LOADING AND BRACING ON FLAT BED OR "LOW-BOY" TRAILER OF CALIBRATION ELECTRONIC EQUIPMENT MOUNTED ON A 5-TON TRUCK, M820A2

CAUTION: LOAD AS SHOWN MAY REQUIRE "CLEARANCE" CONSIDERATION BECAUSE OF EXCESSIVE LADING SIZE.

REVISIONS			
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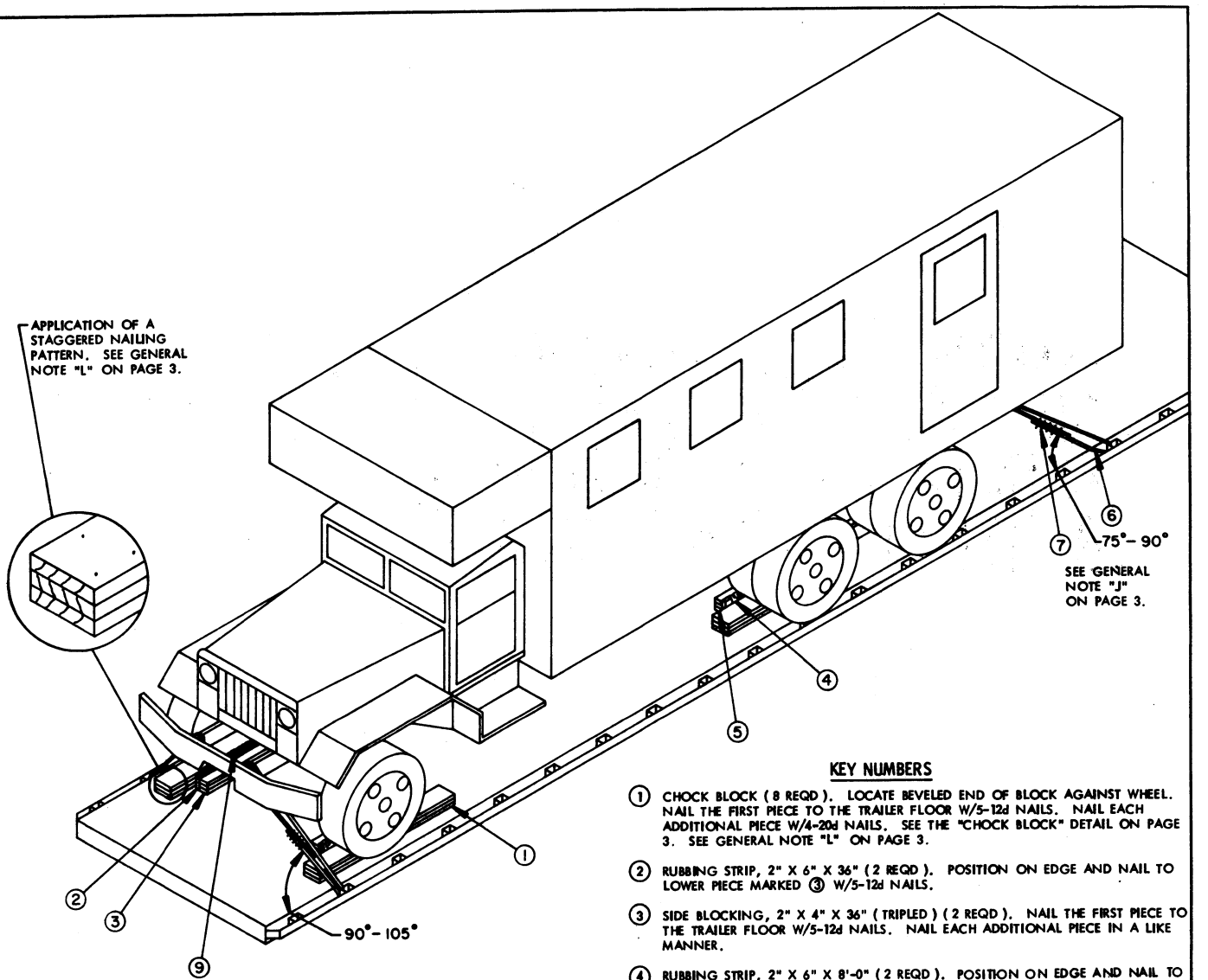
U.S. ARMY AMC DRAWING

OCTOBER 1985

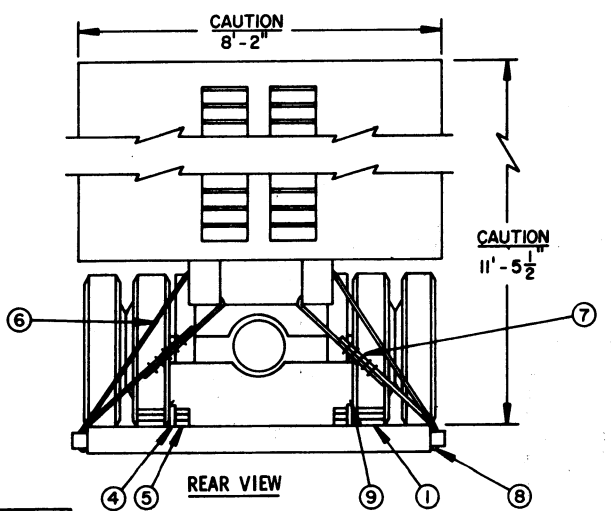
CLASS	DIVISION	DRAWING	FILE
19	48	7613	IIMS2

DO NOT SCALE

PROJECT GSE 685-85



ISOMETRIC VIEW



KEY NUMBERS

(1) CHOCK BLOCK (8 REQD). LOCATE BEVELED END OF BLOCK AGAINST WHEEL. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/5-12d NAILS. NAIL EACH ADDITIONAL PIECE W/4-20d NAILS. SEE THE "CHOCK BLOCK" DETAIL ON PAGE 3. SEE GENERAL NOTE "L" ON PAGE 3.

(2) RUBBING STRIP, 2" X 6" X 36" (2 REQD). POSITION ON EDGE AND NAIL TO LOWER PIECE MARKED (3) W/5-12d NAILS.

(3) SIDE BLOCKING, 2" X 4" X 36" (TRIPLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/5-12d NAILS. NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.

(4) RUBBING STRIP, 2" X 6" X 8'-0" (2 REQD). POSITION ON EDGE AND NAIL TO A LOWER PIECE MARKED (5) W/1-12d NAIL EVERY 8".

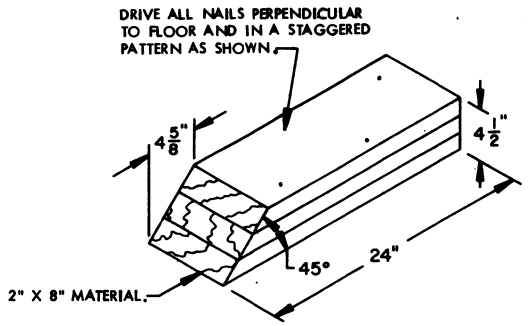
(5) SIDE BLOCKING, 2" X 4" X 8'-0" (TRIPLED) (2 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/1-12d NAIL EVERY 8". NAIL EACH ADDITIONAL PIECE IN A LIKE MANNER.

(6) STEEL WIRE ROPE, 1/2" DIA., 11.5 TONS (4 REQD). INSTALL CABLE TO APPROXIMATE THE ANGLE SHOWN AND TO FORM A COMPLETE LOOP AROUND LADING MAIN FRAME MEMBER AND THROUGH TRAILER TIEDOWN FACILITY. CAUTION: DO NOT TIE TO LADING LIFTING DEVICES. NOTE: CABLE OF A LARGER SIZE MAY BE USED IF AVAILABLE, WHEN SPECIFIED CABLE IS NOT AVAILABLE. SEE GENERAL NOTES "F" , "H" , AND "J" ON PAGE 3. SEE THE "SPECIAL PROVISIONS" ON PAGE 3.

(7) CLIP, SIZE 1/2" DIA. (20 REQD). USE FOUR (4) PER CABLE JOINT AND ONE (1) PER THIMBLE. NOTE: A STANDARD THIMBLE AS SPECIFIED CAN BE SECURED TO A CABLE WITH A 1/2" CLIP. HOWEVER, IF DESIRED, OR IF THE 1/2" THIMBLE BEING USED IS OF A TYPE WHICH CANNOT BE SECURED TO A CABLE WITH A 1/2" CLIP, A 5/8" CLIP MAY BE USED. ALT: NO. 14 GAGE OR HEAVIER WIRE MAY BE USED.

(8) THIMBLE, STANDARD, SIZE 1/2" (4 REQD). USE ONE (1) PER TRAILER TIE-DOWN FACILITY. SECURE TO CABLES, PIECES MARKED (6) , W/1-CLIP PER THIMBLE. NOTE THAT AN "OPEN PATTERN" THIMBLE IS RECOMMENDED.

(9) WATERPROOF PAPER OR BURLAP OF A SUFFICIENT SIZE TO POSITION UNDER AND EXTEND 2" ABOVE PIECES MARKED (2) AND (4) .



CHOCK BLOCK

SPECIAL PROVISIONS:

LADING MAY BE SECURED BY CARRIER-OWNED CHAINS AND LOAD BINDERS IN LIEU OF SPECIFIED STEEL WIRE ROPE CABLE PROVIDING THE FOLLOWING CONDITIONS ARE MET:

1. ONLY CHAINS AND LOAD BINDERS OF GOOD QUALITY SHOULD BE USED. CAUTION: EXTREME CARE MUST BE USED IN TENSIONING CHAINS TO PREVENT DAMAGE TO THE LADING OR DEFORMATION OF THE LADING TIEDOWN FACILITIES.
2. TWO (2) LINES OF 3/8" CHAIN, OR FOUR (4) LINES OF 1/4" CHAIN, MAY BE SUBSTITUTED FOR EACH STEEL WIRE ROPE CABLE TIEDOWN, PIECE MARKED ⑥ ON PAGE 2. CHAINS SHALL BE INSTALLED AT THE SAME LOCATIONS SHOWN FOR THE STEEL WIRE ROPE CABLES AND IN THE SAME MANNER AS DIRECTED IN GENERAL NOTE "H" ON PAGE 3.
3. IF DESIRED, CHAINS OF A LARGER SIZE THAN SPECIFIED ABOVE MAY BE USED.
4. BEFORE AND DURING INSTALLATION, THE CHAINS AND LOAD BINDERS SHALL BE INSPECTED FOR BENT HOOKS, STRETCH, GOUGES, BENT LINKS, WEAR, AND ANY OTHER NOTICEABLE DEFECTS. ANY DEFICIENCY SHALL BE CAUSE FOR REJECTION OF A CHAIN OR LOAD BINDER. CHAINS MUST NOT BE TWISTED DURING INSTALLATION.
5. THE TENSIONING DEVICE OF EACH LOAD BINDER MUST BE SAFETY-WIRE TIED TO PREVENT ACCIDENTAL OPENING OR LOOSENING IN TRANSIT.
6. ANTI-CHAFING MATERIAL MUST BE PLACED AND SECURED BETWEEN THE CHAINS AND THE LADING AT ALL POINTS OF CONTACT, EXCEPT AT DEFINITIVE TIEDOWN POINTS.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	66	44
2" X 6"	22	22
2" X 8"	48	64
NAILS	**NO. REQD**	**POUNDS**
12d (3-1/4")	168	3
20d (4")	64	2-1/2

ROPE, STEEL WIRE, 1/2" DIA	55' REQD	24 LBS
CLIP, 1/2"	20 REQD	9 LBS
CLIP, 5/8" (ALT FOR 1/2")	4 REQD	3 LBS
THIMBLE, STANDARD, 1/2"	4 REQD	1 LB
WATERPROOF PAPER	AS REQD	NIL

MATERIAL SPECIFICATIONS

LUMBER: DOUGLAS FIR OR COMPARABLE LUMBER WITH STRAIGHT GRAIN AND FREE OF MATERIAL DEFECTS. REF: FED SPEC MM-L-751.

NAILS: COMMON, FED SPEC FF-N-105.

ROPE: STEEL WIRE, PLAIN PREFORMED, REGULAR LAY 11.5 TONS, 6 X 19, FLEXIBLE IWRC MACWHYTE WIRE ROPE CO (OR EQUAL). REF: FED SPEC RR-W-410.

CLIP: "U" BOLT, CROSBY, HEAVY DUTY (OR EQUAL). REF: FED SPEC FF-C-450, TYPE I, CLASS 1.

THIMBLE: TYPE II, REF: FED SPEC FF-T-276.

WATERPROOF PAPER: NEUTRAL BARRIER MATERIAL, MIL-B-121 (OR EQUAL).

GENERAL NOTES

A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1.

B. THE LOAD SHOWN IS BASED ON A FLAT BED OR "LOW-BOY" TRAILER 8'-0" WIDE WITH A WOOD OR A WOOD AND METAL FLOOR. TRAILERS WITH ALL METAL FLOORS WILL NOT BE USED. ONLY ONE UNIT OF LADING IS SHOWN; HOWEVER, ACCESSORY ITEMS OR OTHER SIMILAR SMALL ITEMS MAY BE LOADED ON A TRAILER WITH THE VIEW OF FULL UTILIZATION OF CARRIER EQUIPMENT. CAUTION: THE LOAD AS SHOWN MAY REQUIRE "CLEARANCE" CONSIDERATION BECAUSE OF EXCESSIVE LADING SIZE.

C. ONLY TRAILERS CAPABLE OF SAFELY TRANSPORTING THE LADING TO DESTINATION WITHOUT DAMAGE WILL BE SELECTED. TRAILERS SELECTED MUST HAVE "SOUND" FLOORS WHICH PROVIDE NAIL RETENTION PROPERTIES EQUAL TO OR BETTER THAN THE SPECIFIED DUNNAGE LUMBER, AND A SUFFICIENT NUMBER OF ANCHORING FACILITIES OF A STRENGTH EQUAL TO OR BETTER THAN SPECIFIED LADING TIE DOWN ASSEMBLIES.

D. SHIPMENT GROSS WEIGHT, AXLE DISTRIBUTION OF THE LADING WEIGHT AND OVERALL DIMENSIONS MUST MEET STATE LAW REQUIREMENTS.

E. LADING DATA:

DIMENSIONS ---------- 31'-4" LONG BY 8'-2" WIDE BY 11'-5-1/2" HIGH.
GROSS WEIGHT -------- 27,300 POUNDS (APPROX).

F. REFER TO ORD DWG 19-48-C-ORDJU-588, "WIRE ROPE AND ANNEALED WIRE APPLICATION METHODS FOR SECURING LADING ON RAIL & MOTOR CARRIER EQUIP", FOR PROPER TIEDOWN APPLICATION. CAUTION: DURING WIRE ROPE INSTALLATION, AVOID CONTACT WITH ALL ELECTRICAL WIRING AND OTHER APPURTENANCES. METAL FILLERS OR COMPARIABLE CUSHIONING MATERIAL MUST BE USED BETWEEN TIEDOWN CABLES AND ALL SHARP EDGES, AND ANTI-CHAFING MATERIAL MUST BE USED BETWEEN SIDE BLOCKING DUNNAGE AND LADING TIRES.

G. SEE THE "SPECIAL PROVISIONS" AT LEFT. FOR SPECIFICATIONS WHICH MUST BE APPLIED IF CHAINS AND LOAD BINDERS ARE USED.

H. CAUTION: IT IS RECOMMENDED THAT CABLE BE INSTALLED TO APPROXIMATE ANGLE SHOWN; HOWEVER, IF PLACEMENT OF TRANSPORTED ANCHORING FACILITIES PREVENTS THIS, CARE MUST BE EXERCISED TO ENSURE THAT CABLES ON THE SAME SIDE OF LADING ARE INSTALLED SO THEIR RETENTION FORCES ACT IN OPPOSITE LONGITUDINAL DIRECTIONS.

J. WIRE ROPE CABLE MUST BE TENSIONED SUFFICIENTLY TO CAUSE A SLIGHT BODY DEPRESSION. TENSIONING CAN BE ACCOMPLISHED BY EMPLOYING TWO (2) CABLE "GRIPPERS" AND AN APPLICABLY SIZED "COME-A-LONG" TYPE MECHANICAL HOIST.

K. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE. FOR EXAMPLE, 2" X 4" MATERIAL IS ACTUALLY 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.

L. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.

M. IF THE LADING ITEM IS TO BE LOADED ONTO OR OFF OF THE TRANSPORTING TRAILER BY OVERHEAD SLINGING, CARE MUST BE EXERCISED SO THAT THIS ITEM IS NOT DAMAGED DURING THE HANDLING OPERATION BY THE USE OF IMPROPER EQUIPMENT. ONE RECOMMENDED PROCEDURE IS DELINEATED IN THE "SLINGING PROVISIONS" DETAIL ON PAGE 4.

N. CONVERSION TO METRIC EQUIVALENTS: THE DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENT MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4 MM AND ONE POUND EQUALS 0.454 KG.

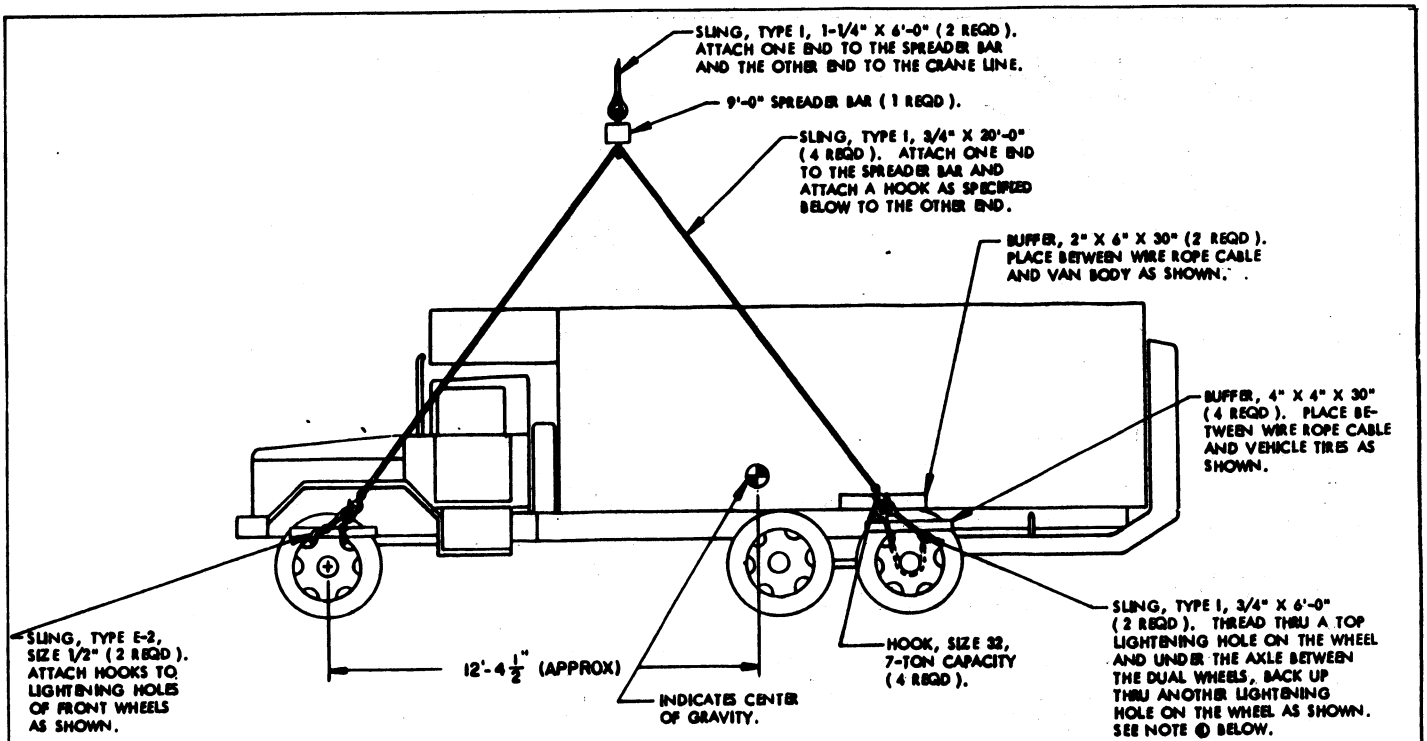
REVISION

REVISION NO. 1 DATED JULY 1986 CONSISTS OF:

1. CHANGING THE SLINGING PROVISIONS AS SHOWN ON PAGE 4.

LOAD AS SHOWN

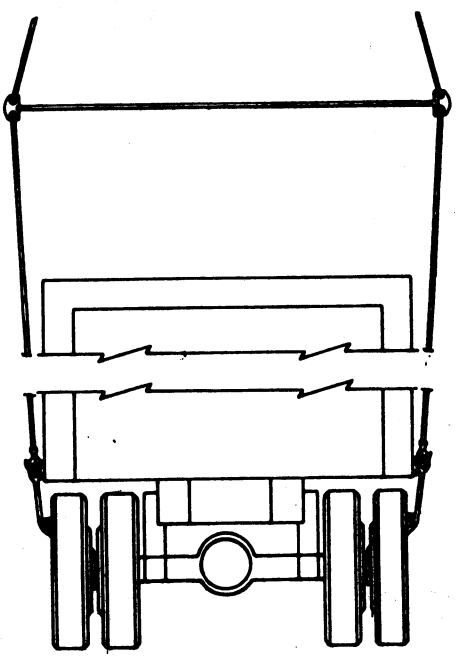
ITEM	QUANTITY	WEIGHT (APPROX)
CALIBRATION VAN	1	27,300 LBS
DUNNAGE		303 LBS
TOTAL WEIGHT		27,603 LBS



ELEVATION VIEW

NOTE ⓓ:

CARE MUST BE USED WHEN PLACING THE ROPE SLING BETWEEN THE DUAL WHEELS. THE CABLE SHOULD BE POSITIONED SO AS TO NOT CONTACT THE VALVE STEMS OF THE WHEELS.



REAR VIEW

SLINGING PROVISIONS