



Standard **HAND BENDING BRAKES**

INSTRUCTIONS AND PARTS LIST



WHEN ORDERING REPLACEMENT PARTS BE SURE TO GIVE THE FOLLOWING

MODEL NO.

SERIAL NO.

- Model and Serial Numbers
- Quantity of Part Required
- Part Number and Name
- Whether for Right or Left Hand Side Facing Machine

A Tradition of Quality and Value since 1899

DREIS & KRUMP MANUFACTURING CO.

7400 SOUTH LOOMIS BOULEVARD

CHICAGO 36, ILLINOIS

GENERAL INSTRUCTIONS

BENDING EDGE ALIGNMENT

When Bending Leaf is in down position, edge of Leaf should be $\frac{1}{64}$ " below Bed edge at the ends and $\frac{1}{32}$ " below Bed edge at the center. To maintain this alignment:

1. Adjust Leaf center with Bolt (2).
2. Adjust Bed center with Bolt (7).
3. Adjust Leaf ends with Screws (H).

ADJUSTING FOR METAL THICKNESS

Clearance for bends is obtained by moving Top Leaf back at bending edge. If material to be bent is within four gauges of capacity, move Top Leaf back twice thickness of the material. With lighter material, move Top Leaf proportionately forward if sharper bends are desired:

1. Loosen Screws (O).
2. Adjust Top Leaf with Screws (M) and (P).
3. Lock adjustment with Screws (O).

Clamping pressure is changed by adjusting Link Blocks (EE):

1. Loosen Screws (BB) which hold Link Adjustment Blocks (EE).
2. Adjust Blocks with Screws (FF).
3. Lock adjustment with Screws (BB).

CAPACITY

The bending capacity of the brake is determined by the bending edge thickness of the various Bending Leaf Bars (S, SS, U, U5 and U6) when used in the standard position:

1. (S, SS) Angle Bars allow the full rated 1" minimum flange on capacity material.
2. (U6) $\frac{1}{2}$ " Bars with the (SS) Angle Bars in the reinforcing, low position, reduce capacity of brake four gauges.
3. (U5) $\frac{1}{4}$ " Bars with the (SS) Angle Bars in the reinforcing, low position, reduce capacity of brake seven gauges. These Bars are used only to make narrow offset bends.
4. (U) $\frac{1}{4}$ " Bars without the (S) Angle Bars reduce capacity of brake seven gauges. These bars are used without Angle Bars only to make narrow offset bends.

NARROW OFFSET BENDS

Attach (SS) Angle Bars in reinforcing, low position as provided by holes (14A) in Bending Leaf and use (U5) or (U6) Bending Leaf Bars in standard position.

If brake is style that uses (S) and (U) Bars, simply remove the (S) Angle Bars.

DUPLICATE BENDS

Adjustable Stop (Q) may be positioned at any point on Stop Gauge Rod (GG) to limit degree of bend.

LUBRICATION

Oil occasionally at points (C), (L) and (20) with SAE-30 oil (Government Specification, Mil-0-2104).

COUNTERBALANCE

Balance Weights (R) can be raised or lowered to properly counterbalance Bending Leaf.

CAUTIONS

Bend short pieces of material in center of brake to equalize the strain.

Never bend against seams unless Links (DD) are adjusted to clamp the full multiple thickness of seam, and, Top Leaf is set back for clearance of the same full multiple thickness.

Always have (SS) Angle Bars in the reinforcing, low position when using (U5) and (U6) Bars to make narrow offset bends.

When forming sections of wide girth such as cornices, equalize the buckles in the sheet:

1. Start bend near the center of sheet, or,
2. Make a kink in the opposite end of sheet from the bend first made.

Sheets are not always perfectly flat and a buckle left in one end while the other is straightened by clamping in the brake, will throw the first bend out of line when it, in turn, is straightened.

CREEPING TOP LEAF ADJUSTMENT

Should Top Leaf creep forward when clamping material:

1. Check that brake sets level on floor.
2. Check tightness of Screws (O) and (P).
3. If still creeping, wedge up rear leg at point (8) under end that creeps until stopped. Replace wedge with permanent block of correct height.

OVERBENDING ADJUSTMENT

If sheet bends over further on one side than on the other, set Top Leaf back on end where sheet is overbending:

1. Loosen Screws (O).
2. Adjust Top Leaf with Screws (M) and (P).
3. Lock the adjustment with Screws (O).

BOWED BENDING LEAF ADJUSTMENT

If Leaf becomes bowed in center after use, tighten both Bolts (10) until center is brought into straight line.

FORMERS (Not Standard Equipment)

These moulds or Formers (V) can be obtained in half-round sizes: $\frac{3}{8}$ ", 1", $1\frac{1}{8}$ ", $2\frac{1}{4}$ " and 3".

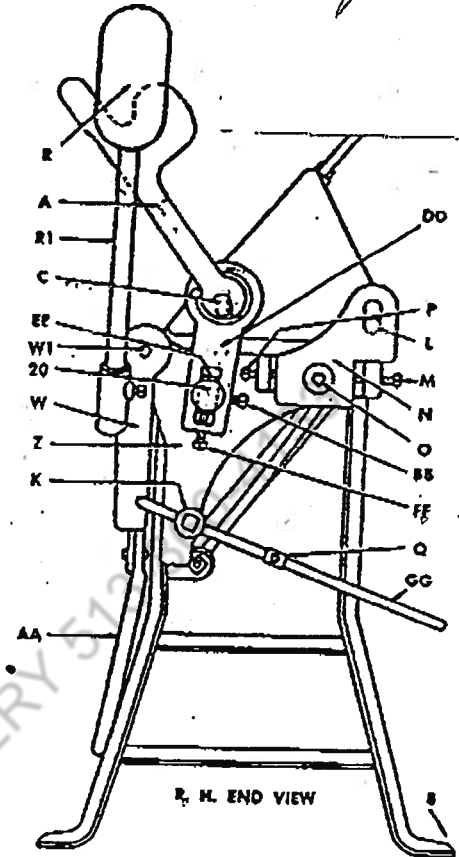
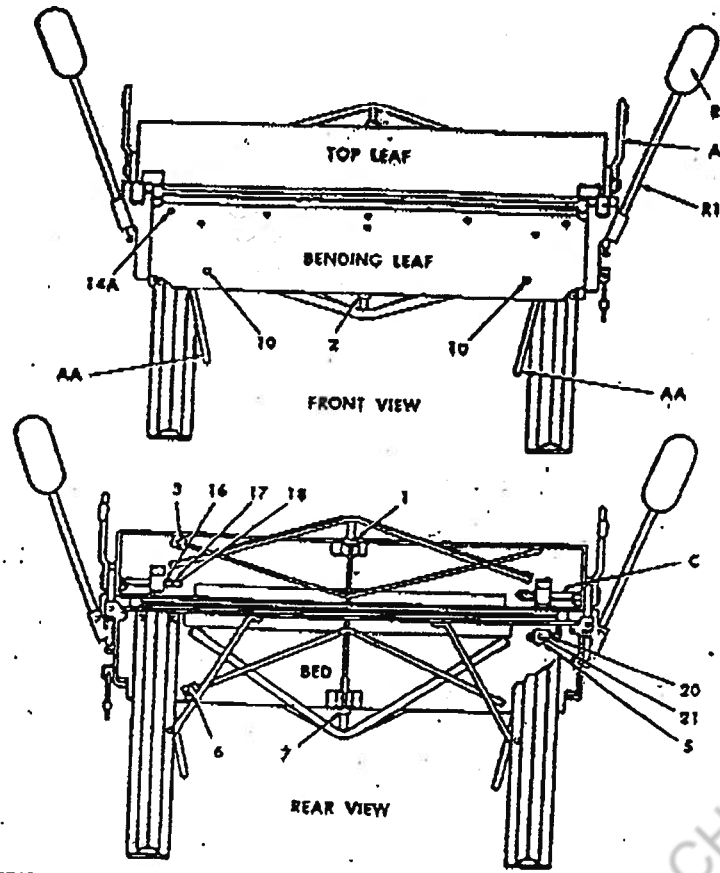
Attach to brake by means of Clamps (Y):

1. Place $\frac{1}{2}$ " clearance side of Formers against Bending Leaf as shown in sketch.
2. Position Clamps and tap lightly with mallet. This creates enough friction to hold Formers.
3. To remove Clamps, tap upward or turn.

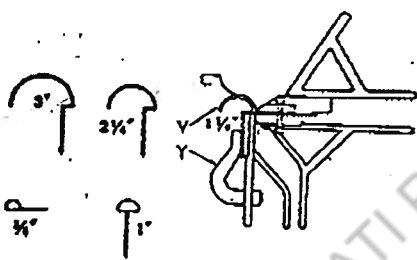
Square bends can be made on a number of sheets and the curves bent afterwards on Formers. The wide opening of the jaw permits these semi-formed sheets to pass over Formers.

DAVID Patteran

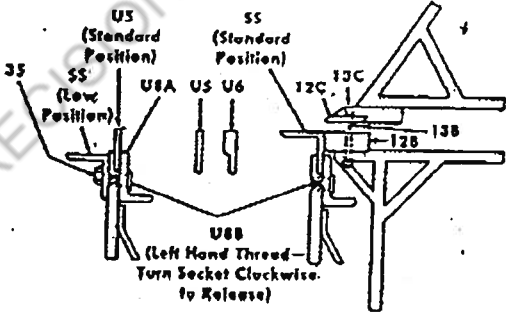
PARTS LIST



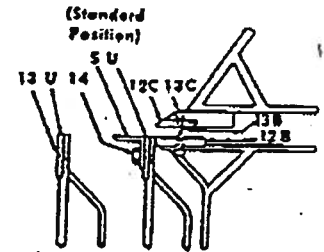
Formers



Cross Section of Brake Models Other Than Those Listed at Right.



Cross Section of Brake Models: 316, 416, 518, 618 and 818 only.



NOTE—CLAMP HANDLES ARE CONNECTED ON 3 AND 4 FOOT BRAKES

- A—Clamping Handle
- AA—Bending Leaf Handle
- BB—Link Set Screw
- C—Top Shaft
- DD—Link
- EE—Link Adj. Block
- FF—Link Adj. Screw
- GG—Stop Gauge Rod
- K—Stop Gauge Guide
- L—Slot Casting Pin
- M—Slot Casting Adj. Screw
- N—Slot Casting
- O—Slot Casting Lock Screw
- P—Slot Casting Adj. Screw
- Q—Adjustable Stop
- R—Balance Weight
- R1—Balance Weight Rod
- S, SS—Bending Leaf Angle Bar
- U—Bending Leaf (1/4") Bar
- US—Bending Leaf (1/4") Bar
- U6—Bending Leaf (1/2") Bar
- USA—Bending Leaf Bar Holder
- U8B—Bar Holder Screw
- V—Formers (Specify Sizes)
- W—Bending Leaf Hinge
- W1—Bending Leaf Hinge Pin
- Y—Former Clamp
- Z—Bed End Housing
- 2—Bending Leaf Adj. Bolt
- 7—Bed Adj. Bolt
- 10—Bending Leaf Tension Bolt
- 12B—Bottom Bar
- 12C—Top Nose Bar
- 13—Bending Leaf (1/4") Bar Screw
- 13B—Bottom Bar Screw
- 13C—Top Nose Bar Screw
- 14—(SI) Angle Bar Screw
- 16—Clamping Handle Spring
- 17—Clamping Handle Washer
- 18—Clamping Handle Nut
- 20—Bottom Shaft
- 21—Bottom Shaft Set Screw
- 35—(SS) Angle Bar Screw

Note

When ordering parts give model and serial number of machine. Also advise whether for right or left hand side facing the machine.