

## Operating Instructions

Holding the material against the angle gauge slide it into the forming head. Be sure that the material remains against the gauge until work is finished.

NOTE: This machine will handle 7" and longer. If shorter, leave on long piece - notch and cut later.

Make "Hold-Down Adjustment" to meet any variation in the material of you locality. *Do not adjust* unless material slips, tends to leave gauge, or curls up at finish.

TO ADJUST:

1. Remove top cover.
2. Tighten hold-down studs until snug and then loosen them a quarter turn. (This setting will usually give proper adjustment for all thicknesses of material).
3. *If the material slips*, tighten the studs *equally* until the condition is overcome.

*If the material curls up* after leaving the forming head, or shows *extremely heavy pressure marks*, loosen studs slightly.

If a wider or narrower hammer-over edge is desired, the angle gauge on the right hand side can be moved to give the desired width. When moving this gauge, be sure to move both ends the same distance, keeping it parallel to the front edge of the top plate for the machine. **DO NOT MOVE ANGLE GAUGES ON THE LEFT OR FINISHING END OF THE MACHINE. THESE GAUGES ARE NOT INTENDED TO TOUCH THE MATERIAL AS IT COMES THROUGH.**

It is very important that long sheets be fed into the machine flat and against the angle gauge for the start.

**Important:** If proper care is taken, the small knife edge roll that holds the pocket of the Pittsburgh Lock open will not break. If burrs and twists from snip cuts are not flattened out, it will sometimes strike against the opening roll causing it to break.

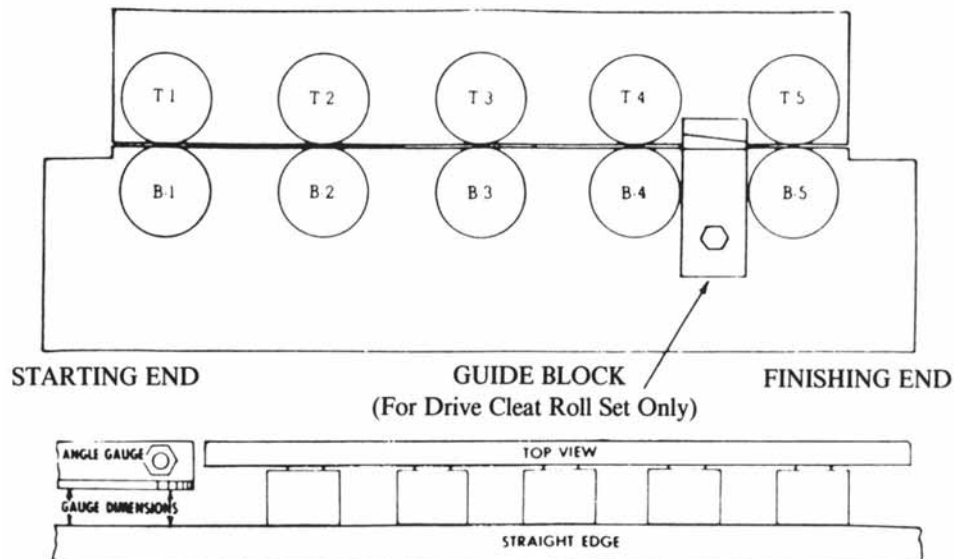
## Lubrication

There are six alemite fittings located on the underside of the stand roller cause on the auxiliary side of the machine. These fittings lubricate the main reduction bearings and should be lubricated after every four hours of operation. Recommended lubricant: Standard Viscous #3 (Product of the Standard Oil Company) or equivalent. The slow speed shafts do not require additional lubrication. Grease gears periodically or as needed. If machine is to be used out of doors, and oil or grease film will prevent rusting of surfaces.

### Instructions for Installing Auxiliary Rolls

#### Double Seam or Straight Right Angle Flange Rolls

1. Remove top cover.
2. Remove rear section of top plate. This will expose the extended shafts on which the rolls are to be mounted.
3. Select the first pair of rolls, which are marked "T1" and "B1", and slip them on the shafts at the left, or feeds side of the machine, placing "T1" on the upper shaft and "B1" on the lower. Repeat this procedure with rolls "T2" and "B2"; "T3" and "B3"; "T4" and "B4"; "T5" and "B5" until all rolls have been mounted. All rolls marked "T" should be on the top shafts and "B" rolls on the bottom shafts, in numerical order, reading from left to right, facing shafts. **THE NUMBERED SIDES MUST FACE OUTWARD, OR TOWARD THE OPERATOR.**
4. Fasten rolls to shafts with capscrews and special washers which are provided.
5. Mount gauge on starting side of machine, using slotted holes provided in top plate. The position of this gauge is shown on the next page (Gauge Dimensions). The angle gauge on the finishing side should be flush against the metal as it emerges from the rolls.
6. Replace back plate and top cover.
7. Hold material against gauge and feed into machine.



**GAUGE DIMENSIONS ARE:**

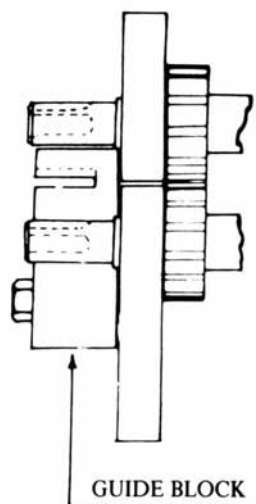
For Double Seam Rolls.....1 1/8"

For Right Angle Flange Rolls..... 1-1/16"

For Drive Cleat Rolls install guide block with its inner edge in line with outer edge of rolls.

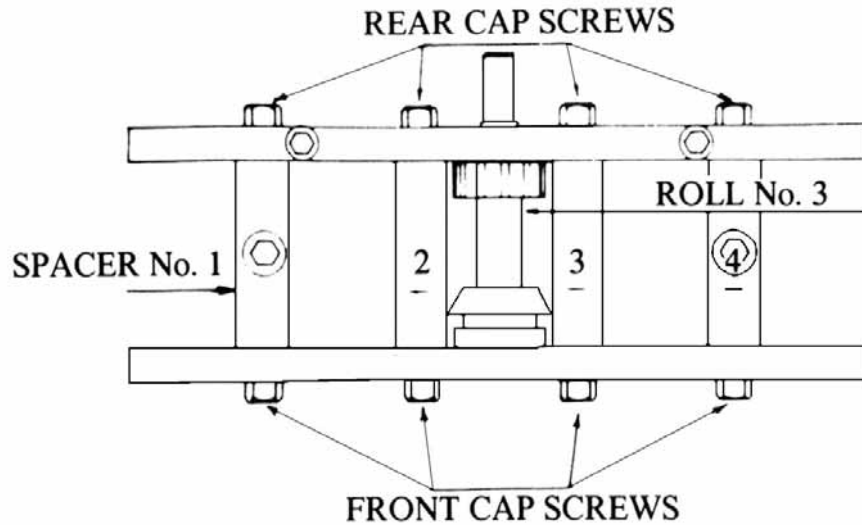
**Drive Cleat Rolls**

1. Proceed as instructed for Double Seam Rolls, but leave roll "T-2" loose. This roll centers itself and should not be held in place with cap screw. Square keys are used in all cases, however.
2. Remove stud indicated by arrow at right (this is located between "B4 " and "B5') and place the slide block in position securing it with the 3" stud furnished CAUTION: ALWAYS REMOVE THE SLIDE BLOCK AND REPLACE THE SHORT STUD WHEN TAKING THE DRIVE CLEAT ROLLS OFF THE MACHINE.
3. Mount the feed gauge on lefthand slide so that it is exactly centered on the rolls. THIS IS VERY IMPORTANT! If it is not centered, the cleat will not be perfect.
4. Tighten small hold-down studs so that "T5" and "B5" do not separate when drive cleats are passing through.  
**IMPORTANT:** Be sure to cut your material a full 2 1/8" wide to insure a perfect cleat.  
**GUIDE BLOCK**



**Flanging Attachment for Lockformer Models 20 & 22  
To Install Auto-Guide Power  
Flanging Attachment**

1. Remove top cover from Lockformer.
  2. Loosen front cap screws on spacers No. 1 and 4.
  3. Remove spacers No. 2 and 3 by taking out front and back caps screws.
  4. Set flanging attachment over the forming head so that the combination bevel and spur gear meshes with the gear on Pittsburgh Lock roll No. 3.
  5. Fasten flanging attachment with the cap screws which held spacers No. 2 and 3 in place.
- CAUTION: Be sure to tighten all cap screws!**



## To Operate Auto-Guide Power

### Flanging Attachment

#### Adjust Unit For Gauge Material To Be Used

To adjust clearance between flanging rolls, tighten the adjusting screw on the front of the block of the machine all the way, then loosen the screw approximately one eighth of a turn. (This setting is usually correct for 26 gauge material). Do not set front gauge adjusting screw too tight. It should be set 'ust tight enough to draw the metal through the rolls. Too tight a setting will stretch and wrinkle the material.

To adjust the spring tension on the compensator arm, tighten the adjusting dial on the back side of the flanger to the stop and then turn back to the proper gauge setting shown on the adjusting dial.

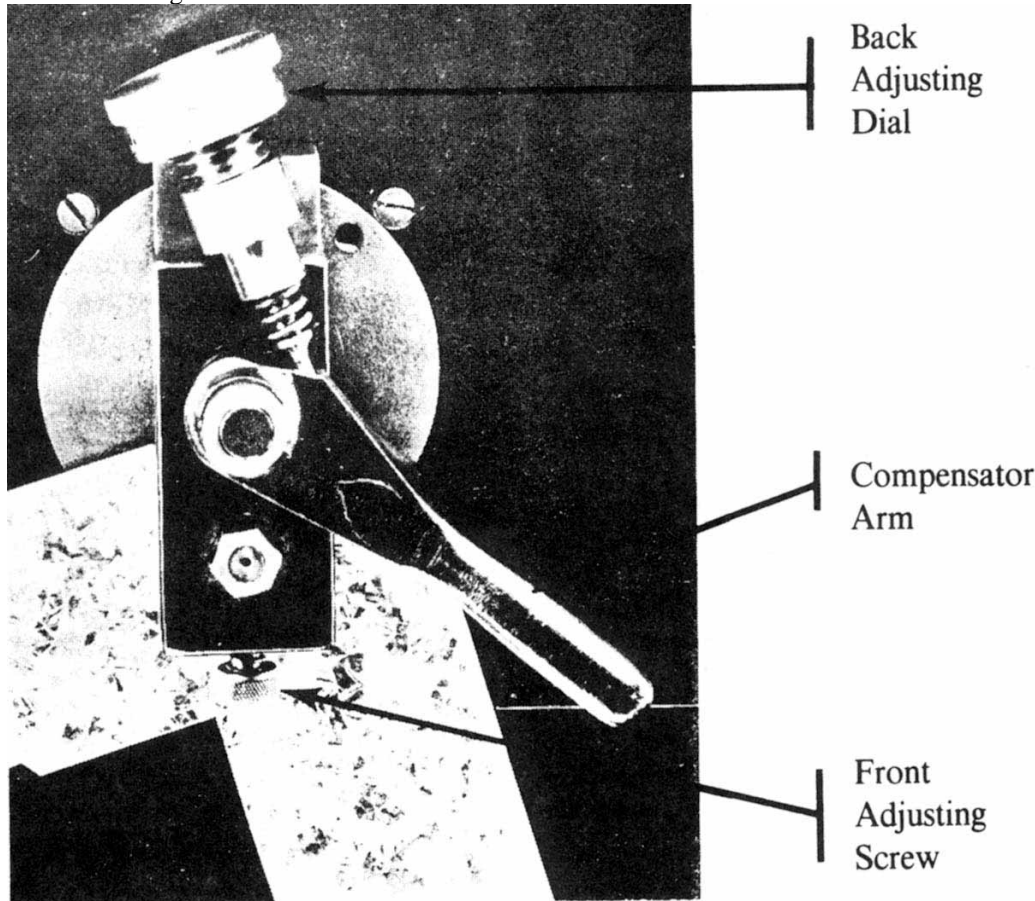
#### Turn Up A "Starting Flange"

on the material before inserting it into the rolls. This is done by inserting the leading edge of the work to be flanged in the slot cut into the table and

bending the piece away from the operator approximately 45°. Start the leading edge of the material into the rolls. As the material passes through the rolls, the compensator arm will make contact with the material and guide it through the rolls. If the material pulls out of the rolls, it is an indication that either the front adjusting screw is too loose or the back adjusting dial is not tight enough.

#### Important

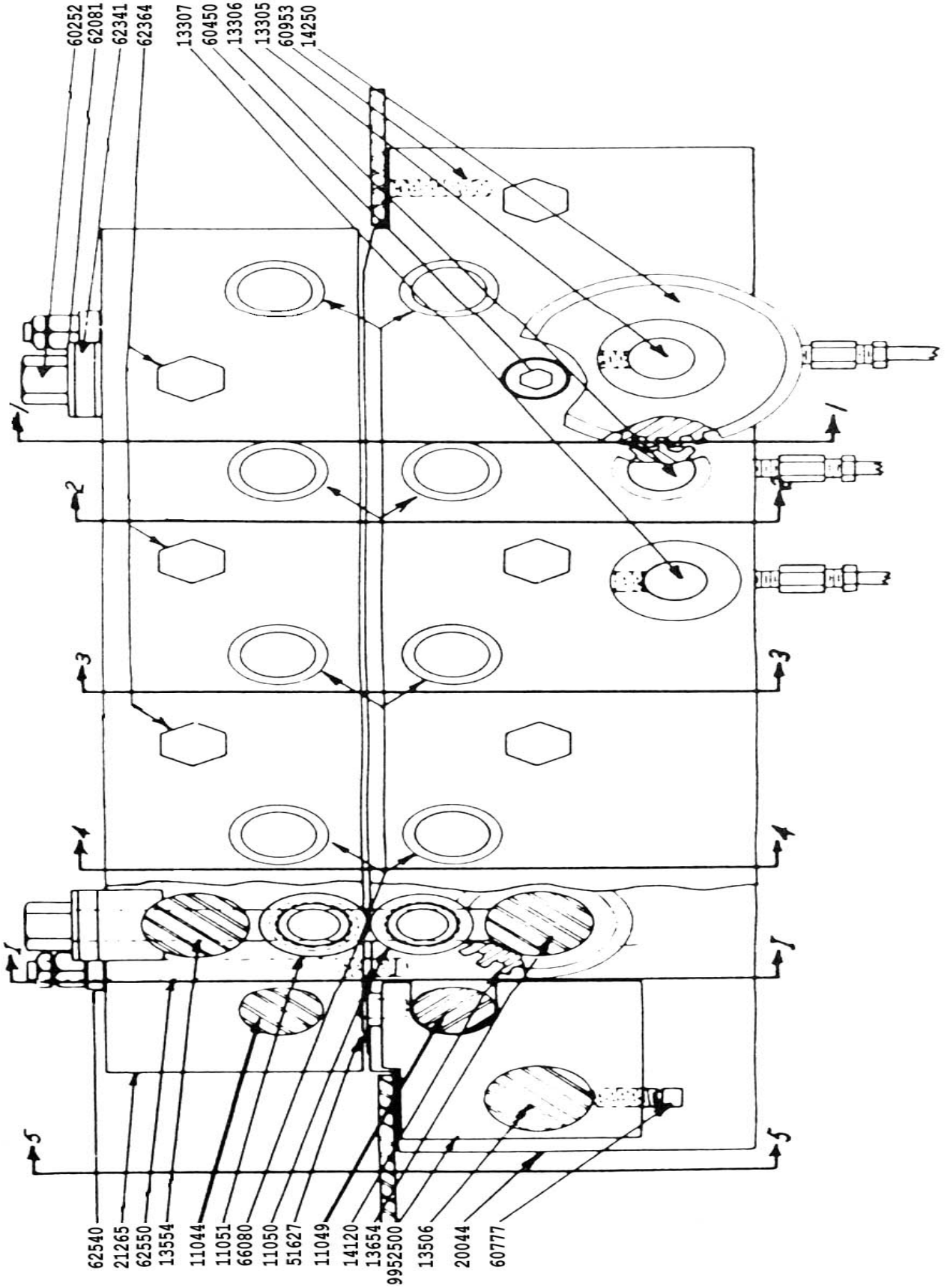
When starting a partially formed section that contains an inside curve, push the compensator arm back until it locks out of position. Feed partially formed section into the rolls and the machine will pull the material through. As the rolls approach the section that is not formed, bring the compensator arm to the material holding the spring tension off the piece until the unformed section comes to the rolls; then bear pressure to the piece until the flange picks up, then release compensator arm so that "automatic" guiding is resumed.



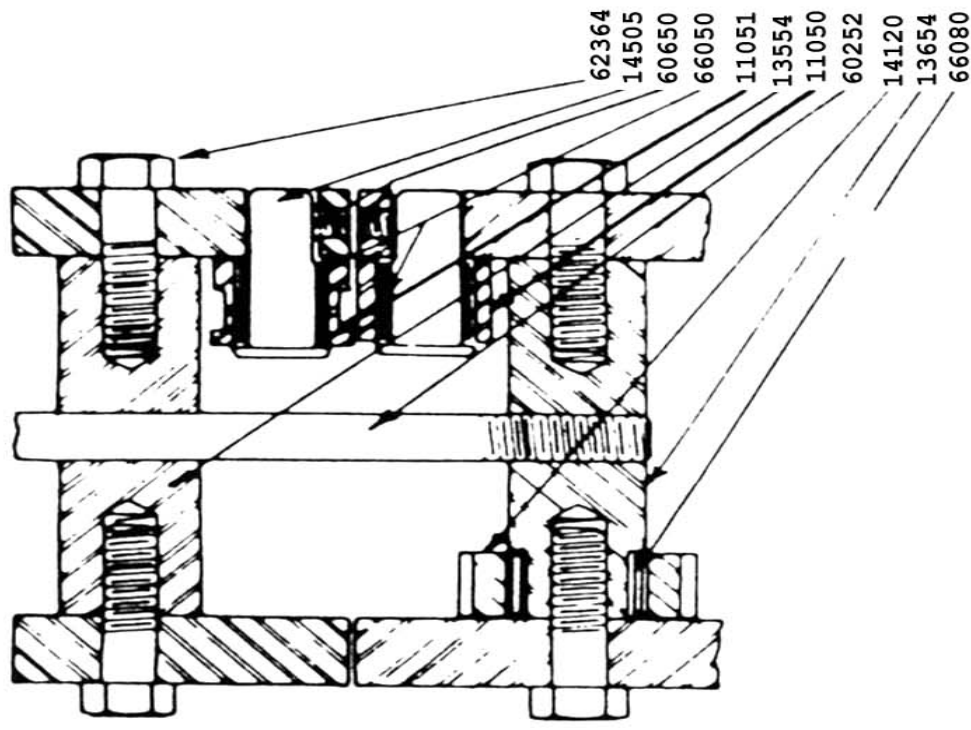
## 20 Ga. Pittsburgh Parts List and Description

Indicate serial number of machine when ordering parts

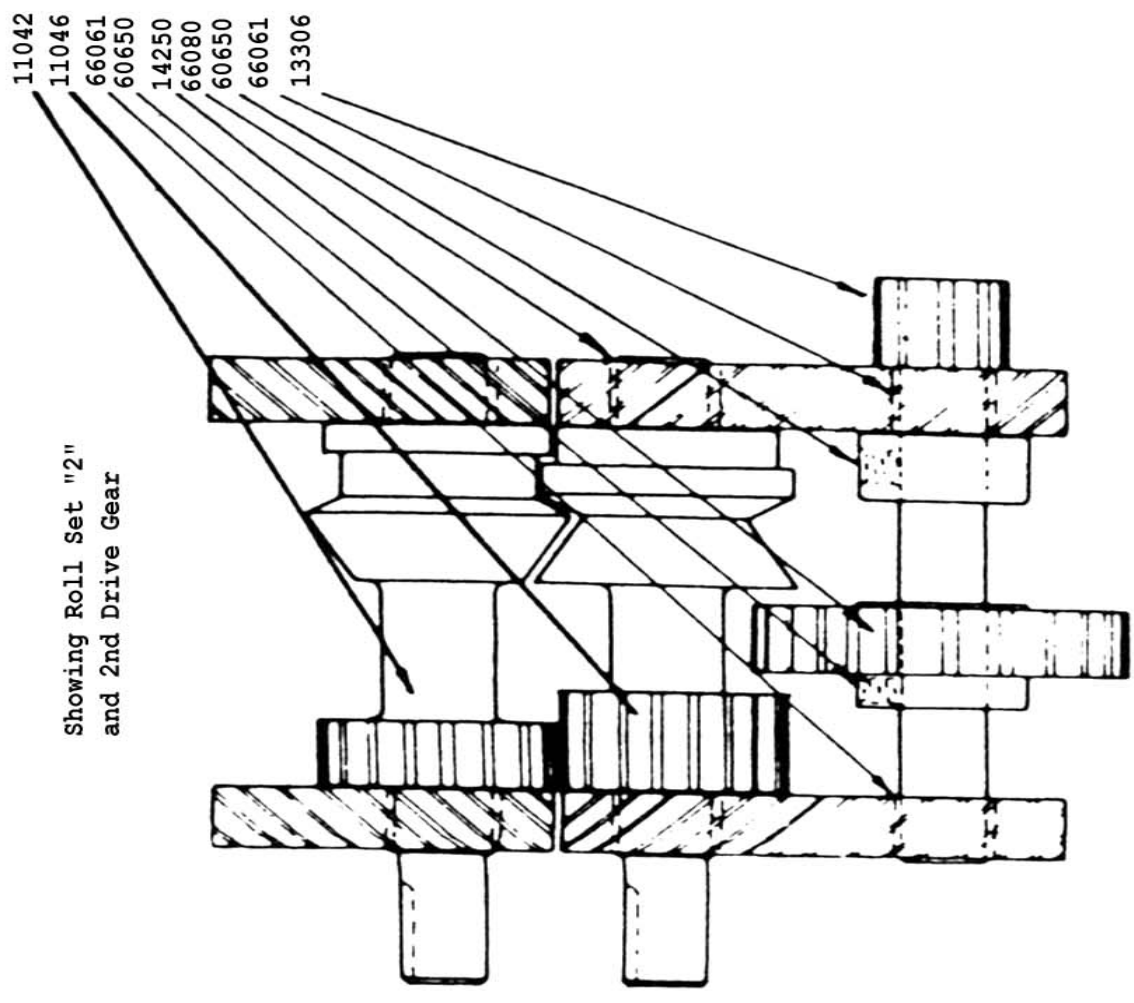
<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>No. PER MACHINE</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>No. PER MACHINE</b>
20043	Lower Front Plate	1	60875	3/8-16 x 1" Carriage Bolt	8
20044	Lower Back Plate	1	71152	3/4" Thrust Collar	2
21266	Upper Front Plate	1	66600	Connector (88L Female Coupling)	6
21265	Upper Back Plate	1	66610	Half Union (886L)	6
11045	Bottom Forming Roll #1	1	66700	Plastic Tubes 3-11"	33"
11046	Bottom Forming Roll #2	1	66700	Plastic Tube 3-16"	48"
1997 + 11998	Bottom Forming Roll #3	1	60450	1/2-13 x 1" SHCS	1
11048	Bottom Forming Roll #4	1	60252	Hold Down Stud 5/8-11 x 6"	2
11049	Bottom Forming Roll #5	1	62550	Hold Down Stud 3/8-16 x 4 3/4"	2
11041	Top Forming Roll #1	1	80525	Extensions Cord	1
11042	Top Forming Roll #2	1	14120	Idler Gear (Need 1-66080 Bearing)	3
11043	Top Forming Roll #3	1	14121	Main Idler Gear (Need 1-66090 Bearing)	1
11044	Top Forming Roll #4	1	62341	5/8" Blvl. Washer	8
11044	Top Forming Roll #5	1	62340	3/8" Blvl. Washer	12
11050	Lower Idler Roll	1	58513	Stand	1
11051	Upper Idler Roll	1	36374	Forming Head Cover	1
13554	Plain Spacer Drilled	2	60778	Set Screw	1
13654	Step Spacer Drilled and Tapped	2	62026	Spacer Washer-3/8" .052	2
13653	Main Step Spacer	1	60750	1/4-20 x 1/2" Square Head Set Screw	2
13601	Space, Gear Stud	2	62633	Dowel Pin 3/8" x 1"	2
62501	Retaining Ring	2	61300	3/8-16 Jam Nut	2
62106	Washer	2	61120	3/8- 16 Hex Head Nut	2
13506	Plain Spacer	4	61101	5/16-18 Hex Head Nut	4
14250	32T Drive Gear	2	62029	3/8" x 1/16" Steel Washer	12
51627	Opening Roll	2	60795	Drive Screws Type U	8
14505	Idler Roll Pin	2	80020	1/2 HP 1 Ph. 60C 18000 RPM (For 22 Ga. Lockformer)	1
9952500	Opening Roll Holder Assembly	1	80030	3/4 HP 1 Ph. 60C 1800 RPM (For 20 Ga. Lockformer)	1
21811	Opening Roll Holder	1	80650	Handy Box Switch Box 4SSL	1
62632	3/8" x 7/8" Dowel	1	80675	Handy Box Cover	1
60777	3/8-16 x 3/4" sq. HSS	1	80431	BX Cable	1
66080	Bearing (B-1412 TORR)	23	62202	3/4" 031 Brass Washer	7
66090	Bearing Main Idler (8-1416 TORR)	1	32902	Lubrication Connector Holder	1
66061	Bearing (B-1212 OH TORR Rdc'n)	6	29510	Motor Base	2
13305	3 Drive Shaft	1	37000	Grease Fitting Shim	1
13306	2 Drive Shaft	1	60048	5/16"-18 x 1 1/4" Hex Head Screws	4
13307	1 Drive Shaft	1	60551	1/4"-20 x 1/2" Round Hd, Cover Screw	1
66050	Bearing (8-1012 TORR)	2	62010	5/16" x 1/16" Flat Washers	8
80204	Toggle Switch	1	62362	5/16" Lockwashers	4
70056	V-Belt 5L 540	1	62363	3/8" Lockwashers	4
29802	Exit and Entrance Gauges	2	66640	1610 Grease Fittings	6
70609	Machine Pulley (6B 3/4" Shv.)	1	71013	opening Roll Spring	1
70301	Motor Sheave (BC 30 5/8" Shv.)	1	80483	BX Connector 3/8"	2
80481	BX Connector 1/2"	2	80602	Ring TNG Terminal	2
62401	Woodruff Key #9	3	80607	Insulating Cap	1
60650	5/16-18 x 3/32" SSS	5	80608	Wire Joint	1
14623	Saddle Washer	2	85156	Capacity Tag	1
60953	3/8-16 x 1" FH SCS	4	85178	Lockformer Logo	1
62081	5/8" x 3/32" Washer	2			
60154	1/2-13 x 1 3/4" HHC Screw HT	19			
62364	1/2" Lockwasher	19			



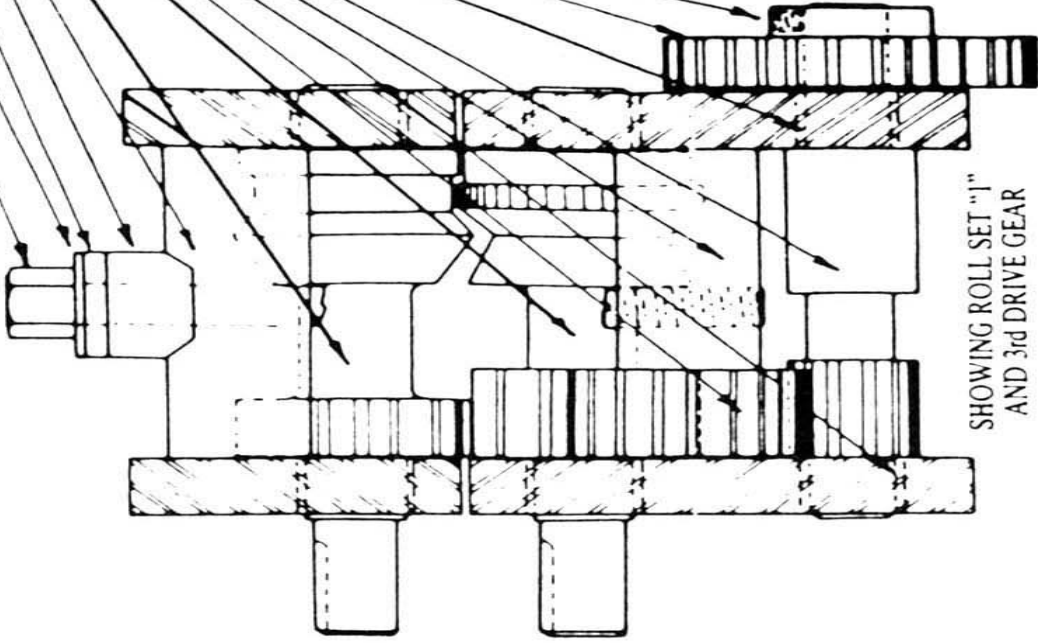
Showing Idler Roll Set and  
 Idler Gear, Stepped Spacer  
 and Hold Down Stud



Showing Roll Set "2"  
 and 2nd Drive Gear



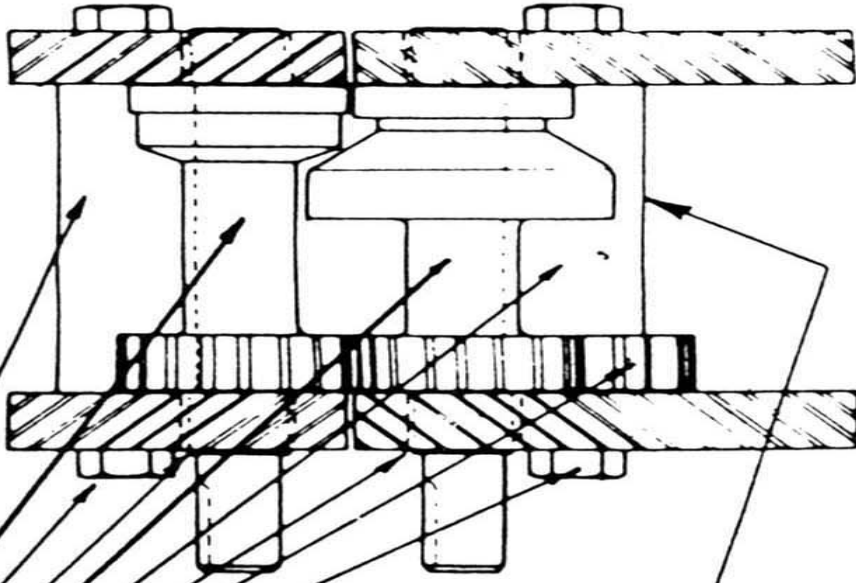
60252  
 62081  
 62341  
 15623  
 13554  
 11041  
 11045  
 14121  
 66061  
 13653  
 13305  
 66061  
 14250  
 60650



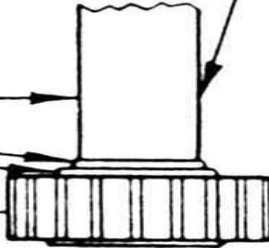
SHOWING ROLL SET "1"  
 AND 3rd DRIVE GEAR

Showing Roll Set "4"  
 and Plain & Stepped  
 Spacers

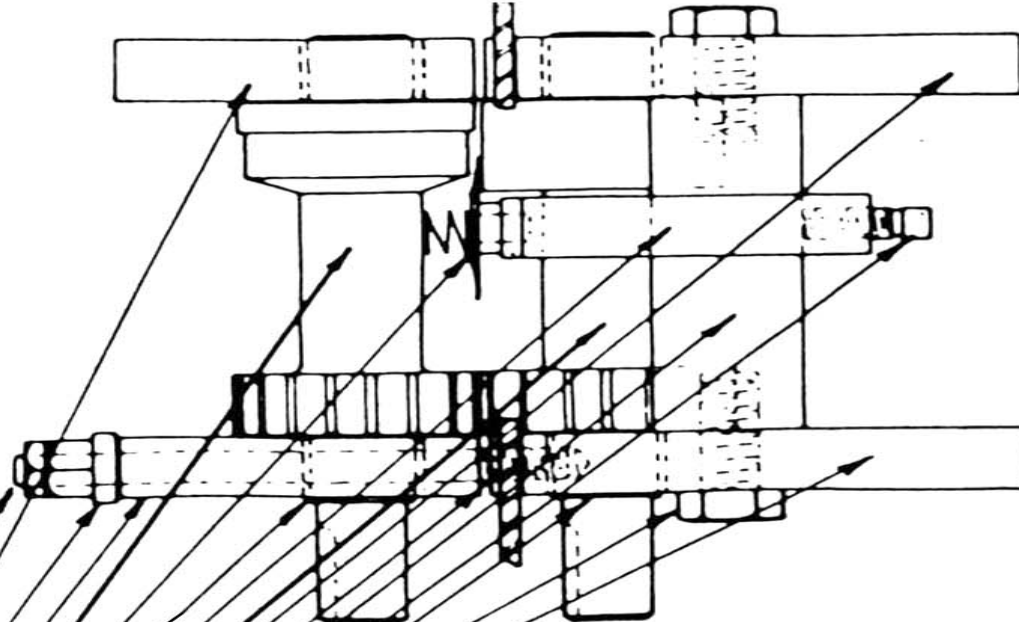
13506  
 11044  
 62364  
 66080  
 11048  
 13601  
 66090  
 14120  
 62364



13601  
 62501  
 62106  
 14120

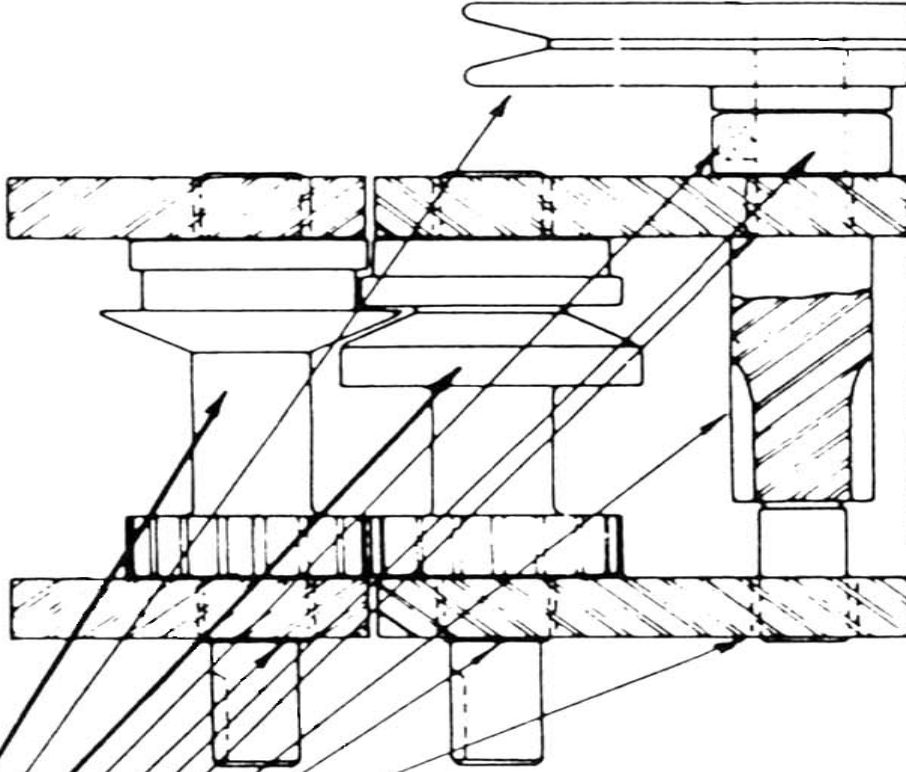


62550  
21266  
62340  
21265  
11044  
51627  
66080  
9952500  
11049  
20043  
62026  
13506  
60777  
66090  
62374  
22040



SHOWING ROLL SET "5"  
AND OPENING ROLL

11043  
70609  
11997 + 11998  
60650  
66090  
71152  
66061  
13307  
66080  
66061



SHOWING ROLL SET "3"  
AND 1st DRIVE GEAR

**20 or 22 Gauge Lockformer Auto-Guide  
Flanging Attachment Parts List  
PLEASE GIVE PART NUMBER WHEN ORDERING PARTS**

**PARTS LIST AND DESCRIPTION**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>No. PER MACHINE</b>
40110	Base Coating	1
40580	Steel Forming Head	1
60983	Thumb Head Screw	1
62440	Special Machine Key	1
71013	Compressions Spring	1
36302	Cover	1
14407	Bevel Gear	1
14408	Gear (Comb. Spur & Bevel)	1
89102	Lifter Plug	1
11602	Knurled Forming Roll	1
11603	Plain Forming Roll	1
22626	Spacer Plate	1
62661	5/8 x 2-1/4 Dowel Pin	1
60098	3/8-16 x 2 HHCS	2
9956563	Inner Race Assembly (66010 & 66164)	1
13006	Roll Shaft	1
66050	Bearing B1020	2
61161	1 /2-20 Hex Lock Nut	1
11601	Adjustable Guide Roll	1
60094	3/8-16 x 1-1 /4 HHCS	4
14102	Steel Gear	2
62363	Lock Washer 3/8	4
62029	Washer 3/8 x 1/16	2
60501	1/4-20 x 1/2 FHMS	4
62423	3 /16 x 1-1 12 Key	1
60655	5/16-18 x 3/4 SSS	1
62631	3/8 x 3/4 Dowel Pin	1
60610	1/4-20 x 1/4 SSS	3
66010	Bearing B108 Torr	4
42411	Modified Woodruff Key 61	1
40080	Compensator Arm	1
40090	Tension Screw Nut	1
14721	Gauge Dial	1
14921	Tension Screw	1
19004	Tension Spring Push Rod	1
62641	Dowel Pin 7/16 x 1-1 /2	1
71014	Spring	1
89103	Sensory Casting	1
60303	1/4-20 x 3/4 SHCS	1
71151	Collar 5/8	1
85166	Name Plate	1
50258	Stand (Forming Table)	1
62201	5/8 x 1/16 Washer	2
36001	Cover Clamp	2
39501	Cover Guard	1
60309	1/4-20 x 1/2 SH Screw	1
60650	1 /4-20 x 3 / 8 Set Screws	2
66164	Bearing	1

