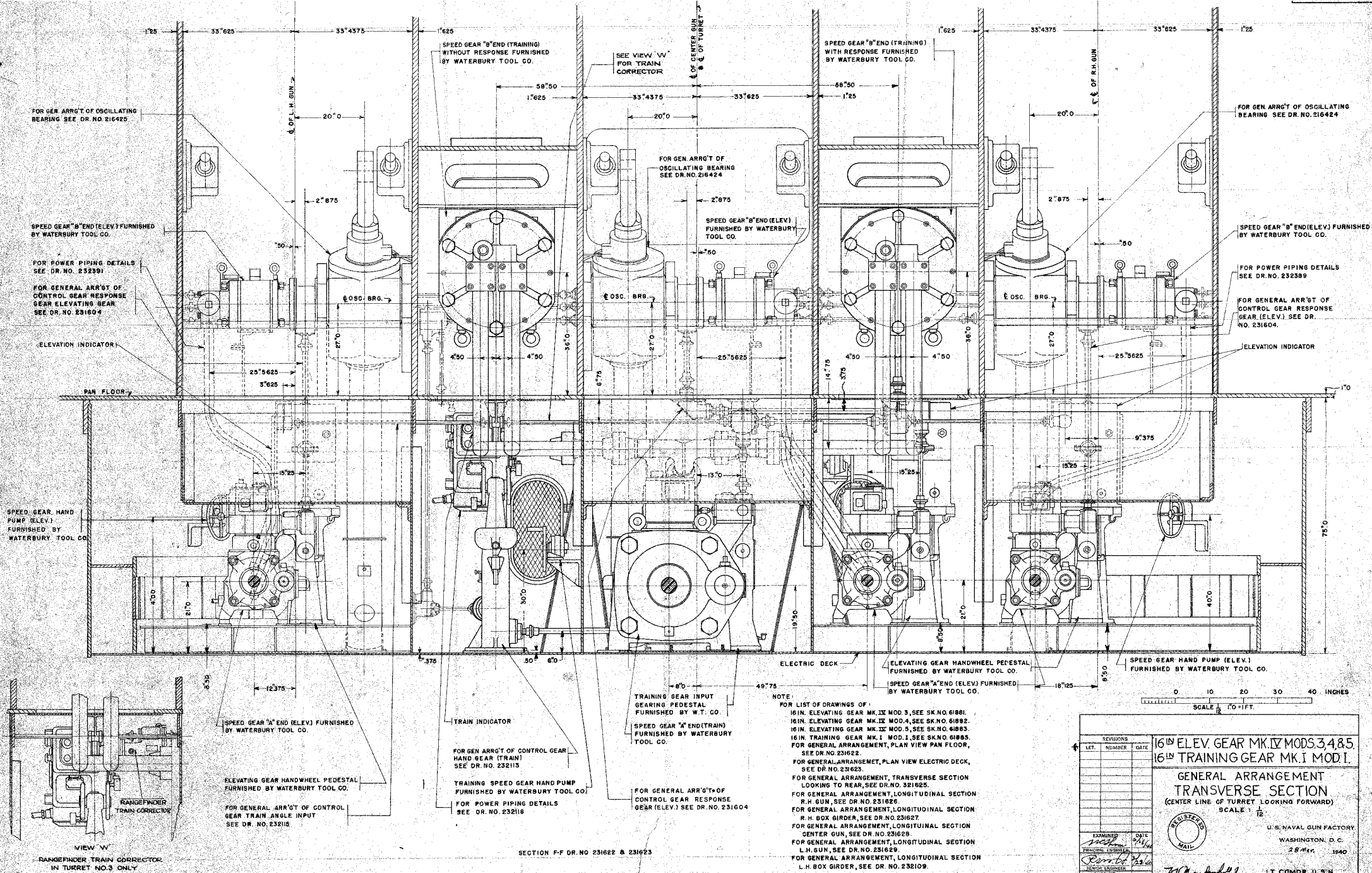
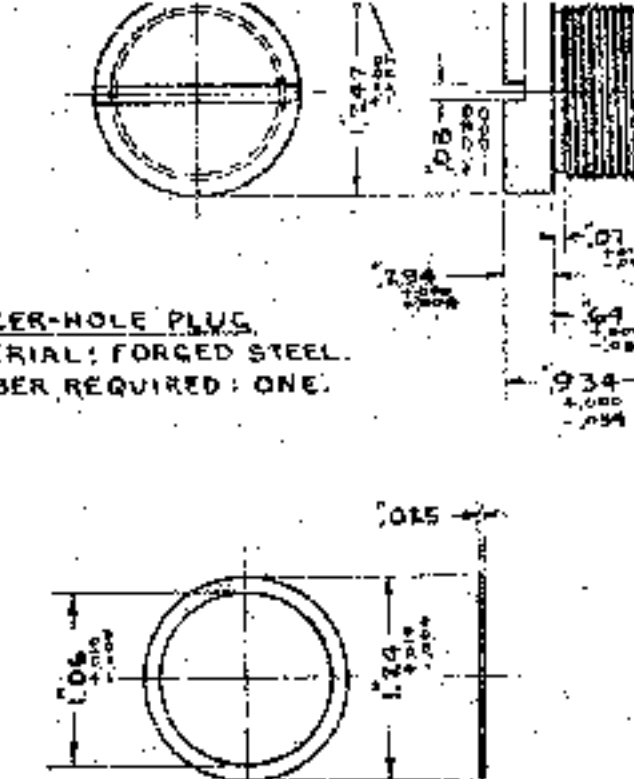


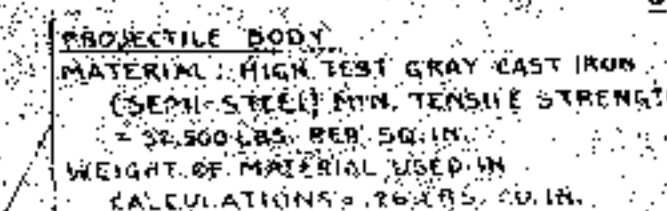


REVISIONS LET. NUMBER DATE 16 IN. ELEV. GEAR MK. IV MODS. 3, 4, & 5 16 IN. TRAINING GEAR MK. I MOD. I		
GENERAL ARRANGEMENT TRANSVERSE SECTION (CENTER LINE OF TURRET LOOKING FORWARD) SCALE: 1" = 12"		
U.S. NAVAL GUN FACTORY WASHINGTON, D. C. 28 Mar 1940		
LT COMDR, U.S.N.		
EXAMINED R.J. REILLY 8-11-40 JOB ORDER 8171E	DATE 2-1-40 3/12/40 (356)	DRAWING NO. 231624

1 1/16	20N-3-LB
	MAJOR DIA. 1.0625 ±
	PITCH DIA. 1.0300 ±
	MINOR DIA. 1.0013 ±



DETAIL OF 5 EQUALLY SPACED NOTCHES. WINDSHIELD NOT TO BE LOCKED IN PLACE BY THE CONTRACTOR.



THE CENTER OF GRAVITY OF THE PROJECTILE SHALL NOT BE MARKEDLY OUT OF COINCIDENCE WITH ITS AXIS. WHEN A PROJECTILE ROLLED ALONG HORIZONTAL RAILS, SHOWS A TENDENCY TO SETTLE WHICH TENDENCY CANNOT BE ELIMINATED BY THE APPLICATION OF MAGNETS TO THE EXTENT OF 105 INCH OUNCES, THE CENTER OF GRAVITY IS MARKEDLY OUT OF COINCIDENCE WITH ITS AXIS.

THE NOSE OF THE PROJECTILE MAY BE MODIFIED TO BRING THE WEIGHT OF THE PROJECTILE WITHIN TOLERANCES. TOLERANCES SHALL BE MANIPULATED TO CHANGE DIMENSIONS IN FRONT OF BAND AS LITTLE AS POSSIBLE.

METHOD OF ATTACHING WINDSHIELD MAY BE VARIED IF APPROVED BY THE BUREAU OF ORDNANCE.

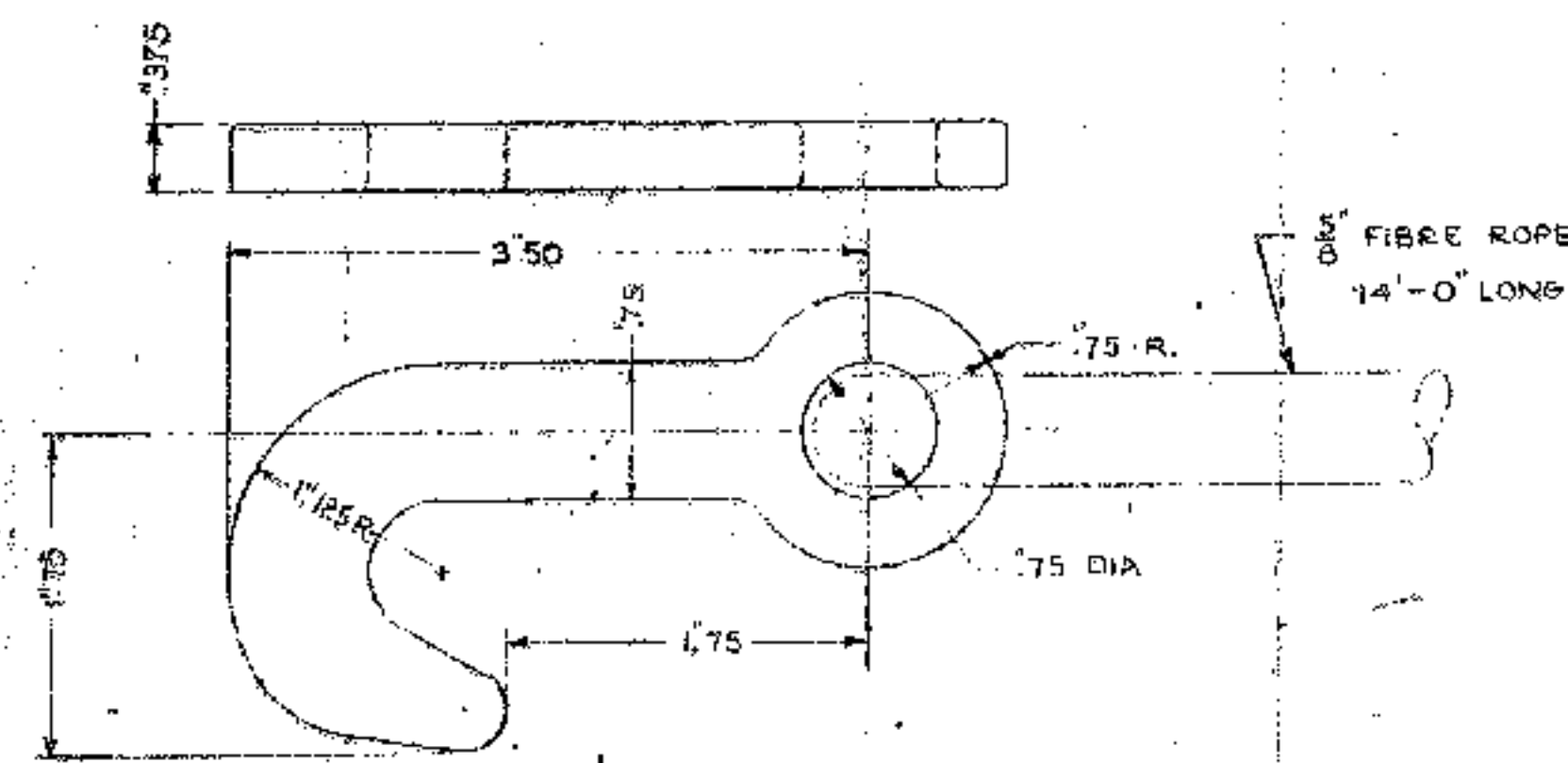
CONTRACTORS DRAWING SHALL SHOW THE EXACT DIMENSIONS USED.

TOLERANCES		INCHES	MILS
TOTAL LENGTH	-----	14.0	200
DIAM. OF CYLINDER	-----	15.95	010
DIAM. OF BOURRELETS	-----	15.977	000
DIAM. AT BOTTOM OF BAND SCORE	-----	15.75	015
REAR EDGE OF BAND SCORE FROM REAR FACE	-----	2.50	030
WIDTH OF BAND SCORE TOP	-----	5.33	010
WIDTH OF BAND SCORE BOTTOM	-----	5.63	010
DIAM. OF BAND	-----	16.37	005
DIAM. OF FUSE HOLE TO LEADS	-----	1.0625	SEE DETAIL

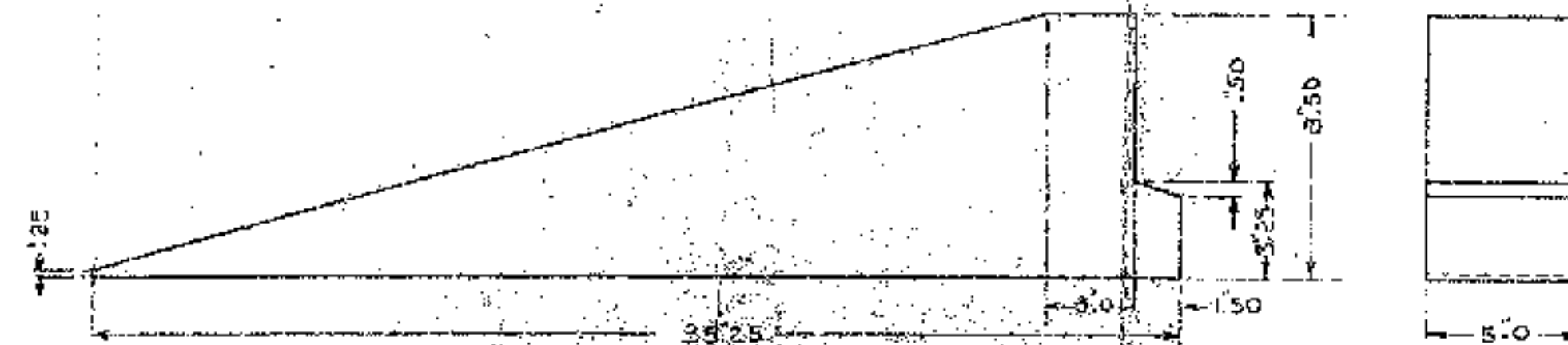
WEIGHTS		POUNDS	
PROJECTILE BODY	-----	2602.94	
ROTATING BAND	-----	42.00	
BASE PLUG	-----	20.52	
WINDSHIELD	-----	33.29	
TRACER MK. VI	-----	1.47	
GASKETS	-----	1.10	
PROJECTILE COMPLETE	-----	2700.00	* 7.0 LBS.

NOTED		
DESK	OFFICER	DATE
1	248	9/4/5
2	248	9/4/5
3	248	9/4/5
4	248	9/4/5
5	248	9/4/5
6	248	9/4/5
7	248	9/4/5
8	248	9/4/5
9	248	9/4/5
10	248	9/4/5

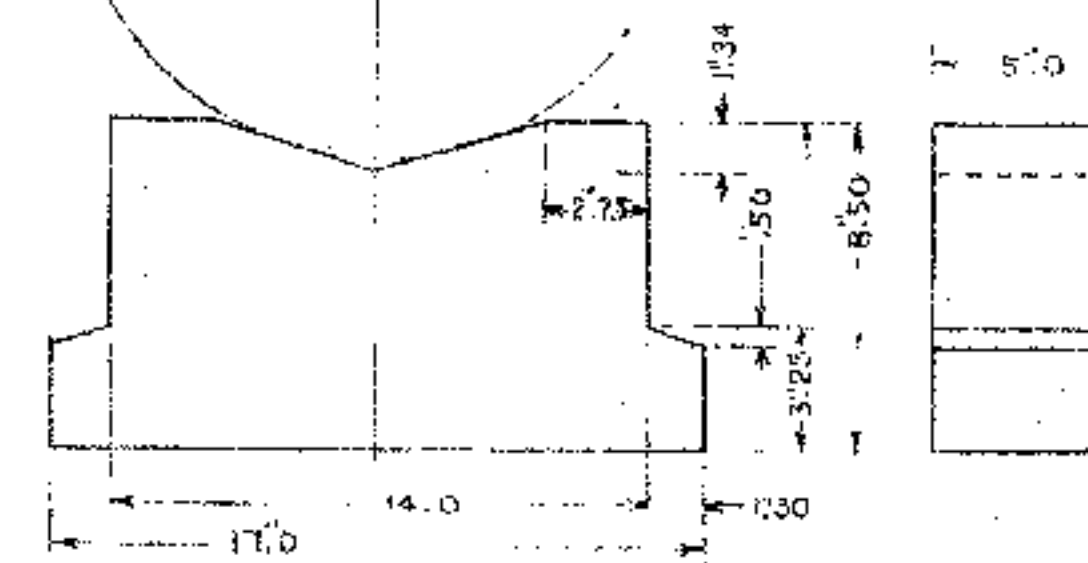
[illegible]



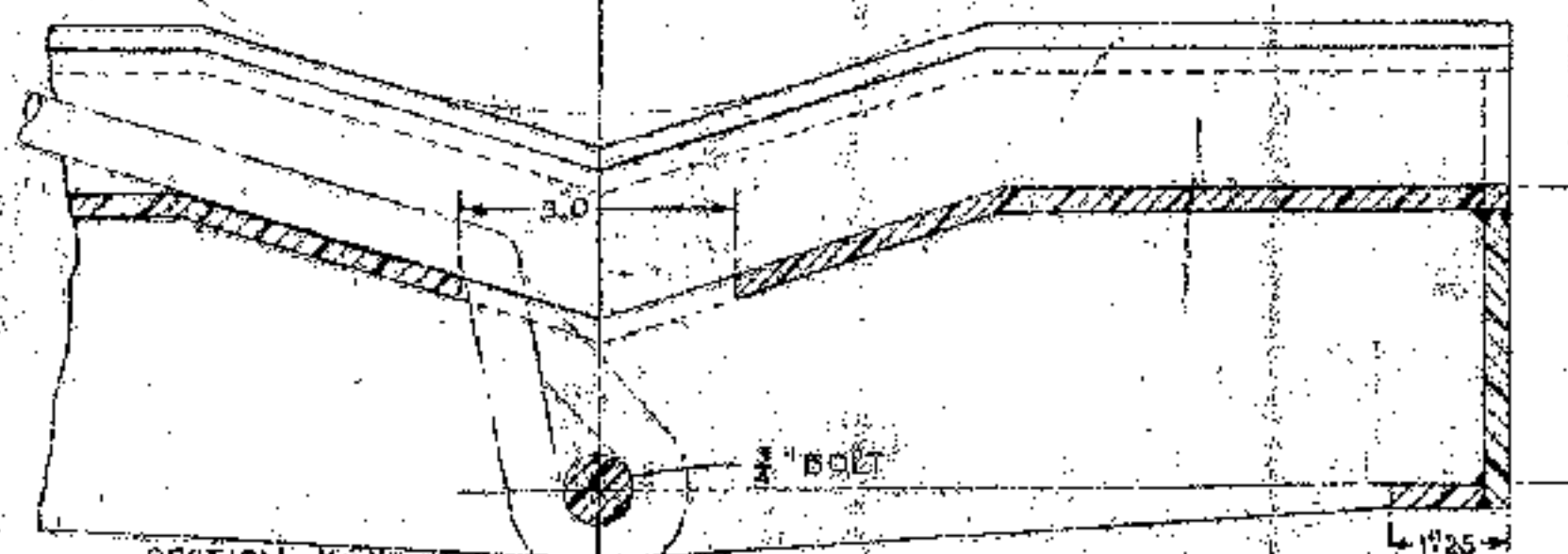
DETAIL-A 2-REQ'D.
SCALE: 1/2"



SKID BLOCK -
HARDWOOD
2-REQUIRED

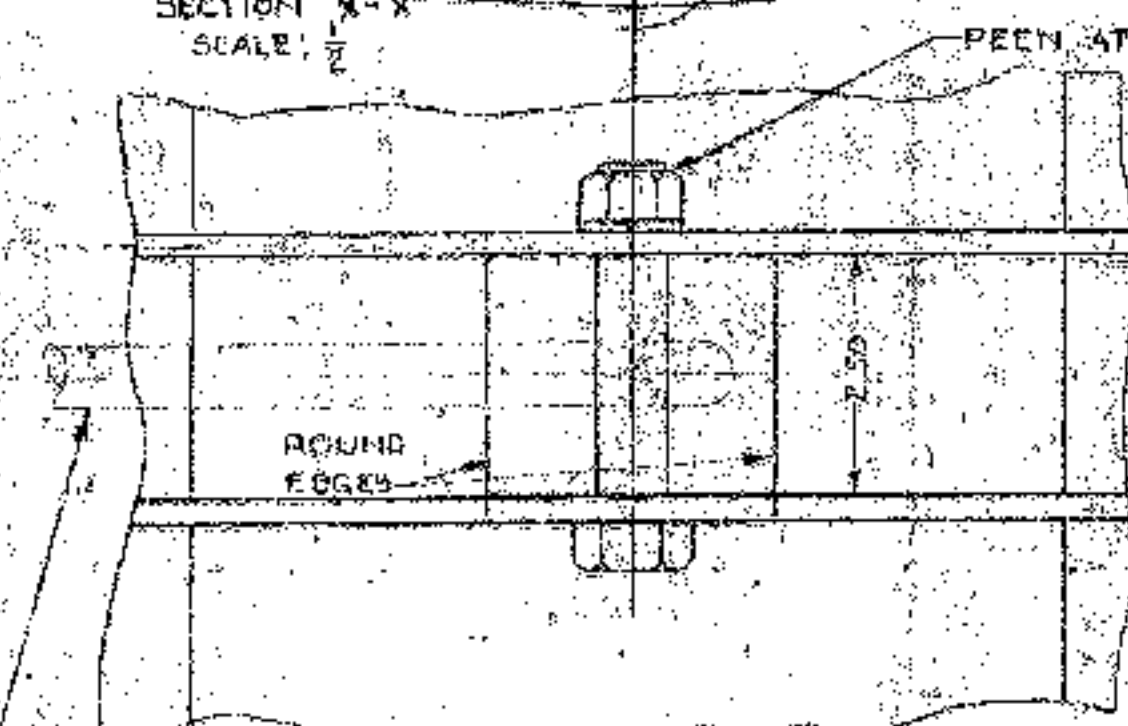


CHECK BLOCK -
HARDWOOD
NUMBER PROVIDED TO
SUIT SHIP'S REQUIREMENTS.



SECTION X-X
SCALE: 1/2"

1/4" DIA. HOLES IN
PADDING ONLY
FOR ACCESS TO
CASTER BOLTS.

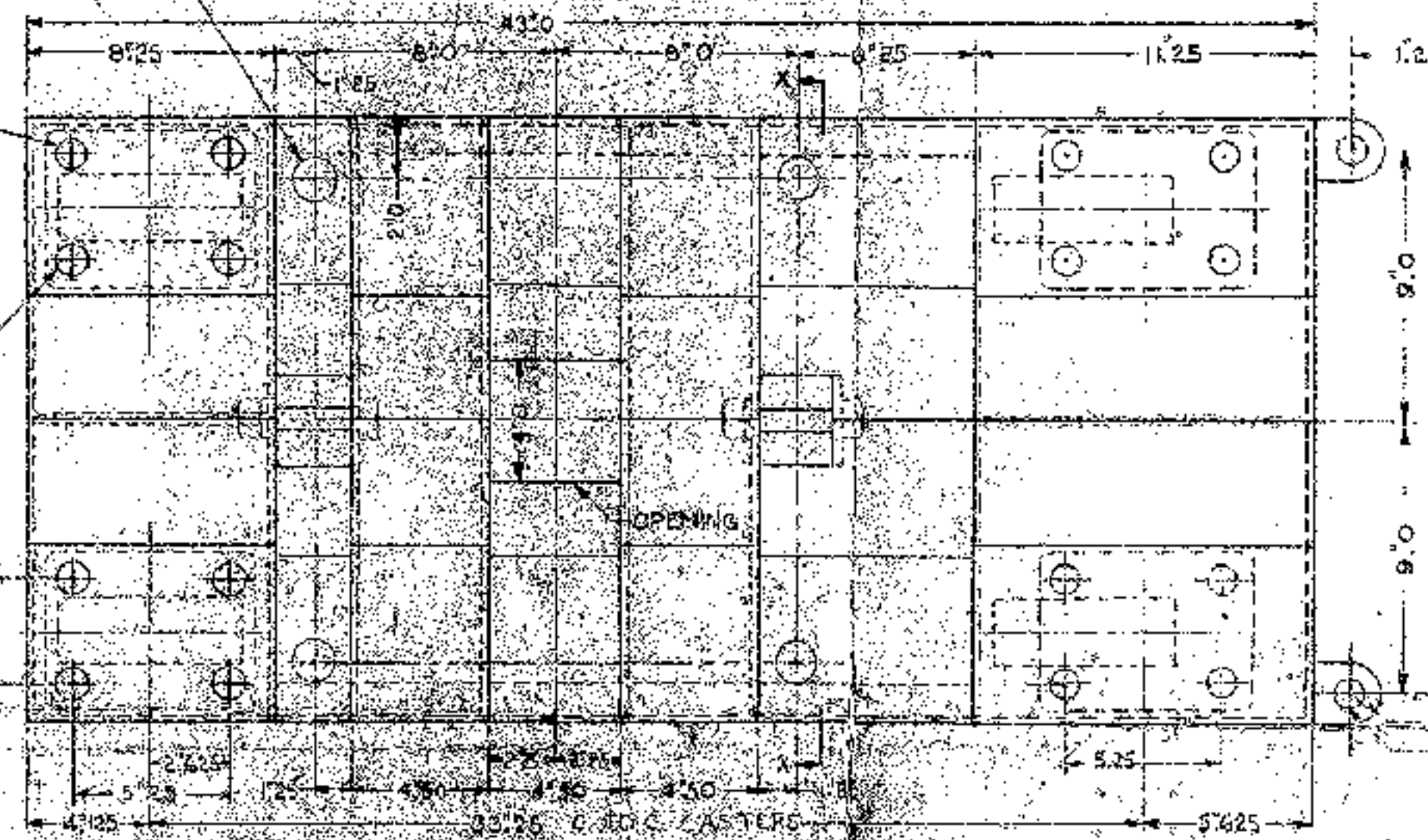


ROUND
EDGES

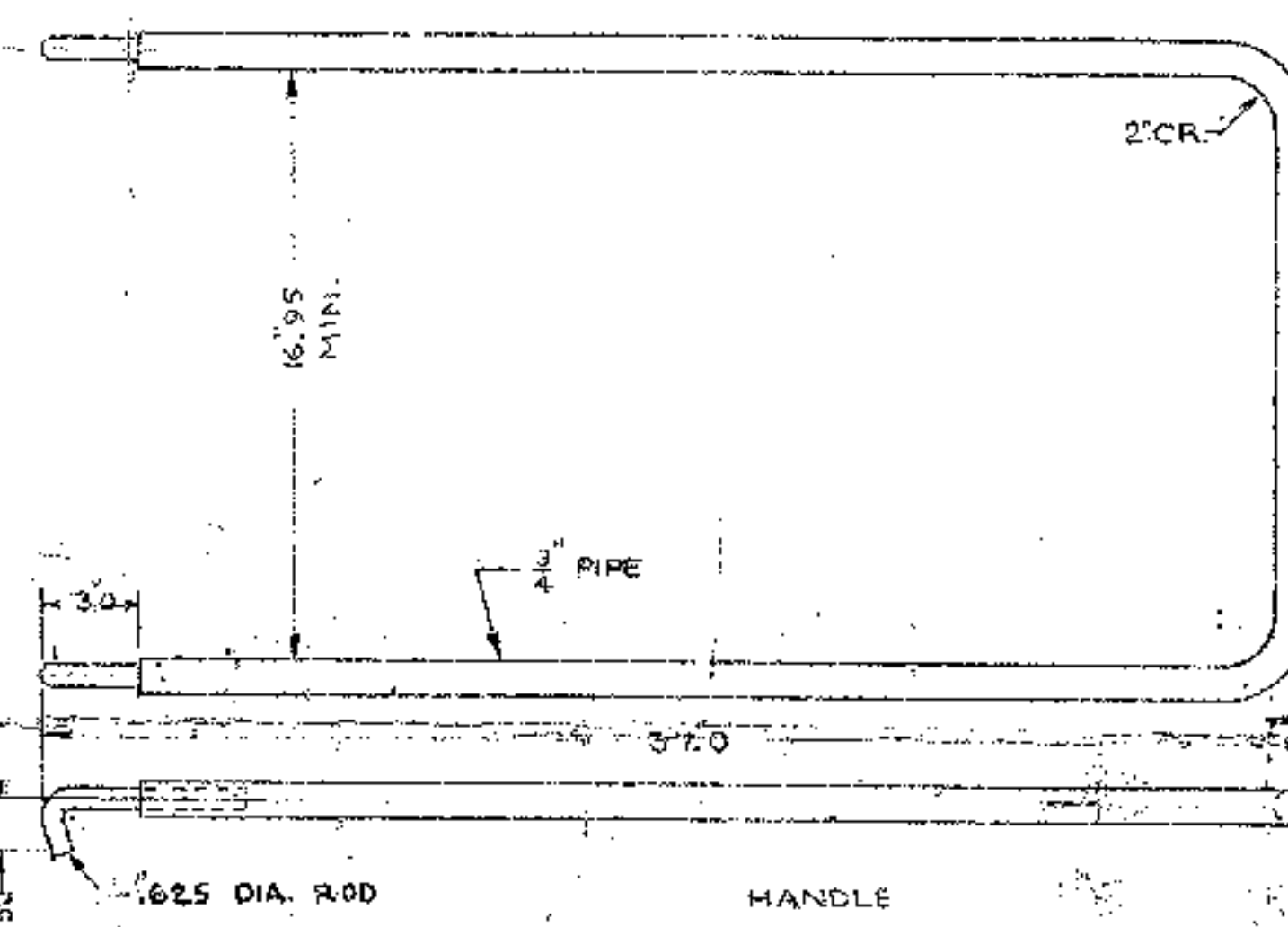
PEEN AT ASSEMBLY

BOLTS FOR ALL
CASTERS TO BE
COUNTERSUNK IN
TOP OF PLATE

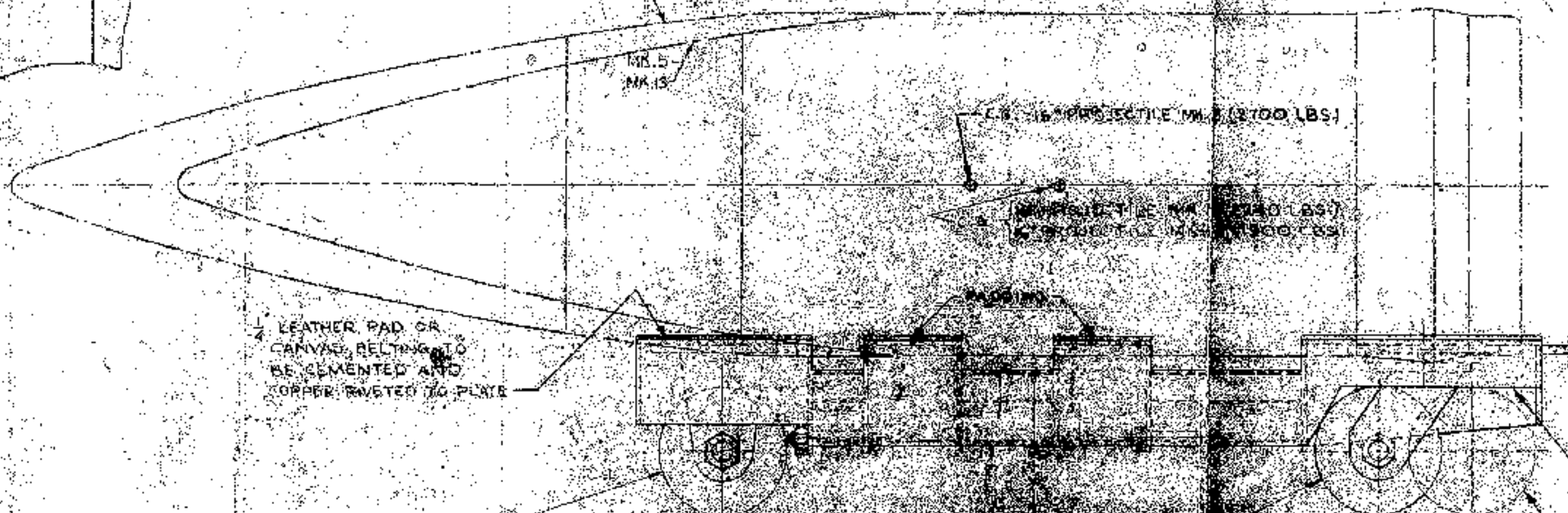
1/4" FIBRE ROPE 14'-0" LONG
TO BE FASTENED TO 1/4" BOLT
WITH THIMBLE AND ROPE BOLT.
TO BE PROVIDED BY SHIP IF DESIRED.



1/4" DIA. ROD
HANDLE



HANDLE

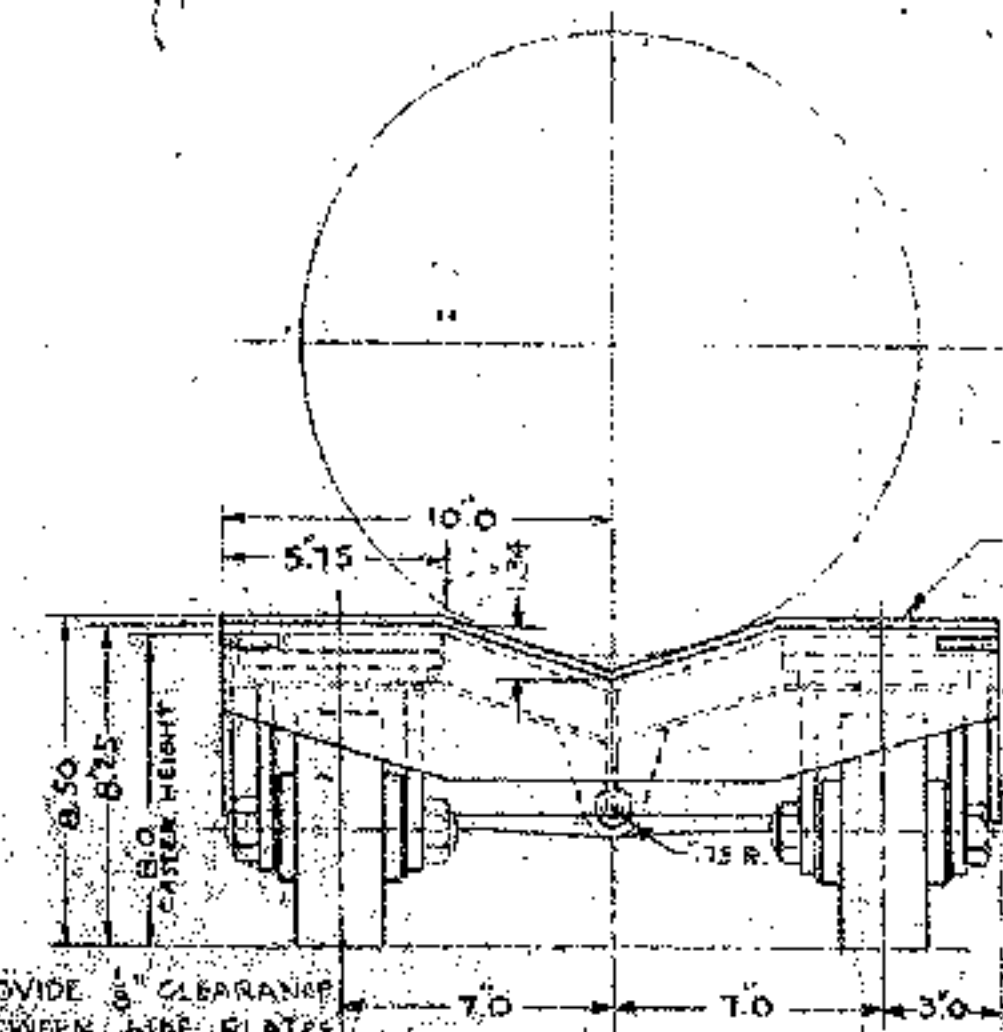


LEATHER PAD OR
CARBON RELYING TO
BE CEMENTED AND
CORNER BOLTS TO PLATE

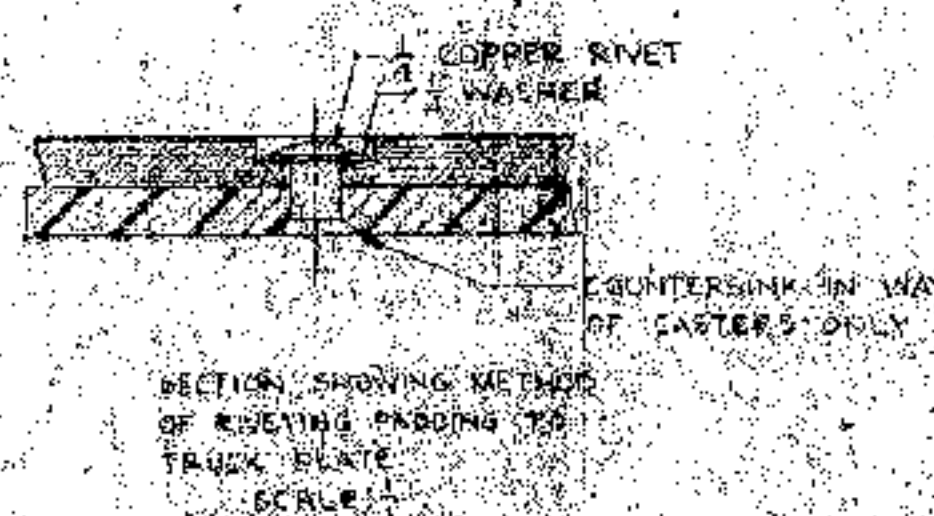
2-NO. 1/4\"/>

1/4\"/>

PROVIDE 1/4\"/>



NOTE:
ALL PLATES TO BE .25 THICK EXCEPT
AS NOTED.
REVISION BY ERASURE. (A)

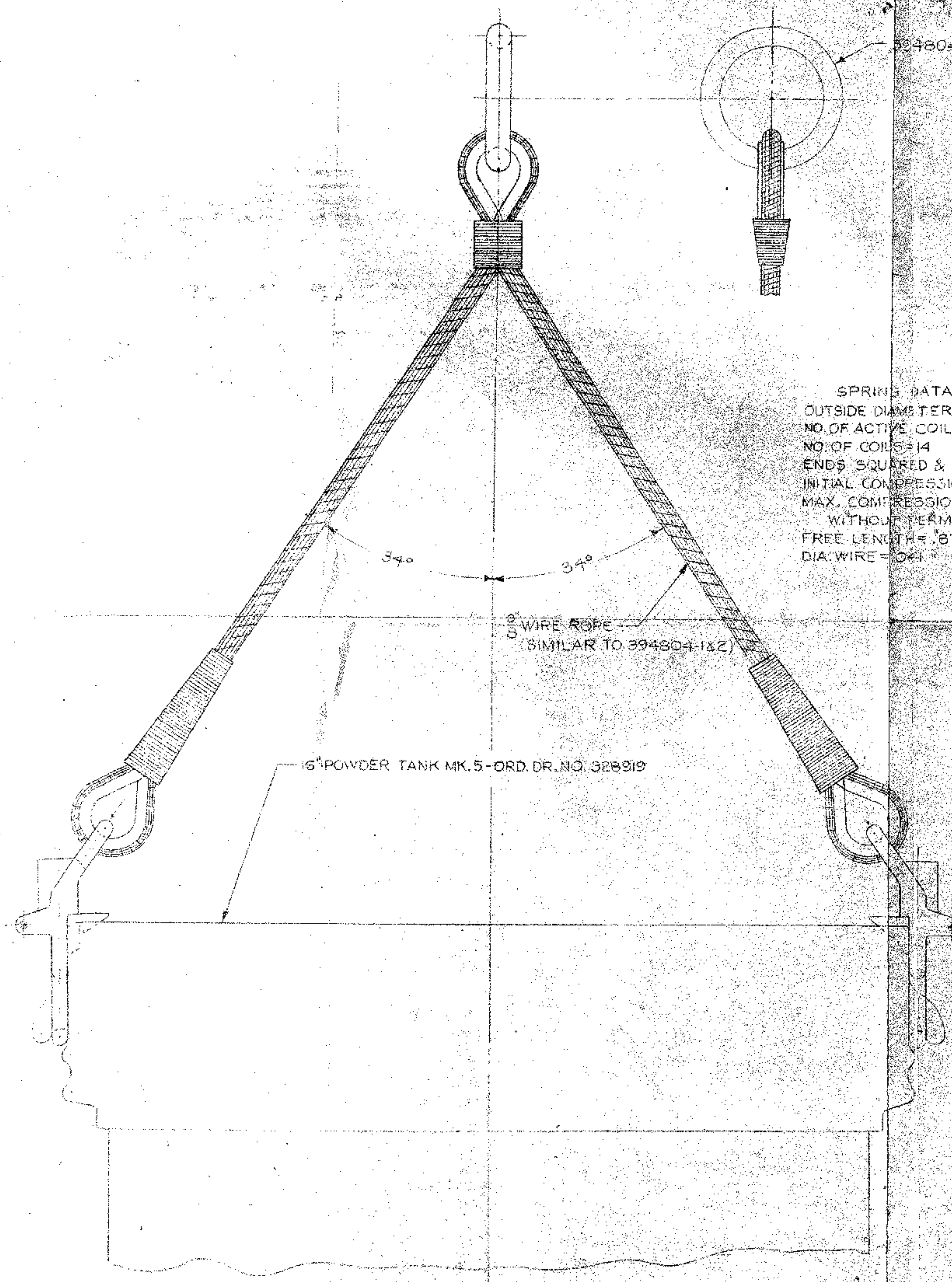


SECTION SHOWING METHOD OF
REINFORCING PADDING TO
TAKE BLUNT
SCALE

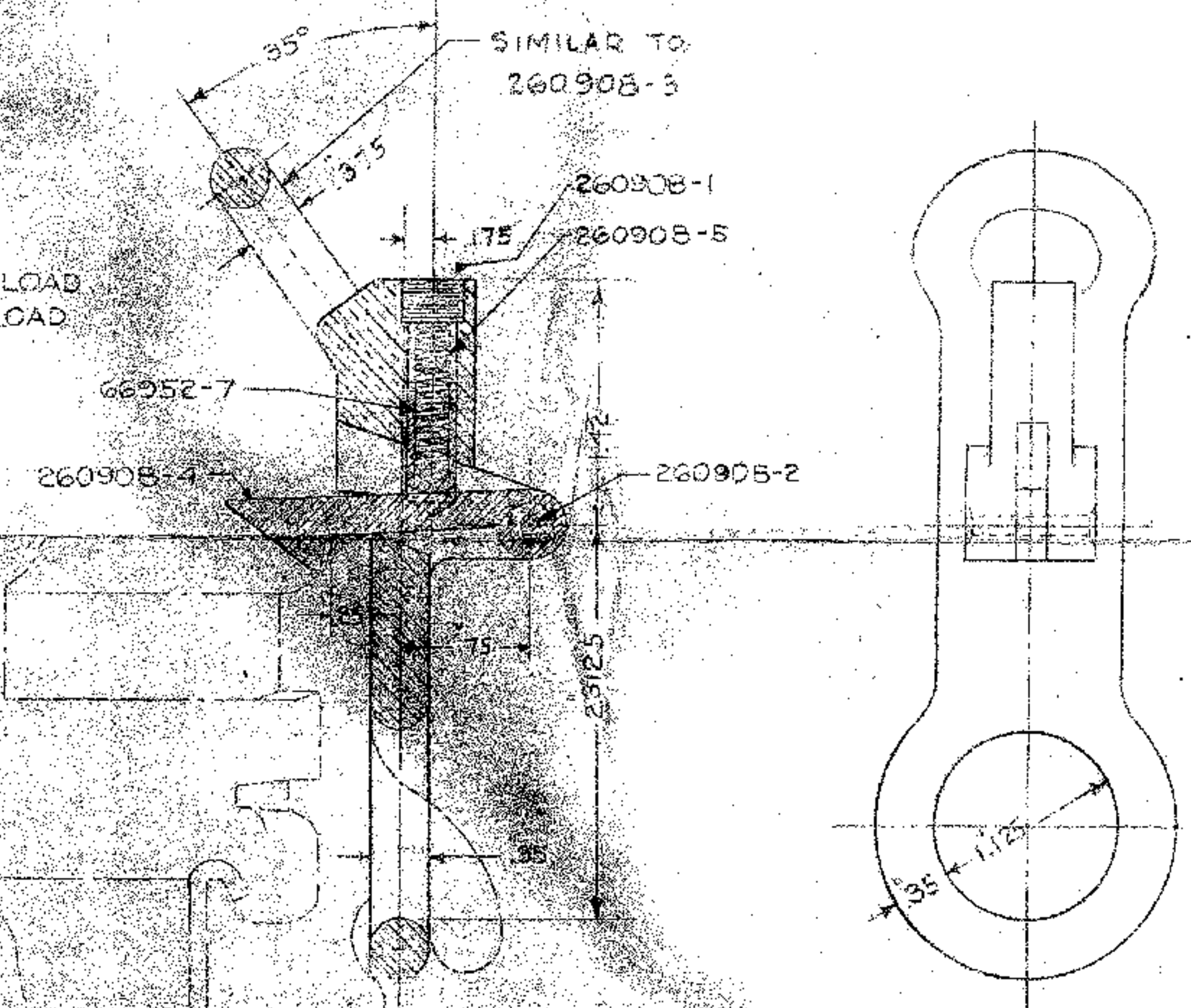
REVISIONS			PROJECTILE HANDLING TRUCK MK 4, MOD 0 (CAPACITY 2700 LBS.)	
REV.	NUMBER	DATE		
A	9021	12-15-44		
			GENERAL ARRANGEMENT REQUISITION SHEET SCALE: 1/2"	
			NAVY DEPARTMENT BUREAU OF ORDNANCE WASHINGTON, D. C. SEPTEMBER 1944	
			ACCESSORIES 140109	

WARNING: THE DISCLOSURE OF NATIONAL DEFENSE
SECRETS IS A PENAL OFFENSE PUNISH-
ABLE BY A FINE, IMPRISONMENT OR BOTH.

SK. No. 140122

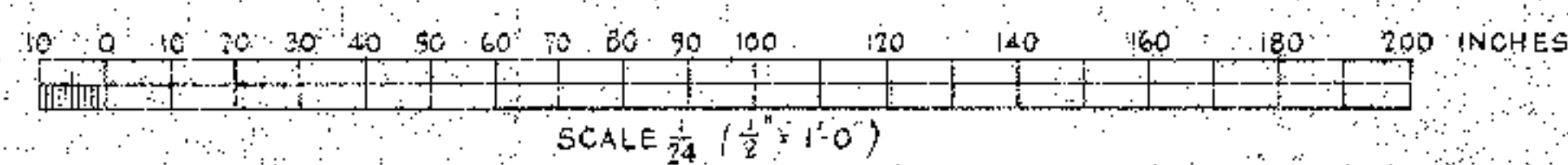
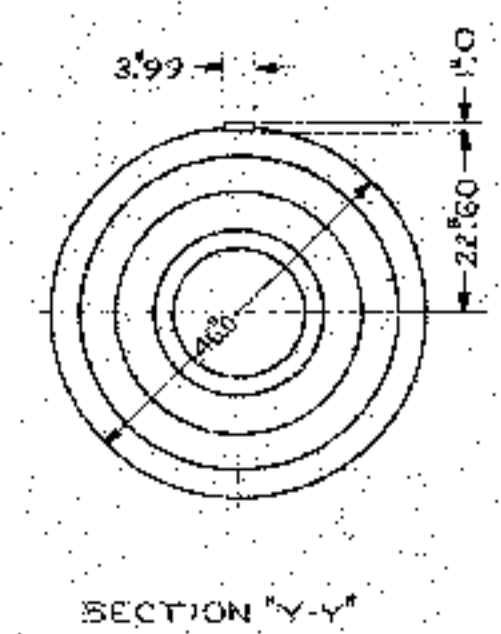
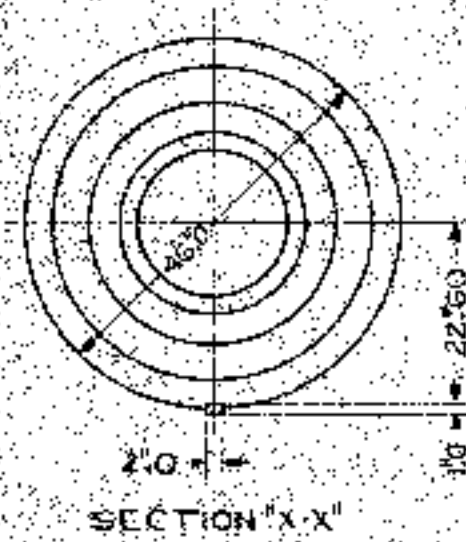
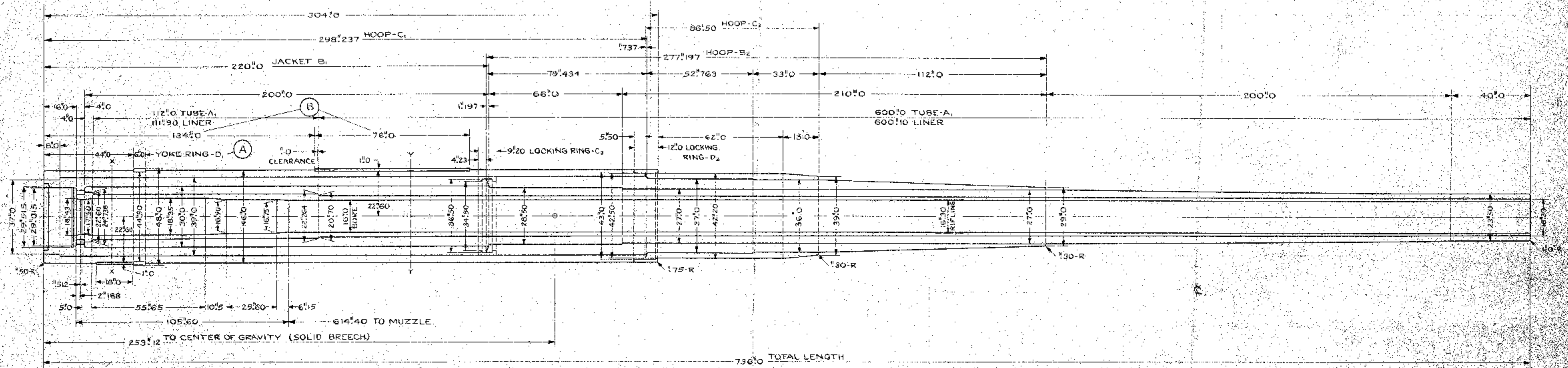


SPRING DATA
 OUTSIDE DIAMETER = .22 ± .005
 NO. OF ACTIVE COILS = 12.5
 NO. OF COILS = 14
 ENDS SQUARED & GROUND
 INITIAL COMPRESSION OF .065 = 36 LBS. LOAD
 MAX. COMPRESSION OF .275 = 16.5 LBS. LOAD
 WITHOUT PERMANENT SET.
 FREE LENGTH = .875
 DIA. WIRE = .041



DESIGN FOR THIS CARRIER ADAPTED
 FROM ORD. DR. NO. 260908,
 (PUGET SOUND NAVY YARD)

REVISIONS			16" POWDER TANK CARRIER MK. 3, MOD. 0	
LET.	NUMBER	DATE		
			GENERAL ARRANGEMENT	
			SCALE: $\frac{1}{2}$	
			NAVY DEPARTMENT BUREAU OF ORDNANCE WASHINGTON, D. C.	
			12 DECEMBER, 1944	
			BY DIRECTION OF THE CHIEF OF BUREAU	
EXAMINED			BUREAU'S FILE	CLASSIFICATION
SECTION	OFFICER OF SECTION	DATE		
PLANNING	AWA	12/14/44		
DESIGN	SPC	12/14/44		
CHIEF ENGINEER	PHG	12/13/44		
HEAD ENGINEER	QJ	12/13/44		
PRINCIPAL ENGINEER				
SENIOR ENGINEER	CHC	12/15/44		
CHECKED				
T.E.D. 12-12-44				
ENGINEER	ENG'N (NAF)			
DRAWN BY	DATE	JOB ORDER	ACCESSORIES	140122
BERRY	11-7-44	5953		



NOTE:
 WEIGHT OF GUN (BREECH SOLID) = 92310 LBS. = 35.25 TONS.
 FOR LIST OF DRAWINGS, SEE SK. NO. 58101.
 BORE TO BE CHROME PLATED FOR A DISTANCE OF 625.12 IN.
 FROM MUZZLE. PLATING TO BE FIVE TEN THOUSANDTHS
 (0.0005) OF AN INCH THICK.
 16" GUN MARK VI MOD I IS 16" GUN MK VI WITH BREECH END
 ALTERED TO PERMIT ATTACHING HINGE LUG OF BREECH
 MECHANISM TO GUN.
 FOR LIST OF DRAWINGS OF 16" GUN MK VI MOD I
 SEE SKETCH N990447.

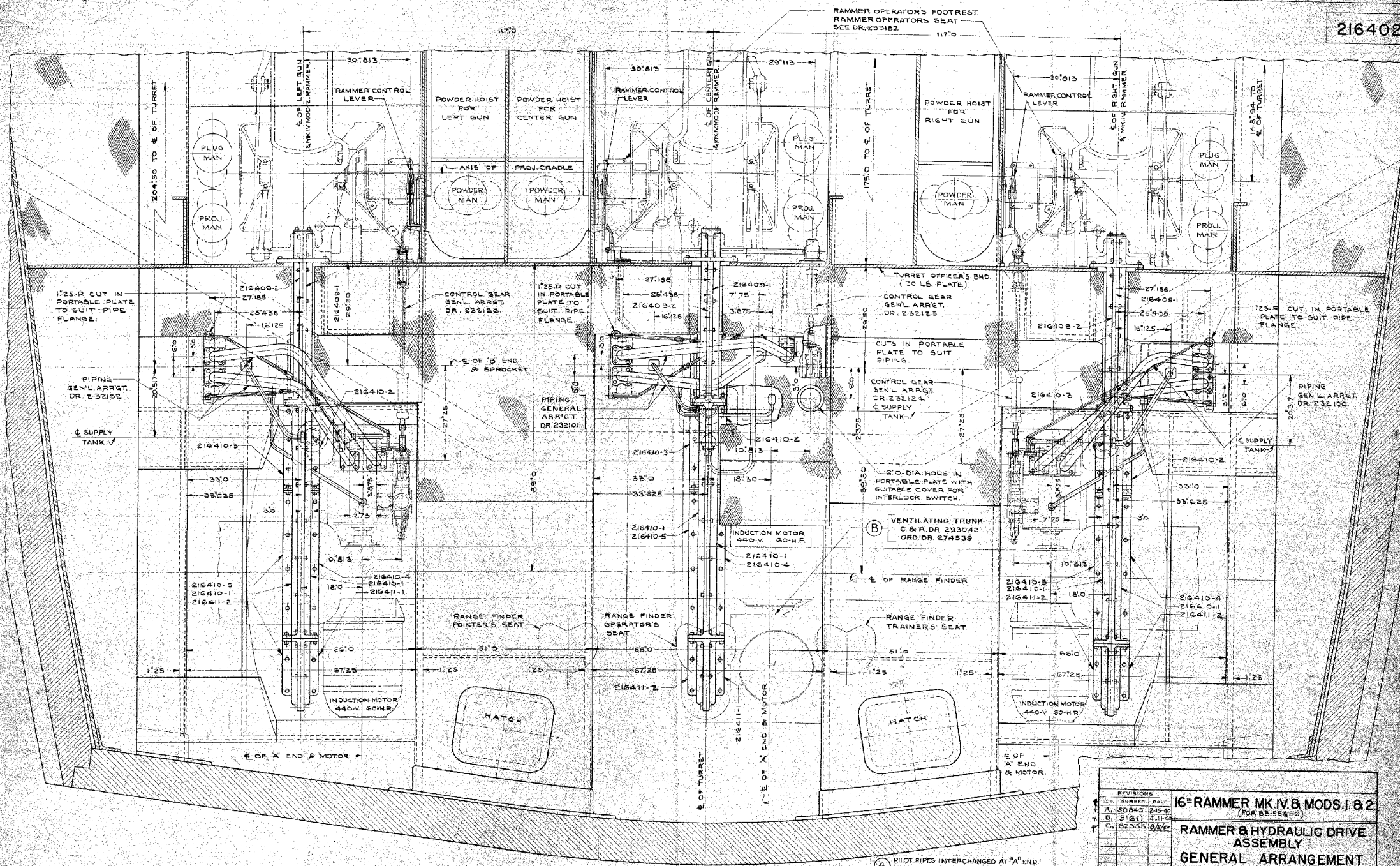
PIECE NO.	NOMENCLATURE	NO. REQ'D.	MATERIAL, QTY. SPECIFICATION NO.	REMARKS
NO. REQ'D. ARE FOR				

REVISIONS			16" GUN MARK VI (35 CALS.)
LET.	NUMBER	DATE	
A	1115	1/7/28	GENERAL ARRANGEMENT NAVY DEPARTMENT BUREAU OF ORDNANCE WASHINGTON D. C. 1928
B	1162	3/1/28	
C	1170	3/1/28	
D	1170	3/1/28	

EXAMINED	DATE	 J. H. H. H. CHIEF OF BUREAU
OFFICIAL EXAMINED	DATE	
CHECKED	DATE	 C. B. GREEN CHIEF OF BUREAU
OFFICIAL CHECKED	DATE	
DESIGNED	DATE	 C. B. GREEN CHIEF OF BUREAU
OFFICIAL DESIGNED	DATE	
CHECKED	DATE	 C. B. GREEN CHIEF OF BUREAU
OFFICIAL CHECKED	DATE	
DESIGNED	DATE	 C. B. GREEN CHIEF OF BUREAU
OFFICIAL DESIGNED	DATE	

16" GUN MARK VI MOD I 45 CALS.	CLASSIFICATION	204093
	GUNS	

216402

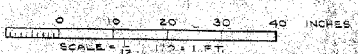


NOTE
FOR LIST OF DRAWINGS, MK. IV, RIGHT GUN, SEE SK. NO. 59230.
FOR LIST OF DRAWINGS, MK. IV MOD. 1, CENTER GUN, SEE SK. NO. 59231.
FOR LIST OF DRAWINGS, MK. IV MOD. 2, LEFT GUN, SEE SK. NO. 59232.
FOR RAMMER & HYDRAULIC DRIVE GENERAL ARRANGEMENT, ELEVATION, SEE DRAWINGS 216404, 216405 & 216406.
FOR RAMMER & HYDRAULIC DRIVE GENERAL ARRANGEMENT, SECTIONS, SEE DR. NO. 216403.
FOR RAMMER GENERAL ARRANGEMENT, ELEVATION, SEE DR. NO. 216400.
FOR RAMMER GENERAL ARRANGEMENT, SECTIONS, SEE DR. NO. 216401.

NOTE:
ALL BOLTS AND LINERS FOR SECURING ORDNANCE WORK TO THE SHIP'S STRUCTURE TO BE FURNISHED BY THE PARTIES INSTALLING THE WORK.

(A) PILOT PIPES INTERCHANGED AT "A" END. CHANGES MADE BY ERASURE.

(C) RELOCATED SUPPLY TANKS. RELOCATED CONTROL LEVERS. CHANGES MADE BY ERASURE. ADDED SEAT & FOOT REST FOR RAMMER OPERATOR.



REVISIONS		16" RAMMER MK. IV B MODS. 1 & 2 (FOR 25-55 & 56)	
NO.	DATE	BY	REASON
1	216402	216402	
2	216402	216402	
3	216402	216402	
4	216402	216402	

RAMMER & HYDRAULIC DRIVE ASSEMBLY GENERAL ARRANGEMENT PLAN

SCALE 1/4" = 1'-0"

U.S. NAVAL GUN FACTORY
WASHINGTON, D. C.
JUN 1942

BY: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]

ASSEMBLY 216402

TRAINING BRAKE L.H.
FURNISHED BY
WATERBURY TOOL CO.

TRAINING GEAR OIL
EXPANSION TANK
FURNISHED BY
WATERBURY TOOL CO.

WATERBURY TOOL CO.

ELEVATING GEAR OIL EXPANSION TANK
(CENTER GUN) FURNISHED BY WATERBURY
TOOL CO.

ELEVATING GEAR OIL EXPANSION TANK (R.H.GUN)
FURNISHED BY WATERBURY TOOL CO.

ELEVATING GEAR OIL EXPANSION
TANK FURNISHED BY WATERBURY
TOOL CO.

POWER FAILURE VALVE
(ELEV.) FURNISHED BY
WATERBURY TOOL CO.

POWER FAILURE VALVE
(TRAIN) FURNISHED BY
WATERBURY TOOL CO.

POWER FAILURE VALVE
(ELEV.) FURNISHED BY
WATERBURY TOOL CO.

POWER FAILURE VALVE (ELEV.)
FURNISHED BY WATERBURY
TOOL CO.

NOTE:
FOR LIST OF DRAWINGS OF:
16^{IN} ELEVATING GEAR MK.IV MOD.3,
SEE SK. NO. 61881.
16^{IN} ELEVATING GEAR MK.IV MOD.4,
SEE SK. NO. 61882.
16^{IN} ELEVATING GEAR MK.IV MOD.5,
SEE SK. NO. 61883.
16^{IN} TRAINING GEAR MK.I MOD.1,
SEE SK. NO. 61885.
FOR GENERAL ARRANGEMENT, PLAN VIEW
ELECTRIC DECK, SEE DR. NO. 231623.
FOR GENERAL ARRANGEMENT, TRANSVERSE
SECTION LOOKING FORWARD, SEE DR. NO. 231624.
FOR GENERAL ARRANGEMENT, TRANSVERSE
SECTION LOOKING TO REAR, SEE DR. NO. 231625.
FOR GENERAL ARRANGEMENT, LONGITUDINAL
SECTION R.H. GUN, SEE DR. NO. 231626.
FOR GENERAL ARRANGEMENT, LONGITUDINAL
SECTION R.H. BOX GIRDER, SEE DR. NO. 231627.
FOR GENERAL ARRANGEMENT, LONGITUDINAL
SECTION CENTER GUN, SEE DR. NO. 231628.
FOR GENERAL ARRANGEMENT, LONGITUDINAL
SECTION L.H. GUN, SEE DR. NO. 231629.
FOR GENERAL ARRANGEMENT, LONGITUDINAL
SECTION L.H. BOX GIRDER, SEE DR. NO. 232109.

0 10 20 30 40 INCHES
SCALE - $\frac{1}{12}$ 1" = 1 FT.

FOR GENERAL ARR'GT
OF OSCILLATING BEARING
SEE DR. NO. 216424

SPEED GEAR "B" END
(TRAINING) WITH
RESPONSE FURNISHED
BY WATERBURY TOOL CO.

FOR GENERAL ARR'GT
OF OSCILLATING BEARING
SEE DR. NO. 216424

SPEED GEAR "B" END
(ELEV.) FURNISHED BY
WATERBURY TOOL CO.

FOR GENERAL ARR'GT
OF OSCILLATING BEARING
SEE DR. NO. 216425

SPEED GEAR "B" END
(TRAINING) WITHOUT
RESPONSE FURNISHED
BY WATERBURY TOOL CO.

SEE DR. NO. 231624

SEE DR. NO. 231625

SEE DR. NO.
231629

SEE DR. NO.
232109

SEE DR. NO.
231628

SEE DR. NO.
231627

SEE DR. NO.
231626

16^{IN} ELEV. GEAR MK.IV MODS.3,4,5
16^{IN} TRAINING GEAR MK.I MOD.1

GENERAL ARRANGEMENT
PLAN VIEW PAN FLOOR

SCALE: $\frac{1}{12}$



U.S. NAVAL GUN FACTORY
WASHINGTON, D.C.
28 MAR 1940

COMDR., U.S.N.

EXAMINED
PRINCIPAL ENGINEER
SENIOR ENGINEER
CHECKED
N. HERMAN
M. MEERKINS
6-22-39
DRAWN BY
JOB ORDER 8171-E & W

BUREAU'S FILE
BB57-60/572(TI-112)
N. G. F. FILE
972/BB.(358)

CLASSIFICATION
ASSEMBLIES

DRAWING NO.
231622

SECTION TAKEN 36" ABOVE THE PAN FLOOR

