SPECIFICATIONS

Bending strength:	**28-1/2 Tons per square inch (4.42T/cm²)**
Maximum capcities (Steel & iron):	**5/8" Round stock (16mm)**
	1/2"×1/2" Square stock (13×13mm)
	1-3/16"×5/16" Strip stock (30×8mm)
Maximum capcities (Wrought iron):	**15/32" Round stock (12mm)**
	13/32"×13/32" Square stock (10×10mm)
	1-3/16"×1/4" Strip stock (30×6mm)
Maximum capcities (Brass & Copper):	**5/8" Round stock (16mm)**
	15/32"×15/32" Square stock (12×12mm)
	1-3/16"×5/16" Strip stock (30×8mm)
Maximum capcities (Aluminum):	**23/32" Round stock (18mm)**
	19/32"× 19/32" Square stock(15×15mm)
	1-3/16"× 13/32" Strip stock (30×10mm)

SAVE THIS MANUAL

You will need this manual for the safety precaution, operating procedures, parts list, and diagram, Put them in a safe, dry place for future reference.

IMPORTANT SAFETY PRECAUTIONS

READ ALL INSTRUCTIONS **BEFORE** USING THIS TOOL

1. KEEP WORK AREA CLEAN. Cluttered areas invite injuries.

2. CONSIDER WORK AREA CONDITIONS. Don't use tools in damp, wet. or poorly lit locations. Don't expose to rain. Keep work area well lit.

3. KEEP CHILDREN AWAY. All children should be kept away from the work area.

4. STORE IDLE EQUIPMENT. When not in use, tools should be locked up in a dry location to inhibit rust. If possible, store in an area out of reach of children.

5. USE THE RIGHT TOOL. Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool for a purpose for which it was not intended.

6. DRESS PROPERLY. Don't wear loose clothing or jewelry. Non-skid footwear is recommended when working to prevent slipping. Wear protective hair coveing to contain long hair.

7. USE EYE PROTECTION. Wear approved impact goggles at all times when using this tool.

8. SECURE WORK. Use clamps or a vise to hold the work if possible. It's safer than using your bands and it frees both bands to operate the tool.
9. DON'T OVERREACH. Keep proper footing and balance at all times. Don't reach over or across machines that are running.
10. MAINTAIN TOOL WITH CARE. Keep handles dry, clean, and free from oil and grease. Follow instructions for lubricating and changing accessories.
11. CHECK DAMAGED PARTS. Before using any tool. any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting. and other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated eisewhere in the instruction manual.
12. REPLACEMENT PARTS AND ACCESSORIES. When servicing, use only identical replacement parts. Only use accessories intended for use with this tool.
13. DOT OPERAYE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. Read warning labels on prescription to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate machine.
14. NEVER STAND ON TOOL. If tool is tipped over, serious injury or product damage could result.

UNPACKING

Make sure you have all parts and dies inchuded with the bender. Check the parts list at the end of the manual.

OPERATING PROCEDURES

Your tool is capable of many different operation. When forming angles or round shapes , the Die Mounting Plate (4) must be attached to the Spring Forming Mounting Disk (32).
NOTE: The Metal Bender must de mounted to a secure surface before using.

Round Operations (see figure #1 on following page):
1. Make sure the Die Mounting Plate (4) is attached to the body.
2. Make sure the Stop (2) is loose.
3. Move the Vise Assembly (8-9, 12) to the rear position on the arm of the Mounting Plate.

4. Screw the Round Die Mount Shaft (28) into the Mounting Plate.

5. Set the Round Die (29) into the Mounting Shaft.

6. Move the Bending Block Assembly (16,17,22-24) back all of the way. You may have to release the Bending Block Locking Plate (21) by loosening the two Hex Key Blots (20). Don't secure the Locking Plate at this tine.

7. Set stock against the Round Die and close the Vise, so that it clamps the worksecurely against the Die.

8. Move the Bending Block in until is up against the work and it's Face (16) is even with the vise Face (8). Secure the Bending Block by tightening the two Bolts.

9. Move the Bending block to the left wity the Handle (27) until you have achieved your desired angle bend (rememer to account for "spring-back")

10. If you wish to do repeat bends at the same are. righten the Stop at the peint where you finished making your bend and tighten it.

11. When you wish to do complete 360° rings, make sure you clamp just the very end of your workpiece in-between the Dir. Bend your stock all of the way around and cut off excess.

12. To make springs, loosen the Stock (2). and lift stock to be formed slightly as you bend the stock around the Die. When starting and finishing the spring, make a complete 360° ring as stated in #11.

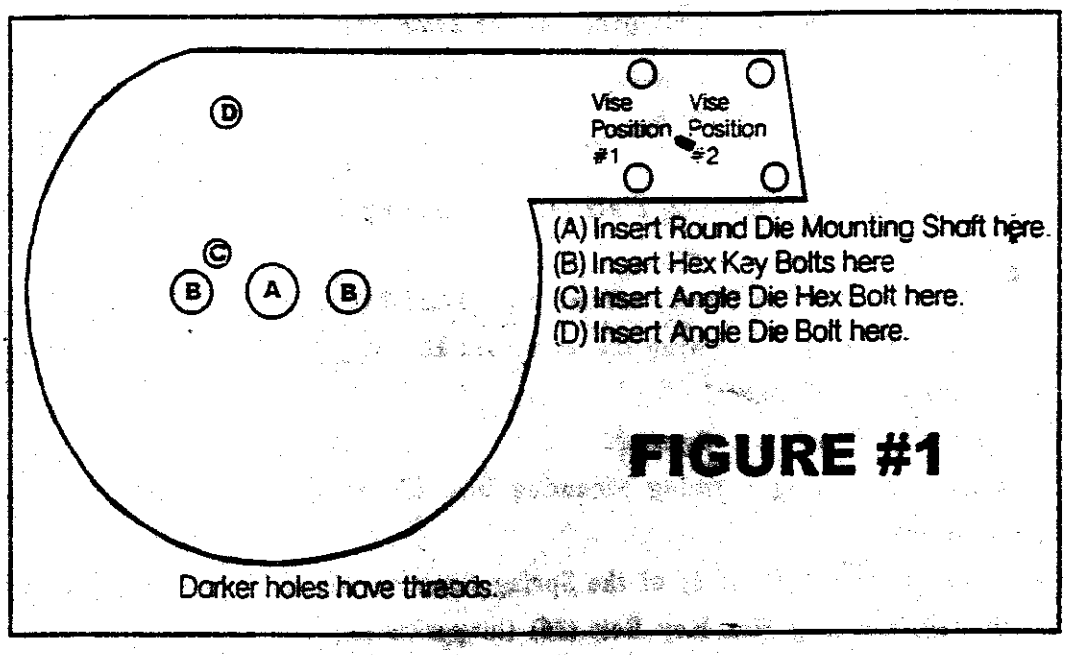


FIGURE #1

Angle Operations (see figure #1 above):

1. Make sure the Die Mounting Plate (4) is attached to the body.
2. Make sure the Stop (2) is loose.
3. Move the Vise Assembly (5-9 , 15) to the forward position on the arm of the Mounting Plate.
4. Place the Angle Die'e (13) Spring Pin (19) into the Mounting Plate's small unthreaded hole.
5. Attach the Angle Die by screwing the Hex Key Bolt (18) into the small threaded hole of the Mounting Plate.
6. Move the Bending Block Assembly (16,17,22-24) back all of the way. You may have to release the Bending Block Locking Plate (21) by loosening the two Hex Key Blots (20). Do not secure the Locking Plate at this time.
7. Set stock against the Angle Die and close the Vise so that it clamps the work securely against the Die.
8. Move the Bending Block until it is up against the work and its Face (16) is even with the Vise Face (8).
9. Move the Bending Bloce to the left with handle (27) until you have achieved your desired angle bend (remember to account for "spring-back").
10. To make repeat bends at 90°, use the Angle Guage Assembly (10-12). Screw the Guage Shaft (10) into the Angle Die. slide the Guage Stop (11) onto the Shaft to the desired position (depending upon the length of your work). This will "stop" your bend at the proper location.
11. If you wish to do repeat bends at the same angle (other than 90°), use the Stop (2).

Spiral Operation:

1. Remove the Die Mounting Plate (4) by removing the two Hex Key Bolts (14). Loosen the Stop (2).
2. Retrat the Bending Block. Assembly (16,17,22-24) all of the way. Remove the Face Plate (16) by unscrewing the associated Hex Key Bolt (17). This will reveal the Bending Block Wheel (22).

For steps 3, 4, & 8, see figure #2

3. Attach the Spring Forming Mounting Disc (32) with the two Hex Key Blots (in positions 1).
4. Place the spring Pin (25) of the Spring Forming Die "A" (31) into hole 3 and attch with the long Hex Key Bolt (26) (in position 2).

For Steps 5&7, see figure #3

5. Insert the stock to be bent into the hole of Die"A".
6. Move the Bending Block Assmbly forward until it comtracts the stock and then tighten it in position.
7. Bend the stock until the portion being formed it about at the Pin (marked with a "P" in the figure).
8. Now put the Spring Pins (25) of Spring Forming Die "B" (30) into holes 4&5.
9. Finish your bend by wrapping completely around the Forming Die.

FIGURE #2

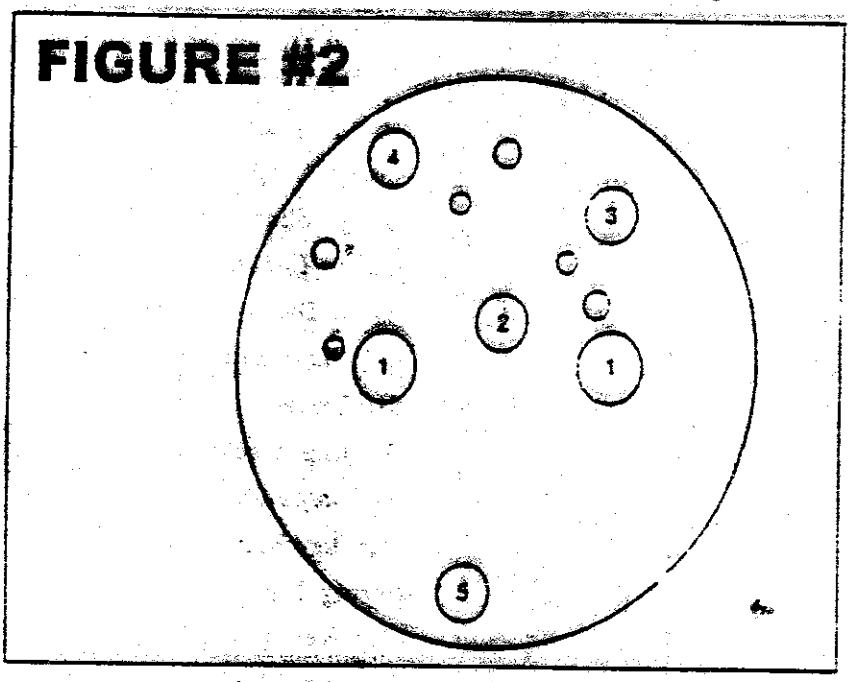
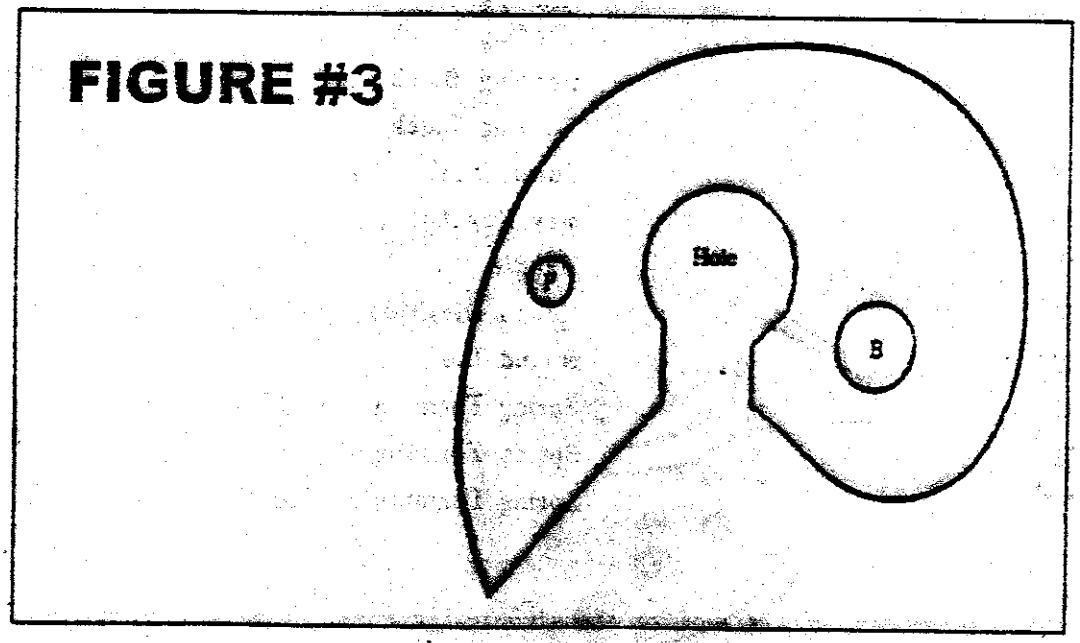
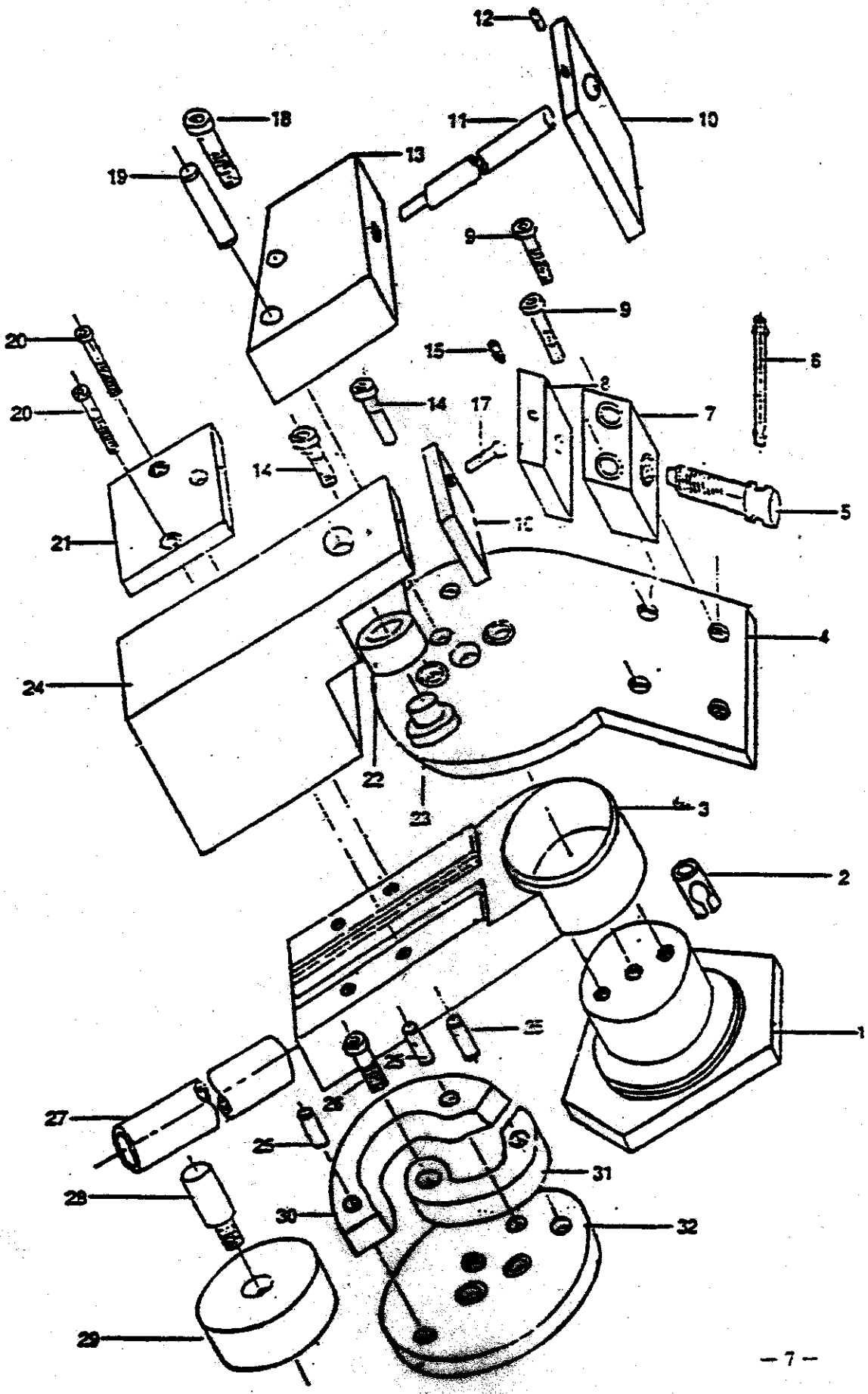


FIGURE #3



PARTS LIST

No.	Qty.	Description
1	1	Base
2	1	Stop
3	1	Body
4	1	Die Mounting Plate
5	1	Vise Drive Screw
6	1	Vise Handle
7	1	Vise Base
8	1	Vise Face
9	2	Hex Key Bolt
10	1	Gauge Stop
11	1	Gauge Shaft
12	1	Gauge Locking Screw
13	1	Angle Die
14	2	Hey Key Bolt
15	1	Set Screw
16	1	Bending block Face Plate
17	1	Hey key Bolt
18	1	Hey key Bolt
19	1	Spring Pin
20	2	Hey Key Bolt
21	1	Bending Block Locking Plate
22	1	Bending Block Wheel
23	1	Bending Block Shaft
24	1	Bending Block
25	3	Spring Pin
26	1	Hey Key bolt
27	1	Handle
28	1	Round Die Mounting Shaft
29	1	Round Die
30	1	Spring Forming Die"B"
31	1	Spring Forming Die"A"
32	1	Spring Forming Die Mounting Disc


12
10
11
18
13
19
9
9
20
15
6
20
14
17
7
14
5
21
16
4
24
22
23
3
2
1
26
27
25
31
29
30
32
28