





Hand Tools Portable Electric Tools Hack Saws



MILLERS FALLS COMPANY

GREENFIELD, MASSACHUSETTS, U.S.A.

CHICAGO OFFICE

NEW YORK OFFICE 28 Werren Street

Cobie Address: "Milliorials" Greenfield Codes: Acts and Benling's



IMPORTANT INFORMATION

CATALOG NO. 49

Effective with this new catalog all of the fine tools in our extensive lines which have heretofore barne 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



ments. All goods are at the risk of the purchaser after delivery in good order to the forwarders. We

meets. All goods are at the risk at the purchaser atter delivery in good order to the torwarders, we cannot hold ourselves responsible for artificite lots in trainal 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 tharge will be quoted on request.

PARTS AND REPAIRS

Repair parts can be familished for any tool shown in this catalog. Customers should state clearly what new parts are wanted, plying the number of the tool and any other data that will half ply and what new parts have a superior of 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 are respoins and prices of region; parts will be glody furnished on request.

RETURNED GOODS

The return of goods for credit cannot be accepted without permission from the main affice. Shipping instructions should be obtained for any goods to be returned for any reason after 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. cers 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 anyearment regulation.

FLECTROTYPES

The free use of our electrotypes for advertising purposes is extended to all of our austomers. 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 2½-indi 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.

MILLERS FALLS COMPANY

October 1040



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, warkmanship 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 frags, 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



The heart of any 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 hone:

back into condition readily when dulled. Being of one solid piece the iron is longer lived; therefore can be sharpened over and over again. The irons listed below used in Aillers Falls Bench Planes can also be used in planes of several other

THUMOS.					
Fitting Planes			e from		s hone.
Nember	Width	Nimber	Trice each	Number	Price eco
8-8C-11	1.94"	1168	\$1.30	168	\$0.9
19-9C-14-14C (814-900	2"	2200	1.40	200	1.0
15-15C	214"	2228	1.60	228	1.26
10-10C-18-18C 22-22C	2 %"	2238	1.80	238	1.3
24-24C	2%"	2258	1.80	258	1.3





SMOOTH PLANES



Quide, easy, depth and side adjustments of licons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished, lexicle of bottoms finished in glass black easume. Adjustrable freque finished in real enomed. Selected rosewood knobs and handles.

		SMOOTH I	MOTTOM		
No. 8 No. 9 No. 10	8 " 9 " 10 "	Width box 1 36 " 2" 2 36 "	3 1/a lbs. 3 1/a lbs. 3 1/a lbs. 4 1/a lbs.	EATER EAMES EAMAT	\$6.60 6.90 8.40
		CORRUGATES	BOTTOM		
No. 8C No. 9C No. 10C	8" 9" 10"	1 34" 2" 2 %"	3 lbs. 3 % lbs. 4 ½ lbs.	EAMOG EAWOR	6.80 7.10 8.70

JACK PLANES



Quide, 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 frags finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nickeled and buffer.

No. 11 No. 14 No. 15	tength 11 ½" 14" 15"	Width Iron 1 34" 2" 2 34"	Weight 3 ½ lbs. 4 ½ lbs. 5 ¾ lbs.	EAWIT EAWUG EARLS	\$7.20 7.50 10.50
		CORRUGATED	BOTTOM		
No. 14C No. 15C	14"	214*	4 1/4 lbs. 5 1/4 lbs.	EAVAD	7.70

All the above planes packed one in a box



FORE PLANES



Oulde, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel risely ground and polished. Softwar and sides milled and well polished, Inside of bottons frished in glassy black ename. Adjustable froig finished in red enomed. Selected rosewood knobs and hardles. Lever caps polished, nickeled and buffed.

MANOTH BOTTOM.

	Length	Width fron	Weight	Code	Price each
No. 18	18"	2 % "	6 % lbs.	EABON	\$11.00
		CORRUGATE	MOTTOM D		
No. 18C	18*	2 % "	6 1/4 lbs.	EACOR	11.30

JOINTER PLANES



Coide, easy, depth and side adjustment of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Brotoms 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 cops polished, nickeled and buffed.

	Langth	Width Iron	Walghn	Code	Frick each
No. 22 No. 24	22"	2 36 "	7 1/2 lbs. 9 1/4 lbs.	EACUL	\$13.40 15.00
		CORRUGATE	D BOTTOM		
No. 22C No. 24C	22"	2 36 "	7 % lbs.	EAFER EAGOL	13.70

All the above planes packed one in a box



No. 56

No. 57

ADJUSTABLE THROAT BLOCK PLANES

Designed and used primarily for working cross grain surfaces. Black 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 polithed. Inside of bottoms and lever caps black enameled. Throat adjusting levers and knowled lock nuts nickel plated.





Same as Nos. 16 and 17 above but with a polished, nickeled and buffed cap with a knuckle joint level

 clamp. Irons one solid piece of fine tool steel.
 William
 Waight
 Code
 Price with

 Na. 36
 6 "
 1 ½"
 1 ½" Bits.
 EBRAG
 \$4.50



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 block enameled. Throat adjusting levers and lock nuts nickel plated.

136"

1 1/4" 1 1/4 lbs.
All the above planes packed one in a box

1 1/4 Bbs.

\$3.80



NOS. 45 and 75 BLOCK PLANES



Standard Angle. Resewood 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. Width from Longita

\$4.60

1.5% BULL NOSED RABBET PLANE

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



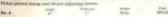
Nicely polished bottom and sides. Body and lever cap black enameled. Solid tool steel cutter iron.

No. 4

No. 07

No. 45

No. 75



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 out. 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.

1/39"



ADJUSTABLE BLOCK PLANES



The unbreakable all steel construction of this fine little plane makes it particularly suited for use n manual training shaps 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.

1867



Standard Angle. Lover 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. Width Iron Langth





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

1.36 lbs.

All of the above planes packed one in a baz



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.





196"

Coée

\$0.90

1:50

Standard Anale

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



No. 33



Standard Angle

Bottom and sides politised. Izwer cop and hardwood leab handle black enameled. Solid tool tree commenced in the contract of th



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. 87 27 156 the other pointed plane posterior.

No. 87 77 156 the other pointed posterior in a box 200 the other pointed posterior in a box 200 the other posterior



No. 68

No. 85 Robbet

8 55.5

DOUBLE END BLOCK PLANE

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



Standard Angle

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

Widh Iron

1.55*



Code

\$3.30

\$5.40

RABBET AND FILLISTER PLANE

This Millers Falls Plane has every desirable feature in a rabbet 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 buil-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, Trimm and small steel parts nickel plated. Prog and

3 lbs.

Pocked one in a box 12

1.55"



65 30

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 battoms can be attached for increasing the bottom area allowing large areas to be worked, or fences can be attached for fo straight or irregular edges.

NO. 77 CLOSED THROAT ROUTER



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.

Battom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated. No. 77

NO. 67 OPEN THROAT ROUTER



Three cutter irons, % and % wide and a % 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 attacked to the bottom for following straight or curved edges is regular equipment. Bottom nicely polished. Mahagany lacquered hardwood handles. Frame nickel plated.

No. 67



BENCH PLANES

This Smooth Plane and Jack Plane are good tools, cappale of first dass performance and are the equ of most standard planes. They do not embody all of the features of the preceding Millers Falls Plan and the overall flishit is not so high which permits their being affered at a lower price.

SMOOTH PLANE



Depth and side adjustment of Iron. Cutters one solid piece of tool steel. Battom and sides polishe leside of bottom, lever cop, and frog black enameled. Knob and handle black enameled hardwoc Furnished with smooth bottom only.

No. 900

116 from Vreight 2 ' 4 lbs.

Code ETDES 53-4

JACK PLANE

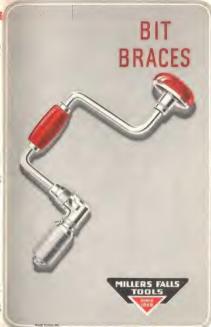


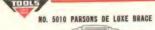
Depth and side adjustment of irons. Cutters one solid piece of teal steel. Bottom and sides polishe haside of bottom, lever cap, and frog black enameted. Knob and handle black enameted han wood. Furnished with smooth bottom only.

No. \$14 14" 2" ± % ths.
Posked one in a bas

ETGOK

ked one in a box







Chrome Ploted

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 fiftiest professionary with the Millers folls Company.

The chuck is full ball bearing, with two machined steel jaws that hold ½ to ½ inch round share.

No. I Mone Taper and square bit sharek drills and reamers. The full based rather is controlled by a ring shill. Sweep handle runs on bronze bushings as does the head. Head is also equipped with a ball throut bearing.

ball thrust bearing.

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

No. 5010 10" Weight Code President
No. 5010 10" 3" bit. ANABO \$11.00

NOS. 770-772 RATCHET BRACES



A sturdy, quality brace. Ball bearing at every positile point, every constructional datall reflect and the entire tool beautifully finished. Equipped with Jain ball bearing druck to hold regular squart sharing, Mo. 1 Mones Taper and round shows from \$\frac{1}{2}\$ to \$\frac{1}{2}\$ sin \$\frac{1}{2}\$ distributed. Source frother into gradient should be sharing the state of the sharing shift. Full steel drad, ball bearing bead. Head and based finely finished tropical hardwood Bandle has metal limitered rings. All exposed metal parts heavily neighbor and highly briffed.

No. 770 14" 276 libr ABACU 50-26" No. 771 12" 376 libr ABACU 50-26" No. 771 12" 376 libr ABACU 8.772 10" 376 libr ABACU 8



A fine qualify brace, popularly known for years as the "Holdall," having been one of the first to be equipped with the universal type or "Master" dack holding square, No. 1 Morse Taper and plain round sharks from % to % inch in diameter.

Boxed ratchet mechanism with ring shift. Steel dad, 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.

	Swarp	era ger	Code	Price and
No. 730	14"	3 1/2 101.	ABBEY	\$8.00
No. 731	12"	3 % lbs	ABSO1	7.40
No. 732	10"	31/4 (0)	ABDIC	7.20
No. 733	8"	2 59 101.	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 frobiatol handleword.

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

	Sweep	Weight	Code	Price each
No. 31	12"	3 1/4 (b)	ARSEN	\$7,20
No. 32	10"	2.% 155.	ABSOL	7.00
No. 33	8"	2 % Tos.	ABSIK	7.00
		Pocked two in a box		



NOS. 1321-1324 RATCHET BRACES



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

Baxed ratchet mechanism, with ring shift. Barber chuck with self-opening, forged steel alligator jaws. Ball bearing, steel clack head. Handle has inserted metal rings. All exposed metal party polithed, nickel plated and buffed.

	Same	West	Code	
No. 1321 No. 1322 No. 1323	1	3 fbs. 2 ½ fbs 2 ½ fbs	ACROB ACTIV ACTOR	\$6.30 6.00 6.00
No. 1324	o o	Pecked two in a box		

NOS. 1708-1712 RATCHET BRACES



Wall bailt, serviceship braces that can be offered at a moderate price. They are equipped with Barriar class with olligator in own and semi-board steel ratiols. Funded shifter improvement mechanism. Steel class, ball bearing head and sweep handles made of hardwood, nitely mahagam larguester and the larguester and largue

No. 1708 8° 2½ lbs AJACK \$40.00 No. 1710 10° 2½ lbs AJACK \$40.00 No. 1712 12° 2½ lbs AJBOX 4.31 Political political



NO. 1410 RATCHET BRACE



A serviceable braze that is offered at a popular price. It is equipped with a Barber chuck with ofligator jaws and a semi-boxed ratchet mechanism operated by a knowled ring shift. Handler mahagamy steined hardwood. All exposed metal parts polished.

No. 1410 10" 2 lbs. AGLOR \$2.40

Posted one half dozen in a box

NO. 502 CORNER BRACE



A great time and faiths raver on jabs where there are a lot of holes to be bared in corners, against walls and beams and similar locations. For more pressure can be just on the bit and more power delivered to the chack than with a ratthet brace on the same work.

Master druek holds square, No. 1 Marser Tager and reand shanks from ½ to ½ inch in diameter Mosthine-ods, con-burdened steel gears, fully modesed. Bell Mhast bearing at base of druck Bell bearing head. Handles have inverted metal rings. Frome black enameted. Head and handles melogony finished bardwood Length; 17 index bearing the control of the cont

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

No. 502 Sweep Weight Code Price and 10° 4½ | Ibb. AGAPE \$12.00



NO 142 PLAIN BRACE



On many classes of work a ratchet mechanism on a brace is unnecessary and a plain or sleeve brafills the requirements. This is a low-priced brace with inexpensive finish. Barber chuck with alligate jaws. Head is screwed securely to the quill. Head and handle mahagany stained hardwood. Expose Weight Code

No. 142

No. 4

No. 2

\$6.7

\$1.5

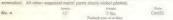
NO. 4 RATCHET AUGER HANDLE



A heavy duty tool that can be operated by two men when desirable. It has a powerful ratchet mechanism, controlled by u 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 nex nut at the top of the frame to form a steady

handle for use in comers or against walls or other obstructions. Chuck holds practically all sizes of bit and auger shanks. Metal frame and ha

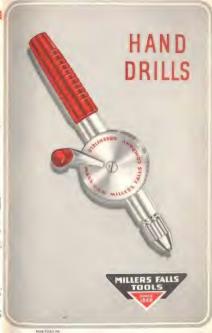




A stout wood handle holding all sizes of bits and all but the largest sizes of thip auger shanks. Aug are held by two 3 inch steel clamps tightened by means of two wing nuts. Handle straight grains selected ash.

Capacity Regular Bit Shanks up to 2 inches; Ship Auger Shanks up to 2 inches,

154 lbs.





No. 401

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 flitted. They are made of a fine grade of lool steel, carefull herdened and tempered and well sharpened. They drill inte, clean hales in hard and soft wood soft metals, plaster, bone, wallboard and many other similar materials.

NEW STYLE DRILL POINTS



For Millers Falls and some other Automatic Drills

\$ 1 | 50

The shanks of these drill points have a slabbad base that seats very positively in the bottom of the shadk and are seases for a locking mechanism that prevents them from polling out. They are made of fine tool steel properly hardened and carefully sharpened. Bright finists. Made in eight sizes or indistinted observe.

FLUTED SHANK DRILL POINTS

For use in Millers Falls and Goodell Pratt Automatic Drills

These diff points have fluted sharks for use in the two-jawed drucks of automatic drifts. They are made of a line grade of tool steel properly hardened and carefully sharpened. Made in eight use as indicated above.

No. 402 2" ZOTOZ Per Dozen \$1 No. 402 2" ZOTPA Set of 8

ROUND SHANK DRILL POINTS



For use in Hand Drill Chucks
These points are identical to those above but with plain round shanks for use in any 14-inch thuce



NO 185A AUTOMATIC DRILL



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 hale or aguae showing the size of hale 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 druck seats the drill points very positively and locks them securely so that they cannot be pulled

out until the churk shell is unscrewed.

One set of eight, No. 401 New Style Drill Points, 1/4 to 1/44 inch in diameter, regular equipment. Code Price each Weight

YEKU

\$4.20



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 saft wood, saft 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, 1/4 to 1/44 inch in diameter, regular equipment.

Code Price week No. 188A \$3.00 936 Parked one in a box

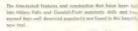
10"

No. 1854





NO. 100 AUTOMATIC DRILL



Its uses are unlimited. It is an essential tool for carpenent cabinet makers, model and pattern makers, electricians, home workshop enthusiats and home owners. It is the ideal tool for drilling lead holes for screws, nails, books, etc.

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

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

No. 100

8 021.



\$21.0



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 Auto matic Drill because to see it is to want it. Nicely lacquered and silk screened in red, black, array and white.

Width, 11 inches, depth, 4½ inches, height, 9½ inches,

No. 1006 S. Do YEDAY

Pathed one unit in a residen



NO. 104 HAND DRILL

Single Speed, Enclosed Gears. Capacity 0 to 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 spladle runs in an "Oiliste" bushing against a thrust bearing. The steel plaion and machine-cut cost drive gear are entirely enclosed.

The handles are made of practically unbreakable, glossy red plastic, far more durable than wood. The scraw cap end handle is bollow and is long enough to hold standard twist drills up to ¼ leach.

The chuck, of new design, has three hardened (aws holding 0 to ¼ inch drills.

One set of eight, No. 403 Drill Points, 1/4 to 1/44 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.

Cooking Length Weight Code

WYDAM \$5.00



\$20.00

New

NO. 1044 DISPLAY UNIT

Complete with four No. 104 Hand Drill

This substantial wood display, lacquered and silk screened in three colors, is supplied entirely free with initial orders for only four No. 10A Handb Drills. Designed for counter use it requires only one-half square foot of space. This display brings this fine need to be a supplied to the attention of customers; makes it easy for them to handle and selfs on sight.

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

No. 1044 Code

10 lbs. WYGEY

Pocked one unit at a perton





NOS. 2 AND 2B HAND DRILLS



Single Speed Capacity O to 3 inch

A strong, serviceable tool built on a sturdy cast frame. Three-jawed chuck with protected spinor holds 0 to 1/2 inch round shanks. Gear ratio 41/2 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 cop-

Eight drill points. We to 11/4s inch in digmeter, regular equipment. No. 28 is exactly the same as No. 2 but with solid mahagany finished hardwood end ha

without drill points. No. 2 No. 2B

NO. 308 HAND DRILL





Enclosed Gears Capacity O to 1/2 inch



Detail showing cost inor drive gear with mathine cut teeth solidly an-

The fine lines and finish of this new 1/4 inch drill are the same as No. 124 illustrated in color on page 25.

The frame and gear cover are die-cost aluminum with a gray ename finish baked on. The steel spindle runs in an "Oilite" bushing against thrust bearing. The steel pinion and the machine-cut cast drive gear are entirely enclosed. Handles are made of practically unbreakable, gloss

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 laws that hold 0 10 3/4 inch round shank drills.

\$6 20

No. 308



NO. 5 HAND DRILL



Single Speed Capacity D to . inch

This drill is equipped with a wide rim on the large drive gear and can be easily grosped 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.

of eight, No. 403 Drill Points, % to 1/st inch in diameter regular equipment, they are packed in the

NO. 77A HAND DRILL



Single Speed Capacity O to 1/4 inch

A smooth operating drill that sells for a very moderate price. The frame is a smooth, black enamel die casting. The drive and equalizing pinions are steel, nickel plated. The solid large gear is red triameled. All gears are machine cut. The nickel plated thuck holds 0 to 1/4 inch round shank

\$3.00

27



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 gen is cast and finished in red enamel; the pinion is steel. Both gears have machine cut teeth. The threeawed chuck holds 0 to 1/4 inch round shank drills. Crank and end handles mahagany finished hardwood Packed one in a box

No. 25008

1056"

\$5 00

NO. 7740 RREAST DRILL



Conneity O to 1/2 Inch Two-Speed

A sturdy, dependable drill offered at a very moderate price. The black enameled frame and breath 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 law speed operation. Two separate steel pinions. All gears machine cut. All-steel chuck has three hardened jaws that half 0 to 1/2 inch round shank drills. Handles mahagany finished hardwood.

No. 7740

Packed one in a box

436 the



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, nickeled and buffed edge and rim. Nickeled steel pinion. Gear ratios 3 to 1 and 1 to 1. Nickeled extensible crank. Adjustable ball bearing spindle. Nickeled three-jawed druck with protected springs holds 0 to 1/2 inch round shanks. Idler roll to equalize large gear bearing. Side and crank handles mahagany finished

All exposed metal parts nickel plated

Code No. 218 DECAD \$9.50 Pocked one in a box

NO. 12 RREAST DRILL



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

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

Weight No. 12 6 1/4 lbs DEBUT Pocked one in a box



NOS. 119A AND 120B BREAST DRILLS



Two-Speed Two Steel Pinions

These fine values a the mind are priced field are built on strong black enameled frames. The breastoisconnected to the frame by a solid polished steel shank. Two speeds with ratios of 3 to 1 and 1 is tage goer finished in red enamel. Ball thrust bearing as spandle. Side and drank handles mehoes finished hardwood. All exposed metal parts relately positived.

No. 1194 is equipped with a two-jawed druck that holds ½ to ½ inch round and No. 1 Morse To thanks and regular square bit brace shanks. No. 1208 is equipped with a Millers Falls three-jaw chuck with protected springs helding 0 to ½ inch rounds shank drifts.

No. 119A Universe 18% 5 No. 1708 /2 16% 4%

5 lbs. YEAWS 4 % lbs. DARED

1011000

CHAIN DRILLS

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

The drill is automatically fed into the work by an adjustable fration feed which is outomatically regulated by the resistance the drill encounters. Drill threatings in, therefore, reduced to a minimum. Requires but a moment to adject the drian. Reverse movement of brace withflows drill No mirrodal parts to get out of order. Hand feed on the used if desired. Four feet of its other with a drill its 27 19 illustration. It is 27 19 illustration.

No. 718 1/4 to 1 . No 1 M T and 84 Shants 4 1/4 lbs. DECLP \$8.00 No. 719 0 to 1/2 Round Shants 4 1/6 lbs. DECLP 8.50







NO. 629 LINE LEVEL



A featherweight model with a call-seye wild set in a hexagonal aluminum tube. The hooks and gur are so designed that it saps on to a level line very easily but cannot be jumped off. Soch level podded in a permanent container of transparent calluloid with a sarew cap.

No 629

Length 3."

Pocked we in a box

ZABLO

50.

New

DIE-CAST ALUMINUM LEVELS



Two level and four plumb vials

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

and nicely finished on four sides and ends. The body is affractively treatmed an gray and rea encircle.

Excellent visibility and luminosity are provided by the large white vial wells in which the highest reality and permanently set. They are well protected by glasses on both side sealed to prevent fagging or breekage.

No. 618 No. 624 No. 628 No. 630

No. 1042

18 = 2 ½ + 1° 24 = 2 ½ + 1° 28 = 2 ½ + 1° 30 × 2 ½ + 1°

42 = 234 = 156°

1 % lbs. 2 % lbs. 2 ½ lbs. 2 ½ lbs. PEN PEN PEN

NAN NEC NIT NOL

Packed one in a bax

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 out on the working faces precisely ground to parallelism. Sides politiced and the body finish in gray examel. Large with

3 1/4 lbs.
Pucked one in a box
32

box

\$12.0

PERYK



WOOD LEVELS

The levels shown on this and the following page are made from the finest straight grain white pine propurable. The billets are thoroughly air seasoned and kiln dried and are filled and finished with care to make them as permanently maisture 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 alasses 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 arips on either side.

\$3.50 3.80

\$2.50

2.80

3 20

3.40

PEFLIX

PEGAM

PEGUN

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.

28 . 21/2 . 11/4" Pocked one in a box

12 + 21/2 + 11/4"

24 + 21/2 + 11/4"

30 . 21/2 . 1 1%

No. 124

No. 130

No. 312

No. 310

No. 324

No. 328

No. 330

1 1/5 lbs



NO. 948 MASONS' LEVEL



Full Brass Binding Two level and four plumb viols

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 permo nently set in the three aval wells protected and seated in by glass. Fine red finish makes it as permo nently mointrue proof and non-fagging as possible. Two hand grips on either side.

No. 948 48 x 2 ½ x 1 ¼"

3 ½ lbs.

Code PEUD \$10

NO. 848 MASONS' LEVEL

-u -0 = u

Brass Ends Two level and four plumb viets

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

No. 848

No. 448

48 x 21/3 x 11/4"

48 . 21/2 . 11/4

2 ½ lbs.

PEKAC

\$7.75

NO. 448 MASONS' LEVEL

d & d

One level and two plumb vials

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

34



\$1.50

30

NO. 590 TORPEDO LEVEL



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

The bady 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 "nickelaid" which sets flush with the body and gives ample protection to the level plans.

Two plumb, one 45 and one 90, and one-level vial are provided, all of the cats-eye type, wh affords better visibility in poorly illuminated places.

No. 590

NO. 296 FLOOR SCRAPER



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

The blade, which is reversible so all four edges can be used, is made of finest quality tool steel, 3 . 41/2 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 lips. No. 296

No 376 Extra B'ades



NOS. 34 AND 35 WOOD SCRAPERS





Four Scroping Edges

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

Bladas fine tool steel carefully hardened and tempered and then ground and honed to a fe

straping edge.

	Vendor Baselin	A COLUMN	Weight	Code	Pro
No. 34		5"	6 025	YOOLU	5
No. 35		5"	4 071.	YOOMA	
	Extra Blades for No. 34			YOONY	
No. 356	Extra Blades for No. 35			YOOPI	

NOS. 39 AND 51 WOOD SCRAPERS



Four Screping Edges
The paint brush type handle with which these scropers are equipped greatly facilitates any scrope

operation as it provides umple 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 blad

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

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

No. 30 2½° BM° 6 att. YADAT No. 31 125° A att. YADAT YAPVA No. 346 Estra Blades for No. 39 YOONY No. 356 Estra Blades for No. 51 Packed air in a box





NO. 29 AUTOMATIC SPIRAL RATCHET



A new, automatic spiral screw driver particularly saited to the requirements of no habbyst and householder. It is a high grade tool in every detail, sturdily busnicely finished.

neary insured.

It drives on draws medium size screws smoothly, easily and with surprising rapids.

The spiral is just as carefully machined as on our larger sizes. The rathlest mechanic is entirely new and dependable. Action is controlled by simply turning the levulation and the state of t

One bright finish forged steel bit ¼ inch wide is regular equipment. The churs on chuck sleeve, shifter sleeve and screw in handle end are nicely nickeled and buffed the handle is made of hardwood with a nice mahogany lacquer (finish).

The handle is made of hardwood with a nice mahagany lacquer finish.

Legal Events and 31 Weight Code

No. 29 CAKON

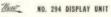
No. 29 CAKON

FXTRA TOOLS

The drills, countersists and slim cobinet type screw driver bit listed below greatincrease the upefulness of the No. 29 screw driver. They are all made with shanks that

| No. 297 | Calculate B | Calculate Calculate

Cobinet &t and Counterwis passed ¼ dat, in an income



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

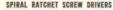
No 294 Deploy Unit 33% fbs. G485O \$
Complete with 1 No 29 Screw

& and Display



MULLERS FALLS







Automatically drives or draws screws, acts as a left- or right-hand rathet or as a rigid screw driver. These actions are all controlled by a simple shifting of the knowled control sleeve and the spirol lock not.

The spired is a solid rod of fine quality steel, precisely methined, running in two managenese bronze spiral runs controlled by hardened tool steel rather pawls. Greatly increased life has been secured by nearly doubling the length of the spiral runs.

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

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

	trige frames site fit bushed	sets to Frented	Weight	Code	Proce much
No. 67 A	12%	9.36"	39 (b)	GARY	\$4.30
No. 61A	19 1/2"	14"	1 % (b)	GALAX	4 90
No. 62A	25 1/4"	16 %"	1.5% (bs	GABEL	6.40



With Automatic, Quick Return

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

	anym Extended	Total Section	Waryer	Code	Free oan
ie. 670A io. 610A io. 620A	13 1/4 1 20 1/5 1 27 1	8 1/4 ° 15 ° 18 1/4 °	% 1b 1 ½ 1bs. 2 % 1bs	GALEA GALIO GALOP	\$4.90 5.60 7.30
		Parked one	on o hou		

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



No. 851

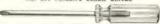
64...

PERMALOID HANDLE SCREW DRIVERS

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

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

NO. 850 PHILLIPS SCREW DRIVER



Licensed under U. S. Patent No. 2 044 840 These drivers are designed to handle the Phillips recessed head screw which is gaining rapidly

popularity. The blades are machined within very close limits to fit the screws perfectly. Blades nice polished. Unbreakable, transparent red Permalaid handles of high dielectric strength and year store burning.

Pullar January Study Code No. 850 No. 1 \$0.50 No: 850 No. 2 1.54 lbs. 6-No. 850 2 this No. 850 No. 4

NO. 851 STANDARD SCREW



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

No. 851 4 0.00 No. 351 lbs. No. 551 5.6 No. 851

NO. 852 HEAVY DUTY SCREW DRIVER



Die

19.6

\$10.6

10.4

19.64

Bits forged on the diagonal from fine quality square stock. Cross ground. Nickeled and burnishes Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning Code tous M Sax Store Weight Sax

No. 852	4"	1/4 × 1/4"	1 5% Hbs.	ZEOJI	
No. 852	6"	55 x 55"	2 % (b)	ZEOKA	
No. 852	8"	3% × 3%"	3 34 (b)	ZEOKM	
No. 852	10"	76 x 76"	4 % the	ZEOKO	
No. 852	12"	% = %'	5 lbs	ZEOKO	







Blades hammer-forged from high grade 1/4 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 Biod 5 8.00 No. 853 8 50 9.00 No. 853

No. 853

11/4 fbs.

10.00



Sturdy, well made tools for use in close quarters or to carry in the packet. Blades are 11/2 inches long, forged from high grade %s inch square stack. The unbreakable, transparent red Permaloid handles are of high dielectric strength and very slaw burning.

Size Biode. No. 854 56 lb. \$6.40 doz .BO each No BAO No. 1 Phillips No. 2 Phillips ZEREN 90 each No. san 1,00 each No. 840 No. 3 Phillips 1 lb.

NO. 855 VEST POCKET SCREW DRIVER



The pencil dip with which this little screw driver is equipped makes it ideal for the vest pocket. The hickeled blade is made of 1/2 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 thrength and very slow burning.

Ma gar 7FORA \$3.00



No. 59

136"

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 knutled 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 mahagany lacquered hardwood.

	Longth South	A mayor Box	Code	Programme and
No. 63	3 "	1 34 lbs	GANE	\$1.20
No. 63	A."	1 % lbs.	GAPER	1.30
No. 63	6"	3 % fbs.	GARTH	1.60
No. 63	8."	3.96 lbs.	GARUM.	1.80
		Packed us in a box		



Particularly adapted for radio, electrical and cabinet work where small screws are used. The cabinet type blade can be spon by merely turning the lousted callor of the base of the blade between thinth and fore flager. The same dependable rathet mechanism is used as in the No. 63 above, gives right and left-hand rathet and rigid actions.

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

2'			
	1 lb.	GATCH	\$1,15
	1 lb.	GATER	1.20
4"	1.56 fbs.	GATHA	1.20
6°	1.50 fbs.	GAUDY	1:30
		4" 1 59 lbs:	4" 1 1½ lbs. GATHA 6" 1 ½ lbs. GAUDY



Exactly the same mechanism as the heavy sizes of No. 63, with a short, stody blade and headle for use by gunniths, lockarisms, mechanism and others who need a heavy duty ratchel driver. Three actions: right- and left-hand ratchet and rigid.

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

2 1/2 lbs.



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 facked directly to the shank of the blade. The more hammering on the head, the tighter this lock

when properly heat-treated. The shanks have long, wide wings forged on them that preclude any thance of turning in the handle. The handles of excellent shape and fluted to give a good grip, are steel ferrule pinned through the blade

The blades are highly polished and the steet head and ferrule nickel plated

	- Drage	a Breste	West Bar		Prov dos
No. 676	3.	fag*	1.19/866		5 6 8
No 676	4				7 40
No. 676	5.				7.81
No 676	6	Sty"	7.15 101		8.00
No 676	8	Agr	4 lbs	Z#K1K	10.89
No 676		36.	4 % Ibs	ZAKOZ	12.70
No. 676	12	34.	5 lbs	ZAKUB	14.40

NO. 909 SCREW DRIVER



Torque Tested Blades

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

Finely pointed tool steel blade. Pinned nickel plated ferrule and mahagany larguered ha

	August Blocke	Barre Barre	Weight Box	Code	Premides
No. 909	2.	See"	2,4 (0);	Z(A5P	5 5 50
No. 909	3.				5 50
No 909	6				6.00
No 909	5.		("a lbs	3/88 C	6 20
No. 909	6.	Sag."	2 lbs	Z(B) Z	6.50
No 909	8.	50	3 + lbs		9 20
No 909	10.	70	2 % fbs	ZIBWA	9.60
No. 909		20	J is the	ZIBIYE	11.50
No 909	18"	24	5 % lbs	ZICEZ	18 00
		Posted t	o bos		



NO. 7777 SCREW DRIVER



A sturdy, serviceable screw driver made in the five most saleable lengths. Blades are hammer-force 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.

	congre dinne	Diameter Shork	Weight Day	Code	Prop. co.s.
No. 7777	3	10.4	1.34 His.	GICAB	\$7.00
No. 7777	4 "	Alexander 1	2 1/2 lbs-	GIDED	2 90
No. 7777	5"	May 1	3 %4 lbs	GIFFO	3 45
No. 7777	6"	100	3 1/4 lbs.	GIGLA	3:45
No. 7777	8 "	1/4"	6 1/4 ths	GIHUN	4 85
		Packed one o	foren in a bax		

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 nice y polished The handles are made of hardwood, fluted to give a good grip and nicely finished a

	Length Storie	Dyseater Block	West for	s, securely pinned on.	1
No. 355	2 1/2.	3/22 "	Va Its	YIMAY	\$4.80
No. 355	3 1/2.	750°	% (b.	YIWEZ	5.00
No. 355	4 1/2	597	1 15.	YIVVIB	5,20
No. 355	51/2"	5/12 "	1 lb	YIWOC	5:60
No. 355	6 1/2"	500°	1 5/a (lbs	YIWUD	6 00
No. 355	8 1/1"	51m "	1 1/4 (151	YIZAB	7.60

NO. 331 JEWELERS' SCREW DRIVER



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

The handles are hardwood with a fine mahagany lacquer finish. They are protected with a nickel

	Laugh Britis	Successed Blooms	Wanger Box	Code	Principles
No. 331	2	76.4	3% (b)	YINPA	\$3185
No. 331	3.	144	36 tts	YINSO	4.10
No. 331	4.1	76.	1/2 lb.	YINUT	4 40
No. 331	5:	144	V2 1b	YINYV	4 85
No. 331	6.	144	36 fb.	YIOCH	5.30
No. 331	6"	264"	% 1b.	YIOFK	6.40



NO. 69 STUBBY SCREW DRIVER



A foot mall 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 proportions to its ize are diversor or drawn with such an invaluable tool for general repair work, machine adjustments, applicance repairs, and all work inclose quarters.

The finely polished tool steel blade, 1½ inches long, is set in a fluted hardwood handle finished in setural lacquer and protected with a heavy steel ferrule.



This enque driver is equipped with four blades, two at either end set at right angles to each other that the pair is one end set at 45° from the pair of the other. This provides a blade politic eight positions of the screw slot, making if possible to handle screws otherwise inoccessible. Provides Different for starting or setting large screws.

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

No. 199 5 1/4" 1 1/4 (b): YBLOW \$0.50

Patked us in a box

NO. 797 OFFSET SCREW DRIVER



A wooderful tool for reaching out-of-the-way szews, starting frazen ones, or wherever a late! power \$ feecasary. Forged from a file grade of orange on seel, carefully hardened and tempered, with \$68s ricety polithed. Blades are set at right angles to one another, and on apposite sides of the handle. Made in two sizes, 414 and 64 in these.

No. 797 4-16" No. 299 4-16" No. 25GMO 1313-0 No. 797 4-16" No. 25GMO 1313-0 No. 797 4-16" No. 25GMO 3313-0 Poised cone distance of the no. 25GMO 400-0



P17

Ne. 6200

SCREW DRIVER BITS

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

Points carefully formed and accurately finished to fit the slots of the size screws for which they are

	See	Sean Server	Weight Box	Code	
No 351		6 to 6	59 lb	VIVOR	500
No. 351	£34"	n to 12	Va lb	AIANC	4.0
No. 351	200	12 10 10	a lb	YEVAMA	
No. 351	710.	16 to 70	Fg 10	YUHIE	
No 351	100	20 to 24	y Ib	YUHUX	5.3
No. 351	Ant Vala	6 to 16	55 th	YUNIC	0.4
		0 1 1			

BITS FOR SPIRAL RATCHET SCREW DRIVERS

for a	V. con	Filo.	1 -	**	William	FEA	Weight Day		Dis.
Nos 67-670	For "	1516	314"	1515		1514	34-14-	\$0.90	\$3.0
Nos 61-610	Eng!	1201		1202	19	1203	Vailb:	90	3.6
Nos 62-620	2/4"	1166	150."	1168		1167	1 lb.	.90	3.6

For Phillips Recessed Head Screws

Tuesday E. A. Parent No. 2010 510

	Protest Sare	Weight Dog.	Francisco.
Nos 67-670	No. I	the life.	55.75
Nos 67-670	No 2	A 110 .	5.75
Nos 61-610	No 1	85 105	5.75
Nos 61-610	No. 2	Au 101	5.75
Nos. 61-610	No 3	Barrier	5.75
Nos 62-670	No 2	So to	5.75
Nos 62-620	No. 3	A a Ro-	5.75

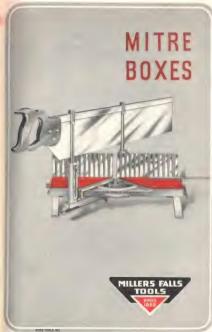
CHUCK AND DRILL ATTACHMENTS

For Spiral Ratchet Screw Drivers





These ottadements for the spiral ratches ratew drivers on page 39 convext them into an efficient out of material for being multi holders, greatly increasing the wildly of the driver. The chuck has a both other hat holds New Style, No. 401 Drill Points securely. If has a faunted tightening not which is necessarily politised, as it who shank. Eight was of drills. You to the internal formation of the spiral formation of the spiral formation.





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 out and losting durability.

The swinging lever, carrying the posts and saw guides which operate in them and the lockquired device, average freely from 45° to 90° left or sight. It can be positively set at the most used angine by means of the lever lock which engages the precisely located nothers on the lower side of the graduated quargeting. Or if may be set at only intermediate angle by means of the compression fost-

grouping agrouping of the state of the part of the property interesting the property of the state of the property of th

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

the work from stipping.

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 exopped metal parts inclosi rickel plated.

Capacity of all sizes, with swinging lever extended, is 10½ inches at right angle, 7¼ inches at mitre. Length of bed 19½ inches; width 4½ inches; height of back 3¼ inches.

		Prices Complete	with Saw		
	Serv Stree	New Weight	Salpang Walght	Code	Price and
No. 1244C	24 × 4"	211/2 lbs.	271/2 lbs.	ZITRE	\$45.40
No. 1264C	26 × 4°	22 fbs.	28 lbs	ZITUV	46.00
No. 1285C	28 , 5'	23 lbs.	31 lbs.	ZITWY	50.00
No. 1305C	30 x 5°	231/2 lbs.	31 lbs.	ZIUGH	54:00
No. 1306C	30 x 6"	25 lbs	33 ths.	ZIUHJ	57 00
		Prices withou	ut Saw		
No. 1002C for 4	* Saw	18 lbs	22 lbs.	ZIRNA	32 50
No. 1003C for 5	* Saw	19 lbs.	NY Stra.	ZIROR	35 50
N- 10045 (4	* C	2D Ilea	2.4 Iba	719.PF	30.00



LANGDON ACME MITRE BOXES



Three Point "Oilite" Bronze Bearing Saw Guides

Langdon Arme 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 Steel guides are equipped with three "Ollite" bronze bearings providing easier and smoother stow travel.

Mounted on the steel posts in which the saw guides operate are adjustable depth gauges to regulate the depth of our and also stops to hold the guides and saw elevated for quick changing of work to the bed. Still another adjustment is provided on the guides to maintain the proper mountment.

set the Ged. Stat declarer adjustment is provided on the gardes to maintain the proper maximum despith of our with relation to the bed pilates and to compensate for filling of the saw. The swinging lever travels freally from 45 to 90° right or left and locks automatically at the most treed qualies. If can be locked at any intermediate anale by means of the additional compression lock.

A length gauge is provided on one end of the bed and a stop for cutting order angles or holding work against the back on the other. The bed plates are steel screed to prevent slipping. The Nahest quality back saws are supplied, each tested for occurrency in the back stay.

thipped. 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

fed enameled. All exposed metal parts, except the saw, nicket plated.

Maximum capacity of all sizes 10½ inches at right angle: 7½ inches at mitre. Length of bad

193/4 inches; width 41/2 inches; height of back 31/4 inches.

		Prices Comple	te With Saw		
No. 72C No. 73C No. 74C No. 75C	24 · 4' 26 · 4' 28 · 5' 30 · 5'	27 ½ lbs 28 lbs 29 lbs 29 ½ lbs	33 ½ lbs. 34 lbs. 37 lbs. 37 ½ lbs.	LADDE LADIM LADIE LADE LAGER	\$45.40 46.00 50.00 54.00
No. 1071C No. 1074C	For 4 inch saw For 5 inch saw	Prices With 24 lbs 25 lbs Pocked one	28 lbs. 29 lbs.	LAIRD /	32.80 35.80



NO. 200 MITRE BOX



The frame of this box is made of laminated wood. The saw guide is designed so that either a box 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, 22% 30, 36 and 45°, right or left, is fixed to the saw guide. To set the guide at any one of these analysis 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 quide 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. 10 + 470 + 4"

\$10.00

Code

YEPRA

NO. 214 SAW SET

No. 214



No. 200

A sturdy set of pistol arip 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 quide is also provided.

Frame and handles are finished in gray and red ename All steel parts nickel plated except the hardened anvil. 1 1/2 lbs.

Posked one m o 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 dearly eithed —

not stamped.

The beam has accurately milled working faces with polished edges and black enameled web. It has a cat's yee level vial accurately set in the body which can be used either as a level or a plumb.

has a cat's-eye level vial accorately 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.

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





Etched Graduations

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

The steel blade is 12 inches long and 1 inch wide. It is well finished and dearly and occurately graduated in 8ths and 16ths on one side and 16ths and 32nds on the other. Both figures and

Staductions are extremely legible as they are deeply eithed —not stamped. The working forces of the beam are concretely millied with politished edges. The web is finished in 90sty stack enamel. When the knufled binder not is loosened the blade can be moved to left or right of desired and looked at any point.

 No. 1000
 12"
 14 ozs.
 ZIRAD
 \$1.40



NO. 365 DIAMOND POINT AWL



Forged Blade with Steel Bolster

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

The blade is hammer/forged tool steel, carefully hardened, rempered and polished. It runs decidrough the handle and is lackled into a steel head set flush with the end of the handle. The handle protected by a heavy, nicked placed steel ferrule, is selected hardwood with a natural lacquer field and is fluted to give it good grap. These flutes also prevent the tool from rolling.

No 365 3½" 6½" 3 Jose YOANE SBO



A smaller, lower priced and that it is really unaful. The blade, 2% industions, snicely pointed, topered and polithed. The blade is secured statem a valid, hardwood bandle protected by a nickel placed ferrule. Mandle finished in natural larguer

No. 10 31/2" 5" 1 oz. YOAIO \$2:10

NO. 211 TACK CLAW

The blade of this very efficient test is carefully shaped and fishibled for pulling tacks and small, headed nails rapidly and with latter or no effort. It is forged from a high grade of \$\frac{1}{2}\$ and setel), hardwood handle is protected by a nickel plated terrule and beeing highest in mahopany incurrent.

No. 211 7" JVs ors. YEPIX \$0.40
Pocked us no box



NO. 227 BUTT GAUGE



The lastallation 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.

Warking faces of the body are polished with the rest of the body finished in gray enamel. Rods an noted set screws nickel plated.

No. 227 3 1/s" 6 ass. YETRE \$2.4

Pathed one in a box

CARPENTERS' PLUMB BOBS

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

They are nicely polished and nickel plated.



DACH VER DANY



\$1 65

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 politice and set at any desirch height up to 1½ in the head of the second that the second that the second that a distinction of the second that a distinction of the controlled by the folds serve with exerter arm. Quildy and easily installed by simply borning two holes: are 2 linds in diameter 1½ is other desired and the first high diameter face and the links in diameter and through the bench and setting two screens.

The steel hook is nickel plated. The edge of the socket is polished and the



No 3



NO. 396 COUNTERSINKS







\$8.00

54.8

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

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

	Districtor	Langth	Weight	Code
No. 396	V2"	4 1/4"	2 021	YORM
No. 396	3/4"	4.56	2 011	YOFOX
No 396	34.	4 1/4"	2 021	YORME
		Pocked	ux 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 co hardened and tempered. Head and body polished. Angle 82'.

No. 394 2 ozs. Packed us in a bas



No. 410

NO. 410 COUNTERSINK



For use in Power Tools

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

1 01



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 a three colors, red, gray, and black.

Bross 5" by 6 %". Height 9".

Supplied entirely free with the following assort-

ment:

6 No. 410 Co 4 No. 394 Co 2 No. 396 14 3 No. 396 15

6 No. 410 Countersinks 4 No. 394 Countersinks

2 No. 396 ¾ Countersirks 3 No. 396 ¾ Countersirks 3 No. 396 ¾ Countersirks 6 No. 351 Ass' Screw Driver Bits.

No 4100 Display Unit Complete
Packed one unit in a earth

\$12.60



NO. 11 BIT EXTENSIONS

Deligned to follow on "I's lads bit or larger but not recommended for his targer than "I's lads. A neat, throug extension of the said is obset type, with solocal forced on to the shade, and pinned. Chalch will "indee of heavy seamless tabling is controlled by a coarse thread operated by turning the knutled collar. Tarke tool include politiked.

No. 11

No. 35

1 lb. 1 ½ lbs 1 ½ lbs Pocked one on a box ME MFO MFS

3.5

NO. 35 BIT EXTENSIONS

100

Designed to follow on "Mi Inch bit or larger but not recommended for continuous use on bits larger with such." The one-piece societ and shortic continuation of this extension makes it every strong. One of the strong of the s

18" 13 ots. 21" 14 ozs 24" 16 ozs

13 oss. CABI
14 oss CACI
16 oss CADI
Pocked one in a box

CABIO \$3.40 CACKO 3.55 CADDY 3.65



NO. 240 CHISEL AND PLANE IRON SHARPENER



No. 36



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

It overcomes the imperfections of free-hand sharpening and honing, insures a perfectly flat be 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 and

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 of

or bevel. The roller bearing rolls freely on the stone and a keen edge is secured in a minin Wants Code No. 240

NO. 36 BIT GAUGE



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

5075





& Realy made and finished bit of the Clark Pattern with sours cutting edges throats screws and neters 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	1/2 to 1 1/2*	Weght Fix Ib. Vs Ib Pasked one in a bax	SARDO	\$1 90
No. 48	1/4 to 3		BOLLO	3 10
No. 1 No. 2 No. 3 No. 4 No. 5 No. 6	No. 47 No. 47 No. 48 No. 48 No. 48 No. 48	1 % 1 0 1	0 %° 0 1 ½° 0 1 ¾°	\$4.10 5.05 7.15 8.50 12.75 17.00

SCREW ADJUSTING EXPANSIVE BITS



A finely made and finished bit with a positive screw adjustment of the cutter which absolutely prevents thifting 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 1/4 inch.

The deep, dean out screw, sharp spurs and cutting edges make it an extremely easy haring hit. tutters. All parts of the hit highly polished except the square shock

No. 152	% to 3	% (b) 1/2 (b)	BONGR	\$2.35 3.40
	Pe	sched one in a box		
		Extre Cutters		
	Fitting	Çı	spacify.	Price doz
No. 1 No. 2	No. 151	35.1	p 155"	\$3.90
no. 2	No. 151	15/41	to 1 %4"	4.93
No. 3 No. 4	No. 152		to 1-64"	6 80
No. 5	No. 152	134 1	p 3 .	7.75
No. 5	No. 152	3 1	0 4 *	11.60
No. 6	No. 152	4 1	10 5 "	15:45



NOS. 43 AND 47 COPING SAW FRAMES



These fine formers are identical except for their depth of throat. The former is made of \$\frac{1}{2} \text{is it}\$ in created deep single steel. The states are designed for thotalling \$\text{o}\$ of \$\frac{1}{2}\$ in the coping rows believed in longs, pin and other types. The pins set firmly in the study permit the blade to be hunded in any deducation. Tension on the blade is controlled by turning the malegony forspered hardwood hands. One book \$1\$ lade farmished with each frame.

All exposed metal parts heavily nickel plated and buffed.

6 + 1/2"

No. 60 No. 65

No. 43 4 %" 6 est. IRIAN No. 47 6 %" 9 est. IRIAN

No. 47 patked four in a box

NO. 50 COPING SAW BLADES

There blades of the long or based and nature are made of the steel wife

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, dean cutting.

No. 50 6 Ms. 6 days. IROUS Wared \$1. No. 50 6 days. IROUS IN Envelopes

NOS. 60 AND 65 COPING SAW BLADES

D.

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

tted one goteu



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, ratefully heat-treated to hold a keen edge and missly polished. The handles, protested with sirkeled ferrules, are hardwood with a mahogany locquer finish.

Set consists of one each of the following tools:

(2)	at comm	is of the end of the follow	ing roots:
	964"	Straight Chisel	5
1	5/4 "	Bent Chisel	
	3/4"	Skew Bayel Chisel	
)	34.	Bent Gouge	
	3/0"	U Tool	
	Sep."	Veining Tool	

No. 106

.75 .05

.65 .65 25

NO. 107 CARVING TOOL SET



This inexpensive set has started thousands in the fascinating hobby of wood and linoleum black 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 finsteed. The hardwood handles, which fit snugly lacquer. They are flatted on one side so they are in proper position when picked up from the

1	the set	consists of one each of t	he following
B C D E F	84 84 800 800	Bent Chisel Skew Beval Chisel Bent Gouge U Toel Veining Tool Sharpening Stone	\$0.65 65 75 .75 85 .35



GLASS CUTTERS AND WHEELS

There are several fine details that enter into the manufacture of Millers Falls Class Cutters that are not peecrally appreciated. A very line grade of alloy steel is used in making the when we of course, are the vetal part of the tool. The wheels must be machined with precision to provide up the exact bavel on the edge for maximum outling efficiency, exactly the right diameter hole for my pin on which it is to rotate, and the exact width for the frame in which it is to rate.

The heat treatment given the wheels is unique and extremely precise — born, he within very clase limits. The process is the result of fifty years of research and expenses.

within very close limits. The process is the result of fifty years of research and appeared in the perfection of these small cutters.

After hardening and tempering, the wheels are twice hand in all on exceeding

After nargening and tempering, me whoests are twice noticed in all on accordingly fine loads wheels to the critical angle on bever that gives the easiest out, deanest area and the longest life on the grade of glass they are intended to out.

Every Millers Falls Glass Cutter is actually tested on glass by a skilled operat before final acceptance. They are strong on wire and sealed for positive identifications to true.

> 1 and 478 337 and 444

Posked one dazon as ten dazen in an envelape

NO 444 GLASS CUTTER

The perfect finger-fitting form of the frame of this rater has made it a tremendously popular too by drops into natural position between the first two fingers and can be used for hours without foriging or disconfiont.

It is equipped with a tested Type \square wheel set in a well-polished frame with three standard u of breaker notches. The handle is finished in bright blue ename! with a red tip.

Weight dos.
51% 1 1/4 files.
52 YOMNE 53



No. 444

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 Cutter Weight of display only 1/4 lb.



NO. 1 TURRET HEAD GLASS CUTTER

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

The hurset is hurned from a solid bar of selected steel with the six wheel cases, integral parts of the turret. Infinite care is taken at the heal treatment so that the custs will outwear many wheels. The turret and turret strew are rust-proofed but the Utelyte process.

Six honed and Insted Type C "Red Seal" wheels are mounted on the furrer sales. Turret and wheels are locked to the highly political and nickel-plated steel frame by reams of a nutriproofed strew. Wheel No. I is used until wom out, then the surew is Sooned and wheel No, 2 rotated rite 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 fishhed in mahagany lacquer and protected by a buffed nicket ferrule.

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

May 2

No. 337



\$3 50

YURUX

d one in a bax; hwelve baxes in a display cartan illustrated above.

NO. 337 GLASS CUTTER



A ficely balanced atter 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 fell in red.

Packed one in a cortan; one dozen cortans 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 to

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

No. 470

NO 218 CAUGE GLASS CUTTER



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

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

No. 218





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 oblisto hold an edge. The bit and head are carefully hardened and tempered for the severe serve

expected of them. The bits and flutes are designed and proportioned to give ample strength and provide adeq chip clearance. The flutes taper back slightly and their outer face is ground concentric with the bi

to insure free turning. The bit is pointed just enough to start holes easily at the desired point or 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 vermillion lacquer with polished fan

The body is finished in aluminum larguer

	Distretes
	01 mt
No. 1216	34"
No. 1216	354"
No. 1216	34.
No. 1216	Ela"
No. 1216	55"
No. 1216	54.
No. 1216	56"
No. 1216	35"
No. 1216	7/4"
No. 1216	1.
No. 1216	1 1/4"
No. 1216	1.5%
No. 1216	1.34 "

of some	Length	per box	dozen	Code	tro
314"	12"	12	2 1/4 Ibs	ZOKLA	56
1/4"	12"	12	2 1/4 ilbs	ZOKLY	6
354."	12"	12	3 Willby	ZOKME	6
3/6"	12"	12	4 Wallba	ZOKMO	7
3/6"	12"	6	4 Va Iba	ZOKOP	7
Dis."	12"	6	6 1/4 lbs.	ZONOS	
1/4"	12"	6	8 Va Ibs	ZOKPO	9
1/4"	12"	6	12 % Ibs	ZOKYS	0
N/4"	12"	6	12 % lbs	ZOKYT	11
3/4 *	12"	3	12 W fbs	ZOLAM	12
2/4"	12"	3	25 lbs	ZOLAS	
1/4"	12"	3	31 1/2 lbs	ZOLEN	2.1
1 "		1	32 1/4 fbs.	ZOLET	26
1.5%*	12"	1	36 % Ibs	ZOUP	30

NO. 470 CHISEL AND PUNCH SET

No. 470

No. 1216

A most useful set of twelve forged thisels and punches put up in a co turned hardwood box with a mahagany lacquer finish.

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



1 No	573	1/4"	Toper Pin Punch
1 No	1140	1/4"	Cape Chnol
I No.	1140	1/4"	
I No.	1150	14"	Cold Chisel
1 No	1150	3/4.	Cold Chisel
1 No	1150	1/50	Cold Christ
1 No.	1178	1/22"	Digmond Point Chisal
1 No.	1190	1/4"	Round Nose Cope Ousel
1 No.	1195	1/22"	Salud Punch
1 No.	1199	34"	Prick Punch
1 No		24.1	Contac Busch

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



\$3.20

4.00

6 60

15.40

\$4.50

FORGED TOOLS

The disels and punches shown on this and the following pages are harmer-forged from a high grade of adapt allows the listeleted for its extreme toghness. The care exercised in heat-treating results as a waiterfully high grade chisel. The blades and heads are ground and nicely polished. The heads were a distantive vermillion lacquer finish.

NO. 1150 COLD CHISELS

9	All Auror	Count Co. No.	-	-	
Code	Wraight dozen	Pocked per box	Congre	Dictionary of store	Width of timels
ZUKE	% lb.	12	5"	3/4"	%; %; %; %;
YOU	1 % ilas	12	5"	Sta."	3/4"
YOU	2.7% (b).	12	5"	36"	1/2"
YUZY	4 % ths.	6	6 1/5"	1/2"	Va.
ZABA	7 lbs.	6	7.	3/4"	2/4"
ZEAH	15 1/2 lbs.	3	8 "	3/4"	1 "

NO. 1140 CAPE CHISELS

Free das	Code	Weight dozen	Pocked per los	Lange.	of ones	Matth of blode
\$4.50	YOORC	1.5% (b)	12	5"	3/6"	56.
5.00	ZEENG	1.94 lbs.	12	5"	2/4"	
5.50	YOOPZ	1 % ths.	12	5"	2/4"	14.
7.50	ZEEPH	3.% (b)	6	6 "	1/2"	714"
10.00	ZEERK	6 ½ lbs	6	7.	3/4"	3/4"
13.80	ZEEWP	10 1/4 Ibs.	6	7 1/2"	24"	1/5"

NO. 1190 ROUND NOSE CAPE CHISELS

-			es Faul Co. etc.	
44.4	of irod	incom- cressor.	Pocked per bes	Wager
1/6" 1/4"	367	5"	12	1 % lbs. 3 W lbs.
34"	54	7.	6	6 % lbs.

NO. 1178 DIAMOND POINT CHISELS

	-	-	Maria Callin	J PRODUCTION OF THE PARTY OF TH	B	
Wish of	Consensor of more	Length	Pocked per box	Warght 60244	Code	Price d
200	2/4"	5"	12	1.36 lbs.	YOOVG	\$3.4
36"	1/2"	6.	6	3 34 tbs	ZULVO	6.4

No. 1150 No. 1150 No. 1150

No. 1150

No. 1150

No. 1140 No. 1140 No. 1140 No. 1140 No. 1140 No. 1140

No. 1190

No. 1190

Mo. 1178 No. 1178 No. 1176



No 1202

No. 1195

No. 1208

NO. 1202 CENTER PUNCHES



NO. 1199 PRICK PUNCH

\$4.00



NO. 1195 SOLID OR TINNERS' PUNCH

24

NO. 1208 ALIGNING OR DRIFT PUNCHES

CHARLES AND ADDRESS OF THE PARTY OF THE PART

5 1/4 lbs.

Indispensable tools for construction work, in automative shaps, farms, or any job where hales must be brought into dose alignment for riveting or balling.

The long, evenly topered points on these fine tools are very highly polithed to a mirror finish.

that they drive easily and lossen up readily. They will not bend or break.

No. 1208 W' 12"

Nik"



NO. 573 TAPER PIN PUNCHES



forged from a high grade of actupon alloy steel, $\frac{1}{2}$ inith in diameter, except the two smallest sizes which are $\frac{1}{2}$ in the points and heads well ground and polished. They have the same distinctive varmilion locquered head that is used on the rest of the punch and which like.

		Incomete-		Principal Co.		
	Size	of week	Leegth	Section	Code	Price dat
No. 573	3/22 "	1/4"	5"	34 fb.	YUMEZ	\$4.40
No. 573	860	1/4"	5"	34 05	YOHYT	4 40
No. 573	200	3/6"	6.	1 %4 fbs.	YUMIB	4 40
No. 573	314"	3/4"	6"	1 34 fbs.	YOUT	4.40
No. 573	Fize"	7/2°	6.	1 %4 Tbs.	YUMOC	4 40
No. 573	1/4"	3/4"	6"	1 1/x 1bs	YOIPY	4.40
No. 573	5%	3/6"	6"	2 1/4 lbs.	YOIRB	4 40
No. 573	3/4"	34"	6.	2.3% lbs	YOJAP	4:40
		Pa	eked one dazen	n a box		

No. 472 Set of 5: 11/4, 5%, 1/4, 1/4 and 3/4") 1/6 lb. YOREZ

NO. 572 PIN PUNCH SET

A conful and convenient set made up of the eight sizes of punches shown above, as follows: one each 1/10, 1/4, 1/10, 1/4, 1/10, 1/4, 1/10 and 1/4 .

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





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 ½s" Pin Penth 1 No. 573 ¼s" Pin Penth

1 No. 573 Ho" Pin Punch 1 No. 1150 W" Cold Chirel

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.

No. 433 8 oz.

Packed one set in a box

\$1.7

\$1.80

No 572



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 invaried and the points, shanks and heads nicely polished. Every punch is very carefully herdened and tempered its entire lenath. Blued finish.

	Promps	Snock	Weight dod.	Code	Price do
No. 681	354"	200	34 4b	ZAUZ	\$2.60
No. 681	3/2"	314"	2/2 (b)	ZALOS	2.60
No. 681	1/4"	714"	3/a lb.	ZALUC	2.60
No. 681	962 °	910°	7's (b)	ZAIWA	2.60
No. 681	3/4"	Ha"	7% (b.	ZALYE	2.60
No. 681	90°	94,"	% lb.	ZAMAY	2.66
No. 681	1/4"	36"	1 1/4 lbs.	ZAMCO	2 66
No. 681	šia"	36.	1 1/4 ibs.	ZAMEZ	2 60

Packed one dozen in a bi

NO. 997 HOLLOW PUNCHES



These pundes are media from a very high grade of round tool steel about four inches long. The centers are knutled to insure, a firm gipt,. They are very carefully hardened and tempered the entire length. The cutting adges are sharpness.

Made in fifteen sizes as follow

	Size	Hole	Sire body	Augment.	Code	
No 997	1	364"	2/4"	1 1/2 lbs.	ZINKA	54 60
No. 997	2	712"	3/4"	1 % lbs.	ZINLE	4:60
No. 997	3	44.	2/8"	1 % lbs.	ZINNO	4 60
No. 997	4	1/4"	3%.	1 55 fbs	ZINON	4 60
No. 997	5	360	3%	1.5% (lbs)	ZINUP	4.60
No 997	6	F22 "	36	1.5% (b)s	ZIOXY	4.60
No. 997	7	377.	2/4	1 1/4 lbs	ZIPAL	4 60
No. 997	8	5/27 °	Fax."	11/2 lbs	ZIPEM	3 60
No 997	9	V4"		1 ½ (b)	Z191.5	4-200
No 997	10	E/22 "	7 10 "	1 1/2 lbs.	719ME	5 20
No. 997	11	556.0	1/5"	1 % Ibo	ZIPOP	5 20
No. 997	12			1-34 fbs	ZIPPO	5 20
No 997	13	36.	534	13% Pbs	ZIPPR	6 80
No 997	1.4	125."	F 34	2 101	ZIPRA	6.80
No. 997	15	756	Y 10 "	2 1/4 fbs.	ZIPRI	0.80



NO. 460 CENTER PUNCH



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

No. 460

MALTA

3 20

2.60

NOS. 141 AND 146 CENTER PUNCHES

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

Code No. 141

No. 146

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 MARES

NO. 167 PRICK PUNCHES

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

60

No. 167 MARRY No. 167 36" 1.54 lbs Parked one dozen in a box

No. 141

No. 141



NO. 800 SERIES OF NAIL SETS



This is the toughest, most serviceable nail set ever offered. It is made of fine quality molybdenum allay steel, hardened and tempered to stand up under a lat of hard usage. The carefully cupped point are formed to give a good bite and equalite the stress and strains so as to eliminate breakage. The deep knutring on this body gives a ure and comflottable gipt. The square heads provide a large

	Dismeter Folia	Body	LAMBOR	Wavehit dos	Code	
No. 801	Via*	364"	4"	1 lb.	MOBAN	\$2.40
No. 802	100	964"	4"	1 (b	MOSBO	2:40
No. 803	3/22"	1000	4"	1.06:	MOBEX	2 40
No. 804		511."	4 "	1 lb	MOSGA	2 40
No. 805	1/10 **	14."	4"	1 lb.	WOSHI	2:40
No. 815	Assorted Dozen			1.05	MORII	2:40

Assortment consists of two each 1/2 inch and 1/2 inch and four each 1/2 each and 1/2 inch
Pothed one dozen in a bax



NO. 825 NAIL SET DISPLAY

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

No. 825 Display with three dozen Nail Sets

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



NO. 310 MAIL SETS

dish

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

specified.	Points and hea	ds hardened at	ad tempered.			
	Digreter paint	Body	variety.	August day	Code	Free cold
io. 310	152"	766"	4"	% 15.	MAGIC	\$1 80
lo: 310	350 "	504"	4"	Va 125.	MAGNA	1 80
lo. 310	350"	\$14."	4."	Va th.	MAGOT	1 80
lo. 310	500	314"	4"	% Ib.	MAGUS	1180
lo. 310	Top "	314"	4"	₹/a lb.	MAHOL	1 960
lo. 310	Assorted			Valle.	MAHUT	1.80

Assortment consists of two each 1/2 such and 1/2 inch and four each 1/2 inch and 1/2 inch



NO. 312 SET OF NAIL SETS

This set consists of one dozen assorted sizes of No. 3 10 Noill
Sets put up in a turned hardwood box, as illustrated, finished
in dear laquer.

May Gode Park
No. 312 Set 156 the Manne 62.10

No. 312 Set 1 1/4 lbs. MAINE Packed one set in a box



NO. 381 BEARING SCRAPERS



designed to do nice scraping without chattering.

The blades are lorged from a very high grade of tool steel correctly hardened and so carefully

tempered that they will scrotch glass and hold their keen rozor-like edge over a long period. After being dulled by long usage they can be easily sharpened by a few strokes on an allstone.

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

	- Fdgs	(maph-season)	Weight box	Code	Price word
No. 387	1.5%	8.	Sá Rb.	YUNDO	\$0.80
No. 381	2 1/2"	10"	I. Skillbis.	YOCYP	1.05
No. 381	3 1/2"	11"	2 % Ibs	YODAK	1.20
Ho. 381	4 %	12"	3 lbs.	roda	1 30
		Pasked us in	n bos		
	One e	od-	Wanghi	Code	Property
No. 740 Set	11/2, 21/2 and 31/2	cutting edges	59 (15)	ZAVIT	\$3.03
No. 471 Set	21/2, 31/2 and 41/2	" culting edges	1 1/4 lbs.	YORCO	3.50

rocked one ter in a be



NO. 82 GASKET CUTTER

An improved cutter with hordened 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 followed on top to give a good bearing for the knutled set screws. Hardened square bit brace shank. Made of steel throughout, well polished. Cutterly Wagts Core Free-win

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 force hardwood bondles with a mahagany lacquer finish.

No. 92 14 136" 7 16" 5 00: YAUXT \$1.2"
No. 93 14 126" 8" 7 7 0. YAUXT \$1.2"



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 out from the finest grade of tool steel. Recommended for use on all hard surfaces.

The faces are occurately formed, sharply cut and deeply relieved, insuring dear, legible impressions. Faces and well-formed heads are hardened and tempered with the utmost care to make these stomps 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 stee by a specially developed modifine process using superior master dies producing sharper, closest faces then usual. Annule relief is provided to produce clear, loggifteed impressions.

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

	GC	HAND O					CHINE N		
Harght thereuter	No 1300 Latters per set	No 135J Figures	Accepta.	Size vesses.	therester	No. 1500 Latters	No. 1550	Single	5 10
1/22" 1/24" 1/50"	\$15.75 14.15 14.15	\$5.25 4.70 4.70	\$0.65 50	1/4 x 2 1/4" 1/4 x 2 1/4"	1/20°	\$7.50 7.50 6.75	\$2.50 2.50 2.25	\$0 40 35 35	560 + 2 % 500 + 2 % 500 n 2 %
144" 350"	11.25 11.25	3.75	40 40	% + 2 % ' % x 2 % ' % x 2 % '	\$14" \$11" \$20"	5.25 5.25 5.25	1.75 1.75 1.75	.30 30	初 · 7 号 例 · 2 号 引 · 2 号
5% " 350 " 354 "	11.25 12.60 14.15	3.75 4.20 4.70	40 50 60	% · 2 % * % · 2 % *	5/0" 5/4" 9/2"	5.25 5.25 6.00	1.75 1.75 2.00	.30 .30 .35	% · 2% % · 2% % · 2%
3hr" 1/4"	15.75 17.30 20.45	5.25 5.80 6.80	.70 .75 85	54 x 3'	\$4a.* \$4a.*	6.75 7.50 8.25	2.25 2.50 2.75	.35 .40 .40	164 × 2 1/2 164 × 2 1/2 164 × 2 1/2
54°	25.20 28.35 34.65	8.40 9.45 11.55	95 1.15 1.35	54 + 3 14" 54 + 3 14"	911 " 911 " 714 "	9.75 12.00 13.50 16.50	3.25 4.00 4.50 5.50	.45 .55 .65	1/4 × 2 % 1/2 × 2 % 1/4 × 2 % 1/4 × 3

Sets of letters, sizes ½ through ¼ inch constst of 28 characters, including & and a period. Sets of letters, sizes ½ through ½ inch comist of 27 characters, the period being amidted Sets of figures consist of nine characters from 0 to 8, the 6 being used for the 9 Each set packed in a well magic nicely finished wooden but.









NO. 120 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings



A stocky machine with a solid frame and ample base a withstand years of service. The spindle is 1/2 inch in diameter and runs in two "Oilite" bronze bearings 11/4 inthes long Bearings are lubricated through good sized spring top oiler. The spindle is threaded at both ends, 1/2 inch by 20 thread

and carries two sets of steel flanges 11/4 inches in diameter to carry wheels up to 4 inches in diameter with a 1/4 inch face and 1/2 inch hale. The V-belt steel pulley is 21/4 inches of diameter. Designed to drive from above, behind or below

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

No 120

NO. 125 GRINDING HEAD

Fitted with "Oilite" Branze 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 3/4 inch in diameter. Height given is to center of spindle.

Weis82 No. 125 6" 414 x 414" 5% lbs. YESVO \$4.50 Packed one in a bas



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-stee chuck with three bardened jaws that hold 0 9 1/4 inch round shank drills or rods. Flanges, chuck and pulley nickel plated.

YECDY \$470







NO. 150 GRINDING HEAD Fitted with "Oilite" Bronze Bearings



A beggier head with bigger base, greater height and 1/4 inch spindle running in two "Oilite" bronze bearings 11/2 inches long. The outboard portions of the spindle are turned down to 1/2 inch with 20 threads per inch The bearings are ailed from two large spring top oil cups on the frame casting directly above the bearings. Arbor on either end of spindle with 1% inth flagges for holding wheels up to 6 inches or larger in diameter with 1 inch face and 1/2 inch hale. Flange nuts are hardened. The V-belt steel pulley is 21/4 inches in diameter and can be driven from above, behind or

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

11 lbs. Postered one in a box

YEEVO

\$8.00

NO. 155 GRINDING HEAD Fitted with "Oilite" Bronze Bearings

Built on the same frame as No. 150. the spindle is 1/4 inch in diameter and tatries 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% 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 The chuck has three hardened theel jaws and holds 0 to 36 inch drills or rods. V-belt steel pulley is 21/4 inches of diameter and drives from above, behind or below.

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

No. 155

Weight

11 1/4 lbs. Parked one in a box

75



WIRE WHEEL BRUSHES



These wire wheel brighes are rigid and compactly made and have more wh per saugre inch of brush surface than the average wheel. Wires are tinh compressed and give greater wearing strength to brush. They have Arbor bushings can be furnished with 1/2 inch, 1/4 inch, 1/4 inch or 1 inch

but the wanted diameter of the arbor hale he to

	GITSPOT TRUTTS		
ALCO LA	It is important	12	
	No. 24		
	No. 26		
1 2 1 -	No. 28		
0	No. 210		

4 = 1"	1 (6	DOSME
6 + 1 +	1 39 fbs.	DOBNA
8 . 1%"	Ibs.	DOBPO
10 x 2'	5 5% (b)s	DOSRI
12 + 25%	6 % lbs.	DOSSU
E-ton o	other husbons ner poir	10.25

GRINDING WHEELS

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



			5	29		
No.	1519	4			1/2"	
No.	636	6	,		1/2"	
No.	660	ó			1/2"	
No.	1036					
No.	1060	10				
No.	2036				1/4"	

1/2"	65	55	34 fb:
55"	36	0	1 1/2.Rbs.
55"	60	A)A.	1 % lbs.
36"	36	0	7 % (b):
36"	60	NA.	7 % Ibs.
36"	36	0	8 14 lbs
34"	60	52	B 1/2 Ibs
Posks		rel in a B	0.00

BUFFING WHEELS



These buffing wheels will meet the need for light, portable buffers polishing a number of different objects that have formerly necessary hand work. The size of the wheel is 6 inches with a 1/2 inch bale 10 an arbor. Two sections of 20-ply are required to make the 1/2 inch thick.

No. 1721 Statched

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

No. 1521

Diameter of brush, 11/4 inches. Length of wire, 11/4 inches. Spindle 14 inch digmeter. Can be used in any 1/4 inch electric drill. No. 1522



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 1/4 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 dell for polishing and sanding.

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

.90

95

SPUR CENTERS



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

Don Head No DIAG 50 80 No. 1 M.I No. 2 MT 1"

SPUR CENTERS



Sharp, hardened points are replaceable. Four thurs insure positive drive in hard and soft wood and non-metallic materials. Shanks accurollely bored to fit 1/2 inch or 1/4 inch round

firbors. Two set screws. No. 917 59 \$1.00 20 1 00



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

No. 938 No 2 M.T. 2" 17 021 \$1.60 CUP CENTERS



hardened points are replaceable. ground Morse Taper Shanks. Shark Dom Manz Weight

No. 910 \$0.75 No. 912 No 1 M.T. 80 No. 914 95

CUP CENTERS



Sharp, hardened points are replaceable. Diameter of cups 1/4 inch. Shanks accurately bored to fit 1/2 inch and 1/4 inch round arbors.

Fits Arbor District Mond No. 915 \$1.00 34" 56. 1:00

SCREW FACE PLATES



For holding small blocks of non-metallic materrais. Hardened screws. Plate 1% inches and 2 inches in digmeter. Precision ground Morse Toper Shonks 1341

\$1.60

1.60

No. 940 No. 1 M.T.

No. 942



FACE PLATE



Heavy 1/2 inch plate, 3 inches in diameter bored so spurs can be set at two diameters. 113/4 inches or 21/16 inches. Center threaded for either the hardened point or screw center regularly supplied. Two hardened spurs also requiar equipment. Back threaded to fit 3/4 inch-167

Arbor.

No. 926 % 16T

TAPER ADAPTER

For adapting tools with No. 2 Morse Taper

Shanks 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.

Address No 982 No 2 M I to No. 33J B o21.



For using shaper cutters with holes % inch in diameter with 18 threads. Hardened left/hand lock screw. Shank accurately bared to fit a No 33 Jacobs Arbor. Drift pin included. Fox Cutters - File Arter A William

No. 980 54"-181 No. 33 Jacobs 5 1/2 ozs. \$1.50

SHAPER CUTTER ADAPTER

For shaper cutters with 1/2 inch holes Maximum thickness of orter 11/4 inches. Shank accurately bared to fit a No. 33 Jacobs Taper Arbor. Drift nin included.

For Cytters - Fits Arbon No. 978 1/2" Hale No. 33 Jacobs 51/2 pas.



Face of pad accurately ground at right analysis to the shook Poul diameter 33% inches Precision around Morse Taper Shank.

Don Fed Weight freeze

Shark No. 2 M.T. 334" 21 ozs MORSE TAPER ADAPTER SLEEVE



A precision ground No. 2 Morse Taper Shark with a No. 1 Morse Taper Socket accurately bared in it. Makes it possible to use No.

Shanks in No. 2 Socket. No. 944 No. 1 to No. 2 M.T. 3 1/2 pzs.



For operating grinding and buffing wheelt wire and fibre brushes, etc., with 1/2 lech hole Shork 1/4 inch in digmeter can be used in on three-igwed chuck of 1/4 inch or larger capacity Maximum distance between the 11/4 nd flanges is 1 inch. Arbor threaded 1/4 inch-201

No 984 SHAPER COLLARS



Set consists of six collars for use on 1/2 inch shapt spindles. Outside dipmeters 1%, 34, 1, 11/2 and 13/4 inches

No 074



60 POINT CENTERS



flurdened, precision ground 60" centers with severage ground Morse Taper Shanks for use

	COLLET	CHUCK	
6. 930 6. 932	No. 1 M.T. No. 2 M.T.	2 ozs. 5 ozs.	.75
40. 928	No 0 M.T.	1 1/2 ozs.	\$0:65
- Iunaico	Store	Warger.	Freezen



Churk has 1/2 inch capacity and is regularly sipplied with one 1/4 inch collet. Shank is occurately bored to fit n No. 33 Jacobs Taper Arthur Drift pin for removal from arbor in-

cluded.

No. 984 "/2" No. 33 Josephs 5 ors. WORK ARRORS



for operating grinding, polishing, wire brush, buffing wheels, sanding drums, etc., with 1/2 inch holes. Maximum capacity between the 2 inch Cameter flanges is 21/4 inches. Spindle is 1/2 inch n diameter with 20 threads per inch. Shanks ottogately based to fit round arbors. Two set

No.	956 958	V2" 39"		\$0.80
	CHUCKS	WITH	ROUND SOCKETS	



120. 972

twee hardened, spring activated jaws for holding round shanks, drills and rods. Chuck backs threaded 1/2 inch-20T. Sockets accurately bored for round shanks.

60 BALL BEARING POINT CENTERS



cision ground concentric with the precision ground Marce Tomes Shooks

	Shore	Weeght	Price water
No. 934	No. I MI	7 ors.	\$3.20
No. 936	No. 2 M.T.	10 oxs.	3.20

COLLET CHUCKS



Made in two sizes, 1/4 inch and 1/2 inch respec

nly.	Back three	aded to fit	an arbor	1/2 inch is
mete	r with 20	threads.		
		Fire Arbitr	Wasshi	free end
974	56"	V1"-201	3 1/2 OZI.	\$1.05

DRILL CHUCKS



Finely knurled shells with three hardened spring actuated jaws for holding all drills or rads within their capacity. Back threaded to fit on 1/2 inch-20 thread spindles. No. 968 is throme plotted and

		anner wre		Weight	Properties.
	988	0 to 1/4"	1/31-201	5 021	SORE
10.	966	0 10 1/2"	1/2"-201	11 025	90
lo.	968	0 10 1/2"	1/2°-201	12 ozs.	1:30

CHUCKS WITH MORSE TAPER SHANKS



\$2.20

A smooth-acting chuck with three bardened spring activated inws for holding round shanks drills and rods from 0 to 1/2 inch in diameter Precision ground Morse Taper Shanks. Shoria No. 1 M.T.

No. 964 O to 1/2" No. 2 M.T. 18 ozs.

No. 962 0 to 1/3"

\$1.50



WORK APROPS WITH CHIICKS



A useful combination of a 1/2 inch capacity threelawed chuck and an arbor for grinding wheels. and brusher with 1/2 inch hale

distance be with chuck Chuck bac	removed, 1/4 k threaded	inch flanges is 2 inch with chuc ½ inch-201, ound arbors.	1/4 inches k closed
No. 946	Fix Arters	Weight 22 ozs.	\$1:65



Work arbors accommodate grinding and buffee wheels, wire brushes, etc., with 1/2 inch hole Maximum capacity between the 2 incl. don eter flanges is 11/4 inches. Arbor throade 1/2 inch-20T. Precision ground Morse Top Shanks.

	Shork	Weight	Acres
950	No. D M.T.	8 ors.	5
954	No. 1 M.T. No. 2 M.T.	9 % 023.	
	ABRASIVE	DISC HOLDER	

ABRASIVE DISC HOLDER

No. 948

No. 88 No. 19



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.

Stork No. 992 1/4" Rd. 2 021 \$0.70

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

No. 994 6 to 8"

NOS. 88 and 89 TAP WRENCHES

1.65



Designed for securely holding top reamers, and other tools with shanks that must be operated by "" The bandles are permanently fixed ! the solid steel body. The thuck shell a long and nicely knurled to provide powerful clamping action on the cat fully heat-treated steel jaws. are self-opening.

Entire tool nicely polished.

WidoNt



NOS. 10 to 12 TAP WRENCHES

These tools are designed for accurately rentering 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 augriers. The set screw. Mustrated, 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.



		Contra	Tax.		-		
		Hord Top	Machine Top	Hondle	Waight	Code	Price each
40.	10	Va-54*	0.14	3 1/4"	2 025	NAVAL	\$1.00
to.	11	516-512	0-16	4 3/4"	4 021	NAVEW	1 25
fa"		54-95"	14-20	5 1/4"	8 025	NAVIC	1.80
to.	112	Set of one each Nos. I	O, 11 and 12		18 ozs.	NAVVY	4.30
		N	os. 10 and 11 pod	ked ux and No.			

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

Width Jows Weight Code 1//2" 1 (b) REAKS

NO. 217 VISE



Other faces black enameled. Clamp screw polished

4 1/2 lbs. Potked one in it box

\$2.90

No. 217



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 con-

struction.

They are operated by an occurately 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 last motion. After the vise is completely assembled, the tars are madipled to that they will meet programful. Clean

All steel parts are polished and all iron parts are finished

black end	mel.	poninco	Ond dir non	ports ore	muunita i
	Wide 3010	Java Open	Weight	Coda	Pres vin
No. 663					





to bench up to and including 2 inches thick.

NOS. 161-1700 BENCH VISES Rigid Twin Guide Rod Construction

These vises are similar to those above but not so fine a fine the twin guide rod construction insures smooth action and ingigidity of the movable jaw. Jaws milled parallel of the twise has been assembled. Small and not body casting 36d and mayable jaws black enameled. All exposed steel path and the property of the pr

	Wight Java	Jam Dpen	Weight	Code	2.11
161	25%*	21/4"	3 % lbs. 4 lbs.	YEGGA	52
		Darkenton			

NO. 18 SWIVEL VISE

Swivel Base. Twin Guide Rads

This vise is similar to No. 1700 above with the addition of a swind base which permits the jown to be swung to any desired angle. The swind clamping mechanism is controlled by a small stent level of the right. Twin guide rold construction gives smooth ordina and rightly Java 2½ intelle wide are milled offer vise is assumbled for class fitting. Clamps to bend up to a similar disclaims of the class fitting. Clamps to bend up to an additional and included no 2 index similar disclaims of the class fitting.

Body finished in red ename! Movable jaw in black ename!

No. 18 21/2" 21/2" 5 1/2 15/5 YEGIAA \$3.81
Packed one in a box





DRILL CHUCKS



Straight Round Shanks

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

Made, entirely of steal with corefully heardened and tempered jaws actuated by three small call phage. But he had been seen to be supported by the phage of the state with the part will paid the state of the state of the state of the state of the state with the part of the state of the sta

These doucks can be easily lightened or loosened by hand. No spanner ar wrench is required. The those shell is nicely knutled affording a positive and comfortable grip. The shanks are lathe ground

10 72 inch diameter.	Shell, back (and shank nicely poli	isned.		
	Country	Shall Cloneter	Weight	Code	Prop sup
No. 15	0 to 1/4"		3/4 (b).	WYNUS	\$2.10
No 15 by	D to 36"	1.5%	Vi 10:	WYPOS	2 60
No. 16	O r y	1.5%*	% Rb.	WYROV	3.40
		Without S	hants		

Without Shank

these are t	he same chudes list	ed above but without shanks.			
	report to	Sent Directed	Weight	Code	Pres .
No. 15	0 to 1/4"	1 (443) 26NS	54 (b)	WEBAL	\$1.50
No. 15 1/2	0 to 35"	"5ta" [467) 24NS	55 tb	WEBEN	2 00
90.16	0 to 15*	* 1.5601 24NS	59 Ib	V/EBIT	2.60

CHUCKS WITH MORSE TAPER SHANK



Those drill chasts are identical to those listed above but are fitted with precision ground, No. 15 No. 2, Marse Taper Shanks.

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

No. 15 M.T. No. 15 /2M.T. No. 16 M.T.	0 to 1/4"	% (b.	1/2 lb.	WYORY	\$3.10
Ma. 151/4M.T	0 to 3%	Vaile.	3/4 fb.	WYRII	3.70
No. 16 M.T	0101/1"	% Ib.	1 (%)	WYSET	4 80



24

No. 153

MILLERS FALLS DRILL CHUCKS



Those drucks have been used for years on Millers Falls Mond and Breast Drills, with complete satisfat to the user. They are fitted with ar without plain round sharks and hold round shark with which are topposty searchy and with ruptifies opcoracy for the low princ at which they are sold. Manufacture interested a chucks in large quantifies for equipment purposes are requested to ask for special, list quantity prices.

They are made entirely of steel with three hardened jaws actuated by concealed springs the cannot be damaged from without. The shells are nicely knutled to give a good grip for tighten

and loosening.

The chucks listed below are regularly equipped with ½ inch round stranks 2½ inches long.

	Common	Shell Donate	Weight	Code
0.5	0 to 1/4"		75 th	EARL*
0.6	0 to 35"	1 1/4	39 (6)	EADEL

Furnished with flattened shank for set screw without extra charge.

Without Shanks

		Shell Dramater	Bods Divended	Weight	Code	
No 5	0 to 54		L4321 22NS	59 Pb	FARSH	5.2
No 6	0 to 1/2"	1.54."	8h " L432) 22NS	1/2 1b	EASTP	
No 7	0 to 1/2"	1 1/2"	1.560) 24NS	39 lb	EAVES	3

NO. 153 BREAST DRILL CHUCK



Pisk drusk is interchangeable with the three-jawed chocks found an any Millers Falls or Goodell Breast Prill. It is all the Universal type holding ½ to ½ sich round shank drills, square bit brace or No. 1 Morse Taper Shenks.

Nicely polished and knurled.

% Ib. DILAT





"BLU-MOL TENSIOMETER""





Applies Floating Tension to Blades in Operation

Tension always has been recognized as essential to the best performance of hads saw blades. Ast how much tension was necessary for the best performance of a given size blade has been, in the part, or matter of pure quests. Naturally, therefore, is precise method or device for applying tension of its many pounds per square inch was unknown.

In doveloping "BU-MCK" and "IET-EDGE" Blades, which involved hundreds of exhaustive per formance tests in which the importance of the rigid tession on only blade was found to be one of the key factors to efficient performance, the Milliam Falls Conjouny determined to get the facts and produce a device that would apply the critical tession to a blade and maintain that feature continued while the blade is in use.

The "BULMOLT ID-BUDMETER," is used cylinder containing a heavy, percisely califorated of springs, it is must. It is installed quidly and early on our off the better lowers holds are motion bocause it arms directly onto the blade holder in place of the original sightening out. A gradual interest shows or a gingen the season ensorted of powers lessions on the blade as the Tensionaters in wife the property of the A principal principal size of the property of the property

In action the blade floats on the Tensioneter spring. By obsorbing blade elongation council in frictional heat or distortion of the eyes, the initial tension is continuously maintained within very definitive without attention from the operator. Blade file is greatly extended on any unsuest about strain on the blade is immediately obsorbed by the spring thereby minimizing breakage within a costly nod at the same time adding over worthwhilest activity found to some time adding over worthwhilest activity food to

With critical tentions worked out to a nicety and the "BLU-MOL TENSIOMETER" to apply the with, the overall efficiency of any hack sow blade can be greatly increased, the performance proved and large savings made.

"Millers Falls" and "Universel" Distributors will gladly furnish additional information about "Icota".

Millers ratios and Universal Distribution will glassly turnus distribution about modern testion" and what if means to you and also arrange for a demonstration on your own modern without any obligation whatsoever. Write us for the name of the distributor nearest you. For the organ respect testion or wereous uses of blodes see page 90.



HACK SAW BLADES

Attain Folls Company manufactures the broadest and floats like of hack saw blades in the world, pary tep in their production from the selection of the alloy steels from which they are made, seamagining and setting of the teeth and particularly like heal treatment employs like most modern kelbods, outpirment and controls. They are conceived and made as high grade cutting tools that manufactures are controls.





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

SELECTION OF HAND BLADES

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

metal consideration.

Type of Blade — Cutting in drill rad, mild steels, non-ferrous metals and softer materials can be safely

fittinated to Unif-Fise or Standard Steel Blades. When the cutting is in the hard alloy steels such as

Perspecies, drom-exicled, statellers, etc., a high speed type such as "Bis-Mod," "Bis-Flox" or "Tungsten flip. Speed" whole the classes.

Namber of Teeth per lack — his general, come leeth should be used on large sections particularly when cattleg midd steels, cut size, one-former mental and incliner materials when comple displacements are a needed. When the sections are unable a filter teeth should be used. The filters then should steel are large on the control of t

of teeth that will give the best performance on a variety of materials.

Table .		Name of Stape of Manufan					
"d Tranh	Large Sections Over 1' Diameters	Aluminum Angle Iron Asbestos Bebbet	Brass Branze 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		
20 Teens	This Sections Less than 1/4" Diameters	Alloy Steels Angle Iron BX	Coble Conduit Channels	Heavy Sheets Pipe Tubing	Wire Rope		
10 to		Annie Iron	Coble	Crutter Pine	Popula		

**Details — A well built frees with as empt treationing derice not sufficiently rigid to keep the built is good eligipaterel is asserted by prevent processory built brieflyings. If pushful the well was being and engineering and the prevent processor is a sufficient to be a work of the processor in the processor in the processor is a processor of the processor in the processor of the processor in the processo

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 and pressed wood panels nicely finished and silk screened in three colors: one combination of colors for the new Blu-Flex Blade, on





unit is the standard list price of the blades only. These display require less than one half square foot of counter square ex-NO. 550 TUF-FLEX UNIT

for Tuf-Flex and one for Blu-Mol. The list price of the complex

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. 65FH 12" - 241 No. 550 Intiffex Display Unit Complete

NO. 1112 BLU-MOL UNIT

High Speed All Hard

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

10 No. 1018M 10" - 18T 10 No. 1218M 12"

\$17.60 No. 1112 Blu-Mol Display Unit Complete Parked one unit in a corton Weight 21/2 fbs.





NO. 2222 BLU-FLEX UNIT High Speed Flexible

Display unit finished blue, black and gold. of Blu-Flex Blades (see next page) is as follows: 10 No. 12188F 12" 10 No. 10188F 10" -- 18T

10 No. 10248F 10" - 24T 5 No. 10328F 10" - 32T 5 No 12328F 12" \$17.0 No. 2222 Blu-Flex Display Unit Complete Patked one unit in a corton Weight 21/2 lbs.

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



ANDARD STEEL ALL HARD

and arade 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

such or in the hands of unskilled operators.

	DE 813 3130	manney or or	man open					
- Lucia	in Hand	Sizes only		ALL HA	RD		Packed 10	
	-				entern Briga		Wonger	-
-	Walte	Thistop	-	100000	29		100	200
10	V ₂	.025 .025	5A	13 15A	23 25 A	33 35 A		\$8.00 9.60
-				FLEXIS	BLE			
10	Us.	025	45A	53 55A	63 65 A	73 75A	3 % 4 %	\$8.00

"THE-FLEX " SPECIAL ALLOY

Pur Place

U. S. Fatant No. 7 252 469

The finest of all general purpose saws to entirely new type of flexible saw made of a patented special alloy steel. It is super-flexible, weretough-practically unbreakable in use. The teeth will not strip when cutting even the lightest

"ang, pipe or thinnest sheets. It arts 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

10

Packed 100 on a be



7.5FH

New Flexible, High Speed Blade

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 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

a equal in every way to an all hard blade. Made in Hand Sizes only

10 1218BF 1214BF



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 mostly and occurately at the lowest cost involves a number of important factors all of which me have careful considerations.

In operation the blade must be tensioned properly if it is to cut rue and perform its best. The arts performance of the performance is the state and to consideration the land of material being out, the type blade doses not production recipiements. For proper feed—pressure on the blade—which was for different sizes and kinds of material and the size and type of blade used, the recommendate of the manufacture of the machine blood be followed:

For general recommendations of critical tensions, cutting speeds and pitches, follow the tables be or submit full districts to us

.....

	PITCHES AND SPEEDS FOR POWER HACK SAW BLADES						
Masteray	faum per sub	Street per monte	Material	faces per ent	State Excised		
Alloy Steel	4-6	60-90	High Speed Steels	4-6			
Aluminum Alloys	4-6	100-125	Modinery Steel	4-6			
Afuminum, Pure	4-6	100-125	Malleable Iron	6-10			
Brass Castings, Soft	6-10	125-150	Managenese Bronze	6-10	60		
Brass Castings, Hard	6-10	100-125	Nickel Chromium Alloys	6-10	60		
Bronze Castings	6-10	100-125	Fige, Iron	10-14			
Cost Iron	4-6-10	100-125	Resis	6-10	60-90		
Copper	6-0	100-125	Stainless Steel	4-6	-65		
Carbon Tool Steel	6-10	90	Structural Steel	6-10	90-12		
Cold Rolled Steel	4-6	125	Julyana Thirk Wolf	6-10			

Use cutting compound on all of the above materials except Cost Iven

TENSION IN POUNDS PER SQUARE INCH FOR POWER BLADES

The following table of correct tession for given sizes of blades was determined for Millors follows the Massachusetts issiliate of Technology in conjunction with the development of Blankhal Selection of the Millors on the Blankhal Tensionnette. See page 86 on "Ricaling Tension" and how if the complicit.

North Walter	Thehren	Busens der Egge Torques-mign speed	Double Double
89"	.037	350 fbs	
	049-065	1500 lbs	2100
1/4"	065	2100 lbs	2800
1/2"	072	2600 lbs	
7	.085100	3000 lbs	3300
23/4"			



"BLU-MOL" HIGH SPEED

suited Blades, made from one of the feest high speed, molybdenom alloy steels, have carried on predete reputation for law cost performance. The exact, despely controlled heat treatment give seed, abrasion resistant criting edge that guarantees more criting per blade than any blade of is type.

giu-Mol Blades aut fast and aut true. Their uniformly fine performance in both hard alloy and mild tests and many other materials makes if the most economical blade for general, all purpose use, st a blade that it pays well to become intimately occupied with.

No.7506 M

Superior High Speed Performance

6 619EC

								10 111 0 001
110				Order by N	unben Below		Weight	List Price
	4.40	*neksess	-74	Teats)	par buts 24	32	800 test	100
10	1/2 1/1	.025	1214M	1018M 1218M	1024M 1224M	1032M 1232M	3/56	\$32.00

	PILES							Packed 10) in a bax
0	Wiem	16cmess	-		es by Numbers Be	iya .		no yer	Int Fine
	-			6	10	14	19	10	blode
2	1 1	.032 049 065			2410M	1254M 2414M	1258M	1 1/4	\$0.64 1.02 1.02
-	1 1/4	049 065 065 072	4504M 4604M	4506M 4606M	1410M 4410M 4510M	4414M		2 % 2 % 3 % 4 %	1.19 1.19 1.49 1.97
	1 1/4	.049 065 065	7504M	7506M	7410M 7510M	7414M		2 % 3 % 4	1.45 1.45 1.81
	1 134 135 2	.065 .065 .072 .085	8504M 8604M 8884M	8506M 8606M 8886M	8410M 8510M			3 1/2 4 1/6 5 1/2 0 1/2	1.53 1.92 2.53 3.98
	2	.085	1884AL	1886M				10%	4.65
	2 2	.085	4884M 4814M	4886M 25a" Hole				12 % 14 %	5:31
	2%	.100	3114M	The Hote				22.%	9.57



less than one third more.

"BLII-MOL" DOUBLE-LIFE

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

"Dooble-Life" is made of one solid piece of fine, high speed, molybdenum steal with feeth or nboth edges. The entire blade is painstakingly heat-treated to produce hard cutting edges. The center is then electrically amenated by a special process to produce a softer, very fleigh some by entire leading the blade indication the every, they reducing brekdage to a minimum.

The two cutting edges have a differential set. The first cut edge is set a few thousandiths of a lind wider than the second out edge allowing the second out edge to follow the kerf of the force without new the contract of the force without new to the contract of the contrac

without any wear.

"Double-Life" with its two cutting edges gives twice the cutting value of a single edge blade in

LUS PATENT No. 2,365,538

			Hi	igh Speed Doub	ale Edge			
Made	in Powe	er Sizes only		New			Packed 1	Owapa
_				Order by No	mbers Below		Weight	Die Pres
Length	Wigh	Thidanese	4	Tooth p	ter inch 10	14	to to	pr pre-
12	1	.049 .065			D12410	DL2414	2 ½ 2 ½	\$13
54 14 18 14	1 1 1 1/4 1 1/5	.049 .065 .065 .072	DL4504 DL4604	DL4506 DL4606	DL4410 DL4510	DL4414	2 % 3 % 4 % 5	1.5 1.5 1.5 1.5
17	1.56	.065	DL7504	DL7506	DL7510		41/5	2
18 18 18	1 % 1 % 2	.065 .072 .085	D18504 D18604 D18884	D18506 D18606 D18886	DL8510		5 6 % 10 %	3.5
21	3	.085	DL1884	DL1886			12%	
24 24	2 2	.085	DL4884 DL4814	DL4886 1%4" Hole			1414	7.



SEL-EDGE LONER DEVOES

joiner in the thousands of tests to which "EFFEDCE" Blades have and are being subjected has a _EEDCE" Blade broken when operating a conything approaching normal speeds and feeds. This independently, profile in inclusivy as well as in our laboratory, it highly important. Far's it makes year backsowing safer and secondly it moves getting the last cents worth of cutting value from every park.

"IELEDGE" is the newest development and most sensational performer in the field. The cutting edge is a strip of super, high speed steel electrically weided to an extremely tough dilay steel back. The back absorbs the stresses and strains encountered in even the severest of operations and makes IELEDGE" whereached in use.

"ELEDGE" has already been standardized by some of the largest users of hack saw blades in the exempt after exhaustive tests by their own production engineers. For safety, fast, clean cutting and accords they cannot be equalified.

0	WELDED EDGE	No. 8884JE 18"x 2"085 - 4T	١
_	*************************		J
	Super, High Speed Unbreakable Blade	15	

Vade	in Powe	Sizes only		New	-		Packed 1	10 in a box
n ca	With	Sec. an		Teath o	Order by Numbers Below Teeth per in 10 14			Fruit par
12	1 1	049 065			2410JE	2414JE	2 2 %	\$1 20
14	1 1 1% 1%	049 065 065 072	4504JE 4604JE	4506JE 4606JE	1410JE 4410順 4510JE	4414JE	2 1/4 3 3 1/4 5	1 40 1 40 1 75 2 31
17	1 1 1/4	049 065 065	7504JE	7506JE	7410JE 7510JE	7414JE	2 % 3 % 4 %	1 70 1 70 2 13
0 0	1 1 1/4 1 1/2 2	065 065 072 083	85047E 8604JE 8884JE	8506JE 81606B	8410JE 8510JE		3 %s 4 % 6 9 %	1 80 2 25 2 97 4 68
11	2	085	1884JE	1886JE			1136	5 46
14	2 2	.085	4884JE 4814JE	4886JE 1964 Hole			1.4 1.5 1/4	6 24 7 20
0	214	100	211415	Do Char			27.84	11.25



TUNGSTEN HIGH SPEED

The high speed steel from which these blades are made, a Tungsten 18-4-1 alloy, is particular efficient in cutting highly abstraine materials such as stainless steel, monet metal, carbon local sections and discoveringles letels, etc.

With their well-known heat and wear resistant qualities they can be operated at normal sea 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 unife high occuracy of cut and long-cutting life.

. FILIPLEVIESIL

No. 4604

HAND SIZES						Parked I	20 on o 60	
				Order by No.	marr ferre		Weight	Car Prio.
incom.	William	Thekeen		Texthip	er ech		box	Par.
			1.6	16	24	32	100	100
10	55	025		1016	1024	1032	4	\$33.5
12	5/2	025	1214	1218	1224	1232	4.3%	40

4T and 18T Slades Standard Set. 24T and 32T Wavy Se

PUWE	R SIZES						Packed 10 in a 50		
langth	Wide	Sections	4		Northern Belgre per ext	14	Weight pier ber 10	, p	
12 12	1	049 065			2410	2414	2 2 %	\$1 1.	
14 14 14 14	1 1 1 % 1 % 1 %	049 065 065 072	4504 4604	4506 4606	1410 4410 4510	4414	2 % 2 % 3 % 4 %	1.	
17 17 17	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	049 065 065	7504	7506	7410 7510	7414	2 % 3 % 4 %	1 2	
E8 E8 16	1 1 54 1 55 2	065 065 072 085	8504 8604 8884	8506 8606 8886	8410 8510		3 1/2 4 1/2 5 1/4	1 2 2 4	
21	2	085	1884	1886			11.56	1	
24	2	085	4884	4886			1359	å	

MI blades 049 to .085 inch inclusive have ½ inch holes and all blades .100 inch thick have *Ne inch h



"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

ent holes, fast and clean, 1/2 to 4 1/2 inches in diameter and up to 1 1/2 inch thick in any machinable naterial such as hard and mild steels, aluminum, brass and bronze, plastics, iron or steel pipe, wood ate. As the outside diameter of cut is slightly larger than the diameter of the body the saw follows toppletely through its own hole. This permits cutting through two or more walls or nortitions

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 resigned with a 1/2 inch or larger chuck or can be used in radial drills, lathes, drill presses, etc.





CUTTING DEPTH 1%"



DLE SAWS ALL SIZES - 6 TEETH PER INCH

Code NOBAC

	Digmeter	Pine	Pa	ne figure		Downster	Fine	2.	in Store
make.	Sew	rost	Pige Tup	Parlimers.	Nonze	Same	each	Fine Top	Pay Intrance
10	Na	\$3.00			542	2.56	\$5.30	715	
112	25	3.00		3.0	544	2.89	5.30		
14	14"	3 00	36	1/2	546	2.591	5 30		
76	1011	3.00			548	3	5.30		21/2
10	156	3.00	1	34	550	3 1/4"	5 30		
20	1 for	3.00			552	3.19	5.30	3	
72	139	3 00		1	554	3/35.7	5.30		
26	110	3 00	1 3%		556	3 1/2"	5 30		
26	1.54	3.00			558	3 %	7 00		3
	1 Su	4.00	159	1.59	560	376	8.00	3 %	
10	1 Tu	4.00			502	3.74	8 50		
13	2	4 00		1109	564	4	9.00		
14	2 4	5 30			566	4 10	10.00		3 5 6
36	219	5 30			568	414	13:00		
10	2 14	5 30	2		57.0	41%	15 50		
40	2.6%	5.30			572	4103	18.00		4
	2 2	5 30		2					

MANDRELS WITH HIGH SPEED PILOT DRILLS

The four mondrels listed below for driving the No. 500 Series of Hole Saws are all equipped " 1/4 inch high speed pilot drills. A 12-inch extension is available.

No an	Pitting Saws	Show	Weight	Cade	Processor.
No. 5514 No. 5518 No. 5540 No. 5572	Nos. 510-518	1/4" Rd	56 tb.	NOCAL	\$2.50
No. 3518	Nos. 510-516	3m" Hex	1/4 tb.	NOCEL	4.00
M 2540	Nos. 520-572	36 Hex	5% 1b.	NODIM	6.00
5500	Nos. 520-572	%" Hex	34 tb	NOFOX	6:00
. 3500	12 Extension	w Hox	59 Hb	NOGUN	4 00
High Spor	ed Pilot Drills			NOGYS	1.50



HIGH SPEED HOLE SAWS











Sow

With a cutting edge as blade made of the finest molybdenum high speed steel hardened and to for fast cutting in the hardest allay steels or any other machinable material. Originally a ... 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 to an V2 inch or larger chuck, or they can be used in a drill press, lathe and some other machine look.

The saw or blade is rigidly locked in the body or cup by means of an expansion balt. 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 1/4 to 31/2 inches inclusive, to tapitate 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 wore -- 17

					for Too	For Pipe	See	Com	and Saw	200	Chily	FAR F 100	-
5600		and flaw	No	Price	100 500	5-27	2011	Sec	Dres	No	Frank.	100	
4500	No	Frice				39	2.1/2	40	\$2.70	040	\$1.80		2
39	12	\$1.80	012	50 90	36	1/2	239	42	2.70	042	1 80	21/3	
7/4	1.6	1 80	014	.90	74	72	200	44	2.70	044	1 80		
1714	15	1 80	015	90			311	46	2.70	046	1.80		
7	16	1 80	016	.90			3	48	2.70	048	1 80		2 1
1 55e	17	1 80	017	.90		36	3 %	50	2.70	050	1 80		
1 1/6	13	1 80	018	.90		.59	3 59	52	2.70	052	1 80		
1/4	20	1 80	020	.90			3.15	54	2.70	054	1 80		
1.39	22	1 80	022	90	1.56		355	56	2.70	056	1.80		-
1 5/3	24	1 80	024	1 30	1.74		3 %	172	3 10	058	1 85		- 2
1.86	26	3 30	026	1 30	135	1.55	1	64	3 40	064	2.15		5.1
1.50	315	2 20	028	1 30		. 24	4.55	66	3.40	066	2.15		3 11
1.0%	30	2 20	030	1 30		1.55	3.55	6.0	3.40	068	2.15		
2	32	2.20	032	1 30		1 72	115	76	4 30	076	2.45	# 55	
2 15:	33	2 20	033	1 80			5%	El	4 60	082	2.75		
219	34	2 70	034	1 80			5 %	90	4.95	090	3.10		
2 4	36	270	036	1 80			1						
2.35	38	270											

MANDRELS WITH PILOT DRILLS

No. 1218 for sizes Nos. 12 to 18 DUDET No. 2054 for sizes Nos. 20 to 56 No. 5890 for sizes Nos. 58 to 90



FLEXIBLE BACK METAL CUTTING BAND SAWS





24

For Straight, Contaur 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-fived. Careful selection of the type, pitch and cutting speed is essential by the best performance and economy.

Two types of teeth are available. "Regular" for ferrous tals, wood, plastics, fibres, atc.

FEGULAR	тоотн	In Coils (100 , 250 or 500) or Cut t						
e 200 enter	Trustien	Traffic not	Sar Year	Availa emit				
	.025	24-32	\$0.12	\$0.60				
16		18. 32	.12	.60				
16		14 -18-24	.12	.60				
20	.025	10 - 14 -18-24-32	.32	.60				
29	.025		.12	.60				
34	.025	10 -12 -14 -18-24-32	.128	.60				
29	.025	8-10 - 14 -18-24						
55	.025	6- 10°- 14°-18-24	.136	.60				
16	.032	8-10°- 14°-18-24	.168	.60				

R. Ch.	Lat Price	-
HTOOTH WIRE	In Ceils (100', 250' or 500) or Cut t	o Len
Peares marked with asterisk are available in Wa		

10m	Durkness	Teeth per mit	per foot	1005
1/4	.025	4-6	\$0.12	\$0.60
16	.025	3-4	.128	.60
15	.025	3-4	.136	.60
3/4	.032	3	.192	60
1	.032	2.3	24	.60

REGULAR OR	SKIP TOOTH				Cut to Length and	d Welded
Lancon	Lawrence Co.	-	100	15"	8	1

incom.	025	022	025	032	632	195
550 000	\$1.32	\$1.37	\$1.42	\$1.61	\$1,75	\$2.04
6 6° to 7 11	1.44	1.50	1.55	1.78	1,94	2.28
7 6 10 8 5"	1.56	1.62	1.69	1.94	2.14	2.52
	1.68	1.75	1.63	2.11	2.33	2.76
	1.80	1.88	1.96	2.28	2.52	3.00
	1.92	2.01	2.10	2.45	2.71	3/24
6 In 12' 50	2.04	2.14	2.23	2 67	2.90	3:48
	2.16	2.26	2.37	2.7%	3.10	3.72
	2.28	2.39	2 50	2.95	3.29	3.96
	2.40	2.52	2.64	3.12	3.48	4/20
15 6 10 15 5"	2.52	2.65	278	3.29	3.67	4.44
	2.64	2.78	2.91	3 46	3.86	4.68
	2.76	2.90	3.05	3.62	4 06	4.92
	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



SPRING TEMPER METAL CUTTING BAND SAWS

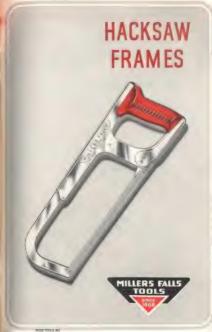
MILLERS FALLS SPRING TEMPER

This type of saw is made of the finest quality spring tempered steel which can reresharpened 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, magnetium

thin metal sheets, plastics, fibre and similar materials.

			- constant	
Witte	Dictions	Teeth per sub	Lot Pres per loot	110
Va	.025	8-10	\$0.14	50 50
3%	.025	8-10	.15	.50
3/4	.032	8-10	.16	50
1/2	.025	6-8-10	.17	.50
5/5	.032	6-8-10		.50
36	.025	4-6-8-10	.18	.60
56	.032	4-6-8-10	.20	.60
59	.035	4-6-8-10	.21	.60
94	.035	4-6-8	.23	:60
1	.035	4-6-8	.28	.60
1 %	.042	3-4	.35	70
2 56	.049	3-4	38	30

Exherra.	023	025	031	023	032	025	032	03.5	% 035	035	017	Cel
5 6" 10 6 5"	\$1:34	\$1.40	\$1:46	\$1.52	\$1.50	\$1 68	\$1.80	\$1.86	\$1.98	\$2.28	\$2.80	\$2.91
6 6" to 7 5"	1:48	1.55	1.62	1.69	1.76	1.56	2.00	2.07	2.21	2.56	3.15	5734
7'6" 10 8 5"	1.62	1.70	1.78	1.86	1.94	2.04	2.20	2.28	2.44	2.84	3.50	371
8 6' 10 9 5"	176	1 85	1.94	2 03	2.12	2.22	2.40	2.49	2.67	3,12	3.85	4.11
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 21
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	5.20
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 6
3 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	6.07
4 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 50
5' 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	691
6 6 10 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 10
7 6° to 18 5"	3.02	3 20	3.38	3 56	3.74	3.84	4 20	4 38	474	5.64	7 00	75
8' 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	7.9
9 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 39
70' 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	26





NO. 84 HACK SAW FRAME



The Finest Frame Ever Made

The frame is made of fine quality steel 1/4 inch thick by 1/1/4 inch wide and the back is hard, too steel 1/1s inch thick. The rear portion of the frame, stamped from 1/1s inch steel, affords a rigid support for the handle and a guard that gives complete protection to the hand. The handle is made at unbreakable, transparent red "Tenite" comfortably shaped and checked to afford a good grap

Easily adjustable for 8 to 12 inch blades which are held by sturdy studs with heavy pins set clips that permit facing the blade in four directions. Any desired tension on the blade can be search 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

1 lb. 15 oxs.

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 one 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. Adj for 8 to 12 inch blades. Equipped with one 10 inch blade,

Pocked one in a box

BYPAR



NO. 300 HACK SAW FRAME



\$3.50

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 1/4 x 1/4 inch

steel and the back is stamped Vis 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,

temfortable 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, nickeled and buffed. A 10 inch Millers Falls "Tuf-Flex"

Special Allay, Flexible Blade is supplied with each frame.

36s x 35" Pocked one in a box 2 ths.

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 pistal 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.

4, 1027 360 x 1562* \$2.10 1 % (b). CHNO Pocked two in a bax

3.240

No. 300



NO. 1237 HACK SAW FRAME



A substantial and serviceable frame with specially reinforced back and fitted with the popular blad moleded pixtle grap handle with metal reinforcement its entire length. Easily adjustable for 8 to 12 me blades which can be faced in four directions. Equipped with one 10 and holdes.

All exposed metal parts nickel plated.

No. 1237 8-12" 314" Seek Weeks Code Present Pasked No. in a box

NO. 99 HACK SAW FRAME



A serviceable frame offered at a very attractive price. The handle is made of black compositor reinforced its entire length, knotled and shaped to give a very, comfortable grip. The belians excellent. The frame construction is wisubstantial and permits ample treation on the blade by an excellent of the frame construction is wisubstantial and permits ample treation on the blade by an excellent of the frame construction is wisubstantial and permits ample treation on the blade. Outside and positively adjustable for 8 to 12 fluint blades.

All exposed metal parts nickel plated.

No. 99 8-12 2 24 Perfect Neurin in Dos

....



A shardy, rigid frame built specially to meet Federal Specifications. It is easily adjustable for 8 ° 12 inch blades which can be faced in any of four directions. Ample tension is secured by the weight on the outer stud. Finished in black "Ebonite" finish with the handle of mahogany lacquered hardwood. No blade furnished with this frame.

| Citizative | Cit



Colde

IMBED

1.20

1 lb.

No. 126 12" 3 %" Ha. 11/4" 1 1/4 lbs. UAB Packed two in a box

No. 125



Made for extra heavy cutting of large rods, bars, rails, structural shapes, etc. The heavy backs have smooth, even bends. Ample blade tention is secured by turning the large wining nut on the outer stud. Studes can be taced in four directions. One 12 inch blade furnished with each frame. Attractively flished in blade ename! with or mahogamy finished hardwood handle.

No. 515A 12" 51/4" Va 1 1" 2 1bs. BJAC \$2.9

Packed one in a box





heavy duty frame with a deep 10% inch throat for cutting steel rails and large structural shapes. Mandles are selected hardwood shaped to give a sure, confortable grip. The large wing not gives made treation on the blade which can be fixed in four directions. One 12 inch blade furnished. Newly black enameted with handle in enabral large-great finish.

No. 24 12' 1014' 14 x 1" 3% lbs. RECK \$3.0

Pecked one in a box



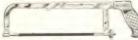
No. 1723 8-12"

No. 168

No. 7

No. 8

NO. 1723 HACK SAW FRAME



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

NO. 168 HACK SAW FRAME

IMPR

\$0.3



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 provide

blade tension. Entire tool well nickeled. Equipped with one 10 inch blade. Weeds 300 x 1 to 1

NO. 237 KEYHOLE HACK SAW



The new handle with which this famous little tool is now equipped will make it more popular than ext

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 mustbe back which minimizes breakage. It outs nails, metal lath, plaster board, stucco, armored cabin

conduit, packing, bone, bakelite, fibre, hard and soft wood, etc., etc. It can be used in countless place where the ordinary back saw will not operate. Wa-gle Lanuth Brode YEYAT No. 237

> YEYD8 Extro Blades 18 Tooth Extra Blades 24 Tooth

Packed su complete saws or one dozen blades in a box



YASFA

NO. 320 BUTCHER SAW FRAMES



Sordy, well balanced frames, well built throughout for long satisfactory service. The frame is made of nietry finished ½ by ½ inch round edge steel. Each frame is equipped with a high quality ½ inch pains lempered sow blade tensioned by memos of a large wing nut opperating or the rear stud. The metertably shaped hardwood handle has a natural lacquered finish. Frame and parts nickel plated.

NO. 420 BUTCHER SAW BLADES

Made from the finest quality of spring steel, % inch wide, tempered, ground and politiked. The teeth the set and filled after setting, making a very free, fast-cutting blade. Ends are rounded and punched

NO. 83 KITCHEN SAW



A well mode serviceable sow for use in the home for cutting green bone and frazen med. The frame 3° Mode of 3° is by 1° with round edge steel. The handle is made of selected hordwood with a natural deguer.

Each frame is equipped with a polished and tempered blade, V_2 inch wide, which is filled and set for fast, free cutting.

No. 83 14" No. - 15" No. 15" VASR \$1.00

Extra Blades 14" Vs lb. per daz.
Packed we frames in a baxy six dazen blades in a bax



BUTCHER SAW BLADES IN COILS



These calls are made of one continuous strip of the finest quality, spring tempered steel with a bright ground and polished finish. Blue finish can be suspilied, if desired. The teeth are set and tiltne field restricted the string, making them exceptionally sharp and ready for immediate use. The teeth are correct sharped and pitched — 11 teeth per inch — for free, easy cutting. They can be readily reflied 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

	Lungth	Water	Tourts	WagN	Code	ALLEGA POP II
No. 251	25'	3/6"	11	1 % Ibs.	MIAIN	\$3.7
No 252	25	36"	11	1 % the.	YIANP	3.7
No. 311	501	39"	11	2.5½ lbs	YIJUP	7.4
No 312	50"	36.	11	3 1/2 lbs.	YIKAL	7.4

NO. 200 BUTCHER SAW PUNCH



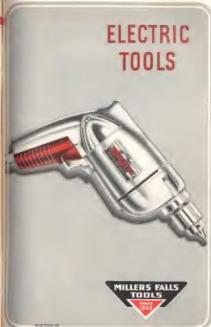
There is so much variation in the sizes of various styles of butther's saw frames that most of the beam class of butther's saw blades as calls are not punched when they leave the factory. All dealers me users of, these blades will fill dish in suspensive deriver your connection for punching the necessary has the frame is made of blade evaluation. The sizes want crossbar are political step the punch and dish are made from file tools test carefully historiased and tempered to push spring ser

\$2,50

No. 200 See male Lerum Weight Code

No. 200 11/4" 5 %" 7 ors. YEMAJ

Proceed one in a bor





MILLERS FALLS PORTABLE ELECTRIC TOOLS

GENERAL UTILITY LINE

With this catalog we announce the first of a complete line of utility tools and occessories produced to meet the particular requirements of the individual tool user, such as, hame owners, carpenters, farmers, model and pattern makers, habbyrist 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 $\frac{1}{4}$ inch and $\frac{1}{2}$ inch drills and stands lated on pages 110 and 111. They are attractive in appearance and are finithed to reflect their fine construction throughout. Their power is conservatively rated giving a reserve safety factor not found in other connectable, 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 Folis Electric Tools, Ireq, and fracrostily become feels file performance and dependentiality, is eligiped and engineered throughout for production use in industry and in the automotive, pileming, besting, consultrion, electrical and many other fields. The wide ranging of opposities, speeds, and power now available answer most every requirement executives. Here tools in development will make the file seven more

It is sold, on a selective basis, through recognized distributors and Millers Falls Co. will wekcome 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 Conado 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



New

For Grinding, Wire Brushing and duffing

A Ree, new grieder that is rugged, powerful and reliable. The design of both the mechanical and leteliated porns is excellent and the performance is consporable to that of much higher priced grieders. It is nicely safet for a great variety of "loods ago" (both in industry and the requirements of union—the publishing and heating, electrical or other types of repair shops. It is equally valuable to Mome vorkhop covers, fames and carditimen in general.

The heavy 14/5 inch spindle runs on large, grease sealed, precision ball bearings. Greater fishance between the mater housing and the wheels gives increased accessibility and a wider flexibility of periodarly on brushing, polishing and buffling. The heavy, wider wheel goards are mounted diseatly on the spindle housing. The work rests are easily a distable.

OVERALL HEIGHT: 9/5 inches. Bench to center of spindle 5 1% inches.

NOTOR: Powerful W HP. for 50 60 cyde AC only. 115 or 230 volts.

SPINDLE: Boll bearing. Overall length 14 ffr inches.

WHEELS: One each coarse and fine, high grade abrasive, CORD: Six feet of high quality, three conductor with plug.

-						
-	Birting	Wheels	No Lood & P.M.	Stepping weight	Code	Price week
No. 60	14 H.P	6 = 1/2 = 1/2"	3450	45 lbs	NILUR	\$39.50
No. 867	Plain Eye Shields, p	per pour		1 % fbs.	DORPA	3.00
Ma. 8610	Illuminated Eye Shi	elds, each		3 % lbs.	DOSSY	7 50

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

109



GENERAL UTILITY DRILL

1/4 INCH



A truly wonderful ¼ inch drill developed with the sale objective of giving the individual crafts 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 hora 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 me from B Millers Falls Tool.

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

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

HOUSING Die cast alumnum allay. Hammared grey enamel finsh CHUCK. New Millers Folls Precision

GEARS: Alloy steel - greate lubricated BEARINGS Ball thrust spindle all others oil impregnated branze.

SWITCH Single pole make and break CORD: Seven feet of two conductor, Type SJ, with moulded rubber reinforcement and plus.

		Cleaners without	PPH	Ampu- fullyport	Lacym reacy	t Awayer	Code	100
No.	914	1/4"	2500	2	11050	3 1/2 lbs.	PANON	\$19.65
No.	2014	Wheel Arbor for Bench Stand, Base Bench Stand	4 ½ + ½ · H	Wheels eight to Chuck		2 lbs. To be announced	PARAR PARES PAREM	1 00



GENERAL HTILITY DRILL 1/2 INCH





Approved by the Underwriters Laboratories

The Best Dollar Value of any Drill Mode

for the craftsman whose work requires a drill of 1/2 inch capacity this tool offers a remarkable value. 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.

NOTOR Universal for D.C. or A.C. 25 to 60 cycles — 115 and 220 730 walts. HOUSING: Die cast aluminum allay Fine hammered gray examel finish.

ENUCK No 338 Jacobs Standard key-operated

GEARS Alloy steel - greose lubricated

HARINGS Ball thrust spindle bearing all others oil impregnated bearing. MITCH: Double pale with lock automatic trigger release

CORD Three conductor, Type 5J, cord with moulded rubber aforeyments and plug cap with grounding terminal

_			Fut Load	Langth overall			
No. 912	1/2°	450	3	15"	8 lbs.	PANNA	\$35.00

BEN		

1	-	For Dr., No.	to Tobia	to Column	Max fred	Weglv	Code	From each
No	2912	912	14"	5141	3%.	26 lbs	PARAB	\$16.80



No. 314 No. 1242 These two beautifully designed and engineered drills are built to a high standard to meet no 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, uninter

performance.

New

No. 1314

No. 1242 712

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 all impregnated bronze. SWITCH: Fully endosed. Double pole CORD: Yen fret of high quality

	Copenty	RELEGE	Full Load	Length	Weght	Code	
No. 314 No. 712	5/4 ° 5/2 °	1800 400	2.2 3.5	12° 15%	4 ½ lbs 10 ½ lbs.	DAMOY	57
			BEN	CH STANDS			
	Por Drill No	Man Chua In Total	Max Chun to Colum	Was fred	Warts	Code	

25 lbs

77 lbs

51100



New

"DYNO-MITE" PRODUCTION DRILLS



More Power More Production Longer Service

in tew, improved line of "Dyno-Mile" drills has been augmented by the addition of a high torque total equipped with a '\$ inch duck nicely adapted to the cirplane and many other industries. The 200s are more powerful, finer materials used and fabrication held within the closest tolerances. The Dyno-Mile" 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 burn. The slower speed, the speed of t

NOTOR: Universal D.C. or A.C. 25 to 60 cycles. VOLTAGES. 115, 125, 220, 230, 250.

SUBMO: De cas aleminum, fine grey enamel finish NICK Jacobs key-operated IABMOS: Amplare, intermediate gears and spindle, grease sealed, ball bearing.

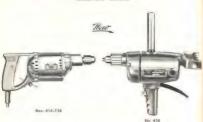
AR3. Heal-treated dility steel throughout
MTCH. Double pale, with lock, automatic trigger release
OND and PLOG. Ten feet of three conductor beavy duly cord with plug.

_	Ches	Steel	copers hamilantes	No Lood Speed 2 P w	Length overall	A 2 701	Code	Free posts
% 220	92"	1/4"	74"	1600	8 %*	3 lbs	DARAT	\$38.00
	1/10	367	14"	2500	6 %	3 lbs	DAREL	38.00
He. 230	1/4"	352"	1/6"	3500	8 %	3 Fbs	DAREX	38:00
	9%	1/4"	1/6"	5000	8 %	3 lbs	DARID	38.00
	964	244	354	800	0.36	3 1/2 lbs	DAROW	44.00
70. 245	254	56."	54."	500	9.5%	3 1/2 lbs.	DAROF	44:00
	35 -	Su	36"	800	10 %	4 Ibn	DARRO	46:00
19. 255	22.1	55.	36	500	10%	4 lbs	DARYS	46 00
1090 Unive	rsof Right A	nale Drive	e Attadunent	for Nos. 220, 2	25, 230, 235,	240 and 245	DETRO	30.00
	and the same of			See name 117	for Stone			

113



ELECTRIC DRILLS



These are industrial drills of the highest order. They have been used an every sort of application and found tried and Inne. Constant improvement and refinement of their electrical units and to precision machining of all vital metal parts insures the long life and dependable service for with they are famous.

The new No. 438 replaces the No. 538 in response to a growing demand for a close 179" heavy duty drill of 1/4 inch capacity. It is one of the finest tools ever produced.

MOTORS: Universal for E.C. or A.C. 25 to 60 cycles - 115, 220, 230 and 250 yells.

CHUCKS Jacobs key-operated
GEARS. PINIONS and SPINDLES: Finest heat-treated plloy steel

GEARS, PRINCING and SPINUTES: Finest heat-freated alloy steel

BEARINGS. Nos. 414 to 738 ball bearing armsture with broaze spindle bearings.

No. 436 ball bearing armsture and spingle. All others needle roller.

BRUSHES Long life pigital accessible from without SWITCHES Double pole, fully endosed. Underwriter approved

SWITCHES Double pole, fully endosed. Underwinter approved CORD Ten feet of best rubber covered three conductor, Type 5, with unbreakable plug.

		neer neer	Standard No.	No Louis A P.As.	Argo Milosi	Length dweep?	West	Code	
No. 414	2/4"	Std	1800	3000	2.5	12"	5 1/4 lbs	DIANA	
No. 514	1/4"	HD	2000	1000-1500-3000	3.0	14"	7 Ibs	DRAWI	
No. 516	160	NID.	1500		3.0	14"	7.3% (b)	DROVE	
No. 638	156	Sal	1000	1500	3.0	14"	7 % (b)	DINOX	
No 738	35.	HD	400	None		14"	8 % Ibs	DAHOY	
No. 438	35"	HD.	900	None	4.5	14"	9 1/2 1b2	DINNO	



No. 3012



he requirements for drills with ½ inch capacity are completely covered by these three fine tools. hey 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 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.

No. 512

CHUCKS: Jacobs key-operated SEARS, PINIONS and SPINDLES Finest heaf-treated alloy steel

MARINGS: No. 312 ball bearing amoture. Spindle bronze sleeve No. 512 ball bearing armoture and spindle. All others needle roller

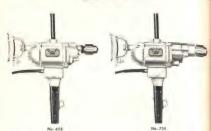
No. 3012 ball bearing armature and spindle. All others bronze sleeve. RUSHES: Long life pigtail accessible from without

MITCHES Double pole, fully endosed. Underwriter approved CORD: Ten feet of best rubber covered. Type 5, three conductor with unb

_	Capacity - Steel	No Load RFJs	Ange Felt Look	Description of the Control of the Co	Weight	Code	Property
No. 312 No. 312 No. 3012	½° Std. ½° Std. ½° H.D.	525 550 650	4.5 5.0 5.5	17" 14" 18"	15 % lbs. 9 ½ lbs. 19 lbs.	DIRCK DIRIL DIRYL	\$58 00 58 00 75.00
		For Stands on	d 4		7 124		



ELECTRIC DRILLS



Each of these rugged, heavy duty drills is available in two speeds which completely cover requested in these capacities. They are perfectly suited for such jobs as driving pipe-threading modific positive set originate gr

The spindles of Nos. 734 and 801 are mounted on Timken Taper Roller Bearings, atherwise the 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: Jatabs key-operated. No. 801 has No. 3 M.T. Socket

BEARINGS: Boll bearing armotutes, Nos. 734 and 801 Timken Roller Bearing.
GEARS, PINIONS and SPINDLES: Heal-treated alloy steel

SWITCHES: H.D. double pole, fully endosed. Underwriter approved

BRUSHES: Proteil - mounted on racker rang.

CORD and PLUG: Ten feet best rubber covered, Type S, three conductor with armored plug.

	Capacity - Steel	R F to	B P w	Amer. Fairfood	Length everal	Weight	Code	
No. 658	W' HD	475	700	6.5	1914	22 13% lbs	DOTTY	5 9
No. 734	34" H.D.	400	275	7.5	2134"	26 % lbs.	DANDY	11
No. 801	1 Std	275	400	7.5	23 1/4"	24 1/4 fbs.	DROXO	1



DRILL AND SCREW DRIVER STANDS AND ACCESSORIES



Newell-built stands listed below make efficient bench units of the Millers Falls Drills and Scrow Drivers
which they are designed. The bases are large enough for stability and afford ample support to
theatry columns which carry the adjustable brackets that hald the tool. The feed levers with spring
an stovide ample drilling pressure or feed for driving screws or running nots.

No. 3344 Goose Neck Stand provides spring suspension hand feed only.

-	For Dobs and or Screw Dosers	Max Division To Toble		Max fred	Base	Wangto	Code	Price was
1014		53%			5 x 2 %	2 1/2 lbs	DUCKE	\$ 3.50
1238	312, 3012, 658, 734 and 801	16 "	734"	4 1/4"	10 + 10"	77 Ibs	DIWAC	35:00
7/1514	414, 514, 516, 638, 11 and 22	13 1/4"	6 *	3 "	974 . 8"	37 lbs	DIACK	20.00
3160	11, 22, 420, 430, 440, 445	161/2"	5 .	2 1/6"	11% + 5%		DIAGO	20 00
	and 50					7 Dis	DAPIR	5.00
2 5014	52	41/4"			41/2 . 2"	2 Ibs	DUCLO	3.50
2 5120	438 and 512	14 "	71/2"	51/3"	8 1/4 1 8 1/4"		DIWE	26 00

Switch Controls and Lant Switcher and last Switcher

-	Accessors	For use with Storeds	Wangs	Code	Price each
1517 1517 3163	Wall Brockets Drill Vise (2 ½ x 3") Foot Treadle Feed Power Feed	1238, 1242, 1514 and 5120 All vertical stands 1238, 1242, 1514, 3160 and 5120 All drills with pape side handles	2 1/4 lb 7 lb 20 lb 3 lb	DIFTS DAPAT	\$ 2:00 4:50 8:00 19:95



"DYNO-MITE" PRODUCTION SCREW DRIVERS



With the smeath, sensitive "ADJUSTOMATIC." CLUTCH

On production assemblies where a myriad of screws or nuts must be driven rapidly, with a city and

uniform torque, thousands of manufacturers know and insist on the velvet smooth, vibrationless coor and sensitive adjustability of Millers Falls "Adjustanatie" Clutches.

Driven by the new, more powerful "Dyno-Mile" power unit these tools have no equal in their feed. They handle madrine strew and wood strew applications within their capacity efficiently, dependently

and with accelerated production.

The 1600 R.P.M. unit is recommended for general all around use. The 500 and 800 R.P.M. in target units are recommended for all sheet metal screen, self-tapping screws and wood screen and band wood screen are self-tapping screws and wood screen and screen are self-tapping screws and wood screen are self-tapping screws and screen are self-tapping screws as the self-tapping screws are self-tapping screws and screen are self-tapping screws and wood screen are self-tapping screws and screen are self-tapping screen are self-tap

applications.

Regular equipment consists of one each, bit and centering sleeve, for Nos. 6, 8 and 10 scient.

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 begring throughout. GEARS: Heat-treated alloy steel

SWITCH: Double pole, with lock automatic trigger release

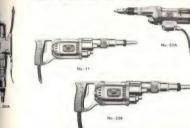
CORD and FLUG	Ten feet of three	conductor heavy duly cord with plug.	

	Moch screws	Wood wifer	No Lood Served	Length overes	Pett wi	cignt.	Code
No. 420	1/4"			1254*	3 %		DUGAN
No. 430	+10	- SE2 1 50	2500	12.54	3 3/4	lbs	DUHET
No. 440	1/4"	-12 159		12361	4	lbs	DUIRO
No. 445	1/4"	×12 155	500	123%"	4	lbs	DUJAR
No. 102	Universal 25	Angle Attach	neol				DELRY
No. 103	Universal 90	Angle Attach	nent				

Complete assertment of Bits and Sockets for any application available. See page 117 for Nos. 3160 and 3 Stands for bench agention of these drivers. Units equipped with revening switches, \$7.50 extra



SCREW DRIVERS AND NUT RUNNERS



Strew 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 the requirements and make recommendations as to the most efficient units to use and, when necessary, "or put 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 and. No other clutch equals its performance. It's exclusive on Millers Falls Tools.

NOTORS: Universal for D.C. or A.C. - 25 to 60 cycles - 115, 220 230 and 250 voln

SUTCHES: Nos. 50A, 52A and 228 "Adjustomatic" selective torque. No. 11 adjustable double actic

HARS, PINIONS and SPINDLES Heat-treated alloy steel

ARINGS: Armature and main spindle ball bearing. Intermediate spindle bearings bronze sleeve SUIPMENT: Nos. 50A and 52A - Bits and sleaves for Nos. 6, 8 and 10 Scraws. No. 11 two bits and sleaves

for Nos. 8 and 12 Screws. No. 228 two bits and sleeves for Nos. 12 and 16 Screws. Complete range of bits, Bleaves and sockets available for all numbers. THITCHES: Double pole, fully enclosed.

CORD: Ten feet of best rubber covered, Type 5, three conductor with unbreakable plug.

	Copedly Weed Screwn	Coppelly Mark Screws	STANDARD N. L. Soeed 8 P. M.	SPECIAL N. L. Speed R.P.M	Ames furnised	Lamps.	Weigh:	Code	Price each
SOA	*10 - 11/5"	#12	800	1200	1.2	12%*	4 % lbs.	DEMUN	\$68.00
52A 5.11 5.228	\$10 - 11/4" \$16 2" \$20 - 21/4"	612 34°	800 500	(3000 700-1000 700-1000		121/2" 161/2" 181/2"	4 % lbs. 7 lbs 9 % lbs	DENIG DELIA DELIB	62.00 78.00 92.00
	Reversing	switches, in		.00 extra.			or special sp	eed	



DOUBLE END BLOCK PLANE

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



Standard Angle

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

Widh Iron No. 68 1.55* \$3.30

RABBET AND FILLISTER PLANE



This Millers Falls Plane has every desirable feature in a rabbet 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 buil-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, Trimm and small steel parts nickel plated.

1.55"

Prog and

\$5.40

Code

8 55.5 Pocked one in a box

No. 85 Robbet

12

3 lbs.



65 30

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 battoms can be attached for increasing the bottom area allowing large areas to be worked, or fences can be attached for fo straight or irregular edges.

NO. 77 CLOSED THROAT ROUTER



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.

Battom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated. No. 77

NO. 67 OPEN THROAT ROUTER



Three cutter irons, % and % wide and a % 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 attacked to the bottom for following straight or curved edges is regular equipment. Bottom nicely polished. Mahagany lacquered hardwood handles. Frame nickel plated.

No. 67



HEAVY DUTY BENCH GRINDERS



This dependable like of grinders is equipped with new super-powered, precumbatances note with extra fast capacites starting with starting current requirements of less than 15 ampres and continuous induction run for stardy, heavy duty service. Oversize, jabyrinih seeled ball beauty insure trouble-free performance

The new knee action tool rests give greater adjustability for straight or angle grinding. Hea safer, endosed wheel guards are supplied. They are also wider to accommodate wire brush wh

One coarse and one fine, high grade abrasive wheel regular equipment.

	HP	entages	Wheels	EFM	Weight	Cons	Page 20
No. 76	1/3	110; 125; 150; 220; 250 50: 60 cyde phose	6 = 34 = 1/1"	3450	55 lbs.	NIBAC	\$ 545
No. 76	1/3	220 230 or 400 440 50 60 cycle 3 phose	6 4 14 4 19"	3450	55 lbs.	NIBEL	541
No. 76	1.3	115, 230 or 250 D.C.	0 . 16 . 1/2"	3450	60 lbs	NIBUS	65.0
No. 77	5%	110, 125, 150, 220, 250 50 60 cycle 1 phase	7 + 1 + 56"	3450	80 lbs.	NIDAR	780
No. 77	1/2	220 230 or 400 440 50 60 cycle 3 phase	7 x 1 x 5%"	3450	80 lbs.	NIDEB	901
No. 77	5/2	115, 230 or 250 D C.	7 . 1 . 1/2"	3450	90 lbs	NIDUG	
No. 81	1	110 1 phase 50 60 cycle	10 . 1 . %"	1725	155 lbs.	NIKAS	120
No. E1	1	220 or 440 3 phase 50 60 cycle	10 . 1 . 34"	1725	155 lbs.	NIKED	126
No. 81	1	550 3 phase 50 60 cycle	10 . 1 . 36"	1725	155 lbs	NIKOP	130

Single phase grinders are equipped with heavy duty switch and 10 feet of rubber covered 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



parameter introduced and powered for nearly duty stagging, generally wells, wire profiting, removing uses, scale and grinding off rivets, pins, bolts and similar operations. Totally enclosed motors exclude buildoos 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 allow steel

GEARS, PINIONS and Spindles: Heat-treated allay steel

BEARINGS Oversize hall bearings throughout SWITCHES Double pole, fully endough

WHEELS No 4068 High grade 6 * 1 * ½" No 461 Bakelie bonded 6 * 1 * ½" EORD Yen feet of rubber covered, Type 5, three conductor with premoved plug

		KEM	Full Load	Length	West	Code	Fr co such.
4068			40			TRUMP	\$110.00
461			6.0		23 % Sbs.	TRUDT	110.00
Eutro Who	rels, No. 400	8, \$3.75, N	a. 461, Bonded.	\$5 00 each	Other accessories.	see pages 76	5 and 117

HIGH SPEED HAND GRINDER





A light, compact tool essential in every toolroom or die shop for grinding clearances, shrinkage Kriteckins, contouring, grinding cavilies, profiling, etc. Motor and spinuse hauseig made at tough modded Bakellie making a coal tool earlily operated with one hand MOTOR's therenal D.C. or. 4C.—25 to (0 cyder. - 115, 220 210 and 250 with

CHUCKING CAPACITY Collets by to 14' d amount

783 2068 IB,000 11" 236 ta. 18U1M \$40.00

No. 6030 Lathe Adopter \$5.00 No. 6131 M Bing Machine Adopter for %. 1. 1 W Spindler \$1.50

No. 1524 79", 1529 W ond 1525 W Collets

200

-	ACCESSORIES F	OR SENCH GRI	NDERS		
-					Pres each
No 867	Plain Shatterproof Eve Shields	All		DORPA	Pair \$ 3.00
No. 8610	De Luxe Illuminated Eve Shields	All	3 1/4 101	DOSSY	7.50
No 7600	Cast Iron Floor Pedestal with water por	60.76	78 % lbs.	DUDE	23 00
No. 7700	Cast Iran Roor Pedestal with water par	77	80 14 lbs	DUFOX	23 00
No. 8100	Cost fron Floor Pedestal with water par	81	105 lbs.	DUKAT	27 50
No. 7080	Twist Drift Grinding Attachment	60, 76, 77	4 1/2 101	DYDAB	21.75
No 7086	Recessed Grending Wheel 6 . 1 . 15	60.76	2 1/4 lbs.	DYCE	3 60
No. 7087	Received Grinding Wheel 7 . 1 . 1/4"	77	2 % lbs.	DYFOM	4.20
No. 7088	Diamond Point Wheel Dresser		1/2 lbs.	DYJAK	5.50



POLISHERS, SANDERS AND GRINDERS







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, comport tool specially designed for cleaning, rubbing, waxing and polishing to produce high lustre flesibes. Its speed is selected to perform these operations efficiently and without damage in the shortest possible fine.

Nos. 775 and 900 are powerful production tools equipped with 7 inch pads which can be replaced with up granding wheels or cup wire brush wheels.

No. 990 is a heavy duty unit powered for heavy sanding, polithing, wire brushing, stone unfood and grinding requirements.

A resilient, shock absorbing coupling, exclusive in these tools, minimizes vibration and arealing.

increases their life.

MOTORS: Universal for D.C. or A.C.—25 to 60 cycles—115, 220 '230 and 250 volts.

15 feet best rubber covered, three conductor, Type 5, with unbreakable plug

PADS: Patented, super-Rexible. SIDE HANDLES Reversible

GEARS, PINIONS and SPINDLES: Heat-treated alloy steel BEARINGS: Precision, grease sealed ball bearing throughout

BEAKINGS: Precision, greate sealed ball beginning innogroups
SWITCHES: Double pole, fully andosed. Underwriter approved.

CORD: No. 27. Ten feet high grade, subber covered, fixee conductor, Type 5, with unbreokable plug. All officers

	Disc	Butting	No Enod	Amps Full Load	Wasple	Code	*14
No. 27	7.	Special	1600	3.5	8 1/4 fbs.	TAMOX	50
No. 775	7.	Standard	4600	6.5	13 34 lbs	TECUL	2
No. 900	7-	Heavy Duty	4600	R:0	153/s Obs	TEFAX	7
No. 990	9"	Standard	3850	8.0	163% lbs.	TRYMO	4



ELECTRIC SAWS









Powerful Fest Compett

See are powerful, heavy duty tools for continuous production work, ripping or cross cutting to their

is sated appearly in hard or soft wood. They can also the used for calling metals, stone, converte, and mony composite materials by employing the stone or observed this precision developed for the upper calling and the stone of the converted that the stone of the converted that the monitoring calling and the converted that the converted that the converted that Disk, every adjustment of depth of out from zero to full capacity is note by rimply flowing the Whoding and calcing the motor in the frome, elevating our droughing the sour has desirable with boding and calcing the motor in the frome, elevating our dropping the uses on the disk risk of the converted that th

Male adjustments are made by loosening the front binder lever at the Tront and setting at the desired male on the quadrant from 0 to 45.

The some cutting guide is used for all angles and the work line is kept dear by a strong air blast.

that some cutting guide is used for all angles and the work line is kept dear by a strong air blast.

**Abrdy, adjustable ripping guide is regular equipment.

**For use at it distance from nearest power connection the following gauges of extensions are

*Commended: 50 feet 12 gauge; 100 feet 10 gauge, and 200 feet 8 gauge.

**STORS: Universal for D.C. or A.C. up to 50 cycles.

O'TAGES: 110 115V Stondard, 220 230V and 250V also available.

ARS Precision out and hardened, helical, alloy steel gears

Precision aut and hardened, helical, away seen green serMoS. Precision half bearings throughout NNARD EQUIPMENT One high quality standard combination saw blade, 15 feet of heavy duty three Smotter and with plag, no guide, filiage spanner, her key for asher sizew and a rugged, lacquered inefal.

-									
	Dises Saw	Maximum Pr. Angle		14 P	Speed NL EP.M.		Shipping	Code	Acres with
850 1050	0.	314	2%*	1 116		20 1/2 lbs.		SUTO	\$152.00



ELECTRIC HAMMERS

New-





No. 1716 Sectional View





. 4016 Nos. 2516 and 321

Millers Falls Hammers have only one moving part — the internal solid steel hammer head white strikes 3600 powerful blaws per minute, actuated by powerful electro magnets. There are no matrix geans, shafts or bearings to wear out, under the constant vibration. They are long lived, dependent and trouble free.

No. 1558, superseding the old No. 1058, is completely self-contained with the rectifier unit but into the handle. Plugs directly into the nearest 110 valt A.C. outlet to operate.

No. 4016 is on entirely new tool which automatically rotates the drill bit. A suitable dutch "off is included to prevent bit breakage in case of binding. It is the fastest cutting harmer mode off carbide tipsed, saired drills.

Nos. 2516, 3216 and 4016 have built-in power cooling units

add \$10.00. For 25 cycle, 110 or 220 walt add \$20.00

	Country	1,197	telipm	W x 351	Code	
No. 1558	36.	.155	10"	11 fbs.	ACFGK	5
No. 1716	1.5%	.355	15"	17 Pm	AGRO	
No. 2516	136"	.620	1536"	22 Dec.	AMNAR	
No. 3216	2"	1.000	15%	25 lbs	TOOMA	
No. 4016	2"	1.650	18.	38 ½ lbs.	ANITA	



ELECTRIC HAMMER TOOLS



HIGH GRADE STANDARD ROUND SHANK TOOLS

face	No. 1558	free each	6 Tasharra	fine each
Buhr Stone Drilling Churel (Toothed)	No. 11	\$3.50	No. 1H	\$5.00
Buhr Stone Dressing Chisel (Floin)	No. 21	3.00	No: 2H	4.00
Round Nose Chipping Chisel	No. 3L	2 40	No. 3H	3.60
Bush Hommer	No. 4L	6.00	No. 4H	8 00
% (wh Wood Chize)	No. 5L	6.00	No. 5H	7.00
Mortor Culting Chisel	No. 6L	3.00	No. 6H	4.00
Calking Tool	No. 71	3.25	No. 7H	4 25
Scoling Chisel	No. 8L	3.00	No. BH	3.50
Brick Cleaning Chisel	No. 91	4.00	No. 9H	5:00
2 Inch Cutting Chisel			No. 10H	4 00
Cold Chisel	No. 111	2.00	No. 11H	2.50
Stone Point	No. 121	2.00	No. 12H	2.50
Cope Charl	No. 13L	3.00	No. 13H	4.00
Beading Tool	190. 100		No. 16H	5.75

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6	Don 1/4"	Sta*	25.	5/10"	1/2"	210	59	y.
	\$0.55 .60 .70	\$0.55 .60 .70	\$0.55 60 .70 .85	\$0.55 60 70 88 1.05	\$0.60 70 .80 85 1.05	\$0.60 .70 80 85 1.05	\$0.70 .85 .95 1.05 1.25	1.05 1.10 1.10 1.20 1.40
4	Don 16"	1.	156*			15g"	155"	2
	\$1.25 1.45	\$1.25 1.45	\$1.35 1:60		2.00	\$2.50 3.00	\$3.00 4.00	\$5.00 6.00

Specify Hammer No. drills are to fit. Tri-point Drills in 6 inch and 12 inch lengths only

CARBIDE-TIPPED TRI-POINT DRILLS

30	Comm. No."	15"	39.	35"	fa"	
2.	\$6.00	\$7.00	\$8.50	\$11,00	\$14.00	\$16:00
		Carbida tinned Sn	and Dutte of a our	Sable for No. 40	16	



No. 4207

No. 7678

No. 9091 1/2-111 Wire Cup Brosh Spindle Not.

PARTIAL LIST OF ACCESSORIES

FOR POLISHERS, SANDERS AND GRINDERS PAGE 122

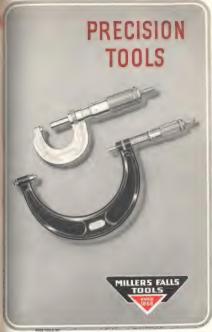
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900, 990

-		Annual Mark
No. 7077	7" Abraine Discs - fine, medium or coarse	Atl
No. 9099	9' Abrasive Discs - fine, medium or coorse	990
No. 9009	Abresive Disc Cutter	
No. 30231	7 1/2" Carpet Pile Pad	27, 775, 900
No 3972	4 Cup Grinding Wheel	
No. 3975	6" Cup Grinding Wheel, Rared	900, 990
No. 8093	2 Felt Rubbing Pad	27, 775, 900
No. 8094	P ' Felt Rubbing Pad	990
No. 705	5" Flexible Pad	27, 775
No: 507	7" flexible Pad "D2"	27, 775, 900
No. 909	9" Heable Pad "D29"	990
No. 277	7 Lamb - Wool Bonnet	27, 775, 900
No 8098	9" Lomb's Wool Bonnet	990
No 22995	7" Sponge Rubber Cushion Pad	27, 775, 900
No. 9090	Syspension Strop, complete	990
No 775	Suspension Spring	990
No. 4208	3 1/4" Wire Cup Brush, 1/2 or 1/4" Bushing	775, 900, 990

		For Delh Has	hand
No. 88 No. 1518 No. 1523	Auxiliary Sute Handle Wheel Arbor, ½' fitting ¼ Chocks Wheel Arbor, ½' fitting ½' Chucks	414, 514, 516, 638	\$ 12 8 12
No. 1524 No. 1522 No. 1034 No. 1034 No. 1034 No. 1034 No.	Feed Scraw or "Old Mun Corben Cleasing Brush Vr." Cop. Jacobs Key Chudd Vr." Cop. Jacobs Key Chudd Jr. Cop. Jacobs Key Chudd Jr. Cop. Jacobs Key Chudd	312, 658, 734, 801 801 801	10.0 10.0 11.0 11.0

	Hale Saws, we pages 95 and 96								
	FOR BENCH GRINDERS	PAGES 109 AND 120							
		Grow and Geoda	Ritting Nos	Dank Hills					
No. 1027 No. 536 No. 537 No. 1039 No. 1513 No. 1519 No. 636 No. 660 No. 675 No. 685 No. 760 No. 760 No. 1036 No. 1036 No. 1036 No. 2036 No. 2036	Vs. Strought Spinistic Ret. Therend only Tapper Therend Spindell Rt. et al. Thread 18 pages (Bread Spinistic Ret.). Thread 18 pages (Bread Spinistic Ret	60-M 36-C 60-M 60-M 36-C 60-M 36-C 60-M 36-C 60-M	60, 76 60, 76 77 60, 76 77 60, 76 60, 76 60, 76 60, 76 60, 76 81 81	\$2.50 4.10 4.40 1.15 2.00 2.31 7.31 3.00 6.00 8.00 8.00					





MICROMETER CALIPERS

The microanter is the precious tool is most general use where measurements in thousandhir or men. 1 10000 of an inch are necessary. They are made in many styles and capacities for outside, muck, and depth measurements. While their construction is comparatively simple, the utnost one mas be used in every step of their immufacture if extreme accuracy and dependability are to be resident and accordance of the second of t



THE FRAME

The frames [F] are steel forgings of good proportions and designed to secure the strength and rigidity that it essential. In the larger, and is few of the smaller sizes the frames are forged in 1 beam for to secure rigidity without undue weight.

THE BARREL

The barrel (B) carries the threaded steel bushing in which the micrometer or lead screw vanuable is part of the forquel frame. The threaded bushing has an ediputable called (C) far taking up any warr at this point. One lack, divided into 40ths, is graduated on the barrel, each graduation expresenting one revolution of the lead screw.

THE SPINDLE AND LEAD SCREW

The spinide and lead stave (\$\si\) in all Miller Falls micrometer is made of one solid piece of very fite tool steel carefully hardened and tempered. It is accurately matrined and then allowed to sealor for months before the lead stave is ground in and the spinidle lapped. This preculation is taken 10 avoid strinkings of the finished stave and spinidle. All machine operations are within extreme per cision limits on modifies specially developed and perfected for the purpose.

THE ANVIL

The and! [A] is sat in the frame in perfect alignment with the spindle. The faces of both the and and spindle are lapped with the ulmost care to that they are at right angles to their axis and perfect to each other. Proper adjustment for wear of the and its provided.

THE THIMBLE

The thimble (T) is rigidly fixed to the lead screw and spindle and fits down over the barrel but steel not touch it. The slightest turn of the thimble results in a similar movement of the lead screw free bevelote and of the thimble is graduated into 25 equal divisions.

RATCHET STOP

The rather stop [R] mechanism can be easily operated by the thumb and forefinger of the same band that holds the micrometer. This leaves one hand entirely free for holding the work to be "milked." This new departure from the old practice of combining the rather stop with the speciar of



ne end of the thimble has proven very popular because it is both convenient and speeds up work.

The testion in the ratchet mechanism is nicely adjusted so that when the knurted ratchet ring is turned a catchet when just the right amount of pressure is exerted on the spindle to give occurate readings. The ratchet stop insures uniformly occurate readings as it entirely eliminates the personal equation.

THE SPEEDER

A bastled handle [H] of small diameter, provided on all outside misrometers, is fixed to the end of the thimble. By turning this speeder between the thumb and forefinger the spindle can be run in a cost very rapidly as required.
SPINDLE LOCK

A spiedle lack (L) is provided on many sizes. This lack is controlled by turning a knotled nut located in the frame. A slight turn of the nut locks the spindle securely, preserving the setting of any desired point.

ACCURACY, WORKMANSHIP AND FINISH

he extreme care with which Millers Falls Micrometers are made, the special precision machinery used, the highly skilled craftmen employed, and the pride taken in the product, permit us to recommend and guarantee the occuracy, 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 (8). On the inside of this barrel is a very occurately seaded bushing with a pitth of 40 threads per inch. The hidden portion of the spindle (5) is also receded with 40 threads per inch and runs in the not formed by the barrel (6).

The extreme right end of the spindle [S] is securely fastened to the thimble (T). These are the tally moving parts and they move in unison.

As end, of the line on the borrel (8) possibility to its cash is produced into 40 equal point correbonding scordly to the threads per indo on the storm of the supplied (51. When the thinble [17] is seen one complete cristion the spindle must move just one graduation, or 1. 40 of an indy, which is 37/1000 of an indx. The beneficial again of the finishing (17) is divided into 25 expost productions 37/1000 of an indx. The beneficial again of the finishing (17) is divided into 25 expost productions with a particular on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation on the finishing (17) exactly coindings with the Q graduation of the finishing with the Q graduation of the fini

To get the measurement between the fixed anvil (A) and the face of the spindle (S), multiply the Pamber of divisions visible on the barrel (B) by 25 and add the number of divisions on the thimble

11) from 0 to the graduation opposite the longitudinal line on the barrel (8).
To facilitate reading, every fourth graduation on the barrel (8) is numbered, 1, 2, 3, 4, etc., the

Towe representing respectively 0, .100", .200", .300", .400", etc. For the same reason every fifth similar on the thimble graduation is numbered.

READING TEN-THOUSANDTHS MICROMETERS

Macmeters that read to one ten-thousandths of an indh have exactly the same graduations as those studing to one-thousandths, with the addition of a vernier reading to 1 10 of the 1 1000 gradua-

here are ten vernier divisions which run the eatire length of the barrel 18 I and are numbered in the top of the frame, as shown in the cut of the No. 902R. These ien vernier divisions correspond will be not in the divisions on the thimble (T1). So that the number opposite the line on the vernier and exactly corresponds with a line on the thimble gradualities gives the number of ten-thousandfits of in high the micromater has been opened beyond the lost 0.01 in gradualities.



NO. 112R MICROMETER



Capacity O to 1 Inch Ratchet Stop Spindle Lock Speeder

The frame of this fine micrometer is made of drop forged steel beautifully polished with decine equivalents clearly ethical on one side. The annil side is out away which permits taking many measurements otherwise impossible.

The precision ground lead storew and spindle are made all one piece of fine, carefully hardware foot steel. The lead storew marie is threaded building in the barrel which can be objighted two state for the slightest wear. The smooth action raticles mechanism is footseld on the thinkle were it can be easily recorded by the operating head. The speeder is footseld on the end of the thinkle were it can be easily recorded by the operating head. The speeder is footseld on the end of the three privates of the speeder is set on the end of the speeder is the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder in the speeder is the speeder in the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder is the speeder in the speeder in the speeder in the speeder is the speeder in the speeder is the speeder in the speeder is the speeder in the speed

The faces of the anvil and the spindle are precision lapped and tested for exact parallelism is insure uniformity of readings.

Measures from 0 to 1 inch by 1/1000 inch.

YAZTU WYDDA

2:00

\$7.50

NO. 38R MICROMETER HEAD



Capacity O to 1 Inch Ratchet Stop Speeder

These heads can be built into special gauges and fixtures and mounted on machines for making precision measurements, selfings 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 II to 1 inch by 1, 1000 inch.

No. 38R 0 to 1" 3 azs.
Packed are in a box

YADAB



2.30

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 vernior etched on the barrel permitting direct readings in 1 10000 inch when desired. Equipped with ratchet stop, speeder and spindle lock. Decimal equivalents etched on the drop forged frame.

Measures from 0 to 1 inch by 1 10000 inch. \$16:00 No. 9028 Each micrometer packed in a slide carer, lack 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 illus-Mated, is supplied with each micrometer for drecking the setting whenever desired.

Measures from 1 to 2 inches by 1: 1000 inch.

Code No. 208 \$15,00 2.95



OUTSIDE MICROMETERS



Forged Frames Ratchet Stops Spindle Locks Speeders
This new line of micrometers with abony enameled, drop forged steel frames combines every legistrate.

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

The design of the frame gives great rigidity and strength. The anvil side is cut away to permit measurements in confined spaces.

The precusion 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 spender is located on the end of the thimble while the spindle lock is set in the frame. The faces of the awill and spindle are precision loaped to exact parallelism. Proper adjustments

The faces of the anvil and spindle are precision or the slightest wear are provided.	lo
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cornered wood box. Weights given are shipping weights.

0 TO 1 INCH MICROMETER	
Specifications as above. Measures 1 inch by 1 1000 inch.	from 0
No. 701R Coopery Weight Code No. 701R 0 to 1' 6 ozs. KABOX	\$10.5
Leatherette covered case WYDDA	2.0
1 TO 2 INCH MICROMETER	
Specifications as above. Measures 2 inches by 1 1000 inch.	
Copacity Weight Code	French as
No. 712R 1 to 2" 10 ozs. KABUW	
Leatherette covered case WYUSY	2.5
2 TO 3 INCH MICROMETER	
Specifications as above. Measures 3 inches by 1 1000 inch.	from 2
Copenty Weight Code	PLAN W

le ches by 1 DOO inch.

10 200 inch.

10 4 INCH MICROMETER

10 4 INCH MICROMETER

10 4 INCH MICROMETER

10 200 inch.

10 200 inc

4 TO 5 INCH MICROMETER
pedifications as above. Measures from 4 to inches by 1 1000 inch.

6. 745R 4.105 1 18.10s. KACAT 51425

5 TO 6 INCH MICROMETER specifications as above. Measures from 5 to inches by 1 1000 inch.

Capacity Wash Code 1.0756R 5 to 6 175 lbs. KACEF \$15.75

Casts are made on a wood frame nicely lined with plush and covered with imitation leather.

Substantial lock and hinges. Each of the above micrometers pocked one in a slide cover, lock



OUTSIDE MICROMETERS Drop Forged Frames Decimal Equivalents Speeders

the abony enameled, drop forged frames of these micrometers are ribbed for maximum strength

and rigidity without undue weight. They have the cutaway feature on the arrivil side. The precision ground lead screw and spindle are made from tool steel carefully hardened. bard screw runs in an adjustable threaded bushing in the barrel. The thimble has decimal equipper bets dearly 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	INCH	MICROMETER			
Specifications	cis	above.	Measures	from	0	to

1 Inch by	1 1000 inch	3.		
No. 701		6 021	KEBAS	\$8.50
seuthorette	covered case		WYDDA	2.30

1	TO	2 INCH	MICROMETER			
Specifications	O.S.	above.	Measures	from	1	ì
2 Inches by 1	10	000 inch				

2	TO	3 INCH	MICROMETER			
Specifications			Measures	from	2	10

146,712

WYNRO

3 TO 4 INCH MICROMETER

nches	by	1	1000	inch.		
274			Dadity	WaysM	Code	Po

4 TO 5 INCH MICROMETER

watheratte covered core

specifications as above. Measures from 4 to 5 inches by 1 1000 inch

covered core				WYPIR	
5	TO	٥	INCH	MICROMETER	

ecifications as above. Measures from 5 to

- unruez D			
No. 756	5 to 6 covered co	KEBYD	\$13.75



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.

3 to



New

NO. 704R MICROMETER SET



Capacity O to 4 Inches Ratchet Stap Spindle Lock Standards

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 care fully 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 rate 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	U to 4 inches by 1 100	2U inch.		
No. 704R	Copacity O to 4"	Weight 3 lbs.	YEMOX	\$25.70
	Earl out a	sales of a boundaries and	and seem	



No. 563

No. 563 No. 563

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

der each		Copenty	Code
2.00	No. 563	4 rod	YUKAV
2.50	No. 563	5° rod	YUKCY

from body heat and prevent rolling,

\$3.20

5



NO. 1218 INSIDE MICROMETER



Capacity 2 to 12 1: Inches by 1 1000 Inch

The head of this fine instrument is provided with a precision ground and hardened spindle and lead view with a 1/2 inch run. Seven easily interchangeable rods with hardened anvils in one end are provided. Those 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 licked by tightening the knurled chuck nut.

Two hardened steel callars, 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 rads and collars are in use. Complete instructions are packed with each micrometer. A long handle that screws into be head is provided for making measurements atherwise inaccessible.

Entire tool begutifully polished.

Mo. 1218	2 to 19 19	34 16	ZISTA	\$14.50
sotherette (G1e			ZISTO	5.05
	Packed o	ne distrometer in a wool	d bax	

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 araduated to read by 1 1000 inch.

Three measuring rads 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 w positive bearing against a finished seat on the end of the lead strew. 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, around and accurately hand tapped at right angles to the rods.

	Score:	Copper to	Wage	Code	Pignaco
No. 31	21/5"	0 to 3 *	6 025.	YAALC	\$12.50
No. 32	4"	0 to 3 "	8 021.	YAAWN	16.00
Leatherette co	ise for No. 31			YAASK	3.05
Leotheratte co	ise for No. 32			YABIT	3.70
		Packed one depth	gauge in a wood b	3.00	
Extra set of 3	rods for measur	ements 3 to 6 inches			3.75



PRECISION STEEL RULES

The standards to which all Millers Falls Rules are made are among the finest in existence, and are the standards to washington the United States Bureau of Standards at Washington Every Millers Falls Rule is as perfect a reproduction of these standards as skilled mechanics and preasian 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 polithed 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 carrectly. 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 of 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 inchexcept 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 or the other. For fast, positive reading the 32nds and 64ths graduations are numbered every 8th 10 an inch. No end graduations

No. 866 No. 866 No. 866	6'12'	34 " 1 1	1 20° 1/16° 1 16°	Weight Box 6 ½ 023. 19 023 27 023	ZEPUL ZEPAT ZEPON	\$1.20 2.15 3.30
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SEMI-FLEXIBLE TEMPERED RULF



Graduated full length on four edges in 8ths, 16ths, 32nds and 64ths of an inch. No. 253 and graduated in 32nds of an inch.

Weight Box No. 253 \$1.20 No. 255 1/50" YIBCA ked wa in a box

2.00



FLEXIBLE TEMPERED RULE



Guaduated full length on two edges, on one side only in 32nds and 64ths of an inch. Ends graduated a 32nds of an inch.

No. 264 6* Vs.* 1 100* 1 1/2 crs. ViCFE \$1.20

Perked us in a box.

NARROW TEMPERED RULE

a les les el ec l

Graduated full length in 32nds of an inch on one side and 64ths of an inch on the other.

No. 274 6' 1/4' 1 20" 21/4 ost YIDGE \$1.20

TEMPERED HOOK RULE



Numbered for Quick Reading

Tel: telicig measurements over rounded corners, through the halss of wheels or pollays, or for setting whitders, or inside colliers and many other uses. The hardened steel hook is locked on by an excentific bot and can be callly removed if desired. Oradiosted full length in 8ths and 10ths of an inch on one side and 37nds and 64ths of an inch on the other, with graduations numbered at every 8th of an inch.

No. 966 6" 14" " " Parked one in a bas.

Parked one in a bas.

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 6" 34" Districts Weight flox Code Frice ext.

1.20" 1/4 oit. 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 available steel with a fire ground value finish an all faces. It is precision graduated on two edges in 16ths and 32nds of an inch. The figures are deeply ethed and shaded for quick, easy legibility. Each rule is mounted or a card printed in red and black and packed in a callophone envelope to protect if from mounter.

No. 106 6" 1s" 1:100" 4 ozs. WYUVA 10-46
Potled us o o 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 dip 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 atched 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 moistureproof cellophane envelope.







No. 20 6

NO. 222 DOUBLE STEEL SOUARE

\$0.50

A precision toolmoker's square with three interchanceable blades that slide their entire length in the solid steel beam. The two wide blades can also be reversed so that life graduations can be placed on either side of the beam and the angles faced either up or down. Blades are looked of any desired position by turning the knowled thumb mut on the bottom of the beam.

The 21/5 by ½ inch blade is graduated in 32nds of an inch on one edge and 64ths of an inch or the other. The beveled blade is ground to 30° at one end and 45° at the other. The narrow stude of 27% by ¼ inch. All parts have a fire stall positive finish, care etched graduations and figured.

No. 222 Inch 15/10 3 and 15/10 15/10 55.00 15/10 15



SLIDE CALIPER RULES



he 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 measuretaken. The rule graduations in 32nds of an inch are etched on one edge and the outside and a de 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 controll by the thumb of the hand that holds the tool.

Meety polished to a satin finish with clear, etched graduations and figures.

16, 303

NO. 80 RULE DEPTH GAUGE

he three inch steel base of this highly useful tool is precisely ground and kely polished. A vertical slot machined at 90° to the base accommolates 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 strag-controlled clamp screw controlled by a knurled thumb nut on the everse side.

By loosening the nut the rule is freed and can be either run up or down be slot, or pivoted to any angle and used as an angle gauge. For

In purpose the base is accurately etched in angle graduations for 30°. 5, and 60' angles, both right and left. Waspie 56, 80 YAPLE





Made of tempered crucible steel, ground and lapped to a light-tight fit with a 60° standard for and and setting screw cutting tools. Graduated on four corners in 14ths, 20ths, 24ths and 32nds on inch for the number of threads per inch.

respective No. 438 \$0.75 139



COMBINATION SETS



Hardened Steel Blades

These unful precision tools are essential to every matrixist and toolmaker. They perform the future of a wide veryinty of specialized tools. They can be used an a square, of deeping upge, in the tools are vide veryinty of specialized tools. They can be used an a square, or deeping upge, in the careful of a small level and a specialized with a beam equipped upge of a small level and a specialized protection personator field pleasable of the following pages; and a small level and a specialize personator field pleasable of the following pages.

The tempered blade is precision graduated; all graduation lines and figures being dearly either and given a fine ground satin finish. The beam, protractor and centerhead have precision ground working laces and politised edges and ebony enameled withs.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

COMBINATION SOURCES



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 me webs above penameted. The blade is tempered steel with a fine said finish.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of on inch.

No. 361 6" % lb. YIZYH
No. 362 9" 1 lb. YOAGM
No. 363 12" 1 % lbs. YOAMN

Perfections in a local



COMBINATION SQUARES



Hardened Steel Blades

Rese are the same precision squares as shown on the preceding page but without protractor head scienterhead. The beams, equipped with a level and a scriber, have precision ground working sizes with pollished edges and ebony enameled webs. The blades are tempered, precision paduoted and clearly etched.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

	Langth Blade	WaspM	Code	Price such
No. 371	6.	5% fb.	YORK	\$3.00
No. 372	9.	No. 121	YOBLO	4.00
No. 373	12"	% No.	YOROL	4 60
		Packed are in a box		

BEVEL PROTRACTORS



Hardened Steel Blades

hele protection have a smooth action haret head precisely graduated from 0° to 90°, right and the color of t

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.

	Lyngth Blade	Waight	Code	Price and
P. 180	Protractor Head Only	Wills.	YEJEG	\$4.0
181	9 complete	1/4 lb.	YELLO	5.7
0. 182	12' complete	1 flo	YERRE	6.4



SPRING CALIPERS AND DIVIDERS

The pages immediately following show a very fine line of cutside and inside calipers and divides 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 extool ground and polished to a beautiful finish.

The legs are nicely tapered and the shape of the points developed for maximum accuracy calipering of every description and for transferring measurements to or from a micrometer or the rule within very close limits. Inside caliper legs are shaped to permit their use in unusually una 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 not are of two types, "solid" and "quick," both of which are hardened. Solid nuts are of ordinanconstruction. The threaded portion of quick nuts is made in two parts which are spread apart by small spring when the pressure of the leg is removed. This disengages the threads and the autom 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 good 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 collipers and dividers. Accurately machined and hardened steel speak 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 ares and circles.

SPRING DIVIDERS

No. 500 No. 500



5:20	Weight Asia	Code
3."	94 tb.	YUAJI
4.	3/4 fb.	YUASE
5"	1/2 lb.	YUBAM
6.	34 (b)	YUBIP
8"	1 16	YUBNA
10 .	1.55 (ba)	YULYE
12"	1 % ibs	YUMAY
	WITH QUICK NUT	
500	Prosper force	Cod+
3 "	1/4 lb.	YUVNY
4"	3/4 lb.	YUVUM
5 "	35 16	YHMAI
6"	35 th	YUMAN
8"	1 lb.	YLIWYP

WITH SOUD NUT

1 3/4 fbs.



7			WITH SOLID NUT		
4 3		Size	Accepts him	Code	Page 2007
100	No. 510	3 "	1/4 lb.	YOYUK	\$1140
(No. 10)	No. 510	4"	3% (b.	YOYZM	1.50
1.04	No. 510	5"	1/2 (b.	YOZHE	1.60
ALC: VIA	No. 510	6"	3/4 (b.	YOZMY	1.70
(11) (1)	No. 510	8"	1 % ths.	YOZOK	1.85
Married 1 (Tourset)	No. 510	10"	1.36 lbs.	YUJEV	2.50
The same of the sa	No. 510	12"	2 lbs.	YUJOY	2.70
			WITH QUICK NUT		
(10)		Size	Awayer for	Code	Propingin
10	No. 610	3 "	1/4 fb.	YUSYL	\$170
17	No. 610	4"	76 fb.	YUTAG	1 80
	No. 610	5"	1/2 lb.	YUTGA	1.90
TO VIEW	No. 610	6"	86 lb	YUTKO	2 00
	No. 610	B *	1 % (b).	YUVAH	2.20
	No. 610	10"	1 Viriles	ZAFUV	2.70
1	No. 610	12"	2 lbs	ZAFWY	3.10
		5	ocked three in a ba	К	

OUTSIDE SPRING CALIPERS

	WITH SOLID NUT			1	1
Size	Wang St Barn	Code	fore and		. 9
3 *	1/4 Rb.	YOWEF	\$1.40	1800	-92.
5.	3/4 lb.	YOWIG	1.50	760	40
5°	Va Ib.	HOWOY	1.60		
6.	% Ib.	YOWYK	1.70	101	
8.	1 Syriba.	YOYFA	1 85	4.8.1	land an
10"	1 1/4 lbs.	YUHET	2 50	The same of	The state of the s
12"	2 lbs.	YUHSA	2.70	100	100
	WITH QUICK NUT			.07	7
Servi	Weight Sox	Code	Free and	100	
3° 4° 5° 6°	5/4 (lb)	YURAD	\$170	6.7	
4.	3/e 1b.	YURFE	1 80		10
5"	1/2 lb.	YURIG	1 90		- 767
6"	% 1b.	YURUJ	2 00		-
8 '	1 % lbs.	YUSEG	2 20	M.	
10 "	1 % Ibs.	ZADVY	2.70	- 10	- 43
12"	2 lbs.	ZADYV	3.10		
	Packed three in a box	0.			-

No. 520 No. 620 No. 620 No. 620 No. 620 No. 620 No. 620 No. 620



HERMAPHRODITE SPRING CALIPERS

Design and construction same as the outside and inside types. Legs nicely thaped and tapered. Divider leg hardened and nicely pointed. Hardened spools and screws. Powerful tempered springs. Finely polished finish.

		WITH SOLID NUT		
	Size	Weight Sos	Code	Price moch
No. 530	3"	1/4 4b	YUEER	\$1.40
No. 530	4.	% (b.	YUFTO	1.50
No. 530	5°	1/5 lb.	YUEWY	1.60
No. 530	6"	34 lb.	YUGAR	1.75
		WITH QUICK NUT		
	See	Weight Bex	Code	Price moch
No. 630	3 °	54 fb	ZACRO	\$1,65
No. 630	4"	3/4 1b.	ZACTY	1.80
No. 630	5"	3/9 lb.	ZACUS	1.95
No. 630	6°	34 fb.	ZACYT	2.10

Potked three in a box



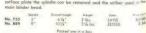
SURFACE GAUGES

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 ½", is carefully ground for use on a surface plate and also graoved for use on cylindrical surfaces. All working faces are ground. Two fritional gauge plan located at the rear can be depressed to bear against the edge of surface plates, just of planers and similar uses.

The spirale siliate through a spring tensioned binder head with a founded thumb screw control. This is provided on the base and provided with a screw for fine height adjustment. The spirale can be set of almost any angle or even turned down through the slot in the ford of the base for use as a depth gauge or it can be drapped down through the binder head and the marker on its lower end used as 0 scratch gauge.

The scriber, six inches long, is carried in a head with spring control which holds if at any desired height on the spindle. It can be looked by merely lightening the knowled thumb screw. For work does to the surface plate the sprindle can be removed and the scriber used on the main binder head.







THICKNESS GAUGES

ness gauges are used extensively in airplane and automobile maintenance and repair for such conditions as setting spark gaps, distributor points and tappet clearances, determining piston and ing dearances, etc. Also very generally by loolmakers and machinists in jig and fixture, gauge and saging work, shimming and experimental uses.

The leaves are made of fine, tempered steel, individually tested to very close limits and well finished. new are assembled in cases with heavy steel side plates and studs, held together by screws or rivets no case may be. Thicknesses are clearly etched on each leaf.





\$1.60

NO. 6 THICKNESS GAUGE - SIX 2 %" LEAVES

mists of six leaves 2 1/4" long, 1/2" wide and .002, .003, .004, .006, .008 and .010 inch thid to case is assembled with rivels.

90%	2.5%*	1/2"	3% lb.	WYGDE	\$0.50
		Pocke	g nu tu a pas		

NO. 9 THICKNESS GAUGE - NINE 3 1/4" LEAVES

basists of nine leaves 3 1/4" long by 1/2" wide and .0015, .002, .003, .004, .006, .008, .010, .013, and ,020 inch thick. The case is assembled with rivets. Code 55 lb.



NO. 25 THICKNESS GAUGE -- TWENTY-FIVE 2 % LEAVES

Consists of twenty-five leaves 2 1/4" long by 1/2" wide and .0015, .002, .003, .004, .005, .006, .007, 98, .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.

(ength users

2 9%

4, 25



.004 .30

.006

30

THICKNESS GAUGES

These are the same precise, well-made gauges as described on the preceding page but with same study at the leaf end of the case to permit easy replacement of leaves or adjustment of the treet





NO. 19 THICKNESS GAUGE - NINE 3 1/4" LEAVES

Consists of nine leaves 3 1/4" long. 1/5" wide and .0015. .002, .003, .004, .006, .008, .010, .015

and .015 inch thick.

longth lorses were through flow of 51 fb.

No. 19 354" 55" 55 fb. WYROL 5140

NO. 22 THICKNESS GAUGE -- TWENTY-TWO 2 1/16" LEAVES

Contists of Prenty-two leaves 2 1/11 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 and hids.

NO. 926 THICKNESS GAUGE — TWENTY-SIX 3 ½" LEAVES
Consists of hventy leaves 3 ½" long, ½" vide and .0015, .002, .0025, .003, .004, .005, .006
.007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .033

0.24 and 0.25 ach miss.

No. 926 3 1/4" 1/4" 134 fbs. WYWAR \$400

NO. 100 THICKNESS GAUGE STRIPS

These convenient strips are available in hventy-six different thicknesses. They are 12" long of 15" wide. Each strip is individually tested and held within very close tolerances. They are not

finished and the thickness of each strip is clearly etched into the steel at two points. The ends of rounded and carefully finished for accuracy. Coria: WYLITO Detress 0015 \$0.40 007 \$0.25 10.25 .019 .002 40 .25 25 070 0025 .40 009 .25 25 .003 40 .25 .016

Pocked uz in a substantial telescope box. Average weight per box 31/2 ources

017

018

.25

25

.25



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 hales for gauging internal threads as well as external. The leaves not in use can be folded into the bondle

30

No. 436



No. 135 has 22 pitches for V-threads, as follows: 9, 10, 11, 111/2, 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, 41/2, 5, 51/2, 6, 7, 8, 9, 10, 11, 111/2, 12, 13, 14,

15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42. Length of leaves, 11/s inches.

No. 135 22 \$1:40 1.09* Packed one in a bax

NO. 315 SCREW PITCH CAUCE



A popular priced gauge with eight leaves, covering all National Fine (NF) or SAE threads from 14 Inch-28 to 1 inch-14 and Standard Pipe threads from 1/2 inch-27 to 2 inches-111/2. In other words, all the standard threads both NF or SAE and Pipe used in the automative and aviation fields

Each gauge mounted on a card printed in red and black as illustrated.

Weight Box No. 215 -8 6 025. \$0.50 Pocked us in a hox



SCRIBERS

Sugar)

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 2 36" 43%" YAJRA NO. 58

NOS 61 and 62

Made of fine grade, round steel with begutifully topered points corefully tempered, ground and polithed. The central body is nicely knurled to give a sure grip. Points in Nos. 61 and 62 are replaceable.

\$0.50 4 DZL No. 58 Single No. Al Double No. 62 Double

NO. 440 SPEED INDICATOR



A very useful, easily operated indicator selling at a low price and having many sterling feature.

The fixed digl is graduated both ways so that the speed of clockwise or counterclockwise and its can be read directly. The rotating dial is quickly set to fi by merely turning the knurled thumb 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 goal operating the recording dial. The spindle is hardened and the contact pressure is taken up on 8 ball thrust bearing. Two rubber tips are furnished, one for centered and one for plain or pointed charfts.

Complete instructions for setting and reading with each indicator,

Entire tool polished and nickel plated.

No. 440

Packed one or a box

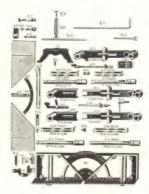
\$0.60





PARTS FOR LANGDON ACME MITTE 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

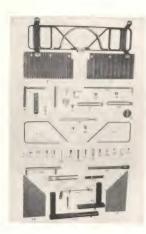
		sees Mos.	Price a
Binder	71-75	71A-75A	\$0.
Index Plate	68.75	71A-75A	
Gib	68-75	71A-75A	
Gib Scraw	68-75	71A-75A	
Binding Strap	68:75	71A-75A	
Spring	68-75	71A-75A	
Stop Lever Strap	68-75	71A-75A	
Stock Rest	68-75	71A-75A	
King Bolt	68-75	71A-75A	
Length Gauge	68.75		
Length Gauge, complete		71A-75A	. 1:
Right Hand Sattons Board	68-75	71A-75A	
Left Hand Bottom Board	68-75	71A-75A	
Stop Lever Strap Screw	68-75	71A-75A	
Stop Lever Pin	. 68-75	71A-75A	
Length Gauge Link Screw (2)		71A-75A	
L.G. Link with Strews		71A-75A	
Length Gauge		71A-75A	
LG Guide Rod		71A-75A	
L.G. Lock Screw		71A-75A	
Stop Lever Rod	71-75	71A-75A	
Thumb Lever	71-75	71A-75A	
Thumb Stop Lever	68-70		
Saw Guide (Front)	68-73	71A-73A	2
Saw Guide (Rear)	68-73	71A-73A	2
Elevator	68-75	71A-75A	
Guide Stop Screw	68-75	71A-75A	
King Bolt Stop Screw	68-75	71A-75A	
Guide Stop	68-75	71A-75A	
Stop Gauge (Front and Rear)	74-75	74A-75A	
Stop Gauge Thumb Screw	68-75	71A-75A	
Swinging Lever	68-70		4
Stop Gauge (Front and Rear)	68-73	71A-73A	
Sliding Front Fost	74-75	74A-75A	1
Stiding Front Post	71-73	71A-73A	1
Swinging Lever	74-75	74A-75A	. 3
Lag Scraw	68-75	71A-75A	
Swinging Lever	71-73	71A-73A	. 3
Saw Guide (Front)	74-75	74A-75A	2
Saw Guide (Rear)	74-75	74A-75A	2
Indicator	68-75	71A-75A	
Stop Laver	68-75	71A-75A	
Swinging Lever Bearing		71A-75A	
Leg	68-75	71A-75A	
Bed and Back	71-75	71A-75A	6
Graduated Arc	68-75	71A-75A	



PARTS FOR

GOODELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A 1285, 1285A, 1305, 1305A, 1306 and 1306A Nos. 1002, 1003 and 1004





.55 -50 .10 .50 .10 .10 -10 .10 .20 .30 .10 .30 .30 .35 .90 .10 .20 .10 .10 .10 10 .10 .10 .10 .10 .10 .10 .10 .15 .10 .10 .10 .70 .20 .15 2.30 .50 3.50 .40

.20

2 80

70

PARTS FOR GOODELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A, 1285, 1285A, 1305, 1305A, 1305 and 1306A Nos. 1002, 1003 and 1004

Name of Fare	
Bed (with leas)	
Back left hand	
Back right hand	
Attochment Angle Slide	
Attochment End Block	
Attachment Length Gauge Stide	
Attachment Washer	
Attachment Clamp	
Attachment Binding Screw	
Attachment Knurled Screw	
Attochment Length Gauge	
Depth Gauge Knarled Screw	
Depth Gauge Bent Wosher	
Front Depth Gauge	
Back Depth Gauge	
Ball Bearing, complete	
Scale and Escutcheon Pins	
Right Hand Riser	
Left Hand Riser	
Back Screw lalso Gib Screw)	
Guide Stop (Automatic Detent)	
Copper Plug	
Not for R and L Binder Screw	
Stiding Lever Binder Bolt Washer	
Boss Binder Screw (1/1 , 14 18 Sq. Hd.)	
Cotch Lever Pin	
Bottom Plate Pin	
lever Screw (1/4 + 1/4" - 18 Fit. Hd.)	
Boss Screw	
Attochment Block Screw (4) (1 + 1/4 - 20 R.	H.)
Saw Stop (2)	
Gib Screw (1/4 + 1/4" 20 R. H. Mich.)	
Catch Lever Spring	
Saw Stop Screw (2) (1/4"-10-32 R. H. Alch.)	
lever Pin	
Ball Cage, complete	
Gib (with Plugs and Brass Pin)	
Catch Lever-large part	
Colds Lever small part	
Saw Guide (give width of saw)	
Bottom Plate Infl hand	
Swinging Lever, complete	
Pull Rod, complete	

See Cut on Proceeding Page

Sliding Lever, complete

Bottom Plate right hand

153



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 din

Chuck Shell for Nos. 51	010, 5012		52.00
Otock Shell for Nos. 73	70, 771, 772, 7312		1 80
Chuck Shell for Nos. 51	02, 730, 731, 732, 733		1 00
Chuck Shell for Nos. 3	1, 32, 33, 1321, 1322,	1323, 1324	.70
Chuck Shell for Nos 17	708, 1710, 1712		65
Church Shull for Nov. 1	42 1410 1610		.66

00 .70 65

45 .65 .85 .85

40

Jaws for Nos.	31, 32, 33, 1321,	1322, 1323, 1324	, 1708, 1710, 1712
Jaws for Nos	502, 730, 731, 731	2, 733, 5010	

7	Jaws for Nos	142, 1410, 1610
8	Jaws for Nos.	31, 32, 33, 1321, 1322,
9	Jaws for Nos :	502, 730, 731, 732, 733
0	Saws for Nos 2	770, 771, 772, 7312
1	Chuck Socket fo	or Nos. 5010, 5012

1	Chuck	Socket	for	Nos.	730.	73	1, 7	32,	733,	770,	771.	772
3	Chuck	Socket	for	Nos.	31, 3	2,	33.	132	1, 13	22, 1	323.	1324

14 Cruck Socket for Nos. 1410, 1610, 1708, 1710, 1712 15 Chuck Socket for No. 142

1



40 .25

.10

10 40

.25

.15 2.00

.15

.10 -20

.20 20

.10

10

10

10

80 60

10

10

.30

.60

an

1.00

PARTS FOR BRACES

Crocked Socket for Nos. 31, 32, 53, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324 \$1.00 1.20 oked Socket for Nos. 5010, 5012 BO. Crooked Socket for Nos. 1410, 1610, 1708, 1710, 1712

Rotchet Pawls for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324,

Ratchet Powls for Nos 1410, 1610, 1708, 1710, 1712 Ratchet Pawl Pins for Nos. 1410, 1610, 1708, 1710, 1712

Retchet Pawl Piss for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324,

Rotchet Chuck Socket Wosher for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322.

Rotebet Churk Socket Washer for Nos. 5010, 5012 Rotchet Geor for Nov. 1410, 1610, 1708, 1710, 1712

Frame for No. 502

Cover for No. 502 Rotches Chuck Socket Screw for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322,

Quill for Nos. 142, 1410, 1610

Based Rotchet Ring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323,

Socket Ring Washer for Nos. 5010, 5012

Socket Ring Washer for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323,

Rotchet Powl Spring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323. 1324, 1410, 1610, 1708, 1710, 1712, 5010, 5012 Quil Washer for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323,

1324, 1708, 1710, 1712, 5010, 5012 Ball Bearing Washer for Nos. 1708, 1710, 1712

Quill for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324,

Quill for Nos. 1708, 1710, 1712

Sall Race for Nos. 1708, 1710, 1712 Bell Roce for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012

Head for Nos. 142, 1410, 1610 Head for Nos. 1708, 1710, 1712

40

Head for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324 43 44 Henri for Nov. 5010, 5012

PARTS FOR MILLERS FALLS AND GOODELL-PRATT DRILLS

HAND DRILLS

1							
34403 2000	88		gred co.		25		
4995	989		ping vist)	0 \$0.15			
60 mag	999			many 61213	10 \$0.2	0000	00000
Norde	252888338838			meng 1799	\$0.15 \$0.15 \$0.15		
Agricus disp yog day	25 25 25 25 25 25 25 25 25 25 25 25 25 2		feral	\$ 50.35	25.52.5		
anail nui	999999999999		Brimaging start punty	\$0.25 0.20 .20 .20		25 25 22 25 25 25 25 25 25 25 25 25 25 2	
aregues	99000000000000		*****	\$0.30			
		RILLS	others are		30.30	17	
fro shade	2	EAST D	ADJUSTED NO.	20 25 50 30 20 35 20 30			
	22222222222222	80	Don love Teachers Teachers Teachers	50 50 35 35 35		1	
Apriliad (C to red)	20 20 20 20 20 20 20 20 20 20 20 20 20 2			\$0.25 \$0.25 30.30			
Chock	\$1.50 2.00 2.00 2.00 1.50 1.50 1.00 2.00 2.00 2.00 2.00 2.00 2.00 2.0			88888			
Cross-used Hondle	\$0 88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			40 \$1.50 40 1.40 40 90			
provent soil	\$0.55.55.55.55.55.55.55.55.55.55.55.55.55			08 09 09 09 09 09 09 09 09 09 09 09 09 09		8-	
hibuby way	\$0.65 1.00 35 65 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0			20.00			
and model	22 28 28 28 28 28 28 28 28 28 28 28 28 2			0A \$2.00 12 1 70 19A 1 60 29A 2 25			
	2002					047	



PARTS FOR SPIRAL AUTOMATIC SCREW DRIVERS

No. 375 No. 50 No. 7 No. 22 No. 5 Please specify the number of the screw driver the parts wanted are to fit as well as the part number. Part Home \$0.70 Churk and Spirol \$0.60 \$0.55 \$0.60 \$0.55 Frame, complete 35 1:00 1:50 80 1 00 1:50 .80 .15 Chuck Shell .25 .15 .15 .15 Chuck Collar 10 10 10 10 .10 .10 Chuck Cam .10 10 10 .10 Chuck Washer 10 .10 10 .10 Chuck Spring .10 10 10 10 .10 10 Birrie Kay 10 10 10 .10 10 .10 10 .10 .10 .10 Splined Washer 10 10 10 Frame Nut 25 25 .25 .25 .10 Spring Ring 10 10 .10 10 -10 Lock Cam 50 50 30 50 .50 .30 Shifter Sleave .20 20 30 20 .30 .15 Com 15 20 10 .15 .20 .10 Ratchet Nut- right hand 20 30 30 25 30 30 25 Rotchet Nut - left hand 20 35 35 35 .35 .30 Pawls (2) 10 20 20 20 .20 .20 10 .10 .10 .10 .10 -10 Rotthet Key 10 .10 10 .10 .10 .10 20 Lock Boffs (2) 10 10 10 10 .10 .10 Stop Collar 10 10 10 10 10 .10 Handle Plug Screw .10 .10 Handle and Ferrule 20 35 40 40 .35 24 Blade, Small See Page 46 .15 10 .10 .10 10 .10 10 Stop Washer .10 10 10 QIR Spirot Spring .10 .10 .10 .10 10 .10 .10 .10 21 .15 .20 .20 .20 -10 .10 34 Step (Wood plug) .10 Blade Key .10

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PARTS FOR BENCH PLANES



	89	ture and	specity	the nun	nber et	blane I	erts w	anted e	re to fit	1.		
Part	Description of Feet	No. 8 No. EC	No. 9 No. PC	No 100 No 100	No. 11		No. 150	No. 18C	No. 22 No. 22C	No. 24 No. 24C	No. 6.	No. 93
1	Double iron					- 5	er Page	4				
2	Single Iron					5	ee Page	. 4				
3	Frog Adj. Screw	\$0.10	\$0:10	\$0.10	\$0.10				\$0.10	\$0.10	\$0.10	50.1
4	Frog Clip	.20	.20	.20	.20	20	.20	.20	.20	.20	.15	.1
5	Plane Iron Cap	.45	55	:60	.45	.55	.60	.60	60	60	.30	3
6	Lever Cap Comp.	.05	.90	1.00	.85	.90	1.00	1 00	1.00	1.00	.60	
7	Knob Bolt and Nut.	.10	10	.10	.10	.10	.10	.10	.10	.10	.10	- 1
	Plane Knob	:40	40	40	.40	40	40	.40	.40	.40	.15	1
9	Plane Bottom	3.20	3.20	3.80	3.80	3 80	3.80	5.30	7.50	9.00	1.75	1.4
10	Frog, complete	1.10	1.10	1.20	1.10	1.10	1.20	1.20	1.20	1.30	1.10	
11	"Y" Adj. Lever	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	- 1
12	Cap Scraw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	1
13	Lever Cop Screw	.10	10	.10	.10	.10	.10	.10	.10	.10	.10	¥
E4	Frog Clip Screw	.10	.10	.10	.10	.10	.10	.10	.10	10	.10	Ŷ.
15	Handle Straw			.10	10	.10	.10	10	.10	.10	.10	1
16	Frog Screw	.10	.10	.10	10	.10	.10	.10	10	.10	.10	¥
17	Frog	.70	.70	.80	7.0	70	.80	.80	80	.90	70	7)
18	Plane Handle	.60	.60	.60	60	60	60	.60	.60	.60	.35	3
1.9	Adjusting Not	.30	30	30	30	30	30	30	.30	.30	.20	2
20	Mountly Bull and blok	20	20	20	20	0.0	0.0	0.0	.50	100	.20	- 7

	PARTS FOR NOS. 4 AND 85 RABBET PL	ANES	•	
Ma	Name of Port		No. 4	plo
4304	Вотом			53
	Bottom, Top and Bottom, complete		\$0.80	
232	Flane Iron		40	
266	Lever		.20	
391	Lever Thumb Screw			
47	Lever Screw		.10	
13.1	Adjusting Lever			
35	Adjusting Lever Screw			
33	Rivet			
34	Line Cutter (Spur)	**		
165	Width Gauge			
121	Width Gauge Stop			
19	Width Gauge Lock Screw			
264	Depth Gauge	2000		



PARTS FOR BLOCK PLANES



art.					No. 27	No. 51	No 57	No. 208	No. 700
	Description of Firm	No. 16	No. 17	No 36					
1	Adopting Nut	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20
2	Lever Cop	50	50			50	.50		
3	Finger Rest Knob	20	20	20	20	20	.20	.20	.20
Ā	Lever Cop			1.10	1.10			1.00	
5	Adı, Lever Pin	05	.05	.05	.05	05	.05	.05	.01
2	Adjusting Not	.20	.20	20	.20	20	.20	.20	.20
Ģ.	Frog, complete					.20	.20		
8	Eccentric Plate	.20	.20	.20	20	.20	.20		
	Lateral Adj Lever	20	.20	.20	20	-20	.20		
0	Bottom	2/30	2.30	2.30	2 30	2.30	2.30	2.50	1.75
	Lever Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10
2		.55	.55	.55	.55	.55	.55	.55	.55
3	Single Plane Iron Adjusting Lever	.10	.10	.10	.10			.10	



Port No.	Description of Ferr	No. 3	No. 07	Ms: 33	No. 45	No. 53	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
2	Detechable Side		.50							
Ä	Frog. complete		.20		20	\$0.30		.20		.30
			.05		0.5	.05		.05		.05
5	Frog Pin		20							
6	Side Screws [2]									
7	Single Plane Iron		.70							.55
	Single Plane Iron	\$0.30		\$0.20	.55	40	.40	.55	.40	.33
9	Frog, complete		.25		.25			.25		
10	Plane Bottom	.80	2 50	60	1.25	80	2.25	1.35	1.25	1.50
		.00			50			.50		
11	Lever Cap									
12	Lever Cap		.40			40	.40		.65	.40

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PARTS FOR NOS. 67 AND 77 ROUTER PLANES



1 2 3 4 5 6 7 8 9 10 11 12

W	hen ordering parts please be sure and give the number of the screw driver the par	ts are to f	101
1	he part number.		
	Description	No 67	
	Plane Boltom	\$2.65	
2	Plane Bottom	\$2.03	
3	Cutter, Vs. Pointed	.60	
1	Cutter, ½*	.60	
5	Cutter, ¼*	.60	
5	Attachment Stud	.15	
٠	Hondle Stud	.15	
1	Handle Nut	.15	
,	Throat Attachment	.25	
,	Attachment Stud Tightening Screw	.10	
	Fence Washer	.10	
1	Cutter Adjusting Screw	20	
1	Knob Hendle	.20	
	Handle Stud	1.5	
	Cutter Clamping Collar with Screw	.50	
	Cutter Clamp Screw	.10	
	Fence Screw	10	
1	Depth Adjusting Nut	.15	
1	Fence	25	

.10



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NOS. 709 AND 714 PLANES



These entirely new planes enjoy on 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 frag so powerfully that vibration and chatter are eliminated. A much larger knurled adjusting not permits fingertip control of depth adjustments of the cutting iron. Cutting iron is one solid prece of highest quality tool steel preasion, heat treated to take and hold a keen haned edge. Cop 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.

No. 709 Swooth Plane 3 % lbs. No. 714 Jock Plane

NO. 1950 RATCHET BRACE



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.

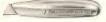
Steel dad ball bearing head, smoothly curved 1/4 inch round steel sweep rod, rugged see boxed, steel ring shift ratchet mechanism and Barber pattern chuck with forged steel jaws are construction features that insure its utility as well as its beauty.

Packed two in a box

No. 1950



NO. 333 UTILITY KNIFE





0 AO

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 shap, its uses are unlimited.

The sturdy, sure-grip, die cost 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.

\$1.25 Knife Complete with 5 Blades No. 333 Extra Blades (Regular) Pkg. of 5 \$0.50 -- Box of 100 7.00 No. 3318 Extra Blades (Heavy Duty) Pkg. of 5 \$0.60 - Box of 100 8.00 No 2325 Six individually boxed No. 333 Knives packed in a Counter Display carton.

Weight of Display Carton with 6 Knives, 11/4 lbs. NO. 710 HIGH SPEED COUNTERSINK



FAST-CUTTING FIVE FLUTES B2 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 around flutes for fast cutting at an 82 angle for wood and machine screws. Shank is '4' in diameter for use in three-lawed chucks. Length averall, 21/2 inches Mounted four on a counter display easel.

No. 710 High Speed Countersink Parked one card of 4 in a box. Weight per box 51/2 ources.

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. Senath Code 43/4"

41/4" No. 810 No. 810 Bushed riv of a tire in a hor Average weight per box 1/4 pound.

No. 810



No. 651

No. 651

No 651

No. 656

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 apague red therma plastic slave burning and shockgroof

NO. 651 SCREW DRIVERS - Standard Round Blade



7LIPIN

13/4 lbs.

7.20

11/5 lbs.

No. 651	8.	34	3/6"	2% lbs.	ZUPOR	10.20
	NO. 65	2 SCREW	DRIVERS - Heavy	Duty Square	e Blade	
	80	-	- 5	Acres acres		

	Blade Length	Sit	Shank	Wt. Box	Code	Price Doz.
No. 652	4"	952"	1/4 × 1/4"	11/s lbs.	ZURAG	\$6.00
No. 652	6"	3/4"	916" x 916"	134 lbs.	ZUREL	8 40
No. 652	8"	1/2"	3/4" × 3/4"	3 lbs.	ZURIK	10:80
No. 652	10"	1/2"	3/6" x 3/6"	31/5 lbs.	ZUROX	13.40

NO. 653	SCREW	DRIVERS - R	ound	Cabinet Blade	
5 3			Po	ACT A DIE	

	Elade Length	84	Diam. Shank	Wr. Box	Code	Price Dat
No. 653	3"	3/66	364"	10 oz.	ZUSAM	\$4.40
No. 653	4"	366"	365	13 oz.	ZUSEB	3 60
No. 653	6"	3/14"	3/6"	13 oz.	ZUSID	4 80
No. 653	8"	2/4	3/6/	14 07	711SOR	5 40

NO. 656 SCREW DRIVERS - Slim Square Blade

	16			-		
	Blade Length	Bir	Shonk	Wt. Box	Code	Price Dot
No. 656	A"	3/2"	356" x 356"	11/a lbs.	ZUTAX	\$6.00
No. 656	6"	7/32	366" x 366"	13/4 lbs.	ZUTEF	8 40
No 454	0.	74.0	24." - 24."	136 Ben	TITTID	10.00

NO. 654 SCREW DRIVER - Stubby Type



Code No 654 5/4 lbs. \$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.

Code ZEOSY No. 8504 Set

Packed one set in a box

NO 29X AUTOMATIC SCREW DRIVER SET



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 1/4". 1/4" and 1/2" in diameter, which are packed in a plastic vial.

\$3.80

\$2.80

No. 29X Set



NO. 525 ROTATABLE BLADE KEYHOLE SAW



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 atting, 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 lacked in eight different positions allowed the operator to always have the handle in the dear for fast work. The solid cast handle and being plus the machined steel blade holder and thumburen, provide a tool that can take the abuse characteristically given this type of sure. Overall length 15½ inches.

			SA	WS					EXTR	A BLADE	IS	
		Type	Tauth For Inch	WI.	Code	Fire field			Type	Team Per Inch	Corte	Prox. Barr
No	425	Metal	241	1.160	YEYGU	\$2.00	No:	10	Metal	1.07	YEYJA	50.50
No	525	Metal	101	1.15	YEYHO	2.00	No.	24	Metal	241	YEAK I	50

NO. 725 NEST OF SAWS



No. 725 Nest of Saws (Carded)



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 at tremedously greater sales potential.

Extryone—formers, until them and the home "handyman"—needs this tow. The compact and conflorable patted gip handle, the dever feature which permits locking the blade in oney of eight positions, together with the outstanding goally of the blades themselves, nake it the outstanding but Sales appeal has been added by moveling the combination on an attractive how-color conf. which will do a fine selling job in windows, or counter or in birs. It's a poerroand volume selling the combination of the selling job in the selling jo

that will yield a big bonus as a Christmas, Father's Day or birthday aift.

Waight Code 154 lbs. YEVMA

Packed four cards in a bax



NO. 5256 KEYHOLE SAW DISPLAY UNIT



A substantial three color wood display. Saws easy to remove for handling and operating the following initial stock

6 No. 525 Keyhole Saws (\$2.00 3 Extro No. 10 Blades (7. 50 1.50 Fran

No. 5256 Display Unit Complete

NO. 500 HACKSAW FRAME DISPLAY UNIT



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 Hock Saw Frames (\$4.30 2 No. 300 Hock Sow Fromes 3 80 7 No 1027 Hock Saw Frames No 500 Daploy Une Complete

WORKSHOP ACCESSORY DISPLAY UNIT

MATERIAL PARTY.

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 stack: No. 262

W. Charle with +1 MT No. 940 Screw Fore Plote | MT No 922 No 934 BB Point Center -1 MT No. 930 No. 912 No. 952 No. 938 No. 917 No. 915 No. 984 Collet Chuck +33 J Arber No. 978 No. 980 No. 960 No. 946 No. 982 No. 966 No. 926 No. 990 No. 956 No. 970 No. 986 No. 992 No. 976 No. 994 1.00

Display Unit Complete

Base 6 + 20 inches Height 21 1/2 inches

No. 944

No. 900



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 rom 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. Weight Box

No. 2120 Attachment Complete

No. 2121 Extra Wool Bannels

to 4914 Dell Kit



21/4 lbs. No. 2122 Extro D or 00 Sanding Discs Packed one complete unit, four bonnets, or two dozen sonding discs in a box

NO. 3914 ELECTRIC DRILL KIT New

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 II, 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 pround the wheels

The following high quality accessories comprise this kit-

			Any item	may be ordere	d separately if		
No.	1914 2014 23096	— ¼ " Drill for — ¼ " Drill for — Bench Stand — Set of High! — Wheel Arbor	No. 4914	22.35 3.00 5.95	No. 23094 No. 23095	- 4" Grieding Wheel	7.25
Ma.	2014	Dell Kin	Millan Fo		Weight	Code	\$39.75



1/4" AND 1/2" UTILITY DRILLS







Electrically and mechanically finese powerful steamlined drills are the last word in modern design engineered to give you the finest low-priend drills available. Smooth nesting and study, they are light in weight and beautifully balanced. Drill up to M' and M' respectively in steel. Can also be smeat to power as wide variety of accessories for grinding, polishing, wire brushing, sawing, sanding, MCIOSEs Usernel In Dr. Car M. Z. = 20 of Cycles—115 and 220 (230 ω lts.

MOTORS: Universal for D.C. or A.C. 25 to 60 Cycles — 115 and 2 HOUSING: Die cast aluminum alloy. Hammered grey enamel finish.

GEARS: Alloy steel grease lubricated.

BEARINGS: Ball thrust spindle — all others oil impregnated branze,

SWITCHES: Nos. 914-1914 single pole. No. 912 double pole. CORD: Seven feet rubber covered Type SJ with plug.

No. 914	14"	2500	2.0	1156"	31/2	lbs:	\$19.8
No. 1914	34"	2500	2.0	1156*	31/2		22.35
No. 912	15"	450	3.0	15"	8	lbs.	40.9
		Toopped	with Account general I	Cey Chick			

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
Maximum distance, chuck to column
Maximum faed
Weight
No. 2914 Stand

4%" 1½" 7½ lbs. \$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 1½ "drilling in steel. Takes only a few moments to mount or remove drill."

table 1. Maximum distance, chuck to colum

Maximum feed
Weight
No. 2912 Stand



NO. 966 — 6" SANDER-POLISHER



A versatile flathing 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, polithing, waxing, sharpening, mising 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

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 1/4"-24 SAE thread. Spindle nut designed

SEARINGS: Self-oiling, bronze sleeve bearings throughout.

BRUSHES: Long-life pigtail. Accessible from willbout.

SWITCH: Fully enclosed, bat-lever type. Underwriter approved.

CORD; Seven feel, best quality rubber covered. Type 51, e18 Condustors with moulded on strain relief reinforcement REGULAR EQUIPMENT: 6" Rubber Pad, 6" Lamb's Wool Sonnes, and three 6" Assorted Sonding Discs.

Disc R.P.M.
Disc R.P.M.
Disc Service Scale

On S

LIST OF ATTACHMENTS AND ACCESSORIES.

Profest Letterprise in the U.S. A. Oxford-Frink Senten

