

# Rivett Blueprints

[Left Click on Blueprint# to go to that Blueprint](#)

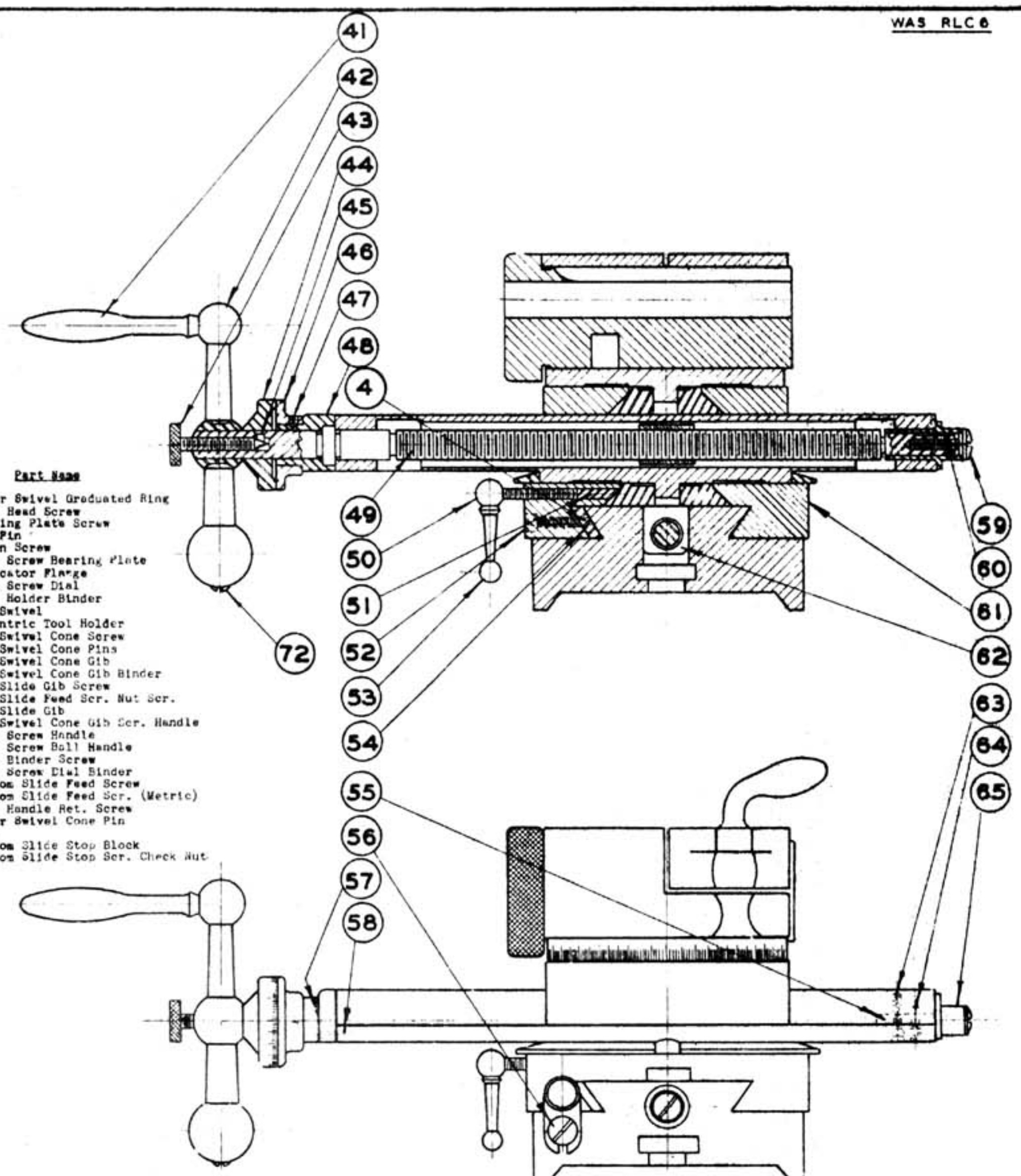
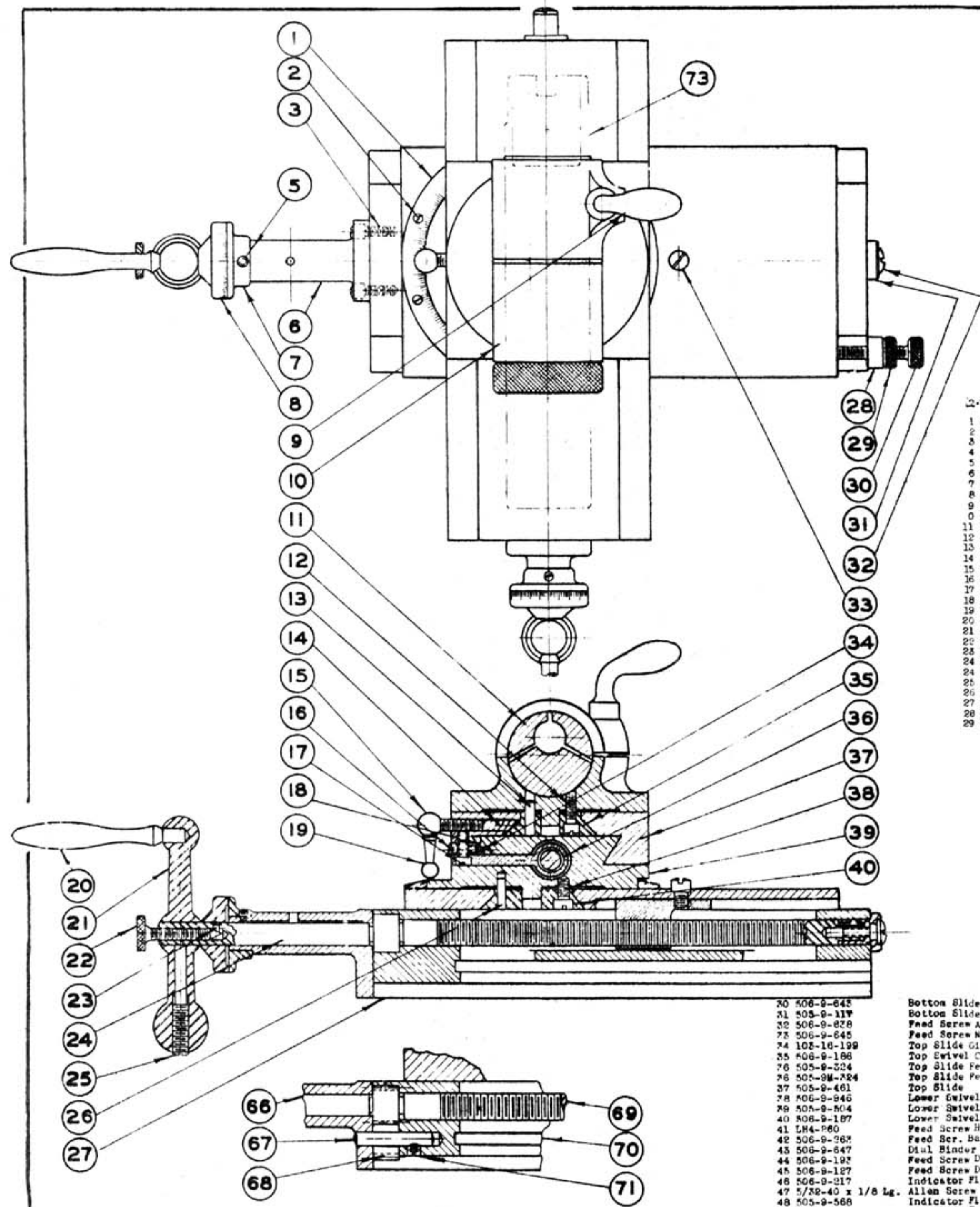
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918R-16	Motor J'Shaft Drive	01/19/51
918S-10K-714-1	918 Metal Cabinet	08/16/48
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918S-16W	Worthington Drive	01/19/51
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B-2650	Wiring Diagram	07/02/45
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LHT4	Tailstock Knurling Attachment	01/19/37
LJ3-354	Pin for Binding Bolt	11/13/18
LJ8-142	Steady Rest Binding Bolt	06/17/38
LKG	Follower Rest	01/18/37
LLE-769	Shank for Jacobs #1	05/18/33
LLE-770	Shank for Jacobs #2	05/18/33
LLE-771	Shank for Jacobs #2	05/18/33
LLE-772	Shank for Jacobs #6	05/18/33
LRQ-201	Speed Box, Motor Driven	03/04/43
LRT-414	Triangle Rest	04/03/37
LRT-415	Sawing Table	04/03/37
LT8A	Traverse Miller Assembly	05/10/32
LT8A-43	Threading Milling Attachment	11/13/36
LT8A-A	Feed Screw Assembly	01/19/37
LVK-145	Thread Dial Bracket	02/05/23
LVK-8-101	Thread Dial	01/22/23
LVK-811	Worm Gear	12/13/22

LVW	Motor Jackshaft Drive	
LVW-325	Binder Stud Nut	08/12/42
LVW-498	Binder Stud	08/05/42
LYX8-23-145	Index Bracket	12/08/21
LYX8A-5C-155	Draw-In Rod Collar	
LYX8-Assembly	Index Attachment	12/21/21
Rivett Factory	Engraving	
RLC-15	5C Headstock	
RLC-32	Motor J'Shaft Drive	
RLC-34	Taper Attachment	
RLC-5	4NS Headstock	
Speed Box	Speed Box Brake Adjustment	
WH-748	Washer for 7/16 Hex Nut	08/15/30
Worthington	Instructions (4 Pages)	



Q'ty.	Part No.	Part Name
1	505-9-198	Lower Swivel Graduated Ring
2	2x-4P x 1/4	Fl. Head Screw
3	506-9-641	Bearing Plate Screw
4	506-9-254	Gib Pin
5	5/32-40 x 1/8 Lg.	Allen Screw
6	505-9-274	Feed Screw Bearing Plate
7	506-9-217	Indicator Flange
8	506-9-193	Feed Screw Dial
9	505-9-128	Tool Holder Binder
10	506-9-502	Top Swivel
11	506-9-274	Eccentric Tool Holder
12	506-9-648	Top Swivel Cone Screw
13	506-9-758	Top Swivel Cone Pins
14	506-9-245	Top Swivel Cone Gib
15	506-9-129	Top Swivel Cone Gib Binder
16	506-9-646	Top Slide Gib Screw
17	506-9-677	Top Slide Feed Scr. Nut Scr.
18	505-9-246	Top Slide Gib
19	506-9-256	Top Swivel Cone Gib Scr. Handle
20	506-9-260	Feed Screw Handle
21	506-9-261	Feed Screw Ball Handle
22	506-9-647	Dial Binder Screw
23	506-9-127	Feed Screw Dial Binder
24	505-9-556	Bottom Slide Feed Screw
25	505-9-556	Bottom Slide Feed Scr. (Metric)
26	506-9-355	Ball Handle Ret. Scr.
27	505-9-115	Lower Swivel Cone Pin
28	506-9-132	Base
29	506-9-720	Bottom Slide Stop Block
		Bottom Slide Stop Scr. Check Nut

30	506-9-645	Bottom Slide Stop Screw
31	505-9-117	Bottom Slide Feed Scr. Sleeve
32	506-9-828	Feed Screw Adj. Screw
33	506-9-645	Feed Screw Nut Screw
34	102-18-199	Top Slide Gib Pin
35	506-9-186	Top Swivel Cone
36	505-9-324	Top Slide Feed Screw Nut
37	505-9M-224	Top Slide Feed Screw Nut (Metric)
38	505-9-461	Top Slide
39	505-9-846	Lower Swivel Cone Screw
40	505-9-804	Lower Swivel
41	506-9-187	Lower Swivel Cone
42	LH4-260	Feed Screw Handle for Top Slide
43	506-9-265	Feed Scr. Ball Handle for Top
44	506-9-647	Dial Binder Screw
45	506-9-127	Feed Screw Dial
46	506-9-127	Feed Screw Dial Binder
47	5/32-40 x 1/8 Lg.	Indicator Flange
48	505-9-557	Allen Screw
49	505-9-557	Indicator Flange Support
50	505-9M-557	Top Slide Feed Screw
51	506-9-130	Top Slide Feed Screw (Metric)
52	506-9-848	Lower Swivel Cone Gib Binder
53	506-9-259	Lower Swivel Cone Gib
54	506-9-147	Lower Slide Gib
55	506-9-174	Lower Swivel Block
56	506-9-847	Stop Block Screw
57	506-9-646	Indicator Flange Supporting Pin
58	506-9-757	Indicator Flange Supporting Pin
59	506-9-678	Feed Screw Adj. Screw
60	506-9-287	Feed Screw Sleeve Key
61	505-9-462	Bottom Slide
62	505-9-225	Bottom Slide Feed Screw Nut
63	506-9-199	Bottom Slide Feed Screw Nut (Metric)
64	506-9-850	Lower Swivel Block Screw
65	505-9-457	Lower Swivel Block Lower
66	505-9-274	Top Slide Feed Screw Sleeve
67	106-20-256	Feed Screw Bearing Plate
68	608-9-226	Intermediate Gear Pin
69	608-9-226	Lower Feed Screw Int. Gear
70	608-9-569	Bottom Slide Feed Screw
71	608-9M-559	Bottom Slide Feed Screw (Metric)
72	505-9-115	Base
73	1/2-20 x 2/18	Int. Gear Pin Cut Screw
		Ball Handle Ret. Scr.
		Tool Holder

**SLIDE REST  
ECCENTRIC TOOL  
HOLDER TYPE**

Fractional Dimensions to Finished Surfaces  $\pm .005"$

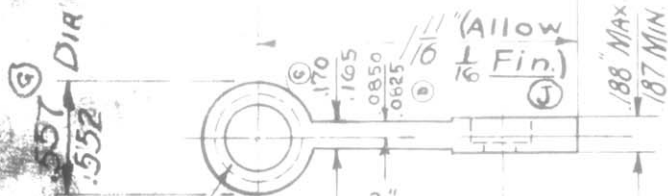
Standard Reamed Holes  $\pm$



H	6-16-48	ADDED AT ASSEMBLY	A	6-11-40	WAS 8" E.T.G.
J	6-16-48	ADDED R.W.G.	B	6-28-43	DIM. ADDED W.O.C.
K	12-13-48	WAS HARD BRONZE E.T.G.	C	6-28-43	" " W.O.C.
			D	6-28-43	" " W.O.C.
			E	6-29-45	WAS 12" Lg E.T.G.
			F	6-29-45	WAS 12 Pcs. E.T.G.
			G	3-21-97	WAS 9/16" (JLD) S.F.
			L	12-13-48	WAS 8" Lg. Mks & Pcs. E.T.G.
			M	1-20-49	WAS 7.52/7.52 E.T.G.
			N	7-27-49	ADDED "R" DR. RG.
					ON 521R

No. 7 (.201) Drill -  $\frac{5}{16}$ " C. bore.  
 $\frac{1}{8}$ " Deep. At Assem.

FORM MILLING  
CUTTER-  
TOOL # 824



# TAPS  
# LGR-247

$\frac{7}{16}$ " - 10 - 29° - L.H. Tap. - "R" Drill

FINISH ALL OVER. DRILLING # LGR-11

TOOL # 943 - # 824 -  
BEARIUM  
METAL

-PATT. 505-9-324-PATT. 12 LG. 505-9-324

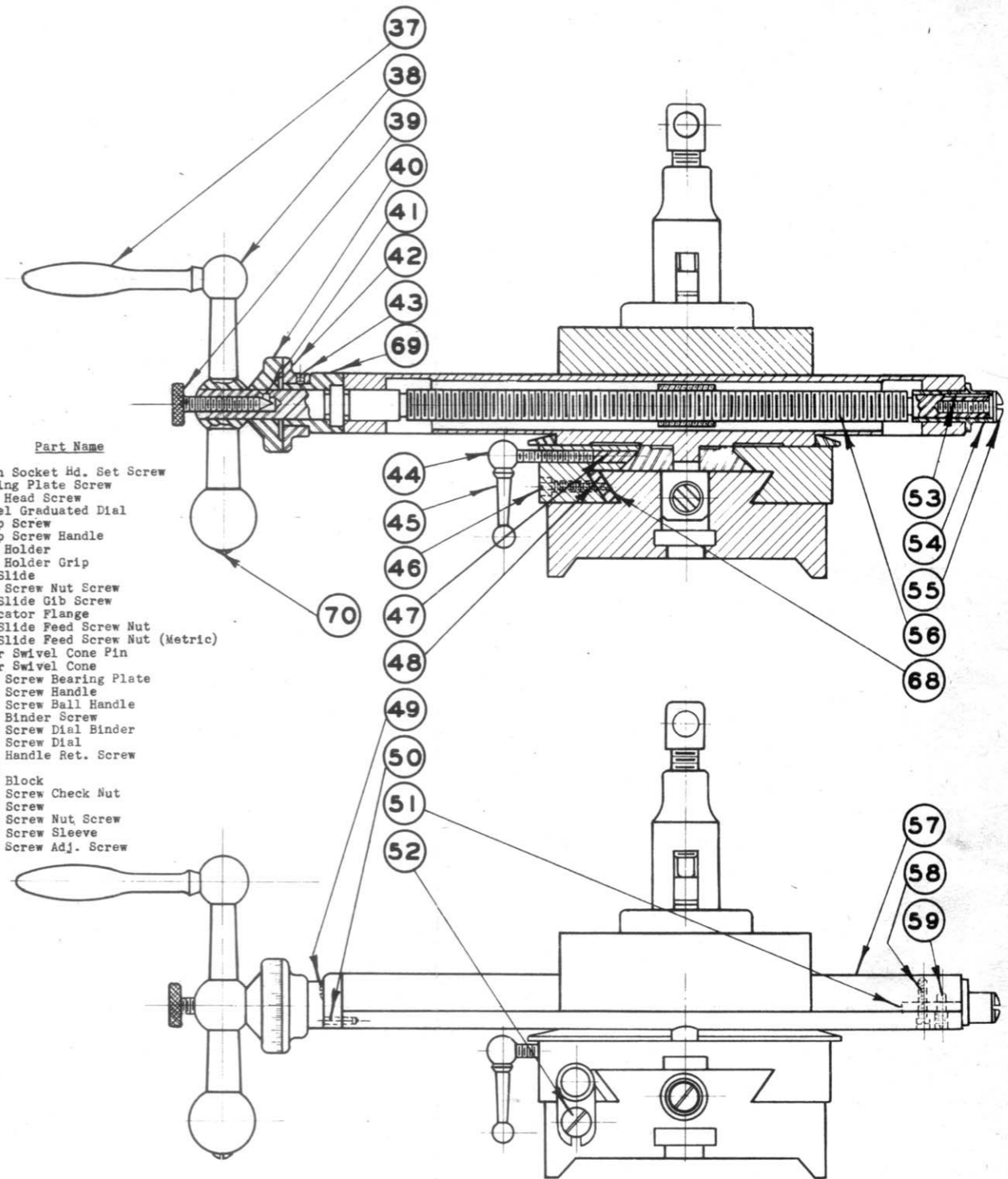
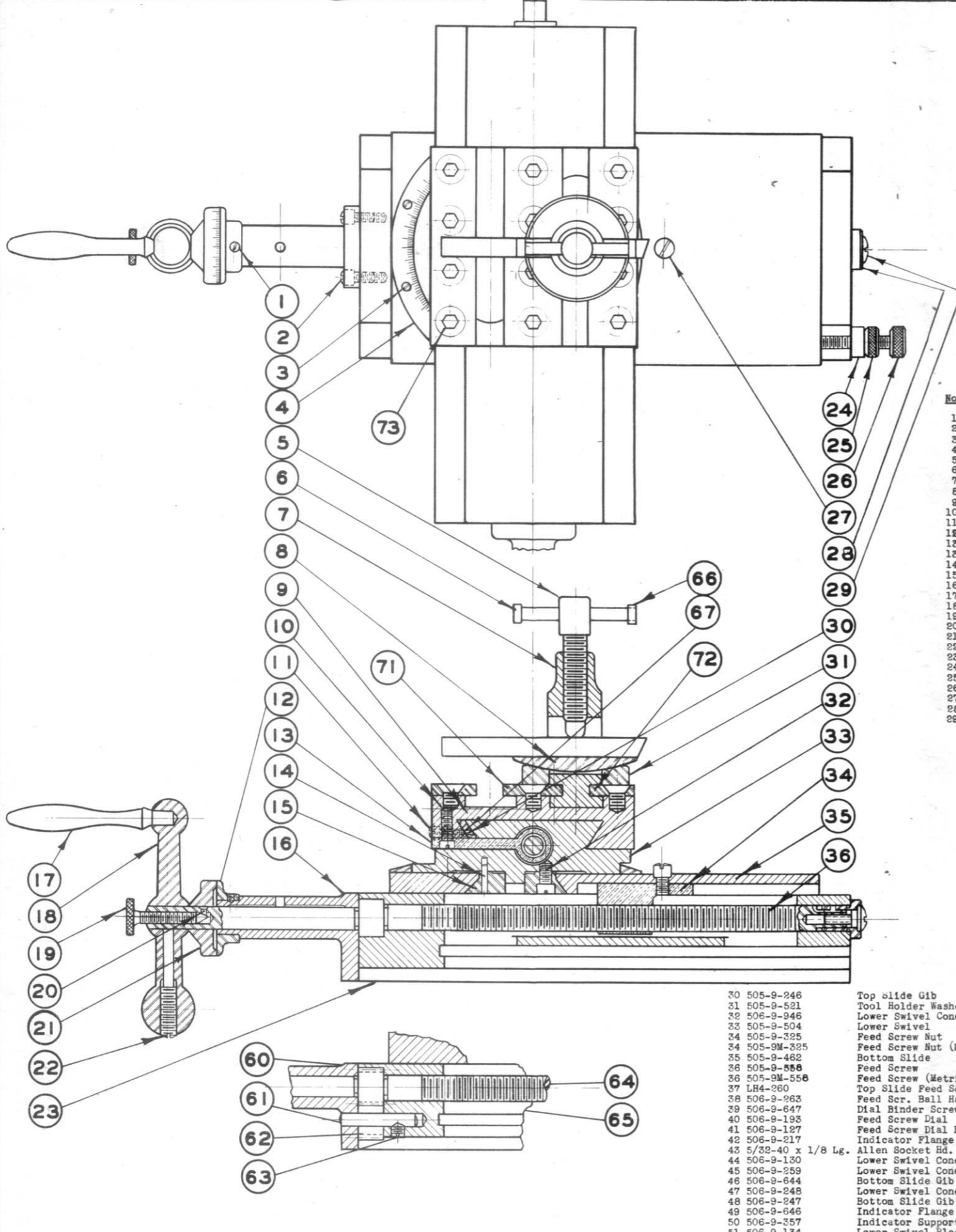
MAKES 120 Pcs

# TOP SLIDE FEED SCREW NUT

R. L. & G. Co.  
BOSTON, MASS.

Drawn by \_\_\_\_\_  
Traced by L.R.S. Date 1-11-29  
Checked by \_\_\_\_\_ Scale FULL SIZE





No.	Part No.	Part Name
1	5/32-40 x 1/8 ug.	Allen Socket Hd. Set Screw
2	506-9-641	Bearing Plate Screw
3	#4-40 x 1/4"	Fl. Head Screw
4	505-9-193	Swivel Graduated Dial
5	506-9-948	Clamp Screw
6	506-9-262	Clamp Screw Handle
7	505-9-733	Tool Holder
8	506-9-249	Tool Holder Grip
9	505-9-464	Top Slide
10	506-9-627	Feed Screw Nut Screw
11	506-9-646	Top Slide Gib Screw
12	506-9-217	Indicator Flange
13	505-9-324	Top Slide Feed Screw Nut
13	505-9M-324	Top Slide Feed Screw Nut (Metric)
14	506-9-355	Lower Swivel Cone Pin
15	506-9-187	Lower Swivel Cone
16	505-9-374	Feed Screw Bearing Plate
17	506-9-260	Feed Screw Handle
18	506-9-261	Feed Screw Ball Handle
19	506-9-647	Dial Binder Screw
20	506-9-127	Feed Screw Dial Binder
21	506-9-193	Feed Screw Dial
22	506-9-642	Ball Handle Ret. Screw
23	505-9-115	Base
24	506-9-132	Stop Block
25	506-9-326	Stop Screw Check Nut
26	506-9-643	Stop Screw
27	506-9-645	Feed Screw Nut Screw
28	505-9-117	Feed Screw Sleeve
29	506-9-638	Feed Screw Adj. Screw

30	505-9-246	Top slide Gib
31	505-9-521	Tool Holder Washer
32	506-9-946	Lower Swivel Cone Screw
33	505-9-504	Lower Swivel
34	505-9-325	Feed Screw Nut
34	505-9M-325	Feed Screw Nut (Metric)
35	505-9-462	Bottom Slide
36	505-9-558	Feed Screw
36	505-9M-558	Feed Screw (Metric)
37	LH4-260	Top Slide Feed Scr. Handle
38	506-9-263	Feed Scr. Ball Handle for Top Slide
39	506-9-647	Dial Binder Screw
40	506-9-193	Feed Screw Dial
41	506-9-127	Feed Screw Dial Binder
42	506-9-217	Indicator Flange
43	5/32-40 x 1/8 Lg.	Allen Socket Hd. Set Screw
44	506-9-130	Lower Swivel Cone Gib Binder
45	506-9-259	Lower Swivel Cone Gib Binder Handle
46	506-9-644	Bottom Slide Gib Screw
47	506-9-248	Lower Swivel Cone Gib
48	506-9-247	Bottom Slide Gib
49	506-9-646	Indicator Flange Supporting Screw
50	506-9-357	Indicator Support Pin
51	506-9-134	Lower Swivel Block

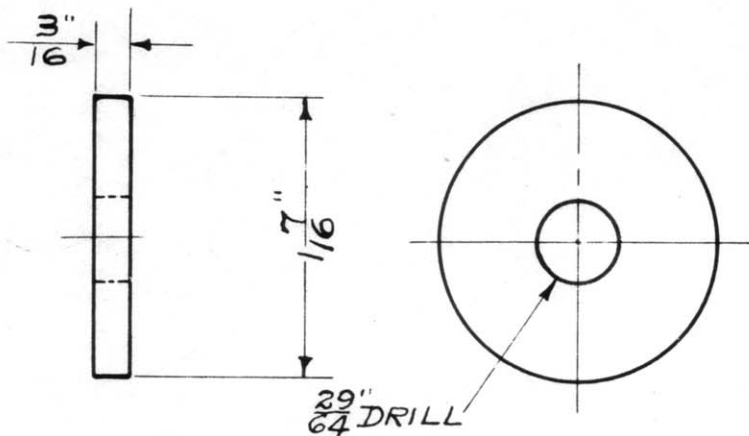
52	506-9-947	Stop Block Screw
53	506-9-287	Feed Screw Sleeve Key
54	505-9-457	Top Slide Feed Screw Sleeve
55	506-9-638	Feed Screw Adj. Screw
56	505-9-557	Top Slide Feed Screw
56	505-9M-557	Top Slide Feed Screw (Metric)
57	505-9-504	Lower Swivel
58	506-9-650	Lower Swivel Block Screw
59	506-9-199	Lower Swivel Block Dowel
60	505-9-274	Feed Screw Bearing Plate
61	1/16-20-356	Intermediate Gear Pin
62	808-9-226	Lower Feed Screw Int. Gear
63	SHR-1031	Int. Gear Pin Set Screw
64	808-9-559	Bottom Slide Feed Screw
64	808-9M-559	Bottom Slide Feed Screw (Metric)
65	505-9-115	Base
66	506-9-188	Collar for Clamp Screw Handle
67	103-16-199	Top Slide Gib Pin
68	506-9-354	Bottom Slide Gib Dowel Pin
69	505-9-568	Indicator Flange Support
70	506-9-949	Ball Handle Ret. Scr. for Top Slide
71	505-9-376	Top Slide Plate (Inner)
72	505-9-375	Top Slide Plate (Outer)
73	505-9-637	1/4-28 Flat Head Screw

## SLIDE REST ROCKER TOOL HOLDER TYPE

**INNETT LATHE & GRINDER INC.**  
BOSTON, MASS.  
Drawn by G. PER H. Date 5/2/43  
Checked by \_\_\_\_\_ Scale FULL  
**505-9A**

Fractional Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $+.0000"$   
 $-.0005"$



9-18-19	DWG. NO. WAS 506-23-522

T REST T BOLT WASHER

✓ **R. L. & G. Co.**  
**BOSTON, MASS.**

Drawn by C. R. O.  
Traced by T. J. K. Date 10-29-18  
Checked by A. C. S. Scale FULL

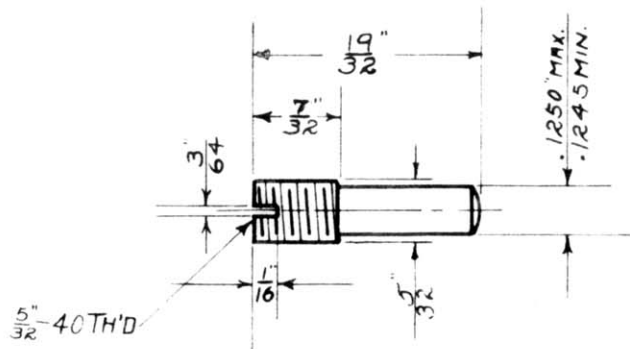
**506-23-522**

COLD ROLLED STEEL

Fractional Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $\begin{matrix} +.0002 \\ -.0005 \end{matrix}$

11-17-19	DWG NO WPS LBY 647



LOWER SWIVEL BLOCK  
DOWEL

X C.P.S.  
AISI B-1113  
5/32 DIA.  
X .07 FT.LG.

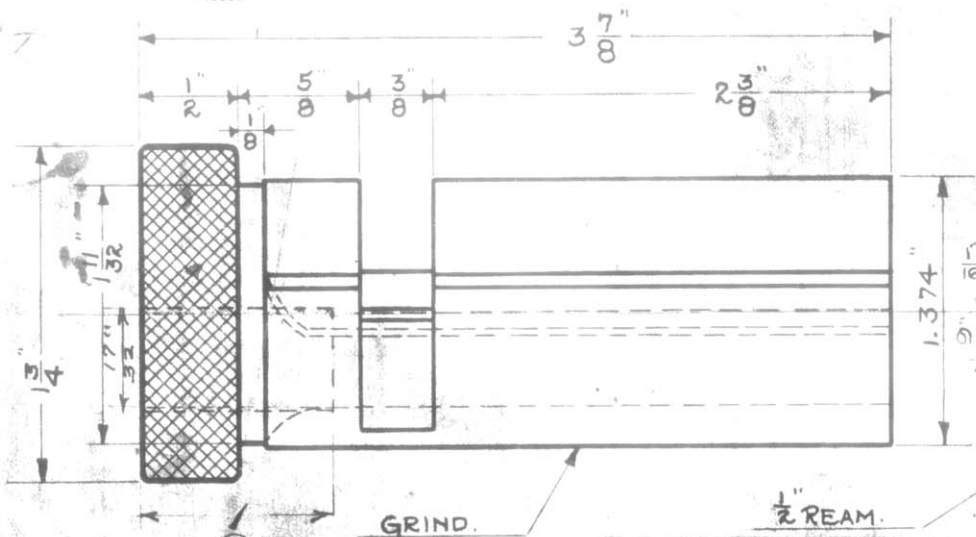
V R. L. & G. Co.  
BOSTON, MASS.

Drawn by W.E.C.  
Traced by W.E.C. Date 11-17-19  
Checked by A.C.S. Scale DOUBLE

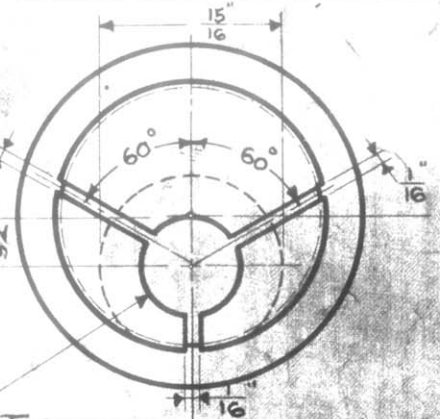
506-9-199

Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $\begin{matrix} +.0008 \\ -.0008 \end{matrix}$



	11-19-19	DWG NO WAS LYCA-274
	4-24-22	$\frac{9}{32}$ WAS $\frac{1}{4}$ "
A	7-21-22	$\frac{17}{32}$ X 1" C. Bore Added



ECCENTRIC TOOL HOLDER.

$\frac{1}{4}$ " ALL OVER.

NOTICE  
Do Not Scale This Drawing  
Read All Notes And  
Instructions Before  
Commencing Work  
Work To Fit

**R. L. & G. Co.**  
BOSTON, MASS.

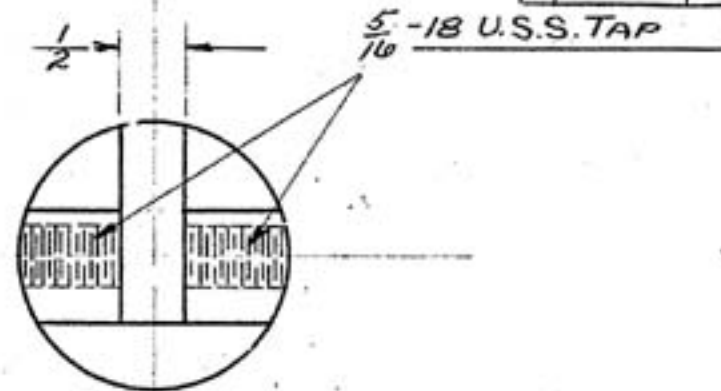
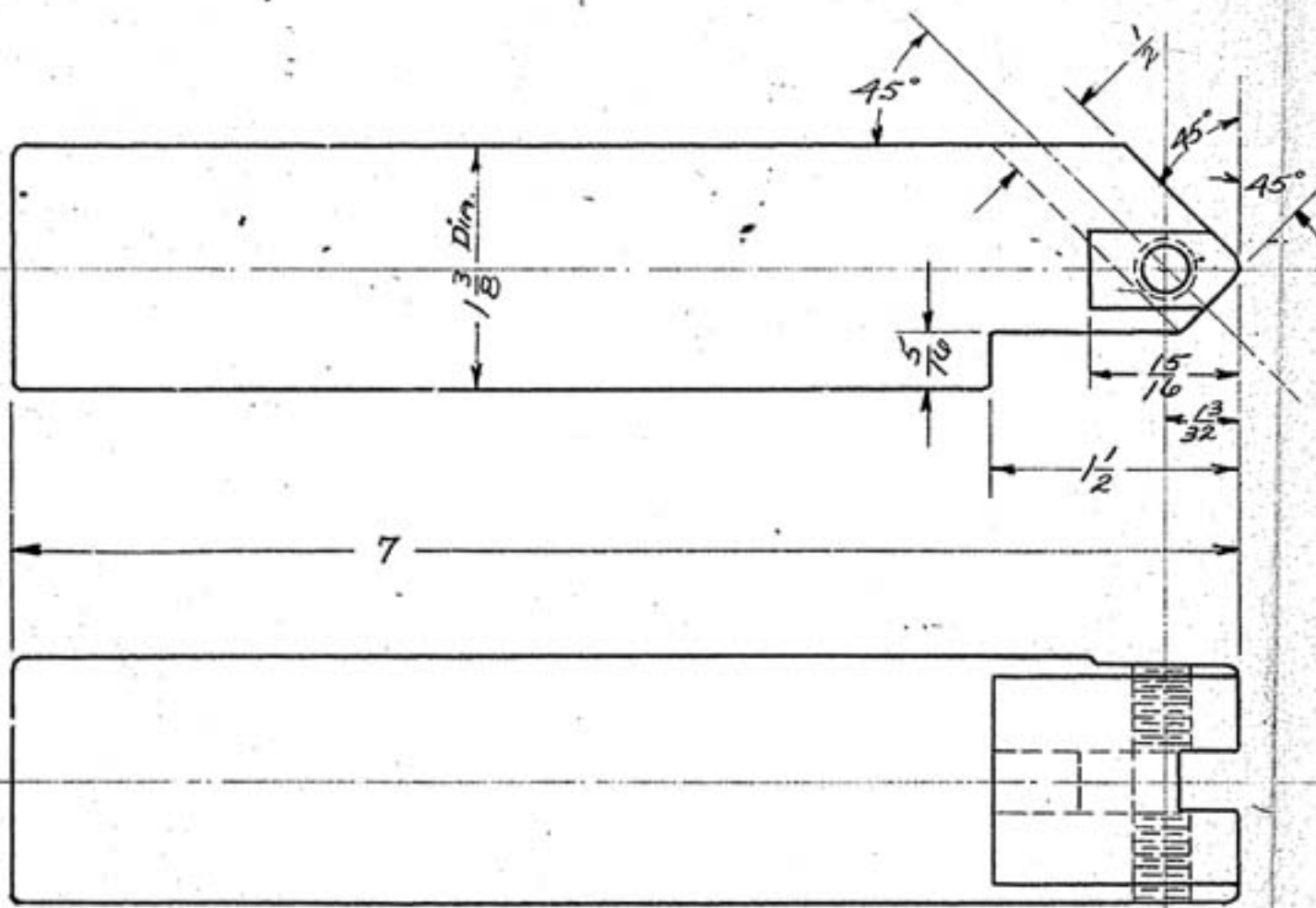
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Traced by " Date 1-25-18  
Checked by A.C.S. Scale FULL

**506-9-274**

CAST IRON. PATTERN # 506-9-274  
BORING FIXTURE #463



Fractional Dimensions to Finished Surfaces  $\pm .005$   
 Standard Reamed Holes  $\pm .0003$



# TOOL HOLDER

( $\frac{5}{16}$  SQ.-TOOL BITS)

$\frac{3}{16}$  DIA. C.R.S.  
 PAT. NO.  
 TOOL NO.

**R. L. & G. Co.**  
 BOSTON, MASS.

Drawn by R.J.R. Date 4-20-33  
 Traced by E.H. Date 1-2-37  
 Checked by \_\_\_\_\_ Scale FULL

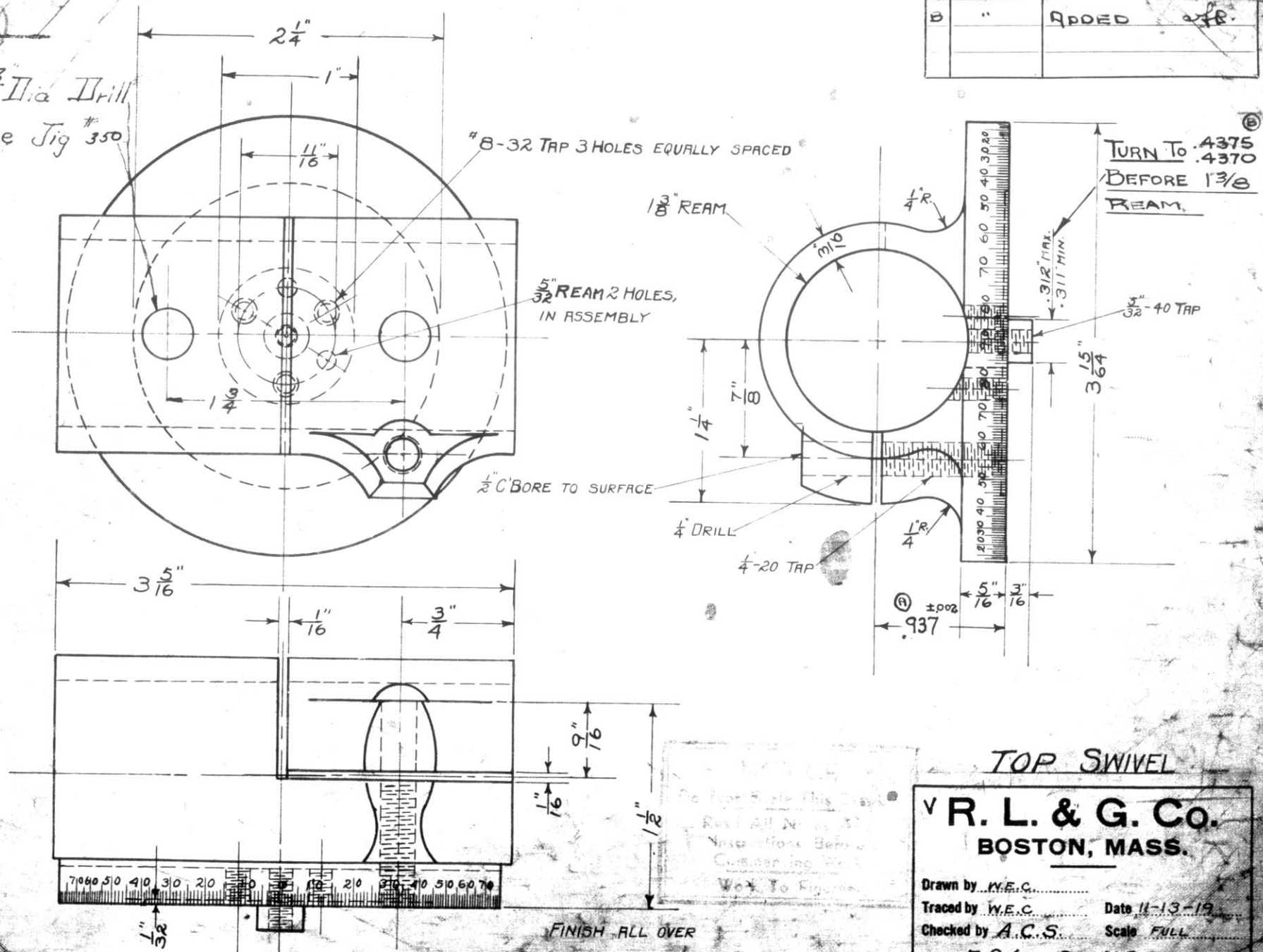
**506-9-279**

Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $+ .0000$   
 $- .0005$ "

	11-13-19	DWG NO. WAS LHA-503
A	7-26-40	WAS 15/16" DIA
B	"	ADDED 2" DIA.

$\frac{3}{8}$ " Dia Drill  
Use Jig # 350



TOP SWIVEL

**V R. L. & G. Co.**  
BOSTON, MASS.

Drawn by W.E.C.  
Traced by W.E.C.  
Checked by A.C.S.

Date 11-13-19  
Scale FULL

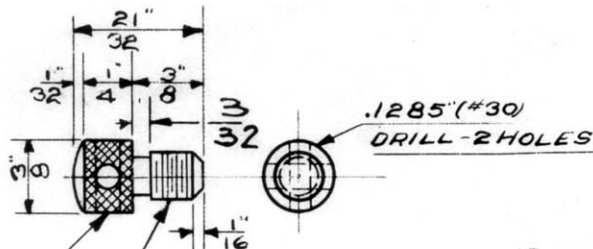
506-9-503

CAST IRON PATTERN 506-9-503

Final Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $\pm .0005"$

4-17-20	DWG NO W-10 204-637



MEDIUM KNURL  
 $\frac{1}{4}$ -32 NS2 THRD

CASE HARDEN

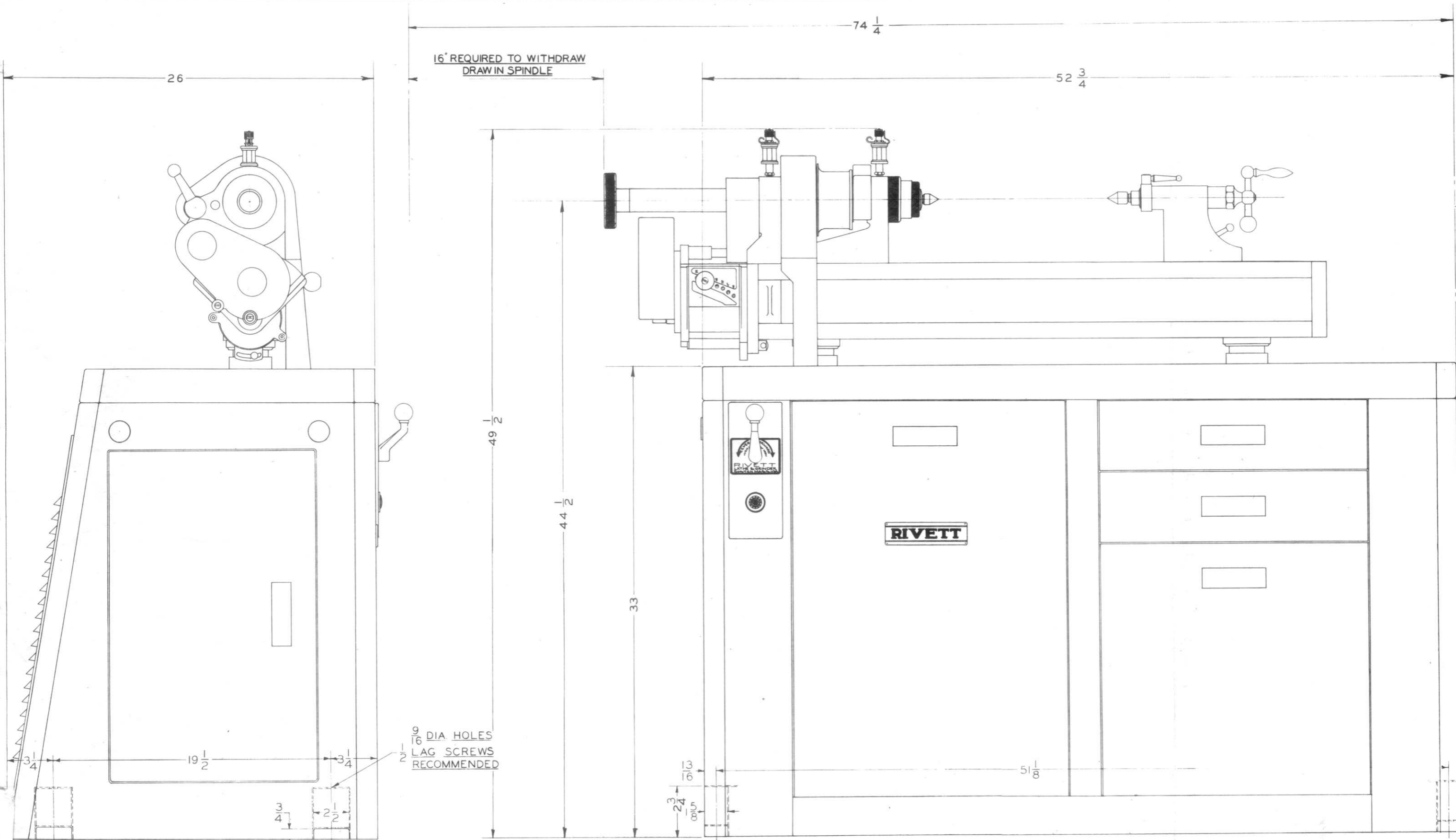
BINDER SCREW

✓ **R. L. & G. Co.**  
BOSTON, MASS.

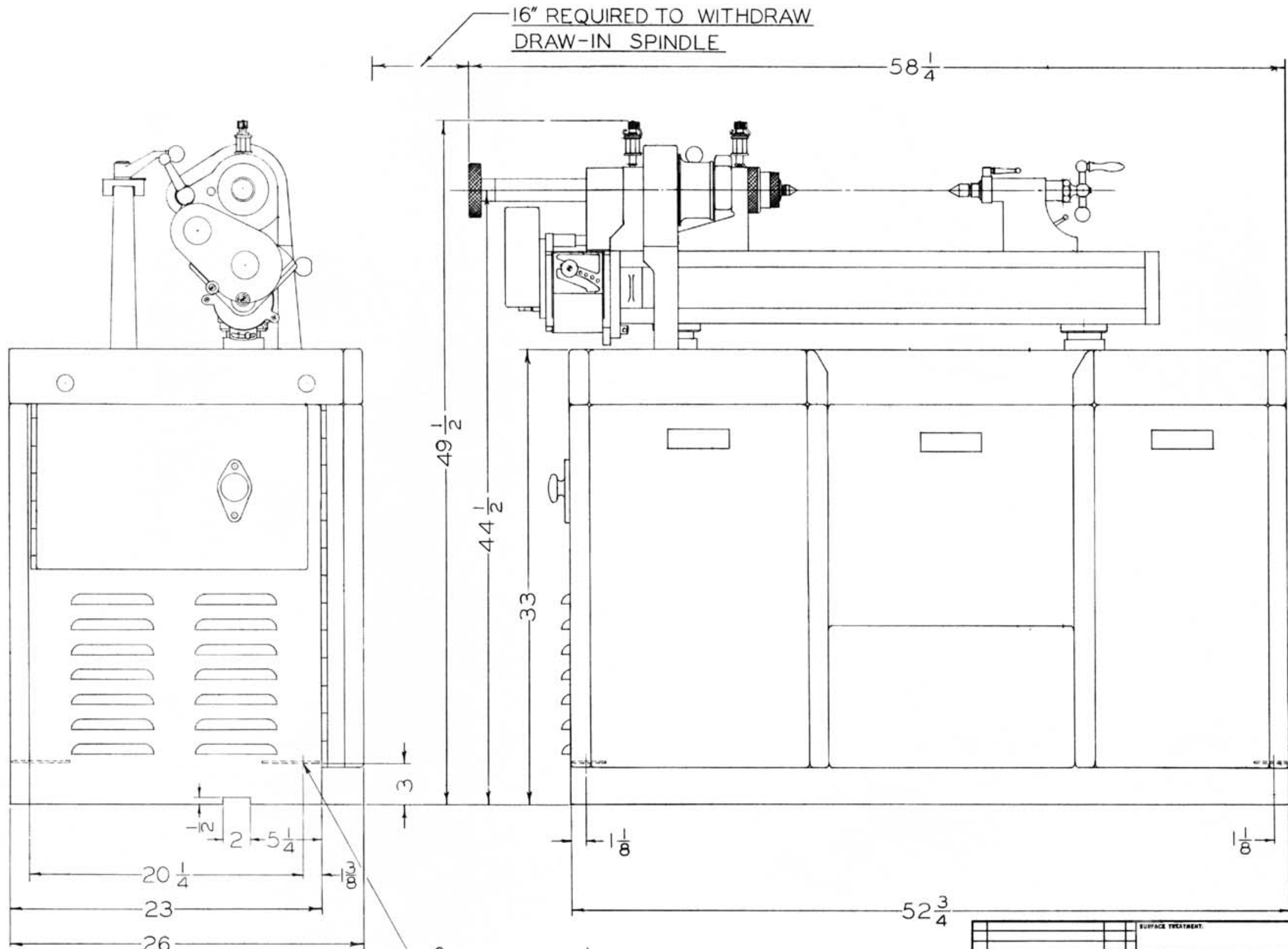
Drawn by R.H.B.  
Traced by E.C. Date 5-7-20  
Checked by A.C.S. Scale FULL

**607-2-637**

MATERIAL CFS  
AISI C-1117  
PART NO.  $\frac{3}{8}$  Dia  
X-OBF-L  
TOOL NO. 3205







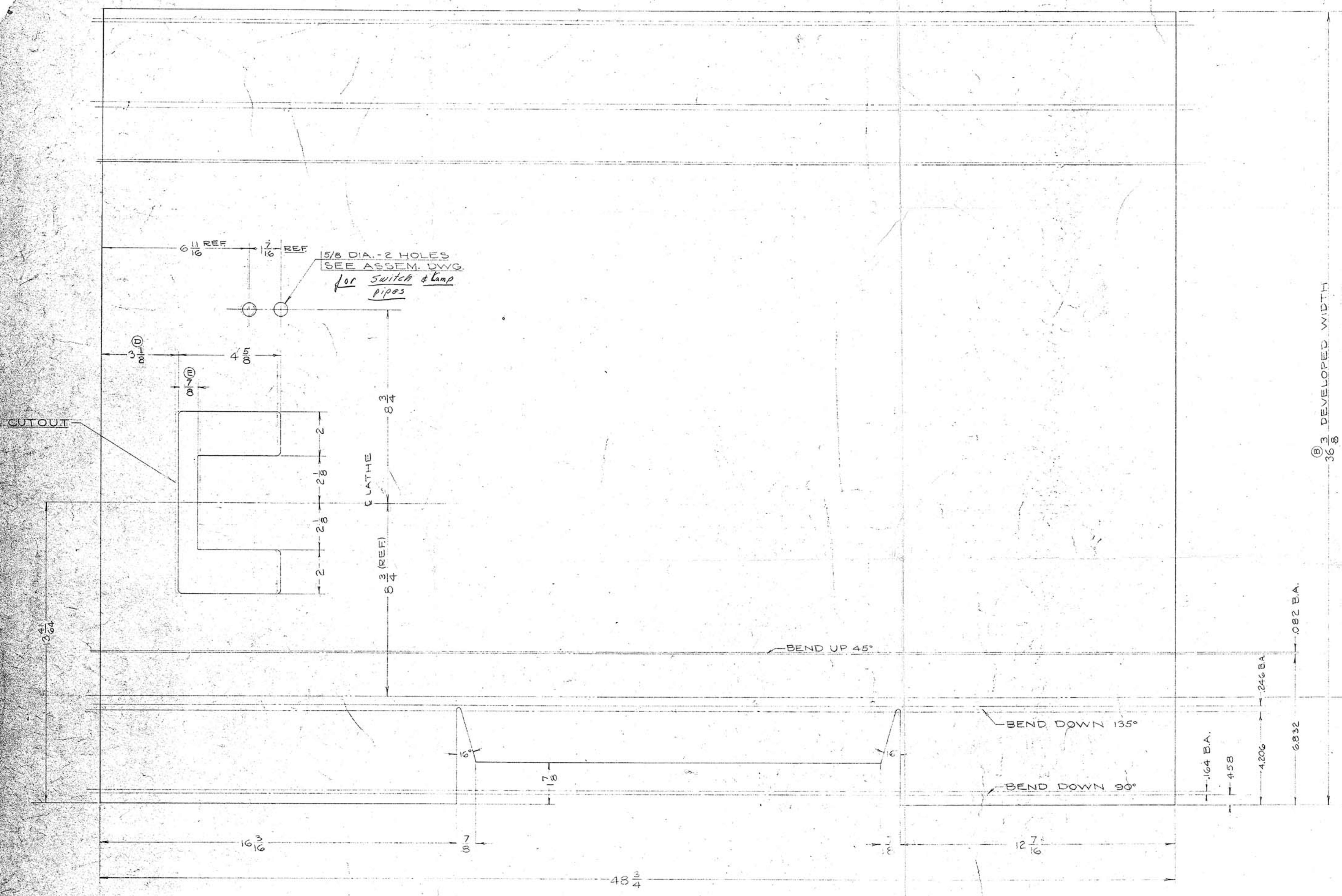
**608 LATHE ON  
KNEE HOLE CABINET**

**9/16" DIA. HOLES 1/2" DIA. LAG  
SCREWS RECOMMENDED**

SYN			REVISION			DATE BY		
MATERIAL:								
MATERIAL SIZE								
PART. NO.								
DIE NO.								
WEIGHT ROUGH-								
WEIGHT FINISHED-								
ASSEMBLY NO.								
NO. REQ. PER ASSEMBLY								
SURFACE TREATMENT:			RIVETT LATHE & GRINDER, INC.					
HEAT TREATMENT:			BRIGHTON BOSTON WARE U.S.A.					
TOOL:			<b>FLOOR PLAN</b>					
TOLERANCES UNLESS OTHERWISE SPECIFIED:-								
DECIMALS			FRACTIONS			ANGLES		
CONCENTRICITY:								
FACE SURFOUT:								
BACK SURFACES:								
BREAK SHARP CORNERS								
REMOVE ALL BURRS								
DRAWN BY:						CHECKED BY:		
TRACED BY:						SCALE:		

RIVETT LATHE & GRINDER, INC.		
BRIGHTON BOSTON WARE U.S.A.		
<b>FLOOR PLAN</b>		
TOLERANCES UNLESS OTHERWISE SPECIFIED:-		
DECIMALS	FRACTIONS	ANGLES
CONCENTRICITY:		
FACE SURFOUT:		
BACK SURFACES:		
BREAK SHARP CORNERS		
REMOVE ALL BURRS		
DRAWN BY:		CHECKED BY:
TRACED BY:		SCALE:
DWG. NO.		
<b>608-10K</b>		





5/8 DIA. - 2 HOLES  
SEE ASSEM. DWG.  
for switch & lamp  
pipes

CUTOUT

LATHE

BEND UP 45°

BEND DOWN 135°

BEND DOWN 90°

② 3 DEVELOPED WIDTH  
36 3/8

082 B.A.

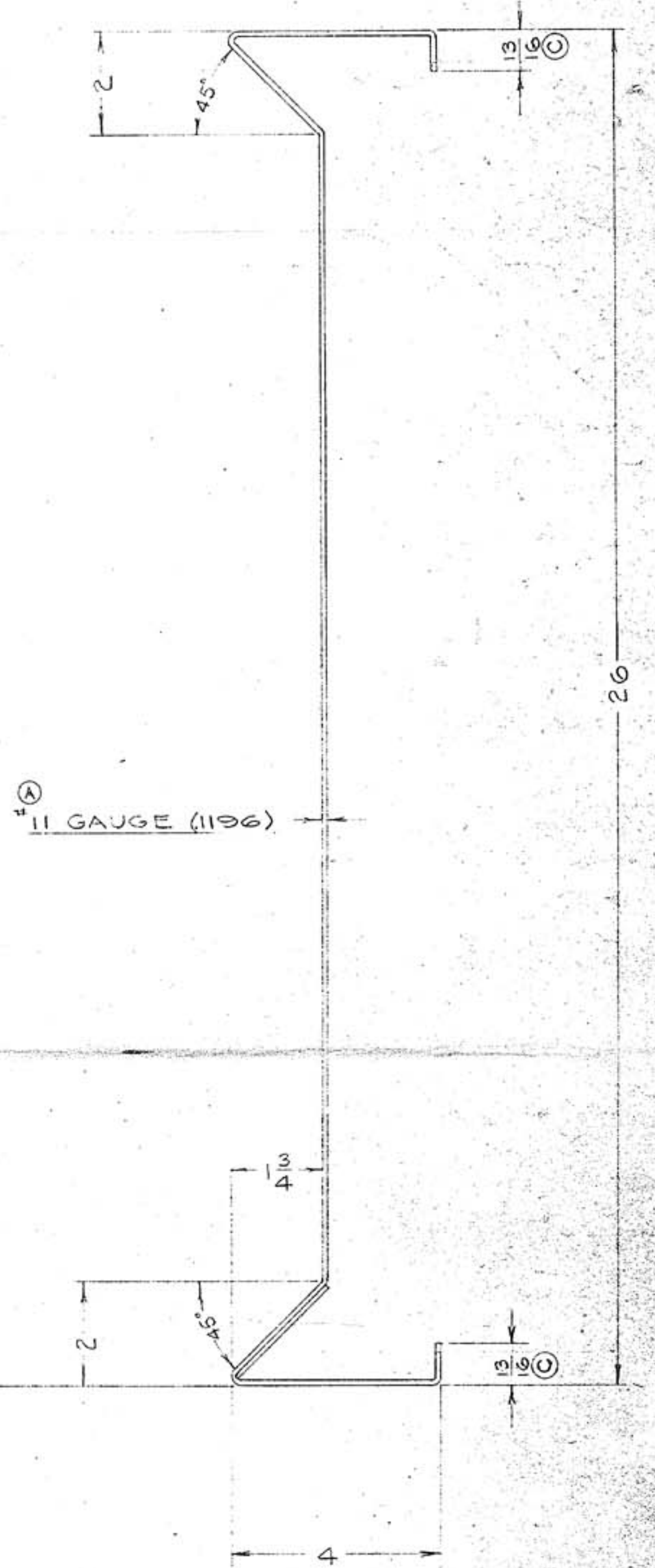
164 B.A.

458

4206

246 B.A.

6832



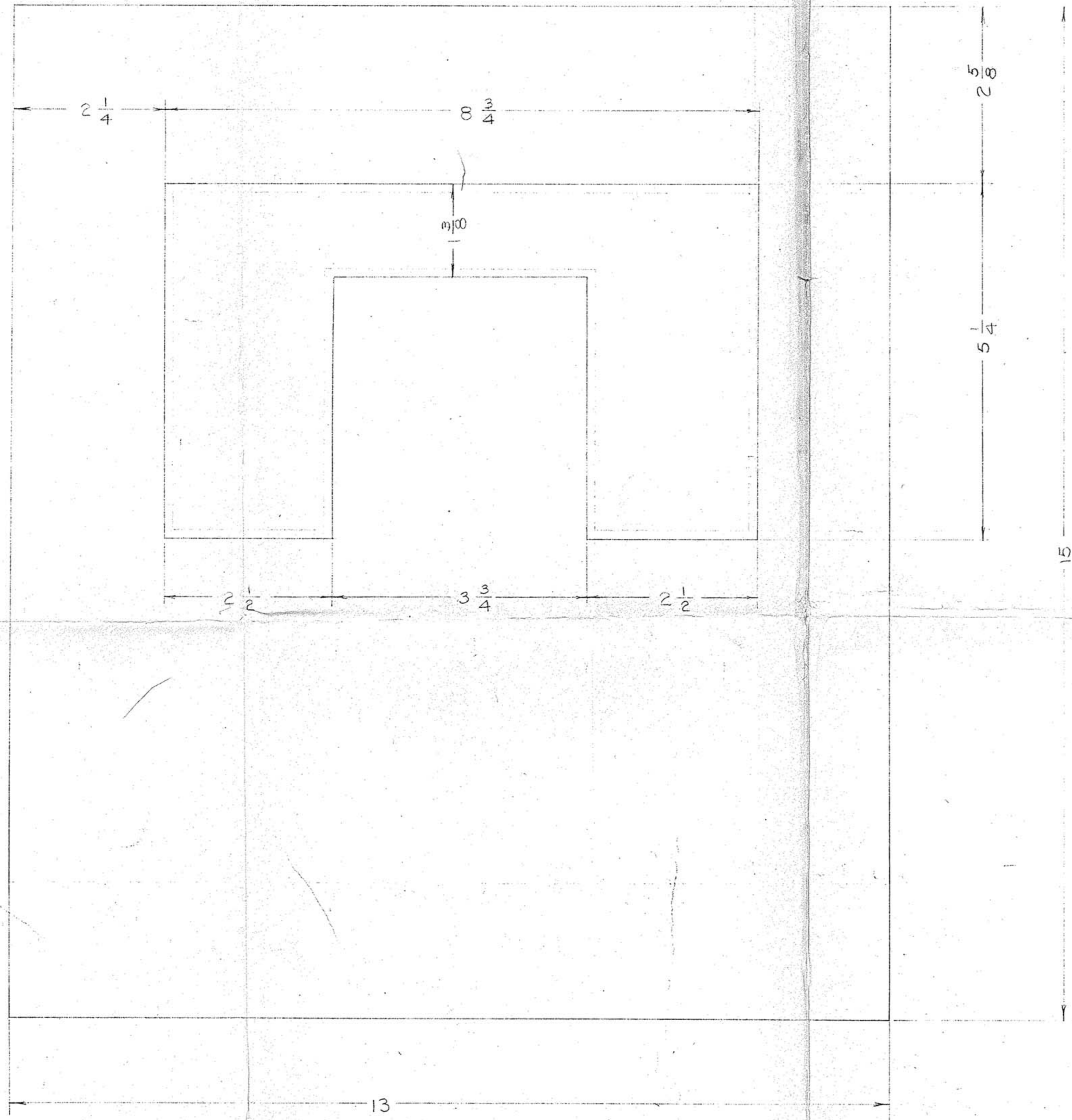
B.A. = BEND ALLOWANCE  
 $B.A. = (.64 \cdot T) + (.157 \cdot R)$   
 $T = .105, R = .062$

ISSUED  
 JUN 3 1958  
 ENGINEERING  
 DISTRIBUTION  
 MFG. DIV. & ADMIN. BLDG.

E WAS N/A	5-3-58	SURFACE TREATMENT
D WAS 3/8	5-31-58	
C WAS 5/8	5-31-58	
B WAS 35 1/8	5-31-58	HEAT TREATMENT
A WAS 12 (104) GAUGE	4-15-58	
BY	REVISION	DATE
MATERIAL SHT. STEEL		
MATERIAL SIZE #11 GAUGE		
WEIGHT ROUGH-		
WEIGHT FINISHED-		
ASSEMBLY NO. 608-10K 7/5		
NO. REQ. PER ASSEM.		

RIVETT LATHE & GRINDER, INC.	
BRIGHTON, BOSTON, MASS., U.S.A.	
TOP PAN	
608 METAL CABINET	
TOLERANCES UNLESS OTHERWISE SPECIFIED:	
DECIMALS	FRACTIONS
	± 1/32
CONCENTRICITY:	
FACE RUNOUT:	
MACH. SURFACES:	
BREAK SHARP CORNERS	
REMOVE ALL BURRS	
DRAWN BY S.W.G. - S.W.G. CHECKED BY	
TRACED BY	
SCALE 1" = 1 1/2"	
608-10K 7/5	

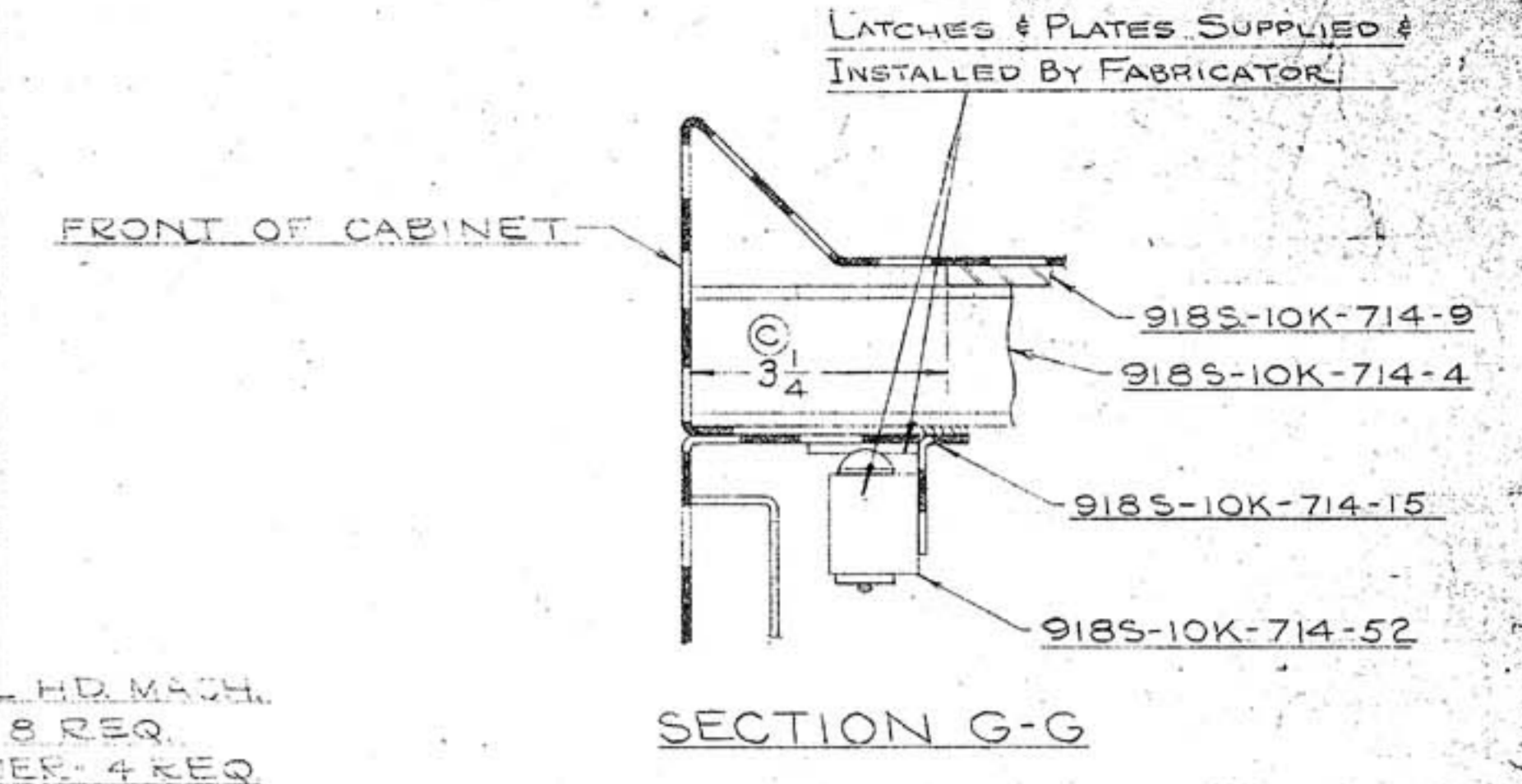
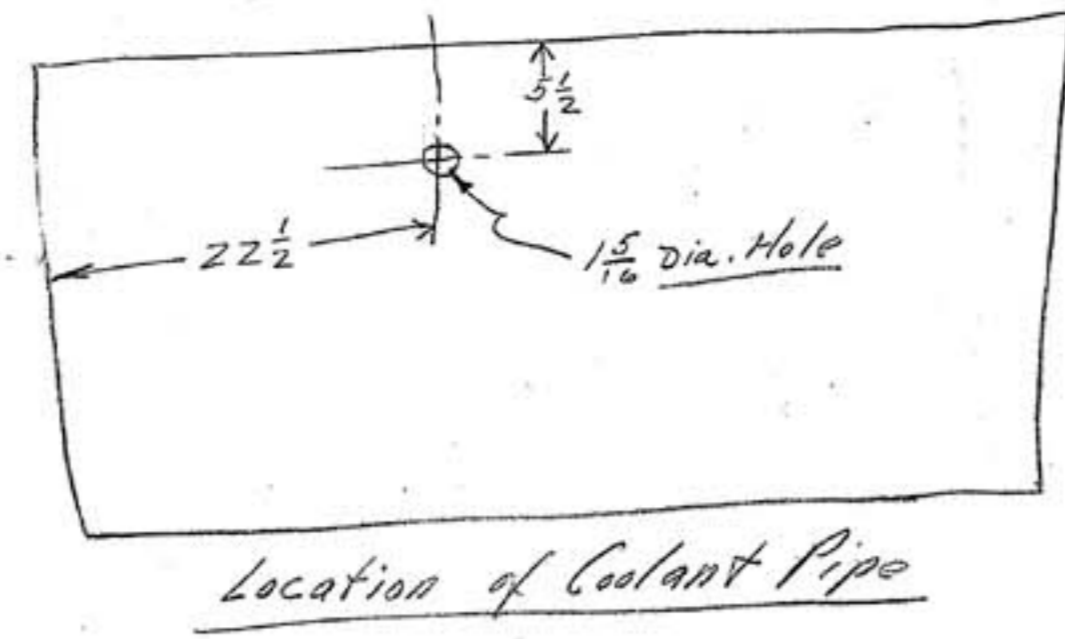
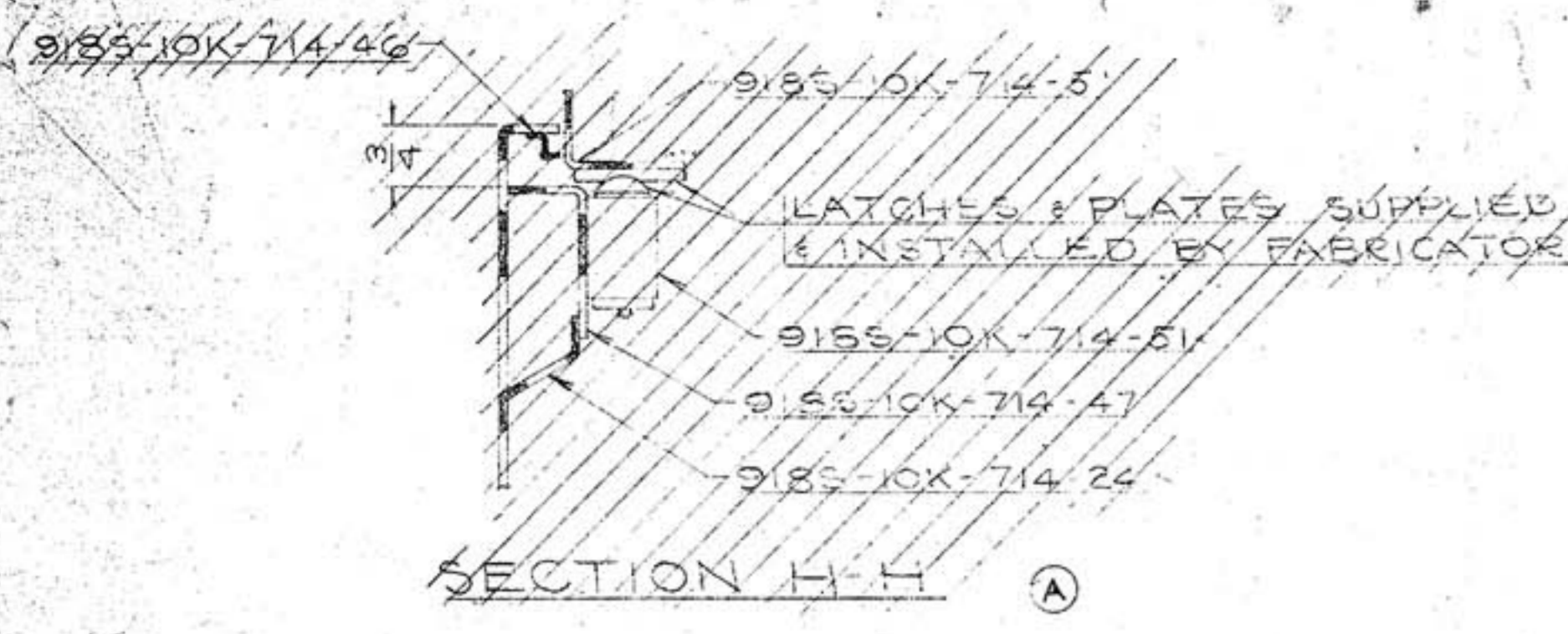




ISSUED  
 JUN - 3 1958  
 ENGINEERING  
 DEPARTMENT  
 RIVETT LATHE & GRINDER, INC.

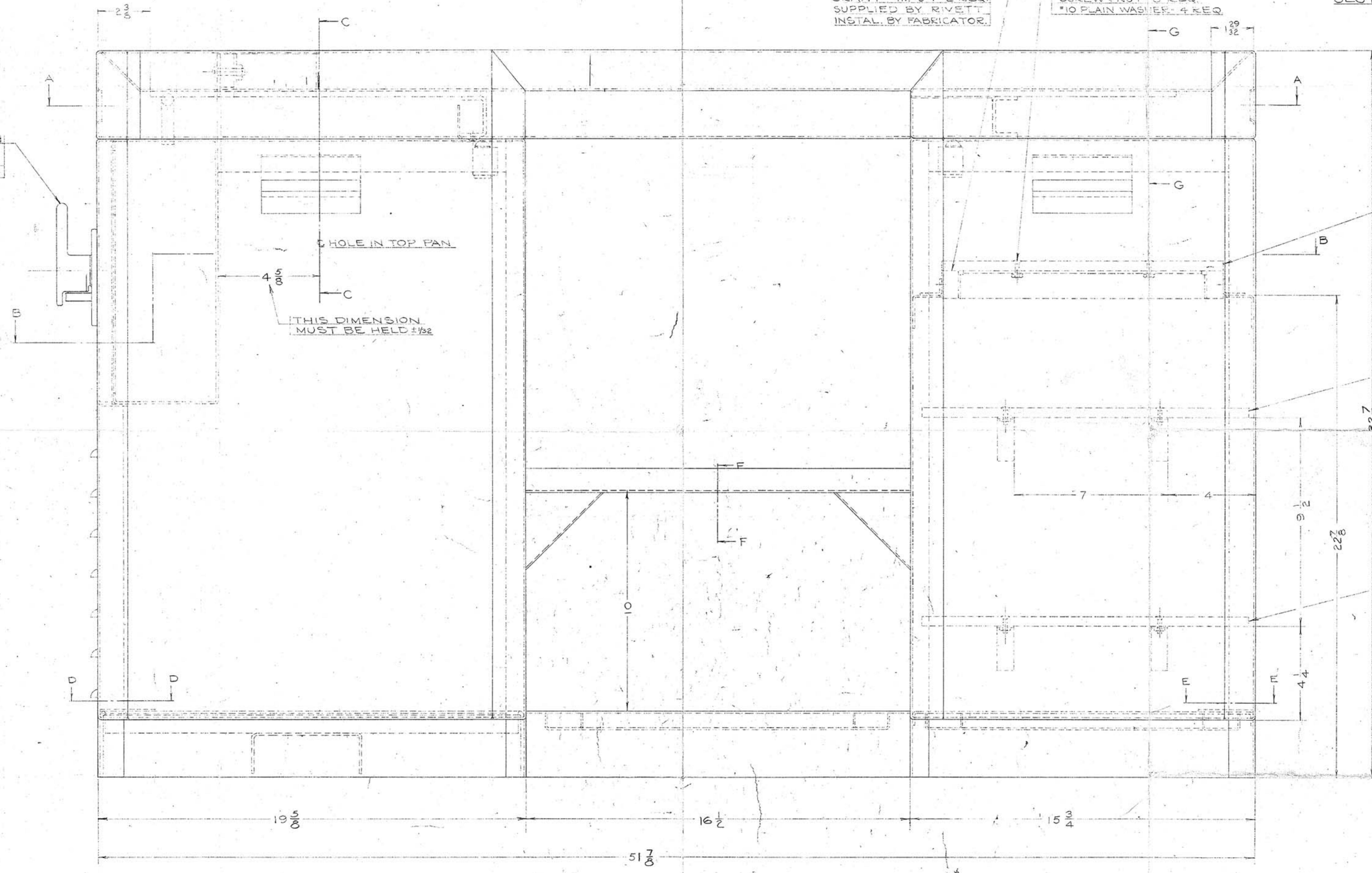
SYMBOL		REVISION		DATE	BY
MATERIAL: H.R. 3TL. PL.					
MATERIAL SIZE: PATS. NO.: 1/4 x 13 x 15					
DIE NO.:					
WEIGHT ROUGH:-					
WEIGHT FINISHED:-					
ASSEMBLY NO. 608-10K					
NO. REQ. PER ASSEM. 1					
SURFACE TREATMENT:					
HEAT TREATMENT:					
TOOLS:					
RIVETT LATHE & GRINDER, INC. BRIGHTON, BOSTON, MASS., U.S.A.					
REINFORCING PLATE-TOP PAN 608 METAL CABINET					
TOLERANCES UNLESS OTHERWISE SPECIFIED:-					
DECIMALS: $\pm 0.005$ FRACTIONS: $\pm 1/32$ ANGLES: $\pm 15'$					
FACE RUNOUT:					
MACH. SURFACES:					
BREAK SHARP CORNERS MAX. RADIUS					
REMOVE ALL BURRS					
DRAWN BY: RWG-91542 CHECKED BY:					
TRACED BY: SCALE: FULL SIZE					
DWG. NO. 608-10K-715-2					





COLLET BOARD RUN GRANT #1M-3-1.2 REQ. SUPPLIED BY RIVETT. INSTAL. BY FABRICATOR.  
 #10-32 x 3/4 OVA. HD. MACH. SCREW # NUT - 8 REQ.  
 #10 PLAIN WASHER - 4 REQ.

C.H. DISCONNECT SWITCH OR 9185-10K-257 HANDLE INSTALLED BY RIVETT.



608-10K-713A COLLET BOARD INSTAL. BY RIVETT.

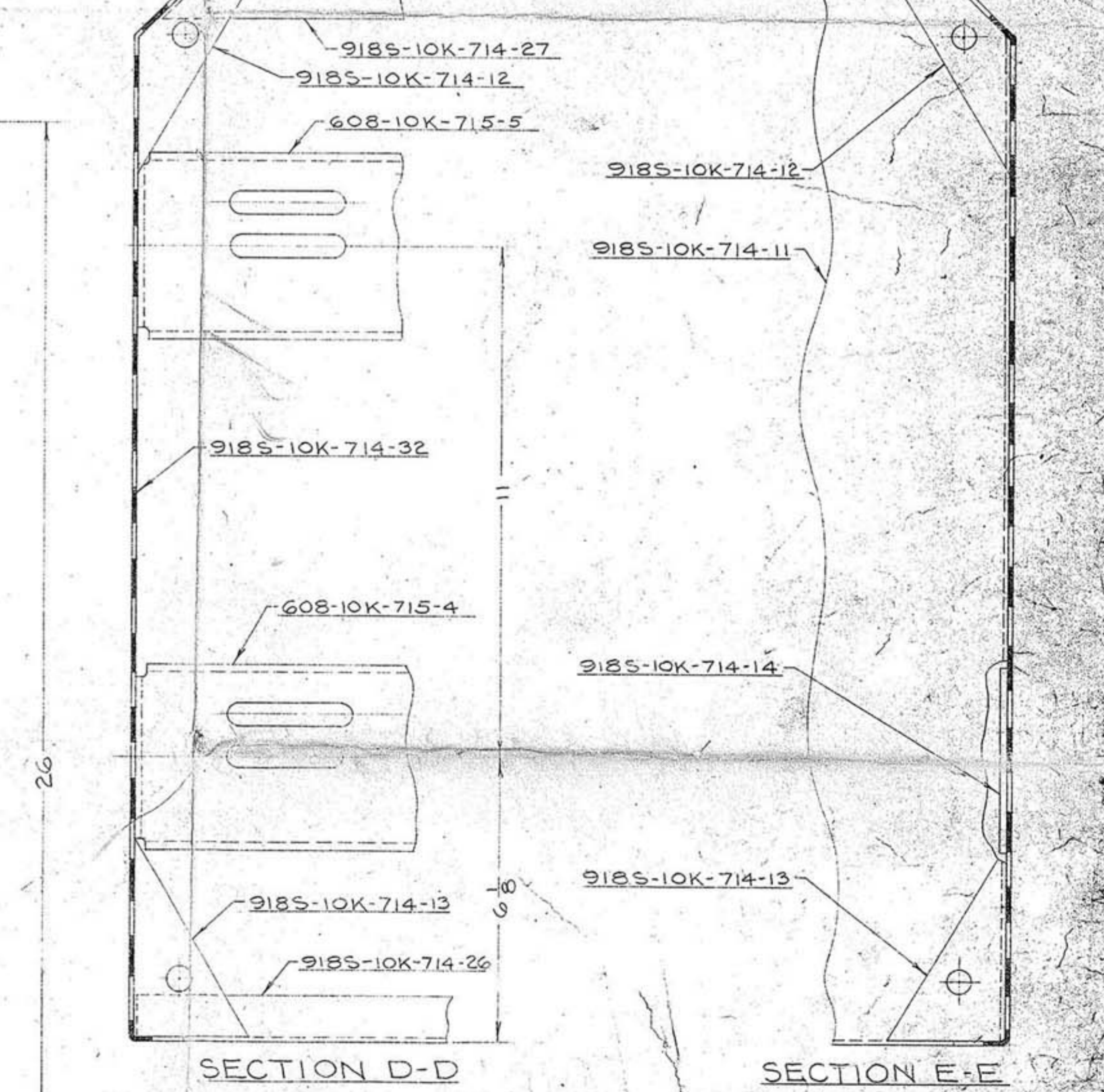
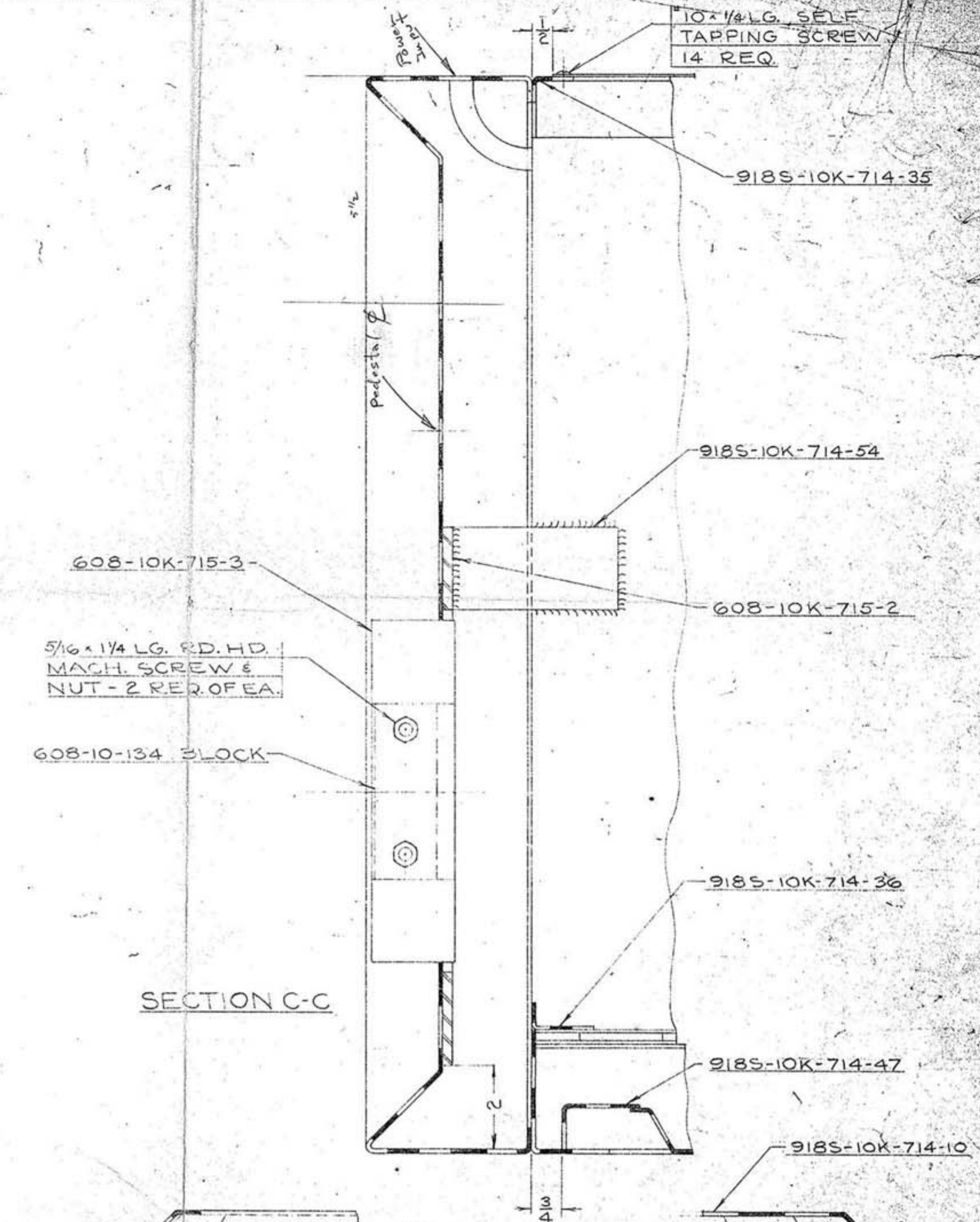
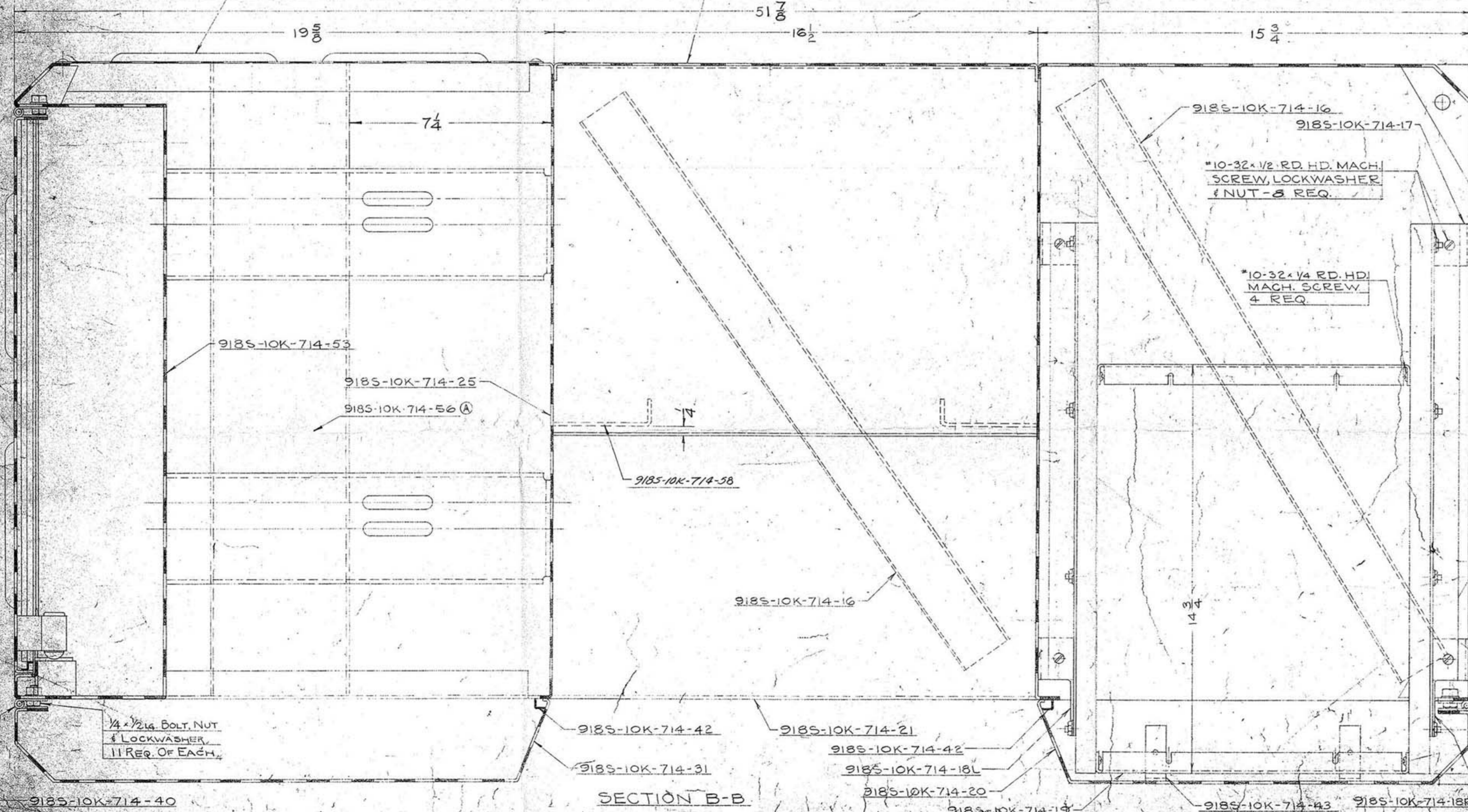
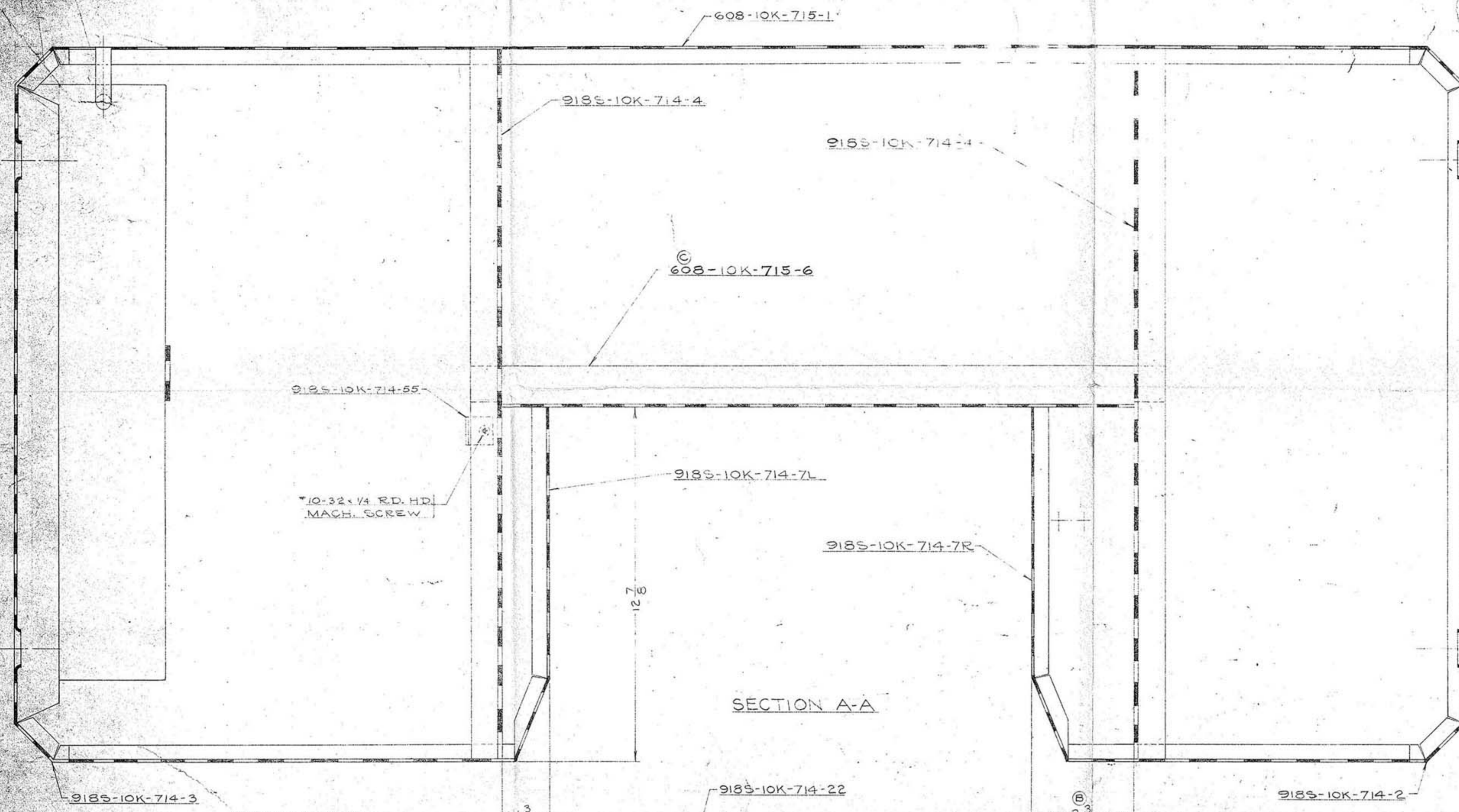
608-10K-821 SHELF INSTAL. BY RIVETT.

918R-10K-821 SHELF INSTAL. BY RIVETT.

REVISION	DATE	BY
D Revised	2/2/55	SW
C WAS 2 1/4	6/15/55	SW
B DASH & HINGE REMOVED	7/16/55	SW
A Emergency X-M REMOVED	11/16/55	SW
SYN		
MATERIAL:		
NATERIAL SIZE:		
PATT. NO.:		
DWG. NO.:		
WEIGHT FINISHED:		
ASSEMBLY NO.:		
NO. REQ. PER ASSEM.		

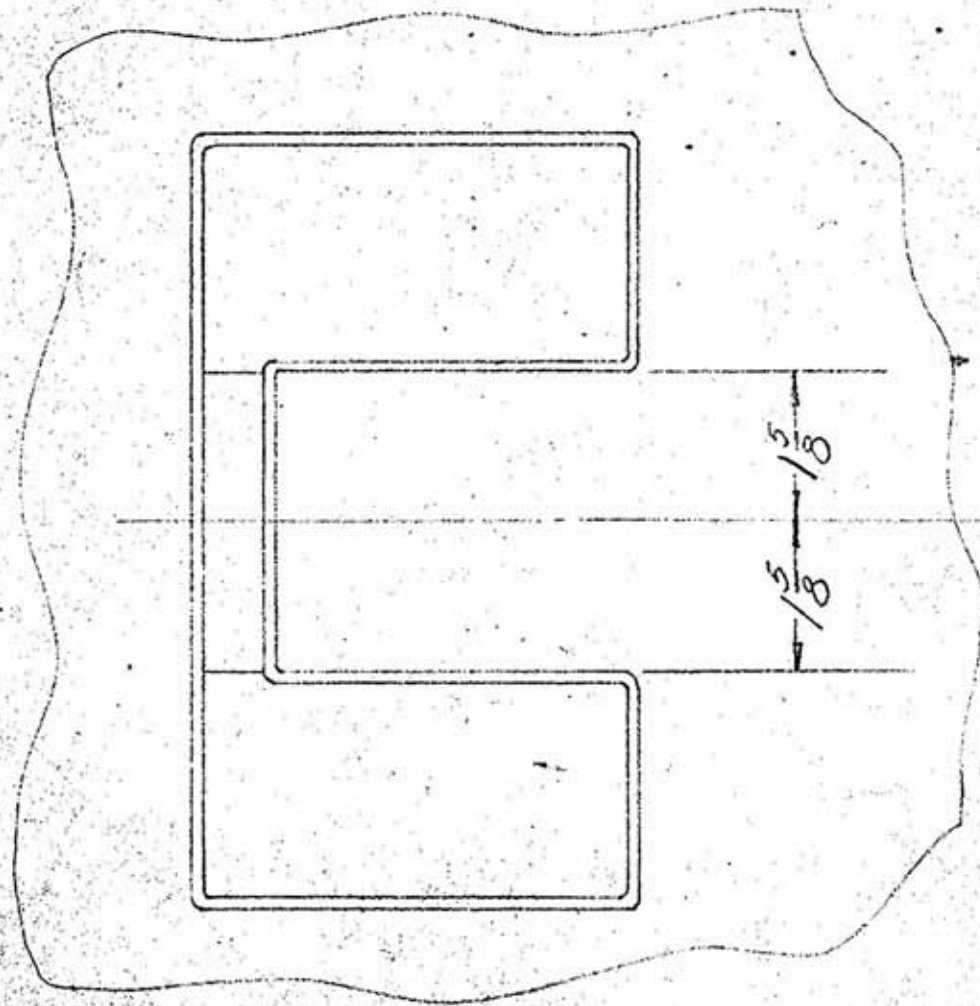
SURFACE TREATMENT: PAINT MACHINE TOOL GRAY  
 HEAT TREATMENT:  
 TOOLS:  
 RIVETT LATHE & GRINDER, INC.  
 BRIGHTON, BOSTON, MASS., U.S.A.  
 608 METAL CABINET  
 TOLERANCES UNLESS OTHERWISE SPECIFIED:  
 DECIMALS: ± 1/32 FRACTIONS: ± 1/32 ANGLES: ± 1/2  
 CONCENTRICITY:  
 FACE RUNOUT:  
 MACH. SURFACES:  
 BREAK SHARP CORNERS MAX. RADIUS  
 REMOVE ALL BURRS  
 DRAWN BY: E.W.G. - 9-20-55 CHECKED BY:  
 TRACED BY:  
 SCALE: 1/4" = 1" (SEE DRAWING)  
 608-10K-710  
 SHEET 1 OF 2





<b>REVISIONS</b> D Revised 6/22/51 C WAS 9185-10K-714-5 6-21-51 B WAS 134 6-21-51 A Added 9-18-51 BYM REVISION DATE BY			<b>SURFACE TREATMENT:</b> HEAT TREATMENT: TOOLS:		
<b>MATERIAL:</b> MATERIAL SIZE: PART NO. WEIGHT ROUGH: WEIGHT FINISHED: ASSEMBLY NO. NO. REQ. PER ASSEM.			<b>608 METAL CABINET</b> TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS: ± 0.015 FRACTIONS: ± 1/32 ANGLES: ± 1° RIVETT LATHE & GRINDER, INC. BRIGHTON, BOSTON, MASS., U.S.A. 608 METAL CABINET TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS: ± 0.015 FRACTIONS: ± 1/32 ANGLES: ± 1° RIVETT LATHE & GRINDER, INC. BRIGHTON, BOSTON, MASS., U.S.A. 608 METAL CABINET TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS: ± 0.015 FRACTIONS: ± 1/32 ANGLES: ± 1° RIVETT LATHE & GRINDER, INC. BRIGHTON, BOSTON, MASS., U.S.A. 608 METAL CABINET		





φ OF LATHE

CUT OUT IN TOP PAN SAME AS  
 608-10K-715-1 EXCEPT AS SHOWN.  
 U" GUARD SAME AS 608-10K-715-3  
 EXCEPT AS SHOWN.

				SURFACE TREATMENT:		RIVETT LATHE & GRINDER, INC.	
						BRIGHTON, BOSTON, MASS. U.S.A.	
A DWG. # WAS 608-10K-715-1 9-17-48 RG				HEAT TREATMENT:		TOP PAN & U" GUARD FOR 608 PV ANS	
						608 KNEE HOLE CRAB.	
SYM	REVISION	DATE	BY	TOOLS:		TOLERANCES UNLESS OTHERWISE SPECIFIED:	
MATERIAL:						DECIMALS: FRACTIONS: 1/100 ANGLES:	
MATERIAL SIZE:						CONCENTRICITY:	
PATT. NO.:						FACE RUNOUT:	
DIE NO.:						MACH. SURFACES:	
WEIGHT ROUGH:—						BREAK SHARP CORNERS MAX. RADIUS	
WEIGHT FINISHED:—						REMOVE ALL BURRS	
ASSEMBLY NO.:						DRAWN BY: ETG 5-15-47 CHECKED BY:	
NO. REQ. PER ASSEM.						TRACED BY: SCALE: FULL	
						DWG. NO. 608-10K-716	



16 REQUIRED TO WITHDRAW  
DRAW-IN SPINDLE

59 1/8

608-5C-12-393

505-23-118

DAYTON 1M072

DRIVING SHEAVE  
DAYTON BK30  
(P.D.-24)

44 1/2

C' SHAFT SHEAVE  
608-16W-385

DAYTON 2M039

MOTOR SHEAVE  
608-16W-385 (60 CYCLE)

33

1/8

52 3/4

26

20 1/4

23

2

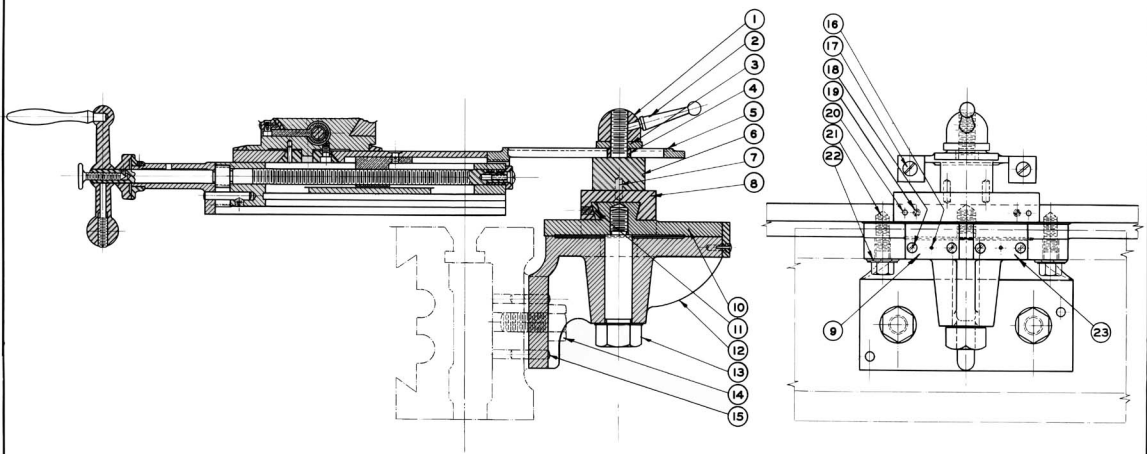
5 1/4

1 3/8

9/16 DIA. HOLES - 1/2 DIA. LAG  
SCREWS RECOMMENDED

608-PV5C LATHE  
WORTHINGTON DRIVE  
KNEE HOLE CABINET

RIVETT LATHE & GRINDER, INC. BOSTON, BOSTON, MASS. U.S.A.			
FLOOR PLAN			
MATERIAL		SURFACE TREATMENT	
SPECIFICATIONS		HEAT TREATMENT	
DRAWING NO.		TOOLING	
DATE		BY	
REVISED		DATE	
BY		BY	
CHECKED BY		CHECKED BY	
APPROVED BY		APPROVED BY	
MATERIAL		MATERIAL	
PLATE NO.		PLATE NO.	
DIE NO.		DIE NO.	
WEIGHT FOUND		WEIGHT FOUND	
WEIGHT FINISHED		WEIGHT FINISHED	
FINISHED BY		FINISHED BY	
NO. AND PER APPROX.		NO. AND PER APPROX.	
POLISHED TO SPECIFICATIONS SPECIFIED		POLISHED TO SPECIFICATIONS SPECIFIED	
FACTORY		FACTORY	
MACH. SURFACES		MACH. SURFACES	
SHARP CORNERS		SHARP CORNERS	
REMOVE ALL BURRS		REMOVE ALL BURRS	
DRAWN BY		DRAWN BY	
CHECKED BY		CHECKED BY	
FINISHED BY		FINISHED BY	
NO. AND PER APPROX.		NO. AND PER APPROX.	
608-10W		608-10W	

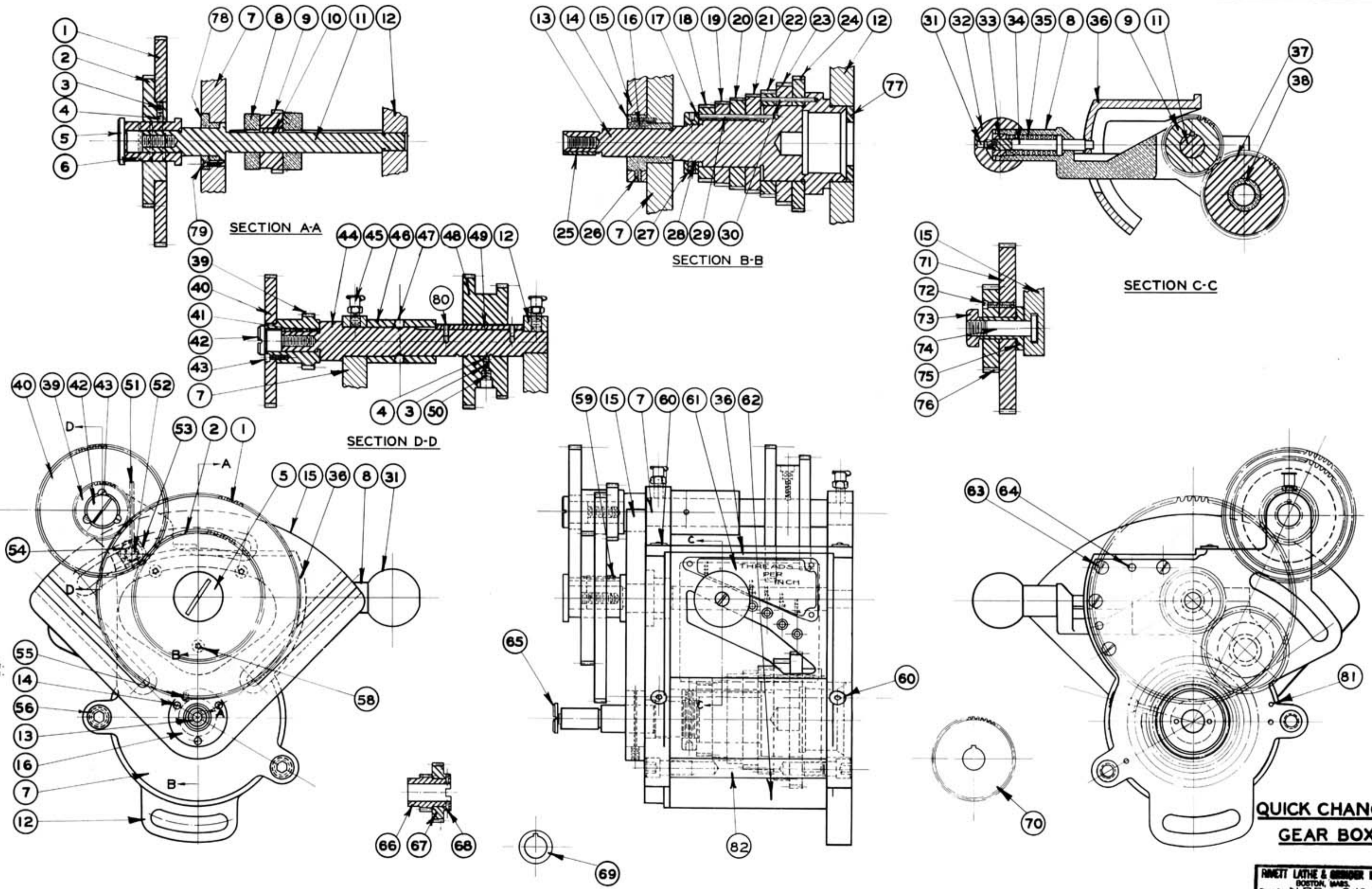


**TAPER ATTACHMENT**

ROBERT LATHE & TOOL CO. INC.  
ROCHESTER, MASS.  
Model No. 147500 Date 1-2-52  
Designed by \_\_\_\_\_  
Manufactured by \_\_\_\_\_  
608-11



No.	Part No.	Part Name
1.	608-20-241	Compound Gear 1127.
2.	240	Compound Gear 707.
3.	664	Lock Ball Spring
4.	5/32 Dia.	Lock Ball
5.	608-20-639	Thimble Retaining Screw
6.	717	Compound Gear Thimble
7.	379	Gear Case - front plate
8.	258	Tumbler Handle
9.	816	Tumbler Driving Gear
10.	672	Tumbler Driving Gear Key
11.	448	Tumbler Shaft
12.	388	Gear Case - rear plate
13.	447	Change Gear Shaft
14.	#4-49x5/8 lg.	Fill. Head Screw
15.	608-20-540	Yoke
16.	110	Change Gear Shaft Bearing
17.	324	Change Gear Shaft Nut
18.	818	Change Gear 497.
19.	819	Change Gear 497.
20.	820	Change Gear 527.
21.	821	Change Gear 527.
22.	822	Change Gear 567.
23.	823	Change Gear 567.
24.	824	Change Gear 727.
25.	290	Shaft End Key
26.	1/4-20x3/8 lg.	Allen Headless Set Screw
27.	#10-32 x 3/16 lg.	Allen Headless Set Screw
28.	103-40-511	Nut Binding Screw Tip
29.	608-20-205	Change Gear Dowel
30.	103-17-199	Change Gear Dowel
31.	#8-32 x 3/8 lg.	Flat Head Screw
32.	608-20-259	Ball Handle
33.	153	Flanger Bushing
34.	369	Index Pin
35.	668	Flanger Spring
36.	382	Index Plate
37.	817	Tumbler Idler Gear
38.	154	Idler Gear Bushing
39.	239	Fixed Compound Small Gear
40.	238	Fixed Compound Large Gear
41.	291	Compound Shaft Key
42.	638	Gear Retaining Screw
43.	#4-40 x 3/4 lg.	Fill. Head Screw
44.	608-20-441	Compound Shaft
45.	#101 Style "B"	Gits Oil Cup
46.	608-20-193	Compound Shaft Collar
47.	#10-32x3/16 lg.	Allen Headless Set Screw
48.	608-20-235	1st. Compound Gear
49.	678	Compound Shaft Key
50.	#10-32x3/16 lg.	Fillister Head Screw
51.	608-20-262	Nut Tightening Pin
52.	129	Yoke Binder
53.	325	Yoke Binder Nut
54.	522	Yoke Binder Washer
55.	WDC-1/4	Boven Oil Cup
56.	5/16-18x3/4 lg.	Allen Cap Screw (4 req.)
57.	#8-32 x 3/8 lg.	Fillister Head Screw
58.	608-20-671	Compound Gear Thimble Key
59.	WDC-1/4	Boven Oil Cup
60.	608-20-677	Gear Case
61.	608-20-172	Fillister Head Screw
62.	#10-32 x 5/8 lg.	Dowel Pin
63.	506-9-356	Change Gear Shaft End Screw
64.	608-20-637	Small Stud Gear - 4 U.S. collet
65.	236	Large Stud Gear
66.	236A or 237	Dowel Pin
67.	180	Change Gear Shaft Collar 1/2" lg.
68.	190	3/8" lg.
69.	191	1/8" lg.
70.	811	Change Gear 497.
71.	812	497.
72.	243	997.
73.	244	817.
74.	242	997.
75.	#6-32 x 5/8 lg.	Fill. Head Screw
76.	608-23-329	Change Gear Sleeve Binder Nut
77.	608-20-120	Change Gear Sleeve Binder
78.	454	Change Gear Sleeve
79.	815	Compound Gear 457.
80.	192	Centering Collar
81.	122	Tumbler Shaft Bearing
82.	#4-40 x 3/8 lg.	Fill. Head Screw
83.	608-20-199	Compound Shaft Key Pin (2 req.)
84.	LY4-154	Gear Case Pin
85.	608-20-824	Spacing Rod (2 req.)



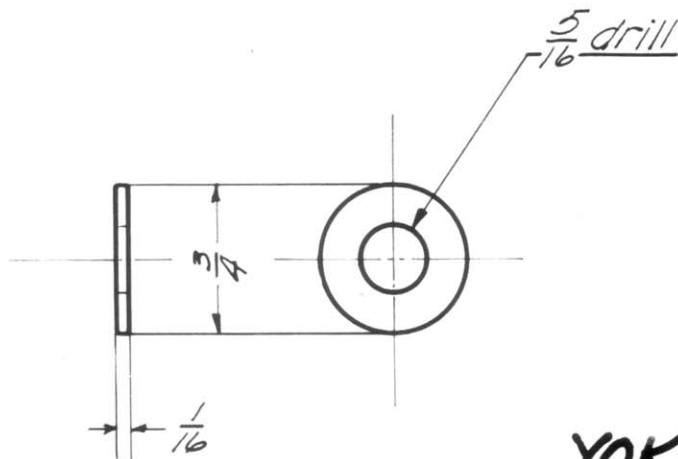
**QUICK CHANGE  
GEAR BOX**

**FINNETT LATHE & GRINDER INC.**  
BOSTON, MASS.  
Drawn by: H.P.E. Date: 3-10-43  
Traced by: H.P.E. Date: 3-11-43  
Checked by: H.P.E. Date: 3-11-43  
**608-20**

Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $\begin{matrix} +.0000'' \\ -.0000'' \end{matrix}$

R




## YOKE BINDER WASHER

C.F.S.  
S.A.E. 111Z  
3/4 DIA.  
1.03 FT. LG.

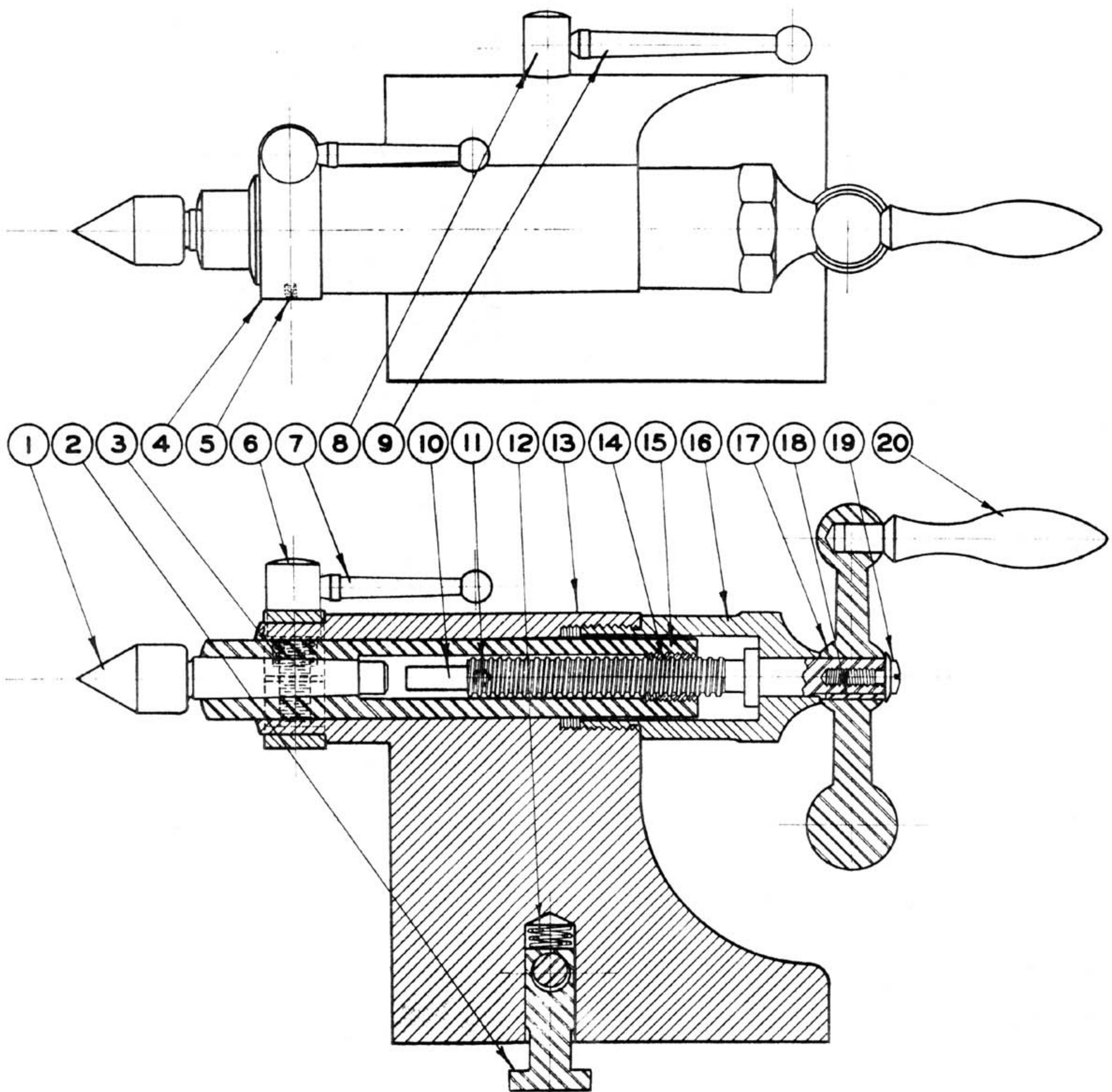
1901 N.E.

✓ R. L. & G. Co.  
BOSTON, MASS.

Drawn by AHS  
Traced by LR5 Date 2-9-29  
Checked by \_\_\_\_\_ Scale FULL SIZE

**608-20-522**

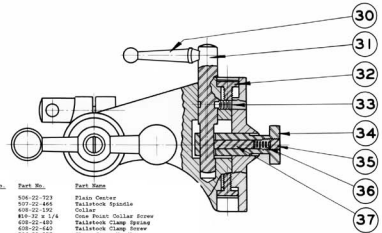
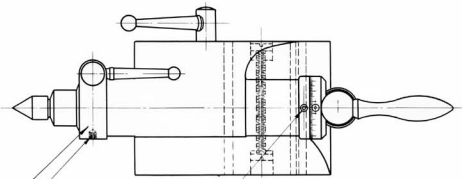




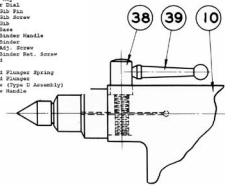
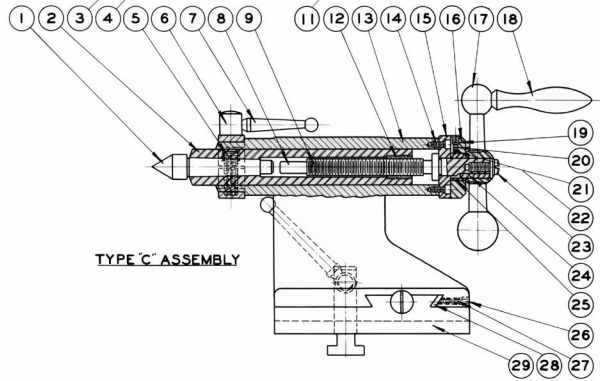
No.	Part No.	Part Name
1	506-22-723	Plain Center
2	608-22-499	Binder Stud
3	608-22-490	Tailstock Clamp Spring
4	608-22-192	Collar
5	#10-32 x 1/4	Headless Cone Point
6	608-22-640	Tailstock Clamp Screw
7	506-22-257	Clamp Screw Handle
8	608-22-129	Eccentric Binder
9	506-22-260	Eccentric Binder Handle
10	506-22-556	Tailstock Feed Screw
11	506-22-639	Spindle Guide Screw
12	608-22-481	Binder Stud Spring
13	608-22-510	Tailstock
14	506-22-151	Tailstock Spindle Bushing
15	507-22-466	Tailstock Spindle
16	608-22-324	Tailstock Nut
17	506-22-258	Feed Screw Ball Handle
18	506-22-287	Tailstock Feed Screw Key
19	506-22-637	Ball Handle Screw
20	506-22-259	Feed Screw Handle

**TAILSTOCK**  
**STANDARD**

**RIVETT LATHE & GRINDER INC.**  
 BOSTON, MASS.  
 Drawn by C.J. Date 11-13-43  
 Traced by C.J. Date 11-15-42  
 Checked by \_\_\_\_\_ Date \_\_\_\_\_  
**608-22**



No.	Part No.	Part Name
1	506-22-729	Plain Center
2	507-22-4665	Tailstock Spindle
3	408-22-192	Collar
4	816-32 x 1/4	One Piece Collar Screw
5	408-22-487	Tailstock Clamp Spring
6	408-22-442	Tailstock Clamp Screw
7	506-22-257	Clamp Screw Handle
8	506-22-556	Tailstock Feed Screw
9	506-22-439	Spindle Guide Screw
10	408-22C-508A	Tailstock (Type D Assembly)
11	856-08	Rowen Oil Cup
12	506-22-151	Spindle Nut
13	608-22C-508	Tailstock
14	48-32 x 3/8	End Flare Screw
15	408-22-914	End Flare
16	408-22C-193	Tailstock Dial
17	506-22-258	Feed Screw Ball Handle
18	506-22-259	Feed Screw Handle
19	410-32 x 3/16	Allen Set Dial Screw
20	608-22C-654	Ball Spring
21	103-48-51	Beaver Tip
22	408-22C-111	Cham Tip
23	506-22-427	Ball Handle Screw
24	506-22-527	Feed Screw Key
25	408-22C-181	Durking Fee Dial
26	506-2-184	Tailstock Oil Van
27	408-22C-637	Tailstock Oil Screw
28	408-22C-248	Tailstock Oil
29	408-22C-115	Tailstock Base
30	506-22-465	Eccentric Bender Handle
31	608-22C-127	Eccentric Bender
32	408-22-637	Tailstock Adj. Screw
33	408-22-435	Eccentric Bender Ret. Screw
34	608-22-495	Bender Stud
35	5/16-11.875/16	Adj. Screw
36	507-5-470	Bender Stud Spring
37	408-22-425	Bender Stud Springs
38	506-22-435	Clamp Screw (Type D Assembly)
39	506-22-257	Clamp Screw Handle

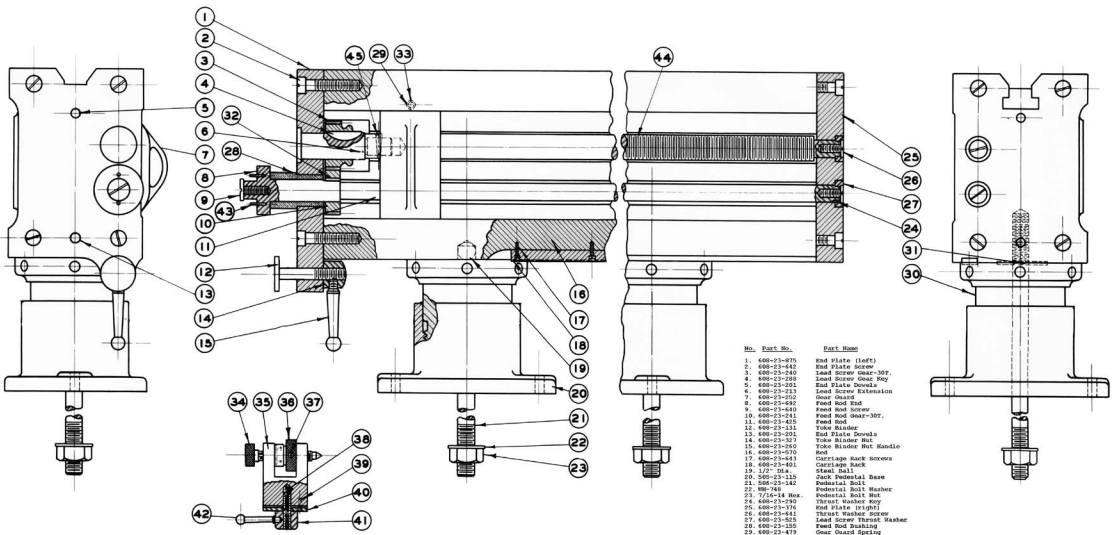


TYPE 'C' ASSEMBLY

TYPE 'D' ASSEMBLY

**ADJUSTABLE  
TAIL STOCK**





MICROMETER STOP

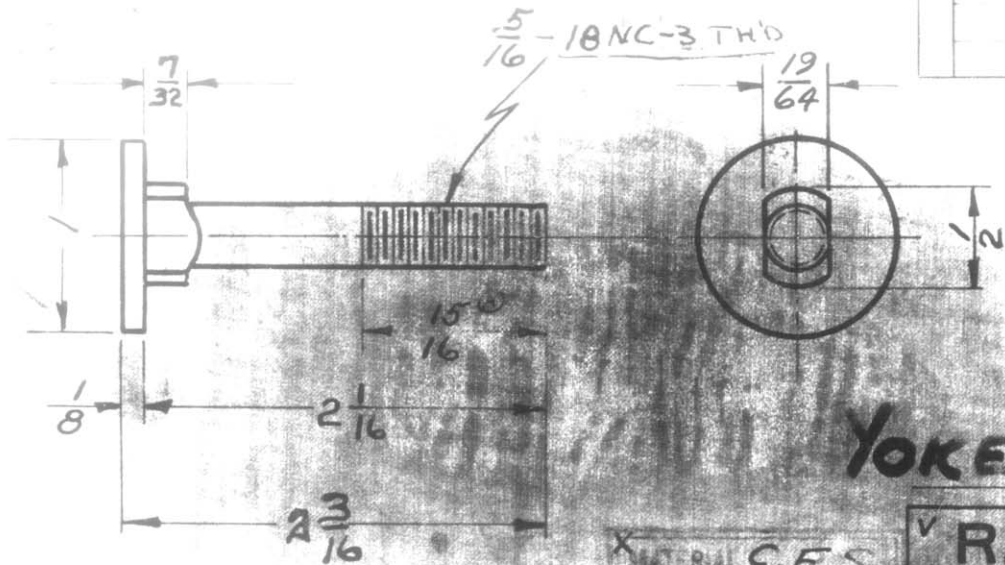
No.	Part No.	Part Name
1.	600-23-875	End Plate (left)
2.	600-23-642	End Plate Screw
3.	600-23-240	Lead Screw Gear-30T.
4.	600-23-280	Lead Screw Gear Key
5.	600-23-223	End Plate Dowel
6.	600-23-213	Lead Screw Extension
7.	600-23-252	Gear
8.	600-23-692	Feed Rod End
9.	600-23-640	Feed Rod Screw
10.	600-23-241	Feed Rod Gear-30T.
11.	600-23-625	Feed Rod
12.	600-23-131	Yoke Blinder
13.	600-23-203	End Plate Dowel
14.	600-23-327	Yoke Binder Nut
15.	600-23-260	Yoke Binder Nut Handle
16.	600-23-670	Rod
17.	600-23-643	Carriage Rack Screws
18.	600-23-601	Carriage Rack
19.	1/2" Dia.	Steel Ball
20.	200-23-113	Jack Pedestal Base
21.	506-23-142	Pedestal Bolt
22.	MS-740	Pedestal Bolt Washer
23.	7/16-14 Hex.	Pedestal Bolt Nut
24.	600-23-290	Thrust Washer Key
25.	600-23-376	End Plate (right)
26.	600-23-641	Feed Rod Bushing
27.	600-23-525	Lead Screw Thrust Washer
28.	600-23-125	Feed Rod Gear
29.	600-23-479	Gear Guard Spring
30.	506-23-270	Jack Pedestal Head
31.	600-23-521	Pedestal Washer
32.	600-23-791	Feed Rod Gear Key
33.	3/16" Dia.	Friction Ball for Guard
34.	600-23-600A	Stop Bracket Screw
35.	600-23-145A	Stop Bracket Dial
36.	600-23-192A	Stop Bracket Dial
37.	600-23-651A	Stop Bracket Screw Key
38.	600-23-639	Blinding Screw
39.	600-23-102	Bracket Plate Dowel
40.	600-23-373A	Bracket Plate
41.	600-23-328	Blinding Screw Nut
42.	506-3-259	Blinding Nut Handle
43.	600-23-355	Dowel Pin for Gears
44.	600-23-637	Lead Screw
45.	#1 x 3/4 lg.	Tape Pin

**BED**  
**JACK PEDESTALS**  
**MICRO STOP**

Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $\begin{matrix} +.0000'' \\ -.0005'' \end{matrix}$

A	2-15-36	was $\frac{1}{16}$ dia



# YOKE BINDER

X INTERNAL C.F.S.  
S.A.E. 1112  
~~1.00~~ 1.0 DIA.  
X-20 FT. LG.  
TOOL NO.

**R. L. & G. Co.**  
BOSTON, MASS.

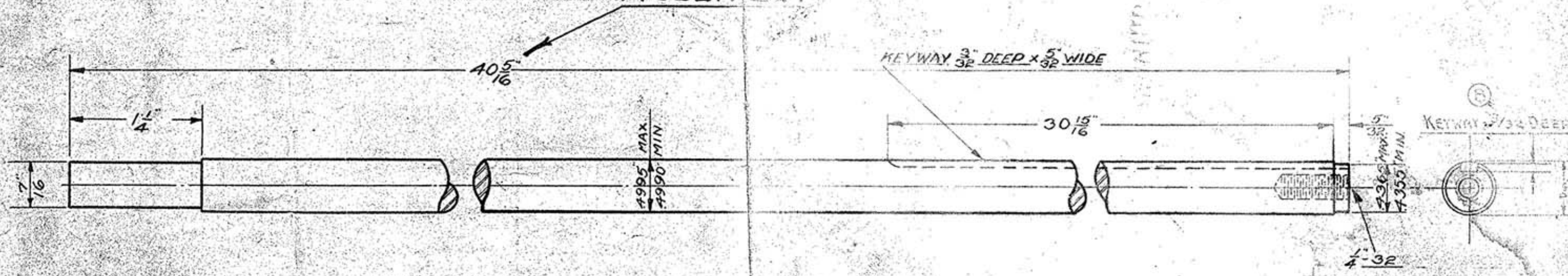
Drawn by R.P.R.  
Traced by R.P.R. Date 3-28-33  
Checked by \_\_\_\_\_ Scale FULL

**608-23-131**

Polished Surfaces ±.005  
 .0005  
 .0005

	7-27-20	
A	8-11-38	Was C.R.S. Finish
B	1-1-43	ADDED END VIEW
C	11/2/43	NOTE ADDED
D	5-16-49	WAS 3.38 FT LG 2W

CUT OFF TO 41" LG.  
FINISH ENDS AFTER  
ASSEMBLY



FEED ROD

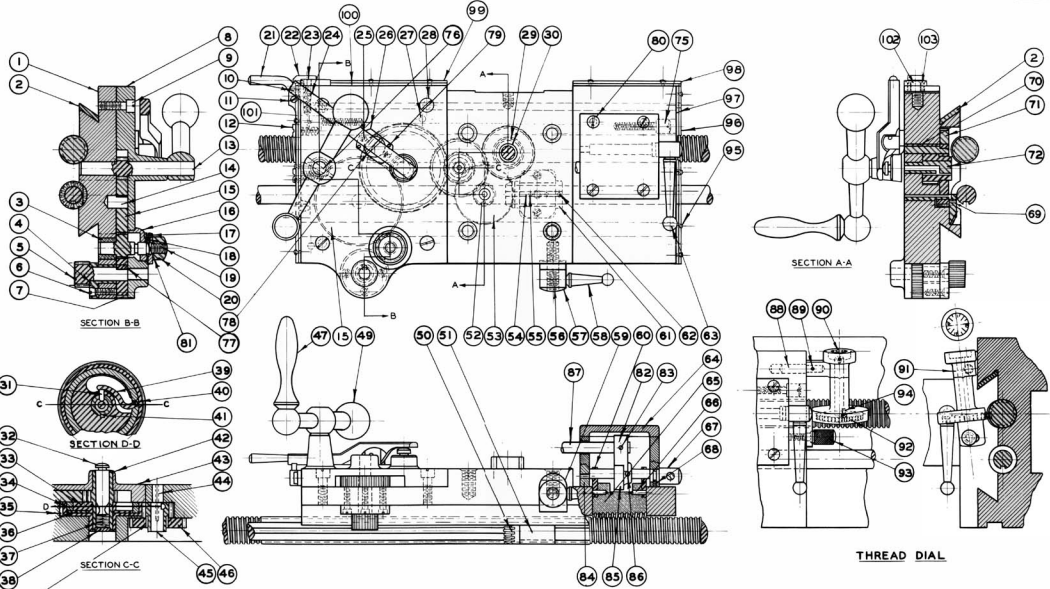
**R. L. & G. Co.**  
 BOSTON, MASS.

Drawn by P.C.B.  
 Traced by E.D. Date 1-6-20  
 Checked by A.C.S. Scale FULL

608-23-485

1/2 ground  
 polished stock  
 1/2 dia.  
 x 3.44 1/4 lg.  
 5.211040

Part may have  
 one of these made. How much.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

**CARRIAGE**

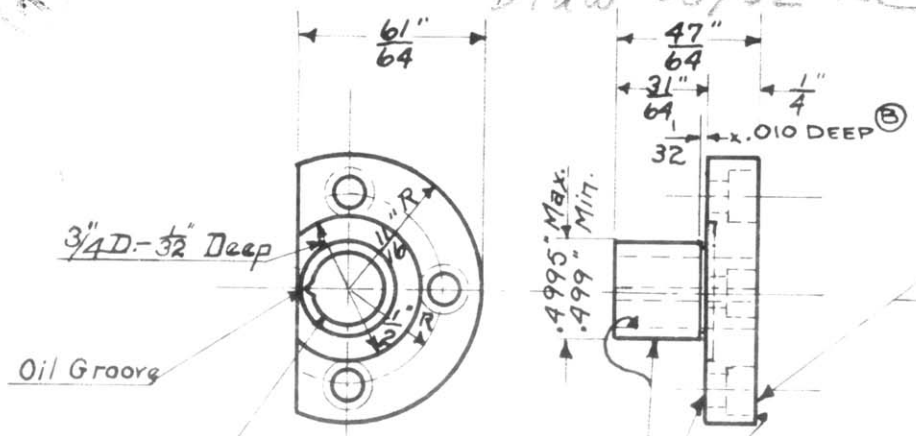


Fractional Dimensions to Finished Surfaces  $\pm .005"$   
 Standard Reamed Hole:  $+.0000"$   
 $-.0005"$

K

(D)  
**HARDEN**  
 Draw 58/62 Rc

1	2-7-18	REVISED.
	10-1-19	
A	10-31-36	WAS #34 BETH. C.B.
B	1-29-37	ADDED C.B.
C	10-8-41	WAS 3755 sat. 3750
D	4-20-43	ADDED W.P.C.
E	10-27-44	ADDED GRIND F.I.



#17 (.173") Drill  
 $\frac{7}{32}$ " Choke -  $\frac{5}{32}$ " Deep

(C)  $.3758$ " MAX GRIND  
 $.3755$ " MIN GRIND

Grind X  
 COLLET  
 STL. MAX-EL  
 $1\frac{1}{2}$  DIA. X .08  
 FT. LG.

Allow  $.005$ " to  $.008$ " for Grinding = #4

(A)

RACK GEAR BEARING

R. L. & G. Co.  
 BOSTON, MASS.

Drawn by J.M.S.  
 Traced by " Date April 17, 17  
 Checked by A.C.S. Scale Full Size

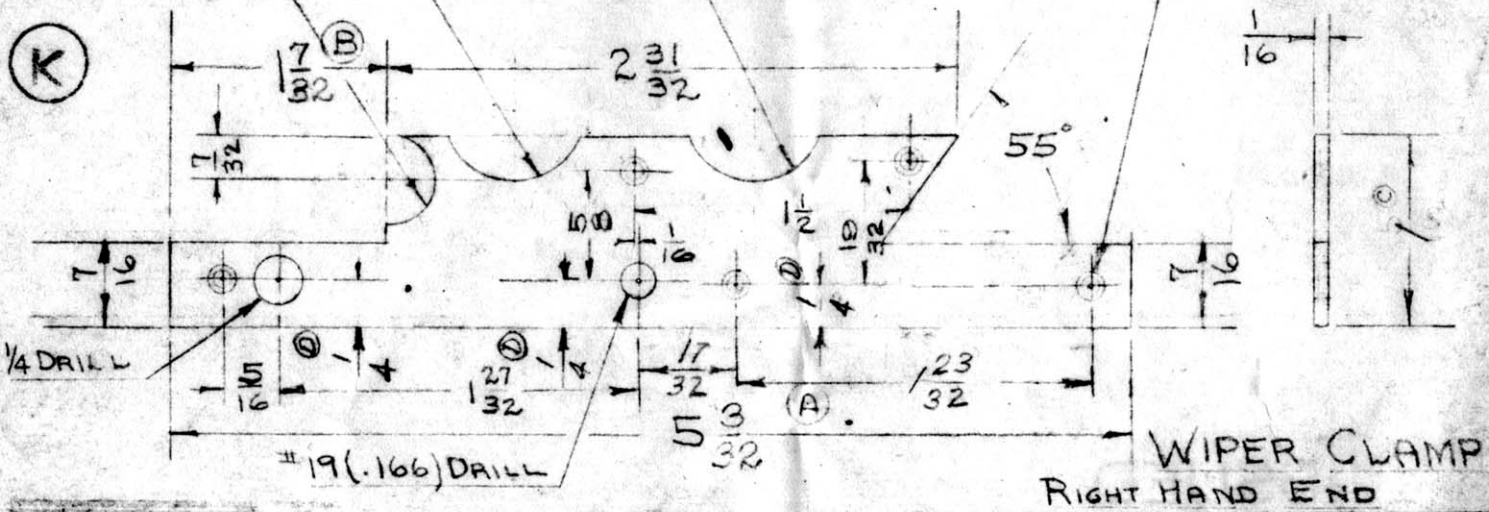
(8L26-117) 608-26-117

sent to 1525-15-20

Collet Steel MAX-EL #4

A 4-9-43 WAS 5 NPB | B 4-9-43 WAS 1/8 NPB  
 C 1-18-46 WAS 13/16 GKC D 11-16-46 WAS 3/16 GKF  
 #44(086) DRILL - 5/32 C BORE - 5 HOLES - USE JIG

FILE TO MATCH CARRIAGE  
 AT ASSEMBLY



1/4 DRILL

#19(.166) DRILL

WIPER CLAMP  
 RIGHT HAND END

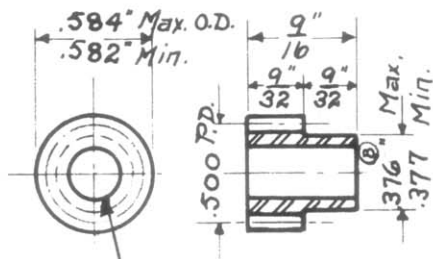
SPECIAL C.R.S. FLAT WIRE SAE 1010 1/16 X 1/8 X .43 FT. 14.	RIVET, LATHE & GRINDER INC. BOSTON, MASS.
	Drawn by: <i>CLB</i> Date: 9-28-46
	Traced by: _____ Date: _____
	Checked by: _____ Scale: _____
608-26-177	

Fractional Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $+.0000"$   
 $-.0005"$



	10-26-18	TRACED & REVISED
A	4-23-37	WAS C.R.S. E.G.
B	4-10-39	Was .3755/.375 E.G.



*Obsolete*  
*11-25-47*

24 Pitch  
12 Teeth

1/4" Ream

BEVEL GEAR PINION

**R. L. & G. Co.**  
**BOSTON, MASS.**

Drawn by J.M.S.

Traced by "

Date April 20, 1936

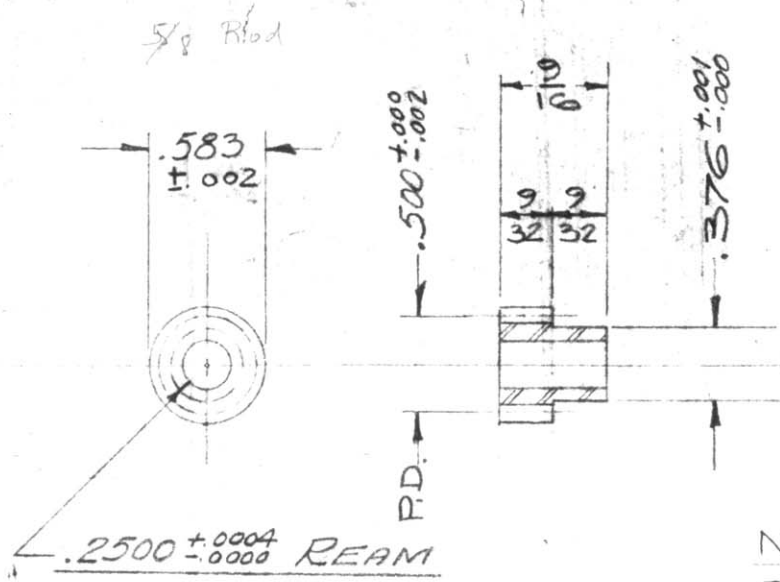
Checked by A.C.S.

Scale Full Size

X  
Hy-Ten B-2  
STEEL  
5/8 DIA X .07 FT. LG  
TOOL NO 1299  
1936

608-26-237

(K)



NOMINAL MEASUREMENT  
OVER .072 D. WIRES = .598

24 PITCH  
12 TEETH  
20° PRESSURE ANGLE

SHAPE TEETH

A WAS: HY TEN B-3X 72649R		SYMBOL		REVISION		DATE		BY	
MATERIAL: SAE 4140 H.R.S.		HEAT TREAT: 28-34 Rc		TOOLS:		SURFACE TREATMENT:		HEAT TREATMENT:	
MATERIAL SIZE: 11/16 DIA x 13/16 (.07 FT) LG.		WEIGHT ROUGH: .09 LBS		WEIGHT FINISHED: -		ASSEMBLY NO. 608-26		NO. REQ. PER ASSEM. 1	

RIVETT LATHE & GRINDER, INC.		BRIGHTON, BOSTON, MASS. U.S.A.	
BEVEL GEAR PINION			
TOLERANCES UNLESS OTHERWISE SPECIFIED:—			
DECIMALS:		FRACTIONS ±.010 ANGLES	
CONCENTRICITY: 1/4 Hole & P.D. Within .001 F.I.R.			
FACE RUNOUT:			
MACH SURFACES:			
BREAK SHARP CORNERS 1/64		MAX. RADIUS	
REMOVE ALL BURRS			
DRAWN BY ETG 11-6-47		CHECKED BY:	
TRACED BY:		SCALE: Full	
DWG. NO. 608-26-237A			

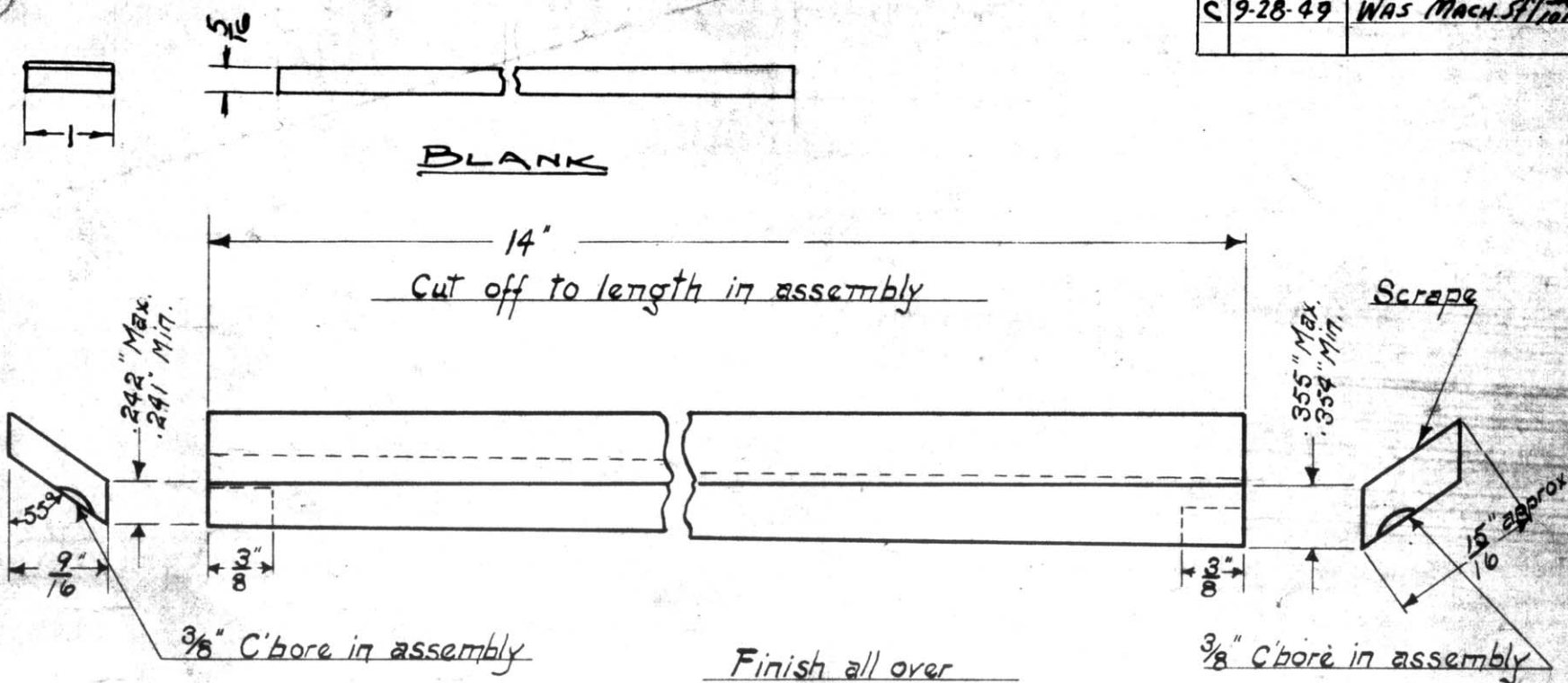


Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $+ .0000$   
 $- .0005$

(K)

	10-26-18	TRAGED & REVISED
A	5-16-38	ADDED E.G.
B	2-2-40	ADDED E.T.G.
C	9-28-49	WAS MACH. ST. 10/15



ALLOW .003" TO .004" FOR SCRAPING

NOTICE  
Do Not Start Work  
Read All Notes And  
Instructions Before  
Commencing Work  
Work To Size

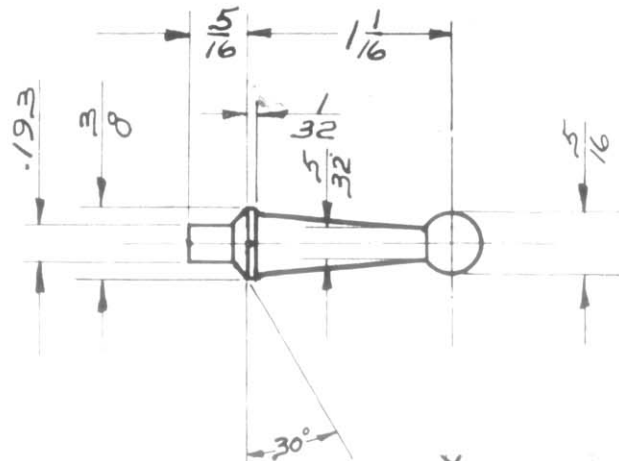
MATERIAL M.C.  
CAST IRON  
PATT. NO. 571,1015  
608-26-245  
TOOL NO.

CARRIAGE GIB  
R. L. & G. Co.  
BOSTON, MASS.  
Drawn by J.M.S.  
Traced by " Date May 4, 17  
Checked by A.C.S. Scale Full Size  
608-26-245

Fractional Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $\begin{matrix} +.0000" \\ -.0005" \end{matrix}$

K



# LEVER HANDLE

X C.A.S.  
S.A.E. 1112  
~~3/8~~ 3/8 DIA.  
X.13 FT. LG.

✓ R. L. & G. Co.  
BOSTON, MASS.

Drawn by P.J. Date 5-14-14  
Traced by DR Date 6-6-33  
Checked by \_\_\_\_\_ Scale Full

608-26-261

Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $\begin{matrix} +.0000 \\ -.0005 \end{matrix}$



RWP	11-13-17	RETRACED AND CHANGED
	10-23-18	

CROSS FEED GEAR GUARD HANDLE

✓ **R. L. & G. Co.**  
BOSTON, MASS.

Drawn by R.W.P.  
Traced by ..... Date 11-13-17  
Checked by ..... Scale Full

608-26-262

C.R. STEEL (POLISH)

Fractional Dimensions to Finished Surfaces = .005"

Standard Reamed Holes:  $+ .0000$ "  
 $- .0005$ "



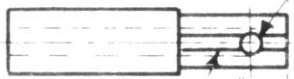
	10-26-18	TRACED & REVISED
R	9-3-47	WAS $5/32$ D. STOCK S.F.
B	11-18-48	WAS $5/16$ DIA. MT

$\frac{1}{8}$ " Drill -  $\frac{1}{4}$ " Deep

.3135" Max.  
.3130" Min.



$\frac{17}{16}$ "  
 $\frac{7}{8}$ "  $\frac{9}{16}$ "



$\frac{1}{8}$ " Drill -  $\frac{1}{8}$ " Deep

.2495" Max.  
.2490" Min.

ALLOW .020 FOR FINISH  
TURNING IN ASSEMBLY

Oil Groove X

PINION GEAR STUD

✓ R. L. & G. Co.  
BOSTON, MASS.

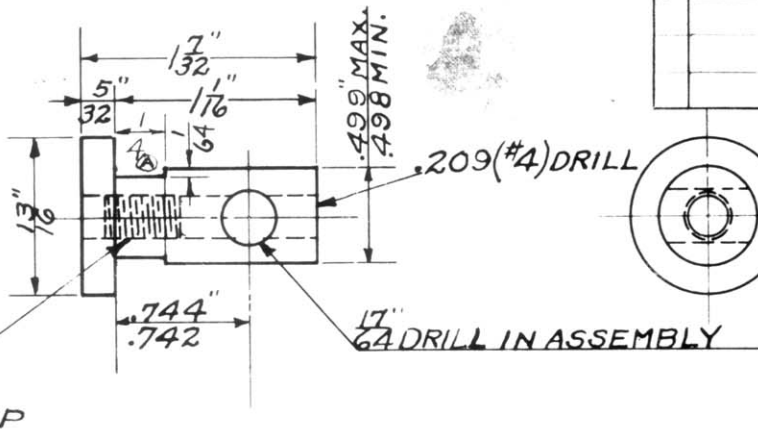
Drawn by J.M.S.  
Traced by " Date April 18, 17  
Checked by A.C.S. Scale Full Size

608-26-500

DRILL  
ROD  
 $\frac{3}{16}$ " (A) (B)  
6" (.316) DIA.  
X .14 FT. LG.

Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $+.0000''$   
 $-.0005''$



	2-1-21	
A	5-22-36	NECK ADDED CHB

BINDER STUD

X C.F.S.  
S.A.E. 1112  
~~7/8~~ DIA.  
X .12 FT. LG.

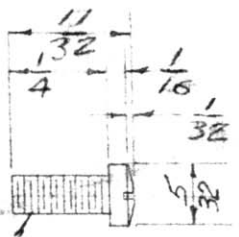
✓ R. L. & G. Co.  
BOSTON, MASS.

Drawn by A.C.S.  
Traced by \_\_\_\_\_ Date 2-1-21  
Checked by A.C.S. Scale FULL

608-26-673



8-8-46 Revised JGC



$\frac{1}{32}$  SAW  
 $\frac{1}{32}$  DEEP



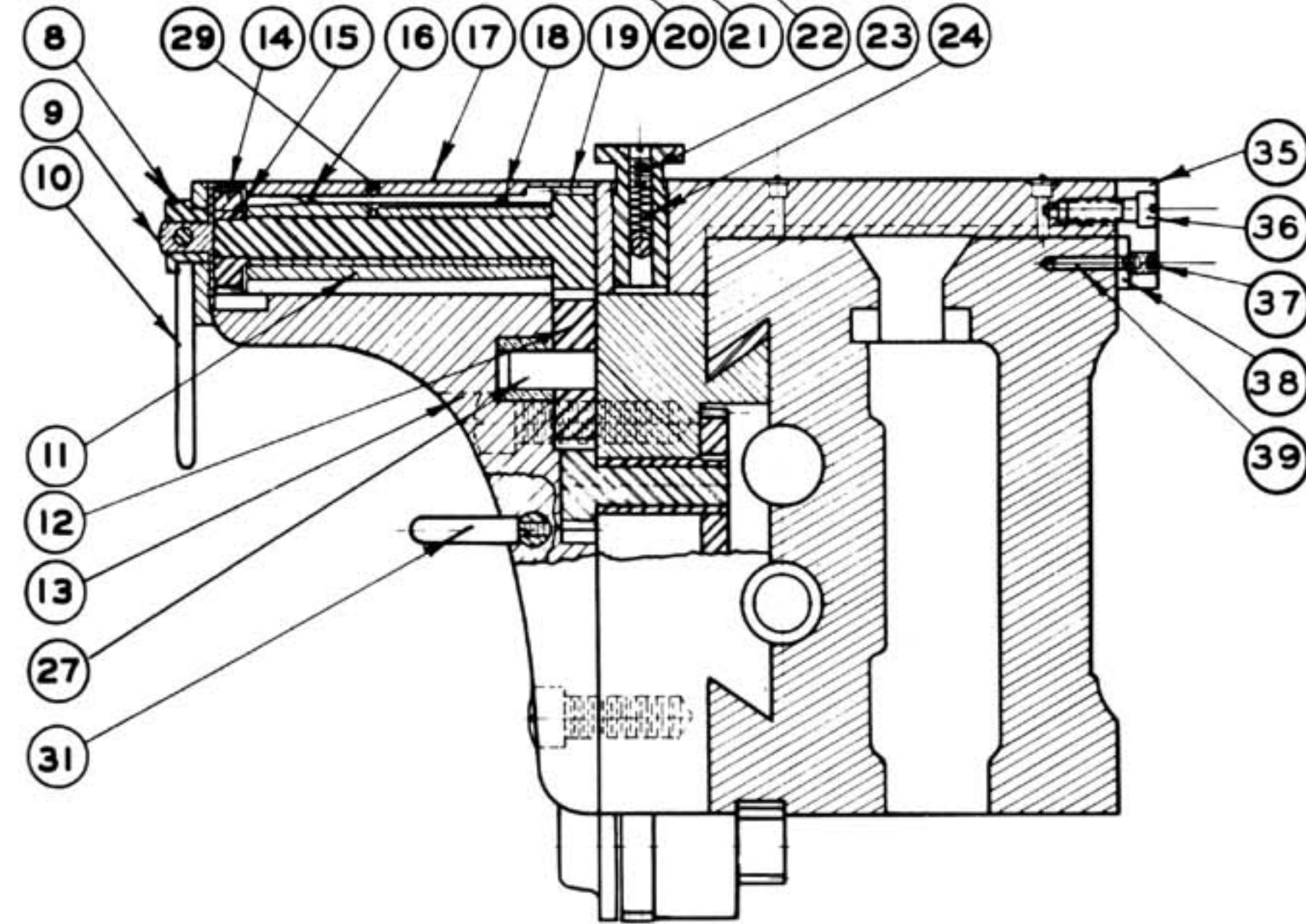
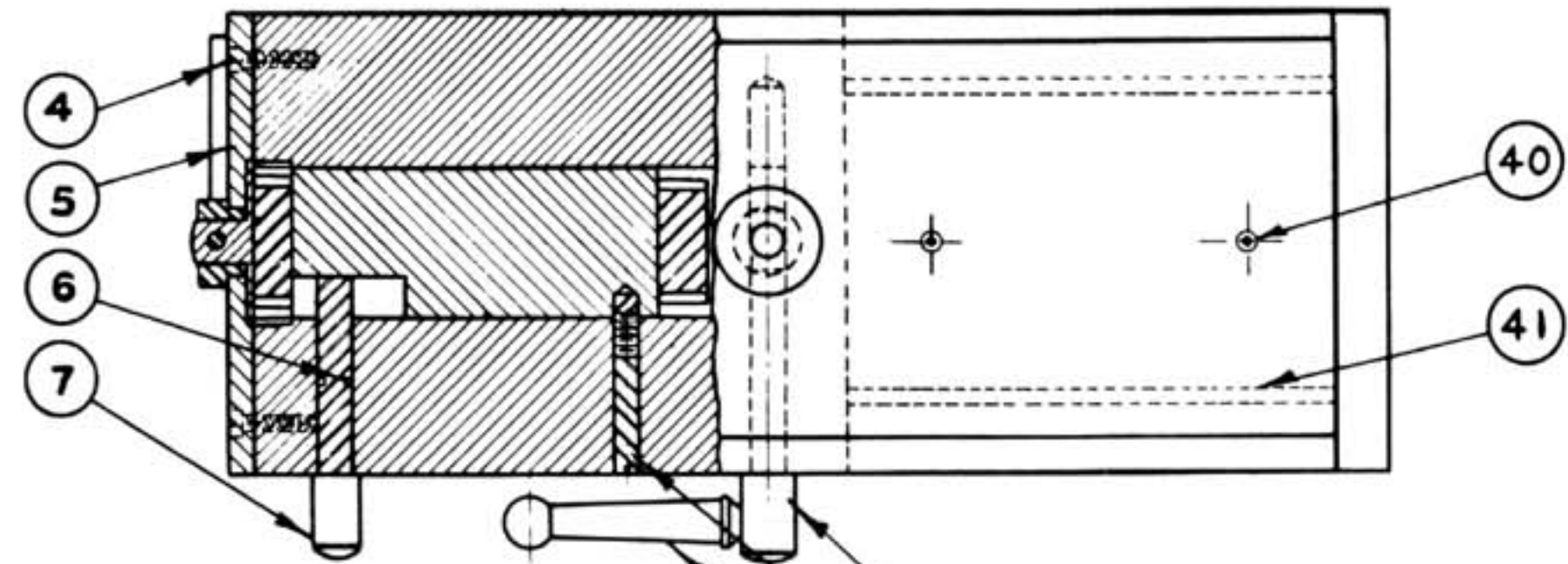
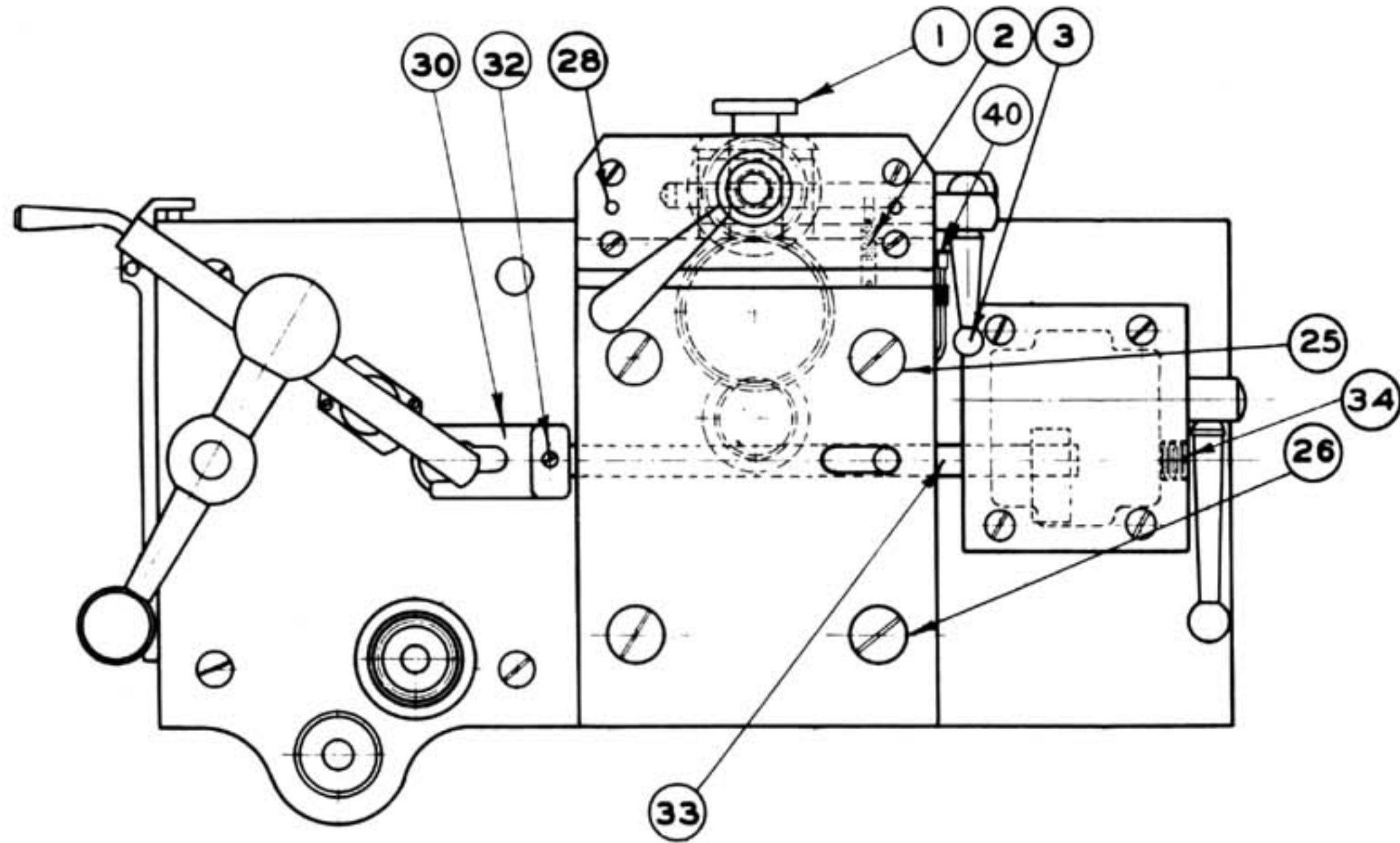
#3-48 N.C. THRD

# WIPER RETAINING PLATE SCREW

STANDARD DIM.

<p>✓ C.F. STEEL</p> <p>NO. SAE 1112</p> <p>5/32 DIA. X .04 FT. LG.</p> <p>✓ PIVETT LATHE &amp; GRINDER</p> <p>BOSTON, U.S.A.</p> <p>Drawn by E.T.G. 2-10-39</p> <p>Checked by</p> <p>Specified by DOUBLE</p> <p>608-26-945</p>
--

No.	Part No.	Part Name	No.	Part No.	Part Name
1.	608-26-673	Binder Stud	21.	608-26-642	Pivot Screw
2.	608-26-641	Lover Stop Screw	22.	608-26-127	Binder
3.	608-26-261	Lover Handle	23.	608-26-637	Binder Stud Spring Screw
4.	8-32x3/8 Fil.	End Plate Screw	24.	608-26-667	Binder Stud Spring
5.	608-26-375	End Plate	25.	3/8-16x1-1/2	Angle Screw
6.	608-26-363	Lover Stop Pin	26.	3/8-16 x 1	Angle Screw
7.	608-26-304	Bearing Block Ecc. Lever	27.	608-26-497	Cross Inter Gear Stud
8.	608-26-155	Guard Bushing	28.	LJ31/2-354	End Plate Dowel
9.	608-26-251	Cross Feed Gear Guard	29.	8-36 x 1/8"	Bearing Block Cover Oil Scr.
10.	608-26-262	Guard Handle	30.	608-26-220	Locking Fork
11.	608-26-133	Bearing Block	31.	608-26-261A	Interlocking Handle
12.	608-26-242	Cross Inter Gear 33 T	32.	#10-32	Set Screw
13.	608-26-677	Carriage Angle	33.	608-26-438	Interlocking Shaft
14.	608-96-243	Cross Feed Gear 22 T	34.	608-26-379	Lead Screw Nut Cover Plug
15.	103-17-287	Gear Key	35.	608-26-376	Carriage Angle End Plate Rear
16.	608-26-482	Block Spring	36.	#10-32 x 5/8	Fil. Head Screw
17.	608-26-181	Bearing Block Cover	37.	#10-32 x 5/16	Headless Slotted Cup Pointed Scr.
18.	1/8-40 x 1/4	Bearing Block Spring Screw	38.	608-26-246	Rear End Plate Gib
19.	608-26-244	Cross Feed Gear	39.	506-9-354	Gib Dowel Pin
20.	608-26-260	Binder Handle	40.	#56-00	Bowen Oil Cup (3)
			41.	608-26-334	Carriage Angle Wiper



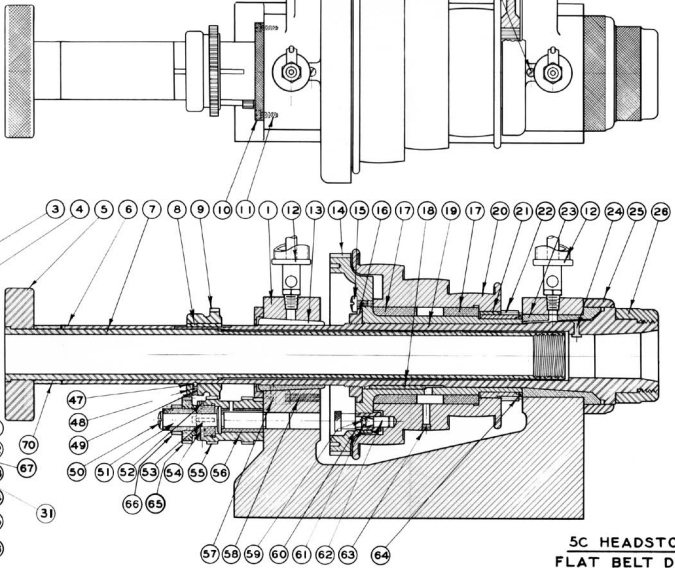
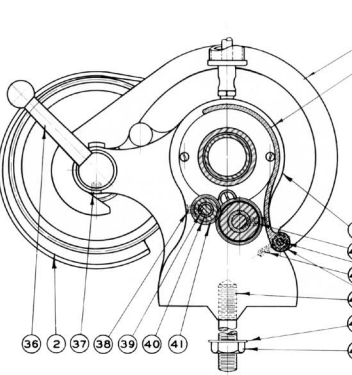
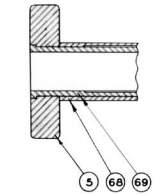
**CARRIAGE ANGLE**

No.	Part No.	Part Name
1.	608-5C-12-271	Headstock
2.	608-5C-12-273	Gear Guard (R.H.)
3.	608-5C-12-252	Gear Guard (L.H.)
4.	608-5C-12-293	Spindle Gear Guard
5.	608-5C-12-292	Draw-in Spindle Knob
6.	608-5C-12-193	Spindle Collar
7.	608-5C-12-469	Spindle Gear Key
8.	08C1-288	Spindle Gear Key
9.	608-12-235	Spindle Gear (10-T)
10.	608-5C-12-144	Rear Shaft Hing
11.	#8-32 x 3/8	Fill. Head Screw
12.	#800	Lockwasher Oil Cup
13.	608-5C-12-152	Gear Bushing
14.	608-5C-12-232	Driving Gear
15.	608-12-442	Check Nut Set Screw
16.	608-5C-12-214	Gear Check Nut
17.	608-5C-12-155	Pulley Bushing
18.	608-12-207	Driving Gear Key
19.	608-5C-12-468	Headstock Spindle
20.	608-5C-12-391	Pulley Gear
21.	103-17-287	Pulley Gear Key
22.	608-5C-12-211	Pulley Gear
23.	608-5C-12-151	Front Bushing

24.	608-5C-12-287	Front Dust Cap
25.	608-5C-12-183	Spindle Nose Guard
26.	508-5C-12-751	Gear Shaft Lever Scr.
27.	608-12-440	Gear Shaft Lever Scr.
28.	608-12-184	Index Pin Knob
29.	504-12-257	Index Pin Knob
30.	608-5C-12-372	Index Pin
31.	608-5C-12-251	Knife Washer
32.	608-5C-12-235	Back Gear Shaft
33.	608-12-460	Fill. Head Screw
34.	#8-32x3/8	Gear Shaft Bushing
35.	608-12-153	Gear Shaft Lever
36.	608-12-392	Washling Screw
37.	608-12-440	Allen Set Screw
38.	1/4"-20 x 3/8"	Int. Gear Stud
39.	608-12-439	Int. Gear Bushing
40.	608-12-157	Fill. Head Screw
41.	#10-32 x 1/2"	Allen Set Screw
42.	1/4"-20 x 3/8"	Allen Set Screw
43.	#10-32 x 1/2"	Washer Stud
44.	608-12-498	Washer Stud
45.	W-748	Washer Stud Washer
46.	7/16-14	Hex. Nut
47.	5/32"	Ball
48.	608-20-666	Spring

49.	#10-32 x 1/8	Set Screw
50.	608-12-441	Stud Gear Nut. Scr.
51.	608-12-409	Switch gear Stud
52.	#10-32 x 1/8	Set Screw
53.	608-12-290	Collar Key
54.	608-12-100	Stud Gear Drive Collar
55.	608-12-234	Switch Gear
56.	608-12-108	Gear Bushing Key
57.	103-12-237	Rear Bushing Key Scr.
58.	103-12-438	Dotum Pin
59.	608-5C-12-356	Gear Bushing Key Scr.
60.	608-5C-12-254	Drive Pin Bushing
61.	608-20-666	Drive Pin Spring
62.	608-5C-12-385	Drive Pin
63.	103-17-639	Oil Screw
64.	608-5C-12-473	Pulley Spacer
65.	608-5C-12-236	Stud Gear (24-T)
66.	608-5C-12-237	Stud Gear (15-T)
67.	608-5C-12-705	Gear Guard Hinge
68.	608-5C-12-192	*Collar
69.	108-5C-470	*Draw-In Spindle
70.	608-5C-12-188	Collar

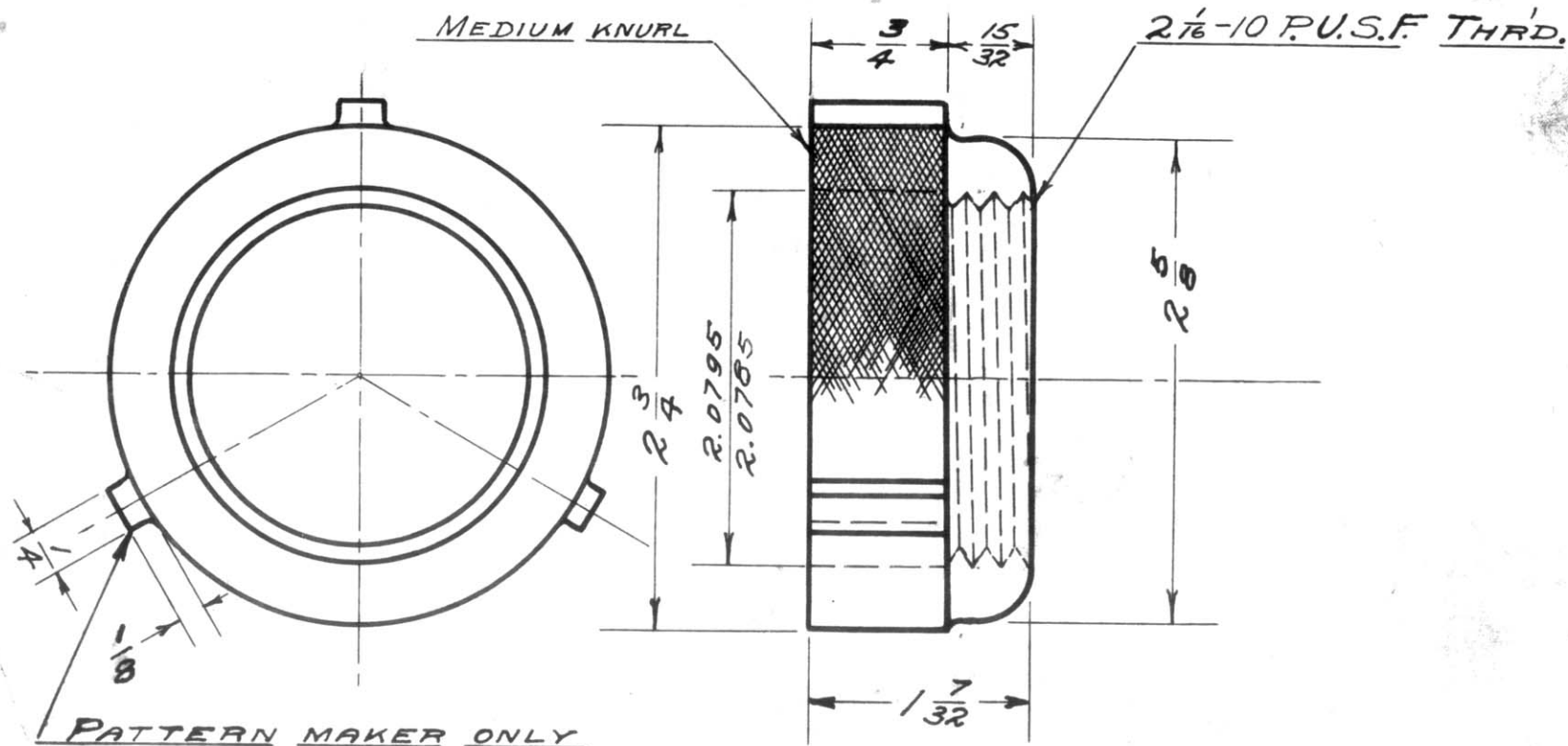
\*With Gear Box or Lever Check Closer



**5C HEADSTOCK  
FLAT BELT DRIVEN**

Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $+.0000''$   
 $-.0005''$

PATTERN MAKER ONLY

FINISH ALL OVER

## SPINDLE NOSE GUARD

**R. L. & G. Co.**  
BOSTON, MASS.

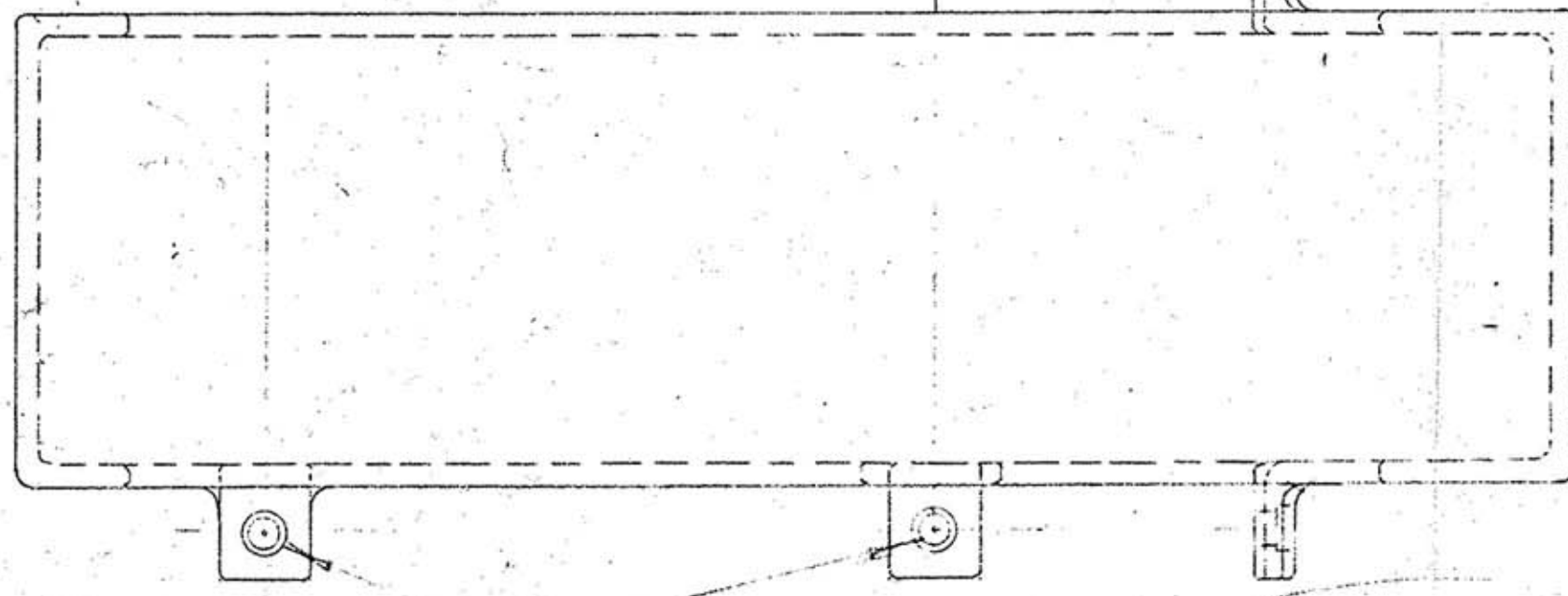
Drawn by A.W.S.  
Traced by A.J. Date 7-21-30  
Checked by \_\_\_\_\_ Scale FULL SIZE

TOOL # 811 & 811A

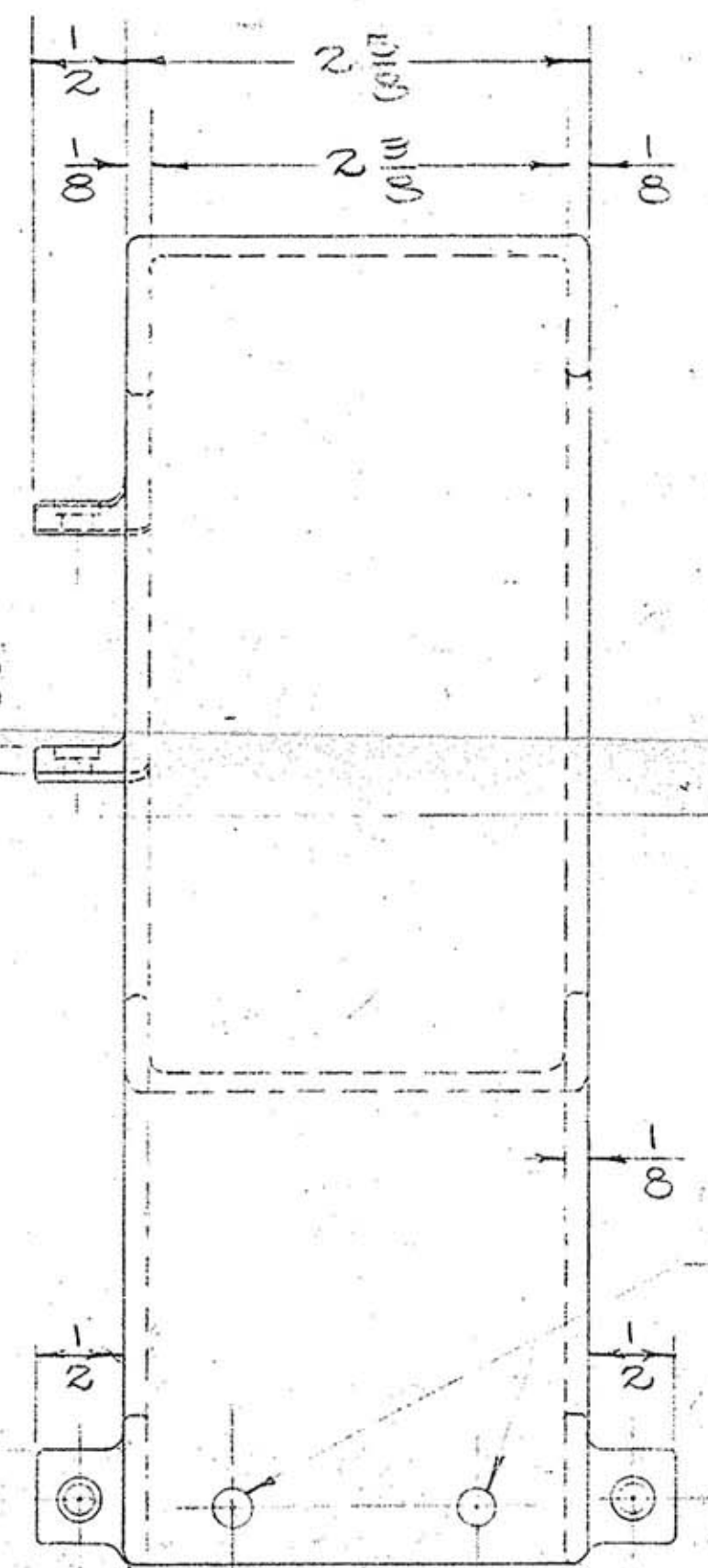
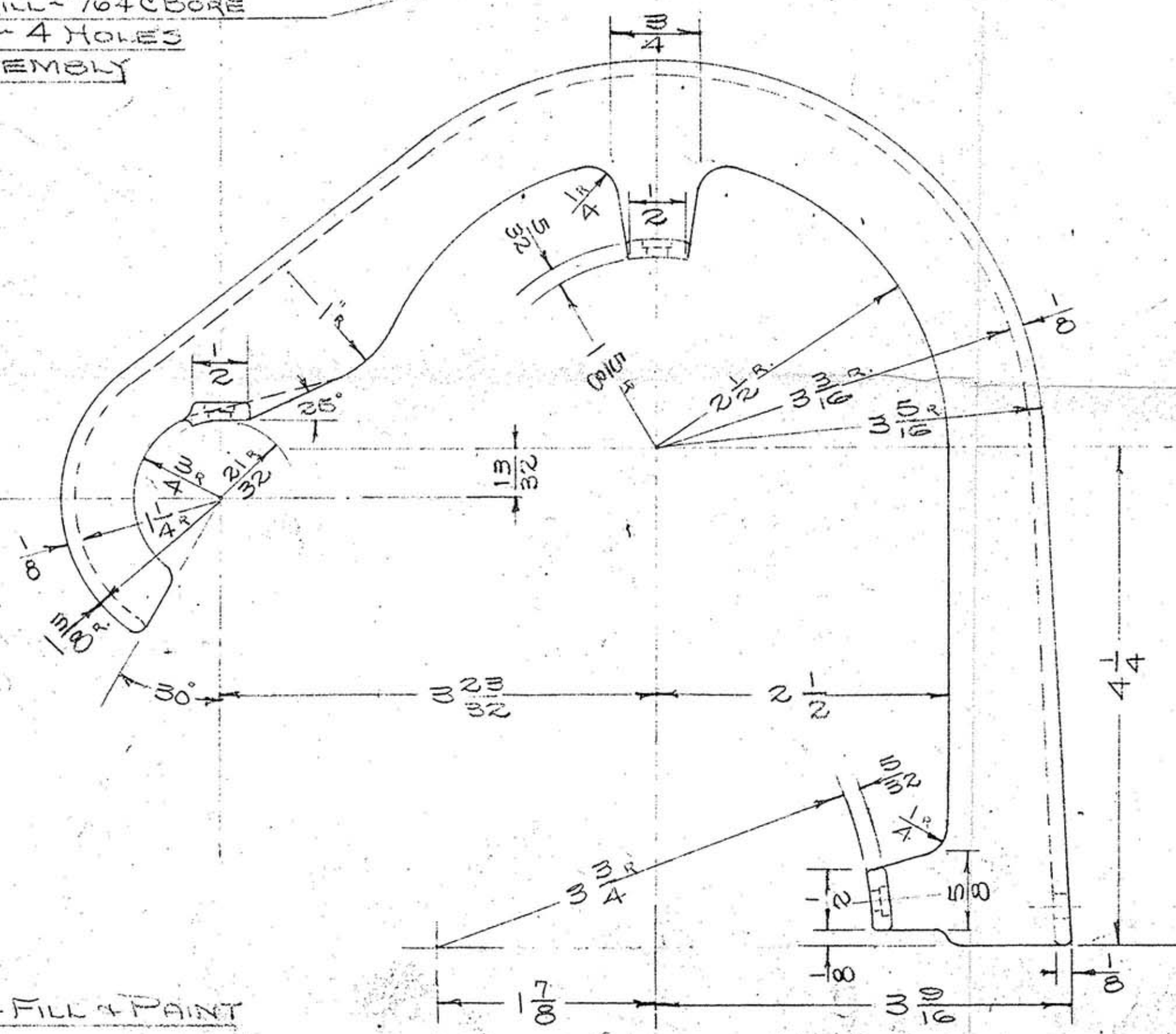
CAST IRON - PATT. 608-5C-12-251

608-5C-12-251





#18(169) DRILL -  $\frac{1}{64}$  C BORE  
 $\frac{3}{32}$  DEEP - 4 HOLES  
 AT ASSEMBLY



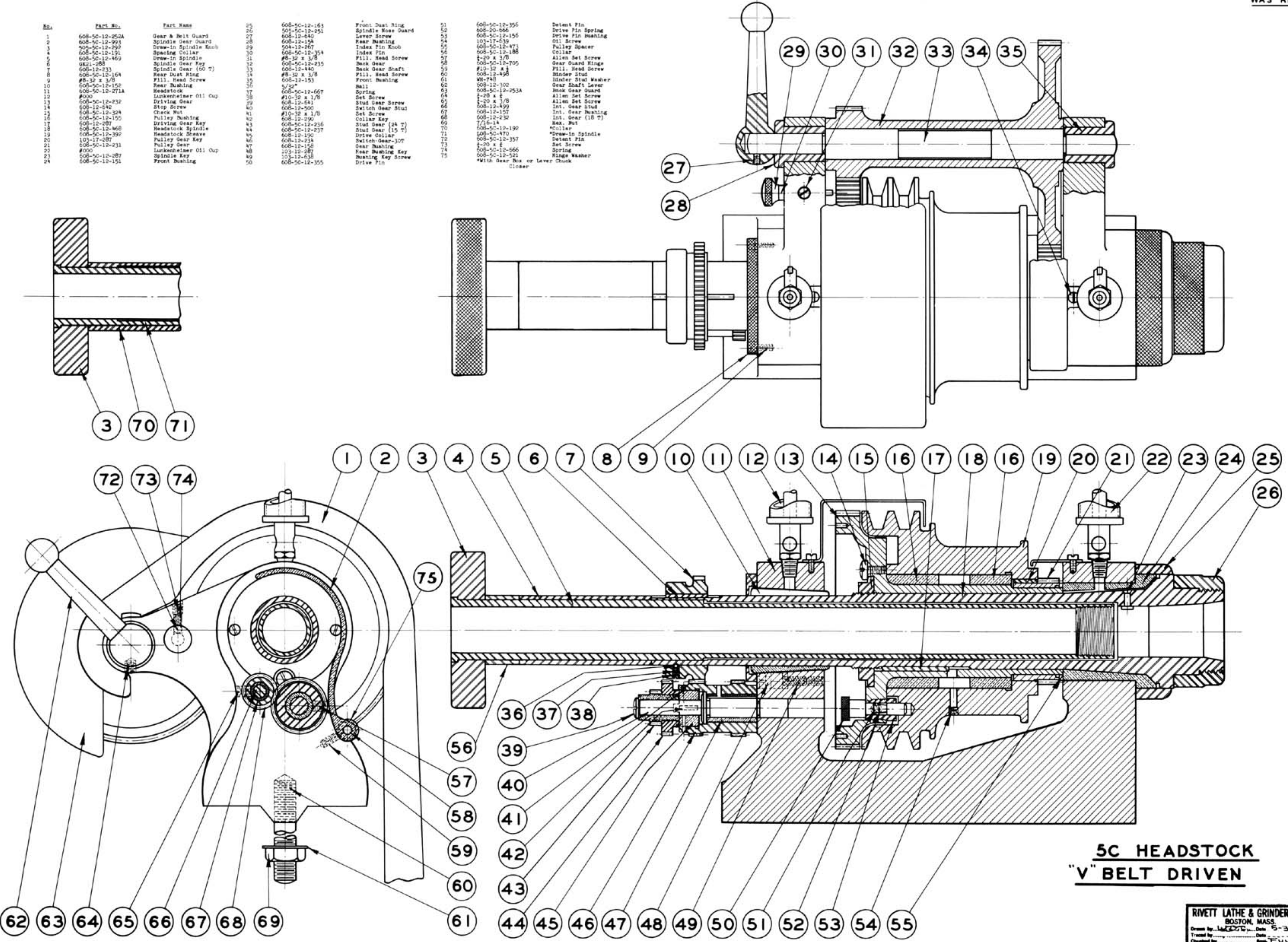
#10(193) DRILL  
 2 HOLES AT ASSEMBLY

BACK GEAR AND BELT GUARD  
 1/2 608-5C LATHE - V BELT DRIVE

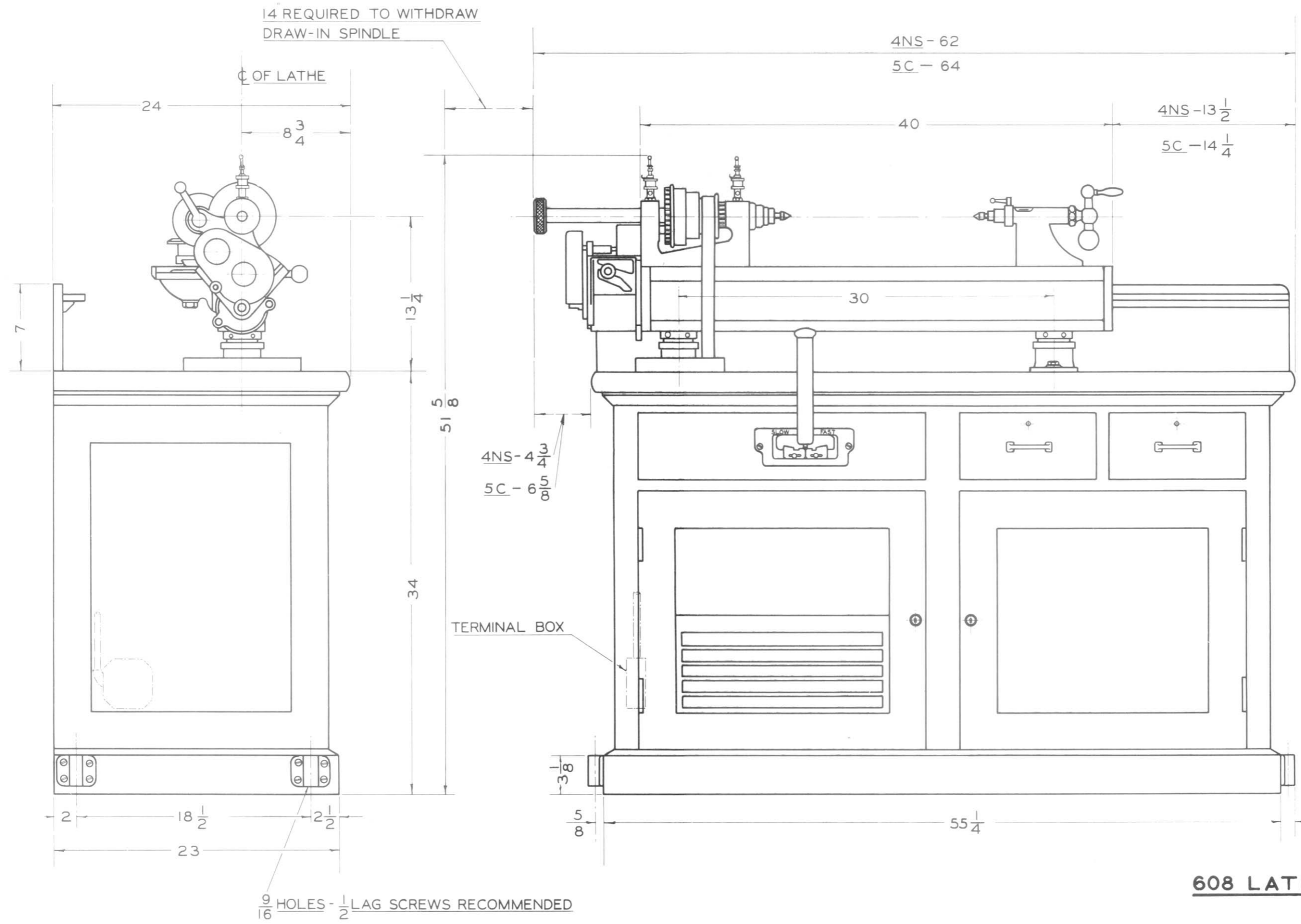
MATERIAL <b>BRASS</b> PART NO. 608-5C-12-252A TOOL NO.	VIKING LATHES & GRINDER INC. BOSTON, MASS. DATE 4-23-51 608-5C-12-252A
--	--



No.	Part No.	Part Name
1	608-5C-12-252A	Gear & Belt Guard
2	608-5C-12-993	Spindle Gear Guard
3	608-5C-12-292	Draw-In Spindle Knob
4	608-5C-12-191	Spacing Collar
5	608-5C-12-469	Draw-In Spindle
6	608-5C-12-231	Spindle Gear Key
7	608-5C-12-164	Spindle Gear (50 T)
8	#8-32 x 1/8	Rear Dust Ring
9	#8-32 x 1/8	Fill. Head Screw
10	608-5C-12-152	Rear Bushing
11	608-5C-12-271A	Headstock
12	#000	Lunkshelmer Oil Cup
13	608-5C-12-232	Driving Gear
14	608-12-642	Stop Screw
15	608-5C-12-204	Check Nut
16	608-5C-12-155	Pulley Bushing
17	608-12-287	Driving Gear Key
18	608-5C-12-468	Headstock Spindle
19	608-5C-12-392	Headstock Sheave
20	103-17-287	Pulley Gear Key
21	608-5C-12-231	Pulley Gear
22	#000	Lunkshelmer Oil Cup
23	608-5C-12-287	Spindle Key
24	608-5C-12-151	Front Bushing
25	608-5C-12-163	Front Dust Ring
26	508-5C-12-251	Spindle Nose Guard
27	608-12-640	Lever Screw
28	608-12-194	Rear Bushing
29	508-12-267	Index Pin Knob
30	608-5C-12-354	Index Pin
31	#8-32 x 1/8	Fill. Head Screw
32	608-5C-12-235	Back Gear
33	608-12-440	Back Gear Shaft
34	#8-32 x 1/8	Fill. Head Screw
35	608-12-153	Front Bushing
36	3/32"	Ball
37	608-5C-12-667	Spring
38	#10-32 x 1/8	Set Screw
39	608-12-641	Driving Gear
40	608-12-500	Switch Gear Stud
41	#10-32 x 1/8	Set Screw
42	608-12-290	Collar Key
43	608-5C-12-236	Stud Gear (24 T)
44	608-5C-12-237	Stud Gear (15 T)
45	608-12-192	Drive Collar
46	608-12-234	Switch Gear-30T
47	608-12-158	Gear Bushing
48	103-12-287	Rear Bushing Key
49	103-12-638	Washing Key Screw
50	608-5C-12-355	Drive Pin
51	608-5C-12-356	Detent Pin
52	608-20-666	Drive Pin Spring
53	608-5C-12-156	Drive Pin Bushing
54	103-17-539	Oil Screw
55	608-5C-12-473	Pulley Spacer
56	608-5C-12-186	Collar
57	1-20 x 3/8	Allen Set Screw
58	608-5C-12-705	Gear Guard Hinge
59	#10-32 x 1/8	Fill. Head Screw
60	608-12-498	Blinder Stud
61	W-748	Blinder Stud Washer
62	608-12-302	Gear Shaft Lever
63	608-5C-12-253A	Back Gear Guard
64	1-20 x 1/8	Allen Set Screw
65	1-20 x 3/8	Allen Set Screw
66	608-12-499	Int. Gear Stud
67	608-12-157	Int. Gear Bushing
68	608-12-232	Int. Gear (18 T)
69	7/16-14	Max. Nut
70	#000	Oil Cup
71	608-5C-12-192	Draw-In Spindle
72	608-5C-12-357	Detent Pin
73	1-20 x 1/8	Set Screw
74	608-5C-12-666	Spring
75	608-5C-12-521	King Washer



**5C HEADSTOCK  
"V" BELT DRIVEN**



**FLOOR PLAN**  
**608 LATHE ON CABINET**

**RIVETT LATHE & GRINDER INC.**  
BOSTON, MASS.  
Drawn by W.D.C. Date 12-1-43  
Traced by J.E.C. Date 12-2-43  
Checked by \_\_\_\_\_ Scale \_\_\_\_\_  
**608-70**



K

$\frac{1}{8} \times \frac{1}{16}$  Keyway

Front

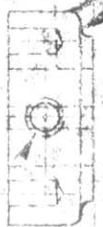
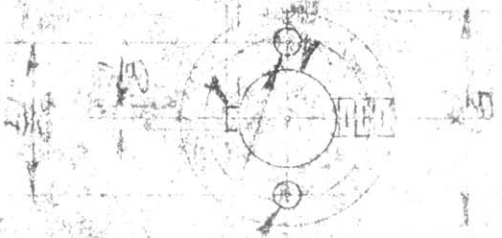
$\frac{7}{16}$

$\frac{3}{8}$

$\frac{1}{4}$

$\frac{1}{16}$

Round Corners



MAIN SHAFT COLLAR

#31(120)DRILL

TOOL #203

FINISH ALL SURF.

X C.F.S.

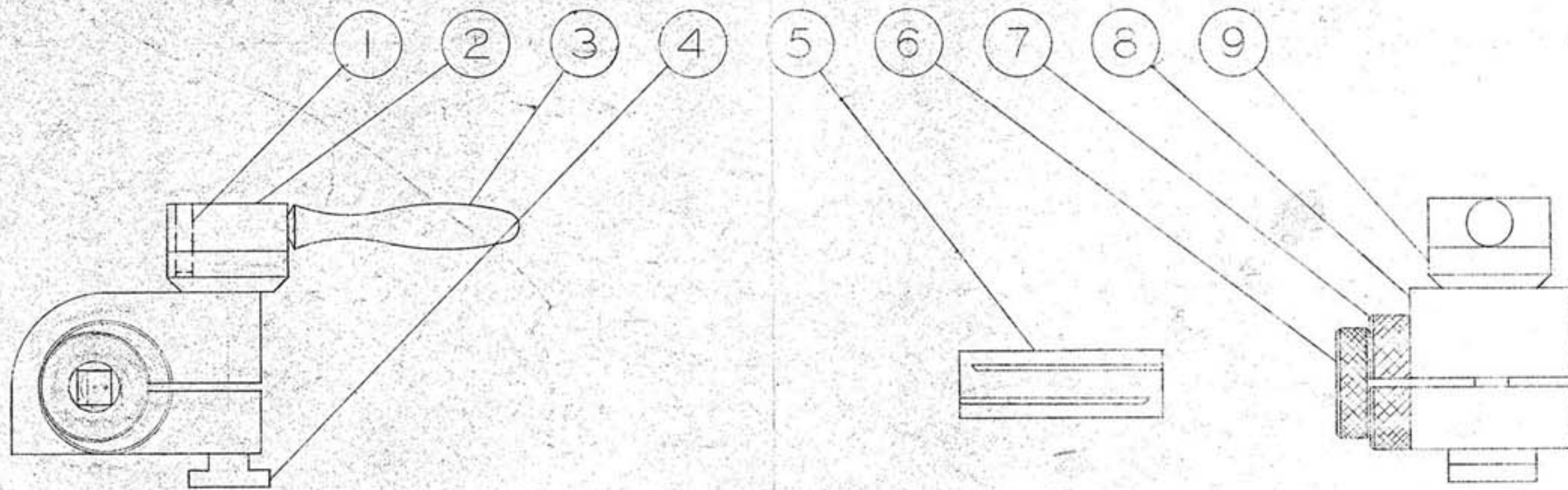
ALSI B-113

$\frac{1}{8}$  DIA.

X .05 FT. LG.

608-9-185

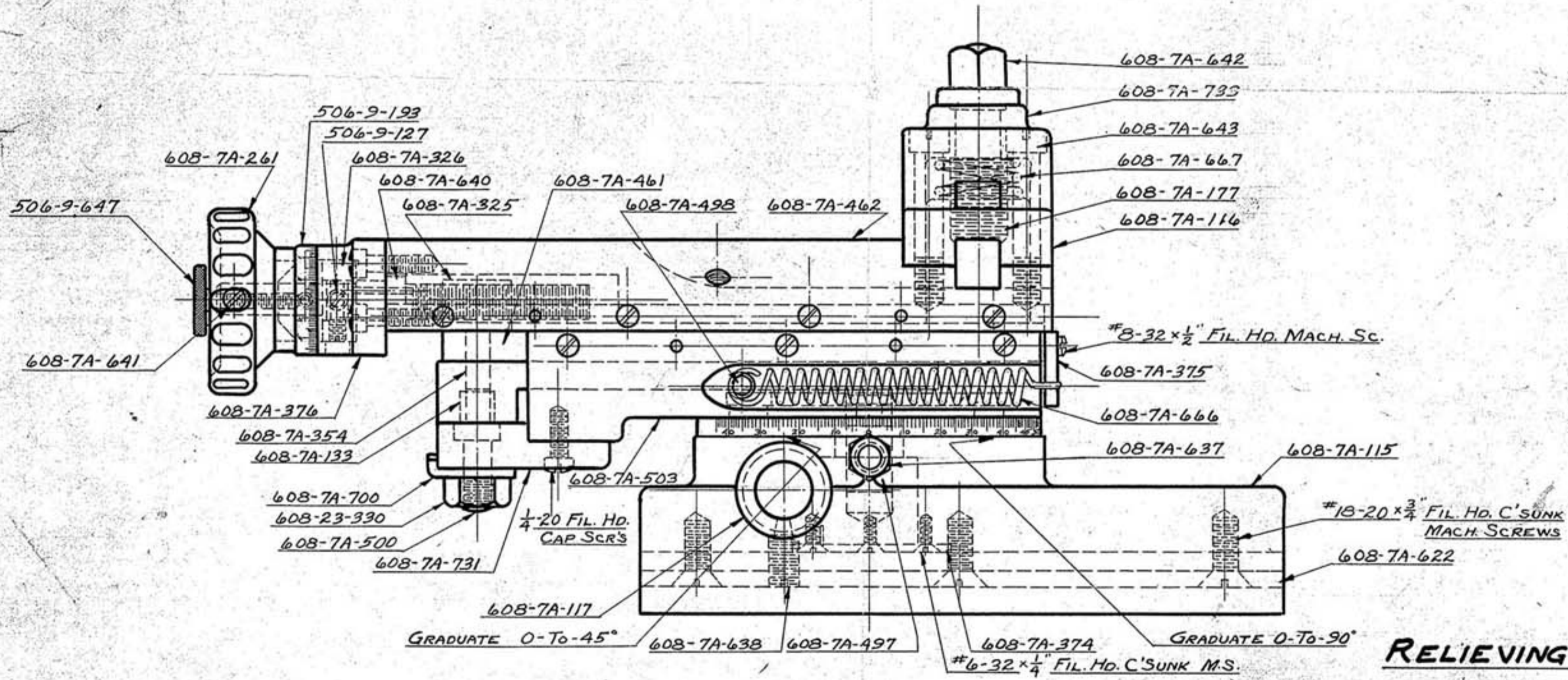
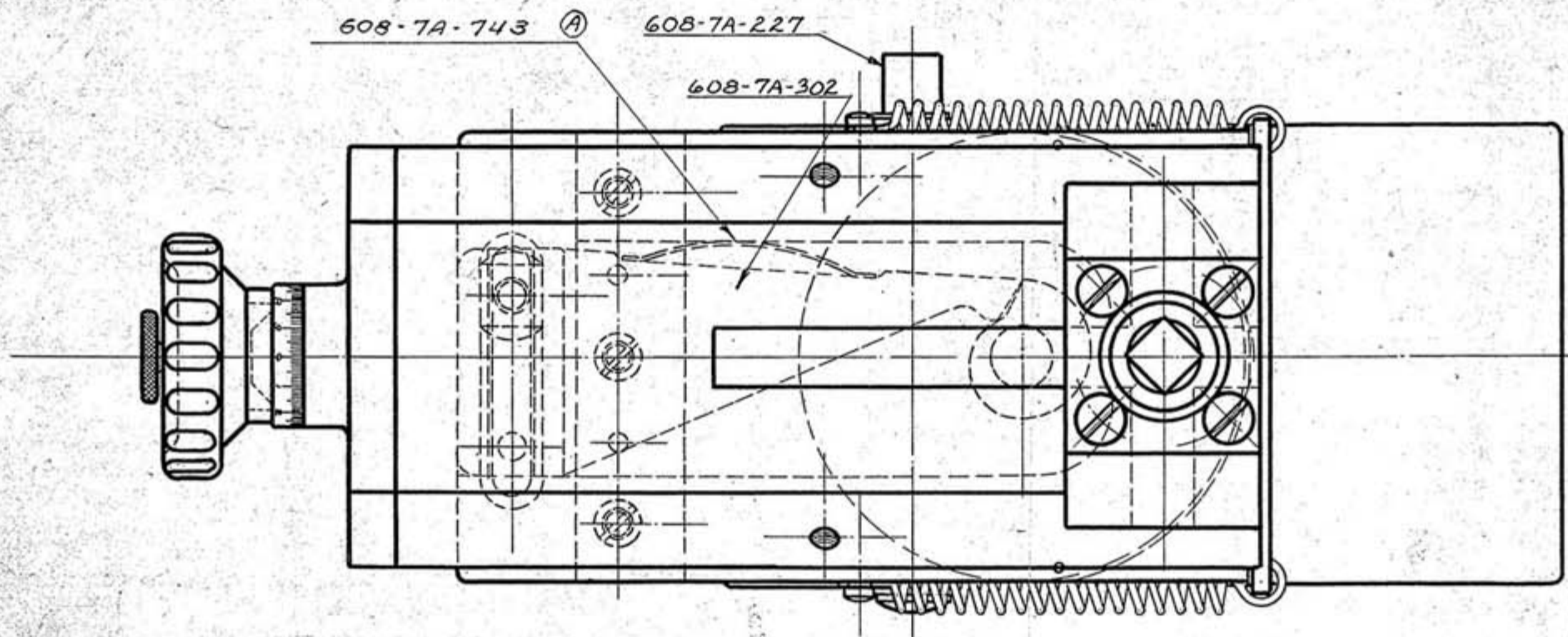




- |   |            |  |
|---|------------|--|
| 1 | 918-76-354 | HANDLE PIN                             |
| 2 | 918-76-267 | BINDER HEAD                            |
| 3 | LH4-260    | HANDLE                                 |
| 4 | 608-76-451 | BINDER SHOE                            |
| 5 | 608-76-151 | BUSHING                                |
| 6 | 608-76-457 | SLEEVE - 5/16 SQ. BIT (WHEN SPECIFIED) |
| 7 | 608-76-456 | ECCENTRIC SLEEVE                       |
| 8 | 608-76-136 | BINDER BODY                            |
| 9 | 608-76-142 | BINDER BOLT                            |

				SURFACE TREATMENT:		RIVETT LATHE & GRINDER, INC. BRIGHTON, BOSTON, MASS. U.S.A.	
				HEAT TREATMENT:			
A ADDED				9-11-52		ECCENTRIC TOOL HOLDER	
SYM	REVISION	DATE	BY	TOOLS:		TOLERANCES UNLESS OTHERWISE SPECIFIED:--	
MATERIAL:						DECIMALS:      FRACTIONS:      ANGLES: $\Delta$	
MATERIAL SIZE:						CONCENTRICITY:	
PATT. NO.:						FACE RUNOUT:	
DIE NO.:						MACH. SURFACES:	
WEIGHT ROUGH:--						BREAK SHARP CORNERS      MAX. RADIUS	
WEIGHT FINISHED:--						REMOVE ALL BURRS	
ASSEMBLY NO.						DRAWN BY: S.F.      7-22-47      CHECKED BY:	
NO. REQ. PER ASSEM.						TRACED BY:      SCALE: FULL	
						DWG. NO.      608-76	

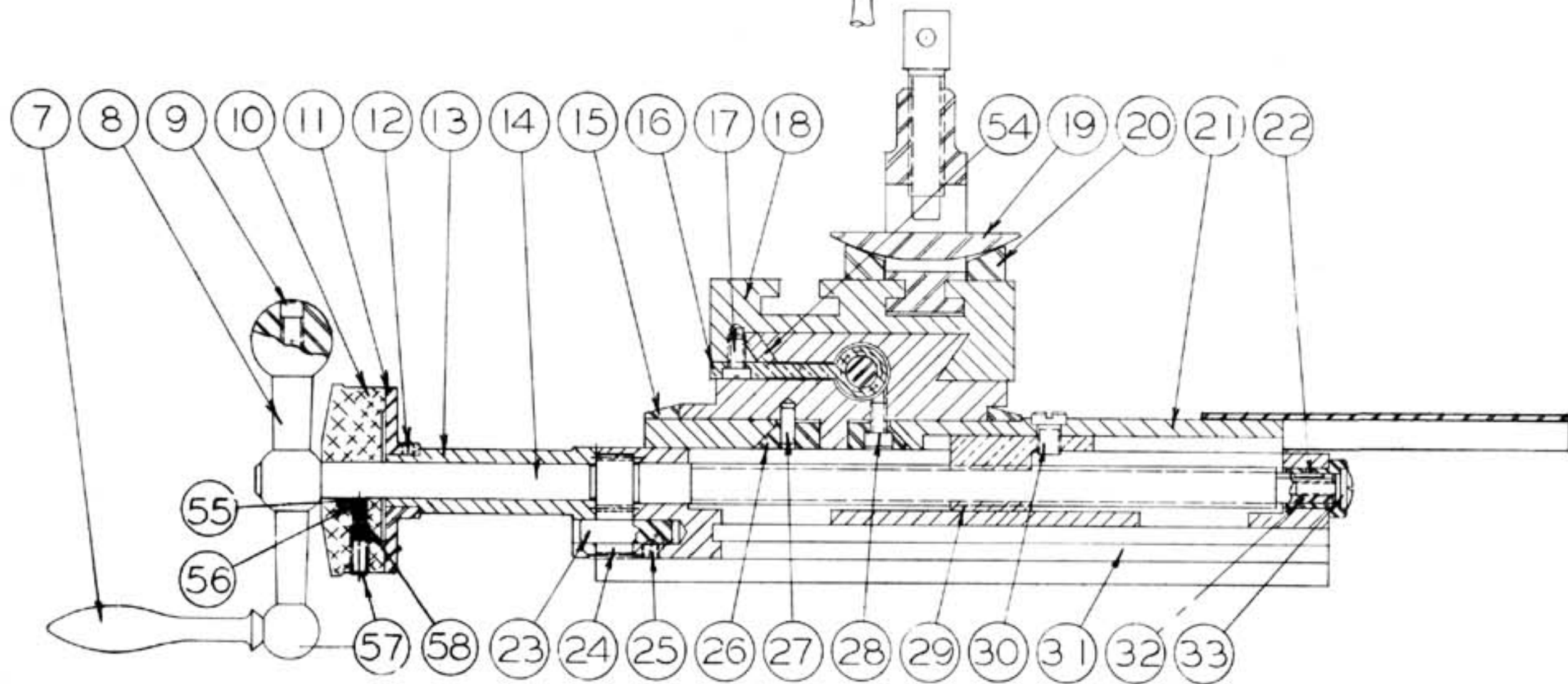
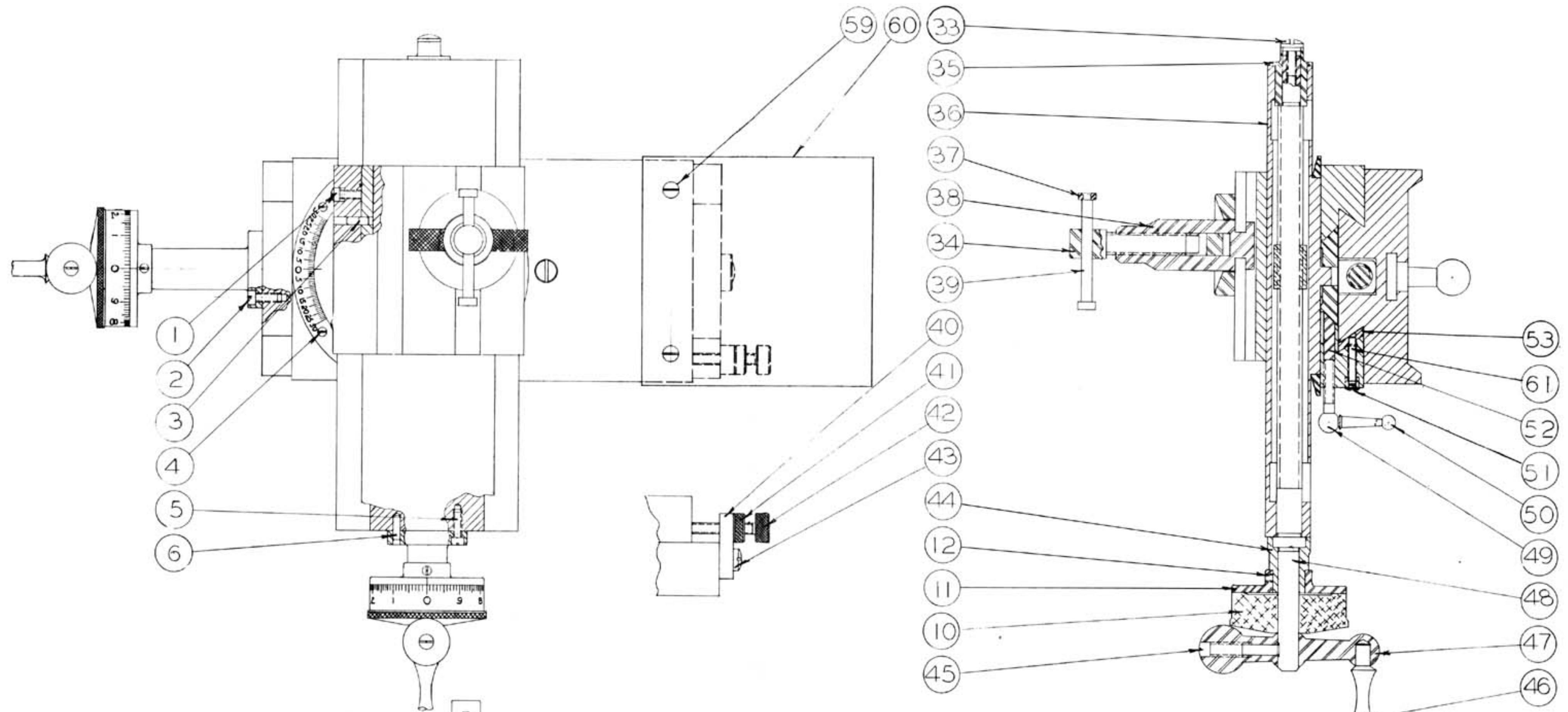




**RELIEVING ATTACHMENT**

E.G. 6-3-25  
12-14-37  
FULL  
**608-7A**





SYM			REVISION			DATE BY			SURFACE TREATMENT:			RIVETT LATHE & GRINDER, INC. BRIGHTON, MASS., U.S.A.		
MATERIAL:									HEAT TREATMENT:					
MATERIAL SIZE:									TOOLS:			SLIDE REST		
PATT. NO.:												TOLERANCES UNLESS OTHERWISE SPECIFIED:-		
DIE NO.:												DECIMALS      FRACTIONS      ANGLES		
WEIGHT ROUGH:-												FACE SURFACES		
WEIGHT FINISHED:-												BACK SURFACES		
ASSEMBLY NO.:												BREAK SHARP CORNERS		
DR. NO. PER AREA:												REMOVE ALL BURRS		
												DRAWN BY: FKS:VT    7-12-47		
												CHECKED BY: [Signature]		
												MFG. NO.      608-9A		



INSTALLATION INSTRUCTIONS FOR 608-PC SCREW CUTTING  
LATHE  
Mounted on Bench or Oak Cabinet

Item 1 - Receiving and Unpacking

If any damage is noticed to packaging of machine or parts, call representative of delivering carrier to inspect condition before removing crate or taking parts from boxes and enter claim against the transportation company. The shipper holds receipt in good order for the entire consignment.

Carefully unpack, using nail puller for removing crate, box covers and braces. Avoid jarring machine or machine parts when doing this. Leave the mounting on the skid on which it was shipped until machine has been finally located. Check all items against packing list. If any shortage exists re-examine packing material before discarding. Small pieces may be lost unless all excelsior and wrapping paper is thoroughly overhauled.

Remove slushing grease using fresh cotton waste or cloth and gasoline or kerosene. Immediately go over all polished and scraped surfaces with an oiled rag.

Item 2 - Setting Up

Locate cabinet or bench and level top in both directions, lengthwise and crosswise. Insert strips of 1/4", cork or other insulating material between bench or cabinet and floor and fasten with lag screws or bolts - see floor plan, print #

To Install Lathe - Screw the two jack pedestal bolts into the bottom face of the lathe bed. Place the spherical washer found on one of the pedestal bolts in the spherical depression on the top surface of the tailstock jack pedestal already in position on the bench top. Lift the lathe on to the jack pedestals and with the flat washers in place apply and tighten the pedestal bolt nuts. These nuts need not and should not be made up too tight. The spherical washer on the tailstock jack pedestal and two steel balls between the lathe bed and the headstock jack pedestal provide a three point mounting of the lathe and insure against any distortion.

To Install Driving Belt - Remove the tie block in the "U" shaped belt guard on bench or cabinet top and pass lower loop of endless belt down through the resulting slot. Place upper loop of endless belt on smallest step of headstock cone pulley and pull tight so lower loop will engage the driving cone pulley on the speed box. Replace the tie block in the "U" shaped belt guard.

To Tension Driving Belt and Level Bed - Jack pedestals on which lathe bed rests provide height adjustment for tensioning underneath driving belt and leveling bed. Loosen the pedestal bolt nuts under the bench top. Insert a short piece of 1/4" or 5/16" round stock in the holes of the upper collars and turn left handed to raise the bed and to increase the belt tension. When subsequently raising bed to tighten belt

be sure to turn the headstock and tailstock jack screws the same number of holes to keep the bed level. Tighten pedestal bolt nuts and set screws in pedestal bases after adjustment is completed.

### Item 3 - Assembling Machine

#### A) Installing Quick Change Gear Box

Attach the quick change gear box to the left end of the bed after first removing the two binder bolts from bed. Locate the gear box by engaging the two driving pins on the end of the lathe feed rod with the corresponding holes in the cone gear shaft. Fasten the gear box to end of lathe bed with hex binder bolt through radial slot in rear and tee binder bolt through radial slot at bottom. Bring round nut on tee binder bolt finger tight and screw in binder handle used for Locking gear box in position after swinging to engage proper stud gear. See Quick/Change Gear Box, print 608-20 and Bed, print 608-23.

#### B) Installing Compound Slide Rest

Carefully wipe and oil contacting slide surfaces. Place slide rest on top of carriage angle with clamping tee bolt engaged in tee slot of slide rest base. Slide rest can be held in any position on carriage angle by clamping bolt operated by the binder handle at right. If power cross feed is used, the guard slide in front end of carriage angle is rotated to the right exposing the driven gear. Mount slide rest almost flush with the front of the carriage angle so as to permit driving gear to be swung upward by small handle at front right side of carriage angle to mesh with slide rest gear under front end of slide rest base.

### Item 4 - Lubrication

The headstock spindle bearings are equipped with wick feed oil cups and should be kept filled. Other lubrication points on lathe are equipped with small spring oilers, or oil holes marked "OIL". They should receive several drops of oil once or twice a day or shift. Use a high grade machine oil for all lubrication. An oil film should be maintained on all slides and finished surfaces to prevent rust.

### Item 5 - 608-PC Headstock

(Numbers in text refer to print 608-5C-12)

The back gears are thrown in and out of mesh by ball handle #36 on the left end of eccentric shaft. A knurled-head pin #62 in the web of the gear inside left end of headstock sheave is pulled out to disconnect gear from sheave when using back gears and is pushed in to engage hole in sheave web when using open belt.

To Adjust Spindle - To adjust the rear spindle bearing #13 remove draw-in spindle #7. Remove spindle gear #9 after loosening set screw #49, being careful not to lose ball #47 and spring #48. With small screw driver turn slotted head screw at the bottom of the bearing. Turning this screw right handed compresses the split bearing and compensates for wear. To adjust the front spindle bearing #23 loosen the round slotted head screw #15 inside the web of the large spindle gear at the left of the headstock pulley and with a screw driver or other flat tool engage the slot in the adjusting nut #16. Turning this nut right-handed draws the spindle into the tapered front bearing. The front bearing should be snug without being tight. Always adjust the spindle at normal operating temperature. After adjusting the front spindle bearing, tighten locking screw #15 to hold the setting.

To Replace Headstock Belt - Remove the tie block in the "U" shaped belt guard on cabinet top. Loosen lever screw #27 and remove gear shaft lever #36. Loosen the two set screws #37 holding the back gear shaft bearing. Insert flat tool in slots provided on underside of bearings and pry bearings from their mounting. Remove shaft #33 and back gear #32. Slip belt off the driving pulley and pull the lower loop through the "U" opening in cabinet top. Replace with new belt and reverse the sequence of operations to reassemble.

## Item 10-C - The Speed Box Motor Drive

The constant speed motor is controlled by drum type reversing switch. While lathe is in use the motor should run continuously. Correct spindle speeds are obtained through engagement or disengagement of back gears and position on flat driving belt in cone pulleys and selective high or low in speed box.

Twelve spindle speeds are available, six with back gears engaged and six with open belt (back gears disengaged). Speed box provides selective high and low spindle speeds in 3 to 1 ratio.

After setting back gears and flat driving belt for desired spindle speeds, the lathe should be operated entirely by speed box control lever, mounted on the cabinet directly in front of the headstock. With the control lever in center position the speed box clutch is in neutral and power from the motor is not transmitted to the cone driving pulley. Also, in this position, an automatic brake applies to the inner rim of the cone driving pulley. With the control lever in the right indented position the speed box transmits its high speed to the driving pulley and in left indented position its low speed. Brake automatically disengages when control lever is in either operating positions. To reverse the spindle, reverse the motor drum type switch.

# INSTRUCTIONS FOR 608-PV SCREW CUTTING LATHE MOUNTED ON KNEE-HOLE CABINET

## Item 1 - Receiving and Unpacking

If any damage is noticed to packaging of machine or parts, call representative of delivering carrier to inspect condition before removing crate or taking parts from boxes and enter claim against the transportation company. The shipper holds receipt in good order for the entire consignment.

Carefully unpack, using nail puller for removing crate, box covers and braces. Avoid jarring machine or machine parts when doing this. Leave the lathe with mounting on the skid on which it was shipped until machine has been finally located. Check all items against packing list. If any shortage exists, re-examine packing material before discarding. Small pieces may easily be lost unless all excelsior and wrapping paper is thoroughly overhauled.

Remove slushing grease using fresh cotton waste or cloth and gasoline or kerosene. Immediately go over all polished and scraped surfaces with an oiled rag.

## Item 2 - Setting Up

Machine should be moved close to its location on its skid, lag screws then removed and machine placed carefully on its prepared position in accordance with floor plan, print # \_\_\_\_\_ in this manual. Fasten to flooring with four 1/2", lag screws or bolts. Level machine using precision level lengthwise and crosswise in lathe bedways.

## Item 3 - Assembling Machine

### A) Installing Quick Change Gear Box

Attach the quick change gear box to the left end of the bed after first removing the two binder bolts from bed. Locate the gear box by engaging the two driving pins on the end of the lathe feed rod with the corresponding holes in the cone gear shaft. Fasten the gear box to end of lathe bed with hex binder bolt through radial slot in rear and tee binder bolt finger tight and screw in binder handle used for locking gear box in position after swinging to engage proper stud gear. See Quick Change Gear Box, print 608-20 and Bed, print 608-23, a part of this manual.

### B) Installing Compound Slide Rest

Carefully wipe and oil contacting slide surfaces. Place slide rest on top of carriage angle with clamping tee bolt engaged in tee slot of slide rest base. Slide rest can be held in any position on carriage angle by clamping bolt operated by the binder handle at right. If power cross feed is used, the guard slide in front end of carriage angle is rotated to the right exposing the driver gear. Mount slide



rest almost flush with the front of the carriage angle so as to permit driving gear to be swung upward by small handle at front right side of carriage angle to mesh with slide rest gear under front end of slide rest base.

#### Item 4 - Lubrication

The headstock spindle bearings are equipped with wick feed oil cups and should be kept well filled. Other lubrication points on Lathe are equipped with small spring oilers, or oil holes marked "OIL". They should receive several drops of oil once or twice a day or shift. Use a high grade machine oil for ALL lubrication. An oil film should be maintained on all slides and finished surfaces to prevent rust.

#### Item 5 - Headstock

(Numbers refer to print 608-5C-12A)

The back gears are thrown in and out of mesh by ball handle #62 on the left end of eccentric shaft. A knurled-head pin #50 in the web of the gear inside left end of headstock sheave is pulled out to disconnect gear from sheave when using back gears and is pushed in to engage hole in sheave web when using open belt.

To Adjust Spindle - to adjust the rear spindle bearing #10 remove draw-in spindle #5. Remove spindle gear #7 after loosening set screw #38, being careful not to lose ball #36 and spring #37. With small screw driver turn the slotted head screw at the bottom of the bearing. Turning this screw right handed compresses the split bearing and compensates for wear. To adjust the front spindle bearing #34 loosen the round slotted head screw #14 inside the web of the large spindle gear at the left of the headstock sheave with a screw driver or other flat tool engage the slot in the adjusting nut #15. Turning this nut right handed draws the spindle into the tapered front bearing. The front bearing should be snug without being tight. Always adjust the spindle at normal operating temperature. After adjusting the front spindle bearing tighten the locking screw #14 to hold the setting.

To Replace Headstock Belt - remove the belt and back gear guards. Remove the tie block in the "U" opening in cabinet top. Loosen lever screws #27 and remove gear shaft lever #62. Loosen the two screws #64 holding the back gear shaft bearings. Insert flat tool in slots provided on underside of bearings and pry bearings from their mounting. Remove shaft #33 and back gear #32. Slip the vee belt off the driving sheave and pull the lower loop through the "U" opening in cabinet top. Replace with new vee belt and reverse the sequence of operations to reassemble.

## Item 6 - Quick Change Gear Box

(Numbers in text refer to print 608-20)

The driving gear is keyed to the spindle at the rear of the rear headstock bearing and drives the quick change gear box through switch and stud gears. By knurled knob this driving gear can be moved along spindle to three detented positions. In right detented position the driving gear engages the switch gear through intermediate gear which through quick change gear box moves the lathe carriage to the right. In center detented position the driving gear is out of mesh and all speed gearing is stopped. In left detented position the driving gear directly engages the switch gear, which through quick change gear box moves carriage to left.

The driving stud, driven by the switch gears is permanently fitted with 18 and 30 tooth gears #66 and #67. The upper gear box shaft carries a sliding compound gear #48 with 60 and 72 teeth. This gives two selective ratios, one to four and one to two from the driving stud. Compound gearing, as tabulated in print GT-12 of this manual, drives from the upper gear box shaft to the sliding tumbler gear shaft. For Standard thread pitches ten to one hundred and forty-four per inch 70 on to 70 and 28 on to 112 compound gears are used. For thread pitches less than ten per inch special gears, 4 to 1 ratio (80-20) are used. This set up requires an idler connecting gear mounted on a stud on the quadrant. The gear box provides four groups of seven thread pitches. Each group is controlled by positioning the compound gear #48 on the upper shaft and the sliding compound gears #1 and #2 on the tumbler shaft. Two additional thread pitches, 30 and 120 are obtained by swinging the gear box as to mesh the 60 tooth gear of the sliding compound #48 on the upper shaft, with the 18 tooth stud gear #66. The thread pitches within each group are controlled by the setting of the index lever. A plate on the front of gear box indicates the location of the lever for each pitch of thread.

By mounting pick-off gear on the auxiliary quadrant provided, additional threads may be cut, see print GT-12 of this manual. Pick-off gears for 11-1/2, 15 and 27 pitch threads are included with standard lathe equipment. When pick-off gears are used, the index lever must be out of engagement.

## Item 7 - Carriage

(Numbers in text refer to print 608-26)

Longitudinal travel is available through ball handle (#47) rack and pinion. Power feed is from the feed rod and is obtained by pulling outward and friction lever #21 On the left end of the carriage until the spring latch moves up and supports tile lever in its full "OUT" position. This engages a friction clutch and establishes gear connection from the feed rod to the feed rack on the front underside of the bed. Feed is thrown out automatically by the carriage stop clamped at any desired position on the lower dovetail on the front face of the bed. The conical point of the stop screw eccentrically contacts a hole in the spring latch and forces it downward releasing the sloping friction lever.

When cutting threads from the lead screw, the gear train for the power feed may be disconnected by pulling out the knurled round knob (#20), at the lower left front of

the carriage. This saves wear on the gears and eliminates their drag which is conducive to higher precision of thread cutting.

To engage the lead screw and nut for thread cutting the eccentric ball handle lever #63 at the extreme right end of the apron is swung upward to a vertical position. The carriage is fitted with safety interlock #31, print #608-26A, to prevent simultaneous engagement of the Lead screw and power feed. With the operating lever moved to the left head screw nut may be engaged and with the operating lever moved to the right the friction clutch can be engaged. Thus, when either feed is engaged, the other feed is prevented.

A threading that used to pick threads without reversing the lathe is located on the right end of the carriage. When any radial graduation mark on the revolving dial comes into line with the reference mark, the lead screw nut may be thrown into engagement to feed the tool along the work until the end of the cut is reached. The lead screw nut may be thrown out by swinging the ball handle downward and the carriage quickly run back by hand without reversing the lathe. With the carriage back to restarting position, the lead screw nut is thrown in when the proper radial graduation mark (same mark on which first cut was started) on the revolving dial comes into line with the reference mark. The tool will accurately pick up its cut.

Power cross feed is obtained from the feed rod and is transmitted to the slide rest through a cam-mounted driving gear #14, print 608-26A, in the front top of the carriage angle. The driving gear is protected from chips and dirt by a guard closed by handle #10, print 608-26A, on front of carriage angle, when power cross feed is not in use. The Cam-mounted driving gear is raised by lever #3, print 608-26A, to engage slide nut lower feed screw intermediate gear #24, print 608-9A, when power cross feed is required.

When power rod feed is in use and not thread cutting is to be done the pinion on the left end of the lead screw #3 print 608-23, under the sliding guard, should be moved to the right. Thus disengaging lead screw and stopping all unnecessary wear on this ultra-precision member. The carriage may be locked to the bed by clamp, operated by lever handle #58 located under the front of the carriage angle. This feature is particularly valuable when using the lathe for facing.

To Adjust Carriage Gib - the upper front dovetail guideway of the carriage apron and the rear slide block of the carriage saddle are gibbed to compensate for wear. The front gib is tapered and extends the length of the carriage. To adjust the tension of this gib loosen the slotted screw at the left end of the carriage directly above the lead screw and tighten the corresponding slotted screw #75, print 608-26, similarly located at the right end of the carriage. The slide block gib bearing on the rear of the bed is adjusted by three headless slotted screws #37, print 608-26A.

To Adjust Carriage Friction Clutch - the friction clutch controlling the feed rod transmits sufficient power for the heaviest cut. To compensate for any wear, the stop screw #11 at the top of the spring latch, left end of carriage is backed out. This holds the sloping friction lever #21 further "OUT" which in turn throws the clutch friction plunger #32 further "IN" by leverage and increases the expansion of the internal clutch

ring #34. To adjust the stop screw, just loosen the slotted Locking screw #10 and after resetting the stop screw, re-tighten the locking screw.

#### Item 8 - Tailstock

(Numbers in text refer to print 608-22C)

The tailstock mounts in any position on the lathe bed and is locked in place by binder handle #30 located in the rear. Spindle movement is obtained by hand operated ball handle and is registered by fractional graduations on the upper periphery of the spindle and by dial graduations to .001". Center or other attachment is automatically ejected when spindle is fully retracted. Tailstock spindle can be adjusted off center by front and rear screws #32.

#### Item 9 - Slide Rest

(Numbers in text refer to print 608-9A)

To Adjust Slide Rest Feed Screws - tighten slotted head screws #33 on the ends of lower and upper feed screws.

To Adjust Slide Rest Gibs - both slides are fitted with gibs to compensate for wear. The top slide is gibbed at the front so all thrust from work is taken on the un-gibbed surface. This gib is adjusted by two Allen screws with lock nuts #1. The lower gib is adjusted by four Allen screws with lock nuts #51.

#### Item 10A - Variable Speed Drive

(Numbers in text refer to Variable Speed Drive, print 918S-16W and 608-10W)

The Worthington Variable Speed Drive is powered by a single speed motor. The entire drive is completely wired, per print # enclosed and tested in the factory. Main power line of proper electrical characteristics should be connected to leads of rear of cabinet. (Motor should turn clockwise viewed from left end when control lever is in forward position). If lathe is equipped with disconnect line switch, electrical control compartment door must be closed before disconnect switch can be thrown to "ON" position. Start, Stop and Reverse switch is mounted on pedestal at rear of headstock and an electro-mechanical interlock prevents line current from passing through the drum switch until finger contacts are engaged.

The speed control and indicator assembly is mounted on front of cabinet. To increase speed move lever to right, to decrease speed move lever to left. Ball handle #I locks lever in position by turning clockwise. Always release same by turning counter clockwise before moving lever. Never try to change position of speed lever when drive is not running.

If headstock driving vee belt is changed, height adjustment to secure correct belt correct belt tension may be obtained by turning jack screw #20 counter -clockwise to tighten, clockwise to loosen belt. To tension motor belt loosen nut #63 and lower belt idler pulley' #60 to proper belt tension. To tension variable speed drive belt turn screw #A clockwise to tighten, counter-clockwise to loosen.



Grease- gun fittings #76 are provided to lubricate motor which should be greased yearly with a good grade of light motor grease.

Item 10B -Motor Jackshaft Drive

(Numbers in text refer to Motor Jackshaft Drive print 918R-16)

(No brake is furnished)

The motor jackshaft drive is powered by a two speed motor. The entire drive is completely wired, per print enclosed and tested in the factory. Main power line of proper electrical characteristics should be connected to leads at rear of cabinet. (Motor should turn clockwise viewed from left end when control lever is in forward position.) If lathe is equipped with disconnect line switch, electrical control compartment door must be closed before disconnect switch can be thrown to "ON" position, Start, Stop and Reverse switch is mounted on pedestal at rear of headstock and an electro-mechanical interlock prevents line current from passing through the drum switch until finger contacts are engaged.

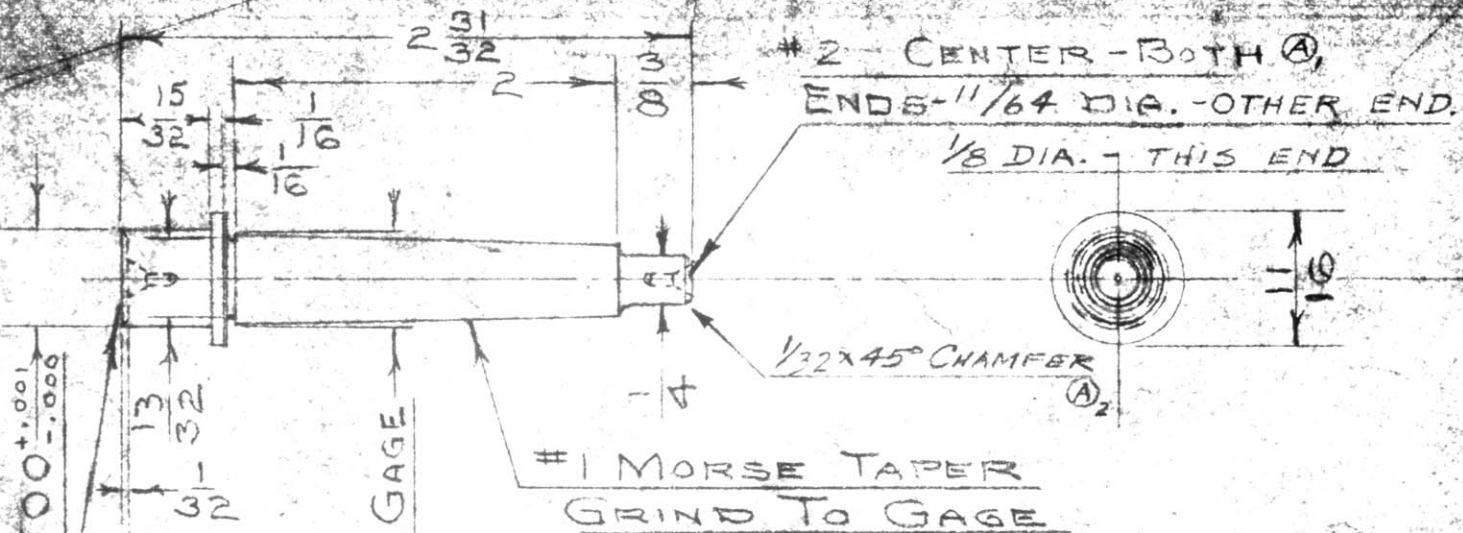
To obtain proper production speeds, three ranges are available by shifting vee belt on - 3 - stop motor and jackshaft sheaves. Release latching handle #1 by swinging forward, thus bringing motor plate and motor forward. Shift belt manually for speed desired referring to chart control lever. Lock latching handle #1 by pushing back. Never run drive with motor in forward position.

If headstock driving vee belt is changed, height adjustment to secure correct tension may be obtained by loosening hex stud clamping bolts #47 and turning jackshaft #6 counter-wise to tighten, clockwise to Loosen belt.

Jackshaft is mounted in self-alignment ball bearings, but alignment of sheaves must be maintained.

Alteration of headstock driving belt ordinarily required a corresponding tensioning of motor vee belt on three step sheaves which is accompanied by turning toggle rod nut #23 clockwise to tighten, counter -clockwise to loosen belt. After adjusting toggle rod nut #23 hex nuts #5 on either side of motor should be slightly tightened to secure proper locking of action of latching, handle #1

Motor is provided with grease fittings which should be greased yearly with good grade of light motor grease,



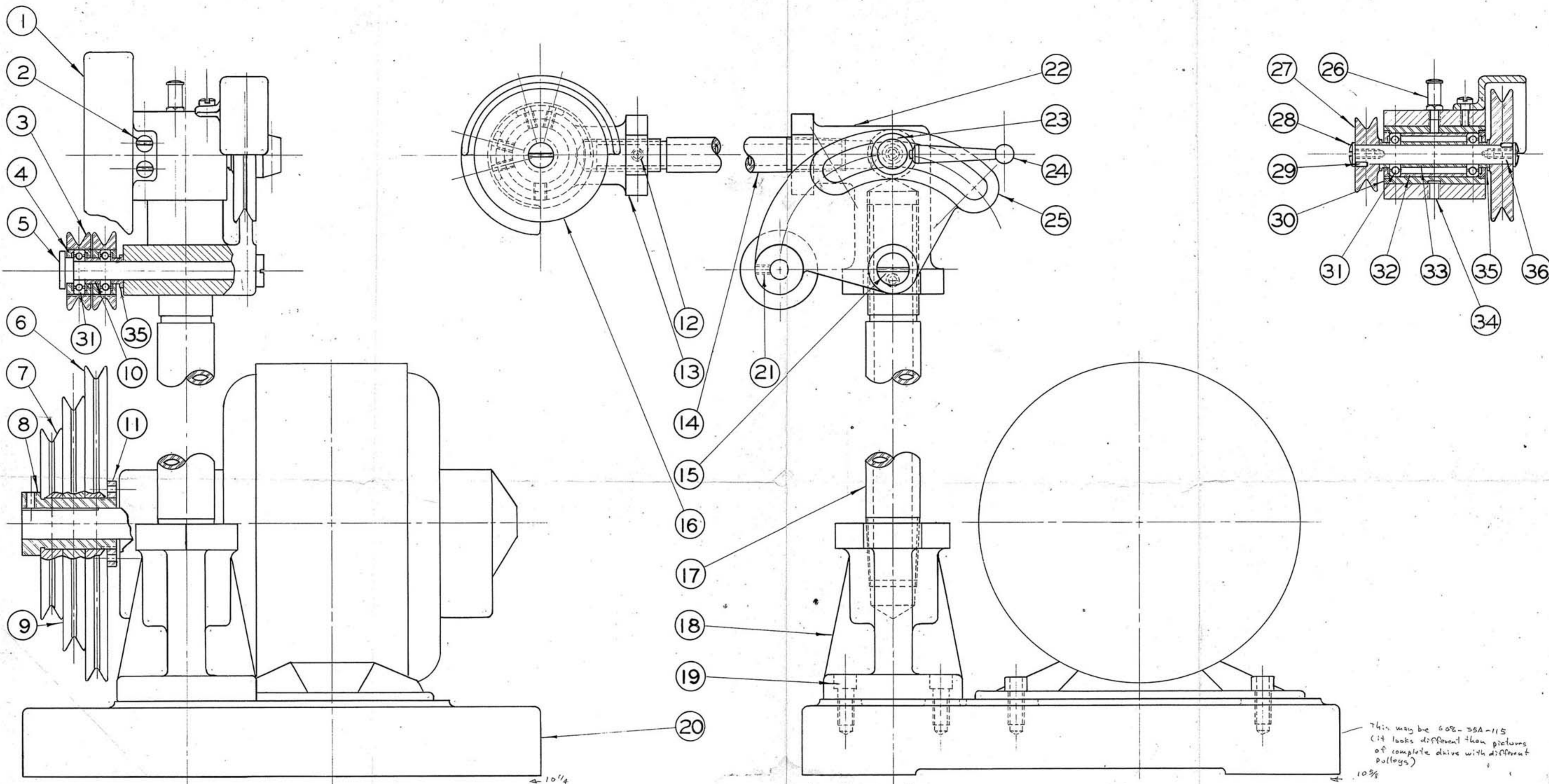
SHANK FOR  
TAILSTOCK TURRET

ALLOW .015  
 FOR GRINDING  
 .020

MATERIAL SAE 1112  
 C. F. STEEL  
 RATE. NO.  $\frac{3}{4}$  DIA  
 X .27 FT. LG.  
 TOOL NO.

KIVETT LATHE & GRINDER INC.  
 BOSTON, MASS.  
 Drawn by G. DER H. Date 10/25/43  
 Traced by \_\_\_\_\_ Date \_\_\_\_\_  
 Checked by \_\_\_\_\_ Date FULL  
 715-22-772





This may be 608-35A-115  
 (it looks different than pictures  
 of complete drive with different  
 pulleys)  
 10 3/8

- 1. 715-35A-252 BELT GUARD
- 2. 10-32 x 1/2 LG. FIL. HEAD CAP SCREW
- 3. 715-35A-385 IDLER PULLEY
- 4. 715-35A-637 BEARING HOUSING CAP SCREW
- 5. 715-35A-437 IDLER PULLEY SHAFT
- 6. 715-35A-986 PULLEY STEP
- 7. 715-35A-984 PULLEY STEP
- 8. 715-35A-280 PULLEY HUB
- 9. 715-35A-985 PULLEY STEP
- 10. 715-35A-473 IDLER PULLEY SPACER
- 11. 715-35A-324 PULLEY HUB NUT
- 12. 1/4-20 NC X 3/8 SET SCREW

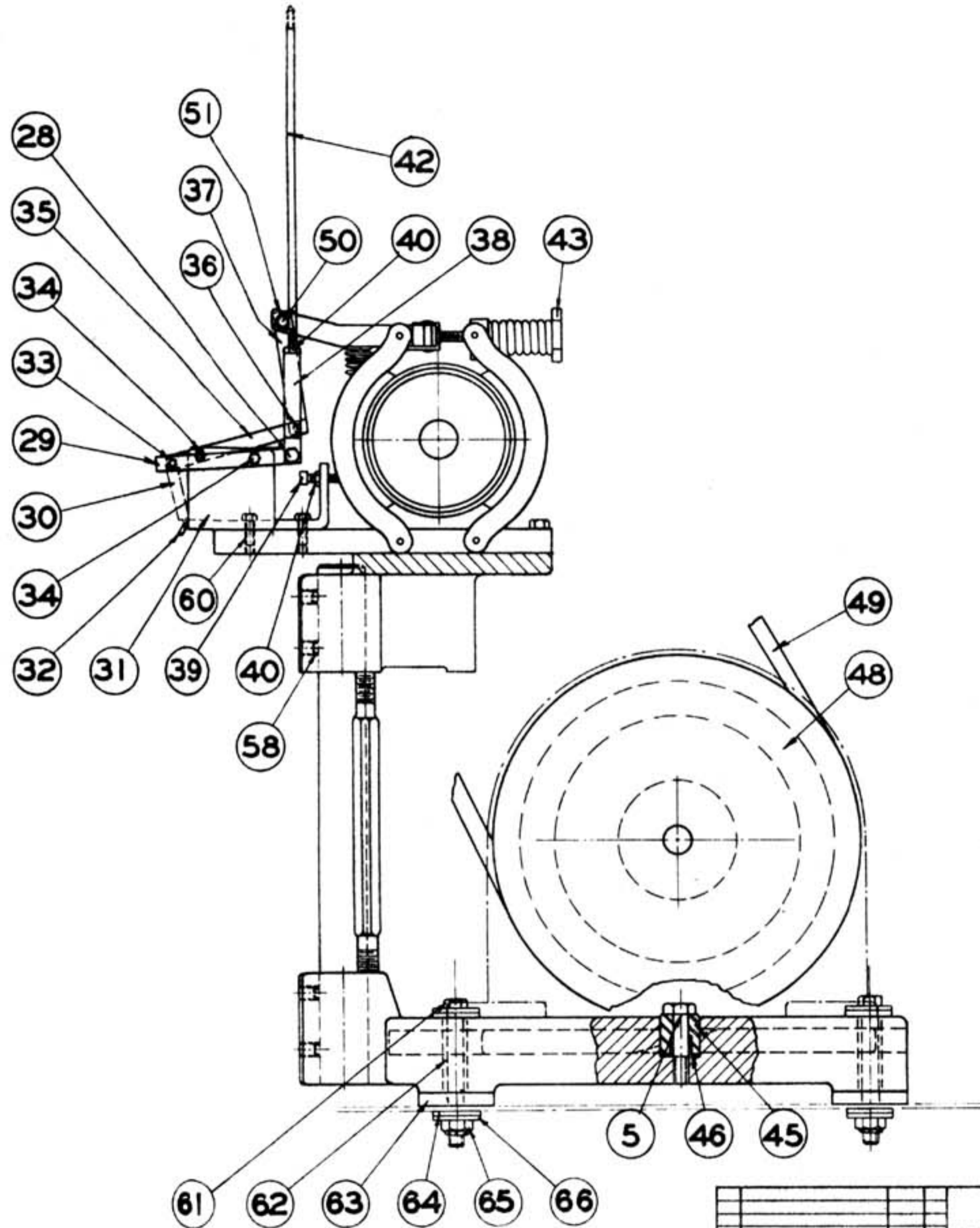
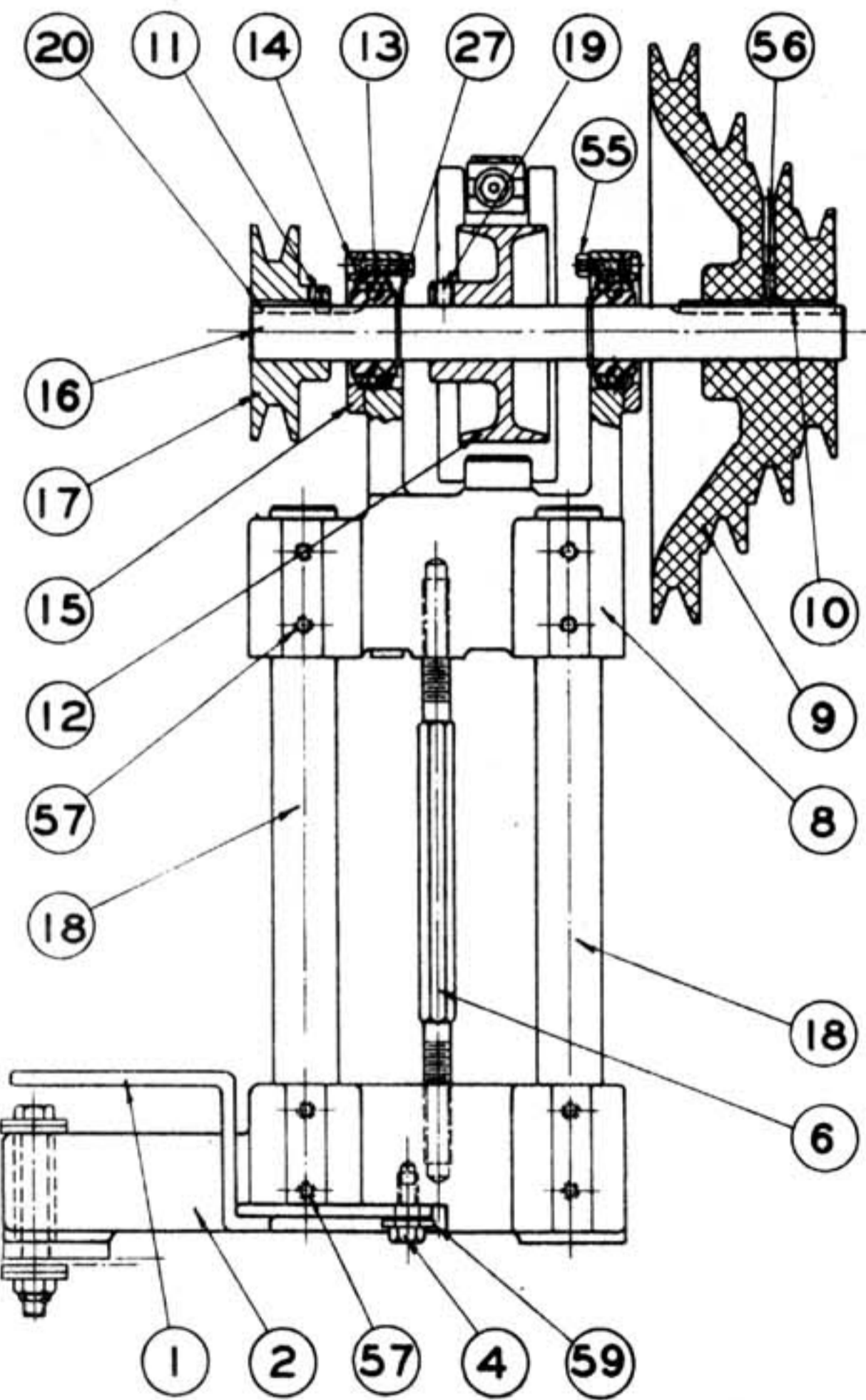
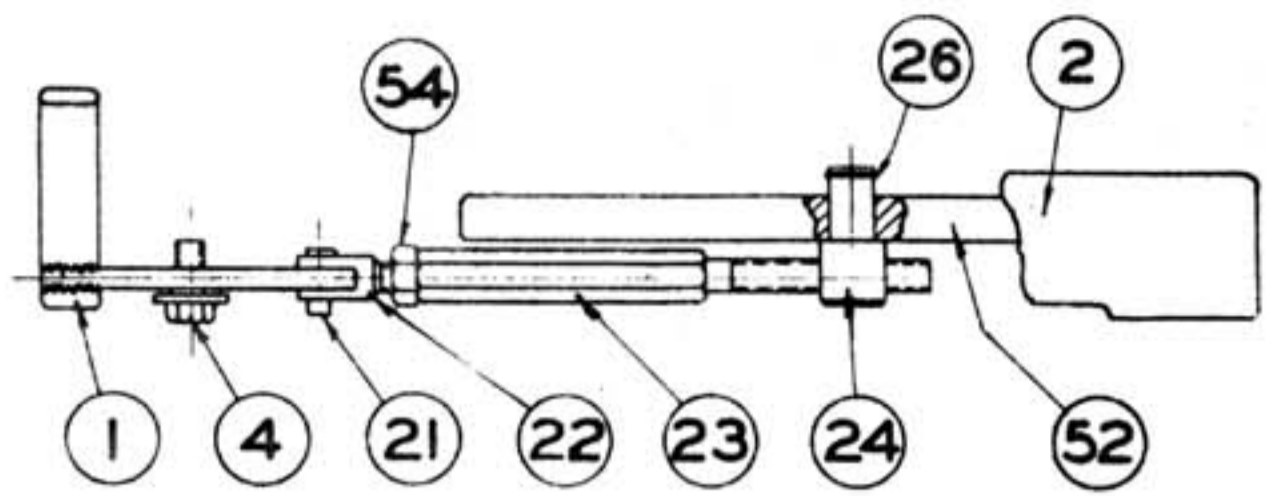
- 13. 715-35A-145 COUNTERSHAFT HOUSING BRACKET
- 14. 715-35A-110 HORIZONTAL ARM
- 15. 715-35A-638 YOKE PIVOT SCREW
- 16. 715-35A-387 COUNTERSHAFT DRIVEN PULLEY
- 17. 715-35A-778 UPRIGHT PIPE
- 18. 715-35A-217 UPRIGHT PIPE FLANGE
- 19. 5/16-18 NC X 5/8 ALLEN FIL. HD. CAP SCREW
- 20. 715-35A-115 MOTOR BASE
- 21. 608-35A-115 MOTOR BASE SET SCREW
- 22. 715-35A-677 GRINDING COUNTERSHAFT ANGLE
- 23. 715-35A-127 YOKE BINDER
- 24. 608-26-259 YOKE BINDER HANDLE

- 25. 715-35A-539 BELT ADJ. YOKE
- 26. STYLE 52-1 BOWEN OIL CUP
- 27. 715-35A-386 COUNTERSHAFT DRIVEN PULLEY
- 28. GK22-639 COUNTERSHAFT SCREW
- 29. 705-5-363 DUTCHMAN PIN
- 30. 715-35A-276 COUNTERSHAFT BEARING HOUSING
- 31. FAFNIR S-3 RADIAL BALL BEARING
- 32. 715-35A-476 BEARING SPACER
- 33. 715-35A-474 COUNTERSHAFT BEARING SPACER
- 34. 1/4-20 NC X 5/16 SET SCREW
- 35. 715-35A-475 COUNTERSHAFT PULLEY SPACER
- 36. 715-35A-721 COUNTERSHAFT

## GRIND. ATTACHMENT DRIVE

RIVETT LATHE & GRINDER INC.  
 BOSTON, MASS.  
 Drawn by G. Lee H. Date 10/23/32  
 Traced by G. Lee H. Date 10/23/32  
 Checked by \_\_\_\_\_ Scale Full  
**715-35A**





APPROV'D # 61766 REVISED # 117876		RIVETT LATHE & GRINDER, INC. BRIGHTON, MASS., U.S.A.
		<b>MOTOR J'SHAFT DRIVE</b>
		DEC 6-28-44 E. J. H. HALL
		<b>918R-16</b>



LAYERS & PLATES SUPPLIED & INSTALLED BY FABRICATOR

FRONT OF CABINET

ETCHED BRASS SUPPLIED & INSTALLED BY FABRICATOR

WELD TWO VENT COUPLINGS TO TOP PAN MUST BE FLUSH WITH UNDERSIDE AS SHOWN

10-32x3/4 OVAL HD MACH SCREW & NUT - 8 REQ. 10 PLAIN WASHER - 4 REQ.

COLLET BOARD RUN GRANT 1/4" x 3-1/2" x 2 REQ. SUPPLIED BY RIVETT INSTAL BY FABRICATOR

SECTION A-A

SECTION F-F

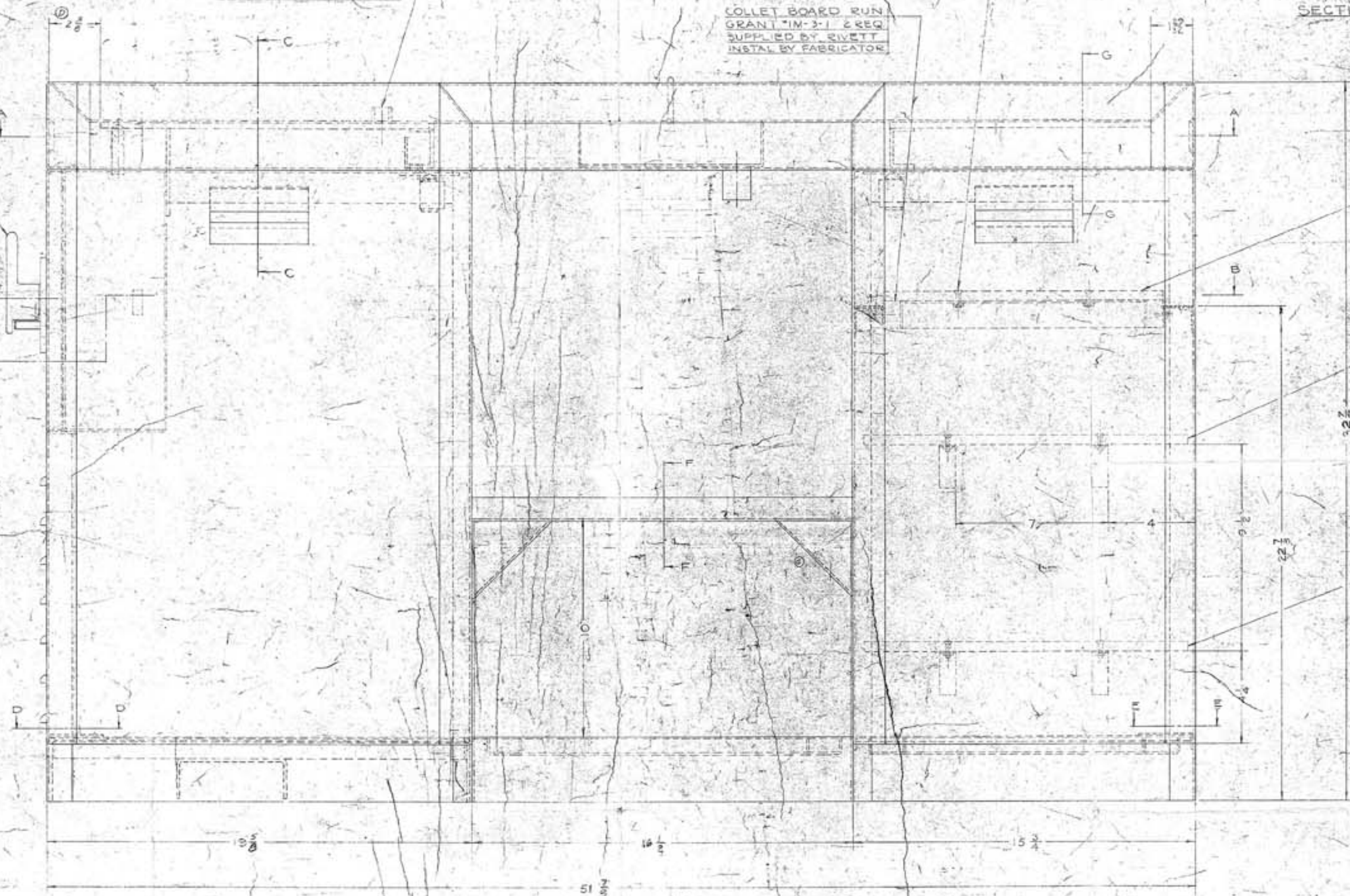
SECTION G-G

C.H. DISCONNECT SWITCH OR 915S-10K-257 HANDLE INSTALLED BY RIVETT

918B-10K-713A COLLET BOARD INSTAL BY RIVETT

918B-10K-823 SHELF INSTAL BY RIVETT

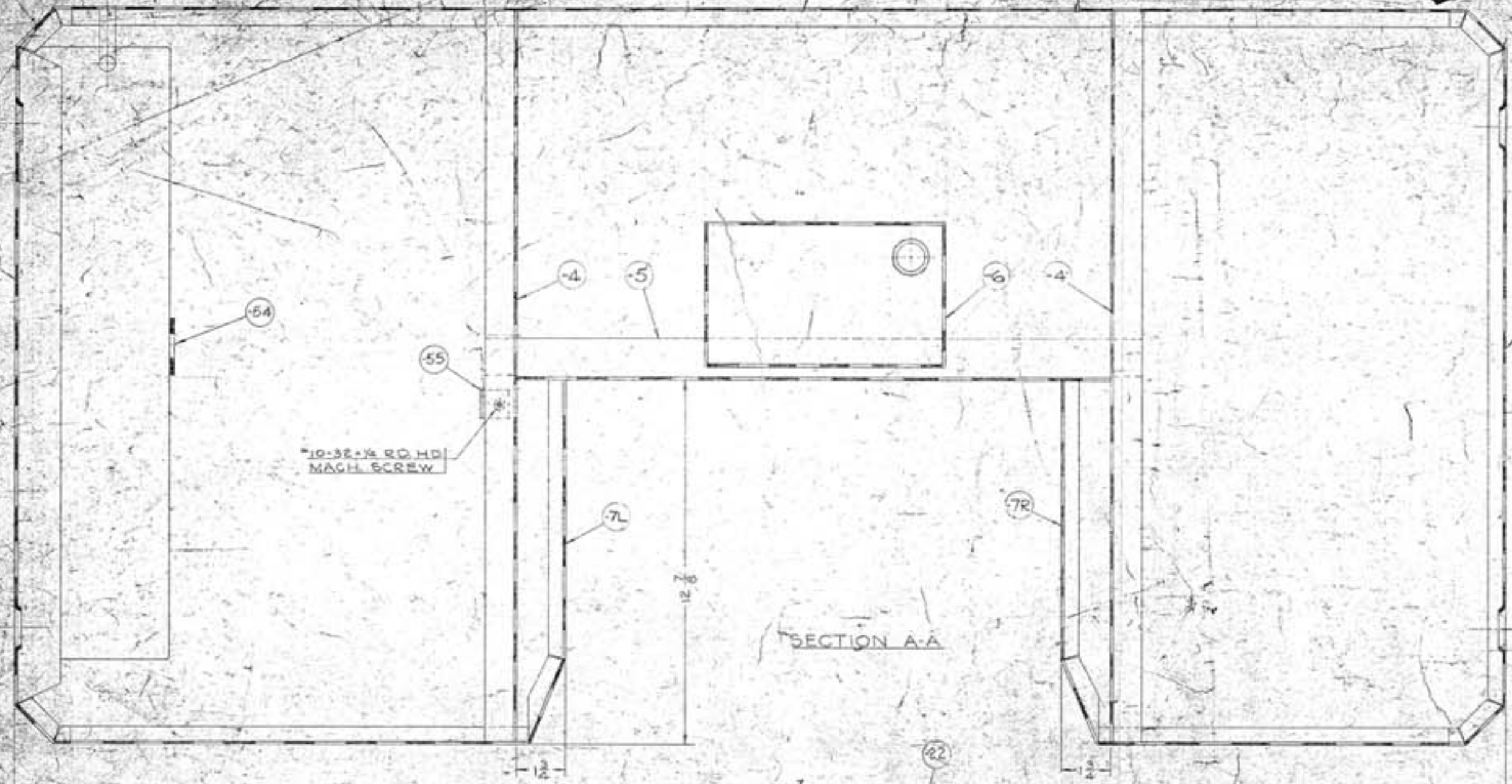
918B-10K-821 SHELF INSTAL BY RIVETT



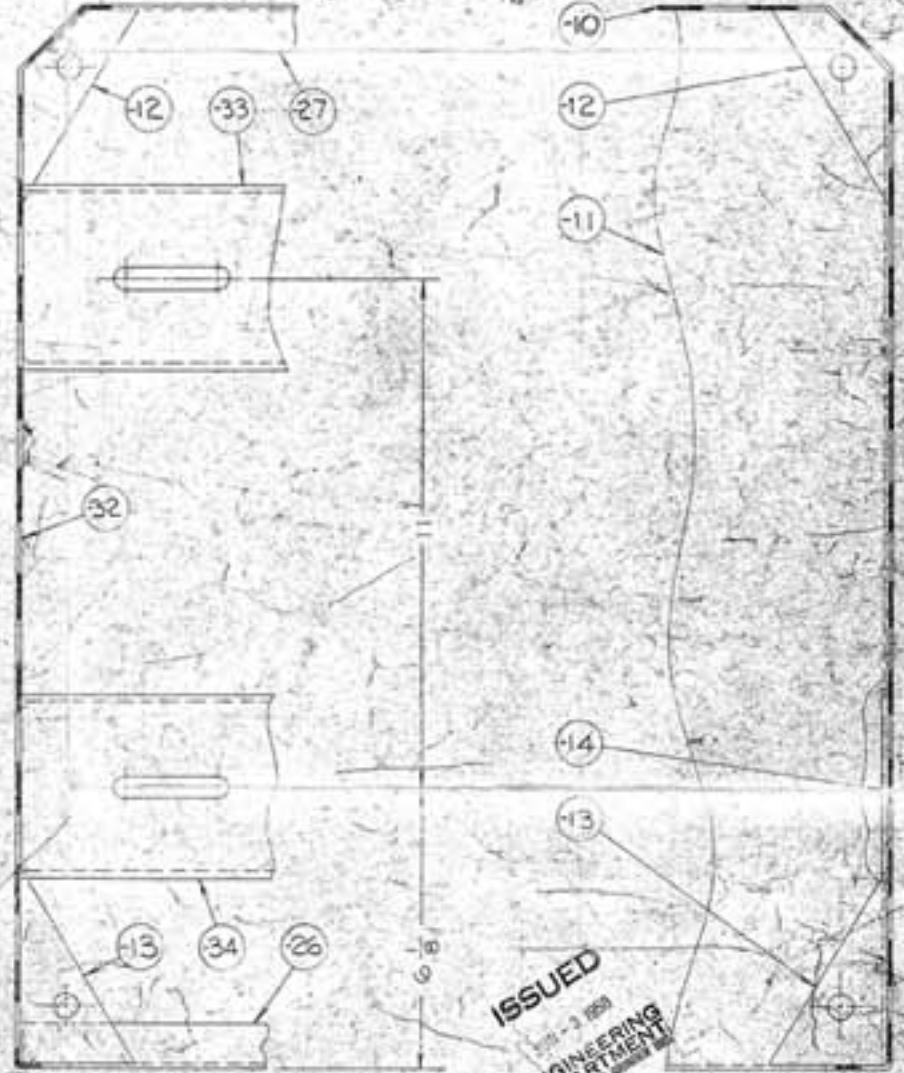
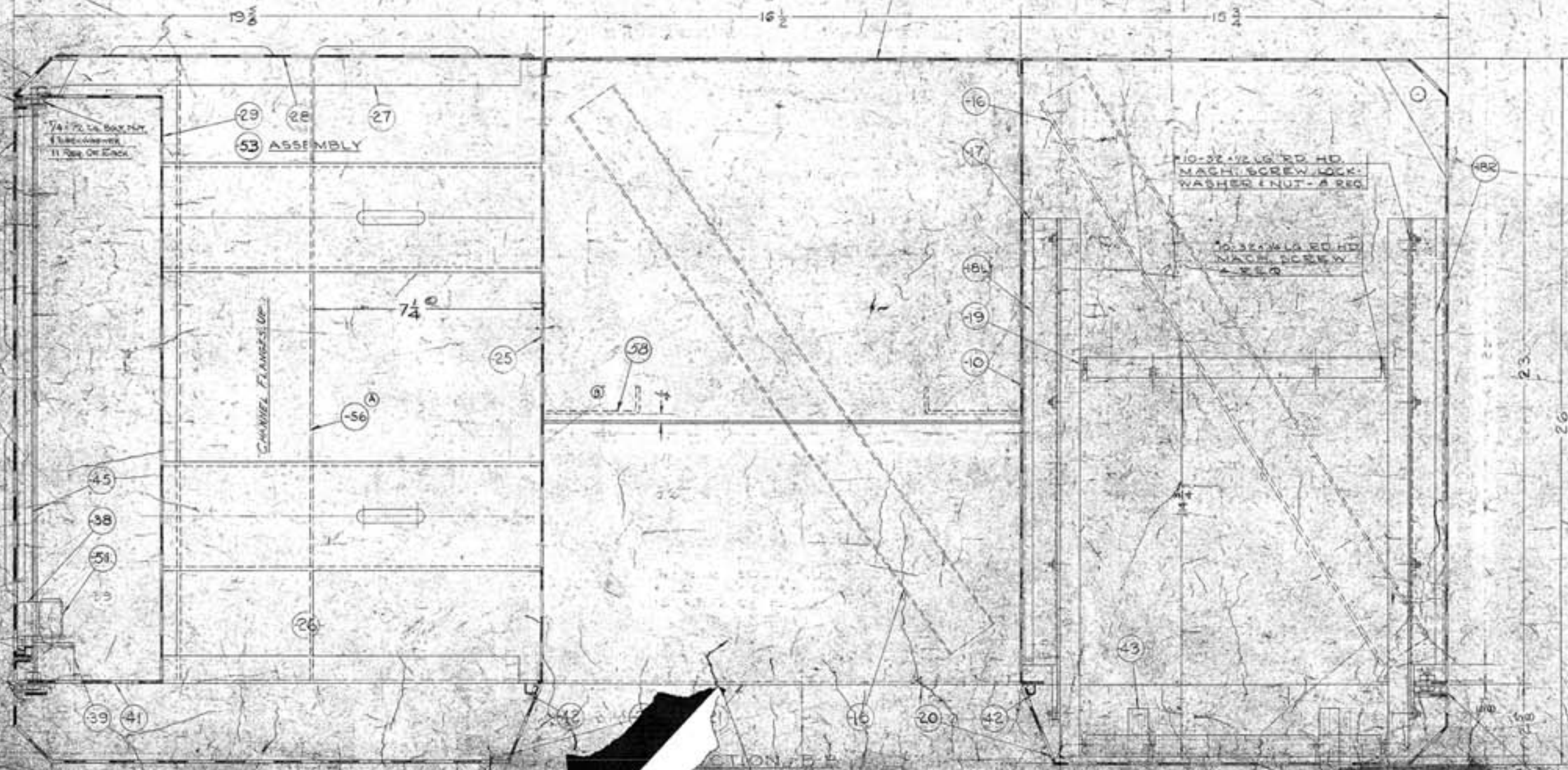
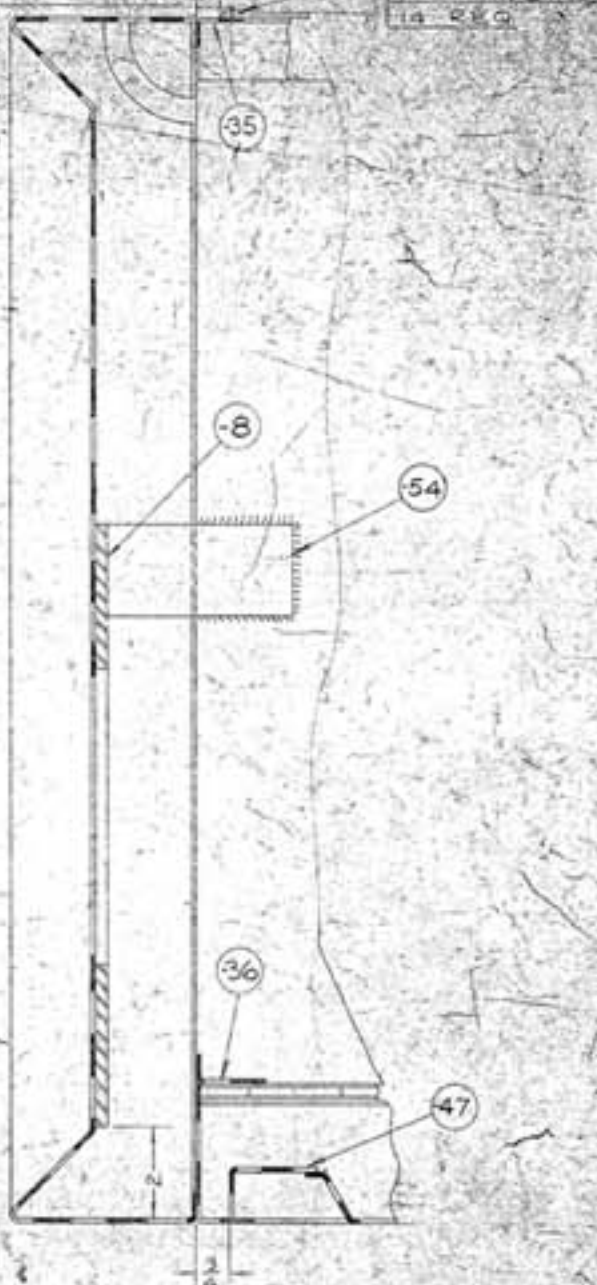
ISSUED  
ENGINEERING DEPARTMENT

<p>PAINT MACHINE STOOL GRAY</p>	<p>RIVETT LATHE &amp; GRINDER, INC. 918 METAL CABINET</p>																								
<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DESCRIPTION	DATE										<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DESCRIPTION	DATE									
NO.	DESCRIPTION	DATE																							
NO.	DESCRIPTION	DATE																							





SECTION C-C

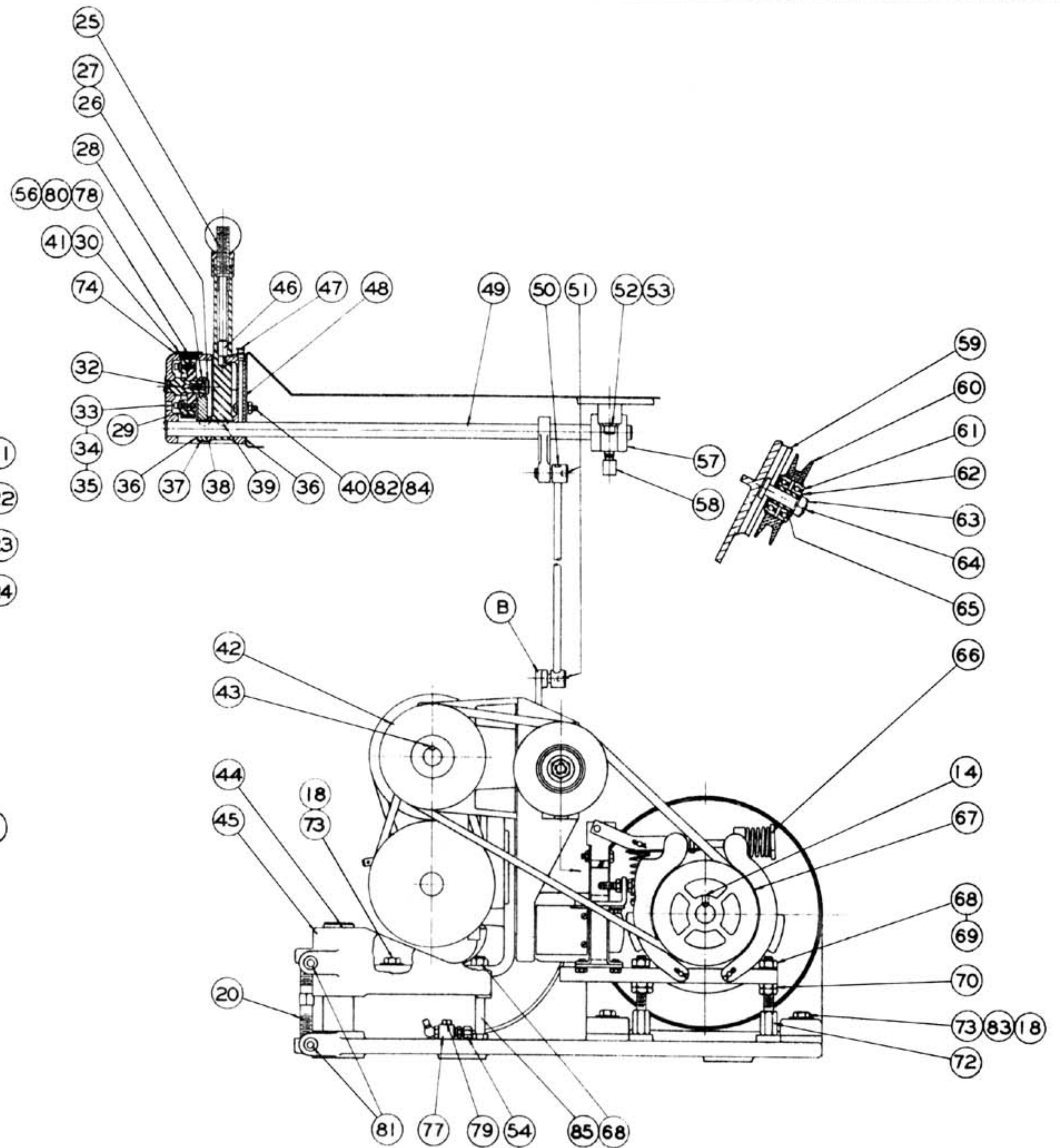
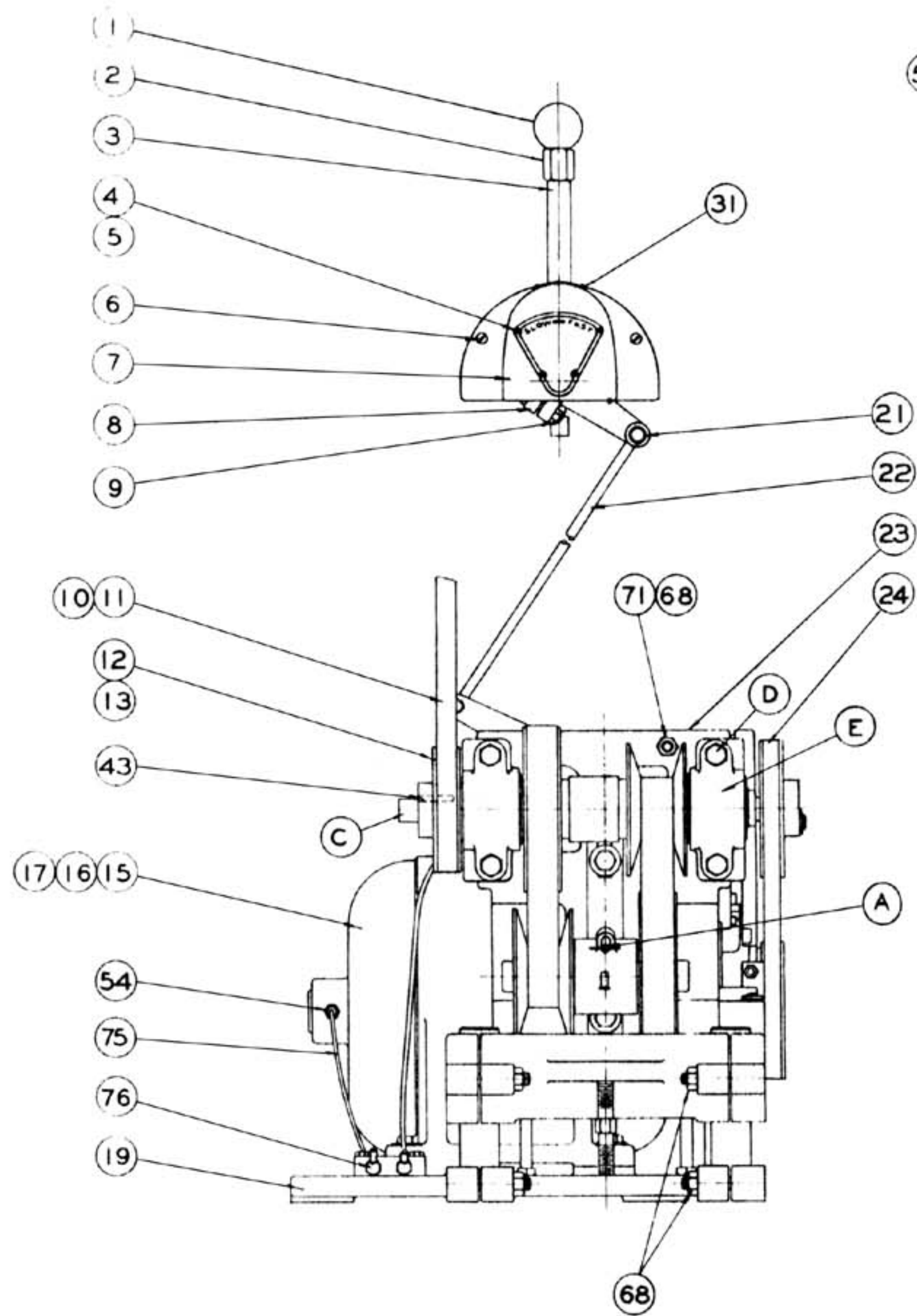


ISSUED  
11-1-58  
ENGINEERING  
DEPARTMENT

DESIGNED BY	DATE	APPROVED BY
DRAWN BY	DATE	APPROVED BY
CHECKED BY	DATE	APPROVED BY
TESTED BY	DATE	APPROVED BY
INSPECTED BY	DATE	APPROVED BY
DATE		

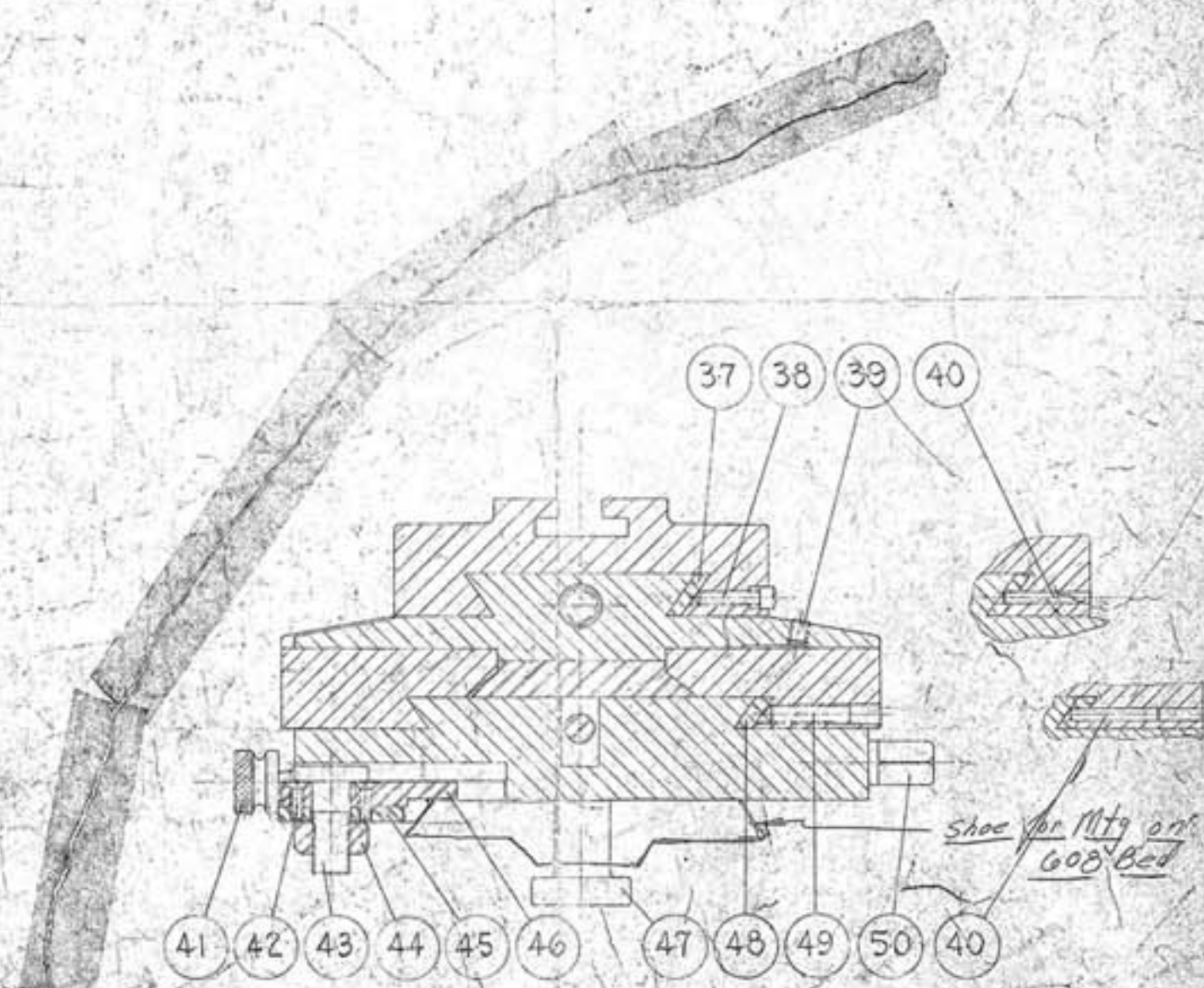
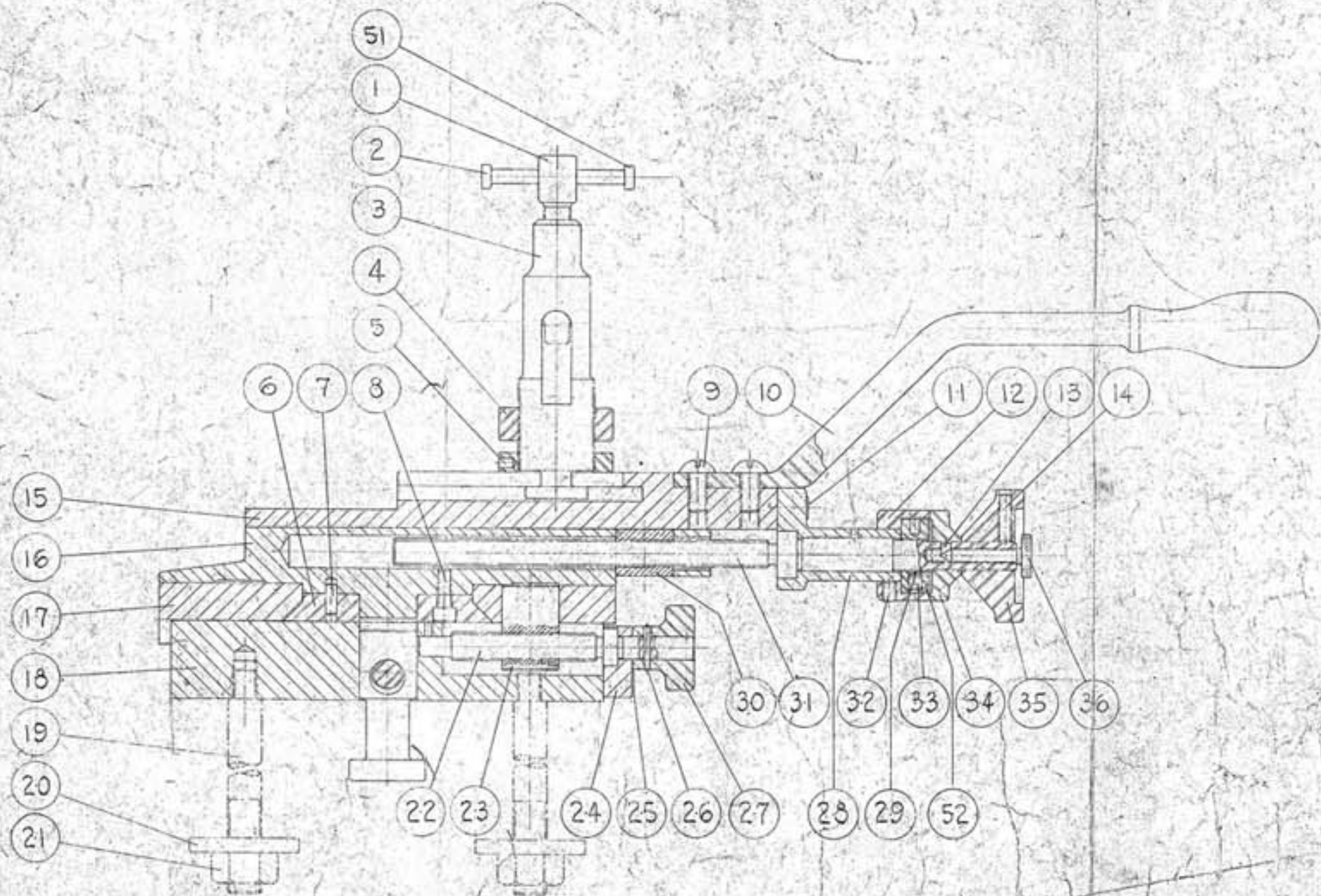
RIVETT LATHE & GRINDER, INC.  
916  
METAL CABINET





		RIVETT LATHE & GRINDER, INC. and others, Boston, Mass. U.S.A.	
J. KENTON 12-28		WORTHINGTON DRIVE	
A. REVISED			
		REV. 7-1-47	
		REV. 10-1-47	
		918S-16W	





SURFACE TREATMENT			RIVETT LATHE & GRINDER, INC. BOSTON, BOSTON, MASS., U.S.A.
HEAT TREATMENT			
TOLERANCES UNLESS OTHERWISE SPECIFIED —			BALL TURNING REST
DECIMALS			USED ON 505-608-618-918
FRACTIONS			TOLERANCES UNLESS OTHERWISE SPECIFIED —
ANGLES			DECIMALS
CONCENTRICITY			FRACTIONS
PAGE #/TOTAL			FACE #/TOTAL
MACH SURFACES			BREAK SHARP CORNERS
REMOVE ALL BURRS			REMOVE ALL BURRS
DRAWN BY			CHECKED BY
TRACED BY			SCALE
DATE			3185-9B



CW	L1	L2	L3	TOGETHER
CCW	L2	L1	L3	
LOW	T1	T2	T3	NONE
HIGH	T6	T4	T5	T1-T2-T3

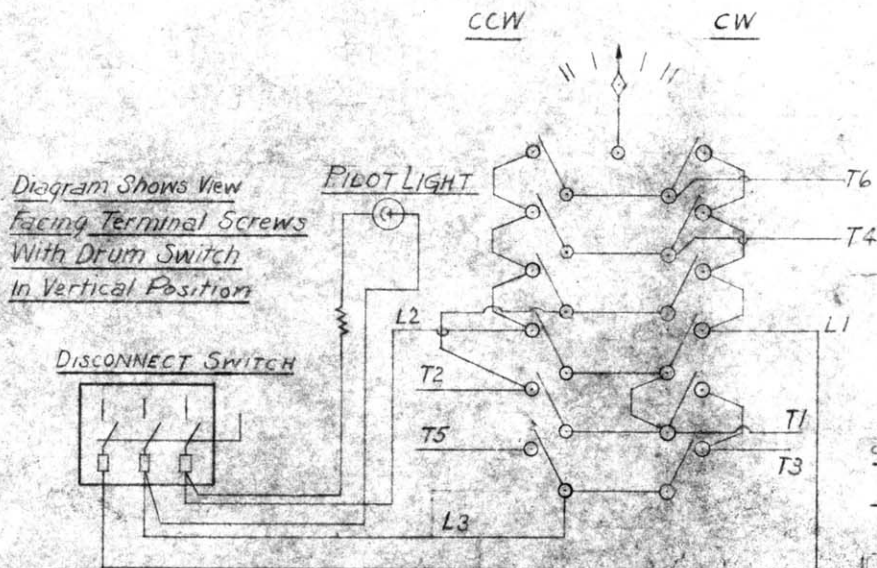


Diagram Shows View  
Facing Terminal Screws  
With Drum Switch  
In Vertical Position

WIRING DIAGRAM,  
FOR — 2 SPEED  
MOTOR-ALLEN BRADLEY  
SIZE 00 4 WAY SWITCH  
LINE DISCONNECT SWITCH

Maximum Ratings  
3/4 H.P. - 110-220  
440-550 Volts.

**RIVETT LATHE & GRINDER INC.**  
BOSTON, MASS  
 ✓ Drawn by J.R.B.      Date JULY 2, 1945  
 Traced by      Date  
 Checked by      Date  
 B-2650



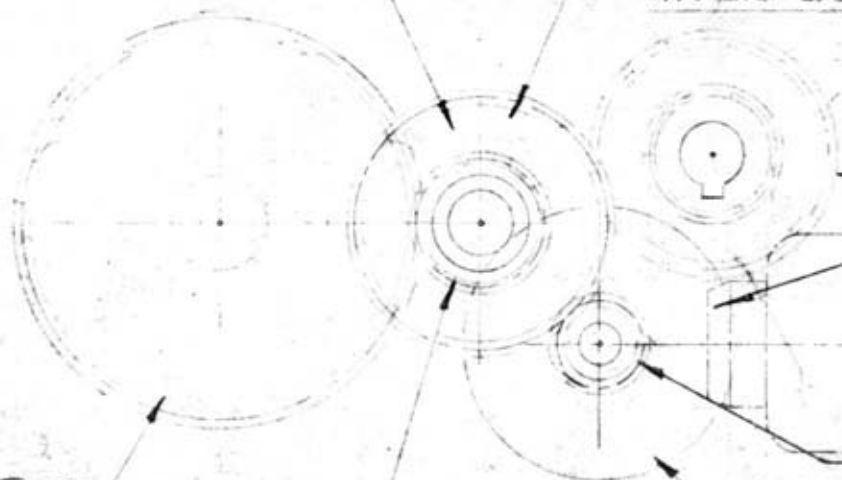
608-26 HA-ASSEMB.

608-26-234A

36T-20° P.A.

INTER. GEAR

GEARS 608-26-234A,  
608-26-237A #608-26-235A  
USED ON LATHES, SERIAL NOS.  
1634-1635 AND 1642  
AND THEREAFTER



608-26-235A

608-26-238

48T-14½° P.A.

BEVEL GEAR

608-26 P ASSEM.

608-26-237A

12T-20° P.A.

PINION

608-26-233

18T-14½° P.A.

INTER. GEAR

608-26 DA

ASSEMBLY

FRICITION GEAR

56T-14½° P.A.

608-26-231

SYMBOL				REVISION				DATE				BY			
MATERIAL:															
MATERIAL SIZE:															
PATT. NO.:															
DIE NO.:															
WEIGHT ROUGH:															
WEIGHT FINISHED:															
ASSEMBLY NO.:				NO. REQ. PER ASSEM.:				SURFACE TREATMENT:				HEAT TREATMENT:			
TOOLS:															

RIVETT LATHE & GRINDER, INC.

BRIGHTON BOSTON, MASS. U.S.A.

BEVEL, PINION & INTER. GEAR  
ASSEMBLY FOR 608 CARRIAGE

TOLERANCES UNLESS OTHERWISE SPECIFIED:		
DECIMALS:	FRACTIONS:	ANGLES:
CONCENTRICITY:		
FACE RUNOUT:		
MACH. SURFACES:		
BREAK SHARP CORNERS:	MAX. RADIUS:	
REMOVE ALL BURRS:		
DRAWN BY: E.T.G. 11-25-47		CHECKED BY:
TRACED BY:		SCALE: Full
DWG. NO.:		

B-2728

# GEAR TABLE

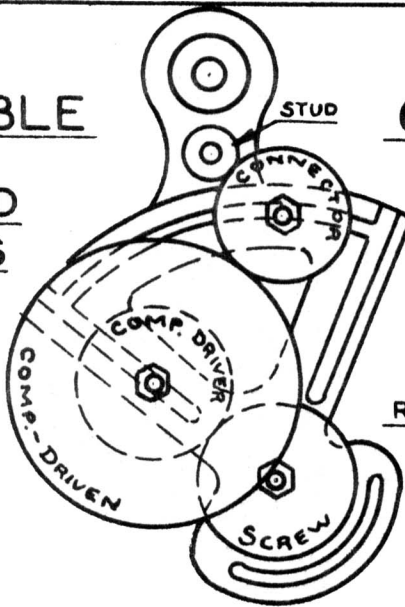
## FOR STANDARD THREADS

# 608 LATHE

LATHE SCREW  
CONSTANT = 4

LEAD SCREW = 8 P

RIVETT L. & G. INC.  
BRIGHTON DIST.  
BOSTON, MASS. U.S.A.



FORMULA

$$N = \frac{2S \times P}{C \times L}$$

No. THREADS	STUD	COMPOUND		SCREW	No. THREADS	STUD	COMPOUND		SCREW
		DRIVEN	DRIVER				DRIVEN	DRIVER	
10	24			60	30	24	120	60	90
11	24			66	32	24	120	60	96
11½	24			69	34 *	24	120	60	102*
12	24			72	36	24	120	60	108
13	24			78	38 *	24	120	60	114*
14	24			84	40	24	120	60	120
15	24			90	44	24	120	30	66
16	24			96	48	24	120	30	72
17 *	24			102*	52	24	120	30	78
18	24			108	56	24	120	30	84
19 *	24			114*	60	24	120	30	90
20	24			120	64	24	120	30	96
22	24	120	60	66	68 *	24	120	30	102*
24	24	120	60	72	72	24	120	30	108
25	24			150	76 *	24	120	30	114*
26	24	120	60	78	80	24	120	30	120
27	24	120	60	81	90 *	24	120	30	135*
28	24	120	60	84	100	24	120	30	150

S = NO. OF TEETH ON STUD GEAR.

P = NO. OF THREADS TO BE CUT.

C = RATIO OF COMPOUND.

L = NO. OF THREADS PER INCH  
ON LEAD SCREW.

N = NO. OF TEETH IN GEAR ON LEAD SCREW

\* - SPECIAL THREADS - GEARS  
NOT FURNISHED WITH  
STANDARD EQUIPMENT.

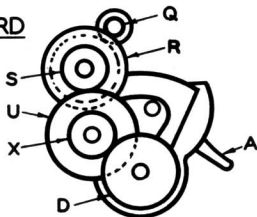
GT-10



# 608 LATHE WITH QUICK CHANGE GEAR BOX

## GEAR TABLE FOR STANDARD AND SPECIAL THREADS

LEAD SCREW - 8 PITCH  
LATHE SCREW CONSTANT - 4



SET-UP FOR SPECIAL SCREW THREADS

FORMULA FOR SPECIAL SET-UP -  $N = \frac{PQSX}{4RU}$   
WHERE: N - NO OF TEETH IN GEAR D  
P - NO OF THDS PER INCH TO BE CUT  
AND S-Q-R-U-X - NO OF TEETH IN GEARS  
S-Q-R-U-X RESPECTIVELY

### THREADS CUT WITH SPECIAL SET-UP PER SKETCH - LEVER 'A' IN NEUTRAL

THDS PER INCH	STUD		S	T	COMPO'ND		D
	Q DRIVER	R DRIVER	DRIVER	CONNECTING	U DRIVER	X DRIVER	
11 1/2	30	60	48	90			69
15	30	60	48	90			90
17*	30	60	48	90			102*
25*	18	72	48	90			75*
27	18	72	48	90			81
34*	18	72	48	90			102*
38*	18	72	32	90			76*
42*	18	72	32	90			84*
50*	18	72	32	90			100*
54*	18	72	32	90			108*
60*	18	72	32		80*	60*	90
68*	18	72	48		90*	45*	102*
76*	18	72	32		90*	45*	76*
100*	18	72	32		90*	45*	100*

### THREADS CUT DRIVING THRU REGULAR GEAR BOX

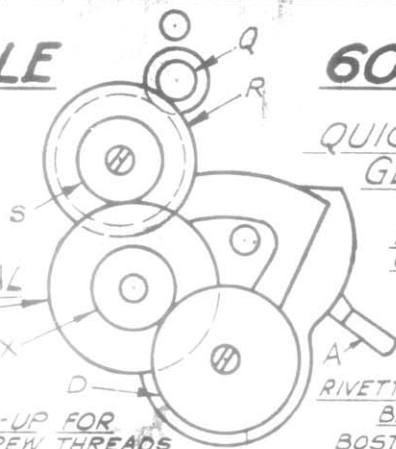
NO OF THREADS PER INCH							STUD		COMPO'ND		
POSITION OF LEVER 'A'							DRI-VER	DRI-VEN	DRI-VER	DRI-VEN	
LEFT			RIGHT								
10	11	12	13	14	16	18	30	60	70	70	
20	22	24	26	28	32	36	18	72	70	70	
40	44	48	52	56	64	72	30	60	28	112	
80	88	96	104	112	128	144	18	72	28	112	
SWING GEAR BOX TO ENGAGE 18T.							30	18	60	70	70
GEAR ON STUD WITH 60T SLIDING GEAR							120	18	60	28	112

\* SPECIAL THREADS - GEARS NOT FURNISHED WITH STANDARD EQUIPMENT

GT-12

# GEAR TABLE

FOR  
METRIC  
THREADS  
FRENCH  
AND  
INTERNATIONAL



SET-UP FOR  
SPECIAL SCREW THREADS

# 608 LATHE

WITH  
QUICK CHANGE  
GEAR BOX

LATHE SCREW  
CONSTANT = 9

LEAD SCREW = 8  
THREADS PER INCH

RIVETT LATHE & GRINDER CORP.  
BRIGHTON DIST  
BOSTON MASS USA

## THREADS CUT DRIVING THRU REGULAR GEAR BOX

MILLIMETERS PITCH						STUD		COMPOUND			CONE GEAR SHAFT	
LEFT-POSITION OF LEVER A - RIGHT						DRIVER	DRIVEN	DRIVER	DRIVEN	DRIVER		
2.00	1.82	1.67	1.54	1.43	1.25	1.11	30	60	40	127	120	48
1.00	0.91	0.83	0.77	0.71	0.625	0.56	18	72	40	127	120	48
0.50	0.45	0.42	0.38	0.36	0.31	0.28	18	72	36	127	100	72
0.25	0.23	0.21	0.19	0.18	0.156	0.14	18	72	40	127	60	96
SWING GEAR BOX TO ENGAGE 18T						0.67	18	60	40	127	120	48
GEAR ON STUD WITH 60T SLIDING GEAR						0.17	18	60	36	127	100	72

## THREADS CUT WITH SPECIAL SET-UP AS SHOWN ABOVE AND LEVER 'A' IN NEUTRAL

M.M. PITCH	STUD		COMPOUND			D LEAD SCREW
	DRIVER	DRIVEN	S DRIVER	DRIVEN	X DRIVER	
2.50*	30	60	81	127	100	81
1.75*	30	60	36	127	105	54
1.50*	30	60	40	127	90	60
0.90*	30	60	36	127	90	90
0.85*	30	60	50	127	68	100
0.81*	30	60	40	127	81	100
0.75*	18	72	40	127	90	60
0.70*	18	72	32	127	105	60
0.66*	18	72	32	127	99	60
0.60*	18	72	32	127	90	60
0.55*	18	72	32	127	99	72
0.53*	18	72	36	127	106	90
0.48*	18	72	48	127	72	90
0.43*	18	72	36	127	86	90
0.39*	18	72	39	127	72	90
0.35*	18	72	40	127	70	100
0.15*	18	72	24	127	50	100

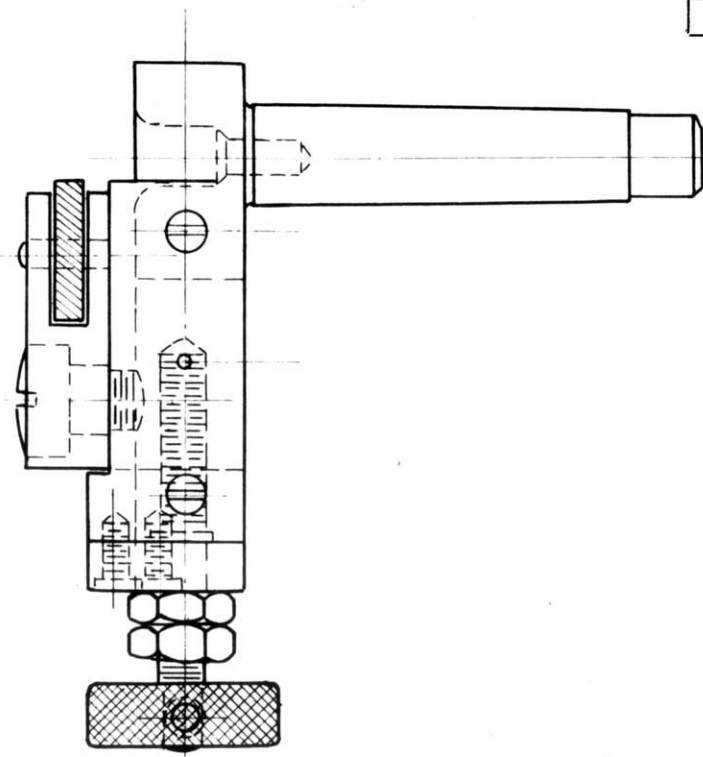
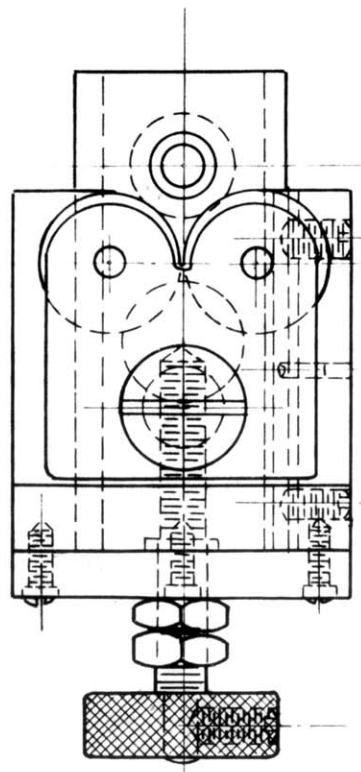
FORMULA FOR SPECIAL  
SET-UP WITH LEAD SCREW = 8P  
AND GEAR U = 127 TEETH

$$M = \frac{5QX}{20RD}$$

WHERE:  
M = MILLIMETERS LINEAR  
PITCH OF THREADS TO BE CUT  
S = NO. OF TEETH IN GEAR 'S'  
Q = NO. OF TEETH IN GEAR 'Q'  
X = NO. OF TEETH IN GEAR 'X'  
R = NO. OF TEETH IN GEAR 'R'  
D = NO. OF TEETH IN GEAR 'D'  
\* = SPECIAL THREADS - GEARS  
NOT FURNISHED WITH  
STANDARD EQUIPMENT



Dimensional Dimensions to Finished Surfaces  $\pm .005"$   
Standard Reamed Holes  $+ .0000"$   
 $- .0005"$

63 F6

# TAILSTOCK KNURLING ATTACHMENT

✓ R. L. & G. Co.  
BOSTON, MASS.

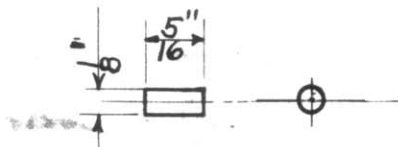
Drawn by M. A. Date 5-28-15  
Traced by E. G. Date 1-19-37  
Checked by \_\_\_\_\_ Scale \_\_\_\_\_

**LHT4**

Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes:  $\pm .0000''$

11-13-18	TRACED & REVISED

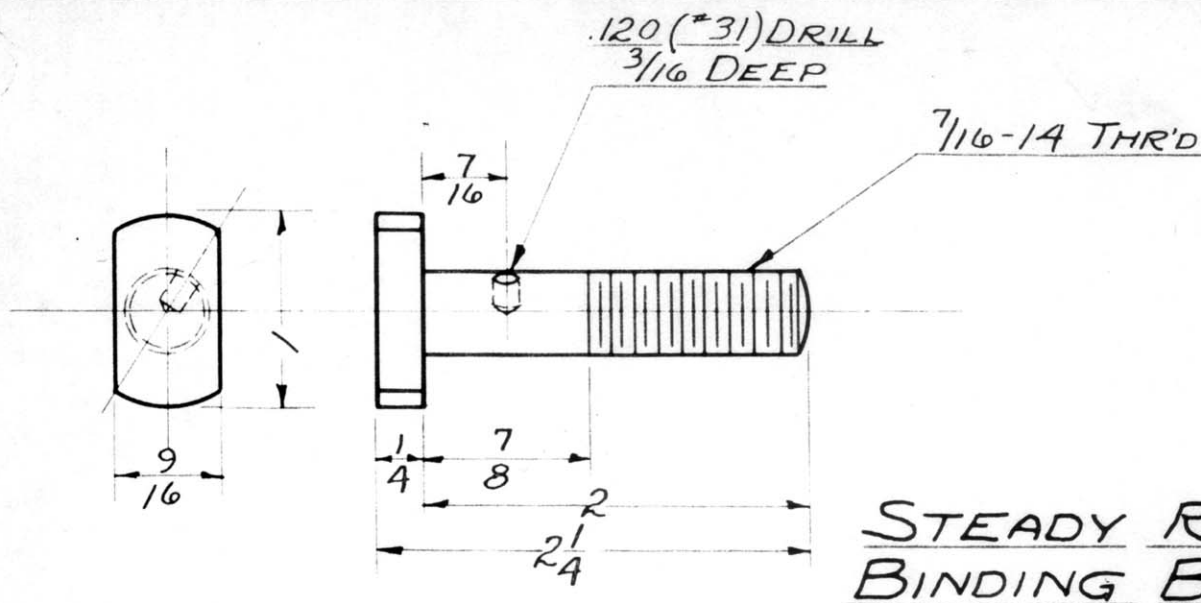


PIN FOR BINDING BOLT

x DRILL  
ROD 1/8 DIA.  
X.04  
FT. LG.  
SAE 1095

✓ R. L. & G. Co.  
BOSTON, MASS.  
Drawn by M.A.  
Traced by T.J.K. Date 11-13-18  
Checked by A.C.S. Scale FULL  
LU3½-354





SAE 1112  
C.R. STEEL  
1 dia.  
x .21 ft. lg.  
796

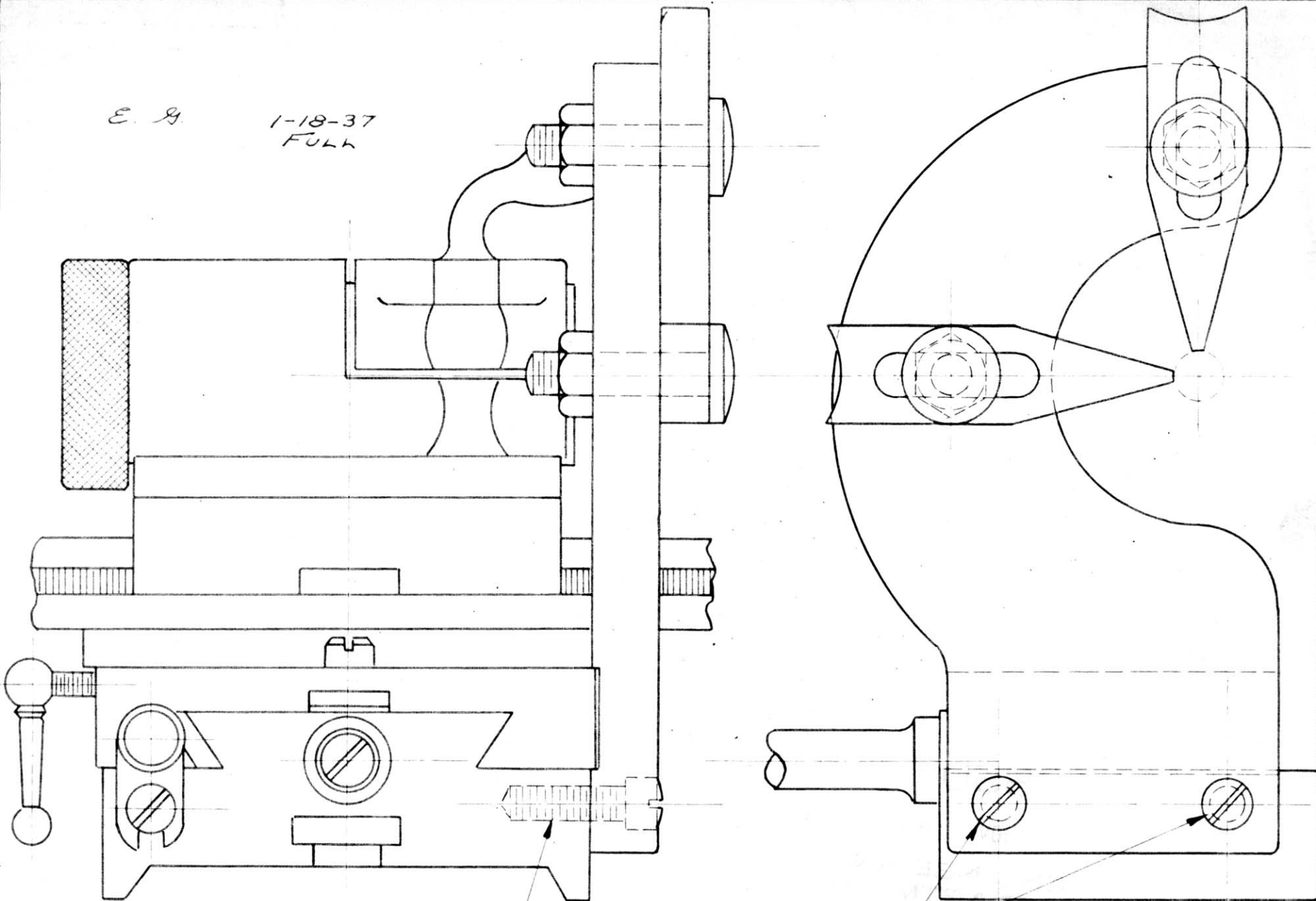
H.B.J.  
E.G.

8-5-19  
6-17-38  
FULL

LJ8-142

E. S.

1-18-37  
FULL



$\frac{1}{4}$ "-20 U.S. TAP  $\frac{5}{8}$ " DEEP  
(DRILL FROM FOLLOWER REST)

DISTANCE FROM  
REAR END OF  
SLIDE REST.

$\frac{7}{16}$        $\frac{13}{4}$

SKETCH SHOWING  
FOLLOWER REST  
ATTACHED TO SLIDE REST

LKG



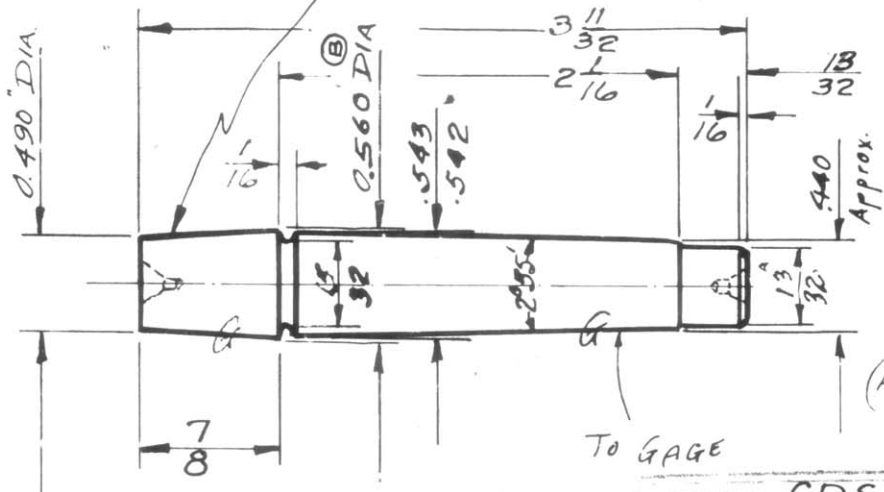


Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $+.0000''$   
 $-.0005''$

#2 JACOBS TAPER  
FIT TO GAGE #1449

A	8-24-30	Was $7/16$ O.D.
B	1-17-44	Was .545 DIA. N.J.



Same AS  
LLE-771

**SHANK**

(For #30 Jacobs Chuck - Capacity  $5/16''$ )

"f" All over

$9/16 \phi$  C.R.S.

MATERIAL C.R.S.  
SAE 1112  
~~1112~~  $9/16$  dia.  
x .30 Ft. Lg.  
TOOL NO.

**R. L. & G. Co.**  
BOSTON, MASS.

Drawn by R. J. R.  
Traced by R. J. R. Date 5-18-33  
Checked by \_\_\_\_\_ Scale FULL

**LLE-770**

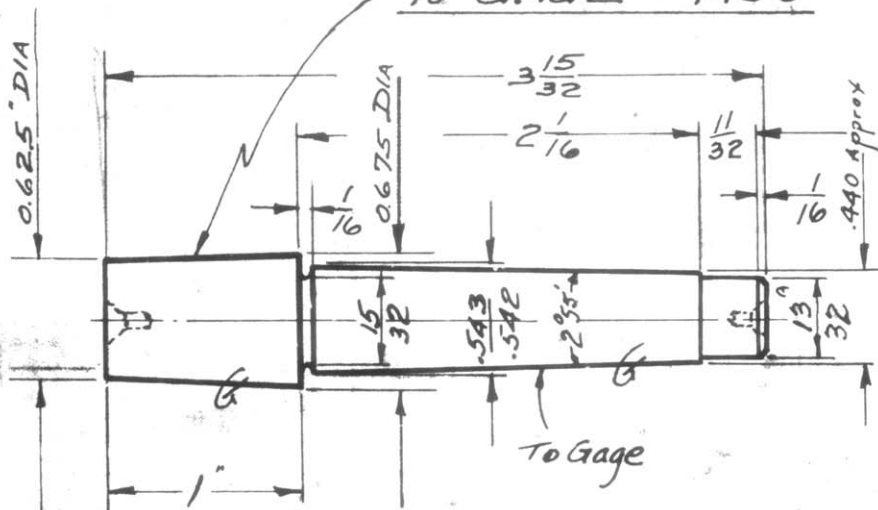




Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $+.0000''$   
 $-.0005''$

# 6 JACOBS TAPER  
TO GAGE # 1450



~~Make from Blue #11A-31A~~

ALL OVER.

A	8-24-36	WAS 7/16	C/S

MATERIAL C.F.S.  
S.A.E. 111R  
~~3/4 DIA.~~  
X . 31 FT. 19.  
TOOL NO. \_\_\_\_\_

**SHANK**

(For #34 Jacobs Chuck - Capacity  $\frac{1}{2}$ " )

**R. L. & G. Co.**  
BOSTON, MASS.

Drawn by R.P.R.  
Traced by R.P.R. Date 5-18-33  
Checked by \_\_\_\_\_ Scale FULL

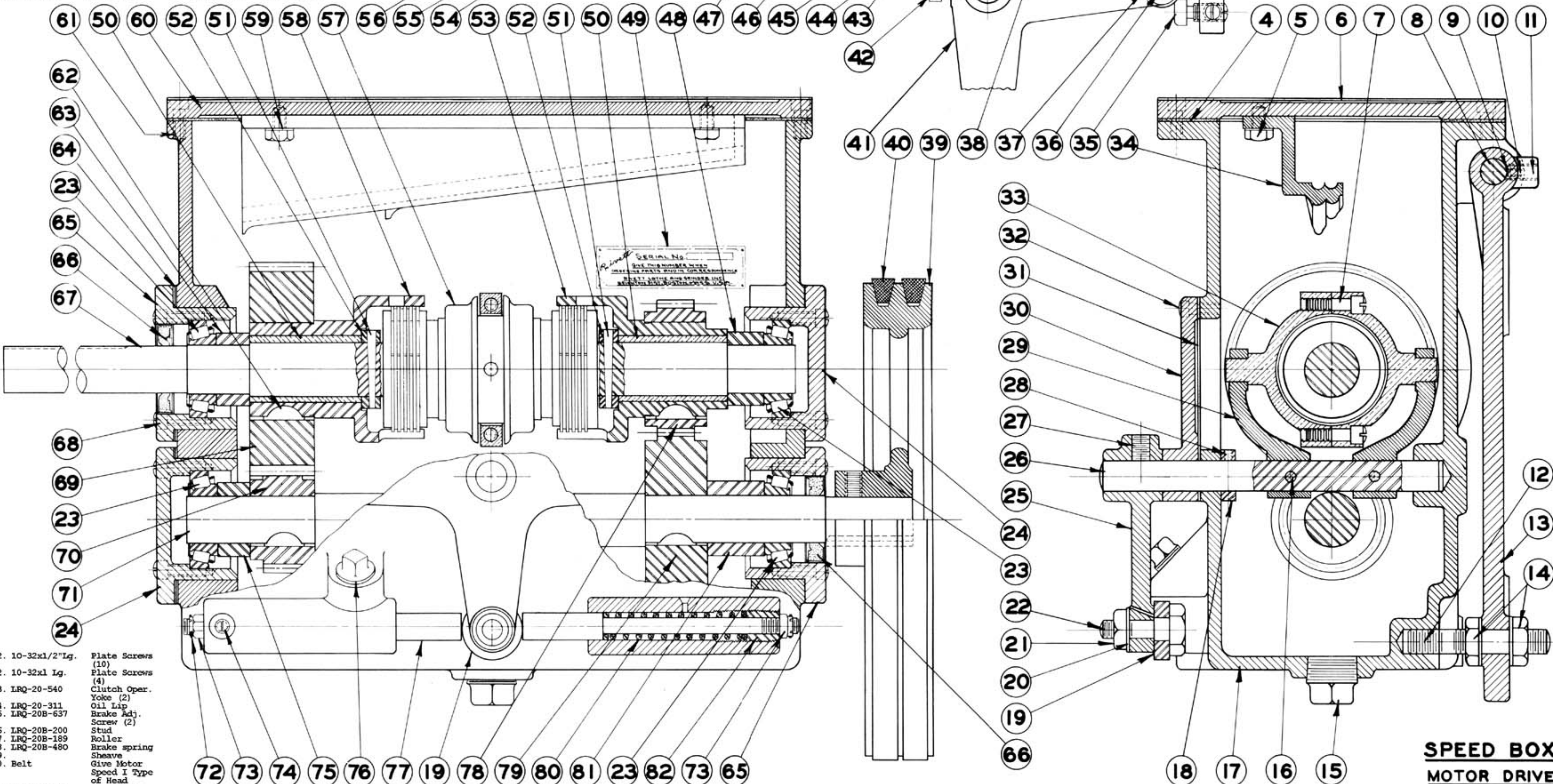
**LLE-772**



- No. Part No. Part Name
- 1. 506-22-639 Guide Screw
- 2. LRQ-20B-447 Brake Rod
- 3. LRQ-20B-206 Brake Dog
- 4. LRQ-201-992 Box Gasket
- 5. 1/4-20x5/8" Lg. Oil Lip Scr. (2)
- 6. LRQ-201-991 Bench Gasket
- 7. 1/4-20x1-1/8" Lg. Yoke Scr. (2)
- 8. LRQ-20-503 Plate Swivel
- 9. LRQ-20-127 Shaft Binder
- 10. 1/4-20 x 5/16 Set Screw
- 11. 5/16-18x1/2" Lg. Set Screw
- 12. LRQ-20-904 Stud
- 13. LRQ-20-115 Motor Plate

- 13. LRQ-20-116A Motor Plate (Dual Plate)
- 14. 1/2-13 Check Nut (2)
- 15. 3/4 N.P.T. Pipe Plug
- 16. #2 F & W Taper Pin (2)
- 17. LRQ-20-140 Gear Box
- 18. LRQ-201-118 Shaft Collar
- 19. LRQ-20-427 Roller
- 20. 3/8 I.D. x1/16 Lock Washer
- 21. 3/8-16 Stud Nut
- 22. LRQ-20-498 Roller Stud
- 23. Timken Roller Br'gs.
- 24. LRQ-201-543A Br'g. Cup (Closed)
- 25. LRQ-20-112 Treadle Arm

- 26. LRQ-20-439 Clutch Shaft
- 27. 3/8-16x1/2" Lg. Set Screw
- 28. J-20x3/16" Lg. Set Screw
- 29. LRQ-20-110 Clutch Oper. Arm
- 30. LRQ-20-374 Clutch Adj. Plate
- 31. LRQ-201-993 Plate Gasket



- 32. 10-32x1/2" Lg. Plate Screws (10)
- 32. 10-32x1 Lg. Plate Screws (4)
- 33. LRQ-20-540 Clutch Oper. Yoke (2)
- 34. LRQ-20-311 Oil Lip
- 35. LRQ-20B-637 Brake Adj. Screw (2)
- 36. LRQ-20B-200 Stud
- 37. LRQ-20B-189 Roller
- 38. LRQ-20B-480 Brake spring Sheave
- 40. Belt
- 41. LRQ-20B-114 Arm (Hand Oper.)
- 42. 3/8-16x1/2" Lg. Lock Screw
- 43. LRQ-20B-188 Collar
- 44. #10-32x1/2" Lg. Adj. Screw (10)
- 45. 1/4-20x3/16" Lg. Set Screw
- 46. #10-32x1" Lg. Adj. Screw (4)

- 47. LRQ-20B-374 Adj. Plate
- 48. LRQ-201-530 Ret. Washer
- 49. LRQ-20-378 Serial No.
- 50. LRQ-20-155 Cup Bushing
- 51. #2 F & W Taper Pin
- 52. LRQ-201-192 Collar
- 53. LRQ-201-547 Driving Cup
- 54. 1/4-20x1/4" Lg. Set Screw
- 55. LRQ-20B-274 Cork Cushion
- 56. 3/4dia. x1/4" Lg. #2 Pullmore
- 57. LRQ-201-546 Driving Cup
- 58. LRQ-201-546 Lock Washer (2)
- 59. 1/4 I.D. Cover Plate

- 61. 1/4-20x1/2" Lg. #9 Hi-Fro
- 62. LRQ-201-528 Ret. Washer
- 63. LRQ-201-817 Br'g. Adj. Shims
- 64. LRQ-201-544A Br'g. Cup (Open)
- 65. LRQ-201-544A Cover Sprock
- 66. Part No. 295 Garlock Clutch
- 67. LRQ-201-449 Clutch Shaft
- 68. 1/4-20x3/4" Lg. Cup Screw (16)
- 69. LRQ-201-233 48 T Gear
- 70. LRQ-201-232 22 T Gear
- 71. LRQ-201-447 Lower Shaft

- 72. 1/16x3/4" Lg. Cotter Pin
- 73. 5/16-24 Castellated Nut (2)
- 74. 1/4-20x3/8" Lg. Set Screw (2)
- 75. LRQ-201-527 Ret. Washer
- 76. 3/8 N.P.T. Pipe Plug
- 77. LRQ-20-655 Plunger
- 78. LRQ-201-231 40 T Gear
- 79. LRQ-201-230 30 T Gear
- 80. LRQ-20-666 Spring (2)
- 81. LRQ-201-529 Ret. Washer
- 82. LRQ-20-637 Adj. Screw

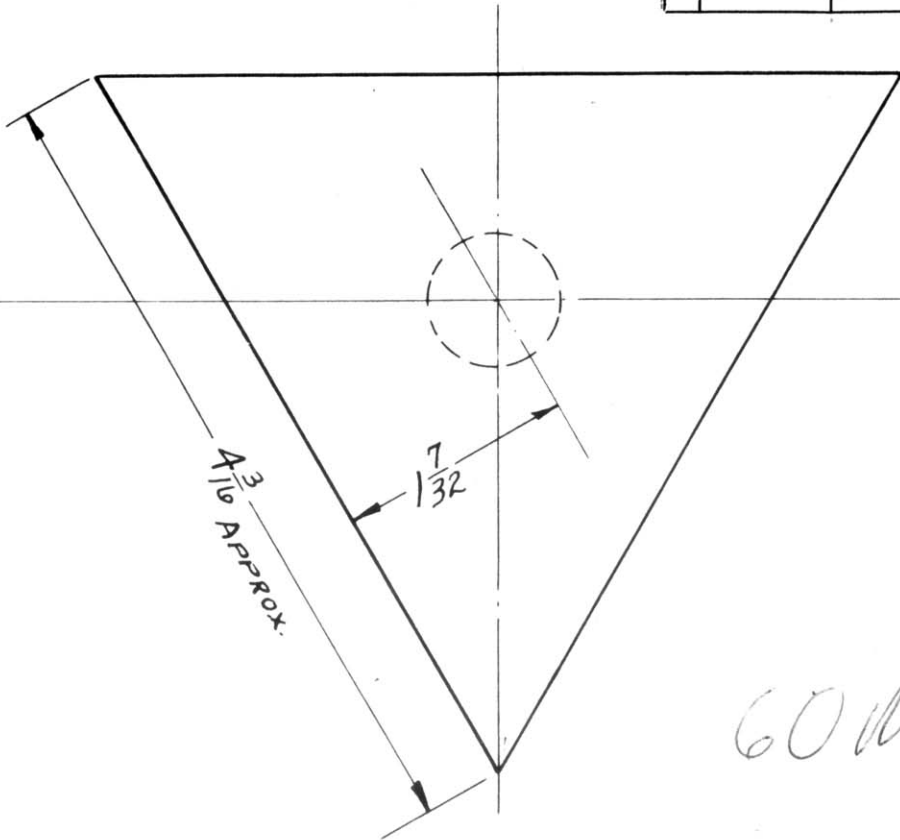
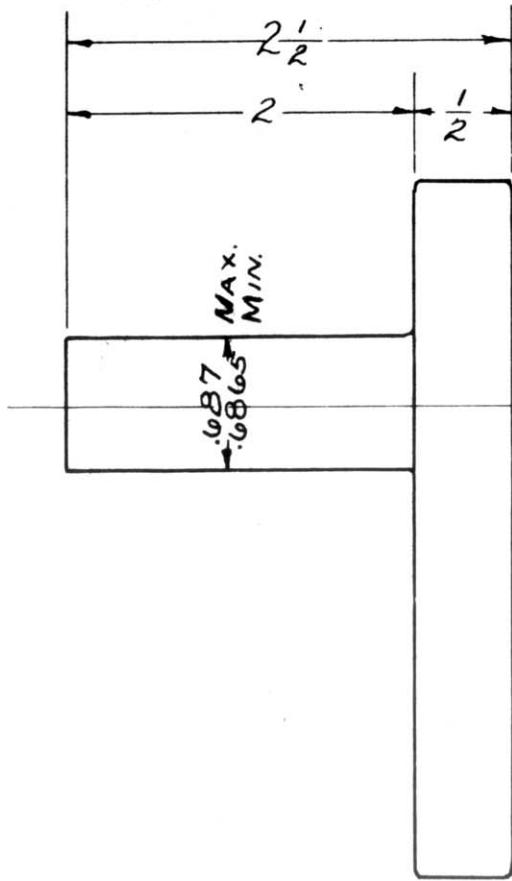
**SPEED BOX MOTOR DRIVE**

RIVETT LATHE & GRINDER INC.  
 BOSTON, MASS.  
 Drawn by J.F.E.C. Date 2-26-43  
 Traced by J.F.E.C. Date 3-4-43  
 Checked by J.F.E.C. Date 3-11-43  
**LRQ-201**



Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $\begin{matrix} +.0005'' \\ -.0005'' \end{matrix}$

60M3

BEVEL ALL EDGES  $\frac{1}{64}$   
POLISH

# TRIANGULAR REST

MATERIAL  
MALL. IRON  
PATT. NO.  
LRT-414  
TOOL NO.

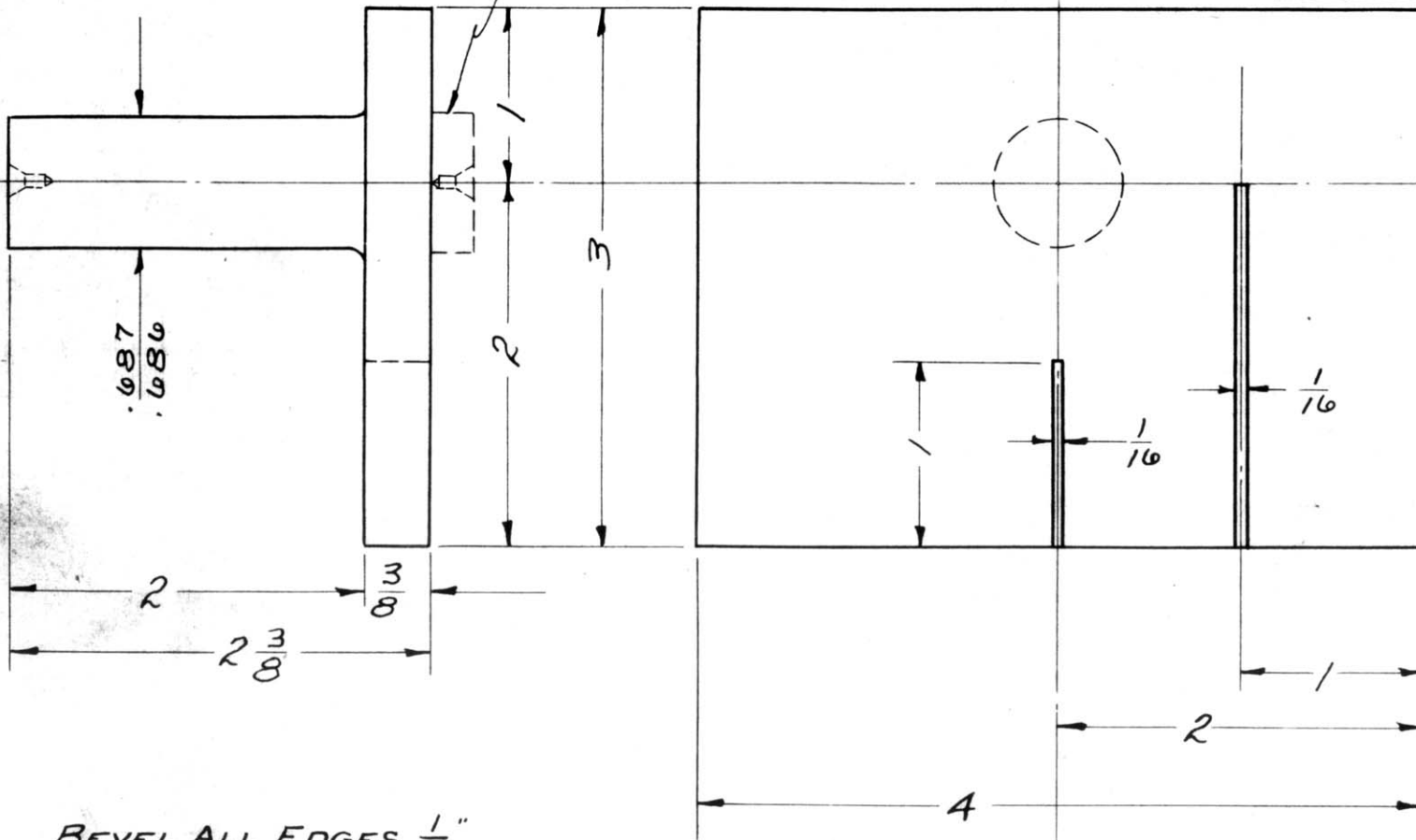
**R. L. & G. Co.**  
BOSTON, MASS.  
Drawn by H.M.G. 7-22-15  
Traced by E.G. Date 4-3-37  
Checked by \_\_\_\_\_ Scale FULL  
**LRT-414**



Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $+\frac{.0000}{-.0005}$ "

NOTE- PATT. MAKER-  $\frac{11}{16}$  DIA. BOSS  $\times \frac{1}{4}$   
HIGH FOR MACHINING PURPOSES.



BEVEL ALL EDGES  $\frac{1}{64}$ "

"f" ALL OVER AND POLISH

10 Top 7

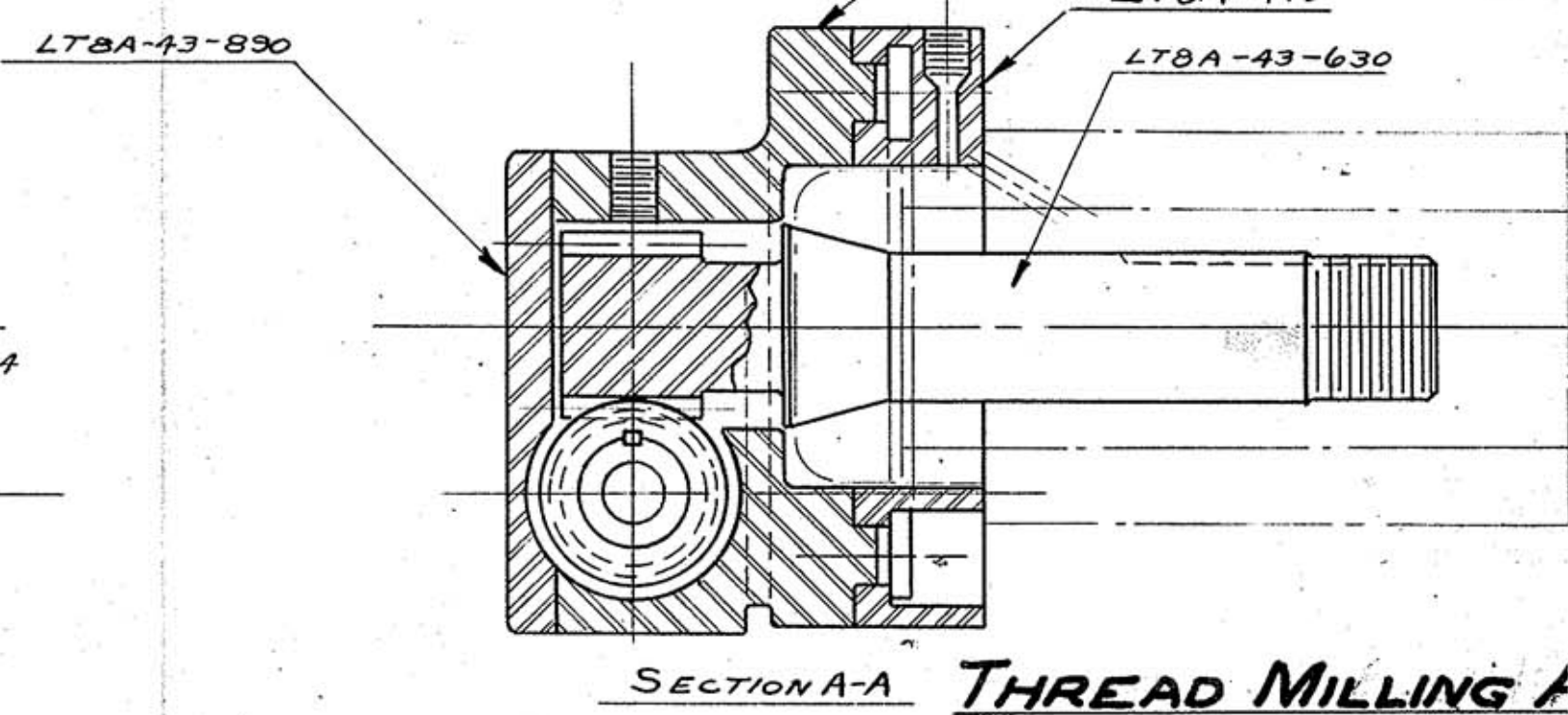
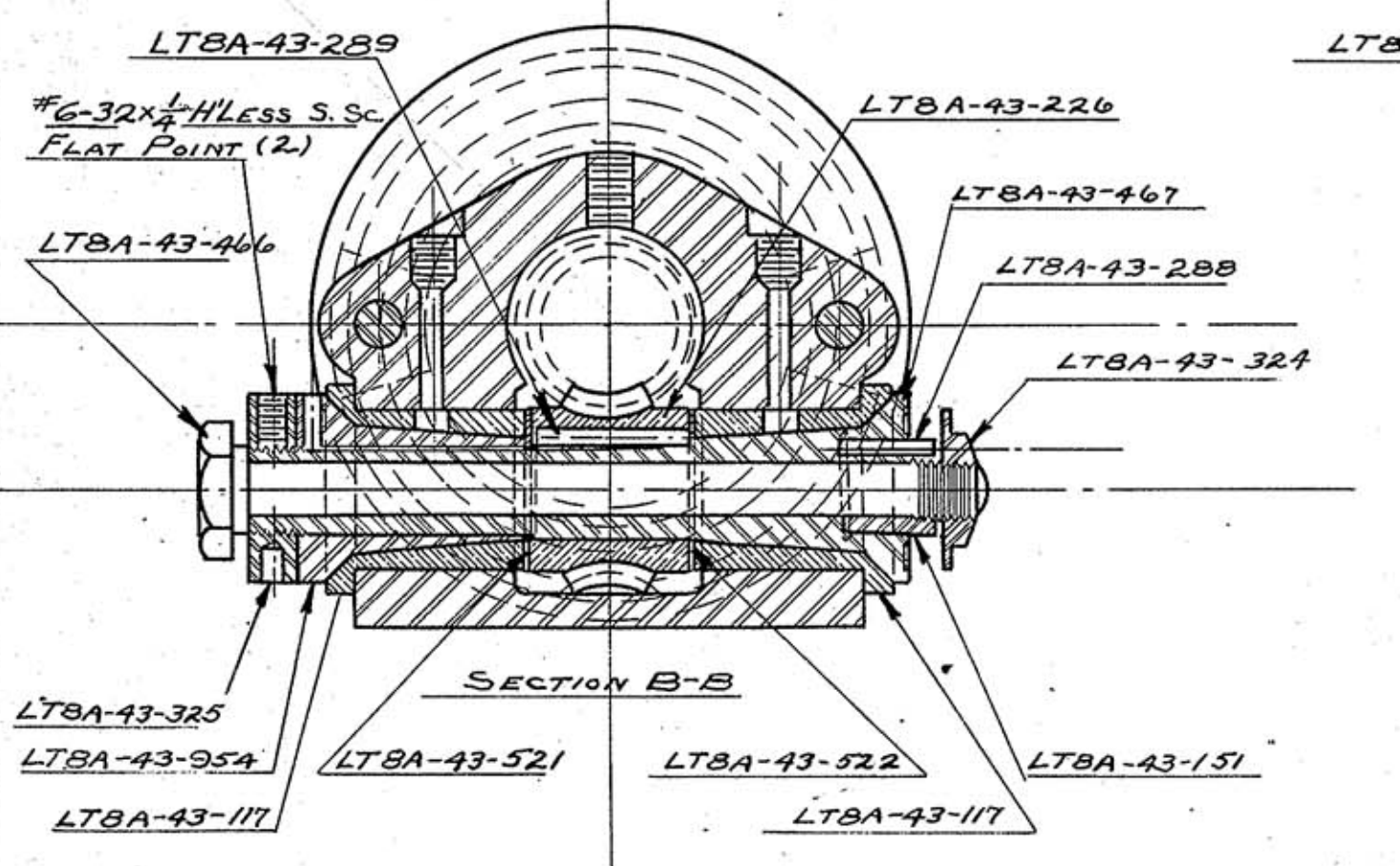
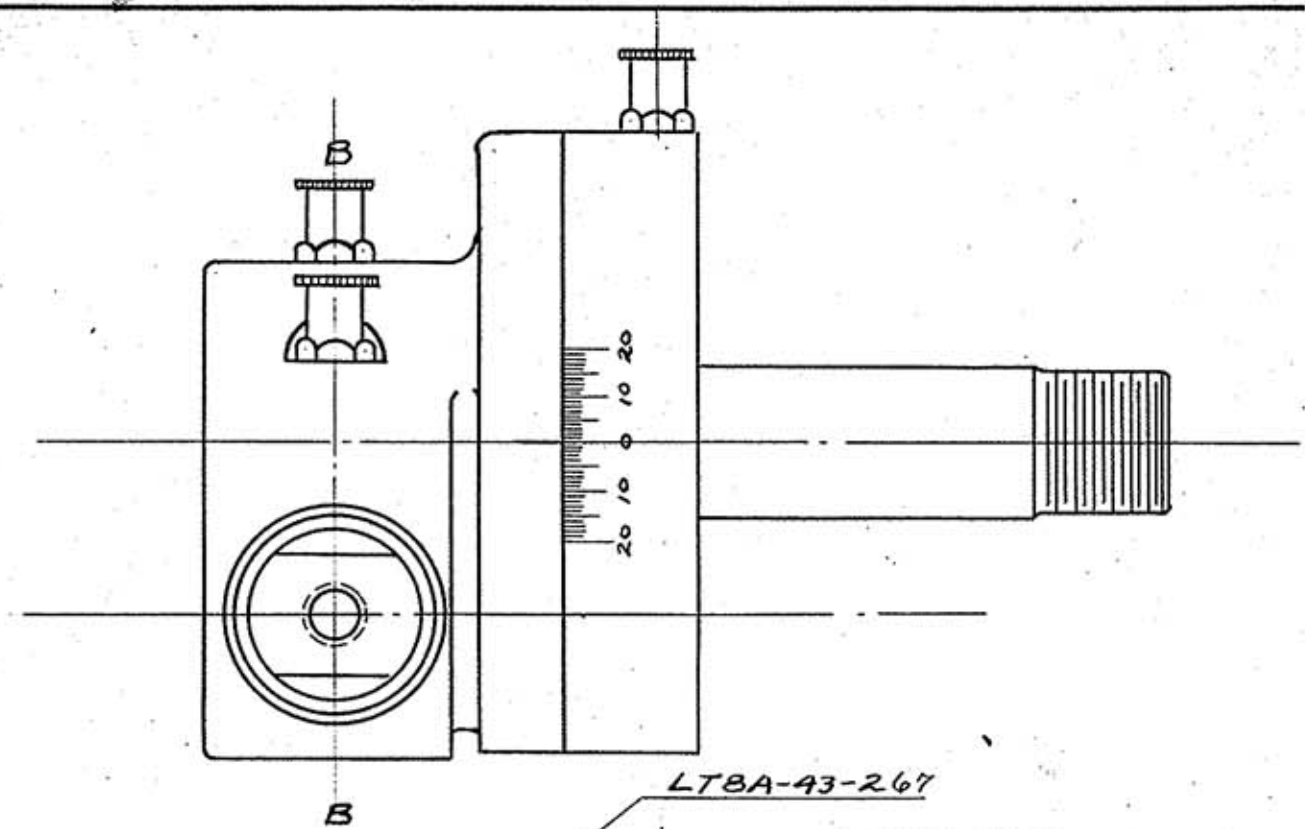
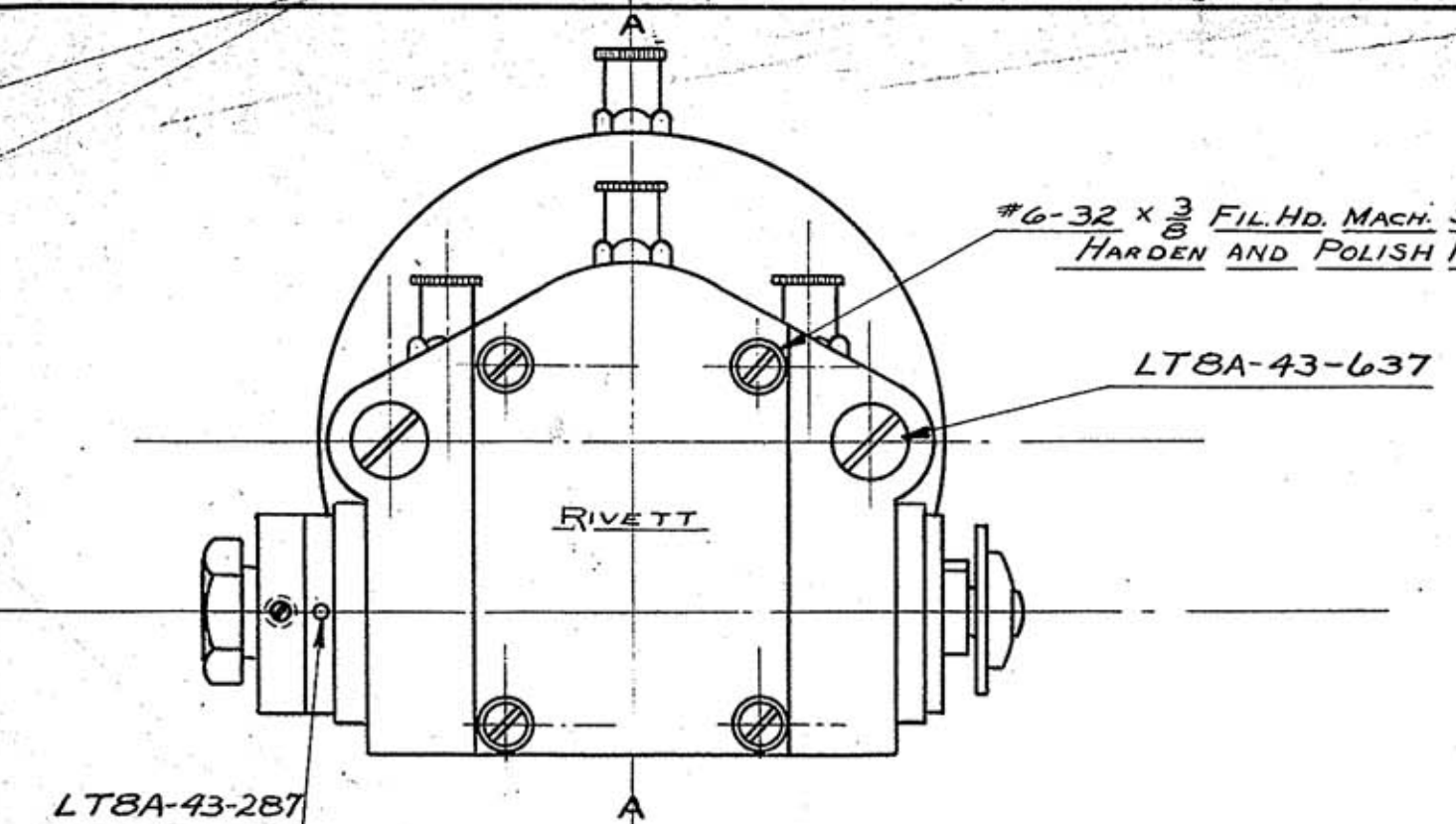
# SAWING TABLE

MATERIAL  
SEMI-STEEL  
PATT. NO.  
LRT-415  
TOOL NO.

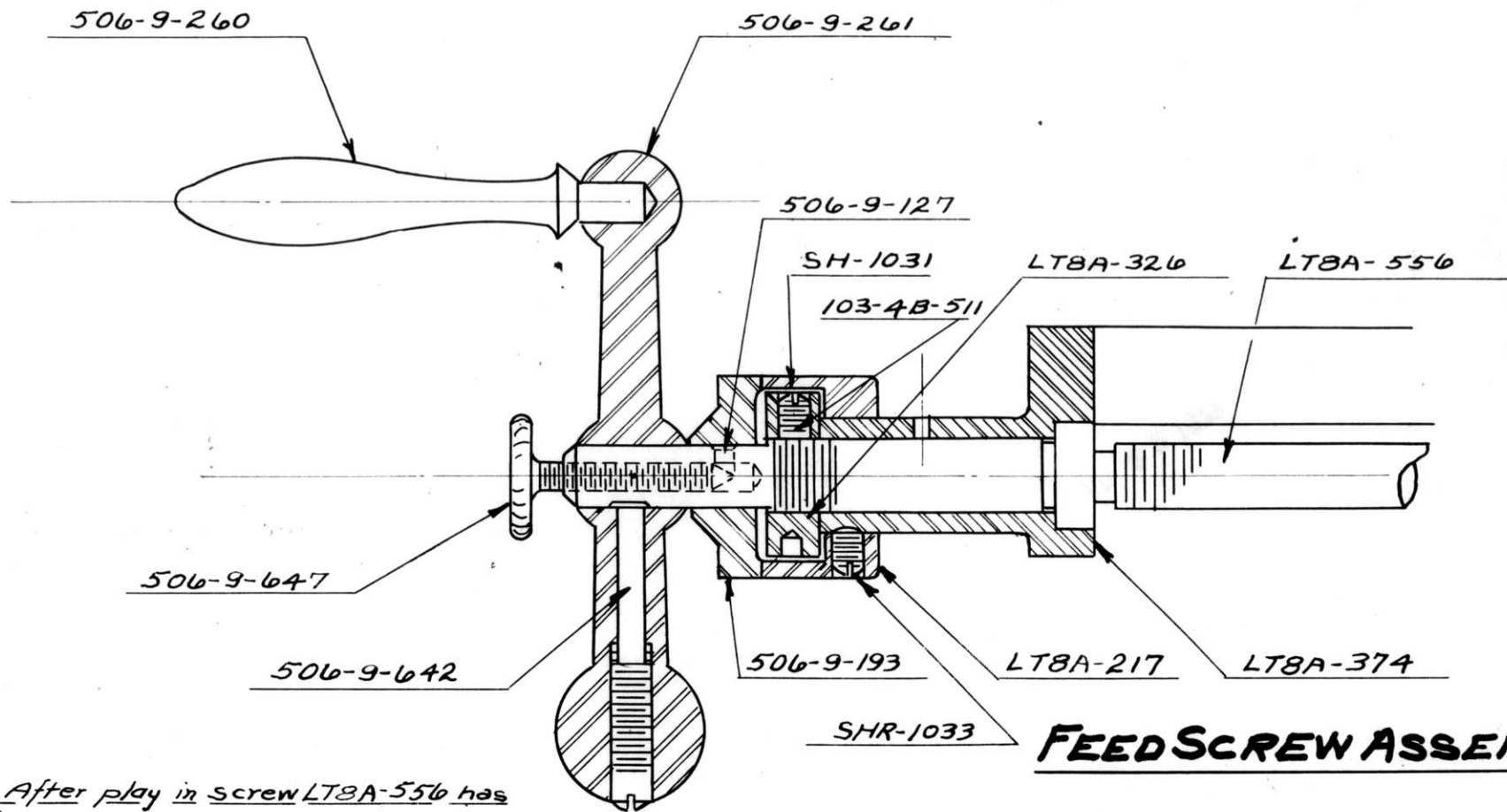
**R. L. & G. Co.**  
BOSTON, MASS.  
Drawn by *R.R.* 1-15-34  
Traced by *E.G.* Date 4-3-37  
Checked by \_\_\_\_\_ Scale FULL  
**LRT-415**







2-19-23  
 11-13-36  
 FULL  
 E. G.  
**LT8A-43**



## FEED SCREW ASSEMBLY

After play in screw LT8A-556 has been taken up through nut LT8A-326 bring LT8A-217 up over and against nut and secure in place through set screw SHR-1033 for which hub of plate LT8A-374 should be spotted.

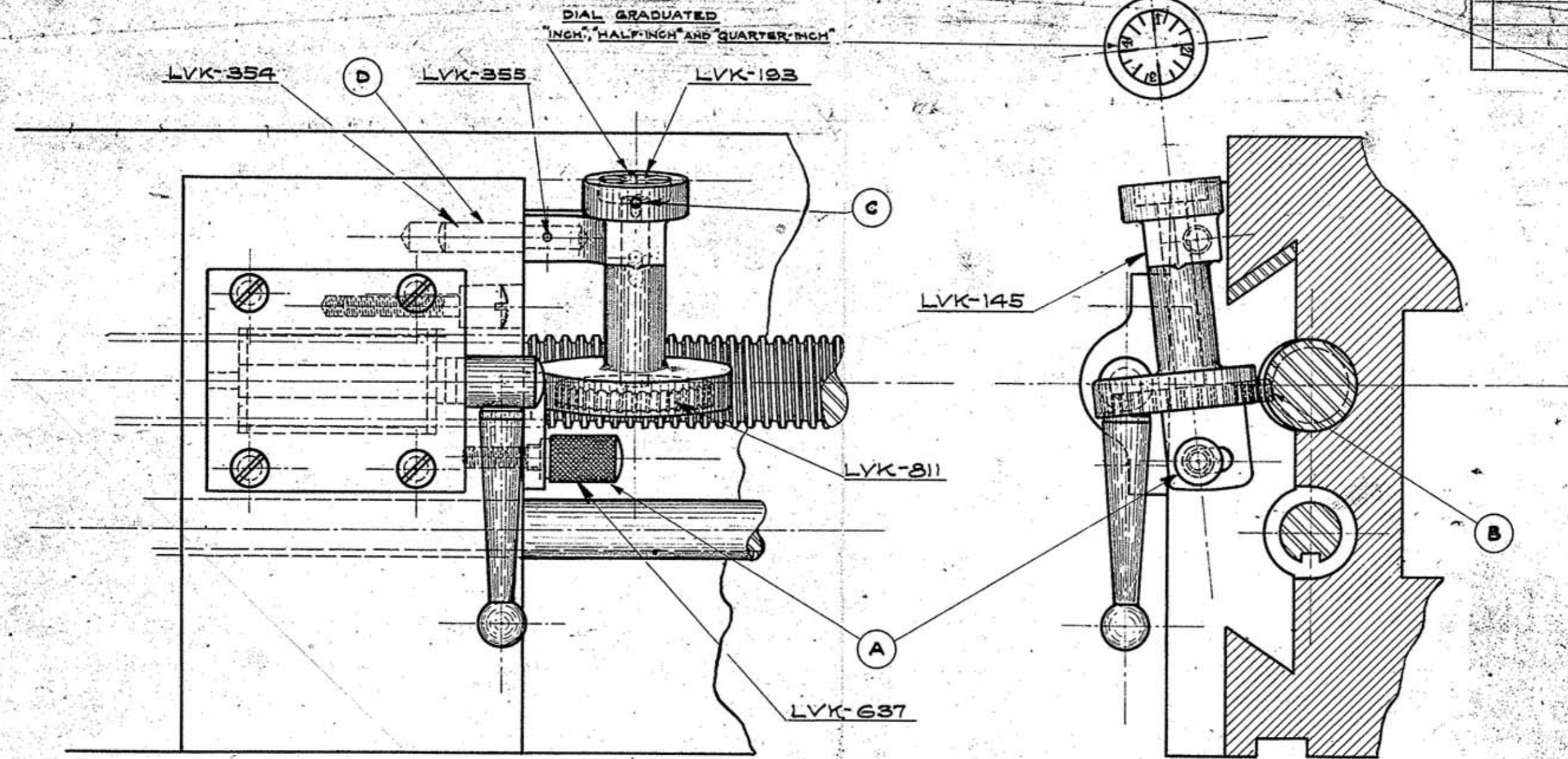
V. W. LATHE & GRINDER, INC.	
BOSTON, MASS.	
Date	11-13-23
By	E. G.
Date	1-19-37
Scale	FULL
<b>LT8A-A</b>	







Fractional Dimensions to Finished Surfaces  $\pm .005$   
Standard Reamed Holes  $\pm .0005$

THREAD DIAL  
ATTACHED TO #608 LATHE

**R. L. & G. Co.**  
BOSTON, MASS.  
Drawn by J.H.F.  
Traced by J.H.F. Date 1-22-23  
Checked by \_\_\_\_\_ Scale \_\_\_\_\_  
LVK-8-10

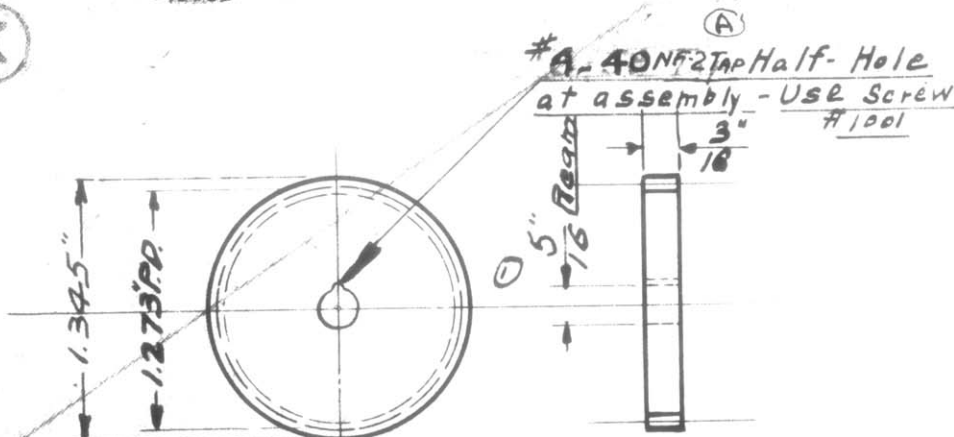
FILE-101



Fractional Dimensions to Finished Surfaces  $\pm .005"$

Standard Reamed Holes  $\pm .0005"$

(K)



32 TEETH USE #4 .20 P. CUTTERS  
SET AT ANGLE  $3^{\circ} 20'$  R.H  
(2) SINK 0.0765"

S.A.E. 641  $\frac{3}{8}$  O.D. SOLID BUNTING BRONZE BAR  
1 BAR MAKES 29 PIECES

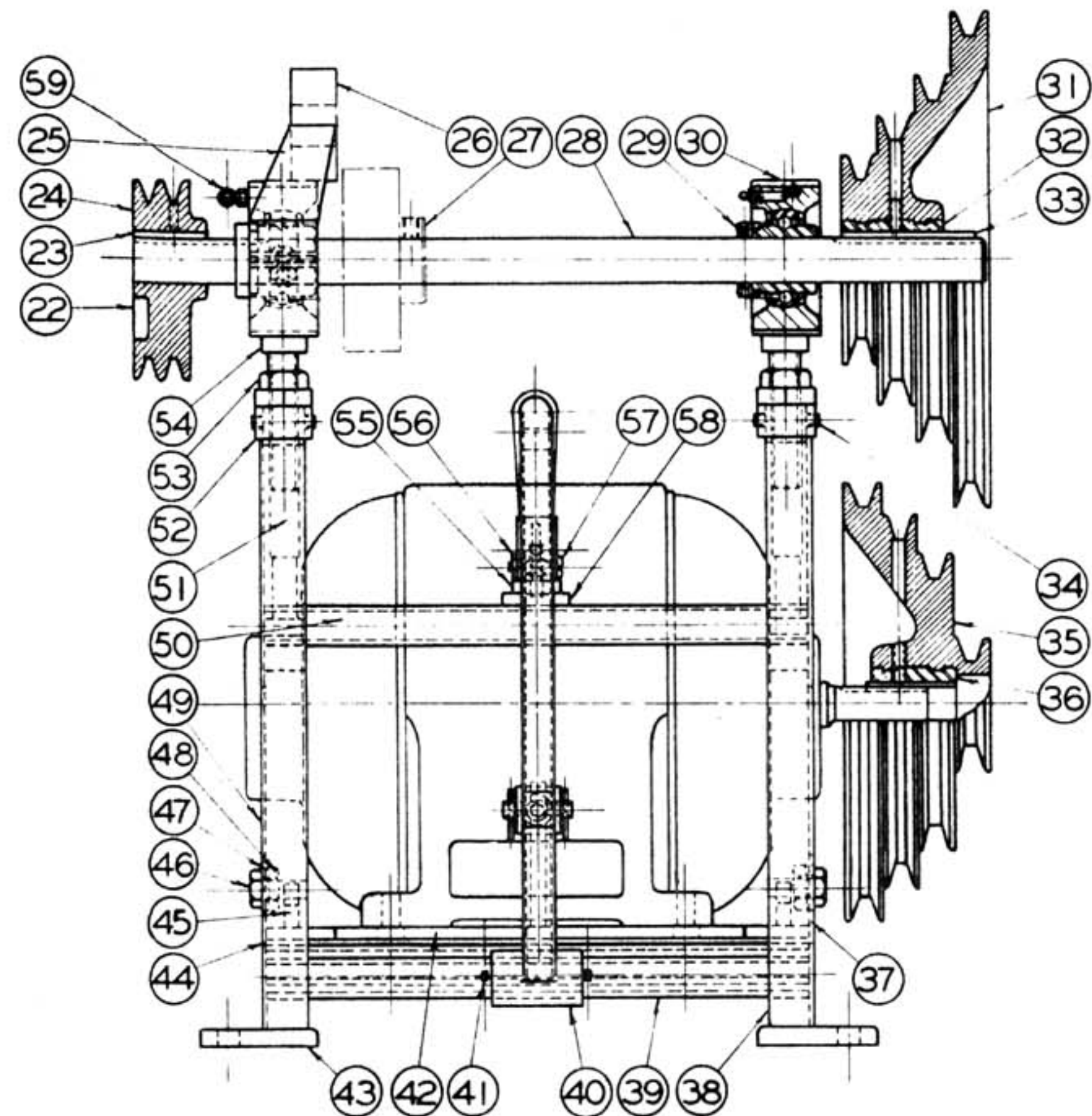
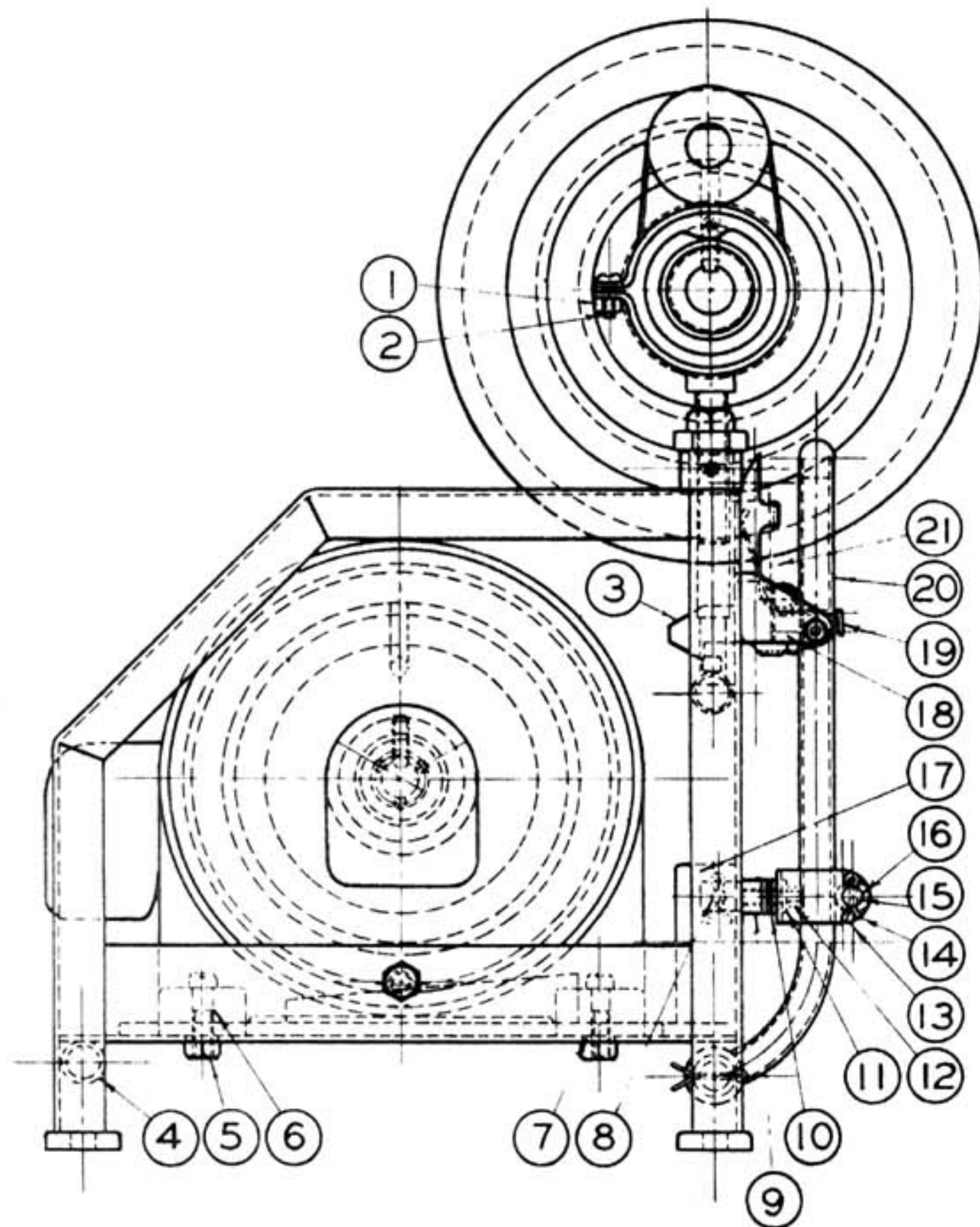
1	2-16-23	$\frac{3}{16}$ " WAS # J.H.E.
	3-9-34	WAS $\frac{3}{16}$ R.J.K. J.C.D.
2	11-10-38	ADDED C.B.
A	2/23/43	WAS # 3-56 G.D.H.

### WORM GEAR

✓ R. L. & G. Co.  
BOSTON, MASS.

Drawn by E.H.I.  
Traced by A.T.S. Date 12-13-22  
Checked by \_\_\_\_\_ Scale Foil

LVK-811



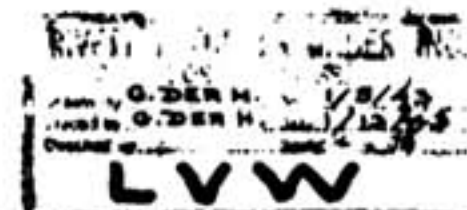
- 1 1/4-20N.C. HEX NUT
- 2 1/4-20N.C.\*3/4LG. ROUND HEAD CAP SCREW
- 3 LVW-206 LEVER DOG
- 4 LVW-491 STRUT
- 5 3/8-16N.C. HEX NUT
- 6 3/8-16N.C.\*1-1/2LG. HEX CAP SCREW
- 7 3/8 HOLE LOCK WASHER
- 8 LVW-354 COUPLING PIN
- 9 LVW-184 COUPLING
- 10 LVW-667 BELLVILLE SPRING
- 11 LVW-521 COUPLING SCREW WASHER
- 12 5/16-18\*1-1/4LG. 1"X HEAD CAP SCREW
- 13 LVW-147 BR/CK T
- 14 1/8 DIA.\*7/8LG. COTTER PIN
- 15 LVW-355 BRACKET HINGE PIN

- 16 LVW-273 BRACKET HINGE
- 17 LVW-148 COUPLING BRACKET
- 18 LVW-272 HINGE
- 19 LVW-666 LEVER LOCKING SPRING
- 20 LVW-302 BELT ADJ. LEVER
- 21 LVW-257 LEVER RELEASE HANDLE
- 22 LVJ-388 C-SHAFT DRIVE SHEAVE HIGH RANGE
- 23 LVJ-289 KEY
- 24 LVJ-386 C-SHAFT DRIVE SHEAVE LOW RANGE
- 25 LVW-568 BRAKE MOUNTING SUPPORT
- 26 LVW-409 BRAKE RETAINER
- 27 LVW-208 BRAKE DRUM
- 28 LVW-437 COUNTERSHAFT
- 29 LG-1"FAFNIR CARTRIDGE TYPE BALL BRGS
- 30 LVW-410 SHAFT RETAINER

- 31 LVJ-394 C-SHAFT SHEAVE
- 32 LVJ-151 STEEL BUSHING FOR C-SHAFT SHEAVE
- 33 LVJ-267 KEY
- 34 1/4-20N.C.\*1/4LG. ALLEN HEADLESS SET SCREW
- 35 LVJ-395 MOTOR SHEAVE
- 36 LVJ-152 STEEL BUSHING FOR MOTOR SHEAVE
- 37 LVW-486 RIGHT HAND STRAP
- 38 LVW-146 RIGHT HAND BRACKET
- 39 LVW-492 STRUT
- 40 LVW-272 LEVER HINGE
- 41 1/8 DIA.\*1-1/2LG. COTTER PIN
- 42 LVW-374 MOTOR PLATE
- 43 LVW-316 MOUNTING LUG
- 44 LVW-485 LEFT HAND STRAP
- 45 LVW-747 BINDING WEDGE

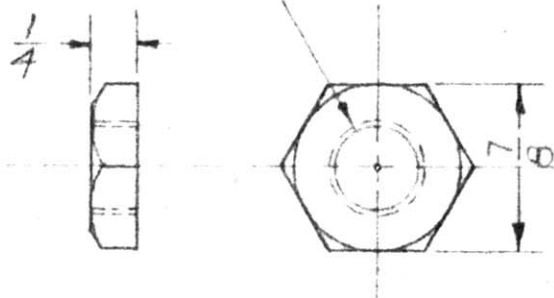
- 46 LVW-498 BINDER STUD
- 47 1/2 HOLE DIA. SHAKEPROOF LOCKWASHER
- 48 LVW-325 BINDER STUD NUT
- 49 LVW-145 LEFT HAND BRACKET
- 50 LVW-491 STRUT
- 51 LVW-411 STUD RETAINER
- 52 LVW-324 SHAFT MOUNTING NUT
- 53 LVW-326 LOCK NUT
- 54 LVW-497 SHAFT MOUNTING STUD
- 55 LVW-134 LEVER RELEASE STOP BLOCK
- 56 10-32N.F. HEX NUT
- 57 10-32N.F.\*1-1/8LG. ROUND HD. MACHINE SCR.
- 58 LVW-317 LEVER HOLDING LUG
- 59 NO.1911-1/8 ALEMITE FITTING BARNUM AND STONE

## MOTOR JACKSHAFT DRIVE





$\frac{1}{2}$ -13-NC TAP



BINDER STUD NUT

MATERIAL C.F.S.  
Hex. SAE 1112  
PART NO. 78"X.04'

TOOL NO.

RIVETT LATHE & GRINDER INC.

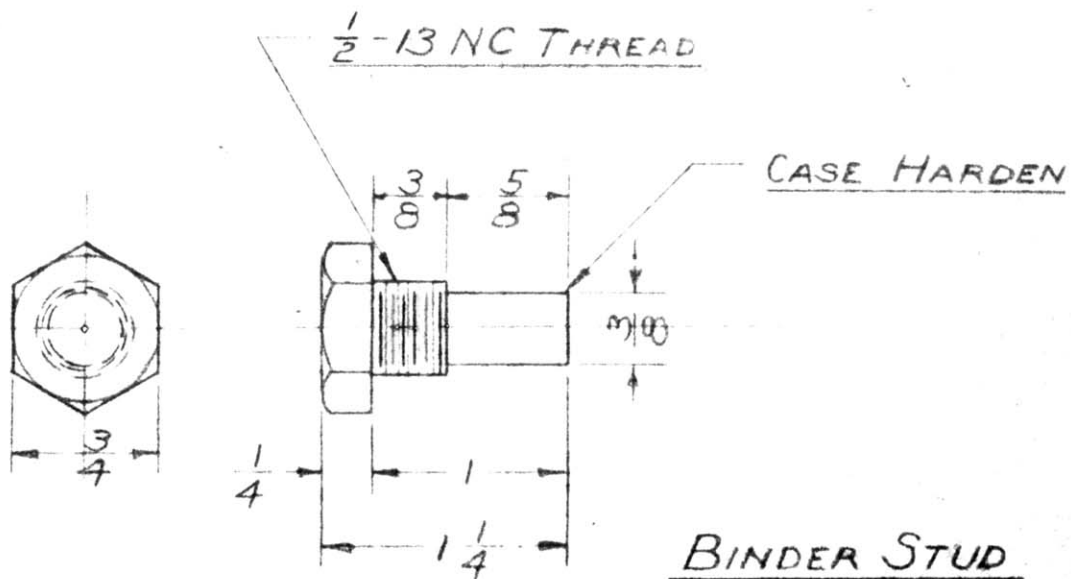
BOSTON, MASS.

Drawn by F. J. M. Date 8-12-12

Traced by \_\_\_\_\_ Date \_\_\_\_\_

Checked by \_\_\_\_\_ Scale FULL

LVW-325



BINDER STUD

C.R.S.  
 HEX. SAE 1112  
 $\frac{3}{4}$ " X .13"

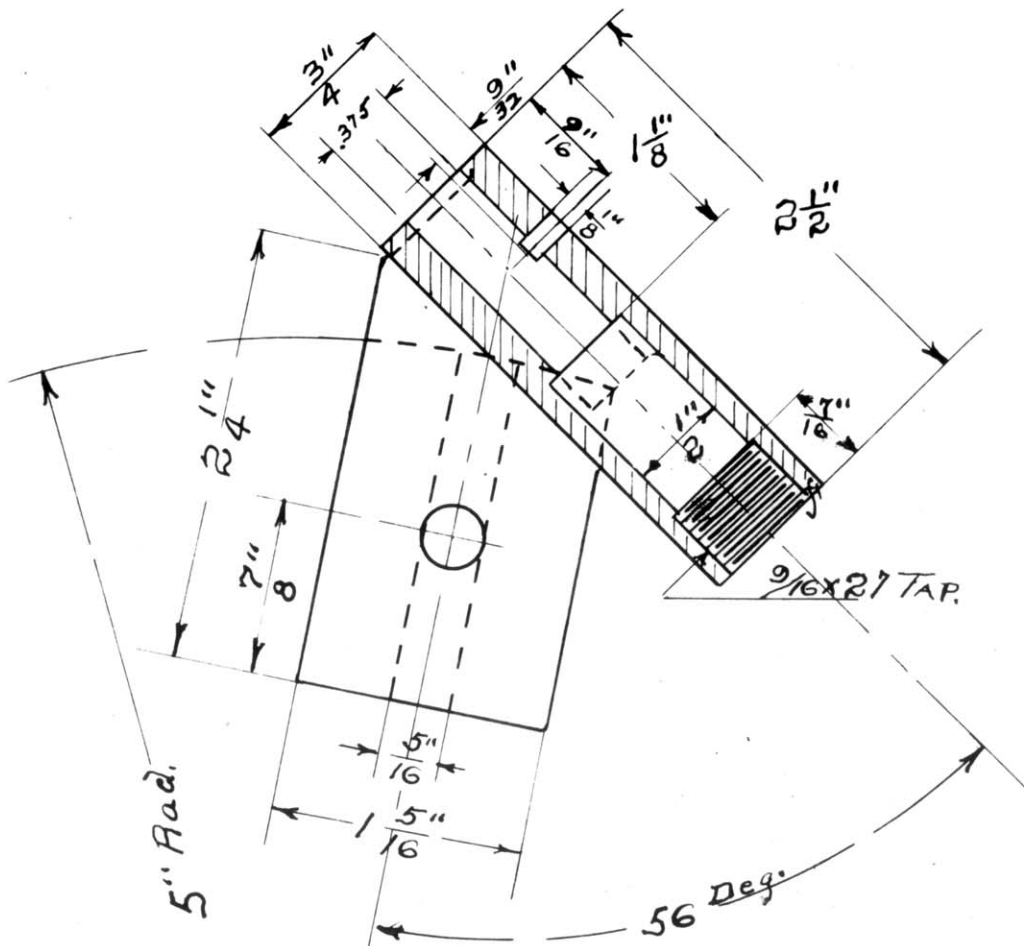
WHEEL & GRINDER, INC.  
 7.7.7. B-5-42

FULL  
 LVW-498



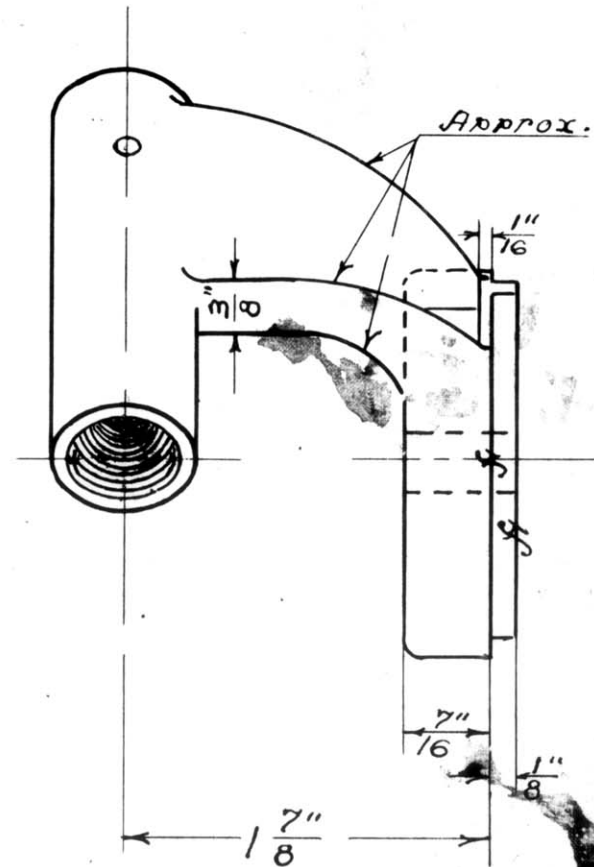
Fractional Dimensions to Finished Surfaces  $\pm .005''$

Standard Reamed Holes  $\pm .0000''$



Polish All Over Except  
Bearing Surfaces.

PATT. No. LYX8-23-145 C.I

INDEX BRACKET

**R. L. & G. Co.**  
BOSTON, MASS.

Drawn by E. H. I.

Traced by

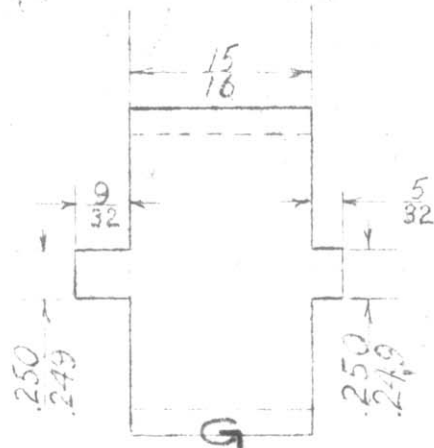
Date 12-8-21

Checked by

Scale FULL

LYX8-23-145

K



Ⓐ 12-11-40 WAS STU...  
Ⓑ 7-27-42 Note Added

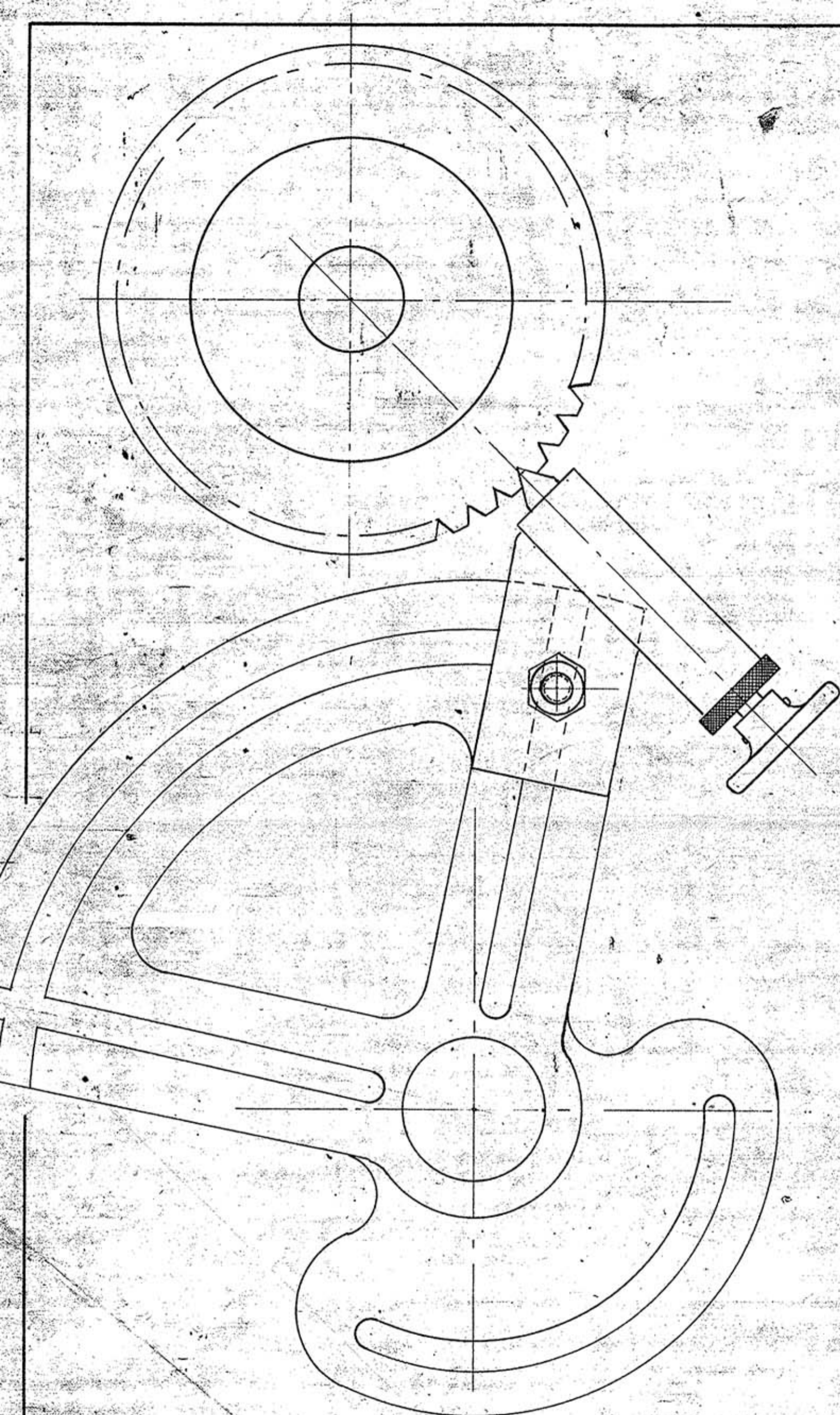
Ⓑ  
GRIND O.D.  
AFTER MILLING

DRAW-IN ROD COLLAR

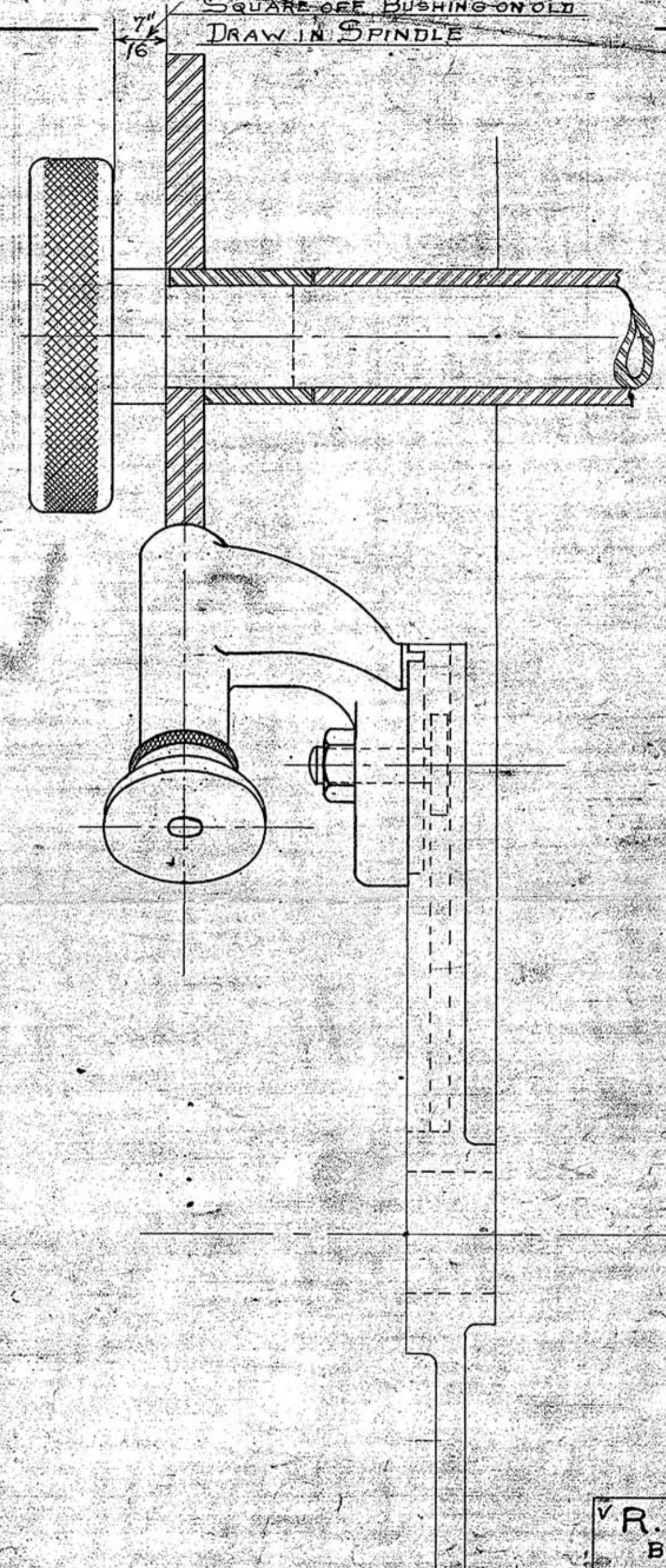
X  
MARCH  
STL. S.A.E. 1020  
1 3/4 DIA.  
14 FT. LG.

LY 8X 50 150





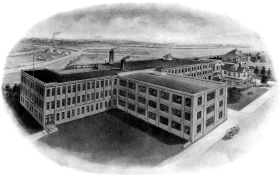
INDEXING ATTACHMENT  
FOR 608 LATHE



SQUARE OFF BUSHING ON OLD  
DRAW IN SPINDLE

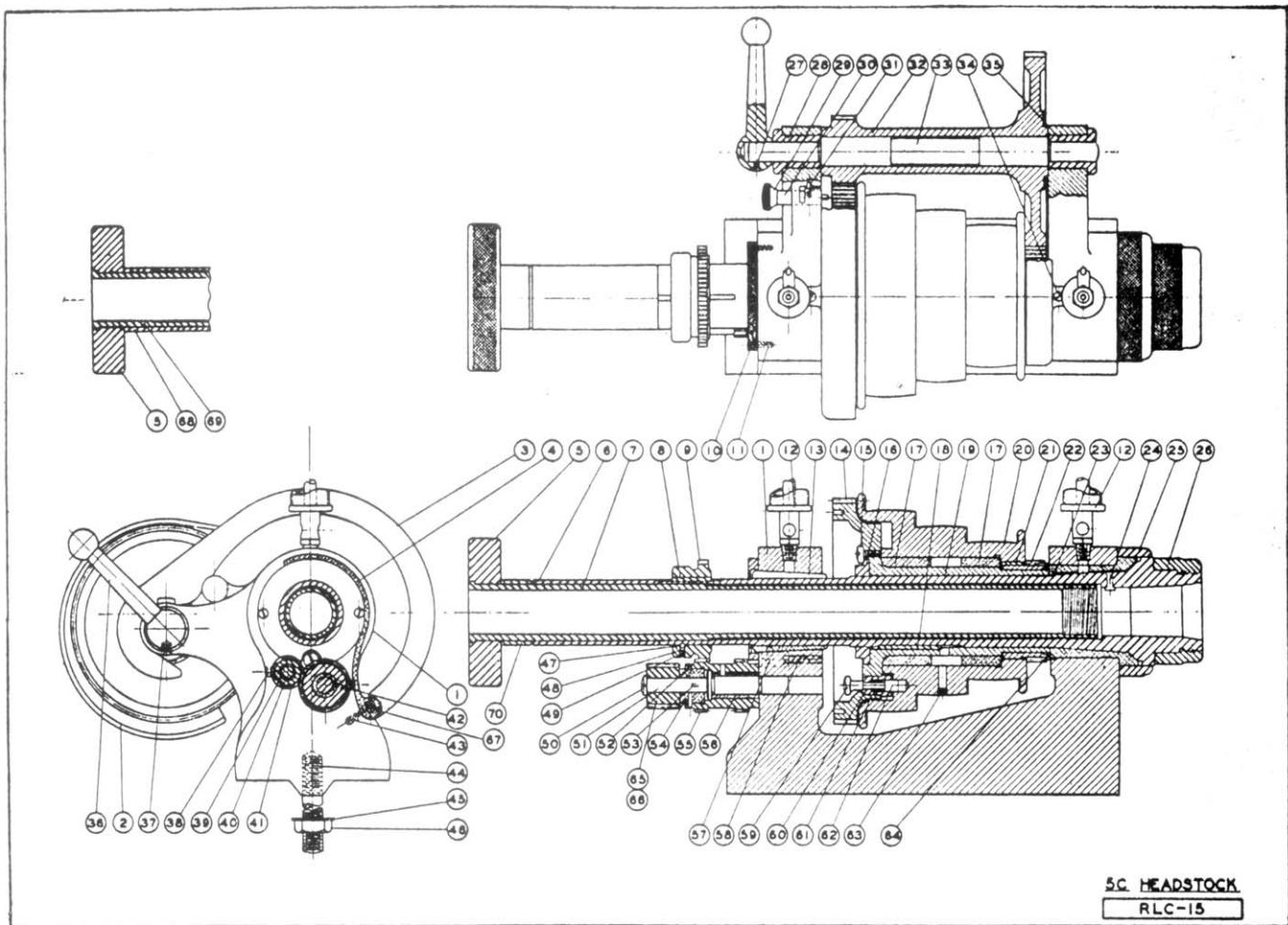
V R. L. & G. Co.  
BOSTON MASS  
DRAWN BY E. H. I.  
CHECKED BY DATE 12-21-21  
SCALE FULL  
LYXO ASSEMBLY







# RIVETT LATHE & GRINDER INC.



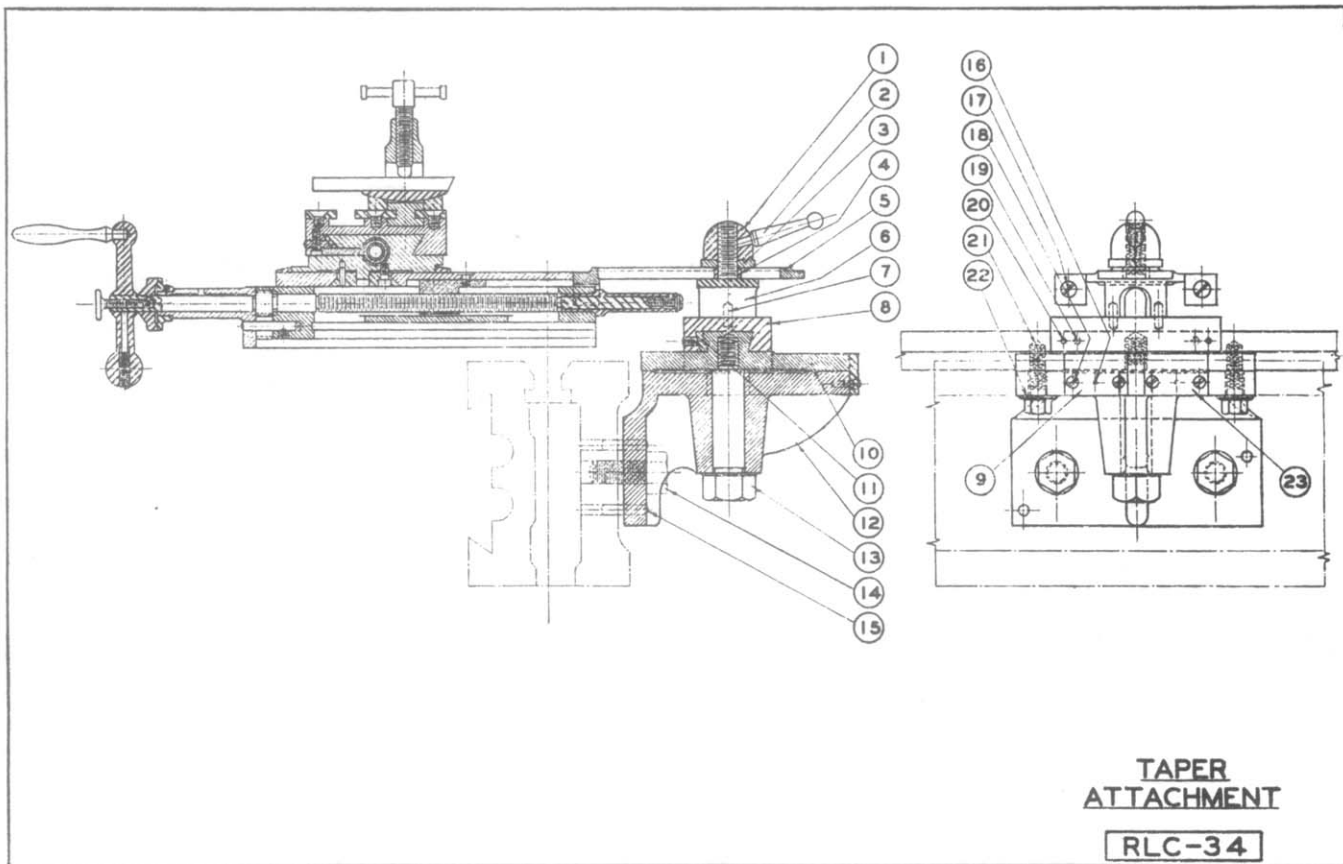
## PARTS LIST

Reference Number	Symbol	Name of Part	Reference Number	Symbol	Name of Part
1	608-5C-12-271	Headstock	36	608-12-302	Gear Shaft Lever
2	608-5C-12-253	Gear Guard (R.H.)	37	608-12-640	Bushing Set Screw
3	608-5C-12-252	Gear Guard (L.H.)	38	1/4"-20 x 3/8 Allen Set Screw	Int. Gear Stud
4	608-5C-12-993	Spindle Gear Guard	39	608-12-499	Int. Gear Stud
5	505-5C-12-292	Draw-in Spindle Knob	40	608-12-157	Int. Gear Bushing
6	608-5C-12-191	Spacing Collar (Plain Lathe)	41	608-12-232	Int. Gear (18-T)
7	608-5C-12-469	Draw-in Spindle (Plain Lathe)	42	1/4"-20 x 3/8 Allen Set Screw	Binder Stud
8	GK21-288	Spindle Gear Key	43	#10-32 x 1/2" Fillister Head Screw	Binder Stud Washer
9	608-12-233	Spindle Gear (60-T)	44	608-12-498	Binder Stud
10	608-5C-12-164	Rear Dust Ring	45	WH-748	Binder Stud Washer
11	#8-32 x 3/8 Fillister Head Screw	Rich Oil Cup - NO -TA #7	46	7/16-14 Hex Nut	5/32" Ball
12	608-5C-12-152	Rear Bushing	47	608-20-666	Spindle Gear Ball Spring
13	608-5C-12-232	Driving Gear	48	#10-32 x 1/8 Headless	Stud Gear Retaining Screw
14	608-12-642	Check Nut Set Screw	49	608-12-500	Switch Gear Stud
15	608-5C-12-324	Driving Gear Check Nut	50	608-12-641	#10-32 x 1/8 Set Screw
16	608-5C-12-155	Pulley Bushing	51	103-17-288	Stud Gear Drive Collar Key
17	608-12-287	Driving Gear Key	52	608-12-190	Stud Gear Drive Collar
18	608-5C-12-468	Headstock Spindle	53	608-12-234	Switch Gear
19	608-5C-12-391	Pulley	54	608-12-158	Gear Bushing
20	103-17-287	Pulley Gear Key	55	103-12-287	Rear Bushing Key
21	608-5C-12-231	Pulley Gear	56	103-12-638	Rear Bushing Key Screw
22	608-5C-12-151	Front Bushing	57	608-12-293	Stop Pin Knob
23	506-12-287	Spindle Key	58	608-12-156	Stop Pin Bushing
24	608-5C-12-163	Front Dust Ring	59	608-12-667	Stop Pin Spring
25	505-5C-12-251	Spindle Nose Guard	60	608-12-254	Stop Pin
26	608-12-640	Gear Shaft Lever Screw	61	103-17-639	Oil Screw
27	608-12-154	Gear Shaft Bushing (Rear)	62	608-5C-12-473	Pulley Spacer
28	504-12-267	Index Pin Knob	63	608-5C-12-236	Stud Gear (24 T)
29	608-5C-12-372	Index Pin	64	608-5C-12-237	Stud Gear (15 T)
30	608-5C-12-373	Index Pin Stop	65	608-5C-12-705	Gear Guard Hinge
31	608-5C-12-235	Back Gear	66	608-5C-12-192	Collar (With Gear Box or Lever Chuck)
32	608-12-440	Back Gear Shaft	67	L08-5C-470	Draw-in Spindle (With Gear Box or Lever Chuck Closer)
33	#8-32 x 3/8 Fillister Head Screw		68		
34	608-12-153	Gear Shaft Bushing (Front)	69		
35			70	608-5C-12-188	Collar





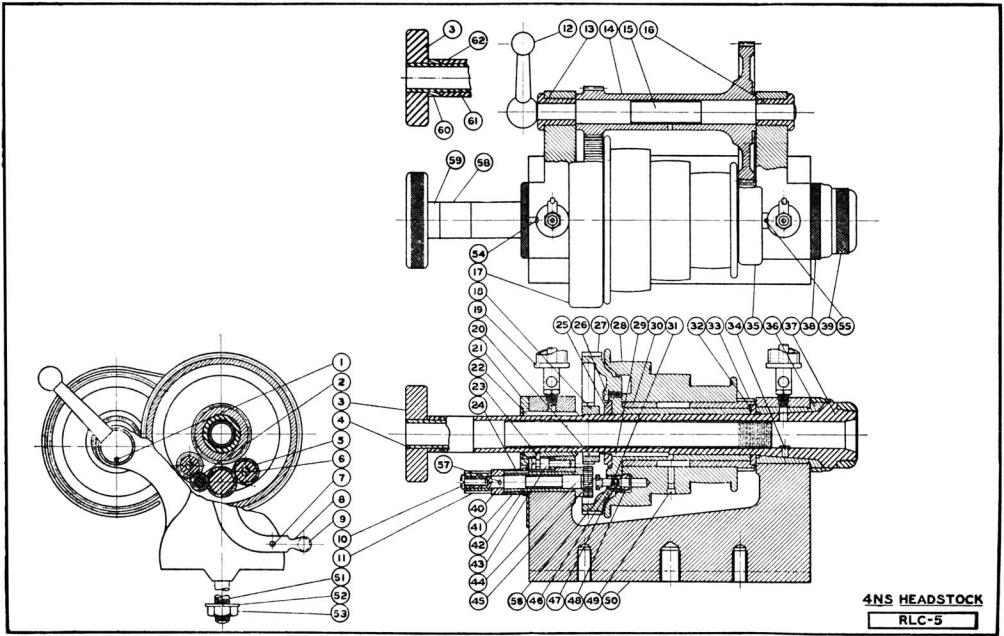
# RIVETT LATHE & GRINDER INC.



## PARTS LIST

Reference Number	Symbol	Name of Part
1	LRM8A-324	Connecting Stud Nut
2	608-26-260	Stud Nut Handle
3	LRM8A-521	Connecting Stud Washer
4	LRM8A-151	Connecting Stud Bushing
5	LRM8A-377	Connecting Plate
6	LRM8A-497	Connecting Stud
7	LXY8-357	Slide to Connecting Stud Pin
8	LRM8A-462	Slide
9	LRM8A-193	Graduated Plate (Degrees Taper)
10	LRM8A-611	Swivel Bar
11	LRM8A-245	Slide Gib
12	LRM8-145	Bracket
13	LRM8-142	Bracket to Swivel Bar Bolt
14		1/2-13 x 1-1/4 Hex. Hd. Cap Screw
15	608-23-201	Bracket Dowel Pin
16	LOJ-354	Indicator Plate Dowel Pin
17		1/4-20 x 7/8 Fil. Head Cap Screw
18		#6-32 x 1/2 Fil. Head Cap Screw
19		#10-32 x 3/8 Set Screw
20	506-9-356	Gib Dowel
21		3/8-16 x 1-1/8 Hex. Head Cap Screw
22	WH-751	Swivel Bar Screw Washer
23	LRM8A-194	Graduated Plate (Inches per Foot Taper)

# RIVETT LATHE & GRINDER INC.



## PARTS LIST

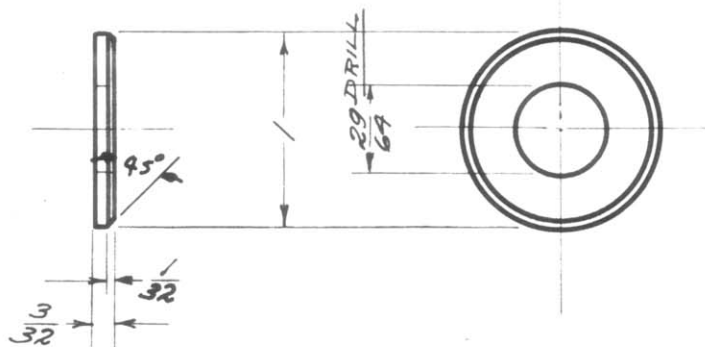
Reference Number	Symbol	Name of Part	Reference Number	Symbol	Name of Part
1	608-12-640	Bushing set screw	32	608-12-473	Spacer
2	607-12-228	Switch gear (12 T)	33	608-12-226	Pulley gear
3	103-12-292	Draw-in spindle knob	34	506-12-287	Spindle key
4	608-12-467A	Draw-in spindle	35	608-12-251	Gear guard (right)
5	607-12-227	Switch gear (18 T)	36	103-12-117	Front bearing
6	607-12-498	Switch gear stud	37	608-12-466	Headstock spindle
7	607-12-354	Switch lever pin	38	103-12-419	Front dust ring
8	606-12-303	Switch lever	39	103-12-261	Spindle nose guard
9	LOJ-257	Lever Handle	40	606-12-190	Switch gear collar
10	608-12-641	Stud gear retain. screw	41	606-12-155	Switch lever bushing
11	607-12-230	Stud gear (15 T)	42	608-12-634	Switch
11	607-12-231	Stud gear (24 T)	43	103-12-638	Rear bearing adjusting screw
12	608-12-302	Gear shaft lever	44	608-12-229	Switch gear (22T)
13	608-12-154	Gear shaft bushing (rear)	45	608-12-329	Stop pin nut
14	608-12-230	Back gear	46	608-12-361	Locating pin
15	608-12-440	Back gear shaft	47	608-12-360	Pulley stop pin
16	608-12-153	Gear shaft bushing (front)	48	608-12-152	Stop pin bushing
17	608-12-252	Gear guard (left)	49	103-17-639	Oil screw
18	608-12-228	Spindle gear	50	608-12-270	Headstock
19		Blanchard oil cup #100-1	51	608-12-498	Binder stud
20	608-12-238	Spindle gear key	52	WH-748	Binder bolt washer
21	504-12-419	Rear dust ring	53		Binder bolt nut
22	103-12-118	Rear bearing	54	SP-1021	Rear dust cap screw
23	103-12-237	Rear bearing key	55	SP-1019	Gear guard screw
24	606-12-289	Lever key	56	608-12-479	Locating pin spring
25	608-12-330	Driving gear check nut	57		Collar pin
26	608-12-642	Check nut set screw	58	608-12-189	Loose Collar
27	608-12-227	Driving gear	59	608-12-188A	Draw-in spindle collar
3	608-12-390	Pulley	60	608-12-188B	Draw-in spindle collar for quick change gear box
9	608-12-237	Driving gear key	61	608-12-467B	Draw-in spindle for quick change gear box
10	608-12-131	Pulley bushing	62	608-12-188C	Loose Collar
1	SH-1032	Locating pin screw			





Fractional Dimensions to Finished Surfaces  $\pm .005$ "

Standard Reamed Holes  $\pm$




# WASHER FOR $\frac{7}{16}$ HEX. NUT

POLISH ALL OVER

C.F.S.

A151 B-1113

1" DIA

X .02 FT. LG.

**R. L. & G. Co.**  
**BOSTON, MASS.**

Drawn by A.W.O.

Traced by A.J.

Date 8-15-30

Checked by

Scale FULL SIZE

**W. H. - 748**



# WORTHINGTON

MECHANICAL POWER TRANSMISSION SALES DEPT.  
OIL CITY, PA.

## ALL SPEED DRIVE MODEL A

1600-E3A  
SEPTEMBER 15, 1956  
SUPERSEDES  
AS1600-E2 & E3  
APRIL, 1954  
AND MPT-F137  
JAN. 3, 1956

THESE INSTRUCTIONS APPLY ONLY TO MACHINES WITH SERIAL NUMBERS  
BEGINNING WITH THE PREFIX 3A

## INSTRUCTIONS FOR INSTALLATION, OPERATION AND LUBRICATION

### INSTALLATION

IN INSTALLING THE WORTHINGTON ALL SPEED DRIVE CARE SHOULD BE USED AND THE FOLLOWING INSTRUCTIONS ADHERED TO.

1. When the machine is uncrated, the crate and unit should be checked for damage due to shipment so that any damage may be reported to the carrier.
2. Mount the machine on its foundation making sure that the base is level and supported at all bolt locations. Shim if necessary.
3. Check all shafts and make sure they all rotate freely. This should be checked after drive is bolted in position to make sure that there is no misalignment.
4. The input and output shaft of the variable drive can be connected by V-Belts, flat belts, chain, gears, or flexible coupling. The alignment of these connections should be carefully checked.
5. Lubricate the grease fittings using a light cup grease and a hand gun. See Lubrication instructions.
6. After checking the electrical connections start the unit up and shift it through its entire range about 4 or 5 times to insure the spreading of the lubricant on the sliding fits.

### OPERATING

1. To insure best operation, shift the drive through the entire speed range once each day if possible. This spreads the lubricant on the sliding fits and keeps the shiftable flanges from sticking.
2. The drive should be protected from abrasive dirt, water, oil and acids getting onto the sheave faces and belts to obtain the maximum belt life.
3. The belt tension should be checked after the first day of operation or after new belts have been installed. See belt tension instructions.
4. After the initial stretch and set of the belts has been taken, it is only necessary to check the tension every 400 hours when lubricating the drive.

## LUBRICATION -- REFER TO FIGURE 1

There are three primary rotating shafts in the Allspeed machine each of which should be greased as indicated below. Worthington recommends the use of a light cup grease.

Lubricate following points every 200 hours of operation.

1. JACKSHAFT - Fitting #7 (located between center two flanges). Make sure the gun is purged of air and actually pumping grease. Stroke the handle enough to force out a thimble full of lubricant. This is the amount that should be injected.
2. INPUT SHAFT - Fitting #8. Start the machine and shift it to maximum output speed. Stop machine and inject grease until it overflows out of the inner end of the shaft into the open shifting spacer #2.
3. OUTPUT SHAFT - Fitting #9. Start machine again and shift it to its lowest speed. Repeat greasing as above.

NOTE that the machine must be shifted to its extreme speeds as indicated in order to prevent grease pressure from blowing out the bushings that are fitted into the shifting flanges. Also note that the grease should be injected slowly so as to prevent excessive pressure build up.

While the machine is shut down, it is also desirable to place a few drops of oil on the sliding fits #10 and #11 where the cam bar moves up and down on the main frame. Handwheel linkage #12 should be oiled lightly.

The ball bearings in these Drives are shielded, life-lubricated ball bearings and no attempt should be made to lubricate or clean out these bearings.

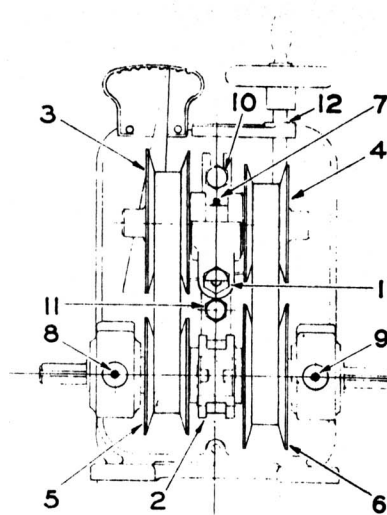


Figure 1

## BELT MAINTENANCE

Both belts can be removed from the machine without disconnecting either the input or output shaft. Place drive in low speed position. Loosen and remove belt tensioning gland #1. This will remove all tension from belts by allowing jackshaft housing to drop to lowered position. With tension removed from belts, remove shifting spacer #2, from in between input and output shafts.

Remove output and input belts from jackshaft flanges, #3 and #4. The Jackshaft assembly may be bumped free of housing and tilted so that input and output belts can be easily removed. Remove belts from input and output flanges, #5 and #6. Pass belts through center of machine between ends of the input and output shafts. Reverse this process to install belts. Tighten belts as indicated in belt tension instructions.

## BELT TENSION -- REFER TO FIGURE 2

The belt tension indicator #1 should be checked after the first day of operation after new belts have been installed and once every 400 hours thereafter. Tension is correctly adjusted by setting the machine for maximum output speed and tightening the belt tension gland until the indicator rod is just touching the end of the hole in the gland as illustrated. When this point is reached, the gland becomes a little harder to turn. DO NOT TIGHTEN BEYOND THIS POINT! The belt will be too tight if you do!

Need for additional tension is clearly seen when the indicator rod is found not touching the end of the hole.

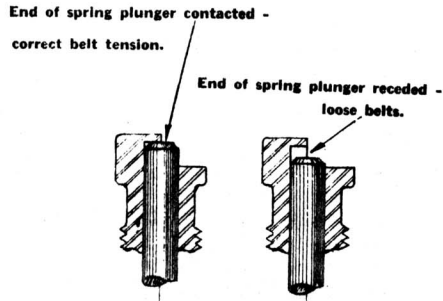


Figure 2



**WORTHINGTON**

Mechanical Power Transmission Sales Department  
**OIL CITY, PA.**

1600-R3A  
 October 24, 1957  
 Supersedes 1600-R3  
 May 17, 1956

**MODEL "A" ALLSPEED DRIVE REPAIR PARTS**

**LIST PRICES**

(List Prices Subject to Published Discount Schedule)

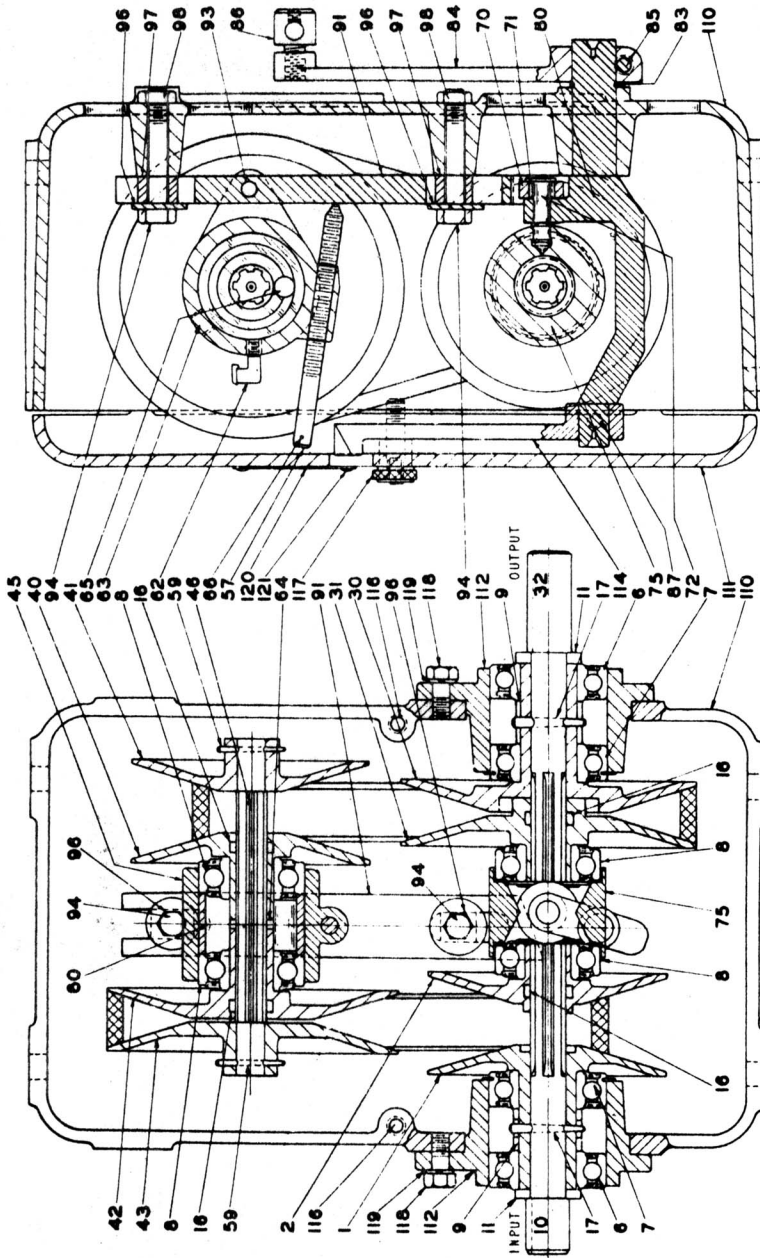
Input Shaft Assembly Complete		Total \$77.80	
Part No.	Input Shaft Assembly Parts	No. Req.	Each
1	First Driver Stationary Flange	1	\$23.00
2	First Driver Shiftable Flange	1	23.00
6	Ball Bearing	1	4.50
7	Ball Bearing with Snap Ring	1	4.50
8	Ball Bearing	1	4.00
9	Bearing Spacer	1	3.70
10	Input Shaft with Collar (III)	1	18.30
16	Felt Strip	1	.20
17	Taper Pin	1	.20
Output Shaft Assembly Complete		Total \$77.80	
Part No.	Output Shaft Assembly Parts	No. Req.	Each
6	Ball Bearing	1	\$4.50
7	Ball Bearing with Snap Ring	1	4.50
8	Ball Bearing	1	4.00
9	Bearing Spacer	1	3.70
16	Felt Strip	1	.20
17	Taper Pin	1	.20
30	Second Driven Stationary Flange	1	23.00
31	Second Driven Shiftable Flange	1	23.00
32	Output Shaft with Collar (III)	1	18.30
Jackshaft Assembly Complete		Total \$148.00	
Part No.	Jackshaft Assembly Parts	No. Req.	Each
8	Ball Bearing	2	\$4.00
16	Felt Strip	2	.20
40	Second Driver Stationary Flange	1	23.00
41	Second Driver Shiftable Flange	1	23.00
42	First Driver Stationary Flange	1	23.00
43	First Driver Shiftable Flange	1	23.00
45	Jackshaft Housing	1	11.50
46	Jackshaft	1	17.80
57	Belt Tension Adjusting Screw	1	1.30
59	Taper Pin	2	.20
60	Bearing Spacer	1	5.30
62	Oil Cup	1	1.70
63	Set Screw	1	.20
64	Felt Washer	1	.20
65	Felt Roller	1	.20
66	Groov-Pin	1	.20
91	Cam Bar	1	18.10
93	Jackshaft Housing Pin	1	.20
Control Yoke Assembly Complete		Total \$24.00	
Part No.	Control Yoke Assembly Parts	No. Req.	Each
70	Cam Roller	1	\$2.30
71	Cam Roller Bearing	1	7.50
72	Control Yoke Shoulder Pin	1	1.50
80	Control Yoke	1	18.40
83	Snap Ring	1	.20
Part No.	Housing Assembly Parts	No. Req.	Each
75	Shifting Spacer	1	\$ 8.00
84	Control Lever with Bolt and Nut (86)	1	8.00
86	Control Lever Skivel with Set Screw	1	8.00
94	Cap Screw	2	.40
96	Cam Bar Guide Washer	2	.10
97	Cam Bar Guide Block	2	2.80
98	Jam Nut	2	.20
110	Housing	1	\$2.80
111	Housing Cover	1	13.60
112	Bearing Sleeve	2	23.00
114	Pointer with Set Screw (87)	1	3.00
116	Stud	2	1.20
117	Locking Knob	2	1.20
118	Cap Screw	6	.40
119	Lockwasher	6	.10
120	Nameplate	1	2.00
121	Drive Screw	4	.20

**COMPLETE NEW REPLACEMENT UNIT ASSEMBLED AT FACTORY. TOTAL LIST \$510.00**

Minimum charge per invoice \$2.00 net. All shipments are F.O.B., Oil City, Pa.

When ordering, give serial number and location of output shaft.

Printed in U. S. A.



DA-127

ALLSPEED DRIVE - MODEL A  
 GENERAL ASSEMBLY FOR PARTS LIST