



**MILLERS FALLS
TOOLS**

**SINCE
1888**



**CATALOG
49**





*Hand Tools
Portable Electric Tools
Hack Saws*

49 CATALOG

MILLERS FALLS COMPANY

GREENFIELD, MASSACHUSETTS, U. S. A.

CHICAGO OFFICE
100 S. Jefferson Street

NEW YORK OFFICE
28 Warren Street

Cable Address: "Millerfall" Greenfield

Codes: Acme and Bentley's

IMPORTANT INFORMATION

CATALOG NO. 49

Effective with this new catalog all of the fine tools in our extensive lines which have heretofore borne the famous Goodell-Pratt name will be branded and labeled Millers Falls. This catalog lists all the active items in our lines. All old catalogs should be destroyed.

NEW TOOLS

See Pages 168 -176 for the interesting new tools announced since the first printing of this catalog.

Many interesting and popular new tools have been added since the publication of our last catalog. These new items are clearly indicated by an appropriate notation in the margin of the pages on which they appear.

SPECIFICATIONS

Control of certain materials by the government under the National Emergency Decree will make it mandatory that some of the specifications appearing in this catalog be changed.

Our standard specifications for each tool we manufacture are used in this catalog. Owing to difficulties that still exist in securing certain classes and finishes of materials it may be several months, in some few instances, before these specifications are fully met.

PRICES

Current prices on Millers Falls tools can be procured from your Hardware Dealer.

The list prices shown in this catalog are those in effect at time of publication and are subject to change without notice. All orders are accepted with the understanding that they will be billed at prices prevailing at the time shipment is made.

WARRANTY

Every tool stamped with the Millers Falls name is warranted free from imperfections and defects in material or workmanship. Should such defects appear, we will, at our option, cheerfully repair or replace the tool without charge. Under no circumstances, however, can we assume the responsibility for breakage where flaws do not appear, nor will we replace tools which have suffered from abusive treatment or have been stamped with the owner's name, changed, or otherwise experimented upon. No dealer is authorized to make replacements for us. Articles claimed defective must be returned, charges paid, for inspection, direct to the factory at Greenfield and not to any of our branch offices.

SHIPPING INSTRUCTIONS

In ordering, please be sure to give full and explicit directions for shipment and they will be carefully followed. If shipping instructions are not given, we will use our own best judgment in forwarding ship-

IMPORTANT INFORMATION

ments. All goods are at the risk of the purchaser after delivery in good order to the forwarders. We cannot hold ourselves responsible for articles lost in transit but will use our best efforts in the interest of the purchaser to locate the goods or have proper restitution made.

SERVICE FROM WAREHOUSE

A warehouse stock is maintained in Chicago for the convenience of our customers. Shipments from this stock are subject to a very reasonable service charge. This charge will be quoted on request.

PARTS AND REPAIRS

Repair parts can be furnished for any tool shown in this catalog. Customers should state clearly just what new parts are wanted, giving the number of the tool and any other data that will help avoid error in filling the order. Owing to the considerable expense of round trip transportation, in addition to repair costs, it is recommended that the owner make his own repairs whenever it is possible. Estimates on repairs and prices of repair parts will be gladly furnished on request.

RETURNED GOODS

The return of goods for credit cannot be accepted without permission from the main office. Shipping instructions should be obtained for any goods to be returned for any reason other than for repair.

TERMS

Invoices are payable at the main office in Greenfield, in New York or Boston funds, net 30 days from date rendered or 2 per cent discount payment in ten days.

Shipments are F.O.B. c.c.s Greenfield or Millers Falls, Massachusetts. Freight allowed on one hundred pound shipments of Hack Saw Blades, Electric Tools or Metal Cutting Band Saws. These terms subject to any changes that may become necessary through government regulation.

ELECTROTYPES

The free use of our electrotypes for advertising purposes is extended to all of our customers. Electrotypes of our tools made from fine wood engravings will be supplied in two sizes: the size used in our large catalog and a small size for use in a 2¼-inch column. We cannot attempt to make up any other special sizes.

INVITATION

A most cordial invitation is extended to Jobbers, Distributors and Dealers to visit our factories and get acquainted with the personnel back of Millers Falls Tools.

October 1949

MILLERS FALLS COMPANY

MILLERS FALLS BENCH PLANES

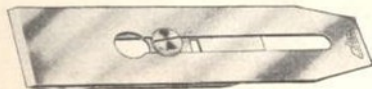
This fine line of planes has an instant appeal to craftsmen who know the true value of fine quality tools and it typifies the excellent design, workmanship and finish that are built into all Millers Falls Tools. These planes are sturdily built for fine performance. They earn through long, satisfactory service a pride of ownership that is the highest tribute that could be paid to their excellence.

Three noteworthy features that contribute to the fine performance of Millers Falls Planes are the exclusive three-point bearing lever cap, preventing chatter; the precisely fitted cutter cap, and the cutter iron which is made of one solid piece of carefully hardened and tempered tool steel nicely polished.

The bottoms are made of seasoned castings, reinforced for added strength, milled and nicely polished on the bottom and two sides. The sensitive, easily operated side and depth adjustments, rigidly seated frogs, self-aligning lever caps and comfortable rosewood knobs and handles all do their part in making this line the last word in planes.

The finish throughout is in perfect keeping with the high standards to which these tools are made.

BENCH PLANE IRONS



Double Iron



Single Iron

The heart of a plane is the cutter iron. Without a fine iron a plane cannot produce the smooth, easy cuts that are expected of an efficient, high quality tool.

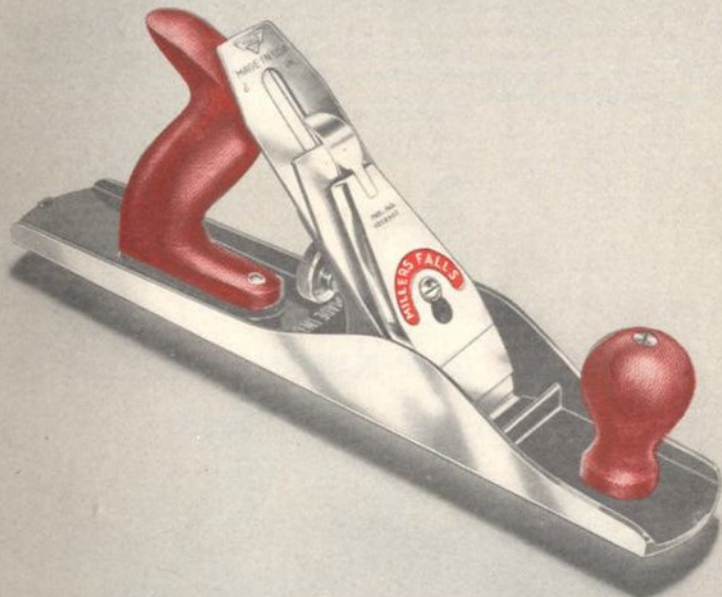
Millers Falls Irons are made of one solid piece of selected tool steel heat-treated with the utmost care to the point where they will give excellent results in hardwood and still are not too hard to be honed back into condition readily when dulled. Being of one solid piece the iron is longer lived; therefore it can be sharpened over and over again.

The irons listed below used in Millers Falls Bench Planes can also be used in planes of several other makes.

Fitting Planes Number	Width	Double Irons		Single Irons	
		Number	Price each	Number	Price each
8-8C-11	1 3/4"	1168	\$1.30	168	\$0.90
{ 9-9C-14-14C 814-900	2"	2200	1.40	200	1.00
15-15C	2 1/4"	2228	1.60	228	1.20
10-10C-18-18C 22-22C	2 3/8"	2238	1.80	238	1.30
24-24C	2 3/4"	2258	1.80	258	1.30

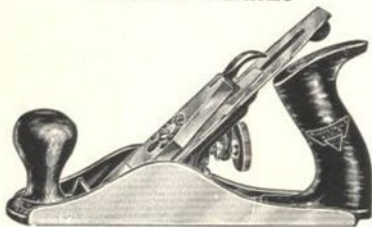
Single Irons packed six in a box. Double Irons packed three in a box.

PLANES


**MILLERS FALLS
TOOLS**

 SINCE
1868

SMOOTH PLANES



Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nicked and buffed.

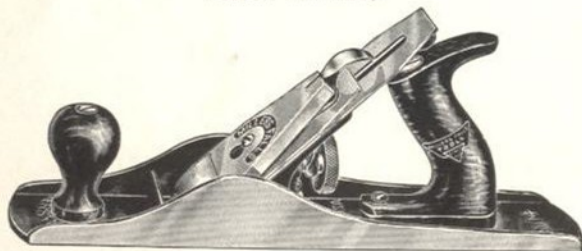
SMOOTH BOTTOM

No.	Length	Width Iron	Weight	Code	Price each
No. 8	8"	1 3/4"	3 1/2 lbs.	EATER	\$6.60
No. 9	9"	2"	3 1/2 lbs.	EAMES	6.90
No. 10	10"	2 3/4"	4 3/4 lbs.	EAMAT	8.40

CORRUGATED BOTTOM

No. 8C	8"	1 3/4"	3 lbs.	EAWEL	6.80
No. 9C	9"	2"	3 3/4 lbs.	EAMOG	7.10
No. 10C	10"	2 3/4"	4 1/2 lbs.	EAWOR	8.70

JACK PLANES



Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nicked and buffed.

SMOOTH BOTTOM

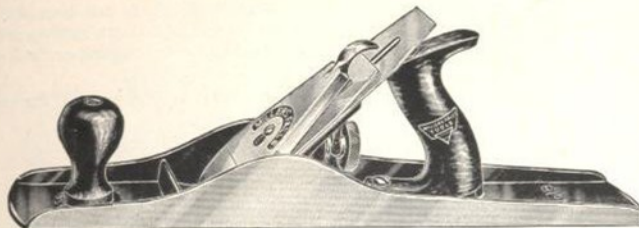
No.	Length	Width Iron	Weight	Code	Price each
No. 11	11 1/2"	1 3/4"	3 1/2 lbs.	EAWIT	\$7.20
No. 14	14"	2"	4 1/2 lbs.	EAWUG	7.50
No. 15	15"	2 1/4"	5 3/4 lbs.	EARLS	10.50

CORRUGATED BOTTOM

No. 14C	14"	2"	4 3/4 lbs.	EAVAD	7.70
No. 15C	15"	2 1/4"	5 3/4 lbs.	EAVOQ	10.80

All the above planes packed one in a box

FORE PLANES



Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nicked and buffed.

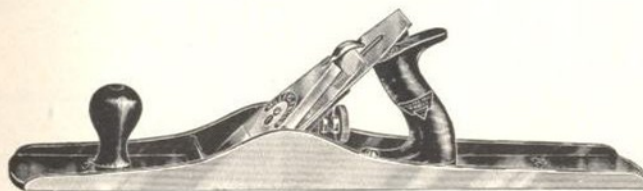
SMOOTH BOTTOM

No.	Length	Width Iron	Weight	Code	Price each
No. 18	18"	2 3/4"	6 3/4 lbs.	EABON	\$11.00

CORRUGATED BOTTOM

No. 18C	18"	2 3/4"	6 1/4 lbs.	EACOR	11.30
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JOINTER PLANES



Quick, easy, depth and side adjustment of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nicked and buffed.

SMOOTH BOTTOM

No.	Length	Width Iron	Weight	Code	Price each
No. 22	22"	2 3/4"	7 1/2 lbs.	EADEN	\$13.40
No. 24	24"	2 3/4"	9 1/4 lbs.	EACUL	15.00

CORRUGATED BOTTOM

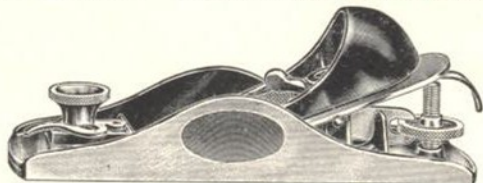
No. 22C	22"	2 3/4"	7 3/4 lbs.	EAFER	13.70
No. 24C	24"	2 3/4"	9 lbs.	EAGOL	15.40

All the above planes packed one in a box

ADJUSTABLE THROAT BLOCK PLANES

Designed and used primarily for working cross grain surfaces. Block Planes are invaluable for many light operations cutting with the grain. They are short, light in weight and are easily controlled with one hand. The models below are equipped with adjustable throats for roughing or finish cuts in any kind of wood.

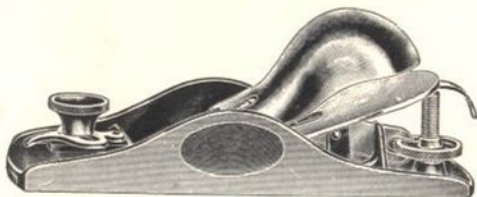
Two cutter iron angles are available — Standard 20° for soft woods and Low 12° for hard woods.



Standard Angle. Adjustable Throat

Side and depth adjustments of irons. Irons one solid piece of high quality tool steel. Bottoms and sides nicely polished. Inside of bottoms and lever caps black enameled. Throat adjusting levers and knurled lock nuts nickel plated.

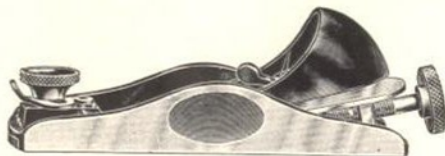
No.	Length	Width Iron	Weight	Code	Price each
No. 16	6"	1 3/4"	1 1/2 lbs.	EBENS	\$3.80
No. 17	7"	1 3/4"	1 3/4 lbs.	EBORG	4.00



Standard Angle. Adjustable Throat

Same as Nos. 16 and 17 above but with a polished, nicked, and buffed cap with a knuckle joint lever clamp. Irons one solid piece of fine tool steel.

No.	Length	Width Iron	Weight	Code	Price each
No. 36	6"	1 3/4"	1 1/2 lbs.	EBRAG	\$4.50
No. 37	7"	1 3/4"	1 3/4 lbs.	EBREL	4.70



Low Angle. Adjustable Throat

Screw depth adjustment of irons. Irons fine tool steel set at 12° angle. Bottoms and sides nicely polished. Inside of bottoms and lever caps black enameled. Throat adjusting levers and lock nuts nickel plated.

No.	Length	Width Iron	Weight	Code	Price each
No. 56	6"	1 3/4"	1 1/2 lbs.	ECROW	\$3.80
No. 57	7"	1 3/4"	1 3/4 lbs.	ECTOL	4.00

All the above planes packed one in a box

NOS. 45 and 75 BLOCK PLANES



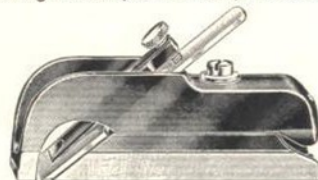
Standard Angle. Rosewood Knobs

Screw depth adjustment of tool steel irons. Cam lock lever caps. Rosewood knobs. Bottoms and sides nicely polished. Inside bottoms and lever caps black enameled.

No.	Length	Width Iron	Weight	Code	Price each
No. 45	5 1/2"	1 3/4"	1 1/4 lbs.	EDROX	\$2.70
No. 75	7"	1 3/4"	1 1/2 lbs.	EDRAL	2.70

BULL NOSED RABBET PLANE

Especially well adapted for working in close quarters and up into corners. It has an adjustable throat.



Nicely polished bottom and sides. Body and lever cap black enameled. Solid tool steel cutter iron. Nickel plated clamp and throat adjusting screws.

No.	Length	Width Iron	Weight	Code	Price each
No. 4	4"	1"	3/4 lb.	EFACE	\$1.70

ADJUSTABLE BLOCK AND RABBET PLANE

This unique plane has its solid tool steel cutter iron ground at an angle which gives an easy skew or shave cut. As illustrated it is used as a block plane. The right-hand side, however, is removable converting it into a rabbet plane.



Standard Angle. Screw Depth Adjustment

Screw depth adjustment of solid tool steel cutter iron. Rosewood knob handle. Bottom and sides nicely polished with inside and lever cap black enameled. Cap lever screws and side lock screws nickel plated.

No.	Length	Width Iron	Weight	Code	Price each
No. 07	7"	1 3/4"	1 1/2 lbs.	ESCOV	\$4.60

All of the above planes packed one in a box

ADJUSTABLE BLOCK PLANES

New



Standard Angle. All Steel Construction

The unbreakable all steel construction of this fine little plane makes it particularly suited for use in manual training shops as well as for skilled craftsmen. Screw depth adjustment of tool steel iron. Bottom and sides nicely polished. Drop forged frog. Steel knob, screw lever cap and adjusting nut nickel plated.

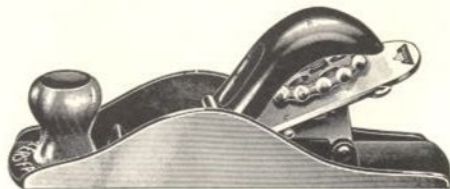
No.	Length	Width Iron	Weight	Code	Price each
No. 206	6 1/4"	1 3/8"	1 lb.	EDFLO	\$4.00



Standard Angle. Lever Depth Adjustment

Lever depth adjustment of solid tool steel cutter iron. Screw operating cap clamp nickel plated. Bottom nicely polished with sides and inside and cap black enameled.

No.	Length	Width Iron	Weight	Code	Price each
No. 55	5 1/2"	1 3/8"	3/4 lb.	EDELS	\$1.90



Standard Angle. Lever Depth Adjustment

Lever depth adjustment of solid tool steel cutter iron. Bottom and sides nicely polished with inside black enamel. Black enameled cap clamp operated by nickel plated screw. Rosewood knob handle.

No.	Length	Width Iron	Weight	Code	Price each
No. 97	7"	1 3/8"	1 3/8 lbs.	EDANS	\$2.60

All of the above planes packed one in a box

NON-ADJUSTABLE BLOCK PLANES

These short length, inexpensive planes will be found particularly useful in pattern work and model building or where the work is in close quarters. They are light in weight and fit into the hand snugly.



No. 33

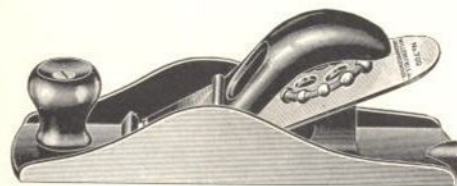


No. 5

Standard Angle

Bottoms nicely polished. Sides and clamps black enameled. Screws operating cap clamps nickel plated. Solid tool steel cutter irons.

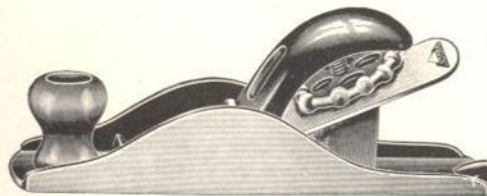
No.	Length	Width Iron	Weight	Code	Price each
No. 33	3 1/2"	1"	3/8 lb.	EDOOL	\$0.90
No. 5	5 1/2"	1 3/8"	7/8 lb.	EDWAD	1.50



Standard Angle

Bottom and sides polished. Lever cap and hardwood knob handle black enameled. Solid tool steel cutter iron. Screws operating cap clamp nickel plated.

No.	Length	Width Iron	Weight	Code	Price each
No. 700	7"	1 3/8"	1 3/4 lbs.	ETCAB	\$2.00



Standard Angle

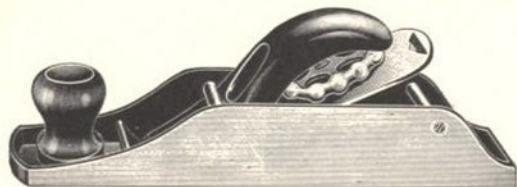
Bottom and sides nicely polished with inside and lever cap black enameled. Rosewood knob handle. Solid tool steel cutter iron. Nickel plated clamp screw.

No.	Length	Width Iron	Weight	Code	Price each
No. 87	7"	1 3/8"	1 1/4 lbs.	EDOLT	\$2.30

All of the above planes packed one in a box

DOUBLE END BLOCK PLANE

This combination plane has two throats and two cutter seats. As illustrated it is an ordinary block plane but when the cutter iron and lever cap are set up in the seat at the other end it becomes a bull-nosed rabbit plane.

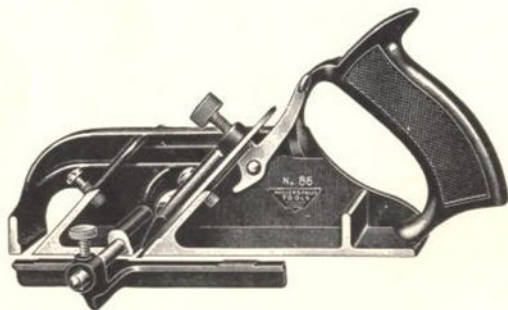


Standard Angle

Bottom and sides nicely polished with inside and lever cap black enameled. Rosewood knob handle. Solid tool steel cutter iron. Nickel plated clamp screw.

No. 68	Length 8"	Width Iron 1 1/4"	Weight 1 1/2 lbs.	Code EDFEN	Price each \$3.30
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RABBIT AND FILLISTER PLANE



This Millers Falls Plane has every desirable feature in a rabbit plane built into it. It is equipped with two cutter seats — a rear seat for regular work with a lever adjustment of the blade for depth, and a forward seat for bull-nosed work.

The fence is adjustable on the steel arm. The steel arm and the fence can be used on either side of the plane as the work requires. When the arm and fence are entirely removed, the plane can be used for a wide variety of uses. A three-point spur and a depth gauge are also part of the equipment. The depth gauge can be removed entirely when desired.

Body of plane nicely finished in black enamel. Bottom and both sides accurately ground. Trimmings and small steel parts nickel plated.

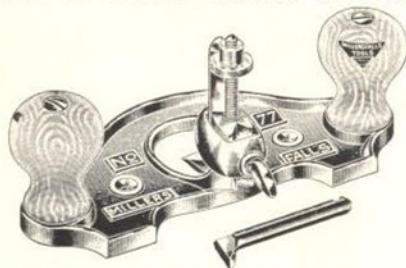
No. 85 Rabbit	Length 8 1/2"	Width Iron 1 1/2"	Weight 3 lbs.	Code EDMAN	Price each \$5.40
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Packed one in a box

ROUTER PLANES

Router Planes are designed to level off and smooth the bottoms of grooves or slots parallel to the working surface. Two screw holes are provided in the body so that wood bottoms can be attached for increasing the bottom area allowing large areas to be worked, or fences can be attached for following straight or irregular edges.

NO. 77 CLOSED THROAT ROUTER



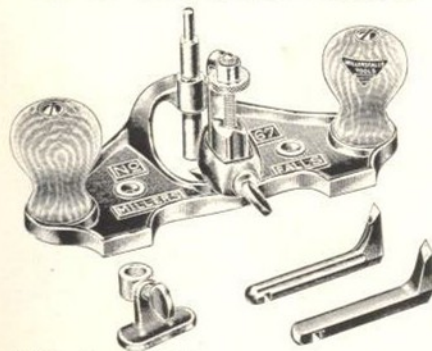
Three cutter irons, 1/4" and 1/2" wide and a 1/2" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. A fence which can be attached to the bottom for following straight or curved edges is regular equipment.

Bottom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

No. 77	Length 7 1/2"	Cutters 1/4", 1/2", 1/2" Point	Weight 2 1/8 lbs.	Code EFRAD	Price each \$5.30
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Packed one in a box

NO. 67 OPEN THROAT ROUTER



Three cutter irons, 1/4" and 1/2" wide and a 1/2" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. Throat can be closed for narrow work by installing attachment supplied. A fence which can be attached to the bottom for following straight or curved edges is regular equipment.

Bottom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

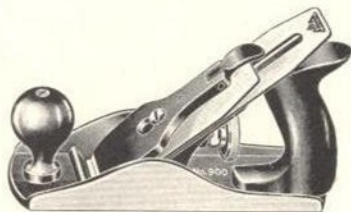
No. 67	Length 7 1/2"	Cutters 1/4", 1/2", 1/2" Point	Weight 2 1/4 lbs.	Code EFRUE	Price each \$6.50
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Packed one in a box

BENCH PLANES

This Smooth Plane and Jack Plane are good tools, capable of first class performance and are the equal of most standard planes. They do not embody all of the features of the preceding Millers Falls Planes and the overall finish is not so high which permits their being offered at a lower price.

SMOOTH PLANE

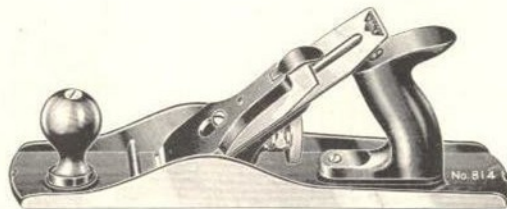


Depth and side adjustment of iron. Cutters one solid piece of tool steel. Bottom and sides polished. Inside of bottom, lever cap, and frog black enameled. Knob and handle black enameled hardwood. Furnished with smooth bottom only.

No. 900	Length 9"	Width Iron 2"	Weight 4 lbs.	Code ETDES	Price each \$3.40
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Packed one in a box

JACK PLANE

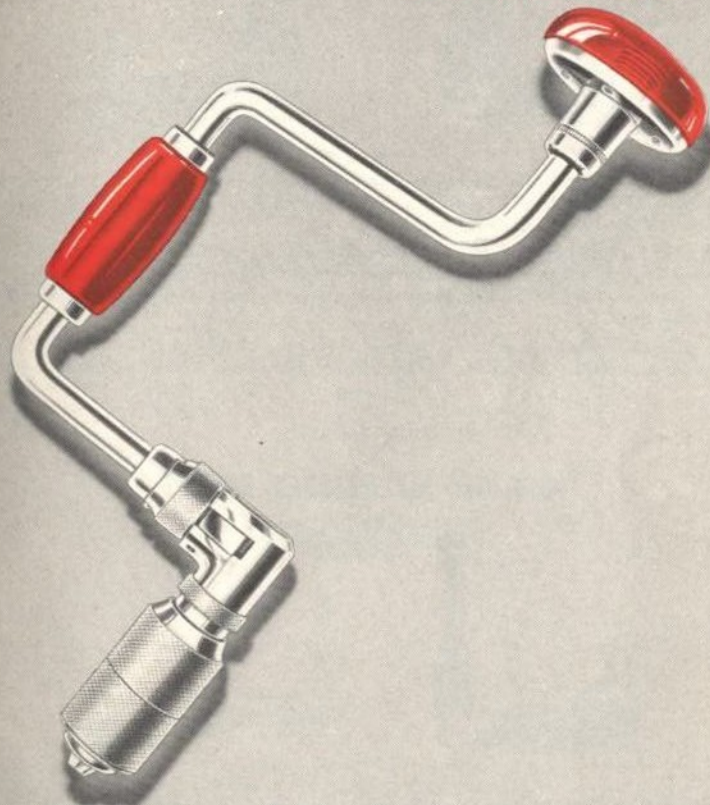


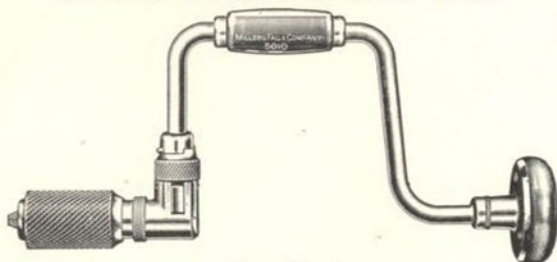
Depth and side adjustment of irons. Cutters one solid piece of tool steel. Bottom and sides polished. Inside of bottom, lever cap, and frog black enameled. Knob and handle black enameled hardwood. Furnished with smooth bottom only.

No. 814	Length 14"	Width Iron 2"	Weight 4 3/8 lbs.	Code ETGOK	Price each \$4.30
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Packed one in a box

BIT BRACES



NO. 5010 PARSONS DE LUXE BRACE


Chrome Plated

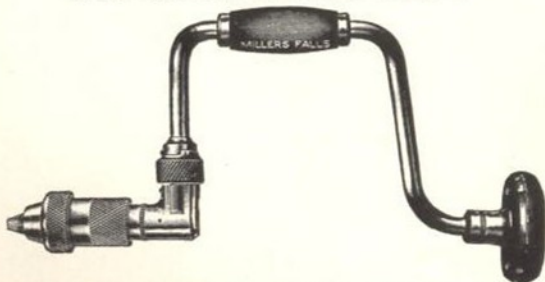
This beautiful tool, illustrated in color on the preceding page, was designed several years ago by W. J. Parsons, the dean of our designing and engineering staff, in commemoration of his fiftieth anniversary with the Millers Falls Company.

The chuck is full ball bearing with two machined steel jaws that hold $\frac{1}{8}$ to $\frac{1}{2}$ inch round shank, No. 1 Morse Taper and square bit shank drills and reamers. The full boxed ratchet is controlled by a ring shift. Sweep handle runs on bronze bushings as does the head. Head is also equipped with a ball thrust bearing.

The steel dad head and sweep handle are made of a glossy, transparent red Permaloid, a plastic more durable than wood. All exposed metal parts highly polished and finished in brilliant chrome plate.

No. 5010	Sweep	Weight	Code	Price each
	10"	3 1/2 lbs.	ANABO	\$11.00

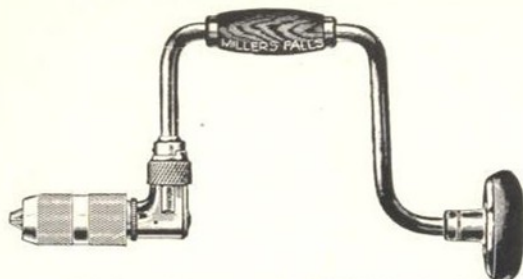
Packed one in a box

NOS. 770-772 RATCHET BRACES


A sturdy, quality brace. Ball bearing at every possible point, every constructional detail refined and the entire tool beautifully finished. Equipped with Lion ball bearing chuck to hold regular square shanks, No. 1 Morse Taper and round shanks from $\frac{1}{8}$ to $\frac{1}{2}$ inch in diameter. Boxed ratchet with ring shift. Full steel clad, ball bearing head. Head and handle finely finished tropical hardwood. Handle has metal inserted rings. All exposed metal parts heavily nicked and highly buffed.

No.	Sweep	Weight	Code	Price each
No. 770	14"	3 3/4 lbs.	ABACU	\$9.20
No. 771	12"	3 1/2 lbs.	ABAFI	8.70
No. 772	10"	3 3/4 lbs.	ABAND	8.40

Packed two in a box

NOS. 730-733 RATCHET BRACES


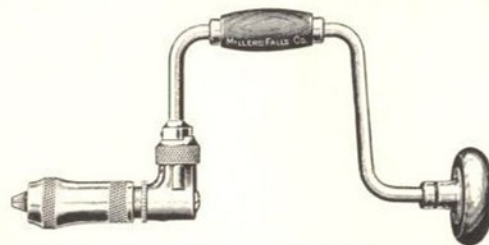
A fine quality brace, popularly known for years as the "Holdall," having been one of the first to be equipped with the universal type or "Master" chuck holding square, No. 1 Morse Taper and plain round shanks from $\frac{1}{8}$ to $\frac{1}{2}$ inch in diameter.

Boxed ratchet mechanism with ring shift. Steel clad, ball bearing head. Handle has inserted metal rings. Head and handle of finely finished tropical hardwood.

All exposed metal parts nicely polished, nickel plated and buffed.

No.	Sweep	Weight	Code	Price each
No. 730	14"	3 1/2 lbs.	ABBEY	\$8.00
No. 731	12"	3 1/4 lbs.	ABBOT	7.40
No. 732	10"	3 1/4 lbs.	ABDIC	7.20
No. 733	8"	2 3/4 lbs.	ABDOK	7.20

Packed two in a box

NOS. 31-33 RATCHET BRACES


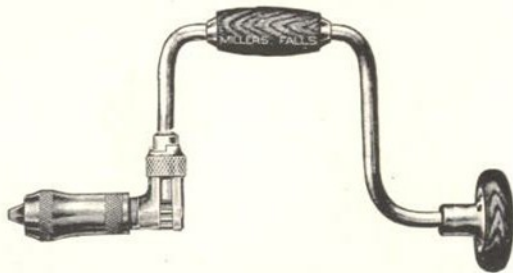
This brace meeting every boring requirement for square shank bits represents a fine value and has probably enjoyed the greatest sale of any quality brace ever produced.

Equipped with Barber chuck with self-opening, forged steel alligator jaws. Steel clad, ball bearing head. Handle has inserted metal rings. Boxed ratchet with ring shift. Head and handle finely finished tropical hardwood.

All exposed metal parts nicely polished, nickel plated and buffed.

No.	Sweep	Weight	Code	Price each
No. 31	12"	3 1/4 lbs.	ABSEN	\$7.20
No. 32	10"	2 7/8 lbs.	ABSOL	7.00
No. 33	8"	2 3/4 lbs.	ABSIK	7.00

Packed two in a box

NOS. 1321-1324 RATCHET BRACES


Similar to Nos. 31 to 33, but with mahogany finished hardwood heads and handles.

Boxed ratchet mechanism, with ring shift. Barber chuck with self-opening, forged steel alligator jaws. Ball bearing, steel clad head. Handle has inserted metal rings.

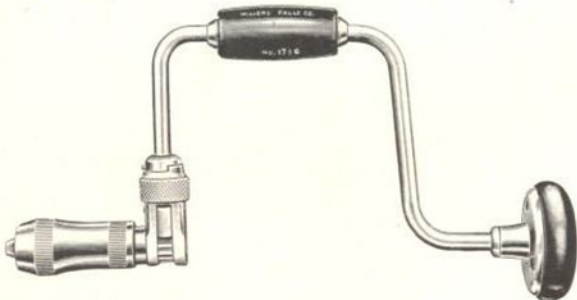
All exposed metal parts polished, nickel plated and buffed.

	Sweep	Weight	Code	Price each
No. 1321	12"	3 lbs.	ACRIM	\$6.30
No. 1322	10"	2 3/4 lbs.	ACROB	6.00
No. 1323	8"	2 1/2 lbs.	ACTIV	6.00
No. 1324	6"	2 1/4 lbs.	ACTOR	6.00

Packed two in a box

NOS. 1708-1712 RATCHET BRACES

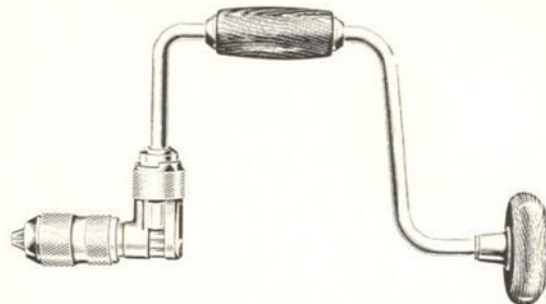
New



Well built, serviceable braces that can be offered at a moderate price. They are equipped with Barber chuck with alligator jaws and semi-boxed steel ratchet. Knurled shifter ring controls ratchet mechanism. Steel clad, ball bearing head and sweep handles made of hardwood, nicely mahogany lacquered. All exposed metal parts nickel plated.

	Sweep	Weight	Code	Price each
No. 1708	8"	2 1/4 lbs.	AJACK	\$4.00
No. 1710	10"	2 3/8 lbs.	AKLEM	4.00
No. 1712	12"	2 1/2 lbs.	ALROX	4.35

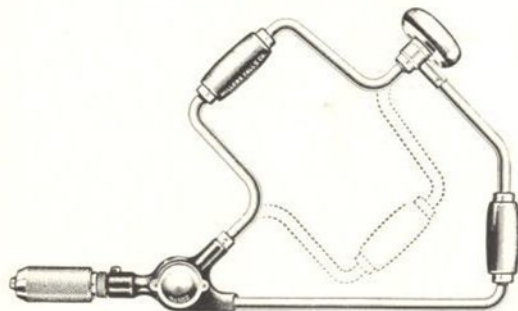
Packed six in a box

NO. 1410 RATCHET BRACE


A serviceable brace that is offered at a popular price. It is equipped with a Barber chuck with alligator jaws and a semi-boxed ratchet mechanism operated by a knurled ring shift. Handles mahogany stained hardwood. All exposed metal parts polished.

	Sweep	Weight	Code	Price each
No. 1410	10"	2 lbs.	AGLOR	\$2.40

Packed one half dozen in a box

NO. 502 CORNER BRACE


A great time and labor saver on jobs where there are a lot of holes to be bored in corners, against walls and beams and similar locations. Far more pressure can be put on the bit and more power delivered to the chuck than with a ratchet brace on the same work.

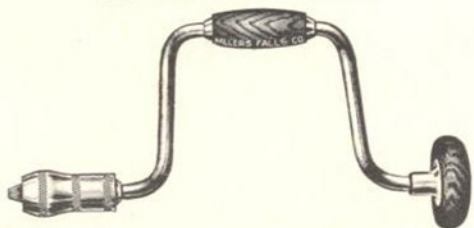
Master chuck holds square, No. 1 Morse Taper and round shanks from 1/8 to 1/2 inch in diameter. Machine-cut, case-hardened steel gears, fully enclosed. Ball thrust bearing at base of chuck. Ball bearing head. Handles have inserted metal rings. Frame black enameled. Head and handles mahogany finished hardwood. Length, 17 inches.

All exposed metal parts, except frame, polished, nickel plated and buffed.

	Sweep	Weight	Code	Price each
No. 502	10"	4 3/8 lbs.	AGAPE	\$12.00

Packed two in a box

NO. 142 PLAIN BRACE

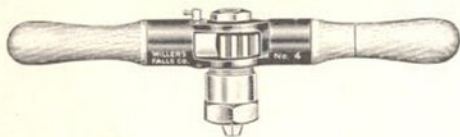


On many classes of work a ratchet mechanism on a brace is unnecessary and a plain or sleeve brace fills the requirements. This is a low-priced brace with inexpensive finish. Barber chuck with alligator jaws. Head is screwed securely to the quill. Head and handle mahogany stained hardwood. Exposed metal parts polished.

No. 142	Sweep 10"	Weight 1 3/4 lbs.	Code AFIL	Price each \$2.00
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Packed six in a box

NO. 4 RATCHET AUGER HANDLE



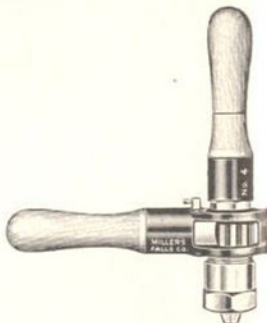
A heavy duty tool that can be operated by two men when desirable. It has a powerful ratchet mechanism, controlled by a small lever. It can be quickly changed from right- to left-hand ratchet or can be positively locked.

The handle shown at the right, the outer portion of which swivels freely, can be unscrewed from its normal position and screwed into the hex nut at the top of the frame to form a steady handle for use in corners or against walls or other obstructions.

Chuck holds practically all sizes of bit and auger shanks. Metal frame and handle ferrule black enameled. All other exposed metal parts nicely nickel plated.

No. 4	Length 15"	Weight 3 lbs.	Code CAGES	Price each \$6.20
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Packed one in a box



NO. 2 AUGER HANDLE



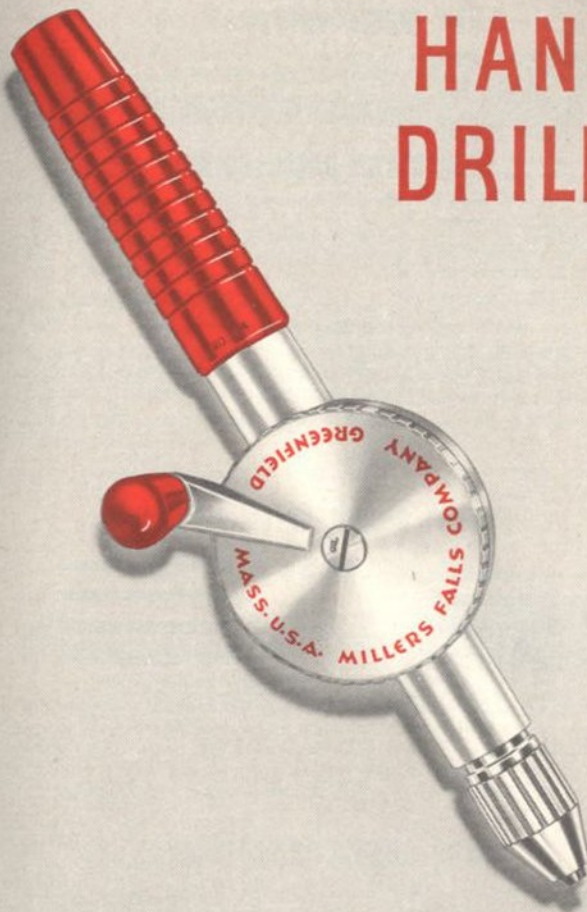
A stout wood handle holding all sizes of bits and all but the largest sizes of ship auger shanks. Augers are held by two 3-inch steel clamps tightened by means of two wing nuts. Handle straight grained, selected ash.

Capacity—Regular Bit Shanks up to 2 inches; Ship Auger Shanks up to 2 inches.

No. 2	Length 17"	Weight 1 1/4 lbs.	Code CAGNE	Price each \$1.50
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Packed six in a box

HAND DRILLS


**MILLERS FALLS
TOOLS**

 SINCE
1868

DRILL POINTS

The straight fluted drill points shown below are for use in automatic or hand drills according to the type of shank with which they are fitted. They are made of a fine grade of tool steel, carefully hardened and tempered and well sharpened. They drill nice, clean holes in hard and soft wood, soft metals, plaster, bone, wallboard and many other similar materials.

NEW STYLE DRILL POINTS

No.	App. Size	No.	App. Size
1	$\frac{1}{16}$	5	$\frac{1}{8}$
2	$\frac{3}{64}$	6	$\frac{3}{64}$
3	$\frac{3}{32}$	7	$\frac{3}{32}$
4	$\frac{7}{64}$	8	$\frac{1}{16}$

For Millers Falls and some other Automatic Drills

The shanks of these drill points have a slabbed base that seats very positively in the bottom of the chuck and a recess for a locking mechanism that prevents them from pulling out. They are made of fine tool steel properly hardened and carefully sharpened. Bright finish. Made in eight sizes as indicated above.

No.	Length	Code	Per Dozen	Price
No. 401	2"	DETOR	Set of 8	\$1.50
No. 401	2"	DETOT	Set of 8	1.10

FLUTED SHANK DRILL POINTS

No.	App. Size	No.	App. Size
1	$\frac{1}{16}$	5	$\frac{1}{8}$
2	$\frac{3}{64}$	6	$\frac{3}{64}$
3	$\frac{3}{32}$	7	$\frac{3}{32}$
4	$\frac{7}{64}$	8	$\frac{1}{16}$

For use in Millers Falls and Goodell-Pratt Automatic Drills

These drill points have fluted shanks for use in the two-jawed chucks of automatic drills. They are made of a fine grade of tool steel properly hardened and carefully sharpened. Made in eight sizes as indicated above.

No.	Length	Code	Per Dozen	Price
No. 402	2"	ZOTOZ	Set of 8	\$1.50
No. 402	2"	ZOTPA	Set of 8	1.10

ROUND SHANK DRILL POINTS

No.	App. Size	No.	App. Size
1	$\frac{1}{16}$	5	$\frac{1}{8}$
2	$\frac{3}{64}$	6	$\frac{3}{64}$
3	$\frac{3}{32}$	7	$\frac{3}{32}$
4	$\frac{7}{64}$	8	$\frac{1}{16}$

For use in Hand Drill Chucks

These points are identical to those above but with plain round shanks for use in any $\frac{1}{4}$ -inch three-jawed chuck. Made in eight sizes as indicated above.

No.	Length	Code	Per Dozen	Price
No. 403	2"	ZOTUB	Set of 8	\$0.75
No. 403	2"	ZOTVA	Set of 8	.55

Packed one dozen or one set in a metal screw capped plastic vial

NO. 185A AUTOMATIC DRILL



A world-famous drill that has been made even finer by the addition of a new style chuck

The front portion of the tool is made of hollow brass tubes, on one of which a carefully machined spiral is cut. This runs through a spiral cut in the center nut, which is made of a very hard grade of bronze.

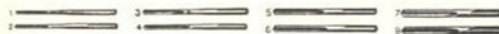
The finely knurled handle is of the magazine type, having individual compartments for the eight different size drill points. Each one of these compartments is numbered and below the number is a hole or gauge showing the size of hole drilled by the point in that compartment. Drill points are removed or returned by turning the hole in the rotating cap opposite the proper compartment and tipping out the point. Only one compartment opens at a time.

The chuck seats the drill points very positively and locks them securely so that they cannot be pulled out until the chuck shell is unscrewed.

One set of eight, No. 401 New Style Drill Points, $\frac{1}{16}$ to $\frac{1}{16}$ inch in diameter, regular equipment.

No. 185A	Length	Weight	Code	Price each
	10"	$\frac{1}{2}$ lb.	YEKIJ	\$4.20

NO. 188A AUTOMATIC DRILL



This tool is built for the home and provides a highly efficient drill at a very reasonable price. Any man, woman, or child can use it to bore the many holes needed from time to time; for installing the many modern fixtures that go into every room in the house, and for innumerable other uses.

It drills eight different size holes quickly and with surprising ease in hard and soft wood, soft metals, wallboard, plaster, etc. The eight drill points are contained in the numbered compartments in the magazine handle. They are safely locked in until wanted.

To remove the desired size drill release the cap lock by slipping down the lock button, turn the hole in the cap opposite the proper drill compartment and tip out the drill.

Insert the drill selected in the four-jawed chuck, tighten the chuck nut and the tool is ready to use. Place the drill point where the hole is wanted and simply push down a few times, allowing the handle to spring back after each stroke, and there is a good clean hole.

The handle is jet black, molded bakelite with a polished aluminum band just below the rotating cap. The exposed metal parts are beautifully polished and nickel plated. The spiral driving mechanism is very well made and is practically indestructible with proper lubrication.

One set of eight, No. 402 Fluted Shank Drill Points, $\frac{1}{16}$ to $\frac{1}{16}$ inch in diameter, regular equipment.

No. 188A	Length	Weight	Code	Price each
	9 $\frac{3}{4}$ "	6 ozs.	YEKNA	\$3.00

Packed one in a box

*New***NO. 100 AUTOMATIC DRILL**

The time-tested features and construction that have been built into Millers Falls and Goodell-Pratt automatic drills and have earned their well deserved popularity are found in this beautiful new tool.

Its uses are unlimited. It is an essential tool for carpenters, cabinet makers, model and pattern makers, electricians, home workshop enthusiasts and home owners. It's the ideal tool for drilling lead holes for screws, nails, hooks, etc.

The barrel of the magazine handle is made of unbreakable red plastic and holds eight No. 402 fluted shank drill points $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$ and $\frac{1}{4}$ of an inch in diameter. The number and diameter of the point in any compartment is indexed on the ring above the barrel. The point wanted for use is obtained by pulling down the lock and turning the barrel until the proper number is directly below the hole in the cap. Tip up the drill and the point slips out.

The chuck holds the drill points securely when the chuck shell is screwed tight.

All exposed metal parts are either nickel plated and buffed or highly polished aluminum.



No. 100	Length 9 $\frac{1}{8}$ "	Weight 8 ozs.	Code YENOR	Price each \$3.50
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Packed one in a box

*New***NO. 1006 DISPLAY UNIT**

Complete with six No. 100 Drills

A compact, colorful wood display requiring less than one-half square foot of counter space, that really sells the No. 100 Automatic Drill because to see it is to want it. Nicely lacquered and silk screened in red, black, gray and white.

Width, 11 inches, depth, 4 $\frac{1}{2}$ inches, height, 9 $\frac{1}{2}$ inches.

No. 1006	Weight 5 lbs.	Code YEDAX	Price \$21.00
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Packed one unit in a carton

*New***NO. 104 HAND DRILL**

Single Speed, Enclosed Gears. Capacity 0 to $\frac{1}{4}$ inch.

This newest and finest Millers Falls hand drill, of entirely new design, has already demonstrated its fine performance and dependability. Its beauty and smooth operation insure acceptance by craftsmen generally.

The frame and gear cover are die-cast aluminum. The steel spindle runs in an "Oilite" bushing against a thrust bearing. The steel pinion and machine-cut cast drive gear are entirely enclosed.

The handles are made of practically unbreakable, glossy red plastic, far more durable than wood. The screw cap end handle is hollow and is long enough to hold standard twist drills up to $\frac{1}{4}$ inch.

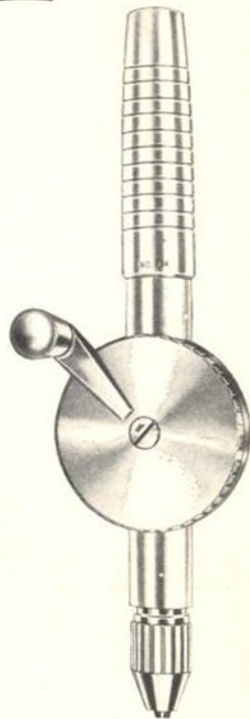
The chuck, of new design, has three hardened jaws holding 0 to $\frac{1}{4}$ inch drills.

One set of eight, No. 403 Drill Points, $\frac{1}{16}$ to $\frac{1}{4}$ inch diameter are regular equipment and are packed in the hollow end handle.

Frame and gear cover gray enamel, chuck nickel plated, handles glossy red plastic.

No. 104	Capacity $\frac{1}{4}$ "	Length 12 $\frac{3}{8}$ "	Weight 1 $\frac{3}{8}$ lbs.	Code WYDAM	Price each \$5.00
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Packed one in a box

*New***NO. 1044 DISPLAY UNIT**

Complete with four No. 104 Hand Drills

This substantial wood display, lacquered and silk screened in three colors, is supplied entirely free with initial orders for only four No. 104 Hand Drills. Designed for counter use it requires only one-half square foot of space. This display brings this fine new drill to the attention of customers; makes it easy for them to handle and sells on sight.

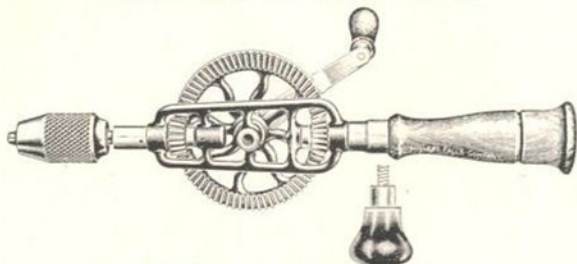
Width, 11 inches, depth, 5 inches, height, 13 inches.

No. 1044	Weight 10 lbs.	Code WYGET	Price \$20.00
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Packed one unit in a carton



NOS. 2 AND 2B HAND DRILLS



Single Speed Capacity 0 to 3/8 inch

A strong, serviceable tool built on a sturdy cast frame. Three-jawed chuck with protected springs holds 0 to 3/8 inch round shanks. Gear ratio 4 1/2 to 1. Spindle equipped with ball thrust bearing. Two steel pinions, one drive and one idling equalizer.

Frame nicely black enameled. Large gear red enameled with nickeled rim.

Exposed metal parts nickel plated and buffed. Tropical hardwood end handle with screw cap. Eight drill points, 1/16 to 1 1/16 inch in diameter, regular equipment.

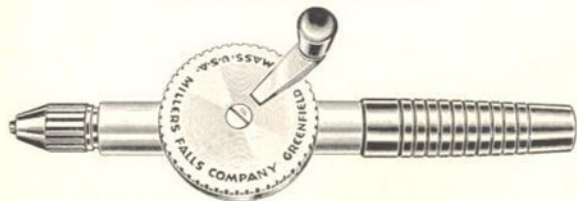
No. 2B is exactly the same as No. 2 but with solid mahogany finished hardwood end handle and without drill points.

	Capacity	Length	Weight	Code	Price each
No. 2	3/8"	14 1/2"	2 1/2 lbs.	DAGER	\$6.50
No. 2B	3/8"	15"	2 3/4 lbs.	DAGOT	5.50

Packed one in a box

NO. 308 HAND DRILL

New



Single Speed Enclosed Gears Capacity 0 to 3/8 inch

The fine lines and finish of this new 3/8 inch drill are the same as No. 104 illustrated in color on page 25.

The frame and gear cover are die-cast aluminum with a gray enamel finish baked on. The steel spindle runs in an "Oilite" bushing against a thrust bearing. The steel pinion and the machine-cut cast drive gear are entirely enclosed. Handles are made of practically unbreakable, glossy red plastic, far more durable than wood. End handle is hollow with screw cap for holding standard twist drills.

The nicely nickeled chuck has three hardened jaws that hold 0 to 3/8 inch round shank drills.

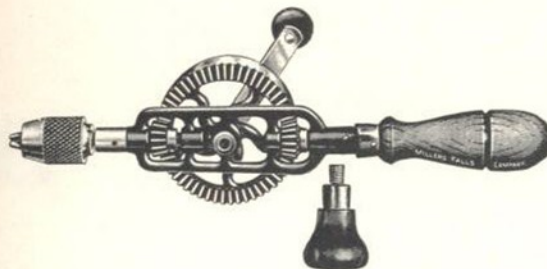
	Capacity	Length	Weight	Code	Price each
No. 308	3/8"	13 3/4"	2 1/8 lbs.	WYFOT	\$6.20

Packed one in a box



Detail showing cast iron drive gear with machine cut teeth solidly anchored to gear cover.

NO. 5 HAND DRILL



Single Speed Capacity 0 to 1/4 inch

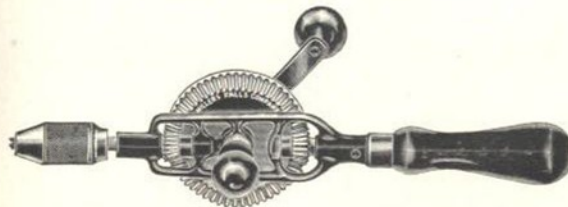
This drill is equipped with a wide rim on the large drive gear and can be easily grasped by the thumb and fingers to start small drills on delicate work. This gear is red enameled and the rim nicely polished and nickeled. The frame is black enameled. The drive and equalizing pinions are steel, nickel plated. All gears are machine cut.

The three-jawed chuck which holds 0 to 1/4 inch round shank drills is nicely nickel plated. One set of eight, No. 403 Drill Points, 1/16 to 1 1/16 inch in diameter regular equipment; they are packed in the hollow screw cap handle which is made of fine tropical hardwood. Handle ferrules bright nickeled.

	Capacity	Length	Weight	Code	Price each
No. 5	1/4"	12 3/4"	1 3/8 lbs.	DANGL	\$6.00

Packed one in a box

NO. 77A HAND DRILL



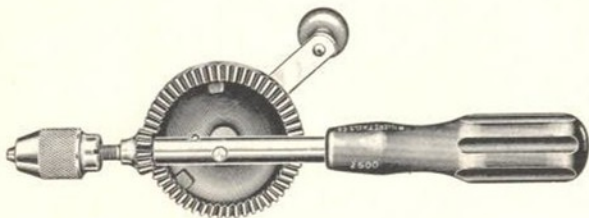
Single Speed Capacity 0 to 1/4 inch

A smooth operating drill that sells for a very moderate price. The frame is a smooth, black enameled die casting. The drive and equalizing pinions are steel, nickel plated. The solid large gear is red enameled. All gears are machine cut.

The nickel plated chuck holds 0 to 1/4 inch round shank drills. Handles mahogany finished hardwood.

	Capacity	Length	Weight	Code	Price each
No. 77A	1/4"	12 1/2"	1 3/8 lbs.	DETIQ	\$3.00

Packed one in a box

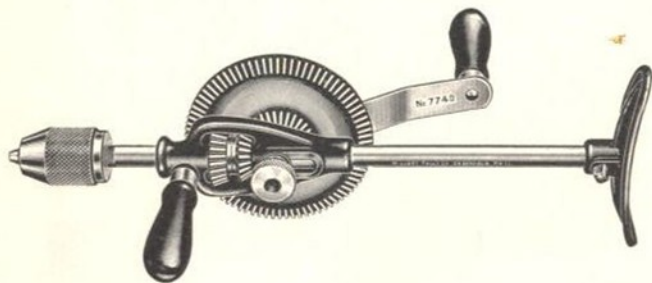
NO. 2500B HAND DRILL


Single Speed Capacity 0 to 1/4 inch

A popularly priced solid steel frame drill with a lot of dependable service built into it. Large gear is cast and finished in red enamel; the pinion is steel. Both gears have machine cut teeth. The three-jawed chuck holds 0 to 1/4 inch round shank drills. Crank and end handles mahogany finished hardwood.

No.	Capacity	Length	Weight	Code	Price each
No. 2500B	1/4"	10 5/8"	1 1/4 lbs.	DASUR	\$2.00

Packed one in a box

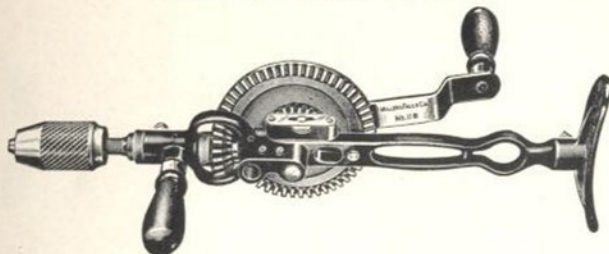
NO. 7740 BREAST DRILL


Two-Speed Capacity 0 to 1/2 inch

A sturdy, dependable drill offered at a very moderate price. The black enameled frame and breast plate are fastened together by a solid polished steel shank. The red enameled large gear can be easily shifted to two positions in the frame—one for high and one for low speed operation. Two separate steel pinions. All gears machine cut. All-steel chuck has three hardened jaws that hold 0 to 1/2 inch round shank drills. Handles mahogany finished hardwood.

No.	Capacity	Length	Weight	Code	Price each
No. 7740	1/2"	16 1/2"	4 3/4 lbs.	DAGIL	\$5.00

Packed one in a box

NO. 118 BREAST DRILL


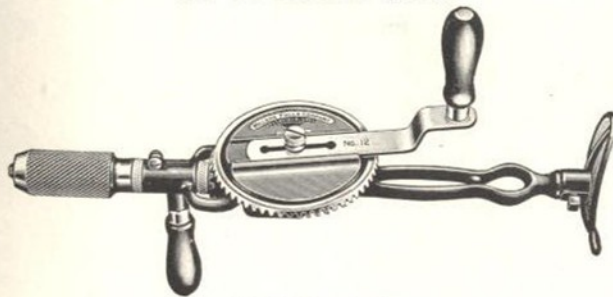
Two-Speed Level Capacity 0 to 1/2 inch

A sturdy, two-speed drill built on a black enameled frame equipped with a well-protected spirit level. Black enameled breastplate. Large gear red enameled with polished, nicked and buffed edge and rim. Nicked steel pinion. Gear ratios 3 to 1 and 1 to 1. Nicked extensible crank. Adjustable ball bearing spindle. Nicked three-jawed chuck with protected springs holds 0 to 1/2 inch round shanks. Idler roll to equalize large gear bearing. Side and crank handles mahogany finished hardwood.

All exposed metal parts nickel plated.

No.	Capacity	Length	Weight	Code	Price each
No. 118	1/2"	17 1/2"	6 1/2 lbs.	DECAD	\$9.50

Packed one in a box

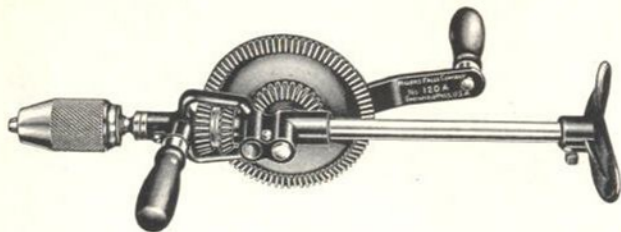
NO. 12 BREAST DRILL

 Two-Speed Level
Capacity 1/8 to 1/2 inch round, Bit and No. 1 M. T. Shanks

Same sterling construction as No. 118 above, but equipped with a Master chuck holding round shank drills, 1/8 to 1/2 inch in diameter, bit shanks and No. 1 Morse Taper Shanks.

No.	Capacity	Length	Weight	Code	Price each
No. 12	Universal	17 1/2"	6 1/2 lbs.	DEBUT	\$8.50

Packed one in a box

NOS. 119A AND 120B BREAST DRILLS



Two-Speed Two Steel Pinions

These fine values in the medium priced field are built on strong black enameled frames. The breastplate is connected to the frame by a solid polished steel shank. Two speeds with ratios of 3 to 1 and 1 to 1. Large gear finished in red enamel. Ball thrust bearing on spindle. Side and crank handles mahogany finished hardwood. All exposed metal parts nicely polished.

No. 119A is equipped with a two-jawed chuck that holds $\frac{1}{8}$ to $\frac{1}{2}$ inch round and No. 1 Morse Taper shanks and regular square bit brace shanks. No. 120B is equipped with a Miller's Falls three-jawed chuck with protected springs holding 0 to $\frac{1}{2}$ inch round shank drills.

	Capacity	Length	Weight	Code	Price each
No. 119A	Universal	18 $\frac{1}{4}$ "	5 lbs.	YEAWS	\$6.50
No. 120B	$\frac{1}{2}$ "	16 $\frac{1}{2}$ "	4 $\frac{3}{8}$ lbs.	DARED	6.50

Packed one in a box

CHAIN DRILLS

An auxiliary tool for use with a breast drill or bit brace when extra power is needed, or where pressure cannot be easily applied.

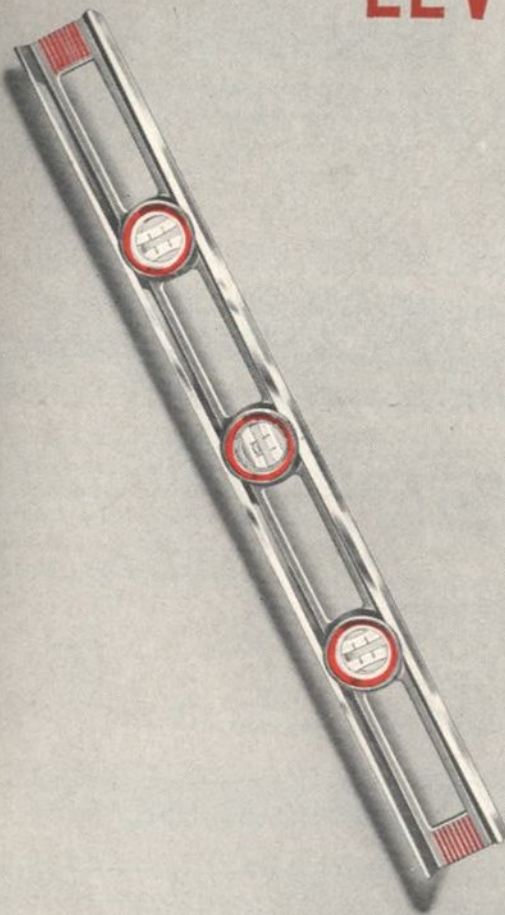
The drill is automatically fed into the work by an adjustable friction feed which is automatically regulated by the resistance the drill encounters. Drill breakage is, therefore, reduced to a minimum. Requires but a moment to adjust the chain. Reverse movement of brace withdraws drill. No intricate parts to get out of order. Hand feed can be used if desired. Four feet of stout chain with each drill. No. 719 illustrated.

	Capacity	Weight	Code	Price each
No. 718	$\frac{1}{8}$ to $\frac{1}{2}$ ", No. 1 M. T. and Bit Shanks	4 $\frac{1}{2}$ lbs.	DECUR	\$8.00
No. 719	0 to $\frac{1}{2}$ " Round Shanks	4 $\frac{1}{2}$ lbs.	DECLP	8.50

Packed one in a box



LEVELS


**MILLERS FALLS
TOOLS**

 SINCE
1868

NO. 629 LINE LEVEL


A featherweight model with a cat's-eye vial set in a hexagonal aluminum tube. The hooks and guards are so designed that it snaps on to a level line very easily but cannot be jumped off.

Each level packed in a permanent container of transparent celluloid with a screw cap.

No. 629	Length 3"	Weight ½ oz.	Code ZABLO	Price each \$0.60
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Packed six in a box

DIE-CAST ALUMINUM LEVELS


Two level and four plumb vials

The frames of these fine new levels are made of smooth aluminum die castings. They are designed for maximum strength and rigidity. The two working faces are precisely ground to exact parallelism and nicely finished on four sides and ends. The body is attractively finished in gray and red enamel.

Excellent visibility and luminosity are provided by the large white vial wells in which the high quality vials are accurately and permanently set. They are well protected by glasses on both sides sealed to prevent fogging or breakage.

	Dimensions	Weight	Code	Price each
No. 618	18 x 2 ¼ x 1"	1 ¾ lbs.	PENAN	\$5.50
No. 624	24 x 2 ¼ x 1"	2 ¼ lbs.	PENEC	6.30
No. 628	28 x 2 ¼ x 1"	2 ½ lbs.	PENIT	6.80
No. 630	30 x 2 ¼ x 1"	2 ¾ lbs.	PENOL	7.20

Packed one in a box

ALUMINUM MASONS' LEVEL


Two level and four plumb vials

This new level is made from an aluminum casting designed for maximum strength and rigidity without undue weight. Working faces precisely ground to parallelism. Sides polished and the body finished in gray enamel. Large white vial wells protected with sealed glasses. Six high quality vials.

	Dimensions	Weight	Code	Price each
No. 1042	42 x 2 ¼ x 1 ½"	3 ¾ lbs.	PEBYK	\$12.00

Packed one in a box

WOOD LEVELS

The levels shown on this and the following page are made from the finest straight grain white pine procurable. The billets are thoroughly air seasoned and kiln dried and are filled and finished with care to make them as permanently moisture proof as possible and to maintain their accuracy.

None but high quality, accurately curved vials are used. They are precisely and permanently set and will remain that way unless abused. They are set in white wells for luminosity and protected by glasses on both sides and sealed in with putty.

NOS. 124 AND 130 WOOD LEVELS


Two level and two plumb vials

Made from a plain piece of straight grained white pine, thoroughly seasoned and kiln dried. Filled and finished with weather-proofing red lacquer. White, glass protected and sealed vial wells. Two hand grips on either side.

	Dimensions	Weight	Code	Price each
No. 124	24 x 2 ½ x 1 ¼"	1 ½ lbs.	PEFAM	\$3.50
No. 130	30 x 2 ½ x 1 ¼"	1 ½ lbs.	PEFUX	3.80

Packed one in a box

NOS. 312 AND 330 WOOD LEVELS


One level and one plumb vial

Same fine quality level as above but with only one level and one plumb vial but with a glass protected and sealed top view opening above the level vial. One hand grip on either side.

	Dimensions	Weight	Code	Price each
No. 312	12 x 2 ½ x 1 ¼"	1 lb.	PEGAM	\$2.50
No. 318	18 x 2 ½ x 1 ¼"	1 lb.	PEGIS	2.80
No. 324	24 x 2 ½ x 1 ¼"	1 ½ lbs.	PEGMY	3.20
No. 328	28 x 2 ½ x 1 ¼"	1 ½ lbs.	PEGUN	3.40
No. 330	30 x 2 ½ x 1 ¼"	1 ½ lbs.	PEGYT	3.50

Packed one in a box

NO. 948 MASONS' LEVEL



Full Brass Binding Two level and four plumb vials

Made of straight grained, selected white pine thoroughly seasoned and kiln dried. Full brass binding on four edges and brass plates on the ends. Two level and four plumb vials accurately and permanently set in the three oval wells protected and sealed in by glass. Fine red finish makes it as permanently moisture proof and non-fogging as possible. Two hand grips on either side.

No.	Dimensions	Weight	Code	Price each
No. 948	48 x 2 1/2 x 1 1/4"	3 1/2 lbs.	PEJJO	\$10.50

Packed one in a box

NO. 848 MASONS' LEVEL



Brass Ends Two level and four plumb vials

The same fine levels as above with brass end plates but without the brass binding. Two level and four plumb vials.

No.	Dimensions	Weight	Code	Price each
No. 848	48 x 2 1/2 x 1 1/4"	2 1/2 lbs.	PEKAC	\$7.75

Packed one in a box

NO. 448 MASONS' LEVEL



One level and two plumb vials

Similar to the levels above but with only one level and two plumb vials which are set in round glass protected and sealed wells. Red weatherproof finish.

No.	Dimensions	Weight	Code	Price each
No. 448	48 x 2 1/2 x 1 1/4"	2 1/2 lbs.	PEMAK	\$5.00

Packed one in a box

NO. 590 TORPEDO LEVEL



One level, one 45° and one plumb vial

A beautiful level, unique in the materials used and its wider range of usefulness.

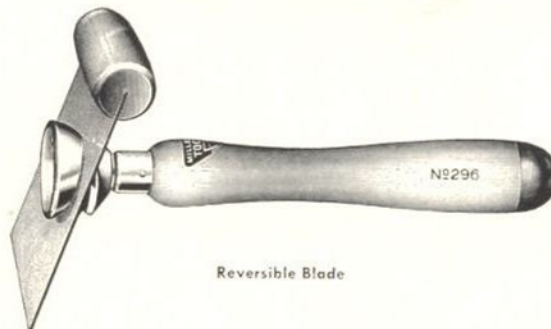
The body is moulded, glossy black bakelite, an ideal material for the purpose due to its great strength; impervious to moisture and the fact that it is affected less by temperature changes than either wood or metal.

The top plate is a heavy piece of polished "nickeloid" which sets flush with the body and gives ample protection to the level glass.

Two plumb, one 45° and one 90°, and one level vial are provided, all of the cat's-eye type, which affords better visibility in poorly illuminated places.

No.	Dimensions	Weight	Code	Price each
No. 590	9 x 1 1/4 x 3/4"	5 ozs.	YUOMO	\$1.50

NO. 296 FLOOR SCRAPER



Reversible Blade

This new scraper has a very quick, positive adjustment of the blade. It is equipped with a practical ball joint that permits setting the blade at a wide range of angles and pitches by simply loosening and tightening the handle.

The blade, which is reversible so all four edges can be used, is made of finest quality tool steel, 3 x 4 1/2 inches, hardened and tempered to hold the ideal scraping edge.

A large, well shaped blade handle is provided to which ample pressure can be applied without discomfort. Both handles are turned from selected hardwood and have a fine natural lacquer finish with green tips.

No.	Width	Length	Weight	Code	Price each
No. 296	3"	9 3/4"	3/4 lb.	YICOM	\$1.50
No. 376 Extra Blades				YOCAJ	.30

Packed one in a box

**MILLERS FALLS
TOOLS**SINCE
1868**NOS. 34 AND 35 WOOD SCRAPERS**

Four Scraping Edges

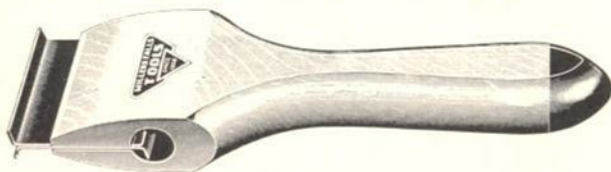
The four fine tool steel scraping edges with which these scrapers are equipped make them an outstanding scraper value. Two edges are always in position ready for use and two more are available by simply reversing the scraper iron. No other scraper offers such value.

Blades fine tool steel carefully hardened and tempered and then ground and honed to a fine scraping edge.

Handles are of selected hardwood nicely finished in natural lacquer with a green tip.

	Width Blade	Length	Weight	Code	Price each
No. 34	2 1/2"	5"	6 ozs.	YOOLU	\$0.70
No. 35	1 1/2"	5"	4 ozs.	YOOMA	.50
No. 346	Extra Blades for No. 34			YOONY	.40
No. 356	Extra Blades for No. 35			YOOP1	.25

Packed six in a box

NOS. 39 AND 51 WOOD SCRAPERS

Four Scraping Edges

The paint brush type handle with which these scrapers are equipped greatly facilitates any scraping operation as it provides ample room to apply pressure and a sure comfortable grip in exerting the necessary pull.

They are equipped with new improved blades that give a finer surface with less effort. Each blade has four scraping edges. Two are always ready for use and the other two quickly available by simply reversing the blade in the handle.

The selected hardwood handles are nicely finished in clear lacquer with a green tip.

	Width of Blade	Length	Weight	Code	Price each
No. 39	2 1/2"	8 3/4"	6 ozs.	YADAT	\$0.70
No. 51	1 1/2"	7 1/2"	4 ozs.	YAFVA	.50
No. 346	Extra Blades for No. 39			YOONY	.40
No. 356	Extra Blades for No. 51			YOOP1	.25

Packed six in a box

**SCREW
DRIVERS****MILLERS FALLS
TOOLS**SINCE
1868

NO. 29 AUTOMATIC SPIRAL RATCHET SCREW DRIVER

With Automatic, Quick Return

New
A new, automatic spiral screw driver particularly suited to the requirements of the hobbyist and householder. It is a high grade tool in every detail, sturdily built and nicely finished.

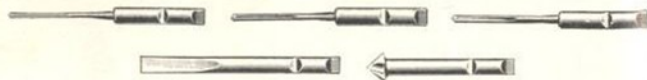
It drives or draws medium size screws smoothly, easily and with surprising rapidity. The spiral is just as carefully machined as on our larger sizes. The ratchet mechanism is entirely new and dependable. Action is controlled by simply turning the knurled shifter sleeve right or left as indicated on the stamped band. When set at 0, ratchet mechanism is locked.

One bright finish forged steel bit 1/4 inch wide is regular equipment. The chuck and chuck sleeve, shifter sleeve and screw in handle end are nicely nicked and buffed. The handle is made of hardwood with a nice mahogany lacquer finish.

No. 29 Length Extended with Bit 10 1/4" Weight 3/8 lb. Code GAKON Price Each \$2.50

Packed one in a box

EXTRA TOOLS



The drills, countersink and slim cabinet type screw driver bit listed below greatly increase the usefulness of the No. 29 screw driver. They are all made with shanks that fit the chuck. No. 329 Set of Points consist of one each 1/16, 3/64 and 3/32 inch diameter.

No.	Size	Code	Price
No. 297	Cabinet Bit 3/32"	GEBAC	Doz. \$1.70
No. 298	Countersink 3/8"	GEBAN	Doz. 4.00
No. 329	Set of Points 1/16" - 3/32"	GEBED	Set .60
No. 3291	Drill Point 1/16"	GEBIF	Doz. 2.00
No. 3292	Drill Point 3/64"	GEBIR	Doz. 2.00
No. 3293	Drill Point 3/32"	GEBOM	Doz. 2.00

Cabinet Bit and Countersinks packed 1/4 doz. in an envelope
Drill Points packed 1/2 doz. or one set in a screw top vial

NO. 294 DISPLAY UNIT

New
The attractive display for the No. 29 screw driver and its attachments made of wood, lacquered and silk screened in three colors, is free with only four screw drivers.

No. 294 Display Unit Weight 3 3/4 lbs. Code GIBBO Price \$11.00

Complete with 4 No. 29 Screw Drivers and 1 each Nos. 329 Set of Points, 297 Screw Driver Bit, 298 Countersink and Display

Packed one unit in a carton

SPIRAL RATCHET SCREW DRIVERS



Automatically drives or draws screws, acts as a left- or right-hand ratchet or as a rigid screw driver. These actions are all controlled by a simple shifting of the knurled control sleeve and the spiral lock nut.

The spiral is a solid rod of fine quality steel, precisely machined, running in two manganese bronze spiral nuts controlled by hardened tool steel ratchet pawls. Greatly increased life has been secured by nearly doubling the length of the spiral nuts.

Three sizes of special analysis steel blades, individually tested, are furnished as regular equipment. They are quickly installed by drawing down the shell of the quick acting chuck, inserting the shank and turning it until seated and then releasing the chuck shell.

All exposed metal parts finely polished, nicked and buffed. Mahogany finished hardwood handle.

	Length Extended with Bit Inserted	Length Closed with Bit Inserted	Weight	Code	Price each
No. 67A	12 3/8"	9 3/8"	3/8 lb.	GAILY	\$4.30
No. 61A	19 1/2"	14"	1 3/8 lbs.	GALAX	4.90
No. 62A	25 1/8"	16 3/8"	1 3/8 lbs.	GABEL	6.40



With Automatic, Quick Return

Same design and action as above, with the addition of a spring in the handle which automatically returns the handle for the next stroke. Makes one hand operation easy.

	Length Extended with Bit Inserted	Length Closed with Bit Inserted	Weight	Code	Price each
No. 670A	13 1/8"	8 1/8"	3/8 lb.	GALEA	\$4.90
No. 610A	20 1/2"	15"	1 1/2 lbs.	GALIO	5.60
No. 620A	27"	18 3/8"	2 3/8 lbs.	GALOP	7.30

Packed one in a box

For extra Phillips and Standard Bits and Drill Attachments see page 46.



PERMALOID HANDLE SCREW DRIVERS

These handsome screw drivers are even more durable and efficient than they are beautiful. The handles are made of transparent bright red Permaloid, an unbreakable, cellulose acetate butyrate, a very slow burning material of high dielectric strength ideal for a screw driver in every way. They are ribbed to give a positive grip and the lengths and diameters are ample for efficient, comfortable use.

The blades are made of a fine grade of steel, heat-treated their entire length for extreme toughness, the bits are cross ground, nicely finished. Each individual blade is torque tested.

NO. 850 PHILLIPS SCREW DRIVER



Licensed under U. S. Patent No. 2,046,840

These drivers are designed to handle the Phillips recessed head screw which is gaining rapidly in popularity. The blades are machined within very close limits to fit the screws perfectly. Blades nicely polished. Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

	Phillips	Screw Size	Length Blade	Diameter Shank	Weight Box	Code	Price doz.
No. 850	No. 1	0 to 4	3"	3/4"	1/2 lb.	ZENAX	\$0.90
No. 850	No. 2	5 to 9	4"	1/4"	1 1/4 lbs.	ZENFO	1.00
No. 850	No. 3	10 to 16	6"	3/8"	2 lbs.	ZENKA	1.20
No. 850	No. 4	18 to 24	8"	3/8"	3 1/2 lbs.	ZENRO	1.70

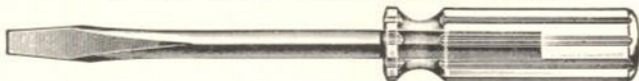
NO. 851 STANDARD SCREW DRIVER



Cross ground, standard type, round shank blades with nicked and burnished finish. Unbreakable transparent red Permaloid handles of high dielectric strength and very slow burning.

	Length Blade	Diameter Shank	Weight Box	Code	Price doz.
No. 851	4"	3/32"	1 1/2 lbs.	ZEOJY	\$ 9.00
No. 851	6"	3/16"	2 lbs.	ZEOFA	12.00
No. 851	8"	3/8"	3 1/4 lbs.	ZEOHE	15.00
No. 851	10"	3/8"	4 1/2 lbs.	ZEOIT	17.20
No. 851	12"	3/8"	5 lbs.	ZEOJA	19.00

NO. 852 HEAVY DUTY SCREW DRIVER



Bits forged on the diagonal from fine quality square stock. Cross ground. Nicked and burnished. Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

	Length Blade	Size Shank	Weight Box	Code	Price doz.
No. 852	4"	1/4 x 1/4"	1 1/4 lbs.	ZEOJT	\$10.00
No. 852	6"	3/16 x 3/16"	2 1/4 lbs.	ZEOKA	13.20
No. 852	8"	3/8 x 3/8"	3 3/4 lbs.	ZEOKM	16.40
No. 852	10"	3/8 x 3/8"	4 1/4 lbs.	ZEOKO	19.60
No. 852	12"	3/8 x 3/8"	5 lbs.	ZEOKR	22.40

Packed six in a box

NO. 853 CABINET SCREW DRIVER



Blades hammer-forged from high grade 3/16 inch round stock and tempered entire length. Cross ground, burnished nickel finish. Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 853	3"	3/16"	3/4 lb.	ZEOKS	\$ 8.00
No. 853	6"	3/16"	1 lb.	ZEOLA	8.50
No. 853	8"	3/16"	1 lb.	ZEOLD	9.00
No. 853	10"	3/16"	1 1/4 lbs.	ZEOLE	10.00

STUBBY SCREW DRIVERS

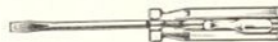
New



Sturdy, well made tools for use in close quarters or to carry in the pocket. Blades are 1 1/2 inches long, forged from high grade 3/16 inch square stock. The unbreakable, transparent red Permaloid handles are of high dielectric strength and very slow burning.

	Size Blade	Length Blade	Weight Box	Code	Price
No. 854	3/16" Standard	1 1/2"	3/8 lb.	ZEOMU	\$6.40 doz.
No. 860	No. 1 Phillips	1 1/2"	1/2 lb.	ZERAB	.80 each
No. 860	No. 2 Phillips	1 1/2"	3/8 lb.	ZEREM	.90 each
No. 860	No. 3 Phillips	1 1/2"	1 lb.	ZERLO	1.00 each

NO. 855 VEST POCKET SCREW DRIVER



The pencil clip with which this little screw driver is equipped makes it ideal for the vest pocket. The nicked blade is made of 1/8 inch round stock, just right size to handle innumerable screws too small for the ordinary driver. The handle is unbreakable, transparent red Permaloid of high dielectric strength and very slow burning.

	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 855	2"	1/8"	1/4 lb.	ZEOZA	\$3.00

Packed six in a box

RATCHET SCREW DRIVERS



The smooth, sturdy ratchet mechanism built into this well-known tool has been thoroughly time tested. It is controlled by turning the knurled shifter sleeve to any one of three positions giving right- or left-hand ratchet or positive action, as desired.

The blade is forged from high quality screw driver steel. Ratchet housing is steel with hardened tool steel ratchet pawls and spring steel springs.

Exposed metal parts polished and nickel plated. Handle mahogany lacquered hardwood.

	Length Blade	Weight Box	Code	Price each
No. 63	3"	1 3/4 lbs.	GANIL	\$1.20
No. 63	4"	1 7/8 lbs.	GAPER	1.30
No. 63	6"	3 1/4 lbs.	GARTH	1.60
No. 63	8"	3 3/8 lbs.	GARUM	1.80

Packed six in a box



Particularly adapted for radio, electrical and cabinet work where small screws are used. The cabinet type blade can be spun by merely turning the knurled collar at the base of the blade between thumb and fore finger. The same dependable ratchet mechanism is used as in the No. 63 above, gives right- and left-hand ratchet and rigid actions.

Blade nicely polished, other metal parts polished and nickel plated. Handle mahogany lacquered hardwood.

	Length Blade	Weight Box	Code	Price each
No. 55	2"	1 lb.	GATCH	\$1.15
No. 55	3"	1 lb.	GATER	1.20
No. 55	4"	1 1/8 lbs.	GATHA	1.20
No. 55	6"	1 1/4 lbs.	GAUDY	1.30

Packed six in a box



Exactly the same mechanism as the heavy sizes of No. 63, with a short, stocky blade and handle for use by gunsmiths, locksmiths, electricians, mechanics and others who need a heavy duty ratchet driver. Three actions: right- and left-hand ratchet and rigid.

Exposed metal parts polished and nickel plated. Handle mahogany lacquered hardwood.

	Length Blade	Length Overall	Weight Box	Code	Price each
No. 59	1 1/4"	6 1/4"	2 1/2 lbs.	GAWBY	\$1.70

Packed six in a box

NO. 676 STEEL HEAD SCREW DRIVER



Torque Tested Blades

An extra fine quality screw driver with a steel head set into the end of the handle and everlastingly locked directly to the shank of the blade. The more hammering on the head, the tighter this lock becomes.

The blades are hammer-forged from a fine quality of tool steel selected for its remarkable toughness when properly heat-treated. The shanks have long, wide wings forged on them that preclude any chance of turning in the handle. The handles, of excellent shape and fluted to give a good grip, are made of selected hardwood with a fine mahogany lacquer finish. The handle is protected by a heavy steel ferrule pinned through the blade.

The blades are highly polished and the steel head and ferrule nickel plated.

	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 676	3"	7/32"	1 1/4 lbs.	ZAJUZ	\$ 6.80
No. 676	4"	9/32"	1 3/4 lbs.	ZAJVE	7.40
No. 676	5"	5/16"	2 1/2 lbs.	ZAJYO	7.80
No. 676	6"	3/8"	2 3/8 lbs.	ZAKAV	8.00
No. 676	8"	3/8"	4 lbs.	ZAKIX	10.80
No. 676	10"	3/8"	4 1/2 lbs.	ZAKOZ	12.20
No. 676	12"	3/8"	5 lbs.	ZAKUB	14.40

Packed six in a box

NO. 909 SCREW DRIVER



Torque Tested Blades

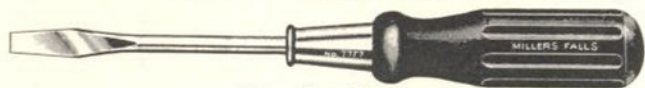
The same fine screw driver described above but without the steel head. No finer general purpose screw driver can be made.

Finely polished tool steel blade. Pinned nickel plated ferrule and mahogany lacquered hardwood handle.

	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 909	2"	7/32"	3/4 lb.	ZIASP	\$ 5.50
No. 909	3"	7/32"	3/4 lb.	ZIAWS	5.50
No. 909	4"	1 3/16"	1 3/8 lbs.	ZIAXT	6.00
No. 909	5"	1 1/8"	1 7/8 lbs.	ZIBBO	6.20
No. 909	6"	5/16"	2 lbs.	ZIBIZ	6.50
No. 909	8"	3/8"	3 1/4 lbs.	ZIBUC	9.20
No. 909	10"	3/8"	3 3/4 lbs.	ZIBWA	9.60
No. 909	12"	3/8"	4 1/8 lbs.	ZIBYE	11.50
No. 909	18"	3/8"	5 1/2 lbs.	ZICEZ	18.00

Packed six in a box

NO. 7777 SCREW DRIVER



Torque Tested Blades

A sturdy, serviceable screw driver made in the five most saleable lengths. Blades are hammer-forged from specially tough steel, hardened and tempered their entire length. Forged lugs on shank prevent turning in handle. Blades and ferrules nickel plated and burnished. Hardwood handle finished in black lacquer with red end. Fluted for sure grip.

No. 7777	Length Blade	Diameter Shank	Weight Box	Code	Price doz.
No. 7777	3"	3/32"	1 3/4 lbs.	GICAB	\$2.60
No. 7777	4"	9/32"	2 1/2 lbs.	GIDED	2.90
No. 7777	5"	5/16"	3 3/4 lbs.	GIFFO	3.45
No. 7777	6"	3/8"	3 7/8 lbs.	GIGLA	3.45
No. 7777	8"	3/8"	6 1/4 lbs.	GIHUN	4.85

Packed one dozen in a box

NO. 355 CABINET SCREW DRIVER



Torque Tested Blades

Manufactured from the best materials obtainable for the purpose and finished in keeping. The blades are hammer-forged from a high grade tool steel, carefully hardened and oil tempered and nicely polished. The handles are made of hardwood, fluted to give a good grip and nicely finished in mahogany lacquer. Handles are protected by heavy steel ferrules, securely pinned on.

No. 355	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 355	2 1/2"	7/32"	7/8 lb.	YIWAY	\$4.80
No. 355	3 1/2"	7/32"	7/8 lb.	YIWEZ	5.00
No. 355	4 1/2"	7/32"	1 lb.	YIWIB	5.20
No. 355	5 1/2"	7/32"	1 lb.	YIWOC	5.60
No. 355	6 1/2"	7/32"	1 1/8 lbs.	YIWUD	6.00
No. 355	8 1/2"	7/32"	1 1/4 lbs.	YIZAB	7.60

Packed six in a box

NO. 331 JEWELERS' SCREW DRIVER



A slim, light screw driver of the best quality suitable for the most delicate work. The blades are hammer-forged from the best quality tool steel, carefully hardened and tempered.

The handles are hardwood with a fine mahogany lacquer finish. They are protected with a nickel-plated steel ferrule.

No. 331	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 331	2"	3/64"	3/8 lb.	YINPA	\$3.85
No. 331	3"	3/64"	3/8 lb.	YINSO	4.10
No. 331	4"	3/64"	1/2 lb.	YINUT	4.40
No. 331	5"	3/64"	1/2 lb.	YINYV	4.85
No. 331	6"	3/64"	3/8 lb.	YIOCH	5.30
No. 331	8"	3/64"	3/4 lb.	YIOFK	6.40

Packed six in a box

NO. 69 STUBBY SCREW DRIVER



A tool small enough to be unnoticed in the side pocket and still fits the palm of the hand so snugly and with such a positive grip that screws out of all proportion to its size are driven or drawn with ease. An invaluable tool for general repair work, machine adjustments, appliance repairs, and all work in close quarters.

The finely polished tool steel blade, 1 1/2 inches long, is set in a fluted hardwood handle finished in natural lacquer and protected with a heavy steel ferrule.

No. 69	Length Blade	Overall	Weight Box	Code	Price each
No. 69	1 1/2"	4 1/2"	14 ozs.	YALKA	\$0.30

Packed six in a box

NO. 199 OFFSET SCREW DRIVER



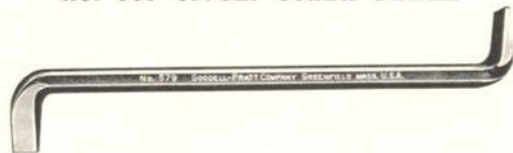
This unique driver is equipped with four blades, two at either end set at right angles to each other and the pair at one end set at 45° from the pair at the other. This provides a blade position for eight positions of the screw slot, making it possible to handle screws otherwise inaccessible. Provides power for starting or setting large screws.

Blades are machined from fine quality manganese tool steel, hardened and tempered for maximum toughness. Nicely finished.

No. 199	Length	Weight Box	Code	Price each
No. 199	5 1/4"	1 1/8 lbs.	YELLOW	\$0.50

Packed six in a box

NO. 797 OFFSET SCREW DRIVER



A wonderful tool for reaching out-of-the-way screws, starting frozen ones, or wherever a lot of power is necessary. Forged from a fine grade of octagon steel, carefully hardened and tempered, with the bits nicely polished. Blades are set at right angles to one another, and on opposite sides of the handle. Made in two sizes, 4 1/4 and 6 1/4 inches.

No. 797	Length	Stock	Weight Box	Code	Price doz.
No. 797	4 1/4"	1 1/4"	1 1/4 lbs.	ZEGMO	\$3.15
No. 797	6 1/4"	3/8"	3 lbs.	ZEGNA	6.00

Packed one dozen in a box

**MILLERS FALLS
TOOLS**SINCE
1868

SCREW DRIVER BITS



An unexcelled line, hammer-forged from the best quality of steel procurable for the purpose. Carefully hardened, tempered and nicely polished.

Points carefully formed and accurately finished to fit the slots of the size screws for which they are intended. Shanks well finished to fit securely in two-jawed or bit brace chucks. Length, 5 inches overall.

No.	Size	Size Screws	Weight Box	Code	Price Doz.
No. 351	1/16"	6 to 8	1/2 lb.	YIVOB	\$4.00
No. 351	3/16"	8 to 12	1/2 lb.	YIVUC	4.00
No. 351	1/4"	12 to 16	3/4 lb.	YIVWA	5.20
No. 351	5/16"	16 to 20	3/4 lb.	YUHTe	5.20
No. 351	3/8"	20 to 24	3/4 lb.	YUHUX	5.20
No. 351	Asst. 1/4-3/8"	6 to 16	3/4 lb.	YUNIC	4.40

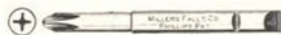
Packed six in a box

BITS FOR SPIRAL RATCHET SCREW DRIVERS

For Standard Slotted Screws

Fitting	Width	No.	Width	No.	Width	No.	Weight Doz.	Set	Price Doz.
Nos. 67-670	3/32"	1516	3/16"	1515	7/32"	1514	3/4 lb.	\$0.90	\$3.60
Nos. 61-610	3/16"	1201	7/32"	1202	1/4"	1203	7/8 lb.	.90	3.60
Nos. 62-620	1/4"	1166	7/32"	1168	5/16"	1167	1 lb.	.90	3.60

For Phillips Recessed Head Screws



Licensed under U. S. Patent No. 2,046,840

No.	Fitting	Phillips Size	Weight Doz.	Price Doz.
P17	Nos. 67-670	No. 1	3/4 lb.	\$5.75
P27	Nos. 67-670	No. 2	3/4 lb.	5.75
P11	Nos. 61-610	No. 1	3/4 lb.	5.75
P12	Nos. 61-610	No. 2	3/4 lb.	5.75
P13	Nos. 61-610	No. 3	3/4 lb.	5.75
P22	Nos. 62-620	No. 2	3/4 lb.	5.75
F23	Nos. 62-620	No. 3	3/4 lb.	5.75

CHUCK AND DRILL ATTACHMENTS

For Spiral Ratchet Screw Drivers

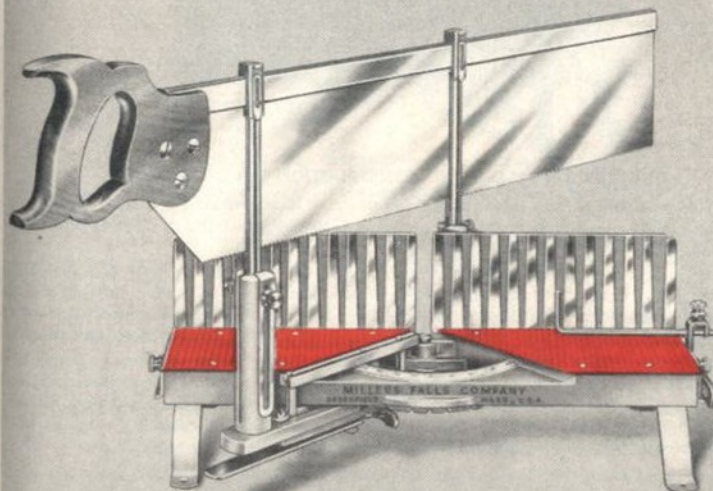


These attachments for the spiral ratchet screw drivers on page 39 convert them into an efficient automatic drill for boring small holes, greatly increasing the utility of the driver. The chuck has a ball lock that holds New Style, No. 401 Drill Points securely. It has a knurled tightening nut which is nicely polished, as is the shank. Eight sizes of drills, 1/16 to 1/4 inch in diameter.

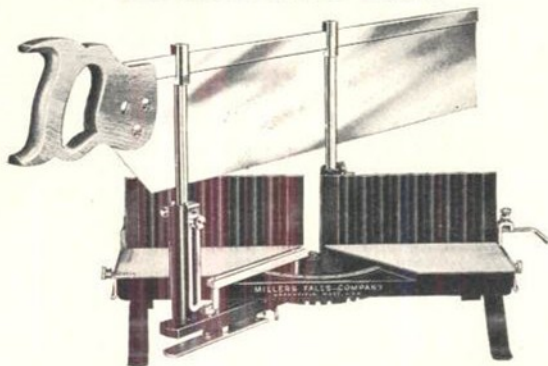
No.	For Use with Screw Driver	Drill Points	Size	Weight	Code	Price each
No. 6700	Nos. 67A and 670A	3	1 to 3	1/8 lb.	GAMOT	\$0.70
No. 6100	Nos. 61A and 610A	8	1 to 8	1/4 lb.	GAMIC	1.30
No. 6200	Nos. 62A and 620A	8	1 to 8	1/4 lb.	GAMOX	1.30

Packed one in a round wooden box

MITRE BOXES

**MILLERS FALLS
TOOLS**SINCE
1868

ALL STEEL MITRE BOXES



UNBREAKABLE ALL-STEEL CONSTRUCTION THROUGHOUT

Every part in the assembly of this fine box is made of steel. It is unbreakable and free from replacements or repairs. The design and construction guarantee continuing accuracy of angular and vertical cuts and lasting durability.

The swinging lever, carrying the posts and saw guides which operate in them and the locking devices, swings freely from 45° to 90° left or right. It can be positively set at the most used angles by means of the lever lock which engages the precisely located notches on the lower side of the graduated quadrant. Or it may be set at any intermediate angle by means of the compression lock.

The extra long saw guides are equipped with three point "Oilite" bronze bearings giving almost effortless saw travel. They also have adjustable gauges for maintaining the proper maximum depth of cut with relation to the bed plates after saw filing. The guides hold the saw in the elevated position illustrated, when not in use, by means of automatic spring catches located in the posts. Depth gauges located on the side of the posts limit the cut to any desired depth.

A length gauge is provided on one end and a stop on the other end of the bed for cutting angles more acute than 45° and holding work against the back. The bottom plates are roughened to keep the work from slipping.

Each box is thoroughly tested for accuracy using the high grade back saw that is shipped with it. Boxes without saws are available but their accuracy cannot be guaranteed.

The bed, back, swinging lever, posts and legs are finished in black enamel; the bed plates in red enamel. All exposed metal parts nicely nickel plated.

Capacity of all sizes, with swinging lever extended, is 10½ inches at right angle, 7¼ inches at mitre. Length of bed 19⅞ inches; width 4½ inches; height of back 3¾ inches.

Prices Complete with Saw

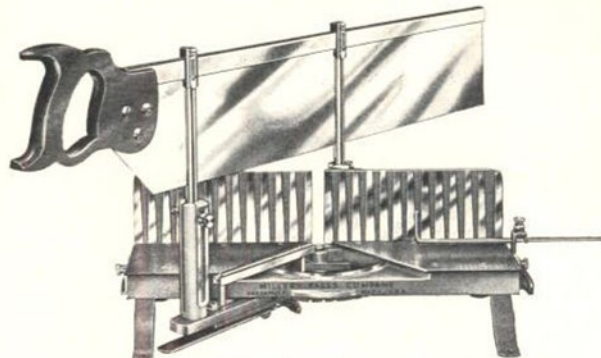
No.	Size Saw	Net Weight	Shipping Weight	Code	Price each
No. 1244C	24 x 4"	21½ lbs.	27½ lbs.	ZITRE	\$45.40
No. 1264C	26 x 4"	22 lbs.	28 lbs.	ZITUV	46.00
No. 1285C	28 x 5"	23 lbs.	31 lbs.	ZITWY	50.00
No. 1305C	30 x 5"	23½ lbs.	31 lbs.	ZIUGH	54.00
No. 1306C	30 x 6"	25 lbs.	33 lbs.	ZIUHJ	57.00

Prices without Saw

No.	Size Saw	Net Weight	Shipping Weight	Code	Price each
No. 1002C	for 4" Saw	18 lbs.	22 lbs.	ZIRNA	32.80
No. 1003C	for 5" Saw	19 lbs.	23 lbs.	ZIROR	35.80
No. 1004C	for 6" Saw	20 lbs.	24 lbs.	ZIRPE	39.00

Packed one in a carton

LANGDON ACME MITRE BOXES



Three Point "Oilite" Bronze Bearing Saw Guides

Langdon Acme has always been the outstanding metal mitre box. Now, more than ever, it is the most desirable box made.

The one piece cast bed and back have been redesigned for much greater strength and are precisely milled at right angle to one another. The legs are made of steel and are extended for greater stability.

The extendable, swinging lever is now made of solid steel as are the posts and saw guides. The saw guides are equipped with three "Oilite" bronze bearings providing easier and smoother saw travel.

Mounted on the steel posts in which the saw guides operate are adjustable depth gauges to regulate the depth of cut and also stops to hold the guides and saw elevated for quick changing of work on the bed. Still another adjustment is provided on the guides to maintain the proper maximum depth of cut with relation to the bed plates and to compensate for filing of the saw.

The swinging lever travels freely from 45 to 90° right or left and locks automatically at the most used angles. It can be locked at any intermediate angle by means of the additional compression lock.

A length gauge is provided on one end of the bed and a stop for cutting acute angles or holding work against the back on the other. The bed plates are steel scored to prevent slipping.

The highest quality back saws are supplied, each tested for accuracy in the box with which it is shipped. The accuracy of boxes shipped without saws cannot be guaranteed.

The bed, back, swinging lever, posts and legs are finished in gray enamel. The bed plates are red enameled. All exposed metal parts, except the saw, nickel plated.

Maximum capacity of all sizes 10½ inches at right angle; 7¼ inches at mitre. Length of bed 19¾ inches; width 4½ inches; height of back 3¾ inches.

Prices Complete With Saw

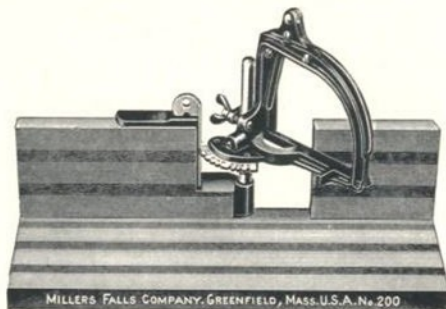
No.	Size Saw	Net Weight	Shipping Weight	Code	Price each
No. 72C	24 x 4"	27½ lbs.	33½ lbs.	LADDE	\$45.40
No. 73C	26 x 4"	28 lbs.	34 lbs.	LADIM	46.00
No. 74C	28 x 5"	29 lbs.	37 lbs.	LADLE	50.00
No. 75C	30 x 5"	29½ lbs.	37½ lbs.	LAGER	54.00

Prices Without Saw

No.	Size Saw	Net Weight	Shipping Weight	Code	Price each
No. 1071C	For 4 inch saw	24 lbs.	28 lbs.	LAIRD	32.80
No. 1074C	For 5 inch saw	25 lbs.	29 lbs.	LAITY	35.80

Packed one in a carton

NO. 200 MITRE BOX



MILLERS FALLS COMPANY, GREENFIELD, MASS. U.S.A. No. 200

The frame of this box is made of laminated wood. The saw guide is designed so that either a back or panel saw may be used.

The saw guide is mounted on a steel post and can be adjusted freely for various angles and heights. It is provided with three screws for adjustment to the thickness of the saw blade used.

A steel index plate, indexed and clearly marked for the six commonly used angles, 0, 9, 22½, 30, 36 and 45°, right or left, is fixed to the saw guide. To set the guide at any one of these angles the steel slide key in the frame of the box is lifted and the guide swung until the proper notch in the index plate is opposite the key. The key is then pushed down until it seats firmly in the notch.

Any intermediate angles can be obtained by using the thumb screw at the back of the saw guide. This thumb screw is also used for setting the guide at any desired height.

When a back saw is used exact depths can be sawed by raising the saw guide on its post to the proper height so that the shoulders provided prevent the saw going below the desired point.

Bed filled and lacquered. All castings black enameled.

No. 200	Dimensions 16 x 4 ¾ x 4"	Weight 7 lbs	Code LITER	Price each \$10.00
	Packed one in a carton			

NO. 214 SAW SET

A sturdy set of pistol grip design with a powerful leverage that makes it easy to obtain a positive and uniform set on any saw with a pitch of from 2 to 14 teeth per inch. Good visibility so that the hardened, triangular-shaped plunger can be centered quickly and surely on the tooth to be set.

The anvil is carefully hardened and is quickly adjustable to the pitch of tooth to be set. This adjustment is locked by means of the upper knurled thumb nut. An adjustable steel guide is also provided.

Frame and handles are finished in gray and red enamel. All steel parts nickel plated except the hardened anvil.



No. 214	Capacity Fitches 2 to 14	Weight 1 ½ lbs.	Code YEPA	Price each \$2.80
	Packed one in a box			

CARPENTERS' COMBINATION SQUARES



Etched Graduations Level and Scriber

These are accurate, well-finished squares, made especially for the carpenter. They can be used as a try square, mitre square, depth gauge, marking gauge or as a level or plumb.

The steel blades are 9 or 12 inches long and 1 inch wide, accurately graduated in 8ths and 16ths on one side and 16ths and 32nds on the other. The graduations and figures are clearly etched — not stamped.

The beam has accurately milled working faces with polished edges and black enameled web. It has a cat's-eye level vial accurately set in the body which can be used either as a level or a plumb. A sturdy, well-pointed scriber is also supplied.

The beam can be slipped along the scale and locked at any point by tightening the knurled thumb nut.

No. 9500	Length Blade 9"	Weight 14 ozs.	Code ZOPER	Price each \$1.60
No. 1200	12"	15 ozs.	ZISPA	1.70

Packed one in a box



Etched Graduations

An accurate, well-finished square made especially for the carpenter. It serves a number of important functions such as try square, mitre square, depth gauge or marking gauge.

The steel blade is 12 inches long and 1 inch wide. It is well finished and clearly and accurately graduated in 8ths and 16ths on one side and 16ths and 32nds on the other. Both figures and graduations are extremely legible as they are deeply etched — not stamped.

The working faces of the beam are accurately milled with polished edges. The web is finished in glossy black enamel. When the knurled binder nut is loosened the blade can be moved to left or right as desired and locked at any point.

No. 1000	Length Blade 12"	Weight 14 ozs.	Code ZIRAD	Price each \$1.40
	Packed one in a box			

Packed one in a box

New

NO. 365 DIAMOND POINT AWL



Forged Blade with Steel Bolster

This good tool has thoroughly demonstrated its quality in the hands of thousands of users. Its usefulness is almost unlimited and no tool box or shop is complete without one. It is indispensable for laying out work on wood, soft metals and other similar materials; making holes for starting nails or screws and innumerable other uses.

The blade is hammer-forged tool steel, carefully hardened, tempered and polished. It runs clear through the handle and is locked into a steel head set flush with the end of the handle. The handle, protected by a heavy, nickel plated steel ferrule, is selected hardwood with a natural lacquer finish and is fluted to give a good grip. These flutes also prevent the tool from rolling.

No.	Blade	Overall	Weight	Code	Price doz.
No. 365	3 1/2"	6 3/4"	3 ozs.	YOANE	\$8.00

Packed six in a box

NO. 10 AWL



A smaller, lower priced awl that is equally useful. The blade, 2 3/8 inches long, is nicely pointed, tapered and polished. The blade is securely set in a solid, hardwood handle protected by a nickel plated ferrule. Handle finished in natural lacquer.

No.	Blade	Overall	Weight	Code	Price doz.
No. 10	3 1/2"	5"	1 oz.	YOALO	\$2.10

Packed one dozen in a box

NO. 211 TACK CLAW

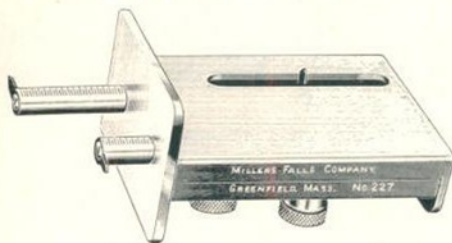


The blade of this very efficient tool is carefully shaped and finished for pulling tacks and small, headed nails rapidly and with little or no effort. It is forged from a high grade of 3/32 inch steel, hardened, tempered and polished. The comfortable, hardwood handle is protected by a nickel plated ferrule and nicely finished in mahogany lacquer.

No.	Length Overall	Weight	Code	Price each
No. 211	7"	3 1/2 ozs.	YEPIX	\$0.40

Packed six in a box

NO. 227 BUTT GAUGE



The installation of butts and hinges has been simplified and speeded up by the redesign and improvement of this tool.

The body is made of two smooth die castings. The rods are steel, accurately graduated, with sharp, hardened, double edged spurs that make legible marks easily.

Working faces of the body are polished with the rest of the body finished in gray enamel. Rods and knurled set screws nickel plated.

No.	Length	Weight	Code	Price each
No. 227	3 1/2"	8 ozs.	YETRE	\$2.40

Packed one in a box

CARPENTERS' PLUMB BOBS

These plumb bobs are accurately machine turned from cold rolled steel with the points carefully sharpened. They hang true and insure positive accuracy in plumbing and leveling.

They are nicely polished and nickel plated.

No.	Length	Weight	Code	Price each
No. 1	2 3/4"	3 ozs.	LLOYD	\$0.40
No. 2	3 1/2"	5 ozs.	LOACH	.50
No. 3	4"	7 1/2 ozs.	LIVER	.70
No. 4	5"	12 ozs.	LOANY	.90

Packed six in a box



NO. 56 BENCH HOOK



A strong, rugged tool with a head having four different faces, any one of which can be used in the working position and set at any desired height up to 1 1/4 inches. Spring automatically raises hook when lock is released. These adjustments are controlled by the lock screw in the center arm. Quickly and easily installed by simply boring two holes: one 2 inches in diameter 7/16 inches deep, and one 1 inch in diameter clear through the bench and setting two screws.

The steel hook is nickel plated. The edge of the socket is polished and the inner surface red enameled.

No.	Max. Lift	Weight	Code	Price each
No. 56	1 1/4"	11 ozs.	LIVID	\$1.65

Packed six in a box

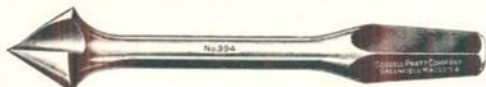
NO. 396 COUNTERSINKS
New


Rose Pattern for use in mild steel, iron and soft metals

These countersinks with square bit brace shanks, available in three diameters, are hammer forged from a high quality of tool steel carefully hardened and tempered. The flutes are milled and the cutting edges ground. Angle 82°.

No.	Diameter	Length	Weight	Code	Price doz.
No. 396	1/2"	4 1/4"	2 ozs.	YOFIM	\$8.00
No. 396	3/8"	4 1/4"	2 ozs.	YOFOX	8.00
No. 396	3/4"	4 1/4"	2 ozs.	YOFME	8.00

Packed six in a box

NO. 394 COUNTERSINK


Two lipped for wood and other soft materials

Hammer forged from high quality tool steel with two cutting lips and square bit brace shank carefully hardened and tempered. Head and body polished. Angle 82°.

No.	Diameter	Length	Weight	Code	Price doz.
No. 394	3/4"	4 1/4"	2 ozs.	YOFEM	\$8.00

Packed six in a box

NO. 410 COUNTERSINK
New


For use in Power Tools

For countersinking holes to admit the heads of standard screws in mild steel, iron, soft metals, wood and similar materials. Turned from a high quality tool steel with milled flutes and ground edges. Fitted with 1/4 inch round shank for use in three-jawed chucks of hand or power driven drills. Nicely polished. Angle 82°.

No.	Diameter	Shank	Length	Weight	Code	Price doz.
No. 410	1/2"	1/4"	1 3/4"	1 oz.	YOFTO	\$4.80

Packed one dozen in a box

NO. 4100 DISPLAY UNIT
COUNTERSINKS AND SCREW DRIVER BITS

A bright, very substantial unit that displays these small tools to excellent advantage and originates many sales.

The base is made of solid pine and the upright panel of masonite. It is lacquered and silk screened in three colors, red, gray, and black.

Base 5" by 6 3/4"; Height 9".

Supplied entirely free with the following assortment:

- 6 No. 410 Countersinks
- 4 No. 394 Countersinks
- 2 No. 396 3/4" Countersinks
- 3 No. 396 3/8" Countersinks
- 3 No. 396 1/2" Countersinks
- 6 No. 351 Ass't Screw Driver Bits

 No. 4100 Display Unit Complete **\$12.60**

Packed one unit in a carton


New
NO. 11 BIT EXTENSIONS


Designed to follow a 1/16 inch bit or larger but not recommended for bits larger than 1/16 inch. A neat, strong extension of the solid socket type with socket forced on to the shank and pinned. Chuck shell made of heavy seamless tubing is controlled by a coarse thread operated by turning the knurled collar. Entire tool nicely polished.

No.	Length	Weight	Code	Price each
No. 11	18"	1 lb.	CAMEL	\$3.40
No. 11	21"	1 1/4 lbs.	CAMFO	3.55
No. 11	24"	1 1/4 lbs.	CAMIS	3.65

Packed one in a box

NO. 35 BIT EXTENSIONS


Designed to follow an 1/16 inch bit or larger but not recommended for continuous use on bits larger than 1/16 inch. The one-piece socket and shank construction of this extension makes it very strong. Chuck shell of extra heavy steel tubing. Drop-forged steel jaws positively seated in socket hold bits securely and in good alignment. Chuck operated by turning knurled collar. Upper hexagon portion for tightening with a wrench when desirable.

No.	Length	Weight	Code	Price each
No. 35	18"	13 ozs.	CABIO	\$3.40
No. 35	21"	14 ozs.	CACKO	3.55
No. 35	24"	16 ozs.	CADDY	3.65

Packed one in a box

NO. 240 CHISEL AND PLANE IRON SHARPENER


New

A very simple but efficient device for putting a fine edge on chisels, plane irons and other edged tools.

It overcomes the imperfections of free-hand sharpening and honing, insures a perfectly flat bevel at any desired angle, saves time and prolongs the life of the blade.

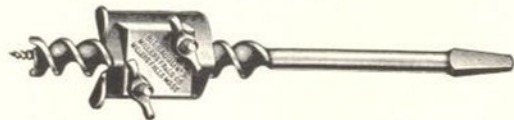
The blade is held rigidly in the holder by means of the lower knurled thumb screw and the angle adjustment is controlled by the upper thumb nut. Still further angle adjustment can be secured by changing the position of the blade in the clamp.

After firmly clamping the blade, place the tool on an oilstone or hone and adjust to the desired angle or bevel. The roller bearing rolls freely on the stone and a keen edge is secured in a minimum of time.

No. 240	Capacity 2 3/8"	Weight 11 ozs.	Code ESDER	Price each \$1.80
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Packed one in a box

NO. 36 BIT GAUGE

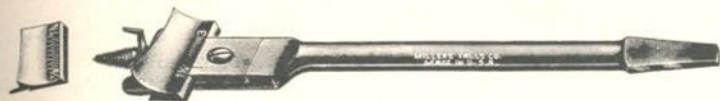


Fits any type of auger bit, clamping securely to the twist of the bit. Clamp controlled by two steel wing nuts. Two smooth shoes prevent marring of the work. Entire tool nickel plated.

No. 36	Length 2"	Weight 4 ozs.	Code AWASA	Price each \$0.75
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Packed six in a box

EXPANSIVE BITS



No. 48

A finely made and finished bit of the Clark Pattern with spurs, cutting edges, throats, screws and cutters designed to function in unison to give a fast, clean cutting bit. Made of the highest quality special bit steel throughout. Each bit equipped with two cutters.

All parts of the bit highly polished except the square shank.

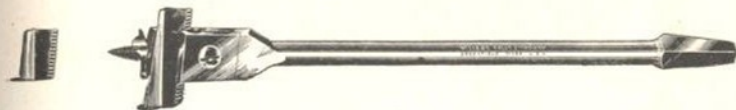
No. 47	Capacity 1/2 to 1 1/2"	Weight 3/4 lb.	Code BARDO	Price each \$1.90
No. 48	3/4 to 3"	1 1/2 lb.	BOLLO	3.10

Packed one in a box

Extra Cutters

No. 1	Fitting No. 47	Capacity 1/2 to 3/4"	Price doz. \$4.10
No. 2	No. 47	3/4 to 1 1/2"	5.05
No. 3	No. 48	3/4 to 1 3/4"	7.15
No. 4	No. 48	1 3/4 to 3"	8.50
No. 5	No. 48	3 to 4"	12.75
No. 6	No. 48	4 to 5"	17.00

SCREW ADJUSTING EXPANSIVE BITS



No. 151

A finely made and finished bit with a positive screw adjustment of the cutter which absolutely prevents shifting even in the toughest woods. The cross feed screw meshes with the cutter and also the plate. One complete turn of screw increases or decreases diameter of hole 1/8 inch.

The deep, clean cut screw, sharp spurs and cutting edges make it an extremely easy boring bit. Two cutters. All parts of the bit highly polished except the square shank.

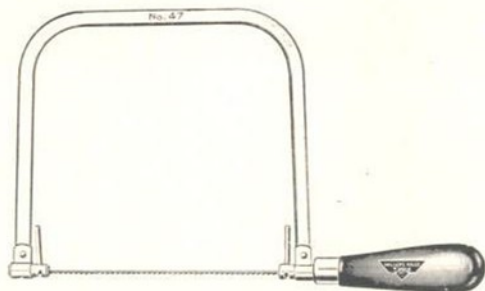
No. 151	Capacity 3/8 to 1 3/4"	Weight 3/4 lb.	Code BONOR	Price each \$2.35
No. 152	3/4 to 3"	1 1/2 lb.	BOMIT	3.40

Packed one in a box

Extra Cutters

No. 1	Fitting No. 151	Capacity 3/8 to 1 1/8"	Price doz. \$3.90
No. 2	No. 151	1 1/8 to 1 3/4"	4.85
No. 3	No. 152	3/8 to 1 3/4"	6.80
No. 4	No. 152	1 3/4 to 3"	7.75
No. 5	No. 152	3 to 4"	11.60
No. 6	No. 152	4 to 5"	15.45

Be sure to specify number of bit cutters are to fit

NOS. 43 AND 47 COPING SAW FRAMES


These fine frames are identical except for their depth of throat. The frame is made of $\frac{3}{16}$ x $\frac{3}{8}$ inch round edge spring steel. The studs are designed for holding 6 or $6\frac{1}{2}$ inch coping saw blades of the loop, pin and other types. The pins set firmly in the studs permit the blade to be turned in any desired direction. Tension on the blade is controlled by turning the mahogany lacquered hardwood handle. One No. 65 blade furnished with each frame.

All exposed metal parts heavily nickel plated and buffed.

	Depth Throat	Weight	Code	Price each
No. 43	4 $\frac{3}{4}$ "	6 ozs.	IRIAN	\$1.20
No. 47	6 $\frac{1}{2}$ "	9 ozs.	IRITO	1.40

No. 43 packed six in a box

No. 47 packed four in a box

NO. 50 COPING SAW BLADES


These blades of the loop or turned end pattern are made of fine steel uniformly heat-treated to produce excellent results. The teeth are keen and properly set for fast, clean cutting.

	Size	Weight Gross	Code	Wired	Price gross
No. 50	6 x $\frac{1}{16}$ "	6 ozs.	IROUX	In Envelopes	\$3.00
No. 50	6 x $\frac{1}{16}$ "	6 ozs.	IROUX	In Envelopes	3.10

Packed one dozen in an envelope or in bulk in wired bundles of one gross consisting of 12 bundles of one dozen each.

NOS. 60 AND 65 COPING SAW BLADES


Pin pattern blades are heavier, cut faster and straighter and will outwear the finer tooth blades. Both fit the Nos. 43 and 47 Coping Saw Frames.

	Size	Weight Gross	Code	Price gross
No. 60	6 x $\frac{3}{32}$ "	9 ozs.	ISCHI	\$3.30
No. 65	6 $\frac{1}{2}$ x $\frac{3}{32}$ "	11 ozs.	ISIAI	3.30

Packed one dozen in an envelope

NO. 106 CARVING TOOL SET

A set of six carefully selected tools to give as wide a range of operation and effects as possible in wood, linoleum, soap and similar materials.

The blades are forged from high quality steel, carefully heat-treated to hold a keen edge and nicely polished. The handles, protected with nicked ferrules, are hardwood with a mahogany lacquer finish.

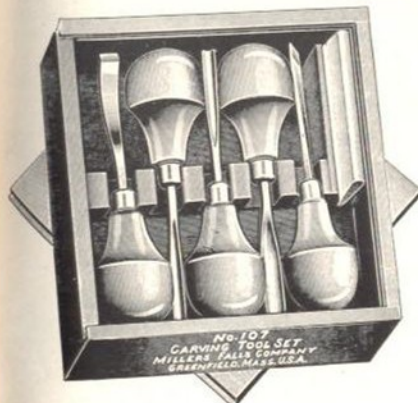
Set consists of one each of the following tools:

A	$\frac{3}{16}$ "	Straight Chisel	\$0.75
B	$\frac{3}{4}$ "	Bent Chisel	.65
C	$\frac{1}{4}$ "	Skew Bevel Chisel	.65
D	$\frac{3}{8}$ "	Bent Gauge	.75
E	$\frac{3}{32}$ "	U Tool	.75
F	$\frac{3}{32}$ "	Veining Tool	.85



No. 106	Length	Weight	Code	Price set
	6 $\frac{1}{4}$ "	$\frac{1}{2}$ lb.	YAYNA	\$4.40

Packed one set in a box

NO. 107 CARVING TOOL SET


This inexpensive set has started thousands in the fascinating hobby of wood and linoleum block carving. It is particularly suited for the Boy Scouts and many other handicraft groups.

The blades are forged from high quality steel, carefully heat-treated and nicely finished. The hardwood handles, which fit snugly into the palm of the hand, are finished in clear lacquer. They are flattened on one side so they are in proper position when picked up from the bench.

The set consists of one each of the following:

B	$\frac{3}{8}$ "	Bent Chisel	\$0.65
C	$\frac{1}{4}$ "	Skew Bevel Chisel	.65
D	$\frac{3}{8}$ "	Bent Gauge	.75
E	$\frac{3}{32}$ "	U Tool	.75
F	$\frac{3}{32}$ "	Veining Tool	.85
		Sharpening Stone	.35

No. 107	Length	Weight	Code	Price set
	5"	$\frac{3}{4}$ lb.	YOYOL	\$4.00

Packed in a lacquered lock corner wood box with slide cover

GLASS CUTTERS AND WHEELS

There are several fine details that enter into the manufacture of Millers Falls Glass Cutters that are not generally appreciated. A very fine grade of alloy steel is used in making the wheels which, of course, are the vital part of the tool. The wheels must be machined with precision to provide just the exact bevel on the edge for maximum cutting efficiency, exactly the right diameter hole for the pin on which it is to rotate, and the exact width for the frame in which it is to run.

The heat treatment given the wheels is unique and extremely precise — being held within very close limits. The process is the result of fifty years of research and experience in the perfection of these small cutters.

After hardening and tempering, the wheels are twice honed in oil on exceedingly fine India wheels to the critical angle or bevel that gives the easiest cut, cleanest break and the longest life on the grade of glass they are intended to cut.

Every Millers Falls Glass Cutter is actually tested on glass by a skilled operator before final acceptance. They are strung on wire and sealed for positive identification as to type.



Type	Fitting Cutters Nos.	Price doz.
C Red Seal	1 and 478	\$1.00
D Blue Seal	337 and 444	1.50
F Black Seal	218	1.00

Packed one dozen or ten dozen in an envelope

NO. 444 GLASS CUTTER



The perfect finger-fitting form of the frame of this cutter has made it a tremendously popular tool. It drops into natural position between the first two fingers and can be used for hours without fatigue or discomfort.

It is equipped with a tested Type D wheel set in a well-polished frame with three standard widths of breaker notches. The handle is finished in bright blue enamel with a red tip.

No.	Length	Weight doz.	Code	Price doz.
No. 444	5 1/4"	1 3/8 lbs.	YOMVE	\$3.50

Packed one in a carton; one dozen cartons in a box



NO. 4412 FREE DISPLAY

The attractive counter display unit illustrated, holding twelve cutters, will be supplied entirely free with an initial order for two dozen No. 444 Cutters. Weight of display only 3/8 lb.

NO. 1 TURRET HEAD GLASS CUTTER

This is the original turret head glass cutter patented by Goodell-Pratt which has earned and maintained such a remarkable reputation for fine performance and low cost operation. Henceforth, this popular cutter will be branded Millers Falls.

The turret is turned from a solid bar of selected steel with the six wheel axles, integral parts of the turret. Infinite care is taken in the heat treatment so that the axles will outwear many wheels. The turret and turret screw are rust-proofed by the Udelyte process.

Six honed and tested Type C "Red Seal" wheels are mounted on the turret axles. Turret and wheels are locked to the highly polished and nickel-plated steel frame by means of a rust-proofed screw. Wheel No. 1 is used until worn out, then the screw is loosened and wheel No. 2 rotated into position and so on until all six have been used. Always insist on genuine Type C Wheels for replacements.

The handle is hardwood, comfortably shaped, nicely finished in mahogany lacquer and protected by a buffed nickel ferrule.

Every genuine No. 1 Turret Head Cutter has the Millers Falls name stamped on the frame and handle and is packed in a distinctive three-color carton.



No.	Length	Weight doz.	Code	Price doz.
No. 1	5 3/4"	7/8 lb.	WYBCE	\$7.00

Packed one in a box; twelve boxes in a display carton illustrated above

NO. 337 GLASS CUTTER



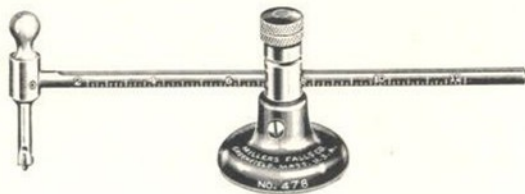
A nicely balanced cutter with a comfortable handle on the end of which is a breaker ball that has sufficient weight to get excellent results.

It is equipped with a high grade tested Type D wheel set in a well-polished frame. The three standard widths of breaker notches are provided. The handle is finished in black and the breaker ball in red.

No.	Length	Weight doz.	Code	Price doz.
No. 337	5"	1 1/2 lbs.	YIRUX	\$3.50

Packed one in a carton; one dozen cartons in a box

NO. 478 CIRCULAR GLASS CUTTER



Circles or arcs of circles from 2 to 12 inches in diameter are quickly and accurately cut with this tool.

It is equipped with a tested Type C wheel set in a head at the end of a graduated beam. Wheel can be replaced very easily. The beam pivots freely in the metal standard so that the complete circle can be cut in one continuous sweep. To free the circle without breakage, six or more tangents should be cut with a straight cutter.

No. 478	Capacity 2 to 12"	Weight ½ lb.	Code YOSAZ	Price each \$2.00
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Packed one in a box

NO. 218 GAUGE GLASS CUTTER



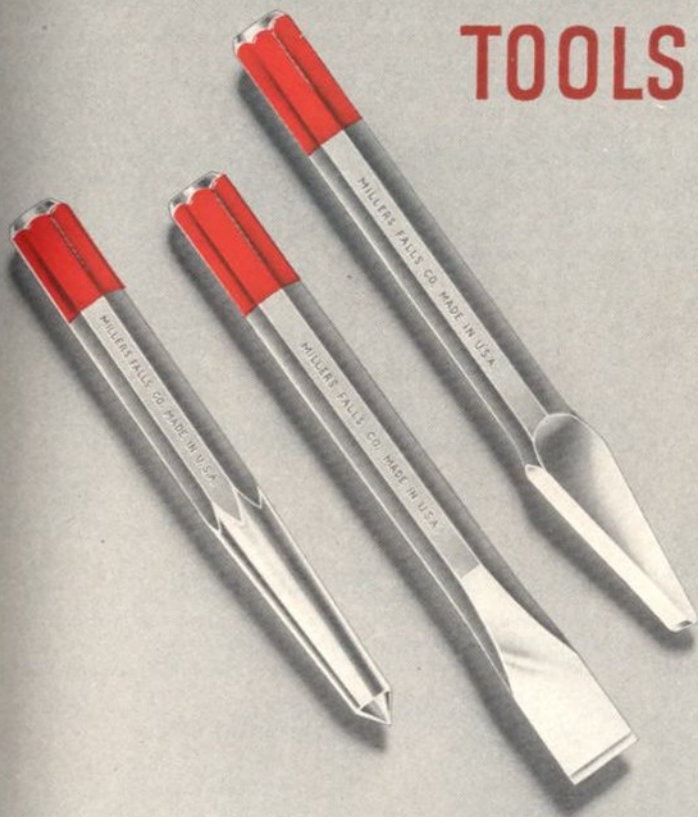
The most practical tool ever designed for cutting the gauge glass ordinarily used in steam and hot water boilers and liquid gauges.

Owing to the very hard glass used in these gauges this cutter is supplied with a tested special Type F "Black Seal" wheel which is set at the end of a graduated steel beam and cuts from the inside, giving a good clean break. The wheels are easily replaced. The length of glass cut off is determined by setting the sliding gauge on the graduated arm. The second steel beam merely counterbalances the cutting pressure on the outside wall of the tube. The steel beams are nicely polished and nickle-plated. Maximum cut six inches. Handles finished in red and black lacquer.

No. 218	Length 12 ½"	Weight ¾ lb.	Code YERRO	Price each \$2.25
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Packed one in a box

FORGED TOOLS



**MILLERS FALLS
TOOLS**

SINCE
1868

NO. 1216 STAR DRILLS



These drills have remarkable free, fast cutting ability in concrete, brick and stone.

They are forged from a high grade of octagon alloy steel selected for its toughness and ability to hold an edge. The bit and head are carefully hardened and tempered for the severe service expected of them.

The bits and flutes are designed and proportioned to give ample strength and provide adequate chip clearance. The flutes taper back slightly and their outer face is ground concentric with the bit to insure free turning. The bit is pointed just enough to start holes easily at the desired point and keep it centered. The blades are long to permit resharpening without reforging.

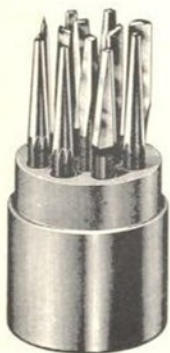
The blades are polished and the head of the tool is finished in vermilion lacquer with polished face. The body is finished in aluminum lacquer.

No.	Diameter of cut	Diameter of stock	Length	Packed per box	Weight dozen	Code	Price doz.
No. 1216	1/4"	3/8"	12"	12	2 1/4 lbs.	ZOKLA	\$6.00
No. 1216	3/8"	1/2"	12"	12	2 1/4 lbs.	ZOKLY	6.60
No. 1216	1/2"	3/4"	12"	12	3 1/4 lbs.	ZOKME	6.80
No. 1216	3/4"	1"	12"	12	4 1/4 lbs.	ZOKMO	7.50
No. 1216	1"	1 1/4"	12"	6	4 1/4 lbs.	ZOKOP	7.80
No. 1216	1 1/4"	1 3/4"	12"	6	6 1/4 lbs.	ZOKOS	8.40
No. 1216	1 1/2"	2"	12"	6	8 1/4 lbs.	ZOKPO	9.00
No. 1216	1 3/4"	2 1/4"	12"	6	12 1/2 lbs.	ZOKYR	9.60
No. 1216	2"	2 3/4"	12"	6	12 1/2 lbs.	ZOKYT	11.20
No. 1216	2 1/4"	3"	12"	3	17 3/8 lbs.	ZOLAM	12.00
No. 1216	2 1/2"	3 1/4"	12"	3	25 lbs.	ZOLAS	15.60
No. 1216	2 3/4"	3 3/4"	12"	3	31 1/2 lbs.	ZOLEN	21.00
No. 1216	3"	3 3/4"	12"	1	32 1/4 lbs.	ZOLET	26.40
No. 1216	3 1/4"	4"	12"	1	36 3/4 lbs.	ZOLIP	30.00

NO. 470 CHISEL AND PUNCH SET

A most useful set of twelve forged chisels and punches put up in a convenient turned hardwood box with a mahogany lacquer finish.

The set consists of the twelve tools listed below which are fully described on the following pages.



- 1 No. 573 3/32" Taper Pin Punch
- 1 No. 573 1/8" Taper Pin Punch
- 1 No. 1140 1/4" Cape Chisel
- 1 No. 1140 1/2" Cape Chisel
- 1 No. 1150 1/4" Cold Chisel
- 1 No. 1150 3/8" Cold Chisel
- 1 No. 1150 1/2" Cold Chisel
- 1 No. 1178 3/32" Diamond Point Chisel
- 1 No. 1190 1/4" Round Nose Cape Chisel
- 1 No. 1195 3/32" Solid Punch
- 1 No. 1199 3/8" Prick Punch
- 1 No. 1202 3/8" Center Punch

Each tool forged from octagon alloy steel, carefully hardened and tempered with well ground and polished points and heads.

No.	Weight	Code	Price set
No. 470	2 1/2 lbs.	YORAY	\$4.90

Packed one set in a box

FORGED TOOLS

The chisels and punches shown on this and the following pages are hammer-forged from a high grade of octagon alloy steel selected for its extreme toughness. The care exercised in heat-treating results in a uniformly high grade chisel. The blades and heads are ground and nicely polished. The heads have a distinctive vermilion lacquer finish.

NO. 1150 COLD CHISELS



No.	Width of blade	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1150	1/4"	1/4"	5"	12	7/8 lb.	ZUKER	\$3.20
No. 1150	3/8"	3/8"	5"	12	1 3/4 lbs.	YOOKE	3.70
No. 1150	1/2"	3/8"	5"	12	2 3/8 lbs.	YOOVL	4.00
No. 1150	3/4"	1/2"	6 1/2"	6	4 1/4 lbs.	YUZYR	6.60
No. 1150	3/4"	3/4"	7"	6	7 lbs.	ZABAM	8.90
No. 1150	1"	7/8"	8"	3	15 1/2 lbs.	ZEAHY	15.40

NO. 1140 CAPE CHISELS



No.	Width of blade	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1140	3/8"	3/8"	5"	12	1 3/8 lbs.	YOORC	\$4.50
No. 1140	1/2"	3/8"	5"	12	1 3/4 lbs.	ZEENG	5.00
No. 1140	3/4"	1/2"	5"	12	1 3/4 lbs.	YOOPZ	5.50
No. 1140	1"	1/2"	6"	6	3 3/4 lbs.	ZEEPH	7.50
No. 1140	1 1/4"	3/4"	7"	6	6 1/2 lbs.	ZEERK	10.00
No. 1140	1 1/2"	3/4"	7 1/2"	6	10 1/4 lbs.	ZEEWP	13.80

NO. 1190 ROUND NOSE CAPE CHISELS



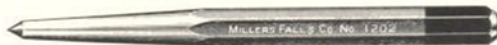
No.	Width of point	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1190	1/8"	3/8"	5"	12	1 3/8 lbs.	ZUMTE	\$4.50
No. 1190	1/4"	1/2"	6"	6	3 1/2 lbs.	YOPAV	7.50
No. 1190	3/8"	3/8"	7"	6	6 3/8 lbs.	ZUMUX	10.00

NO. 1178 DIAMOND POINT CHISELS



No.	Width of point	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1178	3/32"	3/8"	5"	12	1 3/4 lbs.	YOOVG	\$3.40
No. 1178	1/4"	1/2"	6"	6	3 3/4 lbs.	ZULVO	6.40
No. 1178	3/8"	3/8"	7"	6	7 lbs.	ZUMAS	9.00

NO. 1202 CENTER PUNCHES



	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1202	3/8"	5"	12	1 3/4 lbs.	YOPUB	\$4.00
No. 1202	1/2"	5 1/2"	6	3 1/4 lbs.	ZUNOY	6.60

NO. 1199 PRICK PUNCH



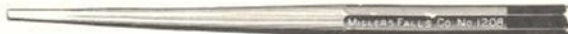
	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1199	3/8"	5"	12	1 3/8 lbs.	YOPOZ	\$4.00

NO. 1195 SOLID OR TINNERS' PUNCH



	Diameter of point	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1195	3/32"	3/8"	5"	12	1 3/4 lbs.	YOPCY	\$4.00

NO. 1208 ALIGNING OR DRIFT PUNCHES



Indispensable tools for construction work, in automotive shops, farms, or any job where holes must be brought into close alignment for riveting or bolting.

The long, evenly tapered points on these fine tools are very highly polished to a mirror finish so that they drive easily and loosen up readily. They will not bend or break.

	Diameter of point	Diameter of stock	Length overall	Packed per box	Weight dozen	Code	Price doz.
No. 1208	3/16"	1/2"	10"	3	5 1/8 lbs.	ZUNUZ	\$10.60
No. 1208	1/4"	3/8"	12"	3	9 3/8 lbs.	ZUNVE	14.50

NO. 573 TAPER PIN PUNCHES



Forged from a high grade of octagon alloy steel, 3/8 inch in diameter, except the two smallest sizes which are 1/4 inch. They are carefully heat-treated and the points and heads well ground and polished. They have the same distinctive vermilion lacquered head that is used on the rest of the punch and chisel line.

	Size	Diameter of stock	Length	Weight dozen	Code	Price doz.
No. 573	3/32"	1/4"	5"	3/4 lb.	YUMEZ	\$4.40
No. 573	1/8"	1/4"	5"	3/4 lb.	YOHYT	4.40
No. 573	3/32"	3/8"	6"	1 3/4 lbs.	YUMIB	4.40
No. 573	3/16"	3/8"	6"	1 3/4 lbs.	YOILT	4.40
No. 573	3/32"	3/8"	6"	1 3/4 lbs.	YUMOC	4.40
No. 573	1/4"	3/8"	6"	1 3/4 lbs.	YOIPY	4.40
No. 573	3/16"	3/8"	6"	2 1/4 lbs.	YOIRB	4.40
No. 573	3/8"	3/8"	6"	2 3/8 lbs.	YOJAP	4.40

Packed one dozen in a box

	Weight	Code	Price set
No. 472 Set of 5: (1/8, 3/16, 1/4, 3/8 and 3/8")	7/8 lb.	YOREZ	\$1.80

Packed one set in a box

NO. 572 PIN PUNCH SET

A useful and convenient set made up of the eight sizes of punches shown above, as follows: one each 3/32, 1/8, 3/32, 3/16, 7/32, 1/4, 3/8 and 3/8".

The container is a round hardwood block and cover nicely turned and finished, providing a convenient holder.

	Weight	Code	Price set
No. 572	2 lbs.	YUMCO	\$4.00

Packed one set in a box



NO. 433 CHISEL AND PUNCH SET

A set of four quality tools selected by and made up for several nationally known aviation training schools.

The four tools consist of:

- 1 No. 573 3/32" Pin Punch
- 1 No. 573 1/8" Pin Punch
- 1 No. 1150 3/8" Cold Chisel

These are all hammer-forged from high grade octagon alloy steel with polished points and heads. The case is made of a serviceable fabric with artificial leather covering.

	Weight	Code	Price set
No. 433	8 oz.	YORAB	\$1.70

Packed one set in a box



NO. 681 MACHINISTS' PIN PUNCHES



These punches are made from a very high grade of round tool steel about four inches long. The centers are knurled and the points, shanks and heads nicely polished. Every punch is very carefully hardened and tempered its entire length. Blued finish.

No. 681	Points	Stock	Weight doz.	Code	Price doz.
No. 681	1/16"	3/16"	3/4 lb.	ZALZ	\$2.60
No. 681	3/32"	5/16"	3/4 lb.	ZALOB	2.60
No. 681	1/8"	3/8"	7/8 lb.	ZALUC	2.60
No. 681	3/32"	7/16"	7/8 lb.	ZALWA	2.60
No. 681	3/16"	5/8"	7/8 lb.	ZALYE	2.60
No. 681	3/32"	3/4"	7/8 lb.	ZAMAY	2.60
No. 681	1/4"	3/8"	1 1/4 lbs.	ZAMCO	2.60
No. 681	3/16"	3/8"	1 1/4 lbs.	ZAMEZ	2.60

Packed one dozen in a box

NO. 997 HOLLOW PUNCHES



These punches are made from a very high grade of round tool steel about four inches long. The centers are knurled to insure a firm grip. They are very carefully hardened and tempered their entire length. The cutting edges are sharpened.

Made in fifteen sizes as follows:

No. 997	Size	Hole	Size body	Weight doz.	Code	Price doz.
No. 997	1	3/64"	3/8"	1 1/4 lbs.	ZINKA	\$4.60
No. 997	2	3/32"	3/8"	1 1/4 lbs.	ZINLE	4.60
No. 997	3	3/16"	3/8"	1 1/4 lbs.	ZINNO	4.60
No. 997	4	1/8"	3/8"	1 1/4 lbs.	ZINON	4.60
No. 997	5	3/16"	3/8"	1 1/4 lbs.	ZINUP	4.60
No. 997	6	3/32"	3/8"	1 1/4 lbs.	ZIOXY	4.60
No. 997	7	3/16"	3/8"	1 1/4 lbs.	ZIPAL	4.60
No. 997	8	7/32"	7/16"	1 1/2 lbs.	ZIPEM	4.60
No. 997	9	1/4"	7/16"	1 1/2 lbs.	ZIPLA	4.60
No. 997	10	5/32"	7/16"	1 1/2 lbs.	ZIPME	5.20
No. 997	11	3/16"	1/2"	1 3/4 lbs.	ZIPOP	5.20
No. 997	12	1/32"	1/2"	1 3/4 lbs.	ZIPPO	5.20
No. 997	13	3/8"	9/16"	1 3/4 lbs.	ZIPPR	6.80
No. 997	14	1/2"	9/16"	2 lbs.	ZIPRA	6.80
No. 997	15	7/16"	9/16"	2 1/8 lbs.	ZIPRI	6.80

Packed one dozen in a box

NO. 460 CENTER PUNCH



Large square head provides large striking surface and prevents rolling. Hardened, tempered and carefully ground points and heads. Bodies nicely knurled, balance of tool nicely polished.

No. 460	Body	Length	Weight doz.	Code	Price doz.
No. 460	3/16"	4"	17 ozs.	MALTA	\$2.00

Packed one dozen in a box

NOS. 141 AND 146 CENTER PUNCHES



Carefully ground, hardened and tempered points. Nicely knurled bodies. Shanks and heads polished.

No. 141	Body	Length	Weight doz.	Code	Price doz.
No. 141	3/16"	4"	7/8 lb.	MALMA	\$1.85
No. 141	3/8"	4"	1 1/4 lbs.	MANCH	2.35
No. 141	1/2"	4"	2 1/4 lbs.	MANKS	3.20
No. 146	1/2"	5"	2 3/4 lbs.	MANSE	3.80

Packed one dozen in a box

NO. 465 PRICK PUNCH



Large square head provides large striking surface and prevents rolling. Carefully formed point and head are hardened and tempered. Nicely knurled body.

No. 465	Body	Length	Weight doz.	Code	Price doz.
No. 465	3/16"	4"	17 ozs.	MARES	\$2.00

Packed one dozen in a box

NO. 167 PRICK PUNCHES



Carefully formed points and heads are hardened and tempered. Bodies nicely knurled, balance of tool polished.

No. 167	Body	Length	Weight doz.	Code	Price doz.
No. 167	3/16"	4"	3/4 lb.	MARRY	\$2.10
No. 167	3/8"	4"	1 1/4 lbs.	MARSH	2.60

Packed one dozen in a box

NO. 800 SERIES OF NAIL SETS


New

This is the toughest, most serviceable nail set ever offered. It is made of fine quality molybdenum alloy steel, hardened and tempered to stand up under a lot of hard usage. The carefully cupped points are formed to give a good bite and equalize the stresses and strains so as to eliminate breakage. The deep knurling on the body gives a sure and comfortable grip. The square heads provide a large striking surface and at the same time prevent rolling. Points and heads are nicely polished.

	Diameter Point	Body	Length	Weight doz.	Code	Price doz.
No. 801	1/32"	3/16"	4"	1 lb.	MOBAN	\$2.40
No. 802	3/32"	3/16"	4"	1 lb.	MOBBO	2.40
No. 803	1/16"	3/16"	4"	1 lb.	MOBEX	2.40
No. 804	1/32"	3/16"	4"	1 lb.	MOBGA	2.40
No. 805	3/32"	3/16"	4"	1 lb.	MOBHI	2.40
No. 815	Assorted Dozen			1 lb.	MOBIL	2.40

Assortment consists of two each 1/32 inch and 3/32 inch and four each 1/16 inch and 1/32 inch
Packed one dozen in a box

New

NO. 825 NAIL SET DISPLAY

This attractive display stand holding the No. 800 Series Nail Sets has demonstrated its ability to multiply the volume of Nail Set sales many times. It is made of wood, nicely finished and silk screened in red, yellow and black.

Free with initial order for three dozen No. 815 Assorted Nail Sets.



No. 825	Display with three dozen Nail Sets	Weight	Code	Price
		4 lbs.	MOBIX	\$7.20

NO. 310 NAIL SETS



A good sturdy set of conventional design. Regularly supplied with blued finish unless bright finish is specified. Points and heads hardened and tempered.

	Diameter point	Body	Length	Weight doz.	Code	Price doz.
No. 310	1/32"	3/16"	4"	7/8 lb.	MAGIC	\$1.80
No. 310	3/32"	3/16"	4"	7/8 lb.	MAGNA	1.80
No. 310	1/16"	3/16"	4"	7/8 lb.	MAGOT	1.80
No. 310	1/32"	3/16"	4"	7/8 lb.	MAGUS	1.80
No. 310	3/32"	3/16"	4"	7/8 lb.	MAHOL	1.80
No. 310	Assorted			7/8 lb.	MAHUT	1.80

Assortment consists of two each 1/32 inch and 3/32 inch and four each 1/16 inch and 1/32 inch
Packed one dozen of a size or assorted in a box

NO. 312 SET OF NAIL SETS

This set consists of one dozen assorted sizes of No. 310 Nail Sets put up in a turned hardwood box, as illustrated, finished in clear lacquer.

No. 312 Set	Weight	Code	Price set
	1 1/4 lbs.	MAINE	\$2.10

Packed one set in a box



NO. 381 BEARING SCRAPERS



These bearing scrapers are the best made. The slightly curved, tapering and recessed blade is designed to do nice scraping without chattering.

The blades are forged from a very high grade of tool steel correctly hardened and so carefully tempered that they will scratch glass and hold their keen razor-like edge over a long period. After being dulled by long usage they can be easily sharpened by a few strokes on an oilstone.

Cutting edges well ground. Blades and shanks have a pleasing jetalite finish. Ferrules nickel plated. Hardwood handle finished in mahogany lacquer.

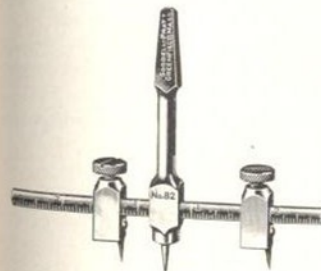
	Cutting edge	Length overall	Weight box	Code	Price each
No. 381	1 1/2"	8"	3/4 lb.	YUNDO	\$0.80
No. 381	2 1/2"	10"	1 1/8 lbs.	YOCYP	1.05
No. 381	3 1/2"	11"	2 1/4 lbs.	YODAK	1.20
No. 381	4 1/2"	12"	3 lbs.	YODEL	1.30

Packed six in a box

	One each	Weight	Code	Price set
No. 740 Set	1 1/2, 2 1/2 and 3 1/2" cutting edges	7/8 lb.	ZAVIT	\$3.05
No. 471 Set	2 1/2, 3 1/2 and 4 1/2" cutting edges	1 1/4 lbs.	YORCO	3.50

Packed one set in a box

NO. 82 GASKET CUTTER



An improved cutter with hardened and tempered tool steel cutters and point, both of which are easily replaceable. Cutters reversible to obtain maximum and minimum capacities. Heavy graduated steel beam flattened on top to give a good bearing for the knurled set screws. Hardened square bit brace shank. Made of steel throughout, well polished.

No. 82	Capacity	Weight	Code	Price each
	3/8 to 6"	9 oz.	YADVT	\$3.00

Packed one in a box

NOS. 92 AND 93 BRASS HAMMERS

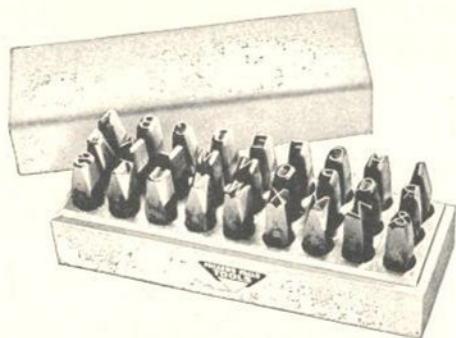


These brass hammers will be found convenient and practical for use on finished work, or on any work where a soft hammer is desired. The brass heads and steel shanks are both nicely polished, and have hardwood handles with a mahogany lacquer finish.

	Head	Length	Weight	Code	Price each
No. 92	3/8 x 1 3/4"	7 1/4"	5 oz.	YAUXT	\$1.25
No. 93	3/4 x 2 1/4"	8"	7 oz.	YAVEN	1.50

Packed one in a box

STEEL LETTERS AND FIGURES



These Steel Letters and Figures are made in two grades as specified below.

HAND CUT. The finest quality of stamp procurable. Every character guaranteed hand cut from the finest grade of tool steel. Recommended for use on all hard surfaces.

The faces are accurately formed, sharply cut and deeply relieved, insuring clear, legible impressions. Faces and well-formed heads are hardened and tempered with the utmost care to make these stamps the best and most economical for general industrial use on both hard and soft surfaces.

MACHINE MADE. The characters in these sets are formed on blanks of a good quality of tool steel by a specially developed machine process using superior master dies producing sharper, cleaner faces than usual. Ample relief is provided to produce clear, long-lived impressions.

Carefully hardened and tempered faces. A fine, durable stamp for general all around use on unhardened surfaces.

HAND CUT GOTHIC FACE

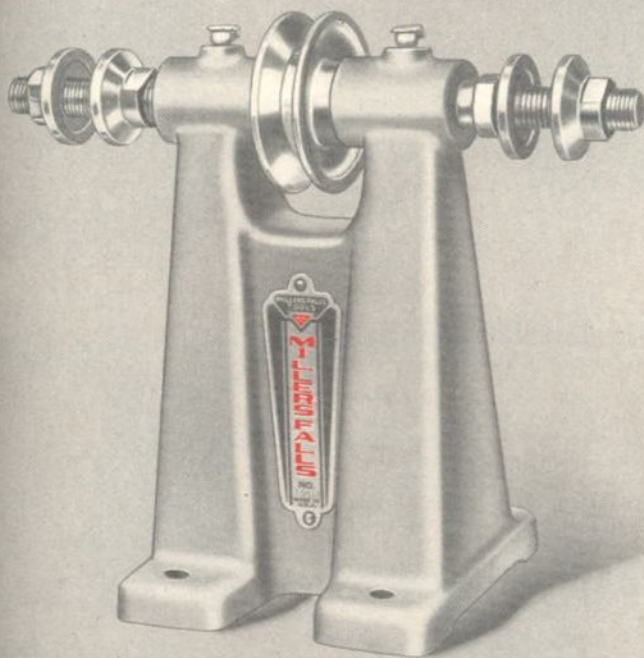
Height character	No. 1300 Letters per set	No. 1353 Figures per set	Single characters	Size stock
1/32"	\$15.75	\$5.25	\$0.65	1/4 x 2 3/8"
1/24"	14.15	4.70	.50	1/4 x 2 3/8"
1/20"	14.15	4.70	.50	1/4 x 2 3/8"
1/16"	11.25	3.75	.40	1/4 x 2 3/8"
3/32"	11.25	3.75	.40	5/16 x 2 3/4"
1/8"	11.25	3.75	.40	5/16 x 2 3/4"
3/32"	12.60	4.20	.50	3/8 x 2 7/8"
3/16"	14.15	4.70	.60	3/8 x 2 7/8"
1/4"	15.75	5.25	.70	7/16 x 3"
5/16"	17.30	5.80	.75	7/16 x 3"
3/8"	20.45	6.80	.85	1/2 x 3"
7/16"	25.20	8.40	.95	7/16 x 3 1/4"
1/2"	28.35	9.45	1.15	3/8 x 3 1/4"
5/8"	34.65	11.55	1.35	3/8 x 3 1/4"

MACHINE MADE ROMAN FACE

Height character	No. 1500 Letters per set	No. 1550 Figures per set	Single characters	Size stock
1/32"	\$7.50	\$2.50	\$0.40	7/32 x 2 3/8"
1/24"	7.50	2.50	.35	7/32 x 2 3/8"
1/20"	6.75	2.25	.30	7/32 x 2 3/8"
1/16"	5.25	1.75	.30	7/32 x 2 3/8"
3/32"	5.25	1.75	.30	7/32 x 2 3/8"
1/10"	5.25	1.75	.30	1/4 x 2 1/2"
3/16"	5.25	1.75	.30	1/4 x 2 1/2"
1/8"	6.00	2.00	.35	3/16 x 2 1/2"
3/32"	6.75	2.25	.35	3/16 x 2 1/2"
1/4"	7.50	2.50	.40	3/16 x 2 3/8"
5/16"	8.25	2.75	.40	3/8 x 2 3/8"
3/8"	9.75	3.25	.45	3/8 x 2 3/4"
7/16"	12.00	4.00	.55	7/16 x 2 3/4"
1/2"	13.50	4.50	.65	1/2 x 2 3/4"
5/8"	16.50	5.50	.70	5/8 x 3"

Sets of letters, sizes 1/32 through 1/4 inch consist of 28 characters, including & and a period.
 Sets of letters, sizes 3/16 through 1/2 inch consist of 27 characters, the period being omitted.
 Sets of figures consist of nine characters from 0 to 8, the 6 being used for the 9
 Each set packed in a well made, nicely finished wooden box.

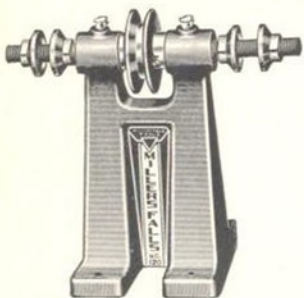
GRINDERS


**MILLERS FALLS
TOOLS**

 SINCE
1868

NO. 120 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings



A stocky machine with a solid frame and ample base to withstand years of service. The spindle is 1/2 inch in diameter and runs in two "Oilite" bronze bearings 1 1/4 inches long. Bearings are lubricated through good sized spring top oilers.

The spindle is threaded at both ends, 1/2 inch by 20 thread and carries two sets of steel flanges 1 1/4 inches in diameter to carry wheels up to 4 inches in diameter with a 3/4 inch face and 1/2 inch hole. The V-belt steel pulley is 2 1/4 inches in diameter. Designed to drive from above, behind or below.

Frame nicely finished in glossy battleship gray. Flanges and pulley nickel plated.

No. 120	Height 6"	Base 4 1/8 x 4 1/8"	Weight 5 1/4 lbs.	Code YEBAT	Price each \$4.00
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Packed one in a box

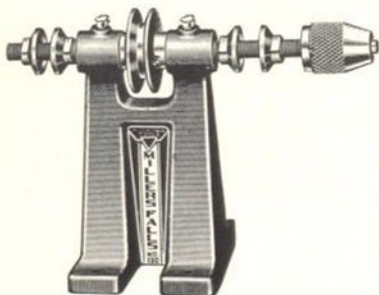
NO. 125 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Exactly the same as No. 120 above, but fitted with a clean, deep taper thread spindle in place of the wheel arbor on the left. This permits the use of buffing wheels and a great variety of wheels built on wood centers. On the right is a set of flanges and an all-steel three-jawed chuck that holds rods or drills from 0 to 3/8 inch in diameter. Height given is to center of spindle.

No. 125	Height 6"	Base 4 1/8 x 4 1/8"	Weight 5 3/4 lbs.	Code YEBVO	Price each \$4.50
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Packed one in a box



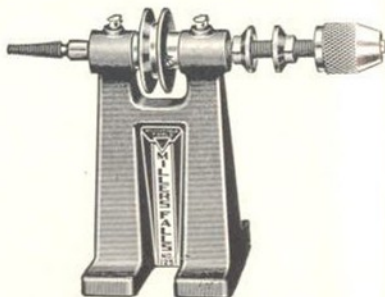
NO. 130 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Exactly the same as No. 120 above, but with a longer spindle on the right side. This is threaded 1/2 inch by 20 thread and on it is mounted an all-steel chuck with three hardened jaws that hold 0 to 3/8 inch round shank drills or rods. Flanges, chuck and pulley nickel plated.

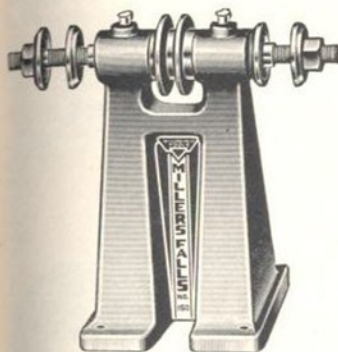
No. 130	Height 6"	Base 4 1/8 x 4 1/8"	Weight 5 1/2 lbs.	Code YECDY	Price each \$4.70
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Packed one in a box



NO. 150 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings



A heavier head with bigger base, greater height and 3/4 inch spindle running in two "Oilite" bronze bearings 1 1/2 inches long. The outboard portions of the spindle are turned down to 1/2 inch with 20 threads per inch. The bearings are oiled from two large spring top oil cups on the frame casting directly above the bearings. Arbor on either end of spindle with 1 1/4 inch flanges for holding wheels up to 6 inches or larger in diameter with 1 inch face and 1/2 inch hole. Flange nuts are hardened. The V-belt steel pulley is 2 1/4 inches in diameter and can be driven from above, behind or below.

Frame finished in glossy battleship gray enamel. Flanges and pulley nickel plated.

No. 150	Height 7 1/2"	Base 5 x 5"	Weight 11 lbs.	Code YEEVO	Price each \$8.00
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Packed one in a box

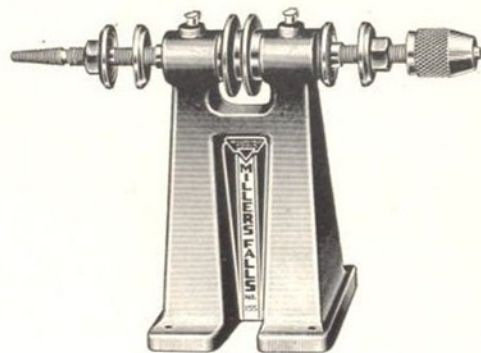
NO. 155 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Built on the same frame as No. 150. The spindle is 3/4 inch in diameter and carries a deep, clean taper thread and a pair of wheel flanges on one end and a pair of flanges and chuck on the other.

The wheel flanges are 1 1/4 inches in diameter and hold wheels up to 6 inches or larger in diameter with 1 inch face and 1/2 inch hole. Hardened steel flange nuts. The chuck has three hardened steel jaws and holds 0 to 3/8 inch drills or rods. V-belt steel pulley is 2 1/4 inches in diameter and drives from above, behind or below.

Frame finished in glossy battleship gray enamel. Flanges, pulley and chuck nickel plated.



No. 155	Height 7 1/2"	Base 5 x 5"	Weight 11 1/4 lbs.	Code YEFEE	Price each \$9.50
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Packed one in a box

WIRE WHEEL BRUSHES

These wire wheel brushes are rigid and compactly made and have more wires per square inch of brush surface than the average wheel. Wires are tightly compressed and give greater wearing strength to brush. They have interchangeable bushings which slip into the 2 inch standard size opening.

Arbor bushings can be furnished with 1/2 inch, 3/8 inch, 3/4 inch or 1 inch arbor hole.

It is important that the wanted diameter of the arbor hole be specified.

No.	Size	Weight	Code	Price each
No. 24	4 x 1"	1 lb.	DOBNA	\$ 3.22
No. 26	6 x 1 1/8"	1 3/4 lbs.	DOBNA	5.05
No. 28	8 x 1 1/2"	2 3/4 lbs.	DOBPO	6.14
No. 210	10 x 2"	5 1/4 lbs.	DOBRI	11.26
No. 212	12 x 2 1/2"	6 3/4 lbs.	DOBSU	13.46

Extra arbor bushings, per pair \$0.25

Packed one wheel in a box

GRINDING WHEELS

These are the best quality wheels made in the most commonly used grains and grades. Especially adapted for use on electric drills and grinders, grinding heads, etc.

No.	Size	Arbor Hole	Grain and Grade	Weight	Code	Price each
No. 1519	4 x 1/2"	1/2"	60 - M	3/4 lb.	DODAK	\$1.40
No. 636	6 x 1/2"	1/2"	36 - O	1 1/2 lbs.	DODFA	2.40
No. 660	6 x 1/4"	1/2"	60 - M	1 3/4 lbs.	DODGU	2.40
No. 1036	10 x 1"	3/4"	36 - O	7 3/4 lbs.	DODIL	8.30
No. 1060	10 x 1"	3/4"	60 - M	7 3/4 lbs.	DODOM	8.30
No. 2036	10 x 1 1/4"	3/4"	36 - O	8 1/4 lbs.	DODUX	9.60
No. 2060	10 x 1 1/4"	3/4"	60 - M	8 1/2 lbs.	DODET	9.60

Packed one wheel in a box

BUFFING WHEELS

These buffing wheels will meet the need for light, portable buffers for polishing a number of different objects that have formerly necessitated hand work. The size of the wheel is 6 inches with a 1/2 inch hole to fit an arbor. Two sections of 20-ply are required to make the wheel 1/2 inch thick.

No.	Weight	Code	Price each
No. 1521	1/4 lb.	DOGAT	2-20 ply sections \$1.20
No. 1721	1/4 lb.	DOGON	2-20 ply sections 1.40

Packed 2-20 ply sections in an envelope

NO. 1522 CARBON REMOVING BRUSH

Very useful in removing carbon from cylinder heads, tops of pistons, valve ports, etc. Leaves fine burnished surface upon which it is hard for carbon to collect.

Diameter of brush, 1/4 inches. Length of wire, 1 1/8 inches. Spindle, 1/4 inch diameter. Can be used in any 1/4 inch electric drill.

No.	Weight	Code	Price each
No. 1522	1/4 lb.	DOGON	\$1.45

Packed one in a box

WORKSHOP ACCESSORIES

The broad assortment of accessories illustrated and described on the next three pages multiplies many times the utility and pleasure to be derived from a variety of power workshop tools.

Some are for use in the live or tailstock spindles of lathes, some on the taper arbors of drill presses and others on the shafts of motors or any driven shaft 1/2 or 3/8 inch in diameter, either plain round or threaded 1/2 inch 20 thread. No. 986 can be used in the chuck of 1/4 inch drills for driving grinding wheels, wire or fibre brushes and buffing wheels. In the same way No. 992 can be used in an electric drill for polishing and sanding.

Taper shanks and sockets precision ground as are point centers. Parts hardened and tempered wherever it is essential.

SPUR CENTERS



Sharp spurs and hardened points insure positive drive for hard or soft wood and other non-metallic materials. Points are replaceable. Hardened, precision ground Morse Taper Shanks.

No.	Shank	Diam. Head	Weight	Price each
No. 920	No. 0 M.T.	1/2"	1 1/2 ozs.	\$0.80
No. 922	No. 1 M.T.	3/8"	2 1/2 ozs.	.90
No. 924	No. 2 M.T.	1"	5 1/2 ozs.	.95

SPUR CENTERS



Sharp, hardened points are replaceable. Four spurs insure positive drive in hard and soft wood and non-metallic materials. Shanks accurately bored to fit 1/2 inch or 3/8 inch round arbors. Two set screws.

No.	Fits Arbor	Diam. Head	Weight	Price each
No. 917	1/2"	3/4"	5 ozs.	\$1.00
No. 918	3/8"	3/4"	5 ozs.	1.00

CROTCH CENTER



For centering round and square stock for drilling. Accurately milled 90° crotch. Precision ground Morse Taper Shank.

No.	Shank	Diam. Head	Weight	Price each
No. 938	No. 2 M.T.	2"	17 ozs.	\$1.60

CUP CENTERS



Deep machined cups with sharp rims. The keen, hardened points are replaceable. Precision ground Morse Taper Shanks.

No.	Shank	Diam. Head	Weight	Price each
No. 910	No. 0 M.T.	1/2"	1 1/2 ozs.	\$0.75
No. 912	No. 1 M.T.	3/8"	2 1/2 ozs.	.80
No. 914	No. 2 M.T.	3/4"	5 1/2 ozs.	.95

CUP CENTERS



Sharp, hardened points are replaceable. Diameter of cups 3/8 inch. Shanks accurately bored to fit 1/2 inch and 3/8 inch round arbors.

No.	Fits Arbor	Diam. Head	Weight	Price each
No. 915	1/2"	3/8"	5 ozs.	\$1.00
No. 916	3/8"	3/8"	5 ozs.	1.00

SCREW FACE PLATES



For holding small blocks of non-metallic materials. Hardened screws. Plate 1 1/4 inches and 2 inches in diameter. Precision ground Morse Taper Shanks.

No.	Shank	Diam. Plate	Weight	Price each
No. 940	No. 1 M.T.	1 3/4"	5 ozs.	\$1.60
No. 942	No. 2 M.T.	2"	11 ozs.	1.60

WORKSHOP ACCESSORIES
FACE PLATE


Heavy 1/2 inch plate, 3 inches in diameter bored so spurs can be set at two diameters, 1 1/16 inches or 2 7/16 inches. Center threaded for either the hardened point or screw center regularly supplied. Two hardened spurs also regular equipment. Back threaded to fit 3/4 inch-16T Arbor.

No.	Fits Arbor	Diam. Plate	Weight	Price each
No. 926	3/4"-16T	3"	21 ozs.	\$2.00

TAPER ADAPTER


For adapting tools with No. 2 Morse Taper Shank to drill presses with No. 33 Jacobs Arbors. An accurately bored No. 2 M.T. socket in one end and a No. 33 Jacobs Arbor in the other. Fine ground finish.

No.	Adapts	Weight	Price each
No. 982	No. 2 M. T. to No. 33J	8 ozs.	\$2.60

SHAPER CUTTER ADAPTER


For using shaper cutters with holes 1/16 inch in diameter with 18 threads. Hardened left-hand lock screw. Shank accurately bored to fit a No. 33 Jacobs Arbor. Drift pin included.

No.	For Cutters	Fits Arbor	Weight	Price each
No. 980	1/16"-18T	No. 33 Jacobs	5 1/2 ozs.	\$1.50

SHAPER CUTTER ADAPTER


For shaper cutters with 1/2 inch holes. Maximum thickness of cutter 1 1/4 inches. Shank accurately bored to fit a No. 33 Jacobs Taper Arbor. Drift pin included.

No.	For Cutters	Fits Arbor	Weight	Price each
No. 978	1/2" Hole	No. 33 Jacobs	5 1/2 ozs.	\$1.40

DRILL PAD


Face of pad accurately ground at right angles to the shank. Pad diameter 3 3/8 inches. Precision ground Morse Taper Shank.

No.	Shank	Diam. Pad	Weight	Price each
No. 960	No. 2 M.T.	3 3/8"	21 ozs.	\$1.60

MORSE TAPER ADAPTER SLEEVE


A precision ground No. 2 Morse Taper Shank with a No. 1 Morse Taper Socket accurately bored in it. Makes it possible to use No. 1 Shanks in No. 2 Socket.

No.	Adapts	Weight	Price each
No. 944	No. 1 to No. 2 M.T.	3 1/2 ozs.	\$1.40

WHEEL ARBOR


For operating grinding and buffing wheels, wire and fibre brushes, etc., with 1/2 inch holes. Shank 1/4 inch in diameter can be used in any three-jawed chuck of 1/4 inch or larger capacity. Maximum distance between the 1 1/4 inch flanges is 1 inch. Arbor threaded 1/2 inch-20T.

No.	Shank	Weight	Price each
No. 986	1/4"	5 ozs.	\$0.65

SHAPER COLLARS


Set consists of six collars for use on 1/2 inch shaper spindles. Outside diameters 1 1/32, 3/4, 1, 1 1/4, 1 1/2 and 1 3/4 inches.

No.	Fits Spindle	Weight	Price set
No. 976	1/2"	4 1/2 ozs.	\$2.00

60° POINT CENTERS


Hardened, precision ground 60° centers with precision ground Morse Taper Shanks for use in tailstocks.

No.	Shank	Weight	Price each
No. 928	No. 0 M.T.	1 1/2 ozs.	\$0.65
No. 930	No. 1 M.T.	2 ozs.	.75
No. 932	No. 2 M.T.	5 ozs.	.80

COLLET CHUCK


Chuck has 1/2 inch capacity and is regularly supplied with one 1/4 inch collet. Shank is accurately bored to fit a No. 33 Jacobs Taper Arbor. Drift pin for removal from arbor included.

No.	Capacity	Fits Arbor	Weight	Price each
No. 984	1/2"	No. 33 Jacobs	5 ozs.	\$1.50

WORK ARBORS


For operating grinding, polishing, wire brush, buffing wheels, sanding drums, etc., with 1/2 inch holes. Maximum capacity between the 2 inch diameter flanges is 2 1/4 inches. Spindle is 1/2 inch in diameter with 20 threads per inch. Shanks accurately bored to fit round arbors. Two set screws.

No.	Fits Arbor	Weight	Price each
No. 956	1/2"	11 ozs.	\$0.80
No. 958	3/8"	12 ozs.	.80

CHUCKS WITH ROUND SOCKETS


Smooth operating 1/2 inch capacity chuck with three hardened, spring activated jaws for holding round shanks, drills and rods. Chuck backs threaded 1/2 inch-20T. Sockets accurately bored for round shanks.

No.	Chuck Capacity	Fits Arbor	Weight	Price each
No. 970	0 to 1/2"	1/2"	16 ozs.	\$1.50
No. 972	0 to 1/2"	3/8"	17 ozs.	1.50

60° BALL BEARING POINT CENTERS


Ball bearing 60° centers, hardened and precision ground concentric with the precision ground Morse Taper Shanks.

No.	Shank	Weight	Price each
No. 934	No. 1 M.T.	7 ozs.	\$3.20
No. 936	No. 2 M.T.	10 ozs.	3.20

COLLET CHUCKS


Made in two sizes, 1/4 inch and 1/2 inch respectively. Back threaded to fit an arbor 1/2 inch in diameter with 20 threads.

No.	Capacity	Fits Arbor	Weight	Price each
No. 974	1/4"	1/2"-20T	3 1/2 ozs.	\$1.05
No. 990	1/2"	1/2"-20T	12 ozs.	1.30

DRILL CHUCKS


Finely knurled shells with three hardened, spring actuated jaws for holding all drills or rods within their capacity. Back threaded to fit on 1/2 inch-20 thread spindles. No. 968 is chrome plated and has a spanner wrench.

No.	Capacity	Fits Arbor	Weight	Price each
No. 988	0 to 1/4"	1/2"-20T	5 ozs.	\$0.55
No. 966	0 to 1/2"	1/2"-20T	11 ozs.	.90
No. 968	0 to 1/2"	1/2"-20T	12 ozs.	1.30

CHUCKS WITH MORSE TAPER SHANKS


A smooth-acting chuck with three hardened, spring activated jaws for holding round shanks, drills and rods from 0 to 1/2 inch in diameter. Precision ground Morse Taper Shanks.

No.	Chuck Capacity	Shanks	Weight	Price each
No. 962	0 to 1/2"	No. 1 M.T.	15 ozs.	\$2.20
No. 964	0 to 1/2"	No. 2 M.T.	18 ozs.	2.20

WORKSHOP ACCESSORIES
WORK ARBORS WITH CHUCKS

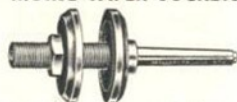

A useful combination of a 1/2 inch capacity three-jawed chuck and an arbor for grinding wheels, buffs and brushes with 1/2 inch hole. Maximum distance between the 2 inch flanges is 2 1/4 inches with chuck removed, 5/8 inch with chuck closed. Chuck back threaded 1/2 inch-20T. Shanks accurately bored to fit round arbors.

	Fits Arbors	Weight	Price each
No. 946	1/2"	22 ozs.	\$1.65
No. 948	3/8"	21 ozs.	1.65

ABRASIVE DISC HOLDER
New


For driving paper and cloth abrasive discs for grinding, polishing and sanding. Anchor screw holds discs securely without protruding beyond the face of the disc. Has 1/4 inch round shank for use in three-jawed chucks.

	Cap. Disc	Shank	Weight	Price each
No. 992	4 to 6"	1/4" Rd.	2 ozs.	\$0.70

**WORK ARBORS FOR
MORSE TAPER SOCKETS**


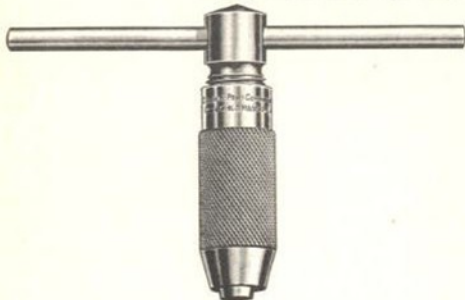
Work arbors accommodate grinding and buffing wheels, wire brushes, etc., with 1/2 inch holes. Maximum capacity between the 2 inch diameter flanges is 1 1/4 inches. Arbor threaded 1/2 inch-20T. Precision ground Morse Taper Shanks.

	Shank	Weight	Price each
No. 950	No. 0 M.T.	8 ozs.	\$1.05
No. 952	No. 1 M.T.	9 1/2 ozs.	1.10
No. 954	No. 2 M.T.	12 ozs.	1.15

ABRASIVE DISC HOLDER
New


Anchor screw holds 6 to 8 inch abrasive disc securely for grinding, polishing and sanding operations. Shank accurately bored to fit 1/2 inch-20T threaded arbor.

	Cap. Disc	Fits Arbor	Weight	Price each
No. 994	6 to 8"	1/2"-20T	5 ozs.	\$1.00

NOS. 88 and 89 TAP WRENCHES


Designed for securely holding taps, reamers, and other tools with square shanks that must be operated by hand. The handles are permanently fixed in the solid steel body. The chuck shell is long and nicely knurled to provide a powerful clamping action on the carefully heat-treated steel jaws. Jaws are self-opening.

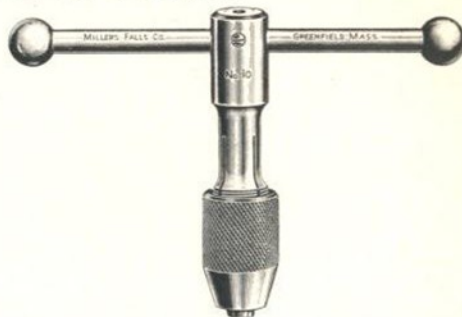
Entire tool nicely polished.

	Hand Tap	Machine Tap	Handle	Weight	Code	Price each
No. 88	1/16-1/4"	0-14	3 1/2"	3 1/2 ozs.	YATPO	\$0.95
No. 89	3/32-1/2"	7-20	4 1/2"	4 1/2 ozs.	YATYR	1.25

Packed one in a box

NOS. 10 to 12 TAP WRENCHES

These tools are designed for accurately centering and holding taps, reamers, small drills or other small tools. They are provided with adjustable handles with ball ends which may be slipped to the extreme left or right when greater leverage is desired or when the work is in close quarters. The set screw, illustrated, locks the handle at any desired position. The chuck shells are nicely knurled. The four jaws are carefully hardened and tempered and the sleeve case hardened.



	Hand Tap	Machine Tap	Handle	Weight	Code	Price each
No. 10	1/16-1/4"	0-14	3 1/4"	2 ozs.	NAVAL	\$1.00
No. 11	1/16-3/32"	0-16	4 3/4"	4 ozs.	NAVEW	1.25
No. 12	1/4-1/2"	14-20	5 1/4"	8 ozs.	NAVIC	1.80
No. 112	Set of one each Nos. 10, 11 and 12			18 ozs.	NAVY	4.30

Nos. 10 and 11 packed six and No. 12 two in a box
No. 112 one set in a box

NO. 3 HAND VISE


A powerful, efficient vise with a comfortable handle. Jaws and handles made of semi-steel. Jaw faces are nicely checked and provide a sure grip when tightened by means of the large steel thumb nut and screw bolt. The entire tool is nickel plated.

	Length	Width Jaws	Weight	Code	Price each
No. 3	5"	1 1/2"	1 lb.	REAKS	\$2.90

Packed one in a box

NO. 217 VISE


An extremely handy vise for holding a great variety of work on a bench drill or drill press bed or on the work bench. The fixed and movable jaws have parallel faces. A removable swivel jaw is also provided. Each base rail has two holes tapped 3/8 inch-20 for fastening to bed or bench. A hand screw for clamping to a bed is provided. Jaws, sides, base and bearing surfaces accurately machined. All other faces black enameled. Clamp screw polished.

	Maximum Capacity	Width Jaws	Weight	Code	Price each
No. 217	3 1/8"	2 3/4"	4 1/2 lbs.	DEIGN	\$6.20

Packed one in a box

NOS. 663-664 BENCH VISES

Rigid Twin Guide Rod Construction

The twin guide rod construction of these vises was originated by Goodell-Pratt and marked a big advance in vise construction.

They are operated by an accurately cut-steel feed screw. Two steel guide rods are provided to insure rigidity. All parts are carefully fitted so that the jaws are easily operated, but without lost motion. After the vise is completely assembled, the jaws are machined so that they will meet accurately. Clamp to bench up to and including 2 inches thick.

All steel parts are polished and all iron parts are finished in black enamel.

	Width Jaws	Jaws Open	Weight	Code	Price each
No. 663	1 1/2"	1 1/2"	2 1/4 lbs.	ZAGIT	\$2.80
No. 664	2 1/2"	2 1/2"	8 lbs.	ZAGOV	5.20

Packed one in a box



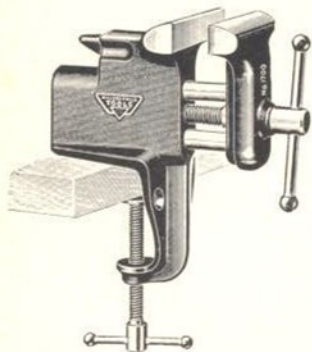
NOS. 161-1700 BENCH VISES

Rigid Twin Guide Rod Construction

These vises are similar to those above but not so fine a finish. The twin guide rod construction insures smooth action and rigidity of the movable jaw. Jaws milled parallel after the vise has been assembled. Small anvil on body casting. Body and movable jaws black enameled. All exposed steel parts polished. Clamp to bench up to and including 2 inches thick.

	Width Jaws	Jaws Open	Weight	Code	Price each
No. 161	2"	2"	3 3/4 lbs.	YEGCA	\$2.50
No. 1700	2 1/2"	2 1/4"	4 lbs.	YEGLO	2.60

Packed one in a box



NO. 18 SWIVEL VISE

Swivel Base. Twin Guide Rods

This vise is similar to No. 1700 above with the addition of a swivel base which permits the jaws to be swung to any desired angle. The swivel clamping mechanism is controlled by a small steel lever at the right. Twin guide rod construction gives smooth action and rigidity. Jaws 2 1/2 inches wide are milled after vise is assembled for close fitting. Clamps to bench up to and including 2 inches thick.

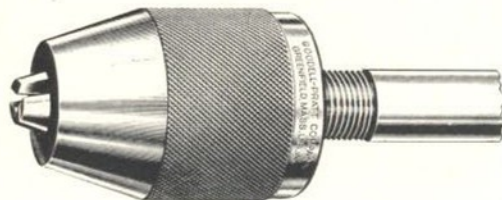
Body finished in red enamel. Movable jaw in black enamel.

	Width Jaws	Jaws Open	Weight	Code	Price each
No. 18	2 1/2"	2 1/4"	5 3/4 lbs.	YEGMA	\$3.80

Packed one in a box



DRILL CHUCKS



Straight Round Shanks

This chuck was originated by Goodell-Pratt over 40 years ago and has been supplied as regular equipment on millions of our hand and breast drills. It has been supplied in tremendous quantities to manufacturers as regular equipment on a wide variety of products. In every instance performance has been highly satisfactory.

Made entirely of steel with carefully hardened and tempered jaws actuated by three small coil springs. The shanks are carefully fitted to, and tested with, the chuck with which they are shipped. This and the care used throughout manufacture accounts for the high standard of trueness maintained at the very moderate prices at which they are offered.

These chucks can be easily tightened or loosened by hand. No spanner or wrench is required. The chuck shell is nicely knurled affording a positive and comfortable grip. The shanks are lathe ground to 1/2 inch diameter. Shell, back and shank nicely polished.

	Capacity	Shell Diameter	Weight	Code	Price each
No. 15	0 to 1/4"	1"	3/8 lb.	WYNUS	\$2.10
No. 15 1/2	0 to 3/8"	1 3/8"	5/8 lb.	WYPOS	2.60
No. 16	0 to 1/2"	1 1/2"	7/8 lb.	WYROW	3.40

Without Shanks

These are the same chucks listed above but without shanks.

	Capacity	Back Threaded	Weight	Code	Price each
No. 15	0 to 1/4"	7/16" (.443) 26NS	1/4 lb.	WEBAL	\$1.50
No. 15 1/2	0 to 3/8"	1 1/2" (.467) 24NS	1/2 lb.	WEBEN	2.00
No. 16	0 to 1/2"	7/8" (.560) 24NS	5/8 lb.	WEBIT	2.60

Packed one in a box

CHUCKS WITH MORSE TAPER SHANK



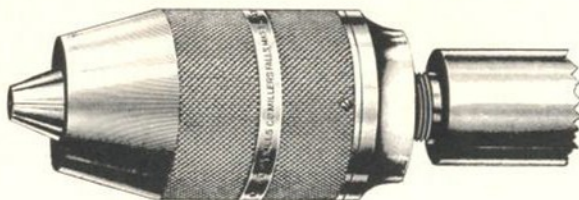
These drill chucks are identical to those listed above but are fitted with precision ground, No. 1 or No. 2, Morse Taper Shanks.

In ordering, please be sure and specify size shank desired.

	Capacity	No. 1 M.T.	No. 2 M.T.	Code	Price each
No. 15 M.T.	0 to 1/4"	3/8 lb.	1/2 lb.	WYORV	\$3.10
No. 15 1/2 M.T.	0 to 3/8"	1/2 lb.	3/4 lb.	WYRIT	3.70
No. 16 M.T.	0 to 1/2"	7/8 lb.	1 lb.	WYSET	4.80

Packed one in a box

MILLERS FALLS DRILL CHUCKS



These chucks have been used for years on Millers Falls Hand and Breast Drills, with complete satisfaction to the user. They are fitted with or without plain round shanks and hold round shank drills within their capacity securely and with surprising accuracy for the low price at which they are sold. Manufacturers interested in chucks in large quantities for equipment purposes are requested to ask for special, large quantity prices.

They are made entirely of steel with three hardened jaws actuated by concealed springs that cannot be damaged from without. The shells are nicely knurled to give a good grip for tightening and loosening.

The chucks listed below are regularly equipped with 1/2 inch round shanks 2 1/2 inches long.

	Capacity	Shell Diameter	Weight	Code	Price each
No. 5	0 to 1/4"	1"	1/2 lb.	EARLY	\$2.60
No. 6	0 to 3/8"	1 1/4"	3/4 lb.	EADEL	3.10
No. 7	0 to 1/2"	1 1/2"	1 1/4 lbs.	EAGLE	4.20

Furnished with flattened shank for set screw without extra charge.

Without Shanks

These are the same chucks listed above but without shanks.

	Capacity	Shell Diameter	Backs Threaded	Weight	Code	Price each
No. 5	0 to 1/4"	1"	7/16" (.432) 22NS	1/4 lb.	EARSH	\$2.00
No. 6	0 to 3/8"	1 1/4"	3/8" (.432) 22NS	1/2 lb.	EASTR	2.40
No. 7	0 to 1/2"	1 1/2"	3/4" (.560) 24NS	3/4 lb.	EAVES	3.40

Packed one in a box

NO. 153 BREAST DRILL CHUCK

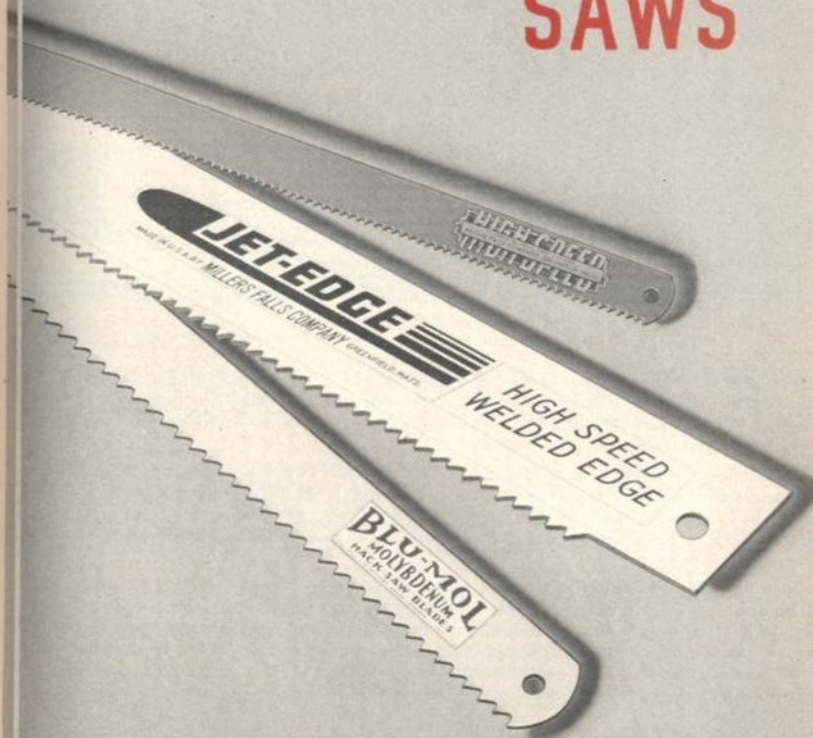


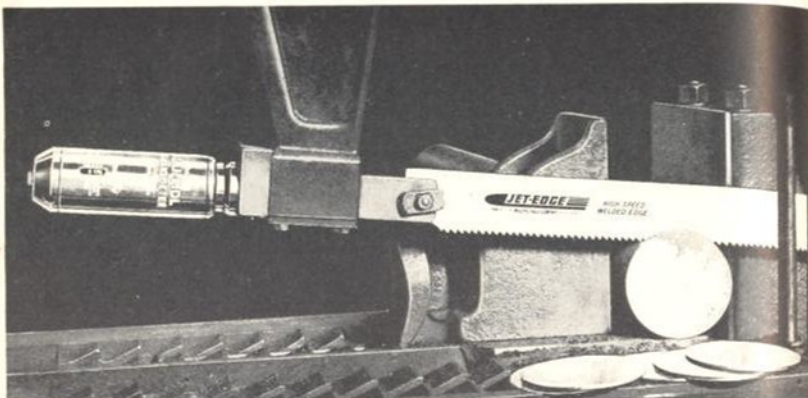
This chuck is interchangeable with the three-jawed chucks found on any Millers Falls or Goodell-Pratt Breast Drill. It is of the Universal type holding 1/8 to 1/2 inch round shank drills, square bit brace shanks or No. 1 Morse Taper Shanks.

Nicely polished and knurled.

	Capacity	Back Threaded	Weight	Code	Price each
No. 153	Universal	3/8" (.560) 24NS	3/4 lb.	DILAT	\$2.70

HACK SAWS



"BLU-MOL TENSIO METER"[®]*New*

U. S. Patent 2,337,629, others pending
Applies Floating Tension to Blades in Operation

Tension always has been recognized as essential to the best performance of hack saw blades. Just how much tension was necessary for the best performance of a given size blade has been, in the past, a matter of pure guess. Naturally, therefore, a precise method or device for applying tension of so many pounds per square inch was unknown.

In developing "BLU-MOL" and "JET-EDGE" Blades, which involved hundreds of exhaustive performance tests in which the importance of the right tension on any blade was found to be one of the key factors to efficient performance, the Millers Falls Company determined to get the facts and produce a device that would apply the critical tension to a blade and maintain that tension continuously while the blade is in use.

The "BLU-MOL TENSIO METER," a steel cylinder containing a heavy, precisely calibrated steel spring, is the result. It is installed quickly and easily on any of the better known hack saw machines because it screws directly onto the blade holder in place of the original tightening nut. A graduated index shows at a glance the exact number of pounds tension on the blade as the Tensiometer is turned on. It is equipped with a heavy, roller thrust bearing in its base so that tightening is extremely easy. A preloading device is incorporated so that only a turn or two is required for any tension up to 4,000 pounds.

In action the blade floats on the Tensiometer spring. By absorbing blade elongation caused by frictional heat or distortion of the eyes, the initial tension is continuously maintained within very close limits without attention from the operator. Blade life is greatly extended as any unusual shock or strain on the blade is immediately absorbed by the spring thereby minimizing breakage which is costly and at the same time adding a very worth-while safety factor.

With critical tensions worked out to a nicety and the "BLU-MOL TENSIO METER" to apply them with, the overall efficiency of any hack saw blade can be greatly increased, the performance improved and large savings made.

"Millers Falls" and "Universal" Distributors will gladly furnish additional information about "floating tension" and what it means to you and also arrange for a demonstration on your own machines without any obligation whatsoever. Write us for the name of the distributor nearest you.

For the proper tension on various sizes of blades see page 90.

HACK SAW BLADES

Millers Falls Company manufactures the broadest and finest line of hack saw blades in the world. Every step in their production from the selection of the alloy steels from which they are made, the machining and setting of the teeth and particularly the heat treatment employs the most modern methods, equipment and controls. They are conceived and made as high grade cutting tools that must deliver superior performance under widely varying and, in many instances, adverse conditions.

MILLERS FALLS
TOOLSSINCE
1868UNIVERSAL[®]

They are made in two brands of identical quality under the trade names "Millers Falls" and "Universal." The two registered trademarks appear above.

No matter which brand a distributor may offer it can be accepted with confidence and the utmost assurance that its performance cannot be excelled.

SELECTION OF HAND BLADES

Hand blade performance depends very largely on the selection of the proper blade for the particular cutting to be done. The proper type of blade and the number of teeth per inch or pitch deserve careful consideration.

Type of Blade—Cutting in drill rod, mild steels, non-ferrous metals and softer materials can be safely entrusted to Tuf-Flex or Standard Steel Blades. When the cutting is in the hard alloy steels such as manganese, chrome-nickel, stainless, etc., a high speed type such as "Blu-Mol," "Blu-Flex" or "Tungsten High Speed" should be chosen.

Number of Teeth per inch—In general, coarse teeth should be used on large sections particularly when cutting mild steels, cast iron, non-ferrous metals and all softer materials where ample chip clearance is needed. When the sections are smaller a finer tooth should be used. The finest teeth should be used in cutting very thin sections. The following table makes it quite simple to select the number of teeth that will give the best performance on a variety of materials.

Pitch	Kind or Shape of Material				
14 Teeth	Large Sections Over 1" Diameters	Aluminum Angle Iron Asbestos Babbitt	Brass Bronze Cast Iron Channels	Copper Hard Rubber I Beams Mild Steel	Plastics Rail, etc.
18 Teeth	Medium Sections Less than 1" Diameters	Alloy Steels Angle Iron	Armored Cable Cast Iron	Channels Drill Rod	Mild Steel Tool Steel
24 Teeth	Thin Sections Less than 1/4" Diameters	Alloy Steels Angle Iron BX	Cable Conduit Channels	Heavy Sheets Pipe Tubing	Wire Rope
32 Teeth	Very Thin Sections	Angle Iron BX	Cable Channels	Gutter Pipe Mouldings	Pipe Tubing

Operation—A well built frame with an ample tensioning device and sufficiently rigid to keep the blade in good alignment is essential to prevent unnecessary blade breakage. If possible the work should be held rigidly in a vise—if not it is advisable to use a flexible blade. Use care in starting the cut. Do not cut into a corner. Angle the starting cut so as to avoid any undue shock to a single tooth. A light, steady stroke should be used until cut is well started, then use long, steady strokes with sufficient pressure to keep the teeth cutting. Blades will wear out quickly if they are allowed to slip over the cut or are dragged over it on the recovery stroke. Blades will last much longer if properly lubricated when cutting all types of steel.

HAND HACK SAW DISPLAY UNITS

The three display units listed below, consisting of a display fixture and a very moderate quantity of carefully balanced pitches of 10 and 12 inch blades, will increase the sales of hand hack saws again and again. The display fixtures are entirely free. They are substantially made of wood and pressed wood panels nicely finished and silk screened in three colors: one combination of colors for the new Blu-Flex Blade, one for Tuf-Flex and one for Blu-Mol. The list price of the complete unit is the standard list price of the blades only. These displays require less than one half square foot of counter space and will make it highly profitable.



New

NO. 550 TUF-FLEX UNIT

Super-Flexible Super-Tough Special Alloy

Display unit finished in red, black and gold. The assortment of Tuf-Flex Blades (see following page) is as follows:

- 20 No. 53FH 10" — 18T
- 20 No. 63FH 10" — 24T
- 10 No. 73FH 10" — 32T
- 20 No. 55FH 12" — 18T
- 20 No. 65FH 12" — 24T
- 10 No. 75FH 12" — 32T

No. 550 Tuf-Flex Display Unit Complete \$8.80
Packed one unit in a carton Weight 4½ lbs.

NO. 1112 BLU-MOL UNIT

High Speed All Hard

Display unit finished in blue, red and gold. The assortment of Blu-Mol High Speed Blades (see page 91) is as follows:

- 10 No. 1018M 10" — 18T
- 10 No. 1024M 10" — 24T
- 5 No. 1032M 10" — 32T
- 10 No. 1218M 12" — 18T
- 10 No. 1224M 12" — 24T
- 5 No. 1232M 12" — 32T

No. 1112 Blu-Mol Display Unit Complete \$17.60
Packed one unit in a carton Weight 2½ lbs.



New

NO. 2222 BLU-FLEX UNIT

High Speed Flexible

Display unit finished blue, black and gold. The assortment of Blu-Flex Blades (see next page) is as follows:

- 10 No. 1018BF 10" — 18T
- 10 No. 1024BF 10" — 24T
- 5 No. 1032BF 10" — 32T
- 10 No. 1218BF 12" — 18T
- 10 No. 1224BF 12" — 24T
- 5 No. 1232BF 12" — 32T

No. 2222 Blu-Flex Display Unit Complete \$17.60
Packed one unit in a carton Weight 2½ lbs.

For ordering replacement stock for these displays see pages 89 and 91

STANDARD STEEL

STANDARD STEEL ALL HARD

High grade blades made of standard analysis of tungsten alloy steel with an exact and uniform heat treatment which makes them economical to use in mild steels, non-ferrous metals, etc.

They are made in two types: All Hard for work rigidly held, and Flexible for work away from the bench or in the hands of unskilled operators.

ALL HARD				Packed 100 in a box				
Length	Width	Thickness	Teeth per inch	Order by Numbers Below			Weight per box 100	List Price per 100
				14	18	24			32
10	½	.025	5A	13	23	33	3 ¾	\$8.00
12	½	.025	5A	15A	25A	35A	4 ¼	9.60
FLEXIBLE				Packed 100 in a box				
Length	Width	Thickness	Teeth per inch	Order by Numbers Below			Weight per box 100	List Price per 100
				14	18	24			32
10	½	.025	45A	53	63	73	3 ¾	\$8.00
12	½	.025	45A	55A	65A	75A	4 ¼	9.60

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

"TUF-FLEX" SPECIAL ALLOY

U. S. Patent No. 2,252,869
The finest of all general purpose saws

An entirely new type of flexible saw made of a patented special alloy steel. It is super-flexible, super-tough—practically unbreakable in use. The teeth will not strip when cutting even the lightest tubing, pipe or thinnest sheets.

It cuts drill rod and alloy steels that ordinary flexible blades cannot master. It takes mild steels and non-ferrous metals in its stride.

MADE IN HAND SIZES ONLY				Packed 100 in a box				
Length	Width	Thickness	Teeth per inch	Order by Numbers Below			Weight per box 100	List Price per 100
				14	18	24			32
10	½	.025	45FH	53FH	63FH	73FH	3 ¾	\$8.00
12	½	.025	45FH	55FH	65FH	75FH	4 ¼	9.60

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

"BLU-FLEX" HIGH SPEED

New Flexible, High Speed Blade

This remarkable new blade, made of fine quality, high speed molybdenum steel, cuts the cost of hand sawing hard alloy steels to the core and is so flexible that it is unbreakable in use. The high cost of breakage is entirely eliminated and 100% of the cutting value of the blade is assured.

The unique heat treatment provides a hard cutting edge and a soft, tough back. Cutting performance is equal in every way to an all hard blade.

MADE IN HAND SIZES ONLY				Packed 100 in a box				
Length	Width	Thickness	Teeth per inch	Order by Numbers Below			Weight per box 100	List Price per 100
				14	18	24			32
10	½	.025	1214BF	1018BF	1024BF	1032BF	3 ¾	\$32.00
12	½	.025	1214BF	1218BF	1224BF	1232BF	4 ½	38.40

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

SUGGESTIONS FOR SELECTION AND OPERATION POWER HACK SAWS

The selection and proper use of a power hack saw blade to cut the greatest amount of material smoothly and accurately at the lowest cost involves a number of important factors all of which must have careful consideration.

The length of the blade is, of course, determined by the size of the machine. Width and thickness depend on the size of the machine, the size and shape of the sections being cut and the feed to be used. The most efficient pitch—teeth per inch—depends on the kind of material being cut, its size and shape. Use four and six teeth for production cutting of large to medium solid sections—the former on softer, free-cutting materials where plenty of chip clearance is needed between teeth and the latter on harder materials. Use 10 teeth on very hard materials, small sections and structural shapes and pipe. In sizes where available, 14 teeth are best for small solid sections or bars, light angle irons, pipe and tubing.

In operation the blade must be tensioned properly if it is to cut true and perform its best. The cutting speed—strokes per minute—must take into consideration the kind of material being cut, the type of blade chosen and production requirements. For proper feed—pressure on the blade—which varies for different sizes and kinds of material and the size and type of blade used, the recommendations of the manufacturer of the machine should be followed.

For general recommendations of critical tensions, cutting speeds and pitches, follow the tables below or submit full details to us.

PITCHES AND SPEEDS FOR POWER HACK SAW BLADES

Material	Teeth per inch	Strokes per minute	Material	Teeth per inch	Strokes per minute
Alloy Steel	4-6	60-90	High Speed Steels	4-6	60-90
Aluminum Alloys	4-6	100-125	Machinery Steel	4-6	125
Aluminum, Pure	4-6	100-125	Malleable Iron	6-10	90-120
Brass Castings, Soft	6-10	125-150	Manganese Bronze	6-10	60
Brass Castings, Hard	6-10	100-125	Nickel Chromium Alloys	6-10	60
Bronze Castings	6-10	100-125	Pipe, Iron	10-14	125
Cast Iron	4-6-10	100-125	Rails	6-10	60-90
Copper	4-6	100-125	Stainless Steel	4-6	60
Carbon Tool Steel	6-10	90	Structural Steel	6-10	90-120
Cold Rolled Steel	4-6	125	Tubing, Thick Wall	6-10	120
Die Blocks	4-6	60-90	Tubing, Thin Wall	14	120
Drill Rod	10-14	90			

Use cutting compound on all of the above materials except Cast Iron

TENSION IN POUNDS PER SQUARE INCH FOR POWER BLADES

The following table of correct tension for given sizes of blades was determined for Millers Falls by the Massachusetts Institute of Technology in conjunction with the development of Blu-Mol and Jet-Edge Blades and the Blu-Mol Tensiometer. See page 86 on "Floating Tension" and how it can be applied.

Blade Width	Thickness	Blu-Mol Jet-Edge Tungsten High Speed	Blu-Mol Double Life
3/8"	.032	350 lbs.	
1"	.049-.065	1500 lbs.	2100 lbs.
1 1/4"	.065	2100 lbs.	2600 lbs.
1 1/2"	.072	2600 lbs.	2800 lbs.
2"	.085-.100	3000 lbs.	3200 lbs.
2 1/2"	.100	3500 lbs.	

"BLU-MOL" HIGH SPEED

Blu-Mol Blades, made from one of the finest high speed, molybdenum alloy steels, have earned an enviable reputation for low cost performance. The exact, closely controlled heat treatment gives a hard, abrasion resistant cutting edge that guarantees more cutting per blade than any blade of its type.

Blu-Mol Blades cut fast and cut true. Their uniformly fine performance in both hard alloy and mild steels and many other materials makes it the most economical blade for general, all purpose use. It is a blade that it pays well to become intimately acquainted with.



No. 7506 M
17" x 1 1/4" x .065 - 6T

Superior High Speed Performance

HAND SIZES

Packed 100 in a box

Length	Width	Thickness	Order by Numbers Below				Weight per box 100	List Price per 100
			14	18	24	32		
10	1/2	.025		1018M	1024M	1032M	3 3/4	\$32.00
12	1/2	.025	1214M	1218M	1224M	1232M	4 1/4	38.40

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

POWER SIZES

Packed 10 in a box

Length	Width	Thickness	Order by Numbers Below					Weight per box 10	List Price per blade
			4	6	10	14	18		
12	3/8	.032				1254M	1258M	3/8	\$0.64
12	1	.049				2414M		1 1/2	1.02
12	1	.065			2410M			2 3/8	1.02
14	1	.049			1410M	4414M		2 1/4	1.19
14	1	.065			4410M			2 3/4	1.19
14	1 1/4	.065	4504M	4506M	4510M			3 1/2	1.49
14	1 1/2	.072	4604M	4606M				4 3/8	1.97
17	1	.049					7414M	2 3/4	1.45
17	1	.065			7410M			3 3/8	1.45
17	1 1/4	.065	7504M	7506M	7510M			4	1.81
18	1	.065				8410M		3 1/2	1.53
18	1 1/4	.065	8504M	8506M	8510M			4 1/4	1.92
18	1 1/2	.072	8604M	8606M				5 1/2	2.53
18	2	.085	8884M	8886M				9 3/8	3.98
21	2	.085	1884M	1886M				10 1/4	4.65
24	2	.085	4884M	4886M				12 3/8	5.31
24	2	.100	4814M		3/8" Hole			14 1/2	6.12
30	2 1/2	.100	3114M		3/8" Hole			22 3/8	9.57

Blades .032 inch have 3/8 inch holes, all blades .049 to .085 inch inclusive have 1/2 inch holes and all blades .100 inch thick have 3/4 inch holes.

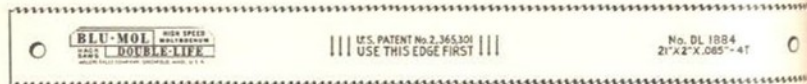
"BLU-MOL®" DOUBLE-LIFE

This remarkable blade is highly recommended for use in any plant where hacksawing operations and personnel are under careful supervision. Under such conditions it is capable of giving the lowest cost per cut of any blade made. It is showing large savings for the many metal working plants which have adopted it.

"Double-Life" is made of one solid piece of fine, high speed, molybdenum steel with teeth cut in both edges. The entire blade is painstakingly heat-treated to produce hard cutting edges. The center is then electrically annealed by a special process to produce a softer, very tough zone the entire length of the blade including the eyes, thus reducing breakage to a minimum.

The two cutting edges have a differential set. The first cut edge is set a few thousandths of an inch wider than the second cut edge allowing the second cut edge to follow the kerf of the former without any wear.

"Double-Life" with its two cutting edges gives twice the cutting value of a single edge blade for less than one third more.



High Speed Double Edge

New

Made in Power Sizes only

Packed 10 in a box

Length	Width	Thickness	Order by Numbers Below			Weight per box 10	List Price per blade
			4	Teeth per inch 6 10	14		
12	1	.049					
12	1	.065		DL2410	DL2414	2 ½ 2 ¾	\$1.20 1.20
14	1	.049			DL4414	2 ¾	1.50
14	1	.065			DL4410	3 ¾	1.50
14	1 ¼	.065	DL4504	DL4506	DL4510	4 ¾	1.90
14	1 ½	.072	DL4604	DL4606		5	2.50
17	1 ¼	.065	DL7504	DL7506	DL7510	4 ½	2.50
18	1 ¼	.065	DL8504	DL8506	DL8510	5	2.40
18	1 ½	.072	DL8604	DL8606		6 ¾	3.20
18	2	.085	DL8884	DL8886		10 ¼	5.10
21	2	.085	DL1884	DL1886		12 ¼	6.00
24	2	.085	DL4884	DL4886		14 ¼	6.80
24	2	.100	DL4814	2 ¾" Hole		16	7.90

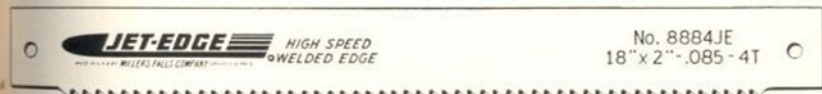
All blades .049 to .085 inch inclusive have ½ inch holes and all blades .100 inch thick have ¾ inch holes.

"JET-EDGE®" POWER BLADES

Never in the thousands of tests to which "JET-EDGE" Blades have and are being subjected has a "JET-EDGE" Blade broken when operating at anything approaching normal speeds and feeds. This unbreakability, proved in industry as well as in our laboratory, is highly important. First it makes your hacksawing safer and secondly it insures getting the last cents worth of cutting value from every blade.

"JET-EDGE" is the newest development and most sensational performer in the field. The cutting edge is a strip of super, high speed steel electrically welded to an extremely tough alloy steel back. This back absorbs the stresses and strains encountered in even the severest of operations and makes "JET-EDGE" unbreakable in use.

"JET-EDGE" has already been standardized by some of the largest users of hack saw blades in the country after exhaustive tests by their own production engineers. For safety, fast, clean cutting and accuracy they cannot be equalled.



Super, High Speed Unbreakable Blades

New

Made in Power Sizes only

Packed 10 in a box

Length	Width	Thickness	Order by Numbers Below			Weight per box 10	List Price per blade	
			4	Teeth per inch 6 10 14				
12	1	.049						
12	1	.065			2410JE	2414JE	2 2 ¾	\$1.20 1.20
14	1	.049			1410JE	4414JE	2 ¼	1.40
14	1	.065			4410JE		3	1.40
14	1 ¼	.065	4504JE	4506JE	4510JE		3 ¾	1.75
14	1 ½	.072	4604JE	4606JE			5	2.31
17	1	.049				7414JE	2 ¾	1.70
17	1	.065				7410JE	3 ½	1.70
17	1 ¼	.065	7504JE	7506JE	7510JE		4 ½	2.13
18	1	.065				8410JE	3 ¾	1.80
18	1 ¼	.065	8504JE	8506JE	8510JE		4 ¾	2.25
18	1 ½	.072	8604JE	8606JE			6	2.97
18	2	.085	8884JE	8886JE			9 ¾	4.68
21	2	.085	1884JE	1886JE			11 ¾	5.46
24	2	.085	4884JE	4886JE			14	6.24
24	2	.100	4814JE	2 ¾" Hole			15 ¼	7.20
30	2 ½	.100	3114JE	2 ¾" Hole			27 ¾	11.25

All blades .049 to .085 inch inclusive have ½ inch holes and all blades .100 inch thick have ¾ inch holes.

TUNGSTEN HIGH SPEED

The high speed steel from which these blades are made, a Tungsten 18-4-1 alloy, is particularly efficient in cutting highly abrasive materials such as stainless steel, monel metal, carbon tool steel, chrome and chrome-nickel steels, etc.

With their well-known heat and wear resistant qualities they can be operated at normal feeds and speeds in these materials cutting many square inches without undue dulling.

The keen teeth are precisely set. The hardness closely controlled and tested to assure uniformly high accuracy of cut and long-cutting life.



HAND SIZES

Packed 100 in a box

Length	Width	Thickness	Order by Numbers Below				Weight per box 100	List Price per 100
			Teeth per inch					
			14	18	24	32		
10	½	.025		1018	1024	1032	4	\$33.50
12	½	.025	1214	1218	1224	1232	4 ½	40.20

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

POWER SIZES

Packed 10 in a box

Length	Width	Thickness	Order by Numbers Below				Weight per box 10	List Price per blade
			Teeth per inch					
			4	6	10	14		
12	1	.049				2414	2	\$1.20
12	1	.065			2410		2 ½	1.20
14	1	.049				1410	2 ½	1.40
14	1	.065				4410	2 ½	1.40
14	1 ¼	.065	4504	4506	4510		3 ½	1.75
14	1 ½	.072	4604	4606			4 ¾	2.31
17	1	.049				7414	2 ½	1.70
17	1	.065				7410	3 ¾	1.70
17	1 ¼	.065	7504	7506		7510	4 ¼	2.13
18	1	.065				8410	3 ¾	1.80
18	1 ¼	.065	8504	8506	8510		4 ½	2.25
18	1 ½	.072	8604	8606			5 ½	2.97
18	2	.085	8884	8886			10	4.68
21	2	.085	1884	1886			11 ¼	5.48
24	2	.085	4884	4886			13 ¾	6.24
24	2	.100	4814			7 ¾ Hole	15 ¾	7.20

All blades .049 to .085 inch inclusive have ½ inch holes and all blades .100 inch thick have ¾ inch holes.

"BLU-MOL" HOLE SAWS

High Speed Heavy Duty "Follow through" Type

These new and outstanding heavy duty, high speed hole saws are rugged gang cutting tools. They cut holes, fast and clean, ⅜ to 4 ½ inches in diameter and up to 1 ⅛ inch thick in any machinable material such as hard and mild steels, aluminum, brass and bronze, plastics, iron or steel pipe, wood, etc. As the outside diameter of cut is slightly larger than the diameter of the body the saw follows completely through its own hole. This permits cutting through two or more walls or partitions.

The cutting edge is a specially selected high speed steel welded to a very tough alloy steel back which in turn is welded to the steel body which receives the mandrel that drives it.

These saws, using mandrels No. 5518 and No. 5540, can be used in any portable power tool equipped with a ½ inch or larger chuck or can be used in radial drills, lathes, drill presses, etc.



CUTTING DEPTH 1 ⅛"

HOLE SAWS

ALL SIZES—6 TEETH PER INCH

Code: NOBAC

Number	Diameter Saw	Price each	Pipe Sizes		Number	Diameter Saw	Price each	Pipe Sizes	
			Pipe Tap	Pipe Entrance				Pipe Tap	Pipe Entrance
510	⅜"	\$3.00			542	2 ⅝"	\$5.30	2 ½	
512	¾"	3.00			544	2 ¾"	5.30		
514	7 8"	3.00	¾	½	546	2 ⅞"	5.30		
516	1"	3.00			548	3"	5.30		2 ½
518	1 ⅛"	3.00	1	¾	550	3 ⅛"	5.30		
520	1 ¼"	3.00			552	3 ⅜"	5.30	3	
522	1 ½"	3.00			554	3 ⅝"	5.30		
524	1 ⅞"	3.00	1 ¼	1	556	3 ⅞"	5.30		
526	1 ¾"	3.00			558	3 ⅞"	7.00		3
528	1 ¾"	4.00	1 ½	1 ¼	560	3 ¾"	8.00	3 ½	
530	1 ¾"	4.00			562	3 ¾"	8.50		
532	2"	4.00		1 ½	564	4"	9.00		
533	2 ¼"	5.30			566	4 ⅛"	10.00		3 ½
534	2 ½"	5.30			568	4 ¼"	13.00		
536	2 ½"	5.30	2		570	4 ⅝"	15.50		
538	2 ¾"	5.30			572	4 ½"	18.00		4
540	2 ½"	5.30		2					

MANDRELS WITH HIGH SPEED PILOT DRILLS

The four mandrels listed below for driving the No. 500 Series of Hole Saws are all equipped with ¼ inch high speed pilot drills. A 12-inch extension is available.

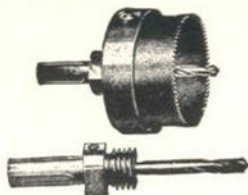
No.	Fitting Saws	Shank	Weight	Code	Price each
No. 5514	Nos. 510-518	¼" Rd.	¼ lb.	NOCAL	\$2.50
No. 5518	Nos. 510-518	7 16" Hex	¼ lb.	NOCET	4.00
No. 5540	Nos. 520-572	7 16" Hex	½ lb.	NODIM	6.00
No. 5572	Nos. 520-572	9 16" Hex	¾ lb.	NOFOX	6.00
No. 5500	12" Extension	7 16" Hex	7 8 lb.	NOGUN	4.00
	Extra High Speed Pilot Drills			NOGYS	1.50

Packed one Saw, Mandrel or Extension in a box

HIGH SPEED HOLE SAWS



Cup and Saw



Mandrel
Replaceable Saws and Drills



Saw

With a cutting edge or blade made of the finest molybdenum high speed steel hardened and tempered for fast cutting in the hardest alloy steels or any other machinable material. Originally developed for the use of automotive mechanics, steamfitters, plumbers, millwrights and electricians they are finding many cost saving applications on construction jobs and in industry.

They can be taken to the job since they are readily driven by any portable power tool with a 1/2 inch or larger chuck, or they can be used in a drill press, lathe and some other machine tools.

The saw or blade is rigidly locked in the body or cup by means of an expansion bolt. The assembled cup and saw is driven by a mandrel which screws into the top of the cup. The mandrel also holds and drives a pilot drill which enters the work ahead of the saw at the desired center of the hole to be cut. Knockout springs are supplied on mandrels of sizes 3/4 to 3 1/2 inches inclusive, to facilitate removal of the plug cutout. Larger sizes have knockout holes in the top of the cup.

Saws and pilot drills can be replaced quickly and easily at very small cost when worn out. The cups and mandrels can be used indefinitely making this the most economical saw of its type available.

CUTTING DEPTH 3/8 INCH

Size Inches	Cup and Saw No.	Cup and Saw Price	Saw Only No.	Saw Only Price	For Pipe Entrance Size		Size Inches	Cup and Saw No.	Cup and Saw Price	Saw Only No.	Saw Only Price	For Pipe Top Size	For Pipe Entrance Size
					For Pipe Top Size	For Pipe Entrance Size							
3/4	12	\$1.80	012	\$0.90		3/8	2 1/2	40	\$2.70	040	\$1.80		2
7/8	14	1.80	014	.90	3/4	1/2	2 3/8	42	2.70	042	1.80		2 1/2
1 1/8	15	1.80	015	.90			2 3/4	44	2.70	044	1.80		
1	16	1.80	016	.90			2 7/8	46	2.70	046	1.80		2 1/2
1 1/4	17	1.80	017	.90			3	48	2.70	048	1.80		
1 1/2	18	1.80	018	.90	1	3/4	3 1/8	50	2.70	050	1.80		
1 3/4	20	1.80	020	.90			3 1/4	52	2.70	052	1.80		3
1 7/8	22	1.80	022	.90		1	3 3/8	54	2.70	054	1.80		
2	24	1.80	024	.90	1 1/4		3 1/2	56	2.70	056	1.80		
2 1/2	26	2.20	026	1.30			3 3/4	58	3.10	058	1.85		3
1 3/4	28	2.20	028	1.30	1 1/2	1 1/4	4	64	3.40	064	2.15		3 1/2
1 7/8	30	2.20	030	1.30			4 1/8	66	3.40	066	2.15		
2	32	2.20	032	1.30		1 1/2	4 1/4	68	3.40	068	2.15		
2 1/4	33	2.20	033	1.30			4 3/8	76	4.30	076	2.45		4 1/2
2 1/2	34	2.70	034	1.80			5	82	4.60	082	2.75		
2 3/4	36	2.70	036	1.80	2		5 1/8	90	4.95	090	3.10		
2 7/8	38	2.70	038	1.80									

MANDRELS WITH PILOT DRILLS

No. 1218 for sizes Nos. 12 to 18
No. 2054 for sizes Nos. 20 to 56
No. 5890 for sizes Nos. 58 to 90
Extra Pilot Drills

Weight	Code
1/4 lb.	LUDAM
1/2 lb.	LUDET
1/2 lb.	LUDIZ
	LUDOR

Packed one Saw, one Cup and Saw or one Mandrel in a box

FLEXIBLE BACK METAL CUTTING BAND SAWS



For Straight, Contour or Profile Sawing

Made of tough alloy steel with a carefully hardened cutting edge and a softer, tough flexible back.

They cut fast and are long-lived. Careful selection of the type, pitch and cutting speed is essential for the best performance and economy.

Two types of teeth are available. "Regular" for ferrous metals—"Skip Tooth" for non-ferrous metals, wood, plastics, fibres, etc.

REGULAR TOOTH

In Coils (100', 250' or 500') or Cut to Length

Width Inches	Thickness	Teeth per inch	List Price per foot	Welds each
1/4	.025	24-32	\$0.12	\$0.60
3/8	.025	18-32	.12	.60
1/2	.025	14-24	.12	.60
3/4	.025	10-14	.12	.60
1	.025	10-12	.12	.60
1 1/4	.025	8-10	.128	.60
1 1/2	.025	6-10*	.136	.60
1 3/4	.032	8-10*	.168	.60
2	.032	6-8-10*-12*-14*-18	.192	.60
1	.035	6-8-10*-14	.24	.60

All 6 to 24 pitch saws have Raker Set—32 pitch have Wavy Set only.

*Pitches marked with asterisk are available in Wavy Set also.

SKIP TOOTH

In Coils (100', 250' or 500') or Cut to Length

Width Inches	Thickness	Teeth per inch	List Price per foot	Welds each
1/4	.025	4-6	\$0.12	\$0.60
3/8	.025	3-4	.128	.60
1/2	.025	3-4	.136	.60
3/4	.032	3	.192	.60
1	.035	2-3	.24	.60

REGULAR OR SKIP TOOTH

Cut to Length and Welded

Lengths Inclusive	Under 3/4"					
	Under 1/4"	1/4"	1/2"	3/4"	1"	1 1/4"
5' 6" to 6' 5"	\$1.32	\$1.37	\$1.42	\$1.61	\$1.75	\$2.04
6' 6" to 7' 5"	1.44	1.50	1.55	1.78	1.94	2.28
7' 6" to 8' 5"	1.56	1.62	1.69	1.94	2.14	2.52
8' 6" to 9' 5"	1.68	1.75	1.82	2.11	2.33	2.76
9' 6" to 10' 5"	1.80	1.88	1.96	2.28	2.52	3.00
10' 6" to 11' 5"	1.92	2.01	2.10	2.45	2.71	3.24
11' 6" to 12' 5"	2.04	2.14	2.23	2.62	2.90	3.48
12' 6" to 13' 5"	2.16	2.26	2.37	2.78	3.10	3.72
13' 6" to 14' 5"	2.28	2.39	2.50	2.95	3.29	3.96
14' 6" to 15' 5"	2.40	2.52	2.64	3.12	3.48	4.20
15' 6" to 16' 5"	2.52	2.65	2.78	3.29	3.67	4.44
16' 6" to 17' 5"	2.64	2.78	2.91	3.46	3.86	4.68
17' 6" to 18' 5"	2.76	2.90	3.05	3.62	4.06	4.92
18' 6" to 19' 5"	2.88	3.03	3.18	3.79	4.25	5.16
19' 6" to 20' 5"	3.00	3.16	3.32	3.96	4.44	5.40
20' 6" to 21' 5"	3.12	3.29	3.46	4.13	4.63	5.64

Price each
\$1.95
1.95
1.95
1.05

SPRING TEMPER METAL CUTTING BAND SAWS

MILLERS FALLS
SPRING TEMPER

This type of saw is made of the finest quality spring tempered steel which can readily be resharpened and reset.

Their applications for economical use should not be confused with those of the hard edge, flexible back type on the preceding page. They are recommended for cutting aluminum, magnesium, brass, thin metal sheets, plastics, fibre and similar materials.

In Coils (100' or up to 1000') or Cut to Length

Width inches	Thickness	Teeth per inch	List Price per foot	Weight each
¼	.025	8-10	\$0.14	\$0.50
⅜	.025	8-10	.15	.50
½	.032	8-10	.16	.50
½	.025	6-8-10	.17	.50
½	.032	6-8-10	.18	.50
¾	.025	4-6-8-10	.18	.60
¾	.032	4-6-8-10	.20	.60
¾	.035	4-6-8-10	.21	.60
¾	.035	4-6-8	.23	.60
1	.035	4-6-8	.28	.60
1 ¼	.042	3-4	.35	.70
1 ¼	.049	3-4	.38	.70

Deduct \$0.04 per foot if neither filed nor set; deduct \$0.0125 per foot if filed and not set; deduct \$0.0275 per foot if set and not filed.

Cut to Length and Welded

Lengths inclusive	¼" .025	⅜" .025	½" .032	⅝" .025	¾" .032	⅞" .025	1" .032	1 ¼" .035	1 ½" .035	1 ¾" .035	2" .042	2 ¼" .049
5' 6" to 6' 5"	\$1.34	\$1.40	\$1.46	\$1.52	\$1.58	\$1.68	\$1.80	\$1.86	\$1.98	\$2.28	\$2.80	\$2.98
6' 6" to 7' 5"	1.48	1.55	1.62	1.69	1.76	1.86	2.00	2.07	2.21	2.56	3.15	3.36
7' 6" to 8' 5"	1.62	1.70	1.78	1.86	1.94	2.04	2.20	2.28	2.44	2.84	3.50	3.74
8' 6" to 9' 5"	1.76	1.85	1.94	2.03	2.12	2.22	2.40	2.49	2.67	3.12	3.85	4.12
9' 6" to 10' 5"	1.90	2.00	2.10	2.20	2.30	2.40	2.60	2.70	2.90	3.40	4.20	4.50
10' 6" to 11' 5"	2.04	2.15	2.26	2.37	2.48	2.58	2.80	2.91	3.13	3.68	4.55	4.88
11' 6" to 12' 5"	2.18	2.30	2.42	2.54	2.66	2.76	3.00	3.12	3.36	3.96	4.90	5.26
12' 6" to 13' 5"	2.32	2.45	2.58	2.71	2.84	2.94	3.20	3.33	3.59	4.24	5.25	5.64
13' 6" to 14' 5"	2.46	2.60	2.74	2.88	3.02	3.12	3.40	3.54	3.82	4.52	5.60	6.02
14' 6" to 15' 5"	2.60	2.75	2.90	3.05	3.20	3.30	3.60	3.75	4.05	4.80	5.95	6.40
15' 6" to 16' 5"	2.74	2.90	3.06	3.22	3.38	3.48	3.80	3.96	4.28	5.08	6.30	6.78
16' 6" to 17' 5"	2.88	3.05	3.22	3.39	3.56	3.66	4.00	4.17	4.51	5.36	6.65	7.16
17' 6" to 18' 5"	3.02	3.20	3.38	3.56	3.74	3.84	4.20	4.38	4.74	5.64	7.00	7.54
18' 6" to 19' 5"	3.16	3.35	3.54	3.73	3.92	4.02	4.40	4.59	4.97	5.92	7.35	7.92
19' 6" to 20' 5"	3.30	3.50	3.70	3.90	4.10	4.20	4.60	4.80	5.20	6.20	7.70	8.30
20' 6" to 21' 5"	3.44	3.65	3.86	4.07	4.28	4.38	4.80	5.01	5.43	6.48	8.05	8.68

HACKSAW FRAMES



**MILLERS FALLS
TOOLS**

SINCE
1868

NO. 84 HACK SAW FRAME



The Finest Frame Ever Made

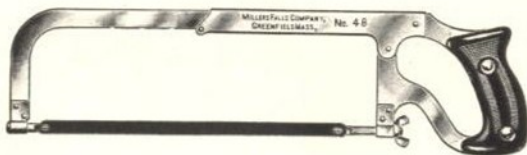
The frame is made of fine quality steel $\frac{3}{16}$ inch thick by $1\frac{1}{16}$ inch wide and the back is hard, tough steel $\frac{1}{8}$ inch thick. The rear portion of the frame, stamped from $\frac{3}{16}$ inch steel, affords a rigid support for the handle and a guard that gives complete protection to the hand. The handle is made of unbreakable, transparent red "Tenite" comfortably shaped and checked to afford a good grip.

Easily adjustable for 8 to 12 inch blades which are held by sturdy studs with heavy pins set in clips that permit facing the blade in four directions. Any desired tension on the blade can be secured by turning up the large wing nut at the rear. Equipped with a Millers Falls "Blu-Mol" High Speed Hack Saw Blade. Beautifully polished, heavily nickel plated and buffed throughout.

No. 84	Capacity	Depth	Stock	Weight	Code	Price each
	8-12"	3 $\frac{1}{4}$ "	$\frac{3}{16}$ x $1\frac{1}{16}$ "	1 lb. 15 ozs.	IGOTU	\$4.10

Packed one in a box

NO. 48 HACK SAW FRAME



For design, serviceability and price appeal in the higher quality field this frame has never been approached. Its unusual rigidity and fine balance, combined with its finely polished, nickel plated and buffed finish, are sure to make it one of the year's best sellers. The fully guarded handle is made of unbreakable, black "Tenite." It is nicely checked to afford a comfortable, sure grip. Adjustable for 8 to 12 inch blades. Equipped with one 10 inch blade.

No. 48	Capacity	Depth	Stock	Weight	Code	Price each
	8-12"	3 $\frac{1}{4}$ "	$\frac{3}{16}$ x $1\frac{1}{16}$ "	1 $\frac{3}{4}$ lbs.	INPAR	\$2.80

Packed one in a box

NO. 300 HACK SAW FRAME



New

The new lever tensioning device with which this fine new frame is equipped supplies more tension with less effort, easier and quicker blade changing, more accurate cutting and more cutting value from every blade. Tension is released by pulling down the lever that hugs the bottom of the frame below the handle. It is instantly restored after the blade has been changed and the lever snapped back into the normal position.

The heavy duty frame is very rigid insuring lasting alignment of the blade. It is made of $\frac{3}{16}$ x $\frac{3}{4}$ inch steel and the back is stamped $\frac{1}{16}$ inch hard steel as is the entire handle frame.

The handle is made of tough, unbreakable, red "Tenite" molded on in one piece. It gives a sure, comfortable grip. The frame has an unusually pleasing balance. Quickly adjustable for 10 or 12 inch blades which may be faced in any of four directions.

All exposed metal parts beautifully polished, nicked and buffed. A 10 inch Millers Falls "Tuf-Flex" Special Alloy, Flexible Blade is supplied with each frame.

No. 300	Capacity	Throat	Stock	Weight	Code	Price each
	10-12"	3 $\frac{7}{8}$ "	$\frac{3}{16}$ x $\frac{3}{4}$ "	2 lbs.	IBYOR	\$3.50

Packed one in a box

NO. 1027 HACK SAW FRAME



A fine quality frame that appeals instantly to the tool-wise purchaser. The heavy back reinforcement extends down the entire length of the molded black pistol grip handle making it practically unbreakable. The hang is excellent. Adjustable for 8 to 12 inch blades which can be faced in four directions. Equipped with one 10 inch blade. Finely polished, nickel plated and buffed.

No. 1027	Capacity	Depth	Stock	Weight	Code	Price each
	8-12"	3 $\frac{1}{4}$ "	$\frac{3}{16}$ x $1\frac{1}{16}$ "	1 $\frac{3}{4}$ lbs.	ICHNO	\$2.10

Packed two in a box

NO. 1237 HACK SAW FRAME


A substantial and serviceable frame with specially reinforced back and fitted with the popular black molded pistol grip handle with metal reinforcement its entire length. Easily adjustable for 8 to 12 inch blades which can be faced in four directions. Equipped with one 10 inch blade.

All exposed metal parts nickel plated.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 1237	8-12"	3 1/4"	3/16 x 1 1/16"	1 3/4 lbs.	INVER	\$1.50

Packed two in a box

NO. 99 HACK SAW FRAME


A serviceable frame offered at a very attractive price. The handle is made of black composition, reinforced its entire length, knurled and shaped to give a sure, comfortable grip. The balance is excellent. The frame construction is substantial and permits ample tension on the blade by means of a wing nut. Blade can be faced four ways. Equipped with one 10 inch hack saw blade. Quickly and positively adjustable for 8 to 12 inch blades.

All exposed metal parts nickel plated.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 99	8-12"	2 3/4"	5/32 x 1 1/16"	1 1/8 lbs.	INNOT	\$1.00

Packed two in a box

NO. 1934B HACK SAW FRAME


A sturdy, rigid frame built specially to meet Federal Specifications. It is easily adjustable for 8 to 12 inch blades which can be faced in any of four directions. Ample tension is secured by the wing nut on the outer stud. Finished in black "Ebonite" finish with the handle of mahogany lacquered hardwood.

No blade furnished with this frame.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 1934B	8-12"	3"	3/16 x 1 1/16"	1 1/8 lbs.	ICORT	\$1.20

Packed two in a box

NOS. 125 and 126 HACK SAW FRAMES


Well made, non-adjustable frames, low price. Made for 10 and 12 inch blades which may be faced in any one of four directions. Blade tension secured by turning the straight, mahogany finished, hardwood handle. One blade furnished with each frame. All exposed metal parts nickel plated.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 125	10"	3 1/4"	3/16 x 1 1/16"	1 lb.	IMBED	\$1.05
No. 126	12"	3 3/8"	3/16 x 1 1/16"	1 1/4 lbs.	IMBUE	1.20

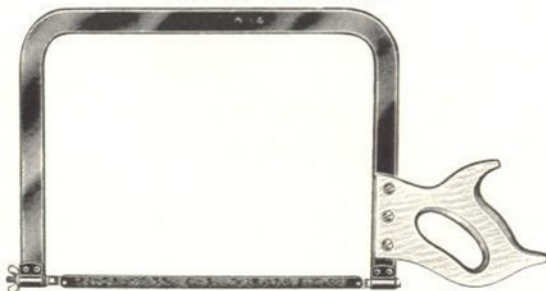
Packed two in a box

NO. 515A HEAVY DUTY HACK SAW FRAME


Made for extra heavy cutting of large rods, bars, rails, structural shapes, etc. The heavy backs have smooth, even bends. Ample blade tension is secured by turning the large wing nut on the outer stud. Blades can be faced in four directions. One 12 inch blade furnished with each frame. Attractively finished in black enamel with a mahogany finished hardwood handle.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 515A	12"	5 1/4"	1/4 x 1"	2 lbs.	ILUAC	\$2.95

Packed one in a box

NO. 24 RAIL SAW


A heavy duty frame with a deep 10 1/4 inch throat for cutting steel rails and large structural shapes. Handles are selected hardwood shaped to give a sure, comfortable grip. The large wing nut gives ample tension on the blade which can be faced in four directions. One 12 inch blade furnished. Nicely black enameled with handle in natural lacquered finish.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 24	12"	10 1/4"	1/4 x 1"	3 3/8 lbs.	ILECK	\$3.50

Packed one in a box

NO. 1723 HACK SAW FRAME


A serviceable, all-metal frame adjustable for 8 to 12 inch blades. Pressed steel pistol grip handle checked to give a good, sure grip. Blades can be faced four ways. Thumb nut provides ample tension on blade. One 10 inch blade furnished with each frame. Entire frame nickel plated.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 1723	8-12"	3 1/4"	3 1/8 x 1 1/8"	1 1/2 lbs.	IMPEL	\$1.75

Packed two in a box

NO. 168 HACK SAW FRAME


Frame well constructed throughout and fitted with an indestructible all-metal pistol grip handle. It is adjustable for 8 to 12 inch blades which may be faced in any of four directions. Thumb nut provides blade tension. Entire tool well nickeled. Equipped with one 10 inch blade.

No.	Capacity	Depth	Stock	Weight	Code	Price each
No. 168	8-12"	2 3/4"	3/22 x 1 1/8"	1 1/2 lbs.	INROT	\$1.50

Packed two in a box

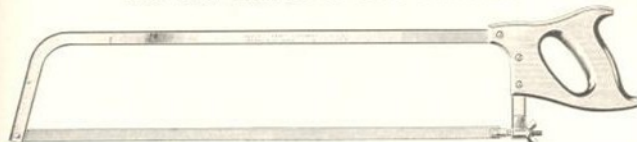
NO. 237 KEYHOLE HACK SAW


The new handle with which this famous little tool is now equipped will make it more popular than ever. It gives a surer grip and better control. It is nicely finished in red and black enamel.

The blade with 18 teeth per inch has carefully hardened and tempered teeth and a soft flexible back which minimizes breakage. It cuts nails, metal lath, plaster board, stucco, armored cable, conduit, packing, bone, bakelite, fibre, hard and soft wood, etc., etc. It can be used in countless places where the ordinary hack saw will not operate.

No.	Length Blade	Length Overall	Weight	Code	Price each
No. 237	5 1/2"	9 1/2"	4 ozs.	YEYAT	\$0.35
No. 7	Extra Blades 18 Tooth			YEYDB	Price doz. \$2.00
No. 8	Extra Blades 24 Tooth			YEYGA	2.00

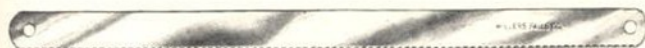
Packed six complete saws or one dozen blades in a box

NO. 320 BUTCHER SAW FRAMES


Sturdy, well balanced frames, well built throughout for long satisfactory service. The frame is made of nicely finished 1/4 by 3/4 inch round edge steel. Each frame is equipped with a high quality 5/8 inch spring tempered saw blade tensioned by means of a large wing nut operating on the rear stud. The comfortably shaped hardwood handle has a natural lacquered finish. Frame and parts nickel plated.

No.	Length	Depth	Stock	Weight	Code	Price each
No. 320	18"	5"	1/4 x 3/4"	1 7/8 lbs.	YILIX	\$2.00
No. 320	22"	5"	1/4 x 3/4"	2 1/8 lbs.	YILLA	2.20
No. 320	24"	5"	1/4 x 3/4"	2 3/8 lbs.	YILKO	2.30

Packed two in a box

NO. 420 BUTCHER SAW BLADES


Made from the finest quality of spring steel, 5/8 inch wide, tempered, ground and polished. The teeth are set and filed after setting, making a very free, fast-cutting blade. Ends are rounded and punched to length.

No.	Length	Width	Weight, Box	Code	Price doz
No. 420	18"	3/8"	5 lbs. 5 ozs.	YOJKO	\$2.00
No. 420	22"	3/8"	6 lbs. 3 ozs.	YOJLE	2.40
No. 420	24"	3/8"	7 lbs.	YOJMA	2.55

Packed one-half gross in a box

NO. 83 KITCHEN SAW

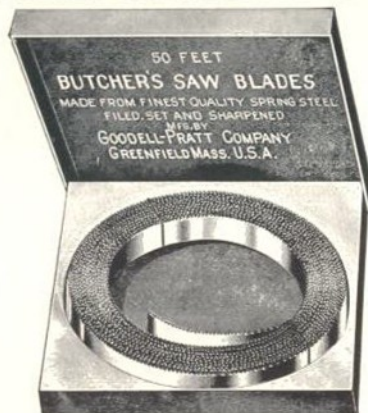

A well made, serviceable saw for use in the home for cutting green bone and frozen meat. The frame is made of 3/16 by 1/2 inch round edge steel. The handle is made of selected hardwood with a natural lacquer finish.

Each frame is equipped with a polished and tempered blade, 1/2 inch wide, which is filed and set for fast, free cutting.

No.	Length Blade	Stock	Weight	Code	Price each
No. 83	14"	3/16 x 1/2"	1/8 lb	YASIR	\$1.00

Extra Blades 14" 1/2 lb. per doz. YASFA \$1.65

Packed six frames in a box; six dozen blades in a box

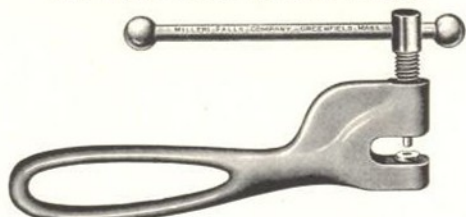
**MILLERS FALLS
TOOLS**SINCE
1868**BUTCHER SAW BLADES IN COILS**

These coils are made of one continuous strip of the finest quality, spring tempered steel with a bright, ground and polished finish. Blue finish can be supplied, if desired. The teeth are set and then filed after setting, making them exceptionally sharp and ready for immediate use. The teeth are correctly shaped and pitched — 11 teeth per inch — for free, easy cutting. They can be readily refilled with the proper equipment.

Supplied in either 25 or 50 foot coils put up in a box from which they are easily dispensed in the desired lengths.

	Length	Width	Teeth	Weight	Code	Price per coil
No. 251	25'	3/8"	11	1 1/4 lbs.	YIALM	\$3.70
No. 252	25'	3/4"	11	1 3/4 lbs.	YIANP	3.70
No. 311	50'	3/8"	11	2 1/2 lbs.	YIJUP	7.40
No. 312	50'	3/4"	11	3 1/2 lbs.	YIKAL	7.40

Packed one coil in a box

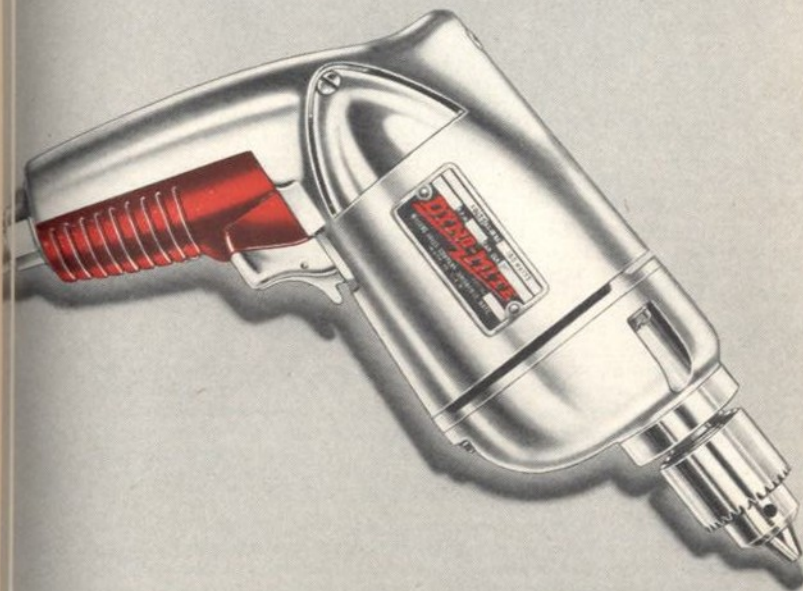
NO. 200 BUTCHER SAW PUNCH

There is so much variation in the sizes of various styles of butcher's saw frames that most of the better class of butcher's saw blades or coils are not punched when they leave the factory. All dealers in, and users of, these blades will find this inexpensive device very convenient for punching the necessary holes.

The frame is made of black enameled, malleable iron. The screw and crossbar are polished steel. The punch and die are made from fine tool steel carefully hardened and tempered to punch spring steel.

	Size Hole	Length	Weight	Code	Price each
No. 200	1/64"	5 3/4"	7 ozs.	YEMAJ	\$1.30

Packed one in a box

**ELECTRIC
TOOLS****MILLERS FALLS
TOOLS**SINCE
1868

MILLERS FALLS
PORTABLE ELECTRIC TOOLS

GENERAL UTILITY LINE

With this catalog we announce the first of a complete line of utility tools and accessories produced to meet the particular requirements of the individual tool user, such as, home owners, carpenters, farmers, model and pattern makers, hobbyists and a host of others who need power tools for intermittent use, at reasonable prices.

There are no finer tools in this class than the new 1/4 inch and 1/2 inch drills and stands listed on pages 110 and 111. They are attractive in appearance and are finished to reflect their fine construction throughout. Their power is conservatively rated giving a reserve safety factor not found in other comparable drills.

These tools will be distributed through the hardware jobbing trade and afford a satisfactory spread for the jobber and dealer alike.

Discounts to the trade will be quoted on request.

STANDARD INDUSTRIAL LINE

The regular line of Millers Falls Electric Tools, long and favorably known for their fine performance and dependability, is designed and engineered throughout for production use in industry and in the automotive, plumbing, heating, construction, electrical and many other fields. The wide range of capacities, speeds and power now available answer most every requirement encountered. New tools in development will make the line even more attractive as an outstanding merchandising opportunity.

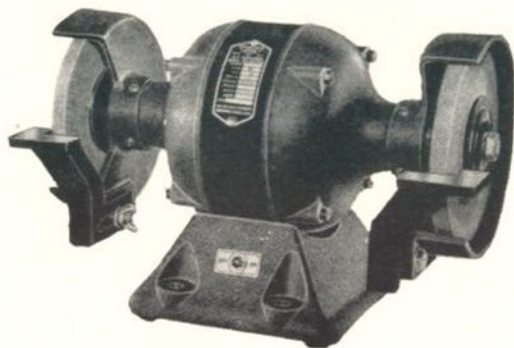
It is sold, on a selective basis, through recognized distributors and Millers Falls Co. will welcome the opportunity of discussing a distributorship with any qualified concern. Our policy and effective co-operation are liberal and fair in every detail and should lead to a mutually satisfactory association.

Write for complete electric tool catalog and further particulars.

SERVICE STATIONS

More than thirty strategically located service stations are available in the United States and Canada for the repair or reconditioning of Millers Falls Electric Tools. They carry complete stocks of parts and have the equipment and skilled personnel to render unusually prompt and efficient service.

GENERAL PURPOSE BENCH GRINDER



For Grinding, Wire Brushing and Buffing

A fine, new grinder that is rugged, powerful and reliable. The design of both the mechanical and electrical parts is excellent and the performance is comparable to that of much higher priced grinders.

It is nicely suited for a great variety of "touch up" jobs in industry and the requirements of automotive, plumbing and heating, electrical or other types of repair shops. It is equally valuable to home workshop owners, farmers and craftsmen in general.

The heavy 1 1/2 inch spindle runs on large, grease sealed, precision ball bearings. Greater distance between the motor housing and the wheels gives increased accessibility and a wider flexibility of use particularly on brushing, polishing and buffing. The heavy, wider wheel guards are mounted directly on the spindle housing. The work rests are easily adjustable.

OVERALL HEIGHT: 9 1/2 inches. Bench to center of spindle 5 13/16 inches.

MOTOR: Powerful 1/4 H.P. for 50/60 cycle A.C. only. 115 or 230 volts.

SPINDLE: Ball bearing. Overall length 14 1/2 inches.

WHEELS: One each coarse and fine, high grade abrasive.

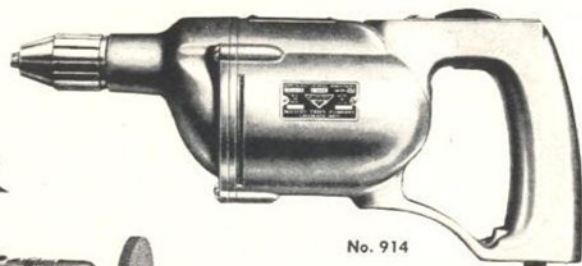
CORD: Six feet of high quality, three conductor with plug.

	Rating	Wheels	No Load R.P.M.	Shipping weight	Code	Price each
No. 60	1/4 H.P.	6 x 1 1/2 x 1 1/2"	3450	45 lbs.	NILUR	\$39.50
No. 867	Plain Eye Shields, per pair			1 3/4 lbs.	DORPA	3.00
No. 8610	Illuminated Eye Shields, each			3 1/4 lbs.	DOSSY	7.50
No. 7600	Cast Floor Pedestal, each			85 lbs.	DUBAX	23.00

For Grinding and Wire Brush Wheels, see pages 76 and 126

GENERAL UTILITY DRILL

¼ INCH

New


No. 914

New


No. 2014

 Approved by the
Underwriters
Laboratories


No. 2914

A truly wonderful ¼ inch drill developed with the sole objective of giving the individual craftsman a better drill than ever available before at such a low price.

It is a smooth running, powerful, sturdily built tool to meet the particular requirements of home owners, farmers, cabinet makers, carpenters, model and pattern makers, hobbyists and a great variety of light maintenance and repair shops. The pleasing lines, light weight and excellent balance are a promise of the long, dependable service it will deliver and which all tool-wise mechanics count on from a Millers Falls Tool.

A number of interesting attachments with accessories for use in this drill are in development and will be announced shortly. Sanding, grinding, buffing and wire brushing are among the operations that can be performed.

MOTOR: Universal for D.C. or A.C. — 25 to 60 cycles — 115 and 220/230 volts.

HOUSING: Die cast aluminum alloy. Hammered grey enamel finish.

CHUCK: New Millers Falls Precision.

GEARS: Alloy steel — grease lubricated.

BEARINGS: Ball thrust spindle — all others oil impregnated bronze.

SWITCH: Single pole — make and break.

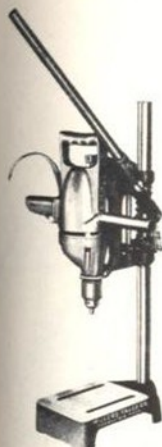
CORD: Seven feet of two conductor, Type SJ, with moulded rubber reinforcement and plug.

	Capacity in Steel	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 914	¼"	2500	2	11 ½"	3 ½ lbs.	PANON	\$19.85
No. 2115	Wheel Arbor for 4 x ½ x ½" Wheels						1.00
No. 2014	Bench Stand, Base 4 ½ x 2", Height to Chuck 5 ¾"						3.00
No. 2914	Bench Stand						To be announced

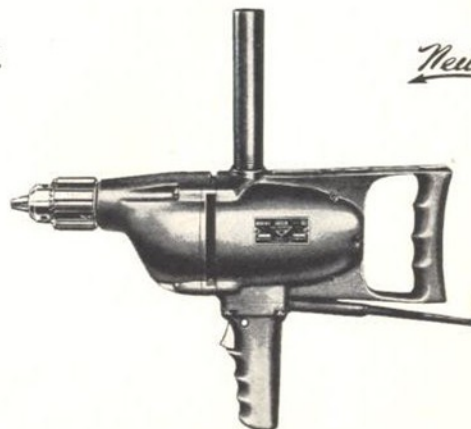
No. 914 can also be used in the No. 2912 Stand on the following page

GENERAL UTILITY DRILL

½ INCH

New


No. 2912

New


No. 912

Approved by the Underwriters Laboratories

The Best Dollar Value of any Drill Made

For the craftsman whose work requires a drill of ½ inch capacity this tool offers a remarkable value. It has more power, finer construction, better performance and less weight than any comparable drill on the market. It is ruggedly built, amply powered and heavily insulated.

MOTOR: Universal for D.C. or A.C. — 25 to 60 cycles — 115 and 220/230 volts.

HOUSING: Die cast aluminum alloy. Fine hammered grey enamel finish.

CHUCK: No. 338 Jacobs Standard key-operated.

CAPACITY: ½ inch in steel — ¾ inch in hard wood.

GEARS: Alloy steel — grease lubricated.

BEARINGS: Ball thrust spindle bearing — all others oil impregnated bronze.

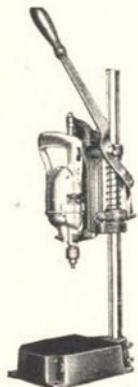
SWITCH: Double pole with lock — automatic trigger release.

CORD: Three conductor, Type SJ, cord with moulded rubber reinforcements and plug cap with grounding terminal connector.

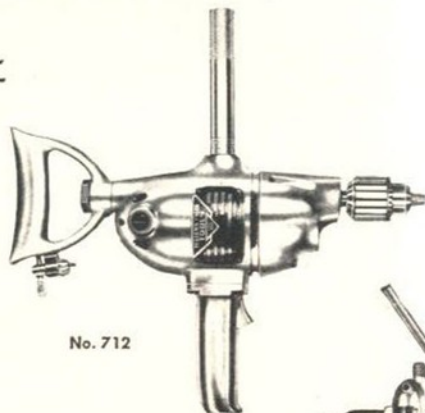
	Capacity in Steel	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 912	½"	450	3	15"	8 lbs.	PANNA	\$35.00

BENCH STAND

	For Drill No.	Max. Chuck to Table	Max. Chuck to Column	Max. feed	Weight	Code	Price each
No. 2912	912	14"	5 ¼"	3 ½"	26 lbs.	PARAB	\$16.80

DRILLS FOR INTERMEDIATE DUTY


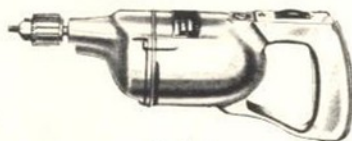
No. 1314

New


No. 712



No. 1242



No. 314

New

These two beautifully designed and engineered drills are built to a high standard to meet the requirements for a 1/4 inch and 1/2 inch drill for intermediate service on maintenance and repair jobs. On the work for which they are intended they can be depended on for smooth, uninterrupted performance.

MOTORS: Universal for D.C. or A.C.—25 to 60 cycles.

VOLTAGES: 115, 125, 150, 230 or 250.

CHUCK: Jacobs key-operated. **GEARS:** Heat-treated alloy steel.

BEARINGS: Ball thrust spindle—all others oil impregnated bronze.

SWITCH: Fully enclosed. Double pole.

CORD: Ten feet of high quality, three conductor with unbreakable plug.

	Capacity in Steel	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 314	1/4"	1800	2.2	12"	4 1/2 lbs.	DAMOY	\$25.00
No. 712	1/2"	400	3.5	15 1/2"	10 1/2 lbs.	DYNET	41.00

BENCH STANDS

	For Drill No.	Max Chuck to Table	Max. Chuck to Column	Max feed	Weight	Code	Price each
No. 1314	314	13 1/2"	5"	2 1/2"	25 lbs.	DYNUT	\$11.00
No. 1242	712	19 1/2"	7 1/2"	4 1/2"	77 lbs.	DYREX	27.50

Other accessories available

"DYNO-MITE"™ PRODUCTION DRILLS

New
"DYNO-MITE"™

U. S. Patents applied for

More Power More Production Longer Service

This new, improved line of "Dyno-Mite" drills has been augmented by the addition of a high torque model equipped with a 3/8 inch chuck nicely adapted to the airplane and many other industries. The motors are more powerful; finer materials used and fabrication held within the closest tolerances. "Dyno-Mite" drills are efficient, highly dependable production tools.

No. 220, 1600 R.P.M. is recommended for general service in steel, while the high speed models are ideal for drilling small diameter holes in non-ferrous metals with minimum burr. The slower speed, high torque models are recommended for stainless and the hard alloy steels up to 5/8 inch and full chuck capacity in non-ferrous metals.

MOTOR: Universal D.C. or A.C.—25 to 60 cycles. **VOLTAGES:** 115, 125, 220/230, 250.

HOUSING: Die cast aluminum, fine grey enamel finish.

CHUCK: Jacobs key-operated.

BEARINGS: Armature, intermediate gears and spindle, grease sealed, ball bearing.

GEARS: Heat-treated alloy steel throughout.

SWITCH: Double pole, with lock, automatic trigger release.

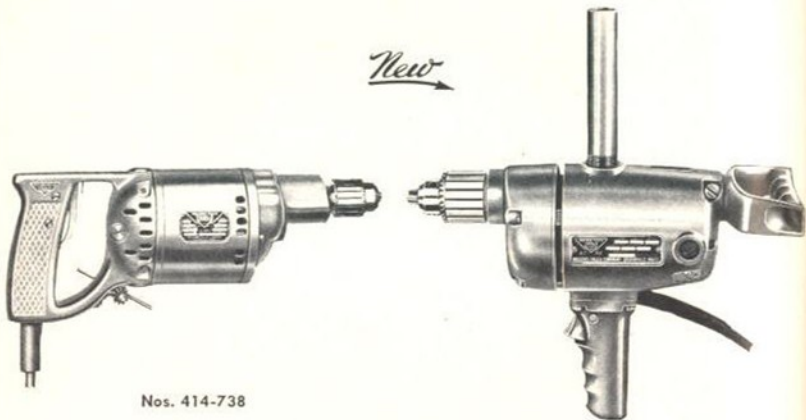
CORD and PLUG: Ten feet of three conductor heavy duty cord with plug.

	Chuck	Capacity Steel	Capacity Non-Ferrous	No Load Speed R.P.M.	Length overall	Weight	Code	Price each
No. 220	1/4"	1/4"	1/4"	1600	8 3/8"	3 lbs.	DARAT	\$38.00
No. 225	1/4"	3/8"	1/4"	2500	8 7/8"	3 lbs.	DAREL	38.00
No. 230	1/4"	3/8"	1/4"	3500	8 7/8"	3 lbs.	DAREX	38.00
No. 235	1/4"	1/2"	1/4"	5000	8 7/8"	3 lbs.	DARID	38.00
No. 240	3/8"	3/8"	3/8"	800	9 3/4"	3 1/2 lbs.	DAROW	44.00
No. 245	3/8"	3/8"	3/8"	500	9 3/4"	3 1/2 lbs.	DAROF	44.00
No. 250	3/8"	3/8"	3/8"	800	10 1/4"	4 lbs.	DARRO	46.00
No. 255	3/8"	3/8"	3/8"	500	10 1/4"	4 lbs.	DARYS	46.00
1090							DETRO	30.00

Universal Right Angle Drive Attachment for Nos. 220, 225, 230, 235, 240 and 245

See page 117 for Stands

ELECTRIC DRILLS

New

Nos. 414-738

No. 438

These are industrial drills of the highest order. They have been used on every sort of application and found tried and true. Constant improvement and refinement of their electrical units and the precision machining of all vital metal parts insures the long life and dependable service for which they are famous.

The new No. 438 replaces the No. 538 in response to a growing demand for a close coupled, heavy duty drill of $\frac{3}{8}$ inch capacity. It is one of the finest tools ever produced.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

CHUCKS: Jacobs key-operated.

GEARS, PINIONS and SPINDLES: Finest heat-treated alloy steel.

BEARINGS: Nos. 414 to 738 ball bearing armature with bronze spindle bearings.

No. 438 ball bearing armature and spindle. All others needle roller.

BRUSHES: Long life pigtail — accessible from without.

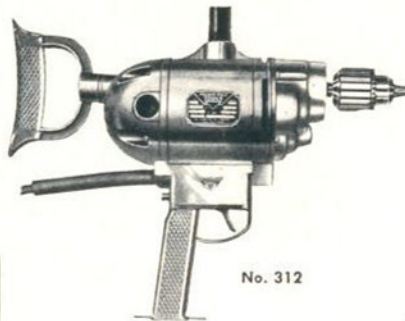
SWITCHES: Double pole, fully enclosed. Underwriter approved.

CORD: Ten feet of best rubber covered three conductor, Type S, with unbreakable plug.

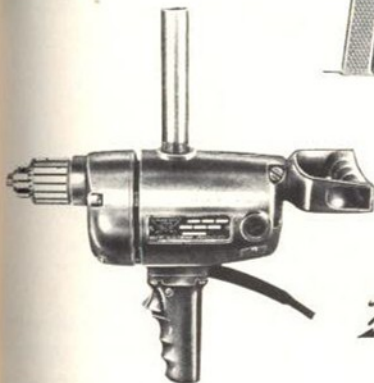
	Capacity in Steel	Standard No Load R.P.M.	Special No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 414	$\frac{1}{4}$ " Std.	1800	3000	2.5	12"	5 $\frac{1}{8}$ lbs.	DIANA	\$40.00
No. 514	$\frac{1}{4}$ " H.D.	2000	1000-1500-3000	3.0	14"	7 lbs.	DRAWL	50.00
No. 516	$\frac{3}{8}$ " H.D.	1500	2000	3.0	14"	7 $\frac{3}{8}$ lbs.	DROVE	52.00
No. 638	$\frac{3}{8}$ " Spl.	1000	1500	3.0	14"	7 $\frac{3}{8}$ lbs.	DINOX	53.00
No. 738	$\frac{3}{8}$ " H.D.	400	None	3.0	14"	8 $\frac{3}{8}$ lbs.	DAHOV	53.00
No. 438	$\frac{3}{8}$ " H.D.	900	None	4.5	14"	9 $\frac{1}{2}$ lbs.	DINNO	58.00

Special speeds as above \$2.50 extra. For Stands and other Accessories see pages 117 and 126.

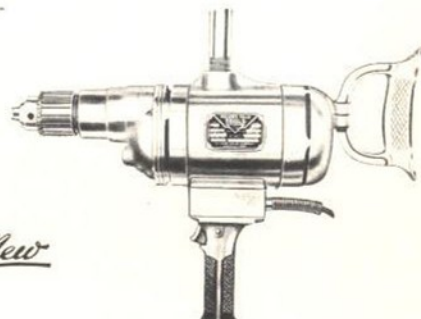
ELECTRIC DRILLS



No. 312



No. 512



No. 3012

New

The requirements for drills with $\frac{1}{2}$ inch capacity are completely covered by these three fine tools. They are rugged and powerful and built up to the high standards set for all Millers Falls Tools.

The addition of the new No. 512 answers the demand for a compact unit for use in close quarters or by operators who prefer this type of design for general use.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

CHUCKS: Jacobs key-operated.

GEARS, PINIONS and SPINDLES: Finest heat-treated alloy steel.

BEARINGS: No. 312 ball bearing armature. Spindle bronze sleeve with ball thrust bearing. All others bronze sleeve.

No. 512 ball bearing armature and spindle. All others needle roller.

No. 3012 ball bearing armature and spindle. All others bronze sleeve.

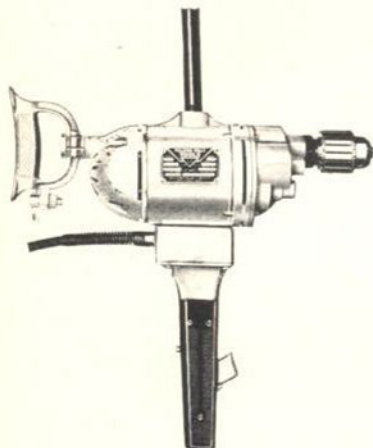
BRUSHES: Long life pigtail — accessible from without.

SWITCHES: Double pole, fully enclosed. Underwriter approved.

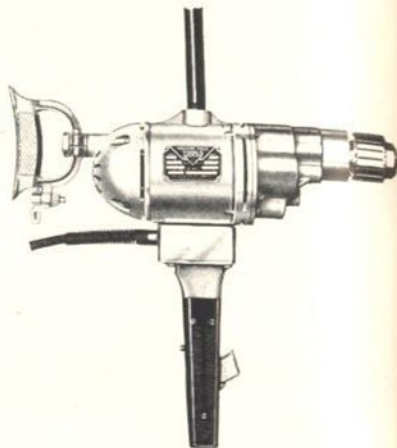
CORD: Ten feet of best rubber covered, Type S, three conductor with unbreakable plug.

	Capacity in Steel	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 312	$\frac{1}{2}$ " Std.	525	4.5	17"	15 $\frac{3}{8}$ lbs.	DIRCK	\$58.00
No. 512	$\frac{1}{2}$ " Std.	550	5.0	14"	9 $\frac{1}{2}$ lbs.	DIRL	58.00
No. 3012	$\frac{1}{2}$ " H.D.	650	5.5	18"	19 lbs.	DIRYL	75.00

For Stands and Accessories see pages 117 and 126

ELECTRIC DRILLS


No. 658



No. 734

Each of these rugged, heavy duty drills is available in two speeds which completely cover requirements in these capacities. They are perfectly suited for such jobs as driving pipe-threading machines, positive set cylinder grinders and hones and similar applications.

The spindles of Nos. 734 and 801 are mounted on Timken Taper Roller Bearings, otherwise these drills have precision ball bearings throughout.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts,

CHUCKS: Jacobs key-operated. No. 801 has No. 3 M.T. Socket.

BEARINGS: Ball bearing armatures; Nos. 734 and 801 Timken Roller Bearing.

GEARS, PINIONS and SPINDLES: Heat-treated alloy steel.

SWITCHES: H.D. double pole, fully enclosed. Underwriter approved.

BRUSHES: Pigtail — mounted on rocker ring.

CORD and PLUG: Ten feet best rubber covered, Type S, three conductor with armored plug.

	Capacity in Steel	No Load R.P.M.	Special R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 658	5/8" H.D.	475	700	6.5	19 1/4"	22 1/4 lbs.	DOTTY	\$ 92.00
No. 734	3/4" H.D.	400	275	7.5	21 3/4"	26 3/4 lbs.	DANDY	105.00
No. 801	1" Std.	275	400	7.5	23 3/4"	24 1/4 lbs.	DROXO	120.00

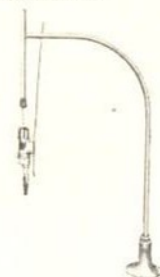
Special Speeds, \$2.50 extra. For Stands and Accessories see pages 117 and 126.

**DRILL AND SCREW DRIVER STANDS
AND ACCESSORIES**


No. 1514



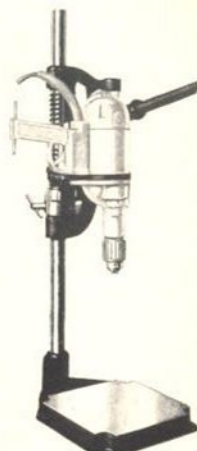
No. 3160



No. 3344



No. 55



No. 1238

The well-built stands listed below make efficient bench units of the Millers Falls Drills and Screw Drivers for which they are designed. The bases are large enough for stability and afford ample support to the heavy columns which carry the adjustable brackets that hold the tool. The feed levers with spring return provide ample drilling pressure or feed for driving screws or running nuts.

No. 3344 Goose Neck Stand provides spring suspension hand feed only.

	For Drills and/or Screw Drivers	Max. Chuck to Table	Chuck to Column	Max. feed	Base	Weight	Code	Price each
No. 1014	414, 514, 516, 638, 11 and 22	5 3/4"			5 x 2 1/2"	2 1/2 lbs.	DUCKE	\$ 3.50
No. 1238	312, 3012, 658, 734 and 801	16 "	7 3/4"	4 1/4"	10 x 10"	77 lbs.	DIWAC	35.00
No. 1514	414, 514, 516, 638, 11 and 22	13 1/4"	6 "	3 "	9 1/4 x 8"	37 lbs.	DIACK	20.00
No. 3160	All Dyno-Mites and 52	16 1/2"	5 "	2 7/8"	11 1/4 x 6 1/4"	29 lbs.	DIAGO	20.00
No. 3344	11, 22, 420, 430, 440, 445 and 50					7 lbs.	DAPIR	5.00
No. 5014	52	4 1/4"			4 1/2 x 2"	2 lbs.	DUCLD	3.50
No. 5120	438 and 512	14 "	7 1/2"	5 1/2"	8 1/4 x 8 1/4"	46 lbs.	DIWEL	26.00

Switch Controls and Limit Switches available for vertical stands

ACCESSORIES

	Accessory	For use with Stands and/or Drills Nos.	Weight	Code	Price each
No. 1511	Wall Brackets	1238, 1242, 1514 and 5120	2 1/2 lbs.	DAMEZ	\$ 2.00
No. 1517	Drill Vise (2 3/8 x 3")	All vertical stands	7 lbs.	DIFTS	4.50
No. 3163	Foot Treadle Feed	1238, 1242, 1514, 3160 and 5120	20 lbs.	DAPAT	8.00
No. 55	Power Feed	All drills with pipe side handles	3 lbs.	DRULO	19.95

"DYNO-MITE"® PRODUCTION SCREW DRIVERS



U. S. Patent No. 2,184,394 (others pending)

With the smooth, sensitive "ADJUSTOMATIC"® CLUTCH

New

"DYNO-MITE"®

On production assemblies where a myriad of screws or nuts must be driven rapidly, with nicety and uniform torque, thousands of manufacturers know and insist on the velvet smooth, vibrationless action and sensitive adjustability of Millers Falls "Adjustomatic" Clutches.

Driven by the new, more powerful "Dyno-Mite" power unit these tools have no equal in their field. They handle machine screw and wood screw applications within their capacity efficiently, dependably and with accelerated production.

The 1600 R.P.M. unit is recommended for general all around use. The 500 and 800 R.P.M. high torque units are recommended for all sheet metal screws, self-tapping screws and wood screws in hard wood. The 2500 R.P.M. unit is recommended for running nuts on long studs and similar applications.

Regular equipment consists of one each, bit and centering sleeve, for Nos. 6, 8 and 10 screws, and a clutch-adjusting spanner.

MOTOR: Universal D.C. or A.C.— 25 to 60 cycles. **VOLTAGES:** 115, 125, 220/230, 250.

CLUTCH: Patented "Adjustomatic" roller, selective torque.

BEARINGS: Ball bearing throughout. **GEARS:** Heat-treated alloy steel.

SWITCH: Double pole, with lock — automatic trigger release.

CHUCK: Quick change ¼" Hex.

CORD and PLUG: Ten feet of three conductor heavy duty cord with plug.

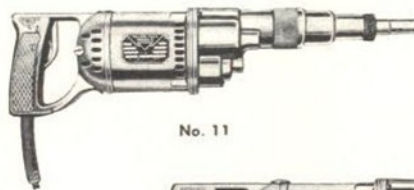
	Capacity		No Load Speed R.P.M.	Length overall	Net weight	Code	Price each
	Mach. screws	Wood screws					
No. 420	¼"	#10 — 1 ¼"	1600	12 ¼"	3 ¾ lbs.	DUGAN	\$66.00
No. 430	#10	#10 — 1 ¼"	2500	12 ¼"	3 ¾ lbs.	DUHET	66.00
No. 440	¼"	#12 — 1 ½"	800	12 ¾"	4 lbs.	DUIRO	66.00
No. 445	¼"	#12 — 1 ½"	500	12 ¾"	4 lbs.	DUJAR	66.00
No. 1025	Universal 25° Angle Attachment					DELRY	15.00
No. 1033	Universal 90° Angle Attachment					DEIGO	30.00

Complete assortment of Bits and Sockets for any application available. See page 117 for Nos. 3160 and 3344
Stands for bench operation of these drivers. Units equipped with reversing switches, \$7.50 extra.

SCREW DRIVERS AND NUT RUNNERS



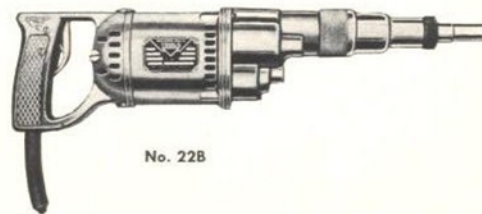
No. 50A



No. 11



No. 52A



No. 22B

The screw drivers and nut runners on this and the preceding page with the diversity of speeds provided and power available will handle any application within their rated capacities. Above all they are particularly valuable where sensitivity and uniformity of set are highly important.

The services of a corps of highly trained and experienced sales engineers are available to survey your requirements and make recommendations as to the most efficient units to use and, when necessary, work out special fixtures to secure the desired results at a high rate of production.

The "Adjustomatic" Clutch is the smoothest acting, most easily adjusted and sensitive device of its kind. No other clutch equals its performance. It's exclusive on Millers Falls Tools.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

CLUTCHES: Nos. 50A, 52A and 22B "Adjustomatic" selective torque. No. 11 adjustable double action.

GEARS, PINIONS and SPINDLES: Heat-treated alloy steel.

BEARINGS: Armature and main spindle ball bearing. Intermediate spindle bearings bronze sleeve.

EQUIPMENT: Nos. 50A and 52A — Bits and sleeves for Nos. 6, 8 and 10 Screws. No. 11 two bits and sleeves for Nos. 8 and 12 Screws. No. 22B two bits and sleeves for Nos. 12 and 16 Screws. Complete range of bits, sleeves and sockets available for all numbers.

SWITCHES: Double pole, fully enclosed.

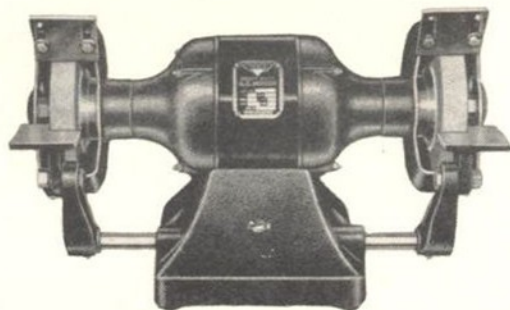
CORD: Ten feet of best rubber covered, Type S, three conductor with unbreakable plug.

	Capacity		STANDARD N. L. Speed R.P.M.	SPECIAL N. L. Speed R.P.M.	Amps Full Load	Length overall	Weight	Code	Price each
	Wood Screws	Mach. Screws							
No. 50A	#10 — 1 ½"	#12	800	1200 2000	1.2	12 ½"	4 ¾ lbs.	DEMUN	\$68.00
No. 52A	#10 — 1 ½"	#12	800	3000	1.2	12 ½"	4 ¾ lbs.	DENIG	62.00
No. 11	#16 — 2"	¾"	500	700-1000	2.5	16 ½"	7 lbs.	DELLA	78.00
No. 22B	#20 — 2 ½"	¾"	500	700-1000	3.5	18 ½"	9 ¾ lbs.	DELIB	92.00

Reversing switches, installed, \$5.00 extra. No extra charge for special speed.

For Stands, see page 117

HEAVY DUTY BENCH GRINDERS



This dependable line of grinders is equipped with new super-powered, precision-balanced motors, with extra fast capacitor starting with starting current requirements of less than 15 amperes and continuous induction run for steady, heavy duty service. Oversize, labyrinth sealed ball bearings insure trouble-free performance.

The new knee action tool rests give greater adjustability for straight or angle grinding. Heavier, safer, enclosed wheel guards are supplied. They are also wider to accommodate wire brush wheels.

One coarse and one fine, high grade abrasive wheel regular equipment.

	H.P.	Voltages	Wheels	No Load R.P.M.	Weight	Code	Price each
No. 76	1/3	110; 125; 150; 220; 250 50/60 cycle 1 phase	6 x 3/4 x 1/2"	3450	55 lbs.	NIBAC	\$ 54.50
No. 76	1/3	220/230 or 400/440 50/60 cycle 3 phase	6 x 3/4 x 1/2"	3450	55 lbs.	NIBEL	54.50
No. 76	1/3	115; 230 or 250 D.C.	6 x 3/4 x 1/2"	3450	60 lbs.	NIBUS	65.00
No. 77	1/2	110; 125; 150; 220; 250 50/60 cycle 1 phase	7 x 1 x 3/8"	3450	80 lbs.	NIDAR	78.00
No. 77	1/2	220/230 or 400/440 50/60 cycle 3 phase	7 x 1 x 3/8"	3450	80 lbs.	NIDEB	78.00
No. 77	1/2	115; 230 or 250 D.C.	7 x 1 x 3/8"	3450	90 lbs.	NIDUG	90.00
No. 81	1	110 1 phase 50/60 cycle	10 x 1 x 3/4"	1725	155 lbs.	NIKAS	120.00
No. 81	1	220 or 440 3 phase 50/60 cycle	10 x 1 x 3/4"	1725	155 lbs.	NIKED	120.00
No. 81	1	550 3 phase 50/60 cycle	10 x 1 x 3/4"	1725	155 lbs.	NIKOP	126.00

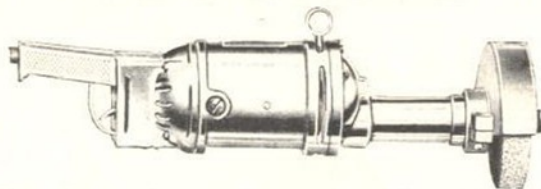
Single phase grinders are equipped with heavy duty switch and 10 feet of rubber covered cord.

Three phase grinders are equipped with a heavy duty switch but no cord.

Nos. 76 and 77 can be supplied with heavy steel guards at slight additional cost.

For Grinding and Wire Brush Wheels, see pages 76 and 126.

PORTABLE ELECTRIC GRINDERS



Designed throughout and powered for heavy duty snagging, grinding welds, wire brushing, removing rust, scale and grinding off rivets, pins, bolts and similar operations. Totally enclosed motors exclude injurious dust and grit.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

GEARS, PINIONS and Spindles: Heat-treated alloy steel

BEARINGS: Oversize ball bearings throughout **SWITCHES:** Double pole, fully enclosed.

WHEELS: No. 406B. High grade 6 x 1 x 3/8" No. 461 Bakelite bonded 6 x 1 x 3/8"

CORD: Ten feet of rubber covered, Type S, three conductor with armored plug.

	Diameter wheel	N.L. Speed R.P.M.	Amps Full Load	Length	Weight	Code	Price each
No. 406B	6"	3700	6.0	23 1/2"	23 1/4 lbs.	TRUMP	\$110.00
No. 461	6"	5500	6.0	23 1/2"	23 3/8 lbs.	TRUYT	110.00

Extra Wheels, No. 406B, \$3.75; No. 461, Bonded, \$5.00 each. Other accessories, see pages 76 and 117

HIGH SPEED HAND GRINDER



A light, compact tool essential in every toolroom or die shop for grinding clearances, shrinkage corrections, contouring, grinding cavities, profiling, etc. Motor and spindle housing made of tough moulded Bakelite making a cool tool easily operated with one hand

MOTORS: Universal D.C. or A.C.— 25 to 60 cycles — 115, 220 230 and 250 volts

CHUCKING CAPACITY: Collets 3/32" to 1/4" diameter

EQUIPMENT: Three wheel extensions, 1/4" arbor, 1/8" collet chuck, 1/8" chuck arbor, 1/8" extension arbor 1 1/4 x 1/4 x 1/4" and 3/8 x 1/8 x 3/8" grinding wheels, 3 mounted wheels and chuck wrench all packed in a wooden box

CORD: Ten feet of best rubber covered, Type SJ, three conductor with plug

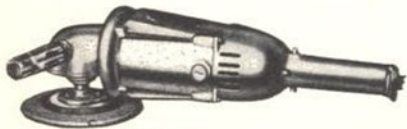
	N.L. Speed R.P.M.	Length overall	Weight	Code	Price each
No. 306B	18,000	11"	2 3/4 lbs	TRUTH	\$40.00
No. 6030	Lathe Adaptor \$5.00 No. 6131 Milling Machine Adaptor for 3/4, 1, 1 1/8" Spindles \$1.50				
No. 1524	3/32", 1529 1/8" and 1525 1/4" Collets				

ACCESSORIES FOR BENCH GRINDERS

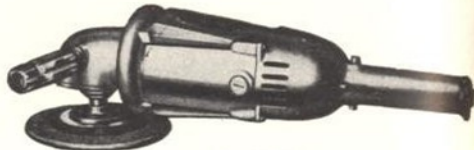
	Fitting	Weight	Code	Price each
No. 867	Plain Shatterproof Eye Shields	All	1 3/8 lbs.	DORPA Pair \$ 3.00
No. 8610	De Luxe Illuminated Eye Shields	All	3 3/4 lbs.	DOSSY 7.50
No. 7600	Cast Iron Floor Pedestal with water pot	60, 76	78 3/4 lbs.	DUSET 23.00
No. 7700	Cast Iron Floor Pedestal with water pot	77	80 3/4 lbs.	DUFOX 23.00
No. 8100	Cast Iron Floor Pedestal with water pot	81	106 lbs.	DUKAT 27.50
No. 7080	Twist Drill Grinding Attachment	60, 76, 77	4 3/8 lbs.	DYDAB 21.75
No. 7086	Recessed Grinding Wheel 6 x 1 x 1/2"	60, 76	2 1/8 lbs.	DYCEL 3.60
No. 7087	Recessed Grinding Wheel 7 x 1 x 3/8"	77	2 3/8 lbs.	DYFOM 4.20
No. 7088	Diamond Point Wheel Dresser		1/8 lbs.	DYJAK 5.50

POLISHERS, SANDERS AND GRINDERS


No. 27



No. 775



Nos. 900, 990

These versatile tools are designed for cleaning, waxing, rubbing, polishing, sanding, wire brushing and grinding on a great variety of production operations as well as maintenance and repair.

No. 27 Polisher is a light, compact tool specially designed for cleaning, rubbing, waxing and polishing to produce high lustre finishes. Its speed is selected to perform these operations efficiently, and without damage in the shortest possible time.

Nos. 775 and 900 are powerful production tools equipped with 7 inch pads which can be replaced with cup grinding wheels or cup wire brush wheels.

No. 990 is a heavy duty unit powered for heavy sanding, polishing, wire brushing, stone surfacing and grinding requirements.

A resilient, shock absorbing coupling, exclusive in these tools, minimizes vibration and greatly increases their life.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles— 115, 220/230 and 250 volts.

PADS: Patented, super-flexible. **SIDE HANDLES:** Reversible.

GEARS, PINIONS and SPINDLES: Heat-treated alloy steel.

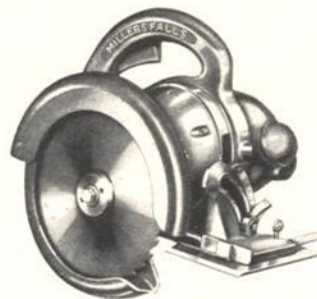
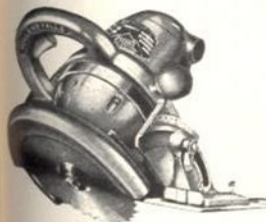
BEARINGS: Precision, grease sealed ball bearing throughout.

SWITCHES: Double pole, fully enclosed. Underwriter approved.

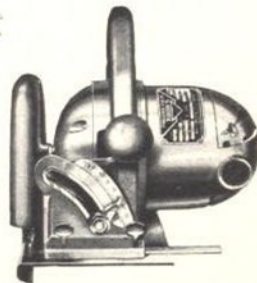
CORD: No. 27. Ten feet high grade, rubber covered, three conductor, Type S, with unbreakable plug. All others 15 feet best rubber covered, three conductor, Type S, with unbreakable plug.

	Diam. Disc	Rating	No Load R.P.M.	Amps Full Load	Weight	Code	Price each
No. 27	7"	Special	1600	3.5	8 1/4 lbs.	TAMOX	\$65.00
No. 775	7"	Standard	4600	6.5	13 3/4 lbs.	TECUL	65.00
No. 900	7"	Heavy Duty	4600	8.0	15 3/4 lbs.	TEFAX	78.00
No. 990	9"	Standard	3850	8.0	16 3/4 lbs.	TRYMO	90.00

For partial list of Accessories, see page 126

ELECTRIC SAWS

New


Powerful Fast Compact



These are powerful, heavy duty tools for continuous production work, ripping or cross cutting to their full rated capacity in hard or soft wood. They can also be used for cutting metals, stone, concrete, tile and many composite materials by employing the saws or abrasive discs specially developed for these applications. They are nicely balanced and easy to control. The telescoping saw guard provides maximum safety.

Quick, easy adjustment of depth of cut from zero to full capacity is made by simply loosening the knob handle and rotating the motor in the frame, elevating or dropping the saw to the desired depth. Angle adjustments are made by loosening the front binder lever at the front and setting at the desired angle on the quadrant from 0 to 45°.

The same cutting guide is used for all angles and the work line is kept clear by a strong air blast. A sturdy, adjustable ripping guide is regular equipment.

For use at a distance from nearest power connection the following gauges of extensions are recommended: 50 feet 12 gauge; 100 feet 10 gauge, and 200 feet 8 gauge.

MOTORS: Universal for D.C. or A.C. up to 60 cycles.

VOLTAGES: 110/115V Standard. 220/230V and 250V also available.

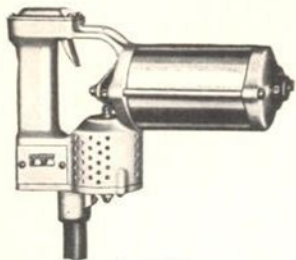
GEARS: Precision cut and hardened, helical, alloy steel gears.

BEARINGS: Precision ball bearings throughout.

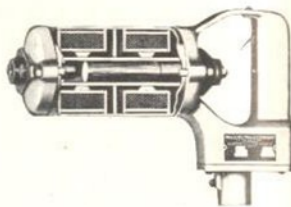
STANDARD EQUIPMENT: One high quality standard combination saw blade, 15 feet of heavy three conductor cord with plug, rip guide, flange spanner, hex key for arbor screw and a rugged, lacquered metal carrying case.

	Diam. Saw	Maximum Cut Rt. Angle	H.P.	Speed N.L. R.P.M.	Net Weight	Shipping Weight	Code	Price each
No. 850	9"	3 1/4" 2 3/4"	1	4000	20 1/2 lbs.	42 1/2 lbs.	SLITO	\$152.00
No. 1050	10"	3 3/4" 2 3/4"	1 1/4	3800	22 3/4 lbs.	44 1/2 lbs.	SMARY	180.00

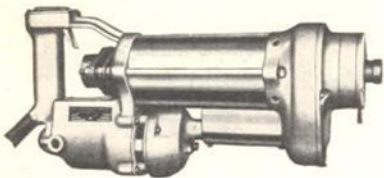
Each tool packed in a substantial, nicely finished metal carrying case in a corrugated container

ELECTRIC HAMMERS


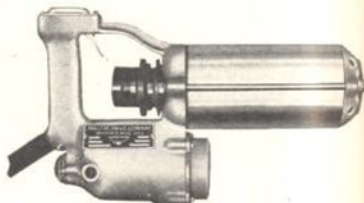
No. 1558

New


No. 1716 Sectional View

New


No. 4016



Nos. 2516 and 3216

Millers Falls Hammers have only one moving part—the internal solid steel hammer head which strikes 3600 powerful blows per minute, actuated by powerful electro magnets. There are no motors, gears, shafts or bearings to wear out, under the constant vibration. They are long lived, dependable and trouble free.

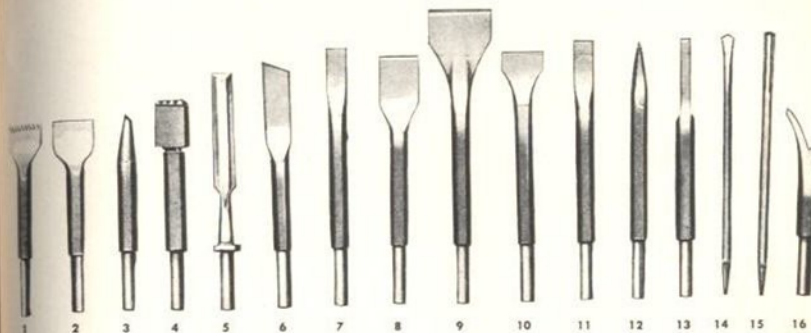
No. 1558, superseding the old No. 1058, is completely self-contained with the rectifier unit built into the handle. Plugs directly into the nearest 110 volt A.C. outlet to operate.

No. 4016 is an entirely new tool which automatically rotates the drill bit. A suitable clutch mechanism is included to prevent bit breakage in case of binding. It is the fastest cutting hammer made using carbide tipped, spiral drills.

Nos. 2516, 3216 and 4016 have built-in power cooling units.

	Capacity	KW	Length	Weight	Code	Price each
No. 1558	3/8"	.155	10"	11 lbs.	ACFGK	\$115.00
No. 1716	1 1/8"	.355	15"	17 lbs.	AGILO	160.00
No. 2516	1 1/2"	.620	15 3/4"	22 lbs.	AMNAR	210.00
No. 3216	2"	1.000	15 1/2"	25 lbs.	AMOQT	240.00
No. 4016	2"	1.650	18"	38 1/2 lbs.	ANITA	295.00

Prices above are for 110 volt, 60 cycle, A.C. units. For 220 volt, add \$10.00. For 50 cycle, 110 or 220 volt add \$10.00. For 25 cycle, 110 or 220 volt add \$20.00.

ELECTRIC HAMMER TOOLS

HIGH GRADE STANDARD ROUND SHANK TOOLS

Tool	Fitting No. 1558		Fitting all others	
	No.	Price each	No.	Price each
1 Buhr Stone Drilling Chisel (Toothed)	No. 1L	\$3.50	No. 1H	\$5.00
2 Buhr Stone Dressing Chisel (Plain)	No. 2L	3.00	No. 2H	4.00
3 Round Nose Chipping Chisel	No. 3L	2.40	No. 3H	3.60
4 Bush Hammer	No. 4L	6.00	No. 4H	8.00
5 3/4 Inch Wood Chisel	No. 5L	6.00	No. 5H	7.00
6 Mortar Cutting Chisel	No. 6L	3.00	No. 6H	4.00
7 Calking Tool	No. 7L	3.25	No. 7H	4.25
8 Scaling Chisel	No. 8L	3.00	No. 8H	3.50
9 Brick Cleaning Chisel	No. 9L	4.00	No. 9H	5.00
10 2 Inch Cutting Chisel			No. 10H	4.00
11 Cold Chisel	No. 11L	2.00	No. 11H	2.50
12 Stone Point	No. 12L	2.00	No. 12H	2.50
13 Cape Chisel	No. 13L	3.00	No. 13H	4.00
16 Beading Tool			No. 16H	5.75

NO. 14 DIAMOND POINT, NO. 15 STAR AND NO. 17 TRI-POINT DRILLS

Length	Diam. 1/4"	3/16"	3/8"	7/16"	1/2"	9/16"	3/4"
6"	\$0.55	\$0.55	\$0.55	\$0.55	\$0.60	\$0.70	\$0.85
9"	.60	.60	.60	.60	.70	.85	1.05
12"	.70	.70	.70	.70	.80	.95	1.10
18"			.85	.85	.85	1.05	1.20
24"				1.05	1.05	1.05	1.40

Length	Diam. 3/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	2"
12"	\$1.25	\$1.25	\$1.35	\$2.00	\$2.50	\$3.00	\$5.00
18"	1.45	1.45	1.60	2.50	3.00	4.00	6.00
24"	1.65	1.65	1.80	3.00	4.00	5.00	7.00

Specify Hammer No. drills are to fit. Tri-point Drills in 6 inch and 12 inch lengths only

CARBIDE-TIPPED TRI-POINT DRILLS

Length	Diam. 3/8"	1/2"	3/4"	1"
6"	\$6.00	\$7.00	\$8.50	\$11.00
12"				\$14.00
				\$16.00

Carbide-tipped Spiral Drills also available for No. 4016

PARTIAL LIST OF ACCESSORIES

FOR POLISHERS, SANDERS AND GRINDERS PAGE 122

		Fitting Nos.	Price each
No. 7077	7" Abrasive Discs — fine, medium or coarse	All	\$0.45
No. 9099	9" Abrasive Discs — fine, medium or coarse	990	.55
No. 9009	Abrasive Disc Cutter		8.00
No. 30231	7 1/2" Carpet Pile Pad	27, 775, 900	1.50
No. 3972	4" Cup Grinding Wheel	775	4.00
No. 3975	6" Cup Grinding Wheel, flared	900, 990	5.75
No. 8093	7" Felt Rubbing Pad	27, 775, 900	1.50
No. 8094	9" Felt Rubbing Pad	990	2.00
No. 705	5" Flexible Pad	27, 775	5.50
No. 507	7" Flexible Pad "D2"	27, 775, 900	6.50
No. 909	9" Flexible Pad "D29"	990	8.00
No. 277	7" Lamb's Wool Bonnet	27, 775, 900	2.30
No. 8098	9" Lamb's Wool Bonnet	990	3.20
No. 22995	7" Sponge Rubber Cushion Pad	27, 775, 900	1.00
No. 9090	Suspension Strap, complete	990	1.00
No. 775	Suspension Spring	990	1.00
No. 4208	3 1/4" Wire Cup Brush, 1/2 or 3/4" Bushing	775, 900, 990	3.25
No. 4207	4 3/4" Wire Cup Brush, 3/8" Bushing	900, 990	4.30
No. 7678	5 3/4" Wire Cup Brush, 3/8" Bushing	900, 990	4.85
No. 9091	3/4-11" Wire Cup Brush Spindle Nut	775, 900, 990	.50

FOR DRILLS PAGES 110 TO 116

		For Drills Nos.	Price each
No. 88	Auxiliary Side Handle	414, 514, 516, 638	\$ 1.75
No. 1518	Wheel Arbor, 1/2" fitting 1/4" Chucks		.85
No. 1523	Wheel Arbor, 1/2" fitting 1/2" Chucks		1.70
No. 1524	Feed Screw or "Old Man"	312, 658, 734, 801	6.00
No. 1522	Carbon Cleaning Brush	All	1.22
No. 1034 1/2	1/2" Cap. Jacobs Key Chuck	801	10.00
No. 1034 3/8	3/8" Cap. Jacobs Key Chuck	801	11.00
No. 1034 3/4	3/4" Cap. Jacobs Key Chuck	801	14.00

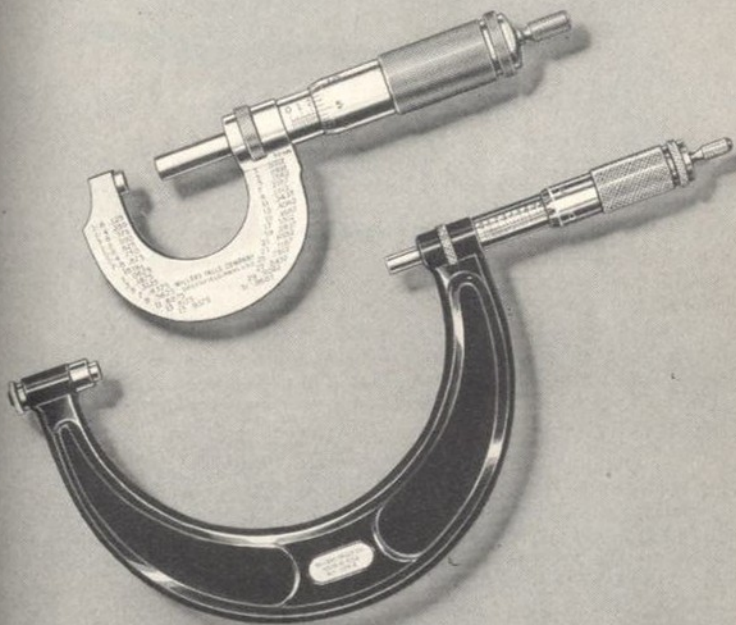
Hole Saws, see pages 95 and 96

FOR BENCH GRINDERS PAGES 109 AND 120

		Grain and Grade	Fitting Nos.	Price each
No. 1027	1/2" Straight Spindle R.H. Thread only		60, 76	\$3.50
No. 536	Taper Thread Spindle R. or L. Thread		60, 76	4.10
No. 537	Taper Thread Spindle R. or L. Thread		77	4.40
No. 1039	3/8" Drill Chuck with Spindle		60, 76	4.10
No. 1513	1/2" Drill Chuck with Spindle		77	4.50
No. 1519	Grinding Wheel 4 x 1/2 x 1/2"	60-M	60, 76	1.15
No. 636	Grinding Wheel 6 x 1/2 x 1/2"	36-O	60, 76	2.00
No. 660	Grinding Wheel 6 x 1/2 x 1/2"	60-M	60, 76	2.00
No. 675	Grinding Wheel 6 x 3/4 x 1/2"	60-M	60, 76	2.35
No. 685	Grinding Wheel 6 x 3/4 x 1/2"	36-O	60-76	2.35
No. 760	Grinding Wheel 7 x 1 x 3/8"	60-M	77	3.00
No. 736	Grinding Wheel 7 x 1 x 3/8"	36-O	77	3.00
No. 1036	Grinding Wheel 10 x 1 x 3/4"	36-O	81	6.90
No. 1060	Grinding Wheel 10 x 1 x 3/4"	60-M	81	6.90
No. 2036	Grinding Wheel 10 x 1 1/4 x 3/4"	36-O	81	8.00
No. 2060	Grinding Wheel 10 x 1 1/4 x 3/4"	60-M	81	8.00

For Wire Brush Wheels, see page 76

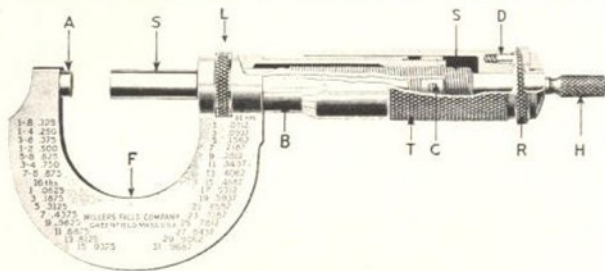
PRECISION TOOLS


**MILLERS FALLS
TOOLS**

 SINCE
1868

MICROMETER CALIPERS

The micrometer is the precision tool in most general use where measurements in thousandths or even $1/1000$ of an inch are necessary. They are made in many styles and capacities for outside, inside, and depth measurements. While their construction is comparatively simple, the utmost care must be used in every step of their manufacture if extreme accuracy and dependability are to be secured. Adjustments for wear must be provided so that the accuracy of the instrument can be maintained.



THE FRAME

The frames (F) are steel forgings of good proportions and designed to secure the strength and rigidity that is essential. In the larger and a few of the smaller sizes the frames are forged in I beam form to secure rigidity without undue weight.

THE BARREL

The barrel (B) carries the threaded steel bushing in which the micrometer or lead screw runs and is part of the forged frame. The threaded bushing has an adjustable collar (C) for taking up any wear at this point. One inch, divided into 40ths, is graduated on the barrel, each graduation representing one revolution of the lead screw.

THE SPINDLE AND LEAD SCREW

The spindle and lead screw (S) in all Millers Falls micrometers is made of one solid piece of very fine tool steel carefully hardened and tempered. It is accurately machined and then allowed to season for months before the lead screw is ground in and the spindle lapped. This precaution is taken to avoid shrinkage of the finished screw and spindle. All machine operations are within extreme precision limits on machines specially developed and perfected for the purpose.

THE ANVIL

The anvil (A) is set in the frame in perfect alignment with the spindle. The faces of both the anvil and spindle are lapped with the utmost care so that they are at right angles to their axis and parallel to each other. Proper adjustment for wear of the anvil is provided.

THE THIMBLE

The thimble (T) is rigidly fixed to the lead screw and spindle and fits down over the barrel but does not touch it. The slightest turn of the thimble results in a similar movement of the lead screw. The beveled end of the thimble is graduated into 25 equal divisions.

RATCHET STOP

The ratchet stop (R) mechanism can be easily operated by the thumb and forefinger of the same hand that holds the micrometer. This leaves one hand entirely free for holding the work to be "miked." This new departure from the old practice of combining the ratchet stop with the speeder at

the end of the thimble has proven very popular because it is both convenient and speeds up work. The tension in the ratchet mechanism is nicely adjusted so that when the knurled ratchet ring is turned it ratchets when just the right amount of pressure is exerted on the spindle to give accurate readings. The ratchet stop insures uniformly accurate readings as it entirely eliminates the personal equation.

THE SPEEDER

A knurled handle (H) of small diameter, provided on all outside micrometers, is fixed to the end of the thimble. By turning this speeder between the thumb and forefinger the spindle can be run in or out very rapidly as required.

SPINDLE LOCK

A spindle lock (L) is provided on many sizes. This lock is controlled by turning a knurled nut located in the frame. A slight turn of the nut locks the spindle securely, preserving the setting at any desired point.

ACCURACY, WORKMANSHIP AND FINISH

The extreme care with which Millers Falls Micrometers are made, the special precision machinery used, the highly skilled craftsmen employed, and the pride taken in the product, permit us to recommend and guarantee the accuracy, workmanship and finish of this fine line, no matter how exacting the requirements may be.

HOW TO READ A MICROMETER

To the frame (F) is immovably fixed the barrel (B). On the inside of this barrel is a very accurately threaded bushing with a pitch of 40 threads per inch. The hidden portion of the spindle (S) is also threaded with 40 threads per inch and runs in the nut formed by the barrel (B).

The extreme right end of the spindle (S) is securely fastened to the thimble (T). These are the only moving parts and they move in unison.

An inch of the line on the barrel (B) parallel to its axis is graduated into 40 equal parts corresponding exactly to the threads per inch on the screw of the spindle (S). When the thimble (T) is given one complete rotation the spindle must move just one graduation, or $1/40$ of an inch, which is $25/1000$ of an inch. The beveled edge of the thimble (T) is divided into 25 equal graduations; each of these must, therefore, represent $1/25$ of $1/40$ of an inch, or $1/1000$ of an inch. The instrument is so graduated and adjusted that when the face of the spindle (S) just touches the fixed anvil (A) the 0 graduation on the thimble (T) exactly coincides with the 0 graduation on the barrel (B).

To get the measurement between the fixed anvil (A) and the face of the spindle (S), multiply the number of divisions visible on the barrel (B) by 25 and add the number of divisions on the thimble (T) from 0 to the graduation opposite the longitudinal line on the barrel (B).

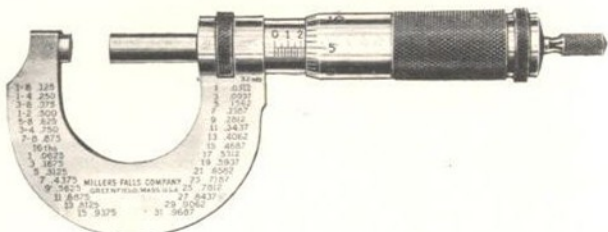
To facilitate reading, every fourth graduation on the barrel (B) is numbered, 1, 2, 3, 4, etc., the figure representing respectively 0, .100", .200", .300", .400", etc. For the same reason every fifth division on the thimble graduation is numbered.

READING TEN-THOUSANDTHS MICROMETERS

Micrometers that read to one ten-thousandths of an inch have exactly the same graduations as those reading to one-thousandths, with the addition of a vernier reading to $1/10$ of the $1/1000$ graduations.

There are ten vernier divisions which run the entire length of the barrel (B) and are numbered on the top of the frame, as shown in the cut of the No. 902R. These ten vernier divisions correspond exactly to nine of the divisions on the thimble (T). So that the number opposite the line on the vernier that exactly corresponds with a line on the thimble graduations gives the number of ten-thousandths of an inch the micrometer has been opened beyond the last .001 inch graduation.

NO. 112R MICROMETER



Capacity 0 to 1 Inch Ratchet Stop Spindle Lock Speeder

The frame of this fine micrometer is made of drop forged steel beautifully polished with decimal equivalents clearly etched on one side. The anvil side is cut away which permits taking many measurements otherwise impossible.

The precision ground lead screw and spindle are made of one piece of fine, carefully hardened tool steel. The lead screw runs in a threaded bushing in the barrel which can be adjusted to compensate for the slightest wear. The smooth action ratchet mechanism is located on the thimble where it can be easily reached by the operating hand. The speeder is located on the end of the thimble. The spindle locking device is set in the frame and is used for preserving a measurement or for setting the spindle when the mike is used as a gauge.

The faces of the anvil and the spindle are precision lapped and tested for exact parallelism to insure uniformity of readings.

Measures from 0 to 1 inch by 1/1000 inch.

No. 112R	Capacity 0 to 1"	Weight 8 ozs.	Code YAZTU WYDDA	Price each \$13.50 2.30
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Each micrometer packed in a slide cover, lock cornered wood box

NO. 38R MICROMETER HEAD



Capacity 0 to 1 Inch Ratchet Stop Speeder

These heads can be built into special gauges and fixtures and mounted on machines for making precision measurements, settings or adjustments.

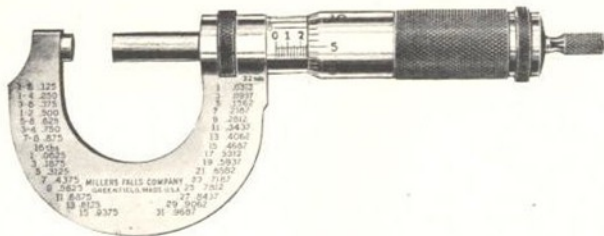
The one-piece precision ground lead screw and spindle, the barrel, thimble, ratchet stop and speeder are exactly the same as used on the No. 112R above.

Range 0 to 1 inch by 1/1000 inch.

No. 38R	Capacity 0 to 1"	Weight 3 ozs.	Code YADAB	Price each \$7.50
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Packed one in a box

NO. 902R MICROMETER



Capacity 0 to 1 Inch by 1/10000 Inch

The same fine instrument as the No. 112R on the preceding page but provided with a vernier etched on the barrel permitting direct readings in 1/10000 inch when desired. Equipped with ratchet stop and spindle lock. Decimal equivalents etched on the drop forged frame.

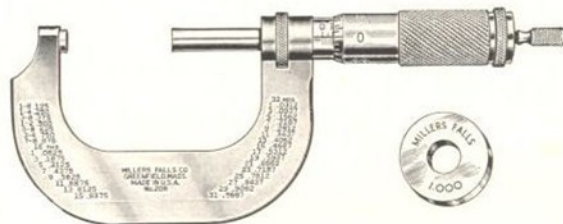
Measures from 0 to 1 inch by 1/10000 inch.

No. 902R	Capacity 0 to 1"	Weight 8 ozs.	Code ZIABX WYDDA	Price each \$16.00 2.30
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Leatherette covered case

Each micrometer packed in a slide cover, lock cornered wood box

NO. 20R MICROMETER



Capacity 1 to 2 Inches Ratchet Stop Spindle Lock Speeder

This is exactly the same fine micrometer as the No. 112R on the preceding page but with larger frame to give a capacity of one to two inches. A precision ground, one inch disc standard, as illustrated, is supplied with each micrometer for checking the setting whenever desired.

Measures from 1 to 2 inches by 1/1000 inch.

No. 20R	Capacity 1 to 2"	Weight 12 ozs.	Code WYUHM WYUSY	Price each \$15.00 2.95
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Leatherette covered case

Each micrometer packed in a slide cover, lock cornered wood box

OUTSIDE MICROMETERS

Forged Frames Ratchet Stops Spindle Locks Speeders

New

This new line of micrometers with ebony enameled, drop forged steel frames combines every feature desirable to make it the finest of its type.

The design of the frame gives great rigidity and strength. The anvil side is cut away to permit measurements in confined spaces.

The precision ground and hardened lead screw and spindle are made of one piece of fine tool steel. The sensitive ratchet stop is on the thimble within easy reach for one hand "miking." The speeder is located on the end of the thimble while the spindle lock is set in the frame.

The faces of the anvil and spindle are precision lapped to exact parallelism. Proper adjustments for the slightest wear are provided.

0 TO 1 INCH MICROMETER

Specifications as above. Measures from 0 to 1 inch by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 701R	0 to 1"	6 ozs.	KABOX	\$10.50
			WYDDA	2.30

1 TO 2 INCH MICROMETER

Specifications as above. Measures from 1 to 2 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 712R	1 to 2"	10 ozs.	KABUW	\$11.50
			WYUSY	2.95

2 TO 3 INCH MICROMETER

Specifications as above. Measures from 2 to 3 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 723R	2 to 3"	12 ozs.	KABYZ	\$12.50
			WYNRO	5.50

3 TO 4 INCH MICROMETER

Specifications as above. Measures from 3 to 4 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 734R	3 to 4"	1 1/4 lbs.	KACAB	\$13.50
			WYVUV	6.30

4 TO 5 INCH MICROMETER

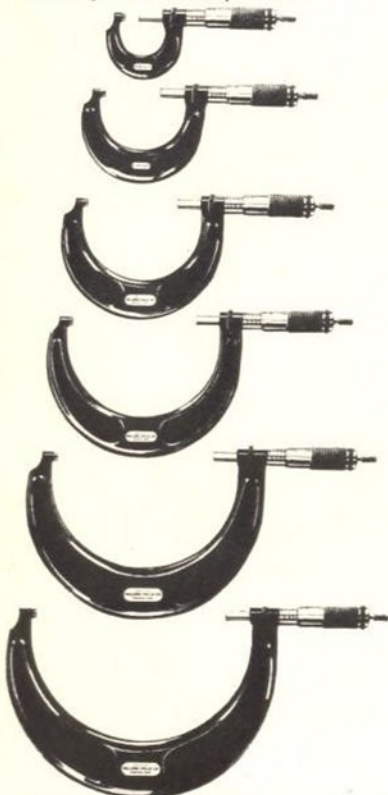
Specifications as above. Measures from 4 to 5 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 745R	4 to 5"	1 3/4 lbs.	KACAT	\$14.75
			WYPIR	8.20

5 TO 6 INCH MICROMETER

Specifications as above. Measures from 5 to 6 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 756R	5 to 6"	1 1/2 lbs.	KACEF	\$15.75
			WYPIR	8.20



Cases are made on a wood frame nicely lined with plush and covered with imitation leather. Substantial lock and hinges. Each of the above micrometers packed one in a slide cover, lock cornered wood box. Weights given are shipping weights.

OUTSIDE MICROMETERS

Drop Forged Frames Decimal Equivalents Speeders

New

The ebony enameled, drop forged frames of these micrometers are ribbed for maximum strength and rigidity without undue weight. They have the cutaway feature on the anvil side.

The precision ground lead screw and spindle are made from tool steel carefully hardened. The lead screw runs in an adjustable threaded bushing in the barrel. The thimble has decimal equivalents clearly stamped on it and a speeder is provided on its end.

The faces of the anvil and spindle are precision lapped to exact parallelism.

0 TO 1 INCH MICROMETER

Specifications as above. Measures from 0 to 1 inch by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 701	0 to 1"	6 ozs.	KEBAS	\$8.50
			WYDDA	2.30

1 TO 2 INCH MICROMETER

Specifications as above. Measures from 1 to 2 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 712	1 to 2"	10 ozs.	KEBEM	\$9.50
			WYUSY	2.95

2 TO 3 INCH MICROMETER

Specifications as above. Measures from 2 to 3 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 723	2 to 3"	12 ozs.	KEBIT	\$10.50
			WYNRO	5.50

3 TO 4 INCH MICROMETER

Specifications as above. Measures from 3 to 4 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 734	3 to 4"	1 1/4 lbs.	KEBOL	\$11.50
			WYVUV	6.30

4 TO 5 INCH MICROMETER

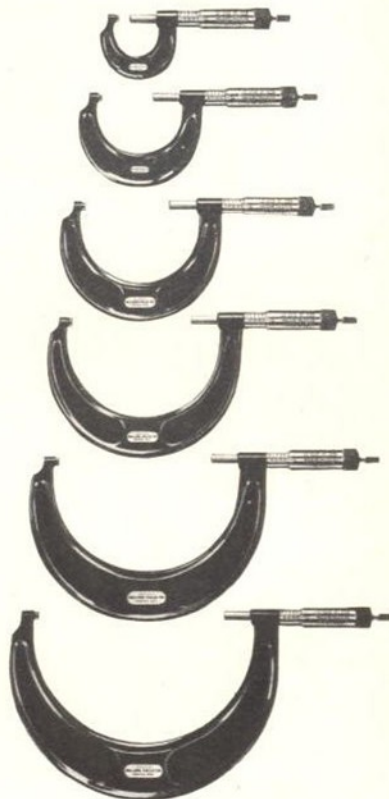
Specifications as above. Measures from 4 to 5 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 745	4 to 5"	1 3/4 lbs.	KEBUF	\$12.75
			WYPIR	8.20

5 TO 6 INCH MICROMETER

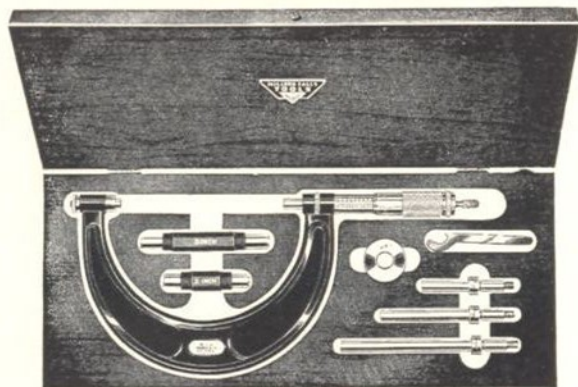
Specifications as above. Measures from 5 to 6 inches by 1/1000 inch.

No.	Capacity	Weight	Code	Price each
No. 756	5 to 6"	1 1/2 lbs.	KEBYD	\$13.75
			WYPIR	8.20



Cases are made on a wood frame nicely lined with plush and covered with imitation leather. Substantial lock and hinges. Each of the above micrometers packed one in a slide cover, lock cornered wood box. Weights given are shipping weights.

NO. 704R MICROMETER SET



Capacity 0 to 4 Inches Ratchet Stop Spindle Lock Standards

New

The frame of this wide range micrometer is drop forged steel proportioned and ribbed for maximum strength and rigidity.

The spindle and precision ground lead screw are made of one solid piece of fine tool steel carefully hardened and tempered. It runs in a threaded bushing in the barrel which has a fine adjustment to compensate for the slightest wear. The thimble is equipped with a sensitive, smooth-acting ratchet stop mechanism and a speeder. The spindle locking device is operated by a knurled ring set in the frame.

Four interchangeable anvils which are held in the frame by a knurled thumb nut are supplied. The faces of these anvils and the spindle are precision lapped to exact parallelism. Three precision standards, described below, are also provided for checking the mike when anvils are changed.

Frame nicely black enameled, all other exposed metal parts beautifully polished.

Measures from 0 to 4 inches by 1/1000 inch.

No. 704R	Capacity 0 to 4"	Weight 3 lbs.	Code YEMOX	Price each \$25.70
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Each set packed in a handsome walnut case



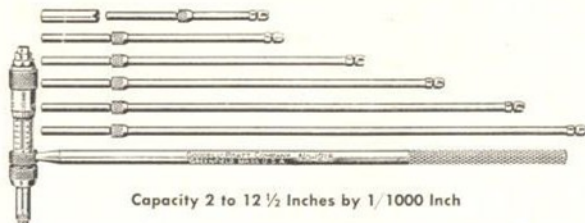
No. 563	Capacity 1" disc	Code YUJUZ	Price each \$2.00	No. 563	Capacity 4" rod	Code YUKAV	Price each \$3.20
No. 563	2" rod	YUJVE	2.50	No. 563	5" rod	YUKCY	3.50
No. 563	3" rod	YUJYO	3.00	No. 563	6" rod	YUKEP	3.75

Packed one in a box

NO. 563 MICROMETER STANDARDS

These standards are made of tool steel, hardened and polished. The one inch standard is a round disc. All other sizes are rods with their faces precision lapped. The rods are equipped with hexagonal hard rubber grips to protect them from body heat and prevent rolling.

NO. 1218 INSIDE MICROMETER



Capacity 2 to 12 1/2 Inches by 1/1000 Inch

The head of this fine instrument is provided with a precision ground and hardened spindle and lead screw with a 1/2 inch run. Seven easily interchangeable rods with hardened anvils in one end are provided. These anvils are adjustable to compensate for the slightest wear. The shanks of the rods are slipped directly into the end of the spindle until the collar comes to a positive seat. This contact can be easily kept free from dirt or dust and is a valuable feature for that reason. The rods are locked by tightening the knurled chuck nut.

Two hardened steel collars, exactly 1/2 and 1 inch in length, that slip over the shanks of the rods are provided and are used in various combinations. Two sets of graduations are provided on the barrel so that direct readings can always be made no matter what combination of rods and collars are in use. Complete instructions are packed with each micrometer. A long handle that screws into the head is provided for making measurements otherwise inaccessible.

Entire tool beautifully polished.

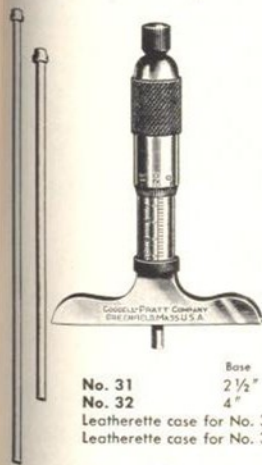
No. 1218	Capacity 2 to 12 1/2"	Weight 3/4 lb.	Code ZISTA ZISTO	Price each \$14.50 5.05
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Leatherette case

Packed one micrometer in a wood box

MICROMETER DEPTH GAUGES

Capacity 0 to 3 Inches by 1/1000 Inch



Designed to make accurate measurements of the depth of holes, slots, shoulders and projections. The spindle has a full one-inch movement and is graduated to read by 1/1000 inch.

Three measuring rods with hardened ends, carrying an adjusting device to compensate for wear, give a capacity of 0 to 3 inches. The rods are inserted through a hole in the lead screw by removing the knurled end nut on the thimble. They are brought to a positive bearing against a finished seat on the end of the lead screw. This gives a positive end contact that does not depend on any device liable to be lost or worn and without rods projecting above the top of the thimble.

The base is 17/32 inch wide, hardened, ground and accurately hand lapped at right angles to the rods.

No. 31	Base 2 1/2"	Capacity 0 to 3"	Weight 6 ozs.	Code YAALC	Price each \$12.50	
No. 32	4"	0 to 3"	8 ozs. <td>YAAWN</td> <td>16.00</td>	YAAWN	16.00	
Leatherette case for No. 31					YAASK	3.05
Leatherette case for No. 32					YABIT	3.70

Packed one depth gauge in a wood box

Extra set of 3 rods for measurements 3 to 6 inches	3.75
Extra set of 6 rods for measurements 6 to 12 inches	10.50

PRECISION STEEL RULES

The standards to which all Millers Falls Rules are made are among the finest in existence, and are checked at intervals with the standards of the United States Bureau of Standards at Washington. Every Millers Falls Rule is as perfect a reproduction of these standards as skilled mechanics and precision machinery can produce, and we guarantee them to be as close to absolute accuracy as it is possible, commercially, to make them.

The steel used is a fine quality of carefully heat-treated crucible steel. They are ground and polished to a beautiful satin finish, and precisely graduated on dividing engines developed and perfected over a period of nearly sixty years by our own engineers. The graduation lines are of different lengths and sharply and uniformly etched, making them very easy to read correctly. The figures are deeply etched, of good size, and shaded for legibility.

Light and semi-flexible tempered rules and square blades are graduated on all four edges in No. 4 graduation—8ths, 16ths, 32nds and 64ths of an inch. Flexible and narrow rules and depth gauge blades are graduated on two edges in No. 10 graduation—32nds and 64ths of an inch—except No. 106.

LIGHT TEMPERED RULES



Numbered for Quick Reading

Graduated full length in 8ths and 16ths of an inch on one side and 32nds and 64ths of an inch on the other. For fast, positive reading the 32nds and 64ths graduations are numbered every 8th of an inch. No end graduations.

No. 866	Length	Width	Thickness	Weight Box	Code	Price each
No. 866	6"	3/4"	1/20"	6 1/2 ozs.	ZEPUL	\$1.20
No. 866	12"	1"	1/16"	19 ozs.	ZEPAT	2.15
No. 866	18"	1"	1/16"	27 ozs.	ZEPON	3.30

Packed six in a box

SEMI-FLEXIBLE TEMPERED RULE



Graduated full length on four edges in 8ths, 16ths, 32nds and 64ths of an inch. No. 253 is end graduated in 32nds of an inch.

No. 253	Length	Width	Thickness	Weight Box	Code	Price each
No. 253	6"	5/8"	1/50"	3 ozs.	YIAWY	\$1.20
No. 255	12"	3/4"	1/50"	6 1/2 ozs.	YIBCA	2.00

Packed six in a box

FLEXIBLE TEMPERED RULE

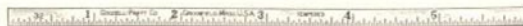


Graduated full length on two edges, on one side only in 32nds and 64ths of an inch. Ends graduated in 32nds of an inch.

No. 264	Length	Width	Thickness	Weight Box	Code	Price each
No. 264	6"	3/4"	1/100"	1 1/2 ozs.	YICFE	\$1.20

Packed six in a box

NARROW TEMPERED RULE



Graduated full length in 32nds of an inch on one side and 64ths of an inch on the other.

No. 274	Length	Width	Thickness	Weight Box	Code	Price each
No. 274	6"	3/4"	1/20"	2 1/4 ozs.	YIDGE	\$1.20

Packed six in a box

TEMPERED HOOK RULE



Numbered for Quick Reading

For taking measurements over rounded corners, through the hubs of wheels or pulleys, or for setting dividers, or inside calipers and many other uses. The hardened steel hook is locked on by an eccentric bolt and can be easily removed if desired. Graduated full length in 8ths and 16ths of an inch on one side and 32nds and 64ths of an inch on the other, with graduations numbered at every 8th of an inch.

No. 966	Length	Width	Thickness	Weight Box	Code	Price each
No. 966	6"	3/4"	1/20"	1 1/2 ozs.	ZIJJO	\$1.85

Packed one in a box

NARROW HOOK RULE



The hardened hook can be easily removed by giving the eccentric stud one half turn. Graduated in 32nds of an inch on one side and 64ths of an inch on the other.

No. 771	Length	Width	Thickness	Weight Box	Code	Price each
No. 771	6"	3/4"	1/20"	1 1/4 ozs.	ZEAMD	\$1.80

Packed one in a box

NO. 106 FLEXIBLE STEEL RULE



A high grade, flexible six inch steel rule made of carefully heat-treated crucible steel with a fine ground satin finish on all faces. It is precision graduated on two edges in 16ths and 32nds of an inch. The figures are deeply etched and shaded for quick, easy legibility. Each rule is mounted on a card printed in red and black and packed in a cellophane envelope to protect it from moisture.

No. 106	Length 6"	Width 3/8"	Thickness 1/100"	Weight Box 4 ozs.	Code WYUVA	Price each \$0.60
Packed six in a box						

NO. 20 VEST POCKET RULE

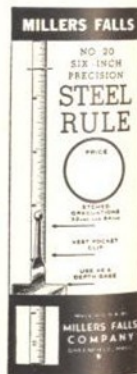
An extremely convenient, six inch precision steel rule for carrying in the vest pocket. It is equipped with a pocket clip which also acts as a base so that the rule can be used as a depth gauge.

Nicely finished and engine graduated. Both graduations and figures deeply etched for easy reading.

Graduated in 32nds of an inch on one side and 64ths of an inch on the other.

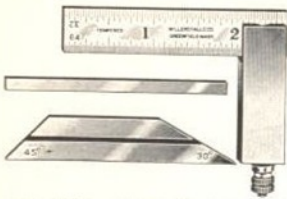
Each rule mounted on a card, as illustrated, and packed in a moisture-proof cellophane envelope.

No. 20	Length 6"	Width 1/4"	Thickness 1/20"	Weight Box 4 ozs.	Code WYUCH	Price each \$0.50
Packed six in a box						



NO. 222 DOUBLE STEEL SQUARE

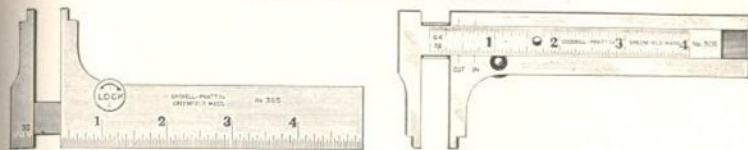
A precision toolmaker's square with three interchangeable blades that slide their entire length in the solid steel beam. The two wide blades can also be reversed so that the graduations can be placed on either side of the beam and the angles faced either up or down. Blades are locked at any desired position by turning the knurled thumb nut on the bottom of the beam.



The 2 1/2 by 1/2 inch blade is graduated in 32nds of an inch on one edge and 64ths of an inch on the other. The beveled blade is ground to 30° at one end and 45° at the other. The narrow blade is 2 1/2 by 1/8 inch. All parts have a fine satin polished finish, clear etched graduations and figures.

No. 222	Length Blades 2 1/2"	Weight 3 ozs.	Code YISCO	Price each \$5.20
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SLIDE CALIPER RULES



The most popular and convenient measuring device available. Precision built in every detail it can be used as an ordinary rule or as an outside or inside caliper providing direct readings of the measurement taken. The rule graduations in 32nds of an inch are etched on one edge and the outside and inside graduations on the slide are in both 32nds and 64ths of an inch.

The slide can be locked at any point by tightening the knurled lock nut which is easily controlled by the thumb of the hand that holds the tool.

Nicely polished to a satin finish with clear, etched graduations and figures.

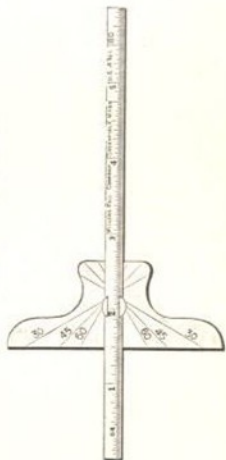
No. 303	Length 3"	Depth of Jaws 1 1/8"	Minimum Inside Measurement 1/8"	Weight 2 ozs.	Code YIHLU	Price each \$5.25
No. 305	5"	1 7/8"	1/4"	4 ozs.	YIHTU	6.50
Packed one in a box.						

NO. 80 RULE DEPTH GAUGE

The three inch steel base of this highly useful tool is precisely ground and nicely polished. A vertical slot machined at 90° to the base accommodates the narrow tempered rule which is graduated on one side in 32nds and 64ths of an inch on the other. This rule runs through a friction spring-controlled clamp screw controlled by a knurled thumb nut on the reverse side.

By loosening the nut the rule is freed and can be either run up or down the slot, or pivoted to any angle and used as an angle gauge. For this purpose the base is accurately etched in angle graduations for 30°, 45°, and 60° angles, both right and left.

No. 80	Length Rule 6"	Width 1/4"	Base 3"	Weight 2 ozs.	Code YAPUL	Price each \$2.50
Packed one in a box.						



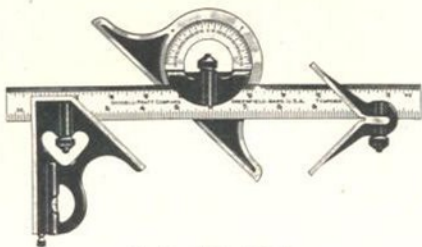
TEMPERED CENTER GAUGE



Made of tempered crucible steel, ground and lapped to a light-tight fit with a 60° standard for grinding and setting screw cutting tools. Graduated on four corners in 14ths, 20ths, 24ths and 32nds of an inch for the number of threads per inch.

No. 438	Angle 60°	Weight Box 1 1/2 ozs.	Code YOMAS	Price each \$0.75
Packed six in a box.				

COMBINATION SETS



Hardened Steel Blades

These useful precision tools are essential to every machinist and toolmaker. They perform the functions of a wide variety of specialized tools. They can be used as a square, a depth gauge, a mitre, a rule, a protractor and a center finder all in one. They are provided with a beam equipped with a small level and a scribe, a precision protractor fully described on the following page, and a centering head. These can be moved and locked to any desired point on the blade or removed entirely.

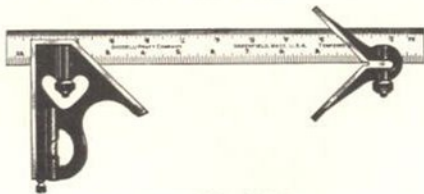
The tempered blade is precision graduated; all graduation lines and figures being clearly etched and given a fine ground satin finish. The beam, protractor and centerhead have precision ground working faces and polished edges and ebony enameled webs.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

No.	Length Blade	Weight	Code	Price each
No. 390	9"	1 1/2 lbs.	YOERZ	\$8.30
No. 391	12"	1 3/4 lbs.	YOEV D	9.00

Packed one set in a box

COMBINATION SQUARES



Hardened Steel Blades

This is the same fine square as above but without the protractor which can be added whenever desired. The working faces of the beam and centerhead are precision ground, the edges polished and the webs ebony enameled. The blade is tempered steel with a fine satin finish.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

No.	Length Blade	Weight	Code	Price each
No. 361	6"	3/4 lb.	YIZYH	\$4.00
No. 362	9"	1 lb.	YOAGM	5.00
No. 363	12"	1 1/4 lbs.	YOAHN	6.00

Packed one in a box

COMBINATION SQUARES



Hardened Steel Blades

These are the same precision squares as shown on the preceding page but without protractor head or centerhead. The beams, equipped with a level and a scribe, have precision ground working faces with polished edges and ebony enameled webs. The blades are tempered, precision graduated and clearly etched.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

No.	Length Blade	Weight	Code	Price each
No. 371	6"	3/4 lb.	YOBJE	\$3.00
No. 372	9"	3/4 lb.	YOBLO	4.00
No. 373	12"	7/8 lb.	YOBOL	4.60

Packed one in a box

BEVEL PROTRACTORS



Hardened Steel Blades

These protractors have a smooth action turret head precisely graduated from 0° to 90°, right and left, for a total of 180°. It can be set at any desired angle within this range. A small level is mounted on one side which makes it possible to determine angles to the horizontal and adds greatly to the usefulness of the tool. They are provided with satin finish, precision graduated and etched blades to which they can be locked at any point.

No. 180 Protractor Head only fits the blades on the foregoing squares.

The hardened blades are graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

No.	Length Blade	Weight	Code	Price each
No. 180	Protractor Head Only	3/4 lb.	YEJEG	\$4.00
No. 181	9" complete	7/8 lb.	YEJJO	5.75
No. 182	12" complete	1 lb.	YEJUK	6.40

Packed one in a box

SPRING CALIPERS AND DIVIDERS

The pages immediately following show a very fine line of outside and inside calipers and dividers. They are designed to meet the most exacting requirements of skilled machinists and toolmakers.

The stock used is a fine grade of hard crucible steel. All edges are nicely rounded and the entire tool ground and polished to a beautiful finish.


The legs are nicely tapered and the shape of the points developed for maximum accuracy in calipering of every description and for transferring measurements to or from a micrometer or steel rule within very close limits. Inside caliper legs are shaped to permit their use in unusually small spaces. Divider points are nicely tapered and carefully hardened and tempered.

Precisely machined and hardened screws are used on all spring calipers and dividers. The nuts are of two types, "solid" and "quick," both of which are hardened. Solid nuts are of ordinary construction. The threaded portion of quick nuts is made in two parts which are spread apart by a small spring when the pressure of the leg is removed. This disengages the threads and the nut can then be slipped over the entire length of the screw or any portion of it very rapidly and without turning it. The instant the leg is allowed to press against the nut it engages the screw thread again and the final adjustment is made by turning the nut in the usual manner.

Side deflection in calipers or dividers destroys their value for precise work, and the greatest care is used to eliminate it from these spring calipers and dividers. Accurately machined and hardened steel spools or fulcrum studs with a good wide face are used and the bearings in the legs are carefully fitted to them. These are held in close contact by stiff, heat-treated steel springs, making a very rigid tool.

Spring dividers have a finely knurled handle riveted to the spring to facilitate the describing of arcs and circles.

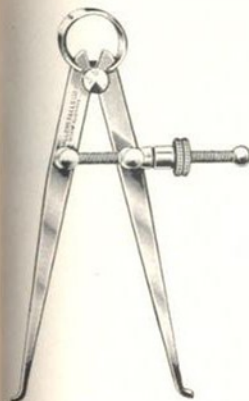
SPRING DIVIDERS



WITH SOLID NUT				
No.	Size	Weight Box	Code	Price each
No. 500	3"	¼ lb.	YUAJT	\$1.50
No. 500	4"	¾ lb.	YUASF	1.65
No. 500	5"	½ lb.	YUBAM	1.75
No. 500	6"	¾ lb.	YUBIP	1.85
No. 500	8"	1 lb.	YUBNA	2.25
No. 500	10"	1 ½ lbs.	YULYE	2.50
No. 500	12"	1 ¾ lbs.	YUMAY	2.70
WITH QUICK NUT				
No.	Size	Weight Box	Code	Price each
No. 600	3"	¼ lb.	YUVNY	\$1.75
No. 600	4"	¾ lb.	YUVUM	2.00
No. 600	5"	½ lb.	YUWAJ	2.10
No. 600	6"	¾ lb.	YUWIL	2.20
No. 600	8"	1 lb.	YUWYP	2.50
No. 600	10"	1 ½ lbs.	ZAHZY	3.00
No. 600	12"	1 ¾ lbs.	ZAFIS	3.50

Packed three in a box

INSIDE SPRING CALIPERS



WITH SOLID NUT				
No.	Size	Weight Box	Code	Price each
No. 510	3"	¼ lb.	YOYUK	\$1.40
No. 510	4"	¾ lb.	YOYZM	1.50
No. 510	5"	½ lb.	YOZHE	1.60
No. 510	6"	¾ lb.	YOZMY	1.70
No. 510	8"	1 ¼ lbs.	YOZOK	1.85
No. 510	10"	1 ¾ lbs.	YUJUE	2.50
No. 510	12"	2 lbs.	YUJOY	2.70

WITH QUICK NUT				
No.	Size	Weight Box	Code	Price each
No. 610	3"	¼ lb.	YUSYL	\$1.70
No. 610	4"	¾ lb.	YUTAG	1.80
No. 610	5"	½ lb.	YUTGA	1.90
No. 610	6"	¾ lb.	YUTKO	2.00
No. 610	8"	1 ¼ lbs.	YUVAH	2.20
No. 610	10"	1 ¾ lbs.	ZAFUV	2.70
No. 610	12"	2 lbs.	ZAFWY	3.10

Packed three in a box

OUTSIDE SPRING CALIPERS

WITH SOLID NUT				
No.	Size	Weight Box	Code	Price each
No. 520	3"	¼ lb.	YOWEF	\$1.40
No. 520	4"	¾ lb.	YOWIG	1.50
No. 520	5"	½ lb.	YOWOH	1.60
No. 520	6"	¾ lb.	YOWYK	1.70
No. 520	8"	1 ¼ lbs.	YOYFA	1.85
No. 520	10"	1 ¾ lbs.	YUHET	2.50
No. 520	12"	2 lbs.	YUHSA	2.70

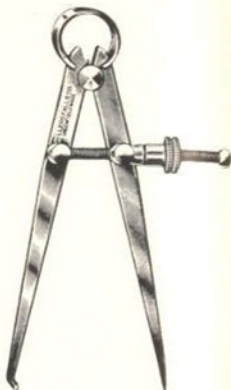
WITH QUICK NUT				
No.	Size	Weight Box	Code	Price each
No. 620	3"	¼ lb.	YURAD	\$1.70
No. 620	4"	¾ lb.	YURFE	1.80
No. 620	5"	½ lb.	YURIG	1.90
No. 620	6"	¾ lb.	YURUJ	2.00
No. 620	8"	1 ¼ lbs.	YUSEG	2.20
No. 620	10"	1 ¾ lbs.	ZADYY	2.70
No. 620	12"	2 lbs.	ZADYY	3.10

Packed three in a box



HERMAPHRODITE SPRING CALIPERS

Design and construction same as the outside and inside types. Legs nicely shaped and tapered. Divider leg hardened and nicely pointed. Hardened spools and screws. Powerful tempered springs. Finely polished finish.



WITH SOLID NUT

No.	Size	Weight Box	Code	Price each
No. 530	3"	¼ lb.	YUFER	\$1.40
No. 530	4"	¾ lb.	YUFTO	1.50
No. 530	5"	½ lb.	YUFWY	1.60
No. 530	6"	¾ lb.	YUGAR	1.75

WITH QUICK NUT

No.	Size	Weight Box	Code	Price each
No. 630	3"	¼ lb.	ZACRO	\$1.65
No. 630	4"	¾ lb.	ZACTY	1.80
No. 630	5"	½ lb.	ZACUS	1.95
No. 630	6"	¾ lb.	ZACYT	2.10

Packed three in a box

SURFACE GAUGES

These gauges embody all the most desirable features in a tool of this kind but still are very moderately priced. They are well built in every detail and nicely finished.

The heavy gray iron base, 3" by 2½" by ¾", is carefully ground for use on a surface plate and also grooved for use on cylindrical surfaces. All working faces are ground. Two frictional gauge pins located at the rear can be depressed to bear against the edge of surface plates, slots of planers and similar uses.

The spindle slides through a spring tensioned binder head with a knurled thumb screw control. This is pivoted on the base and provided with a screw for fine height adjustment. The spindle can be set at almost any angle or even turned down through the slot in the front of the base for use as a depth gauge or it can be dropped down through the binder head and the marker on its lower end used as a scratch gauge.

The scriber, six inches long, is carried in a head with spring control which holds it at any desired height on the spindle. It can be locked by merely tightening the knurled thumb screw. For work close to the surface plate the spindle can be removed and the scriber used in the main binder head.

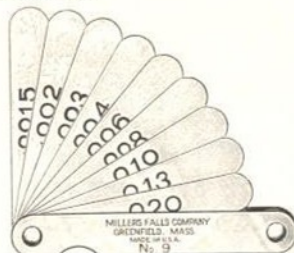
No.	Spindle	Overall Height	Weight	Code	Price each
No. 755	5"	6 ¼"	2 lbs.	ZAYLE	\$5.00
No. 889	9"	10 ¼"	2 ½ lbs.	ZEYGD	5.50

Packed one in a box

THICKNESS GAUGES

These gauges are used extensively in airplane and automobile maintenance and repair for such operations as setting spark gaps, distributor points and tappet clearances, determining piston and ring clearances, etc. Also very generally by toolmakers and machinists in jig and fixture, gauge and gauging work, shimming and experimental uses.

The leaves are made of fine, tempered steel, individually tested to very close limits and well finished. They are assembled in cases with heavy steel side plates and studs, held together by screws or rivets as the case may be. Thicknesses are clearly etched on each leaf.



NO. 6 THICKNESS GAUGE — SIX 2 3/16" LEAVES

Consists of six leaves 2 3/16" long, 1/2" wide and .002, .003, .004, .006, .008 and .010 inch thick. The case is assembled with rivets.

No.	Length Leaves	Width	Weight Box	Code	Price each
No. 6	2 3/16"	1/2"	3/8 lb.	WYGDE	\$0.50

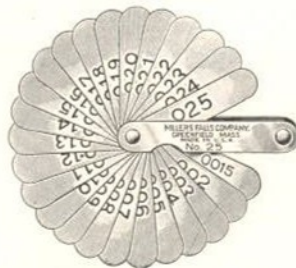
Packed six in a box

NO. 9 THICKNESS GAUGE — NINE 3 1/16" LEAVES

Consists of nine leaves 3 1/16" long by 1/2" wide and .0015, .002, .003, .004, .006, .008, .010, .013, and .020 inch thick. The case is assembled with rivets.

No.	Length Leaves	Width	Weight Box	Code	Price each
No. 9	3 1/16"	1/2"	1/2 lb.	WYIFO	\$0.75

Packed six in a box



NO. 25 THICKNESS GAUGE — TWENTY-FIVE 2 3/16" LEAVES

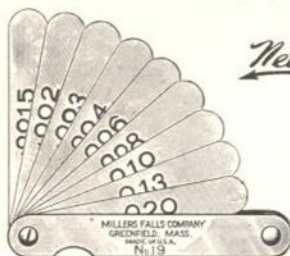
Consists of twenty-five leaves 2 3/16" long by 1/2" wide and .0015, .002, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 inch thick. The case is assembled with rivets.

No.	Length Leaves	Width	Weight Box	Code	Price each
No. 25	2 3/16"	1/2"	1 lb.	WYZCY	\$1.60

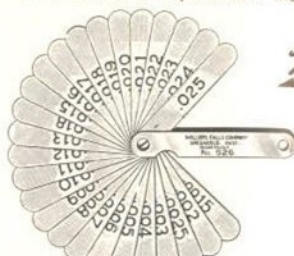
Packed six in a box

THICKNESS GAUGES

These are the same precise, well-made gauges as described on the preceding page but with screw studs at the leaf end of the case to permit easy replacement of leaves or adjustment of the tension.



New



New

NO. 19 THICKNESS GAUGE — NINE 3 1/16" LEAVES

Consists of nine leaves 3 1/16" long, 1/2" wide and .0015, .002, .003, .004, .006, .008, .010, .012 and .015 inch thick.

No. 19	Length Leaves 3 1/16"	Width 1/2"	Weight Box of Six 1/2 lb.	Code WYROL	Price each \$1.60
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NO. 22 THICKNESS GAUGE — TWENTY-TWO 2 3/16" LEAVES

Consists of twenty-two leaves 2 3/16" long, 1/2" wide and .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 inch thick.

No. 22	Length Leaves 2 3/16"	Width 1/2"	Weight Box of Six 1/4 lb.	Code WYVUT	Price each \$3.00
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NO. 926 THICKNESS GAUGE — TWENTY-SIX 3 1/16" LEAVES

Consists of twenty-six leaves 3 1/16" long, 1/2" wide and .0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 inch thick.

No. 926	Length Leaves 3 1/16"	Width 1/2"	Weight Box of Six 1 3/8 lbs.	Code WYWAR	Price each \$4.00
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NO. 100 THICKNESS GAUGE STRIPS



These convenient strips are available in twenty-six different thicknesses. They are 12" long and 1/2" wide. Each strip is individually tested and held within very close tolerances. They are nicely finished and the thickness of each strip is clearly etched into the steel at two points. The ends are rounded and carefully finished for accuracy.

Code: WYUTO

Thickness	Price each	Thickness	Price each	Thickness	Price each	Thickness	Price each
.0015	\$0.40	.007	\$0.25	.013	\$0.25	.019	\$0.25
.002	.40	.008	.25	.014	.25	.020	.25
.0025	.40	.009	.25	.015	.25	.021	.25
.003	.40	.010	.25	.016	.25	.022	.25
.004	.30	.011	.25	.017	.25	.023	.25
.005	.30	.012	.25	.018	.25	.024	.25
.006	.30					.025	.25

Packed six in a substantial telescope box Average weight per box 3 1/2 ounces

SCREW PITCH GAUGES

Designed for quickly and positively determining the pitch of screw threads. The teeth milled on the thin blades are the exact profile of a standard screw thread, each leaf being numbered with its own particular pitch. To determine the pitch of a screw try successive leaves of the gauge until the one is found which meshes perfectly with the thread. The pitch can then be read directly from the leaf.



The leaves are shaped so that they can be inserted into tapped holes for gauging internal threads as well as external. The leaves not in use can be folded into the handle.

No. 135 has 22 pitches for V-threads, as follows: 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. Length of leaves, 1 inch.

No. 436 has 30 pitches for V-threads, as follows: 4, 4 1/2, 5, 5 1/2, 6, 7, 8, 9, 10, 11, 11 1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42. Length of leaves, 1 1/8 inches.

No. 135	No. Leaves 22	Length Leaves 1"	Code YECUD	Price each \$1.40
No. 436	30	1 1/8"	YOLVO	1.75

Packed one in a box

NO. 315 SCREW PITCH GAUGE

AUTOMOTIVE & AVIATION.

SCREW PITCH GAUGE

RANGE
NF or SAE Standard
Both, Non-Pipe Threads

1 1/2"-28	1 1/2"-27
1 1/4"-28	1 1/4"-18
1 1/4"-24	3/4"-18
1 1/4"-20	3/4"-14
1 1/2"-20	3/4"-14
1 1/2"-18	1 1/2"-11 1/2
1 1/2"-18	1 1/2"-11
1 1/2"-14	1 1/2"-11 1/2
1 1/2"-14	1 1/2"-11
1"-14	2"-11 1/2

MILLERS FALLS
No. 315
Price

Made in U.S.A. by MILLERS FALLS COMPANY, Greenfield, Massachusetts

DETERMINES PITCHES QUICKLY AND POSITIVELY
ON BOLTS AND NUTS, PIPE AND FITTINGS

A popular priced gauge with eight leaves, covering all National Fine (NF) or SAE threads from 1/4 inch-28 to 1 inch-14 and Standard Pipe threads from 1/2 inch-27 to 2 inches-11 1/2. In other words, all the standard threads both NF or SAE and Pipe used in the automotive and aviation fields.

Each gauge mounted on a card printed in red and black as illustrated.

No. 315	No. Leaves 8	Weight Box 6 ozs.	Code WIBAL	Price each \$0.50
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Packed six in a box

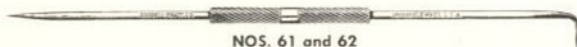
SCRIBERS


NO. 75

The body of this tool is made of finely knurled steel tubing with a chuck which holds the finely drawn, tempered scriber point securely. The point can be removed and reversed for complete protection when not in use.

No. 75	Blade	Overall	Weight Box	Code	Price each
	2 3/4"	4 7/8"	3 ozs.	YAJRA	\$0.60

Packed six in a box


NO. 58

NOS. 61 and 62

Made of fine grade, round steel with beautifully tapered points carefully tempered, ground and polished. The central body is nicely knurled to give a sure grip. Points in Nos. 61 and 62 are replaceable.

No. 58	Single	Length	Body	Weight Box	Code	Price each
		4 1/2"	5/32"	4 ozs.	YAHOC	\$0.55
No. 61	Double	6 1/2"	1/4"	5 ozs.	YAIKZ	.50
No. 62	Double	9 1/2"	1/4"	6 ozs.	YAIJA	.60

Packed six in a box

NO. 440 SPEED INDICATOR



A very useful, easily operated indicator selling at a low price and having many sterling features.

The fixed dial is graduated both ways so that the speed of clockwise or counterclockwise shafts can be read directly. The rotating dial is quickly set to 0 by merely turning the knurled thumb screw to the left and tightening after the setting has been made.

The mechanism consists of a burnished worm cut on the steel spindle which drives the worm gear operating the recording dial. The spindle is hardened and the contact pressure is taken up on a ball thrust bearing. Two rubber tips are furnished, one for centered and one for plain or pointed shafts.

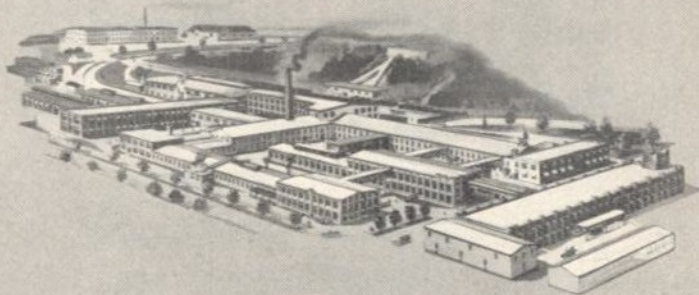
Complete instructions for setting and reading with each indicator.

Entire tool polished and nickel plated.

No. 440	Length	Weight	Code	Price each
	4 1/4"	6 ozs.	YOMOB	\$1.75

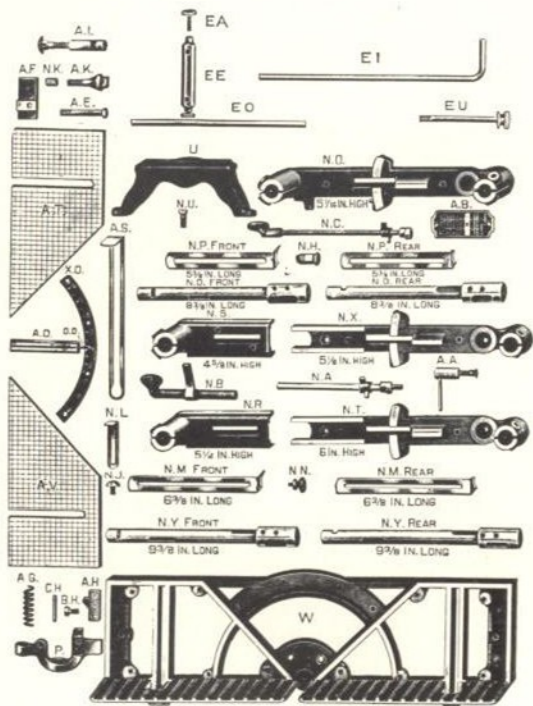
Packed one in a box

PARTS



PARTS FOR LANGDON ACME MITRE BOXES

Nos. 68 to 75 and Nos. 71A to 75A



PARTS FOR LANGDON ACME MITRE BOXES

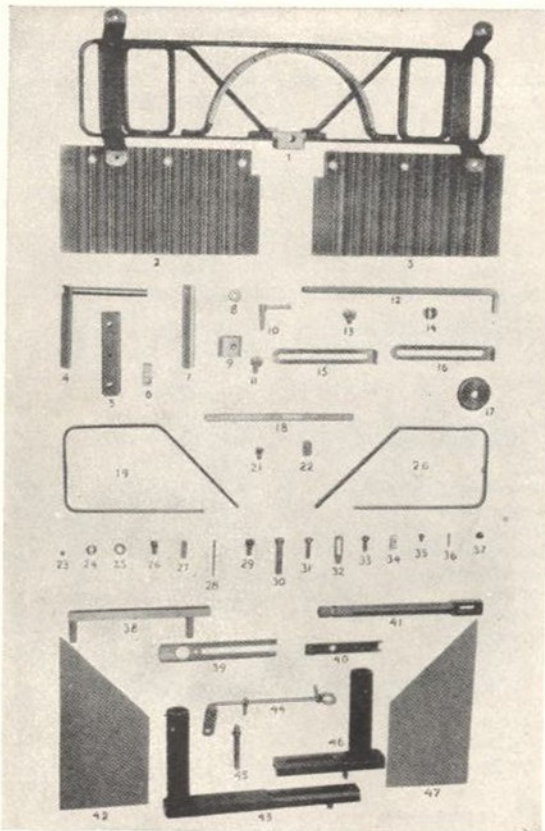
Nos. 68 to 75 and Nos. 71A to 75A

		For Boxes Nos.	Price each
AA	Binder	71-75 71A-75A	\$0.15
AB	Index Plate	68-75 71A-75A	.25
AD	Gib	68-75 71A-75A	.50
AE	Gib Screw	68-75 71A-75A	.10
AF	Binding Strap	68-75 71A-75A	.20
AG	Spring	68-75 71A-75A	.10
AH	Stop Lever Strap	68-75 71A-75A	.10
AI	Stock Rest	68-75 71A-75A	.30
AK	King Bolt	68-75 71A-75A	.15
AS	Length Gauge	68-75	.30
A4	Length Gauge, complete	71A-75A	1.80
AT	Right Hand Bottom Board	68-75 71A-75A	.75
AV	Left Hand Bottom Board	68-75 71A-75A	.75
CH	Stop Lever Strap Screw	68-75 71A-75A	.10
EH	Stop Lever Pin	68-75 71A-75A	.10
EA	Length Gauge Link Screw (2)	71A-75A	.10
EE	L.G. Link with Screws	71A-75A	.70
EI	Length Gauge	71A-75A	.50
EO	L.G. Guide Rod	71A-75A	.30
EU	L.G. Lock Screw	71A-75A	.30
EA	Stop Lever Rod	71-75 71A-75A	.35
EB	Thumb Lever	71-75 71A-75A	.50
EC	Thumb Stop Lever	68-70	.50
ED	Saw Guide (Front)	68-73 71A-73A	2.30
EE	Saw Guide (Rear)	68-73 71A-73A	2.30
EF	Elevator	68-75 71A-75A	.50
EG	Guide Stop Screw	68-75 71A-75A	.10
EH	King Bolt Stop Screw	68-75 71A-75A	.10
EI	Guide Stop	68-75 71A-75A	.10
EJ	Stop Gauge (Front and Rear)	74-75 74A-75A	.15
EK	Stop Gauge Thumb Screw	68-75 71A-75A	.20
EL	Swinging Lever	68-70	4.00
EM	Stop Gauge (Front and Rear)	68-73 71A-73A	.15
EN	Sliding Front Post	74-75 74A-75A	1.30
EO	Sliding Front Post	71-73 71A-73A	1.25
EP	Swinging Lever	74-75 74A-75A	3.00
EQ	Leg Screw	68-75 71A-75A	.10
ER	Swinging Lever	71-73 71A-73A	3.00
ES	Saw Guide (Front)	74-75 74A-75A	2.30
ET	Saw Guide (Rear)	74-75 74A-75A	2.30
EU	Indicator	68-75 71A-75A	.10
EV	Stop Lever	68-75 71A-75A	.25
EW	Swinging Lever Bearing	68-75 71A-75A	.50
EX	Leg	68-75 71A-75A	.50
EY	Bed and Back	71-75 71A-75A	6.60
EZ	Graduated Arc	68-75 71A-75A	.55

Parts NO, P, NR, NS, NT, U, W and NX have corresponding letters cast in them, so, if in doubt, reference may be made to the castings.

PARTS FOR GOODSELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A, 1285, 1285A, 1305, 1305A, 1306 and 1306A
Nos. 1002, 1003 and 1004

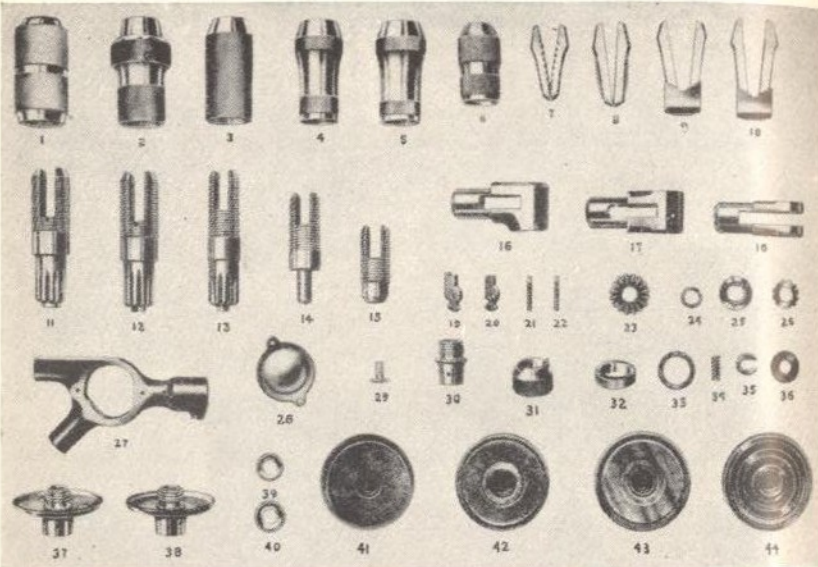


PARTS FOR GOODSELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A, 1285, 1285A, 1305, 1305A, 1306 and 1306A
Nos. 1002, 1003 and 1004

No.	Name of Part	Price each
1	Bed (with legs)	\$10.50
2	Back—left hand	1.15
3	Back—right hand	1.15
4	Attachment Angle Slide	1.15
5	Attachment End Block	.55
6	Attachment Block	.50
7	Attachment Length Gauge Slide	.10
8	Attachment Washer	.50
9	Attachment Clamp	.10
10	Attachment Binding Screw	.10
11	Attachment Knurled Screw	.10
12	Attachment Length Gauge	.20
13	Depth Gauge Knurled Screw	.30
14	Depth Gauge Bent Washer	.10
15	Front Depth Gauge	.30
16	Back Depth Gauge	.30
17	Ball Bearing, complete	.35
18	Scale and Escutcheon Pins	.90
19	Right Hand Riser	.15
20	Left Hand Riser	.15
21	Back Screw (also Gib Screw)	.10
22	Guide Stop (Automatic Detent)	.20
23	Copper Plug	.10
24	Nut for R. and L. Binder Screw	.10
25	Sliding Lever Binder Bolt Washer	.10
26	Boss Binder Screw (1/2 x 3/4"—18 Sq. Hd.)	.10
27	Catch Lever Pin	.10
28	Bottom Plate Pin	.10
29	Lever Screw (3/8 x 3/4"—18 Fil. Hd.)	.10
30	Boss Screw	.10
31	Attachment Block Screw (4) (1 x 1/4"—20 R. H.)	.10
32	Saw Stop (2)	.10
33	Gib Screw (3/4 x 1/4"—20 R. H. Mch.)	.10
34	Catch Lever Spring	.15
35	Saw Stop Screw (2) (3/8"—10-32 R. H. Mch.)	.10
36	Lever Pin	.10
37	Ball Cage, complete	.10
38	Gib (with Plugs and Brass Pin)	.70
39	Catch Lever—large part	.20
40	Catch Lever—small part	.15
41	Saw Guide (give width of saw)	2.30
42	Bottom Plate—left hand	.50
43	Swinging Lever, complete	3.50
44	Pull Rod, complete	.40
45	R. and L. Binding Screw	.20
46	Sliding Lever, complete	2.80
47	Bottom Plate—right hand	.70
	Complete Set End Attachments	3.00

See Cut on Preceding Page

PARTS FOR BRACES


IMPORTANT: The number of the brace for which parts are wanted should be specified as well as the number of the part. If this information is not available make a sketch of the part showing dimensions.

No.		Price each
1	Chuck Shell for Nos. 5010, 5012	\$2.00
2	Chuck Shell for Nos. 770, 771, 772, 7312	1.80
3	Chuck Shell for Nos. 502, 730, 731, 732, 733	1.00
4	Chuck Shell for Nos. 31, 32, 33, 1321, 1322, 1323, 1324 .....	.70
5	Chuck Shell for Nos. 1708, 1710, 1712 .....	.65
6	Chuck Shell for Nos. 142, 1410, 1610 .....	.60
7	Jaws for Nos. 142, 1410, 1610 .....	.45
8	Jaws for Nos. 31, 32, 33, 1321, 1322, 1323, 1324, 1708, 1710, 1712 .....	.65
9	Jaws for Nos. 502, 730, 731, 732, 733, 5010 .....	.85
10	Jaws for Nos. 770, 771, 772, 7312 .....	.85
11	Chuck Socket for Nos. 5010, 5012 .....	.90
12	Chuck Socket for Nos. 730, 731, 732, 733, 770, 771, 772	1.00
13	Chuck Socket for Nos. 31, 32, 33, 1321, 1322, 1323, 1324 .....	.60
14	Chuck Socket for Nos. 1410, 1610, 1708, 1710, 1712 .....	.40
15	Chuck Socket for No. 142 .....	.15

PARTS FOR BRACES

No.		Price each
16	Crooked Socket for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324	\$1.00
17	Crooked Socket for Nos. 5010, 5012	1.20
18	Crooked Socket for Nos. 1410, 1610, 1708, 1710, 1712 .....	.80
19	Ratchet Pawls for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	Pair .40
20	Ratchet Pawls for Nos. 1410, 1610, 1708, 1710, 1712 .....	.25
21	Ratchet Pawl Pins for Nos. 1410, 1610, 1708, 1710, 1712 .....	.10
22	Ratchet Pawl Pins for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012 .....	.10
23	Gears for No. 502 (2)	Price each .40
24	Ratchet Chuck Socket Washer for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324 .....	.15
25	Ratchet Chuck Socket Washer for Nos. 5010, 5012 .....	.25
26	Ratchet Gear for Nos. 1410, 1610, 1708, 1710, 1712 .....	.15
27	Frame for No. 502	2.00
28	Cover for No. 502 .....	.15
29	Ratchet Chuck Socket Screw for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012 .....	.10
30	Quill for Nos. 142, 1410, 1610 .....	.30
31	Boxed Ratchet Ring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1410, 1610, 1708, 1710, 1712, 5010, 5012 .....	.20
32	Socket Ring Washer for Nos. 5010, 5012 .....	.20
33	Socket Ring Washer for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324 .....	.10
34	Ratchet Pawl Spring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1410, 1610, 1708, 1710, 1712, 5010, 5012 .....	.10
35	Quill Washer for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1708, 1710, 1712, 5010, 5012 .....	.10
36	Ball Bearing Washer for Nos. 1708, 1710, 1712 .....	.10
37	Quill for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012 .....	.80
38	Quill for Nos. 1708, 1710, 1712 .....	.60
39	Ball Race for Nos. 1708, 1710, 1712 .....	.10
40	Ball Race for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012 .....	.10
41	Head for Nos. 142, 1410, 1610 .....	.30
42	Head for Nos. 1708, 1710, 1712 .....	.60
43	Head for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324 .....	.80
44	Head for No. 5010, 5012	1.00

HAND DRILLS

Number	Mohr Handle	Side Handle	Crank and Handle	Chuck Complete	Jaws and Springs (Set of 3)	Large Gear	Small Gear	Main Frame	Cap for End Handle	Spline	Gear Clip	Clutch	Gear Cover
1	\$0.65	\$0.25	\$0.50	\$1.50	\$0.60	\$0.50	\$0.10	\$0.70	\$0.25	\$0.20			\$0.60
2	1.00	.25	.50	2.00	.70	.75	.10	.90	.30	.25			.70
2B	.35	.50	.70	2.00	.70	.60	.10	.90	.25	.25			
5	.65	.25	.50	1.50	.60	.70	.10	.90	.25	.20			
05	1.00	.25	.45	1.50	.60	.60	.10	.65	.25	.20			
5 1/2 B	.80	.25	.40	1.50	.50	.85	.25	.35	.30	.25	\$0.10	\$0.20	
38	.80	.25	.45	1.25	.50	.10	.70	1.20	.25	.20	.10	.20	
77A	.15	.25	.20	1.00	.30	.30	.10	.40	.25	.20	.10	.20	
85	.20	.20	.20	1.05	.40	.40	.10	.65	.20	.20	.10	.20	
104	.65	.20	.20	2.00	.60	.75	.25	1.50	.20	.25		.25	
308	.70	.25	.25	2.50	.70	.85	.25	1.50	.20	.15		.25	
655A	.20	.30	.80	.40	.10	.35	.10	.40	.20	.10		.10	
2500B	.15	.20	.50	.25	.10	.30	.10	.40	.20	.10		.10	

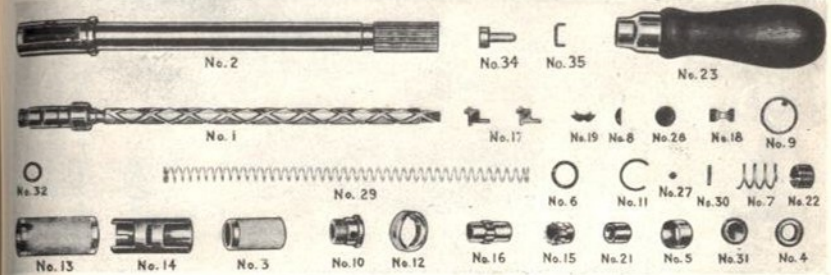
BREAST DRILLS

Number	Chuck Complete	Chuck Socket	Chuck Shell	Spring Set	Spindle	Frame Stem	Ball Bearing	Level	Gear Screw	Crank Screw	Clutch	Clutch Shield	Lock Block Complete
6A	\$2.00	\$0.60	\$0.80	\$0.40	\$1.00	\$0.25	\$0.30	\$0.25	\$0.15	\$0.10	\$0.20	\$0.15	\$0.25
12	1.70	.80	.70	.40	1.00	.40	.50	.20	.35	.15	.15	.15	.25
19A	1.60	.60	.60	.40	.90	.35	.35	.20	.30	.15	.10	.10	.25
29A	2.25	.70	.60	.30	.90	.30	.35	.20	.30	.15	.10	.10	.25
97	2.50	.70	.80	.30	1.10	.70	3.90	2.20	.35	.15	.10	.10	.25
118	2.50	.70	.80	.30	1.40	.40	.45	.20	.35	.15	.10	.10	.25
119A	2.70	.80	.70	.40	.90	.40	.20	.30	.40	.20	.25	.15	.25
120A	1.75	.70	.70	.30	.90	.30	.40	.20	.35	.15	.10	.10	.25
120B	1.75	.70	.60	.30	.90	.30	.40	.20	.35	.15	.10	.10	.25
0477	1.50	.60	.60	.30	.90	.30	.40	.20	.30	.15	.10	.10	.25
666	2.50	.70	.80	.30	2.00	.75	.25	.45	.25	.15	.10	.10	.25
7740	1.00	.50	.60	.30	.80	.55	.25	.30	.20	.15	.10	.10	.25

Please be sure and give number of the drill and full name of part wanted in ordering.

PARTS FOR SPIRAL AUTOMATIC SCREW DRIVERS

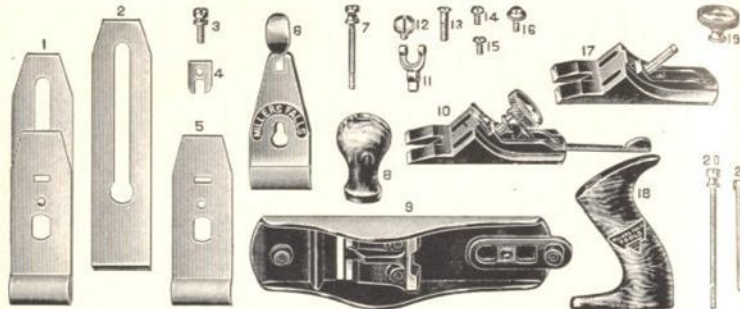
Nos. 29, 61A, 62A, 67A, 610A, 620A, 670A



Please specify the number of the screw driver the parts wanted are to fit as well as the part number.

Part Number	Part Name	Screw Driver Number						
		29	61A	62A	67A	610A	620A	670A
1	Chuck and Spiral	\$0.40	\$0.60	\$0.70	\$0.55	\$0.60	\$0.70	\$0.55
2	Frame, complete	.35	1.00	1.50	.80	1.00	1.50	.80
3	Chuck Shell	.25	.15	.15	.15	.15	.15	.15
4	Chuck Collar	.10	.10	.10	.10	.10	.10	.10
5	Chuck Cam		.10	.10		.10	.10	
6	Chuck Washer		.10	.10		.10	.10	
7	Chuck Spring	.10	.10	.10	.10	.10	.10	.10
8	Blade Key	.10	.10	.10	.10	.10	.10	.10
9	Splined Washer		.10	.10	.10	.10	.10	.10
10	Frame Nut	.10	.25	.25	.25	.25	.25	.25
11	Spring Ring		.10	.10	.10	.10	.10	.10
12	Lock Cam		.50	.50	.30	.50	.50	.30
13	Shifter Sleeve	.20	.20	.30	.15	.20	.30	.15
14	Cam		.15	.20	.10	.15	.20	.10
15	Ratchet Nut—right hand	.20	.30	.30	.25	.30	.30	.25
16	Ratchet Nut—left hand	.20	.35	.35	.30	.35	.35	.30
17	Pawls (2)	.10	.20	.20	.20	.20	.20	.20
18	Pawl Springs	.10	.10	.10	.10	.10	.10	.10
19	Ratchet Key		.10	.10	.10	.10	.10	.10
20	Lock Balls (2)	.10	.10	.10	.10	.10	.10	.10
21	Stop Collar	.10	.10	.10	.10	.10	.10	.10
22	Handle Plug Screw					.10	.10	.10
23	Handle and Ferrule	.20	.35	.40	.35	.35	.40	.35
24	Blade, Small							See Page 46
25	Blade, Medium	.15						See Page 46
26	Blade, Large							See Page 46
27	Headless Set Screw		.10	.10	.10	.10	.10	.10
28	Stop Washer					.10	.10	.10
29	Q.R. Spiral Spring	.10				.10	.10	.10
30	Stop Collar Pin		.10	.10	.10	.10	.10	.10
31	Handle Cap Screw	.15				.20	.20	.20
32	Chuck Rings (2)	.10			.10			.10
34	Step (Wood plug)	.10						
35	Blade Key	.10						

PARTS FOR BENCH PLANES



Be sure and specify the number of plane parts wanted are to fit.

Part No.	Description of Part	No. 8 No. 8C	No. 9 No. 9C	No. 10 No. 10C	No. 11	No. 14 No. 14C	No. 15 No. 15C	No. 18 No. 18C	No. 22 No. 22C	No. 24 No. 24C	No. 814	No. 900
1	Double Iron											
2	Single Iron											
3	Frog Adj. Screw	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
4	Frog Clip	.20	.20	.20	.20	.20	.20	.20	.20	.15	.15	.15
5	Plane Iron Cap	.45	.55	.60	.45	.55	.60	.60	.60	.30	.30	.30
6	Lever Cap Comp.	.85	.90	1.00	.85	.90	1.00	1.00	1.00	1.00	.60	.60
7	Knob Bolt and Nut	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
8	Plane Knob	.40	.40	.40	.40	.40	.40	.40	.40	.15	.15	.15
9	Plane Bottom	3.20	3.20	3.80	3.80	3.80	3.80	5.30	7.50	9.00	1.75	1.45
10	Frog, complete	1.10	1.10	1.20	1.10	1.10	1.20	1.20	1.20	1.30	1.10	1.10
11	"Y" Adj. Lever	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
12	Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
13	Lever Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
14	Frog Clip Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
15	Handle Screw			.10	.10	.10	.10	.10	.10	.10	.10	.10
16	Frog Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
17	Frog	.70	.70	.80	.70	.70	.80	.80	.80	.90	.70	.70
18	Plane Handle	.60	.60	.60	.60	.60	.60	.60	.60	.60	.35	.35
19	Adjusting Nut	.30	.30	.30	.30	.30	.30	.30	.30	.30	.20	.20
20	Handle Bolt and Nut	.20	.20	.20	.20	.20	.20	.20	.20	.20	.15	.15
21	Lateral Adj. Lever	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20

PARTS FOR NOS. 4 AND 85 RABBIT PLANES

No.	Name of Part	No. 4	No. 85
4304	Bottom		\$3.20
	Bottom, Top and Bottom, complete	\$0.80	
14232	Plane Iron	.40	.40
21266	Lever	.20	.20
12391	Lever Thumb Screw		.15
12247	Lever Screw	.10	.10
14231	Adjusting Lever		.25
14235	Adjusting Lever Screw		.10
14233	Rivet		.10
14234	Line Cutter (Spur)		.10
21265	Width Gauge		.65
14221	Width Gauge Stop		.20
14219	Width Gauge Lock Screw		.10
21264	Depth Gauge		.40
14220	Depth Gauge Lock Screw		.20

PARTS FOR BLOCK PLANES



Be sure to specify the number of plane parts wanted are to fit.

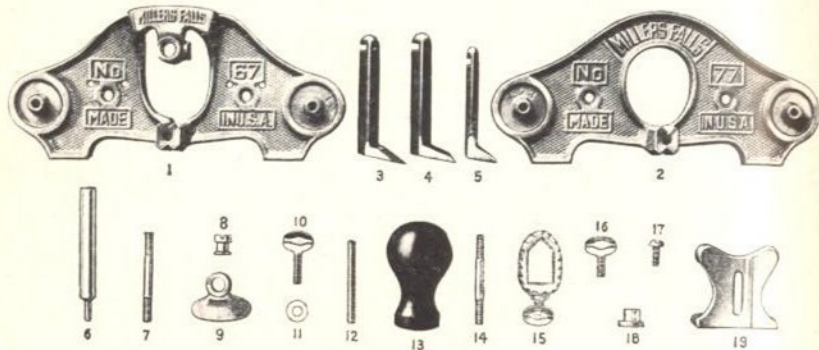
Part No.	Description of Part	No. 16	No. 17	No. 36	No. 37	No. 56	No. 57	No. 206	No. 700
1	Adjusting Nut	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20
2	Lever Cap	.50	.50			.50	.50		
3	Finger Rest Knob	.20	.20	.20	.20	.20	.20	.20	.20
4	Lever Cap			1.10	1.10			1.00	
5	Adj. Lever Pin	.05	.05	.05	.05	.05	.05	.05	.05
6	Adjusting Nut	.20	.20	.20	.20	.20	.20	.20	.20
7	Frog, complete					.20	.20		
8	Eccentric Plate	.20	.20	.20	.20	.20	.20		
9	Lateral Adj. Lever	.20	.20	.20	.20	.20	.20		
10	Bottom	2.30	2.30	2.30	2.30	2.30	2.30	2.50	1.75
11	Lever Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10
12	Single Plane Iron	.55	.55	.55	.55	.55	.55	.55	.55
13	Adjusting Lever	.10	.10	.10	.10			.10	



Be sure to specify the number of plane parts wanted are to fit.

Part No.	Description of Part	No. 5	No. 07	No. 33	No. 45	No. 55	No. 68	No. 75	No. 87	No. 97
1	Adjusting Nut	\$0.20			\$0.20			\$0.20		
2	Plane Knob	.20			.20		\$0.20	.20	\$0.20	\$0.20
3	Detachable Side	.50								
4	Frog, complete	.20			.20	\$0.30		.20		.30
5	Frog Pin	.05			.05	.05		.05		.05
6	Side Screws (2)	.20								
7	Single Plane Iron	.70								
8	Single Plane Iron	\$0.30		\$0.20	.55	.40	.40	.55	.40	.55
9	Frog, complete	.25			.25			.25		
10	Plane Bottom	.80	2.50	.60	1.25	.80	2.25	1.35	1.25	1.50
11	Lever Cap				.50			.50		
12	Lever Cap	.40								
13	Lever Cap	.40		.20		.40	.40		.65	.40

**PARTS FOR
NOS. 67 AND 77 ROUTER PLANES**



When ordering parts please be sure and give the number of the screw driver the parts are to fit as well as the part number.

Part No.	Description	No. 67	No. 77
1	Plane Bottom	\$2.65	....
2	Plane Bottom	....	\$2.65
3	Cutter, 1/2" Pointed	.60	.60
4	Cutter, 1/2"	.60	.60
5	Cutter, 1/4"	.60	.60
6	Attachment Stud	.15	....
7	Handle Stud	.15	.15
8	Handle Nut	.15	.15
9	Throat Attachment	.25	....
10	Attachment Stud Tightening Screw	.10	....
11	Fence Washer	.10	.10
12	Cutter Adjusting Screw	.20	.20
13	Knob Handle	.30	.30
14	Handle Stud	.15	.15
15	Cutter Clamping Collar with Screw	.50	.50
16	Cutter Clamp Screw	.10	.10
17	Fence Screw	.10	.10
18	Depth Adjusting Nut	.15	.15
19	Fence	.25	.25

**ALPHABETICAL
AND
NUMERICAL INDEXES**

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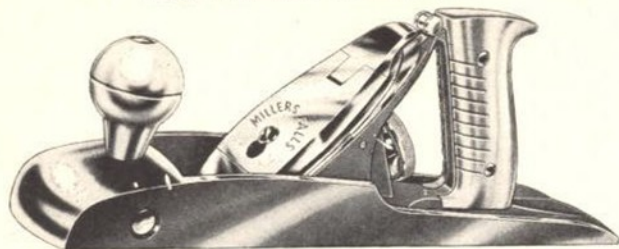
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NOS. 709 AND 714 PLANES



New

These entirely new planes enjoy an immense and growing popularity that can be attributed to their beauty and superior performance.

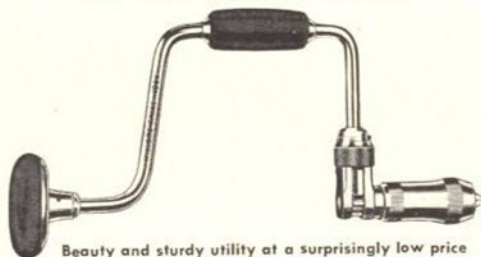
The Millers Falls patented three-point bearing of the lever cap locks the cutter iron to the frog so powerfully that vibration and chatter are eliminated. A much larger knurled adjusting nut permits fingertip control of depth adjustments of the cutting iron. Cutting iron is one solid piece of highest quality tool steel precision, heat treated to take and hold a keen honed edge. Cap is precision ground to fit the iron. New bed and frog design provide greater strength and the balance is excellent.

The new "Tenite" glossy red plastic main handle and knob are guaranteed unbreakable in use and provide a surer, more comfortable grip for even the largest hands. The nickel-plated and buffed lever cap and knurled adjusting nut add to the appearance, making it a tool to be proud of as well as a joy to use.

	Length	Cutter	Weight	Code	Price
No. 709 Smooth Plane	9"	2"	3 3/8 lbs.	EMDOX	\$9.00
No. 714 Jack Plane	14"	2"	4 7/8 lbs.	EMFIT	9.50

Packed one in a box

NO. 1950 RATCHET BRACE



New

Beauty and sturdy utility at a surprisingly low price

Head and handle are solid glossy red "Tenite" — a velvet smooth plastic guaranteed unbreakable in use. All exposed metal parts are nickel-plated and buffed; and when combined with the red plastic handles comprise a tool of striking appearance and beauty.

Steel clad ball bearing head, smoothly curved 7/16 inch round steel sweep rod, rugged semi-boxed, steel ring shift ratchet mechanism and Barber pattern chuck with forged steel jaws are construction features that insure its utility as well as its beauty.

	Sweep	Weight	Code	Price Each
No. 1950	10"	2 1/2 lbs.	AMMOT	\$4.80

Packed two in a box

NO. 333 UTILITY KNIFE



This knife cuts linoleum, fibre board, rubber, veneer, paper, fabrics, rope, composition roofing, gaskets, carpeting, matting, upholstery, wood, etc. It opens cartons. It trims. In business, in the home, and in the shop, its uses are unlimited.

The sturdy, sure-grip, die cast handle is nicely finished in grey enamel. It is equipped with five reversible blades which can be set in three positions. They are stored in the handle when not in use.

	Each List
No. 333 Knife Complete with 5 Blades	\$1.25
No. 3318 Extra Blades (Regular) Pkg. of 5 \$0.50—Box of 100	7.00
No. 3325 Extra Blades (Heavy Duty) Pkg. of 5 \$0.60—Box of 100	8.00

Six individually boxed No. 333 Knives packed in a Counter Display carton.
Weight of Display Carton with 6 Knives, 1 1/8 lbs.

NO. 710 HIGH SPEED COUNTERSINK



FAST-CUTTING FIVE FLUTES 82° ANGLE

Made of a fine grade of high-speed steel for use in any material ordinarily machinable with a high-speed cutter. Has five, carefully ground flutes for fast cutting at an 82° angle for wood and machine screws. Shank is 1/4" in diameter for use in three-jawed chucks. Length overall, 2 1/2 inches.

Mounted four on a counter display easel.

	Diameter	Code	Price Each
No. 710 High Speed Countersink	1/2"	YODER	\$1.50

Packed one card of 4 in a box. Weight per box 5 1/2 ounces.

NO. 810 COUNTERSINKS



ROSE PATTERN WITH FIVE FLUTES 82° ANGLE

Cut fast and clean in soft steel, iron, non-ferrous metals, woods, and other similar materials to admit heads of standard 82° machine or wood screws. Made of a fine grade of tool steel with carefully hardened, tempered and ground flutes. Square bit brace shanks.

	Diameter	Length	Code	Price Dozen
No. 810	1/2"	4 1/4"	YOGAL	\$9.60
No. 810	5/8"	4 1/4"	YOGIT	9.60
No. 810	3/4"	4 1/4"	YOGOB	9.60

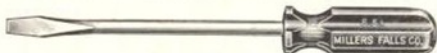
Packed six of a size in a box. Average weight per box 3/4 pound.

PLASTIC HANDLED SCREW DRIVERS

PACKED SIX IN A BOX

A fine new line of popularly priced, plastic handled screw drivers with real merit. The blades are forged from a high-quality alloy steel, carefully hardened and tempered for toughness, cross ground and plated. The handles are made of an unbreakable opaque red thermo plastic — slow burning and shockproof.

NO. 651 SCREW DRIVERS — Standard Round Blade



	Blade Length	Bit	Diam. Shank	Wt. Box	Code	Price Doz.
No. 651	3"	7/32"	7/32"	3/4 lb.	ZUPAL	\$4.80
No. 651	4"	7/32"	7/32"	1 1/4 lbs.	ZUPET	5.40
No. 651	6"	3/16"	3/16"	1 1/2 lbs.	ZUPIN	7.20
No. 651	8"	3/8"	3/8"	2 5/8 lbs.	ZUPOR	10.20

NO. 652 SCREW DRIVERS — Heavy Duty Square Blade



	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 652	4"	7/32"	1/4" x 1/4"	1 1/8 lbs.	ZURAG	\$6.00
No. 652	6"	3/8"	3/16" x 3/16"	1 3/4 lbs.	ZUREL	8.40
No. 652	8"	1/2"	3/8" x 3/8"	3 lbs.	ZURIK	10.80
No. 652	10"	1/2"	3/8" x 3/8"	3 1/2 lbs.	ZUROX	13.40

NO. 653 SCREW DRIVERS — Round Cabinet Blade



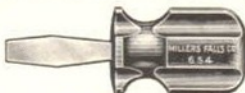
	Blade Length	Bit	Diam. Shank	Wt. Box	Code	Price Doz.
No. 653	3"	3/16"	3/16"	10 oz.	ZUSAM	\$4.40
No. 653	4"	3/16"	3/16"	11 oz.	ZUSEB	4.60
No. 653	6"	3/16"	3/16"	13 oz.	ZUSID	4.80
No. 653	8"	3/16"	3/16"	14 oz.	ZUSOR	5.40

NO. 656 SCREW DRIVERS — Slim Square Blade



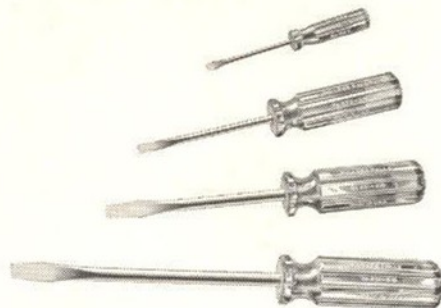
	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 656	4"	7/32"	3/16" x 3/16"	1 1/8 lbs.	ZUTAX	\$6.00
No. 656	6"	7/32"	3/16" x 3/16"	1 3/8 lbs.	ZUTEF	8.40
No. 656	8"	7/32"	3/16" x 3/16"	1 1/2 lbs.	ZUTIP	10.00
No. 656	10"	7/32"	3/16" x 3/16"	1 3/4 lbs.	ZUTOS	11.60

NO. 654 SCREW DRIVER — Stubby Type



	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 654	1 1/2"	7/32"	1/4" x 1/4"	3/8 lbs.	ZUSUT	\$5.60

NO. 8504 SET OF SCREW DRIVERS



A carefully selected set of fine quality screw drivers for everyday use around the home and shop. They cover the entire range of screws found in appliances, radios, television sets, up to and including locks, door hinges, etc.

The set consists of 1 — No. 851-6"; 1 — No. 851-4"; 1 — No. 853-3"; and 1 — No. 855. These drivers are fully listed on pages 40 and 41.

The handles are made of shockproof red "Tenite" and are unbreakable.

No. 8504 Set	Weight	Code	Price Set
	3/4 lb.	ZEOSY	\$2.80

Packed one set in a box

NO. 29X AUTOMATIC SCREW DRIVER SET



This is the fine automatic driver No. 29 illustrated and described on page 38 with the standard bit. To this have been added a No. 297 Cabinet Bit and a set of three drill points No. 329 — one each 1/16", 3/16" and 3/32" in diameter, which are packed in a plastic vial.

No. 29X Set	Length extended with bit	Weight	Price each
	10 1/4"	7/8 lb.	\$3.80

Packed one set in a box

NO. 525 ROTATABLE BLADE KEYHOLE SAW

New



Cuts most anything — most anywhere, taking all materials from soft wood to hard steel in its stride. Any of three types of 12 inch blades (10-tooth, all purpose; 24-tooth, thin metal cutting; or 7-tooth wood cutting) can be quickly interchanged in the handle. The saw may be purchased with any of these blades, or blades can be purchased separately.

The blade can be quickly rotated and positively locked in eight different positions allowing the operator to always have the handle in the clear for fast work. The solid cast handle and barrel, plus the machined steel blade holder and thumbscrew, provide a tool that can take the abuse characteristically given this type of saw. Overall length 15 1/4 inches.

SAWS

No.	Type Cutting	Teeth Per Inch	Wt.	Code	Price Each
No. 425	Metal	24T	1 lb.	YEYGU	\$2.00
No. 525	Metal	10T	1 lb.	YEYHO	2.00
No. 625	Wood	7T	1 lb.	YEYHU	2.00

EXTRA BLADES

No.	Type Cutting	Teeth Per Inch	Code	Price Each
No. 10	Metal	10T	YEYJA	\$0.50
No. 24	Metal	24T	YEYKU	.50
No. 27	Wood	7T	YEYLO	.50

Packed one complete saw or 1/4 doz. blades in box

NO. 725 NEST OF SAWS

New



Here is a combination of the fast-selling No. 525 Rotatable Blade Keyhole Saw with two extra interchangeable blades — one each of No. 24 and No. 27, giving a greatly increased range of usefulness and a tremendously greater sales potential.

Everyone — farmers, craftsmen and the home "handyman" — needs this saw. The compact and comfortable pistol grip handle, the lever feature which permits locking the blade in any of eight positions, together with the outstanding quality of the blades themselves, make it the outstanding buy.

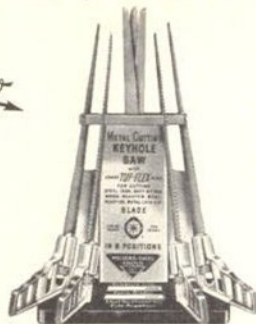
Sales appeal has been added by mounting the combination on an attractive two-color card, which will do a fine selling job in windows, on counters or in bins. It's a year-round volume seller that will yield a big bonus as a Christmas, Father's Day or birthday gift.

No. 725	Nest of Saws (Carded)	Weight	Code	Price Each
		1 3/8 lbs.	YEYMA	\$2.95

Packed four cards in a box
For details of saw and blades see above

NO. 5256 KEYHOLE SAW DISPLAY UNIT

New



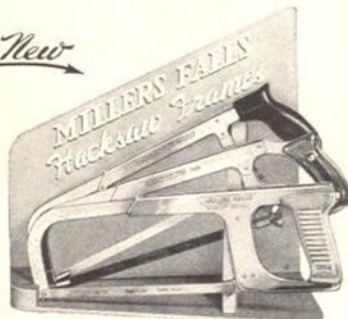
New

A substantial three color wood display. Saws easy to remove for handling and operating the rotatable blade feature. Furnished free with the following initial stock:

6 No. 525 Keyhole Saws @	\$2.00	\$12.00
3 Extra No. 10 Blades @	.50	1.50
Display Fixture		Free
No. 5256 Display Unit Complete		\$13.50

NO. 500 HACKSAW FRAME DISPLAY UNIT

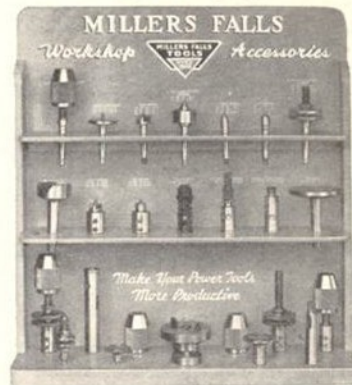
New



A two color wood display of substantial construction. Saw frames easy to remove for checking their comfortable handles and pleasing balance. Furnished free with this initial stock of popular Millers Falls Frames:

2 No. 84 Hack Saw Frames @	\$4.30	\$ 8.60
2 No. 300 Hack Saw Frames @	3.80	7.60
2 No. 1027 Hack Saw Frames @	2.20	4.40
No. 500 Display Unit Complete		\$20.60

NO. 900 WORKSHOP ACCESSORY DISPLAY UNIT



This display easily doubles or trebles the sale of these accessories. See pages 77 to 80 inclusive for complete line. Polished steel against a red background makes this an attention-getting display. Display unit furnished free with the following initial stock:

No. 962	1/2" Chuck with #1 MT	\$2.20
No. 940	Screw Face Plate #1 MT	1.60
No. 922	Spur Center #1 MT	1.10
No. 934	BB Point Center #1 MT	3.20
No. 930	Point Center #1 MT	.80
No. 912	Cup Center #1 MT	1.10
No. 952	Work Arbor #1 MT	1.20
No. 938	Crotch Center	1.60
No. 917	Spur Center	1.00
No. 915	Cup Center	1.00
No. 984	Collet Chuck #33 J. Arbor	1.60
No. 978	Shaper Adapter #33 J. Arbor	1.60
No. 980	Shaper Adapter #33 J. Arbor	1.60
No. 960	Drill Pad #2 MT	1.60
No. 946	Work Arbor with Chuck	2.20
No. 982	Taper Adapter	2.60
No. 966	1/2" Drill Chuck	1.20
No. 926	Face Plate	2.00
No. 990	Collet Chuck	1.30
No. 956	Work Arbor	1.20
No. 970	Chuck with Socket	1.90
No. 986	Wheel Arbor 1/4" Shank	.75
No. 992	Disc Holder 1/4" Shank	.70
No. 976	Shaper Collars	2.00
No. 994	Disc Holder — threaded socket	1.00
No. 944	MT Arbor Sleeve	1.50
No. 900 Display Unit Complete		\$39.55
Base 6 x 20 inches		Height 21 1/2 inches
Shipping Weight 16 pounds.		

NO. 2120 TWO SPEED BUFFING AND SANDING ATTACHMENT

Convert your electric drill to a portable buffer or sander, and eliminate the fatigue of hand polishing automobiles, furniture, metalware, etc., or slow hand sanding operations.

Millers Falls exclusive 100 degree angle drive insures drill and cord clearance when working on flat surfaces. The new two speed feature for low rpm drills and sanding operations is foolproof. No special adjustments — just drive from either spindle depending upon the speed desired. The two speeds are: (1) One-half drill rpm. (2) Double drill rpm.

The 5-inch pad is made of rubber and flexes readily to get the best results on irregular surfaces. A high-grade standard 5-inch lamb's wool bonnet and two 5-inch sanding discs are standard equipment.



No.	Description	Weight Box	Code	Price Each
No. 2120	Attachment Complete	2 1/4 lbs.	PABAP	\$8.45
No. 2121	Extra Wool Bonnets	3/4 lbs.	PABEK	1.25
No. 2122	Extra 0 or 00 Sanding Discs	1/2 lb.	PABIL	.10

Packed one complete unit, four bonnets, or two dozen sanding discs in a box

NO. 3914 ELECTRIC DRILL KIT



Three points of superiority make this your best drill kit buy. First: a finer, more powerful drill used as a power unit — no load speed 2500 rpm and available for 110 or 220 volt A.C. (specify voltage). See page 110 for complete drill specifications. Second: a wheel arbor that replaces the chuck, instead of fitting into it, keeping the load close to the bearings, insuring less wear and tear and truer running wheels with less vibration. Third: a horizontal stand that affords greater freedom of movement around the wheels.

The following high quality accessories comprise this kit:

Any item may be ordered separately if desired

No. 914	— 1/4" Drill for No. 3914.....	\$19.85
No. 1914	— 1/4" Drill for No. 4914.....	22.35
No. 2014	— Bench Stand.....	3.00
No. 23096	— Set of High Speed Drills....	5.95
No. 2115	— Wheel Arbor.....	1.00
No. 23093	— 4" Grinding Wheel.....	\$1.00
No. 23094	— 4" Wire Brush Wheel.....	1.10
No. 23095	— 4" Cotton Buff Wheel.....	.60
No. 5265	— Enameled Steel Case.....	7.25

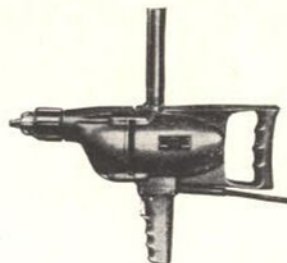
No.	Description	Chuck	Weight	Code	Price Each
No. 3914	Drill Kit	Millers Falls	12 1/2 lbs.	PANUR	\$39.75
No. 4914	Drill Kit	Jacobs Geared Key	12 1/2 lbs.	PANVA	42.25

Packed one kit in a carton

1/4" AND 1/2" UTILITY DRILLS



No. 914



No. 912

Electrically and mechanically these powerful streamlined drills are the last word in modern design — engineered to give you the finest low-priced drills available. Smooth running and sturdy, they are light in weight and beautifully balanced. Drill up to 1/4" and 1/2" respectively in steel. Can also be used to power a wide variety of accessories for grinding, polishing, wire brushing, sawing, sanding, etc. Write for circular giving further details.

MOTORS: Universal for D.C. or A.C. — 25 to 60 Cycles — 115 and 220, 230 volts.

HOUSING: Die cast aluminum alloy. Hammered grey enamel finish.

GEARS: Alloy steel — grease lubricated.

BEARINGS: Ball thrust spindle — all others oil impregnated bronze.

SWITCHES: Nos. 914-1914 single pole. No. 912 — double pole.

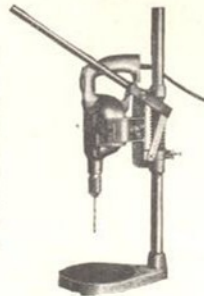
CORD: Seven feet rubber covered Type SJ with plug.

No.	Capacity	R.P.M.	Amp. Rating	Length	Weight	Price
No. 914	1/4"	2500	2.0	11 1/2"	3 1/2 lbs.	\$19.85
No. 1914	1/4"	2500	2.0	11 1/2"	3 1/2 lbs.	22.35
No. 912	1/2"	450	3.0	15"	8 lbs.	40.95

*Equipped with Jacobs geared Key Chuck

NO. 2914 BENCH STAND

A solidly constructed stand that makes the No. 914 or No. 1914 Drill an efficient drill press. Drill is easily mounted and securely held for accurate work. Increases the usefulness of your drill many fold.



Maximum distance, chuck to table	12"
Maximum distance, chuck to column	4 3/4"
Maximum feed	1 1/2"
Weight	7 3/8 lbs.
No. 2914 Stand	\$13.00

NO. 2912 BENCH STAND

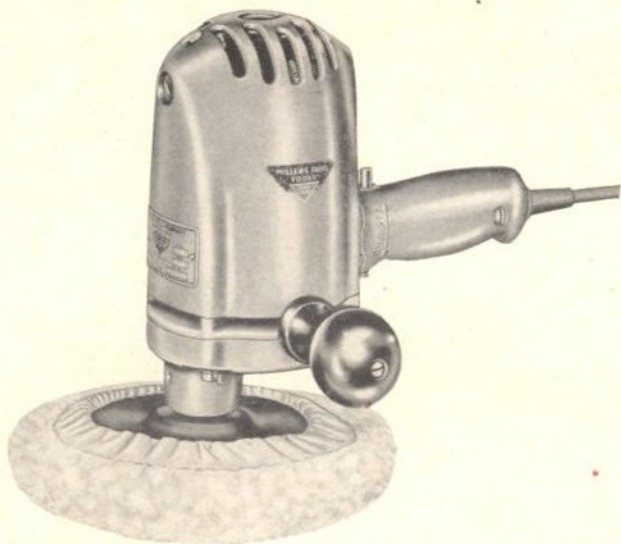
Ruggedly built to convert the No. 912 into a high-accuracy drill press. Heavy construction throughout. Large base gives stand great stability and is carefully machined for accurate work. Smooth acting with powerful leverage capable of exerting ample pressure for 1/2" drilling in steel. Takes only a few moments to mount or remove drill.



Maximum distance, chuck to table	14"
Maximum distance, chuck to column	5 1/4"
Maximum feed	3 1/2"
Weight	26 lbs.
No. 2912 Stand	\$18.50



NO. 966 — 6" SANDER-POLISHER



A versatile finishing and multi-purpose power tool for which a wide variety of accessories are available. It's an ideal tool for the home or shop for buffing, disc sanding, orbital sanding, drilling, grinding, polishing, waxing, sharpening, mixing paints, cleaning, wire brushing.

High powered, light and easy to operate and ruggedly built, it is guaranteed to give you hundreds of hours of trouble-free performance.

The accessories available include an orbital sanding attachment for fine finishing, a Jacobs Chuck for drilling, a bench stand and arbor for operating, buffing, grinding and wire brush wheels, etc.

MOTOR: Universal for D.C. or A.C. — 25/60 cycles — 115 and 230 volts.

GEARS: PINION, and SPINDLE: Finest heat-treated alloy steel. Spindle has $\frac{3}{8}$ "-24 SAE thread. Spindle nut designed to take sanding discs with either $\frac{3}{8}$ " or $\frac{7}{8}$ " holes.

BEARINGS: Self-oiling, bronze sleeve bearings throughout.

BRUSHES: Long-life pigtail. Accessible from without.

SWITCH: Fully enclosed, bat-lever type. Underwriter approved.

CORD: Seven feet, best quality rubber covered. Type SJ. #18 Conductors with moulded-on strain relief reinforcement.

REGULAR EQUIPMENT: 6" Rubber Pad, 6" Lamb's Wool Bonnet, and three 6" Assorted Sanding Discs.

No. 966	Disc Diameter	R.P.M. No load	Amps.	Height	Weight	Code	Price Each
	6"	3300	3.8	7 $\frac{3}{4}$ "	4 $\frac{7}{8}$ lbs.	PARID	\$37.50

SEND FOR SPECIAL CIRCULAR FOR FULL DETAILS AND LIST OF ATTACHMENTS AND ACCESSORIES.