

GOODMAN MANUFACTURING COMPANY

ELECTRIC MINING MACHINERY

MAIN OFFICE AND PLANT
HALSTED STREET AND 48TH PLACE
CHICAGO, ILLINOIS

704 DENVER NATIONAL BUILDING

DENVER, COLO.

Nov. 2, 1942

DENVER TELEPHONE
TABOR 5090

Mr. W. H. Schacht, President
Copper Range Company
Painesdale, Michigan

Dear Mr. Schacht:

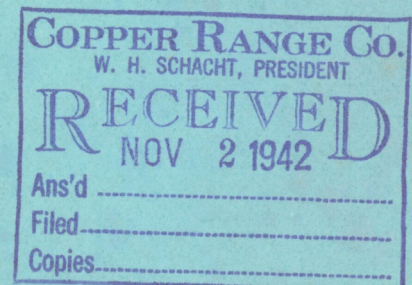
We are returning photostats of the drill jumbos that we used on the Carlton Tunnel, the Big Thompson Tunnel, and by the Howe Sound Company for the development of their Lake Chelan Property.

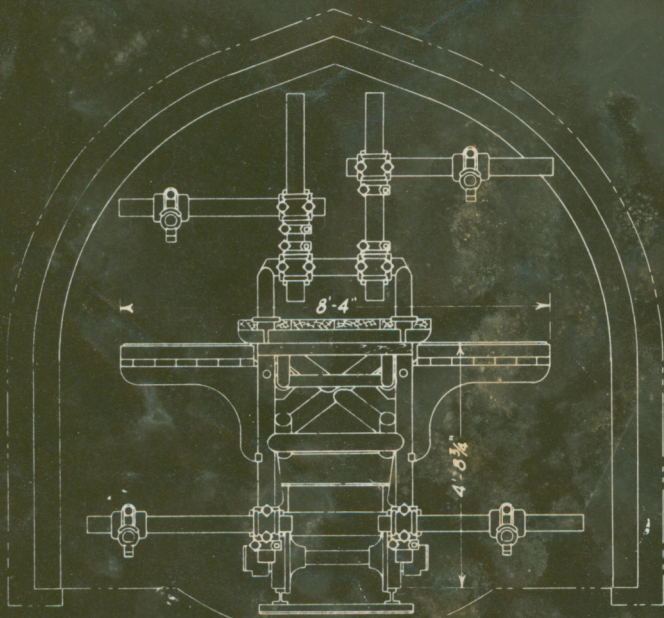
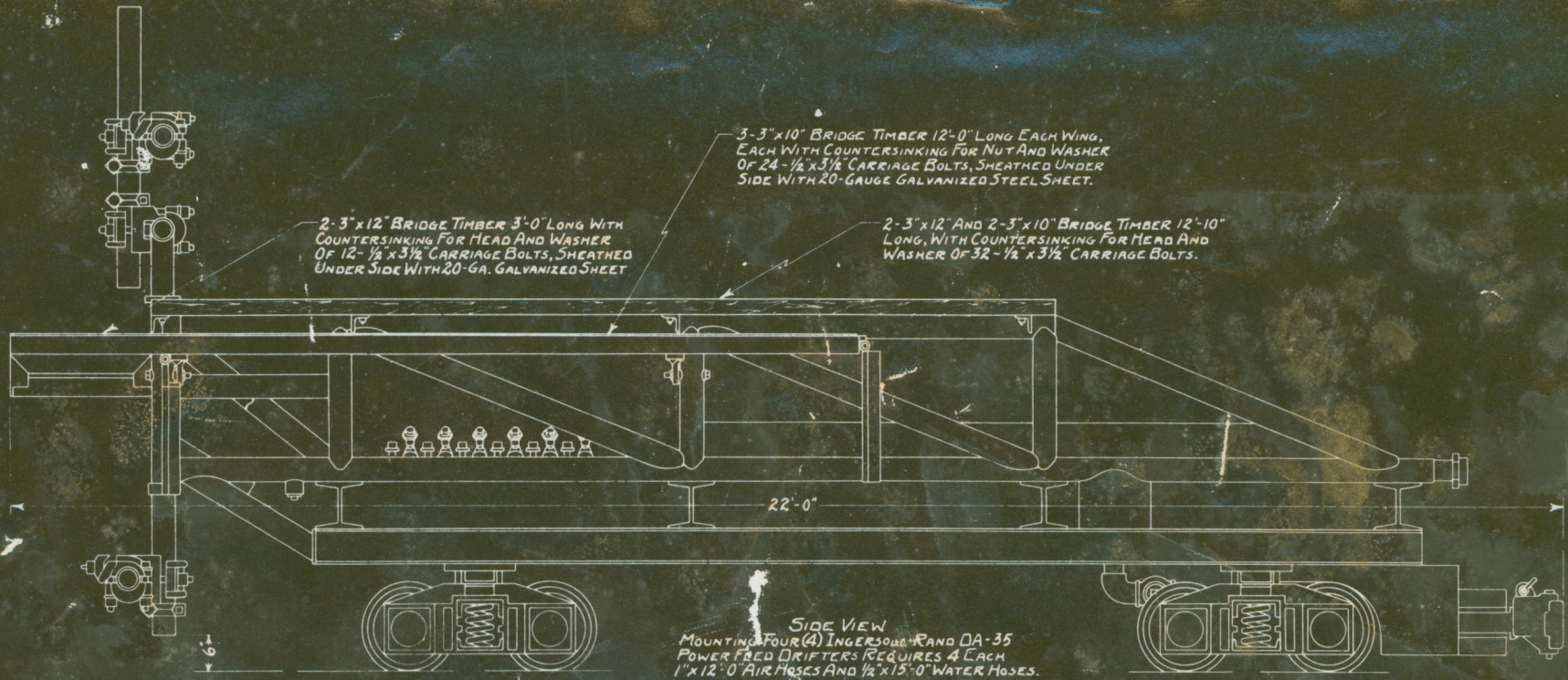
These photostats will replace the blueprints originally submitted to you and which you allowed us to take back to Chicago when we saw you last. We trust that the information may be of interest to you and hope that you may give us a chance to discuss with you the development work at the White Pine Mine when you are ready to go ahead with this proposition.

RDBudd

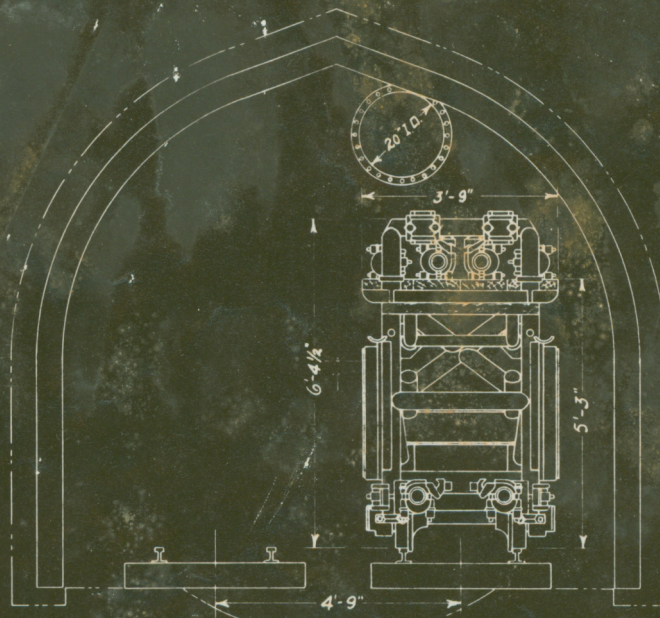
Yours very truly,

R. D. Budd

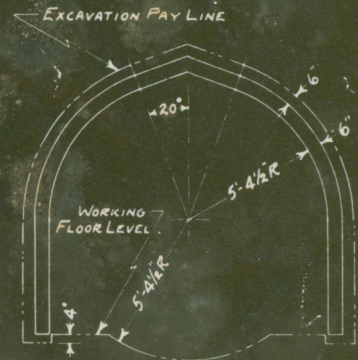




FRONT VIEW AT FACE
CARRIAGE RUNNING ON 6'-0" SECTIONS OF 40 LB. RAIL, TOP OF RAIL FLUSH WITH WORKING FLOOR LEVEL; TIES CONSISTING OF 3 PIECES 4"-7.25 LB. CHANNEL 3'-0" LONG WITH 2"x4" TIMBER FILLERS, LOCATED ON 18" CENTERS, PER SECTION.



FRONT VIEW ON SIDING
TRACK CONSISTING OF 40 LB. RAILS ON 6"x6"x42" TIES LAID ON WORKING FLOOR LEVEL.

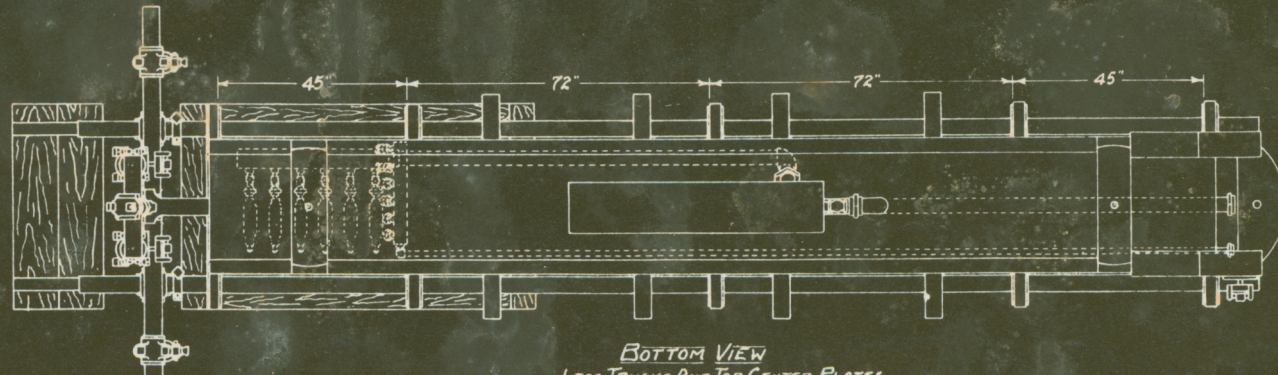
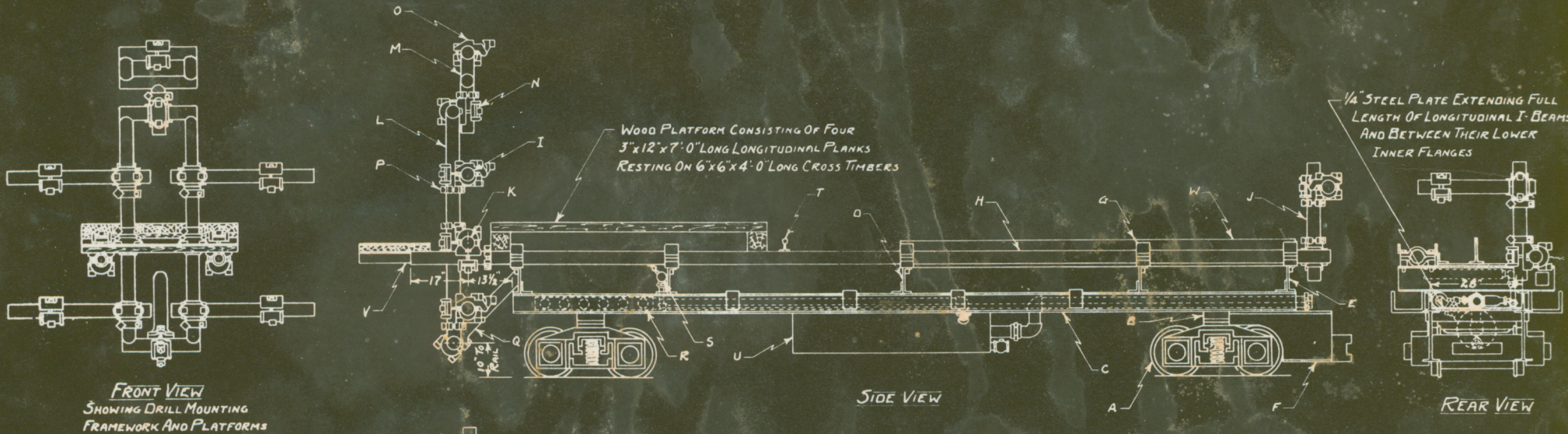


TYPICAL TUNNEL SECTION
6" H STEEL RIB SUPPORT

ASSEMBLY OF DRILL CARRIAGE
USED ON
OUTLET END CONTINENTAL DIVIDE TUNNEL
COLORADO-BIG THOMPSON PROJECT, COLORADO
S.S. MAGOFFIN Co., INC. CONTRACTOR
F.R. PURVIS, GEN. SUPT.
F.R. MERRICK, TUNNEL SUPT.
DRAWN BY:
M.W. TERRILL
INGERSOLL RAND Co.
DENVER

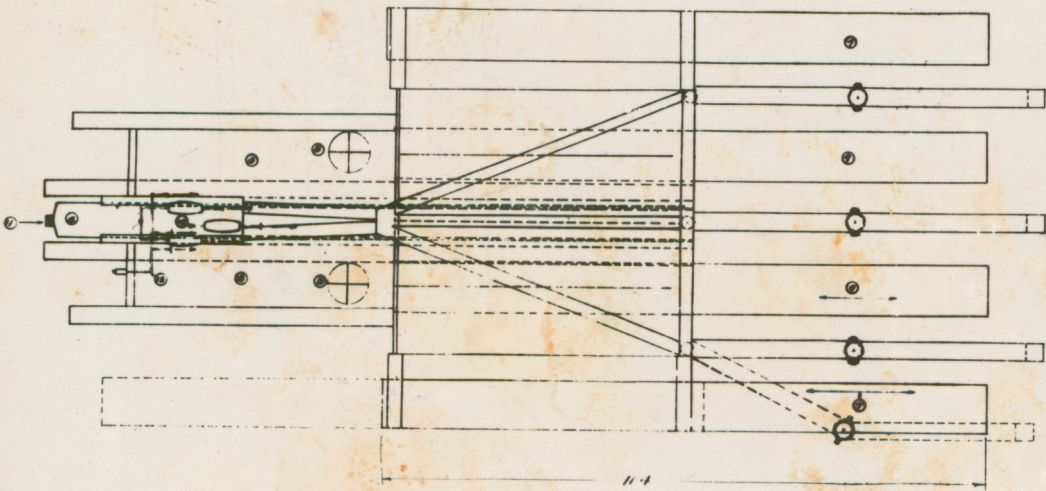
SHEET No. 3 OF 3.

ASSEMBLY
OF
DRILL CARRIAGE
USED ON
CARLTON DRAINAGE TUNNEL
APPROX. 10' x 11' IN SECTION
JOHN R. AUSTIN, SUPT.
DRAWN BY
INGERSOLL RAND CO., DENVER
M. W. TERRILL

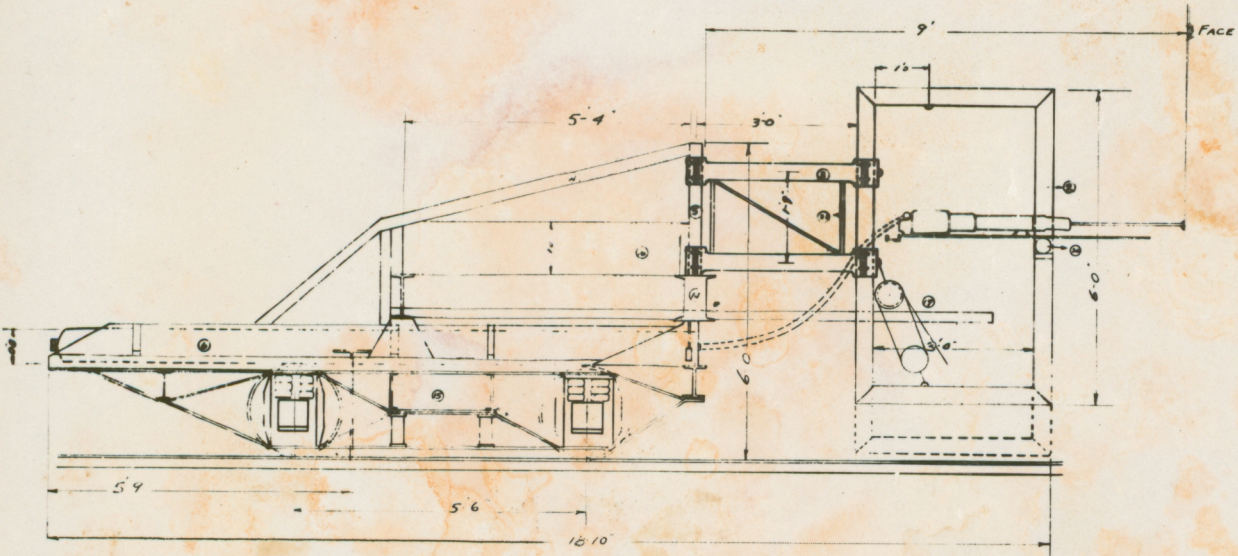


LEGEND

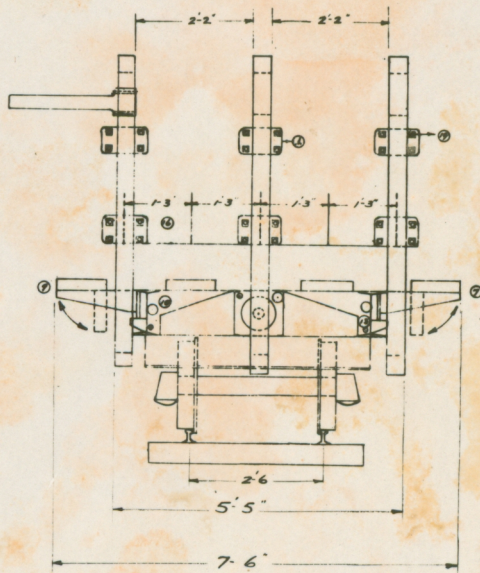
- ① EXTRA HEAVY DUTY CLAMP 6x6 (8" STEEL)
- ② EXTRA HEAVY COLUMN PIPE (3 1/2")
- ③ 2" BLACK PIPE (HOLLOW)
- ④ 3/4" BLACK PIPE (HOLLOW)
- ⑤ 3/4" EXTRA HEAVY COLUMN PIPE
- ⑥ 2-10 CHANNELS
- ⑦ COLLAPSIBLE STAGING 4x12x11'-0" ALSO TELESCOPIC
- ⑧ KEYPERS
- ⑨ 4x12x11" TELESCOPIC STAGING
- ⑩ OILS CONNECTED TO AIRSEVER-OUTLETS CONTINUE TO FRONT OF JUMBO WHERE HOSE CONNECTIONS ARE MADE
- ⑪ DULL HOSE CONNECTION FOR AIR
- ⑫ AIR RECEIVING TANK 12" LONG
- ⑬ DULL HOSE CONNECTION FOR WATER-OUTLETS CONTINUE TO FRONT OF JUMBO WHERE HOSE CONNECTIONS ARE MADE
- ⑭ 2" REINFORCED DEAN 10" @ 17" FT
- ⑮ CARRIAGE TAKEN FROM SIDE DUMP CAR
- ⑯ 7" STEEL COMPARTMENTS 1x1 3/4x3'-4"
- ⑰ CHAIN DOLLS TO RAISE AND LOWER FRAME
- ⑱ BALLAST 550# ON EACH SIDE
- ⑳ 3" BOLTS
- ㉑ 5" D SADDLES CLAMP'S ARMS
- ㉒ BRACING 2 1/2" x 1/2" STRAP IRON



TOP VIEW

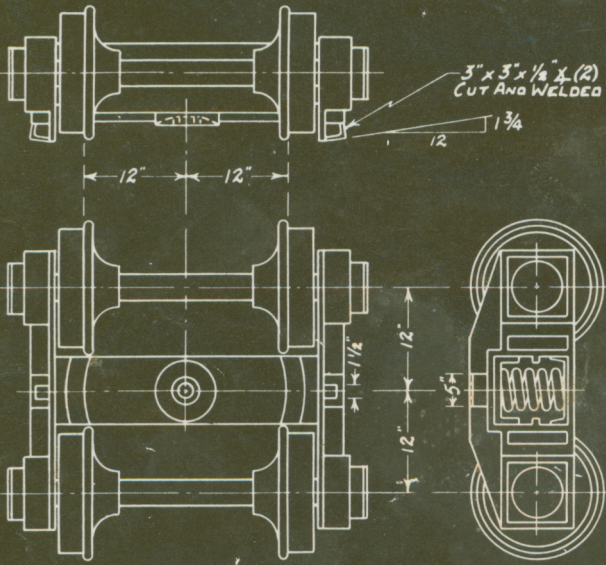


SIDE VIEW

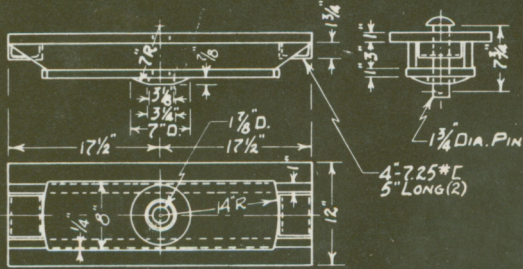


END VIEW

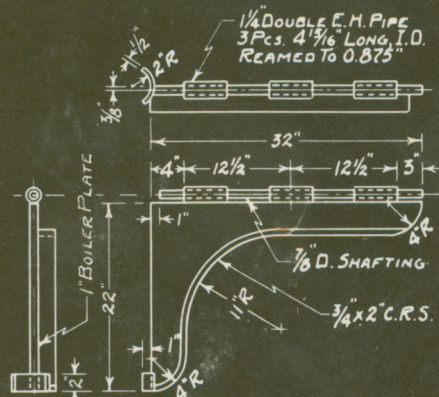
HOWE SADDLE COMPANY	
CHELAN DIVISION	
TITLE: DULL CARRIAGE	
DATE: 1/1/24	
LESS / FOR	SCALE: 1/2\"/>
DRAWN BY: [Signature]	
CHECKED BY: [Signature]	
DATE: 1/1/24	
JOB NO: 24-3	



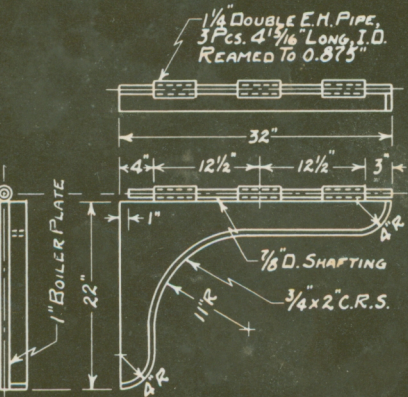
24 GAUGE TIMKEN BEARING EQUIPPED SPRING MOUNTED TRUCKS (2), C.S. CARD IRON WORKS CO.'S NO. 2219, LESS TOP CENTER PLATE



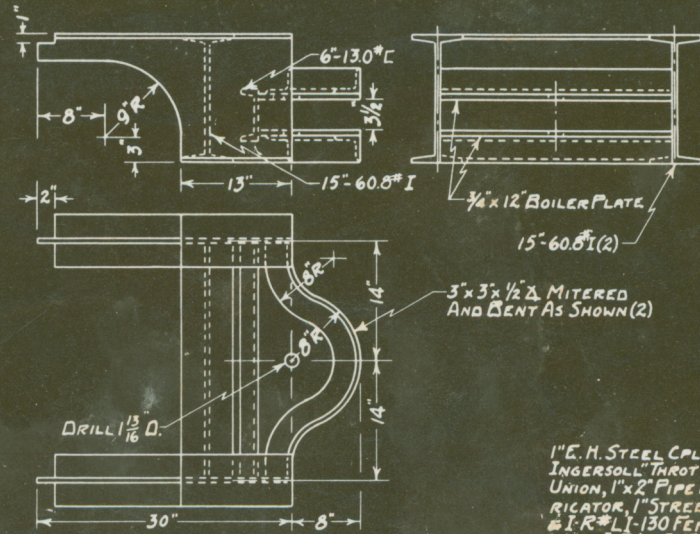
TRUCK BOLSTER (2), ONE EACH BETWEEN STATIONS B&C AND D&E



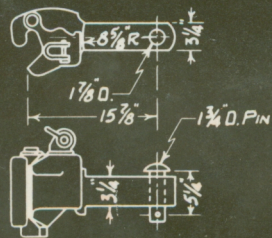
RIGHT FRONT WING BRACE (1) MAKE ONE RIGHT, ONE LEFT



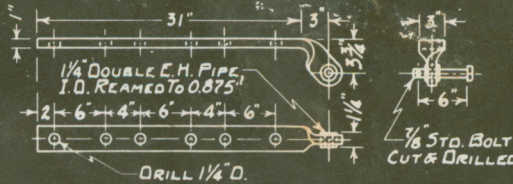
RIGHT REAR WING BRACE (1) MAKE ONE RIGHT, ONE LEFT



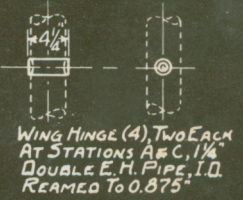
COUPLER MOUNTING ASSEMBLY (1) AT STATION E



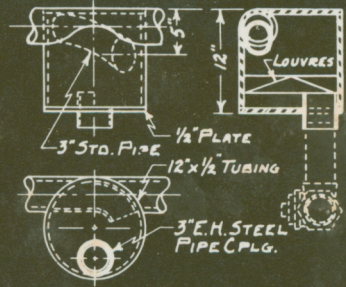
COUPLER (1), C.S. CARD IRON WKS. CO. #3810



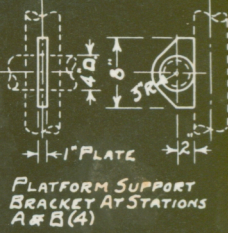
WING HINGE STRAP (4) MAKE TWO RIGHT, TWO LEFT



WING HINGE (4), TWO EACH AT STATIONS A&C, 1 1/4 DOUBLE E.M. PIPE, I.D. REAMED TO 0.875"



ASSEMBLY OF AIR LINE TRAP (1) NEAR STATION D, WITH 3" x 8" PIPE NIPPLE, 3" STREET ELL AND 3" LUBRICATED FULL-WAY STOP COCK



PLATFORM SUPPORT BRACKET AT STATIONS A&B (4)

1" E.M. STEEL CPLG., EIGHT (8) WITH I-R NEW INGERSOLL THROTTLE; SIX (6) WITH I" PIPE UNION, 1" x 2" PIPE NIPPLE, I-R TYPE F LUBRICATOR, 1" STREET ELL, 1" x 3" PIPE NIPPLE & I-R #LI-130 FEMALE SPUD; TWO (2) WITH I-R #LI-130 FEMALE SPUD

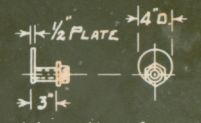
3/4" E.M. STEEL CPLG., SIX (6) WITH 3/4" I-R NEW INGERSOLL THROTTLE, 3/4" PIPE CPLG. AND I-R #LI-104 MALE SPUD



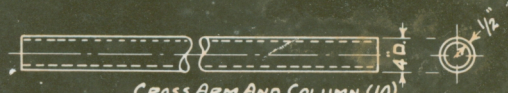
SECTION THRU LOWER CHORD OF FRAME BETWEEN STATIONS B&C



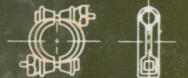
AIR BULL HOSE CONNECTION (1) AT STATION E, WITH E.M. 3" PIPE AND 3" DIXON 'BOSS' SPUD



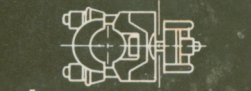
WATER HOSE CONNECTION (1) AT STATION E, WITH 1" E.M. PIPE AND I-R #LI-130 FEMALE SPUD



CROSS ARM AND COLUMN (10) FOUR ARMS 48" LONG (USED IN STEEL SECTION) FOUR ARMS 42" LONG (USED IN ROCK SECTION) TWO COLUMNS 48" LONG (USED ALL SECTIONS)



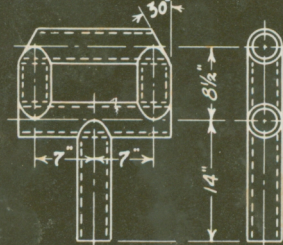
4" SAFETY CLAMP (6) I-R #147F-1



4" x 4" UNIVERSAL CLAMP (7) I-R #F-5, LESS ARM



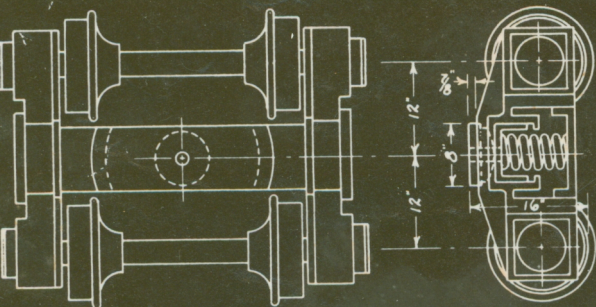
4" COLUMN CLAMP - 5" CONE (6) I-R #4'FI-5



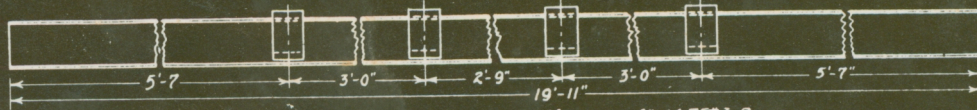
CROWN NEST FRAME (1) 4 - 1 1/2" WALL TUBING

DETAIL OF PARTS OF DRILL CARRIAGE USED ON OUTLET END CONTINENTAL DIVIDE TUNNEL COLORADO - BIG THOMPSON PROJECT, COLORADO S.S. MAGOFFIN CO., INC., CONTRACTOR F.R. PURVIS, GEN. SUPT. F.R. MERRICK, TUNNEL SUPT. DRAWN BY: M.W. TERRILL INGERSOLL RAND CO. DENVER SHEET No. 2 OF 3

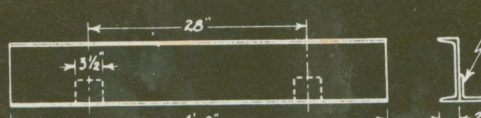
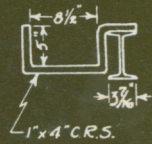
DETAIL OF
DRILL CARRIAGE
 USED ON
CARLTON DRAINAGE TUNNEL
 JOHN R. AUSTIN, SUPT.
 DRAWN BY
 INGERSOLL RAND CO., DENVER
 M. W. TERRILL



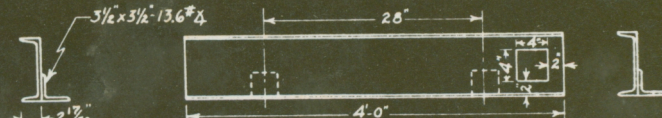
A. Two (2) 24 GAUGE TIMKEN BEARING EQUIPPED SPRING MOUNTED TRUCKS
 C. S. CARD IRON WKS. CO., #2219 WITH TOP CENTER PLATE



C. Two (2) BOTTOM LONGITUDINAL MEMBERS, 6"-14.75" I-BEAM



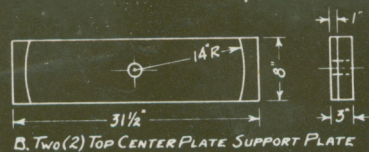
D. THREE (3) CROSS MEMBERS, 8"-10.75" CHANNEL



E. Two (2) CROSS MEMBERS, 8"-18.75" CHANNEL



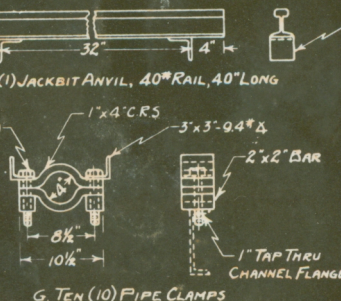
T. ONE (1) JACKBIT ANVIL, 40" RAIL, 40" LONG



B. Two (2) TOP CENTER PLATE SUPPORT PLATE



F. ONE (1) COUPLING ASSEMBLY



G. TEN (10) PIPE CLAMPS

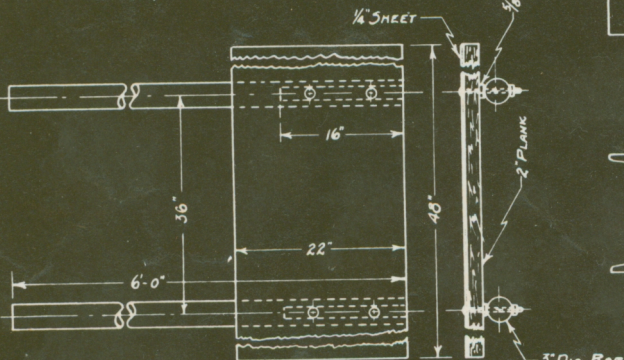


H. Two (2) TOP LONGITUDINAL MEMBERS, 23'-4" LONG

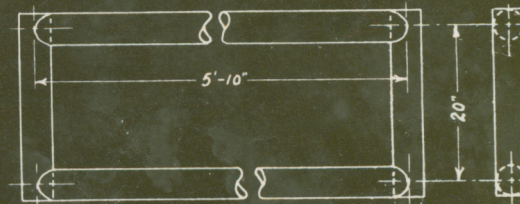
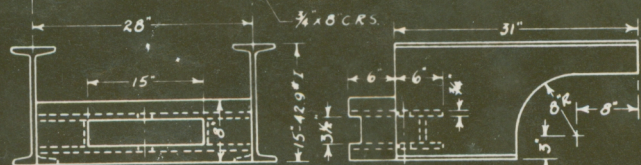
I. FOUR (4) COLUMN ARMS, 3'-8" LONG

J. Two (2) COLUMN, 3'-0" LONG

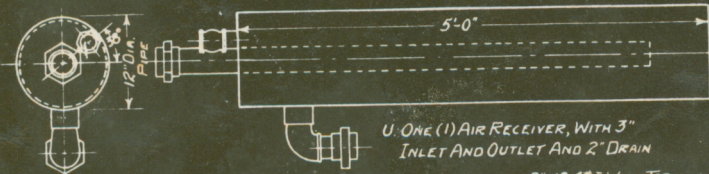
K. ONE (1) CROSS ARM, 4'-0" LONG



V. ONE (1) MOVABLE PLATFORM



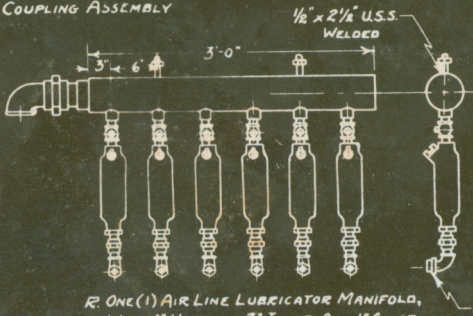
L. ONE (1) DRILL MOUNTING MAIN FRAME, 3 1/2" E.H. PIPE



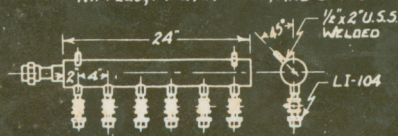
U. ONE (1) AIR RECEIVER, WITH 3" INLET AND OUTLET AND 2" DRAIN



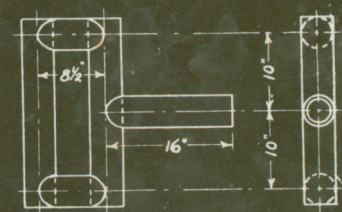
W. ONE (1) STEEL RACK



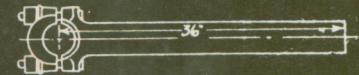
R. ONE (1) AIR LINE LUBRICATOR MANIFOLD, WITH 4" HEADER, 3" INLET, AND 1" CLOSE NIPPLES, PIPE FITTINGS, AND SPUDS



S. ONE (1) WATER MANIFOLD, WITH 3" HEADER, 1 1/2" INLET, AND 3/4" PIPE FITTINGS AND SPUDS



M. ONE (1) DRILL MOUNTING TOP FRAME 3 1/2" E.H. PIPE



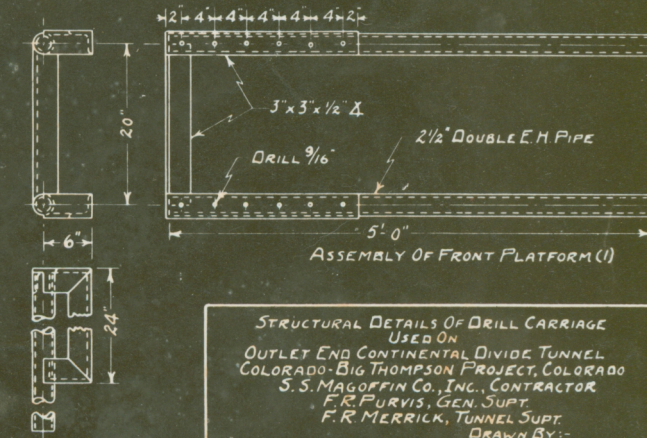
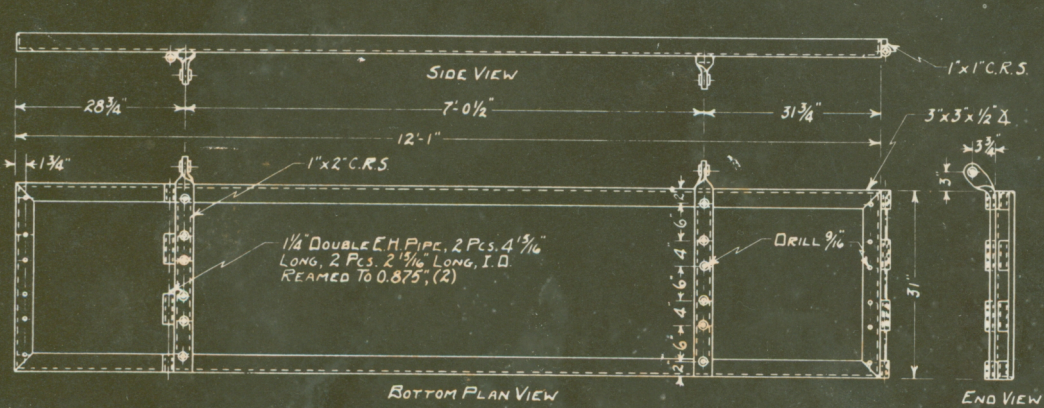
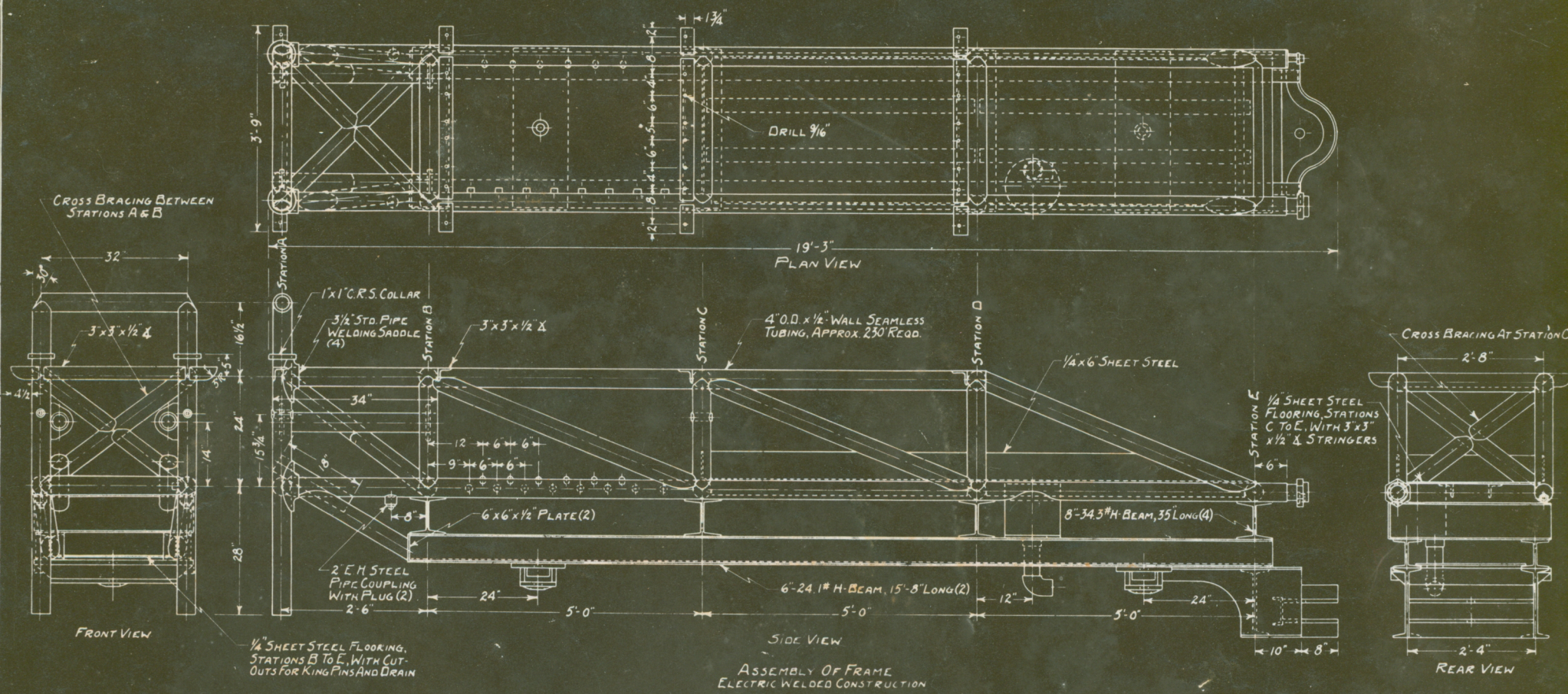
Q. ONE (1) DIAGONAL BRACE, 4" COLUMN ARM



P. ELEVEN (11) 4" SAFETY CLAMPS



O. SIX (6) 4" COLUMN CLAMPS, 5" CODE N. ELEVEN (11) 4" UNIVERSAL CLAMPS



STRUCTURAL DETAILS OF DRILL CARRIAGE
 USED ON
 OUTLET END CONTINENTAL DIVIDE TUNNEL
 COLORADO-BIG THOMPSON PROJECT, COLORADO
 S. S. MAGOFFIN CO., INC., CONTRACTOR
 F. R. FURVIS, GEN. SUPT.
 F. R. MERRICK, TUNNEL SUPT.
 DRAWN BY:-
 M. W. TERRILL
 INGERSOLL RAND CO
 DENVER

SHEET NO. 1 OF 3