



MONARCH

MODEL "M"

20" ENGINE LATHE

CODE WORD "CADET"

Specifications

Swing over bed.....	22½"
Swing over compound rest.....	13"
Takes between centers, tailstock flush.....	48"
Base length shipping weight, without motor.....	10,100 lbs.
Weight each additional two feet.....	600 lbs.
Hole through spindle.....	2⅜"
Spindle bearings.....	Double Precision Timken
Center Morse taper.....	No. 5
Standard Camlock spindle nose.....	8"—D-1
Leadscrew diameter and threads per inch.....	2"—2 thd.
Range of threads per inch, quick-change.....	¼ to 46
Range of feeds per revolution, quick-change.....	.0038" to .240"
Thread and feed changes, regular quick-change..	48
Tailstock, spindle diameter.....	4"
Tailstock, spindle traverse and set-over.....	10"—1"
Steady rest opening, regular.....	7"
Carriage length.....	32¼"
Carriage bridge width.....	9¾"
Compound rest top slide travel.....	6"
Size of lathe tool.....	¾" x 1⅝"
Motor, size recommended, ordinary service.....	10 to 15 H.P.
Motor, size recommended, heavy duty service...	20 to 25 H.P.
Motor, constant speed recommended.....	1800 R.P.M.

for top spindle speeds from 18 to 800 R. P. M.
and 1200 R.P.M. for all slower spindle speed ranges.

Distance, spindle center to floor.....	42"
Width of bed.....	21¾"
Depth of bed.....	15"—18½"
Distance between centers in multiples of 2'....	From 4' to 24'

Actual threads cut with full quick-change gear box: ¼, ⅜, ½, 1, 1½, 1¾, 1⅝, 1⅞, 2, 2¼, 2½, 2¾, 2⅞, 3, 3¼, 3½, 4, 4½, 5, 5½, 5¾, 6, 6½, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 16, 18, 20, 22, 23, 24, 26, 28, 32, 36, 40, 44 and 46.

Metric transposing thread range: 3/8 MM to 21 MM pitch.
Metric gear box thread range: 3/8 MM to 23 MM pitch.

Spindle speeds obtained with driving pulley operated at 625 R.P.M.: 11, 15, 20, 26, 34, 43, 55, 70, 89, 112, 147, 187, 237, 301, 400 and 500 R.P.M. This spindle speed range will be furnished unless otherwise specified on the order.

NOTE: Other speed ranges optional. See speed chart in our price list.

Higher spindle speeds may be used to get full efficiency from Tungsten-carbide tools.

Taper attachment turns 6½" taper per foot—24" length at one setting.

Floor space, 48" between centers, length 148", width 77".

REGULAR EQUIPMENT INCLUDES—large and small face plates, high duty tool post with 2 screws, steady rest, compound rest, centers, chasing dial and wrenches. With automatic force feed lubrication to carriage, bed ways, compound rest and apron.

THIS MONARCH ENGINE LATHE HAS:

Hardened and ground alloy-steel helical gears in headstock—silent, smooth transmission of power—no gear tooth marks on work. Available alloy-steels governed by W. P. B. war-time regulations.

Hardened spindle with standard Camlock spindle nose.

Timken bearings in headstock.

Headstock, combined pump, spray and splash oiled and oil tight. Filtered oil to Timken spindle bearings. Visual oil gauges.

Hardened gears, shafts and studs in end gear train, gear box and apron.

Hardened tailstock spindle.

Multiple ground splined shafts throughout.

Dual control of headstock spindle and brake.

Flame-hardened and ground bed ways. Bed of 96" center distance and shorter have flame-hardened and ground ways.

Filtered and metered automatic force-feed lubrication to carriage on bed and to bottom slide on carriage and apron.

Carriage and tool slide ground on top and sides.

Hardened alloy-steel bed rack.

Anti-friction bearings in gear box, apron and all other points of advantage.

Centralized lubrication for gear box.

Large diameter cross feed and compound micrometer dials graduated in thousandths, to read in diameter, not in radius.

Chromium plated handles and handwheels.

Leveling screws in legs.

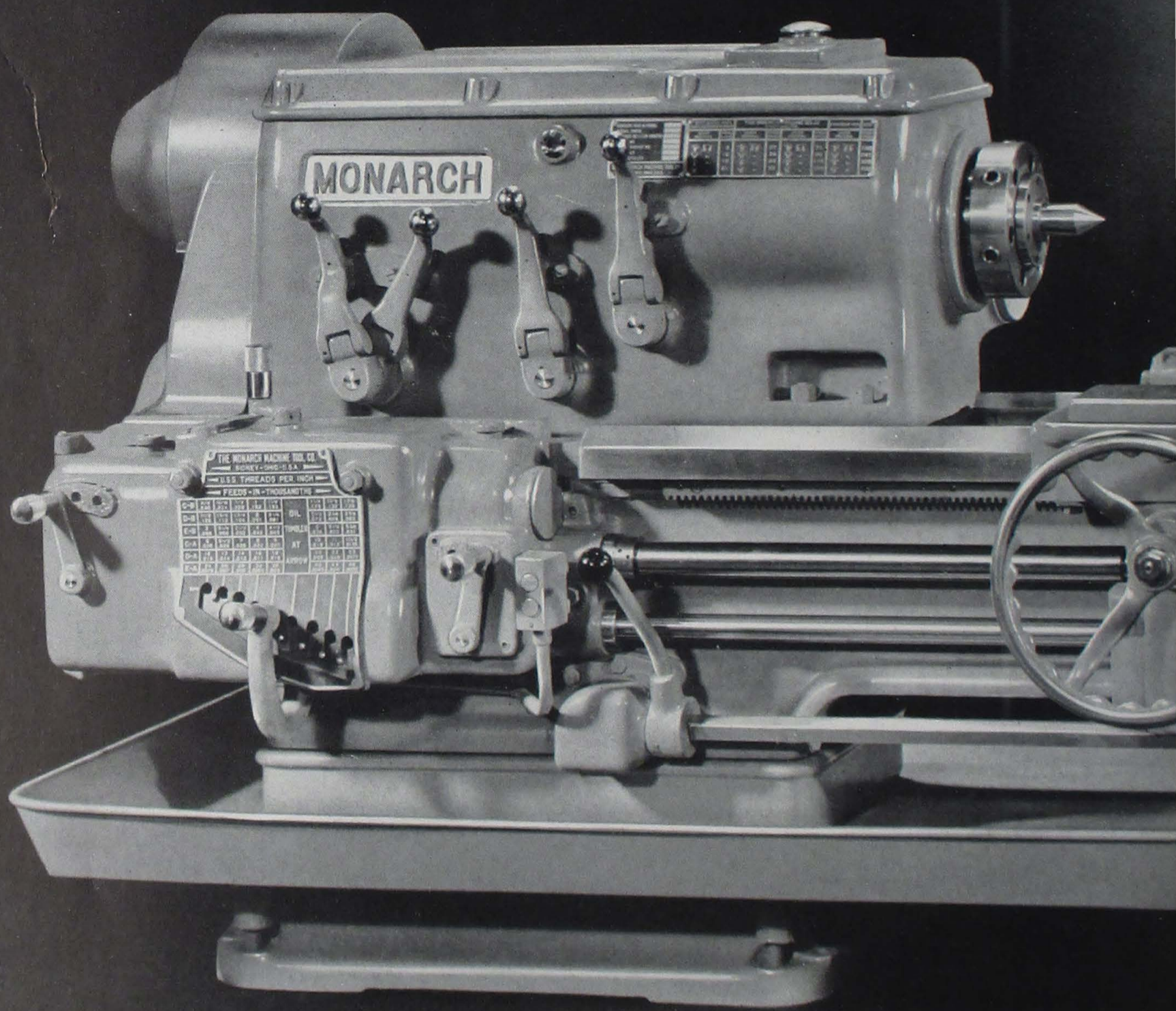
Motor, vertical rear leg mounted when lathe not equipped with power rapid-traverse. Other mountings, top of headstock or rear floor type. Specify type motor mounting preferred.

Drive is through multiple "V" belts.

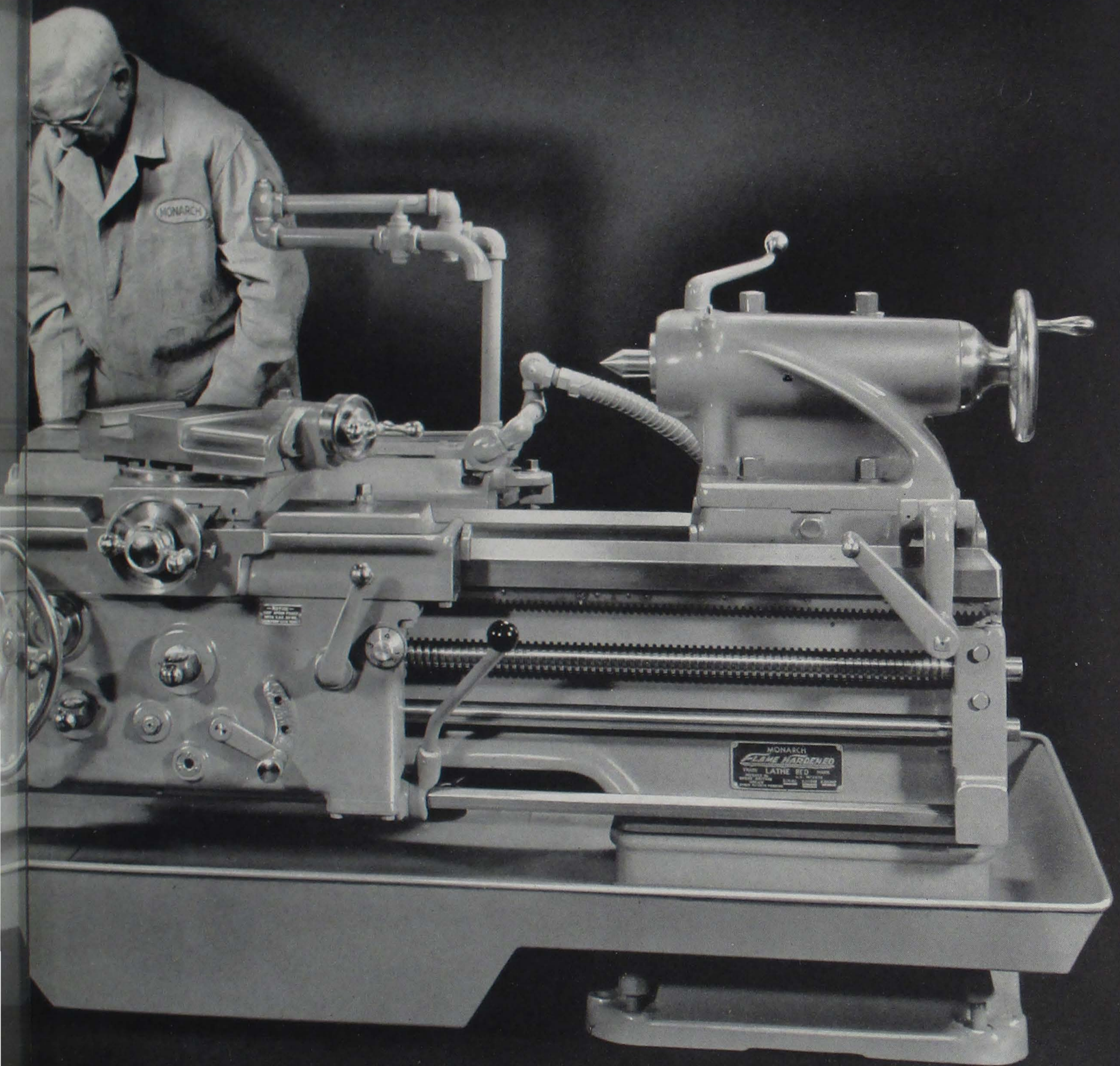
THE MONARCH MACHINE TOOL COMPANY, SIDNEY, OHIO

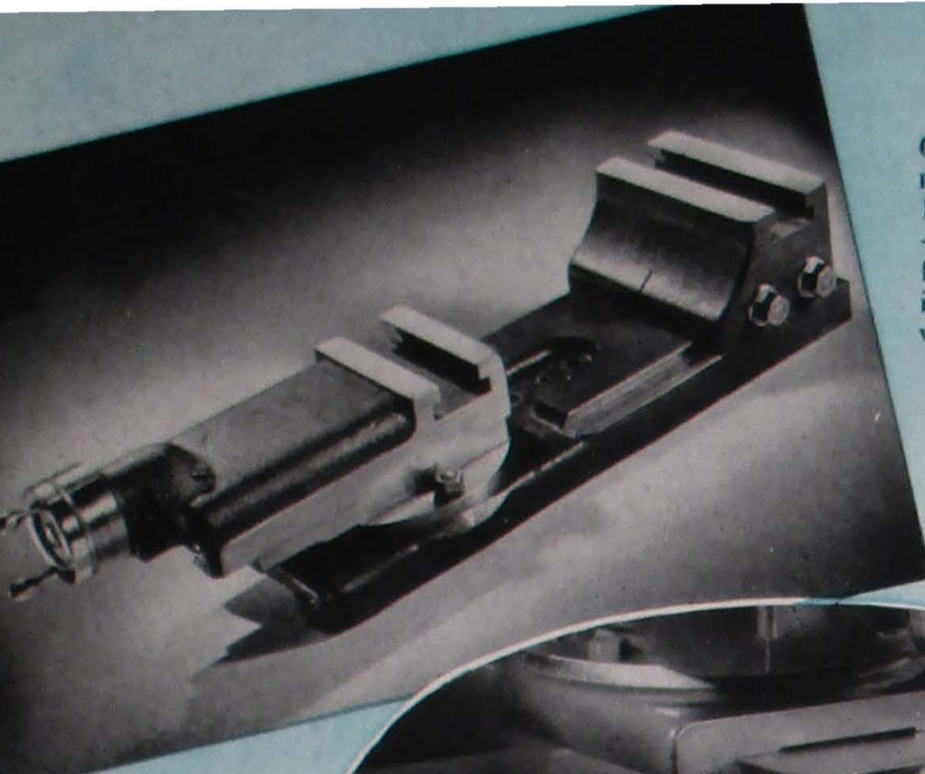
BRANCH OFFICES AND SELLING AGENCIES IN ALL INDUSTRIAL CENTERS THROUGHOUT THE WORLD

MONARCH MO



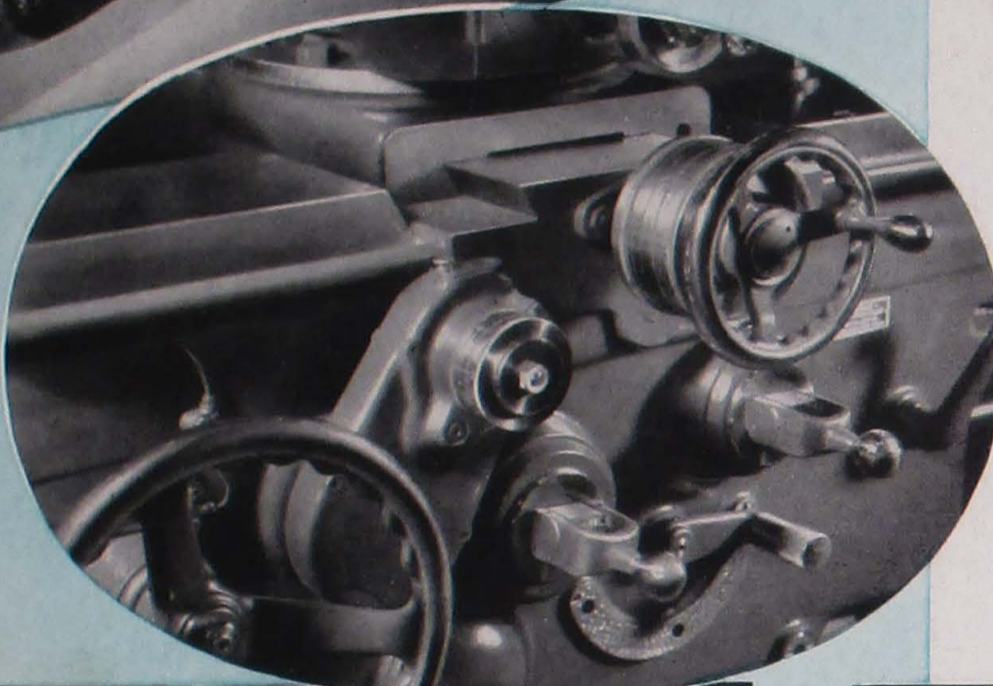
MODEL "M" 20" ENGINE LATHE





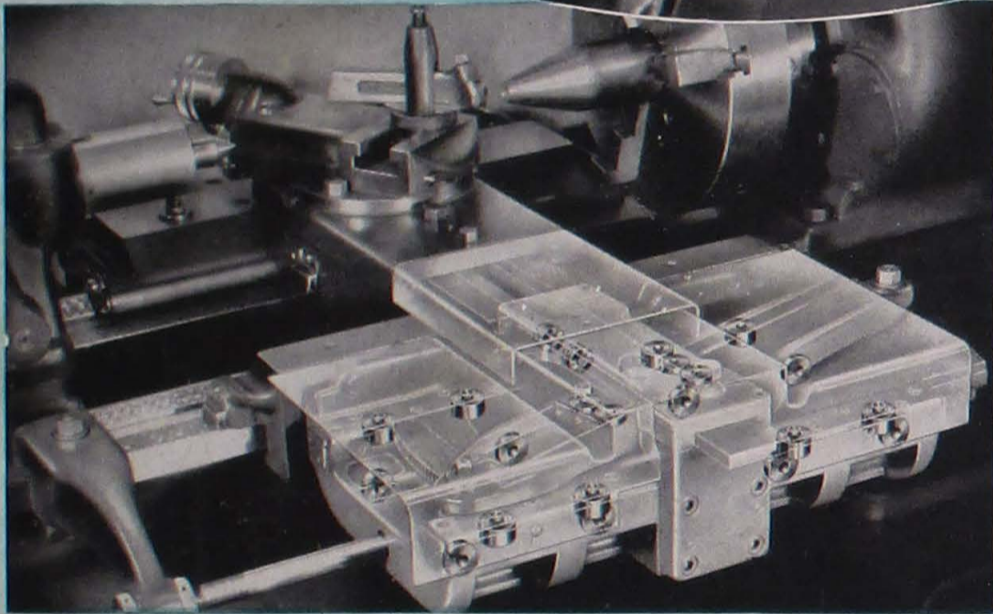
**CONNECTED COM-
POUND AND PLAIN
BLOCK REAR REST**
—especially useful
for turning, neck-
ing or chamfering
work.

**LENGTH READING
DIAL**—saves time
by permitting the
operator to read
lengths of cut di-
rectly on the dial,
also lessens spoiled
work.

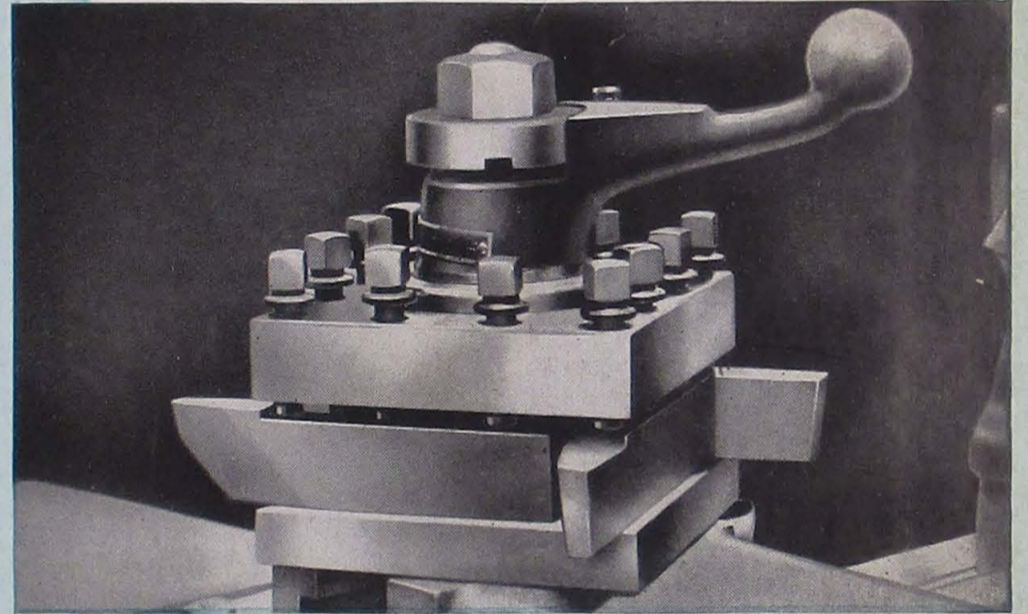


MONARCH ACCESSORIES CUT TURNING COSTS

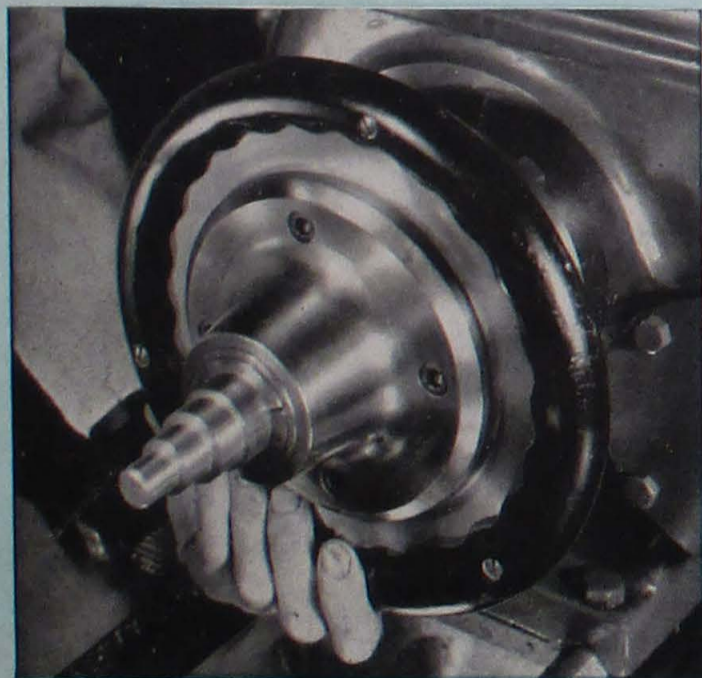
The accessories illustrated here are just a few from the many which Monarch makes available. On many jobs, the use of one or more of these special attachments will increase output and thus reduce costs to an extent that will repay the first cost in a very short time. Complete bulletins on any of these accessories will be provided on request.



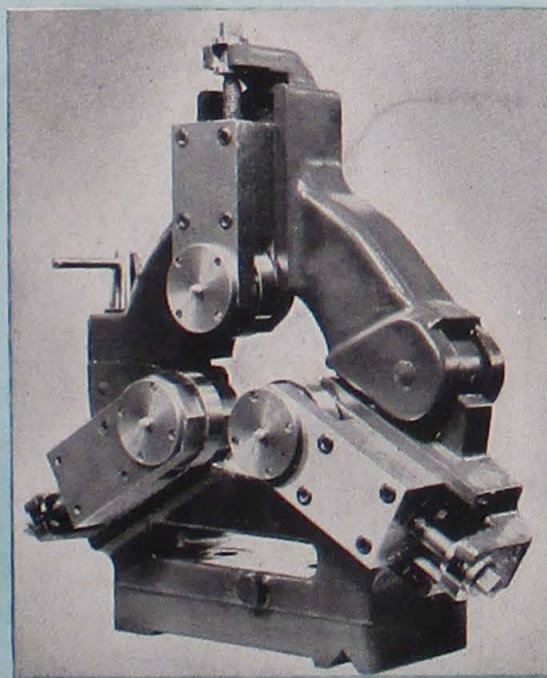
ANTI-FRICTION TAPER TURNING ATTACHMENT—for turning or boring accurate and smooth tapers under all conditions. Saves time. Improves quality of tapers.



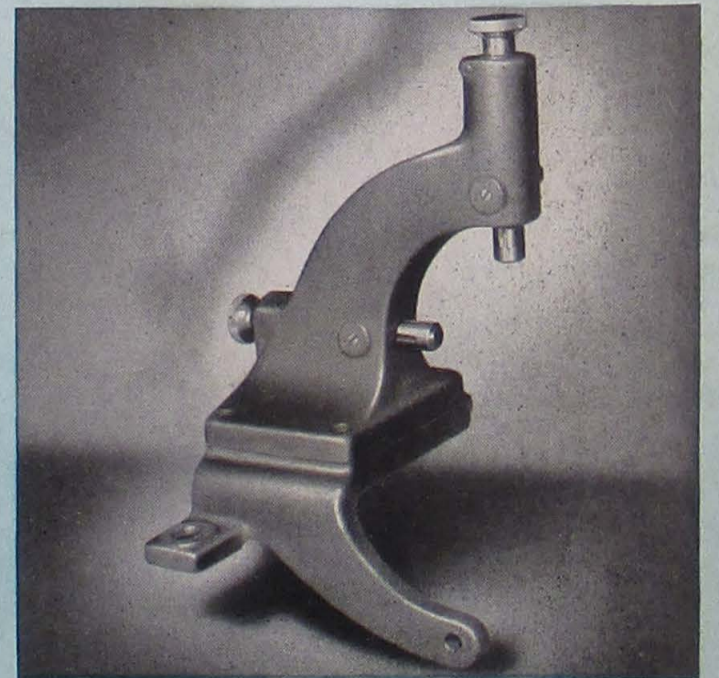
STYLE "O" TURRET—fits directly to the compound rest in the same manner as an ordinary tool post. It indexes accurately in 12 positions.



SJOGREN SPEED CHUCK—fits directly on Monarch D-1 Camlock spindle nose without the use of an adapter plate. This reduces overhang and insures extreme accuracy of chuck body alignment.



3-JAW HEAVY DUTY STEADY REST—available in capacities from 1" minimum and 7" maximum on lathes 12" to 18", inclusive, to 6" minimum and 12" maximum on lathes from 22" Model "M" to 36" Model "NN"



ROLLER BEARING FOLLOW REST—available in capacities from 1/2" minimum to 3 1/2" maximum to 1" minimum and 4" maximum, for Monarch lathes from 12" to 20".