

SECTION No. 2

PART 2

RULES GOVERNING

THE

**Loading of Pipe
On Open Top Cars**

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RULES GOVERNING

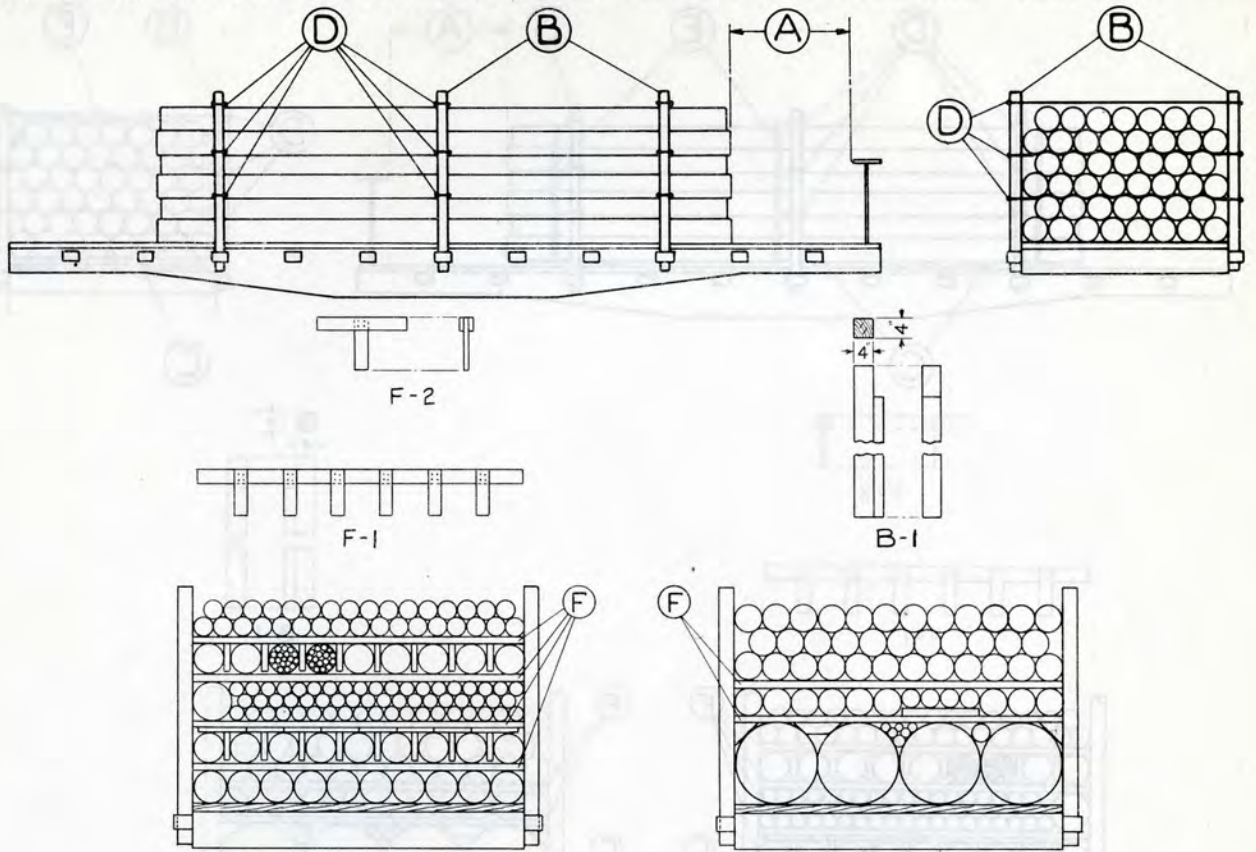
THE

Loading of Pipe

On Open Top Cars

Sec. 2—Fig. 120

WROUGHT IRON AND STEEL PIPE, 26 INCHES OR LESS IN DIAMETER, WITH WIRE—FLAT CARS



SKETCH No. 1

SKETCH No. 2

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 4 ft. high or less: 3 pr. per pile 25 ft. long or less; 4 pr. per pile over 25 ft. to 34 ft. long, inclusive; 5 pr. per pile over 34 ft. long. Pile over 4 ft. high: 4 pr. per pile 25 ft. long or less; 5 pr. per pile over 25 ft. to 34 ft. long, inclusive; 6 pr. over 34 ft. long.	Stakes, hardwood, spaced as equally as possible. Fill space between pipe and stakes by nailing suitable fillers to inside face of stakes, per Sketch B-1.
C		VACANT.
D	Each pr. Items "B" as required	6 strands, No. 11 ga. wire. Space lower wire not more than 20 in. from floor and intermediate wires not more than 20 in. apart, except for pipe over 20 in. dia., use wire between each successive layer. Place wire across top of pile.
E		VACANT.
F	3 between one or more successive layers. Use only when necessary for separation of pipe.	2 in. x 4 in., hardwood, length equal to width of load, not to extend beyond inside face of stakes, equally spaced. For pipe 10 in. or more in dia., nail a 2 in. x 4 in. block, length to suit, located midway between both ends, with three 20-D nails. On pipe less than 10 in. dia., size of block to be as large as possible, located in same manner. Place one pipe directly above the one below, if possible, otherwise use supports underneath Items "F", per Sketch 2, for spaces over 10 in. between pipe and over 4 in. between pipe and inside of Items "B", measured crosswise. Suitable vertical separators, per Sketch F-1, nailed to Item "F", or "T" shaped separators, per Sketch F-2, may be used as per Sketch 1.

Ends of pipe must not be less than 18 in. from ends of car.

Couplings must be staggered and must not rest on each other.

Wire, flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.

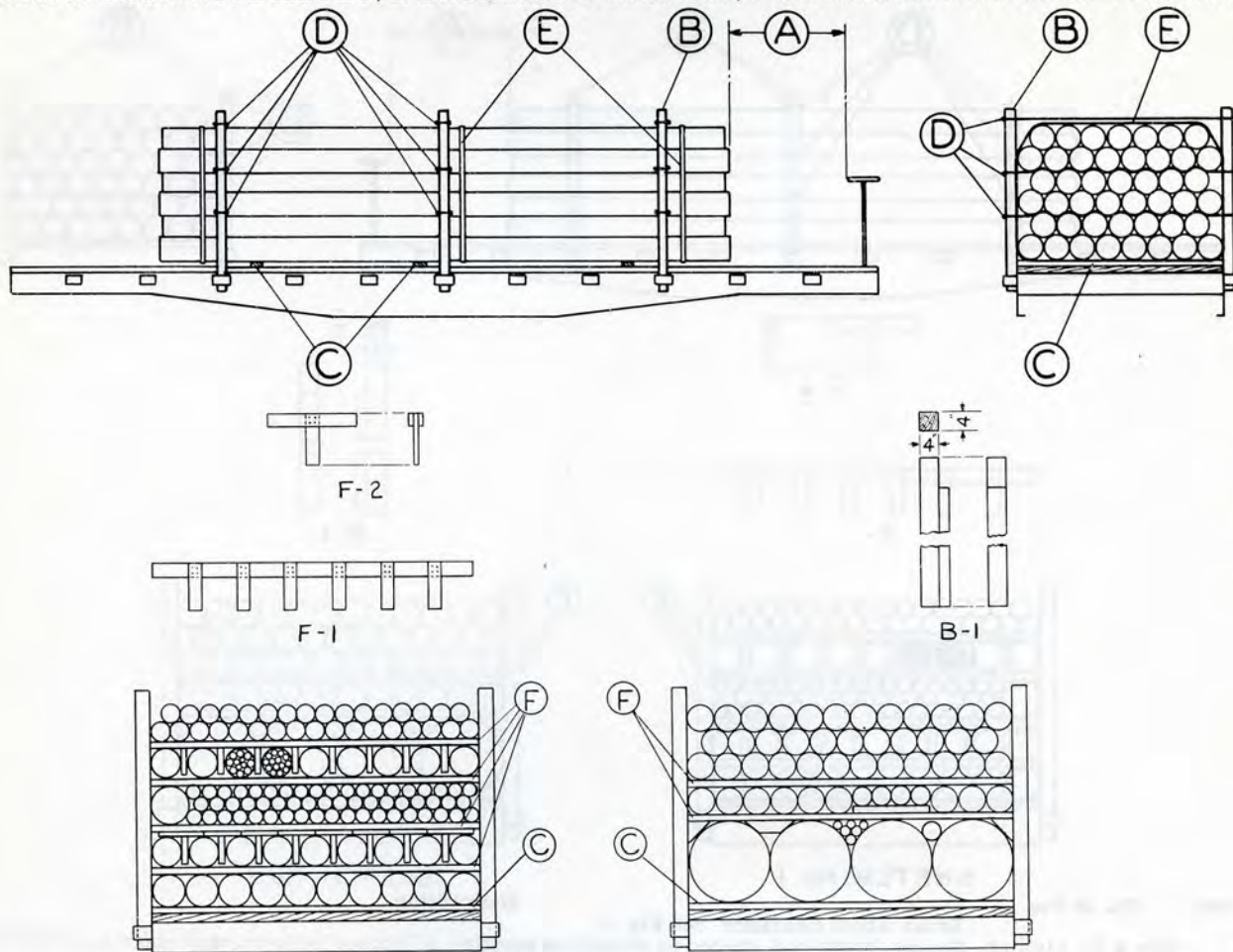
Tubular steel poles, tapered or made of two or more sections of different diameters, must be loaded with the large and small ends alternated in each layer. Use suitable fillers when necessary to equalize load.

Pipe 12 ft. long or less must not be loaded on flat cars. Small diameter pipe must not be loaded inside larger diameter pipe.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

Sec. 2—Fig. 121

WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, WITH HIGH TENSION BANDS—FLAT CARS



SKETCH. No. 1

SKETCH. No. 2

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 4 ft. high or less: 3 pr. per pile 34 ft. long or less; 4 pr. per pile over 34 ft. long. Pile over 4 ft. high: 4 pr. per pile 34 ft. long or less; 5 pr. per pile over 34 ft. long.	Stakes, hardwood, spaced as equally as possible. Fill space between pipe and stakes by nailing suitable fillers to inside face of stakes, per Sketch B-1.
C	3 per pile	4 in. wide, length equal to width of car, high enough to protect bands, suitably spaced.
D	Ea. Pr. Items "B", as required	6 strands, No. 11 ga. wire. Space lower wire not more than 20 in. from floor and intermediate wires not more than 20 in. apart, except for pipe over 20 in. dia., use wire or band between each successive layer. Place wire or band across top of pile.
E	1 ea. pr. Item "B"	2 in. x .050 in. bands, suitably spaced.
F	3 between one or more successive layers. Use only when necessary for separation of pipe.	2 in. x 4 in., hardwood, length equal to width of load, not to extend beyond inside face of stakes, equally spaced. For pipe 10 in. or more in dia., nail a 2 in. x 4 in. block, length to suit, located midway between both ends, with three 20-D nails. On pipe less than 10 in. dia., size of block to be as large as possible, located in same manner. Place one pipe directly above the one below, if possible, otherwise use supports underneath Items "F", per Sketch 2, for spaces over 10 in. between pipe and over 4 in. between pipe and inside of Items "B", measured crosswise. Suitable vertical separators, per Sketch F-1, nailed to Item "F", or "T" shaped separators, per Sketch F-2, may be used as per Sketch 1.

Ends of pipe must not be less than 18 in. from ends of car.

Couplings must be staggered and must not rest on each other.

Wire, flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.

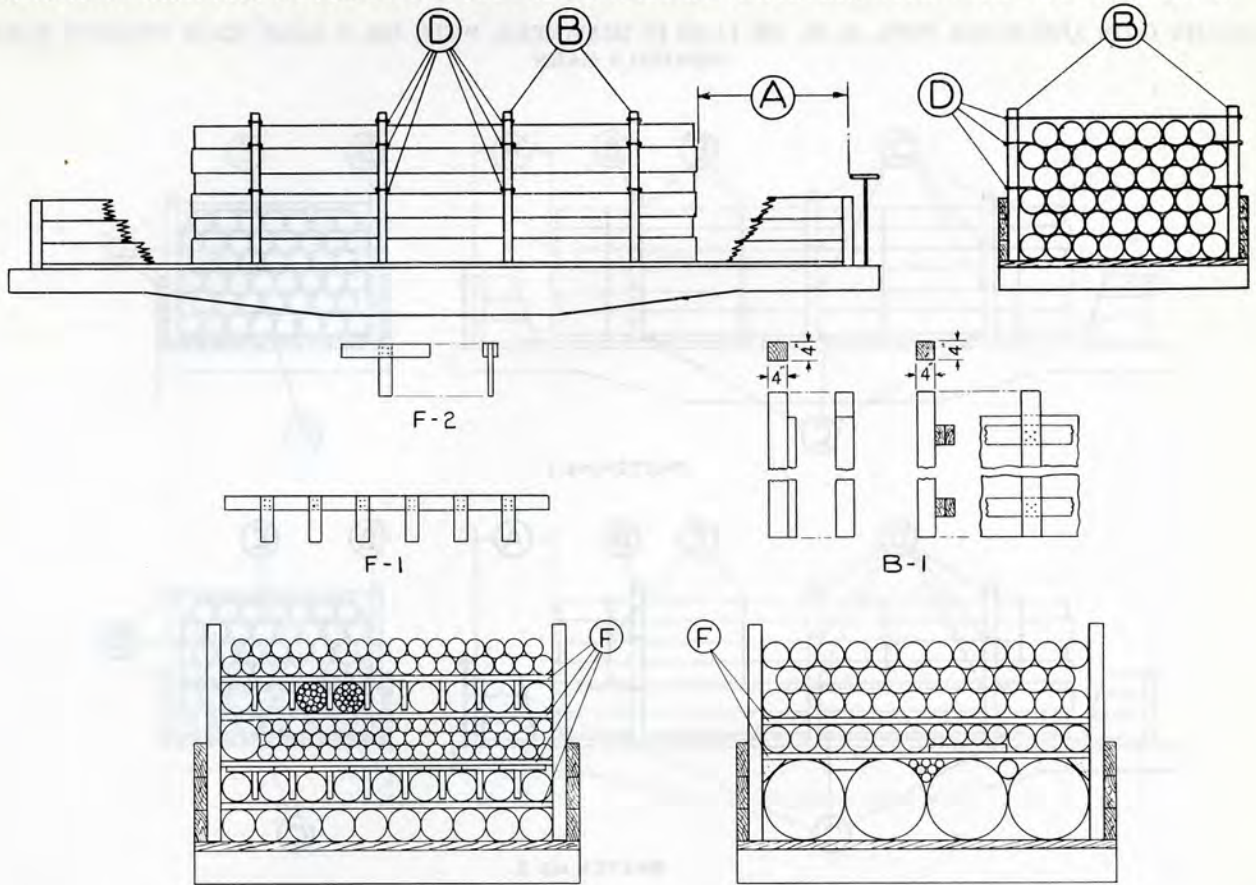
Tubular steel poles, tapered or made of two or more sections of different diameters, must be loaded with the large and small ends alternated in each layer. Use suitable fillers when necessary to equalize load.

Pipe 12 ft. long or less must not be loaded on flat cars. Small diameter pipe must not be loaded inside larger diameter pipe.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

Sec. 2—Fig. 122

WROUGHT IRON AND STEEL PIPE 26 INCHES OR LESS IN DIAMETER, WITH WIRE—GONDOLA CARS



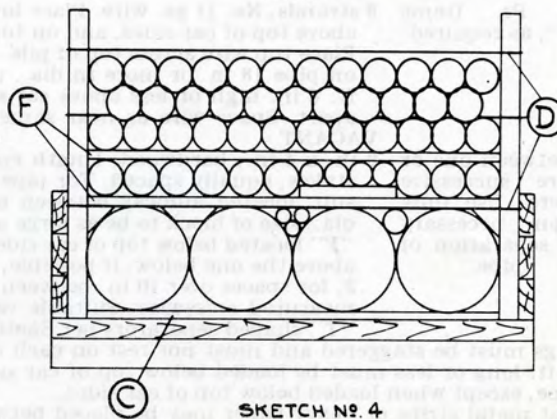
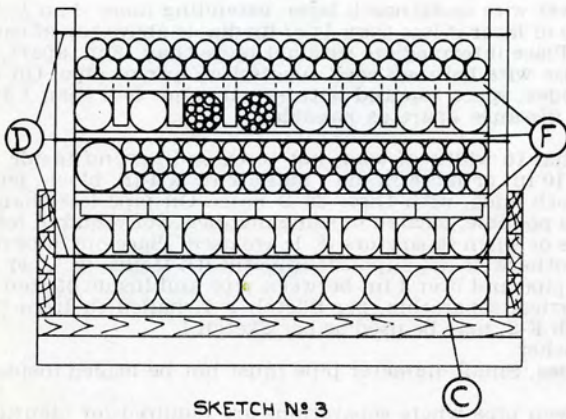
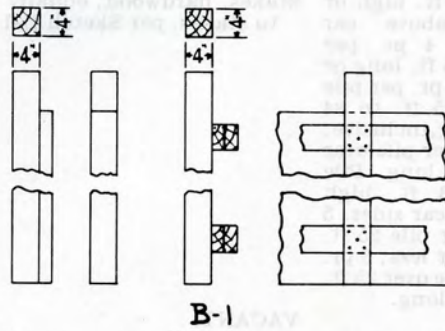
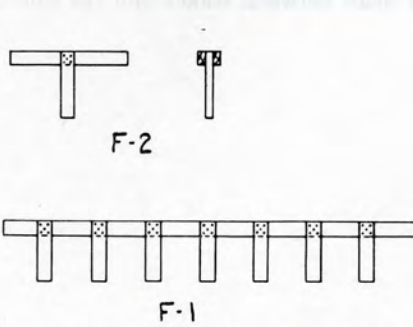
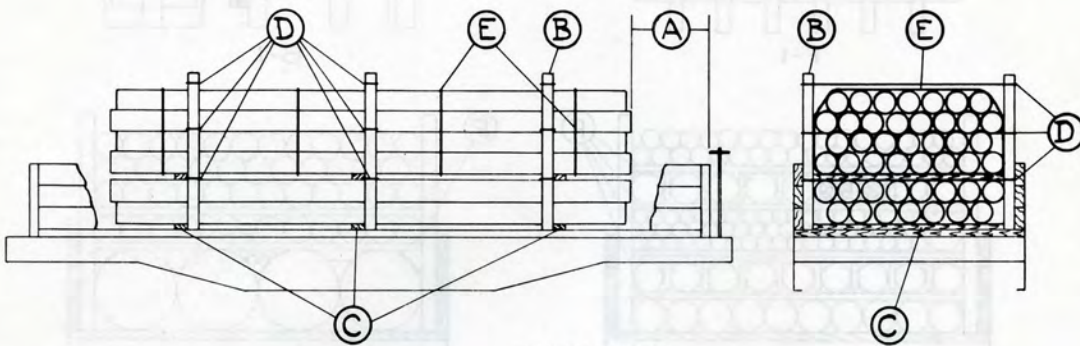
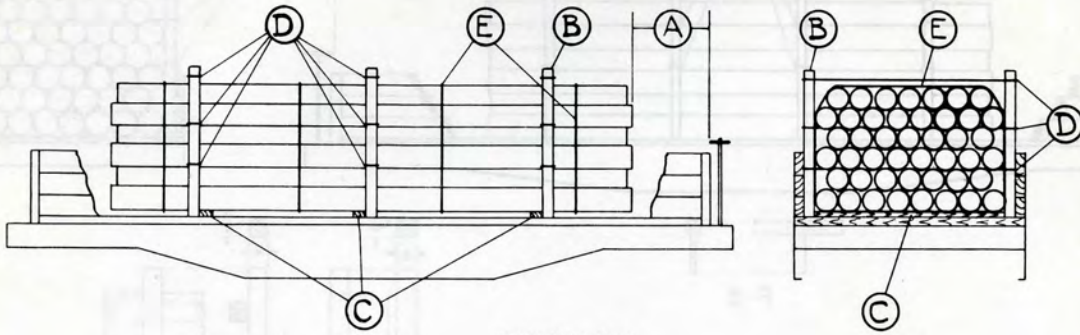
SKETCH No. 1

SKETCH No. 2

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 3 ft. high or less above car sides: 4 pr. per pile 25 ft. long or less; 5 pr. per pile over 25 ft. to 34 ft. long, inclusive; 6 pr. per pile over 34 ft. long. Pile over 3 ft. high above car sides: 5 pr. per pile 25 ft. long or less; 6 pr. per pile over 25 ft. long.	Stakes, hardwood, equally spaced. Fill space between stakes and car sides by nailing fillers to stakes, per Sketch B-1.
C		VACANT.
D	Ea. Pr. Items "B", as required.	6 strands, No. 11 ga. wire. Place lower wire underneath layer, extending more than 1/2 its dia. above top of car sides, and on top of layer if less than 1/2 of its dia. is above top of car sides. Place top wire across top of pile. Place intermediate wire not more than 18 in. apart, except on pipe 18 in. or more in dia., use wire between each successive layer of pipe. On loads 1 ft. 6 in. high or less above car sides, space top and bottom wires not less than 1 ft. 6 in. apart. Space wire as near same distance apart as possible.
E		VACANT
F	3 between one or more successive layers. Use only when necessary for separation of pipe.	2 in. x 4 in., hardwood, length equal to width of load, not to extend beyond inside face of stakes, equally spaced. For pipe 10 in. or more in dia., nail a 2 in. x 4 in. block, length to suit, located midway between both ends, with three 20-D nails. On pipe less than 10 in. dia., size of block to be as large as possible, located in same manner. Not required for Items "F" located below top of car sides or when separators (F-1) are used. Place one pipe directly above the one below, if possible, otherwise use supports underneath Items "F", per Sketch 2, for spaces over 10 in. between pipe and over 4 in. between pipe and inside of Items "B", measured crosswise. Suitable vertical separators, per Sketch F-1, nailed to Item "F", or "T" shaped separators per Sketch F-2, may be used as per Sketch 1.

Couplings must be staggered and must not rest on each other.
 Pipe 12 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.
 Wire, flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.
 Tubular steel poles, tapered or made of two or more sections of different diameters, must be loaded with the large and small ends alternated in each layer. Use suitable fillers when necessary to equalize load.
 See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, WITH NO. 8 GAGE HIGH TENSION WIRE—
GONDOLA CARS



Sec. 2—Fig. 123

**WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, WITH NO. 8 GAGE HIGH TENSION WIRE—
GONDOLA CARS**

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 3 ft. 6 in. high or less above car sides, 3 pr. per pile. Pile over 3 ft. 6 in. high above car sides, 4 pr. per pile 34 ft. long or less, 5 pr. per pile over 34 ft. long.	Stakes, hardwood, equally spaced. Fill space between stakes and car sides by nailing fillers to stakes per Sketch B-1.
C	3 per pile	4 in. wide, length equal to width of car, high enough to protect wires, suitably spaced.
D	Pile 3 ft. 6 in. high or less above car sides, 34 ft. long or less, 2 ea. pr. Items "B"; pile over 34 ft., 3 ea. pr. Items "B". Pile over 3 ft. 6 in. high above car sides, 3 ea. pr. Items "B"	2 strands. Place lower wire about midway between top of car floor and top of car sides, when practicable. On large diameter pipe, place across top of bottom row. Place intermediate wire about midway between top wire and top of car sides, when practicable. Place top wire across top of pile. High tension bands must not be substituted.
E	Pile 3 ft. 6 in. high or less above car sides, 34 ft. long or less, 4 per pile; over 34 ft. long, 5 per pile. Pile over 3 ft. 6 in. high above car sides, 34 ft. long or less, 5 per pile; over 34 ft. long, 6 per pile	If desired, these wires may pass underneath pipe below top of car sides; provided the pipe so tied forms a unit not less than 3 ft. 6 in. high, per Sketch 2. In such cases place three 1 in. x 4 in. strips between layers of pipe to protect wires. High tension bands must not be substituted.
F	3 between one or more successive layers. Use only when necessary for separation of pipe.	2 in. x 4 in., hardwood, length equal to width of load, not to extend beyond inside face of stakes, equally spaced. For pipe 10 in. or more in dia., nail a 2 in. x 4 in. block, length to suit, located midway between both ends, with three 20-D nails. On pipe less than 10 in. dia., size of block to be as large as possible, located in same manner. Not required for Items "F" located below top of car sides or when separators (F-1) are used. Place one pipe directly above the one below, if possible, otherwise use supports underneath Items "F", per Sketch 4, for spaces over 10 in. between pipe and over 4 in. between pipe and inside of Items "B", measured crosswise. Suitable vertical separators, per Sketch F-1, nailed to Item "F", or "T" shaped separators, per Sketch F-2, may be used as per Sketch 3.

Couplings must be staggered and must not rest on each other.

Fifth pair of Items "B" may be omitted by adding one additional wire, Item "E", for loads over 3 ft. 6 in. high above car side and over 34 ft. in length.

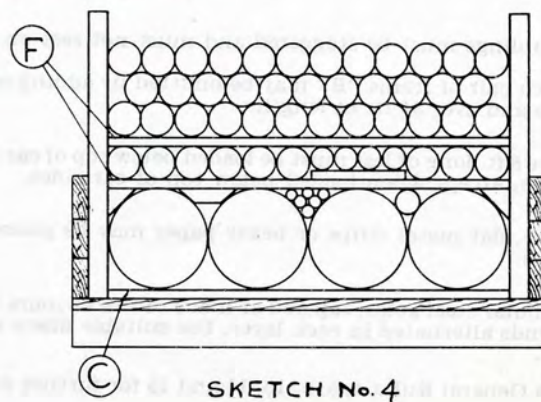
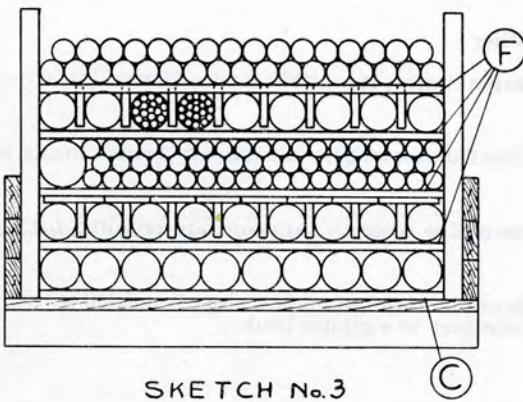
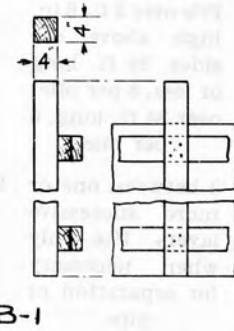
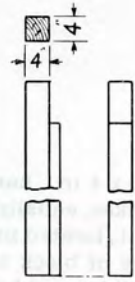
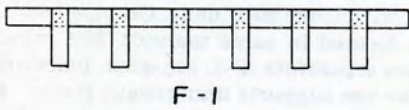
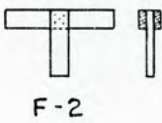
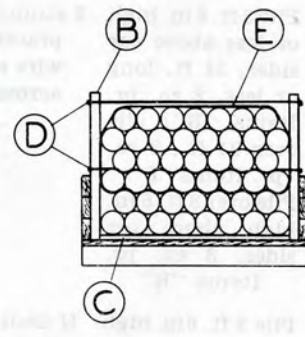
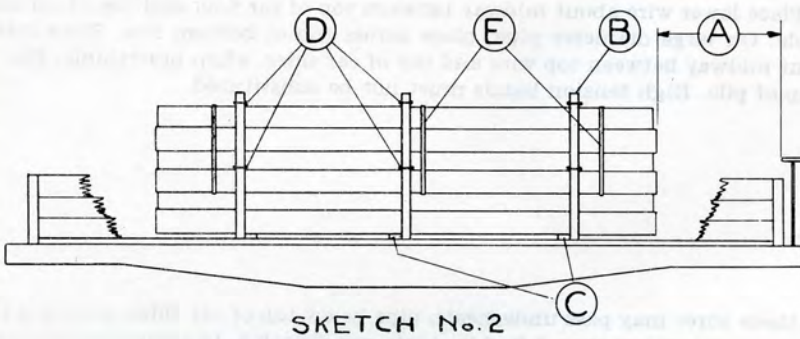
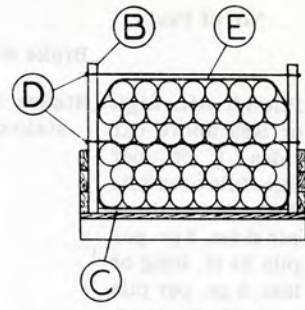
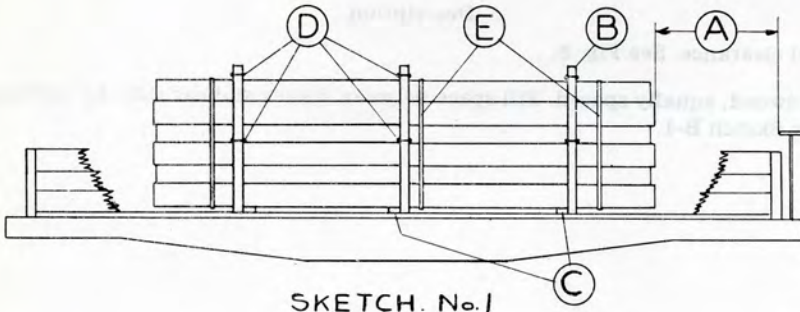
Pipe 8 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

Wire, flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.

Tubular steel poles, tapered or made of two or more sections of different diameters, must be loaded with the large and small ends alternated in each layer. Use suitable fillers when necessary to equalize load.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, WITH HIGH TENSION BANDS—GONDOLA CARS



Sec. 2—Fig. 124

WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, WITH HIGH TENSION BANDS—GONDOLA CARS

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 3 ft. 6 in. high or less above car sides, per 3 pr. per pile. Pile over 3 ft. 6 in. high above car sides, 4 pr. per pile.	Stakes, hardwood, equally spaced. Fill space between stakes and car sides by nailing fillers to stakes, per Sketch B-1.
C	3 per pile.	4 in. wide, length equal to width of car, high enough to protect bands, suitably spaced.
D	2 ea. pr. Items "B"	1 Strand, $1\frac{1}{4}$ in. x .035 in. band, or 6 strands, No. 11 ga. wire. Locate one close to top of car sides, and the other across top of pile. On loads 1 ft. 6 in. high or less above car sides, space top and bottom bands or wires not less than 1 ft. 6 in. apart.
E	Pile 3 ft. 6 in. high or less above car sides: 3 per pile 34 ft. long or less; 4 per pile over 34 ft. long. Pile over 3 ft. 6 in. high above car sides: 4 per pile 34 ft. long or less; 6 per pile over 34 ft. long (5 only required when 2 in. x .050 in. bands are used.)	$1\frac{1}{4}$ in. x .035 in., or 2 in. x .050 in. bands, suitably spaced. For piles exceeding 7 ft. 6 in. in height, tie upper portion into a unit including all pipe extending wholly or partially above top or car sides, forming a unit not less than 3 ft. 6 in. high, per Sketch 2. For pile 7 ft. 6 in. high or less, pass bands around entire load. If desired, these bands may pass underneath pipe below top of car sides provided the pipe, so tied, forms a unit not less than 3 ft. 6 in. high, per Sketch 2.
F	3 between one or more successive layers. Use only when necessary for separation of pipe.	2 in. x 4 in., hardwood, length equal to width of load, not to extend beyond inside face of stakes, equally spaced. For pipe 10 in. or more in dia., nail a 2 in. x 4 in. block, length to suit, located midway between both ends, with three 20-D nails. On pipe less than 10 in. dia., size of block to be as large as possible, located in same manner. Not required for Items "F" located below top of car sides or when separators (F-1) are used. Place one pipe directly above the one below, if possible, otherwise use supports underneath Items "F", per Sketch 4, for spaces over 10 in. between pipe and over 4 in. between pipe and inside of Items "B", measured crosswise. Suitable vertical separators, per Sketch F-1, nailed to Items "F", or "T" shaped separators, per Sketch F-2, may be used as per Sketch 3.

Couplings must be staggered and must not rest on each other.

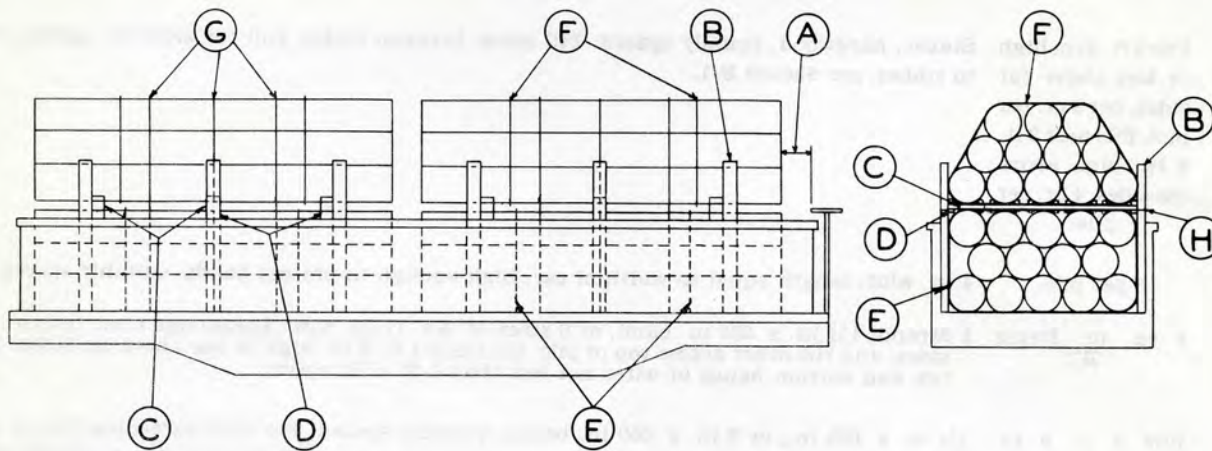
Pipe 8 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

Flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.

Tubular steel poles, tapered or made of two or more sections of different diameters, must be loaded with the large and small ends alternated in each layer. Use suitable fillers when necessary to equalize load.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, 26 INCHES OR LESS IN DIAMETER, IN PYRAMIDAL FORM, WITH NO. 8 GAGE HIGH TENSION WIRES—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 40 ft. long or less, 3 pr. per pile. For ea. 10 ft. or less over 40 ft. long, 1 additional pr. per pile.	Stakes, hardwood, extending to top of pipe forming the base layer of pyramid.
C	3 per pile.	2 in. x 4 in., length equal to width of load, equally spaced between base layer of pyramid and top layer of lower unit. On cars with sides 54 in. high or over, locate on layer even with or extending partially above top of car sides. On cars with sides less than 54 in. high, locate not to exceed 4 ft. 6 in. from floor. If lower unit consists of mixed diameter pipe, level off top layer to provide uniform bearing, full length of Items "C".
D	As required.	3 in. x 4 in. x 4 in., nailed on top of Item "C", against each side of each pipe in the base layer of pyramid, and on bottom sides at each end bearing against outside pipe of the layer below.
E	Pile 40 ft. long or less, 2 per pile. For ea. 10 ft. or less over 40 ft. long, 1 additional per pile.	1 strand, around pipe below Items "C". Not required when layer of pipe directly below Items "C" is at least one-half its diameter below top of car sides. High tension bands must not be substituted.
F	Pile 40 ft. long or less, 2 per pile. For ea. 10 ft. or less over 40 ft. long, 1 additional per pile.	1 strand, around pyramided portion, equally spaced. High tension bands must not be substituted.
G	3 per pile.	1 strand, around entire load. Locate one about 4 ft. from each end and one at center. High tension bands must not be substituted.
H	1 ea. pr. Items "B".	2 strands. High tension bands must not be substituted.

When height of load does not exceed 30 inches above top of car sides, and more than one-half the diameter of pipe in base layer of pyramid is below top of car sides, Items "B", "C", "D", "E", "G" and "H" may be omitted, provided Items "F" are 15 in. or more below top of car sides. When so loaded, use six Items "F" for pile 24 ft. long or less, seven for piles over 24 ft. long to and including 40 ft. long, and eight for pile over 40 ft. long. End wires must be located about 2 ft. from each end of pile, and all wires must be about equally spaced.

For pipe 18 in. to 26 in. in diameter, inclusive, Items "B", "C", "D", "E", "F" and "H" may be omitted when eight equally spaced wires, Items "G", encircle the entire pile and when at least one-half the diameter of pipe in base layer of pyramid is below top of car sides.

Couplings must be staggered and must not rest on each other.

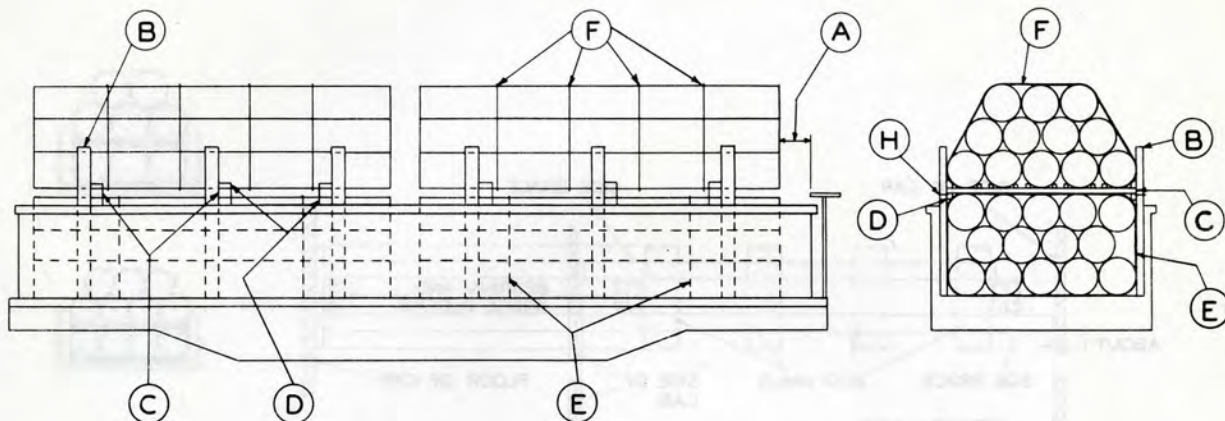
Pipe 8 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

Wire, flat metal strips or heavy paper may be placed between pipe where separators are required for identification purposes.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

Sec. 2—Fig. 126

WROUGHT IRON AND STEEL PIPE, 26 IN. OR LESS IN DIAMETER, IN PYRAMIDAL FORM WITH HIGH TENSION BANDS—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 40 ft. long or less, 3 pr. per pile; for ea. 10 ft. or less over 40 ft. long, 1 additional pr. per pile.	Stakes, hardwood, extending to top of pipe forming the base layer of pyramid.
C	1 ea. pr. Items "B"	2 in. x 4 in., length equal to width of load, equally spaced between base layer of pyramid and top layer of lower unit. On cars with sides 54 in. high or over, locate on layer even with or extending partially above top of car sides. On cars with sides less than 54 in. high, locate not to exceed 4 ft. 6 in. from floor. If lower unit consists of mixed diameter pipe, level off top layer to provide uniform bearing, full length of Items "C".
D	As required.	3 in. x 4 in. x 4 in., nailed on top of Items "C", against each side of each pipe in the base layer of pyramid, and on bottom sides at each end bearing against outside pipe of the layer below.
E	Pile 40 ft. long or less, 2 per pile; for ea. 10 ft. or less over 40 ft. long, 1 additional per pile.	1/4 in. x .035 in. bands, around pipe below Items "C". Not required when layer of pipe directly below Items "C", is at least one-half its diameter below top of car sides.
F	Pile 40 ft. long or less, 4 per pile; for ea. 10 ft. or less over 40 ft. long, 1 additional per pile.	1/4 in. x .035 in. bands, around pyramided portion, equally spaced.
G		VACANT.
H	1 ea. pr. Items "B"	1/4 in. x .035 in. bands. Locate at Items "C".

When height of load does not exceed 30 in. above top of car sides and 1/2 dia. of pipe in base layer of pyramid is below top of car sides, Items "B", "C", "D", "E" and "H" may be omitted, provided Item "F" is 15 in. or more below top of car sides.

For pipe from 16 in. to 26 in. in diameter, inclusive, Items "B", "C", "D", "E" and "H" may be omitted when six equally spaced bands, Items "F", encircle the entire pile, and when at least one-half the diameter of pipe in base layer of pyramid is below top of car sides.

Couplings must be staggered and must not rest on each other.

Pipe 8 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

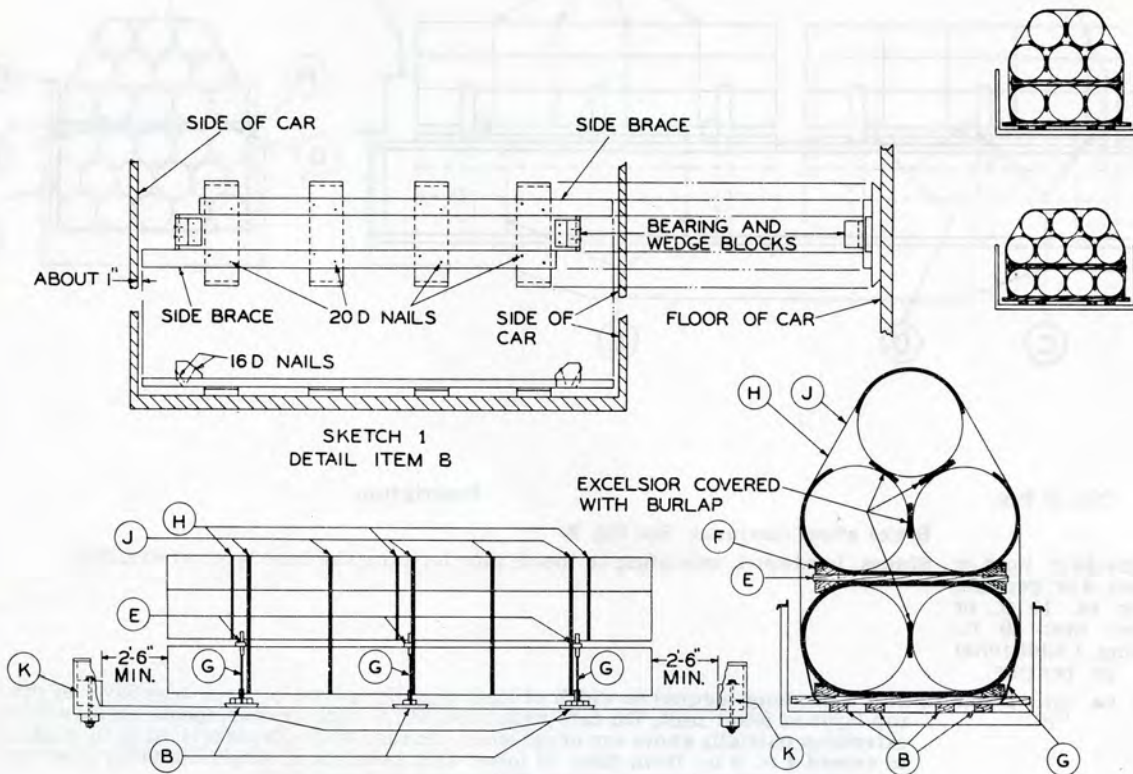
Wire, flat metal strips or heavy paper may be placed between pipe where separations are required for identification purposes.

When bottom row does not fill width of car, chock blocks must be placed between pipe so as to bring outside pipe of base layer flush with side stakes.

See General Rules 4, 5, 7, 9, 10, 14 and 15 for further details.

Sec. 2—Fig. 127

COATED WROUGHT IRON AND STEEL PIPE 22 INCHES AND OVER IN DIAMETER, 30 FT. OR OVER, IN LENGTH, ON SKIDS, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—ENDS OF LOAD MUST NOT BE LESS THAN 2 FT. 6 IN. FROM ITEM "K"—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 per pile.	Bearing skids, each comprising one 2 in. x 8 in., hardwood plank, two 4 in. x 6 in., hardwood wedge blocks, four 2 in. x 8 in. x 24 in., hardwood skid blocks and two 2 in. x 4 in., hardwood side braces. See Sketch 1.
C		VACANT.
D		VACANT.
E	3 per pile between first and second layer.	2 in. x 8 in., hardwood, long enough to apply Items "F" but short enough to clear bands. Locate directly above Items "B".
F	4 ea. Item "E".	4 in. x 6 in., hardwood, wedge-shaped blocks. Nail to top and bottom of Items "E" with five 16-D nails in each, three in tapered face and two in outside face.
G	3 per pile.	Bands, encircling bottom row and Item "B".
H	3 per pile.	Bands, encircling top portion of pile above bottom row.
J	5 per pile.	Bands, encircling entire pile.
K	1 ea. end of load.	6 in. x 6 in., hardwood, length equal to inside width of car. Locate tight against end of car and secure each to floor with two $\frac{3}{8}$ in. dia. bolts passed through Item "K", floor and 4 in. x 4 in. x 18 in., hardwood, or $\frac{1}{2}$ in. x 4 in. x 18 in. plate under floor.

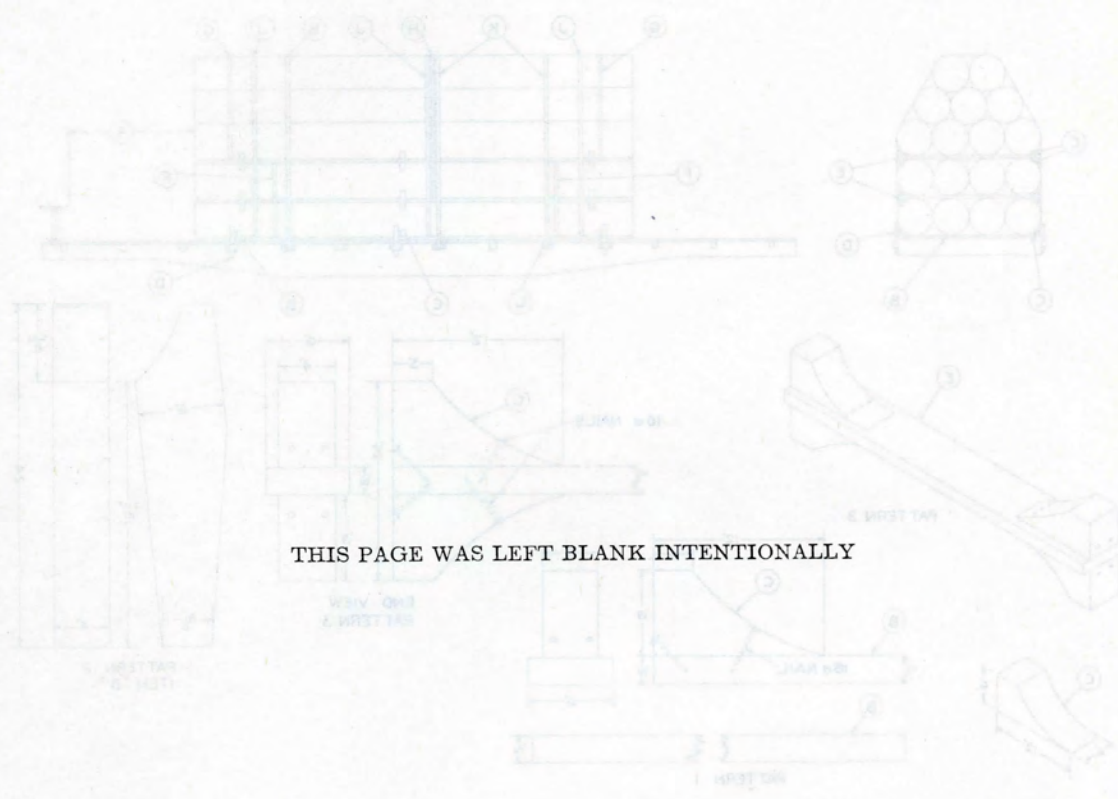
When loaded, pile should be located equally distant from each end of car.

Pipe must be separated and protected on bearing pieces and under bands by excelsior covered with burlap or similar padding.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

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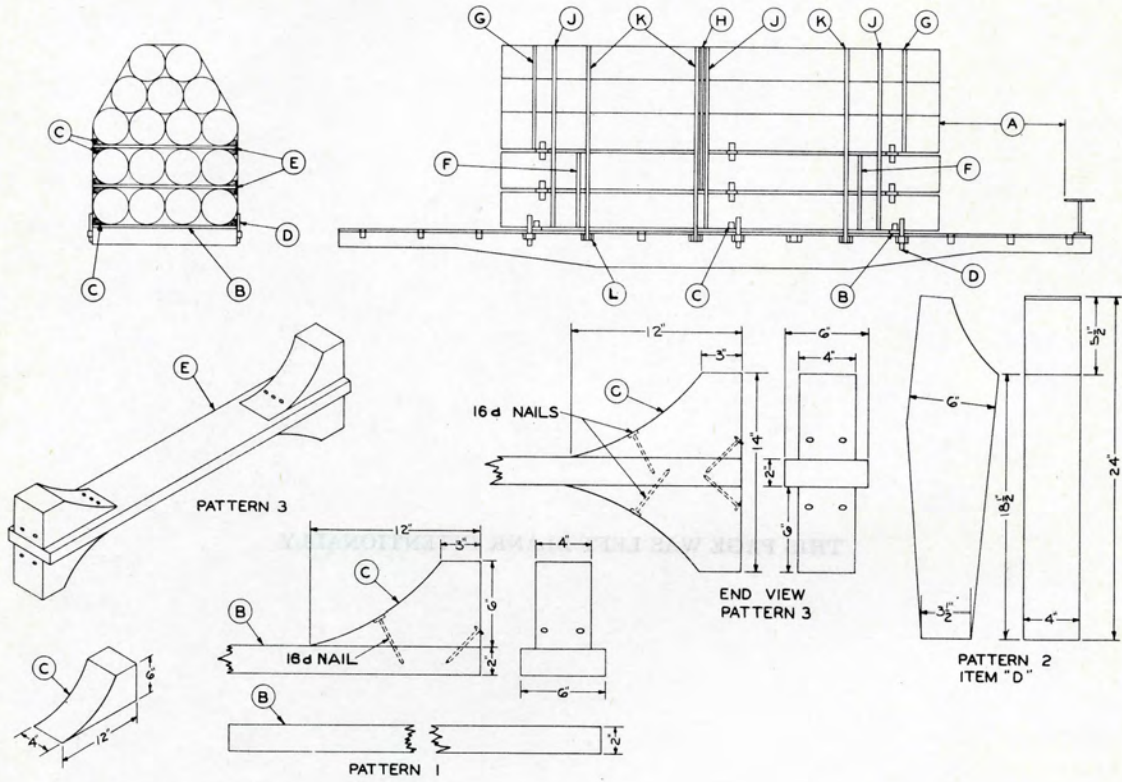
WROUGHT IRON AND STEEL PIPE 24 INCHES TO 30 INCHES INSIDE DIAMETER, IN PYRAMIDAL FORM
WITH 1 IN. X .088 IN. HIGH TENSION BANDS—TWO PER CAR.
12 PIECES PER CAR, LESS THAN 1/2 IN. THICK
18 PIECES PER CAR, 1/2 IN. TO 1 IN. THICK
24 PIECES PER CAR, 1 IN. THICK AND OVER



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Sec. 2—Fig. 128

WROUGHT IRON AND STEEL PIPE, 24 INCHES TO 31 INCHES, INCLUSIVE, IN DIAMETER, IN PYRAMIDAL FORM,
 WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT CARS
 17 PIECES PER CAR, LESS THAN $\frac{3}{8}$ IN. THICK
 15 PIECES PER CAR, $\frac{3}{8}$ IN. TO $\frac{1}{2}$ IN. THICK
 12 PIECES PER CAR, $\frac{1}{2}$ IN. THICK AND OVER



WROUGHT IRON AND STEEL PIPE, 24 INCHES TO 31 INCHES, INCLUSIVE, IN DIAMETER, IN PYRAMIDAL FORM,
WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT CARS
17 PIECES PER CAR, LESS THAN $\frac{3}{8}$ IN. THICK
15 PIECES PER CAR, $\frac{3}{8}$ IN. TO $\frac{1}{2}$ IN. THICK
12 PIECES PER CAR, $\frac{1}{2}$ IN. THICK AND OVER

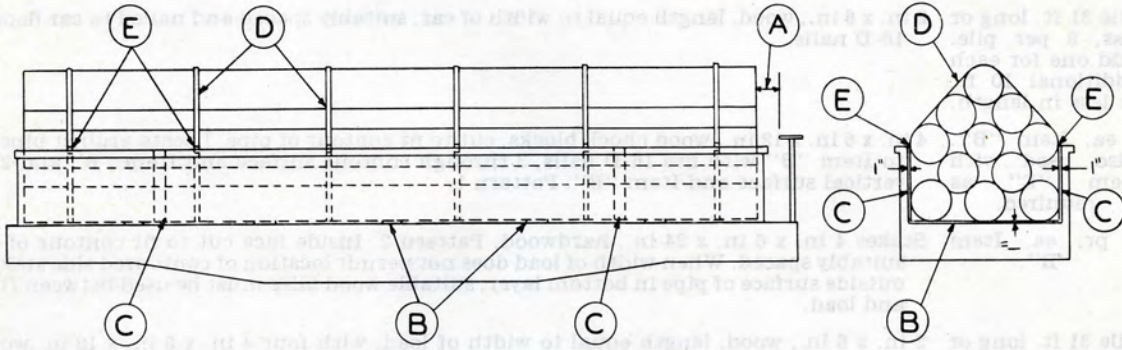
Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 31 ft. long or less, 3 per pile. Add one for each additional 10 ft. or less in length.	2 in. x 6 in., wood, length equal to width of car, suitably spaced and nailed to car floor with six 16-D nails.
C	2 ea. Item "B". Also used with Item "E" as required.	4 in. x 6 in. x 12 in., wood chock blocks, cut to fit contour of pipe. Locate against pipe and nail to Item "B" with five 16-D nails, 3 through contour surface and Item "B" and 2 through vertical surface and Item "B". Pattern 1.
D	1 pr. ea. Item "B".	Stakes 4 in. x 6 in. x 24 in., hardwood, Pattern 2. Inside face cut to fit contour of pipe and suitably spaced. When width of load does not permit location of contoured side stake against outside surface of pipe in bottom layer, suitable wood filler must be used between Items "D" and load.
E	Pile 31 ft. long or less, 3 between first and second layer, and 3 between second and third layer. Add one between first and second layer and one between second and third layer for each additional 10 ft. or less in length.	2 in. x 6 in., wood, length equal to width of load, with four 4 in. x 6 in. x 12 in. wood chock blocks (Item "C"). Locate against pipe and nail to Item "E" with five 16-D nails, three through contour surface and Item "E", and two through vertical surface and Item "E". Pattern 3.
F	Pile 31 ft. long or less, 2 per pile. Add one for each additional 10 ft. or less in length.	2 in. x .050 in. bands, suitably spaced, encircling the two bottom layers.
G	Pile 31 ft. long or less, 2 per pile. Add one for each additional 10 ft. or less in length.	2 in. x .050 in. bands, suitably spaced, encircling all layers above the two bottom layers.
H	Pile 31 ft. long or less, 1 per pile. Add one for each additional 10 ft. or less in length.	2 in. x .050 in. band suitably spaced, encircling entire pile above bottom layer.
J	Pile 31 ft. long or less, 3 per pile. Add one for each additional 10 ft. or less in length.	2 in. x .050 in. bands, suitably spaced, encircling entire pile.
K	Pile 31 ft. long or less, 3 per pile. Add one for each additional 10 ft. or less in length.	2 in. x .050 in. bands, suitably spaced, secured to opposite stake pockets.
L	2 ea. Item "K".	Metal filler 4 in. wide and of sufficient thickness to maintain $\frac{1}{2}$ in. radius and secured to prevent displacement must be used to protect bands at all stake pockets.

Pipe must be loaded centrally on car.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

Sec. 2—Fig. 129

WROUGHT IRON AND STEEL PIPE, OVER 26 INCHES TO 36 INCHES, INCLUSIVE, IN DIAMETER, IN PYRAMIDAL FORM, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—GONDOLA CARS



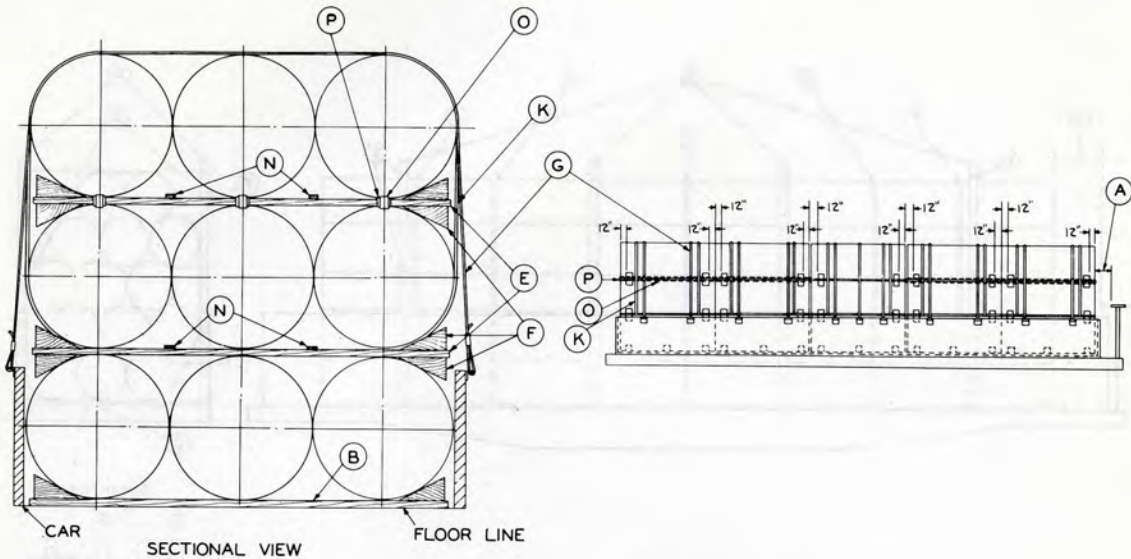
Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	5	1 in. x 4 in., wood, length equal to width of car.
C	4	1 in. x 4 in., wood, length equal to height of car side. Secure to car side with nails or other suitable means.
D	6	2 in. x .050 in., bands, encircling entire pile, spaced equally over length of pile.
E	2 each Item "B".	Metal band protectors to be applied to bands to protect bands from contacting car sides.

Note.—Only four (4) bands, Item "D", required when load consists of six (6) pieces of pipe or less.

Pile must be loaded centrally on car, at least one third of pipe forming base layer of pyramid must be below top of car side.

See General Rules 4, 5, 9 and 15 for further details.

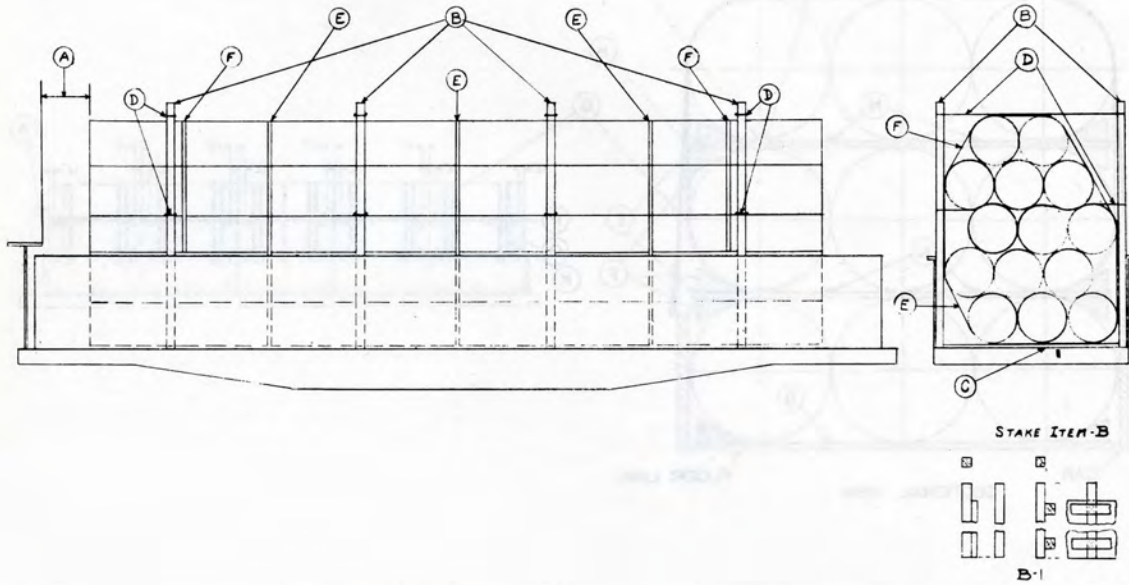
WROUGHT IRON AND STEEL PIPE, OVER 26 IN. IN DIAMETER, 8 FT. TO LESS THAN 12 FT. IN LENGTH, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 per pile.	2 in. x 4 in., hardwood, length equal to width of car, suitably spaced. Locate end pieces approximately 12 in. from each end of pile and third piece at center.
C		VACANT.
D		VACANT.
E	2 per pile between ea. successive layer.	2 in. x 6 in., hardwood, long enough to apply Items "F" but short enough to clear bands. Locate approximately 12 in. from each end of pile. Not required beneath top layer when top layer is nested.
F	2 ea. Item "B". 4 ea. Item "E".	4 in. x 6 in., hardwood, wedge shaped, nailed to top of Items "B" and to top and bottom of Items "E" with five 16-D nails in each, three in tapered face and two in outside face.
G	2 on ea. of the 2 outer piles ea. end. 3 on intermediate piles.	Bands. Pass over top of load and attach to opposite car sides.
H		VACANT.
J	2 ea. Item "G".	4 in. wide, 1/2 in. radius, metal filler of suitable design and strong enough to maintain this radius. Required only when necessary to protect bands.
K	2 per pile.	Bands encircling top portion of pile above bottom row. Locate approximately 12 in. from outside Items "G".
L		VACANT.
M		VACANT.
N	As required.	1 in. x 2 in., hardwood, longitudinal strips, long enough to tie Items "E" together. Locate as shown and nail to Items "E" with two 8-D nails at each location.
O	As required on ea. of the 2 outer piles on ea. end, above bottom row.	Bands, longitudinally, tying the first two piles together, as shown.
P	2 ea. Item "O".	Protection clips, 20 gage, 4 in. wide, applied so as to prevent displacement.

When more than one-half the diameter of top layer of pipe is below top of car sides, Items "G", are not required. Longitudinal welds on pipe must not contact bands. Pipe less than 8 ft. long must be loaded below top of car sides. See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, OVER 26 INCHES IN DIAMETER, 63 FT. LONG OR LESS, WITH HIGH TENSION BANDS OR WIRES—GONDOLA CARS

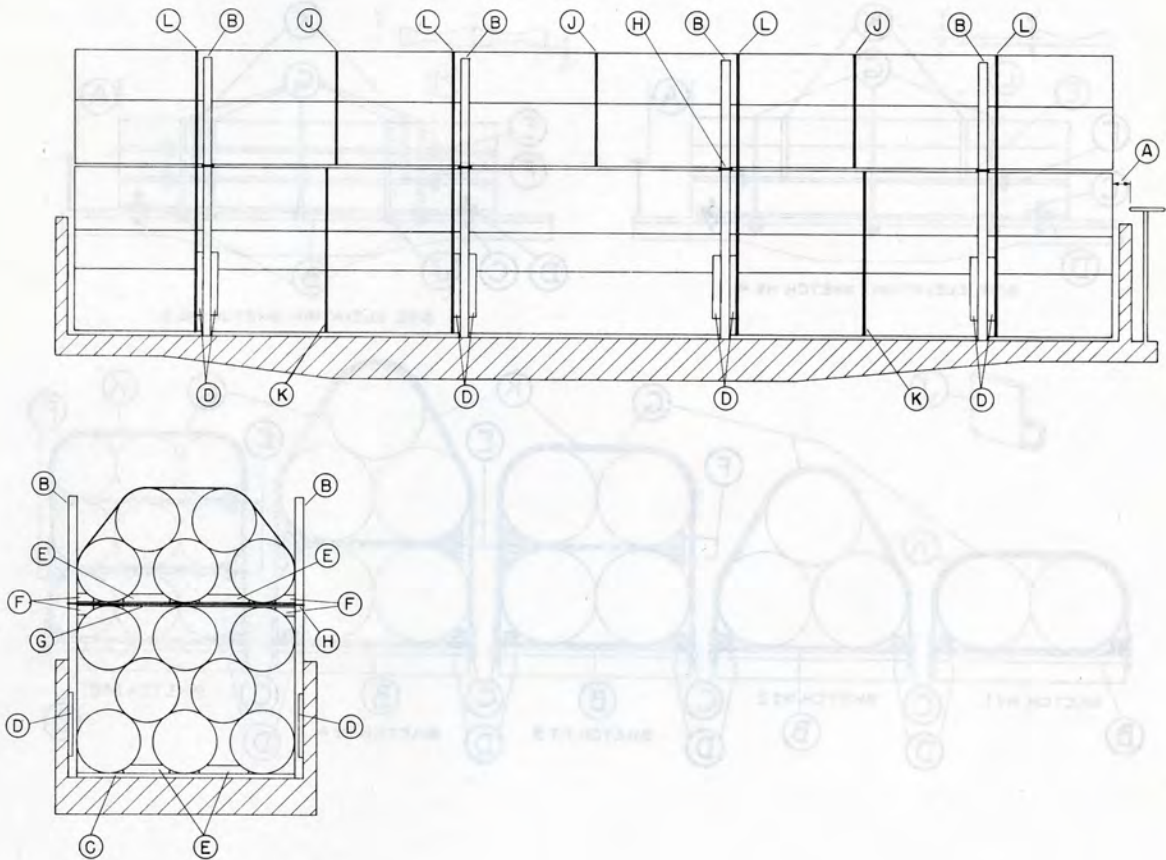


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	4 pr. per pile 41 ft. long or less. 5 pr. per pile over 41 ft. long.	Stakes, hardwood, equally spaced, extending above load to permit application of Item "D". Fill space between stakes and car sides by nailing fillers to stakes, per Sketch B-1.
C	1 ea. pr. Items "B".	2 in. x 4 in., length to suit. Locate between Items "B".
D	2 ea. pr. Items "B".	8 strands No. 11 gage wire. Locate at top of load and one midway between top of car side and top of load. Substitute, if desired, at each location, one 1 1/4 in. x .035 in. high tension band.
E	3 per pile 41 ft. long or less. 4 per pile over 41 ft. long.	2 in. x .050 in. high tension bands encircling entire pile, equally spaced over length of pile.
F	2 per pile.	2 in. x .050 in. high tension bands, encircling all pipe extending wholly or partially above car side. Locate near end Items "B".

Pile must be located centrally on car.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, 30 INCHES IN DIAMETER 41 FT. LONG OR LESS, 13 PIECES PER CAR, WITH HIGH TENSION BANDS—GONDOLA CARS

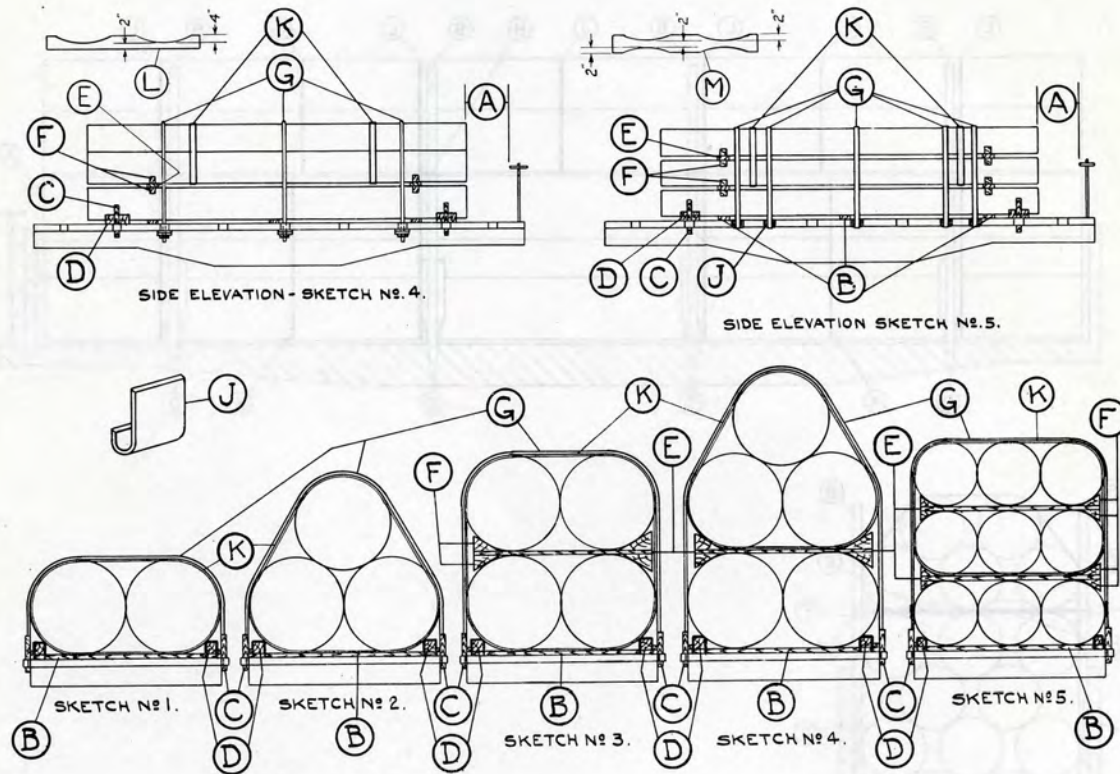


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	4 pr. per pile.	Stakes, hardwood, 4 in. x 4 in. x 9 ft.
C	1 ea. pr. Items "B".	2 in. x 4 in. length to suit, floor bearing pieces. Locate between Items "B".
D	2 ea. Item "B".	2 in. x 4 in. x 30 in., softwood, stake clamp blocks. Locate as shown front and back of Items "B". Secure to car side with 20-D nails. Use optional.
E	4 ea. pr. Items "B".	4 in. x 4 in. x 24 in., hardwood, chock blocks shaped and located as shown. Nail to Items "C" and "G" with four 30-D nails.
F	4 ea. pr. Items "B".	4 in. x 4 in. x 8½ in., hardwood, chock blocks, shaped and located as shown. Nail to top and bottom each end of Items "G" with four 30-D nails.
G	1 ea. pr. Items "B".	2 in. x 4 in. wood, separator, length to suit. Locate as shown between Items "B".
H	1 ea. pr. Items "B".	1¼ in. x .035 in. bands. Locate at Items "G", snug tight around Items "B".
J	3 per pile.	2 in. x .050 in. bands, encircling top five pieces of pipe, equally spaced.
K	2 per pile.	2 in. x .050 in. bands, encircling bottom eight pieces of pipe, suitably spaced.
L	4 per pile.	2 in. x .050 in. bands, encircling entire pile, equally spaced over length of pile.

Suitable end bulkhead, below top of car end, may be used to prevent pipe contacting end of car. Use optional. Pile must be located centrally on car.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE OVER 26 IN. IN DIAMETER, 12 FT. LONG OR OVER, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT OR GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 per pile.	2 in. x 4 in., hardwood, length equal to width of car, suitably spaced. Not required when Items "L" are used.
C	Pile 20 ft. long or less, 2 pr. per pile. Pile over 20 ft. long, 3 pr. per pile.	Stakes, extending 9 in. above floor. Not required for gondola cars.
D	Pile 20 ft. long or less, 4 per pile. Pile over 20 ft. long, 6 per pile.	8 in. x 8 in. x 16 in., hardwood, for pipe to 56 in. in diameter, 8 in. x 10 in. x 16 in., hardwood, for pipe over 56 in. in diameter. Cut top edge to provide a 2 in. bearing against pipe. Nail to floor with 60-D nails. Not required for gondola cars when pipe completely fills inside width of car. Space between Items "C" and "D" must be filled in with suitable blocking nailed to floor.
E	Pile 20 ft. long or less, 2 per pile between ea. successive layer. Pile over 20 ft. long, 3 per pile between ea. successive layer.	2 in. x 6 in., hardwood, long enough to apply Items "F", but short enough to clear bands. Not required beneath top layer when top layer is nested. Not required when Items "M" are used.

WROUGHT IRON AND STEEL PIPE OVER 26 IN. IN DIAMETER, 12 FT. LONG OR OVER, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT OR GONDOLA CARS

Item	No. of Pcs.	Description
F	4 ea. Item "E".	4 in. x 6 in., hardwood, wedge shaped, nailed to Items "E" with five 16-D nails in each, three in tapered face and two in outside face. Not required when Items "M" are used.
G	Sketches 1 and 2. Pile 20 ft. long or less, 2 per pile. Pile over 20 ft. long, 3 per pile. Sketches 3, 4 and 5. Pile 20 ft. long or less, 3 per pile. Pile over 20 ft. long, add one additional band for ea. 10 ft. or less in length over 20 ft.	Bands. Pass over top of load and attach to opposite stake pockets or car sides.
H		VACANT.
J	2 ea. Item "G".	4 in. wide, $\frac{1}{2}$ in. radius, metal filler of suitable design and strong enough to maintain this radius.
K	Sketch 1. Pile 20 ft. long or less, 1 per pile. Pile over 20 ft. long, 2 per pile.	Bands encircling entire pile. When one band is used, apply at center. When two are used, apply one about one-fourth length of pile from each end. Not required for gondola cars.
	Sketches 2 and 3. Pile 20 ft. long or less, 2 per pile. Pile over 20 ft. long, 3 per pile.	Bands encircling entire pile. When two are used, apply one about one-fourth length of pile from each end, third band, when used, to be located at center of pile.
	Sketches 4 and 5. Pile 20 ft. long or less, 2 per pile. Pile over 20 ft. long, add 1 additional for ea. 10 ft. or less in length over 20 ft.	Bands, encircling top portion of pile above bottom row, suitably spaced.
L	3 per pile.	6 in. x 6 in., hardwood, cradle blocks on floor, cut to fit contour of pipe. Not required when Items "B" are used.
M	Pile 20 ft. long or less, 2 per pile between ea. successive layer.	6 in. x 6 in., hardwood, cradle blocks—intermediate, cut to fit contour of pipe. Not required beneath top layer when top layer is nested.
	Pile over 20 ft. long, 3 per pile between ea. successive layer.	Not required when Items "E" and "F" are used.

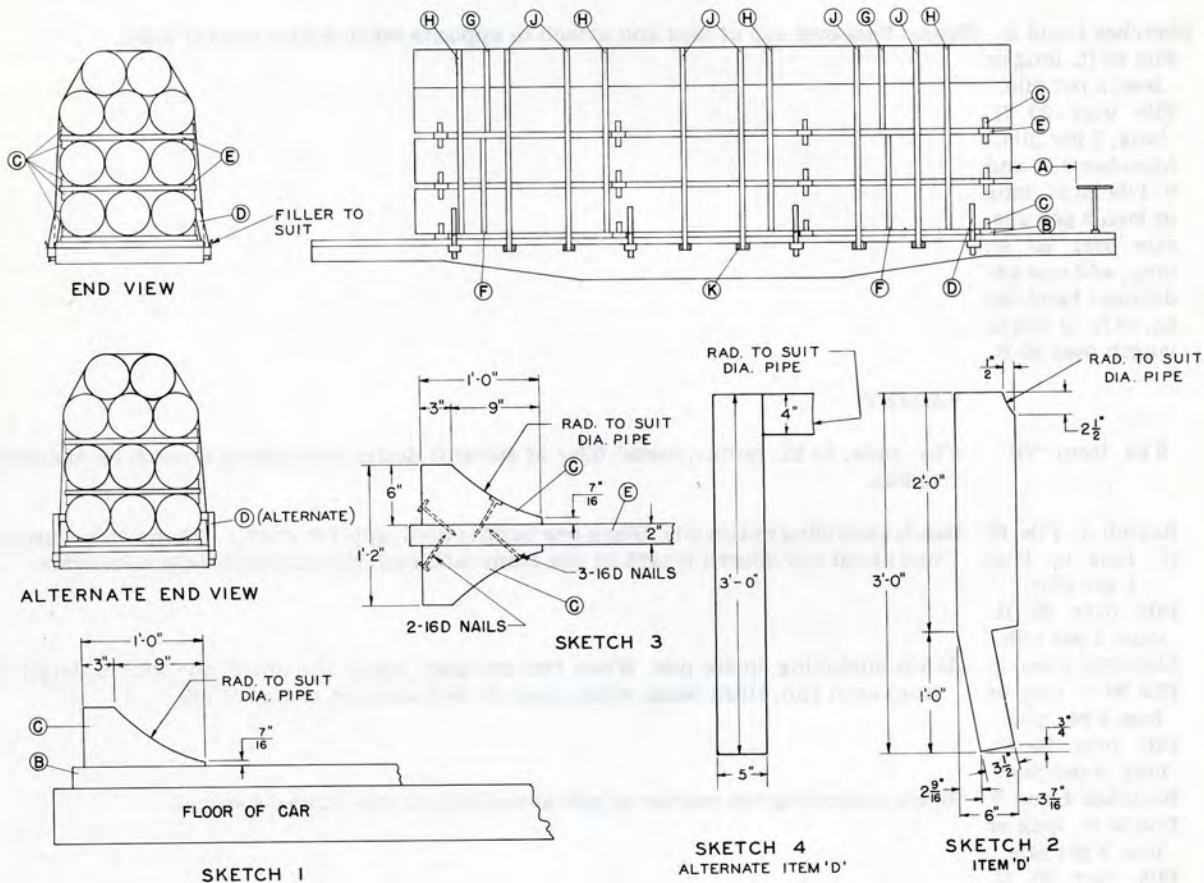
$\frac{3}{4}$ in. dia. rods may be substituted for bands, Items "G", in like number. When rods pass through floor, use 4 in. x 4 in. x 18 in., hardwood, or $\frac{1}{2}$ in. x 4 in. x 18 in. plate under floor. When rods pass through stake pockets, use $\frac{1}{2}$ in. x 4 in. x 10 in. plate under stake pockets.

When more than one-half the diameter of top layer of pipe is below top of car sides, Items "G" are not required.

Longitudinal welds on pipe must not contact bands.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

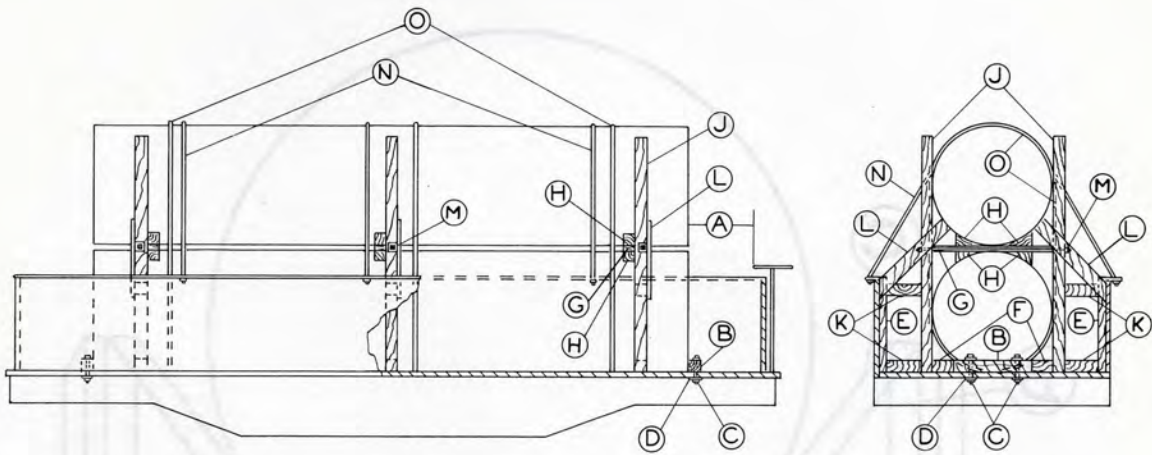
WROUGHT IRON AND STEEL PIPE 34 IN. OR 36 IN. IN DIAMETER, MAXIMUM THICKNESS .500 IN., WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	4 per pile.	2 in. x 6 in. (rough) hardwood, length equal to width of car, suitably spaced.
C	2 ea. Item "B", also 4 ea. Item "E".	4 in. x 6 in. x 12 in., wood chock blocks, cut to fit contour of pipe. Locate against pipe and nail to Item "B" with five 16-D nails, 3 through contour surface and Item "B" and 2 through vertical surface and Item "E". Sketch 1.
D	4 pr. per pile.	Stakes 4 in. x 6 in. x 36 in. hardwood, Sketch 2 or Sketch 4. Inside face cut to fit contour of pipe and suitably spaced.
E	4 between first and second layer and 4 between second and third layer.	2 in. x 6 in. (rough) hardwood, length equal to width of load, with four 4 in. x 6 in. x 12 in. wood chock blocks (Item "C"). Locate against pipe and nail to Item "E" with five 16-D nails, three through contour surface and Item "E", and two through vertical surface and Item "E". Sketch 3.
F	2 per pile.	2 in. x .050 in. bands, suitably spaced, encircling the two bottom layers.
G	2 per pile.	2 in. x .050 in. bands, suitably spaced, encircling the two top layers.
H	4 per pile.	2 in. x .050 in. bands, suitably spaced, encircling entire pile.
J	6 per pile.	2 in. x .050 in. bands, suitably spaced. Pass over top of load and secure to opposite stake pockets.
K	2 ea. Item "J".	Metal filler 4 in. wide and of sufficient thickness to maintain 1/2 in. radius and secured to prevent displacement must be used to protect bands at all stake pockets.

Pipe must be loaded centrally on car and longitudinal welds on pipe must not contact bands.
See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE, 60 INCHES AND OVER IN DIAMETER—GONDOLA CARS



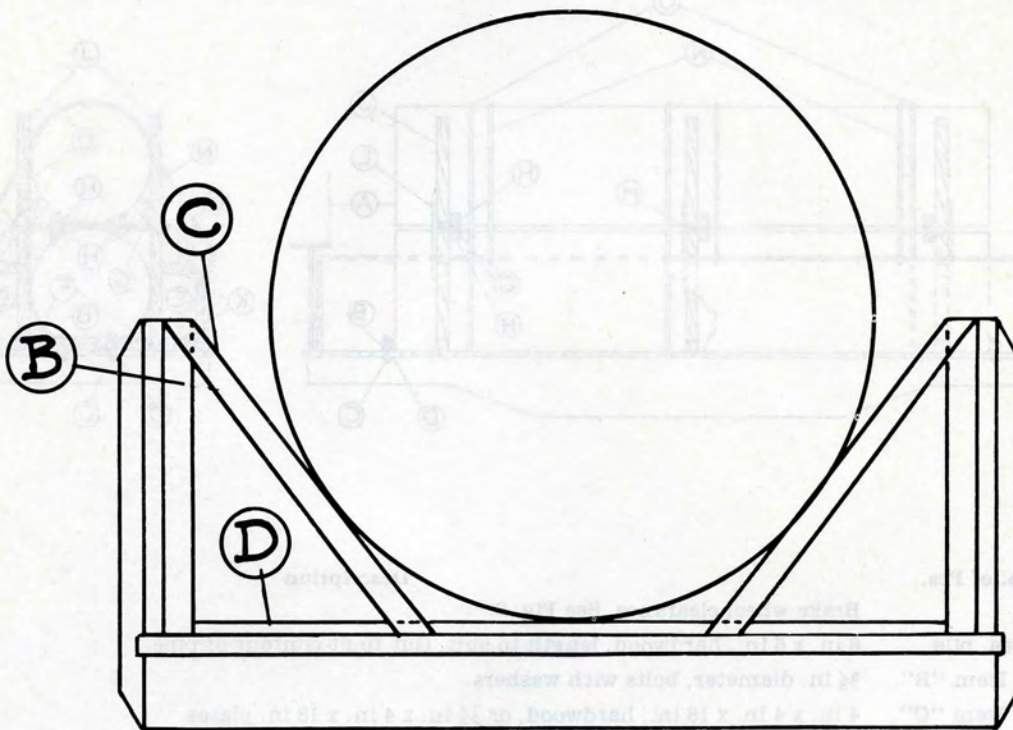
Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 ea. pile.	6 in. x 6 in., hardwood, length to suit. Cut to fit contour of pipe.
C	2 ea. Item "B".	$\frac{5}{8}$ in. diameter, bolts with washers.
D	1 ea. Item "C".	4 in. x 4 in. x 18 in., hardwood, or $\frac{1}{2}$ in. x 4 in. x 18 in. plates.
E	2 ea. pr. Items "J".	2 in. x 6 in., hardwood, height of car sides. Nail with 20-D nails.
F	2 ea. pr. Items "J".	6 in. x 6 in., hardwood, cut to fit contour of pipe, long enough to extend from pipe to stakes. Nail with 60-D nails.
G	1 ea. pr. Items "J".	2 in. x 6 in., hardwood, length to suit.
H	4 ea. Item "G".	6 in. x 6 in., hardwood, wedge shaped. Nail to Item "G" with 30-D nails.
J	12 ft. long or less, 2 pr. Over 12 ft. long to 24 ft. long, 3 pr. Add 1 for ea. additional 8 ft. or less.	6 in. x 6 in., hardwood.
K	2 ea. Item "J".	6 in. x 6 in., hardwood, length to suit. Toe-nail bottom pieces to floor, Items "E" and "J". Toe-nail top pieces to Items "E" and "J". Use 30-D nails.
L	2 ea. pr. Items "J".	2 in. x 6 in., hardwood, length to suit. Nail to Items "E", "J" and "K" with 30-D nails.
M	1 ea. pr. Items "J".	$\frac{5}{8}$ in. diameter rod, length to suit with $\frac{1}{4}$ in. x 4 in. x 4 in. plate washers.
N	12 ft. long or less, 2. Over 12 ft. long to 24 ft. long, 3. Add 1 for ea. additional 8 ft. or less.	$\frac{3}{4}$ in. diameter rods or bands of equal strength, with threaded ends. When rods pass through floor, use cleats or plates, per Item "D". Substitute, if desired, at each location, one 2 in. x .050 in. high tension band.
O	12 ft. long or less, 2. Over 12 ft. long to 24 ft. long, 3. Add 1 for ea. additional 8 ft. or less.	2 in. x .050 in. high tension bands. Substitute, if desired, at each location, one $\frac{3}{4}$ in. diameter rod, bent to fit contour of pipe on top and bear against sides of pipe and pass through floor and Item "D".

Pipe less than 12 ft. long must be loaded below top of car sides.

Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WROUGHT IRON AND STEEL PIPE OF LARGE DIAMETER—GONDOLA CARS

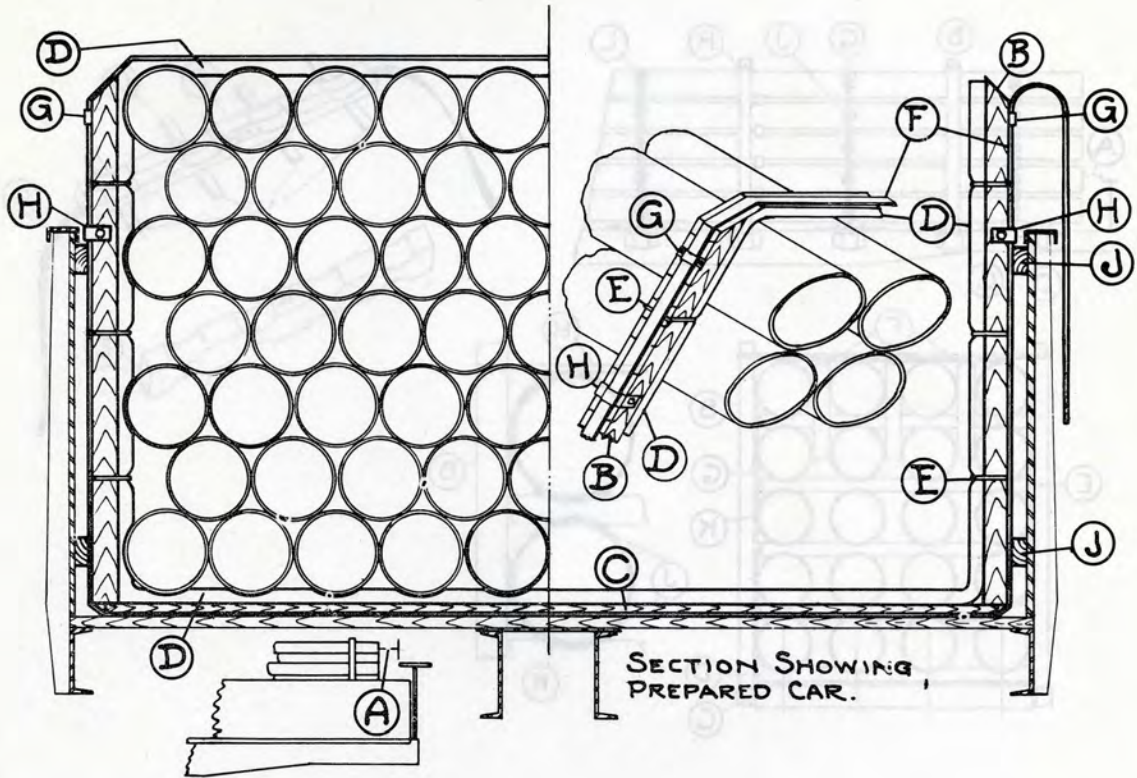


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 pr. per pile.	Stakes, hardwood, to top of car sides, equally spaced, nailed or bolted to car side.
C	1 ea. Item "B".	2 in. x 6 in., length to suit, nailed to Items "B" and "D".
D	1 at ea. pr. Items "B".	1 in. x 4 in., length equal to width of car.

Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

WRAPPED WROUGHT IRON AND STEEL PIPE, WITH HIGH TENSION BANDS—GONDOLA CARS

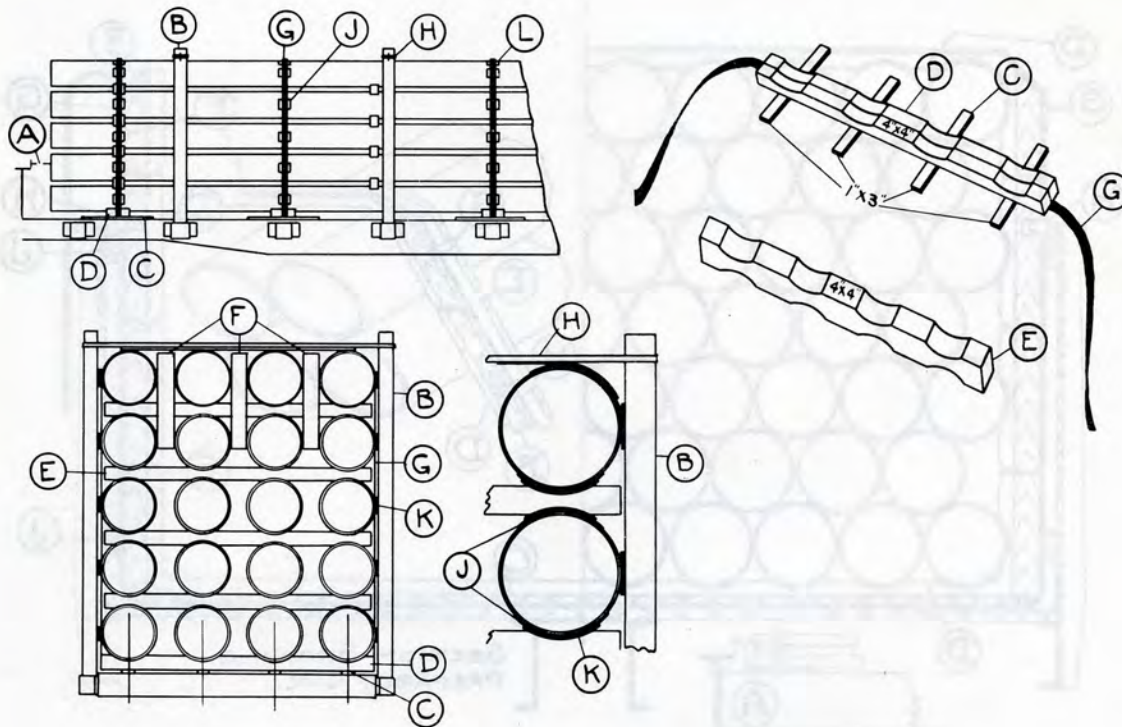


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 25 ft. long or less, 3 pr. Pile over 25 ft. long, 4 pr. Add 1 pr. when load exceeds 3 ft. above car sides.	Stakes, hardwood, extending from top of Item "C" to top of load. Place not more than 5 ft. from ends of pipe, and equally space intermediate stakes. Half of thickness to project beyond ends of Item "C".
C	1 ea. Item "B".	2 in. x 6 in., about 3 in. shorter than inside width of car.
D	1 ea. Item "B" and "C" and across top of load at ea. pr. Items "B".	Excelsior padding entirely enclosed in heavy wrapping paper.
E	4 ea. Item "B".	Wire to secure Item "D" to Item "B".
F	1 ea. Item "B".	2 in. x .050 in. bands.
G	1 near top ea. Item "B".	Metal plate to hold them "F" in place on Item "B", but permit Item "F" free vertical movement to allow drawing same tight.
H	1 ea. Item "B" located to contact top angle of car when load shifts to side of car.	Metal strap over Item "F" and nailed to sides of Item "B".
J	2 ea. Item "B".	Suitable block, one near top and one near bottom between car side and Item "B" to hold same in place until load has been secured with Item "F". Remove after loading is completed.

Pipe 8 ft. long or less must be loaded below top of car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

See General Rules 4, 5, 9, 10 and 15 for further details.

COATED WROUGHT IRON AND STEEL PIPE, WITH HIGH TENSION BANDS—FLAT OR GONDOLA CARS

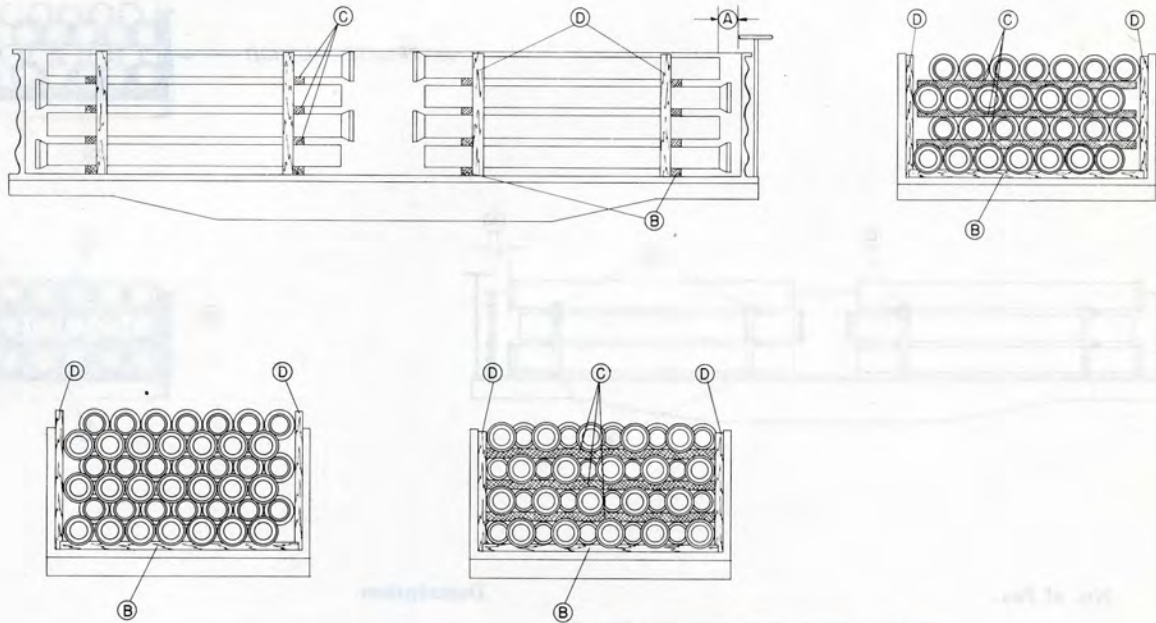


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 40 ft. long or less, 3 pr. Pile over 40 ft. long, 4 pr.	4 in. x 5 in., hardwood stakes, extending above load to permit application of Item "H".
C	4 ea. Item "D".	1 in. x 3 in. x 18 in., hardwood, nailed to Items "D".
D	Pile 40 ft. long or less, 4 pr. Pile over 40 ft. long, 5 pr.	4 in. x 4 in., hardwood, length equal to width of load, cut out on top 1 in. deep to fit contour of pipe, with rounded corners at bottom to prevent sharp bends in bands.
E	Pile 40 ft. long or less, 3. Pile over 40 ft. long, 4.	4 in. x 4 in., hardwood, length equal to width of load, between each layer of pipe. Cut out on top and bottom 1 in. deep to fit contour of pipe.
F	As required.	Dimensions to suit, locate as shown, apply before Items "G" are tensioned. Secure to prevent displacement.
G	Pile 40 ft. long or less, 4. Pile over 40 ft. long, 5.	2 in. x .050 in. bands, around entire load passing underneath Items "D" and on top of Item "C".
H	1 ea. pr. Items "B".	1 1/4 in. x .035 in. band, secured to Items "B" with staples.
J	As required.	No. 20 ga. dimensions to suit, between pipe and Items "K" at each bearing piece, secured to prevent displacement.
K	As required.	Padding between Items "J" and bearing piece, also between each pipe and Items "B".
L	4 ea. Item "G".	No. 20 ga., dimensions to suit. Pipe must be equally spaced as shown.

Pipe 8 ft. long or less must not be loaded on flat cars or above top of gondola car sides. Small diameter pipe must not be loaded inside larger diameter pipe, except when loaded below top of car sides.

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

CAST IRON PIPE, 12 IN. AND LESS IN DIAMETER, 12 FT. LONG OR OVER—GONDOLA CARS



ALTERNATE METHODS

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	Wood strips, high enough to keep flange or bell from coming in contact with floor, rivet heads, etc., length 2 in. less than width of car. Locate about $\frac{1}{5}$ the distance from each end of pile.
C	2 per pile.	Wood strips, excelsior or similar material, between successive layers, when necessary.
D	4 per pile.	Wood strips, when necessary, to keep pipe from coming in contact with sides, gussets, rivets, etc.

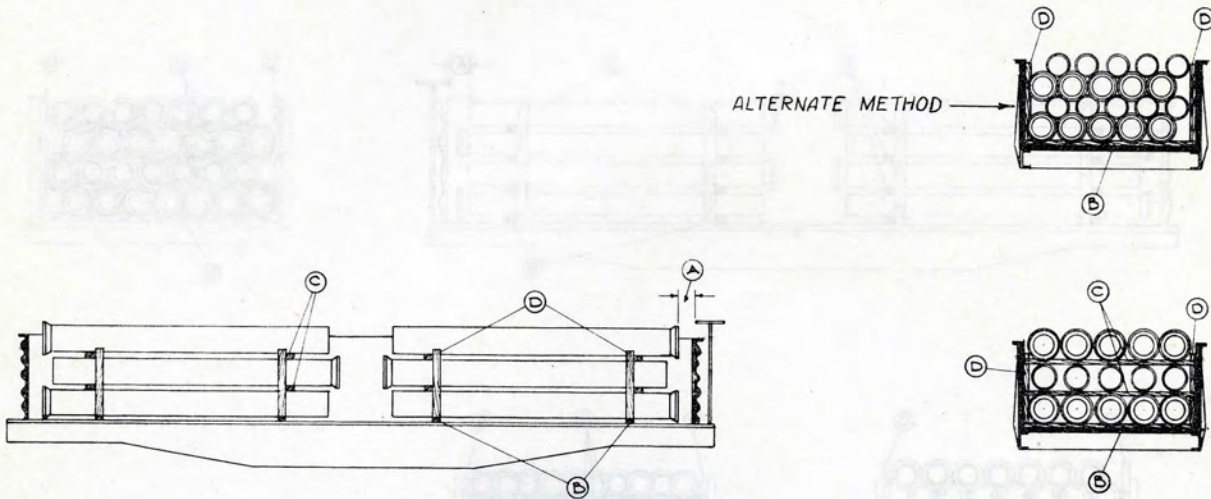
Secure pipe extending above car sides with 3 pairs of stakes per pile, 4 in. x 4 in., extending from floor to top of pile. Opposite stakes must be tied together above pipe with 6 strands, No. 11 ga. wire.

When loading two piles per car, place bell ends of top layers toward center of car; when loading three piles per car, place bell ends of top layer of end piles toward center of car. Space between piles should be about 2 ft.

Pipe less than 12 ft. long must be loaded below top of car sides.

See General Rules 4, 5, 9, 10 and 15 for further details.

CAST IRON PIPE 14 IN. TO 30 IN. DIAMETER, INCLUSIVE, 12 FT. LONG OR OVER—GONDOLA CARS



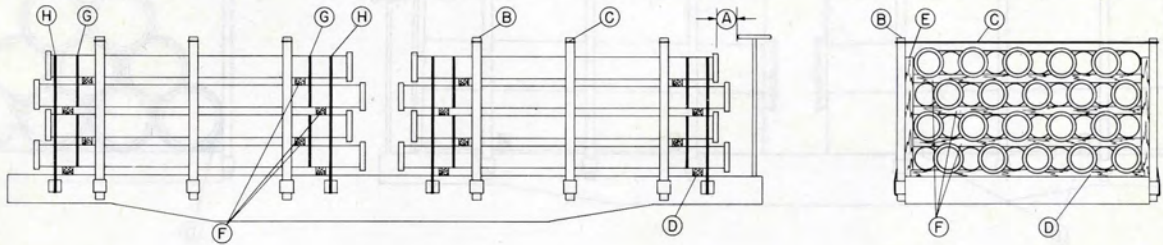
Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	Wood strips, high enough to keep flange or bell from coming in contact with floor, rivet heads, etc., length 2 in. less than width of car. Locate about 1/2 the distance from each end of pile.
C	2 per pile.	Wood strips, excelsior or similar material, between successive layers, when necessary.
D	4 per pile.	Wood strips, when necessary, to keep pipe from coming in contact with sides, gussets, rivets, etc.

Pipe extending more than 1/2 its diameter above car sides must be secured with 3 pairs of stakes per pile. Opposite stakes must be tied together above pipe with 6 strands of No. 11 ga. wire.

Pipe less than 12 ft. long must be loaded below top of car sides.

See General Rules 4, 5, 9, 10 and 15 for further details.

CAST IRON PIPE 14 IN. AND LESS IN DIAMETER WITH 2 IN. X .050 IN. HIGH TENSION BANDS—FLAT CARS

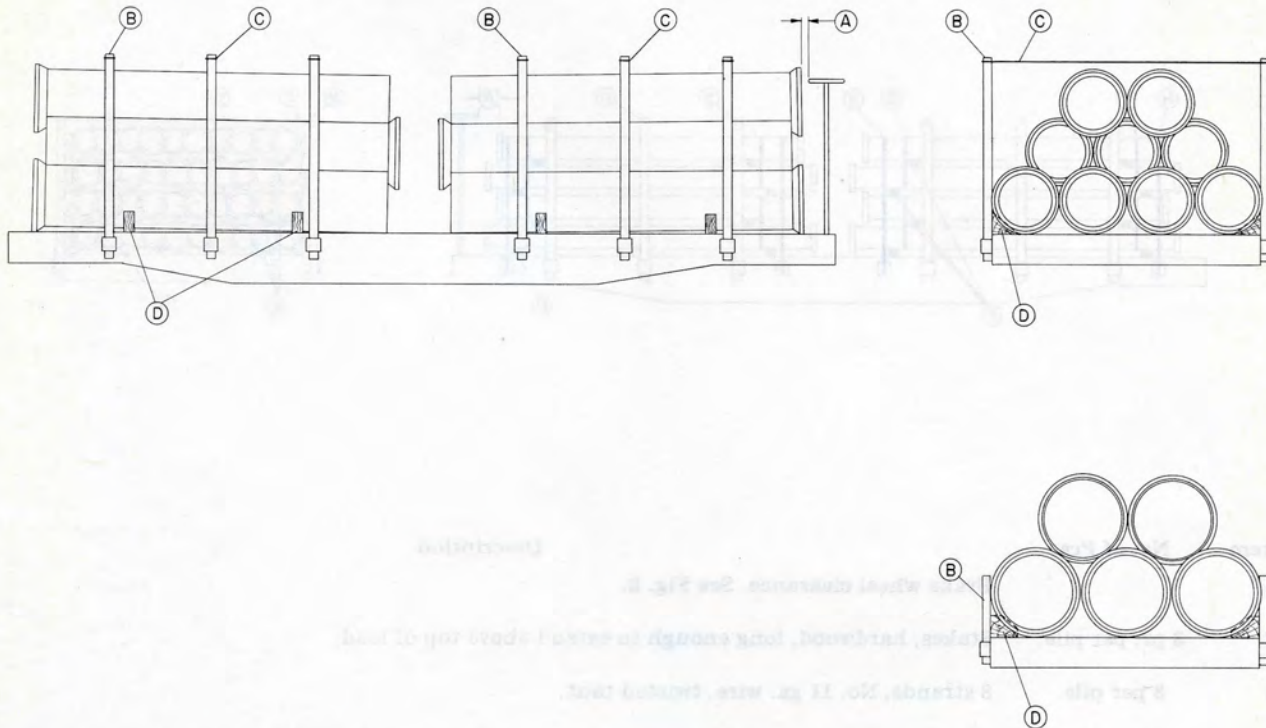


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 pr. per pile.	Stakes, hardwood, long enough to extend above top of load.
C	3 per pile.	8 strands, No. 11 ga. wire, twisted taut.
D	2 per pile.	Floor bearing pieces thick enough to keep bell ends off floor and load level, when necessary, to prevent damage to pipe.
E	1 ea. Item "B".	Width of, and nailed to stake, thickness to suit. Use when pipe does not completely fill space between stake.
F		Suitable separators to keep load level.
G	2 per bundle.	2 in. x .050 in. high tension bands encircling each bundle.
H	2 ea. two bundles.	2 in. x .050 in. high tension bands passed across top of load and secured to stake pockets with seals approximately 18 in. above pocket.

See General Rules 10 and 15 for further details.

Sec. 2—Fig. 142

CAST IRON PIPE, 16 IN. DIAMETER AND OVER—FLAT CARS

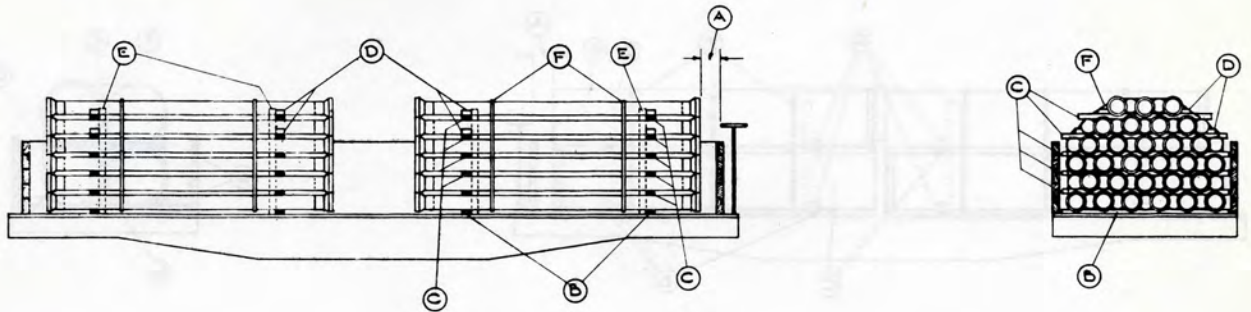


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 pr. per pile.	Stakes, hardwood, long enough to extend 15 in. above floor when pipe is loaded two high and long enough to extend above top of pile when loaded 3 or 4 high.
C	1 ea. pr. Items "B".	8 strands, No. 11 ga. wire, twisted taut. Not required on pipe loaded two high.
D	2 ea., outside pipe, ea. pile.	4 in. x 5 in., hardwood, wedge shaped, equally spaced, nailed to floor with 40-D nails.
E		Suitable dunnage between pipe, when necessary, to prevent damage to pipe.

Place bell ends of pipe in bottom layer of end piles toward end of car.

See General Rules 10 and 15 for further details.

CAST IRON PIPE LESS THAN 24 INCHES IN DIAMETER, 12 FEET LONG OR OVER (NOT EXCEEDING TWO LAYERS ABOVE TOP OF CAR SIDES), WITH 2 IN. X .050 IN. HIGH TENSION BANDS—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	Wood strips, 3 in. wide, high enough to keep flange or bell from coming in contact with floor, rivet heads, etc., length 2 in. less than width of car. Locate about $\frac{1}{2}$ the distance from each end of pile.
C	2	3 in. x 4 in., between successive layers. Locate directly above Items "B".
D	2 ea. Items "B" and "C".	4 in. x 6 in., wedge shaped, nailed to Items "B" and "C" with five 16-D nails in each, three in tapered face and two in outside face. Not required below top of car side when pipe completely covers full width of car.
E	2 per pile.	3 in. x 3 in., long enough to extend from floor to 6 in. above center line of top layer of pipe, secured to Items "C". Use optional.
F	2 per pile.	Bands. Locate about 12 in., from Items "C".

Pipe less than 12 ft. long must be loaded below top of car sides.

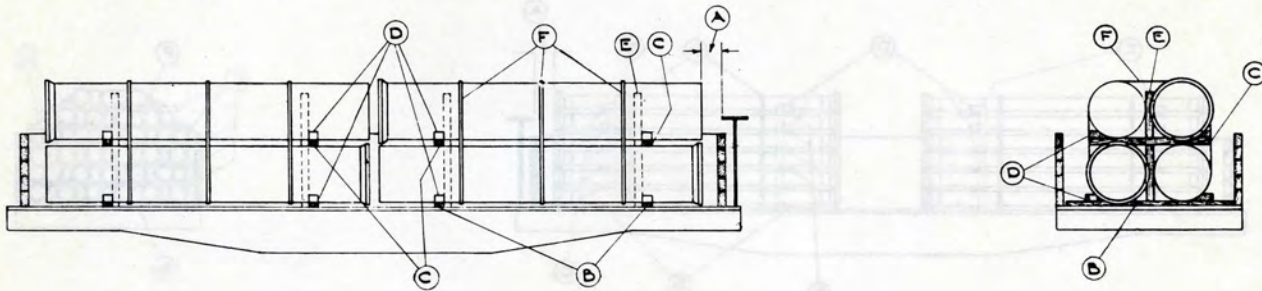
Length of car permitting bell ends of pipe should be about 16 inches in from plain ends of pipe, and ends of pile about 18 inches from ends of car.

If desired, suitable cushioning material may be applied between piles and between piles and ends of car.

See General Rules 4, 5, 9, 14 and 15 for further details.

Sec. 2—Fig. 144

CAST IRON PIPE 24 IN. TO 54 IN. IN DIAMETER, INC., 12 FT. LONG OR OVER, WITH 2 IN. X .050 IN. HIGH TENSION BANDS—GONDOLA CARS



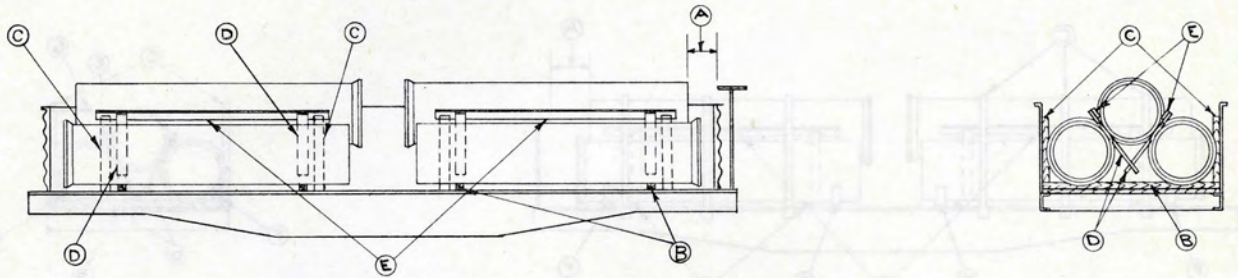
Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	Wood strips, 3 in. wide, high enough to keep flange or bell from coming in contact with floor, rivet heads, etc., length 2 in. less than width of car. Locate about $\frac{1}{2}$ the distance from each end of pile.
C	2	2 in. x 3 in., or of sufficient thickness to clear bell ends (height must not exceed width), between successive layers. Locate directly above Items "B".
D	2 ea. Items "B" and "C".	4 in. x 6 in., wedge shaped, nailed to Items "B" and "C" with five 16-D nails in each, three in tapered face and two in outside face.
E	2 per pile.	3 in. x 3 in., long enough to extend from floor to 6 in. above center line of top layer of pipe, secured to Items "C".
F	3 per pile.	Bands. Locate end bands about 12 in. from Items "C" and third band, when used, at center of pile. When pipe 30 in. or less in diameter extends $\frac{1}{2}$ or less its diameter above top of car sides, and when pipe 36 in., or more, in diameter extends $\frac{1}{4}$ or less its diameter above top of car sides, the center band may be omitted.

Pipe less than 12 ft. long must be loaded below top of car sides.

See General Rules 4, 9, 14 and 15 for further details.

Sec. 2—Fig. 145

CAST IRON PIPE 36 IN. TO 48 IN. DIAMETER, INCLUSIVE, 12 FT. LONG OR OVER—GONDOLA CARS

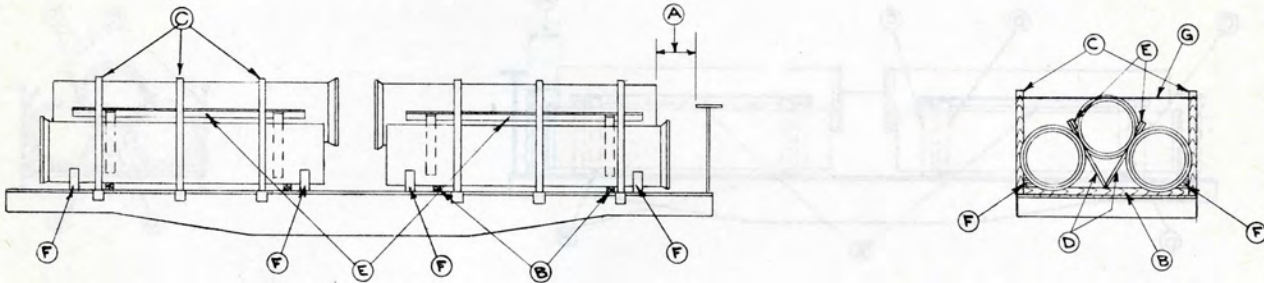


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	4 in. x 8 in. or of sufficient height to clear bell end from floor of car. Length 2 in. less than width of car.
C	4 per pile.	4 in. x 4 in. height equal to diameter of pipe.
D	4 per pile.	2 in. x 6 in., length to suit.
E	2 per pile.	2 in. x 6 in., length to suit. Nailed to Items "D".

Rope, excelsior or similar material may be used in place of Items "D" and "E".

See General Rules 4, 5, 9 and 14 for further details.

CAST IRON PIPE 36 IN. TO 48 IN. DIAMETER, INCLUSIVE, 12 FT. LONG OR OVER—FLAT CARS

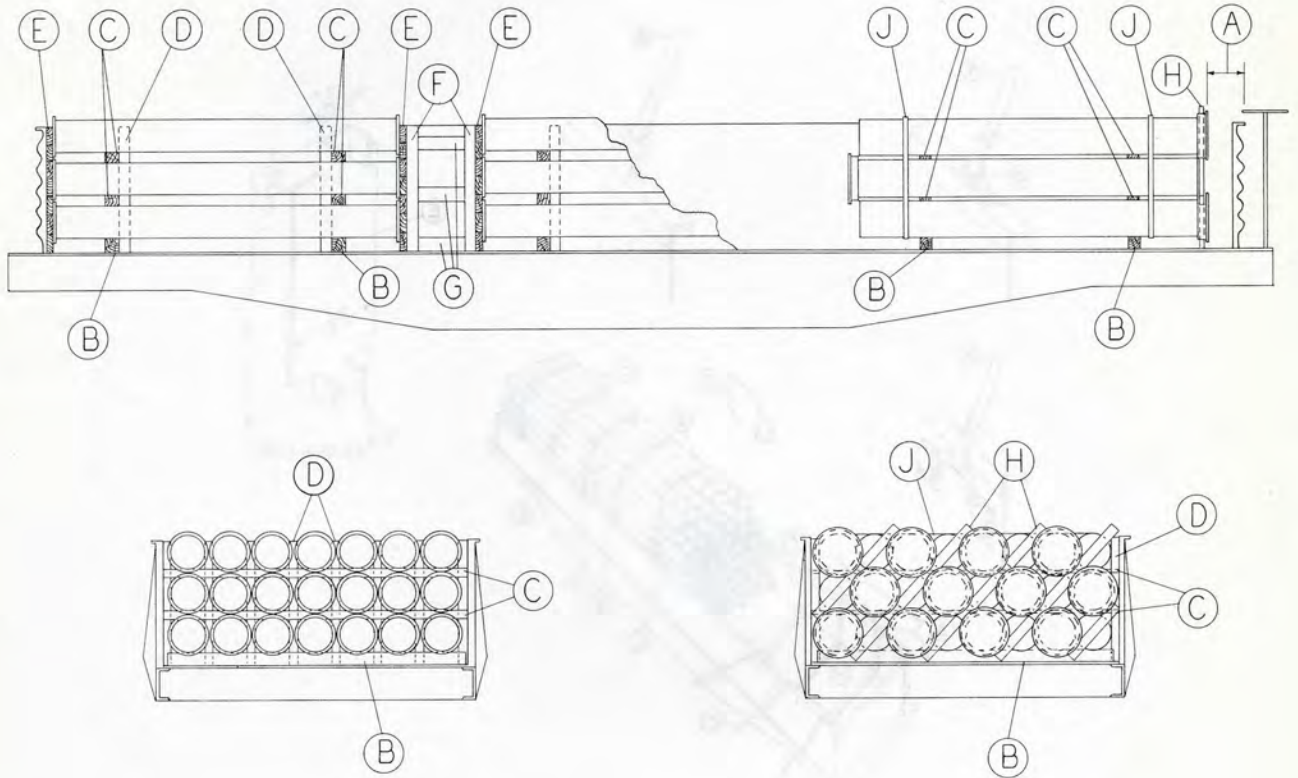


Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	4 in. x 8 in. or of sufficient height to clear bell end from floor of car. Length 2 in. less than width of car.
C	3 pairs per pile.	Stakes—hardwood, long enough to extend above top of pile.
D	4 per pile.	2 in. x 6 in., length to suit.
E	2 per pile.	2 in. x 6 in., length to suit. Nailed to Items "D".
F	4 per pile.	Wedge blocks 4 in. wide, placed against pipe and securely nailed to car floor.
G	1 each pair Items "C".	6 strand No. 9 gauge wire. Substitute if desired one 1¼ in. x .035 in. high tension band.

Rope, excelsior or similar material may be used in place of Items "D" and "E".

See General Rules 4, 5, 9, 10, 14 and 15 for further details.

CAST IRON FLANGED OR MECHANICAL JOINT PIPE, 12 FT. LONG OR OVER—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 per pile.	Wood strips, high enough to keep flanges from coming in contact with floor, rivet heads, etc. Width to be greater than height. Length 2 in. less than width of car.
C	2	Wood strips, between successive layers of pipe, thick enough to keep flanges from coming in contact with each other. Width to be greater than height. Locate directly above Items "B".
D	As required.	Wood strips, between each pipe and between pipe and car sides. Width, thickness and length to suit.
E	As required.	2 in. thick, width of car, extending to top of pile.
F	6 ea. bulkhead.	4 in. x 4 in., length to suit.
G	9 ea. bulkhead.	4 in. x 4 in., length to suit, nailed to Items "F".
H	As required.	Wood strips, width, thickness and length to suit. Apply at one end of pile, as shown, to prevent straight ends contacting flanged ends of pipe. Not required for pipe over 12 in. in diameter.
J	2 per pile.	2 in. x .050 in. high tension bands. Not required when Items "D" are used.

For layers extending more than two-thirds their height above top of car sides, 4 in. x 6 in., wedge blocks, must be used against pipe on each end of each Item "C".

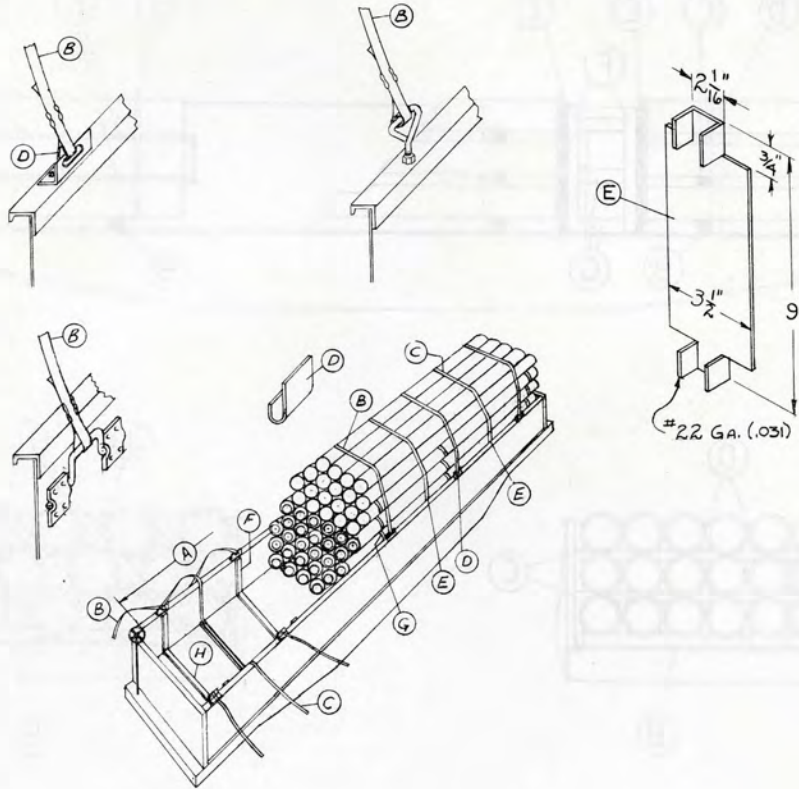
When unit method of loading is used, Items "D", "E", "F" and "G" may be omitted, except where ends of pile are loaded less than 18 in. from end of car or with less than 18 in. between piles.

End gates, built up of 2 in. x 6 in. uprights and cross pieces may be substituted for Items "E", "F" and "G" when ends of pile are less than 18 in. from end of car, or when less than 18 in. between piles.

Rope, excelsior or similar material may be used in place of Items "C" and "D".

See General Rules 4, 5, 9, 14 and 15 for further details.

GALVANIZED CORRUGATED PIPE, 30 INCHES OR LESS IN DIAMETER, WITH HIGH TENSION BANDS—
GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 30 ft. long or less, 2; pile over 30 ft. long, 3.	2 in. x .050 in. bands, attached to stake pockets, anchor bolts or slotted angle. Not required when load is not more than 2 ft. above car sides.
C	Pile 30 ft. long or less, 2; pile over 30 ft., 3.	2 in. x .050 in. bands, encircling entire pile, equally spaced. Add 1 additional band for each band specified when Items "B" are not used.
D	1 ea. stake pocket.	4 in. wide, 1/2 in. radius, metal filler of suitable design and strong enough to maintain this radius.
E	2 ea. Item "B" and "C".	Use when bands may contact metal at top of car sides.
F	4 ea. pile.	4 in. wide, thick enough to prevent pipe from contacting car sides, etc. Use optional.
G	3 ea. layer.	3/4 in. x .035 in. bands, encircling entire layer when outside pipe in layer are directly above or slightly overhanging pipe below.
H	3 per pile.	4 in. wide, thick enough to prevent pipe contacting floor, rivet heads, etc., length equal to width of load.

Place all bands in corrugations of pipe.

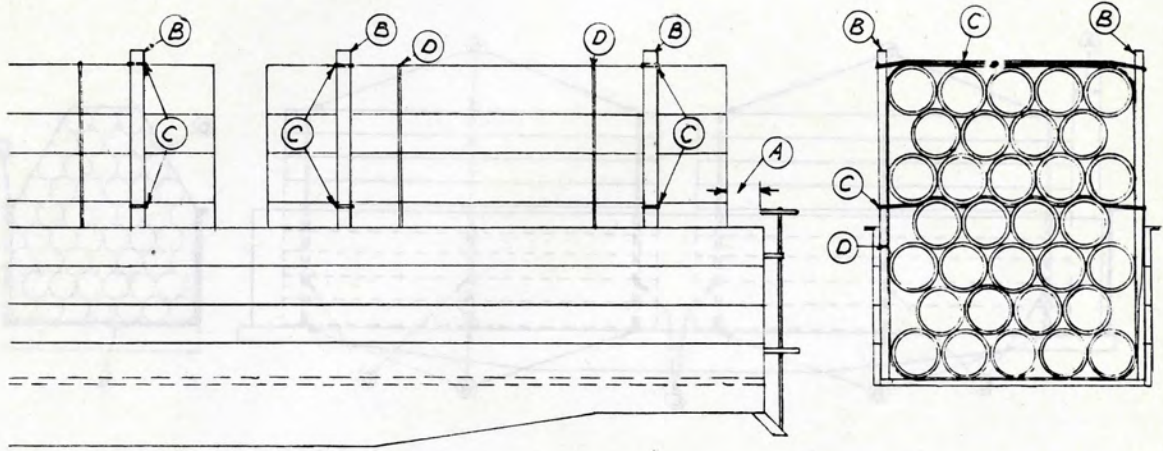
Pipe less than 10 ft. long must be loaded below top of car sides. Small diameter pipe may be loaded inside larger diameter pipe.

Where small diameter spiral corrugated pipe is loaded inside larger diameter pipe above top of car sides, the inner and outer pipe must be wired together to prevent shifting.

Coated or treated pipe may be separated by wood, excelsior or similar material, when necessary.

See General Rules 4, 5, 9, 10 and 15 for further details.

GALVANIZED CORRUGATED PIPE, LESS THAN 36 INCHES IN DIAMETER—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	2 pr. per pile.	Stakes, hardwood.
C	2 ea. pr. Items "B".	6 strands, No. 11 gage wire, at top of load and above first row of pipe extending wholly or partially above car side.
D	Pile 30 ft. long or less 2 per pile. Add 1 for ea. additional 10 ft. or less in length.	6 strands, No. 11 gage wire, around entire pile, about 4 ft. from each end of pipe. Substitute, if desired, at each location, 2 — No. 8 gage high tension wires or 1 — 1¼ in. x .035 in. high tension band.

Place all wires or bands in corrugations of pipe.

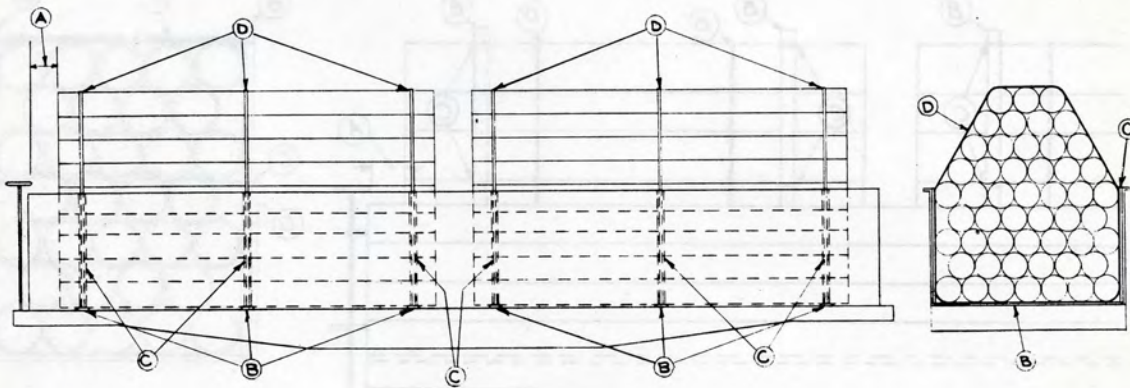
Pipe less than 10 ft. long must be loaded below top of car sides. Small diameter pipe may be loaded inside larger diameter pipe.

Where small diameter spiral corrugated pipe is loaded inside larger diameter pipe above top of car sides, the inner and outer pipe must be wired together to prevent shifting.

Coated or treated pipe may be separated by wood, excelsior or similar material, when necessary.

See General Rules 4, 5, 9, 10 and 15 for further details.

GALVANIZED CORRUGATED PIPE—LESS THAN 36 INCHES IN DIAMETER—PYRAMIDAL FORM—HIGH TENSION BANDS—GONDOLA CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	3 per pile.	1 in. x 4 in. wood. Length 2 in. less than width of car.
C	6 per pile.	1 in. x 4 in. wood. Length equal to height of car side. Use optional.
D	Pile 16 ft. long or less, 3 per pile. 1 additional for ea. 8 ft. or fraction thereof in excess of 16 ft.	1 1/4 in. x .035 bands, around entire pile, equally spaced.

At least one-half diameter of pipe in first row below pyramid must be below car side.

Place all bands in corrugations of pipe.

Pipe less than 10 ft. long must be loaded below top of car sides. Small diameter pipe may be loaded inside larger diameter pipe.

Where small diameter spiral corrugated pipe is loaded inside larger diameter pipe above top of car sides, the inner and outer pipe must be wired together to prevent shifting.

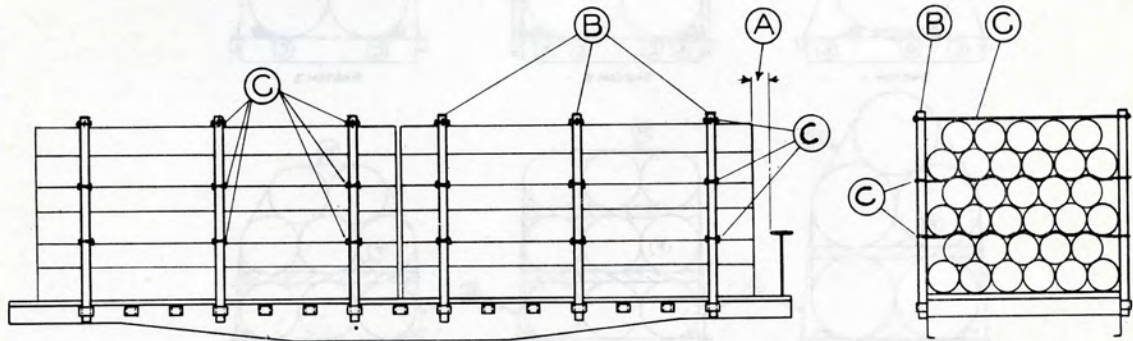
Coated or treated pipe may be separated by wood, excelsior or similar material, when necessary.

When ends of pile are loaded against end of car, wood strips may be placed between end of car and ends of pipe.

See General Rules 4, 5, 9, 10 and 15 for further details.

Sec. 2—Fig. 151

GALVANIZED CORRUGATED PIPE, LESS THAN 36 INCHES IN DIAMETER—FLAT CARS



Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Pile 30 ft. long or less, 3 pr.; pile over 30 ft. long, 4 pr.	Stakes, hardwood, extending above load to permit application of Item "C" as shown.
C	Ea. pr. Items "B" according to height of load.	6 strands, No. 11 gage wire, not more than 30 in. apart, and across top of load, twisted taut. Substitute, if desired, at each location, 2—No. 8 gage high tension wires or 1—1¼ in. x .035 in. high tension band.

Place all wires in corrugations of pipe.

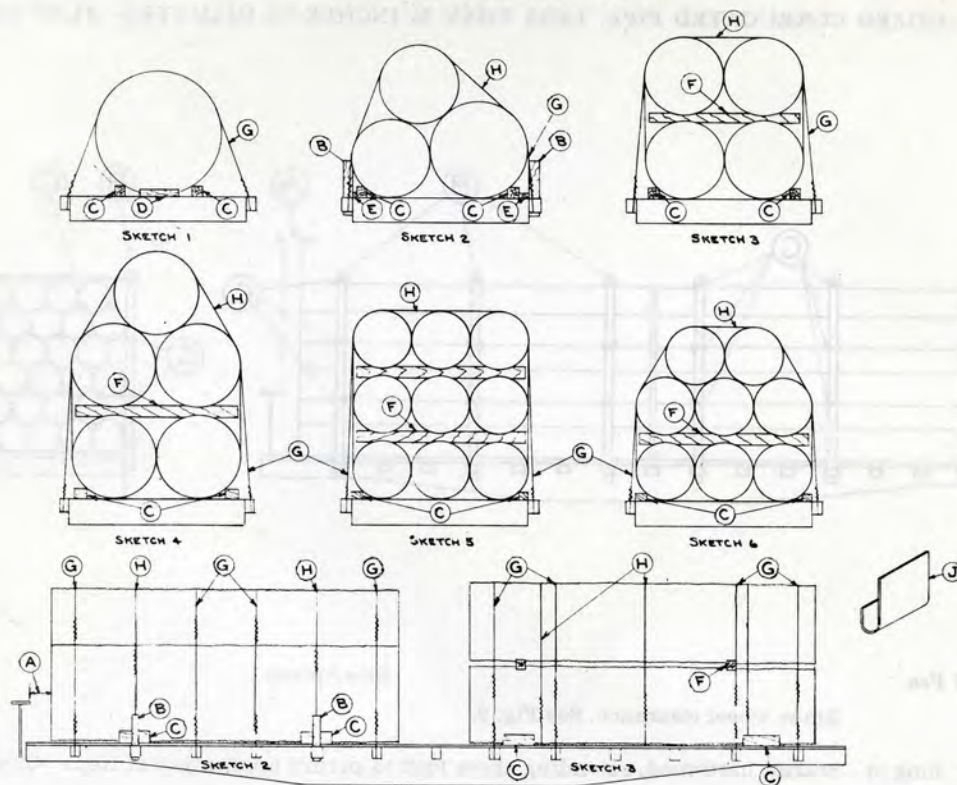
Pipe less than 10 ft. long must not be loaded on flat cars. Small diameter pipe may be loaded inside larger diameter pipe.

Where small diameter spiral corrugated pipe is loaded inside larger diameter pipe above top of car sides, the inner and outer pipe must be wired together to prevent shifting.

Coated or treated pipe may be separated by wood, excelsior or similar material, when necessary.

See General Rules 4, 5, 9, 10 and 15 for further details.

Sec. 2—Fig. 152

GALVANIZED CORRUGATED PIPE, 36 INCHES OR OVER IN DIAMETER WITH NO. 8 GAGE HIGH TENSION WIRE—
FLAT OR GONDOLA CARS

Item	No. of Pcs.	Description
A		Brake wheel clearance. See Fig. 2.
B	Sketch 2 only. Pile 30 ft. long or less, 2 pr. Pile over 30 ft. long, 3 pr.	4 in. x 5 in., extending 14 in. above floor, or in contact with pipe wider than car. May be used on Sketches 3, 4, 5 and 6.
C	2 ea. side of ea. pile.	4 in. x 4 in. x 12 in. Nail to floor with 40-D nails.
D	Sketch 1 only. 1 ea. end of ea. pipe.	2 in. x 4 in. x 12 in. Nail to floor with 40-D nails. When two or more pipe are loaded end to end, one block between each two pipe will suffice.
E	Sketch 2 only. 1 ea. Item "C".	2 in. x 4 in., long enough to fill space between Items "B" and "C". Nail to floor with 30-D nails. Must be used on Sketches 3, 4, 5 and 6 if Items "B" are used.
F	Sketches 3, 4, 5 and 6 only. Pile 30 ft. long or less, 2. Pile over 30 ft. long, 3.	6 in. x 6 in. hardwood, length to suit. Cut top and bottom to fit contour of pipe. Substitute, if desired, 2 in. x 6 in., hardwood, length to suit, with four 4 in. x 6 in. x 12 in. chock blocks. Two chock blocks to be located at each end of 2 in. x 6 in. spacer, one above and one below, each end of spacer secured with five 16-D nails in each.
G	Sketch 1. 3 per pile 30 ft. long or less. 5 per pile over 30 ft. long. Sketches 2, 3, 4, 5 and 6. 4 per pile 30 ft. long or less. 5 per pile over 30 ft. long.	No. 8 gage wire, attached to stake pocket or top side chord. When 3 are used, place one at center of pile, and one about 2 ft. from ends of pile. When 4 and 5 are used, space evenly throughout pile.
H	Sketches 2, 3, 4, 5 and 6. 2 per pile 30 ft. long or less. 4 per pile over 30 ft. long. Sketch 3. 3 per pile 30 ft. long or less. 4 per pile over 30 ft. long.	No. 8 gage wire encircling pile.
J	2 ea. Item "G".	Fillers at stake pockets to prevent cutting of wires in transit.

Items "B", "D" and "E" not required for gondola cars.
Place all wires in corrugations of pipe.
Pipe less than 10 ft. long must not be loaded on flat cars, or above top of gondola car sides. Small diameter pipe may be loaded inside larger diameter pipe.

Where small diameter spiral corrugated pipe is loaded inside larger diameter pipe above top of car sides, the inner and outer pipe must be wired together to prevent shifting.

Coated or treated pipe may be separated by wood, excelsior or similar material, when necessary.

See General Rules 4, 5, 9, 10 and 15 for further details.

