

159 A-57

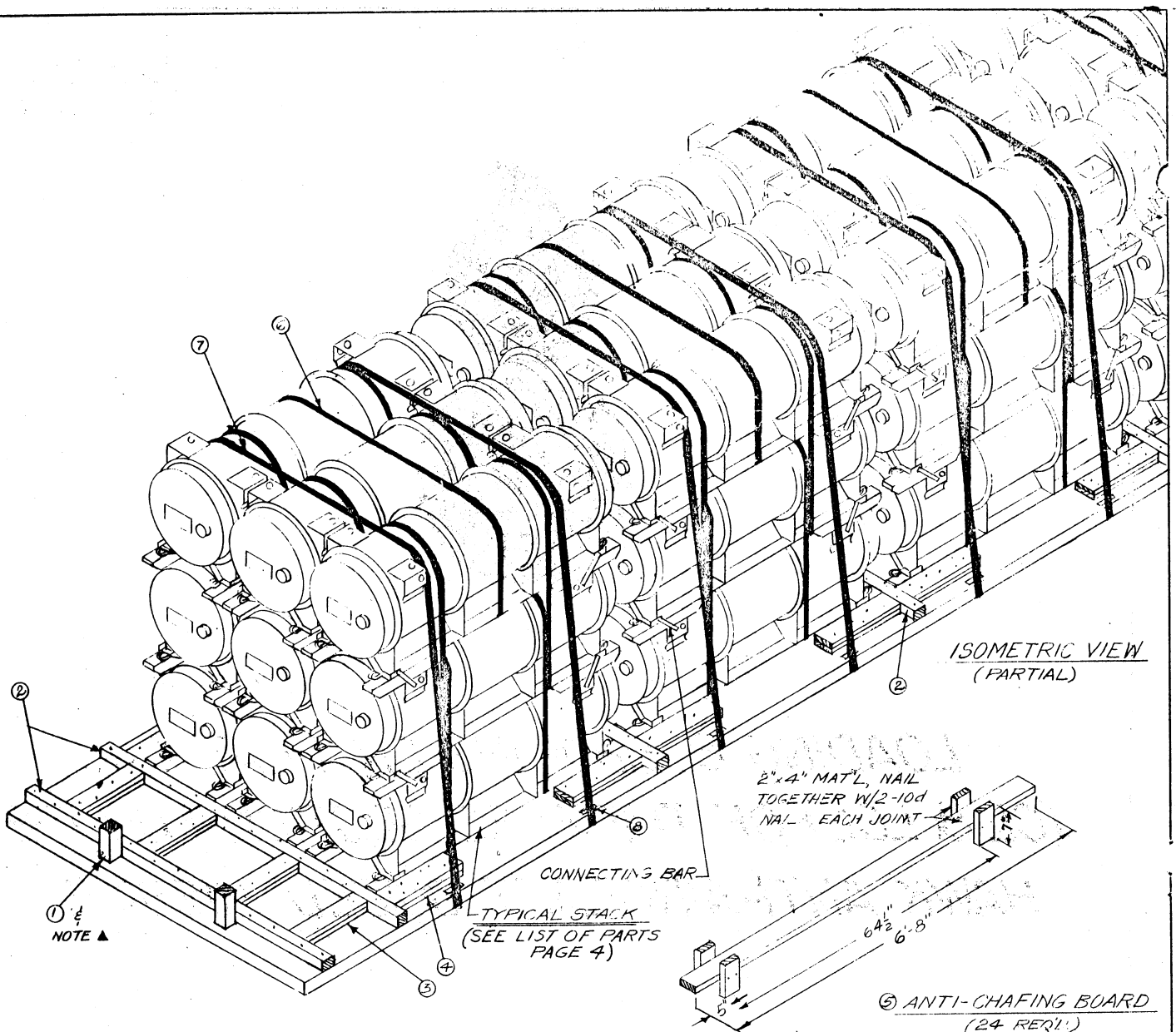
APPROVED
BUREAU
OF
EXPLOSIVES
W. J. Brassmuck
DATE 2/17/58 INSPECTOR



LOADING & BRACING ON FLAT CAR (CL & LCL) OF THE FORE SECTION FOR THE HAWK ANTI-AIRCRAFT GUIDED MISSILE

LOADING & BRACING ON FLAT CAR (CL & LCL) OF THE FORE SECTION FOR THE HAWK ANTI- AIRCRAFT GUIDED MISSILE

DRAWN BY <i>WAS</i>	TRACED	ENGINEER <i>CRT</i>	IDENTIFIED <i>WAS</i>
CHECKED <i>CRT</i>	CHECKED <i>D</i>	ENGINEER	COL. ORD. CORPS U.S.A.
REVISIONS			EXAMINED <i>Donald C. Koshin</i>
			ORD. CORPS U.S.A.
			APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>W. J. Brassmuck</i>
			ORD. CORPS U.S.A.
			ORDNANCE CORPS U.S.A.
			5 MARCH 1958
CLASS	DIVISION	DRAWING	FILE
19	48	5357	GM5A55



ISOMETRIC VIEW
(PARTIAL)

2" x 4" MAT'L, NAIL
TOGETHER W/ 2-10d
NAL. EACH JOINT

CONNECTING BAR

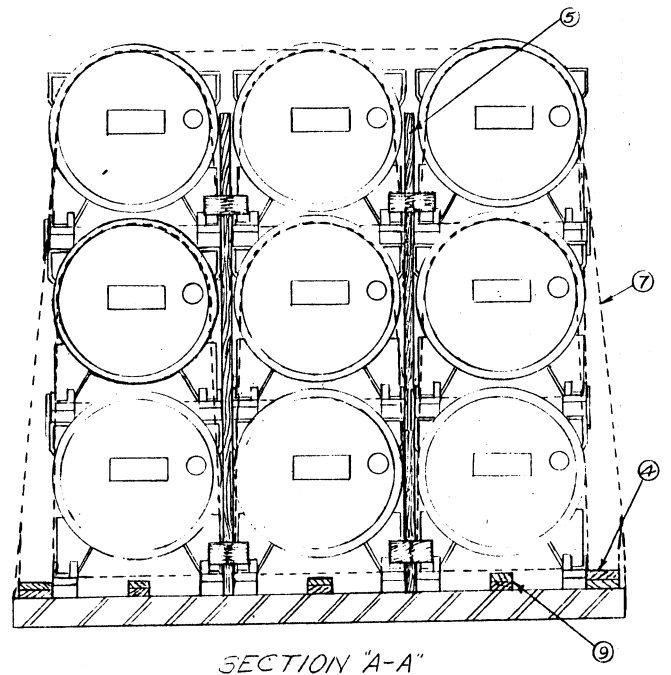
TYPICAL STACK
(SEE LIST OF PARTS
PAGE 4)

NOTE ▲

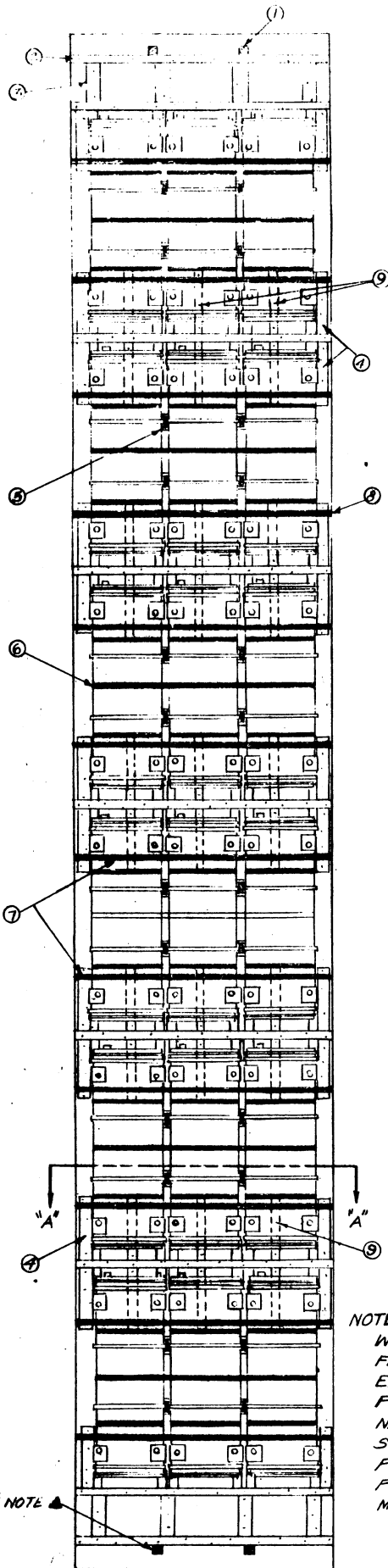
ANTI-CHAFING BOARD
(24 REQ'D)

KEY NUMBERS & NOTES (CL)

- ① STUB STAKE SIZE TO FIT STAKE POCKET, CUT TO EXTEND APPROX. 9" ABOVE CAR FLOOR AND 3" BELOW STAKE POCKET. DRIVE 1-50d NAIL BELOW POCKET ALLOWING APPROX. 1" TO PROTRUDE, THIS WILL PREVENT STAKE FROM WORKING OUT OF PLACE. (4 REQ'D)
- ② 4" x 4" x CAR WIDTH (9 REQ'D) NAIL TO CAR FLOOR W/ 1-50d NAIL EVERY 8"
- ③ 2" x 6" CUT TO FIT (DOUBLED). (8 REQ'D) NAIL BOTTOM PIECE TO FLOOR W/ 1-16d NAIL EVERY 4". NAIL TOP PIECE TO BOTTOM IN LIKE MANNER.
- ④ 2" x 6" x 24" (DOUBLED) SIDE BLOCKING (24 REQ'D). NAIL BOTTOM PIECE TO FLOOR W/ 6-16d NAILS. NAIL TOP PIECE TO BOTTOM IN LIKE MANNER.
- ⑤ ANTI-CHAFING BOARD (SEE DETAIL) ASSEMBLE AND PREPOSITION AS LOADING PROGRESSES.
- ⑥ 1 1/2" x .035" x APPROX. 21'-0" STEEL STRAPPING (6 REQ'D)
- ⑦ 2" x .050" x APPROX. 24'-6" STEEL STRAPPING (12 REQ'D)
- ⑧ STAKE POCKET PROTECTOR (24 REQ'D) SIGNODE NO. 1 OR EQUAL. POSITION BETWEEN STRAPPING AND EDGE OF STAKE POCKET.
ALT: 2" x .050" STAPPING 18" LONG, BEND TO FIT (24 REQ'D)
- ⑨ 2" x 4" x 24" (DOUBLED) BACKUP CLEATS (30 REQ'D) PREPOSITION AS LOADING PROGRESSES. NAIL BOTTOM PIECE TO FLOOR W/ 1-16d NAIL EVERY 4". NAIL TOP PIECE TO BOTTOM IN LIKE MANNER.



SECTION "A-A"



PLAN VIEW

BILL OF MATERIAL (CL)		
LUMBER	LINEAL FEET	BOARD FEET
2" x 4"	336	224
2" x 6"	132	132
4" x 4"	84	112
NAILS - 10d - APPROX. 192 REQ'D -		3 LBS.
16d - APPROX. 466 REQ'D -		10 1/2 LBS.
50d - APPROX. 117 REQ'D -		9 LBS.
STEEL STRAPPING - 1 1/2" x .035" - APPROX. 126' REQ'D -		18 LBS.
2" x .050" - APPROX. 294' REQ'D -		98 LBS.

MATERIAL SPECIFICATION

LUMBER: SEE PAR. 8400, ORDM 3-4, VOL. 3 DATED 1 JULY 1955.
 NAILS: COMMON CEMENT COATED, FED. SPEC. FF-N-105
 ALT.- ANNULAR-RING TYPE NAILS OF SAME SIZE
 STRAPPING: STEEL, TYPE I, CLASS A ORC, FED. SPEC. QQ-S-781.

GENERAL NOTES

- A. LOAD AS SHOWN IS BASED ON A FLAT CAR HAVING DIMENSIONS OF 50'-0" L. x 8'-6" WIDE.
- B. NOTICE: SHIPMENTS WILL BE POSITIONED IN THE RAILCAR IN COMPLIANCE WITH THE WEIGHT DISTRIBUTION REQUIREMENTS OF THE AAR. THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE RAILCAR CONCERNED OR THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN FOR FULL OR PARTIAL CAR LOAD MUST BE FOLLOWED FOR BLOCKING, BRACING AND STAYING OF THIS ITEM.
- C. SELECTION OF RAILCARS FOR TRANSPORT OF ITEMS WILL BE IN ACCORDANCE WITH PAR. 8,300.6 OF ORDM 3-4, VOL II.
- D. ONLY CARS WITH "SOUND" FLOORS WILL BE USED. CARS WITH STEEL FLOOR ENDS AND/OR EXPOSED STEEL BOLSTERS WILL NOT BE USED.
- E. CNTR SIZE - 86 1/2" L. x 28 1/2" W x 33 3/4" H
 GROSS WT. - 700 LBS.
 FOR DETAILS OF CNTR SEE DWG NO. _____

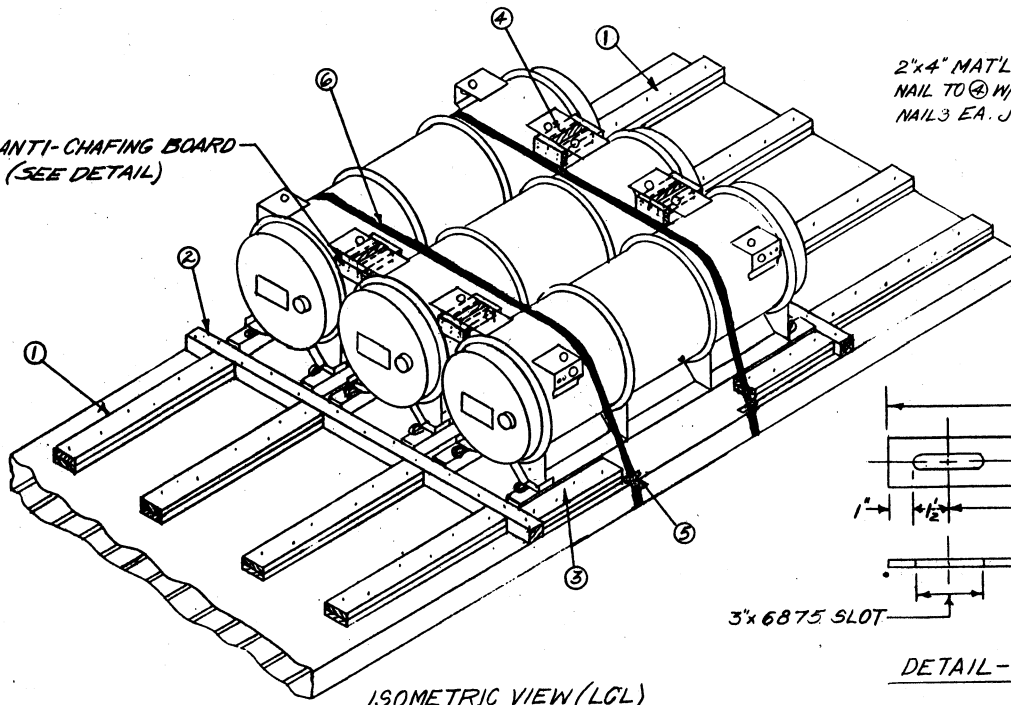
NOTE ▲
 WHEN LOADING FLATCARS WITHOUT END STAKE POCKETS, ELIMINATE END STUB STAKES AND END PCS. ② LENGTHEN PCS ③ TO A MINIMUM OF 36".

SEE NOTE ▲

<u>LOAD AS SHOWN</u>	
CONTAINERS - 54 -	37,800 LBS.
DUNNAGE -	1,503 LBS.
TOTAL -	39,303 LBS.

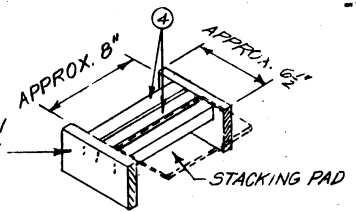
DO NOT SCALE

ANTI-CHAFING BOARD
(SEE DETAIL)

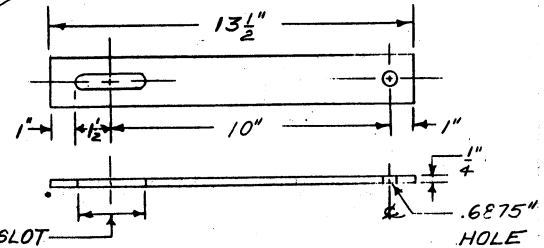


ISOMETRIC VIEW (LCL)

2"x4" MAT'L.
NAIL TO ⊕ W/2-10d
NAIL 3 EA. JOINT.



ANTI-CHAFING BOARD
(4 REQ'D)



DETAIL-CONNECTING BAR

KEY NUMBERS

- ① 2"x6"x48" (DOUBLED) (8 REQ'D) POSITION AS SHOWN. NAIL BOTTOM PIECE TO FLOOR W/1-10d NAIL EVERY 8". NAIL TOP PIECE TO BOTTOM IN LIKE MANNER.
- ② 4"x4"x CAR WIDTH (2 REQ'D) NAIL TO CAR FLOOR W/1-50d NAIL EVERY 8".
- ③ 2"x6"x24" SIDE BLOCKING (DOUBLED) (4 REQ'D) NAIL BOTTOM PIECE TO FLOOR W/4-16d NAILS. NAIL TOP PIECE TO BOTTOM IN LIKE MANNER.
- ④ 2"x2"x8" (12 REQ'D) POSITION AS SHOWN.
- ⑤ STAKE POCKET PROTECTOR (SIGNODE NO. 1) OR EQUAL. (4 REQ'D) POSITION BETWEEN STRAPPING AND EDGE OF STAKE POCKET.
ALT. - 2"x.050" STRAPPING 18" LONG, BEND TO FIT (4 REQ'D)
- ⑥ STEEL STRAPPING, 2"x.050" x APPROX. 13'-0" LONG (2 REQ'D) POSITION AS SHOWN.

NOTE:

- EACH GROUP OF THREE (3) CONTAINERS REQUIRES:
 1. EIGHT (8) CONNECTING BARS SECURED IN PLACE BY SIXTEEN (16) BOLTS 5/8" DIA. (SEE LIST OF PARTS.)
 - SIXTEEN (16) NUTS (SEE LIST OF PARTS)
 2. 1.25" STEEL STRAPPING AS SHOWN IN TYPICAL STACK.

NOTE:

- HOLES MAY BE "BURNED" THRU CONNECTING BAR THEN ENLARGED TO .6875" WITH A "BRIDGE" TYPE
- N.B. LOCK WASHERS WILL NOT USED.

LUMBER	LINEAL FEET	BOARD FEET
2"x2"	8	6
2"x4"	5	4
4"x4"	17	23
2"x6"	80	80
NAILS - 10d - APPROX. 24 REQ'D.		1/2 LB.
16d - APPROX. 160 REQ'D.		3 1/2 LBS.
50d - APPROX. 26 REQ'D.		2 LBS.
STEEL STRAPPING - 2"x.050" - APPROX. 26'-0" REQ'D - 9 LBS.		

LIST OF PARTS PER UNIT (STACK)

LINE NO.	NAME OF PARTS	NO. REQ'D	PC. MK. OR D. PART NO.	MATERIAL				RE-MARKS
				SIZE OR FORM	KIND	GRAN.	SPEC. NO. (DWG. NO.)	
1	SCREW, CAP	16	225910	5/8-18-UNF-2A	STEEL ALLOY		BUBX31	PLAIN FINISH
2	NUT, CASTLE	16	218469	5/8-18-UNF-2A	STEEL ALLOY		BUNX11	PLAIN FINISH
3	WASHER	16	221440	5/8	STEEL, CORROSION RESISTANT	LIGHT SERIES	BEBX1	PLAIN
4	PIN, COTTER	16	590492	1/8 x 2"	STEEL, CORROSION RESISTANT		BFA331	SPLIT*
5	BAR, CONNECTING	8		2 x 1/2 x 13 1/2	STEEL, HOT ROLLED		WD1010	57-130
6	STRAPPING	4		1.25 x .035"	STEEL		TYPE 1 CLASS A OR C	QQ-5-781 12'-6"

MATERIAL SPECIFICATIONS

LUMBER: SEE PAR. 8400, ORDM 3-4, VOL. 3, DATED 1 JULY 1955.
 NAILS: COMMON, CEMENT COATED, FED. SPEC. FF-N-101
 ALT. ANNULAR-RING TYPE NAILS OF SAME SIZE
 STRAPPING, STEEL: 2"x.050" TYPE 1, CLASS A OR C, FED. SPEC. QQ-5-781.

* ALTERNATE: DOUBLE "LOCK NUTS" MAY BE SUBSTITUTED FOR CASTLE NUTS AND COTTER PINS.