NON-LINEAR SCREW CUTTING ATTACHMENT
FOR 9-INCH SOUTH BEND LATHE

DEVELOPED BY
GENERAL MINIATURIZATION LABORATORY
NATIONAL BUREAU OF STANDARDS

FOR
BUREAU OF AERONAUTICS
DEPARTMENT OF THE NAVY
(2) CARRIAGE GUIDE
MATERIAL: STEEL (SAE 1040)
COMMERCIAL FINISH, UNLESS SPECIFIED
QUANTITY: ONE REQD.

NATIONAL BUREAU OF STANDARDS
Ordnance Development Division
Washington, D.C.

CARRIAGE GUIDE
FOR SCREW CUTTING ATTACHMENT

MODEL

DIMENSIONS IN INCHES
(Unless otherwise specified)

TOLERANCES
(Unless otherwise specified)

DECIMALS ±.005
FRACTIONS ±.015
ANGLES ±3°

DO NOT SCALE THIS PRINT

THIS PRINT ISSUED

L62315
3-\%4 DRILL \%2 CBORE \%2 DEEP-BELOW WHOLE DEPTH
(Locate holes at root of tooth)

3. STEEL RACK (BOSTON L509-20 D.P.)
ONE REQD.

4. STEEL SPUR GEAR (BOSTON “NA28P 20 D.P.”)
ONE REQD.

750 +005 REAM

\frac{3}{16} x \frac{3}{16} KEYWAY

NATIONAL BUREAU OF STANDARDS
ORDNANCE DEVELOPMENT DIVISION
WASHINGTON, D.C.

RACK & GEAR
FOR SCREW CUTTING ATTACHMENT

MODEL

DIMENSIONS IN INCHES
(Unless otherwise specified)

TOLERANCES
(Unless otherwise specified)
DECIMALS ±0.005
FRACTIONS ±0.015
ANGLES ±\%4

DO NOT SCALE THIS PRINT

THIS PRINT ISSUED

L62316

DRAFTSMAN
FJ B

CHECKER
S. SMITH

PROJECT ENGR.
S. D. HAYN

SUBMITTED BY

EXAMINED BY

APPROVED BY

CHIEF, SEC.

CHIEF ENGINEER

CHIEF, 3RD DEV. DIV.
DESIGNED CAM
CONTOUR

2 - 1/16 - DRILL 1/2 CB 104 DEEP

5 STEEL (SAE 1132)
COMMERCIAL FINISH, UNLESS SPECIFIED
QUANTITY - ONE REQ'D.

NATIONAL BUREAU OF STANDARDS
Ordnance Development Division
WASHINGTON, D.C.

CAM
FOR
SCREW CUTTING ATTACHMENT

MODEL

DIMENSIONS IN INCHES
(Unless otherwise specified)

TOLERANCES
(Unless otherwise specified)

DECIMALS ± .005
FRACTIONS ± .013
ANGLES ± .5°

DO NOT SCALE THIS PRINT

THIS PRINT ISSUED

L62317
FOLLOWER GUIDE
MATERIAL: STEEL (S.A.E. 1040)
COMMERCIAL FINISH UNLESS SPECIFIED
QUANTITY ONE REQ'D.

DIMENSIONS IN INCHES
(Unless otherwise specified)

TOLERANCES
(Unless otherwise specified)
DECIMALS ±.005
FRACTIONS ±.015
ANGLES ±1/4°

DO NOT SCALE THIS PRINT

L 62319
FOLLOWER ARM

Material: Steel drill rod
Finish: \( \frac{3}{16} \), unless specified
Quantity: One req'd.

390-010

\[ \frac{4}{3} \]

2.5

90°

L R

4994-0004

NATIONAL BUREAU OF STANDARDS
Ordnance Development Division
WASHINGTON, D.C.

FOLLOWER ARM

For: Screwcutting attachment

Model

Dimensions in inches

(Unless otherwise specified)

Tolerances

(Unless otherwise specified)

Decimals \( \pm 0.005 \)

Fractions \( \pm 0.015 \)

Angles \( \pm \frac{1}{2} \%

DO NOT SCALE THIS PRINT

THIS PRINT ISSUED

L62321

DATE

CHANGE

NO.

E. C. N.
SLIDING CAM PLATE

MATERIAL: STEEL (SAE 1132)
QUANTITY: ONE REQ'D.
LOCATE & DRILL AT ASSEMBLY

NOTE:
THIS ATTACHME SPECIFICALLY TO
# Parts List

<table>
<thead>
<tr>
<th>NAME</th>
<th>QUAN.</th>
<th>MAT.</th>
<th>USED WITH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tailstock Base Plate</td>
<td>1</td>
<td>C.I.</td>
<td></td>
</tr>
<tr>
<td>Carriage Guide</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Rack</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Gear</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Cam</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Follower Support</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Follower Guide</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Lead Screw Bear's</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Bearing Bushing</td>
<td>1</td>
<td>BRONZE</td>
<td></td>
</tr>
<tr>
<td>Follower Arm</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Cam Guide Plate</td>
<td>1</td>
<td>CRS</td>
<td></td>
</tr>
<tr>
<td>Sliding Cam Plate</td>
<td>1</td>
<td>CRS</td>
<td></td>
</tr>
<tr>
<td>Guide Plate Support</td>
<td>1</td>
<td>CRS</td>
<td></td>
</tr>
<tr>
<td>Anchor Bolt-Plate</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
<tr>
<td>Dowel Pin</td>
<td>1</td>
<td>STEEL</td>
<td></td>
</tr>
</tbody>
</table>

## Standard Parts

- **Cap Screws**: 3/8 x 1/4 - 16. FI. HD. 2 - 246
- **Tailstock Base Plate**: 1 - South Bend
- **Steel Knob (Boston 3/8-20)**: 1
- **Hex Shank Cap Screw**: 3/8 x 6 x 1/8. 2 - 385
- **Gear (Boston A288-20)**: 1 - STEEL - Lead Screw
- **Safety Switch**: 1/4-20 x 1/4. 1 - 6.910
- **Hex Screw Cap Screws**: 7/8 x 32. 4 - 728
- **Socket Key**: 3/8 x 31/2. 1 - 4
- **Hex Socket Cap Screw**: 7/8 x 20 x 1/4. 2 - 13
- **Hex HD Bolt**: 1/2 x 3. 7 - 14
- **Hex HD Nut**: 7/8-14. 7 - 22
- **Washer, For 3/8 Bolt**: 1 - STEEL. 22

---

*Attachment has been designed specifically to fit a 9-inch South Bend Lathe.*