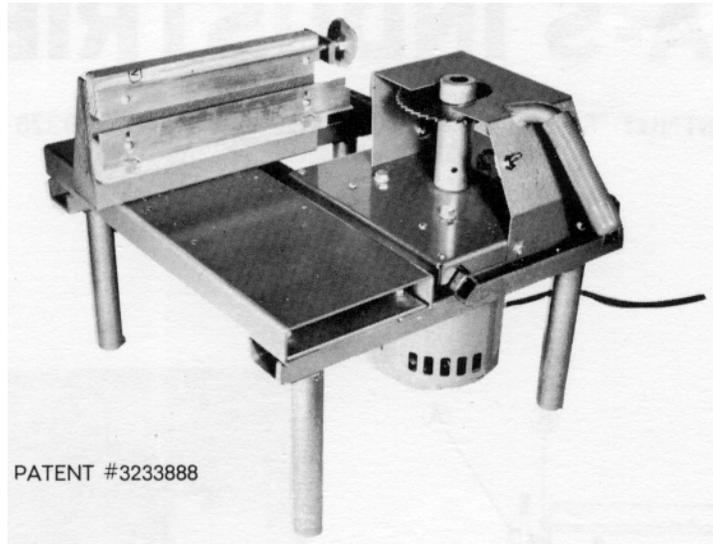


SECTION J - TOOLS AND MISCELLANEOUS

| APPLICATION | PAGE |
|-----------------------------|------------|
| NOTCHING SAW | J-2 & J-2A |
| 825 & 826 DRILL JIG (BLANK) | J-3 |
| DRILL BUSHINGS | J-4 |
| MISCELLANEOUS TOOLS | J-5 |
| SCREWS | J-6 |

NS-400 NOTCHING SAW



NOW IN 3 SECONDS YOU CAN NOTCH A FIN TUBE . . . CLEANLY AND ACCURATELY

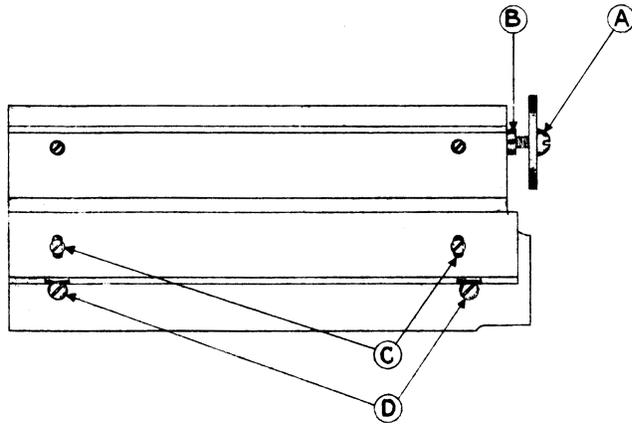
Place the fin of the tube in the guide slot. The fin will rest on the bottom of the guide slot — the tube does not rest on the table. This gives the fin perfect alignment to the saw blade. Slide the tube along until you reach the stop. Grasp the handle on the saw guard, press the momentary switch and push the saw forward. This will cut a clean, accurate notch. (The same procedure is used for fins that are not center located.)

SPECIAL FEATURES OF THE NS-400 NOTCHING SAW

- Made of heavy-duty channel and square steel tubing.
- Powered by Westinghouse 3/4 H.P. motor for continued heavy-duty use.
- Motor is activated by momentary switch located conveniently at the handle.
- 5" high speed steel slotting saw blade.
- Height of the tube stop is adjustable for the depth of the notch desired.
- The machine is portable for field fabrication.
- Specifications: Width 17 1/2", Length 17", Height 14", Shipping weight 80 pounds.

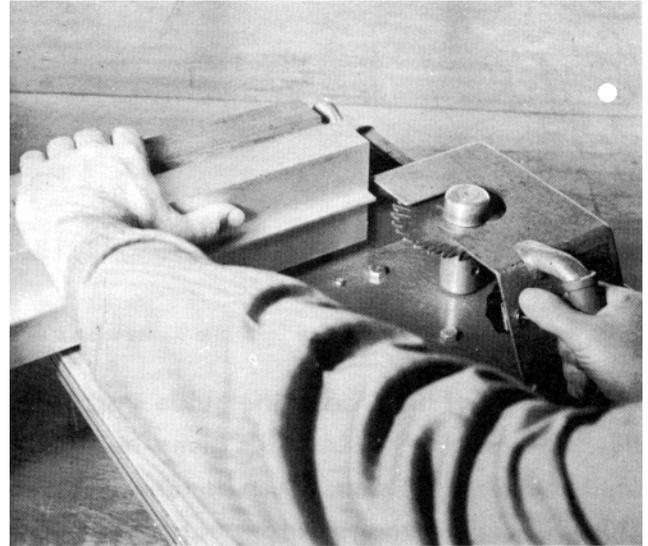
R-A-S MANUFACTURES DRILL JIGS AND BRACKETS FOR ALL TYPES OF ALUMINUM EXTRUSIONS

R-A-S NS-400 Notching Saw covered by U.S. Patent 3233888.

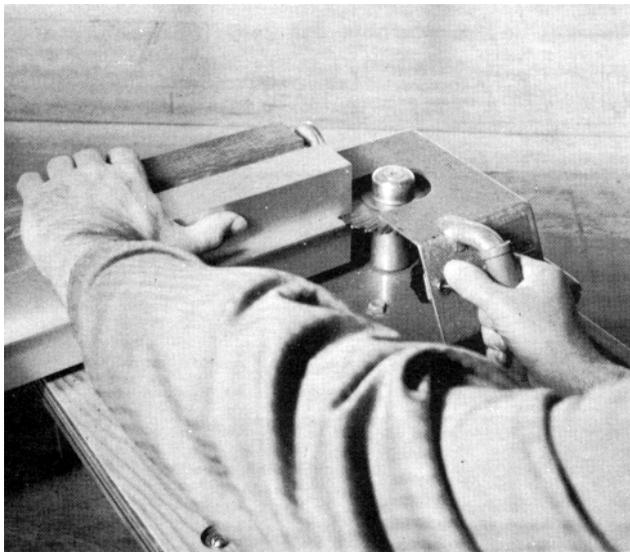


LOCATING BLOCK

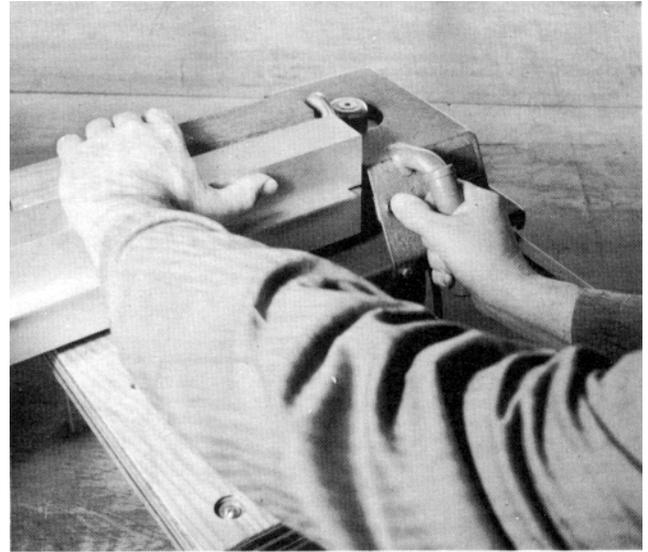
To increase or decrease the notch depth, release lock nut (B). With screwdriver, turn slotted screw (A) to proper depth. Tighten lock nut (B). To put fin in alignment with saw blade, release screws (C) and turn screws (D) in or out to proper alignment.



Place fin in slot, slide forward to positive stop. Hold tube with left hand, grasp handle with the right hand.



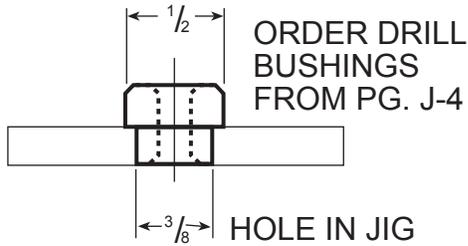
Hold momentary switch down, slide toward tube slowly, blade will start cutting, go all the way through.



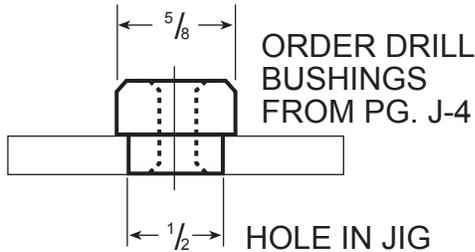
Having gone through, return with power on to original position, clearing notch.

INEXPENSIVE CUSTOM DRILL JIG

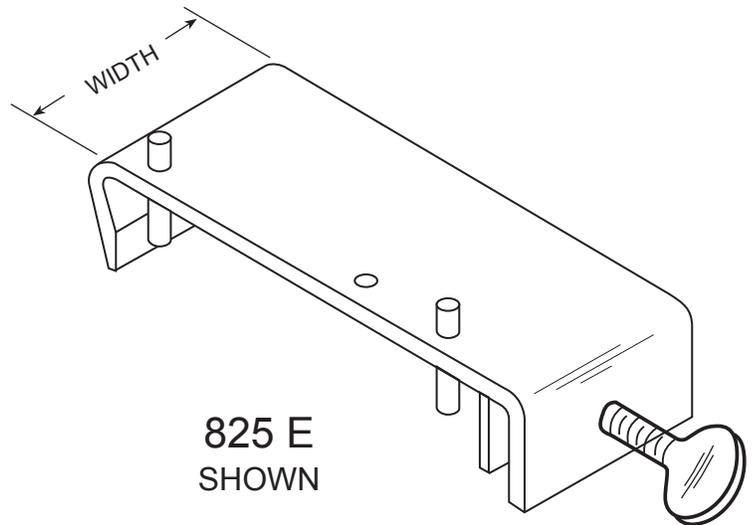
DRILL THIS JIG OUT TO SUIT YOUR OWN SPECIFICATIONS.
 INSTALL DRILL BUSHINGS (SOLD SEPARATELY ACCORDING TO SIZE).
 YOU NOW HAVE YOUR OWN CUSTOM DRILL JIG.



#34 TO #8 DRILL



#7 TO #0 DRILL



825 DRILL JIG COMES WITH HOLES & PINS FOR LOCATING JIG ON END OF TUBE.
 826 DRILL JIG HAS NO HOLES.
 STOCK JIGS ARE 1³/₄ – 2 & 2¹/₂ WIDE. OTHER SIZES AVAILABLE.
 THREE JIGS AVAILABLE IN EACH WIDTH TO FIT 3^{IN} TO 6^{IN} TUBE.
 DRILL BUSHINGS ARE ORDERED FROM PAGE J-4

| DRILL JIG | WIDTH | TUBE SIZE |
|--------------|-------------------------------|-----------|
| 825A OR 826A | 1 ³ / ₄ | 3 TO 4 |
| 825B OR 826B | 1 ³ / ₄ | 4 TO 5 |
| 825C OR 826C | 1 ³ / ₄ | 5 TO 6 |
| 825E OR 826E | 2 | 3 TO 4 |
| 825F OR 826F | 2 | 4 TO 5 |
| 825G OR 826G | 2 | 5 TO 6 |
| 825J OR 826J | 2 ¹ / ₂ | 3 TO 4 |
| 825K OR 826K | 2 ¹ / ₂ | 4 TO 5 |
| 825L OR 826L | 2 ¹ / ₂ | 5 TO 6 |

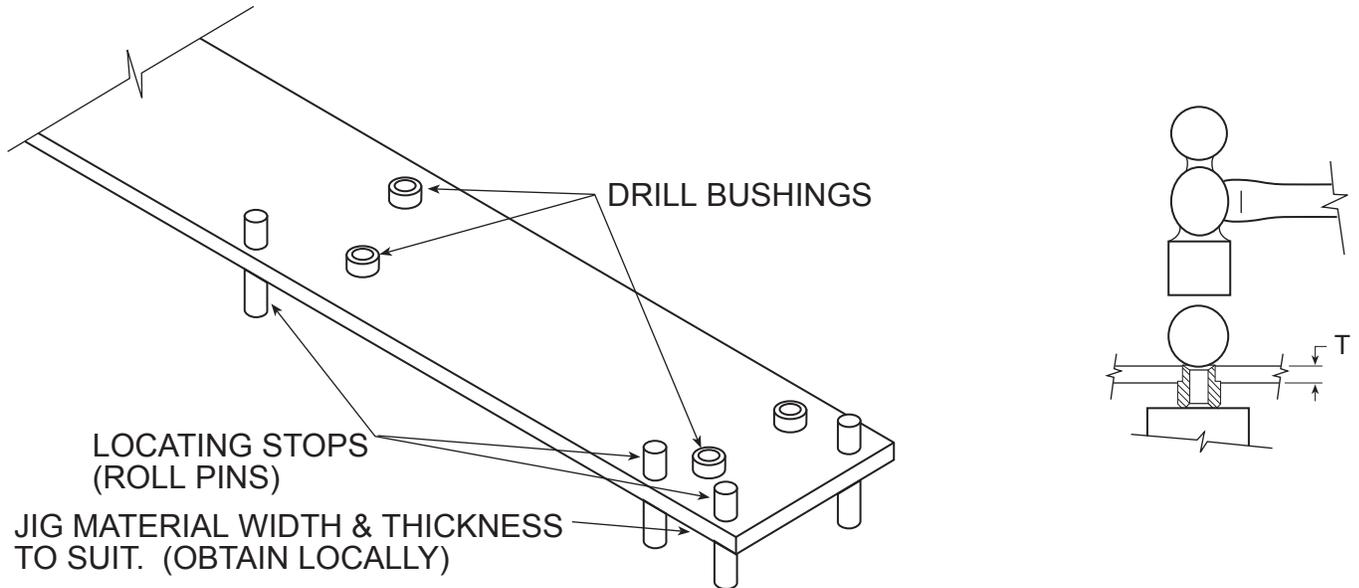
FULL LENGTH OR INDIVIDUAL DRILL JIGS CAN BE FABRICATED IN YOUR OWN SHOP TO YOUR SPECIFICATIONS.

DRILL AND INSTALL STOPS ($3/16$ OR $1/4$ ROLL PINS) WHERE NECESSARY.

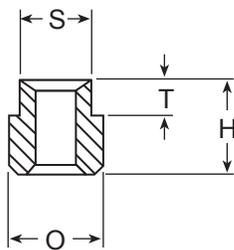
LAY OUT DESIRED HOLE PATTERN AND DRILL THROUGH JIG MATERIAL.

OPEN HOLES TO "S" DIMENSION AND INSERT DRILL BUSHINGS.

INVERT JIG AND FLARE BUSHINGS (SEE DETAIL).



DRILL BUSHINGS



| TYPE | DRILL SIZE | T JIG THICKNESS | | | S SHANK DIA. | O OUTSIDE DIA. | H HEIGHT |
|------|---------------------------|--------------------|------|-----|--------------------|----------------------|------------------|
| | | 1/8 | 3/16 | 1/4 | | | |
| DB 1 | #54 to #35 (1/16 to 7/64) | B | C | D | 1/4 | 3/8 | BC-1/4 D-5/16 |
| DB 2 | #34 to #8 (1/8 to 3/16) | B | C | D | 3/8 | 1/2 | 3/8 |
| DB 3 | #7 to 0 (13/64 to 5/16) | B | C | D | 1/2 | 5/8 | 1/2 |
| DB 4 | P (21/64) to 17/32 | B | C | D | 5/8 | 13/16 | 5/8 |

WHEN ORDERING INDICATE TYPE, DRILL SIZE & JIG THICKNESS "T"
 EXAMPLE DB2 - 29 - D

| RECOMMENDED DRILL SIZE | | |
|------------------------|-----|-----------|
| SCREW SIZE | TAP | CLEARANCE |
| 6 | 36 | 28 |
| 8 | 29 | 19 |
| 10 | 21 | 9 |
| 12 | 16 | 2 |
| 1/4 | 7 | 1/4 |

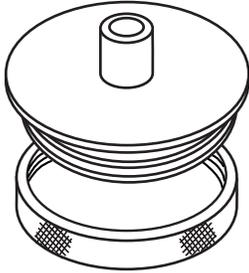
TAP DRILL FOR SELF TAPPING
 OR SHEET METAL SCREW

WE HAVE IN STOCK

- DRILL BUSHINGS
- DRILL BITS FOR INSTALLING BUSHINGS
- HARDENED BALL FOR FLARING BUSHINGS
 OR HAND HELD FLARING TOOL
- DRILL BITS FOR USE IN DRILL BUSHINGS
- ROLL PINS (FOR LOCATING STOPS)
 $3/16 \times 1/2 - 3/4 - 1 - 1 1/4$
 $1/4 \times 1/2 - 3/4 - 1 - 1 1/4$

ROUTER TEMPLATE GUIDE

MUST BE USED WITH R-A-S ROUTER TEMPLATES
 RECOMMENDED SIZE – 1/2" TEMPLATE GUIDE AND 1/4" ROUTER BIT.
 OR 5/8" TEMPLATE GUIDE AND 3/8" ROUTER BIT.



FOR BLACK & DECKER OR
 ROCKWELL-PORTER CABLE ROUTERS:
 1/2" TEMPLATE GUIDE: PART# 955 B BR
 5/8" TEMPLATE GUIDE: PART# 955 D BR
 USE AT LEAST 1/2 H.P.
 RECOMMEND 1/2" TEMPLATE GUIDE AND 1/4" ROUTER BIT

ROUTER BITS

SELF STARTING



| CUTTING DIA. | SHANK DIA. | CUTTING LENGTH | OVERALL LENGTH | 2 FLUTE PART # | 1 FLUTE PART # |
|--------------|------------|----------------|----------------|----------------|----------------|
| 1/8 | 1/4 | 3/8 | 2 1/2 | 958 A | 958 AS |
| 3/16 | 1/4 | 5/8 | 2 5/8 | 958 B | 958 BS |
| 1/4 | 1/4 | 1 | 3 | 958 C | 958 CS |
| 5/16 | 5/16 | 1 | 3 1/4 | 958 D | 958 DS |
| 3/8 | 3/8 | 1 | 3 1/4 | 958 E | 958 ES |

FOOT SWITCH PART# 950 G

EASIEST WAY TO CONTROL
 A ROUTER

