. Four screws.

TB SCC11—Hand. Points per inch 8. Weight per carton (4) 6 $\frac{1}{2}$ lbs. Std. List Each \$1.59. Each \$1.59

Four in a carton.

COLD CHISELS



Forged tool steel, carefully tempered to correct hard-

ness—tough and strong. Black finish.

Nos.	Each	Cut, In.	Lgth., In.	Diam-eter, In.	Wt., Lbs.	Std. List
TY SJ1	\$0.15	$\frac{1}{2}$	6	$\frac{1}{2}$	1 $\frac{3}{4}$	\$0.15
TB SJ2	.23	$\frac{5}{8}$	6 $\frac{3}{8}$	$\frac{5}{8}$	2 $\frac{1}{2}$	.23
TB SJ3	.29	$\frac{3}{4}$	7 $\frac{1}{2}$	$\frac{3}{4}$	5	.29

Six in a carton.

DRIFT PUNCHES

- Forged from high quality steel, $\frac{5}{16}$ -inch hexagon—strong, sturdy, withstands hard service.
- Black finish. Polished point.



Diameter point $\frac{9}{32}$ inch.

TB SDD44—Length 5 inches. Weight per carton (6) $\frac{3}{4}$ lb.....Std. List Each \$0.23 Each \$0.23

Six in a carton.

SOLID PUNCHES

- Forged from high quality steel, $\frac{5}{16}$ -inch hexagon—strong, sturdy, withstands hard service.
- Black finish. Polished point.



Diameter point $\frac{3}{16}$ -inch

TB SDD88—Length 6 inches. Weight per carton (6) 1 $\frac{3}{4}$ lbs.....Std. List Each \$0.29 Each \$0.29

Six in a carton.

CENTER PUNCHES

- Forged from high quality steel, $\frac{5}{16}$ -inch hexagon—strong, sturdy, withstands hard service.
- Black finish. Polished point.



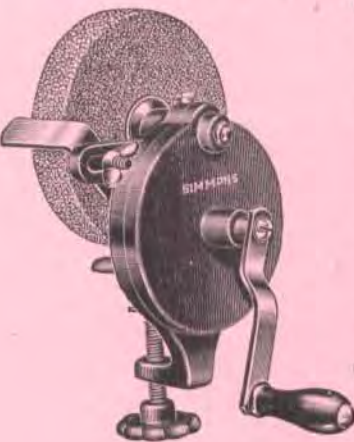
Sharp point.

TB SDD11—Length 5 inches. Weight per carton (6) $\frac{3}{4}$ lb.....Std. List Each \$0.23 Each \$0.23

Six in a carton.

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TOOL GRINDERS



• Ideal for sharpening tools and cutlery. Useful in workshop and kitchen. Handy clamp for attaching to bench or table.
Vitrified grinding wheel 4x1 inches. Properly balanced adjustable tool rest.
Machine cut helical gears. Cast dust-proof case, red enameled finish. Wrought steel handle with black enameled wood grip. Wheel type clamp screw.

TB SBB11 — Weight each 4½ lbs.
Std. List Each \$1.99
Each 1.99

One in a carton.

VICES

• Extra heavy cast iron. Hardened jaws with milled pipe jaws. Polished steel free-action screw and sliding handle. Red enameled, with polished jaws and top of anvil.



STATIONARY—
Clamp Base

Easily clamped to bench or table.

TB SAA11—Width jaws 2½ inches.
Open 2½ inches.
Weight each 6 lbs.

Std. List Each \$1.39
Each 1.39

Swivel Base

Vise swivels on base and can be quickly locked by lever.

TB SAA12—
Width jaws 3½ inches. Open 4 inches. Weight each 11¾ lbs.
Std. List Each \$2.19
Each 2.19



One in a carton.

SOLDERING COPPERS



SQUARE
POINT

Drawn copper. Wrought iron shank. Shaped hardwood handle with wired shank.

Nos.	Each	Wt. Each,		Std. List, Each
		Copper, Lbs.	Complete, Lbs.	
TB SN10	\$0.38	¼	¾	\$0.38
TB SN11	.41	⅜	⅞	.41
TB SN12	.44	½	1	.44
TB SN1	.49	¾	1½	.49
TB SN2	.59	1	1¾	.59
TB SN3	.69	1½	2½	.69

Wrapped in paper.

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TINNERS' SNIPS

• Sharp blades snip light metal quickly and accurately.



GENERAL
PURPOSE

Solid forged steel. Red enameled handles. Polished heads.

Nos.	Each	Lgth., In.	Cut, In.	Wt. Per Carton (6),		Std. List, Each
				Lbs.	Lbs.	
TB SD2	\$0.69	12½	3	11¼		\$0.69
TB SD5	.59	10	2½	7½		.59

Six in a carton.



STRAIGHT

Forged from special high-grade metal, with steel laid blades. Blue japanned handles. Polished heads.

Nos.	Each	Lgth., In.	Cut, In.	Wt. Will Per Cut Ctn. Iron, (2),		Std. List, Each
				Ga.	Lbs.	
TB SD3	\$1.89	12¾	3	27	3¾	\$1.89
TB SD4	1.59	11¾	2½	28	3	1.59

Two in a carton.



STRAIGHT

Solid forged steel. Red enameled handles. Polished heads. Pocket size. Length 7 inches, cut 2 inches.

TB SD1—Weight per carton (6) 3¾ lbs.
Std. List, Each \$0.49.....Each \$0.49

Six in a carton.

TINNERS' SNIPS



COMBINATION,
CIRCULAR AND
STRAIGHT

• Sharp blades snip light metal quickly and accurately.

Combines advantages of circular and straight snips in one tool! Jaws are specially ground and shaped to cut curved and irregular shapes as readily as straight work.

Solid forged steel. Red japanned handles. Polished head. Length 12¾ inches. Cut 3 inches.

TB SD7—Weight per carton (2) 3¾ lbs.
Std. List, Each \$0.99.....Each \$0.99

Two in a carton.

SIMMONS LEADER TOOLS — Quality Tools at Popular Prices

PIPE WRENCHES



STEEL HANDLE

- Milled jaws provide positive grip. High - grade

material and workmanship assure long performance.

Drop forged steel jaws and handle. Polished steel frame. Smooth-working knurled adjusting nut.

Nos.	Each	Lgth., In.	Capac., In.	Wt. Per Car- ton, Lbs.	Std. List, Each
TB SR10	\$0.59	8	1/8 to 3/4	4 1/2	\$0.59
TB SR1	.69	10	1/8 to 1	8 5/8	.69
TB SR2	.99	14	1/4 to 1 1/2	16 1/4	.99
TB SR3	1.39	18	1/4 to 2	17 1/2	1.39
TB SR4	2.19	24	1/4 to 2 1/2	24	2.19

Packing: 8- to 14-inch—six in a carton.
18-inch and over—four in a carton.

ANGLE WRENCHES



ADJUSTABLE

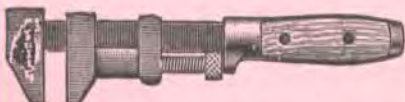
- Easily adjusted with free-action knurled screw. Special forged steel. Jaws and

frame polished. Cadmium finish handle.

Nos.	Each	Lgth., In.	Cap., In.	Wt. Each, Lbs.	Std. List, Each
TB SF1	\$0.44	6	3/4	3/8	\$0.44
TB SF2	.66	8	1 1/8	5/8	.66
TB SF3	.88	10	1 1/8	1 1/4	.88
TB SF4	1.09	12	1 1/8	2	1.09

One in a cardboard box; six in a carton.

WRENCHES



KNIFE HANDLE

Forged steel bar and head. Tough malleable iron handle frame. Head and jaw

hardened. Bar extends to end of handle and is riveted. Selected hardwood grip secured by 2 rivets and counter-sunk washers. Knurled adjusting screw.

Nos.	Each	Lgth., In.	Jaws Open, In.	Wt. Per Carton (4), Lbs.	Std. List, Each
TB SG1	\$0.89	8	1 1/4	6 1/4	\$0.89
TB SG2	1.10	10	1 3/4	8 5/8	1.10

Four in a carton.

QUILT FRAME CLAMPS



- Ideal for pattern making, and similar work. Used extensively by home workshop operators and model airplane builders. Swivel head screw adjusts itself to uneven shapes.

Cast iron frame and screw, cadmium plated. Opens 3 inches.

TB ST1—Weight per carton (12) 5 1/4 lbs.
Std. List Each \$0.10.....Each \$0.10

Twelve in a carton.

WRENCH SETS



"S" PATTERN

Open end, double head. Forged steel, cadmium-plated to resist rust. Polished jaws. No two openings alike.

Set of 5 wrenches—10 openings ranging from 3/8-inch to 1 1/8-inch. Handy metal clip holds wrenches compact.

TB S5FO4—Weight per set 2 7/8 lbs.

Std. List, Per Set \$0.99.....Per Set \$0.99

Packing—bulk.

WRENCH SETS



ENGINEER'S STRAIGHT PATTERN

Open end, double head. Forged steel, cadmium-plated to resist rust. Polished

jaws. No two opening alike.

Set of 6 wrenches—12 openings ranging from 5/16-inch to 1 1/8-inch. Handy metal clip holds wrenches compact.

TB S6FO3—Weight per set 1 7/8 lbs.

Std. List, Per Set \$0.89.....Per Set \$0.89

Packing—bulk.

FILES

- Skillfully made to do good work. High quality steel.



For filing and sharpening hand saws, or any type saw having 60-degree angle teeth. Edges and corners are "set" and cut, to file gullet between saw teeth. Length 6 inches.

TY SZ2—Slim Taper. Weight per carton (6)

7 ozs. Std. List Each \$0.15.....Each \$0.15

TY SZ3—Extra Slim Taper. Weight per carton

(6) 5 1/2 ozs. Std. List Each \$0.15.....Each .15

Six in a carton.

MILL BASTARD



For filing mill or circular saws, planes and mowing machine knives. For lathe work, draw filing and for finishing the several compositions of brass and bronze. Also for sharpening agricultural tools, such as garden, field and cotton hoes.

Nos.	Each	Length, Inches	Weight Per Carton (4) Lbs.	Std. List Each
TY SZ4	\$0.15	6	1/2	\$0.15
TB SZ5	.20	8	3/4	.20
TB SZ6	.25	10	1 1/4	.25

Four in a carton.

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LIST OF KEEN KUTTER BRANDED MERCHANDISE



MECHANICS' TOOLS	HAMMERS, Bill Posters' Blacksmiths' Brick Machinists' Ball Pein Machinists' Riveting Nail Saw Setting	RULES, Boxwood Folding	MEAT CUTTERS	HOES, Cotton Cultivator Eye Garden Garden Mattock German Grub or Sprouting Mattock Mortar Planters' Railroad Scuffle Scuffle Southern Meadow Strawberry Triangular Weeder Turf Edgers Weeding
AUGERS, Nut Ship	HANDLES, Axe, D. B. Axe, S. B. Blacksmith Hand Brick Hammer Broad Axe Broad Hatchet Cross Cut Saw House Axe Hunters' Axe Lathing Hatchet Machinist Hammer Mattock Nail Hammer Pick Scout Axe Shingling Hatchet Sledge or Spike Maul	SAW CLAMPS SAW TOOLS SCRATCH AWLS SCREW DRIVERS, Electricians' Regular	POCKET KNIVES, Cattle Jack Pen Pruning Scout	Cotton Cultivator Eye Garden Garden Mattock German Grub or Sprouting Mattock Mortar Planters' Railroad Scuffle Scuffle Southern Meadow Strawberry Triangular Weeder Turf Edgers Weeding
AXES, Double Bit, Handled House Scout Single Bit, Handled		SPEED INDICATORS	PURTY CHISELS	HOOKS, Potato Stone
AXE STONES		SQUARES	RAZORS, Old Style Blade Safety	HORSE OR MULE SHEARS
BITS, Auger Car Countersink Electrician Expansive Gimlet Screw Driver Ship Car Wood		SAWS, Back Compass Coping De-Horning Hack Saw Hand Keyhole Kitchen Metal Cutting Mitre Box Nest, of Saws Panel Pruning Rip Ship Wood or Buck	RAZOR BLADES, Double Edge Single Edge	LAWN MOWERS, 4 and 5 Knife, Plain 4 and 5 Knife, Rubber Quiet, Rubber Tired
BIT BRACES		TACK CLAWS	RAZOR HONES	POST HOLE AUGERS
BIT EXTENSIONS, Straight		TINNERS' SNIPS	RAZOR STROPS	POST HOLE DIG- GERS
BLADES, Butcher Saw, Coil Hack Saw Wood Saw	HATCHETS, Broad Claw Half Lathing Shingling Rig Builders' Produce	TOOL BAGS	SCISSORS, Button Hole Cuticle Embroidery or Lace Ladies' or Regular Manicure Nail Pedicure Pocket	PRUNERS, Trimmer
CABINET SCRAPERS	HAZEL HOES	TROWELS, Brick Plastering Pointing	SHEARS, Bankers' or Paper Barbers' Bent, Trimmers Kitchen Straight Trimmers Tailors'	PRUNING SHEARS
CHISELS, Butt Cape Cold Socket Firmer	LEVEL GLASSES	TRY SQUARES	STEELS, Butcher Kitchen	RAKES, Broome Coal or Road Dandelion Garden Lawn Park Tar or Asphalt
CALIPERS	MALLETS	TRY AND MITRE SQUARES	TABLE KNIVES and FORKS	SCYTHES, Bush Grass Weed
CARPENTERS' APRONS	MARKING GAUGES	WORK BENCHES	GARDEN TOOLS and IMPLEMENTS	SCYTHE STONES
CARPENTERS' PENCILS	MATTOCKS	WRENCHES, Engineers' Double End Tappet, Double End Thin Alloy Steel, Angle Stillson Pattern Pipe	BUSH HOOKS	SHEEP SHEARS
CHISEL HANDLES	NAIL SETS	CUTLERY	CORN KNIVES	SIDEWALK CLEANERS
CORNER BRACES	OIL STONE SLIPS	CARVERS, IN SETS	CULTIVATORS, Garden Speedy	SCOOPS, Break Down Coal Yard Grain Gravel
CUTTING NIPPERS	OIL STONES	CLEAVERS, Household	DITCH BANK BLADES	SHOVELS, Campers' or Floral Dirt, "D" Handle Dirt, Long Handle Irrigating Miners' Moulders' Rice
DRILLS, Bit Stock, Twist Straight Shank, Machine Straight Shank, Twist	PICKS, Coal Railroad	CLIPPERS, Hair Toilet	DRAIN CLEANERS	SPADES, Drain Iowa Pattern Regular Pattern Post or Ditching
DRAWING KNIVES	PINCERS, Carpenters' Hoof Paring Nail Cutting	COOKS' FORKS	FORKS, Alfalfa Baling Press Barn Coal Coal Scoop Coke Cotton Seed English Digging Grain Header Manure Mill or Manure Stone Sugar Beet Scoop Spading Vegetable Scoop	THERMOMETERS
DIVIDERS	PLANES, Block Fore Jack Smooth	FOOD CHOPPERS	GARDEN FLOWS	TOOL HANDLES, Alfalfa Fork Hay Fork Garden Header Fork Heavy Fork "D" Shovel "D" Spade Long Shovel Manure Fork Post Spade
FILES, Cant Saw Carpenters' Special Extra Slim Taper Flat Bastard Flat Smooth Great American Cross Cut Half Round, Bastard Half Round, Cabinet Half Round, Smooth Half Round, Wood Knife, Bastard Mill, Bastard Mill, One Safe Edge Regular Taper Reversible Taper Round, Bastard Safety Mill Slim Taper Special Blunt Square, Bastard Straight, Mill Warding, Bastard Cut Warding, Second Cut	PLIERS, Chain Nose Combination Diagonal Cutting Lineman's Side Cutting Thin Nose	HAMBURGER TURNERS	GARDEN SETS	TREE PRUNERS
GLASS CUTTERS	PLASTERERS' HAWKS	KNIVES, Boning Bread Broom Corn Budding Butcher Cooks' Cotton Sampling Grafting Grape Fruit Ham Slicing Hunting Linoleum Paring Pocket Poultry Killing Putty Roofing Scraping Shoe Skinning Slicing Sticking Steak Utility	GARDEN TROWELS	WEED CUTTERS
GOUGES	PLUMBS and LEVELS		GARDEN WEEDERS	
GRUB HOES	PUNCHES, Center Machine Pin Prick Leather, Round		GLOVES, Cotton, Work Rubber Dipped, Cotton	
	POCKET KNIFE HONES		GRASS CUTTERS	
	RASPS, Extra Slim, Light Horse Flat Wood Half Round, Shoe Half Round, Wood Plain Horse		GRASS HOOKS	
	REAMERS, FLUTED		GRASS SHEARS	
			HEDGE KNIVES	
			HEDGE SHEARS	