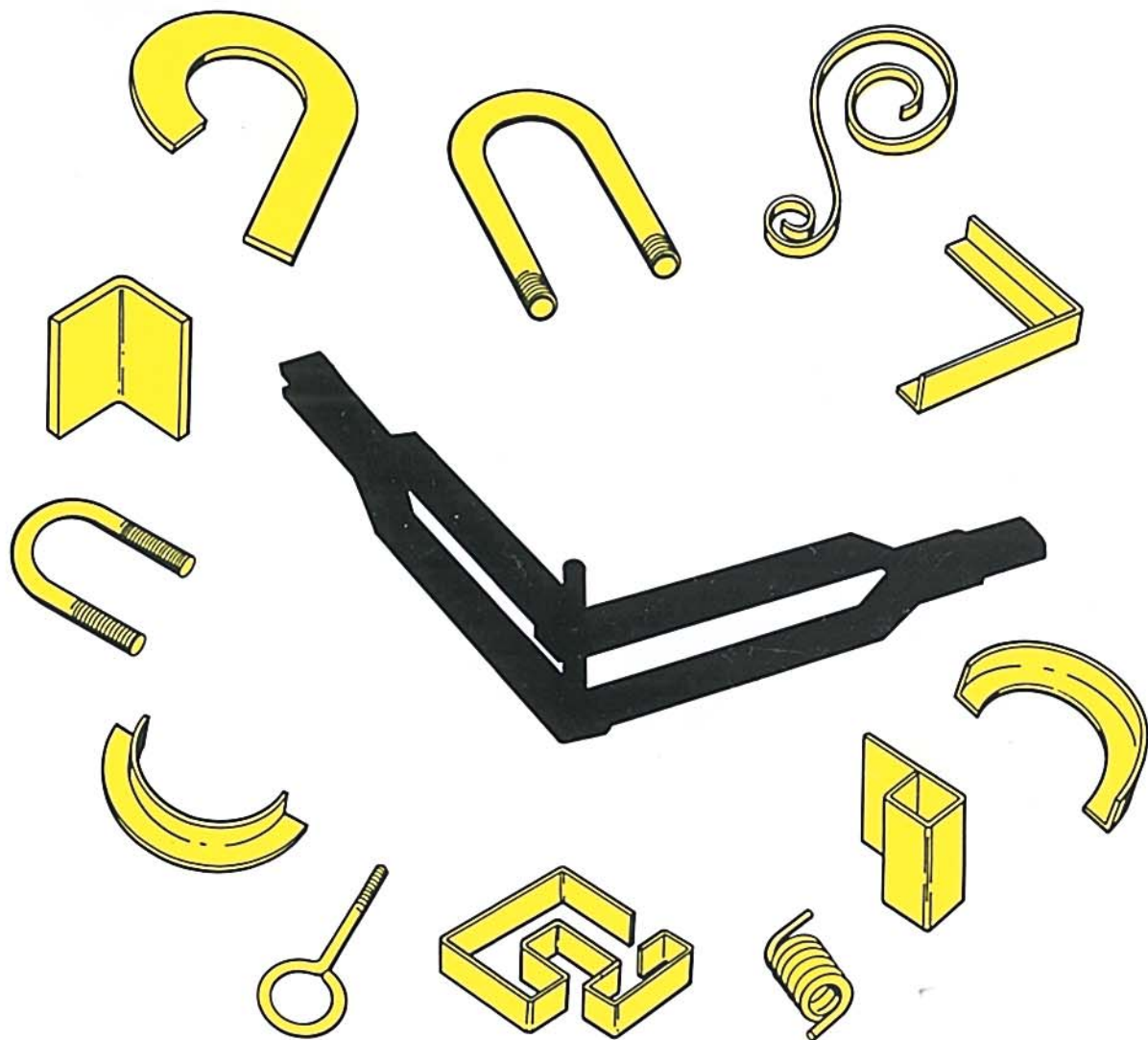




HOSSFELD UNIVERSAL[®] BENDER

BENDS Round, Square, Flat Stock, Pipe, Tube, Conduit, Angle Iron, Shapes. Make set-ups in minutes WITHOUT TOOLS. Ideal for single bends or small quantities.



The **HOSSFELD UNIVERSAL[®]** Bender has been a favorite of Iron Benders since 1925 because it is completely versatile, any set-up can be made quickly and easily without tools, has a wide range of capacity and is a simple, rugged machine that stands years of use.

USERS of the **HOSSFELD UNIVERSAL[®]** Bender include job shops, maintenance departments, ornamental metal shops, welding shops, contractors and many others where its complete versatility and big capacity takes the place of several specialized benders.

SCHOOLS find it an excellent instruction tool because it is so easy to set up and because it demonstrates the basic principles of metal forming.

PRODUCTION BENDING on short runs is also an ideal use because bends are easily and accurately duplicated and the costs for standard

dies that are available for practically all common bends are low.

SPECIAL BENDING PROBLEMS can frequently be solved with special dies recommended by Hossfeld Bending technicians.

TWO MODELS of the **HOSSFELD UNIVERSAL[®]** Bender are available: the No. 2, which is illustrated on the following pages, and the small #1, which has less capacity. Set ups for both are much the same. Capacities for the No. 2 are stated in the folder, and on the #100 parts list. Those for the small #1 are stated only on the #50 parts list.

HYDRAULIC POWER is available in a unit that can be attached to any Model No. 2.

HYDRAULIC POWER is recommended on heavy material. 1-1/4" thru 2" OD and 1" thru 2" schedule 40 pipe.

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HOSSFELD UNIVERSAL[®]
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of **HOSSFELD MFG. CO.**

HOSSFELD MANUFACTURING CO.
460 W. THIRD ST., WINONA, MINN., U. S. A. 55987
OFFICE: (507) 452-2182 FAX: (507) 454-1194



SIZE No. 2 "WRENCHLESS TYPE" with Standard Equipment

Bending Pipe and Conduit

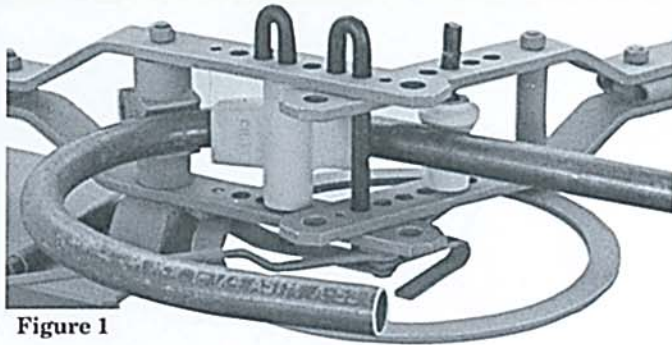


Figure 1

Bends Cold, all sizes of standard pipe and conduit up to 2" inside diameter. Makes a smooth even bend without flattening the pipe or splitting the seam. Bends to any degree or to a continuous coil as desired. Bends to a 10" radius on the 2" size, down to a 2" radius on the 1/4" size. Illustration shows a 1-1/4" standard pipe being bent to a return bend on a 8" radius.

Bending Eye Bolts, "S" Shapes, Etc.

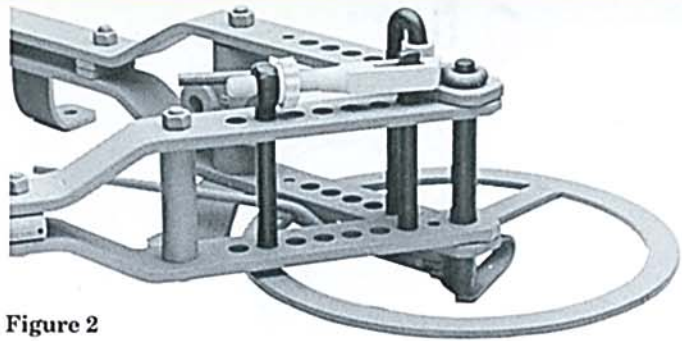


Figure 2

Eye Bolt Bending Feature forms neat smooth Eye Bolts, "S" shapes, "U" shapes, etc., of round or square stock up to 5/8", cold. By using a wider Bending Dog and longer Forming Pin, flat stock up to 1-1/2" in width can be handled. With standard equipment, Eyes and "U"s can be bent with 1/2", 5/8", 3/4", 7/8" and 1" inside openings. Special bushings for bending larger than 1" eyes are available. Eyes 1-1/2" or 2" I.D. can be bent easily on 3/4" stock.

Bending Angles, Offsets, Etc., of Heavy Cold Stock

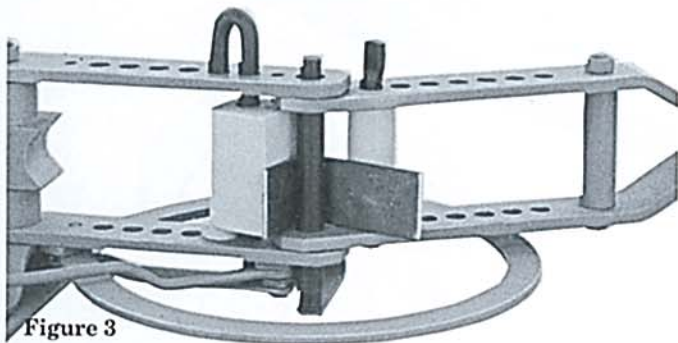


Figure 3

Bends Angles, Irregular Shapes, Offsets, etc. of round or square stock up to 1-1/4", or of flat stock up to 4-1/2" x 1/2". Gauges are provided for accurately locating the point of the bend and for gauging the degree of the angle desired. Illustration shows a piece of 2-1/2" x 3/8" stock being bent to a right angle.

Bending Heavy Cold "U" Shapes

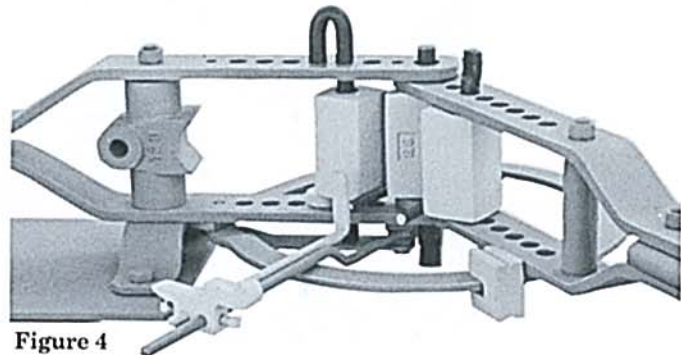


Figure 4

Bends "U" Shapes of 1-1/4" round or square stock, or of 4-1/2" flat stock, cold. Self locking Cam Shaped Dies for bending "U"s of 1-3/4", 2" and 2-1/4" inside spread are furnished with General Purpose Dies. These Dies can be built up to any larger size desired by simply bending a piece of flat stock around them. Illustration shows a "U" bolt being bent.

Bending Sharp Square Bends on Wide Flat Stock

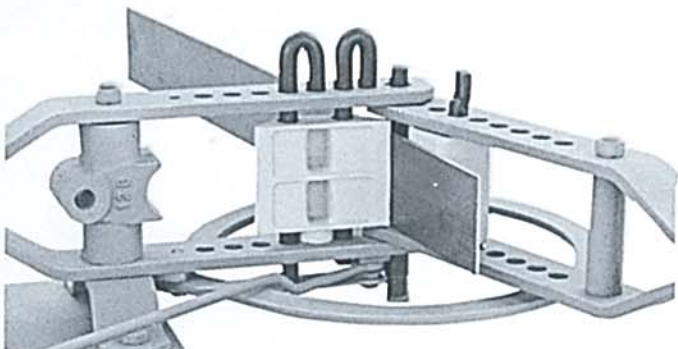


Figure 5

Bends Sharp Bends to a right angle or less on 4-1/2" x 1/4" flat stock, cold. This feature of the bender is used where a real sharp corner bend is required. It can be used for making sharp offsets, stake pockets, sharp cornered "U" clips, etc. Illustration shows a piece of flat stock inserted ready for bending.

Bending Rings and Coils

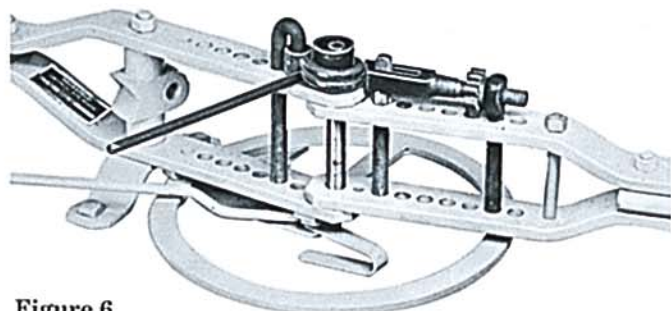


Figure 6

Rings and continuous Coils of any desired diameter can be formed as shown in the illustration. The Forming ring may be a short piece of pipe of the right diameter or a 20B1 Bushing can be purchased from our Parts Catalog. The stock is fed along a distance of 1" or 2" after each pull of the hand lever.

Over 150 Standard Dies For All Common Bends Available From Stock

Bends Pipe, Tube, Conduit, Bar, Flat, Angle Iron, Many Shapes

Bending Sharp Bends or "U" Bolts, Etc.

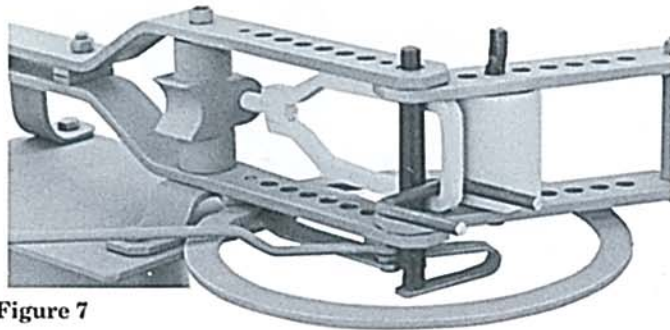


Figure 7

Sharp Cornered "U" Bolts are bent on the same feature of the bender as shown for bending ornamental iron. This feature is also used for bending short close hooks on the ends of rods. It will bend a hook with sharp inside corners and having an inside spread of as close as 5/8". It has a capacity of 5/8" round or square stock or 3" x 1/4" flat stock, cold. Illustration shows a sharp square bend.

Bending Ornamental Iron Work

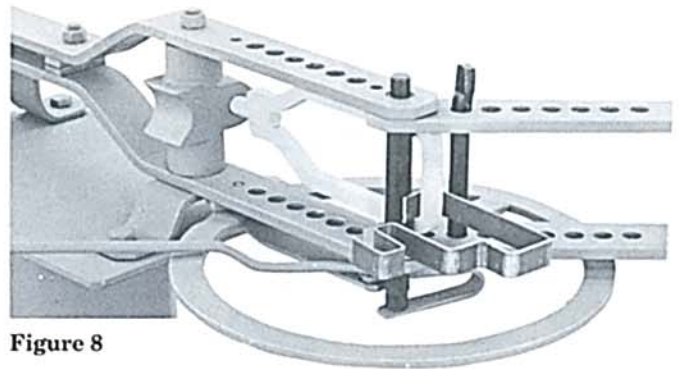


Figure 8

This feature of the bender is used in making Ornamental Iron Shapes and various other intricate bends. Bends a sharp corner and will handle work as small as the making of a staple or a small nail. This feature has a capacity of 3" x 1/4" flat stock or 5/8" round stock, cold. Illustration shows an ornamental iron shape being formed.

Bending Angle Iron with Flange Inward

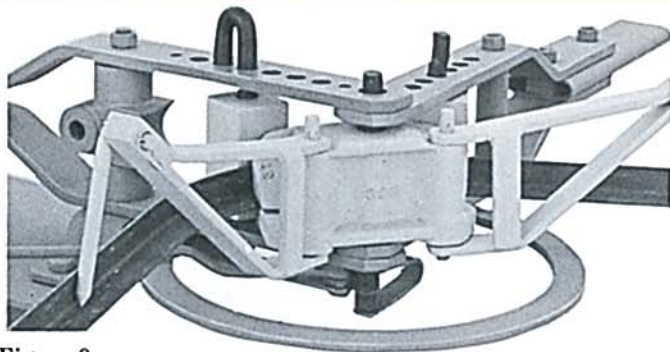


Figure 9

Attachments for bending Angle Iron with either the Flange Inward or Flange Outward consist of a Master Die with which forming blocks of various radii can be used. These blocks work on a wedge principle so that when the bending pressure is applied, the horizontal flange of the stock is held in a vise-like grip. This helps prevent crimping or twisting.

Bending Angle Iron with Flange Outward

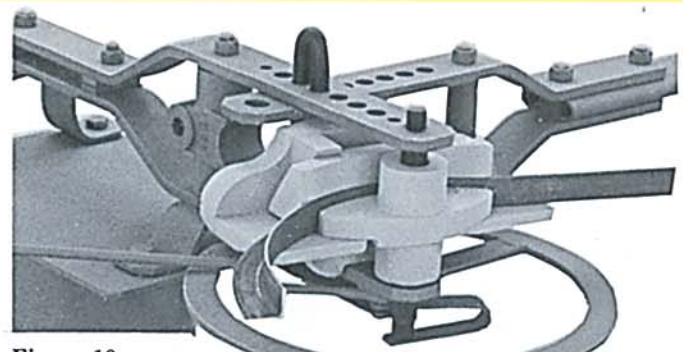


Figure 10

Forming Blocks for bending radii of 5, 6, 7, 9, 12, 15, 18, 24, 30, 36 inches are furnished with Inbend and Outbend Attachments. Blocks for any radius up to 10 ft. (minimum; Inbend 4", Outbend 3") can be furnished if desired. Both Inbend and Outbend Attachments have a capacity of 2" x 2" x 3/16" stock, cold, or 2" x 2" x 3/8" stock, hot.

Bending Flat Stock Edgeways

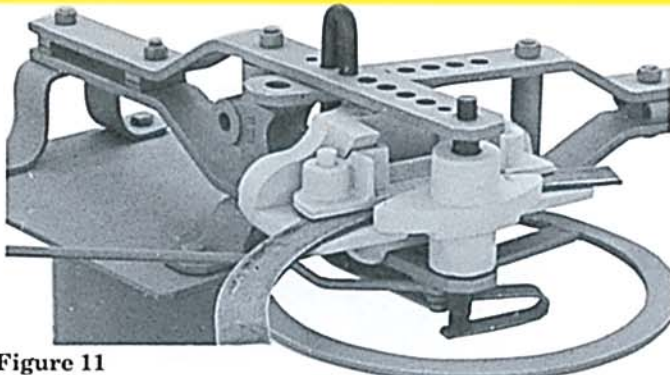


Figure 11

Bend Edgeways with Edgebend Die used with outbend master die, wrist pin and inner radius block. Size of inner radius block determines radius of bend. Capacity 3/8" x 1-3/4" cold. Bends flat edgeways from 4" inside radius and up to any degree including 360° circles. Same set up used for bending hand rail capping edgeways.

Bending Notched Angle Iron

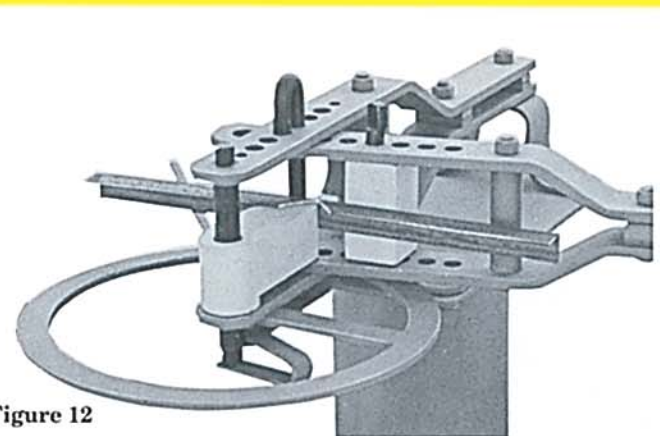


Figure 12

This feature of the bender is used for bending sharp bends on angle iron after the point of bend has been notched. This feature has a capacity of 2-1/2" x 2-1/2" x 5/16" angle iron stock, cold. This special Die will also form sharp "V" bends on flat stock.

Special Dies for Problem Bends Designed and Built at Low Cost



HOSSFELD UNIVERSAL® BENDER No. 2 "Wrenchless Type"

Bending Larger Diameter Rings or Eyes.

Bending Round or Square Eyes on Flat Stock

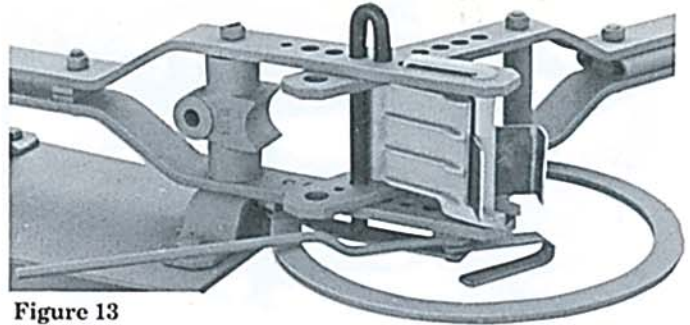
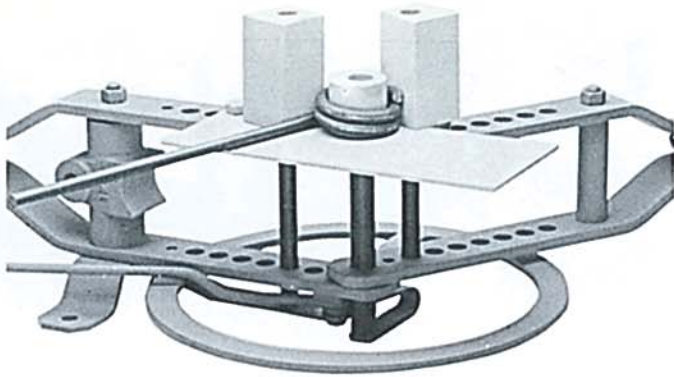


Figure 12-1

2-1/2" and Larger Eyes or Rings may be made using the 20B1 Cast Cam mounted over the 53B2 center pin.

Figure 13

The Bulldozer Die illustrated above is designed for making round or square bends on stock up to 3/16" thick and 4-1/2" wide. The advantage of this die for sharp square bends, is that the stock can be easily removed from the machine by pulling a pin; thus round or square eyes can be made. Also, the die is ideal for making intricate bends on wire up to 1/4" diameter.

Equalizer Type Pipe and O.D. Tube Dies

90° Bends on Rigid Conduit, Standard Size Pipe

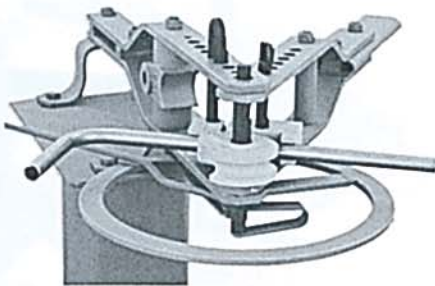


Figure 14

For Cold Bending 16 ga. thru 10 ga. O.D. tubing and sch. 40 pipe up to 180° without the use of mandrel or filler. Tube sizes available 3/8" thru 2". Pipe sizes 1/4" thru 2".

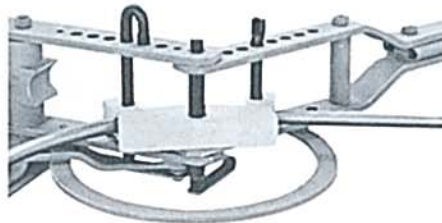


Figure 14-1

Large Radius Bends or Coils on 3/8" thru 2" O.D. tube and 1/4" thru 2" sch. 40

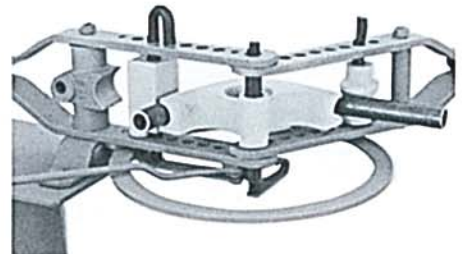


Figure 15

This "Rigid Conduit" bending die is used mainly by electricians for quantity production of 90° ells. The capacity on this type of die is 1/2" thru 1-1/2" sch. 40 pipe.

Bending Reinforcing Bar

Bending Scrolls

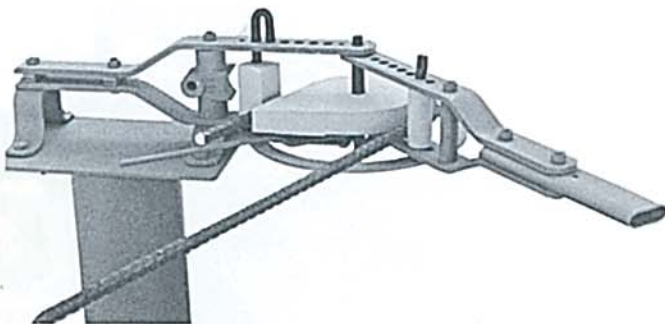


Figure 16

Specially Designed Dies for re-bar sizes through 1" Grade 40 make it easy to bend fill-in mat and saddles as needed on the job. Mounts on bench or rugged steel pedestal available.

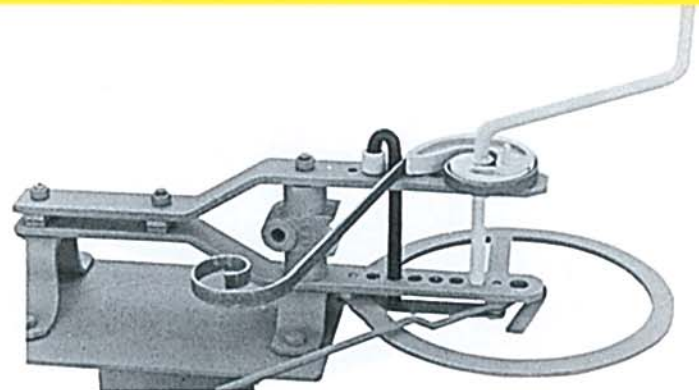


Figure 17

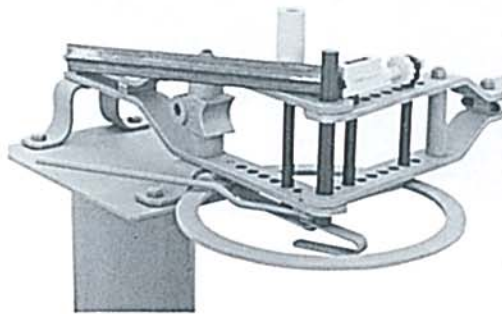
Scroll Bending Dies form uniform single turn scrolls 2-1/2", 4" and 5" diameter and one-and-one half turn scrolls 6-1/2" and 8" diameter. Hand operated, forms complete scrolls in seconds. Capacity 3/16" x 3/4".

HOSSFELD "Single Purpose" Benders are available at Low Cost

Dies and Attachment for Special Purpose Operations

Bending Handrail Capping

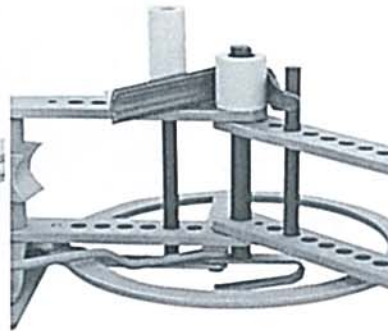
Figure 18



BENDING LAMBS TONGUE

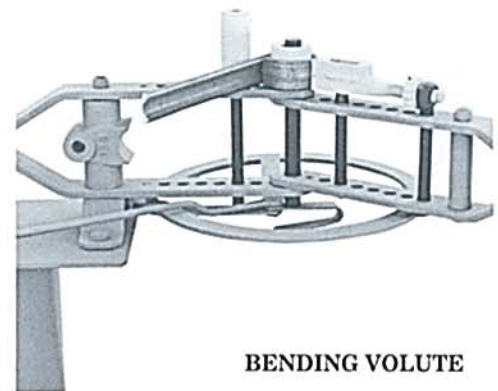
For Cold Bending Handrail Capping up to 1/2" x 1-3/4" size into Lambs Tongues, Volutes and Edgebends. Edge Bending done with

Figure 19



COMPLETING LAMBS TONGUE

Figure 20



BENDING VOLUTE

dies shown in Figure 11, (Bending Flat Stock Edgeways). Extra spacer blocks available for different thicknesses and widths of stock.

Bending Electro Metallic Tube (EMT), 1/2" to 2" sizes

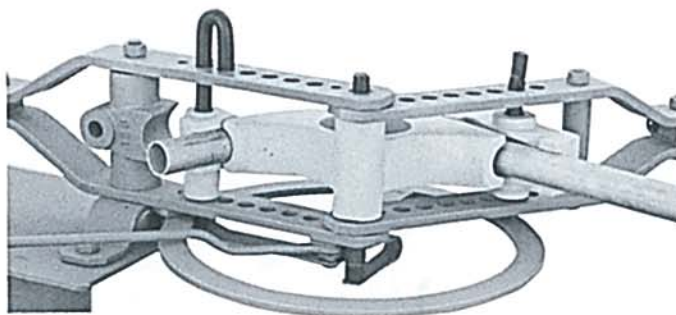


Figure 21

Bends 1/2" to 1-1/4" sizes EMT on 90° Single Pull Dies. Makes full round, smooth bends without wrinkling because tube is entirely supported from the outside. NO MANDRELS or FILLERS are needed.

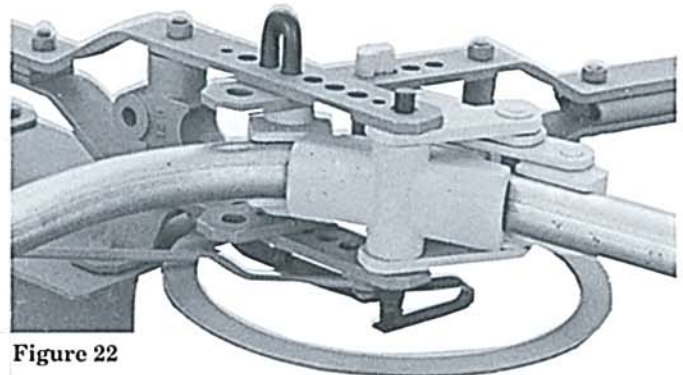


Figure 22

Bends 1-1/2" to 2" sizes on Feed-Along Type Dies. Use of compound leverage principle makes it easy to bend large EMT. Standard radius die for each size furnished. Ideal for making 90° bends, 180° return bends and offsets.

Square Tube Bends using the Back Block or No. 11B and Holding Pin

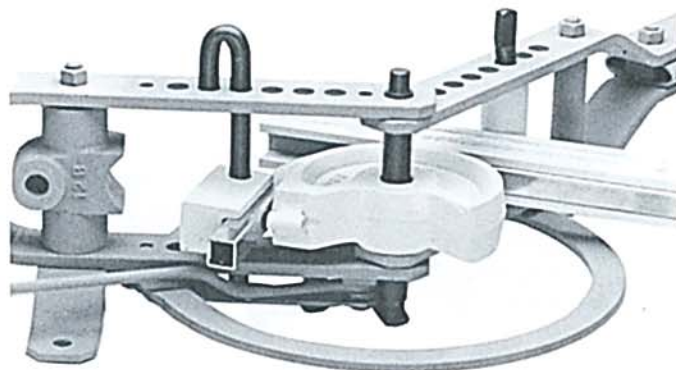


Figure 23

Smooth Bends on Square Tubing are easy to make on the No.2 HOSSFELD UNIVERSAL® Bender. Die sets for bending

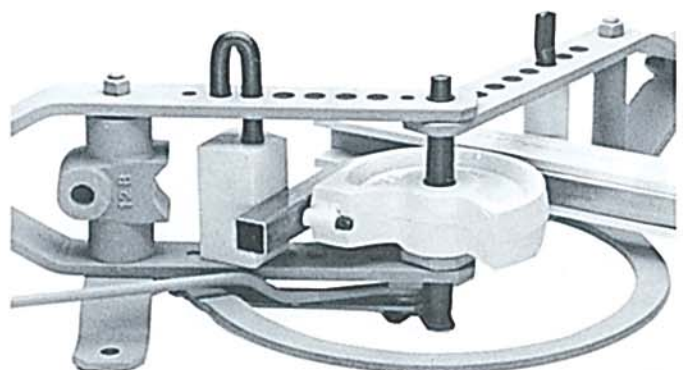


Figure 23-1

1/2", 3/4", 7/8" and 1" square tubing, 16 gauge through 10 gauge wall, to 3", 4", 5" or 6" inside radius are available.

Over 150 Standard Dies For All Common Bends Available From Stock

Larger Radius Bends on Square Tubing

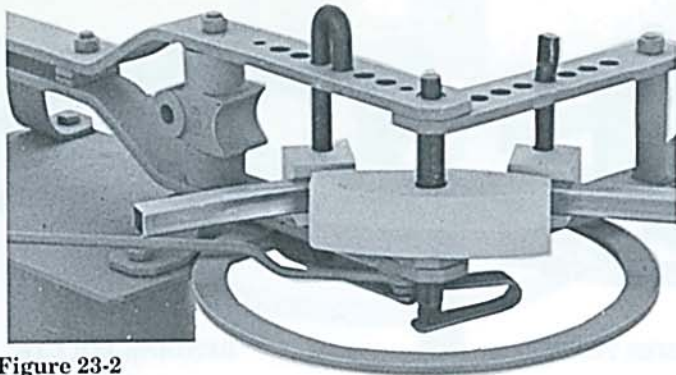


Figure 23-2

Larger Radius Bends from 8" inside radius and up on Square Tube up to 1-1/2" size.

Bending Rectangular Tube

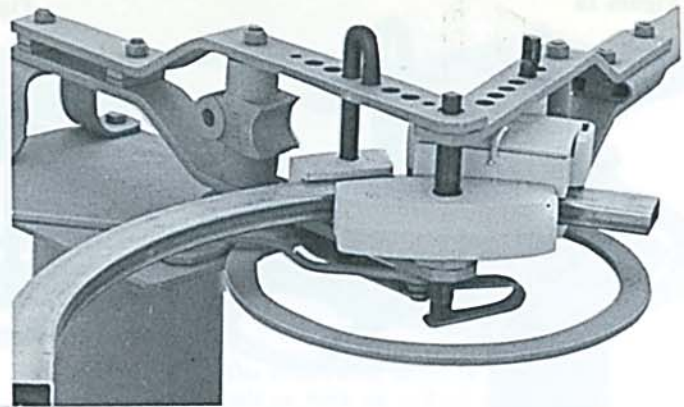


Figure 23-3

Feed-Along Type tooling for edgending Rectangular Tube, 3/4" x 1-1/2", 1" x 1-1/2" and 1" x 2" to 10" Minimum Inside Radius.

Edgending Hand Rail Capping

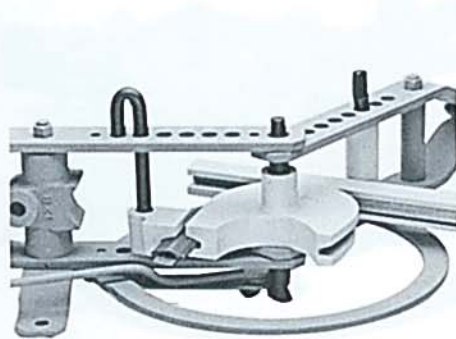


Figure 24

4" Centerline Radius can be done without twisting or distortion.

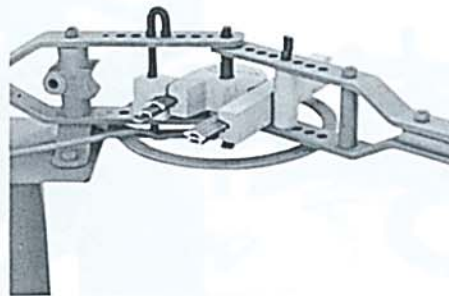


Figure 24-1

Edgending Handrail Cap and 1" x 1/2" x 1/8" Channel Combined. Hydraulic attachment and "L" Type Swinging Frame not shown, but is recommended.

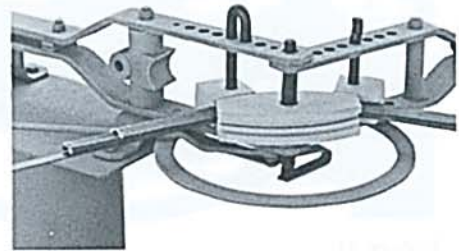


Figure 24-2

Bending two and three piece Molded Handrail Assembly to larger radius, 10" and up.

Bending Angle Iron Heel Inward

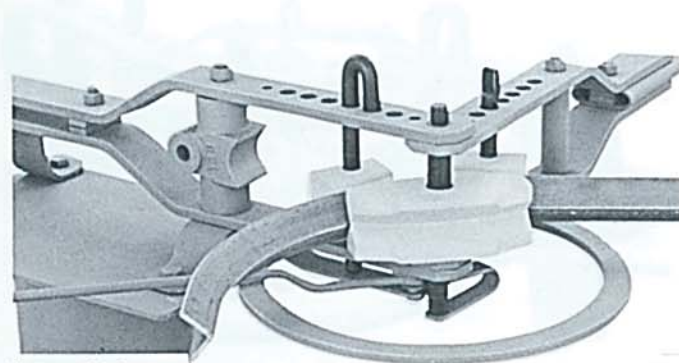


Figure 24-3

Bend Angle Iron 1/2" x 1/2" x 1/8" Through 1-1/2" x 1-1/2" x 3/16" Heel Inward to 10" or larger radius.

Bending Angle Iron Heel Outward

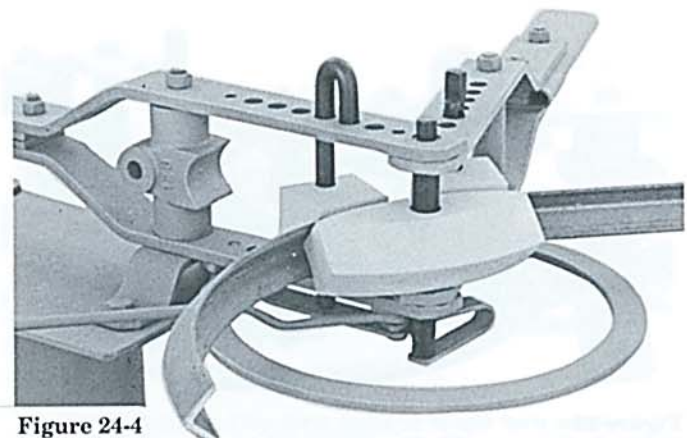


Figure 24-4

Bend Angle Iron 1/2" x 1/2" x 1/8" through 1-1/2" x 1-1/2" x 3/16" to 10" Heel Outward to 14" or larger radius.

Shear Attachment

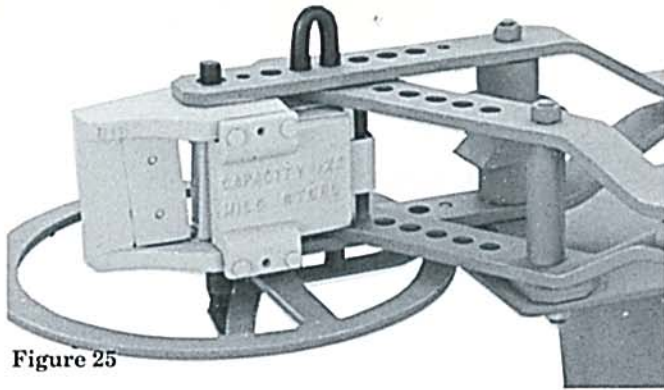


Figure 25

As illustrated above, Shearing is now possible up to 3/8" x 2" flat bar stock, and up to 1/2" round or square bar stock -HOT ROLL MILD STEEL (HRMS) or equivalent. The Standard No. 61B Shear Attachment Complete, comes with set of No. 61B1 Blades, and No. 53B Wrist Pin.

Punch Attachment

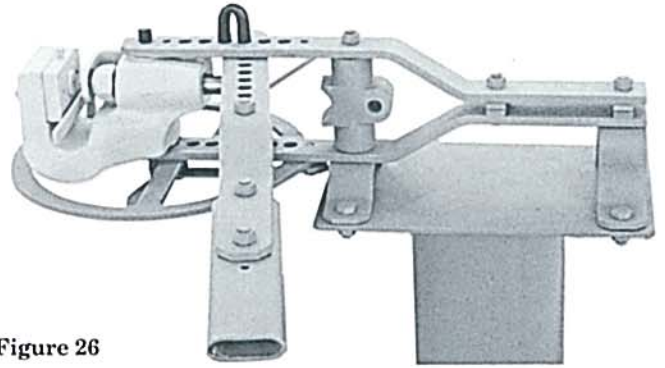


Figure 26

As illustrated above, Punching is possible up to 3/8" diameter hole in 3/8" HOT ROLL MILD STEEL or equivalent. The standard No. 62B Punch Attachment comes with No. 53B Wrist Pin and Coupling Nut. No. 62B1 Round or Square Punch and Die Sets are available in Sizes 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", and 9/16".

One Pull Inbend Angle Iron Bending

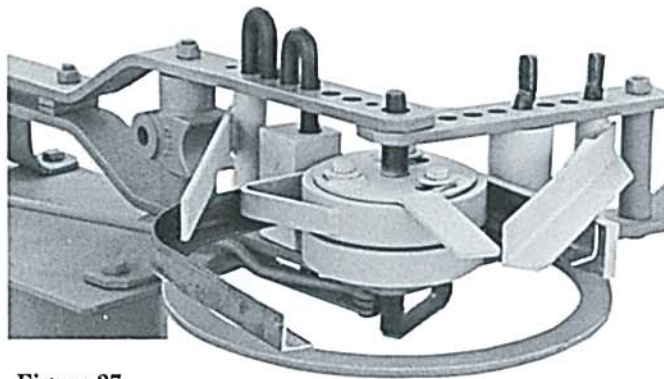


Figure 27

No. 102B one pull type die set for bending 3/4" x 3/4" x 1/8", through 1-1/4" x 1-1/4" x 1/8" angle iron flange inward without wrinkling. 2-3/4", 3" and 3-3/8" radius are available.

Flat Eye Attachment

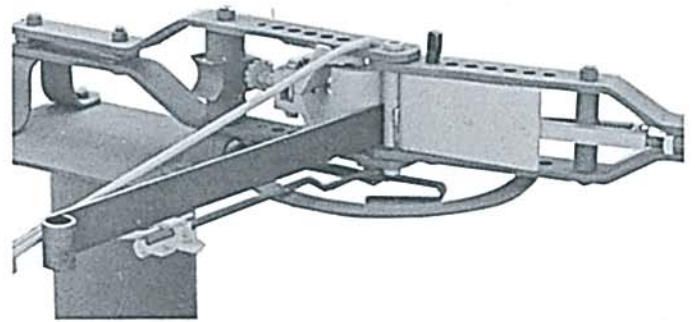


Figure 28

Attachment for bending eyes on Trailer or Truck Springs as well as other flat stock for heavy hinges, etc. Capacity for Hot Bending, 4-1/2" x 3/8" Spring steel or it's equivalent.

Bending Square Tubing on Section Diagonal 180° or Feed Along

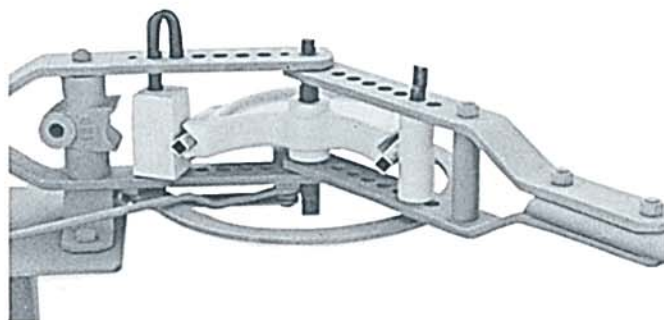


Figure 28-1

Bend Square Tube, 1/2" through 1" on Section Diagonal, 180 degrees. Radius depends on wall thickness and tube size.

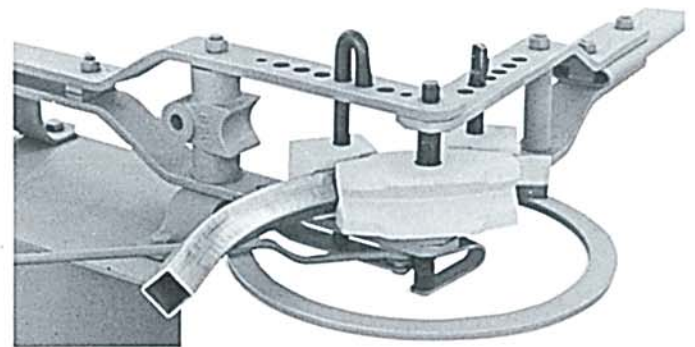


Figure 28-2

Bend Square Tube, 1/2" through 1-1/4" on Section Diagonal on 10" or larger radius Feed-Along Type.



Hydraulic Attachment for No. 2 HOSSFELD Bender

**EASY TO INSTALL – SIMPLE TO OPERATE
– RUGGEDLY CONSTRUCTED –
ECONOMICAL TO USE – VERSATILE**

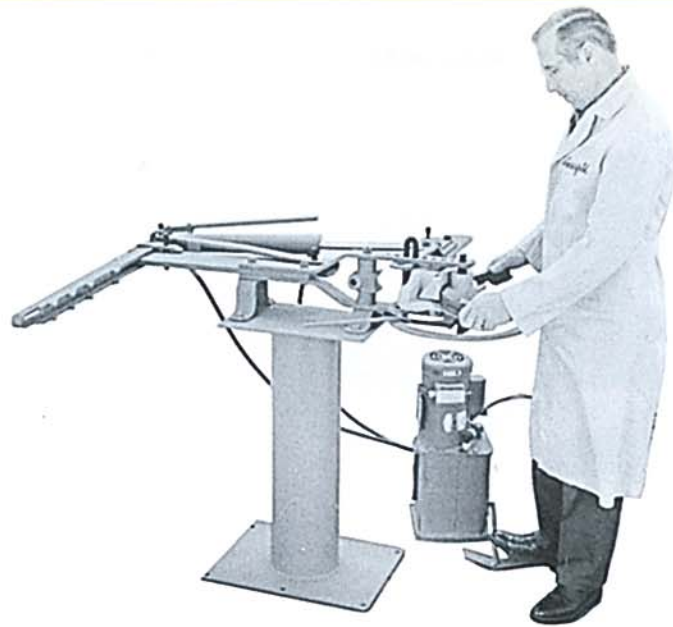
Production bending in short runs and hard to pull bends on heavy material are accomplished easily with Hydraulic power provided by the Hydraulic Attachment for the No. 2 HOSSFELD UNIVERSAL® Bender.

Simple, positive foot control of the hydraulic power leaves both hands free to control stock. Double acting cylinder returns swinging frame while operator resets stock for feed along bending. Operator can gauge degree of bend better and complete bends faster, with less work, than by manual bending.

For bending 90° up to 180° on wrap around type dies a special "L" type swinging frame is available (see Fig. 30 illustration).

The Hydraulic Attachment can be used with any Model No. 2 HOSSFELD UNIVERSAL® Bender. Installation can be made quickly and easily with only 4 bolts (included) by following simple, illustrated instructions furnished. Changing from power to manual operation requires only disconnecting, or connecting, the hydraulic ram by pulling, or inserting one pin.

Typical bends are illustrated below. With the exception of the bending of eye bolts, figures 2 and 6, all the bends illustrated in this folder can be made on the hydraulic powered unit.



Bending 1-1/2" and 2" Standard Pipe

180° Bending with special "L" Frame

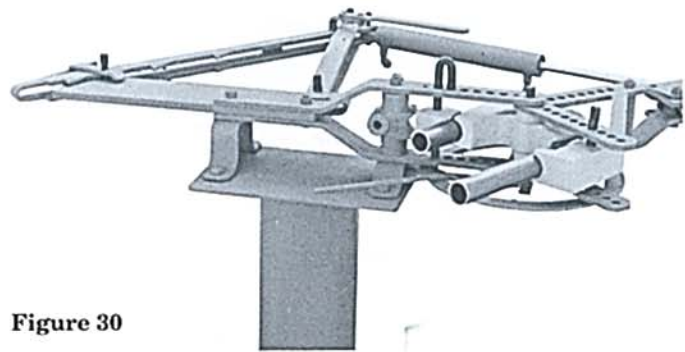
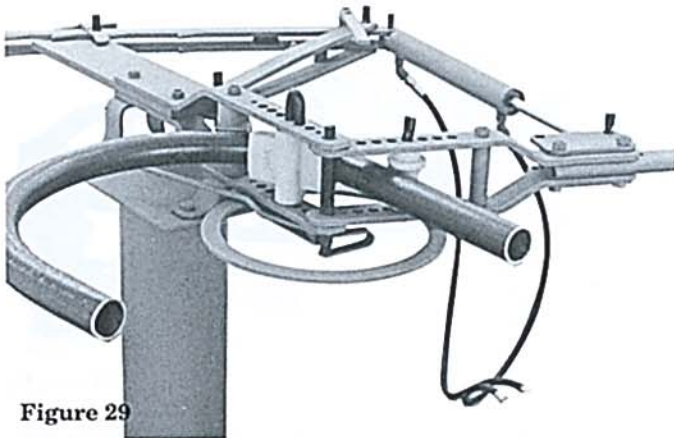


Figure 29

Figure 30

Feed-Along type dies permit any degree of bend, offsets, coils.

Bend pipe, tube or solid stock on wrap around dies.

Single stroke 90° bend on pipe, rigid conduit

Forming sharp square bends on wide flat stock

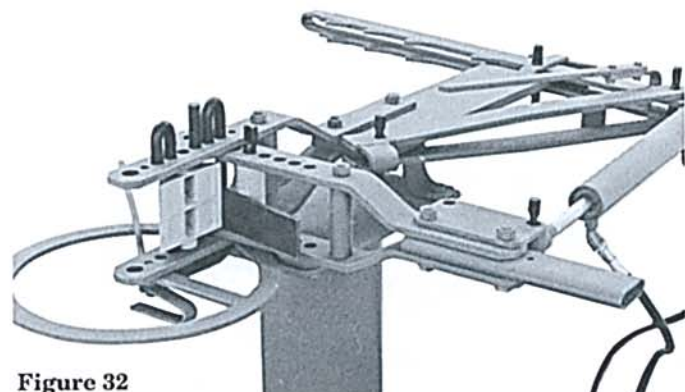
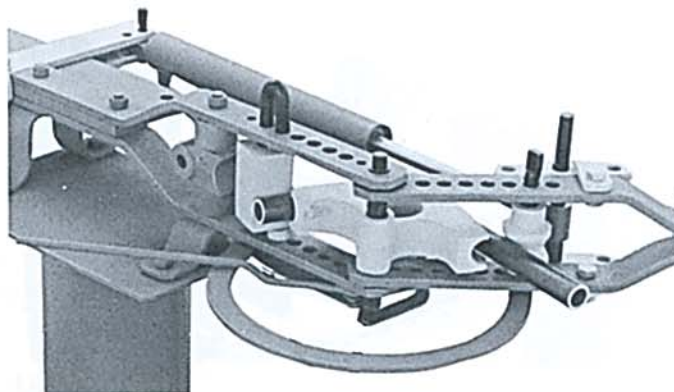


Figure 31

Figure 32

No Mandrels or Fillers required to make smooth bends.

Cold Bend up to 1/4" x 4-1/2" Hot Rolled Mild Steel or equivalent.

HOSSFELD Bending Experts can help solve your unusual bending problems