

OPERATORS MANUAL

BRIDGEPORT

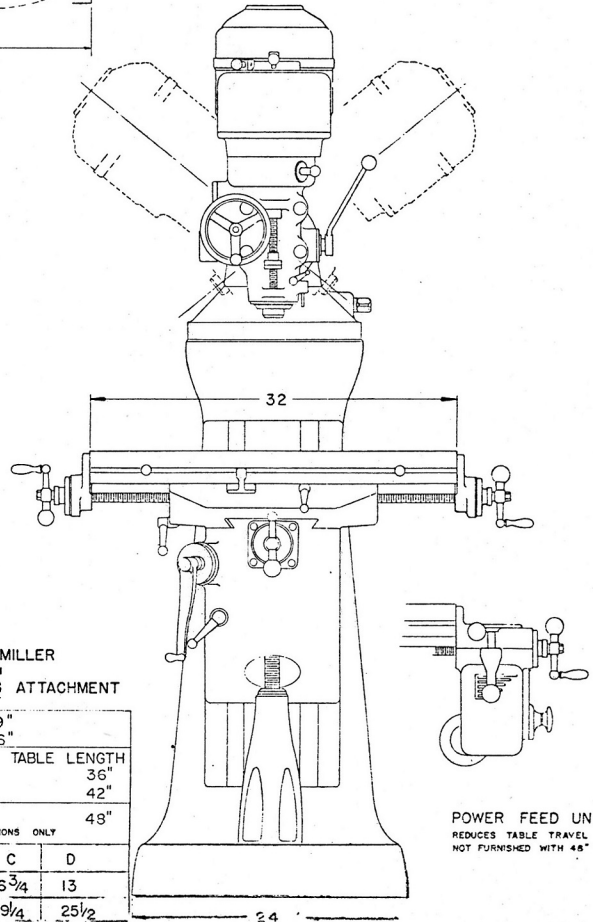
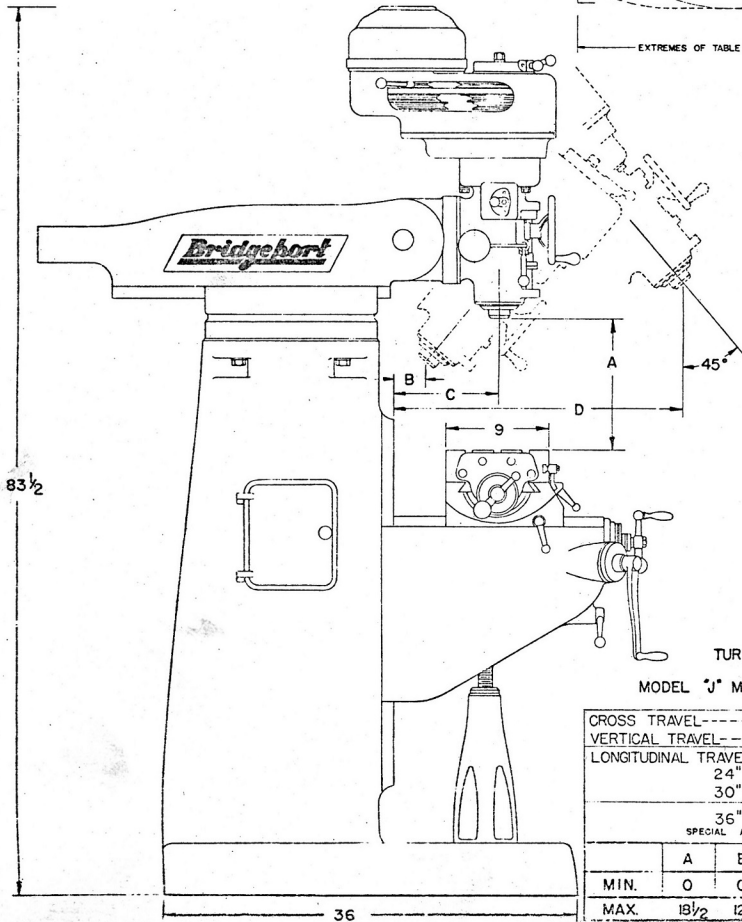
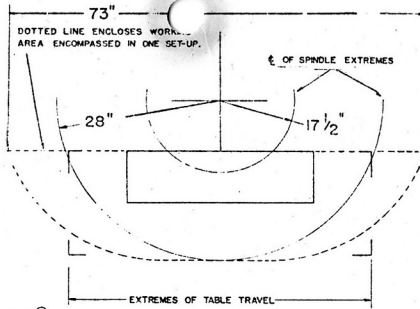
SERIAL # J1 7290

INDEX

	Page
Dimensional Drawing	1
Floor Plan	2
Long and Cross Feed Assembly	3
Incrating	4
Mortgages	4
Cleaning	4
Placing on Solid Foundation	4
Leveling Machines	4
Mounting Head on Overarm Adapter	5
Handles	5
Lubrication	5
Inspection	5
Alignment of Head	5
Lubrication Drawing	6
Adjustment of Table Gib	7
Adjustment of Saddle and Knee Gibs	7
Clamping Table, Saddle and Knee	8
Removing of Table	8
Removing of Saddle	8
Power Feed Attachment	9
Instructions for Installing Power Feed	9 & 10
Installation and Use of Measuring Attachment	11 & 12
Descriptive Photograph of Model "J" Attachment	13
Mounting Motor on Attachment	14
Placing and Adjusting Belts	14
Operating Instruction of "J" Attachment	14
Operating Instruction of "J" Attachment	15
Operating Instruction of "J" Attachment	16
Operating Instruction of "J" Attachment	17
General Speed Recommendations	18
Table of Cutting Speeds and Feeds	18
Parts Drawing on "J" Attachment	19
Parts List on "J" Attachment	20
Quill Housing Unit Parts List	21
Quill Unit Parts List (Serial "J" 1200)	22
Quill Unit Parts List (Serial J 1200 and Up)	23
V Belt Unit Parts List	24
Back Gear Transmission Unit Parts List	25
Quill Pinion and Overload Clutch Assembly Parts List	26
Feed Transmission Unit Parts List	27
No. 4 Belt Housing	28
Brake and Clutch Unit Parts List	29
Parts List and Drawing on BR Turret Milling Machine	30-31
Parts List and List on Power Feed Attachments	32
Parts Drawing and List on Model "M" Attachments	33
Parts Drawing and List on Shaping Attachment	34-35
Parts Drawing and List on Cherrying Attachment	36-37
Parts Drawing and List on Model "R" Attachment	38
Parts List and Drawing on Model "C" Attachment	39
Optical Measuring System	40
Optical Parts Drawing	41
Optical Parts List	42

Drawing 1

Dimensional



TURRET MILLER
WITH
MODEL "J" MILLING ATTACHMENT

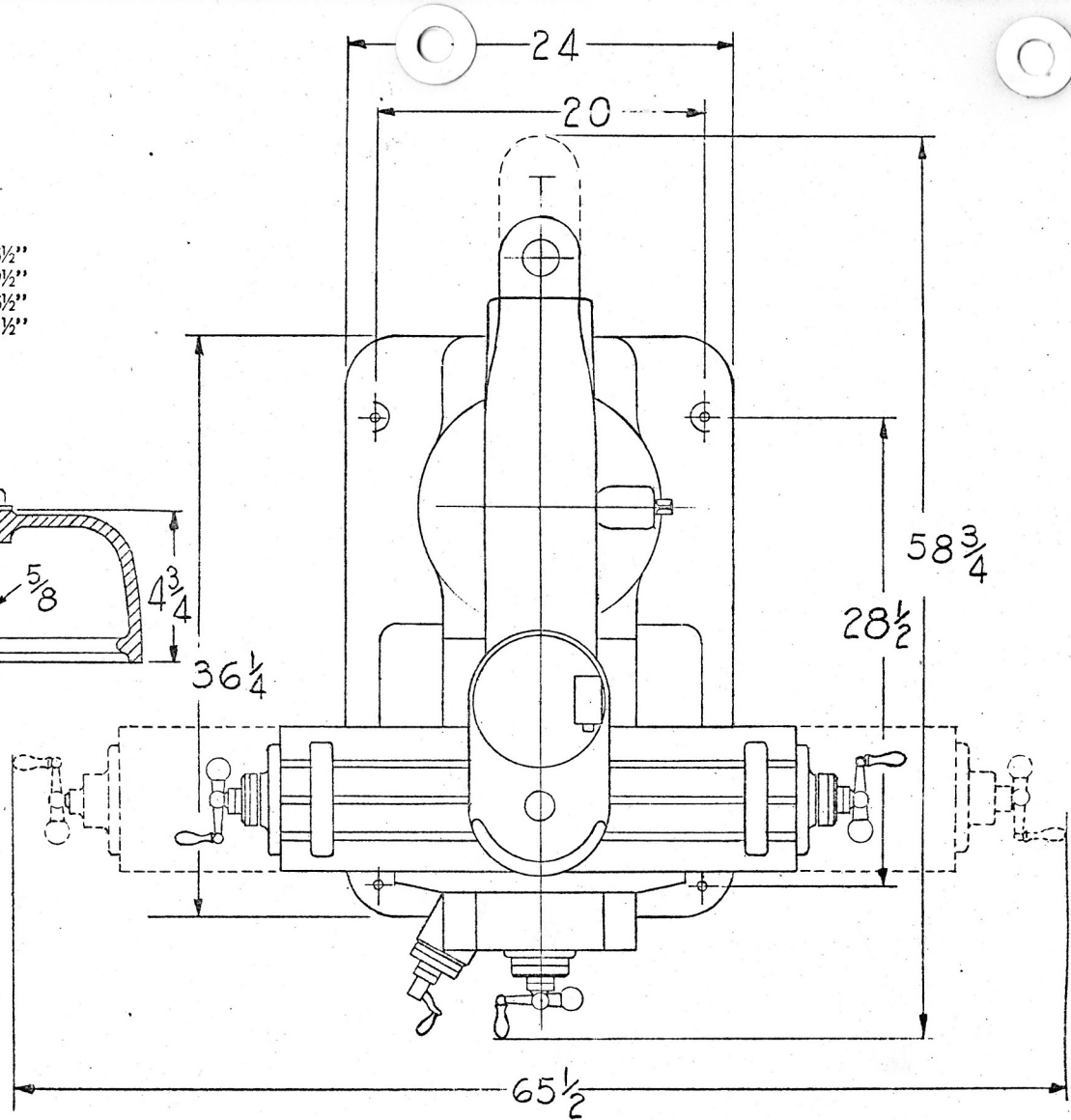
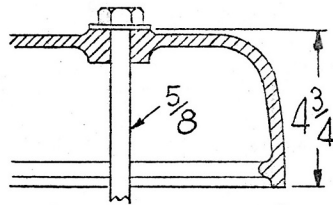
CROSS TRAVEL	----- 9"			
VERTICAL TRAVEL	----- 16"			
LONGITUDINAL TRAVEL	24"	TABLE LENGTH		
	30"	36"	42"	
	36"	SPECIAL APPLICATIONS ONLY		
		48"		
MIN.	0	0	6 3/4	13
MAX.	13 1/2	12	19 1/4	25 1/2

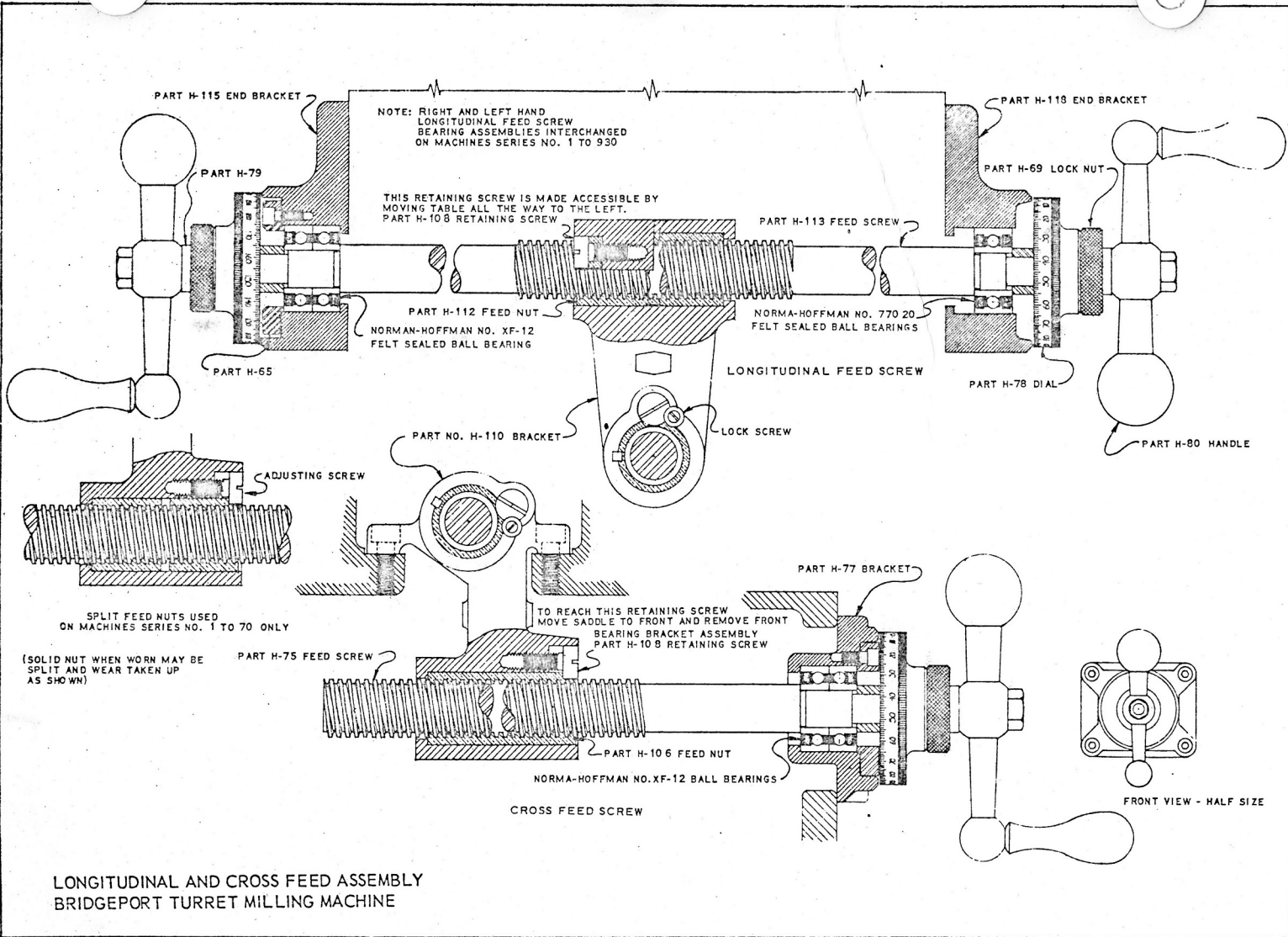
POWER FEED UNIT
REDUCES TABLE TRAVEL 2 1/2"
NOT FURNISHED WITH 48" TABLE

Drawing 2

Floor Plan

- A - 32" Table - 65½"
- 36" Table - 69½"
- 42" Table - 75½"
- 48" Table - 81½"





Drawing 3

UNCRATING

Carefully remove protective crating and skids so that the machine and parts are not marred, scratched or impaired. In the event of damage in transit, communicate at once with our representative and the transportation company making delivery.

Machine should be lifted by placing a sling under overarm or by putting an eye bolt in tapped hole on top of overarm.

SHORTAGES

Check shipment carefully, against the itemized packing list which is included in the parts box. In case of shortages, report them immediately to the representative from whom the machine was purchased, indicating parts not received which have been checked on the packing list.

CLEANING

Thoroughly clean slush from machine with gasoline or kerosene. Do not move the table, saddle, knee or any movable part until all ways have been well cleaned and lubricated. Then, by hand, move table, saddle and knee to limit stop in one direction. Clean and lubricate exposed ways and then move each unit to the opposite limit stop and similarly clean and lubricate the exposed ways. Loosen bolts to unlock overarm, and move it forward and backward to the full length in order to clean and lubricate.

PLACING ON SOLID FOUNDATION

The column and base are cast in one piece. When setting machine on a concrete foundation, it is advisable to use a little grout (thin mortar) to take care of any unevenness in the concrete as well as to provide a solid foundation at all points.

When setting machine on a floor that has any surface irregularities, shims should be used to correct this condition to the greatest extent possible.

LEVELING MACHINES

Set machines by leveling the work table lengthwise and crosswise with a precision instrument.

MOUNTING HEAD ON OVERARM ADAPTER

The face on flange or adapter should be thoroughly cleaned as this aligns milling head square with table working surface. Then clean mounting surface of head carefully. When bolting the head to the adapter or overarm, tighten nuts evenly, using normal pressure. Care should be taken to avoid excessive pressure since this will cause distortion in the quill.

HANDLES

When crating, the three ball crank handles are turned facing each other. The handles should be reversed.

LUBRICATION

Do not operate machine until properly lubricated. Follow the instructions given in Dwg. 4, page 6.

INSPECTION

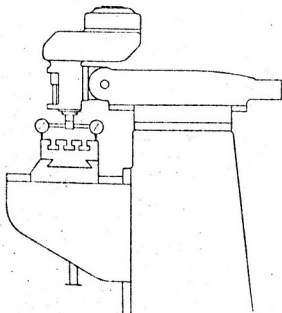
Machine is carefully inspected and lined up before it leaves our factory. Sketch # 1 and 2 shows the way your machine is lined up.

ALIGNMENT OF HEAD

In case of precision boring or work of that nature, where it is necessary to have head perfectly square with the table, use method prescribed below. For normal milling, graduations on turret and head are close enough. To set head perfectly square with table, Sketch #1. This may be done with head and adapter on overarm, by adjusting adapter through worm gear on adapter. Loosen three binding bolts but leave drag on same for fine adjustment. Mount indicator in spindle nose as shown in Sketch #2 and 2, and indicate parallel.

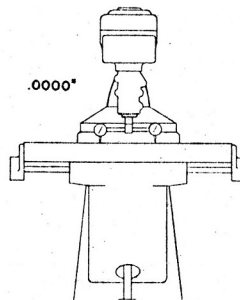
Note: When indicating as in Sketch 1, it should be noted that the table is fitted to be slightly high in front, usually about .005.

TABLE SQUARE WITH SPINDLE THRU
TRANSVERSE AXIS



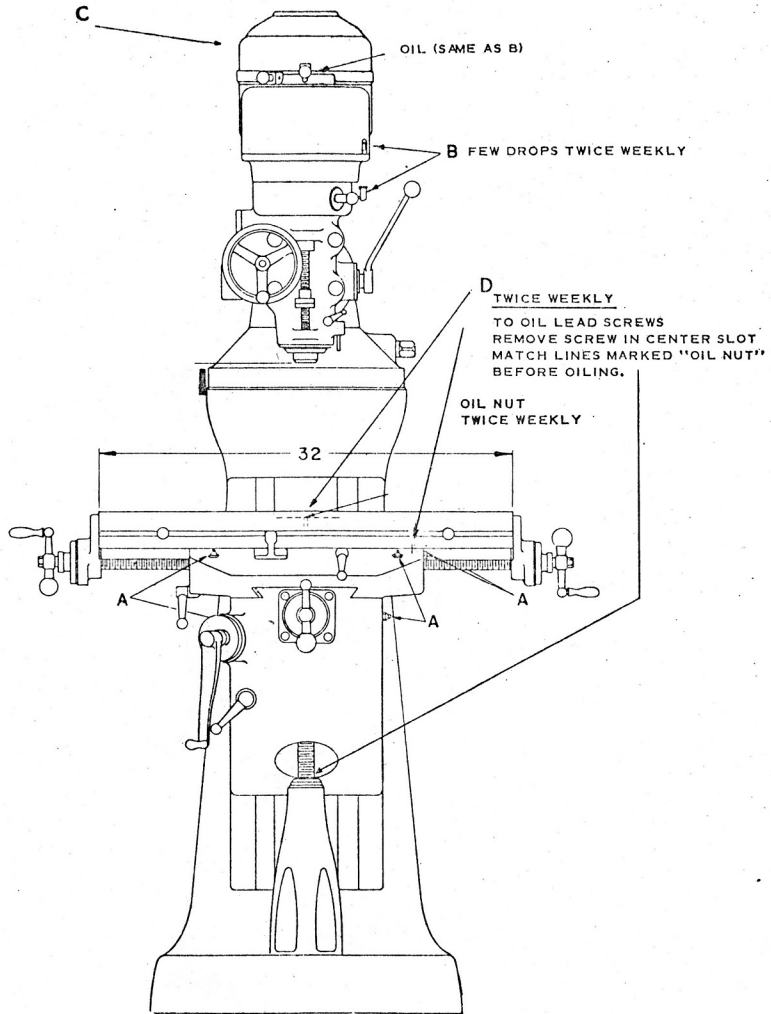
Sketch #1

TABLE SQUARE WITH SPINDLE THRU
LONGITUDINAL AXIS



Sketch #2

RECOMMENDED LUBRICATION FOR THE
BRIDGEPORT TURRET MILLING MACHINE



- A. Way Surfaces**
 Shell Alvania Grease 2
 Socony Gargoyle Grease
 Sovorex No. 1 } WEEKLY
- B. Milling Heads (Spindle Bearings)**
 Shell Cornea Oil 33
 Socony Gargoyle Vactra Oil
 Heavy Medium
- C. Motors are greased for life of bearings**
 For further instructions refer to
 motor manufacturer's instruction book
- D. Lead Screws**
 Shell Cornea Oil 41
 Socony Gargoyle Vactra Oil No. 2

- ATTACHMENTS: POWER FEED**
 Shell Cornea Oil 33
 Socony Gargoyle Vactra Oil
 (Heavy Medium)
- SHAPING ATTACHMENT**
 Shell Nassa Oil J78 or K79
 Socony Gargoyle Vactra
 Oil (Heavy Medium)
- SHAPING ATTACHMENT (Warm drive)**
 Shell Nassa Oil J78 or K79
 Socony Cylinder Oil 600W

ADJUSTMENT OF TABLE GIB

The table is provided with a full length tapered gib in the saddle, with an adjusting screw on the left side. To take up gib, tighten large screw slightly and repeat until a slight drag is felt when moving the table by hand. (Sketch 3)

Sketch #3

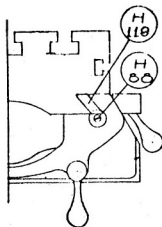
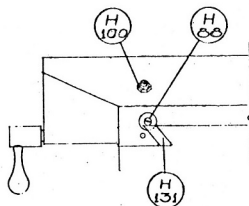


Table-saddle gib

ADJUSTMENT OF SADDLE AND KNEE GIBS

A tapered gib is used for adjusting the saddle bearing on the knee. This forms a guide for the saddle. To tighten gib same principal as described above is used; however, chip wiper has to be removed first. (Sketch 4)

Sketch #4

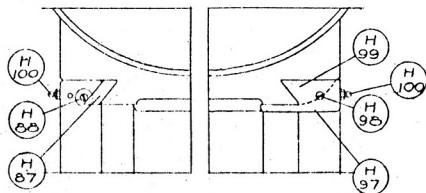


Saddle-knee gib

ADJUSTMENT OF KNEE GIB

Remove chip wiper and adjust screw until smooth movement is attained. (Sketch 5)

Sketch #5

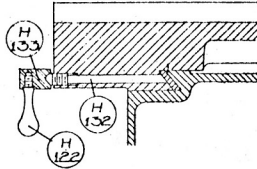


Knee-Column gib

CLAMPING TABLE, SADDLE AND KNEE

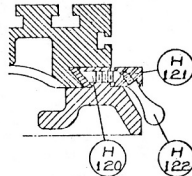
When milling with longitudinal table feed only, it is advisable to clamp the knee to the column and the saddle to the knee to add rigidity to these members and provide for heavier cuts with a minimum of vibration. The saddle locking lever is located on the left-hand side of saddle. (Sketch 6) Excessive pressure can cause slight table bind. Use moderate clamping pressure, as this will hold saddle sufficiently.

Sketch #6



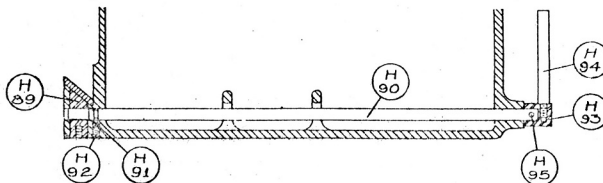
The table clamping lever is located on front of saddle and should always be clamped when longitudinal movement is not required. (Sketch 7)

Sketch #7



The knee clamping lever is at the left side of the knee and should be drawn upward to clamp the knee. (Sketch 8) This is only a tension brake and will not lock the knee completely. Leave clamped at all times unless using knee in operation.

Sketch #8



REMOVING OF TABLE

Remove as follows: Ball crank handles, dial holders, bearing brackets. Screw will then turn all the way so that it can be removed. When this is accomplished, the table can easily be taken off merely by sliding from saddle.

REMOVING OF SADDLE

Follows along the same lines as removing table; however, it is necessary to remove entire front bracket assembly completely. Then remove nut bracket which has become accessible after table has been removed. See pages 9 and 10, Drawing 5 and 6.

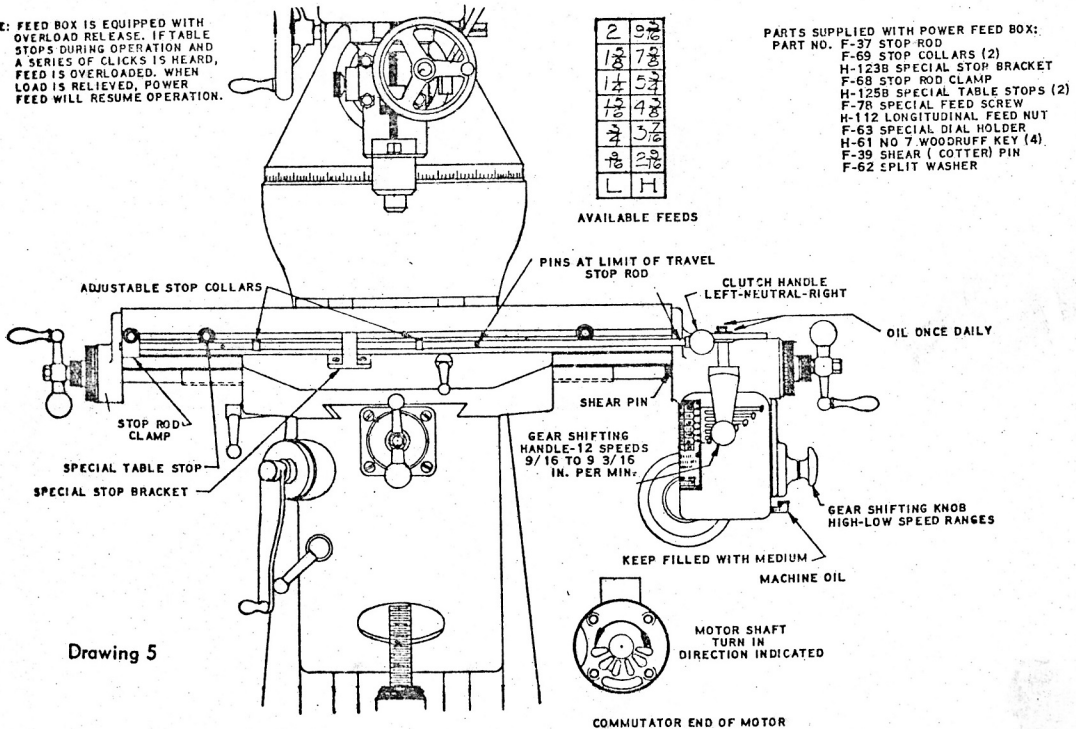
POWER FEED ATTACHMENT

The feed box is equipped with an overload release. If the table stops during operation and a series of clicks is heard, feed is overloaded. When load is relieved, power feed will resume operation. If the overload clutch jams, the 1/8" shearing pin (Drawing 5) will break. This will prevent damage to the power feed box.

INSTRUCTIONS FOR INSTALLING POWER FEED IN FIELD

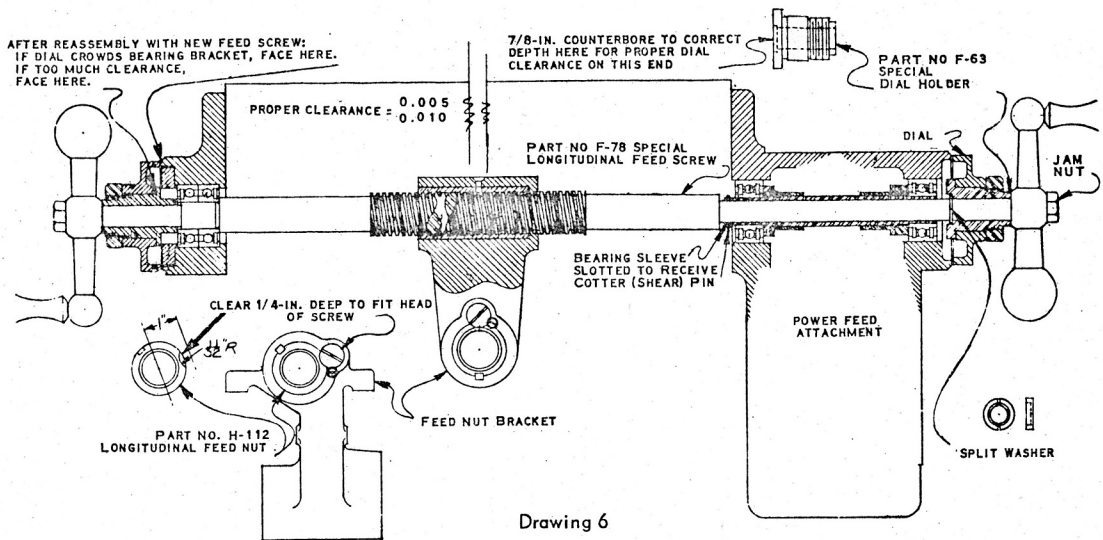
First remove left handle, lock nut, dial, and end bracket. Then remove right handle and also right bearing and bracket. The next step is to remove retaining screw (see Drawing 6) after lock screw has been taken out. The screw and nut will then slide out. This procedure is reversed for installing power feed screw and nut. Power feed unit is easily installed and needs little explanation. Do not neglect to put Shear Pin in Place. (Drawing #5).

NOTE: FEED BOX IS EQUIPPED WITH OVERLOAD RELEASE. IF TABLE STOPS DURING OPERATION AND A SERIES OF CLICKS IS HEARD, FEED IS OVERLOADED. WHEN LOAD IS RELIEVED, POWER FEED WILL RESUME OPERATION.



Drawing 5

LONGITUDINAL FEED SCREW ASSEMBLY WITH POWER FEED



REMOVING REGULAR SCREW

Remove (left side) bracket - (the 1/2" 20 nut, dial holder and nut, (4) 3/8 16 x 1" cap screws, and H-115 bracket and bearing by tapping with plastic hammer). Remove (right side) bracket - using same procedure. Remove 8/32" locking screw from feed nut bracket. Also remove 5/16" 18 binding screw. Pull, to remove lead screw and lead nut from lead screw bracket.

INSTALLING POWER FEED

Move table to right side, half way. Insert power feed lead screw and nut into bracket from left side; long end of screw should be on right side.

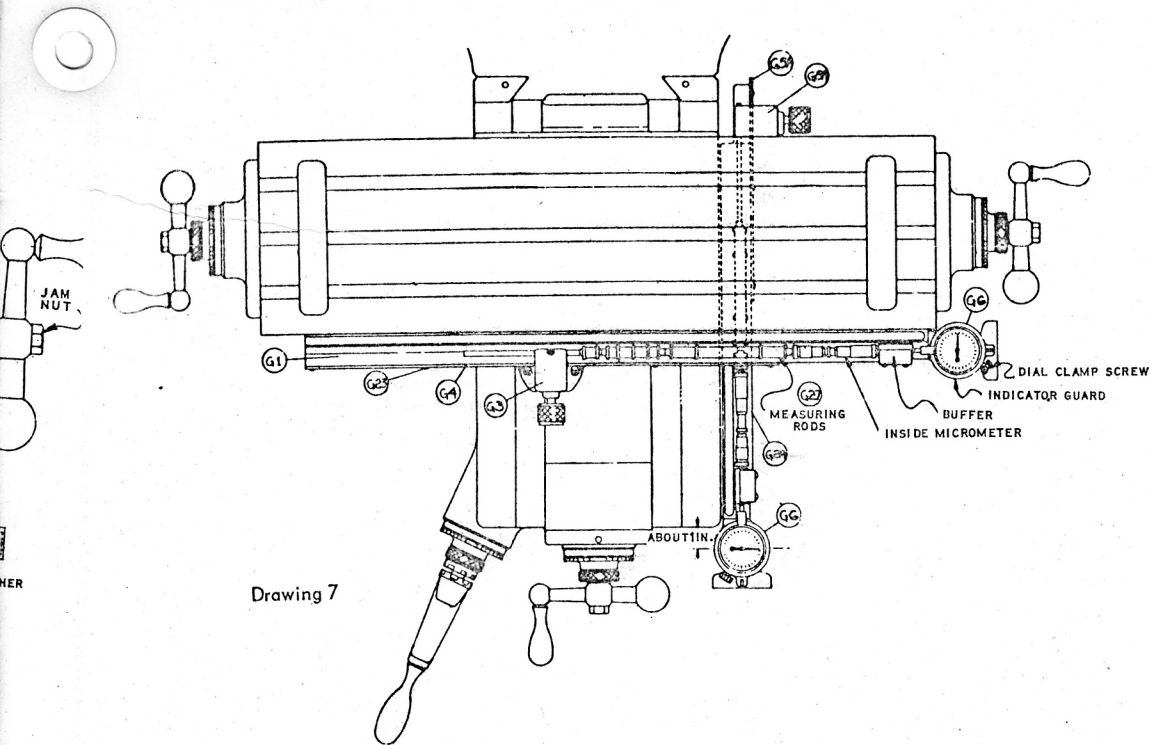
Mark with scriber on bushing where binding screw goes; remove screw and nut from bracket. Remove the screw from the nut. File relief flat on nut to receive binding screw. (Make certain flat is not filed too deep.) Insert screw and nut into bracket with binding screw and locking screw. Reassemble left hand bracket and dial holder complete. Mount power feed box on right with dowel pins and 3/8" cap screws (3). Insert split washer into groove in lead screw. Insert Woodruff keys. Push power feed dial holder onto screw. (Make sure split washer does not fall out.)

Assemble dial and nut onto dial holder. Insert cotter pin through hole in lead screw at back of power feed box. If dials drag, remove some stock from outside rib. If too much clearance, remove stock from inside rib. Remove door and fill with oil to height of oiler.

Assemble stop rod as illustrated. Drill 3/32" hole into stop rod to receive 3/32" pins which limit the travel of the power feed. Locate these by cranking table to each extreme travel and locate pin to kick off feed rod about 1/4" before extreme travel.

INSTALLING MEASURING ATTACHMENT (Sketch #17)

For locating holes to greater accuracy on the Bridgeport Turret Milling Machine.



Drawing 7

INSTALLING MEASURING SYSTEM

I

Install knee trough in counterbored holes on right hand side of knee. Indicate from dovetail on knee for parallelism within $.003$ using $5/8$ rod in trough - Indicate top and side. Bring saddle as far front as possible. Mount saddle bracket into trough with rolls on spindle of bracket. Center rolls in trough and scribe holes in saddle. Drill $5/16$ hole $1/2$ " deep (Caution on depth; do not drill into dovetail) Use $3/8-16$ Tap. Mount Bracket with $3/8-16 \times 1 1/2$ Cap screw. Caution: Saddle and table bracket alignment with trough is essential for good operation.

II

TABLE TROUGH

Remove table stops and stop bracket from front of table. Remove table lock bolt and handle. (Reposition handle after trough is installed by facing end of lock bolt).

Mount table trough with tee nuts into tee slot on front of table. Indicate from top of table for parallelism - within $.003$ - same as cross feed trough.

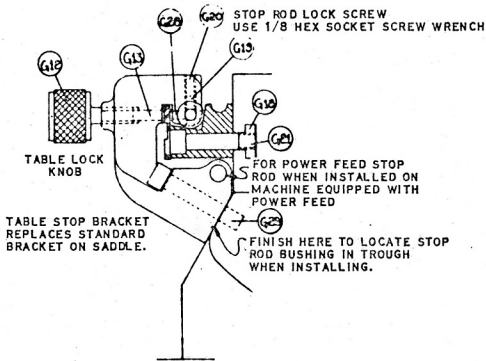
With rolls on spindle of table stop bracket, center rolls into trough and secure with $3/8-16 \times 2$ " cap screw. Adjustment may be made by filing bottom of bracket or shimming if necessary.

Locking table on saddle with table lock knobs (Reed clamp on troughs) shouldn't disturb indicator needle more than $.0001$ if brackets are aligned properly.

USING MEASURING ATTACHMENT

Any hole may be located by two dimensions at right angles. The table and saddle are located separately by combinations of positive measuring instruments consisting of measuring rods for even inches, an inside micrometer for fractions, and a dial indicator reading to one ten-thousandth. The "zero" point from which other dimensions are taken is established for each slide after locating the first hole and is not changed until the job is finished. Other holes to be bored are located from these two "zero" points by measurements at right angles. The measuring rods required are added, and the inside micrometers set and locked at the proper readings. The table and saddle are then carefully positioned with the dial indicators and clamped in place. After checking indicator readings, the hole is ready to be bored.

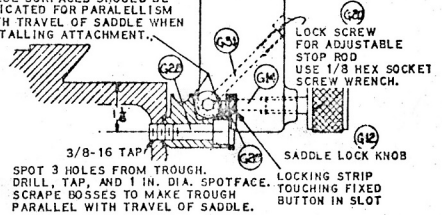
CAUTION: Make certain that the head is indicated properly so that the head is absolutely square with the table.



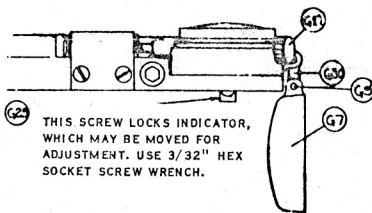
Sketch #9

SPOT AND 3/8-16 TAP & HOLES 3/4-IN DEEP ON BACK OF SADDLE FROM THIS BRACKET AFTER LOCATING STOP ROD BUSHING IN TROUGH.

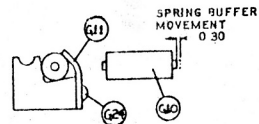
IMPORTANT: THESE SURFACES SHOULD BE INDICATED FOR PARALLELISM WITH TRAVEL OF SADDLE WHEN INSTALLING ATTACHMENT.



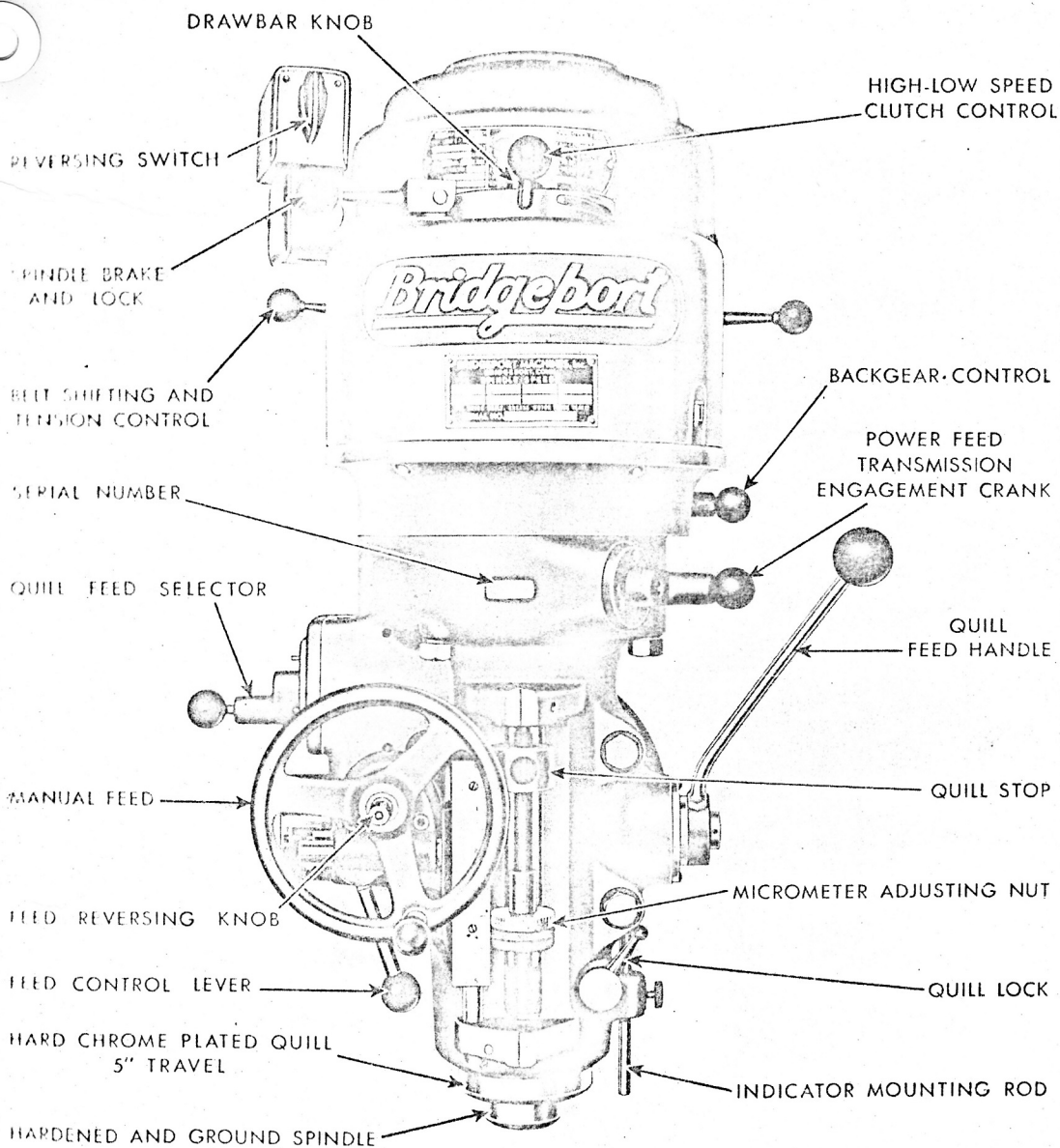
Sketch #10



Sketch #11



Sketch #12



Photograph 1

MOUNTING MOTOR ON ATTACHMENT

Place belt over bottom step of spindle pulley, then place motor in housing and lower to place, switch being on left hand side.

PLACING AND ADJUSTING BELTS

Release lock nut handle which is the handle on right of belt housing and also handle on left side and adjust V belts to proper driving tension, then tighten both motor clamping handles.

MACHINE IS READY TO OPERATE

If quill and head are to be used in stationary position, quill lock should be applied. Micrometer depth stop scale is graduated in 20ths of an inch, pitch is .050 and nut is graduated in thousands. By utilizing these graduations it is possible to work very accurately as far as different depths are concerned. Micrometer nut when in position is locked securely by tightening micrometer lock nut.

OPERATING INSTRUCTIONS

When tightening or loosening the draw bar it is necessary to lock the spindle. To accomplish this, use spindle brake and lock which is located at top of belt housing, turning it either to the right or left until it binds, then raise handle.

Drawbar has 7/16-20 right hand thread and should be tightened with normal amount of pressure using wrench furnished with machine. To loosen collet back off drawbar and if collet does not open immediately give knob on top of drawbar a slight tap. Spindle has non sticking taper and collets should release readily.


SPINDLE BRAKE

Lever can be moved in either direction to stop spindle; however, when locking spindle, lever should be moved to right or left and then raised.

CAUTION: Be certain that the spindle brake is released before starting the motor. This is important as the motor can be damaged if switch is left on with brake in locked position.

REVERSING SWITCH is used to obtain clockwise or counter clockwise rotation of spindle.

Note: Due to back gear construction, when machine is running in low speed range, spindle rotation is opposite to that of high speed range. Therefore forward on your reversing switch becomes reverse switch in low speed range.



HIGH LOW SPEED CLUTCH CONTROL is directly in front of motor. When knob is in position, as shown on picture, clutch is in high speed position. To put clutch into low speed position turn lever to the extreme right. It is necessary to rotate spindle while engaging high speed clutch. This can be accomplished by either turning spindle nose by hand or by turning drawbar knob using wrench, providing drawbar is pulled up tightly.

CAUTION: Do not shift clutch while motor is running.

Back gear control is used in conjunction with the high low speed clutch control above back gear control handle is stamped IN and OUT. When back gear control handle is in OUT position, which is the position furthest from face of machine, then HIGH LOW speed clutch control should be located as illustrated in photograph. With these controls in position as explained, head is set for operation in high speed range (660-2720 RPM). When back gear control lever moved to IN position and HIGH LOW speed clutch control moved to extreme right then the head is ready for operation in the low speed range (80-325 RPM).

POWER FEED TRANSMISSION ENGAGEMENT CRANK engages power feed worm gear. When lever is in position as indicated in photograph, the power feed worm gear is engaged. To disengage worm gear, pull knob out and crank handle in clockwise or down direction and move to opposite position.

Note: Crank cannot be swung around in counter clockwise direction; however no damage will occur if moved in this direction. To engage the worm a counter clockwise movement is required.

CAUTION: Power feed worm gear may be engaged when spindle is rotating, however it should be engaged gently to avoid damage to worm gear. The worm gear may be disengaged at any time.

IMPORTANT: It is recommended that the Power Feed worm gear be disengaged whenever the power feed is not required. This will avoid unnecessary wear on power feed worm gear.

QUILL FEED SELECTOR

This crank is used for selecting the three feeds; 1.5, 3 and 6 thousandths per revolution. It is shifted by pulling knob out and turning from one position to the other. Feeds are stamped on cover below indentation hole. Feed is more readily engaged when spindle is running.

FEED REVERSING KNOB

Position of this handle depends upon direction of spindle rotation. If boring with right hand cutting tools, pull feed handle towards operator until clutch becomes engaged.

Neutral position is between forward and reverse position. It is recommended that the handle be left in neutral position when not in use.

MANUAL FEED

Reversing clutch knob should be in neutral position and feed control lever engaged. Clock-wise rotation of handwheel moves quill down. The Manual Feed Handwheel and the quill feed handle may be disengaged by moving outward about 1/8".

Note: Feed control lever must be engaged in order to use manual feed controls. Manual Feed Handle and Handwheel may be taken off when not in use.

FEED CONTROL LEVER

Engages over-load clutch on pinion shaft when thrown to left and will stay engaged until either quill stop comes in contact with micrometer nut, forcing feed control lever to drop out automatically, or released manually by throwing lever to right.

Note: Feed Control Lever is carefully set at plant to throw out automatically when quill stop goes against micrometer nut or against safety pin in top. However, if this should go out of adjustment it may easily be brought back by regulating the screw located at bottom of tripping rod.

CAUTION: When adjusting the screw, check automatic throw off in both directions; that is with micrometer nut against the quill stop for down position and quill stop against throw out pin for up position.

QUILL FEED HANDLE

May be removed by simply pulling handle off end of shaft. It is recommended that handle be disengaged when using power feed.

QUILL STOP is used to disengage automatic feed in either direction as well as the setting point for working to given depths.

MICROMETER ADJUSTING NUT is used for setting of depths. Each graduation on nut indicates one thousand of depth, it reads directly to scale mounted along side of it. Depths may be obtained by setting micrometer nut in conjunction with quill stop.

QUILL LOCK

This is a positive quill lock to be used when quill is in stationary position such as milling operations. It is recommended that this lock be used whenever quill movement is not desired.

INDICATOR MOUNTING ROD is used for the fastening of an indicator.

LUBRICATION

Do not operate machine until properly lubricated. Lubrication of head is obtained by use of the drip feed method through two oil cups located at right side of belt housing. Oil cup should be filled every 4 hours of running time with light machine oil such as Socony D.T.E. light or equivalent.

POSITION OF OVERARM can be regulated by loosening two bolts on turret and pulling arm in or out to desired position.

CAUTION: Care should be taken to lock overarm securely after setting.

Note: It is recommended that on heavy milling work, head should be kept as close to face of turret as possible, as maximum rigidity is then obtained.

OPERATION

To operate in high speed range, move high low speed clutch control handle to extreme left then put back gear control in OUT position.

Then, if power feed is desired, crank power feed transmission engagement to IN position, (refer back to explanation of controls) and feed reversing knob should be pushed in for down feed and pulled out for up feed.

The next step is to throw feed control lever to left. Power feed is now in operation in high speed range. Feeds can be selected by cranking quill feed selector to desired feeds.

BACK GEAR OR LOW SPEED RANGE

Stop spindle, then move high low speed clutch control to extreme right and also back gear control handle over to IN position.

RECOMMENDATIONS

Use 2, 3, or 4 flute end mills. 8 flute end mills are usually not as satisfactory. When using shell or face mills standard cutter practice should be observed.

Power feed can be used for drilling up to 3/8" diameter drills. Use manual feed for drills larger than 3/8".

Overload clutch is set at factory to hold up to 200 lbs. DOWN pressure on quill, which will accommodate drills up to 3/8" diameter in mild tool steel.

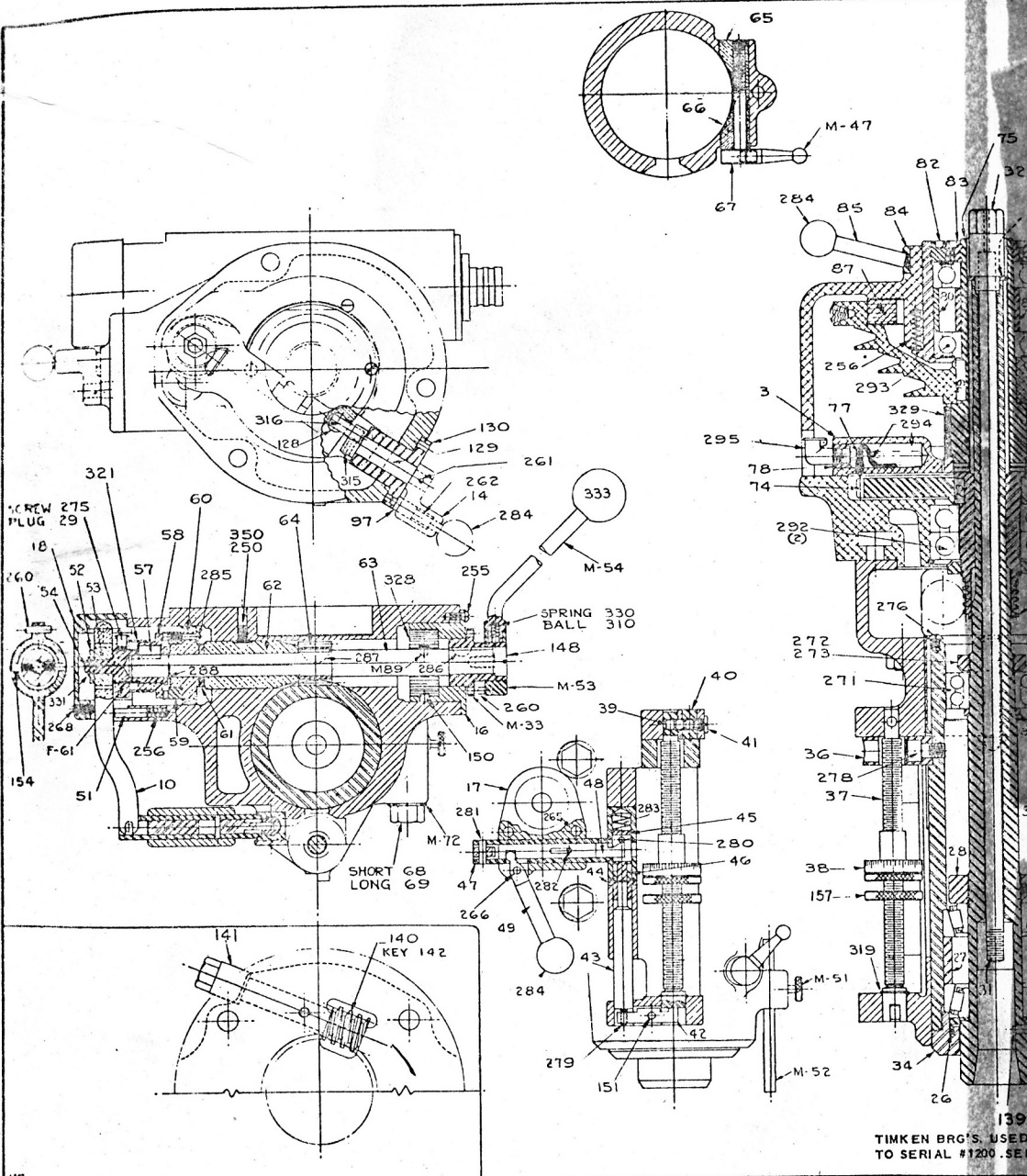
CAUTION: This clutch should not be tampered with in the field.

GENERAL SPEED RECOMMENDATIONS

Material to be Cut	Feet Per Minute		
	Rough Cut	Rough and Finish	Light and Finish Cut
Cast Iron-Soft-(Under 200 Brinnell)	70	80-90	120
Cast Iron-Med.-(200-300 Brinnell)	55	60-70	90
Cast Iron-Hard-(Over 200 Brinnell)	40	50-60	70
Steel (Chrome Nickel 40-45 Shore)	30	40	50
Steel (Stainless)	60	80	90
Steel (Low Carbon)	80	90	140
Steel (High Carbon)	40	50	70
Bronze (Medium)	90	120	150
Bronze (Hard)	65	90	130
Brass (Hard)	100	150	200
Copper	150	200	300
Duraluminum	400	----	600
Aluminum	600	----	1000

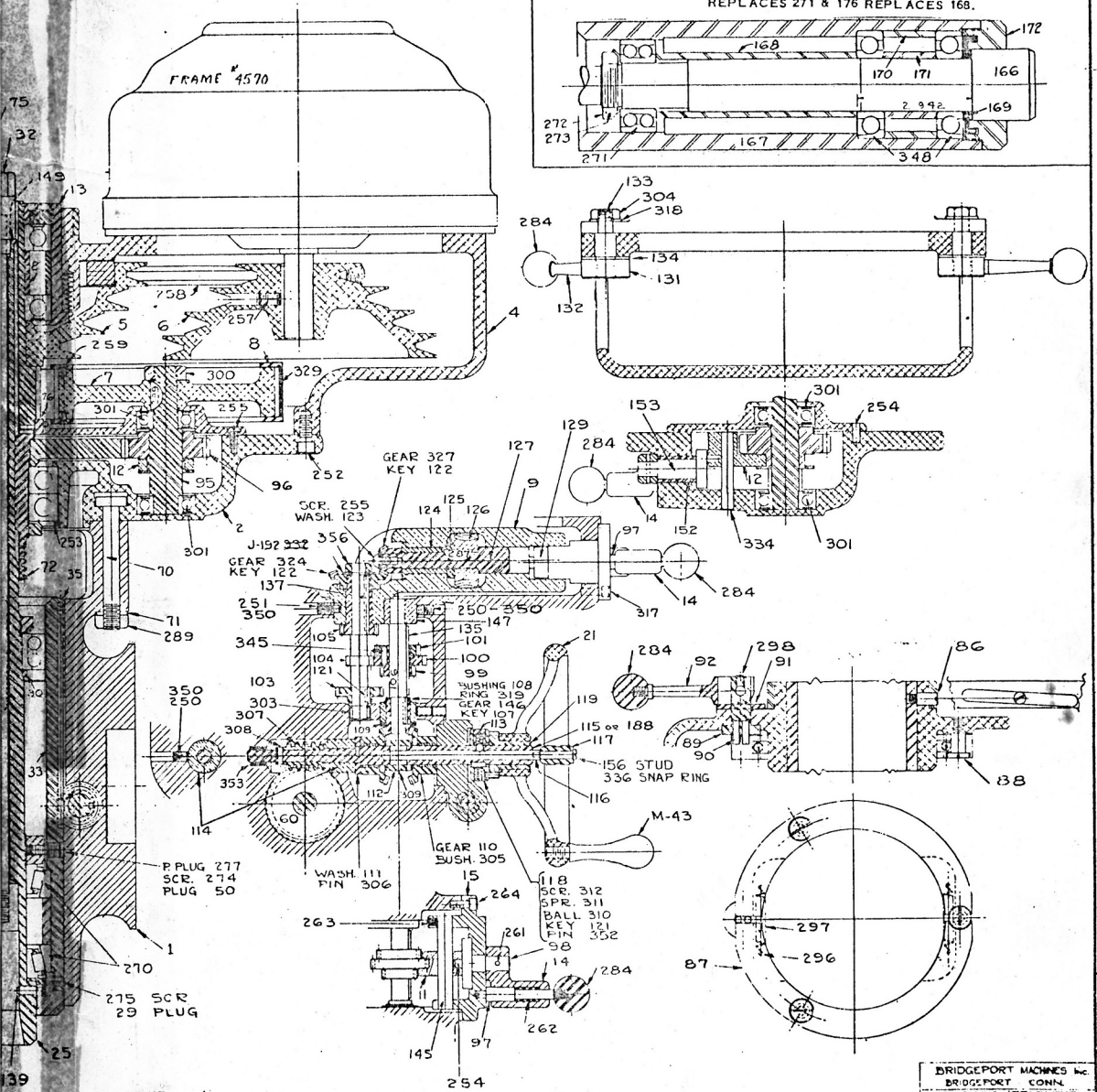
TABLE OF CUTTING SPEEDS AND FEEDS

Feet Per Minute	15	20	25	30	40	50	60	70	80	90	100
Diameter, Inches	Revolutions Per Minute										
1/16"	917	1222	1528	1833	2445	3056	3667	4278	4889	5500	6112
1/8"	458	611	764	917	1222	1528	1833	2139	2445	2750	3056
3/16"	306	407	509	611	815	1019	1222	1426	1630	1833	2037
1/4"	229	306	382	458	611	764	917	1070	1375	1375	1528
5/16"	183	244	306	367	489	611	733	856	978	1100	1222
3/8"	153	204	255	306	407	509	611	713	815	917	1019
7/16"	131	175	218	262	349	437	524	611	698	786	873
1/2"	115	153	191	229	306	382	458	535	611	688	764
5/8"	91	122	153	183	244	306	367	428	489	550	611
3/4"	76	102	127	153	204	255	306	357	407	458	509
7/8"	65	87	109	131	175	218	262	306	349	393	437
1"	57	76	95	115	153	191	229	267	306	344	382
1 1/8"	50	67	84	102	136	170	204	238	272	306	340
1 1/4"	45	61	76	91	122	153	183	214	244	275	306
1 3/8"	41	55	69	83	111	139	167	194	222	250	278
1 1/2"	38	50	63	76	102	127	153	178	204	229	255
1 5/8"	35	47	58	70	94	118	141	165	188	212	235
1 3/4"	32	43	54	65	87	109	131	153	175	196	218
1 7/8"	30	40	50	61	81	102	122	143	163	183	204
2"	28	38	47	57	76	95	115	134	153	172	191



139
 TIMKEN BRG'S. USED
 TO SERIAL #1200 .SEE

THIS DESIGN APPLIES TO ALL HEADS FROM SERIAL #1200 TO 1750. FOR 1750 & UP, 349 REPLACES 271 & 176 REPLACES 168.



139
 SED ON ALL HEADS UP
 SEE UPPER R. H. CORNER

BRIDGEPORT MACHINES INC.	
BRIDGEPORT CONN.	
THE MILLING ATTACHMENT	
1:25.46	J-200 M.W.
HALF SIZE	

Drawing 8

J PARTS LIST

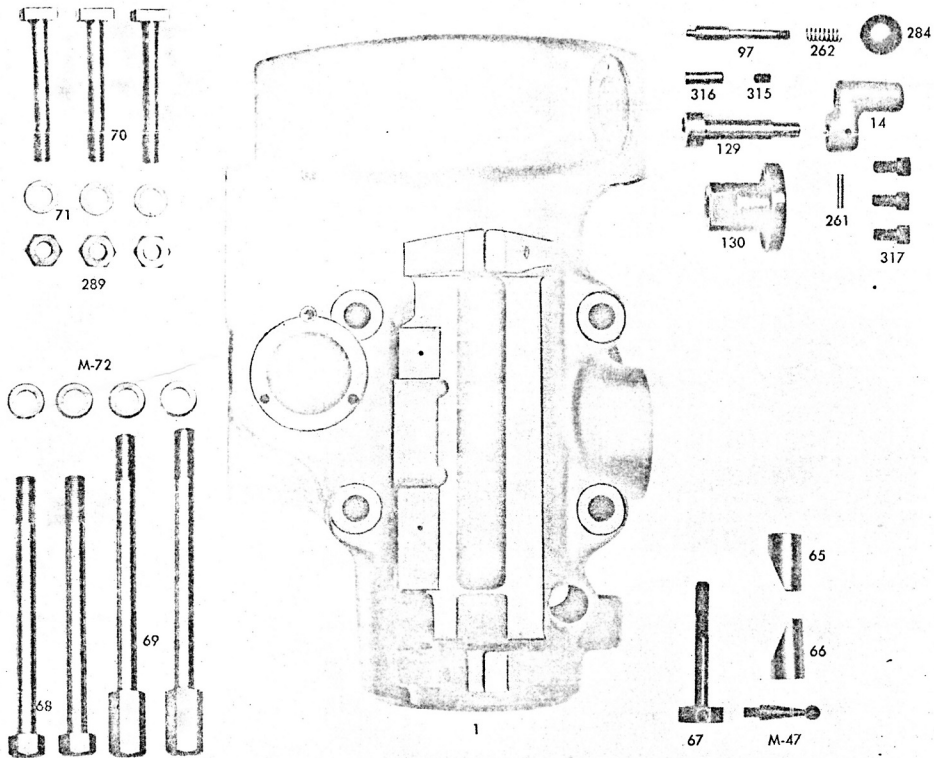
J-1	QUILL HOUSING	J-88	BRAKE RING SCREW
J-2	GEAR HOUSING	J-89	BRAKE LOCK STUD
J-3	GEAR HOUSING COVER	M-89	CLOCKSPRING STUD
J-4	BELT HOUSING	J-91	BRAKE LOCK WASHER
J-5	SPINDLE PULLEY	J-92	BRAKE LOCK & HANDLE
J-6	MOTOR PULLEY	M-92	3/16 x 3/4 LG. DOWEL
J-7	TIMING BELT PULLEY	J-93	BRAKE LOCK PIN
J-8	TIMING BELT PULLEY FLANGE	J-95	COUNTERSHAFT
J-9	WORM GEAR CRADLE	J-96	COUNTERSHAFT GEAR
J-10	OVERLOAD CLUTCH TRIP LEVER	J-97	GEARSHIFT PLUNGER
J-11	FEED GEAR SHIFTER FORK	J-98	CLUSTER GEAR SHIFTER
J-12	BACK GEAR SHIFTER FORK	J-99	FEED DRIVE CLUSTER
J-13	SPINDLE PULLEY BEARING SLEEVE	J-100	FEED DRIVE CLUSTER
J-14	SHIFT CRANK	J-101	FEED DRIVE GEAR
J-15	CLUSTER GEAR COVER	J-103	FEED DRIVE GEAR
J-16	SPRING COVER	J-104	CLUSTER GEAR IN
J-17	FEED TRIP BRACKET	J-105	FEED DRIVING GEAR
J-18	CLUTCH ARM COVER	J-106	CLUSTER GEAR SHIFTER
J-19	FLANGED HEAVY-DUTY OVERARM	J-107	CLUSTER GEAR KEY
J-20	MOTOR SWITCH BRACKET	J-108	BEVEL GEAR BEARING
J-21	HANDWHEEL	J-109	BEVEL GEAR THRU SHAFT
M-24	MICRO SCREW JAM NUT	J-110	FEED REVERSE BEVEL
J-25	SPINDLE FOR J-100 to J-100 TO J-1199 ONLY	J-111	FEED WORM SHAFT
J-26	SPINDLE DIRT SHIELD FOR J-100 TO J-1199 ONLY	J-112	FEED REVERSE CLUSTER
J-27	TIMKEN BEARING SPACER FOR J-100 TO J-1199 ONLY	J-113	HANDWHEEL CLUTCH
J-28	SPINDLE BEARING LOCKNUT FOR J-100 TO J-1199 ONLY	J-114	FEED WORM SHAFT
J-29	SPINDLE LOCKNUT BINDING	J-115	FEED WORM SHAFT
J-30	BEARING SHOULDER RING FOR J-100 TO J-1199 ONLY		SUPERCEDED BY PART
J-31	DRAWBAR FOR R-8 COLLET	J-116	REVERSE CLUTCH RING
J-32	DRAWBAR KNOB	J-117	REVERSE KNOB
J-33	QUILL FOR J-100 TO J-1199 ONLY	J-118	HANDWHEEL CLUTCH
M-33	PINION SHAFT HUB SLEEVE	J-119	HANDWHEEL BUSHING
J-34	QUILL NOSEPIECE FOR J-100 TO J-1199 ONLY	J-121	WORM SHAFT KEY
J-35	QUILL SKIRT	J-122	FEED DRIVING GEAR
J-36	QUILL STOP KNOB	J-123	BEVEL PINION WASHER
J-37	QUILL STOP MICRO SCREW	J-124	FEED WORM GEAR
J-38	MICROMETER NUT	J-125	WORM GEAR SPACER
J-39	REVERSE TRIP BALL LEVER	J-126	FEED DRIVE WORM
J-40	FEED REVERSE TRIP PLUNGER	J-127	FEED DRIVE WORM
J-41	REVERSE TRIP BALL LEVER SCREW	J-128	FEED ENGAGE PIN
J-42	FEED TRIP LEVER	J-129	WORM GEAR CRADLE
J-43	FEED TRIP PLUNGER	J-130	SHIFT SLEEVE
M-43	HANDWHEEL HANDLE	J-131	MOTOR LOCKNUT
J-44	TRIP PLUNGER BUSHING	J-132	MOTOR LOCKNUT
J-45	TRIP PLUNGER	J-133	MOTOR MOUNTING STUD
J-46	FEED TRIP PLUNGER BUSHING	J-134	MOTOR MOUNTING STUD
J-47	CAM ROD SLEEVE ASSEMBLY	J-135	CLUSTER GEAR KEY
M-47	LOCK HANDLE	J-137	CLUSTER GEAR KEY
J-48	CAM ROD	J-139	COLLET ALIGNING STUD
J-49	TRIP HANDLE	J-140	WORM GEAR
J-50	LOCKNUT BINDING PLUG FOR J-100 to J-1199 ONLY	J-141	NUT
J-51	OVERLOAD CLUTCH LEVER SPRING PLUNGER	J-142	KEY
M-51	INDICATOR ROD SCREW	J-143	1/4 - 20 x 3/8 SOCKET
J-52	OVERLOAD CLUTCH WASHER	J-144	GEAR
M-52	INDICATOR ROD	J-145	FEED SHIFT ROD
J-53	CLUTCH RING	J-146	FEED REVERSE BEVEL
M-53	PINION SHAFT HUB	J-147	CLUSTER GEAR SHIFTER
J-54	OVERLOAD CLUTCH SLEEVE	J-148	PINION SHAFT HUB S
M-54	PINION SHAFT HUB HANDLE	J-149	DRAWBAR WASHER
J-57	OVERLOAD CLUTCH SLEEVE KEY	J-150	OUTSIDE CLOCKSPRING
J-58	OVERLOAD CLUTCH	J-151	TRIP LEVER PIN
J-59	OVERLOAD CLUTCH RING	J-152	BACKGEAR SHIFT BALL
J-60	OVERLOAD CLUTCH WORM GEAR	J-153	BACKGEAR SHIFT BALL
J-61	PINION SHAFT WORM GEAR SPACER	J-154	CLUTCH RING PIN
F-61	OVERLOAD CLUTCH LOCKNUT	J-156	FEED REVERSE KNOB
J-62	QUILL PINION SHAFT BUSHING	J-157	QUILL MICRO STOP N
J-63	QUILL PINION SHAFT	J-159	KEY FOR #30 STD T
J-64	QUILL PINION	J-166	SPINDLE (SERIAL J-1
J-65	QUILL LOCK SLEEVE	J-167	QUILL (SERIAL J-120
J-66	QUILL LOCK SLEEVE	J-169	SPINDLE DIRT SHIELD
J-67	QUILL LOCK BOLT	J-170	BEARING SPACER - 1
J-68	QUILL HOUSING LOCKBOLT (SHORT) BEFORE J 9536 1/2 - 20 THREAD, AFTER J 9536 1/2 - 13 THREAD	J-171	BEARING SPACER - S
J-69	QUILL HOUSING LOCKBOLT (LONG) BEFORE J 9536 1/2 - 20 THREAD, AFTER J 9536 1/2 - 13 THREAD	J-172	NOSEPIECE
J-70	VERTICAL TEE BOLT	J-173	MOTOR SWITCH BRAC
J-71	VERTICAL TEE BOLT WASHER	J-176	SLEEVE FROM SER.
J-72	SPLINED GEAR HUB	J-188	FEED WORM SHAFT S
J-73	BULL GEAR KEY	J-190	1/2 - 13 SPECIAL HE
J-74	SPINDLE BULL GEAR	J-192	WASHER FOR J-104 S
J-75	SPINDLE PULLEY HUB	J-193	PLUG FOR 5/8 HOLE
J-76	PULLEY COLLAR	J-250	1/4 - 20 x 1/2 LG. SO
J-77	OILER TUBE	J-251	5/16 - 18 x 5/16 SOCK
J-78	OIL PLUG	J-252	5/16 - 18 x 5/8 LG. SO
J-79	SPINDLE PULLEY KEY	J-253	KOHINOOR #5000 - 3
J-80	UPPER BEARING SPACER (LARGE)	J-254	3/16 x 1/2 LG. DOWE
J-81	UPPER BEARING SPACER (SMALL)	J-255	#10-24 x 3/8 LG. R. P
J-82	BEARING SLEEVE LOCKNUT	J-256	COMPRESSION SPRING
J-83	UPPER BEARING LOCKNUT	J-257	5/16 - 18 x 1/2 LG. K
J-84	CAM RING	J-258	GILMER 4LS 245 V-B
J-85	SPINDLE CLUTCH LEVER	J-259	#6 - 32 x 3/8 LG. FL
J-86	SPINDLE CLUTCH CAM RING PIN	J-260	3/16 x 3/4 LG. DOWE
J-87	BRAKE BLOCK	J-261	1/8 x 7/8 LG. ROLL

W	J-262	COMPRESSION SPRING
D	J-263	10-32 x 1/4 LG. K.P. SET SCREW
ND	J-264	#10-24 x 1/2 LG. CAP SCREW
HER	J-265	1/4 - 20 x 1 LG. CAP SCREW
NDLE	J-267	#10-24 x 1 1/2 LG. CAP SCREW
VEL	J-268	1/4 - 20 x 1/2 SOCKET SET SCREWS
EAR	J-269	1/4 - 20 x 3/8 LG. SOCKET HEAD CAP SCREW
GER	J-270	#14137A CONE 14277 #0 PREC. ROLLER BRG. FOR J-100 to J-1199 ONLY
HIFT CRANK	J-271	N.D. #5206 BALL BEARING #5 PRECISION FOR J-100 TO J-1749 ONLY
TER GEAR	J-272	N-06 LOCK NUT
TER GEAR (CENTER)	J-273	W-06 LOCKWASHER
TER GEAR (UPPER)	J-274	5/16 - 18 x 5/16 SOCKET SET SCREW K.P.
R	J-275	1/4 - 20 x 1/4 LG. SOCKET SET SCREW
INPUT SHAFT	J-276	10-32 x 5/16 LG. RD. HD. SCREW
AR	J-277	1/8 ALLEN PIPE PLUG FOR J-100 TO J-1199 ONLY
LAFT	J-278	3/8 - 24 x 5/8 SCREW
EY	J-279	#6 - 32 x 3/8 SOCKET SET SCREW
RING	J-280	1/8 x 7/16 LG. ROLL PIN
UST SPACER	J-281	3/16 x 5/8 LG. DOWEL PIN
VEL GEAR	J-282	1/8 x 9/16 LG. ROLL PIN
T THRUST WASHER	J-283	COMPRESSION SPRING
LUTCH	J-284	BLACK PLASTIC BALL HANDLES 1" DIM.
TCH SPRING SCREW	J-285	8-32 x 5/8 LG. RD. HD. SCREW
T BUSHING	J-286	#3 WOODRUFF KEY
T FOR J-100 TO J-5499 ONLY.	J-287	#7 WOODRUFF KEY
PART #J-188	J-288	#5108 - 59 KOHINOOR SNAP RING
ROD	J-289	7/16 - 14 HEX NUT HARDENED (AMERICAN STD. REGULAR)
TCH	J-290	N-08 SPECIAL 5/16 THICK BEARING LOCKNUT
ING	J-291	W-08 LOCKWASHER
AR KEY	J-292	FAFNIR MM208 KDB - DF OR NORMA HOFFMAN 208 S-455 BEARINGS
ASHER	J-293	FAFNIR RMM207 KD OR NORMA HOFFMAN 207 P S-456 BEARINGS
SHAFT SLEEVE	J-294	WICK 1/8 O.D.
ER	J-295	GITS OIL CUP #1207
A GEAR	J-296	3/32 x 5/8 LG. ROLL PIN
A GEAR SHAFT	J-297	W. B. JONES #167 - A EXT. SPRING (LINDQUIST)
LE THROW-OUT	J-298	10-32 x 1/4 LG. SOCKET SET SCREWS
HANDLE	J-299	#9 WOODRUFF KEY
STUDS	J-300	5/8 - 18 HEX JAM NUT
STUD WASHERS	J-301	ND #99503 DOUBLE SEAL BEARING ABEC 3
EY	J-303	B-66 TORRINGTON NEEDLE BEARING
EY	J-304	3/8 - 24 HEX JAM NUT
D SCREW	J-305	A-672-4 OILITE BEARING
ET SET SCREW	J-306	3/32 x 5/16 LG. PIN
VEL PINION	J-307	BOSTON WORM #HLVH
HAFT UPPER BEARING	J-308	.110 DIA. x 7/16 LG. PIN
B SCREW	J-309	3/32 x 3/4 LG. ROLL PIN
R	J-310	3/16 STEEL BALL
PRING PIN	J-311	COMPRESSION SPRING
BUSHING	J-312	1/4 - 20 x 5/16 LG. SET SCREW
CRANK	J-313	USE J-287
NOB STUD	J-315	#10-24 x 3/8 LG. K.P. SET SCREW
P NUT	J-316	5/16 x 7/8 LG. DOWEL PIN
TAPER SPINDLE	J-317	USE J-264
J-1200 AND UP)	J-318	3/8 LOCKWASHER
(1200 AND UP)	J-319	5108 - 62 WALDES SNAP RING
WELD	J-321	SAFETY CLUTCH SPRING
- LARGE FROM J - 1750	J-322	MICROMETER SCALE
- SMALL	J-323	6-32 x 1/4 LG. RD. HD. SCREW
RACKET	J-324	FEED REVERSE BEVEL GEAR
R. J-1750	J-326	BILLING #1166 WRENCH
T STARTED WITH SER. NO. 5500	J-327	STEEL PINION
HEX NUT OPTIONAL EQUIP.	J-328	CLOCK SPRING 1" x .020" x 42"
4 SHAFT OPTIONAL EQUIP.	J-329	TIMING BELTS 1 1/4" WIDE
BLE	J-330	COMPRESSION SPRING
OCKET SET SCREW KP	J-331	5108 - 37 KOHINOOR SNAP RING
OCKET SET SCREW	J-332	3/8 STAR WASHER
OCKET CAP SCREWS	J-333	BLACK PLASTIC BALL HANDLES 1 3/8 DIM. SAME AS M-54
315 SNAP RING	J-334	5/16 x 2" LG. DOWEL PIN
WEL PINS	J-335	#8 SPLIT LOCKWASHER
R. HEAD SCREW	J-336	SNAP RING 5100-25
RING	J-337	1/8 x 1/2 LG. ROLL PIN
K.P. SOCKET SET SCREWS	J-338	#2002 GITS OIL CUP
-BELT	J-339	SPINDLE SPEED PLATE
FLAT HEAD SCREWS	J-340	OPERATING INSTRUCTION PLATE
WEL PIN	J-345	10-32 x 3/8 SOCKET SET SCREWS
L PIN	J-348	FAFNIR MM 207 Wl - CR - DB. SPEC. E5227. START AT J-1200
	J-349	FAFNIR M206 K SPEC. E 6578 OR NORMA HOFFMAN 206 S-685 A START AT SER. #J-1750
	J-350	1/4 - 20 MOCK-IT LOCKSCREW
	J-351	5/16 - 18 MOCK-IT LOCKSCREW
	J-352	1/8 x 3/4 LG. DOWEL PINS
	J-353	BUSHING
	J-354	OPERATING INSTRUCTION PLATE
	J-356	3/8 - 24 FLOPLOC STOP & LOCKNUT
	J-358	6-32 x 1/4 SOCKET SET SCREW K.P. STARTED WITH SER. #J-8300
	J-359	1/4 - 20 JAM - NUT
	J-362	5/16 - 18 JAM NUT
	J-363	5/16 EXTERNAL LOCK WASHER
	J-364	TRUST BEARING (DISCONTINUED)
	J-365	1/4 x 3/4 ROLL PINS

J PARTS LIST

- J-1 QUILL HOUSING
- J-2 GEAR HOUSING
- J-3 GEAR HOUSING COVER
- J-4 BELT HOUSING
- J-5 SPINDLE PULLEY
- J-6 MOTOR PULLEY
- J-7 TIMING BELT PULLEY
- J-8 TIMING BELT PULLEY FLANGE
- J-9 WORM GEAR CRADLE
- J-10 OVERLOAD CLUTCH TRIP LEVER
- J-11 FEED GEAR SHIFTER FORK
- J-12 BACK GEAR SHIFTER FORK
- J-13 SPINDLE PULLEY BEARING SLEEVE
- J-14 SHIFT CRANK
- J-15 CLUSTER GEAR COVER
- J-16 SPRING COVER
- J-17 FEED TRIP BRACKET
- J-18 CLUTCH ARM COVER
- J-19 FLANGED HEAVY-DUTY OVERARM
- J-20 MOTOR SWITCH BRACKET
- J-21 HANDWHEEL
- M-24 MICRO SCREW JAM NUT
- J-25 SPINDLE FOR J-100 TO J-1199 ONLY
- J-26 SPINDLE DIRT SHIELD FOR J-100 TO J-1199 ONLY
- J-27 TIMKEN BEARING SPACER FOR J-100 TO J-1199 ONLY
- J-28 SPINDLE BEARING LOCKNUT FOR J-100 TO J-1199 ONLY
- J-29 SPINDLE LOCKNUT BINDING
- J-30 BEARING SHOULDER RING FOR J-100 TO J-1199 ONLY
- J-31 DRAWBAR FOR R-8 COLLET
- J-32 DRAWBAR KNOB
- J-33 QUILL FOR J-100 TO J-1199 ONLY
- M-33 PINION SHAFT HUB SLEEVE
- J-34 QUILL NOSEPIECE FOR J-100 TO J-1199 ONLY
- J-35 QUILL SKIRT
- J-36 QUILL STOP KNOB
- J-37 QUILL STOP MICRO SCREW
- J-38 MICROMETER NUT
- J-39 REVERSE TRIP BALL LEVER
- J-40 FEED REVERSE TRIP PLUNGER
- J-41 REVERSE TRIP BALL LEVER SCREW
- J-42 FEED TRIP LEVER
- J-43 FEED TRIP PLUNGER
- M-43 HANDWHEEL HANDLE
- J-44 TRIP PLUNGER BUSHING
- J-45 TRIP PLUNGER
- J-46 FEED TRIP PLUNGER BUSHING
- J-47 CAM ROD SLEEVE ASSEMBLY
- M-47 LOCK HANDLE
- J-48 CAM ROD
- J-49 TRIP HANDLE
- J-50 LOCKNUT BINDING PLUG FOR J-100 TO J-1199 ONLY
- J-51 OVERLOAD CLUTCH LEVER SPRING PLUNGER
- M-51 INDICATOR ROD SCREW
- J-52 OVERLOAD CLUTCH WASHER
- M-52 INDICATOR ROD
- J-53 CLUTCH RING
- M-53 PINION SHAFT HUB
- J-54 OVERLOAD CLUTCH SLEEVE
- M-54 PINION SHAFT HUB HANDLE
- J-57 OVERLOAD CLUTCH SLEEVE KEY
- J-58 OVERLOAD CLUTCH
- J-59 OVERLOAD CLUTCH RING
- J-60 OVERLOAD CLUTCH WORM GEAR
- J-61 PINION SHAFT WORM GEAR SPACER
- F-61 OVERLOAD CLUTCH LOCKNUT
- J-62 QUILL PINION SHAFT BUSHING
- J-63 QUILL PINION SHAFT
- J-64 QUILL PINION
- J-65 QUILL LOCK SLEEVE
- J-66 QUILL LOCK SLEEVE
- J-67 QUILL LOCK BOLT
- J-68 QUILL HOUSING LOCKBOLT (SHORT) BEFORE J 9536 1/2 - 20 THREAD, AFTER J 9536 1/2 - 13 THREAD
- J-69 QUILL HOUSING LOCKBOLT (LONG) BEFORE J 9536 1/2 - 20 THREAD, AFTER J 9536 1/2 - 13 THREAD
- J-70 VERTICAL TEE BOLT
- J-71 VERTICAL TEE BOLT WASHER
- J-72 SPLINED GEAR HUB
- J-73 BULL GEAR KEY
- J-74 SPINDLE BULL GEAR
- J-75 SPINDLE PULLEY HUB
- J-76 PULLEY COLLAR
- J-77 OILER TUBE
- J-78 OIL PLUG
- J-79 SPINDLE PULLEY KEY
- J-80 UPPER BEARING SPACER (LARGE)
- J-81 UPPER BEARING SPACER (SMALL)
- J-82 BEARING SLEEVE LOCKNUT
- J-83 UPPER BEARING LOCKNUT
- J-84 CAM RING
- J-85 SPINDLE CLUTCH LEVER
- J-86 SPINDLE CLUTCH CAM RING PIN
- J-87 BRAKE BLOCK
- J-88 BRAKE RING SCREW
- J-89 BRAKE LOCK STUD
- M-89 CLOCKSPrING STUD
- J-91 BRAKE LOCK WASHER
- J-92 BRAKE LOCK & HANDLE
- M-92 3/16 x 3/4 LG. DOWEL
- J-93 BRAKE LOCK PIN
- J-95 COUNTERSHAFT
- J-96 COUNTERSHAFT GEAR
- J-97 GEARSHIFT PLUNGER
- J-98 CLUSTER GEAR SHIFT CRANK
- J-99 FEED DRIVE CLUSTER GEAR
- J-100 FEED DRIVE CLUSTER GEAR (CENTER)
- J-101 FEED DRIVE CLUSTER GEAR (UPPER)
- J-103 FEED DRIVE GEAR
- J-104 CLUSTER GEAR INPUT SHAFT
- J-105 FEED DRIVING GEAR
- J-106 CLUSTER GEAR SHAFT
- J-107 CLUSTER GEAR KEY
- J-108 BEVEL GEAR BEARING
- J-109 BEVEL GEAR THRUST SPACER
- J-110 FEED REVERSE BEVEL GEAR
- J-111 FEED WORM SHAFT THRUST WASHER
- J-112 FEED REVERSE CLUTCH
- J-113 HANDWHEEL CLUTCH SPRING SCREW
- J-114 FEED WORM SHAFT BUSHING
- J-115 FEED WORM SHAFT FOR J-100 TO J-5499 ONLY. SUPERCEDED BY IPART #J-188
- J-116 REVERSE CLUTCH ROD
- J-117 REVERSE KNOB
- J-118 HANDWHEEL CLUTCH
- J-119 HANDWHEEL BUSHING
- J-121 WORM SHAFT KEY
- J-122 FEED DRIVING GEAR KEY
- J-123 BEVEL PINION WASHER
- J-124 FEED WORM GEAR SHAFT SLEEVE
- J-125 WORM GEAR SPACER
- J-126 FEED DRIVE WORM GEAR
- J-127 FEED DRIVE WORM GEAR SHAFT
- J-128 FEED ENGAGE PIN
- J-129 WORM GEAR CRADLE THROW-OUT
- J-130 SHIFT SLEEVE
- J-131 MOTOR LOCKNUT
- J-132 MOTOR LOCKNUT HANDLE
- J-133 MOTOR MOUNTING STUDS
- J-134 MOTOR MOUNTING STUD WASHERS
- J-135 CLUSTER GEAR KEY
- J-137 CLUSTER GEAR KEY
- J-139 COLLET ALIGNING SCREW
- J-140 WORM GEAR
- J-141 NUT
- J-142 KEY
- J-143 1/4 20 x 3/8 SOCKET SET SCREW
- J-144 GEAR
- J-145 FEED SHIFT ROD
- J-146 FEED REVERSE BEVEL PINION
- J-147 CLUSTER GEAR SHAFT UPPER BEARING
- J-148 PINION SHAFT HUB SCREW
- J-149 DRAWBAR WASHER
- J-150 OUTSIDE CLOCKSPrING PIN
- J-151 TRIP LEVER PIN
- J-152 BACKGEAR SHIFT BUSHING
- J-153 BACKGEAR SHIFT CRANK
- J-154 CLUTCH RING PIN
- J-156 FEED REVERSE KNOB STUD
- J-157 QUILL MICRO STOP NUT
- J-159 KEY FOR #30 STD TAPER SPINDLE
- J-166 SPINDLE (SERIAL J-1200 AND UP)
- J-167 QUILL (SERIAL J-1200 AND UP)
- J-169 SPINDLE DIRT SHIELD
- J-170 BEARING SPACER - LARGE FROM J - 1750
- J-171 BEARING SPACER - SMALL
- J-172 NOSEPIECE
- J-173 MOTOR SWITCH BRACKET
- J-176 SLEEVE FROM SER. J-1750
- J-188 FEED WORM SHAFT STARTED WITH SER. NO. 5500
- J-190 1/2 - 13 SPECIAL HEX NUT OPTIONAL EQUIP.
- J-192 WASHER FOR J-104 SHAFT OPTIONAL EQUIP.
- J-193 PLUG FOR 5/8 HOLE
- J-250 1/4 - 20 x 1/2 LG. SOCKET SET SCREW KP
- J-251 5/16 - 18 x 5/16 SOCKET SET SCREW
- J-252 5/16 - 18 x 5/8 LG. SOCKET CAP SCREWS
- J-253 KOHINOOR #5000 - 315 SNAP RING
- J-254 3/16 x 1/2 LG. DOWEL PINS
- J-255 #10-24 x 3/8 LG. R. HEAD SCREW
- J-256 COMPRESSION SPRING
- J-257 5/16 - 18 x 1/2 LG. K.P. SOCKET SET SCREWS
- J-258 GILMER 4LS 345 V-BELT
- J-259 #6 - 32 x 3/8 LG. FLAT HEAD SCREWS
- J-260 3/16 x 3/4 LG. DOWEL PIN
- J-261 1/8 x 7/8 LG. ROLL PIN
- J-262 COMPRESSION SPRING
- J-263 10 - 32 x 1/4 LG. K.P. SET SCREW
- J-264 #10 - 24 x 1/2 LG. CAP SCREW
- J-265 1/4 - 20 x 1 LG. CAP SCREW
- J-267 #10 - 24 x 1 1/2 LG. CAP SCREW
- J-268 1/4 - 20 x 1/2 SOCKET SET SCREWS
- J-269 1/4 - 20 x 3/8 LG. SOCKET HEAD CAP SCREW
- J-270 #14137A CONE 14277 #0 PREC. ROLLER BRG. FOR J-100 TO J-1199 ONLY
- J-271 N.D. #5206 BALL BEARING #5 PRECISION FOR J-100 TO J-1749 ONLY
- J-272 N-06 LOCK NUT
- J-273 W-06 LOCKWASHER
- J-274 5/16 - 18 x 5/16 SOCKET SET SCREW K.P.
- J-275 1/4 - 20 x 1/4 LG. SOCKET SET SCREW
- J-276 10-32 x 5/16 LG. RD. HD. SCREW
- J-277 1/8 ALLEN PIPE PLUG FOR J-100 TO J-1199 ONLY
- J-278 3/8 - 24 x 5/8 SCREW
- J-279 #6 - 32 x 3/8 SOCKET SET SCREW
- J-280 1/8 x 7/16 LG. ROLL PIN
- J-281 3/16 x 5/8 LG. DOWEL PIN
- J-282 1/8 x 9/16 LG. ROLL PIN
- J-283 COMPRESSION SPRING
- J-284 BLACK PLASTIC BALL HANDLES 1" DIM.
- J-285 8-32 x 5/8 LG. RD. HD. SCREW
- J-286 #3 WOODRUFF KEY
- J-287 #7 WOODRUFF KEY
- J-288 #5108 - 59 KOHINOOR SNAP RING
- J-289 7/16 - 14 HEX NUT HARDENED (AMERICAN STD. REGULAR)
- J-290 N-08 SPECIAL 5/16 THICK BEARING LOCKNUT
- J-291 W-08 LOCKWASHER
- J-292 FAFNIR MM208 KDB - DF OR NORMA HOFFMAN 208 S-455 BEARINGS
- J-293 FAFNIR RMM207 KD OR NORMA HOFFMAN 207 P S-456 BEARINGS
- J-294 WICK 1/8 O.D.
- J-295 GITS OIL CUP #1207
- J-296 3/32 x 5/8 LG. ROLL PIN
- J-297 W. B. JONES #167 - A EXT. SPRING (LINDQUIST)
- J-298 10 - 32 x 1/4 LG. SOCKET SET SCREWS
- J-299 #9 WOODRUFF KEY
- J-300 5/8 - 18 HEX JAM NUT
- J-301 ND #99503 DOUBLE SEAL BEARING ABEC 3
- J-303 B-66 TORRINGTON NEEDLE BEARING
- J-304 3/8 - 24 HEX JAM NUT
- J-305 A-672-4 OILITE BEARING
- J-306 3/32 x 5/16 LG. PIN
- J-307 BOSTON WORM #HLVH
- J-308 .110 DIA. x 7/16 LG. PIN
- J-309 3/32 x 3/4 LG. ROLL PIN
- J-310 3/16 STEEL BALL
- J-311 COMPRESSION SPRING
- J-312 1/4 - 20 x 5/16 LG. SET SCREW
- J-313 USE J-287
- J-315 #10 - 24 x 3/8 LG. K.P. SET SCREW
- J-316 5/16 x 7/8 LG. DOWEL PIN
- J-317 USE J-264
- J-318 3/8 LOCKWASHER
- J-319 5108 - 62 WALDES SNAP RING
- J-321 SAFETY CLUTCH SPRING
- J-322 MICROMETER SCALE
- J-323 6-32 x 1/4 LG. RD. HD. SCREW
- J-324 FEED REVERSE BEVEL GEAR
- J-326 BILLING #1166 WRENCH
- J-327 STEEL PINION
- J-328 CLOCK SPRING 1" x .020" x 42"
- J-329 TIMING BELTS 1 1/4" WIDE
- J-330 COMPRESSION SPRING
- J-331 5108 - 37 KOHINOOR SNAP RING
- J-332 3/8 STAR WASHER
- J-333 BLACK PLASTIC BALL HANDLES 1 3/8 DIM. SAME AS M - 54
- J-334 5/16 x 2" LG. DOWEL PIN
- J-335 #8 SPLIT LOCKWASHER
- J-336 SNAP RING 5100 - 25
- J-337 1/8 x 1/2 LG. ROLL PIN
- J-338 #2002 GITS OIL CUP
- J-339 SPINDLE SPEED PLATE
- J-340 OPERATING INSTRUCTION PLATE
- J-345 10 - 32 x 3/8 SOCKET SET SCREWS
- J-348 FAFNIR MM 207 WI - CR - DB. SPEC. E5227. START AT J-1200
- J-349 FAFNIR M206 K SPEC. E 6578 OR NORMA HOFFMAN 206 S-685 A START AT SER. #J-1750
- J-350 1/4 - 20 MOCK-IT LOCKSCREW
- J-351 5/16 - 18 MOCK-IT LOCKSCREW
- J-352 1/8 x 3/4 LG. DOWEL PINS
- J-353 BUSHING
- J-354 OPERATING INSTRUCTION PLATE
- J-356 3/8 - 24 FLOPLOC STOP & LOCKNUT
- J-358 6 - 32 x 1/4 SOCKET SET SCREW K.P. STARTED WITH SER. #J-8300
- J-359 1/4 - 20 JAM - NUT
- J-362 5/16 - 18 JAM NUT
- J-363 5/16 EXTERNAL LOCK WASHER
- J-364 TRUST BEARING (DISCONTINUED)
- J-365 1/4 x 3/4 ROLL PINS

Quill Housing Unit - PARTS LIST

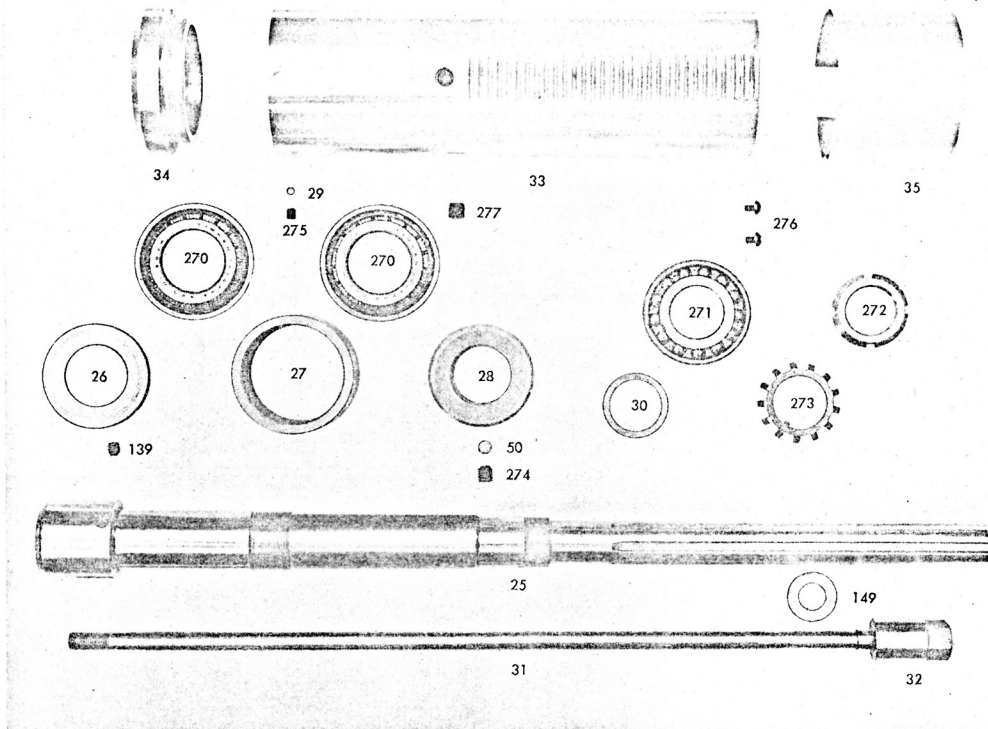


Photograph 2

1	Quill Housing	97	Gearshift Plunger
14	Shift Crank	129	Worm Gear Cradle Throw-out
M-47	Lock Handle	130	Shift Sleeve
65	Quill Lock Sleeve (Tapped)	261	1/8 x 7/8 lg. Roll Pin
66	Quill Lock Sleeve	262	Compression Spring
67	Quill Lock Bolt	284	1/4-20 Bakelite Ball Handle
68	Quill Housing Lockbolt	289	7/16-14 Hex Nut Hardened (American Std. regular)
69	Quill Housing Lockbolt (Long)	315	# 10-24 x 3/8 lg. K. P. Set Screw
70	Vertical Tee Bolt	316	5/16 x 7/8 lg. Dowel Pin
71	Vertical Tee Bolt Washer	317	# 10-24 x 1/2 lg. Cap Screws (use 264)
M-72	Quill Housing Lock Bolt Washer		

Quill Unit - PARTS LIST

UP TO SERIAL NO. J1200

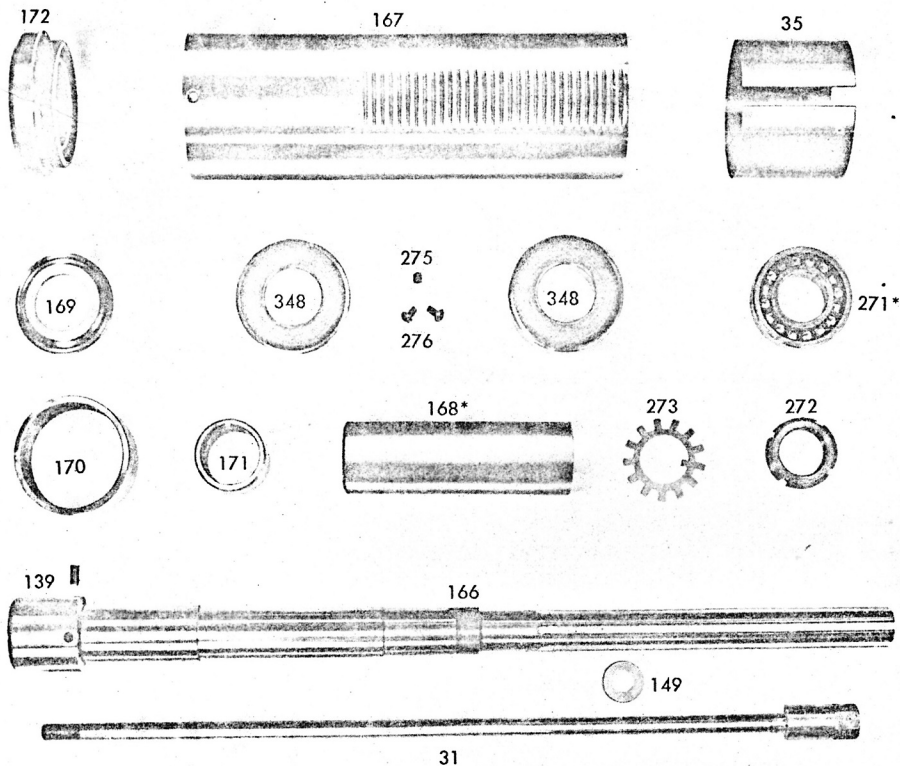


Photograph 3

- | | | | |
|----|------------------------------|-----|-----------------------------------|
| 25 | Spindle | 50 | Locknut Binding Plug |
| 26 | Spindle Dirt Shield | 139 | Collet Aligning Screw |
| 27 | Timken Brg. Spacer | 149 | Drawbar Washer |
| 28 | Spindle Br. Locknut | 270 | #0 Precision Brg. |
| 29 | Spindle Locknut Binding Plug | 271 | N.D. #5206 Ball Brg. #5 Precision |
| 30 | Brg. Shoulder Ring | 272 | N-06 Locknut |
| 31 | Drawbar for R-8 collet | 273 | W-06 Lockwasher |
| 32 | Drawbar Knob | 274 | 3/8-16 x 3/8 K.P. Set Screw |
| 33 | Quill | 275 | 1/4-20 x 1/4 lg. Set Screw |
| 34 | Quill Nosepiece | 276 | 10-32 x 5/16 lg. Rd. Hd. Screw |
| 35 | Quill Skirt | 277 | 1/8 Allen Pip Plug |

Quill Unit - PARTS LIST

SERIAL No. J1200 AND UP

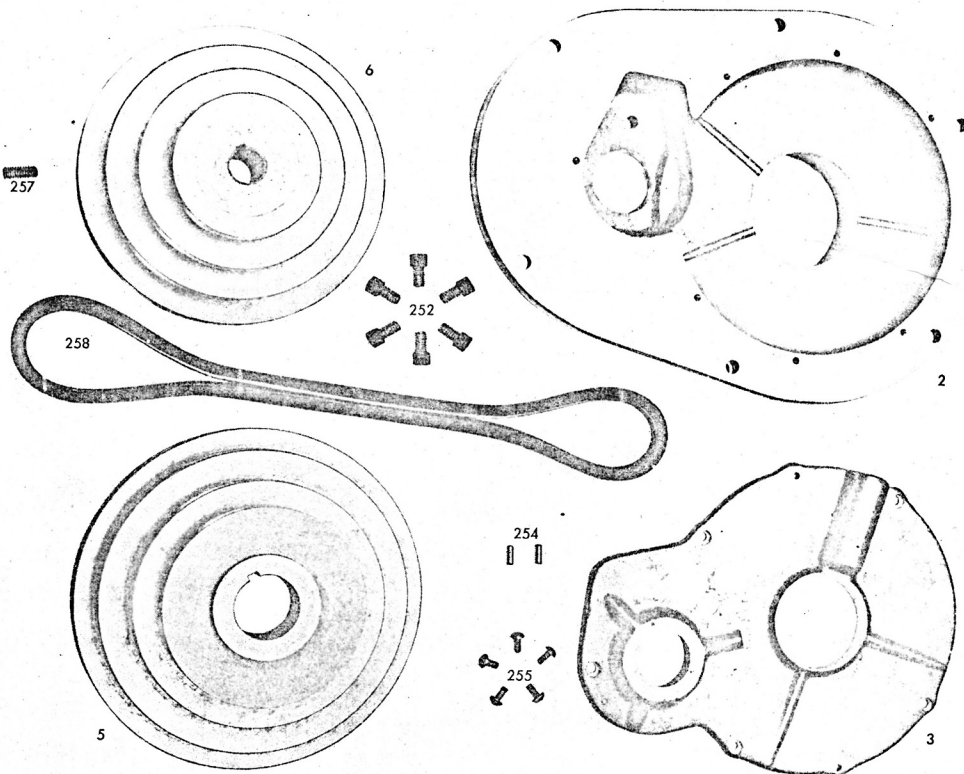


Photograph 4

166	Spindle	139	Collet Aligning Screw
169	Spindle Dirt Shield	149	Drawbar Washer
170, 171, 168*	Brg. Spacer	348*	MM-207 W1 #5 Precision
31	Drawbar for R-8 collet	271*	N.D. #5206 Ball Brg. #5 Precision
32	Drawbar Knob	272	N-06 Locknut
167	Quill	273	W-06 Lockwasher
172	Quill Nosepiece	275	1/4-20 x 1/4 lg. Set Screw
35	Quill Skirt	276	10-32 x 5/16 lg. Rd. Hd. Screw

*For Serial No. 1750 and up
 #349 replaces #271 and
 #176 replaces #168

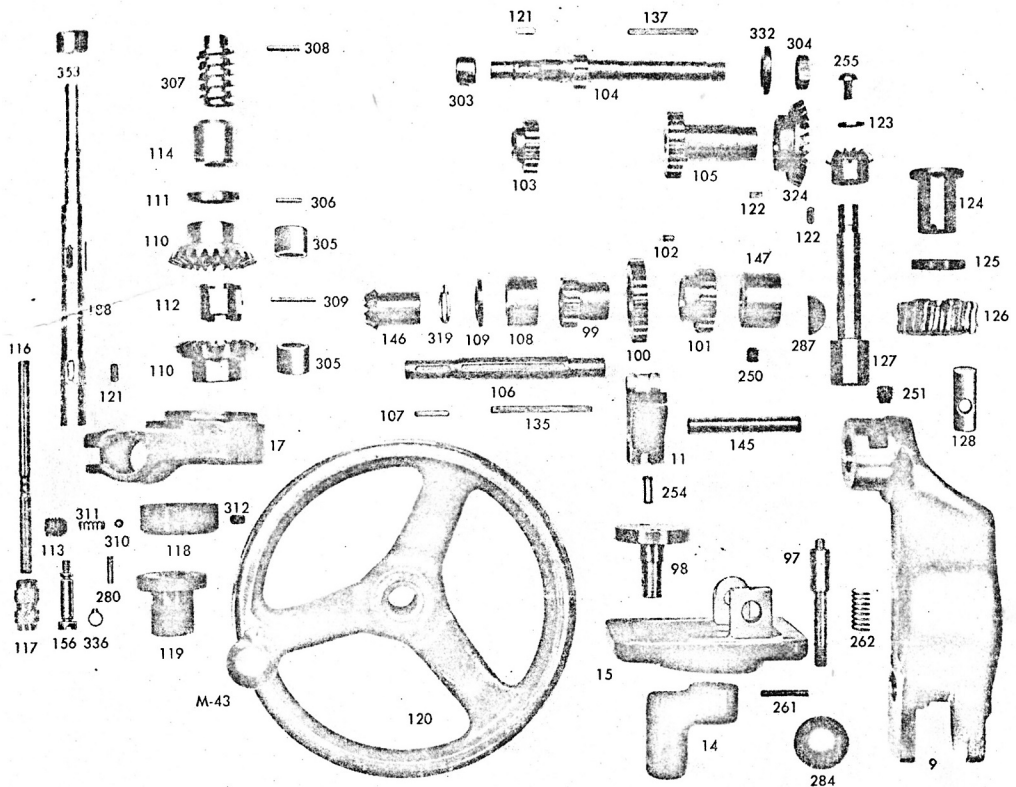
V Belt Unit - PARTS LIST



Photograph 5

- | | | | |
|-----|-------------------------------------|-----|----------------------------------|
| 2 | Gear Housing | 254 | 3/16 x 1/2 lg. Dowel Pins |
| 3 | Gear Housing Cover | 255 | #10-24 x 3/8 lg. Rd. Head Screws |
| 5 | Spindle Pulley | 257 | 5/16-18 x 1/2 lg. K.P. Set Screw |
| 6 | Motor Pulley | 258 | Gilmer #3345 Vee Belt |
| 252 | 5/16-18 x 5/8 lg. Socket Cap Screws | | |

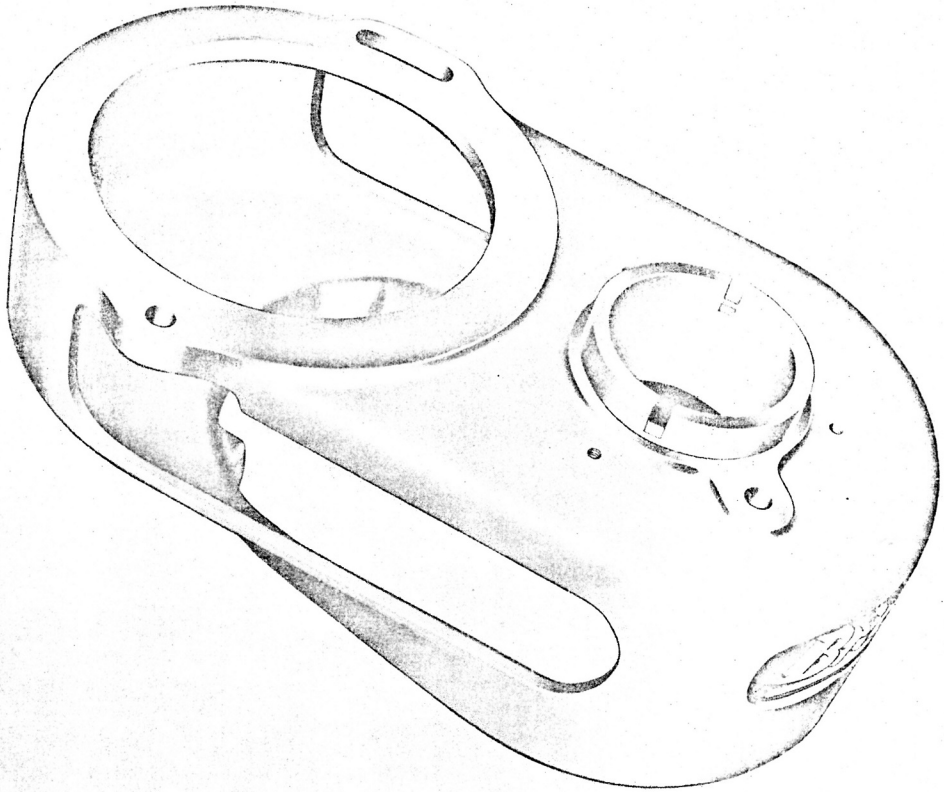
Feed Transmission Unit - PARTS LIST



Photograph 8

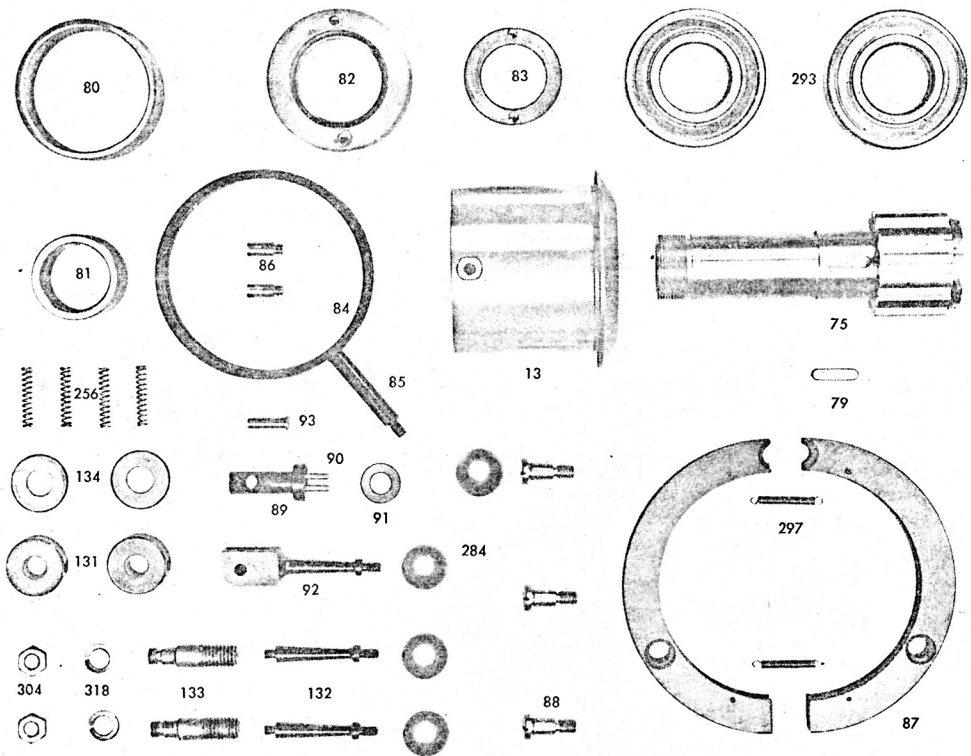
- | | | | | | |
|------|--|-----|---------------------------------|-----|----------------------------------|
| 9 | Worm Gear Cradle | 114 | Feed Worm Shaft Bushing | 251 | Set Screw |
| 11 | Feed Gear Shifter Fork | 116 | Reverse Clutch Rod | 254 | 3/16 x 1/2 lg. Dowel Pins |
| 14 | Shift Crank | 117 | Feed Reverse Knob | 255 | #10-24 x 3/8 lg. rd. Head Screws |
| 15 | Cluster Gear Cover | 118 | Handwheel Clutch | 261 | 1/8 x 7/8 lg. Roll Pin |
| 17 | Feed Trip Bracket | 119 | Handwheel Bushing | 262 | Compression Spring |
| M-43 | Handwheel Handle | 120 | Handwheel (use M 42 Casting) | 280 | 1/8 x 7/16 lg. Dowel Pin |
| 97 | Gearshift Plunger | 121 | Worm Shaft Key | 284 | 1/4-20 Bakelite Ball Handle |
| 98 | Cluster Gear Shift Crank | 122 | Feed Driving Gear Key | 287 | #7 Woodruff Key |
| 99 | Feed Drive Cluster Gear | 123 | Bevel Pinion Washer | 303 | B-66 Torrington Needle Brg. |
| 100 | Feed Drive Cluster Gear (Center) | 124 | Feed Worm Gear Shaft Sleeve | 304 | 3/8-24 Hex Jam Nut |
| 101 | Feed Drive Cluster Gear (Upper) | 125 | Worm Gear Spacer | 305 | A-672-4 Oilite Bearing |
| 102 | Cluster Gear Key | 126 | Feed Drive Worm Gear | 306 | 3/32 x 5/16 lg. Pin |
| 103 | Feed Drive Gear | 127 | Feed Drive Worm Gear Shaft | 307 | Boston Worm #HLVH |
| 104 | Cluster Gear Input Shaft | 128 | Feed Engage Pin | 308 | .110 Dia. x 7/16 lg. Pin |
| 105 | Feed Driving Gear | 135 | Cluster Gear Key | 309 | 3/32 x 3/4 lg. Roll Pin |
| 106 | Cluster Gear Shaft | 137 | Cluster Gear Key | 310 | 3/16 Steel Ball |
| 107 | Cluster Gear Key | 145 | Feed Shift Rod | 311 | Compression Spring |
| 108 | Bevel Gear Bearing | 146 | Feed Reverse Bevel Pinion | 312 | 1/4-28 x 5/16 lg. Set Screw |
| 109 | Bevel Gear Thrust Spacer | 147 | Cluster Gear Shaft Upper Brg. | 319 | 319-5108-62 Weldex Snap Ring |
| 110 | Feed Reverse Bevel Gear (Boston L 148) | 156 | Feed Reverse Knob Stud | 324 | Feed Reverse Bevel Gear |
| 111 | Feed Worm Shaft Thrust Washer | 188 | Feed Worm Shaft | 332 | 3/8 Star Washer |
| 112 | Feed Reverse Clutch | 250 | 1/4-20 x 3/8 lg. K.P. Set Screw | 336 | Snap Ring 5100-25 |
| 113 | Handwheel Clutch Spring Screw | | 5/16-18 x 5/16 lg. half dog pt. | 353 | Bushing |

No. 4 Belt Housing



Photograph 9

Brake & Clutch Unit - PARTS LIST



Photograph 10

- | | | | |
|----|-----------------------------|-----|--|
| 13 | Spindle Pulley Brg. Sleeve | 91 | Brake Lock Washer |
| 75 | Spindle Pulley Hub | 92 | Brake Lock & Handle |
| 79 | Spindle Pulley Key | 93 | Brake Lock Pin |
| 80 | Upper Brg. Spacer (Large) | 131 | Motor Locknut |
| 81 | Upper Brg. Spacer (Small) | 132 | Motor Locknut Handle |
| 82 | Brg. Sleeve Locknut | 133 | Motor Mounting Studs |
| 83 | Upper Brg. Locknut | 134 | Motor Mounting Stud Washers |
| 84 | Cam Ring | 256 | Compression Spring |
| 85 | Spindle Clutch Lever | 284 | 1/4-20 Bakelite Ball Handle |
| 86 | Spindle Clutch Cam Ring Pin | 293 | ND #9507 Single Plate Ball Brg. |
| 87 | Brake Block | 297 | W.B. Jones # 167-A Ext. Spring (Lindquist) |
| 88 | Brake Ring Screw | 304 | 3/8-24 Hex Jam Nut |
| 89 | Brake Lock Stud | 318 | 3/8 Lockwasher |
| 90 | Brake Pins | | |

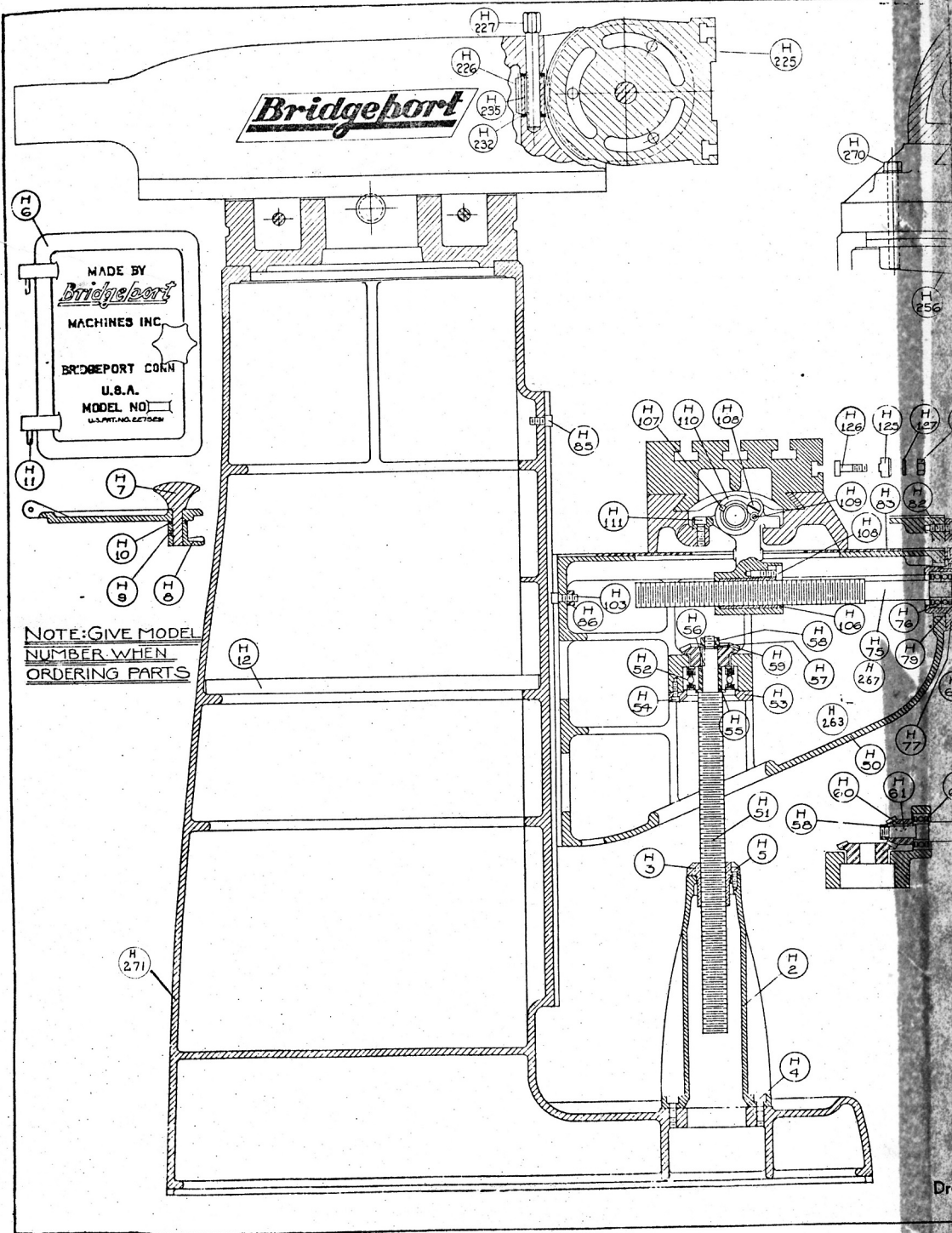
PART LIST -- THE BRIDGEPORT TURRET MILLING MACHINE

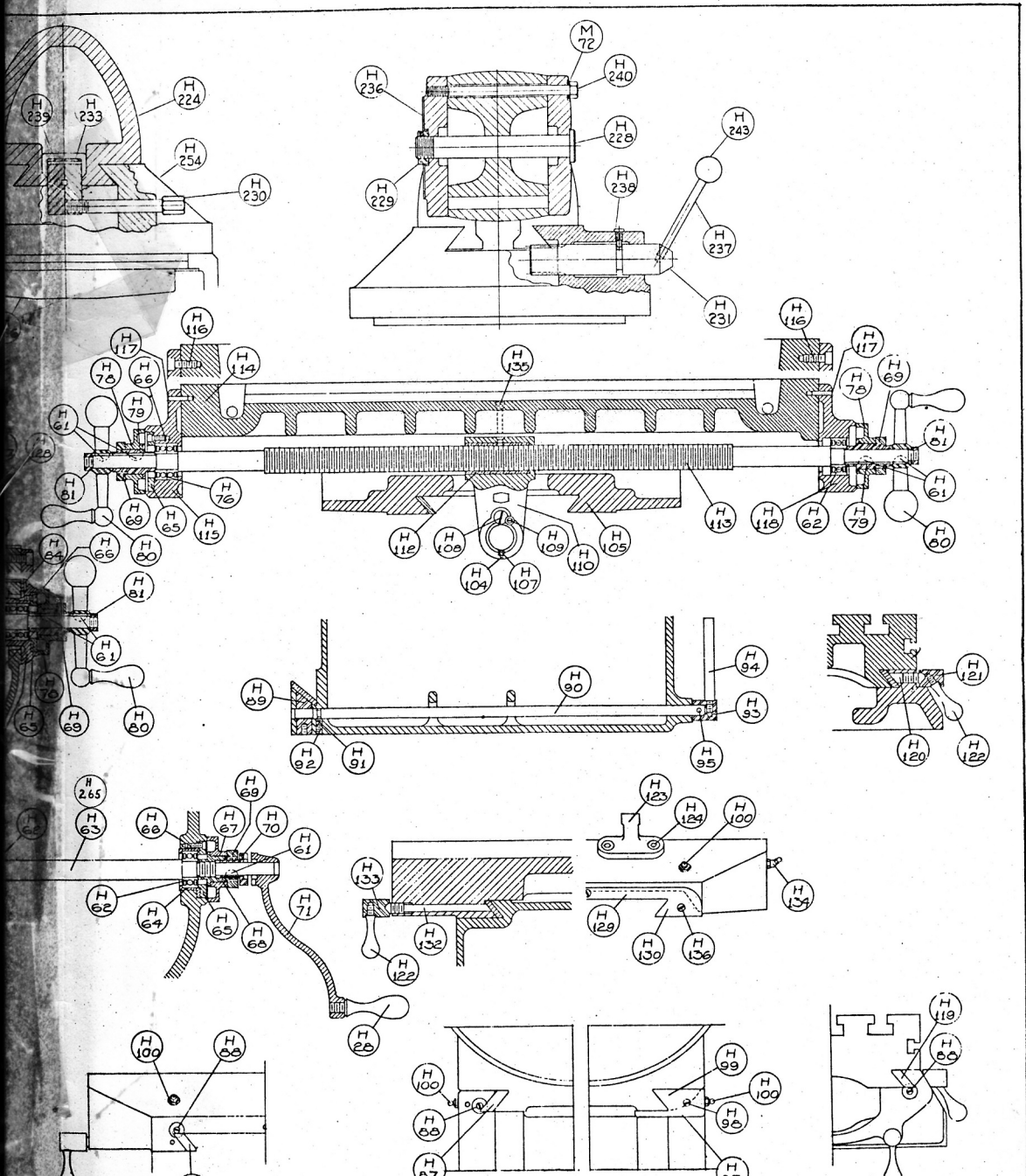
H-2	ELEVATING SCREW HOUSING	H-100	NO. 1610 ALEMITE FITTING (4 REQUIRED)
H-3	ELEVATING SCREW NUT	H-103	3/8 - 16 x 1 MACHINE SCREW
H-4	3/8 - 16 x 1 HOLLOW HEAD CAP SCREW (2 REQUIRED)	H-104	3/32 x 3/8 PIN
H-5	1/4 - 20 x 3/4 HOLLOW HEAD CAP SCREW (3 REQUIRED)	H-105	SADDLE
H-6	DOOR	H-106	CROSS FEED NUT
H-7	DOORKNOB	H-107	3/16 x 3/16 x 2-1/2 KEY (2 REQUIRED)
H-8	DOOR LOCKING CAM	H-108	CROSS FEED NUT RETAINING SCREW (2 REQUIRED)
H-9	1/4 - 20 x 1/4 SET SCREW	H-109	NO. 8 - 32 x 3/8 WASHER HEAD SCREW (2 REQUIRED)
H-10	17/32 x 1 SPACER	H-110	FEED NUT BRACKET
H-11	3/16 x 1-1/2 HINGE PIN (2 REQUIRED)	H-111	3/8 - 16 x 1 HOLLOW HEAD CAP SCREW (4 REQUIRED)
H-12	WOODEN SHELF (2 HALVES)	H-112	LONGITUDINAL FEED NUT
H-50	KNEE (9"	H-113	LONGITUDINAL FEED SCREW
H-263	KNEE 12"	H-114	TABLE
H-51	ELEVATING SCREW	H-115	LEFT BEARING BRACKET
H-52	NO. 3606 - J GREASE-SEALED BALL BEARING	H-116	3/8 - 16 x 1 HOLLOW HEAD CAP SCREW (8 REQUIRED)
H-53	BEARING RETAINER RING	H-117	3/16 x 1 DOWEL PINS (6 REQUIRED)
H-54	1/4 x 20 x 1/2 HOLLOW HEAD CAP SCREW (3 REQUIRED)	H-118	RIGHT BEARING BRACKET
H-55	BEARING BUSHING	H-119	SADDLE-TABLE GIB
H-56	3/16 x 3/16 x 7/8 KEY	H-120	TABLE LOCK PLUNGER
H-57	33/64 x 1 x 0.100 WASHER	H-121	TABLE LOCK BOLT
H-58	1/2 - 20 JAM NUT (2 REQUIRED)	H-122	TABLE LOCK BOLT HANDLE (2 REQUIRED)
H-59	BEVEL GEAR	H-123	TABLE STOP BRACKET
H-60	BEVEL PINION	H-124	3/8 - 16 x 1/2 HOLLOW HEAD CAP SCREW (2 REQUIRED)
H-61	NO. 7 WOODRUFF KEY	H-125	TABLE STOP PIECE (2 REQUIRED)
H-62	NO. 77020 GREASE-SEALED BALL BEARINGS (3 REQUIRED)	H-126	STOP PIECE T-BOLT (2 REQUIRED)
H-63	GEAR SHAFT FOR 9" KNEE	H-127	13/32 x 3/4 x 1/8 HARDENED CHAMFERED WASHER (2 REQUIRED)
H-265	GEAR SHAFT FOR 12" KNEE	H-128	3/8 - 16 HEXAGON NUT (2 REQUIRED)
H-64	BEARING CUP	H-129	SADDLE-KNEE WIPER PLATE (2 REQUIRED)
H-65	BEARING RETAINER RING (3 REQUIRED)	H-130	FELT WIPER (4 REQUIRED)
H-66	1/4 - 20 x 1/2 HOLLOW HEAD CAP SCREW (9 REQUIRED)	H-131	SADDLE-KNEE GIB
H-67	DIAL WITH 100 GRADUATIONS	H-132	SADDLE LOCK PLUNGER
H-68	DIAL HOLDER	H-133	SADDLE LOCK BOLT
H-69	DIAL LOCK NUT (4 REQUIRED)	H-134	NO. 1611 ALEMITE FITTING (2 REQUIRED)
H-70	GEARSHAFT CLUTCH INSERT	H-135	5/16 - 18 x 5/16 SET SCREW
H-71	ELEVATING CRANK	H-136	NO. 10 - 32 x 1/2 OVAL HEAD SCREW (6 REQUIRED)
H-75	CROSS FEED SCREW FOR 9" KNEE	H-140	1-1/4 OPEN END AND 1-1/16 BOX END WRENCH
H-267	CROSS FEED SCREW FOR 12" KNEE	H-141	GREASE GUN
H-76	NO. XF-12 GREASE-SEALED BALL BEARINGS (2 PAIRS REQUIRED)	H-223	TURRET
H-77	CROSS FEED BEARING BRACKET	H-224	RAM
H-78	DIAL WITH 200 GRADUATIONS (3 REQUIRED)	H-225	RAM ADAPTER
H-79	DIAL HOLDER (3 REQUIRED)	H-226	VERTICAL ADJUSTING WORM
H-80	BALL CRANK HANDLE (3 REQUIRED)	H-227	VERTICAL ADJUSTING WORM SHAFT
H-81	1/2 - 20 JAM NUT (3 REQUIRED)	H-228	ADAPTER PIVOT STUD
H-82	3/8 - 16 x 1 HOLLOW HEAD CAP SCREW (4 REQUIRED)	H-229	ADAPTER PIVOT STUD LOCKNUT
H-83	CHIP GUARD	H-230	RAM LOCK STUD
H-84	NO. 10 - 32 x 5/8 STOP SCREW	H-231	RAM PINION
H-85	3/8 - 16 x 3/4 MACHINE SCREW	H-232	WORM THRUST WASHER
H-86	3/8 - 16 HEXAGON NUT	H-233	RAM CLAMP
H-87	KNEE COLUMN GIB FOR 9" KNEE	H-234	RAM CLAMP BAR
H-264	KNEE COLUMN GIB FOR 12" KNEE	H-235	WORM KEY
H-88	GIB SCREW (3 REQUIRED)	H-236	ANGLE PLATE
H-89	KNEE LOCKING PLUNGER	H-237	RAM PINION HANDLE
H-90	KNEE LOCKING CAMSHAFT	H-238	RAM PINION SCREW
H-91	5/16 - 18 x 5/16 DOG POINT SET SCREW	H-239	RAM CLAMP
H-92	5/16 - 18 x 5/16 SET SCREW	H-240	ADAPTER LOCKING BOLT (2 REQUIRED)
H-93	CAM SHAFT HUB	H-243	3/8 x 16 BALL
H-94	CAM SHAFT HANDLE	J-19	OVERARM
H-95	NO. 1 x 1" TAPER PIN	M-72	WASHER
H-96	LEFT HAND KNEE-COLUMN WIPER HOLDER	H-268	CHIP GUARD COVER PLATES FOR 12" KNEE
H-97	RIGHT HAND KNEE-COLUMN WIPER HOLDER	H-269	
H-98	1/4 - 20 x 1 HOLLOW HEAD CAP SCREW (2 REQUIRED)	H-271	COLUMN
H-99	FELT WIPER (2 REQUIRED)		

Bridgeport

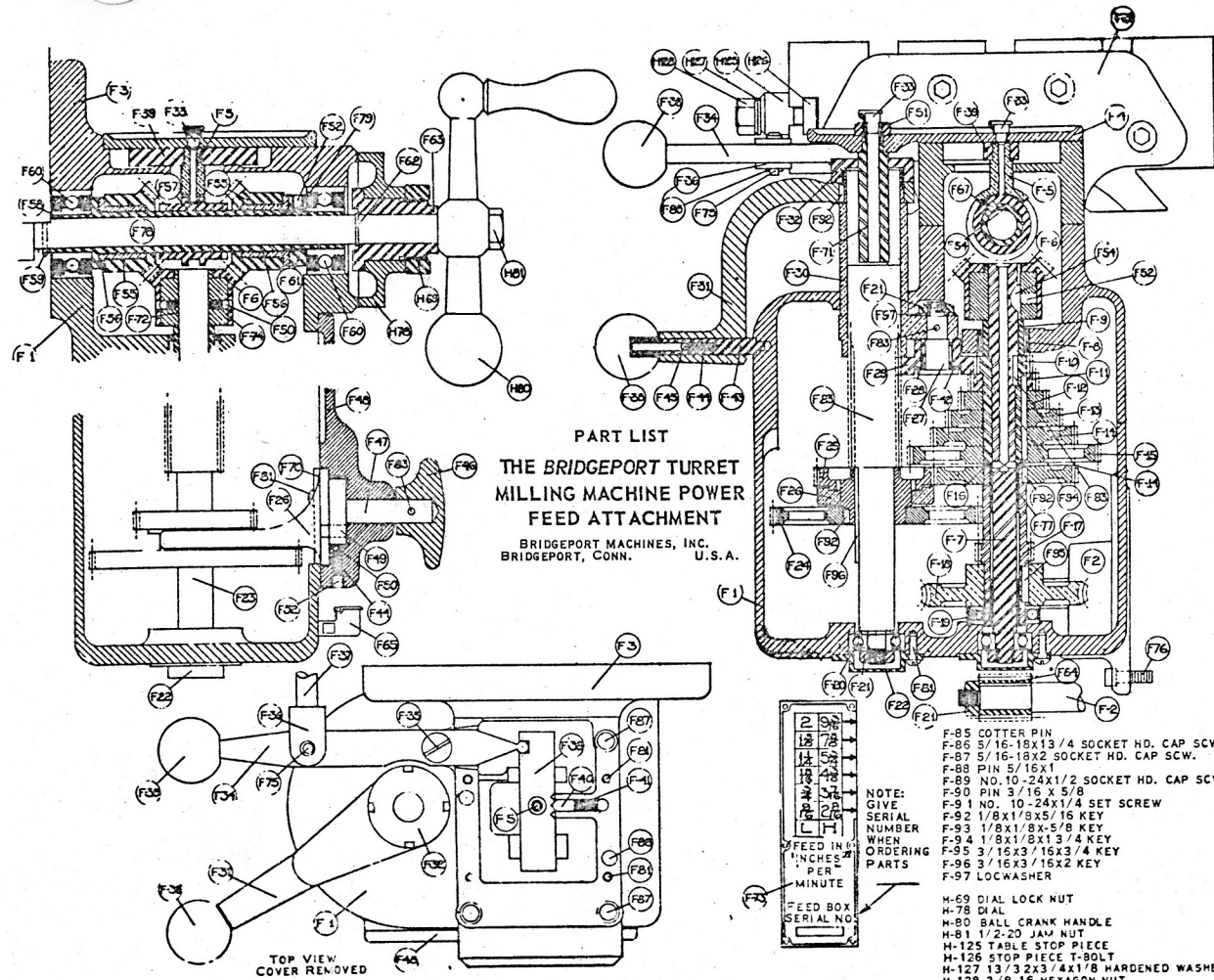
MADE BY
Bridgeport
MACHINES INC.
BRIDGEPORT CONN.
U.S.A.
MODEL NO. _____
U.S. PAT. NO. 2,270,528

NOTE: GIVE MODEL
NUMBER WHEN
ORDERING PARTS





PART LIST
THE BRIDGEPORT TURRET MILLING MACHINE
 BRIDGEPORT MACHINES, INC.
 BRIDGEPORT, CONN. U. S. A.



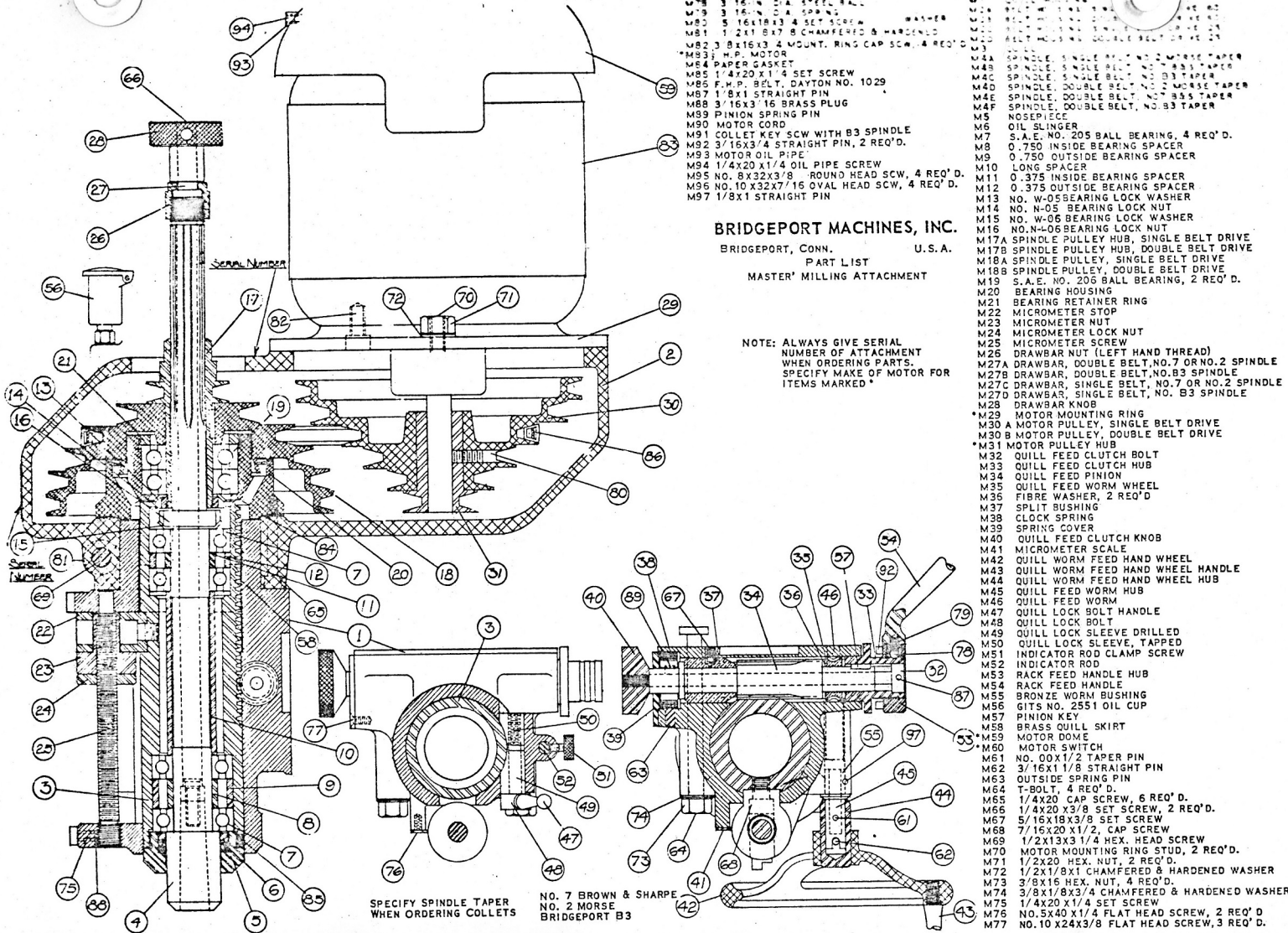
PART LIST
THE BRIDGEPORT TURRET MILLING MACHINE POWER FEED ATTACHMENT
 BRIDGEPORT MACHINES, INC. U.S.A.
 BRIDGEPORT, CONN.

- F-1 HOU.
- F-2 MOTO.
- F-3 BRACKL.
- F-4 COVER PLATE
- F-5 REVERSING FORK
- F-6 MITER GEAR
- F-7 GEAR SHAFT
- F-8 NEEDLE BEARING
- F-9 BEARING INNER RACE
- F-10 18 TOOTH GEAR WITH HUB
- F-11 22 TOOTH GEAR
- F-12 75 TOOTH GEAR
- F-13 38 TOOTH GEAR
- F-14 48 TOOTH GEAR
- F-15 64 TOOTH GEAR
- F-16 FIBER WASHER
- F-17 TOOTH SLEEVE GEAR
- F-18 WORM GEAR
- F-19 THRUST BEARING
- F-20 S.A.E. NO. 20 0 BALL BEARING
- F-21 3/8-24 HEX. JAM NUT
- F-22 BEARING COVER
- F-23 16 TOOTH PINION WITH SHAFT
- F-24 70 TOOTH GEAR
- F-25 40 TOOTH GEAR WITH HUB
- F-26 GEAR SHIFTING FORK
- F-27 IDLER STUD
- F-28 NEEDLE BEARINGS
- F-29 27 TOOTH IDLER GEAR
- F-30 GEAR SHIFTING SLEEVE
- F-31 GEAR SHIFTING HANDLE
- F-32 SHIFTING SLEEVE CAP
- F-33 OILER
- F-34 REVERSING HANDLE
- F-35 PIVOT SCREW
- F-36 REVERSING STOP ROD FORK
- F-37 REVERSING STOP ROD
- F-38 BALL HANDLE
- F-39 REVERSING SLIDE
- F-40 LOCK PIN
- F-41 SPRING 1/4x3/4
- F-42 THRUST WASHER
- F-43 LOCK PIN
- F-44 SPRING 1 3/4x1 3/16
- F-45 PIN
- F-46 SPEED CHANGE KNOB
- F-47 SPEED CHANGE CRANK
- F-48 DOOR
- F-49 PIN
- F-50 BALL
- F-51 7/16-20 HEX. JAM NUT
- F-52 1/2-20 X1/4 SET SCREW
- F-53 SWITCH
- F-54 NO. 7 WOODRUFF KEY
- F-55 MITER GEAR WITH CLUTCH FACE
- F-56 MOLDED BRONZE BEARING
- F-57 CLUTCH
- F-58 GEAR SLEEVE
- F-59 COTTER (SHEAR) PIN
- F-60 GREASE-SEALED BALL BEARING
- F-61 GEAR SLEEVE NUT
- F-62 SPLIT WASHER
- F-63 DIAL HOLDER
- F-64 WORM
- F-65 OIL CUP
- F-66 SPRING SET
- F-67 3/16x3/16x1 1/2 KEY
- F-68 STOP ROD CLAMP
- F-69 STOP ROD COLLAR
- F-70 SHIFTING FORK HOLD-DOWN
- F-71 SLEEVE GUIDE PIN
- F-72 SAFETY RELEASE INSERT
- F-73 NAMEPLATE
- F-74 SPRING 3/16x1/2
- F-75 STOP ROD FORK PIN
- F-76 1 4-20 X3/4 SOCKET HD. CAP. SCW.
- F-77 MOLDED BRONZE BEARING
- F-78 FEED SCREW
- F-79 BRASS PLUG 3/16x1 1/16
- F-80 NO. 10-24x1 1/2 PD. HD. SCREW
- F-81 NO. 10-24x1 2 PD. HD. SCREW
- F-82 N. 1 1/2
- F-83 NO. 00 X1 TAPER PIN
- F-84 NO. 00 X3 8 TAPER PIN

NOTE: GIVE SERIAL NUMBER WHEN ORDERING PARTS

FEED IN INCHES PER MINUTE	FEED BOX SERIAL NO.
12	28
18	36
24	44
30	52
36	60
42	68
48	76
54	84
60	92
66	100
72	108
78	116
84	124
90	132
96	140
102	148
108	156
114	164
120	172

- F-85 COTTER PIN
- F-86 5/16-18x13/4 SOCKET HD. CAP SCW.
- F-87 5/16-18x2 SOCKET HD. CAP SCW.
- F-88 PIN 5/16x1
- F-89 NO. 10-24x1/2 SOCKET HD. CAP SCW.
- F-90 PIN 3/16 X 5/8
- F-91 NO. 10-24x1/4 SET SCREW
- F-92 1/8x1/8x5/16 KEY
- F-93 1/8x1/8x5/8 KEY
- F-94 1/8x1/8x1 3/4 KEY
- F-95 3/16x3/16x3/4 KEY
- F-96 3/16x3/16x2 KEY
- F-97 LOCKWASHER
- H-69 DIAL LOCK NUT
- H-78 DIAL
- H-79 BALL CRANK HANDLE
- H-81 1/2-20 JAM NUT
- H-125 TABLE STOP PIECE
- H-126 STOP PIECE-BOLT
- H-127 13 3/2x3 4/11/8 HARDENED WASHER
- H-128 3/8-16 HEXAGON NUT



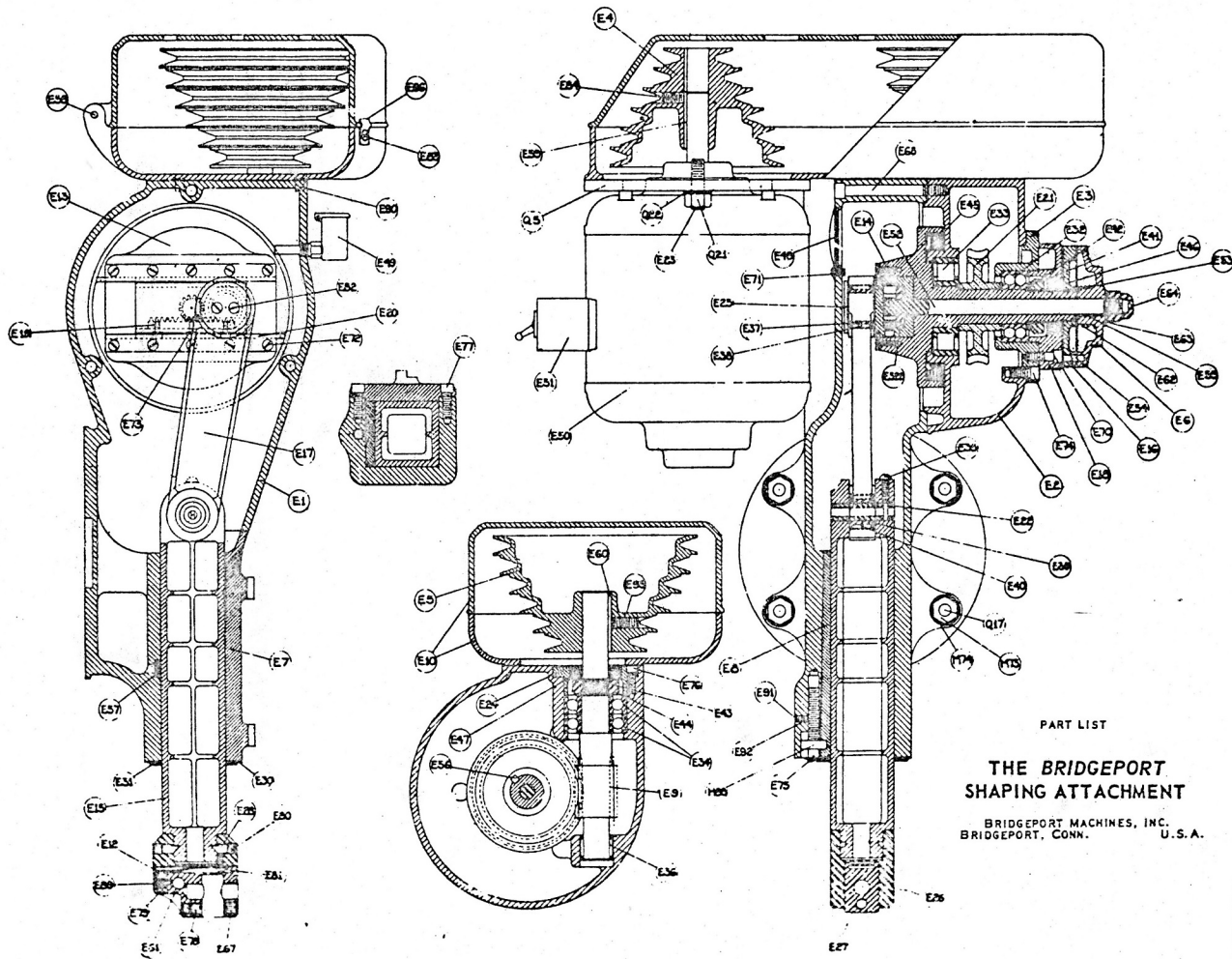
- M78 3/16" DIA STEEL BALL
- M79 3/16" DIA SPRING WASHER
- M80 1/2" X 1/8" CHAMFERED & HARDENED
- M81 1/2" X 1/8" CHAMFERED & HARDENED
- M82 3/8 X 1/4 MOUNT. RING CAP SCW, 4 REQ'D
- M83 H.P. MOTOR
- M84 PAPER GASKET
- M85 1/4 X 20 X 1/4 SET SCREW
- M86 F.H.P. BELT, DAYTON NO. 1029
- M87 1/8 X 1 STRAIGHT PIN
- M88 3/16 X 1/16 BRASS PLUG
- M89 PINION SPRING PIN
- M90 MOTOR CORD
- M91 COLLET KEY SCW WITH B3 SPINDLE
- M92 3/16 X 3/4 STRAIGHT PIN, 2 REQ'D.
- M93 MOTOR OIL PIPE
- M94 1/4 X 20 X 1/4 OIL PIPE SCREW
- M95 NO. 8 X 32 X 3/8 ROUND HEAD SCW, 4 REQ'D.
- M96 NO. 10 X 32 X 7/16 OVDERING HEAD SCW, 4 REQ'D.
- M97 1/8 X 1 STRAIGHT PIN
- M43 SPINDLE, SINGLE BELT, NO. 7 MORSE TAPER
- M44 SPINDLE, DOUBLE BELT, NO. 3 B3 TAPER
- M45 SPINDLE, DOUBLE BELT, NO. 7 MORSE TAPER
- M46 SPINDLE, DOUBLE BELT, NO. 3 B3 TAPER
- M47 SPINDLE, DOUBLE BELT, NO. 3 B3 TAPER
- M5 NOSERIECC
- M6 OIL SLINGER
- M7 S.A.E. NO. 205 BALL BEARING, 4 REQ'D.
- M8 0.750 INSIDE BEARING SPACER
- M9 0.750 OUTSIDE BEARING SPACER
- M10 LONG SPACER
- M11 0.375 INSIDE BEARING SPACER
- M12 0.375 OUTSIDE BEARING SPACER
- M13 NO. W-05 BEARING LOCK WASHER
- M14 NO. N-05 BEARING LOCK NUT
- M15 NO. W-06 BEARING LOCK WASHER
- M16 NO. N-06 BEARING LOCK NUT
- M17A SPINDLE PULLEY HUB, SINGLE BELT DRIVE
- M17B SPINDLE PULLEY HUB, DOUBLE BELT DRIVE
- M18A SPINDLE PULLEY, SINGLE BELT DRIVE
- M18B SPINDLE PULLEY, DOUBLE BELT DRIVE
- M19 S.A.E. 205 BALL BEARING, 2 REQ'D.
- M20 BEARING HOUSING
- M21 BEARING RETAINER RING
- M22 MICROMETER STOP
- M23 MICROMETER NUT
- M24 MICROMETER LOCK NUT
- M25 MICROMETER SCREW
- M26 DRAWBAR NUT (LEFT HAND THREAD)
- M27A DRAWBAR, NO. 7 OR NO. 2 SPINDLE
- M27B DRAWBAR, DOUBLE BELT, NO. B3 SPINDLE
- M27C DRAWBAR, SINGLE BELT, NO. 7 OR NO. 2 SPINDLE
- M27D DRAWBAR, SINGLE BELT, NO. B3 SPINDLE
- M28 DRAWBAR NUT
- M29 MOTOR MOUNTING RING
- M30 A MOTOR PULLEY, SINGLE BELT DRIVE
- M30 B MOTOR PULLEY, DOUBLE BELT DRIVE
- M31 MOTOR PULLEY HUB
- M32 QUILL FEED CLUTCH BOLT
- M33 QUILL FEED CLUTCH HUB
- M34 QUILL FEED PINION
- M35 QUILL FEED WORM WHEEL
- M36 FIBRE WASHER, 2 REQ'D
- M37 SPLIT BUSHING
- M38 CLOCK SPRING
- M39 SPRING COVER
- M40 QUILL FEED CLUTCH KNOB
- M41 MICROMETER SCALE
- M42 QUILL WORM FEED HAND WHEEL
- M43 QUILL WORM FEED HAND WHEEL HANDLE
- M44 QUILL WORM FEED HAND WHEEL HUB
- M45 QUILL FEED WORM HUB
- M46 QUILL FEED WORM
- M47 QUILL LOCK BOLT HANDLE
- M48 QUILL LOCK BOLT
- M49 QUILL LOCK SLEEVE DRILLED
- M50 QUILL LOCK SLEEVE, TAPPED
- M51 INDICATOR ROD CLAMP SCREW
- M52 INDICATOR ROD
- M53 RACK FEED HANDLE HUB
- M54 RACK FEED HANDLE
- M55 BRONZE WORM BUSHING
- M56 GITS NO. 2551 OIL CUP
- M57 PINION KEY
- M58 BRASS QUILL SKIRT
- M59 MOTOR DOME
- M60 MOTOR SWITCH
- M61 NO. 00 X 1/2 TAPER PIN
- M62 3/16 X 1/8 STRAIGHT PIN
- M63 OUTSIDE SPRING PIN
- M64 T-BOLT, 4 REQ'D.
- M65 1/4 X 20 CAP SCREW, 6 REQ'D.
- M66 1/4 X 20 X 3/8 SET SCREW, 2 REQ'D.
- M67 5/16 X 18 X 3/8 SET SCREW
- M68 7/16 X 20 X 1/2, CAP SCREW
- M69 1/2 X 13 X 3/4 SCREW
- M70 MOTOR MOUNTING RING STUD, 2 REQ'D.
- M71 1/2 X 20 HEX. NUT, 2 REQ'D.
- M72 1/2 X 1/8 X 1 CHAMFERED & HARDENED WASHER
- M73 3/8 X 1/8 HEX. NUT, 4 REQ'D.
- M74 3/8 X 1/8 X 3/4 CHAMFERED & HARDENED WASHER
- M75 1/4 X 20 X 1/4 SET SCREW
- M76 NO. 5 X 40 X 1/4 FLAT HEAD SCREW, 2 REQ'D.
- M77 NO. 10 X 24 X 3/8 FLAT HEAD SCREW, 3 REQ'D.

BRIDGEPORT MACHINES, INC.
 BRIDGEPORT, CONN. U.S.A.
 PART LIST
 MASTER'S MILLING ATTACHMENT

NOTE: ALWAYS GIVE SERIAL NUMBER OF ATTACHMENT WHEN ORDERING PARTS. SPECIFY MAKE OF MOTOR FOR ITEMS MARKED *

SPECIFY SPINDLE TAPER
 NO. 7 BROWN & SHARPE
 NO. 2 MORSE
 BRIDGEPORT B3

NO. 7 BROWN & SHARPE
 NO. 2 MORSE
 BRIDGEPORT B3



PART LIST

**THE BRIDGEPORT
SHAPING ATTACHMENT**

BRIDGEPORT MACHINES, INC.
BRIDGEPORT, CONN. U.S.A.

PART LIST -- THE BRIDGEPORT SHAPING ATTACHMENT

E-1 RAM HOUSING
 E-2 GEAR HOUSING
 E-3 GEAR HOUSING COVER
 E-4* MOTOR PULLEY
 E-5 WORM SHAFT PULLEY
 E-6 STROKE ADJUSTMENT DIAL
 E-7 RAM COVER
 E-8 GIB
 E-9 WORM AND SHAFT
 E-10* BELT HOUSING
 E-12 CALPPER SPRING
 E-13 CRANK AND SHAFT
 E-14 CRANKPIN BLOCK
 E-15 RAM
 E-16 STROKE ADJUSTMENT PLATE
 E-17 CONNECTING ROD
 E-18 CRANK BEARING COVER
 E-19 RACK
 E-20 CRANKPIN BLOCK HOLD-DOWN--2 REQUIRED
 E-21 WORM GEAR
 E-22 RAM CRANKPIN
 E-23 MOTOR MOUNTING RING STUD--2 REQUIRED
 E-24 WORM BEARING COVER
 E-25 BEARING RETAINING WASHER
 E-26 CLAPPER BOX
 E-27 CLAPPER
 E-28 CLAPPER BOX CLAMP SHOE--2 REQUIRED
 E-29* BELT
 E-30 WIPER PLATE
 E-31 WIPER--FELT
 E-32 NO. 5205 BEARING
 E-33 NO. R330 BEARING
 E-34 NO. 204 BEARING--1 PAIR
 E-35 RAM CRANKPIN LOCKSCREW
 E-36 NO. B-1212X BEARING
 E-37 NO. IS-1312 INNER RACE
 E-38 NO. G-1612X BEARING
 E-39 NO. IS-812 OSC. INNER RACE
 E-40 NO. GB-1212X BEARING
 E-41 N-05 LOCKNUT
 E-42 NO. W-05 LOCKWASHER
 E-43 NO. N-04 LOCKNUT
 E-44 NO. W-04 LOCKWASHER
 E-45 3 1/4 x 4 1/4 x 1/2 OILSEAL
 E-46 7/8 x 1 1/2 x 3/8 OILSEAL
 E-47 3/4 x 1 1/2 x 5/16 OILSEAL
 E-48 AIR VENT COVER
 E-49 OIL CUP
 E-50* MOTOR
 E-51* SWITCH
 E-52 LOCKING BOLT AND GEAR
 E-52B LOCKING BOLT COLLAR

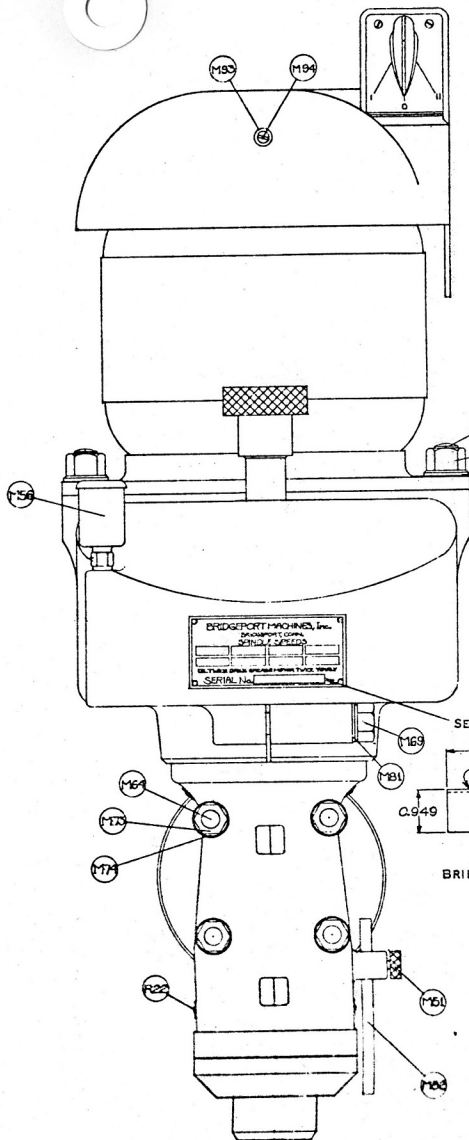
E-53 1/8 x 1 8 x 3 8 KEY
 E-54 3/16 x 3 8 PIN
 E-55 1/8 x 1 8 x 3 4 KEY
 E-56 3/16 x 3/16 x 1 3/16 KEY
 E-57 FELT PLUG
 E-58 1/8 x 1 1/4 PIN -- 2 REQUIRED
 E-59 3/16 x 3/16 x 1 3/4 KEY
 E-60 3/16 x 3/16 x 1 3/4 KEY
 E-61 5/16 x 1 7/8 PIN
 E-62 DIAL SPRING
 E-63 7/16 x 7/8 WASHER
 E-64 7/16 - 20 ACORN NUT
 E-65 NAMEPLATE
 E-66 BELT COVER CLIP
 E-67 5/16 - 18 x 1/2 SET SCREW
 E-68 5/16 - 18 x 2 3/4 CAP SCREW
 E-69 5/16 - 18 x 3 1/2 CAP SCREW -- 2 REQUIRED
 E-70 1/4 - 20 x 3/4 CAP SCREW -- 3 REQUIRED
 E-71 NO. 8-32 x 3/8 WASHER HEAD SCREW -- 2 REQUIRED
 E-72 NO. 10-24 x 3/8 FLAT HEAD SCREW -- 10 REQUIRED
 E-73 NO. 8-32 x 3/8 ROUND HEAD SCREW -- 3 REQUIRED
 E-74 1/4 - 20 x 1/2 CAP SCREW -- 3 REQUIRED
 E-75 NO. 5-40 x 1/4 ROUND HEAD SCREW -- 4 REQUIRED
 E-76 NO. 10-24 x 3/8 CAP SCREW -- 3 REQUIRED
 E-77 1/4 - 20 x 1/2 CAP SCREW -- 6 REQUIRED
 E-78 5/16 - 18 x 5/8 SET SCREW
 E-79 5/16 - 18 x 5/8 SET SCREW
 E-80 5/16 - 18 x 5/16 SET SCREW -- 2 REQUIRED
 E-81 NO. 8-32 x 3/8 ROUND HEAD SCREW
 E-82 NO. 5-40 x 1/4 FLAT HEAD SCREW -- 2 REQUIRED
 E-83 NO. 8-32 x 3/8 WASHER HEAD SCREW
 E-84 5/16 - 18 x 5/8 SET SCREW
 E-85 OVERARM MARKER
 E-86 NO. 10-24 x 3/8 ROUND HEAD SCREW
 E-87 1/8 PIPE PLUG
 E-88 1/8 PIPE PLUG, DRILLED AND TAPPED
 E-89 NO. 10-24 x 1/4 SET SCREW
 E-90 1/4 - 20 x 1/2 FLAT HEAD SCREW -- 4 REQUIRED
 E-91 1/4 - 20 x 1/4 SET SCREW
 E-92 BRASS PLUG
 E-93 5/16 - 18 x 3/4 SET SCREW
 M-73 T-BOLT NUT -- 4 REQUIRED
 M-74 T-BOLT WASHER -- 4 REQUIRED
 Q-17 T-BOLT -- 4 REQUIRED
 Q-5 MOTOR MOUNTING RING
 Q-21 MOTOR MOUNTING RING STUD NUT -- 2 REQUIRED
 Q-22 MOTOR MOUNTING RING STUD WASHER -- 2 REQUIRED
 H-88 GIB SCREW
 E-94 11/16 x 3/4 OPEN END WRENCH

* GIVE MOTOR SPECIFICATIONS INCLUDING MAKE OF MOTOR WHEN ORDERING THESE PARTS. ALWAYS GIVE SERIAL NUMBER OF ATTACHMENT.

CHERRYING ATTACHMENT PARTS LIST

M2A	Belt Housing, single belt drive, 60 cycle	M90	Motor Cord
M4D	Spindle, Double belt, #2 Morse Taper	T1	Quill Housing
M4E	Spindle, Double belt, #7 B&S Taper	T2	Quill Housing Saddle
M5	Nosepiece	T3	Gear Housing
M6	Oil Slinger	T4	Drum Gear
M7	SAE # 205 Ball Bearing (4 Req'd)	T5	Gib (2 Req'd)
M8	0.750 Inside Bearing Spacer	T6	Gib Screw (2 Req'd)
M9	0.750 Outside Bearing Spacer	T7	Gib Screw Washer (2 Req'd)
M10	Long Spacer	T8	Cherry
M11	0.375 Inside Bearing Spacer	T9	Pivot Stud
M12	0.375 Outside Bearing Spacer	T10	Torr. Brg. GB-98
M13	No. W-05 Bearing Lock Washer	T11	Drum Gear Plate
M14	No. N-05 Bearing Lock Nut	T12	Pivot Offset Block
M15	No. W-06 Bearing Lock Washer	T13	Lead Screw
M16	No. N-06 Bearing Lock Nut	T14	Lead Screw Locknut
M17A	Spindle Pulley Hub, Single Belt Drive	T15	Lead Screw Washer
M18A	Spindle Pulley, Single Belt Drive	T16	Lead Screw Dial
M19	SAE #206 Ball Bearings (2 Req'd)	T17	Lead Screw Spacer
M20	Bearing Housing	T18	Allen Wrench Stud
M21	Bearing Retainer Ring	T19	Wrench Knob
M26	Drawbar Nut (Left Hand Thread)	T20	10 - 32 x 1/2 Ig. Flat Head Screw
M27A	Drawbar, double drive, #7 or #2 spindle	T21	Zero Block
M28	Drawbar Knob	T22	Handwheel Handle
M29	Motor Mounting Ring	T23	3/8" Star Washer
M30A	Motor pulley, single belt drive with Hub Part M31	T24	Hand Wheel
M31	Motor Pulley Hub	T25	Hand Wheel Dog
M47	Quill Lock Bolt Handle	T26	Hand Wheel Gear Clutch
M48	Quill Lock Bolt	T27	Hand Wheel Pinion
M49	Quill Lock Sleeve, Drilled	T28	Idler Gear
M50	Quill Lock Sleeve, Tapped	T29	Idler Gear Post
M56	Gits No. 2551 Oil Cup	T30	Lead Screw Zero Pin
M60	Motor Switch 9441 H31D Cutler Hammer	T31	Scale (Purchased)
M64	T Bolts (4 Req'd)	T32	Stop Dog (2 Req'd)
M65	1/4 x 20 x 1-3/4 Ig. Cap Screw (6 Req'd)	T33	T Bolt (3 Req'd)
M69	1/2 x 13 x 3-1/4 Hex. Head Screw	T34	T Bolt Washer (3 Req'd)
M70	Motor Mounting Ring Stud (2 Req'd)	T35	Dial Binder Plug
M71	1/2 x 20 Hex. Nut (2 Req'd)	T36	Fork Adapter (See Misc. Price List)
M72	1/2 x 1/8 x 1 Chamfered & Hardened Washer	T37	Finger Ratchet Spring
M83	1/2 HP Motor	T38	Feed Ratchet Dog
M84	Paper Gasket	T39	Ratchet Stud
M85	1/4 x 20 x 1/4 Set Screw	T40	Ratchet Dog Tee Bolt
M86	Gilmer 5607 Belt F.H.P.	T41	Adapter Tee Bolt
		T45	Quill

NOTE: ALWAYS GIVE SERIAL NUMBER OF ATTACHMENT WHEN ORDERING PARTS. SPECIFY MAKE OF MOTOR FOR PARTS MARKED*.



SERIAL NUMBER

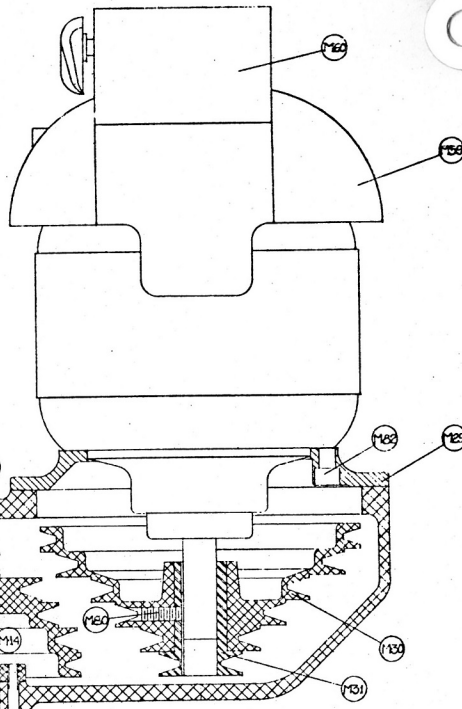
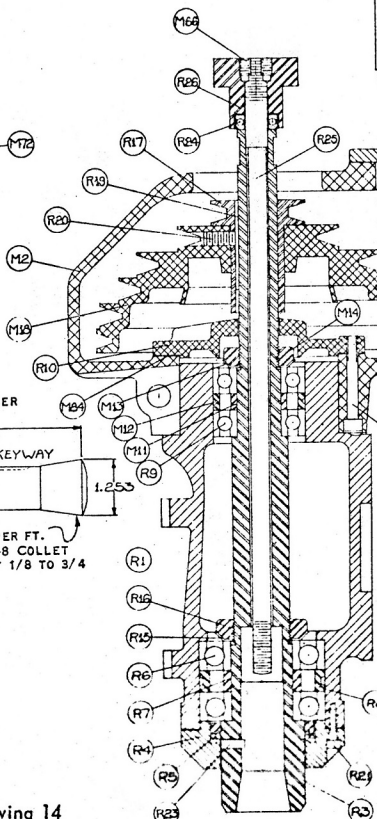
3 1/2 IN. PER FT. BRIDGEPORT R-8 COLLET CAPACITY 1/8 TO 3/4

0.949

1.253

2 1/2 x 3/8 KEYWAY

Drawing 14



BRIDGEPORT MACHINES, INC. BRIDGEPORT, CONN., U.S.A.

PART LIST
One-Half Horsepower Milling Attachment

- | | |
|--|--|
| R1 SPINDLE HOUSING | R26 DRAWBAR KNOB |
| R2A BELT HOUSING, SINGLE BELT, 60 | *M29 MOTOR MOUNTING RING |
| R2B BELT HOUSING, DOUBLE BELT, 60 | M30 MOTOR PULLEY, SINGLE BELT DRIVE |
| M2C BELT HOUSING, SINGLE BELT, 25 | M30B MOTOR PULLEY, DOUBLE BELT DRIVE |
| M2D BELT HOUSING, DOUBLE BELT, 25 | *M31 MOTOR PULLEY HUB |
| R3A SPINDLE, SINGLE BELT DRIVE | M31 INDICATOR ROD CLAMP SCREW |
| R3B SPINDLE, DOUBLE BELT DRIVE | M32 INDICATOR ROD |
| R4 NOSEPIECE | M36 GITS NO. 2551 OIL CUP |
| R5 OIL SLINGER | *M39 MOTOR DOME |
| R5 S.A.E. NO. 207 BALL BEARINGS | *M40 SWITCH |
| R6 0.500 INSIDE SPACER | M64 T-BOLT, 4 REQ'D. |
| R7 0.500 OUTSIDE SPACER | M65 1/4-20X5/8 CAP SCREW, 3 REQ'D. |
| R8 S.A.E. NO. 205 BALL BEARINGS | M66 1/4-20 X 3/8 SET SCREW, 4 REQ'D. |
| R10 BEARING COVER | M69 1/2-13X3 1/4 HEX. HEAD SCREW |
| M11 0.375 INSIDE SPACER | M70 MOTOR MOUNTING RING STUD, 2 REQ'D. |
| M12 0.375 OUTSIDE SPACER | M71 1/2-20 HEX. NUT, 2 REQ'D. |
| M13 NO. W-05 BEARING LOCK WASHER | M72 1/2X1 1/8X1/8 HARDENED, CHAMFERED WASHER |
| M14 NO. W-05 BEARING LOCK NUT | M73 3/8-16 HEX. NUT, 4 REQ'D. |
| R15 NO. W-07 BEARING LOCK WASHER | M74 3/8X1 1/8X3/4 HARDENED, CHAMFERED WASHER |
| R16 NO. W-07 BEARING LOCK NUT | M80 5/16-18X3/4 SET SCREW |
| R17 SPINDLE PULLEY HUB | M81 1/2X1 1/8X7/8 HARDENED, CHAMFERED WASHER |
| M18A SPINDLE PULLEY, SINGLE BELT DRIVE | M82 3/8-16 X 3/4 CAP SCREW, 4 REQ'D. |
| M18B SPINDLE PULLEY, DOUBLE BELT DRIVE | M83 1/2 P.P. MOTOR GASKET |
| R19 1 1/8X1 1/2 KEY | M84 MOTOR COORD SET |
| R20 5/16-18X3/4 SET SCREW | M85 DAYTON NO. 1029 F.H.P. V-BELT |
| R21 NO. 10-24X5/8 CAP SCREW, 4 REQ'D. | M86 MOTOR OIL PIPE |
| R22 BALL NUT, 4 REQ'D. | M93 MOTOR OIL PIPE |
| R23 1/4-32 FRY SCREW | M94 1-20 X 1/4 SET SCREW |
| R24 NICE NO. 603 1/4 BALL THRUST BEARING | M95 NO. 8 - 32 1/2 X 5/8 HEAD SCREW, 4 |
| R25A DRAWBAR, SINGLE BELT DRIVE | M96 NO. 15 - 32 X 7/16 OVAL HEAD SCREW, 4 |
| R25B DRAWBAR, DOUBLE BELT DRIVE | |

OPTICAL MEASURING SYSTEM

Alignment of Scales.

Table Scale

1. Install scale holder (0-7) on scale holder bracket (0-21) using (2) washers (0-60) and (2) round head screws (0-41). Snug up screws (0-41).
2. Loosen (4) screws (0-40) located in base of scope housing (0-2). Move scope unit (0-2) in or out to bring image in focus on window of scope unit (0-2). Snug up (2) screws (0-40) (top left and lower right) in base of scope unit (0-2).
3. Crank table to read 5.000 inch in scope unit window. At this point lower or raise scale holder (0-7) by using adjustment screw (0-48) to bring scale image into view of scope unit window so that the top of the short graduations lines are parallel to top of catch fork.

(Note: Illustration.)

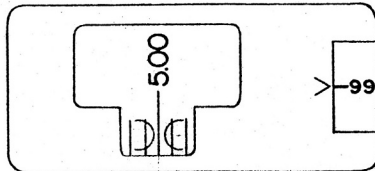


FIG. 3

4. Follow same procedure at point 15 inch on scale image viewed in scope unit window. This adjustment is repeated until scale graduations are parallel to catch fork. Re-adjust scope housing for sharpness and lock scope housing tight by using (4) screws (0-40). Re-check scale image in scope unit window and make final adjustment on scale holder (0-7) if necessary. Lock (2) screws (0-41) tight. Check tenth reading dial to scale graduations. (This reading will determine proper focus of scope — i.e. scope must be adjusted in or out for proper focus.) Dial reading should be set at 99 and catch fork lined central with a given line by moving the machine lead screw. See Fig. 3. Rotate dial to line below 0 line — catch fork should now fall centrally over adjacent line. If it doesn't, then the focus of the scope must be adjusted.

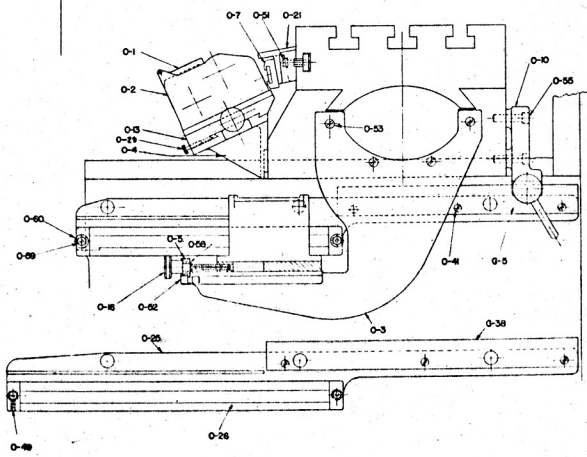
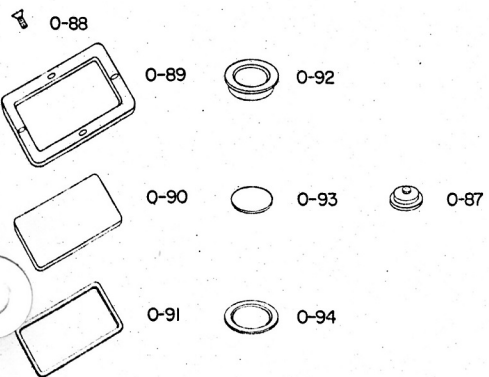
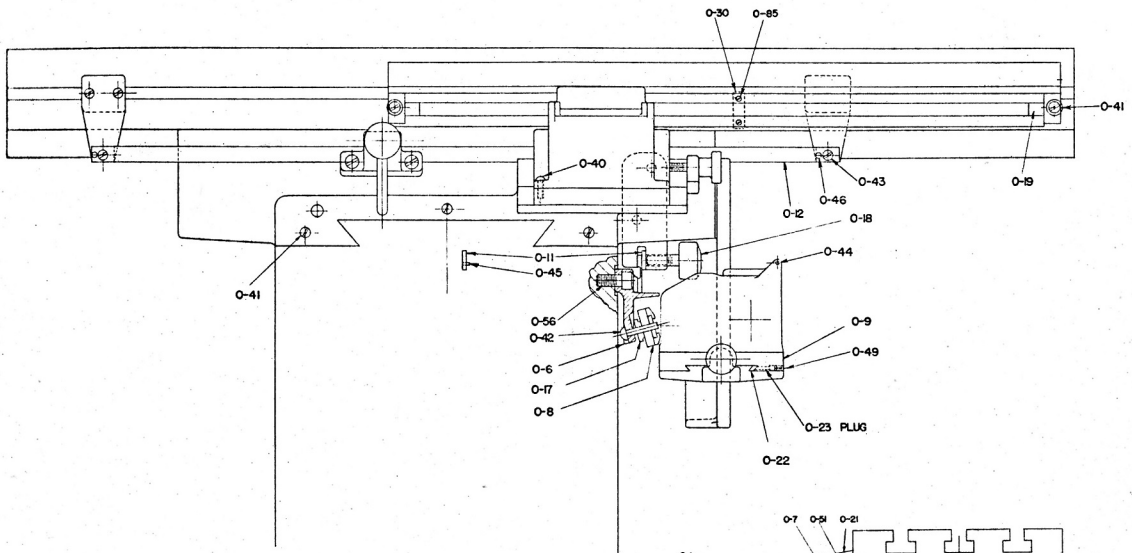
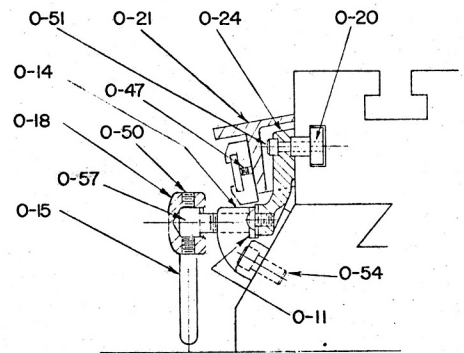
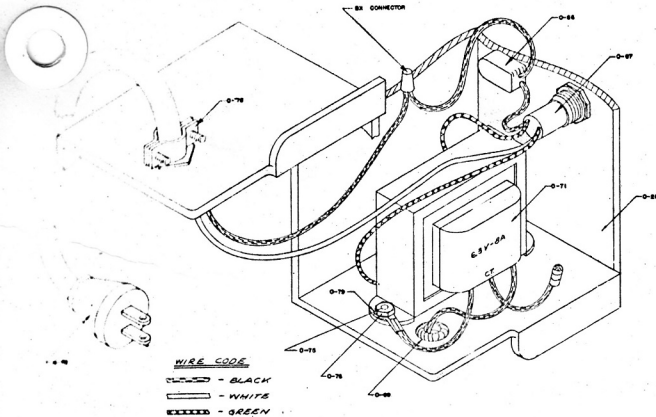
Note: This is most important as unit is *only* in focus when lines are in center of catch and fork as described above.

Cross Travel Scale

1. Crank saddle to front position.
2. Loosen (4) screws (0-40) located in base of scope unit (0-2). Position scope unit (0-2) so location of screws (0-40) are in center of elongated slots. Snug up (2) screws (0-40) in scope unit.
3. Bring scale into focus by using adjusting nut (0-17). Align short graduations to top of catch fork.
4. Crank table to 9" or 12" point on scale. Bring scale to focus by adjusting nut (0-17) and set top of catch fork to top of short graduations using adjusting set screw (0-48). Proceed to focus following same procedure in setting table scale holder (0-7).

Note: Check 1" slide adjustment for parallelism. If top of catch fork does not run parallel to top of short graduations. It is necessary to loosen (4) cap screws (0-53) holding cross bracket-lens assembly (0-3) and make proper adjustment.

OPTICAL PARTS DRAWING



OPTICAL PARTS LIST

AMOUNT	NAME				
0-1	2	Scope Housing Cover	0-60	4	#6 Flat Washer
0-2	2	Scope Housing	0-61	1	9" Scale
0-3	1	Cross Bracket	0-62	1	12" Scale
0-4	1	Table Bracket	0-63	1	20" Scale
0-5	2	Adj. Screw Bracket	0-64	2	Bycor Cord Seal (Specify Scale Length)
0-6	1	9" Cross Travel Bracket	0-65	2	Scale Glass (" " ")
0-7	1	Table Scale Bracket	0-66	1	Toggle Switch (117/110 Volt)
0-8	1	9" Cross Travel Scale Bracket	0-67	1	Signal Lamp Complete (117/110 Volt)
0-9	1	Cross Travel Dovetail Slide	0-68	1	Signal Lamp Bulb GE NE 51H (117/110 Volt)
0-10	1	Cross Travel Binder Bracket	0-69	1	Rubber Cromet 3/8 I. D.
0-11	2	Binding Bracket Plate	0-70	1	Cord Set (18-2 117/110 Volt)
0-12	1	Table Binder Strip	0-71	1	Transformer (117/110 Volt Primary - 6.3 Volt Secondary)
0-13	1	Table Dovetail Slide			
0-14	1	Table Binder Bracket	0-72	1	Harness Cord Set (6.3 Volt)
0-15	2	Binder Handle	0-73	1	Transformer Box Name Plate
0-16	2	Housing Adjusting Screw	0-74	2	Decal (Optical Housing)
0-17	2	Scale Adj. Nut	0-75	2	6-32 x 1/2 Round Head Screws
0-18	2	Binder Hub	0-76	2	6-32 Hex Nuts
0-19	4	Scale Bracket Cap	0-77	2	1/4-20 x 1/2 Round Head Screws
0-20	7	Tee Slot Shoe	0-78	1	3/8" Cable Connector
0-21	1	Table Scale Bracket	0-79	1	#B65 Spade Terminal
0-22	2	Straight Dovetail Gib	0-80	1	#2B-14 Wire Terminal
0-23	6	Gib Binding Plugs	0-81	2	Bulb #81 Automotive (6 Volt)
0-24	2	Binding Strip Dogs	0-82	1	1/2-13 x 3/8 Socket Set Screws
0-25	1	12" Cross Travel Bracket	0-83	1	67 1/2" Angle Alemite Fitting
0-26	1	12" Cross Travel Scale Bracket	0-84	1	Starr Lenn Gauze
0-27		Assembly Dwgs.	0-85	2	5-40 x 1" Oval Head Screw
0-28	1	Transformer Box	0-86	2	No. 4 x 1/4 R Sheet Metal Screws
0-29	2	Slide Lock Screw	0-87	2	Rubber Cap
0-30	1	Scale Holder Clamp	0-88	4	#172 x 3/16 Flat Head Screw for Window Frame
0-31	1	Cam Shaft (Not Shown)	0-89	2	Window Frame
0-32	1	Scale Dial Knob (Not Shown)	0-90	2	Window
0-33	1	Dial Knob Shaft (Not Shown)	0-91	2	Window Gasket
0-34	1	Dial Knob Washer (Not Shown)	0-92	2	Lens Frame
0-35	1	Lamp Cover Gasket (Not Shown)	0-93	2	Lens
0-36	1	Lens Cover Gasket (Not Shown)	0-94	2	Lens Gasket
0-37	1	Dial Knob Shaft Diaphragm (Not Shown)	0F-79	1	Table Stop Bracket (P. F.)
0-38	4	Scale Holder Cap (Replaces 0-19)	0F-80	1	Power Feed Stop Rod
0-39	2	Scope Units Complete	0F-81	1	Reversing Stop Rod Guide (Give Table Size)
0-40	8	8-32 x 1/2 Round Head Screws	0F-82	1	Table Binder Strip (With Power Feed)
0-41	8	10-32 x 1/2 Round Head Screws	G-5	1	9" Saddle Locking Strip
0-42	2	10-32 x 1-1/4 Round Head Screws	G-38	1	12" Saddle Locking Strip
0-43	2	1/4-20 x 3/8 Round Head Screws			
0-44	4	.078" x 3/8 Roll Pins			
0-45	4	1/8 x 1/4 Roll Pins			
0-46	2	1/8 x 3/8 Roll Pins			
0-47	4	5-40 x 1/8 Socket Set Screws			
0-48	4	5-40 x 1/2 Socket Set Screws			
0-49	4	6-40 x 3/8 Socket Set Screws			
0-50	2	1/4-28 x 1/4 Socket Set Screws			
0-51	7	10-32 x 3/4 Socket Cap Screws			
0-52	4	1/4-20 x 1/2 Socket Cap Screws			
0-53	4	1/4-20 x 3/4 Socket Cap Screws			
	2	5/16-18 x 5/8 Socket Cap Screws			
	2	5/16-18 x 1" Socket Cap Screws			
	3	3/8-16 x 3/4 Socket Cap Screws			
0-57	2	3/8-16 x 1 Socket Cap Screws			
0-58	2	#5100-31 Snap Ring			
0-59	2	10-32 Hex Nut			