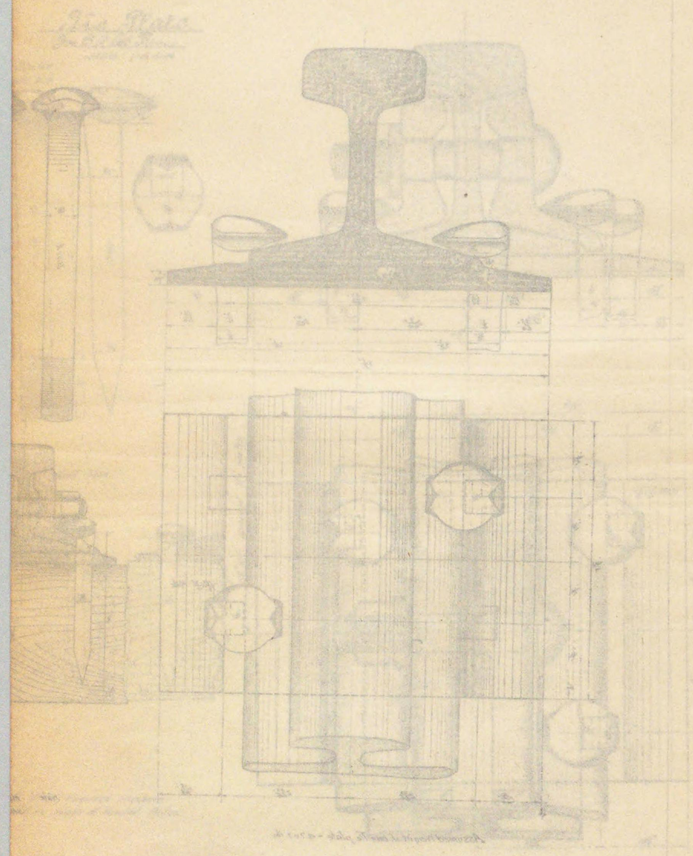
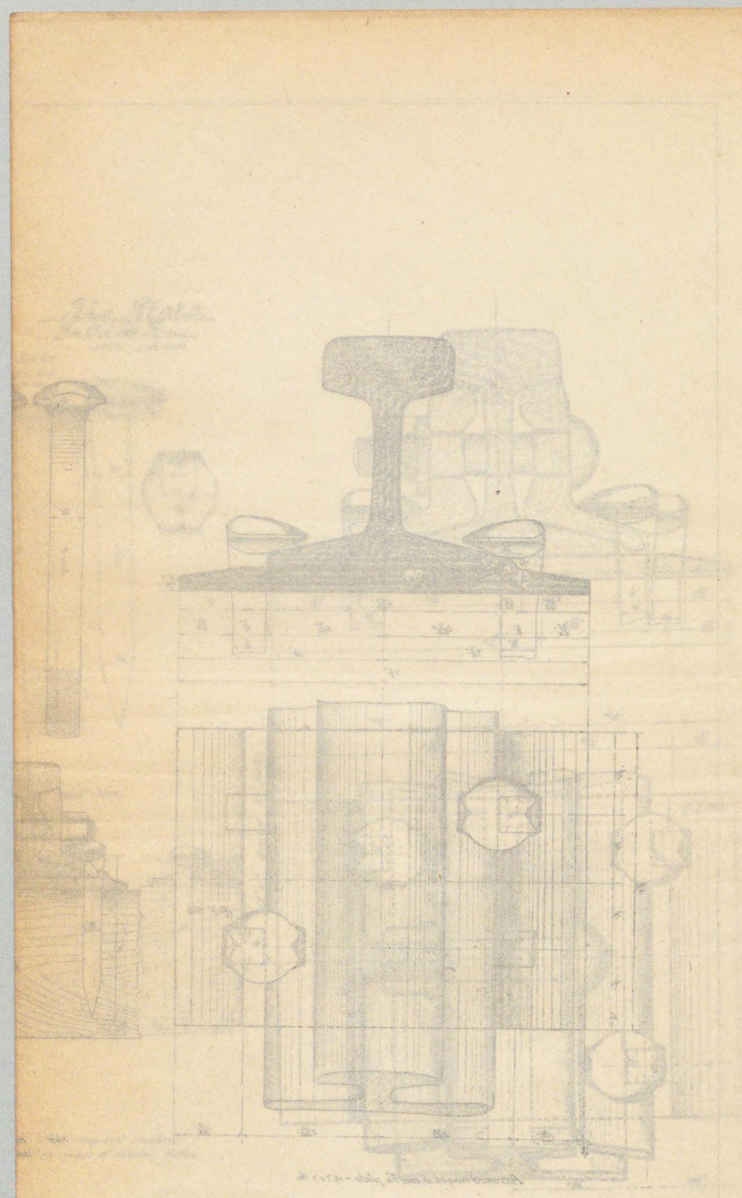
圖第一一號（二）



圖第一一號（二）

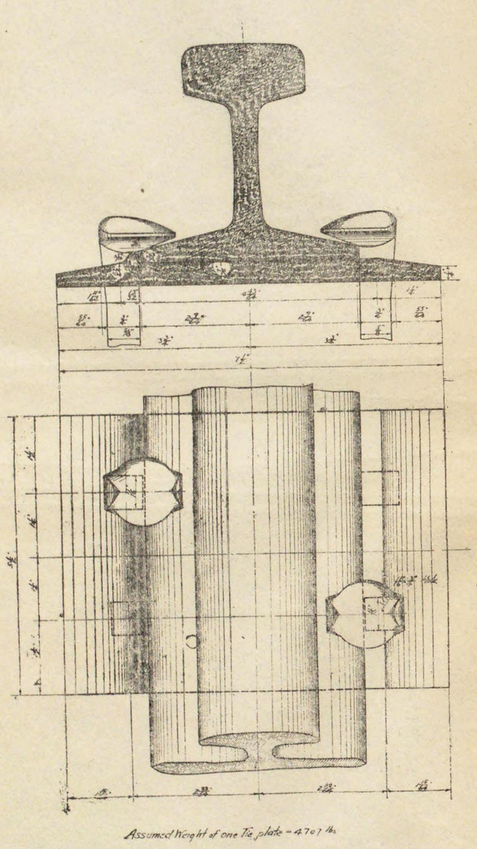


Assumed weight of one Tie plate=

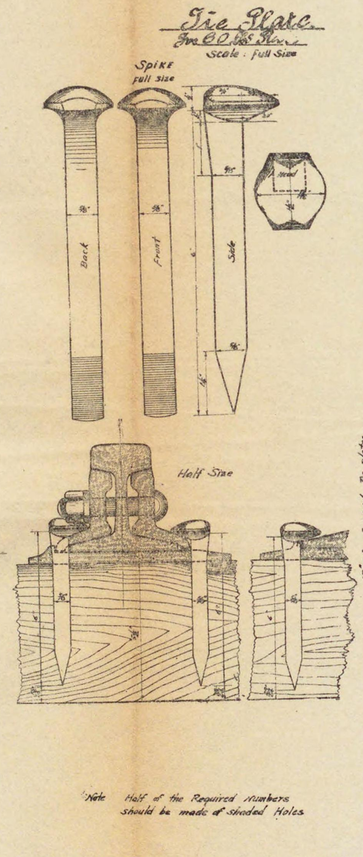
圖第一一號（二）

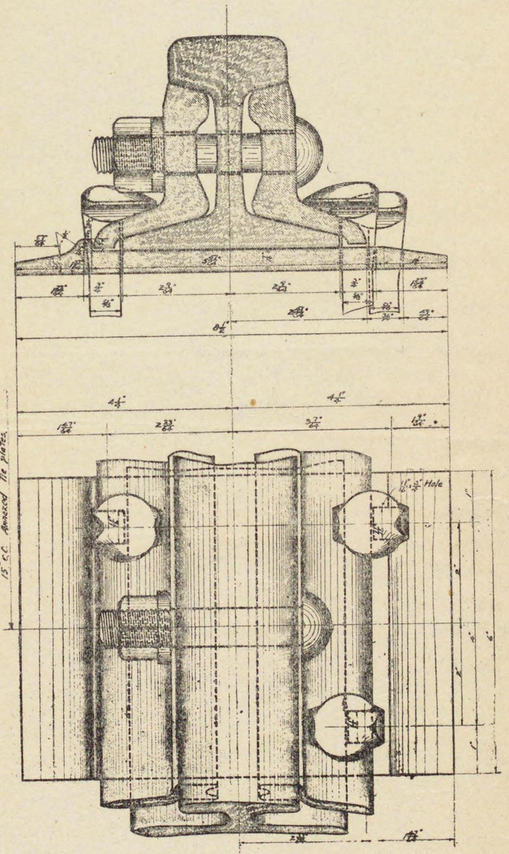
圖第一一號（二）

圖第一一號（二）



Assumed Weight of one Tie plate = 4.701 lbs.

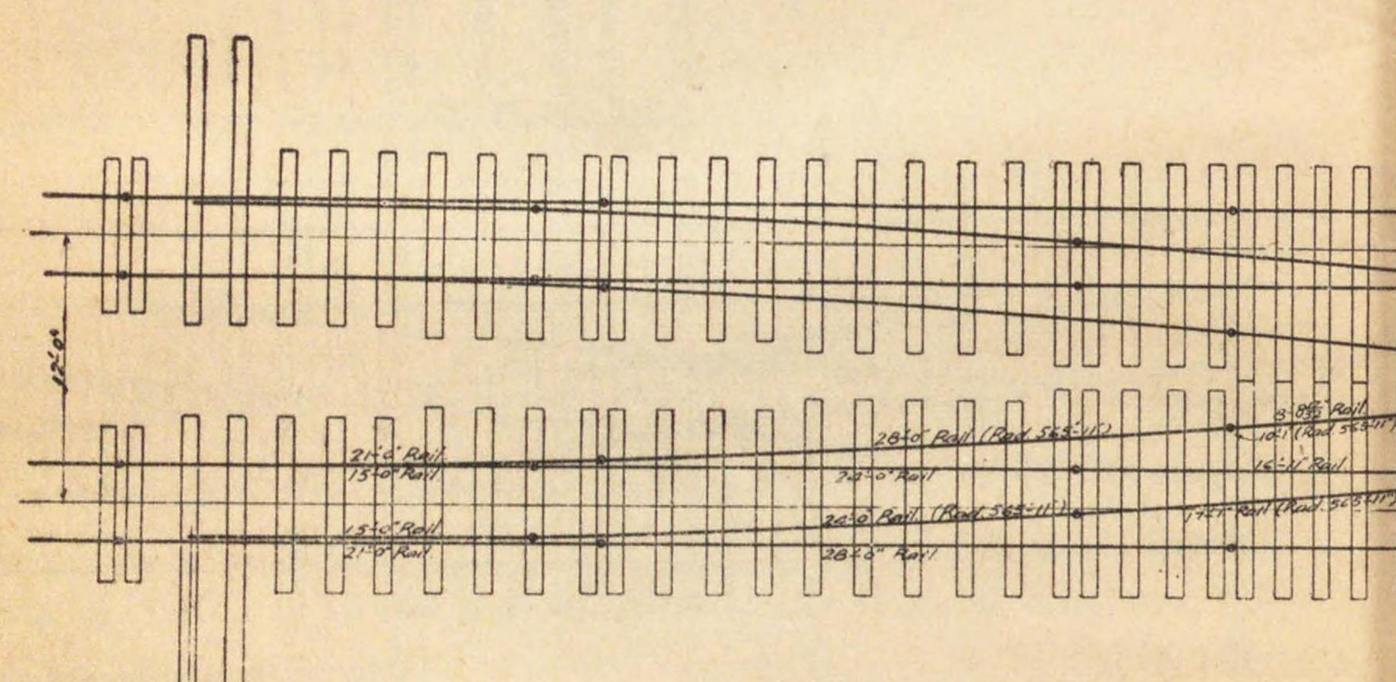




Assumed weight of one Tie plate=5.874 lbs.

圖第一一號（二）

No1

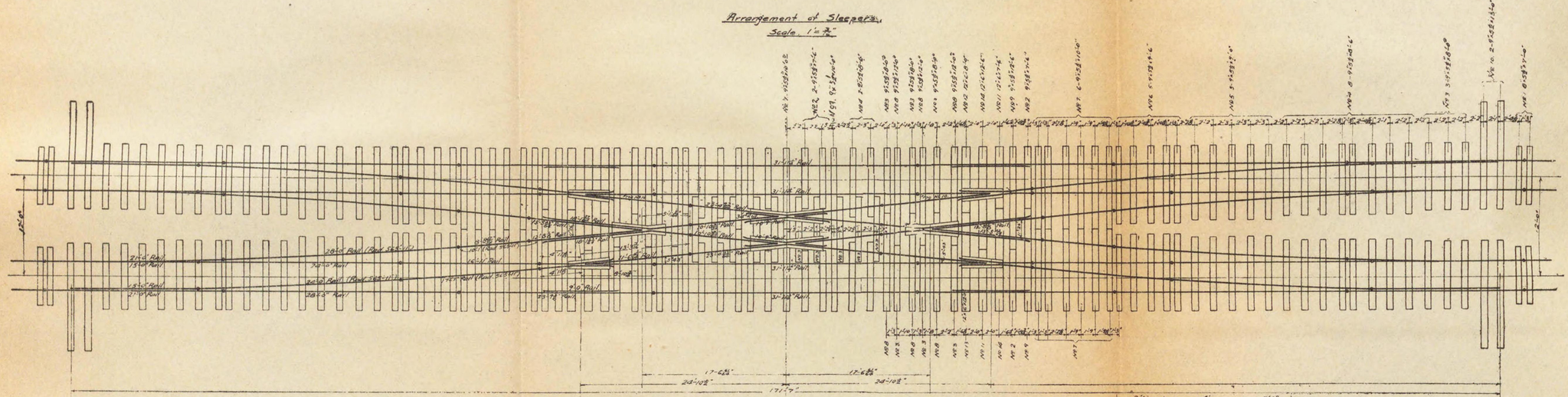

12'-0"
21'-0" Rail
15'-0" Rail
15'-0" Rail
21'-0" Rail
28'-0" Rail (Rad. 565'-11")
22'-0" Rail
20'-0" Rail (Rad. 565'-11")
28'-0" Rail
8'-8 5/8" Rail
10'-1" (Rad. 565'-11")
16'-11" Rail
17'-1" Rail (Rad. 565'-11")

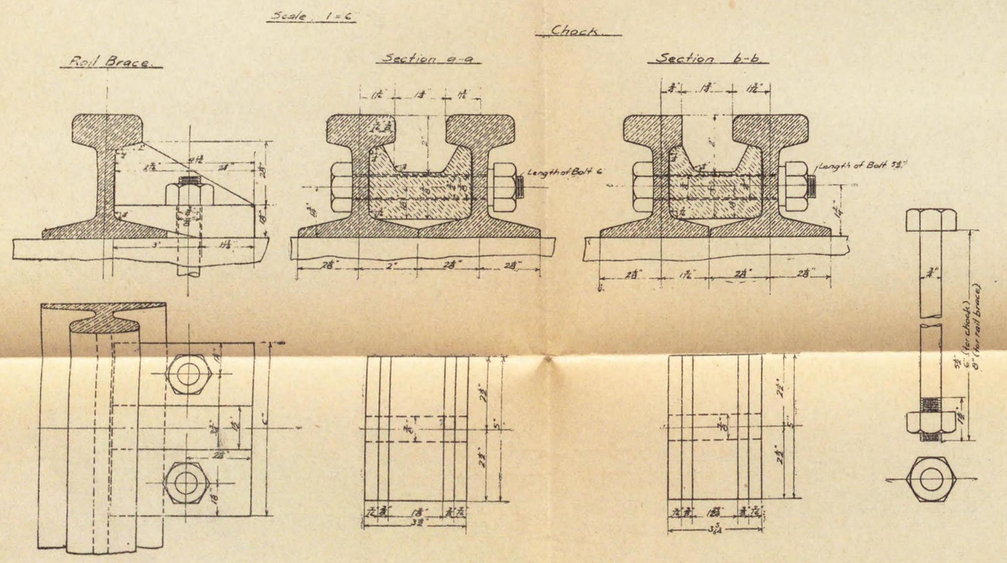
No1

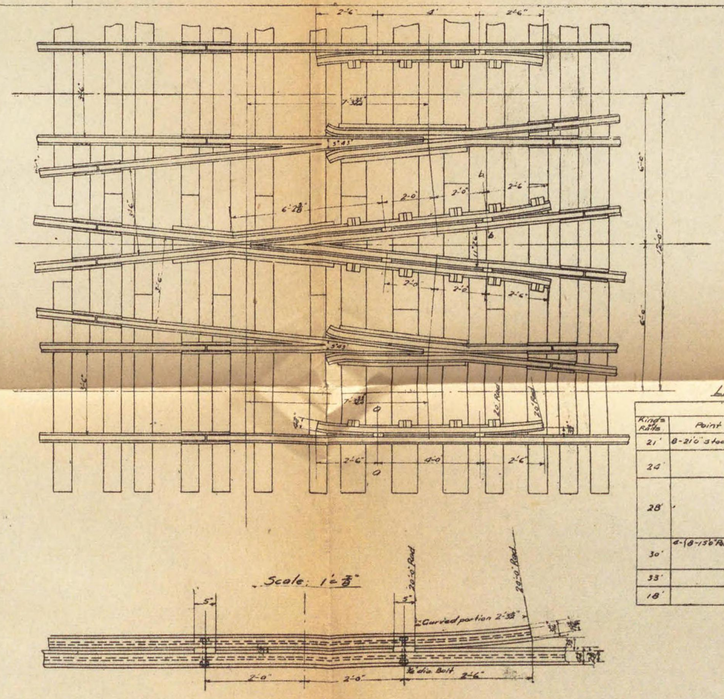
Assumed weight of one Tie plate = 5.874 lbs.

No1 60 LB. RAIL SCISSORS CROSSING.

FROG No FOR CROSSOVER ROADS——10.







List for Rails and Sleepers

Rails				Sleepers		
Kinds Rails	Point	Other Parts	Total	Order No.	Dimension	Faces
21'	8-21'0" Stock Rail	4-{4-17'1" / 4-3'4" Nose rail}	4	1	8"×5½"×7'0"	8
24'		8-24'0" / 4-23'9⅜" / 2-23'0⅜"	14	2	9"×5⅜"×7'6"	12
				3	" " " ×8'0"	34
28'		2-{2-12'8⅜" / 2-13'5⅜"}		4	" " " ×8'6"	40
				5	" " " ×9'0"	70
		8-28'0" / 4-{4-16'1" / 4-10'10⅜" Nose rail}	18	6	" " " ×9'6"	20
				7	" " " ×10'0"	30
		4-{4-8'0⅜" / 4-18'1⅜" Bent rail}		8	" " " ×12'0"	12
30'	4-{8-15'0" Point rail}	4-{8-9'0" Wing rail / 4-11'6⅜" Nose rail}	6	9	" " " ×12'6"	4
		2-{4-8'0⅜" Nose rail / 2-10'9" Bent wing rail}	"	10	" " " ×12'0"	8
				11	12"×6"×7'6"	4
33'		4-31'11⅜"	4	12	" " " ×8'0"	2
				13	" " " ×12'0"	2
18'		2-{4-9'0" Guard rail}	2	14	" " " ×2'6"	4

圖第一二號（一）

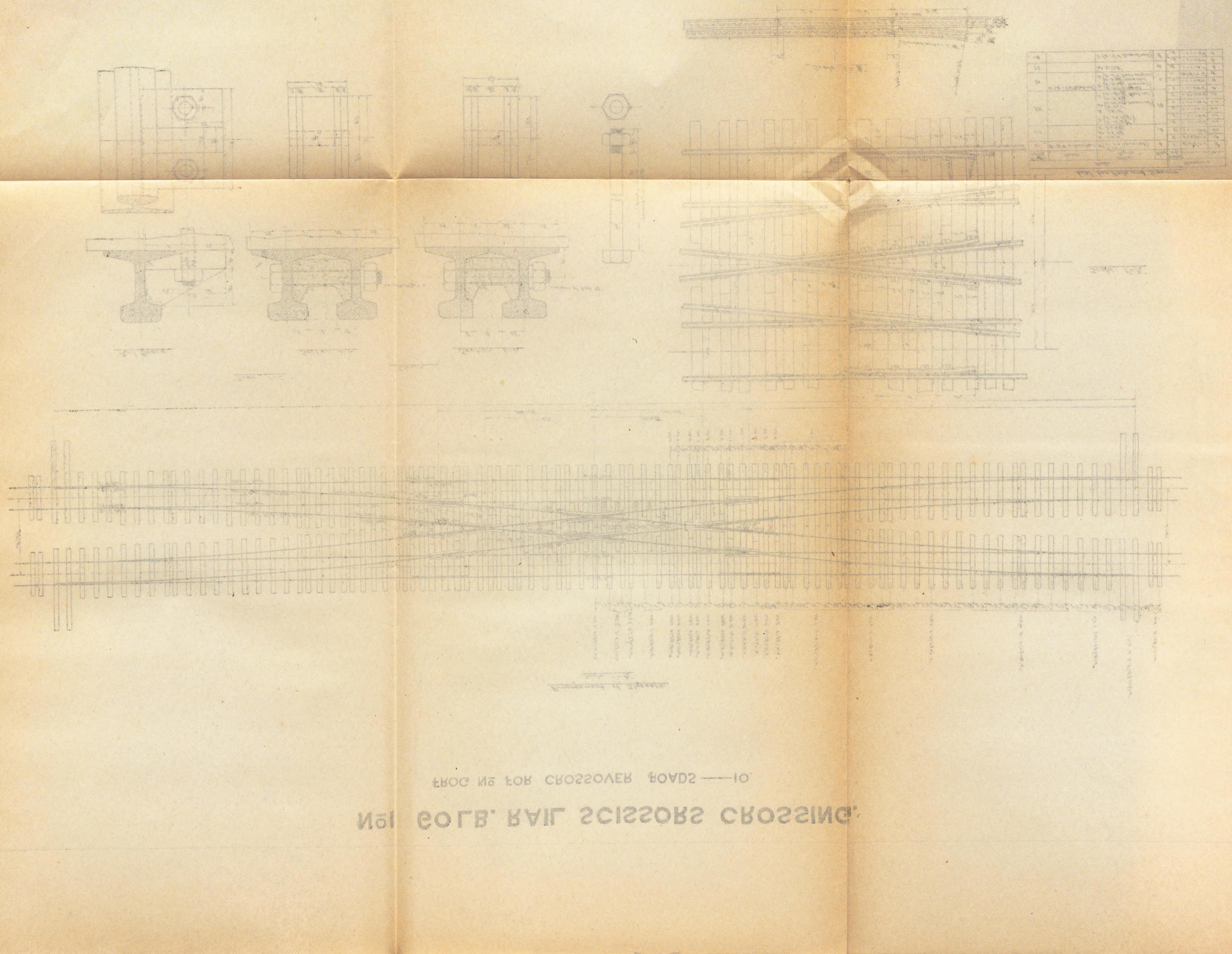
六十封度第三種軌條製第一號及第二號「シサースクロッシング」定規

明治四十三年九月達第七六〇號

圖第一二號（一）

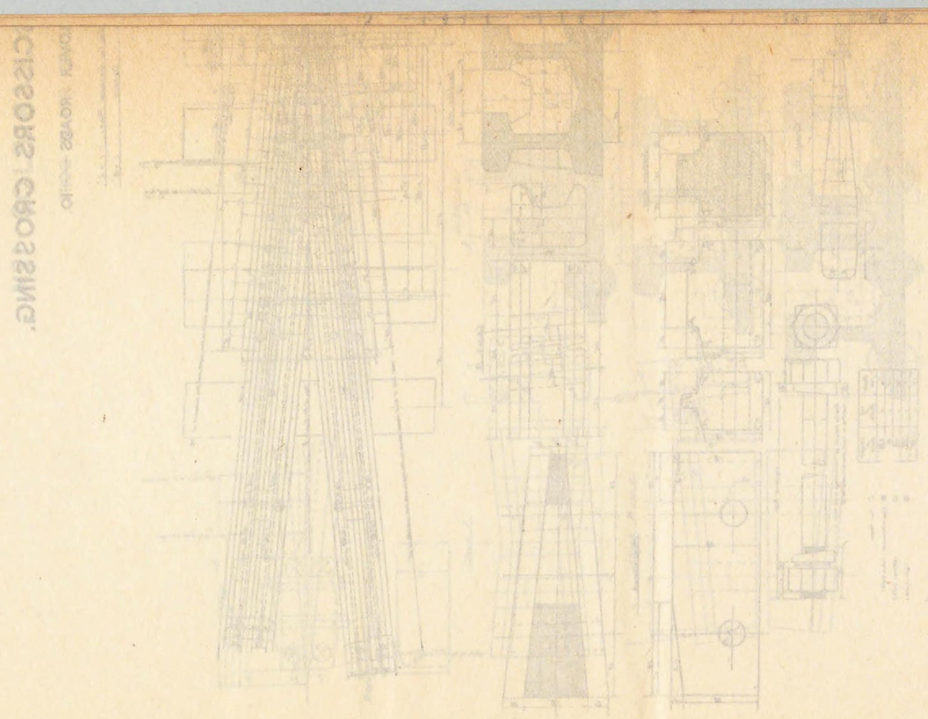
第二十六圖　說明書第二編第二章第一節(二)

單式乙種菱形交叉線路



No. 6 DOUBLE RAIL SCISSORS CROSSING.

FROG No. FOR CROSSOVER ROADS——10.



№1 · 60 LB. RAIL SCISSORS CROSSING.

List of Materials for №1 Scissors Crossing

№of Set	Description	Remark
4	Standard 15 ft Point Switches	
# 4	Standard frog no. 10 Crossings.	Instead of Short Nose rail №7 in Standard №10 Crossing it is to be used
2	Centre Crossings (Frog angle 11°26')	
2	Side Crossings (Frog angle 11°26')	
4	Guard rails & Accessories	
36	Rails excluding Guard rails & those at Point & Crossing.	
200	Sleepers.	

+ 十番號又材料表中七以一對二為一基礎組數據以外一以八對
六十四分之十一強表示以外他一重覆ヒル・ナル

List of Materials for one Centre Crossing

№of Piece	Description.	Dimension	Remark.
1	Short Nose rail №3.	3'-4"	
1	Do. of opposite side 5.	3'-4	
1	Long Nose rail №4.	10'-10 3/8"	
1	Do. of opposite side.	10'-10 3/8"	
1	Rail №1 (Bent)	23'-4 3/8"	
1	Wing rail №2 (Bent)	10'-9"	
1	Cast iron Chock at throat, A	9"	
2	" " Nose, B	7"	
2	" " " C	7"	
2	" " Flange way D	10 3/8"	
2	" " " E	10 3/8"	
2	" Heel chock, F	10"	
1	" Chock, G.	6"	
1	Do. of opposite side	6"	
1	3/8" Steel Bed plate	8-10"×10"×3/8"	
2	Steel Bolt №1 for Chock A, dia.	7/8"	with Lock Nut Washer & Bevel washers
2	" " 2 " B&C	9 3/4"	
2	" " 3 " B&C	10 3/4"	
2	" " 4 " D&E&F	1-2 3/8"	
2	" " 5 " "	1-3 3/8"	
62	3/4" dia. Steel rivets		

List of Materials for one Side Crossing

№of Piece	Description	Dimension	Remark.
1	Short Nose rail №7	12'-8 3/8"	
1	Long " 8	13'-5 3/8"	
1	Bent rail 6	18'-1 3/8"	
1	" 9	10'-1 3/8"	
1	Cast iron Chock at throat, A	9"	
1	" " Nose, B	7	
1	" " " C	7	
1	" " Flange way D	10 3/8"	
1	" " " E	10 3/8"	
1	" " Heel Chock F	10	
1	" " chock G	6	
1	3/8" Steel bed plate	6'-6"×1'-9"×3/8"	
2	Steel bolts №6 for Chock A, dia.	6 3/8"	with lock nut washer & bevel washers
1	" " 7 " B&C	8 5/8"	
1	" " 8 " B&C	9 3/8"	
1	" " 9 " D&E&F	1-1 3/8"	
1	" " 10 " "	1-2 3/8"	
4	Cast iron chock	5"	
4	Steel bolts 3/4" dia.	5 5/8"	with Lock nut washers
10	Rail brace	6"	
20	Steel bolts	8"	
53	Steel rivets.		

List of Materials for 1 Guard Rail & Accessories

№of Piece	Description	Dimension	Remark
1	Guard rail	9'-0"	
2	Cast iron Chock	5"	
2	Steel bolts 3/4" dia.	6"	with Lock nut washer
4	Rail brace	6"	
8	Steel bolts 3/4" dia	8"	

圖第一二號(五)

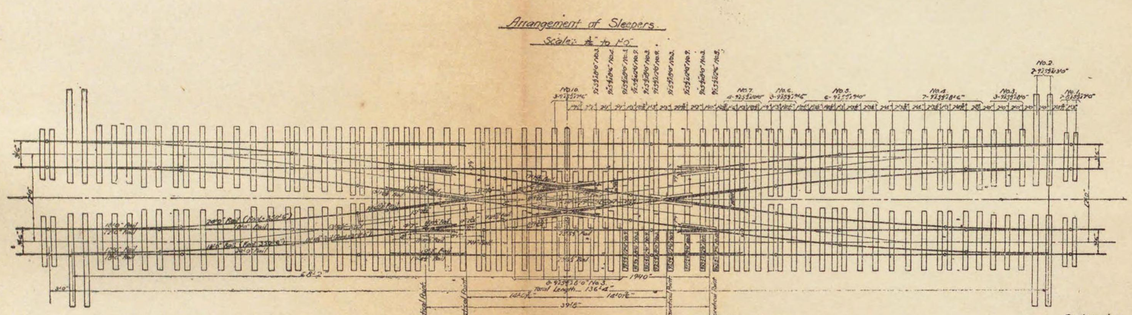
(五) 第一二號圖

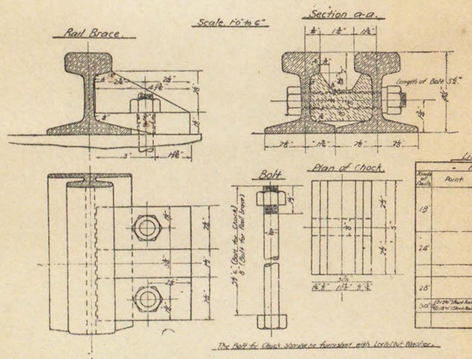
No. 60 LB. RAIL SCISSORS CROSSING.

圖第一二號（五）

№260LB. RAIL SCISSORS CROSSING.

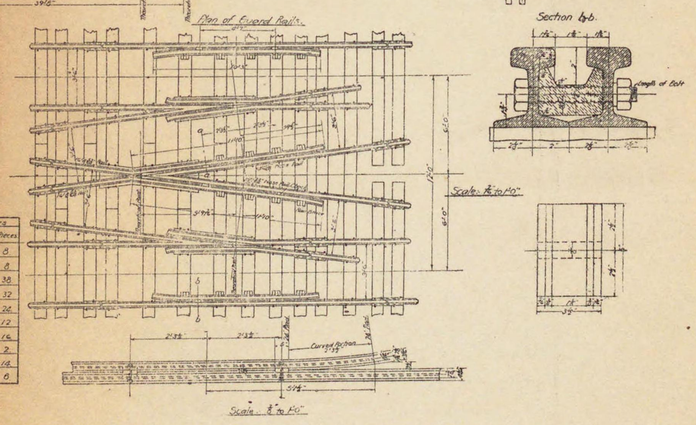
FROG № FOR CROSSOVER ROADS——8.





List for Rails and Sleepers

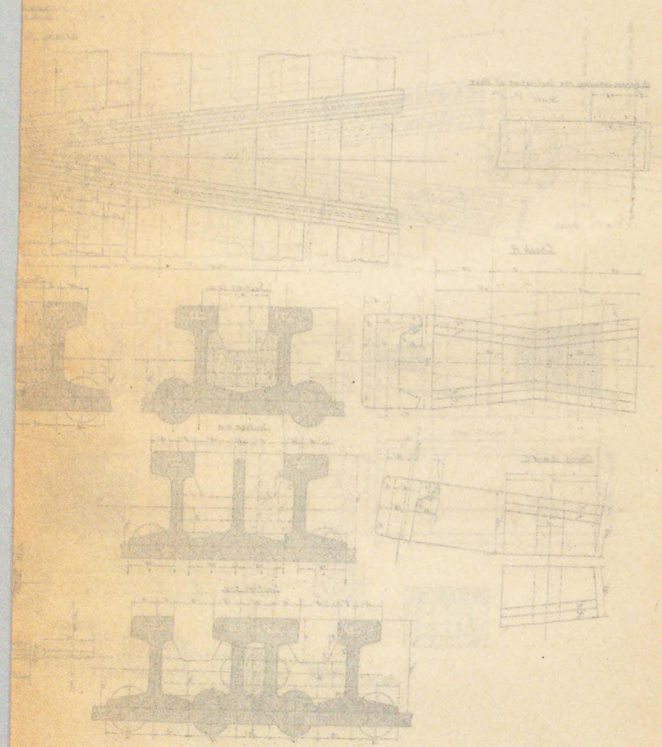
Rail	Point	Other Parts	Weight per Yard	No.	Sleepers Dimension	Sleepers Pieces
18		A - 17'-4½"	24	1	6"×6"×7'-0"	8
		B - 18'-5"		2	9"×9"×7'-0"	8
		C - 18'-5" (Right Hand)		3	10"×10"×7'-0"	38
		D - 18'-5" (Left Hand)		4	9"×9"×6'-0"	32
24		E - 24'-0" Curved	14	5	10"×10"×6'-0"	24
		F - 24'-0" Straight		6	10"×10"×5'-0"	12
		G - 24'-0" (Right Hand)		7	10"×10"×4'-0"	16
25		H - 25'-0" (Left Hand)	4	8	10"×10"×3'-0"	2
30		(1-7½" Short Rail) (10-6" Short Rail)	8	9	10"×10"×2'-0"	16
		(1-7½" Short Rail) (Curved)	2	10	10"×10"×1'-0"	8



圖第一二號（五）

№260LB. RAIL SCISSORS CROSSING.

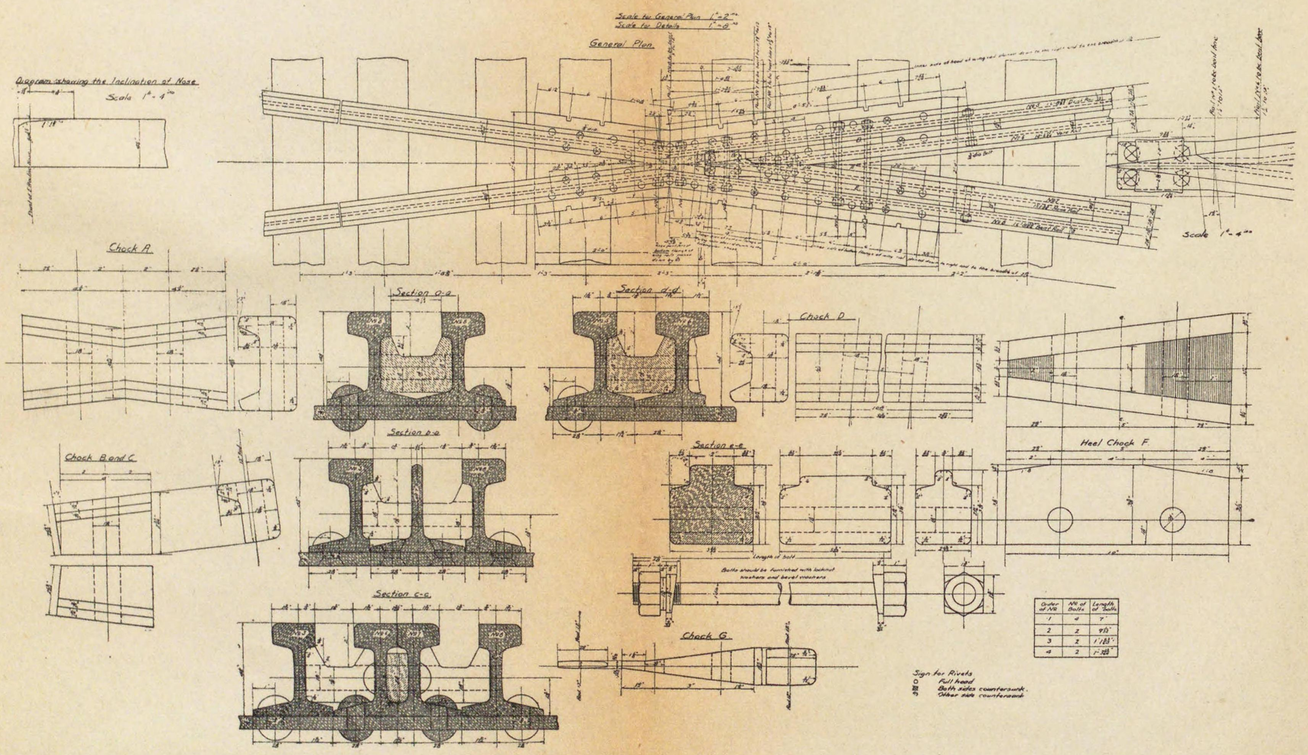
（五）號二一第圖



圖第一二號 (六)

№2 60 LB. RAIL SCISSORS CROSSING.

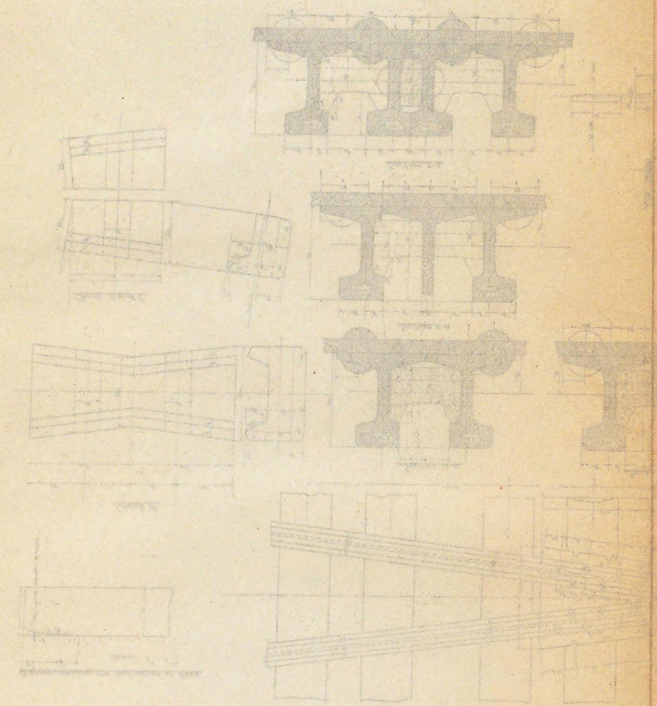
FROG № FOR CROSSOVER ROADS — 8.



Order of No	№ of Bolts	Length of Bolts
1	4	
2	2	9"
3	2	1'-11"
4	2	1'-10"

圖第一二號 (六)

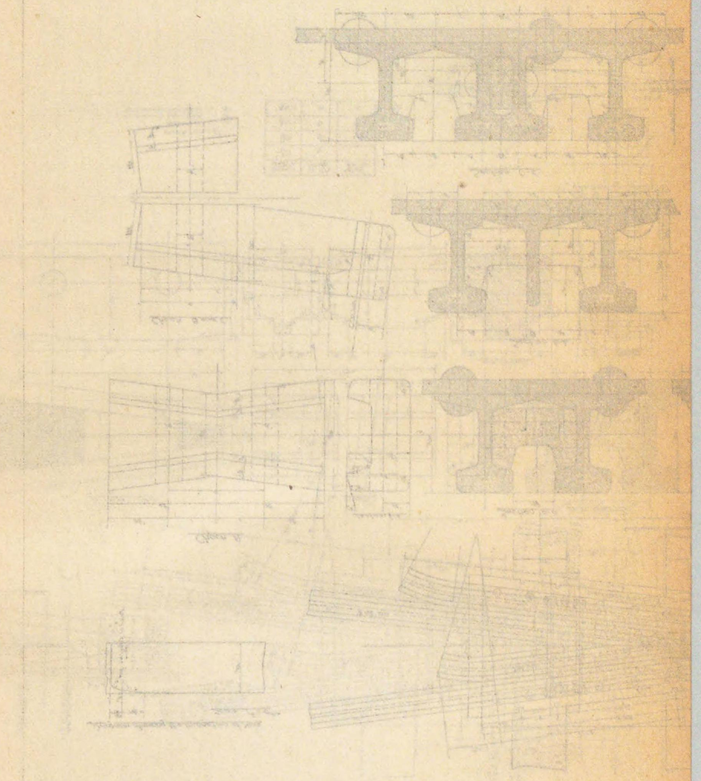
圖第二一號(六)



No.5 GOLD RAIL SCISSORS CROSSING.

圖第二一號(六)

圖第二一號(七)



(六) 第二一二號圖

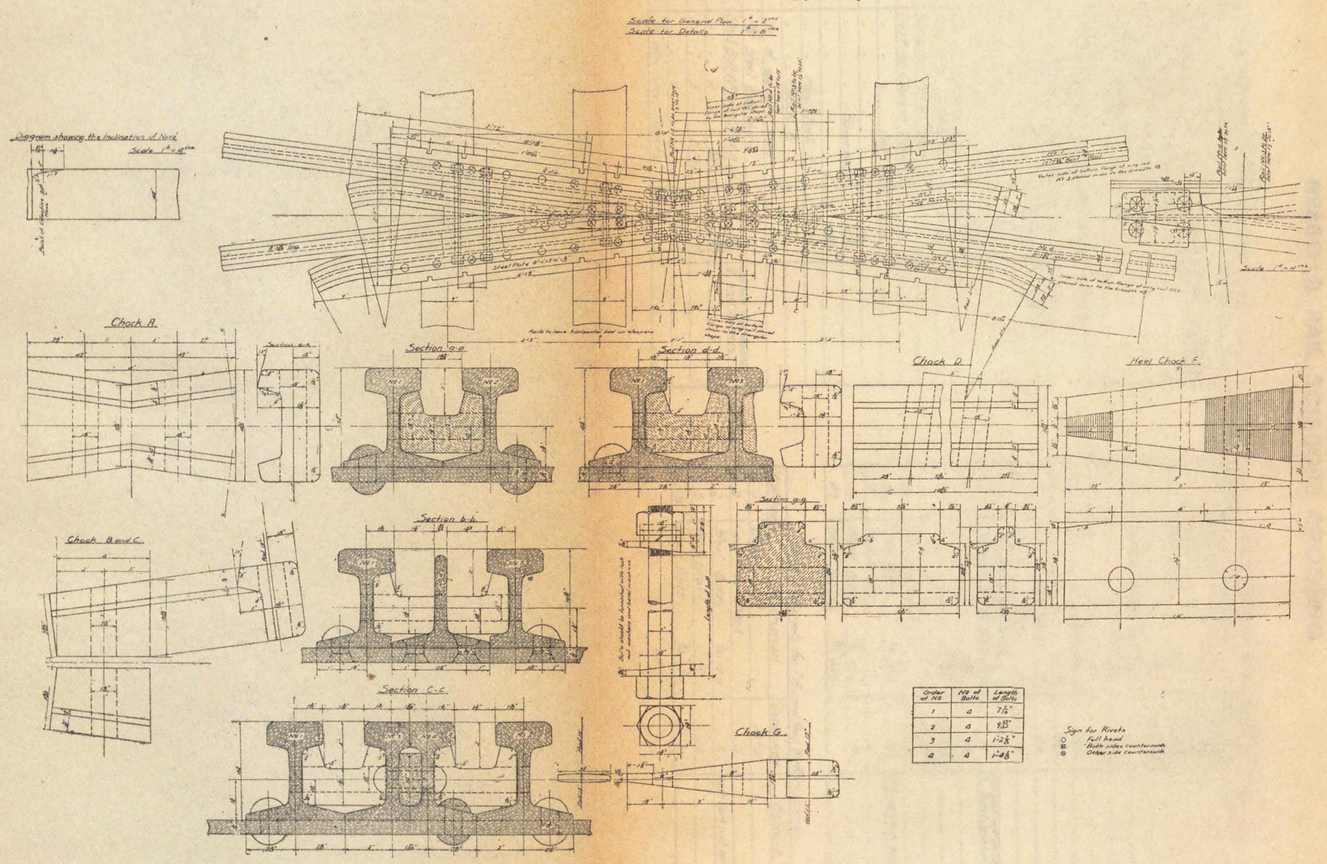
圖第二一二號(六)

圖第二一二號(七)

圖第一二號 (七)

Nº2 60LB. RAIL SCISSORS CROSSING

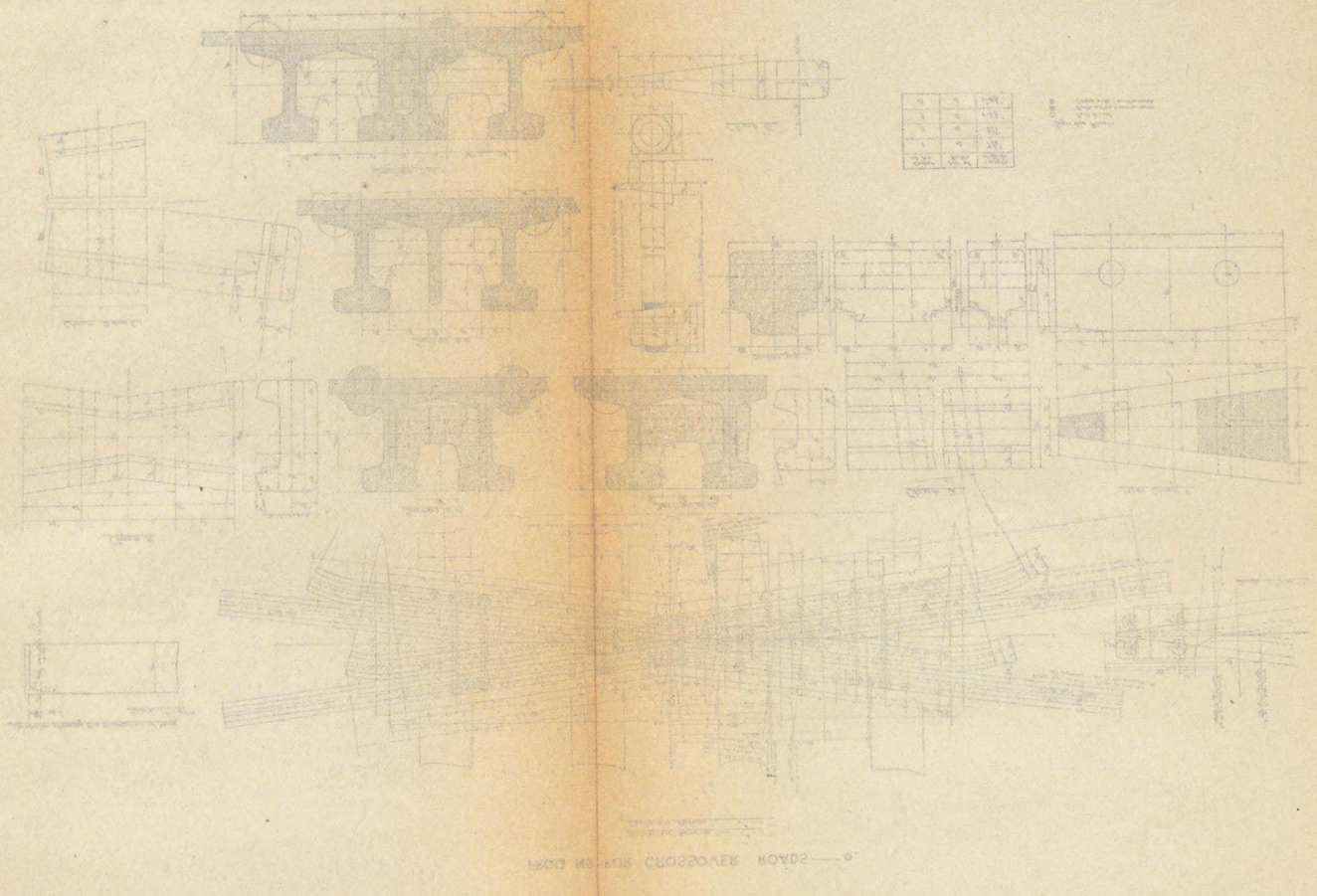
FROG Nº FOR CROSSOVER ROADS——5.



Order of Nº	Nº of Bolts	Length of Bolts
1	2	7½"
2	4	9¾"
3	4	12½"
4	4	1'-4⅜"

圖第一二號(七)

圖第一二號 (六)



圖號 111 號(六)

No2 60 LB. RAIL SCISSORS CROSSING.

List of Materials for one Side Crossing.

Ref/Nos	Description	Dimension	Remark
1	Short Nose rail No 6.	14'-6½"	
1	Long " 7.	15'-2¾"	
1	Bent rail 5.	16'-0¾"	
1	" 8	16'-0¾"	
1	Cast iron Check at throat A.	9"	
1	" " " Nose B	4"	
1	" " " " C	4"	
1	" " " " Flange way D	10½"	
1	" " " " E	10½"	
1	" " Heel Check F	10"	
1	" " Check 6	6"	
1	⅝" Steel Bed plate	6'-0"	
2	Steel Bolts (W) for Check A also	7	with lock nut washer & Steel washers
1	" " 2 " " B&C "	2¾"	"
1	" " 3 " " D&E&F "	1'-1½"	"
1	" " 4 " " " "	1'-3½"	"
4	Cast iron Chocks	3	
4	Steel Bolts ¾" dia	5½"	with lock nut washers
8	Rail brace ¾" dia	6"	
16	Steel Bolts ¾" dia	8"	
49	Steel Rivets ⅝" dia		

List of Materials for Guard Rail & Accessories

Ref/Nos	Description	Dimension	Remark
1	Guard rail	10'-3"	
2	Cast iron Chock	5"	
2	Steel Bolts ¾" dia	6"	with lock nut washer
5	Rail brace	6"	"
10	Steel Bolts ¾" dia		

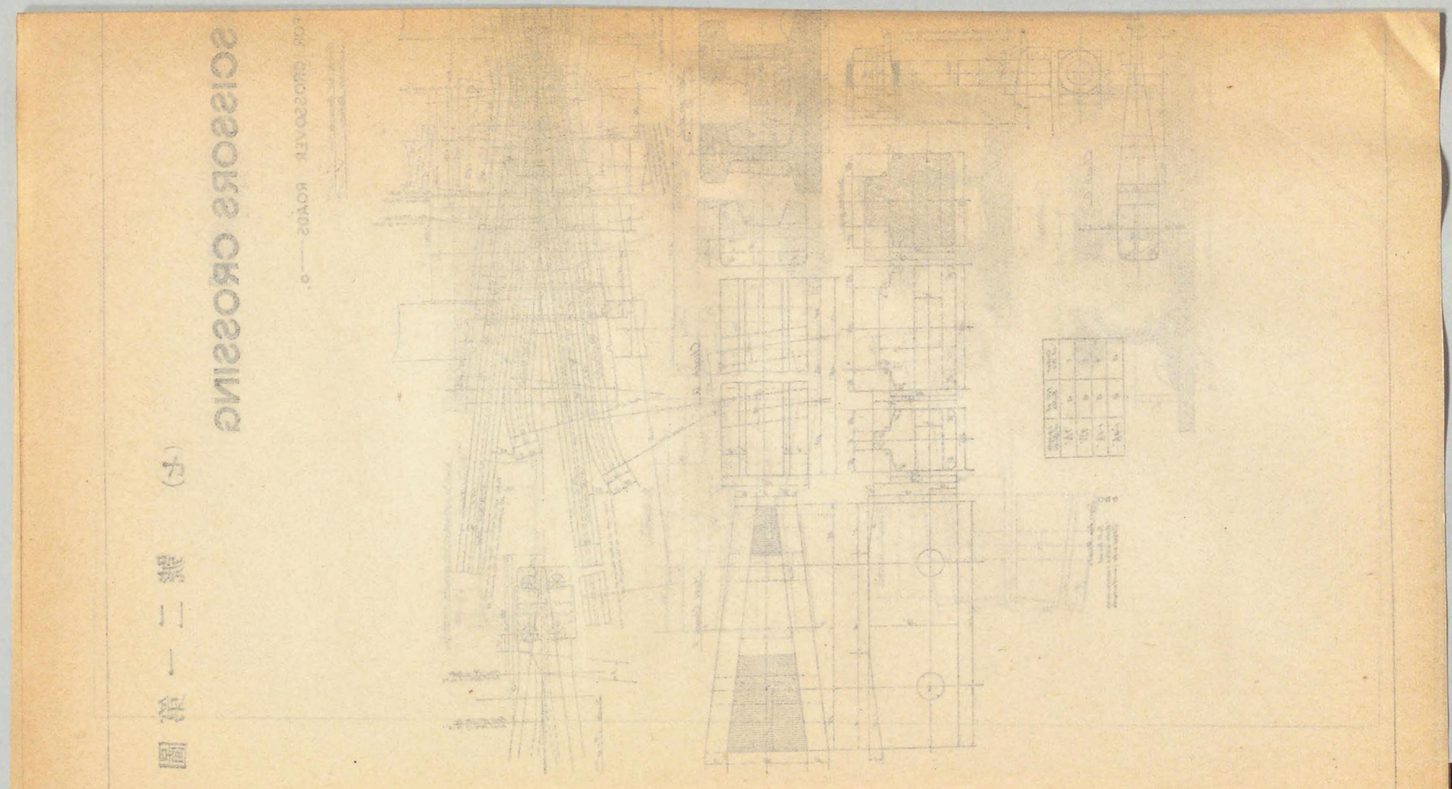
List of Materials for No2 Scissors Crossing.

Ref/Nos	Description	Dimension	Remark
1	Short Nose rail No 3.	3'-4½"	
1	Do. of opposite side	4'-1½"	
1	Long Nose rail No4	4'-7½"	
1	Do. of opposite side	5'-1½"	
1	Rail No1 (Bent)	17'-7½"	
1	Wing rail No2 (Bent)	10'-5"	
1	Cast iron Chock at Throat A	9"	
2	" " " " Nose B	4"	
2	" " " " C	4"	
2	" " " " Flange way D	10½"	
2	" " " " E	10½"	
2	" " Heel chock F	10"	
1	" " Chock 6	6"	
1	Do. of opposite side	6"	
1	⅝" Steel Bed plate	8'-0"	
2	Steel Bolts (W) for Check A also	7½"	with lock nut washer & Steel Washers
2	" " 2 " " B&C "	1¾"	"
2	" " 3 " " D&E&F "	1'-1½"	"
2	" " 4 " " " "	1'-3½"	"
58	¾ dia Steel Rivers		

(八) 號二一第圖

No2 60 LB. RAIL SCISSORS CROSSING

(七) 號二一第圖



圖第一一號(六)

No 2 60 LB. RAIL SCISSORS CROSSING.

List of Materials for No 2 Scissors Crossing.

No of Pcs	Description	Remark
4	Standard 12" Point Switches	
4	Standard Frog no 8 Crossings	Instead of Short Nose rail 6 & Frog in Standard No 8 Crossing 3'10½" to be used
2	Centre Crossings (Frog angle 14°18')	
2	Side Crossings (Frog angle 14°18')	
4	Guard rails & Accessories	
32	Rails excluding Guard rails & those of Point & Crossing.	
162	Sleepers.	

註 八番報文材料表中、九呎十吋幕3鐵短軌條ト、九呎十吋三十二分、十七、此長モノ外他、変更モナシ。

List of Materials for one Centre Crossing.

No of Pcs	Description	Dimension	Remark
1	Short Nose rail No 3.	3'4½"	
1	Do. of opposite side	3'4½"	
1	Long Nose rail No 4	8'1 29/32"	
1	Do. of opposite side	8'1 29/32"	
1	Rail No 1 (Bent)	17'7 29/32"	
1	Wing rail No 2 (Bent)	10'5"	
1	Cast iron Chock at Throat A	9"	
2	" " " Nose B.	4"	
2	" " " C.	4"	
2	" " " Flange way D.	10 21/64"	
2	" " " E	10 25/64"	
2	" " Heel Chock F	10"	
1	" " Chock G	6"	
1	Do of opposite side	6"	
1	5/8" Steel Bed plate	8'0"	
2	Steel Bolt No 1 for Chock A 1" dia	7 7/16"	with Lock Nut Washer & Bevel Washers
2	" " 2 " " B&C "	7 29/32"	"
2	" " 3 " " D.E&F "	1'2 7/8"	"
2	" " 4 " " " "	1'4 7/8"	"
58	3/4" dia Steel Rivets		

List of Materials for one Side Crossing.

No of Pcs	Description	Dimension	Remark
1	Short Nose rail No 6.	14'6 29/32"	
1	Long " " 7.	15'1 29/32"	
1	Bent rail 5.	16'8 29/32"	
1	" " 8	16'8 29/32"	
1	Cast iron Chock at throat A.	9"	
1	" " " Nose B.	4"	
1	" " " " C.	4"	
1	" " " " Flange way D	10 7/16"	
1	" " " " " E.	10 7/16"	
1	" " Heel Chock F.	10"	
1	" " Chock G	6"	
1	5/8" Steel Bed plate	6'0"	
2	Steel Bolts No 1 for Chock A 1" dia	7	with Lock nut washer & Bevel washers
1	" " 2 " " B&C "	7 29/32"	"
1	" " 3 " " D.E&F "	1'1 29/32"	"
1	" " 4 " " " "	1'3 25/64"	"
4	Cast iron Chocks	3	
4	Steel Bolts 3/4" dia	5½"	with Lock nut washers.
8	Rail brace	6"	
16	Steel Bolts 3/4" dia.	8"	
49	Steel Rivets 3/4" dia.		

List of Materials for 1 Guard Rail & Accessories.

No of Pcs	Description	Dimension	Remark.
1	Guard rail	10'3"	
2	Cast iron Chock	5"	
2	Steel Bolts 3/4" dia	6"	with Lock nut washer
5	Rail brace	6"	
10	Steel Bolts 3/4" dia		

圖第一三號(一)

圖第一三號(二)

(八) 號二一第圖

圖第一三號（一）

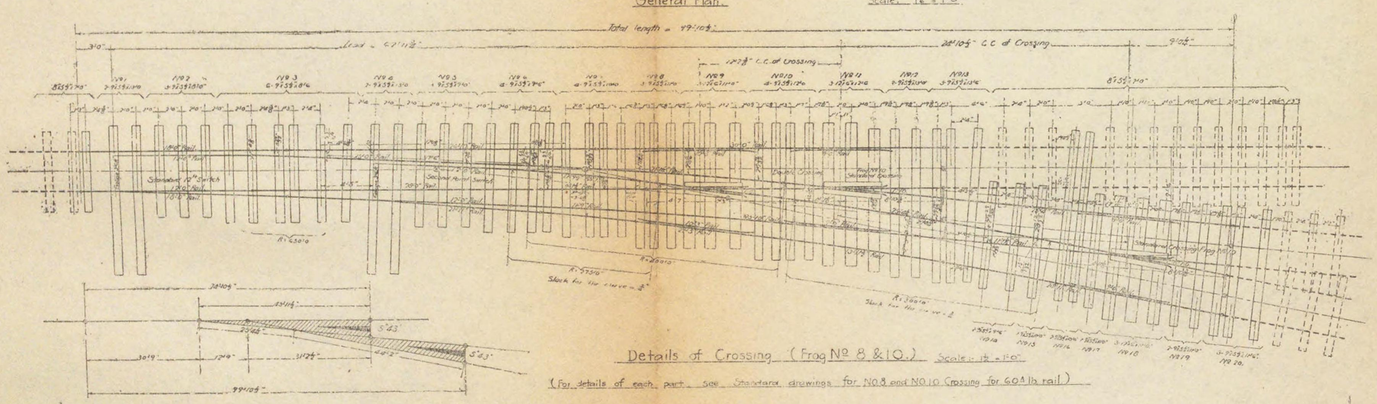
規定「ダブルスリップ」製條軌度封十六種三第　　明治四十三年十一月達第九四二號

STANDARD DOUBLE SWITCH FOR 60 LB. RAIL.

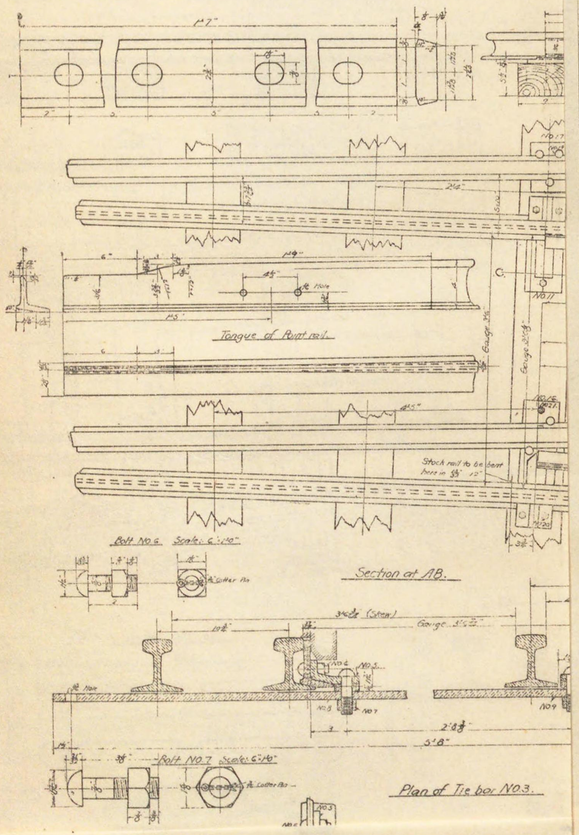
LENGTH OF SWITCH RAIL 12 FT.　　FROG NO. 8 & 10.

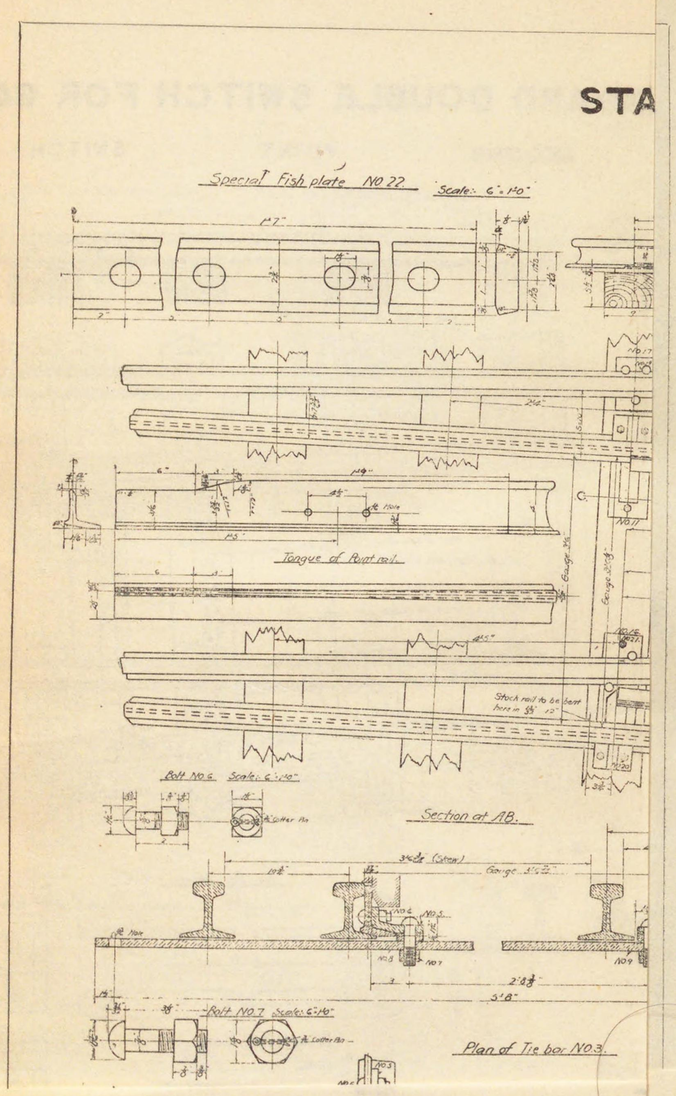
(Einseitige Doppelweiche)

General Plan.　　Scale 1/8" = 1'-0"


Total length = 99'-10½"
Lead = 67'-11½"
28'-10½" C.C. of Crossing
12'-7½" C.C. of Crossing
9'-10½"
Standard 12' Switch
Slide Plate
Stock Rail
Tongue Rail
Guard Rail
Guard Plate
Heel Block
Heel Plate
Heel Rod
Tie Plate
Rail Brace
Tie Rod
Adjusting Screw
Switch Stand
Switch Rod
Lock Rod
Lock Stand
Lock Bracket
Lock Spring
Lock Pin
Lock Nut
Lock Rod Guide
Lock Rod Guide Plate
Lock Rod Guide Bracket
Lock Rod Guide Spring
Lock Rod Guide Pin
Lock Rod Guide Nut
Lock Rod Guide Screw
Lock Rod Guide Washer
Lock Rod Guide Bolt
Lock Rod Guide Clip
Lock Rod Guide Key
Lock Rod Guide Cotter

STA


Special Fish plate NO 22 Scale: 6"=1'0"
Tongue of Rail rail
Stock rail to be bent here in
Bolt NO 6 Scale: 6"=1'0"
Section at AB.
Bolt NO 7 Scale: 6"=1'0"
Plan of Tie bar NO 3.


STA
Special Fish plate NO 22.
Scale: 6" = 1'-0"
Tongue of Point rail.
Section at AB.
Bolt NO 6
Bolt NO 7
Plan of Tie bar NO 3.

STANDARD DOUBLE SWITCH FOR 60 LB. RAIL.

SECOND POINT SWITCH.

Special Fish plate NO 22 Scale: 6"=1'0"

Sectional elevation at C.D Scale:- 1½"=1ft for elevation and plan, except where otherwise noted 3"=1'0" for detail drawing.

Section at E.F. Scale: 6"=1'0"

Toague of Point rail

Length of Point rail 12'0"

Length of Stock rail 21'4"

Bolt NO.6 Scale: 6"=1'0"

Section at AB.

Bolt NO.7 Scale: 6"=1'0"

Plan of Tie bar NO.3.

Tie Bar NO.10.

Wrought iron Studs

Packing NO.8

Cast Steel Clip NO.5

Packing NO.9

Cast steel Clip NO.4.

Scale: 6"=1'0"

Tie plate NO.17.

NO.11 Cast Steel Bed Plates

NO.12

NO.13

NO.14

NO.15

NO.16

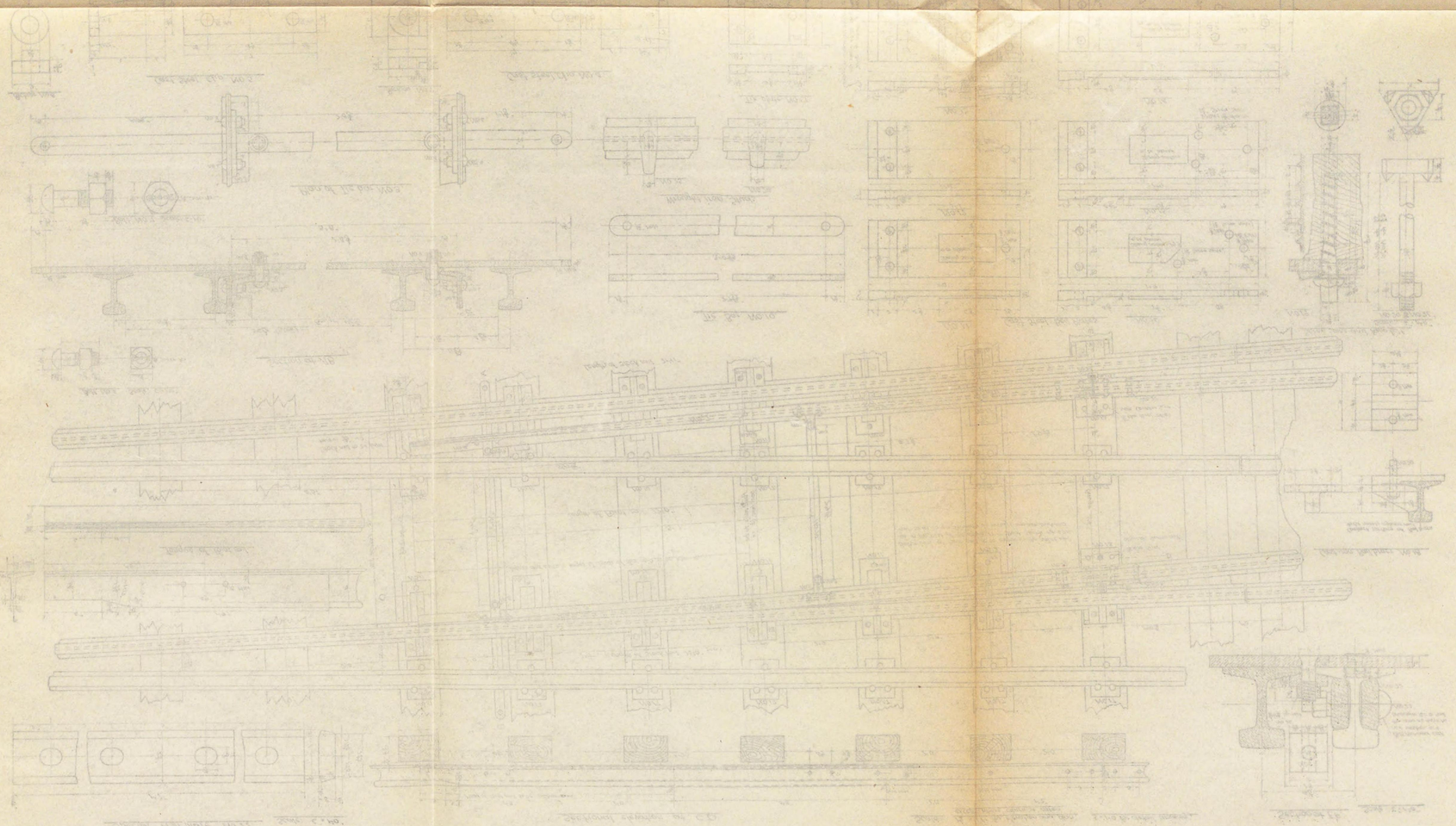
Cast iron Rail brace NO.18

NO.19

Screw spike and fang bolt Scale: 6"=1'0"

NO.20 NO.21

圖第一三號(二)



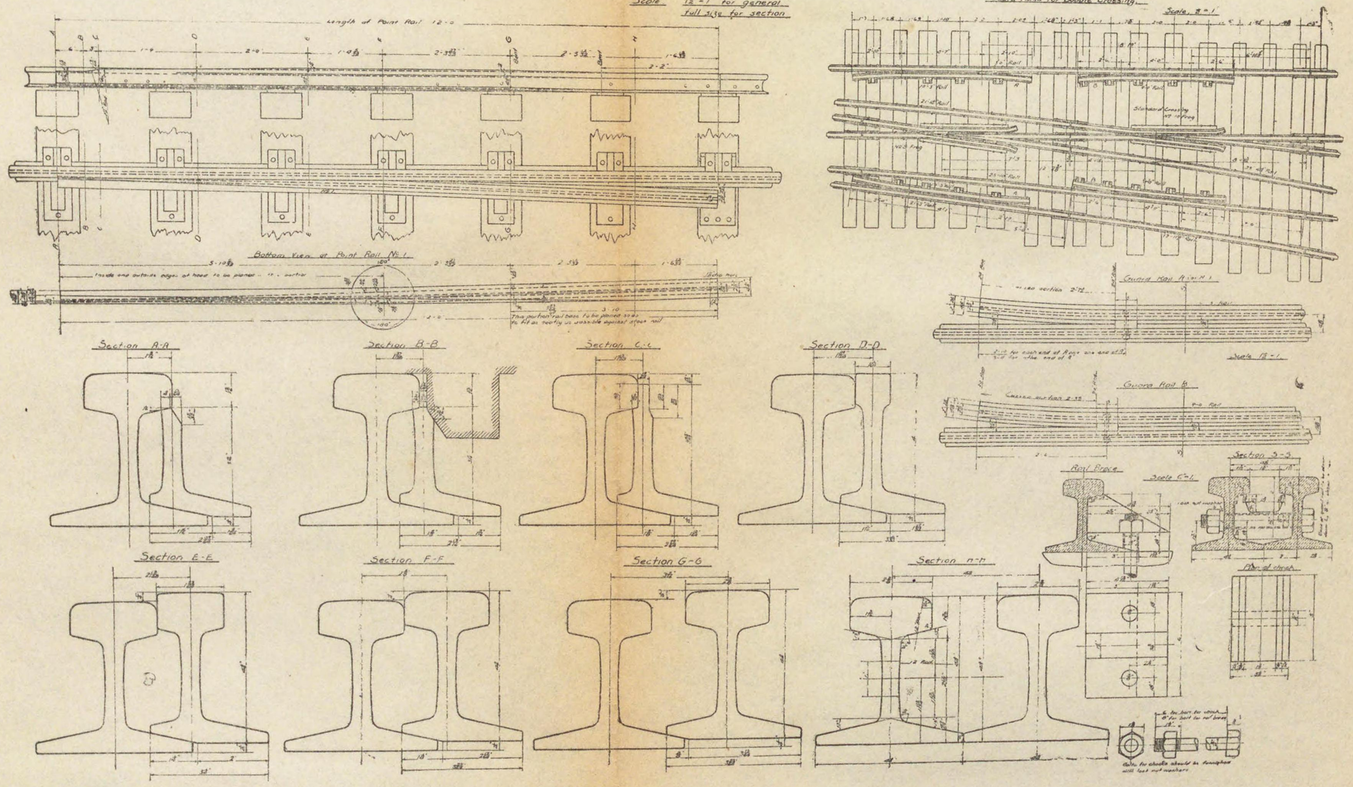
SECOND POINT SWITCH.

STANDARD DOUBLE SWITCH FOR COAL RAIL.

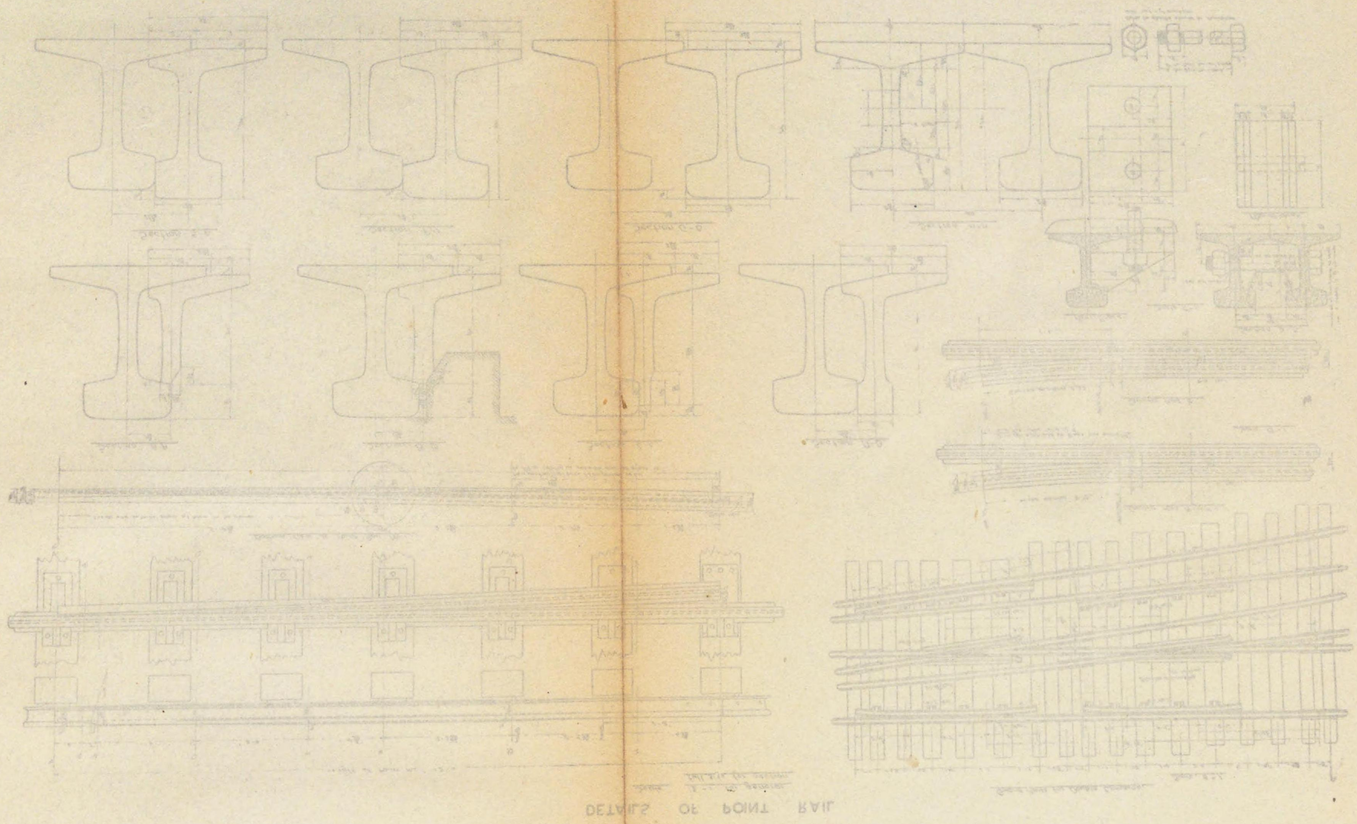
圖第一三號（三）

STANDARD DOUBLE SWITCH FOR 60 LB. RAIL.

DETAILS OF POINT RAIL



圖第一三號（三）



STANDARD DOUBLE SWITCH FOR COAL RAIL.

DETAILS OF POINT RAIL

圖第十三號(五)

圖第一三號（四）

STANDARD DOUBLE SWITCH FOR 60 LB. RAIL.

LIST OF MATERIALS.

List of Rails and Sleepers
Annexed to drawing Sheet 1

Rails							Sleepers		
Kinds of rails	Nº of Rails					Nº of Rails	Nº of Orders	Dimension	Length	Nº of Pieces
	Standard 12ft Point Switch	Second 12ft Point Switch	Nº 8 Crossing with Guard Rails	Nº 10 Crossing with Guard Rails	Remaining Rails					
18 Rail				(4-9-2 Long rails 2-7-5 Short rails 2-0-10 Manganese 4-9-7 Guard rails)		6	1	9'-3 1/2"	13'-0"	2
							2	Do	6'-0"	3
							3	Do	9'-6"	6
24 Rail		(2-10-0 Point rails 1-2-11 Short rail Belly Curve)	2			(2-2-5 Belly Curve 1-11-10 8 Curved 1-7-5 8	4	4	Do	13'-0"	2
							5	Do	9'-0"	3
							6	Do	9'-6"	4
25 Rail		1-25-0 Short rail Belly Curved		(2-8-0 Long rails 1-7-1 Manganese		(1-23-4 1-23-0 1-23-8 Belly Curve 1-20-8 Curved 1-20-0 Belly Curve 1-17-8 1-13-2 Curved	8	7	Do	10'-0"	4
							8	Do	11'-0"	3
							9	Do	11'-0"	3
28 Rail				(1-6-6 Manganese 2-10-3 Guard rails		1-26-10	2	10	12"×6"	12'-0"	4
							11	12"×6"	12'-6"	3
							12	9"×3 1/2"	13'-0"	2
							13	Do	13'-6"	3
							14	Do	9'-6"	2
30 Rail	2	(2-12-0 Short rails 2-8-0 Short rails				1-36-0	3	15	Do	10'-0"	1
								16	Do	13'-0"	2
								17	Do	10'-0"	1
33 Rail						(2-14-8 Curved 1-8-4 Curved	1	18	12"×6"	11'-0"	3
								19	9"×3 1/2"	11'-0"	2
								20	Do	11'-6"	3
				Total Nº		24		Total Nº			36

List of Materials for the 2nd Point Switch
Annexed to drawing Sheet 2

Nº of Pieces	Nº of Orders	Description	Length	Remarks
1		Stock rail	23'-0"	Rails Curved (made from 25' rails)
1		Do of opposite side	20'-11"	Heel of toe rail and rail between (made from 2-24 rails)
1	1	point rail	16'-8"	
1	2	Do of opposite side	15'-8"	
1	3	Steel tie bar 2"×⅝	5'-11"	
1	4	Cast steel clip		Attached at the toe of point rail Nº 2
3	5	Do		
8	6	Bolts and square nuts ⅝ dia.	2"	with collar pins (Connecting clips to the Rails)
4	7	Bolts and nuts ⅝ dia.	3½"	with do (Connecting clips to the Tie Bars)
3	8	Packings 2dia×⅝"		Between clips and tie bars
1	9	Do 2"×⅝"		Between clip Nº 4 and Tie bar
1	10	Steel tie bar 2"×⅝	3'-9½"	
7	11	Cast steel bed plate 6"×⅝	1'-0"	With sloping surface 6"×3
2	12	Do 6"×⅝	1'-4"	without Do
2	13	Do 6"×⅝	1'-4"	With rib ⅝"×⅜"in. Pads, Projections and ⅞ dia. Rivets
1	14	Do 6"×⅝	1'-11"	With sloping surface 6"×3
1	15	Do 6"×⅝	1'-7"	With slo
1	16	Do 6"×⅝	1'-7"	With slo
11	17	Steel tie plates 6"×⅜	6"	
12	18	Cast iron rail bases		
41	19	Screw spikes ⅝ dia.	6⅜	for Tie plates
30	20	Fang bolts ⅝ dia.	6⅜	With hex nuts
10	21	Do ⅝ dia.	7⅜	With slo
4	22	Special fish plates ⅞ thick	1'-7"	
8	23	Fish bolts ⅞ dia.	4	With fast-nut washers (These bolts are the Same as those for the Standard 60 lb. rail)
2	24	Wrought iron Stocks	2⅜	
2	25	Do	3⅜	
2	26	Bolts ⅝ dia.	2⅜	With square nut (for bed plates Nº 13)
2	27	Cast Steel Square washers 3"×2"	2	For bed plates Nº 13

List of Materials for Crossings and Guard Rails
Annexed to drawing Sheet 3

Nº 8 Crossing

The materials for the Nº 8 Crossing are the same as those for the Standard Nº 8 Crossing for Bolts rail except as follows

Nose rail 7-1
Do 6-0
} For this crossing

Guard Rails

Nº of Pieces	Description	Length	Remarks
2	Guard rails	10'-3	1-60 lbs rail over their 2 rails above Nose 7'-8" & rail
4	Cast iron chocks	3"	
8	Cast iron rail bases		
4	Bolts for chocks	6"	with fast-nut washers
16	Bolts for rail bases	8	with hex nuts

Nº 10 Crossings

The materials for 2 Sets of Nº 10 Crossings are the same as those for the Standard Nº 10 Crossing for 60 lb. rail

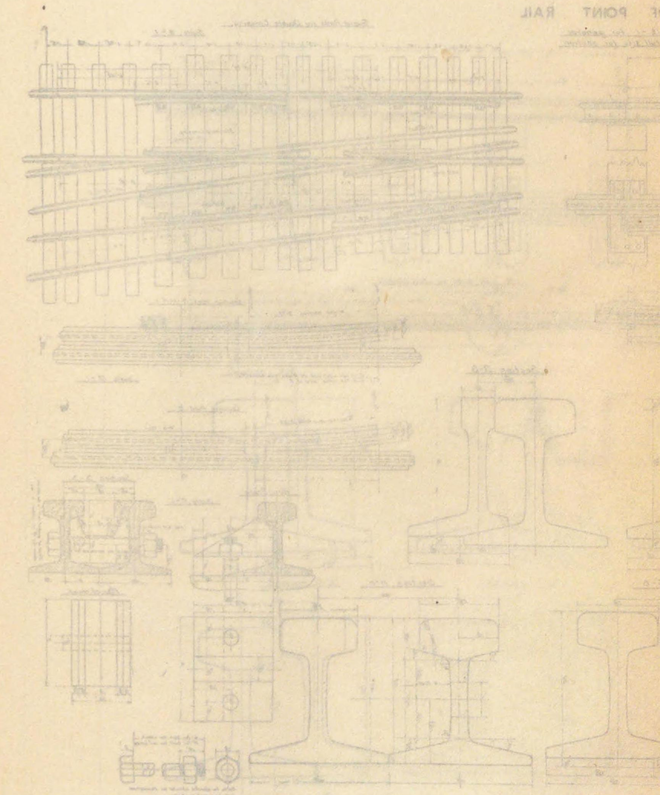
Guard Rails (for 1 Set of Crossing)

Nº of Pieces	Description	Length	Remarks
2	Guard rails	9'-0"	made from 18'-6" rail
4	Cast iron chocks	3	
12	Cast iron rail bases		
4	Bolts for chocks	6	with fast-nut washers
20	Bolts for rail bases	8	with hex nuts

List of Total Materials

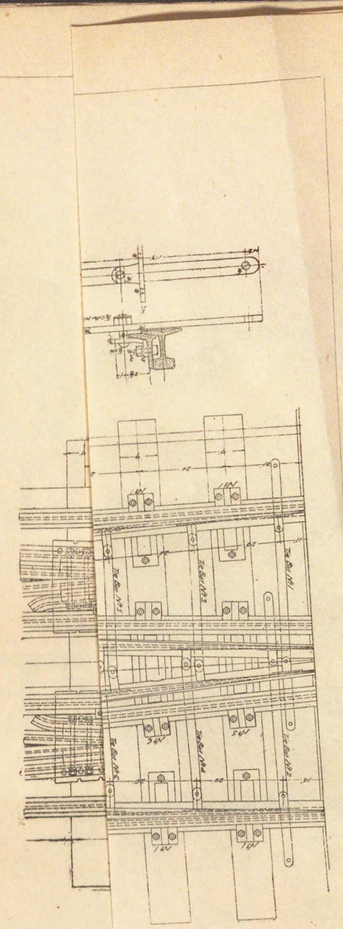
Number	Description	Remarks
56	Sleepers	
1 Set	Standard 12th Point Switches	
1 Set	Second 12th Point Switch	
2 Sets	Nº 10 Crossings with guard rails	
1 Set	Nº 8 Crossings with guard rail	
11	Remaining Rails	2-24', 6-26', 1-28', 1-30' and 1-33' rails

圖第一三號（三）



圖第一三號（四）

圖第一四號（一）



（四）號二二圖第

圖第一四號（一）

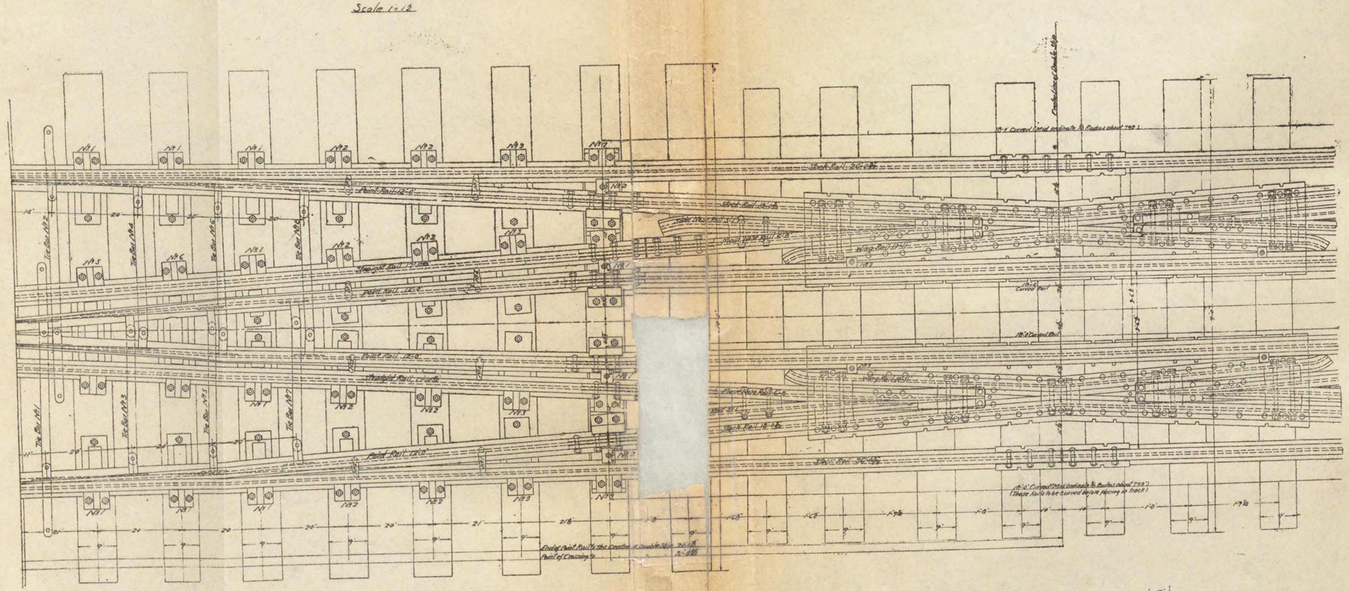
圖第一四號（一）

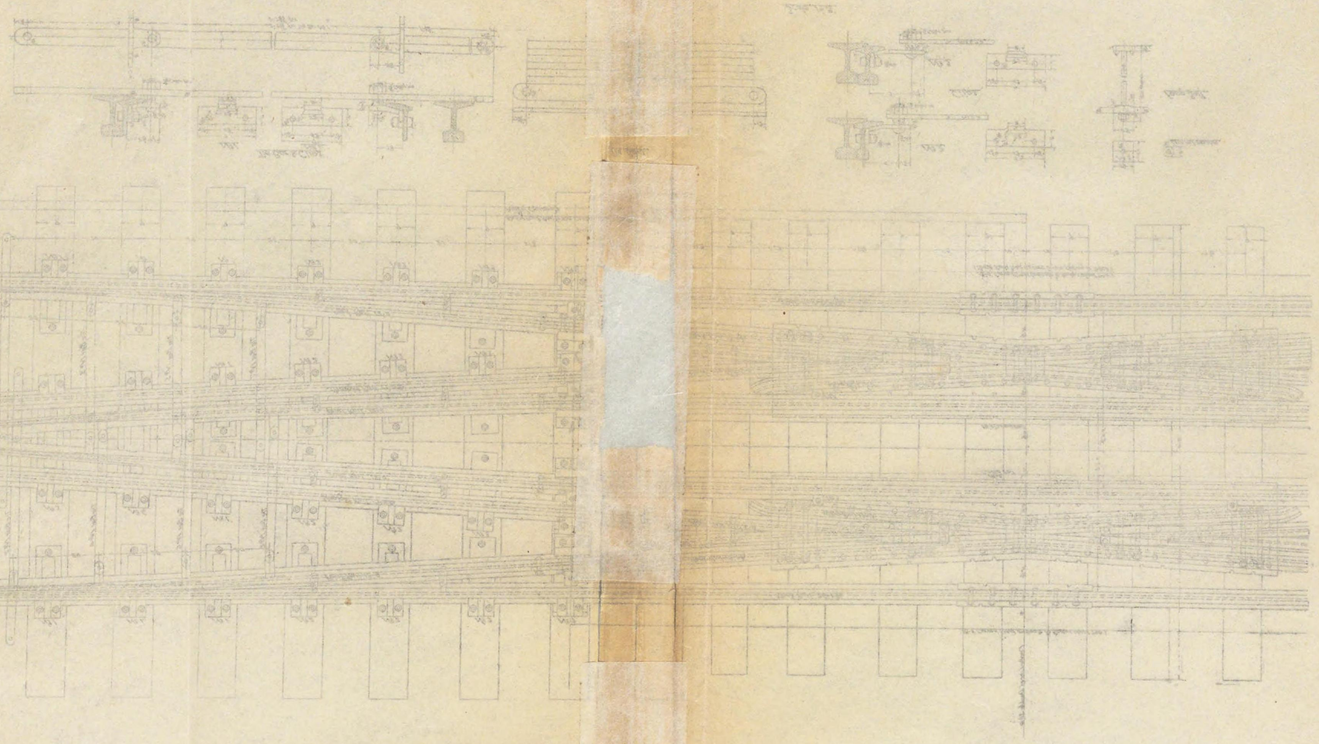
圖第一三號（四）

明治四十三年十二月達第一〇五八號

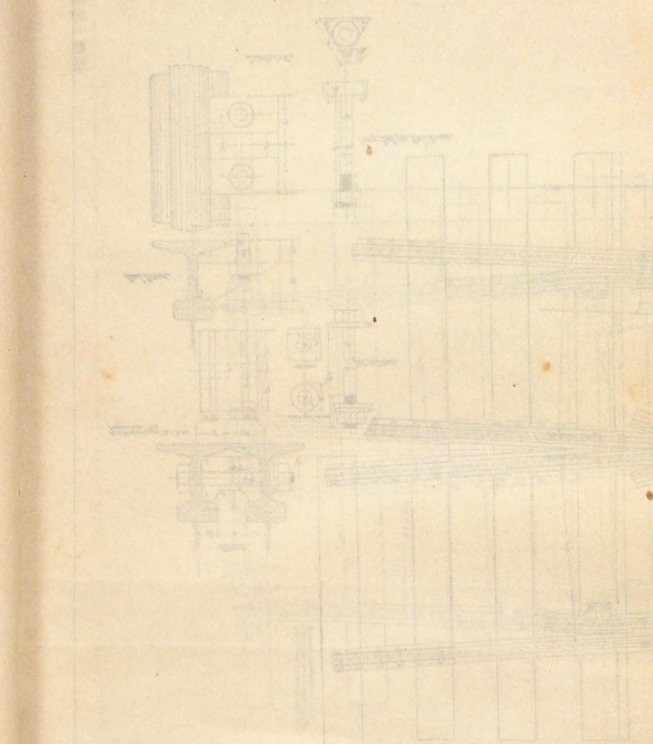
七十五封度軌條製九番ダブルスリップスウキッチ規定

GENERAL PLAN OF No. 9 DOUBLE SLIP SWITCH.—(1)





GENERAL PLAN OF No 9 DOUBLE SAIL SWITCH.——(上)

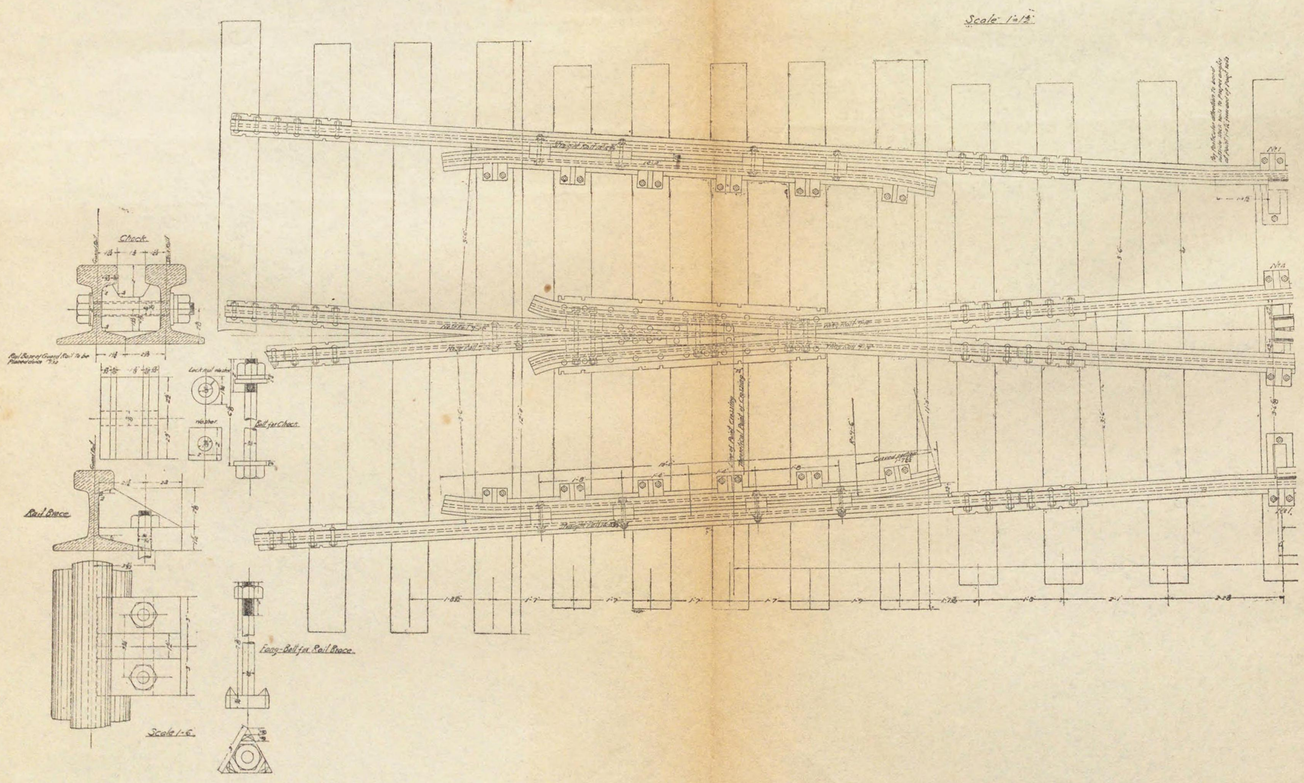


GENERAL PLAN OF

第一四號圖（二）

圖第一四號（二）

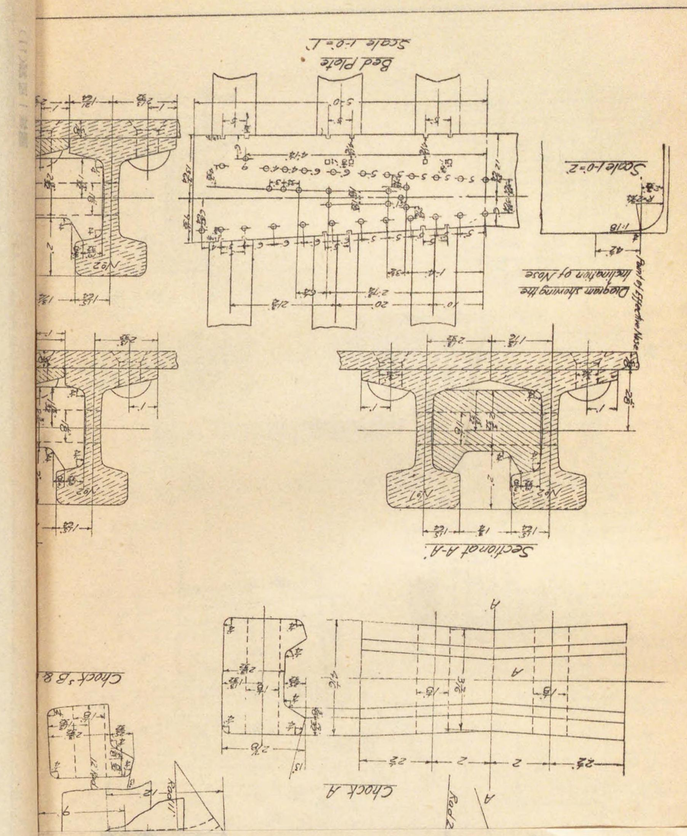
GENERAL PLAN OF No 3 DOUBLE SLIP SWITOH.—(2)

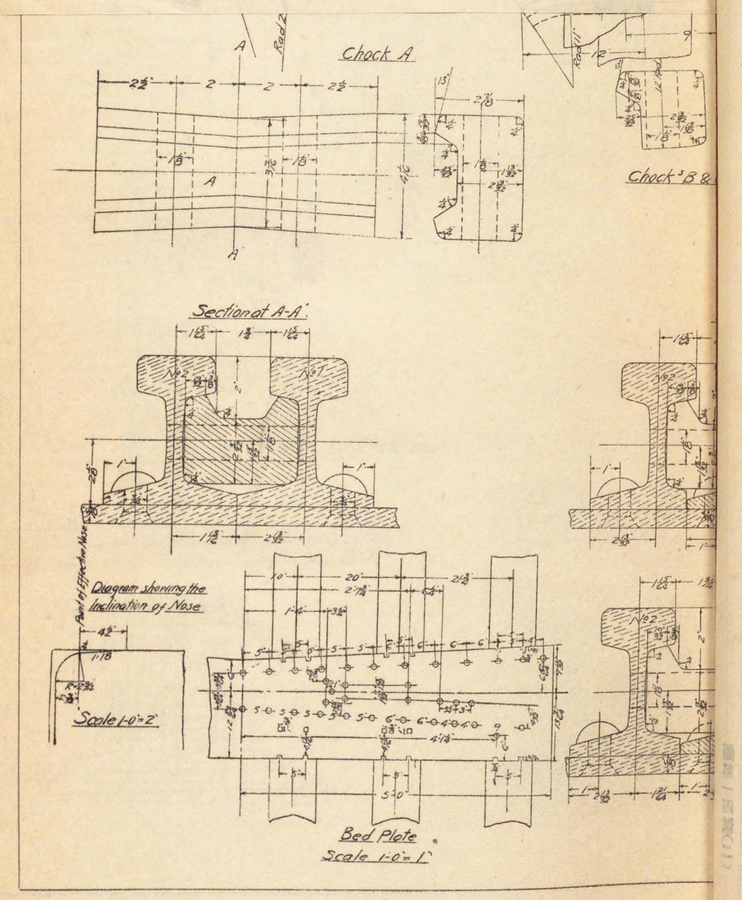


圖第一四號（二）

GENERAL PLAN OF No 3 DOUBLE SLIP SWITCH.

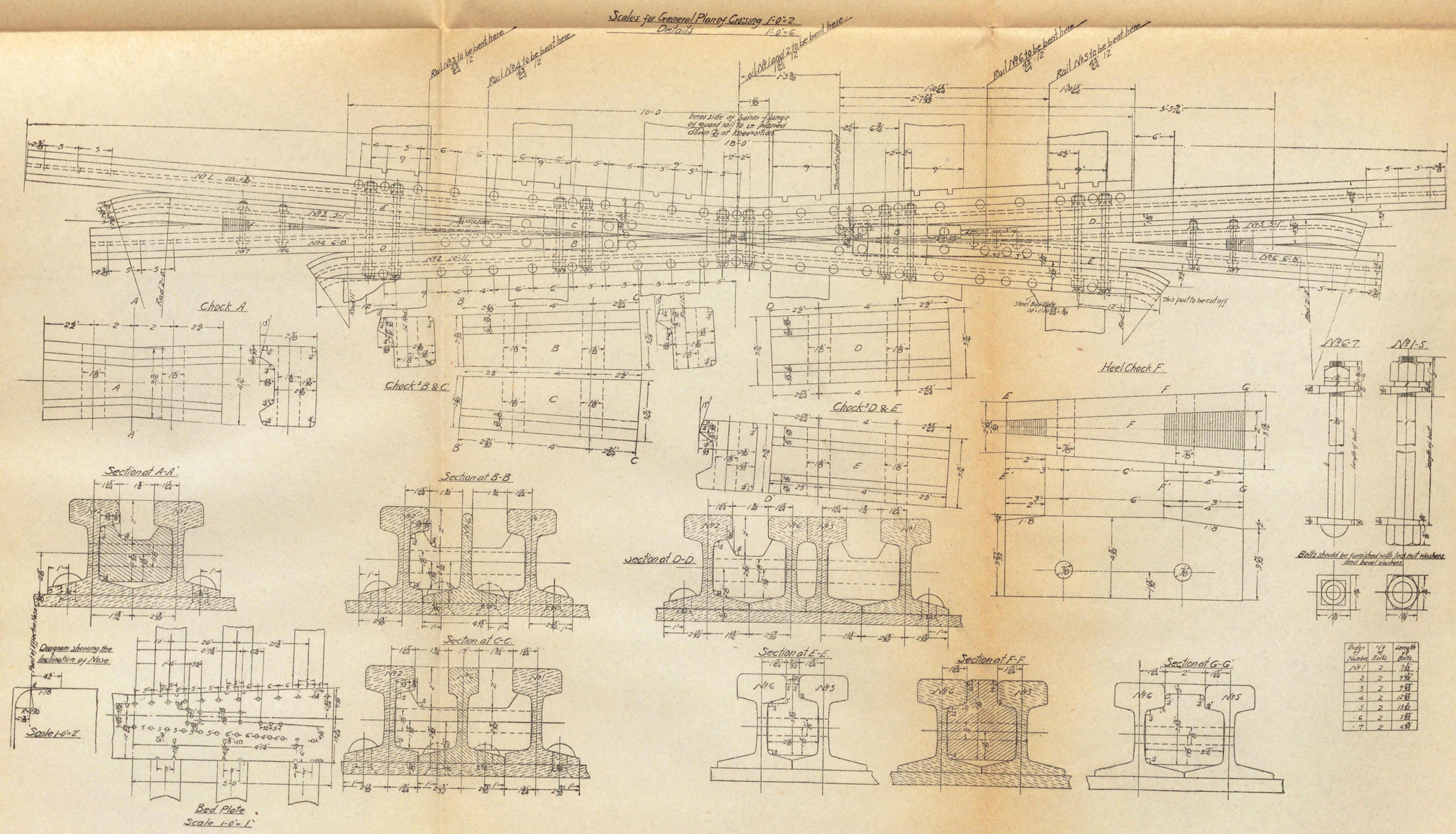
圖 線 (一)




Chock A
Chock B &
Section at A-A'
Diagram showing the Inclination of Nose
Scale 1-0"=2"
Bed Plate
Scale 1-0"=1"

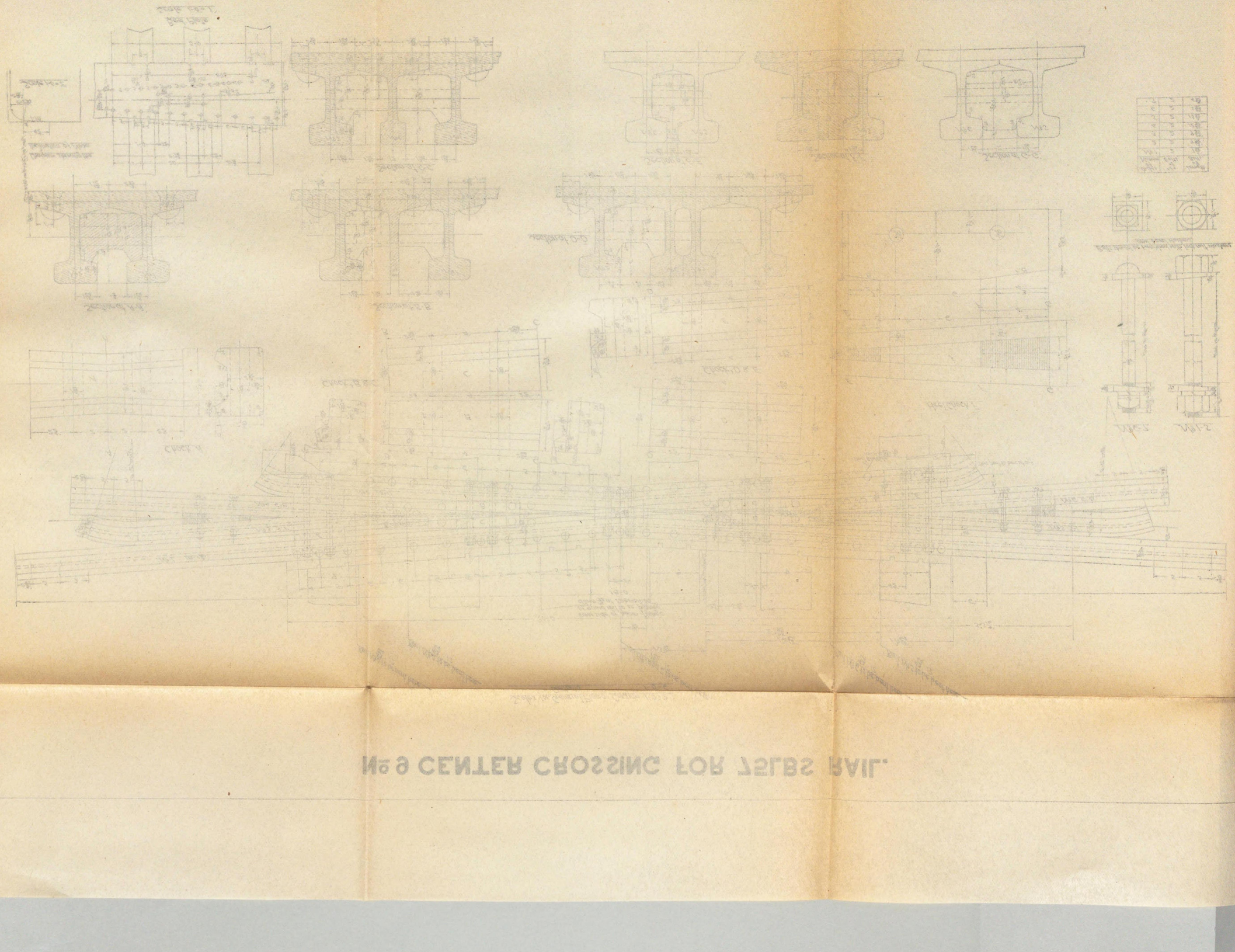
№ 9 CENTER CROSSING FOR 75LBS RAIL.

圖第一四號（三）



Order of Number	No of Bolts	Length of Bolts
No 1	2	7 1/32"
2	2	9 13/32"
3	2	9 23/32"
4	2	12 23/32"
5	2	13 23/32"
6	2	5 23/32"
7	2	6 23/32"

圖第一四號（三）

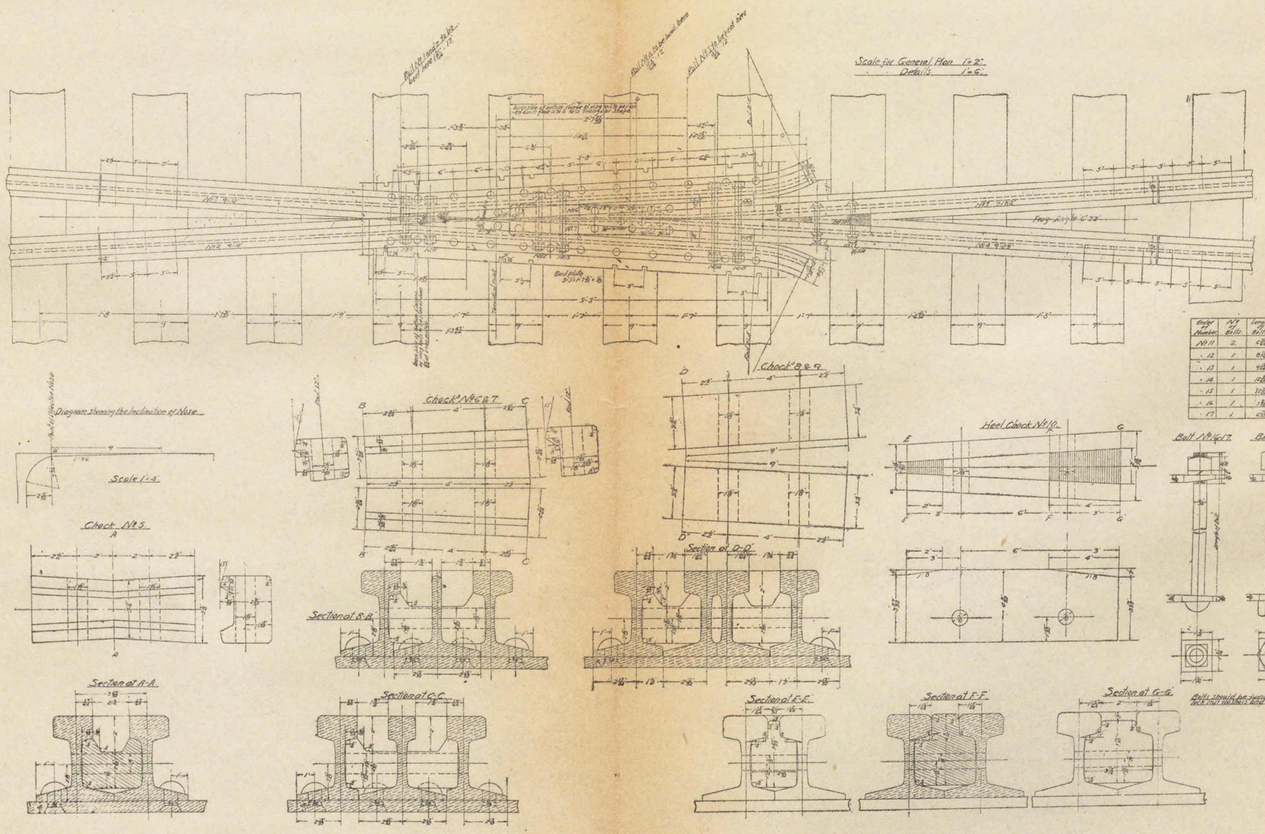


No 9 CENTER CROSSING FOR 75LBS RAIL.

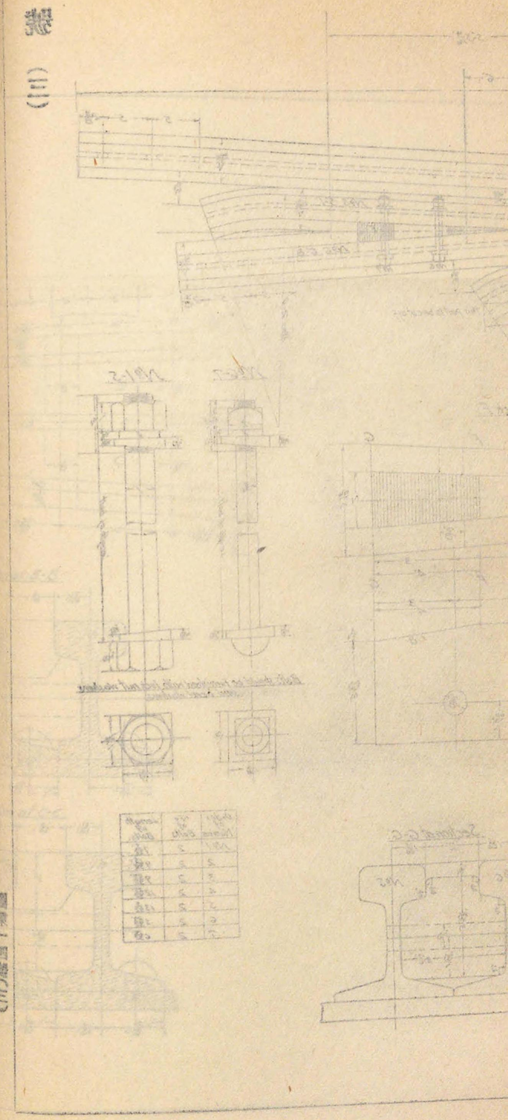
第一四圖(四)

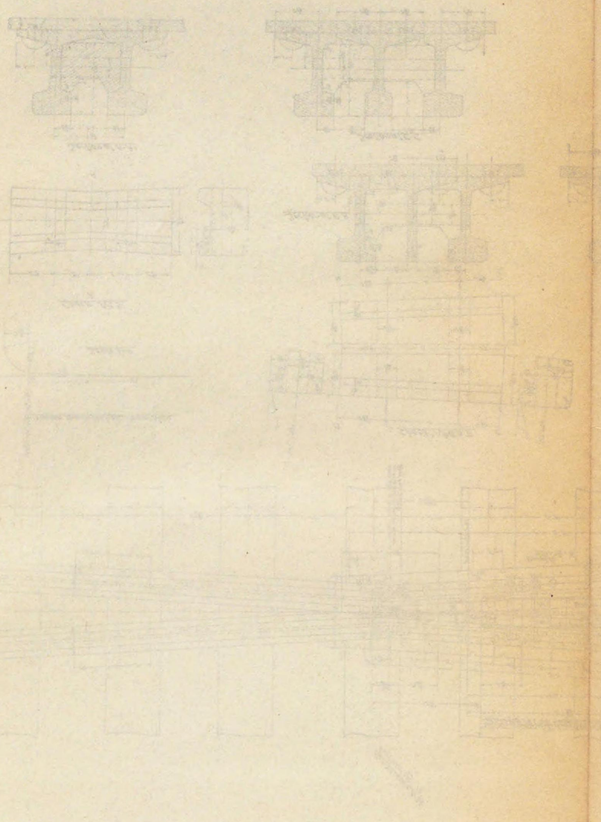
第一四圖(三)

No 9 END CROSSING FOR 75LBS RAIL.

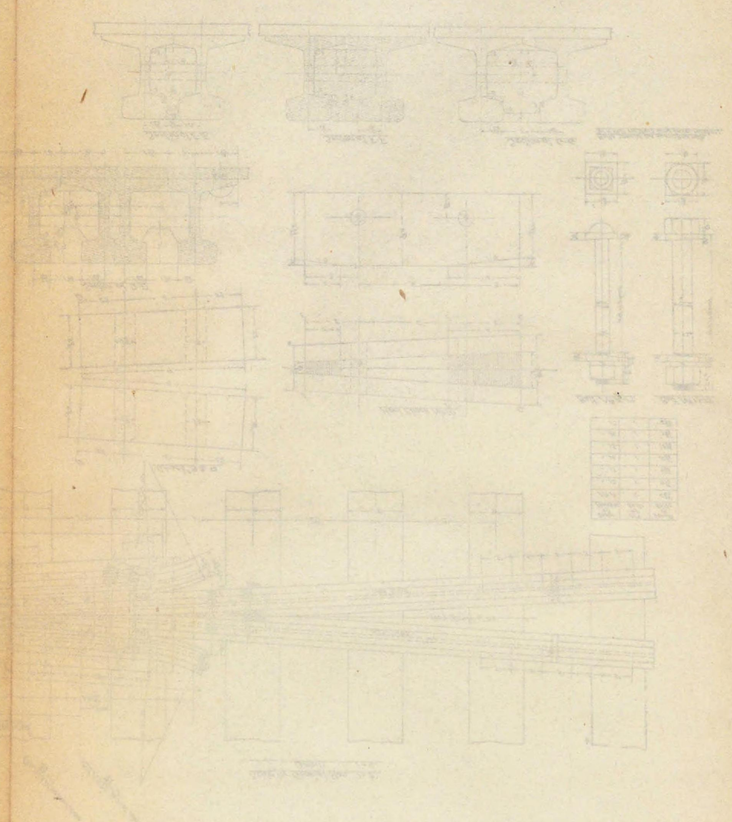


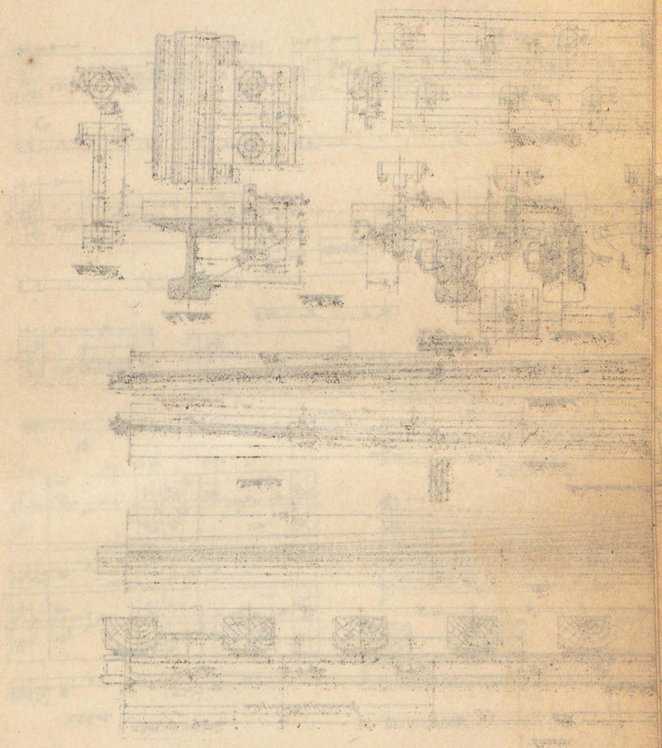
Bolt Number	No of Bolts	Length of Bolts
No 11	2	4½
" 12	1	6½
" 13	1	9½
" 14	1	10½
" 15	1	11½
" 16	1	13½
" 17	1	15½





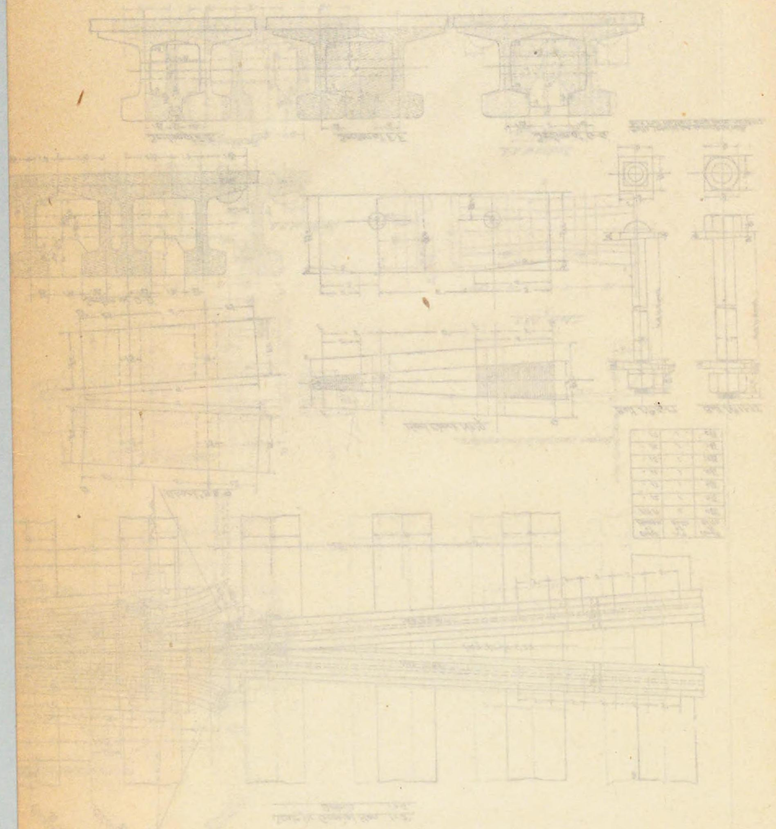
No.9 END CROSSING FOR 127LBS RAIL



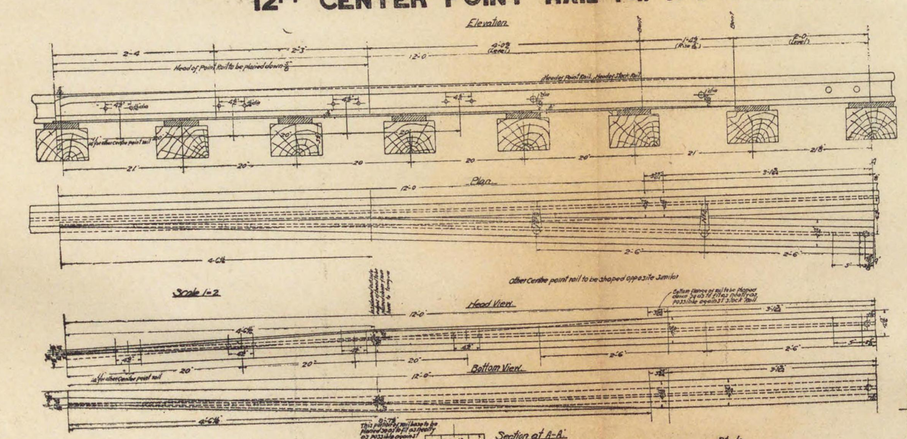


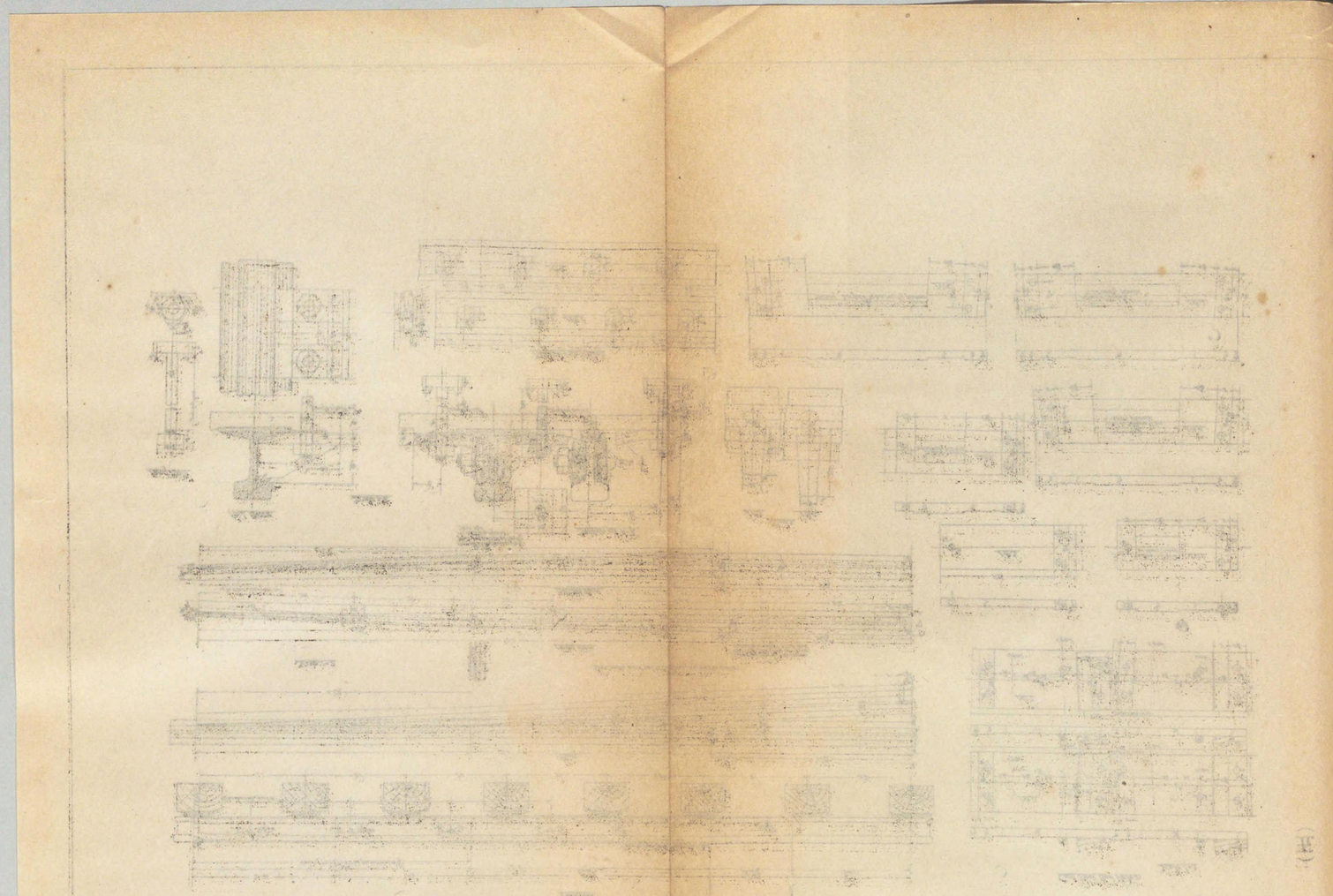
13° CENTER POINT RAIL

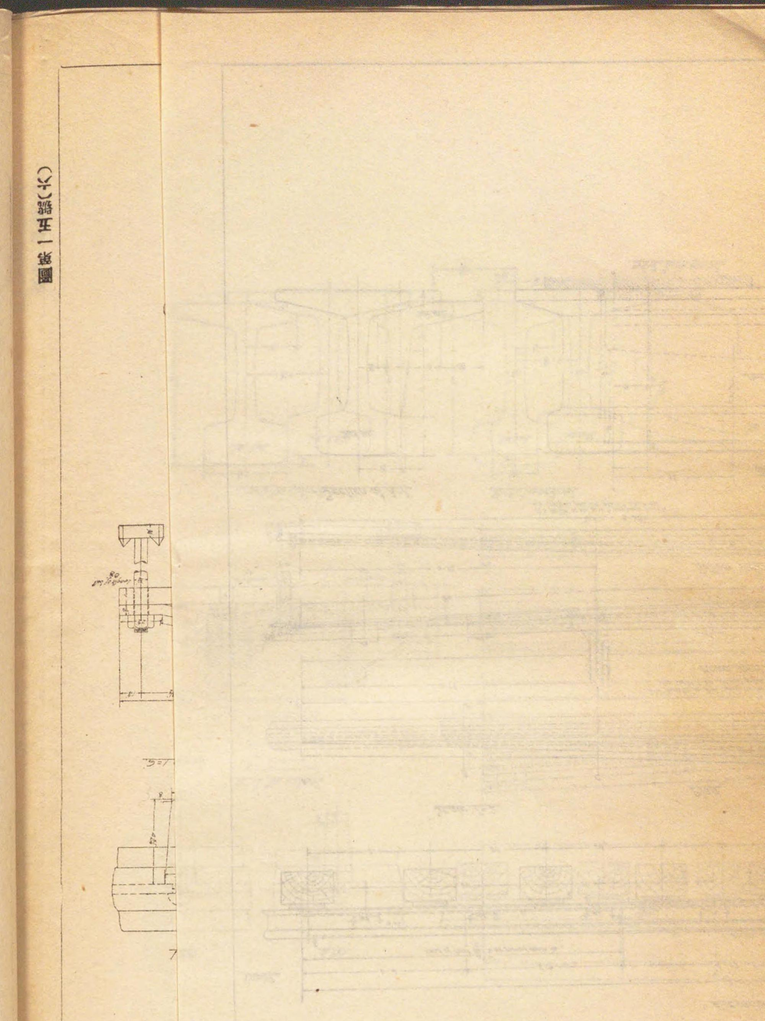
図第1図(甲)



12FT CENTER POINT RAIL FOR Nº9 DOUBLE SLIP SWITCH.





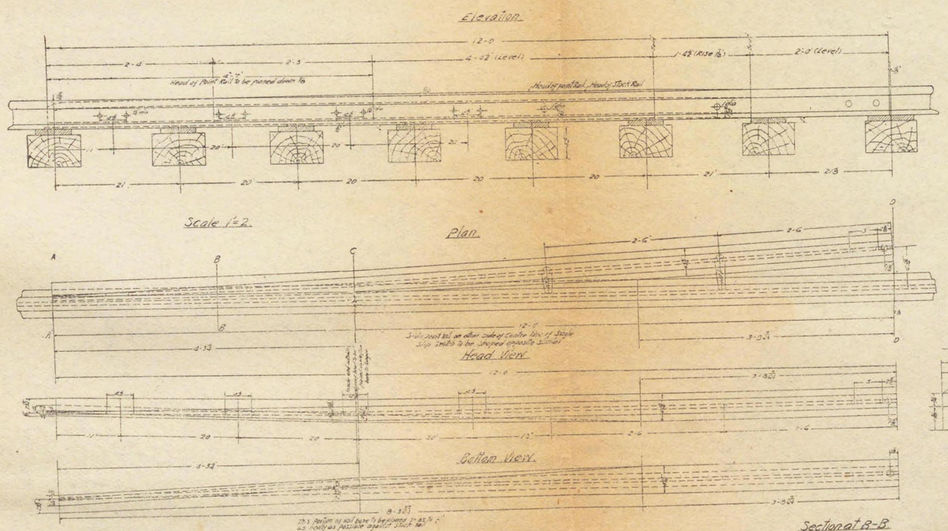


第一圖　(六)號五十第圖

圖

圖第一五號(六)

12FT SIDE POINT RAIL FOR Nº9 SINGLE SLIP SWITCH.

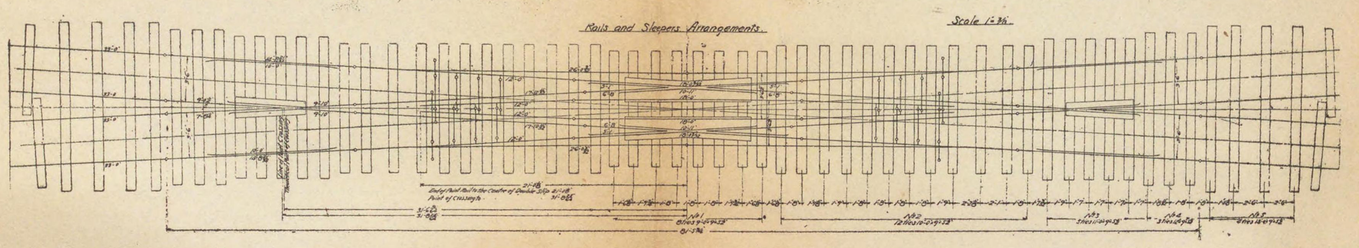


圖第一四號(七)

(六) 號五一第圖

№9 DOUBLE SLIP SWITCH FOR 75LBS RAIL.

Rails and Sleepers Arrangements. Scale 1:96



List of Materials for №9 Crossing Double Slip Switch Annexed to Drawing Sheet № 1 2 3 4 5 6 7

№of Pieces	Description		Remarks
2	Centre Crossings		Complete with check & bolts etc.
2	№9 End Crossings		
4	Centre Point Rails	12-6	
4	Side . .	12-6	
4	Guard Rails	12-6	Complete with Check & braces etc.
4	Stock Rails	16-5½	
4	. .	24-7½	
4	. .	17-11½	
2	. .	18-6	
2	Steel Tie Rod №1		Curved
2	. . . 2		Complete with 2-Nuts bolt etc.
2	. . . 3		. . . . .
2	. . . 4		. . . . .
2	. . . 5		. . . . .
2	. . . 6		. . . . .
2	. . . 7		. . . . .
2	. . . 8		. . . . .
8	Check №1 & 2 №1		Complete with 2-Nuts bolt etc.
8	. 2		. . . . .
16	. 3		. . . . .
20	Cast Steel Bed Plate №1		With Sliding Surface.
16	. 2		. . . . .
8	. 3		Without
2	. 4		With
2	. 5		. . . . .
2	. 6		. . . . .
2	. 7		Without
2	. 8		. . . . .
62	Rail Knees		Cast Iron
4	. Chairs (1)		To fit at the end of 12 m/ft rails
4	Raisers №1	5-1½	. . Heel . Joint rails
4	. . 2	5-1½	. . . . .
6	. . 3	22-1½	Place the inside of rail Sliding Rail
8	Pins ⅞		To fit at the heels of Point Rails
144	Fang bolts	Bolts length 9⅞	
144	. .	7½	
8	. .	36 0½	
8	. .	7½ 0½	With lock nut washer.
8	Wedges		To fit at the heels of Point rails
16	Special Joint plate №1		Complete with bolts nuts etc.
2	. . 2		. . . . .
4	Wrought Iron Block №1		. . . . .
8	. . 2		. . . . .
4	. . 3		. . . . .
8	. . 4		. . . . .
16	Steel angle Yoke bars		Complete with 2-Bolts bolts & washers
32	Round Spikes		
1	Complete Joint & Connection		

List of Materials for 1- Centre №9 Crossing of Double Slip Switch Annexed to Drawing Sheet № 3

№of Pieces	Description		Remarks
1	Stock rail №1	18-11½	
1	Point Rail №2	18-11½	
2	Side mate rail №2 & 3	5-1½	
2	Heel . . №4 & 5	6-0	
1	Cast iron check A	9	
2	. . B	9	
2	. . C	9	
2	. . D	9	
1	. . E	9	
2	Heel check F	11	
2	Steel bolts №1	1 side 7½	For check A with lock nut washer & bevel shoulders
2	. .	2 " 9½	. . B & C . . . . .
2	. .	3 " 11½	. . . . .
2	. .	4 " 10½	. . D . E . . . . .
2	. .	5 " 11½	. . . . .
2	. .	6 " 13½	. . F . . . . .
2	. .	7 " 13½	. . . . .
1	Fished Steel keed Plate	20 1/2 x 10 - 1/2	
62	Nuts one end Counter Sunk Steel rivets	1 1/2 x 1/2 - 1/2	
16	. . Steel rivets		

List of Materials for 1- End №9 Crossing of Double Slip Switch Annexed to Drawing Sheet № 4

№of Pieces	Description		Remarks
1	Piling rail №1	9-11½	
1	. .	7-11½	
1	Side mate rail . 2	7-6½	
1	Heel . . . 4	7-0½	
1	Cast iron check C	9	
1	. . D	9	
1	. . E	9	
1	. . F	9	
1	Heel . . 10	9	
2	Steel bolt №1	Bolts length 6½	For check №1 with lock nut washer & bevel shoulders
1	. .	1A 6½	. . . . .
1	. .	13 7½	. . . . .
1	. .	14 10½	. . . . .
1	. .	15 10½	. . . . .
1	. .	16 11½	. . . . .
1	. .	17 6½	. . . . .
1	Heel plate	25-1/2 x 18 - 3/4	
34	Nuts one end Counter Sunk Steel rivets		
2	Knee Iron rivets		

List of Sleepers for №9 Double Slip Switch Annexed to Drawing Sheet №7

№of Pieces	Description		Remarks
13	Sleepers №1	9-0 x 9 - 12	
104	. . 2	10-0 x 9 - 12	
18	. . 3	11-0 x 9 - 12	
6	. . 4	12-0 x 9 - 12	
11	. . 5	13-0 x 9 - 12	

List of Rails for №9 Double Slip Switch Annexed to Drawing Sheet №7

№of Pieces	Description		Remarks
12	Side mate rails	7-0½	For №9 End Crossing
2	Heel . .	9-0½	. . . . .
2	Stock rails	18-11½	. . Centre . .
2	Piling rails	18-11½	. . . . .
4	Side mate rails	5-1½	. . . . .
4	Heel . .	6-0	. . . . .
4	Point rails	18-11½	Centre Point rails .
4	. .	18-6	Side . .
4	Stock rails	16-5½	. . . . .
2	. .	20-7½	Rails Curved
2	. .	20-6	. . Curved
4	. .	17-11½	. . . . .
4	Wing rails	9-11½	For №9 End Crossing.
4	Guard rails	20-3	. . . . .

List of Materials for 1- Guard Rail of №9 Double Slip Switch Annexed to Drawing Sheet №2

№of Pieces	Description		Remarks
1	Guard rail	20-6	Curved at both ends
16	Rail Bearers	6	. . . . .
16	Chocks	5	. . . . .
12	Fang bolts for bearers	Bolts length 8-½	. . . . .
16	Bolts . chocks	6-½	With square shoulders & lock nut washer.

No 3

End of Point Rail to
Point of Crossing 70

21'

Scale 1"=3'

(上) 鐵 四 一 道 圖

No 8 DOUBLE SLIP SWITCH FOR 12LBS RAIL.

No 3

End of Point Rail to

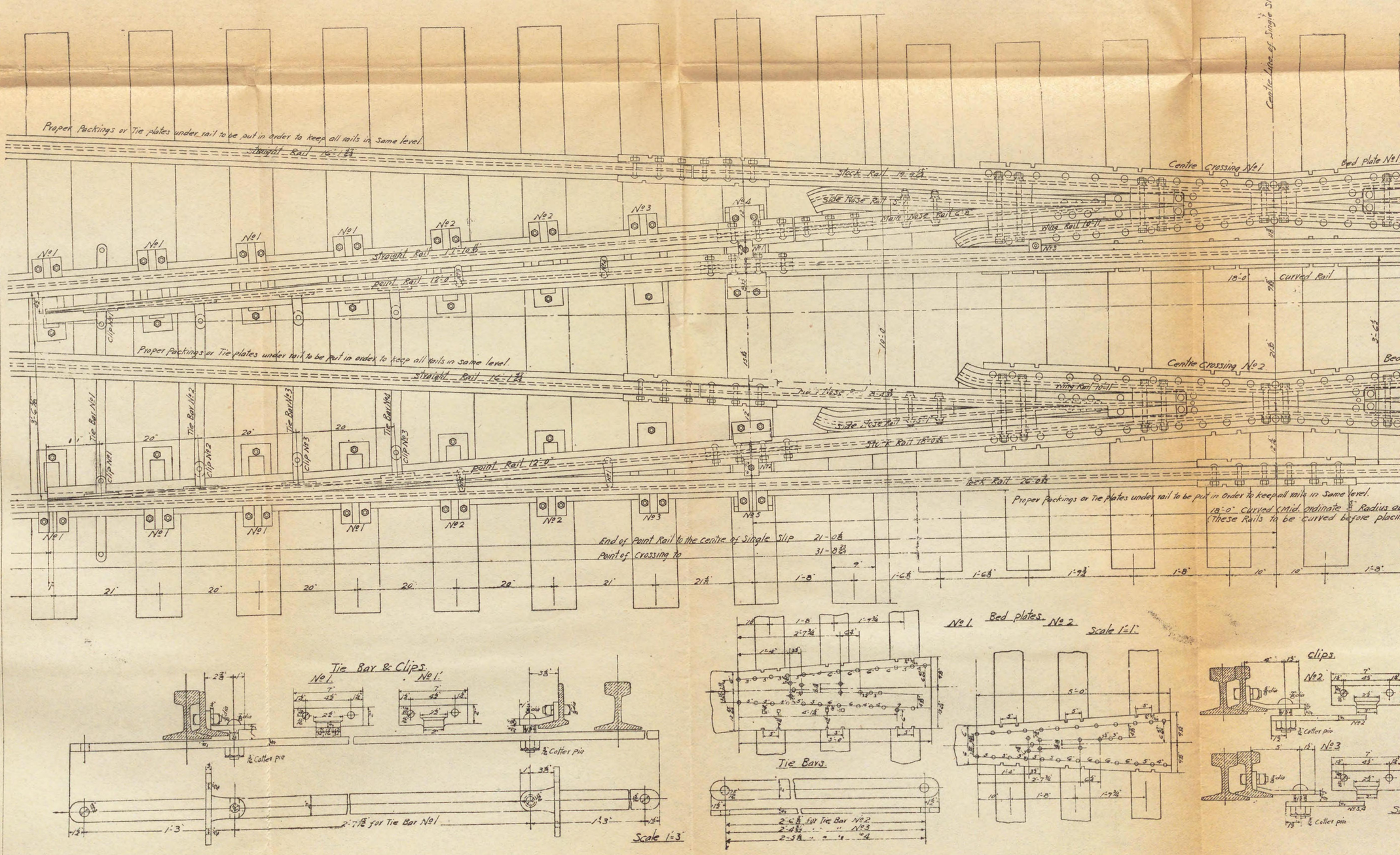
Point of Crossing to

21'

Scale 1"=3'

圖第一四號 (七)

GENERAL PLAN OF №9 SINGLE SLIP SWITCH. (1)

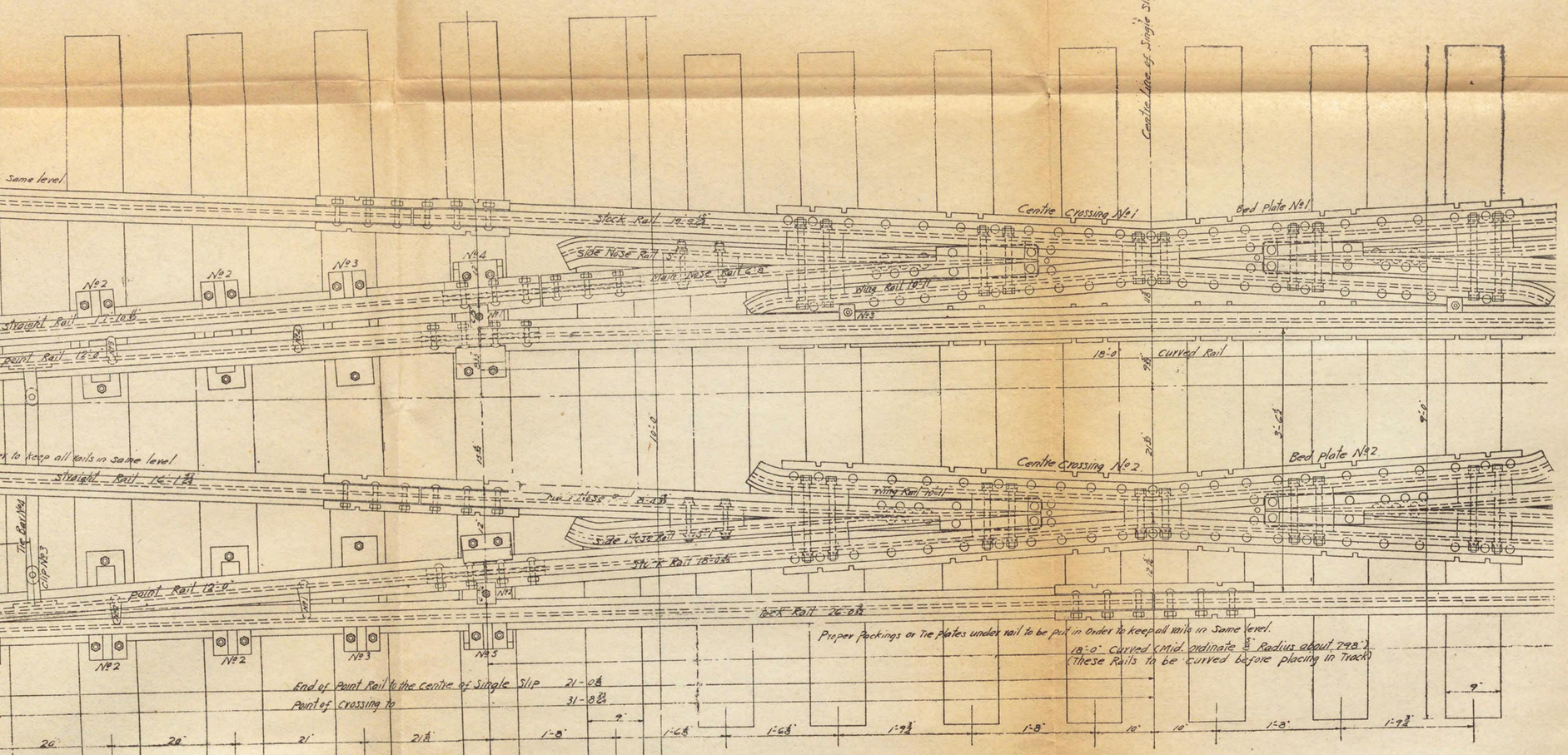


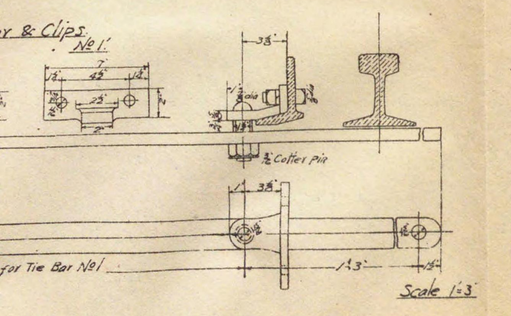
Tie Bar & Clips. №1. №1.

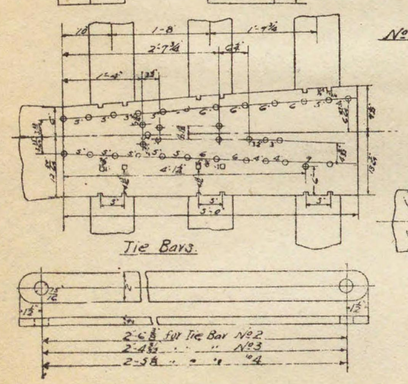
№1. Bed plates. №2 Scale 1=1'

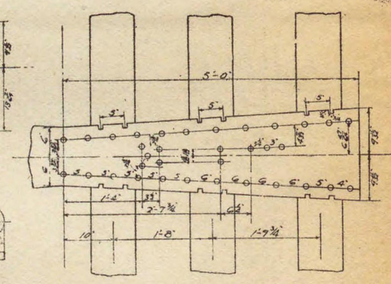
clips.

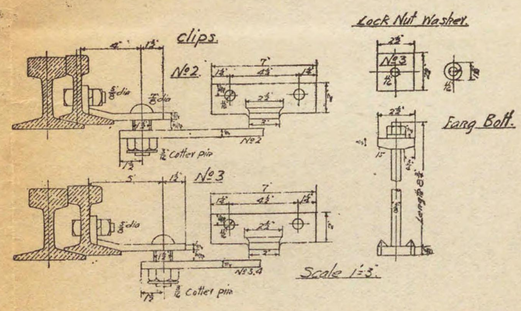
GENERAL PLAN OF №9 SINGLE SLIP SWITCH. (1)

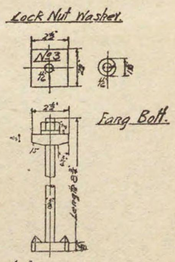












圖第一五號（一）

七十五封度軌條製九番「シングルスリップスウキッチ」定規

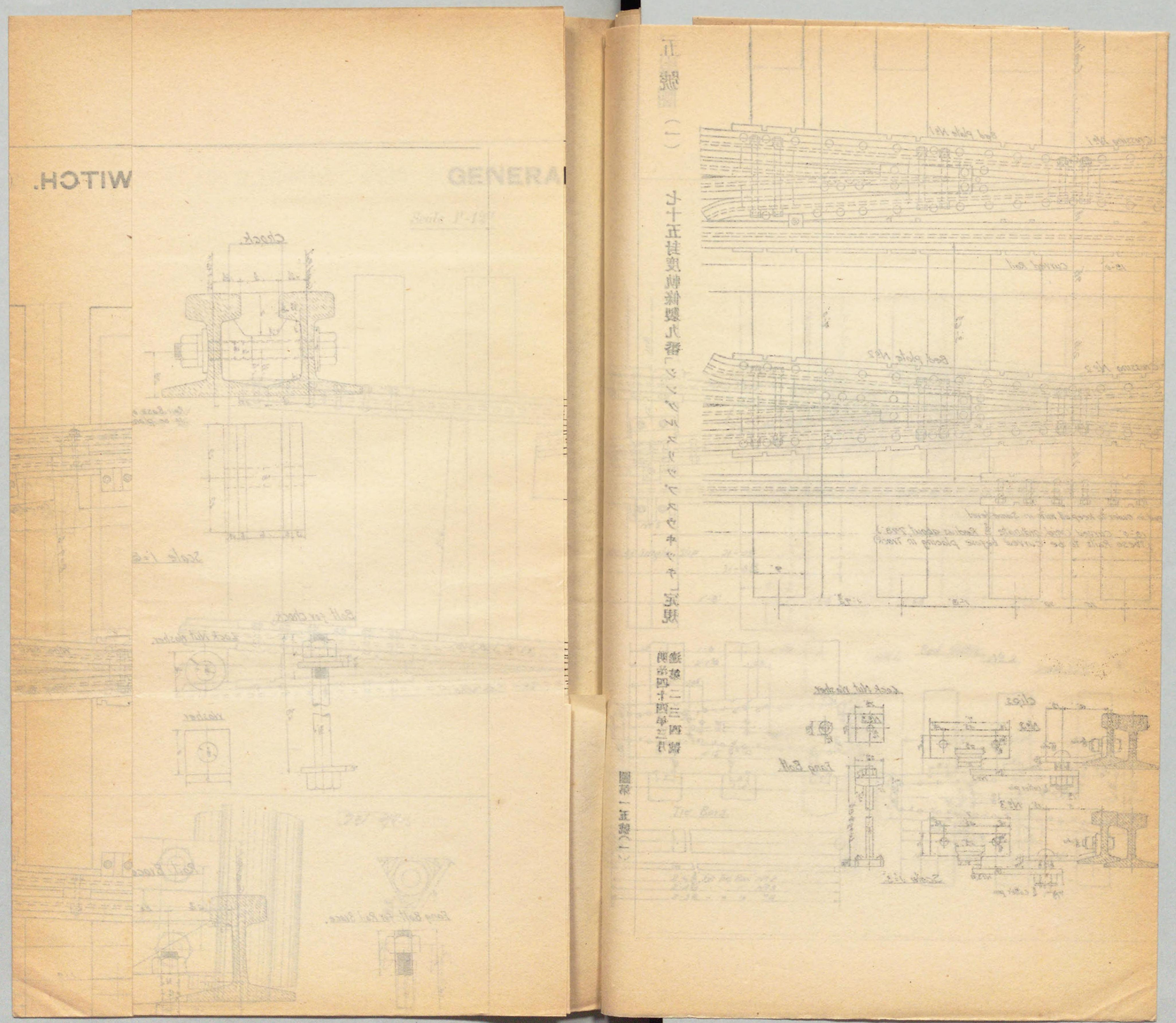
明治四十四年三月
達第二三四號

圖第一五號（一）

GENERAL PLAN OF No.9 SINGLE SLIP SWITCH.

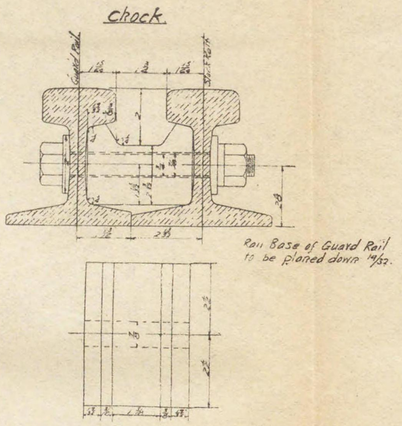
GENERAL PLAN OF No.9 SINGLE SLIP SWITCH. (1)

第九十五號單式菱形交叉渡線（一）工作圖



GENERAL PLAN OF №9 SINGLE SLIP SWITCH. (2)

Scale 1'-12"



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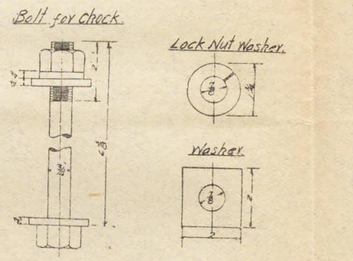

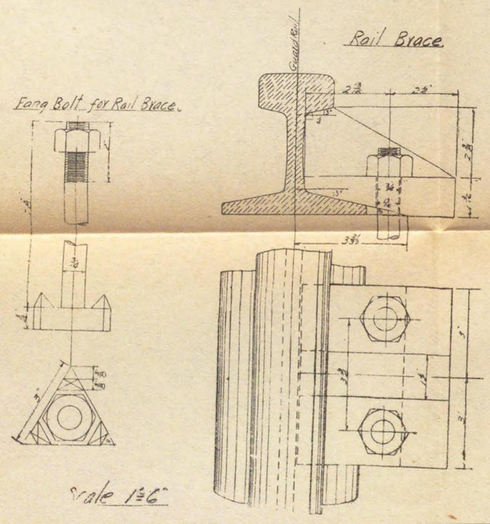

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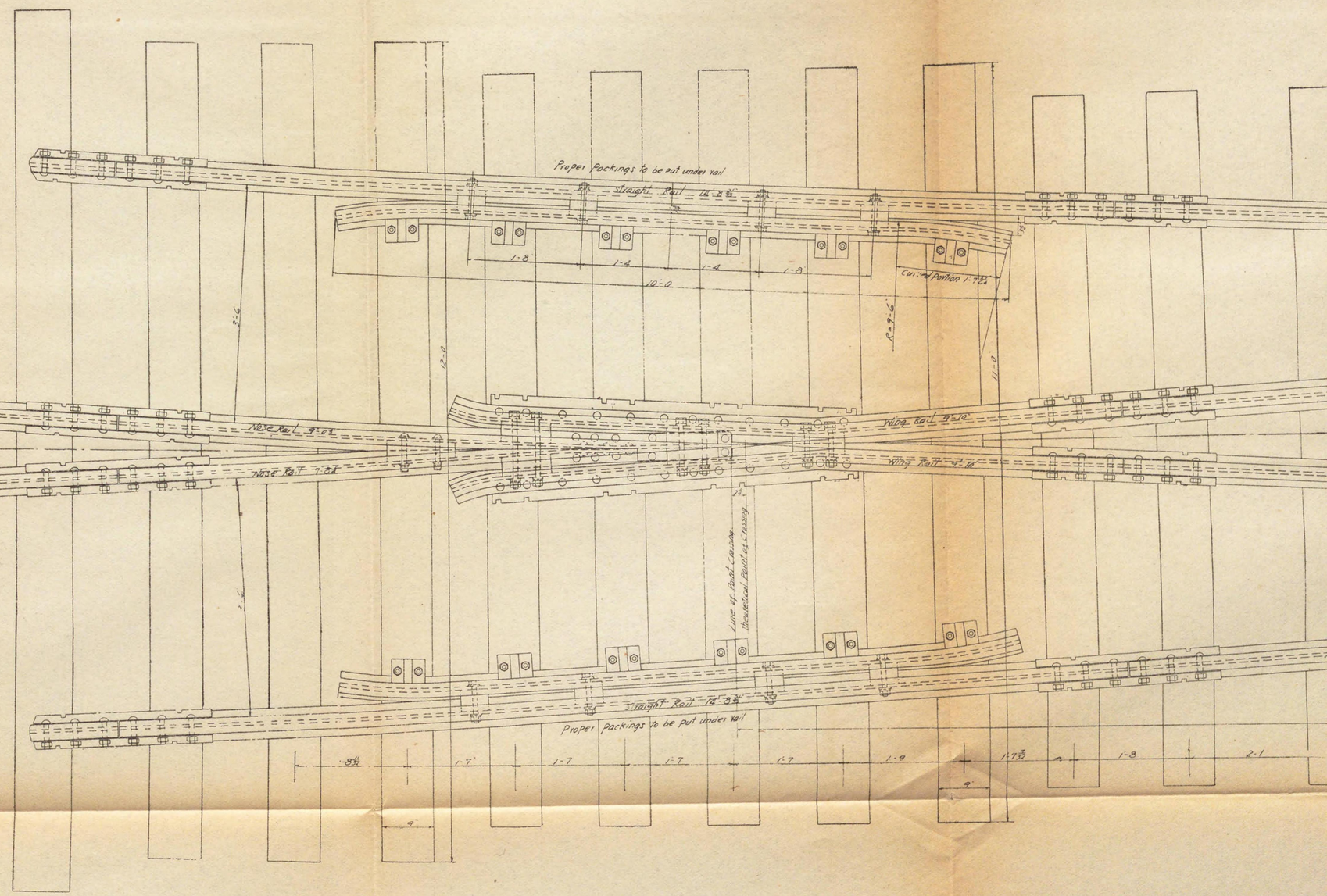
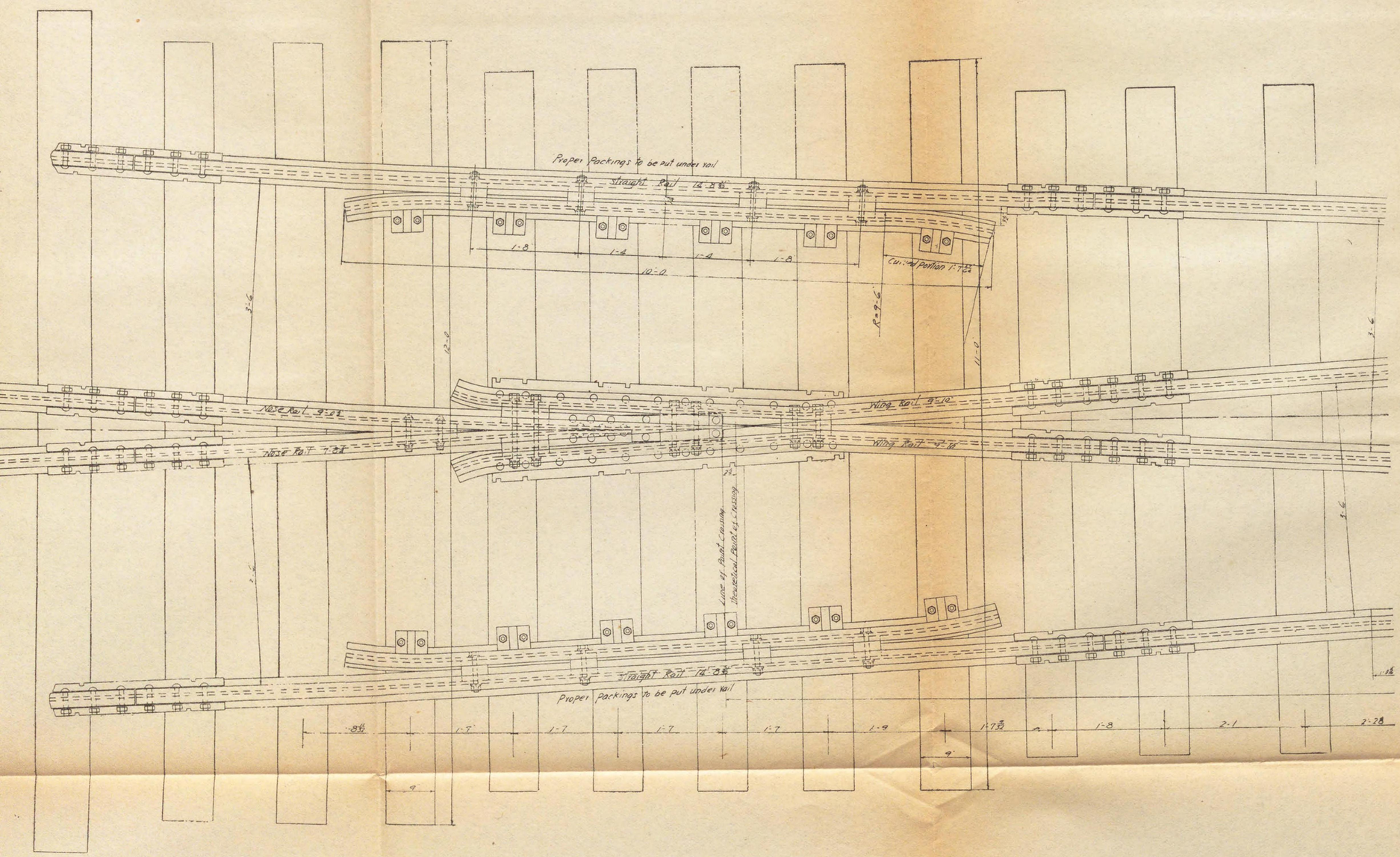


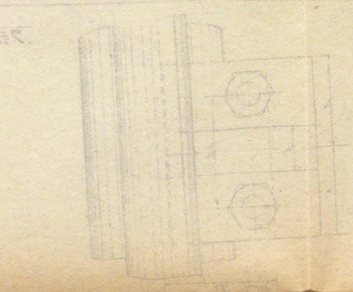
GENERAL PLAN OF №9 SINGLE SLIP SWITCH. (2)

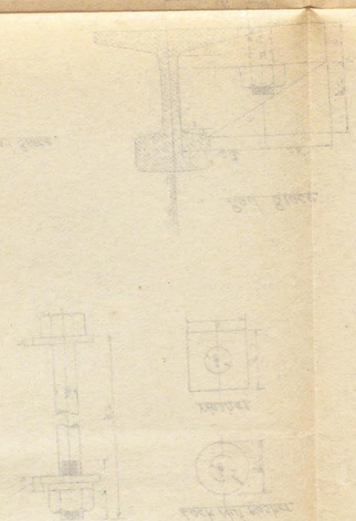
Scale 1'-12"

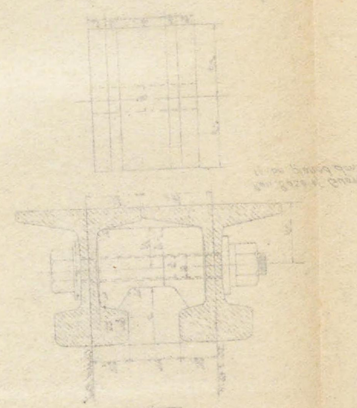


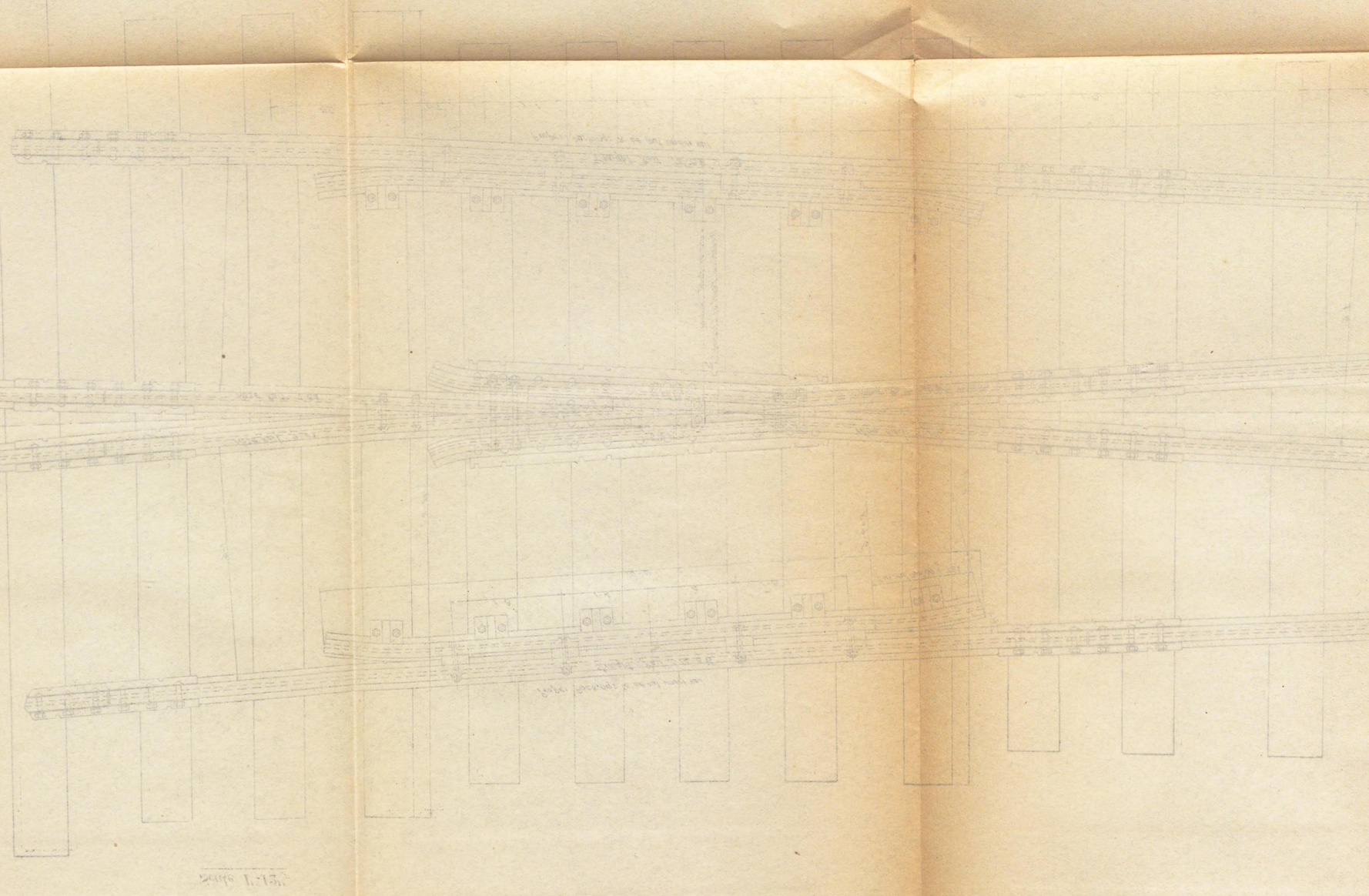
圖第一五號（二）

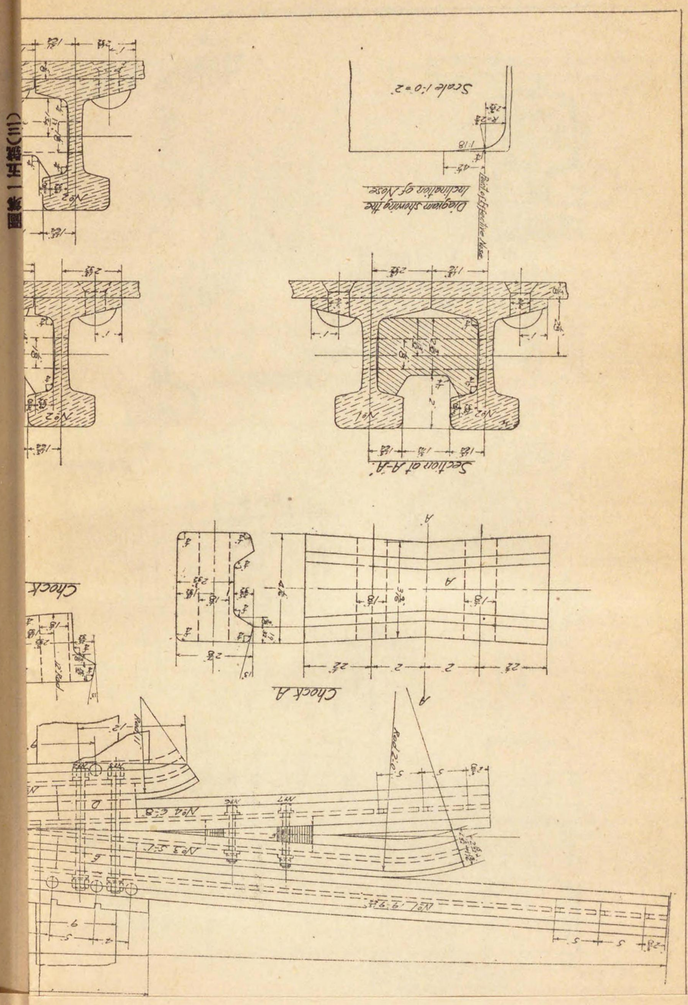
圖第一五號（二）



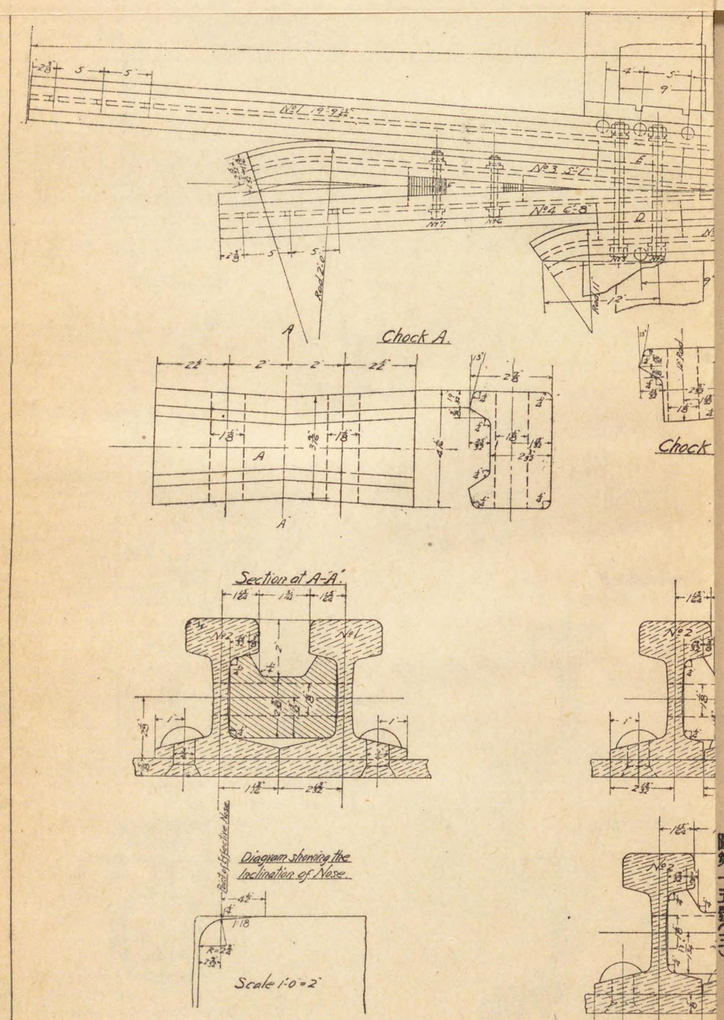








OF NO5 SINGLE SLIP SWITCH (5)



PLAN OF №9 SINGLE SLIP SWITCH, (9

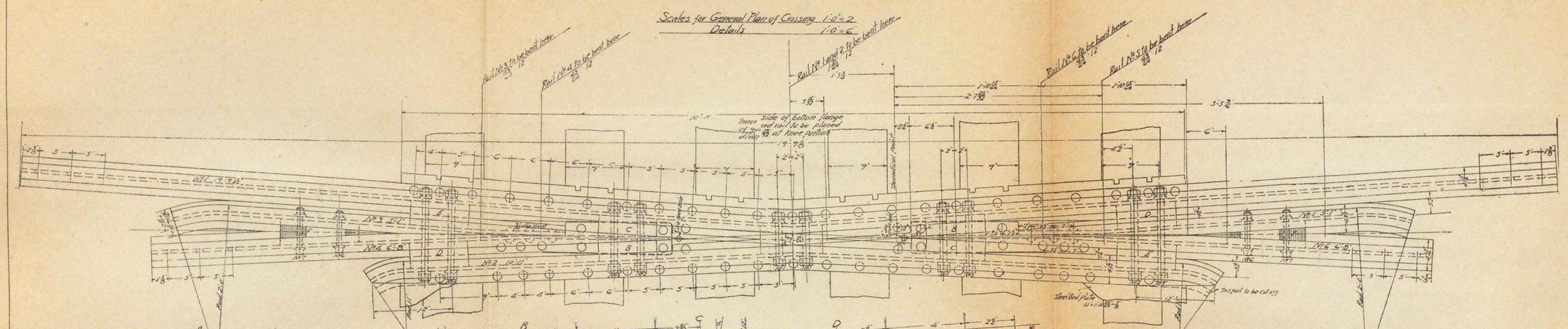
圖第一五號(三)

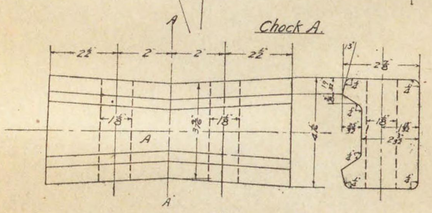
No 9 CENTER CROSSING FOR 75LBS RAIL.

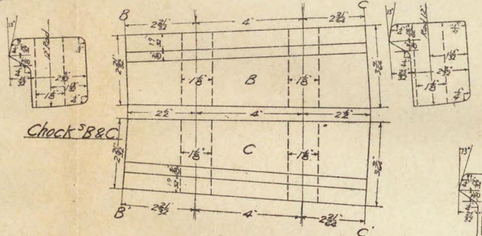
圖第一五號（三）

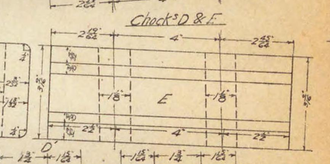
Centre Crossing No 1.

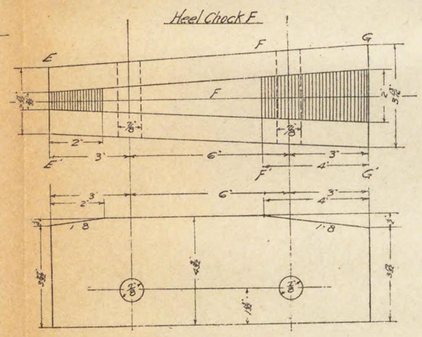
Scales for General Plan of Crossing 1:0=2
Details 1:0=6

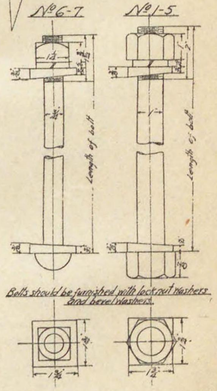


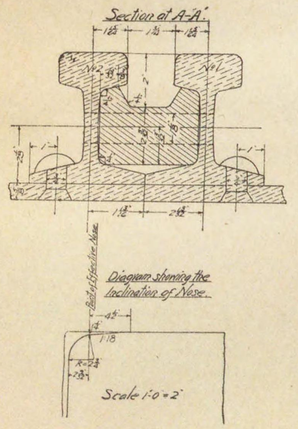


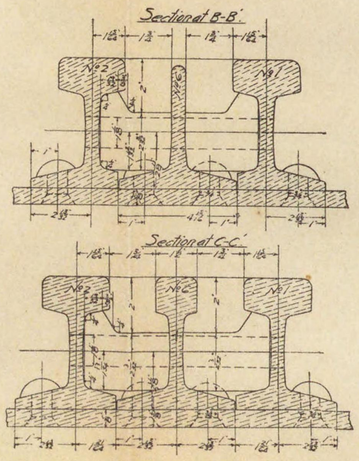


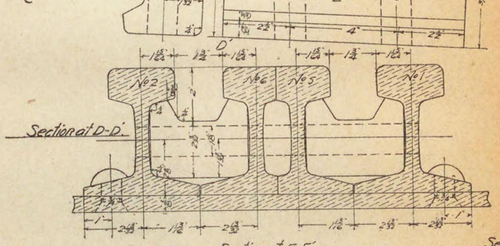


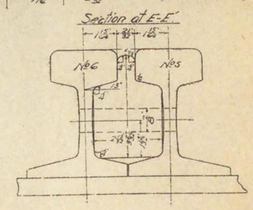


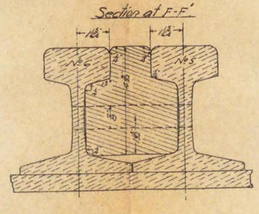


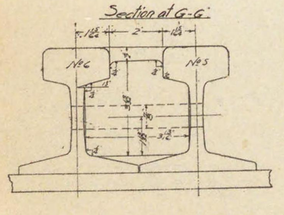








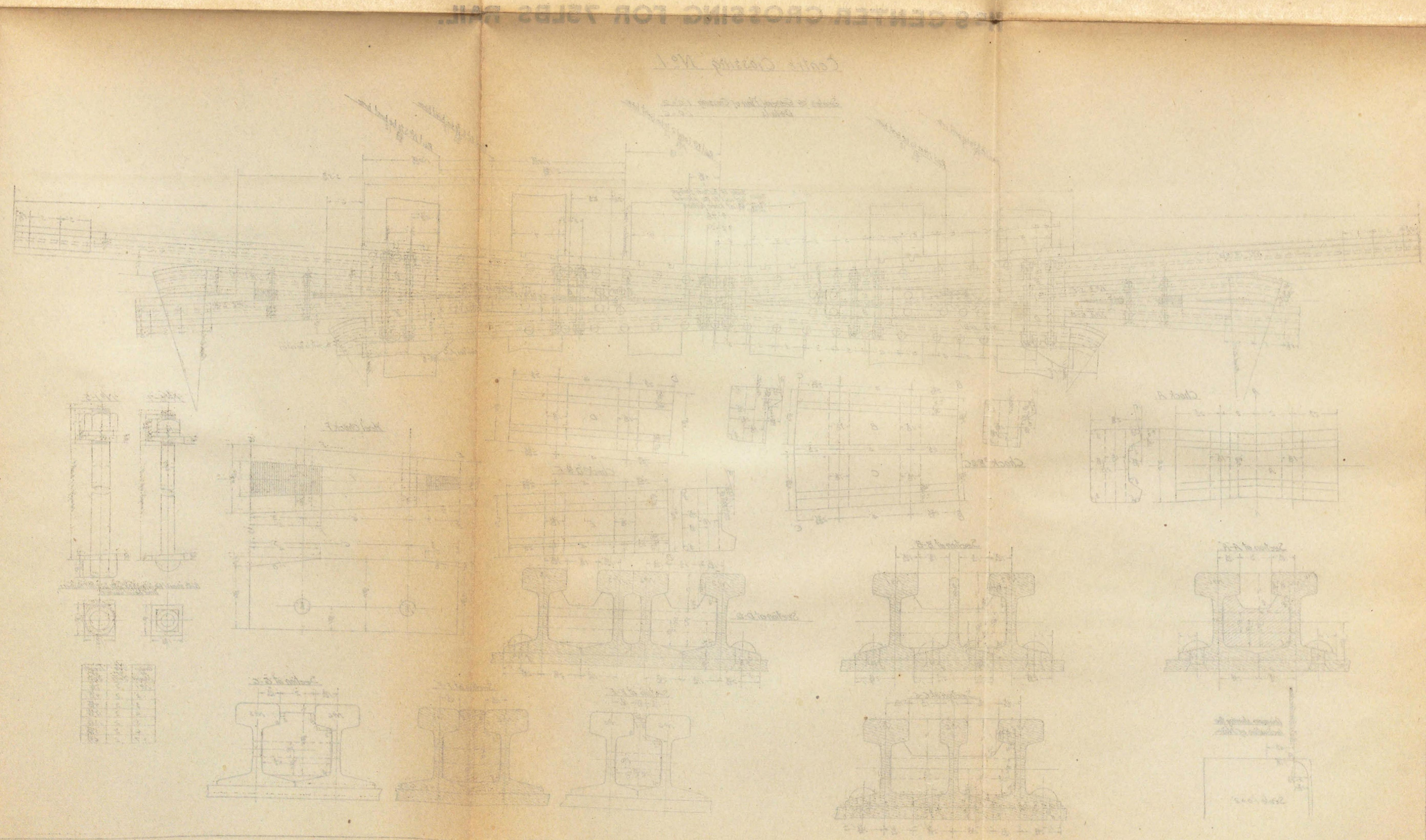




Order by Number	No of Bolts	Length Bolts
No 1	2	7⅛
2	2	9⅛
3	2	9⅛
4	2	12⅛
5	2	13⅛
6	2	5⅛
7	2	6⅛

圖第一五號（三）

圖第一五號（三）

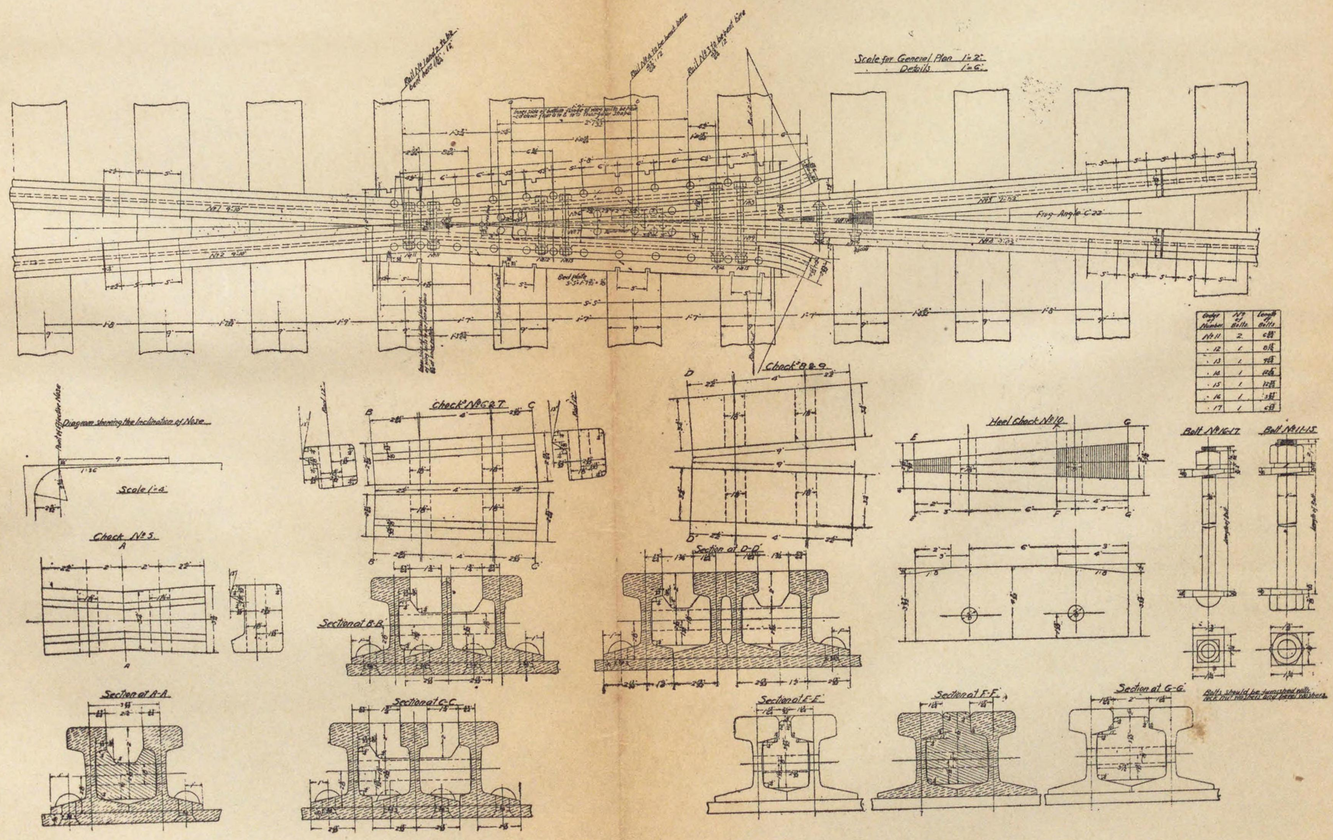


圖第一五號（三）

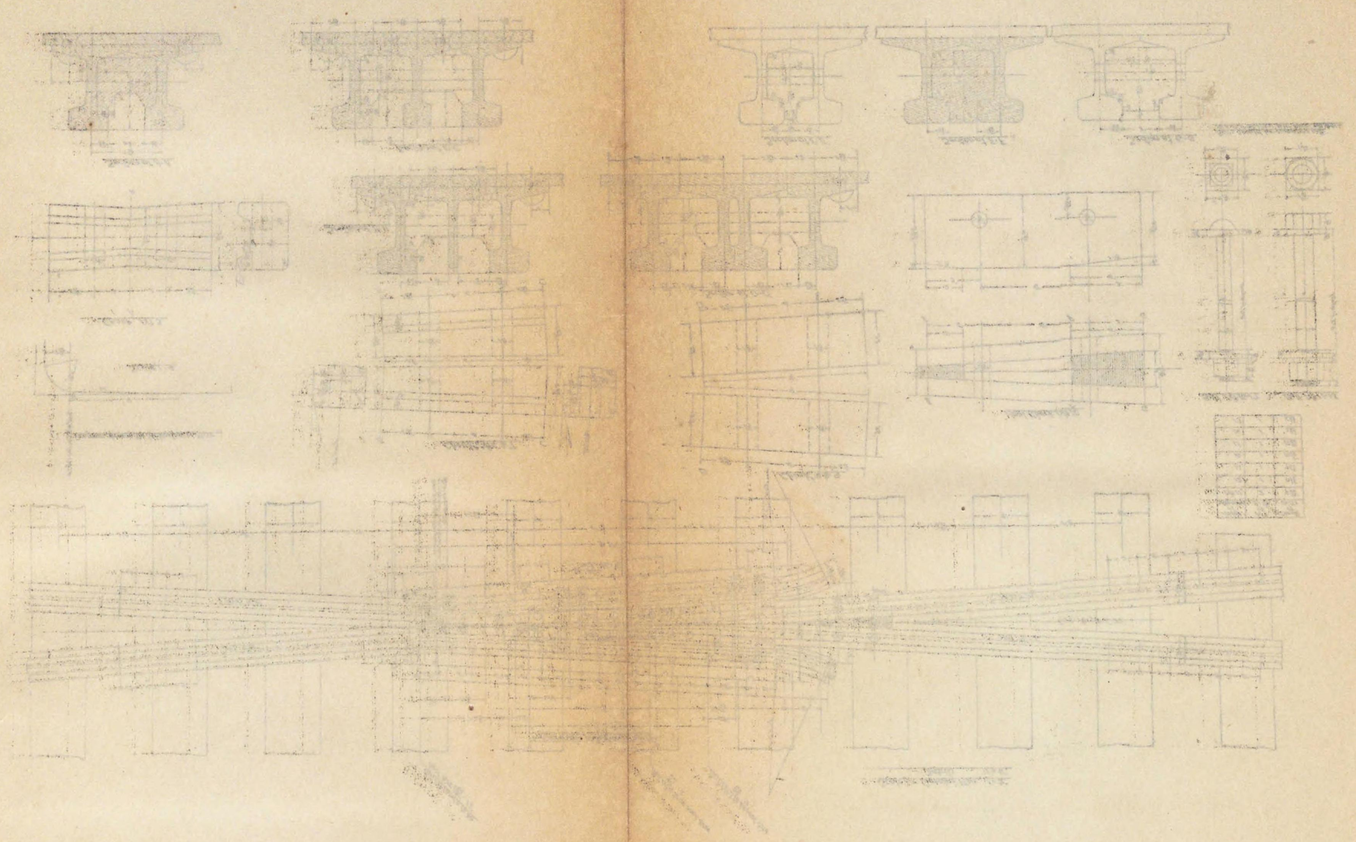
圖第一五號（四）

圖第一五號 (四)

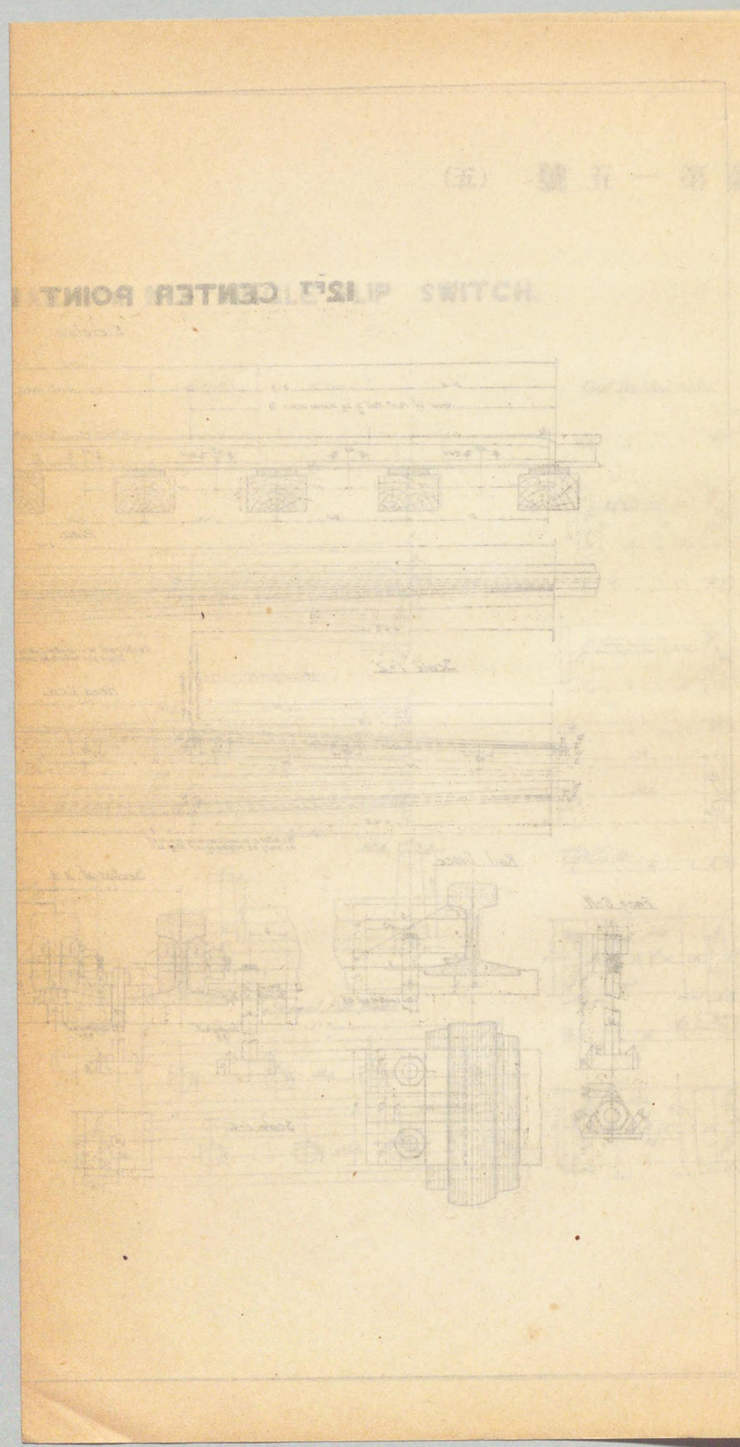
No 9 END CROSSING FOR 75LBS RAIL.

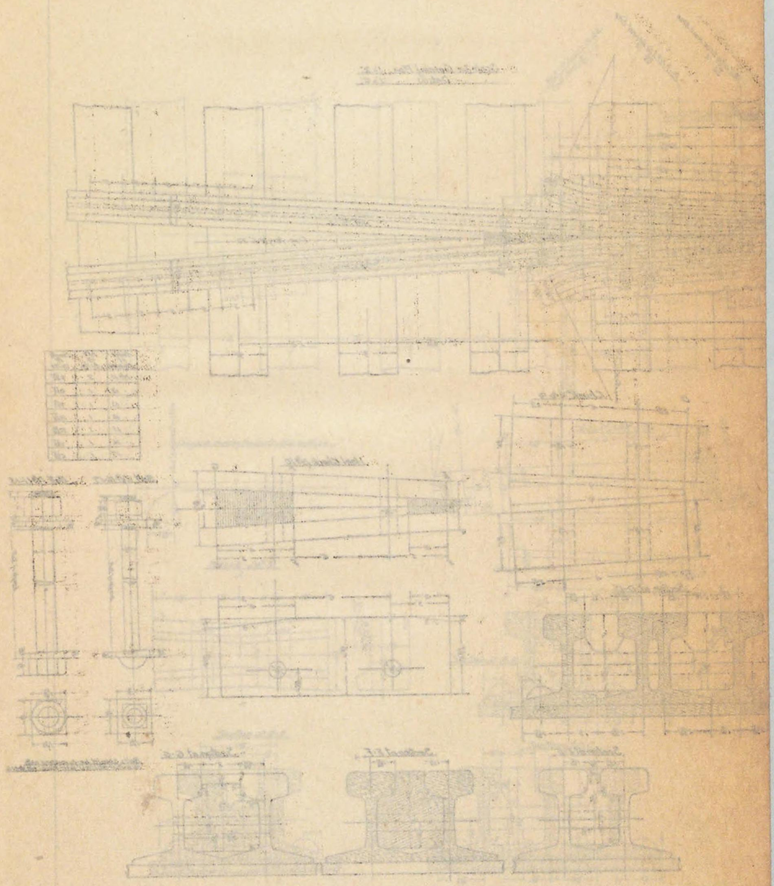


Order Number	No of Bolts	Length of Bolt
No 11	2	6"
" 12	1	8½
" 13	1	9"
" 14	1	10½
" 15	1	12"
" 16	1	13½
" 17	1	15"

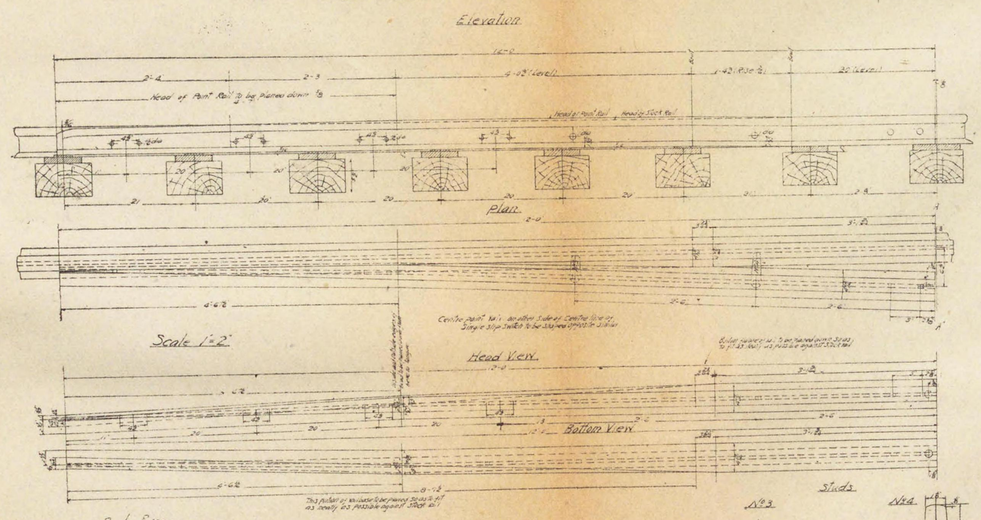


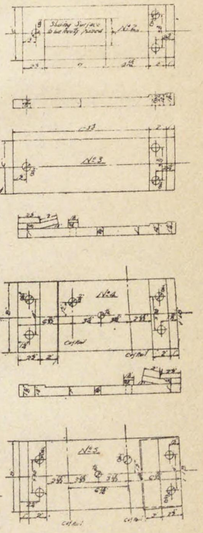
圖第一五號(五)

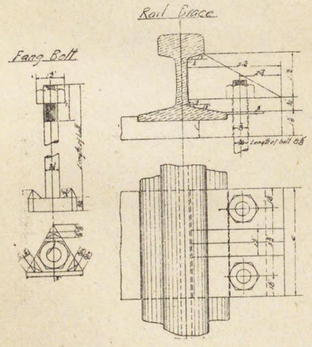


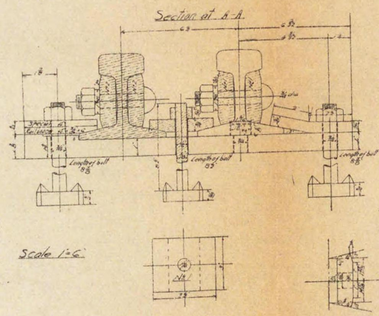


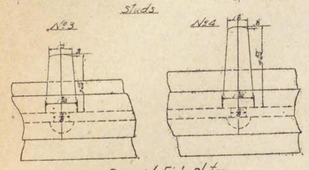
12FT CENTER POINT RAIL FOR Nº9 SINGLE SLIP SWITCH.

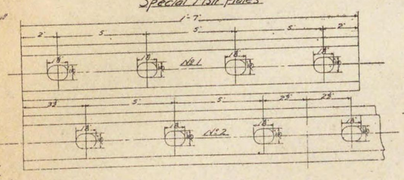


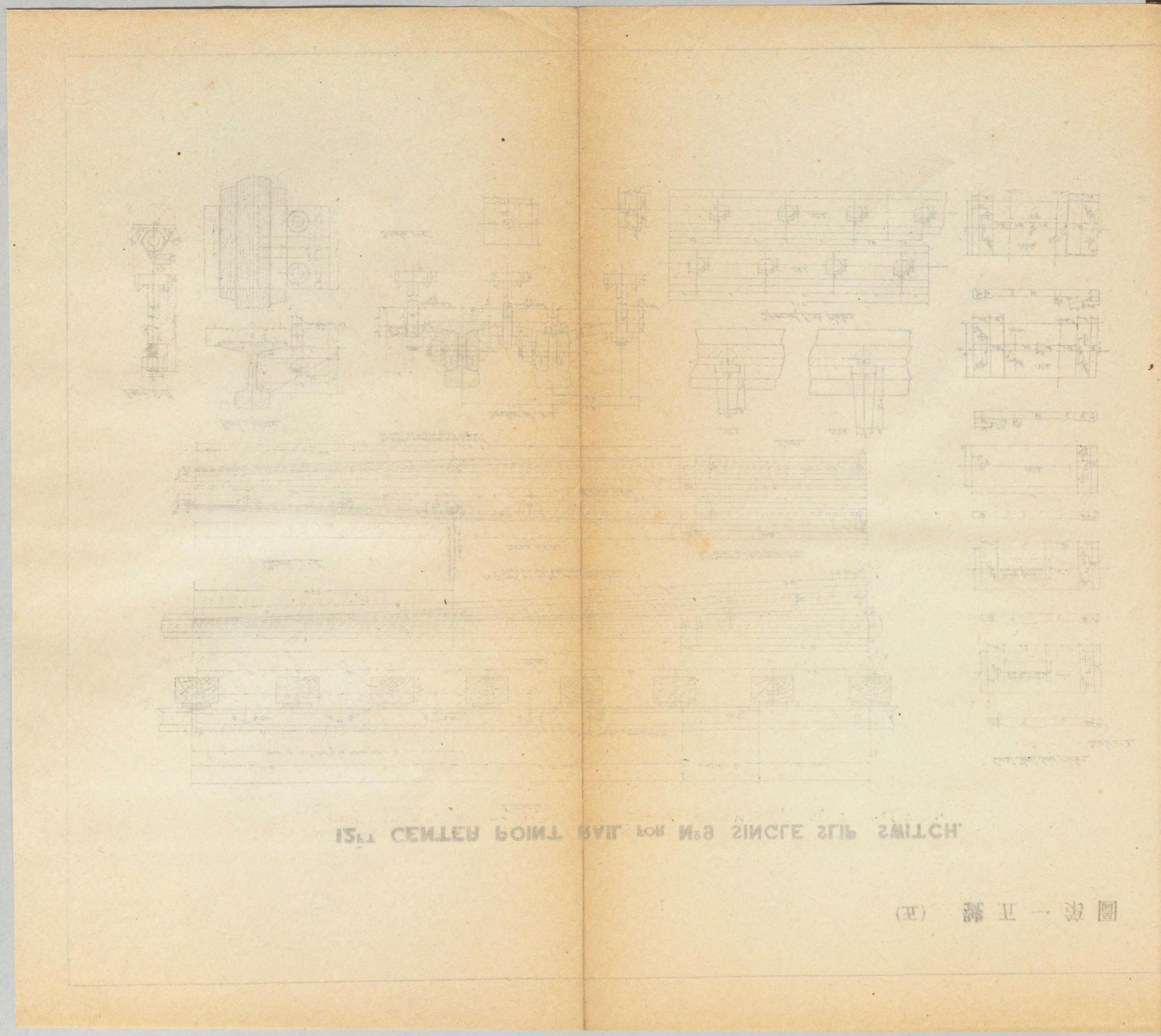




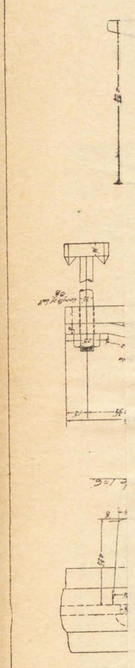




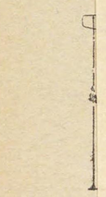


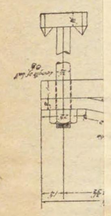


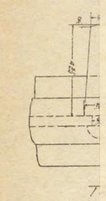
(五) 號五一道圖



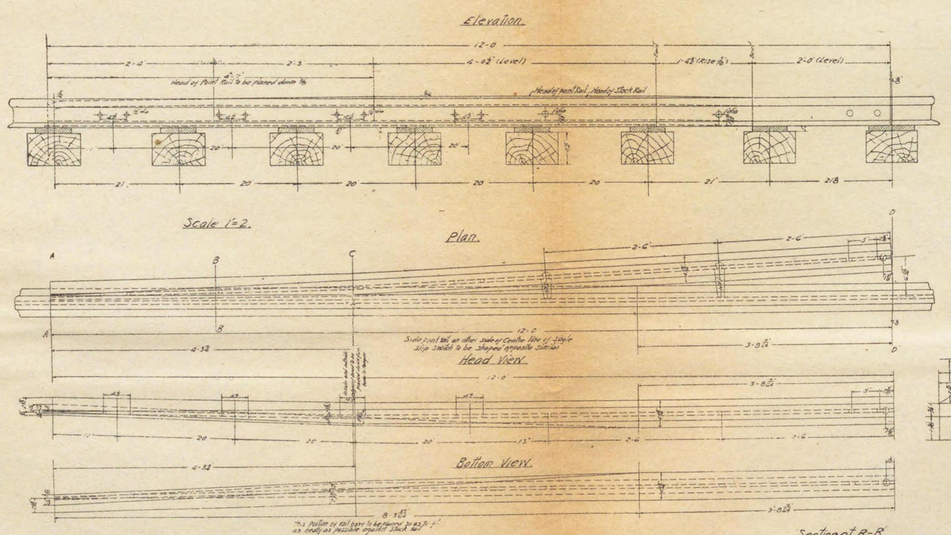
(六) 號五一道圖

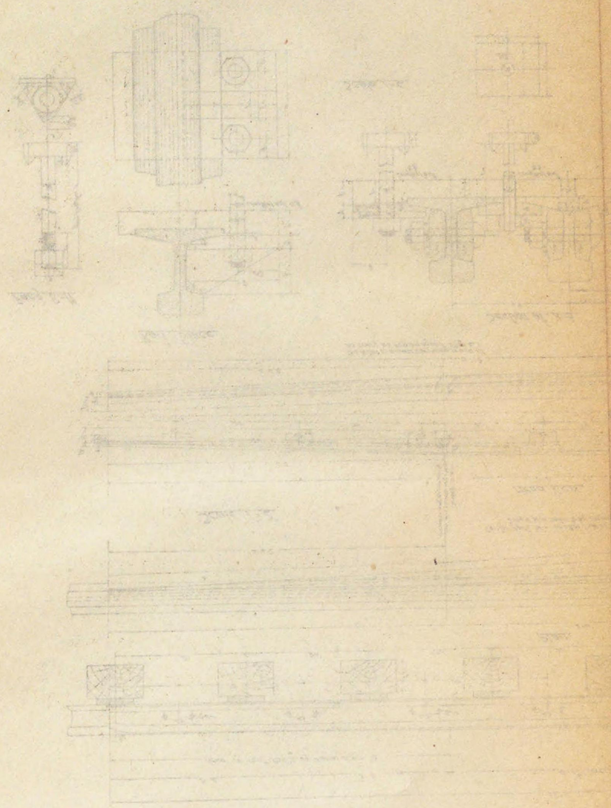


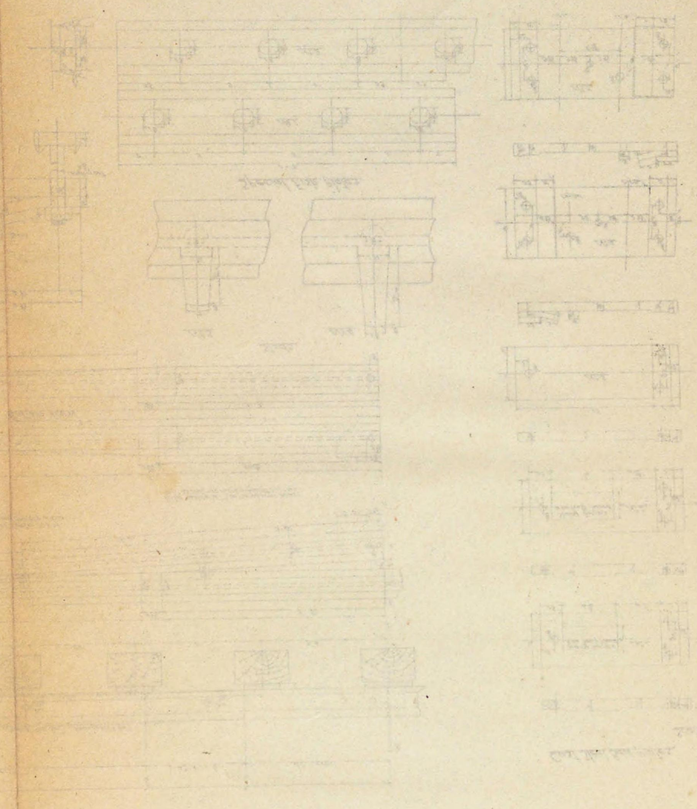




12FT SIDE POINT RAIL FOR Nº9 SINGLE SLIP SWITCH.







圖第一五號(三)

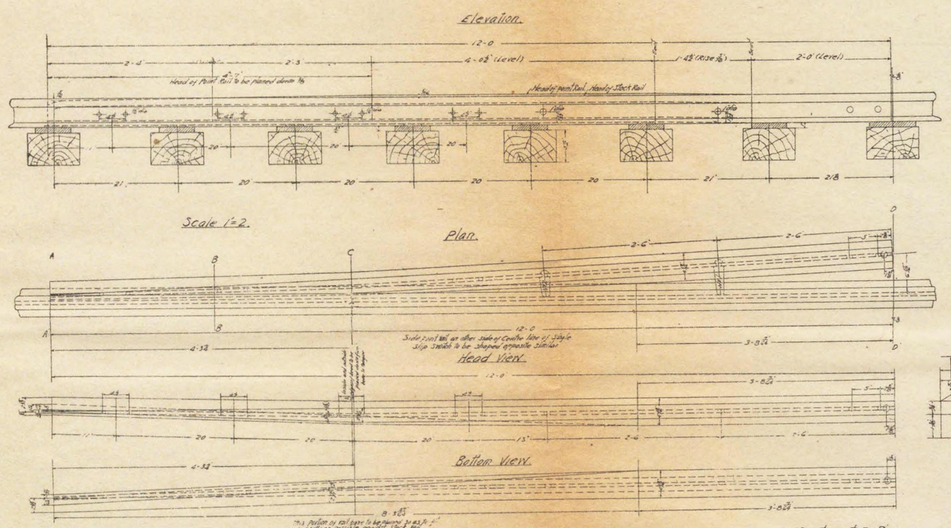
15ft CENTER POINT RAIL FOR No8 SINGLE SLIP SWITCH.

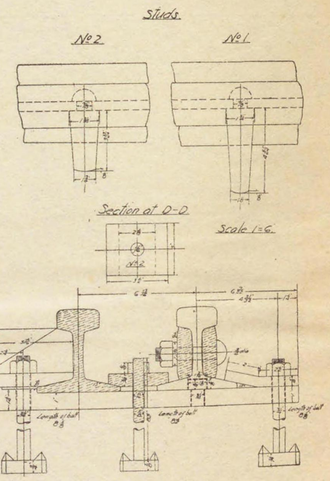
圖第一五號(三)

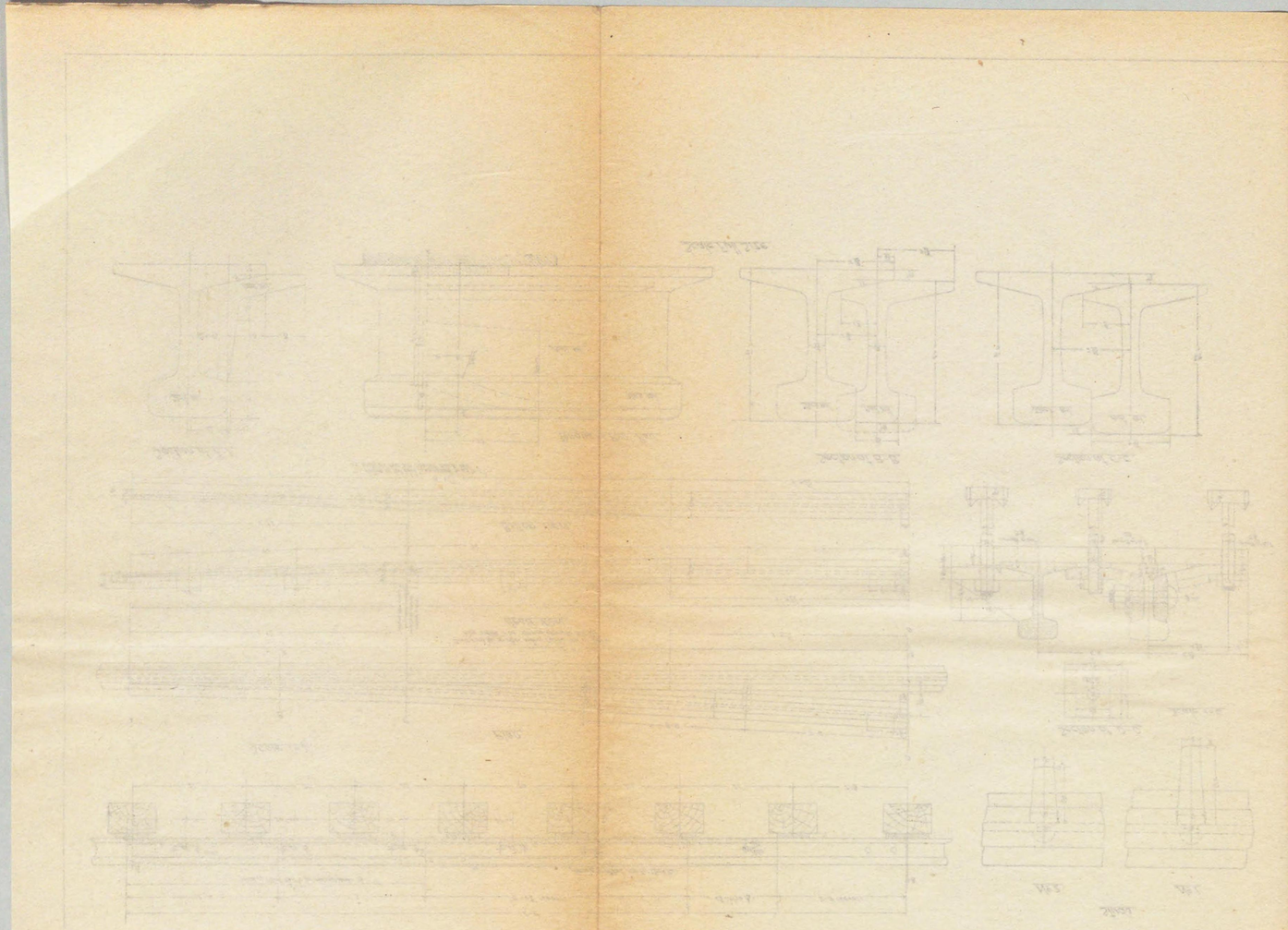
圖第一五號（六）

(五)　第五一圖

12FT SIDE POINT RAIL FOR Nº9 SINGLE SLIP SWITCH.





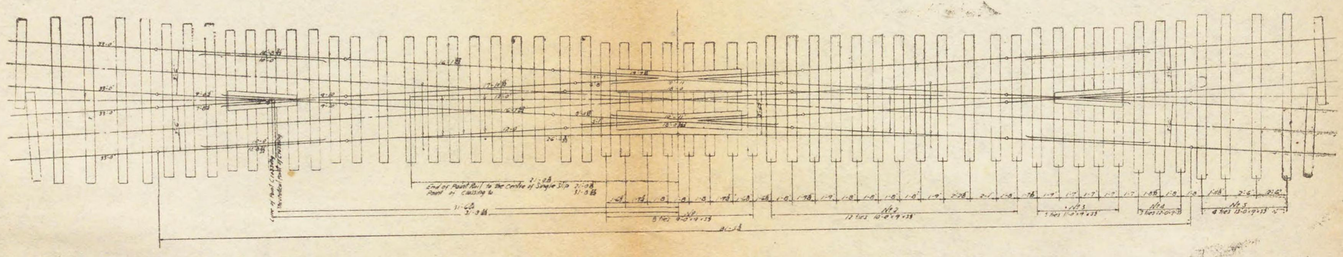


LEFT SIDE POINT RAIL FOR No.8 SINGLE SLIP SWITCH.

(右) 號五十一第圖.

№9 SINGLE SLIP SWITCH FOR 75LBS RAIL.

Rails and Sleepers Arrangements Scale 1/8"=1'0"



List of Materials for 1/9 Crossing Single Slip Switch Annexed to Drawing Sheet №s 1 2 3 4 5 & 7

Total Pieces	Description		Remarks
1	1/9 Centre Crossing	No.	Complete with check, bolts etc.
1		No.	
2	1/9 end (optional)		
2	Centre Joint Rails	2'-0"	
2	Side Joint "	2'-0"	
2	Guard "	3'-0"	Complete with Chocks, bonces etc.
2	Stock "	24'-7½"	
2	Stock "	3'-11"	Curved
2	Wing "	1'-11½"	
4	"	1'-5½"	
2	"	2'-8½"	
2	Short Tie Rods (No)		Complete with 2-¾" dia bolts etc.
2	"	1/9	
2	"	1/9	
4	Plates	1/9, 2-17"	Counter's with 2-¾" dia bolts etc.
2	"	1/9	
2	"	1/9	
2	Cast Steel End Plates	1/9	with Sliding Surface
2	"	1/9	
2	"	1/9	without Sliding Surface
2	"	1/9	
2	"	1/9	
2	Rail Bonces	(Special)	Cast Iron
2	"	(Special)	To fit on the inner of the rails
2	Washers	3"-12	To fit on the ends of Short Rails
2	"	3"-12	
2	"	12"	Shot the ends of all the Rails
2	Nuts		To fit on the bevelled Point Rails
12	Fang Bolts	10 dia 7½ length	
12	"	Taper 3/8	
12	"	Taper 3/8	With lock nut Washer
12	Washers	4 dia	To fit on the bevels of Point rails
8	Special Tie Plate	1/9	Complete with bolts, bolts etc.
4	"	1/9	
2	Heavy Plates, Studs	1/9	
2	"	1/9	
2	"	1/9	
2	"	1/9	
12	Short angle fish plates		Complete with 3-¾ dia bolts & Washers
2 Sets	Switch		
1	Complete switch Connection		
	Packings at Tie Rods		Shown the rails to be set in order to ensure all bolts in same line

List of Materials for Centre 1/9 Crossings of Single Slip Switch Annexed to Drawing Sheet №s 3 & 4

Centre Crossing №s 1

Total Pieces	Description		Remarks
1	Stock rail	1/9	18'-3 7/8"
1	Wing "	1/9	12'-11"
2	Side Joint "	1/9	9'-11"
2	Main Joint "	1/9	7'-6½"
2	Cast Iron Chairs	A	4
2	Cast Iron Chairs	B	4
2	"	C	4
2	"	D	4
2	"	E	2
2	Cast Iron steel chairs	F	2
2	Steel Bolts	1/9	7¾ length for chairs A & B with nut washer & spring washers
2	Steel Bolts	1/9	7¾ length for chairs C D & E
2	"	1/9	8¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	Steel Bolts	1/9	8¾ length for chairs F with nut washer & spring washers
2	Steel end Plate	1/9	18-2 3/8" x ¾"
4/6	¾ dia Steel Rivets		Countersunk Heads
6	¾ dia Steel Rivets		

Centre Crossing №s 2

Total Pieces	Description		Remarks
1	Stock rail	1/9	18-2 3/8"
1	Wing "	1/9	12'-11"
2	Side Joint Rail	1/9	9'-11"
2	Main Joint "	1/9	7'-6½"
2	Cast Iron Chairs	A	4
2	Cast Iron Steel chairs	B	4
2	"	C	4
2	"	D	4
2	"	E	2
2	Cast Iron steel chairs	F	2
2	Steel Bolts	1/9	7¾ length for chairs A with nut and washers & steel washers
2	"	1/9	7¾ "
4	"	1/9	8¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	"	1/9	7¾ "
2	Steel Bolts	1/9	8¾ length for chairs A with nut and washers & steel washers
2	Steel end Plate	1/9	18-2 3/8" x ¾"
4/6	¾ dia Steel Rivets		Countersunk Heads
6	¾ dia Steel Rivets		

List of Materials for 1-End 1/9 Crossing of Single Slip Switch Annexed to Drawing Sheet №s 1

Total Pieces	Description		Remarks
	Wing rail	1/9	9'-11"
	"	1/9	9'-11"
	Side Joint rail	1/9	7'-6½"
	Cast Iron Chair	1/9	4
	"	1/9	4
	"	1/9	4
	"	1/9	4
	Cast Iron steel chairs	1/9	2
2	Steel Bolts	1/9	7¾ length for chairs 1/9 with nut washer & spring washers
	Steel Bolts	1/9	8¾ "
	"	1/9	7¾ "
	"	1/9	7¾ "
	"	1/9	7¾ "
	"	1/9	7¾ "
	"	1/9	7¾ "
	"	1/9	7¾ "
	Steel Bolts	1/9	8¾ length for chairs 1/9 with nut washer & spring washers
12	Steel end Plate	1/9	18-2 3/8" x ¾"
24	¾ dia Steel Rivets		Countersunk Heads
6	¾ dia Steel Rivets		

List of Materials for 1-Guard Rail of 1/9 Single Slip Switch Annexed to Drawing Sheet №s 2

Total Pieces	Description		Remarks
2	Guard rail	1/9	Curved at both ends
12	Rail Braces		
12	Chairs		
12	Fang Bolts for Braces	¾ dia 7½ length	
2	Bolts for Chairs	¾ dia	with Spring Washers & Nut and Washer

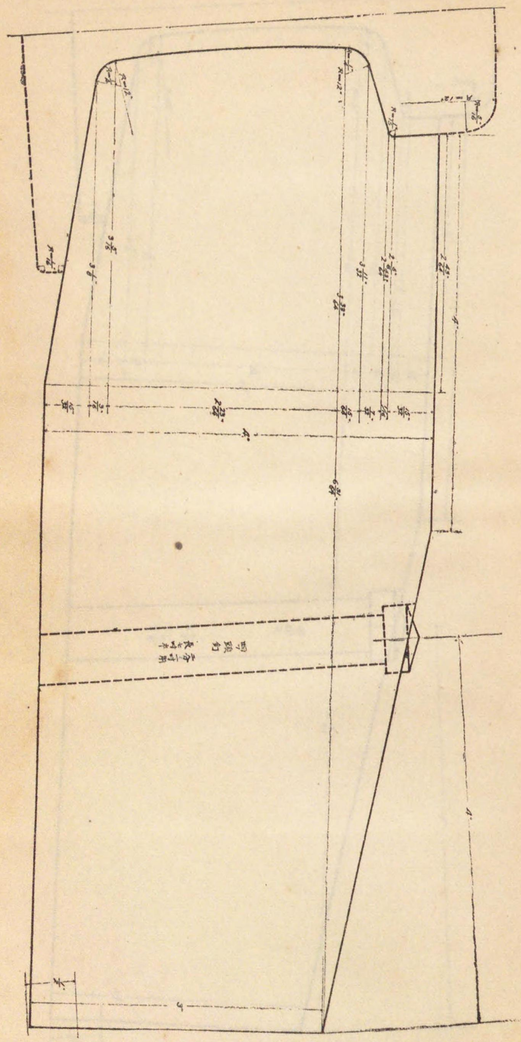
List of Rails for 1/9 Single Slip Switch Annexed to Drawing Sheet №s 7

Total Pieces	Description		Remarks
2	Side Joint Rails	1/9	for 1/9 End Crossing
4	Main Joint "	1/9	
1	Stock "	1/9	for 1/9 Centre Crossing №s 1
1	Wing "	1/9	
2	Side Joint Rails	1/9	
2	Main Joint Rails	1/9	for 1/9 Centre Crossing №s 2
1	Stock Rail	1/9	
1	Wing "	1/9	
2	Side Joint Rails	1/9	
2	Main Joint Rails	1/9	
2	Point Rails	1/9	Double Point Rails
2	"	1/9	Single " "
2	Stock Rails	1/9	Radius Curved
1	"	1/9	Curved
1	"	1/9	
1	"	1/9	
1	Guard Rails	1/9	

List of Sleepers for 1/9 Single Slip Switch Annexed to Drawing Sheet №s 7

Total Pieces	Description		Remarks
8	Sleepers	1/9	9'-0" x 10" x 5½"
24	"	1/9	10'-0" x 10" x 5½"
1	"	1/9	11'-0" x 10" x 5½"
6	"	1/9	12'-0" x 9" x 5½"
8	"	1/9	13'-0" x 9" x 5½"

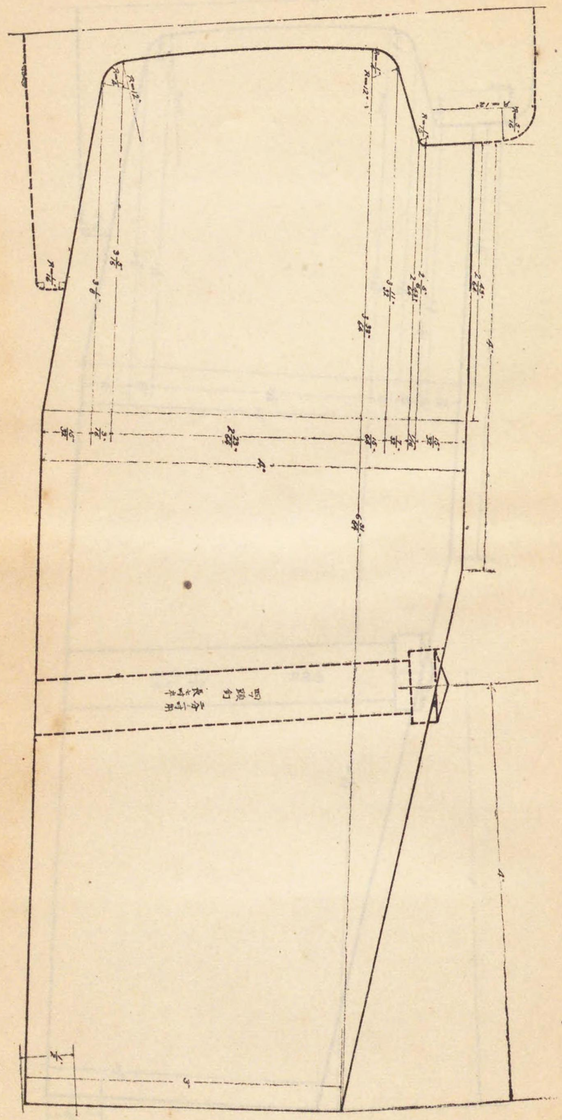
七十五封度軌條用



圖第一六號（一）

七十五封度軌條及第三種軌條用「ウッドチヨック」定規 明治四十五年三月達第二〇五號

七十五封度軌條用



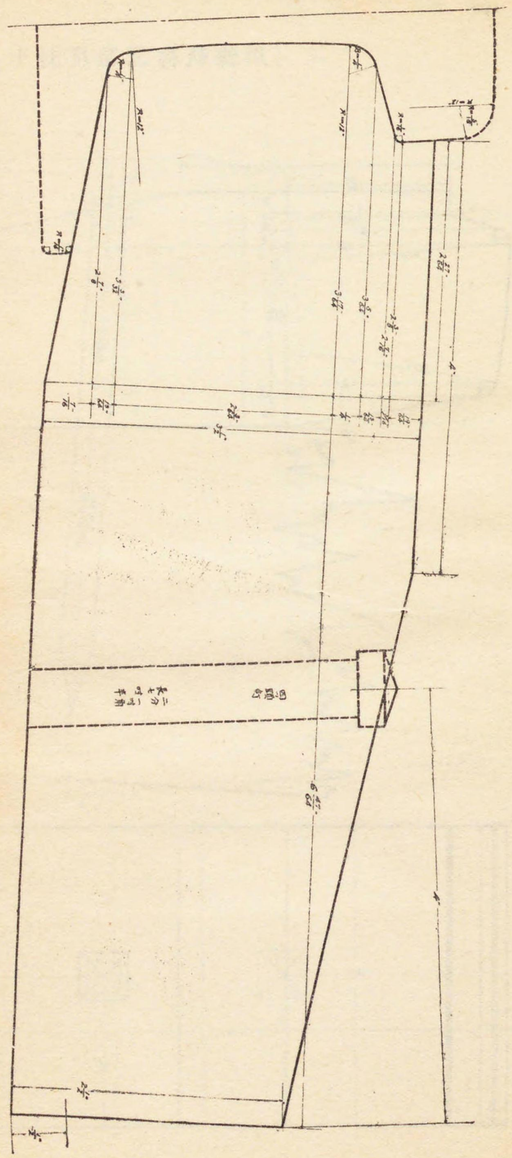
圖第一六號（一）

七十五封度軌條及第三種軌條用「ウッドチョック」定規明治四十五年三月達第二〇五號

圖第一六號（一）

六十封度第三種軌條用

圖第一六號（二）



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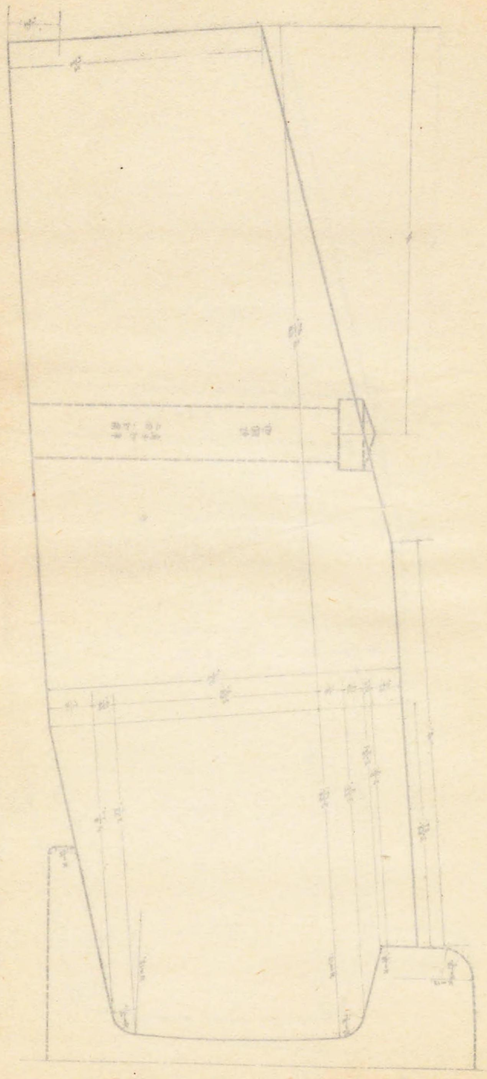
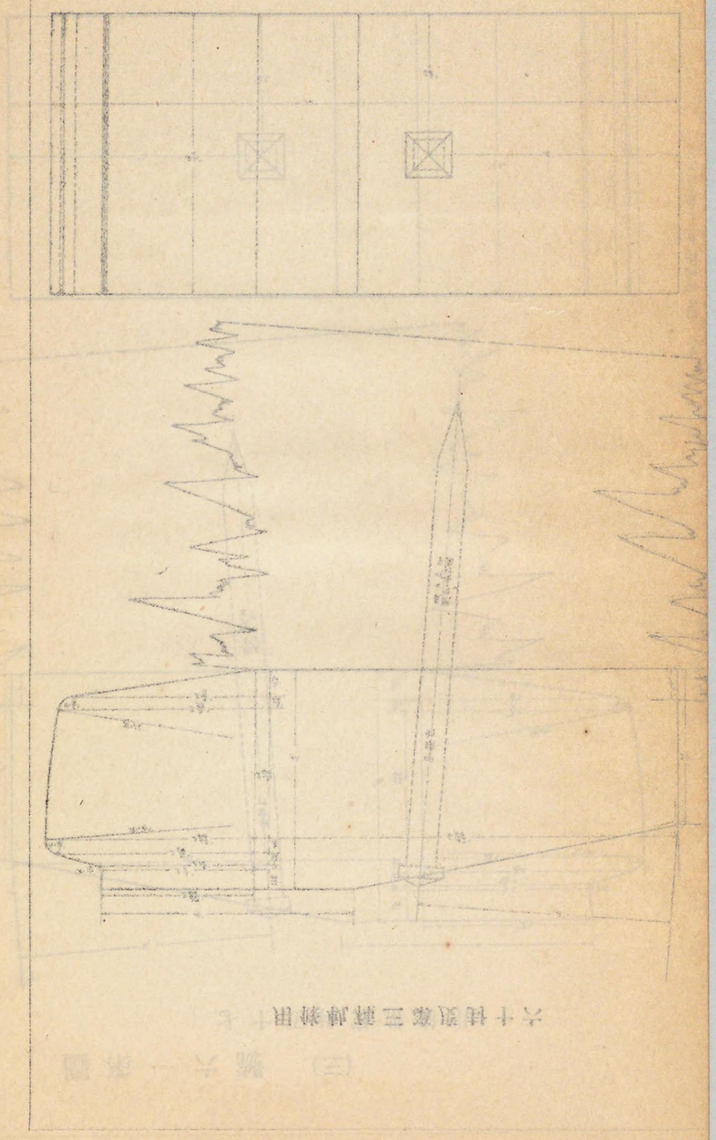


六十住気缶三斜連結用

圖第一六第（二）

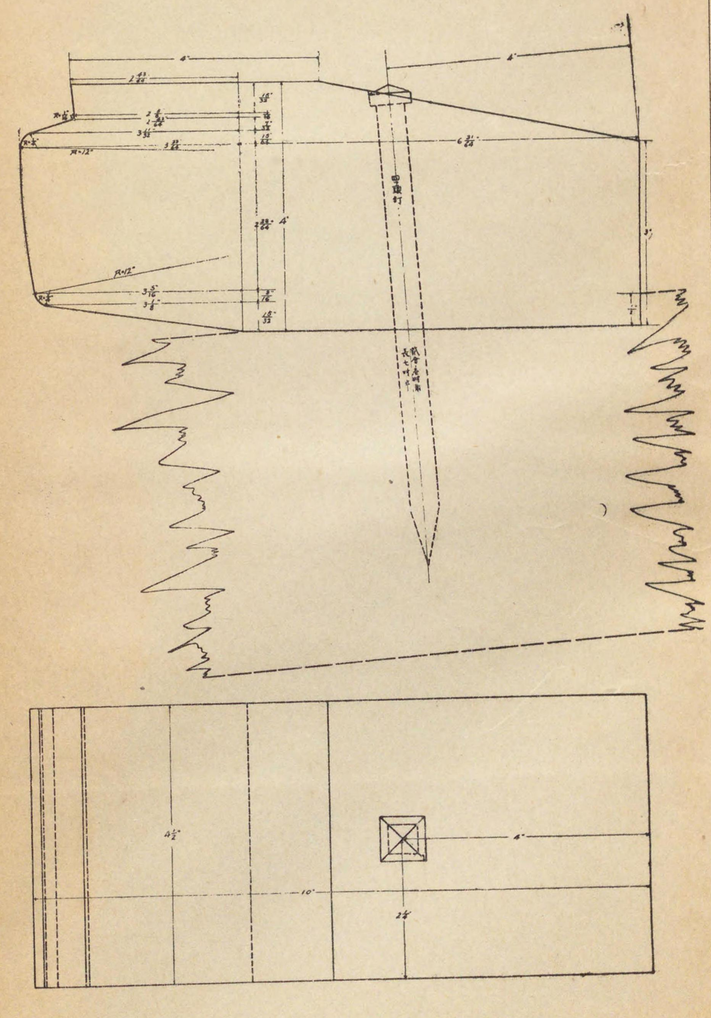


六十住気缶三斜連結用

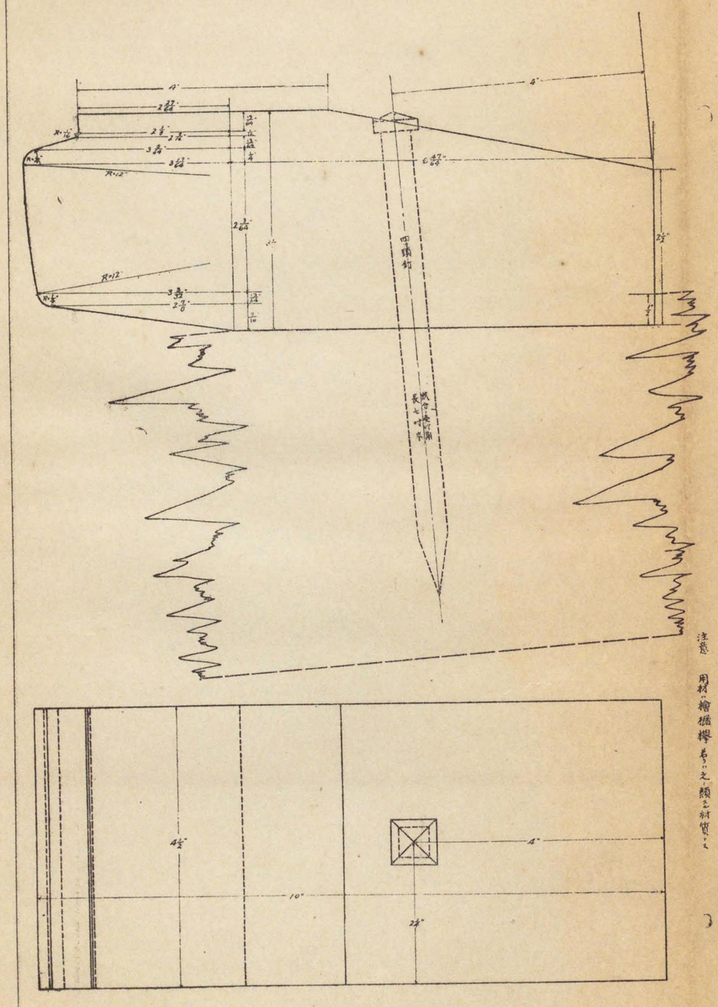
圖第一六第（三）

圖第一六號（三）

七十五封度軌條用

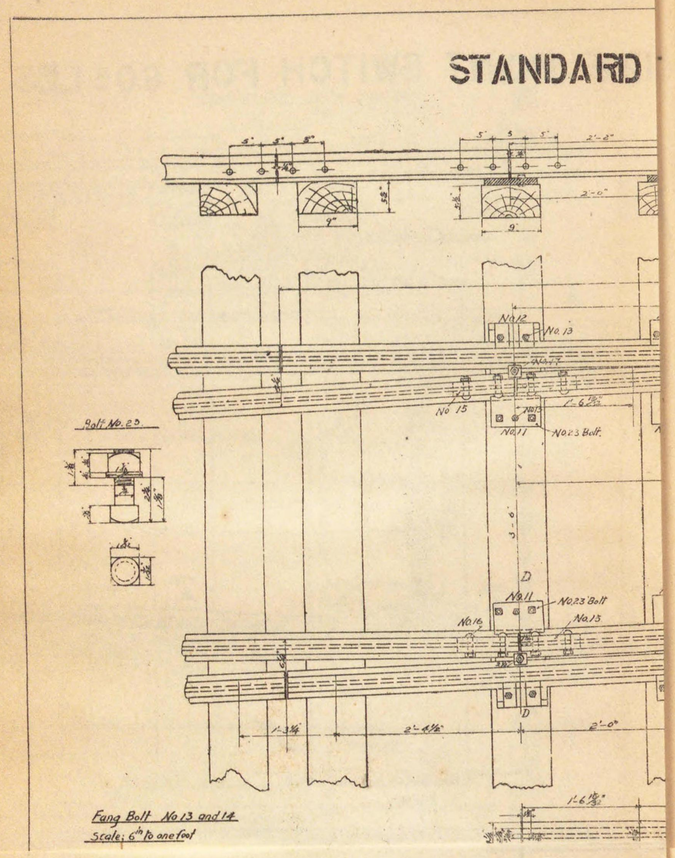


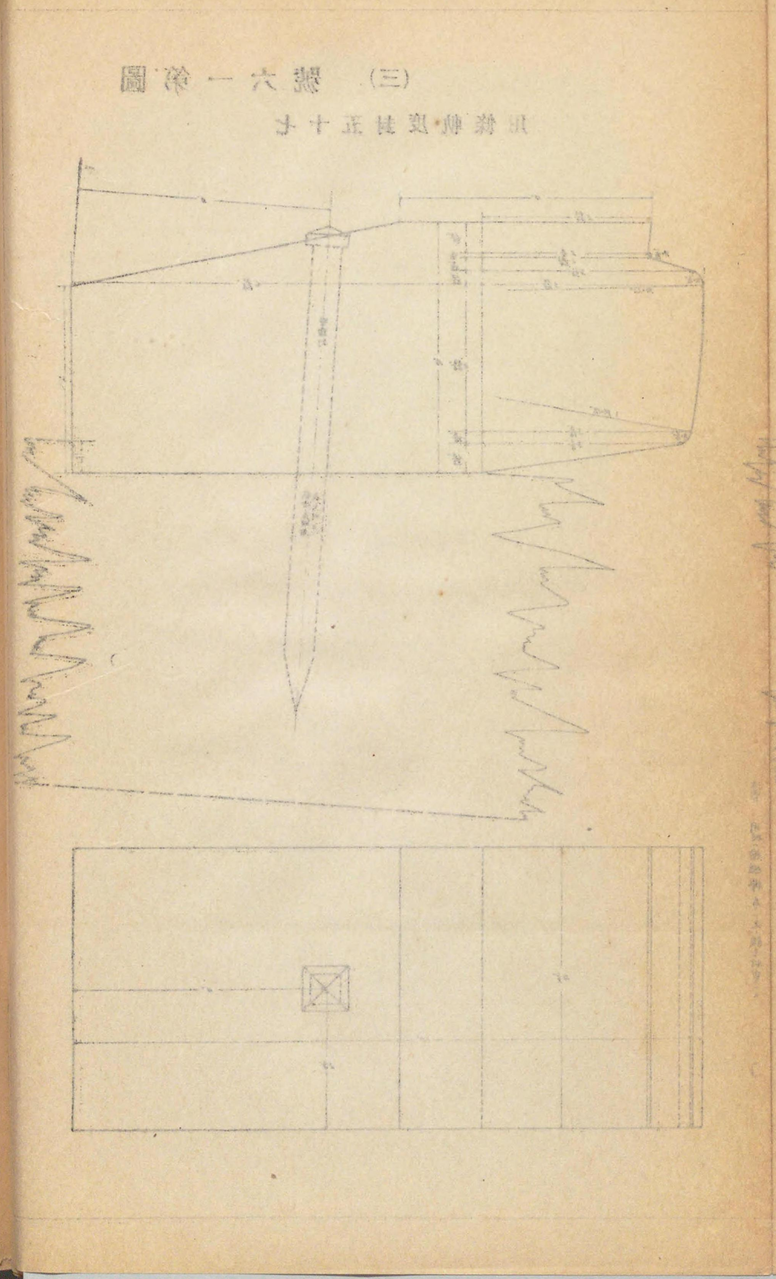
六十封度第三種軌條用

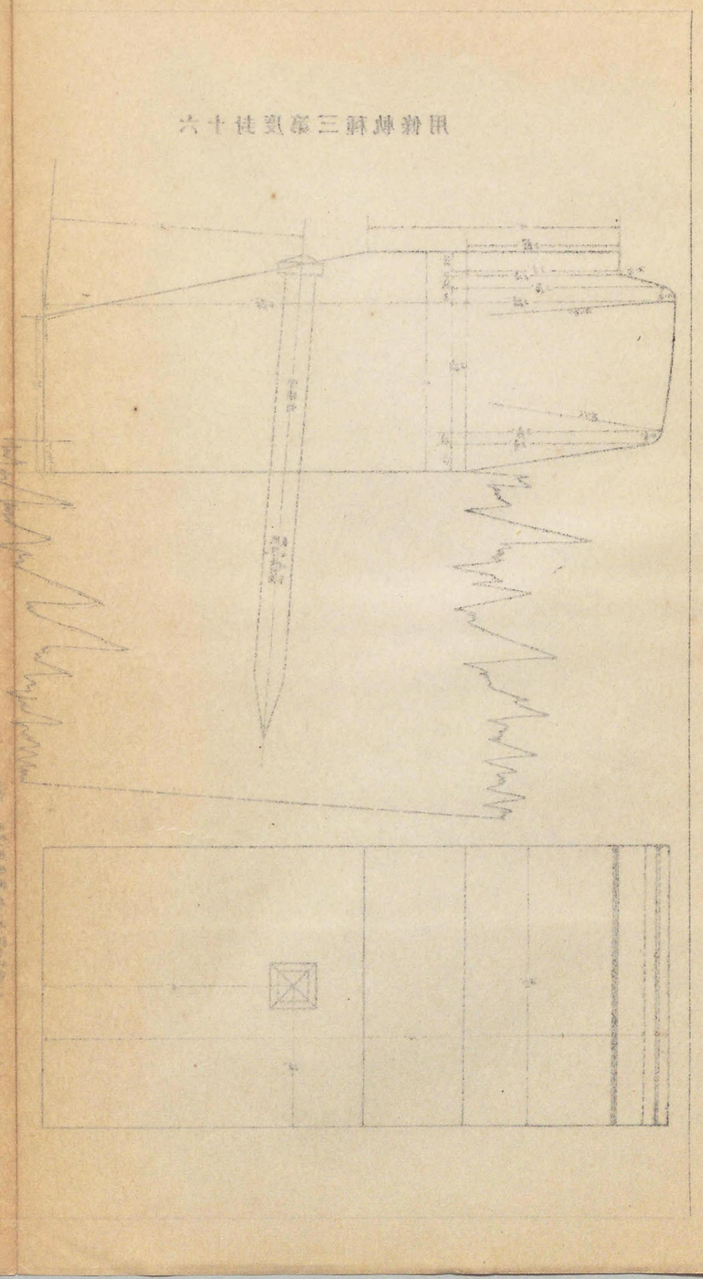


注意　用材ハ檜樅欅ニ若ハ之ニ類ニ材質ニ又

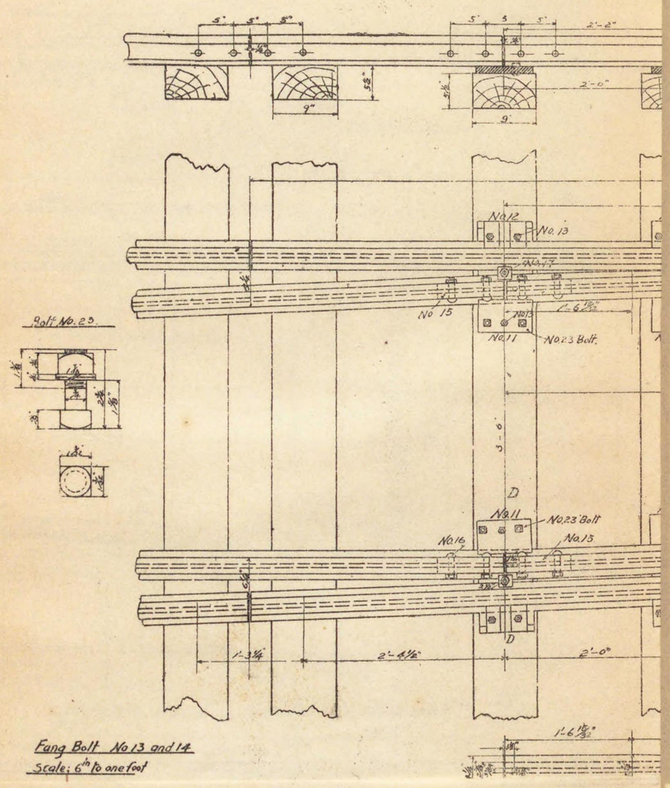
圖第一六號（三）


STANDARD
Bolt No. 23
No. 12
No. 13
No. 15
No. 11
No. 23 Bolt
No. 16
Fang Bolt No 13 and 14
Scale: 6th to one foot



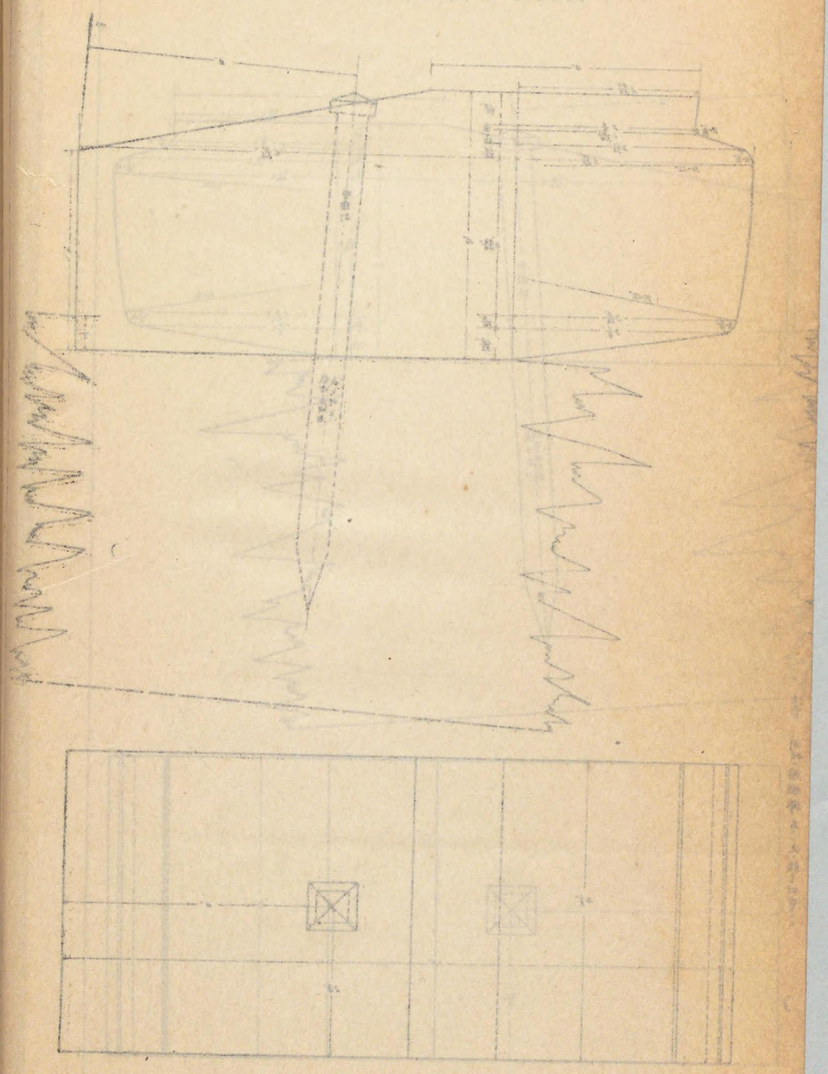


STANDARD



Fang Bolt No 13 and 14
Scale; 6" to one foot

圖第一六號 (三)



STANDARD 12 Ft POINT SWITCH FOR 60 A LBS RAIL

圖第一七號（一）　轉轍器及轍叉　明治三十九年十月逢第一五〇號

Scale 1/8" to one foot

Length of stock rail 18'-0"

Length of point rail 12'-0"

Head of point rail to be planed down

Bottom of Point Rail

Bottom of Stock rail

Inside and outside edges of head of point rails to be planed

Section at DD (Heel of Point Rail)
Scale 6" to one foot

Heel Square

Point Rail Section at A

Plan of Tongue of Point Rail

Point Rail Section at B

Stock rail to be beat here

Tongue of Point Rail
Scale: 6" to one foot

Bolt No. 23

Fang Bolt No 13 and 14
Scale: 6" to one foot

Bottom View of Point Rail No. 4
Scale: 1½" to one foot

Inside and outside edges of head to be planed from here to tongue.

Length of Point Rail 12'-0"

Rail Brace No. 12
Contact surface of rail brace to fit neatly against rail
Scale: 6" to one foot

Fang bolt No 13

Studs
Scale: 6" to one foot

Cast Sled Bed Plate No. 9

Sliding surface to be planed

Cast Sled Bed Plate No. 10

Cast Sled Bed Plate No. 11
Scale: 3" to one foot

First Plate has projections drawn with broken line to be used for point rail of opposite side.

Tie Rod No. 5
Scale: 6" to one foot

Tie Rod No. 7
Scale: 6" to one foot

Special Fish Plate and Fish Bolt for Joint at Heel of Point Rail
Scale 6" to one foot

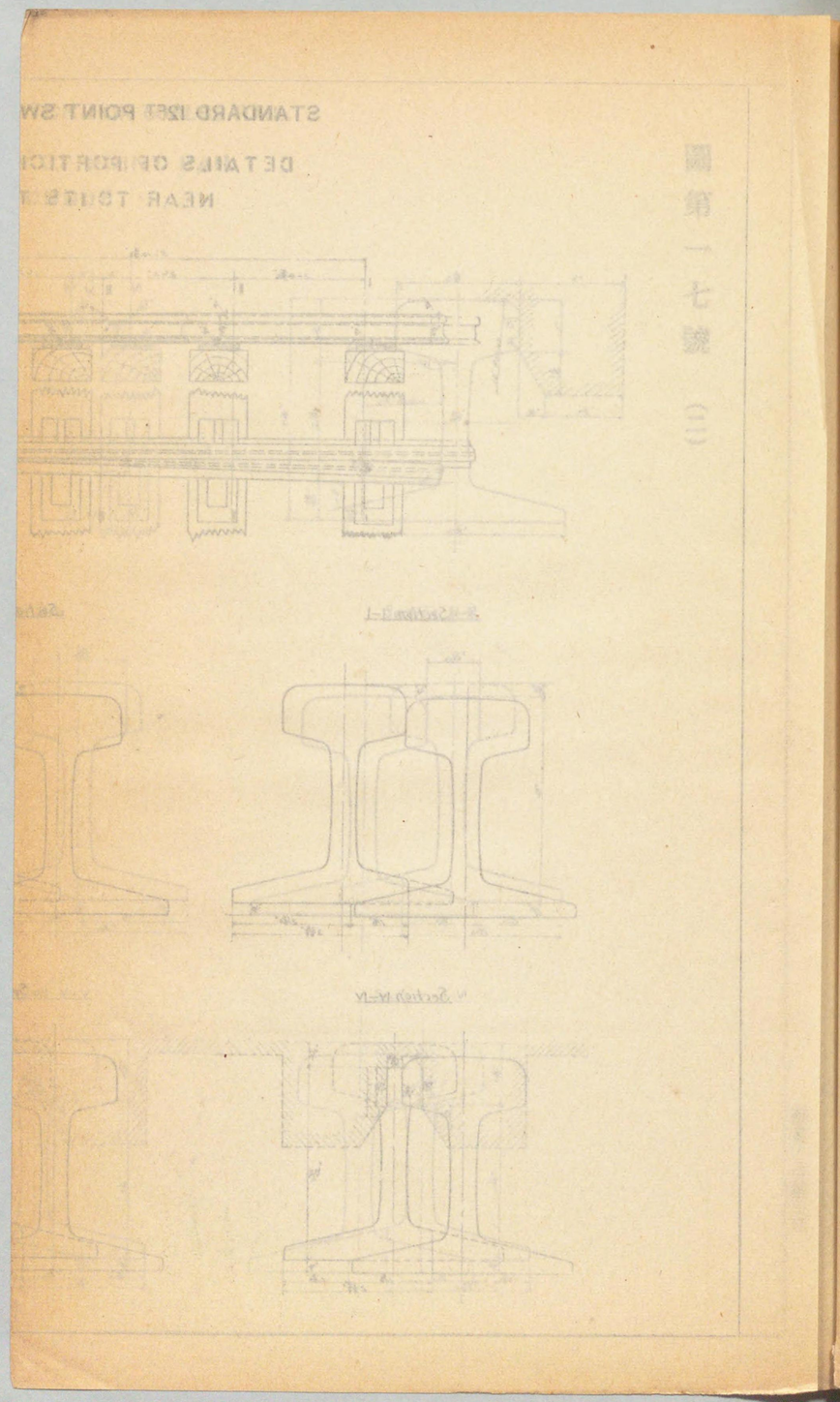
The bolt is the same as that for the standard 60 lbs rail.

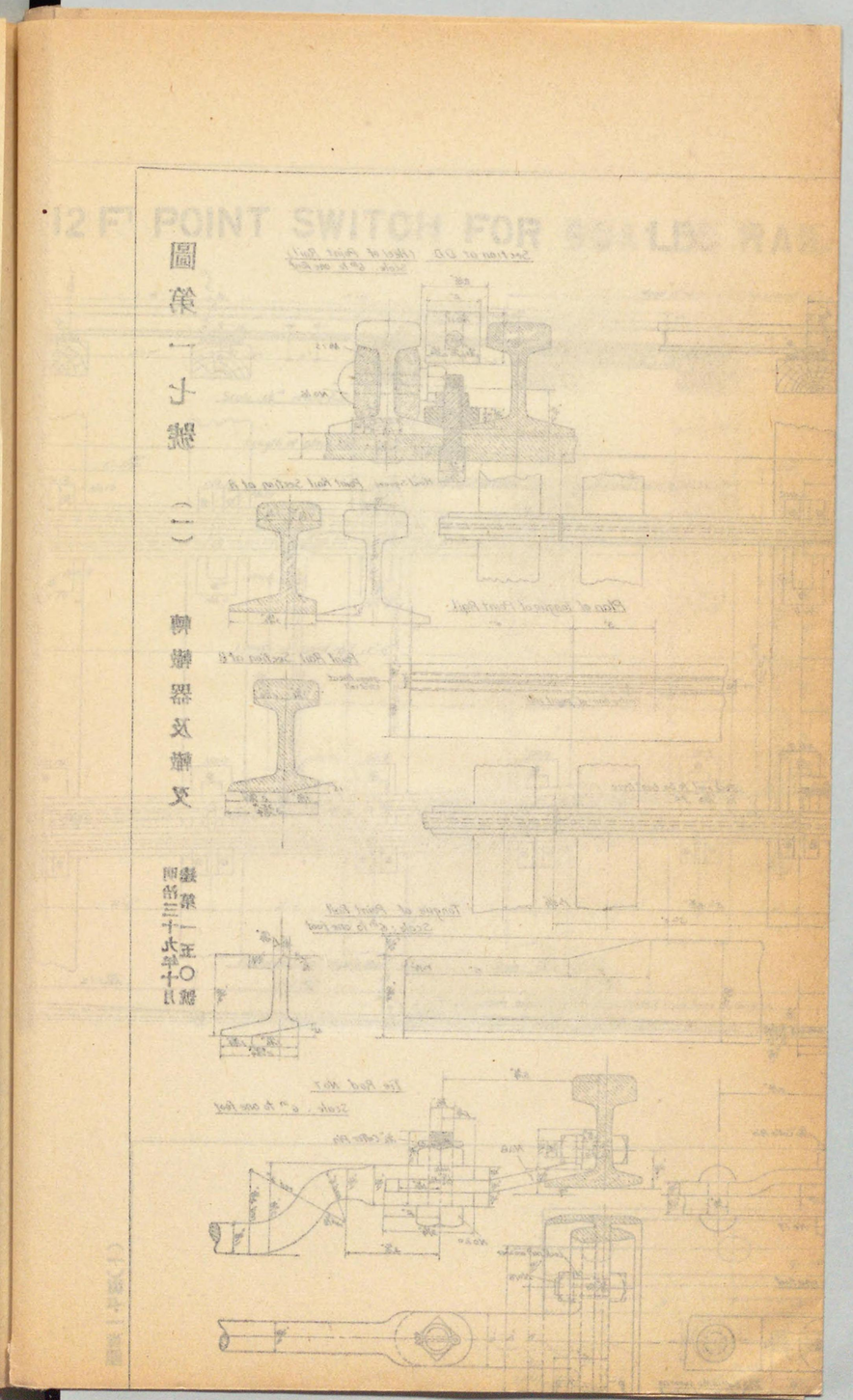
圖第一七號（一）

STANDARD 12 E. POINT SWITCH FOR 60 LBS RAIL

圖第一十七號（二）　轉轍器及轍叉

第一五〇號　第三十九冊

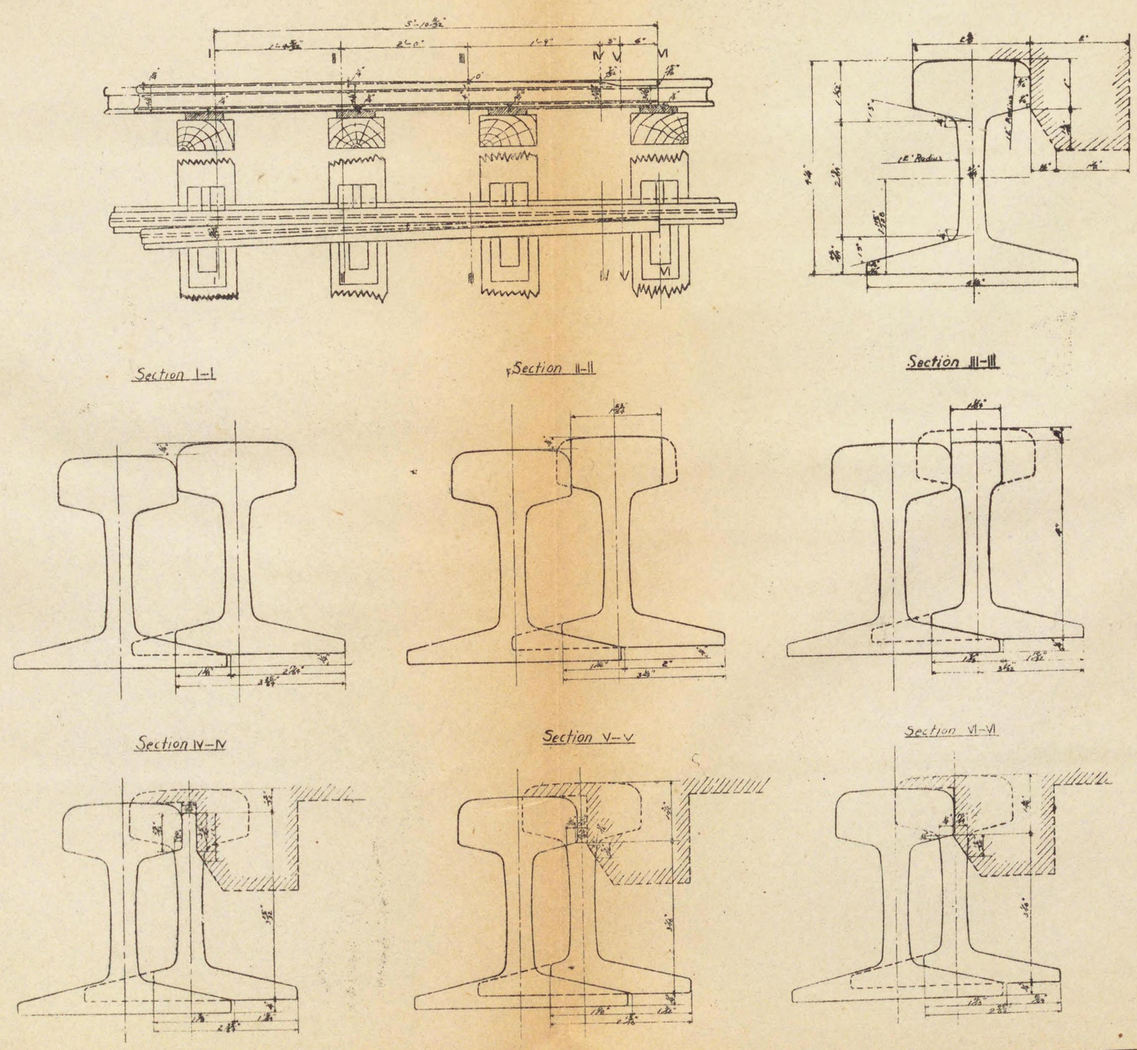




STANDARD 12FT POINT SWITCH FOR 60ALBS RAIL.

DETAILS OF PORTION OF POINT RAIL NEAR TO ITS TONGUE

圖第一七號（二）



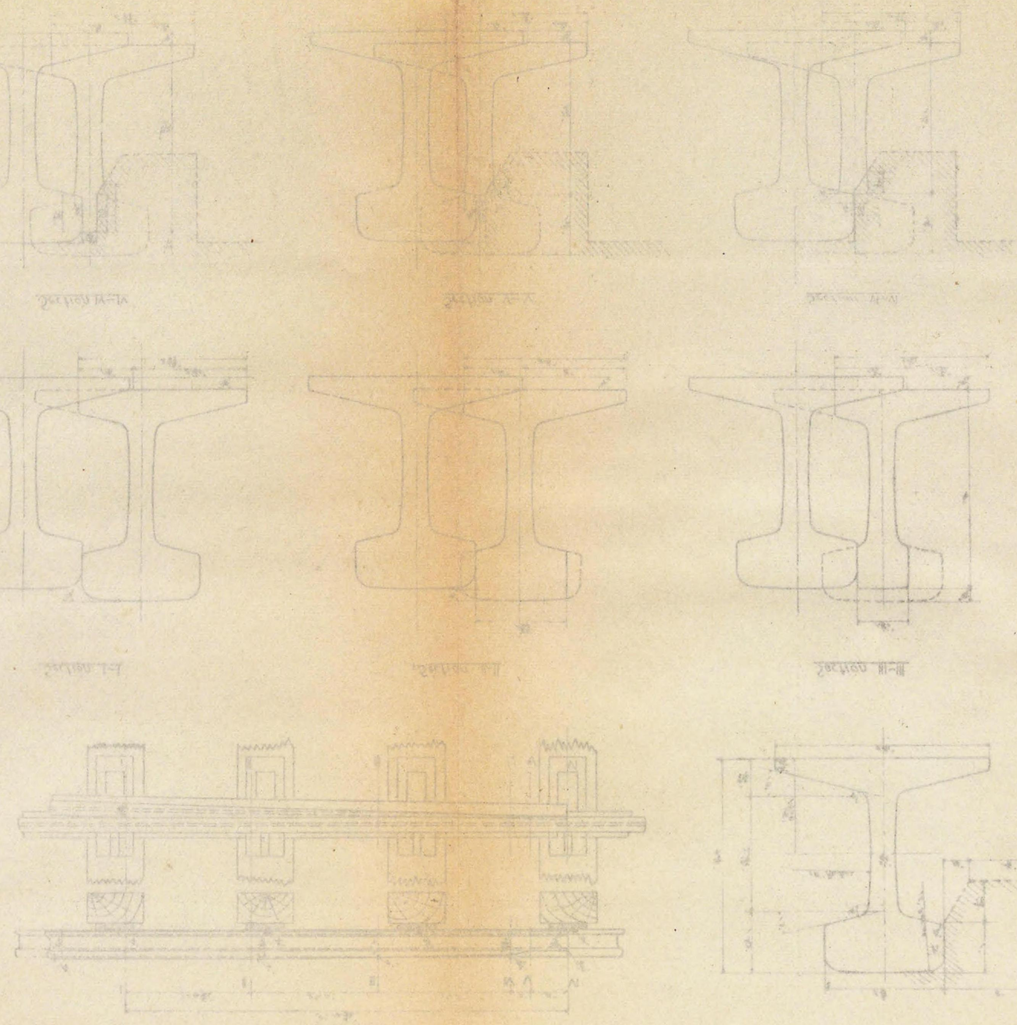
圖第一七號(二)

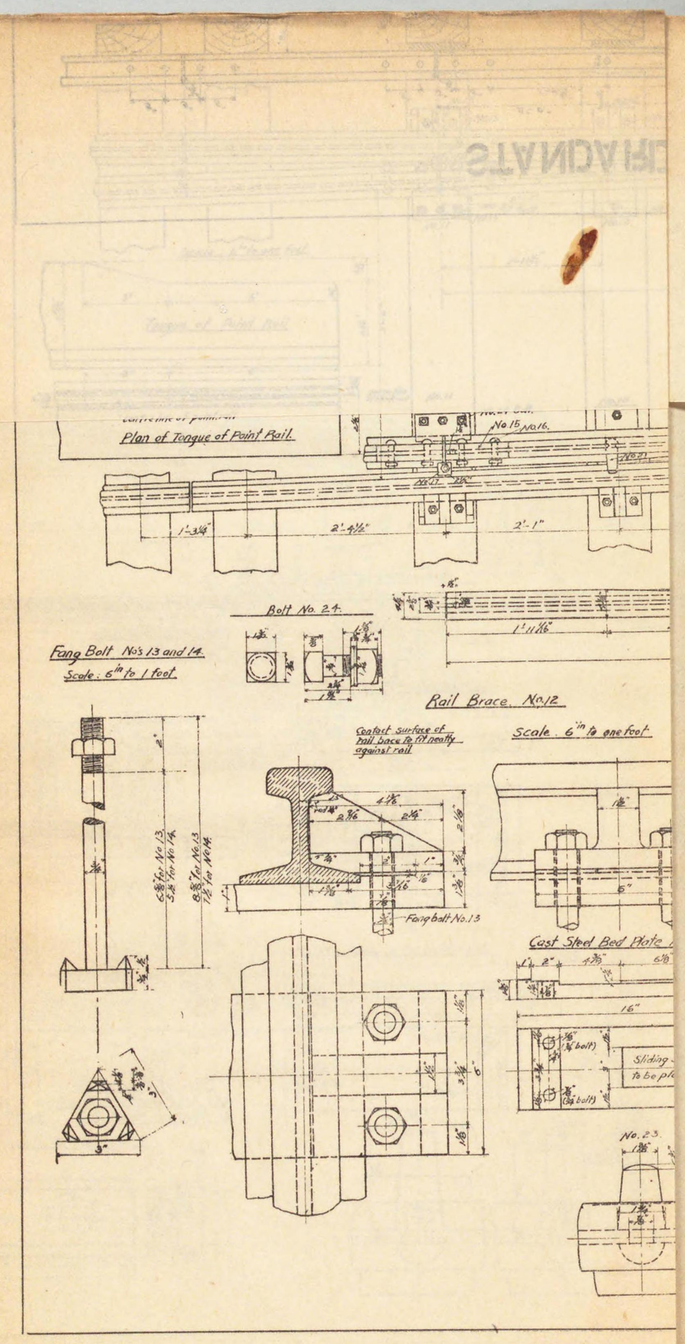
圖第十二第(二)

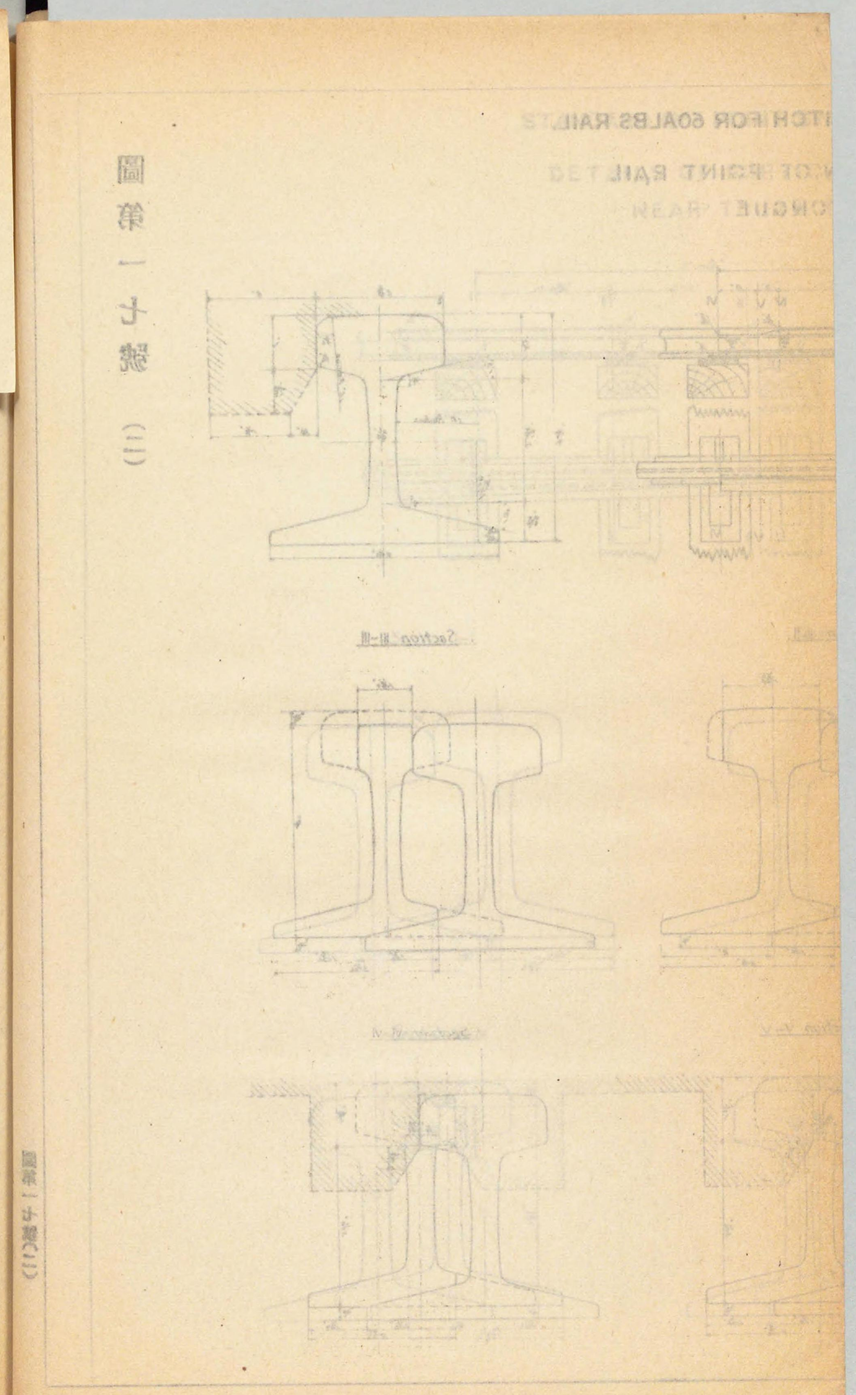
STANDARD ISET POINT SWITCH FOR COATES RAIL.

DETAILS OF PORTION OF POINT RAIL

NEAR TO ITS TONGUE




Plan of Tongue of Point Rail.
No 15 No 16.
1'-3¼"
2'-4½"
2'-1"
Bolt No. 24.
Fang Bolt No's 13 and 14.
Scale: 6" to 1 foot.
Rail Brace. No.12
Contact surface of rail brace to fit neatly against rail
Scale. 6" to one foot
Fang bolt No.13
Cast Steel Bed Plate
No. 23.



STANDARD 15 Ft POINT SWITCH FOR 60A LBS RAIL

圖第一七號（三）

Scale: 1½" to one foot

Length of Point Rail 15'-0"

Length of Stock Rail 21'-0"

Head of point rail from here to Tongue to be planed down.

Bottom of Point Rail
Bottom of Stock Rail

Scale: 6" to one foot.

Tongue of Point Rail

Plan of Tongue of Point Rail.

Inside and outside edges of point rail heads to be planed from here to Tongue.

Point rail to be bent here in 36'-12"

Point Rail Section at A

Point Rail Section at B

Scale 6" to 1 foot.

Stock rail to be bent here in 36'-12"

Tongue of Point Rail

Bottom View of Point Rail

Section of Heel of Point Rail

Scale: 6" to 1 foot.

Bolt No. 24.

Fang Bolt Nos 13 and 14.

Scale: 6" to 1 foot.

Rail Brace No. 12

Scale 6" to one foot.

Cast Steel Bed Plate No. 11

Cast Steel Bed Plate No. 9

Scale: 3" to 1 foot.

Cast Steel Bed Plate No. 10

Sliding Surface To be planed

Studs Scale: 6" to 1 foot

Tie Rod No 5

Scale: 6" to 1 foot.

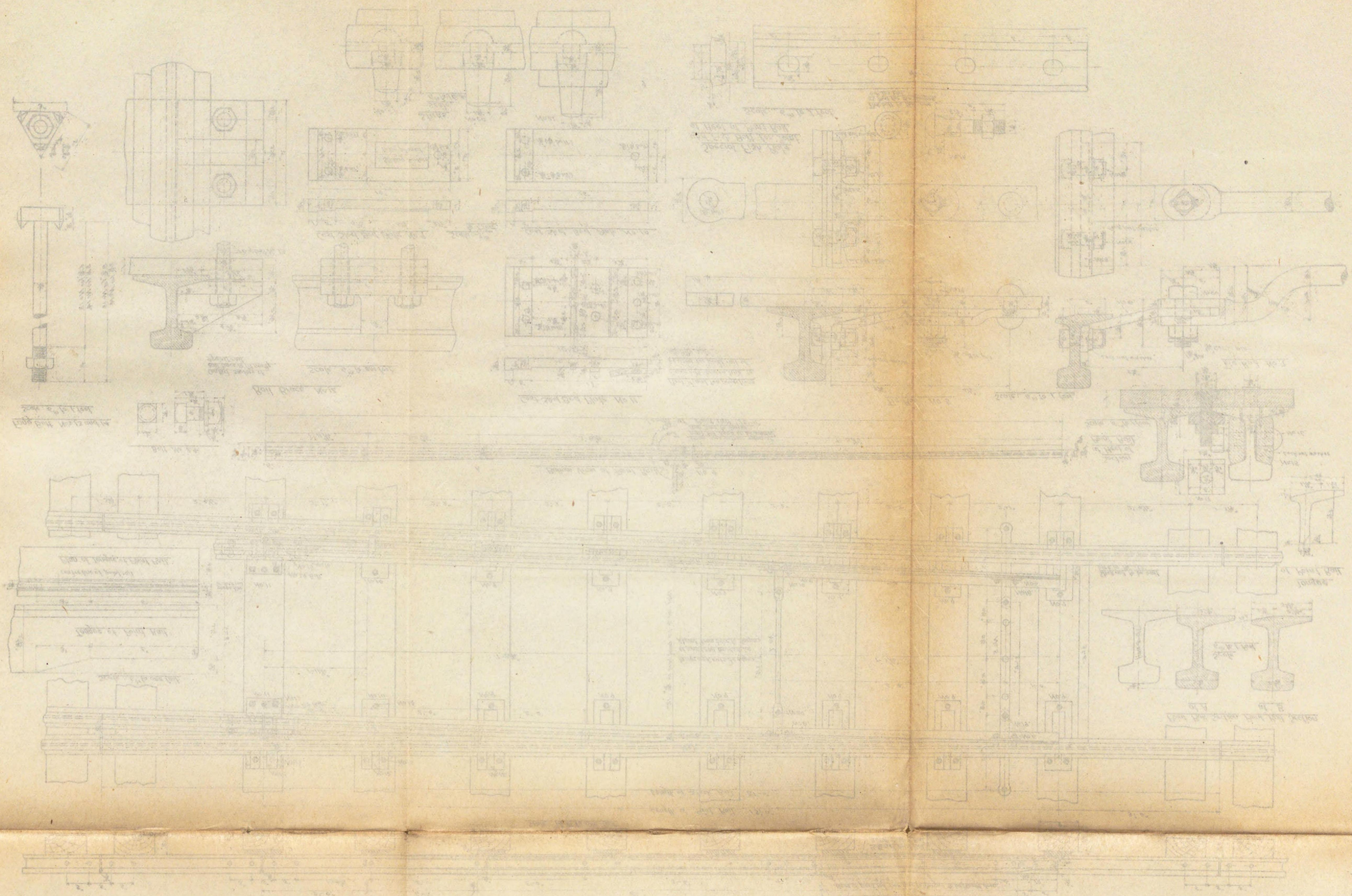
Tie Rod No. 7

Special Fish Plate and Fish Bolt for Joint at Heel of Point Rail.

Scale 6" to 1 foot.

This bolt is the same as that for the standard 60A lbs Rail.

圖第一七號(三)



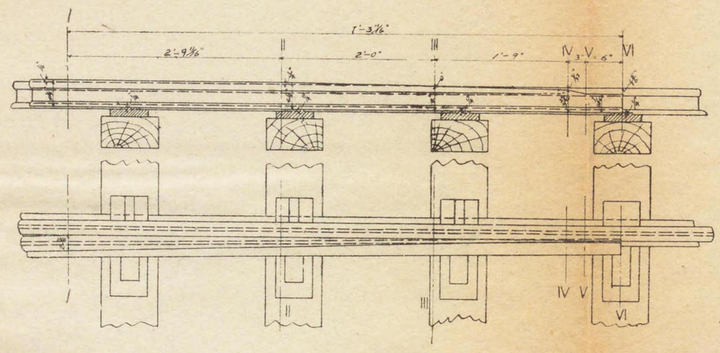
STANDARD 12 FT POINT SWITCH FOR 60 LBS RAIL

圖第一七號(四)

圖第一七號(三)

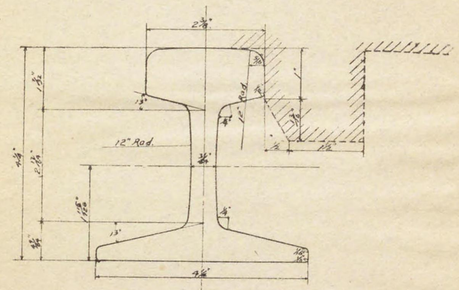
STANDARD 15 Ft POINT SWITCH FOR 60A LBS RAIL

DETAILS OF PORTION OF POINT RAIL
NEAR TO ITS TONGUE

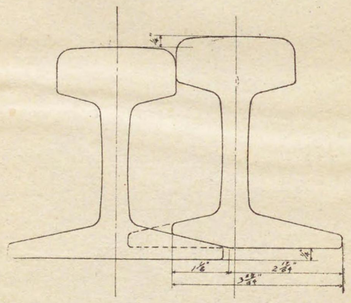


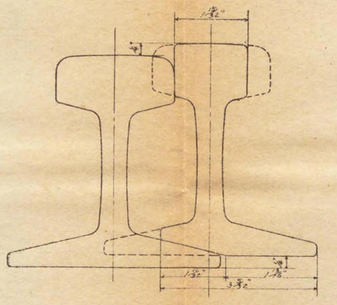
Section I–I

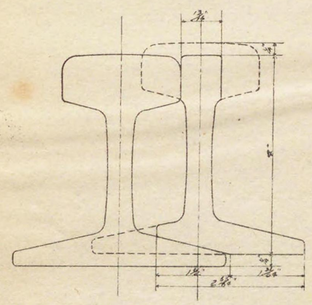
Section II–II



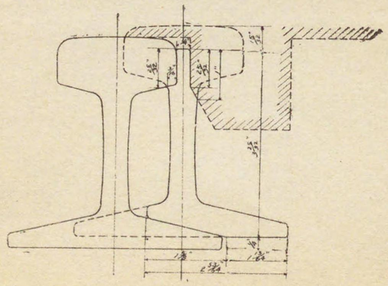
Section III–III



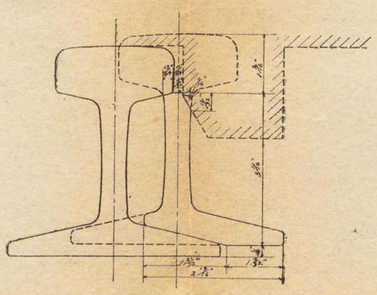




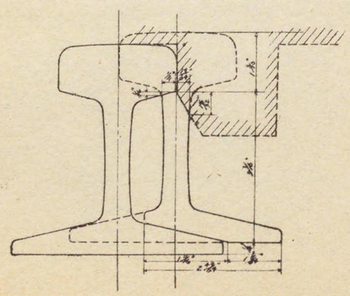
Section IV–IV



Section V–V

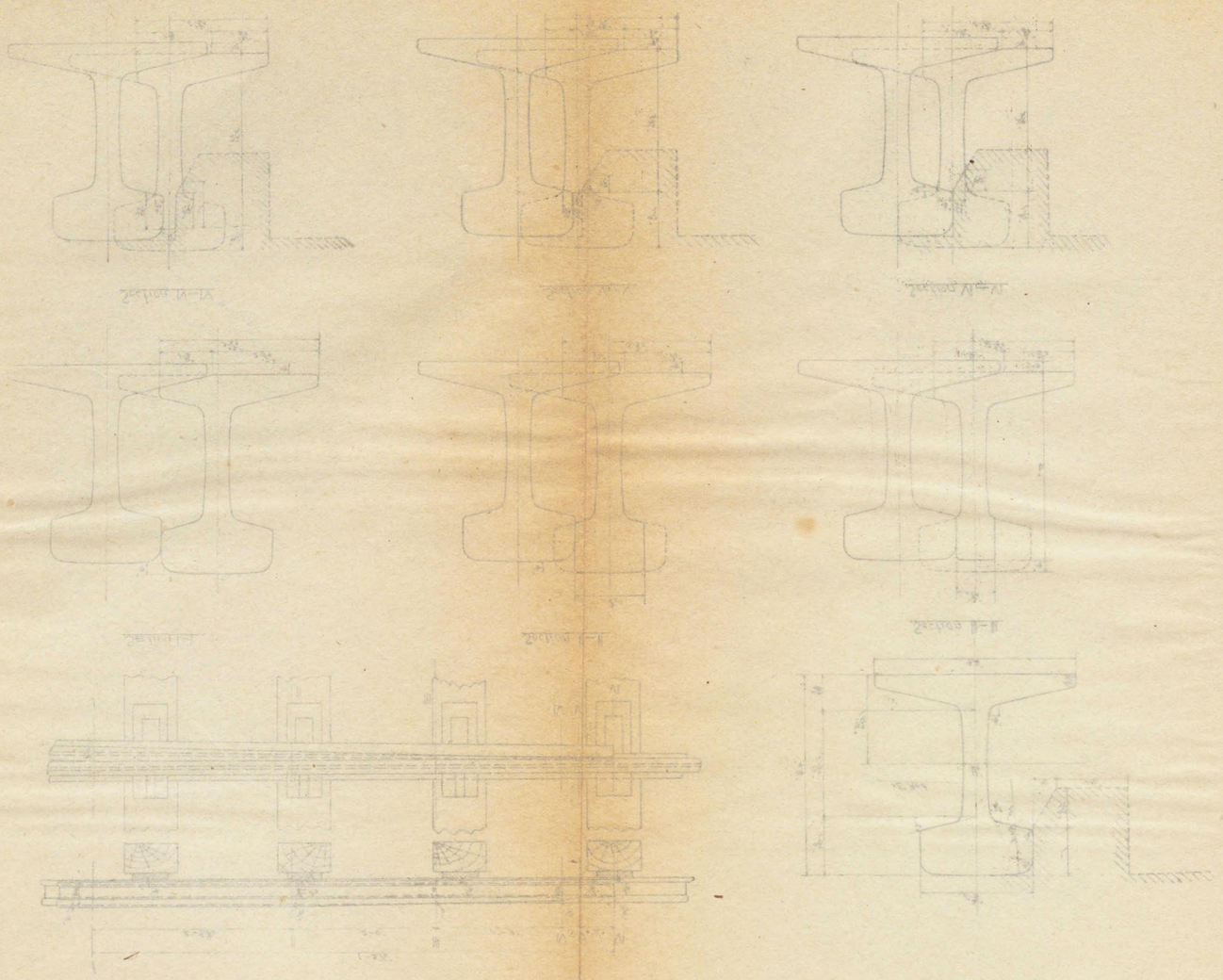


Section VI–VI



圖第一七號（四）

圖第一七號（四）



STANDARD No. 8 CROSS

STANDARD IS.E. POINT SWITCH FOR 60-LBS RAIL

DETAILS OF PORTION OF POINT RAIL

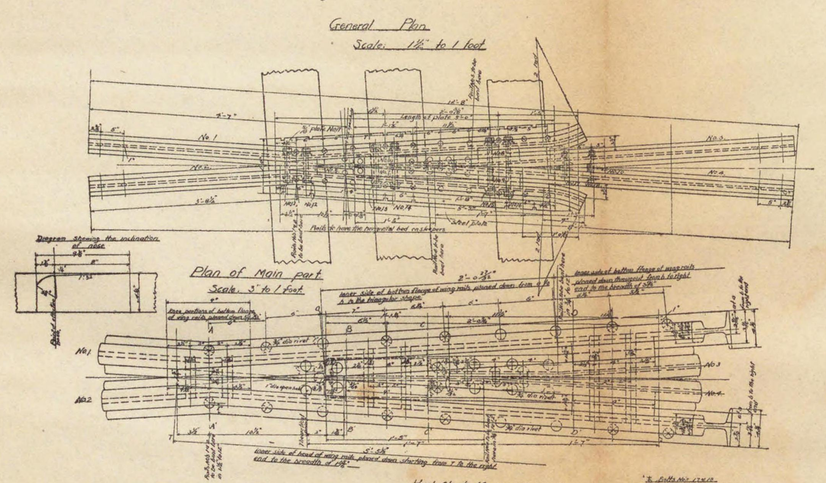
NEAR TO ITS TONGUE

第十一號圖（四）

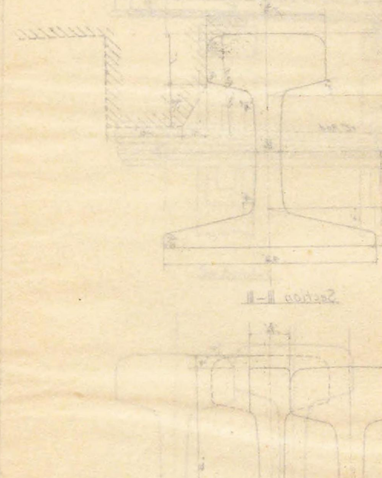
圖第一七號（五）

圖第一七號（四）

STANDARD Nº 8 CROSSING FOR 60ᴬ LBS RAIL



圖第一七號 (四)



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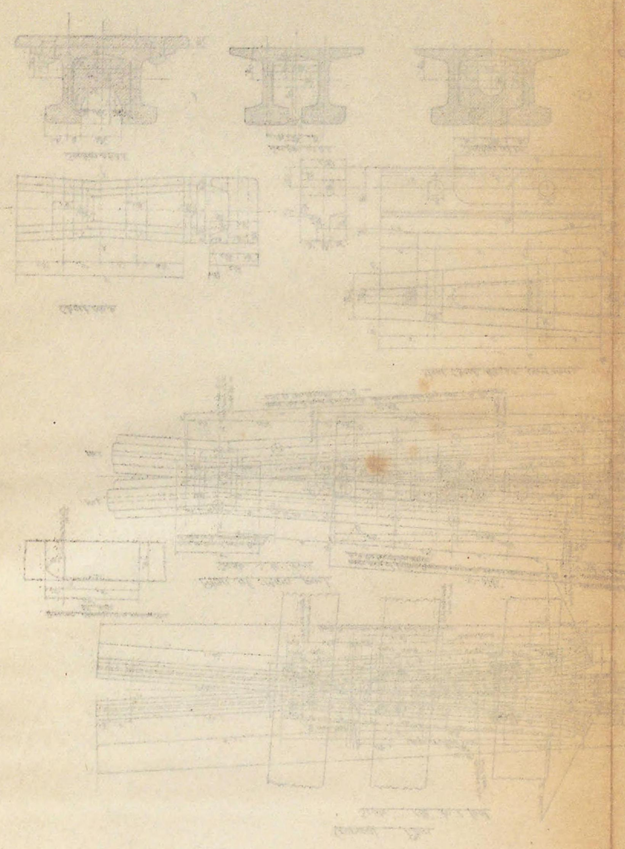

STANDARD No 8 CROSSING FOR 60# LBS RAIL

(正) 號十一卅圖

(32)