

**Brief Notes on Diamonds and Slips**

**Crossover:** A crossover affords means of connection between two adjacent and continuous tracks. It comprises of two sets of turnouts which are interconnected by generally a straight track. A crossover may either be left handed or right handed and it may have two crossings of equal or unequal angles; depending upon the local requirements. All the crossovers, included in this chapter are, however, left handed with crossings of equal angle and have a straight connecting track in between the two crossings. Page SX6 sheet 1 shows such a typical crossover for BG.

**Scissors crossover:** When two crossovers are so arranged as to form a diamond crossing at their point of intersection, the arrangement is known as a scissors crossover. In other words, a scissors crossover is a combination of four turnouts and one diamond. It provides access, usually between the two adjacent parallel tracks, for the rolling stock, from either direction. The scissors crossovers included in this Chapter are with crossings of equal number and are therefore symmetrical about the longitudinal and transverse axes through centre of the scissors crossover. Pages SX2, sheets 1 & 2 show such typical crossover. Main dimensions of scissors crossovers included in this Chapter are given in pages SX2 to SX5.

**Acute crossings for scissors:** The acute crossings on the main track of scissors cross overs are the same as used in the turnouts of equivalent angle given in Chapter V. But, with the difference that in the case of scissors the sleepers in the crossing portion are perpendicular to the main track instead of the centre line of the crossing as is the case in turnouts. In some cases the sleeper spacings and the special bearing plates are also changed to accommodate the special requirements of other acute crossings required for the diamond portion, depending upon the track centres and location of joints.

**Table of main dimensions of scissors & ordinary crossovers:**

(a) The main dimensions of ordinary crossovers are:

Track centres . . . . . (G)

Angle of crossing . . . . .	(Z)
Switch angle . . . . .	(H)
Radius of turnout . . . . .	(M)
Distance of actual toe of switch to heel . . . . .	(L)
Distance of theoretical toe of switch to heel . . . . .	(B)
Distance of actual toe or switch to end of stock rail . . . . .	(K)
Distance of theoretical toe of switch to end of stock rail . . . . .	(A)
Length of straight from actual nose of crossing to the tangent point along rail . . . . .	(J)
Lead of the turnout . . . . .	(C)
Distance of actual nose of crossing to heel . . . . .	(P)
Distance between actual noses of acute crossings . . . . .	(Q)
Distance between theoretical noses of acute crossings . . . . .	(D)
Distance between actual and theoretical noses of crossings . . . . .	(E)
Distance between actual nose and end of the toe of crossing . . . . .	(S)
Distance between actual and theoretical toe of switch . . . . .	(F)
Overall length of the crossing . . . . .	(R)
Overall length of the cross-over . . . . .	(Y)

These dimensions are given in pages SX6 and SX7 for ordinary L.H. Crossovers for BG and MG respectively.

(b) The main dimensions of scissors crossover are:

Track centres . . . . .	(G)
Angle of acute crossing on main track . . . . .	(Z)
Angle of acute and obtuse crossing in diamonds . . . . .	(O)
Switch angle . . . . .	(H)

Radius of turnout . . . . .	(M)
Distance between actual noses of point rails of an obtuse crossing . . . . .	(R)
Distance between theoretical noses of acute and obtuse crossings . . . . .	(F&D)
Distance between actual noses of the acute and obtuse crossings . . . . .	(S)
Distance of actual toe of switch to heel . . . . .	(L)
Distance of theoretical toe of switch to heel . . . . .	(B)
Distance of actual toe of switch to end of stock rail . . . . .	(K)
Distance of theoretical toe of switch to end of stock rail . . . . .	(A)
Length of straight from actual nose of crossing to the tangent point along rail . . . . .	(J)
Lead of turnout . . . . .	(C)
Distance of actual nose of crossing to heel . . . . .	(P)
Distance between actual noses of acute crossings . . . . .	(Q)
Distance between theoretical noses of acute crossings . . . . .	(E)
Overall length of scissors crossover . . . . .	(Y)

These dimensions are given in pages SX2 to SX5 for the scissors crossovers of BG & MG.

**Table of rail lengths :** The lengths of rails connecting the acute and obtuse crossings and switches for BG and MG are given in pages SX8 to SX15. Rail lengths for ordinary crossovers for BG and MG are available in pages SX16 to SX18 and SX19 to SX20 respectively.

**Check rails :** On certain locations in the scissors crossovers, it is not possible to provide ordinary check rails due to the limited available space. This is especially so, when the two parallel tracks are located close to each other. Special type of check rails, viz., tapered check rails and Vee check

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rails are used in such situations. Pages SX27 and SX28 give the salient details of tapered and Vee check rails respectively.

Another variation of the special check rails are as shown in sheets 7 & 9 of page SX25. In this case, the wing rails of one crossing are extended to guide the wheels over the throat of another crossing.

**Tie plates:** Pages SX30 and SX31 show the details of tie plates used for the scissors crossovers of BG and MG, respectively. It may be noticed that their cross-section and the cross-section of the plates used in other points and crossings are similar. Also, square or rectangular holes are shown for dog spikes, as was the usual practice, so far.

Plate screws or rail screws should be used in preference to dog spikes with a view to reduce damage to the wood fibres. In such cases, however, the tie plates or bearing plates with round or oblong holes shall have to be provided in lieu of those with square or rectangular holes.

**ASSEMBLIES AND SUB-ASSEMBLIES IN SCISSORS CROSSOVERS FOR DIFFERENT TRACK CENTRES**

GAUGE	DESCRIPTION	TRACK CENTRES	CROSSING	RAIL SECTION	ASSEMBLIES		SUB-ASSEMBLIES								
					DRAWING NO	PAGE NO	MAIN ACUTE CROSSING	SCISSORS ACUTE CROSSINGS	ORTHOSE CROSSING	SWITCH	DRAWING NO	PAGE NO			
													TA 20190	SX 2	TA 20193
B.G.	SCISSORS CROSSOVERS WITH STRAIGHT SWITCHES.	5 180	1IN8½	90 R.	TA 20150	SX 2	TA 20153	ST.1,2	TA 20151	ST.3,4	TA 20152	ST.5,6	TA 20112	TSC 21	
			1IN12	90 R.	TA 20200	ST.1,2	TA 20203	SX 22	TA 20201	SX 22	TA 20202	SX 22	TA 5270(M)	TSC 26	
			1IN12	90 R.	TA 20163		TA 20166	ST.1,2	TA 20164	ST.3,4	TA 20165	ST.5,6	TA 5272(M)	TSC 26	
		1IN8½	90 R.	TA 20186		TA 20189	SX 23	TA 20187	SX 23	TA 20188	SX 23	TA 20106	TSC 21		
		1IN12	90 R.	TA 20158	SX 3	TA 20161	ST.1,2	TA 20159	ST.3,4	TA 20160	ST.5,6	TA 20112	TSC 21		
		1IN12	90 R.	TA 20204	ST.1,2	TA 20207	SX 24	TA 20205	SX 24	TA 20206	SX 24	TA 5270(M)	TSC 26		
	M.G.	SCISSORS CROSSOVERS WITH CURVED SWITCHES.	4 725	1IN8½	90 R.	TA 20227		TA 20189	SX 23	TA 20187	SX 23	TA 20188	SX 23	TA 20197	TSC 31
				1IN12	90 R.	TA 20234	SX 3	TA 20161	ST.1,2	TA 20159	ST.3,4	TA 20160	ST.5,6	TA 20149	TSC 31
				1IN12	90 R.	TA 20226	ST.3,4	TA 20207	SX 24	TA 20205	SX 24	TA 20206	SX 24	TA 20172	TSC 35
			1IN12	90 R.	TA 20235		TA 20170	ST.1,2	TA 20168	ST.3,4	TA 20169	ST.5,6	TA 20126	TSC 35	
			1IN8½	60 R.	TA 20434		TA 20437	SX 25	TA 20435	SX 25	TA 20436	SX 25	TA 20405	TSC 23	
			1IN12	60 R.	TA 20430	SX 4	TA 20433	ST.1,2	TA 20431	ST.3,4	TA 20432	ST.1,2	TA 20408	TSC 23	
M.G.	SCISSORS CROSSOVERS WITH STRAIGHT SWITCHES.	4 420	1IN12	75 R.	TA 20476	ST.1,2	TA 20477	SX 26	TA 20478	SX 26	TA 20479	SX 26	TA 20492	TSC 28	
			1IN12	60 R.	TA 20438		TA 20441	ST.1,2	TA 20439	ST.5,6	TA 20440	ST.9,10	TA 20411	TSC 28	
			1IN8½	75 R.	TA 20488	SX 4	TA 20437	ST.1,2	TA 20435	ST.3,4	TA 20436	ST.1,2	TA 20452	TSC 33	
		1IN12	75 R.	TA 20486	SX 4	TA 20477	SX 26	TA 20478	SX 26	TA 20479	SX 26	TA 20465	TSC 42		
		1IN12	75 R.	TA 20484		TA 20437	SX 25	TA 20435	SX 25	TA 20436	SX 25	TA 20405	TSC 23		
		1IN8½	60 R.	TA 20442	SX 4	TA 20433	ST.1,2	TA 20431	ST.3,4	TA 20432	ST.1,2	TA 20408	TSC 23		
M.G.	SCISSORS CROSSOVERS WITH STRAIGHT SWITCHES.	4 265	1IN12	75 R.	TA 20480		TA 20481	SX 26	TA 20478	SX 26	TA 20479	SX 26	TA 20465	TSC 42	
			1IN12	75 R.	TA 20487	SX 4	TA 20481	SX 26	TA 20478	SX 26	TA 20479	SX 26	TA 20465	TSC 42	
		1IN12	75 R.	TA 20449	SX 5	TA 20446	SX 25	TA 20445	SX 25	TA 20446	SX 25	TA 20408	TSC 23		
		1IN12	60 R.	TA 20443	ST.1,2	TA 20443	ST.1,2	TA 20444	ST.5,6	TA 20444	ST.5,6	TA 20408	TSC 23		

**CROSSING SUB—ASSEMBLIES AND MAIN PARTS**

GAUGE	TRACK CENTRES	CROSSING	RAIL SECTION	MAIN ACUTE CROSSING				SCISSORS ACUTE CROSSING				OBTUSE CROSSING						
				SUB ASSEMBLY DRAWING NO	CHECK RAILS		TIE PLATE		SUB ASSEMBLY DRAWING NO	CHECK RAILS		TIE PLATE		SUB ASSEMBLY DRAWING NO	CHECK RAILS		TIE PLATE	
					TAKE IN	TAKE OUT	TAKE IN	TAKE OUT		TAKE IN	TAKE OUT	TAKE IN	TAKE OUT		TAKE IN	TAKE OUT	TAKE IN	TAKE OUT
B.G.	5 180	1 IN 8 1/2	52 kg	TA 20193	—	T 4776 (M)	T 15063	TA 20191	—	—	T 15063	TA 20192	T 19027	T 15041	TA 20152	T 19012	T 15041	
			90 R.	TA 20153	—	T 4777 (M)	T 15040	TA 20151	—	—	T 15040	TA 20202	T 19032	T 15045	TA 20165	T 19018	T 15045	
			52 kg	TA 20203	—	T 4776 (M)	T 15066	TA 20201	—	—	T 15066	TA 20188	T 19027	T 15041	TA 20206	T 19032	T 15045	
			90 R.	TA 20166	—	T 4777 (M)	T 15046	TA 20164	—	—	T 15046	TA 20160	T 19012	T 15041	TA 20169	T 19018	T 15045	
M.G.	4 265	1 IN 12	52 kg	TA 20189	T 19029	T 4776 (M)	T 15062	TA 20187	T 19028	—	T 15062	TA 20435	—	T 19003	T 15053	TA 20432	T 19021	T 15048
			90 R.	TA 20161	T 19014	T 4777 (M)	T 15042	TA 20159	T 19015	—	T 15042	TA 20478	—	T 19003	T 15059	TA 20479	T 19039	T 15100
			52 kg	TA 20207	T 19034	T 4776 (M)	T 15067	TA 20205	T 19033	—	T 15067	TA 20439	—	T 19004	T 15056	TA 20432	T 19021	T 15048
			90 R.	TA 20170	T 19019	T 4777 (M)	T 15047	TA 20168	T 19020	—	T 15047	TA 20444	—	T 19004	T 15056	TA 20432	T 19021	T 15048
M.G.	3 810	1 IN 8 1/2	75 R.	TA 20437	—	T 19003	T 15052	TA 20435	—	T 19003	T 15053	TA 20432	T 19022	T 15051	TA 20432	T 19022	T 15051	
			60 R.	TA 20433	—	T 19004	T 15049	TA 20431	—	T 19004	T 15050	TA 20432	T 19021	T 15048	TA 20432	T 19021	T 15048	
			75 R.	TA 20477	—	T 19003	T 15098	TA 20478	—	T 19003	T 15099	TA 20479	T 19039	T 15100	TA 20479	T 19039	T 15100	
			60 R.	TA 20441	—	T 19004	T 15055	TA 20439	—	T 19004	T 15056	TA 20445	—	T 19003	T 15099	TA 20445	—	T 15060

**ASSEMBLIES AND SUB-ASSEMBLIES IN CROSSOVERS**

GAUGE	CROSSING	TRACK CENTRES	RAIL SECTION	DESCRIPTION	LAYOUT		CROSSING		SWITCH		
					DRAWING NO.	PAGE NO.	DRAWING NO.	PAGE NO.	DRAWING NO.	PAGE NO.	
B. G.	1 IN 8½	4 725	52 kg	CROSSOVER WITH 4 725 mm STRAIGHT SWITCHES.	TA 20826		TA 20806		TA 20805	TSC 22	
				CROSSOVER WITH 6 400 mm CURVED SWITCHES.	TA 20837		TA 20806		TA 20836	TSC 32	
				CROSSOVER WITH 4 725 mm STRAIGHT SWITCHES.	TA 20820		TA 20812	TSC 7	TA 20811	TSC 22	
		4 265	90 R.	CROSSOVER WITH 6 400 mm CURVED SWITCHES.	TA 20841		TA 20812		TA 20823	TSC 32	
				CROSSOVER WITH 4 725 mm STRAIGHT SWITCHES.	TA 20827		TA 20806		TA 20805	TSC 22	
				CROSSOVER WITH 4 725 mm STRAIGHT SWITCHES.	TA 20821	SX 6	TA 20812		TA 20811		
	1 IN 12	4 725	52 kg	CROSSOVER WITH 6 400 mm STRAIGHT SWITCHES.	TA 20824		TA 20803		TA 20802	TSC 27	
				CROSSOVER WITH 7 730 mm CURVED SWITCHES.	TA 20838		TA 20803		TA 20832	TSC 36	
				CROSSOVER WITH 6 400 mm STRAIGHT SWITCHES.	TA 20818		TA 20809	TSC 12	TA 20808	TSC 27	
		4 265	90 R.	52 kg	CROSSOVER WITH 7 730 mm CURVED SWITCHES.	TA 20842		TA 20809		TA 20840	TSC 36
					CROSSOVER WITH 6 400 mm STRAIGHT SWITCHES.	TA 20825		TA 20803		TA 20802	TSC 27
					CROSSOVER WITH 6 400 mm STRAIGHT SWITCHES.	TA 20819		TA 20809		TA 20808	
M. G.	1 IN 8½	4 265	75 R.	CROSSOVER WITH 5 500 mm CURVED SWITCHES.	TA 21021	SX 7	TA 21006	TSC 9	TA 21020	TSC 34	
		4 265	75 R.	CROSSOVER WITH 5 485 mm STRAIGHT SWITCHES.	TA 21018		TA 21003	TSC 14	TA 21002	TSC 29	

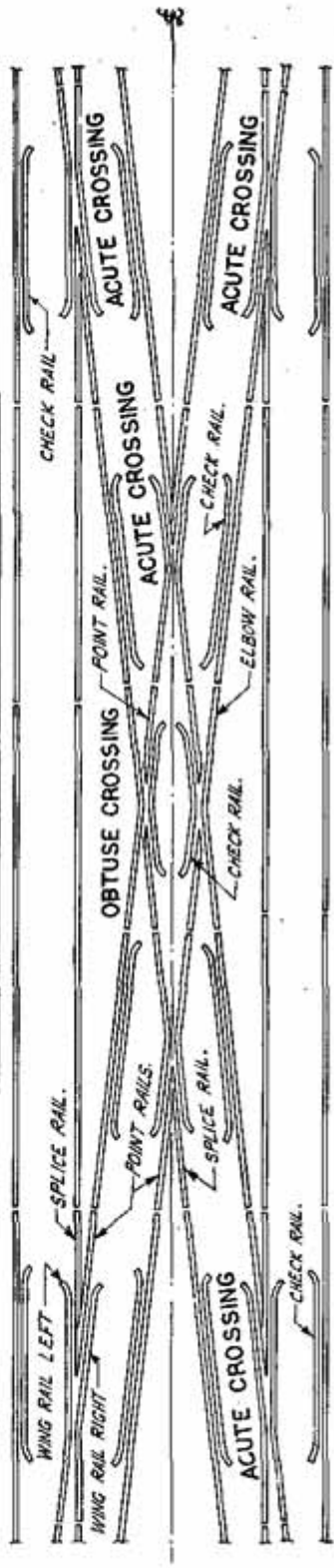
**CROSSING & SWITCH SUB-ASSEMBLIES AND MAIN PARTS**

GAUGE	TRACK CENTRES	CROSSING	RAIL SECTION	CROSSING			SWITCH			STRETCHER BAR					BRACKETS M.S.		
				DRAWING NUMBER	PAGE NO	CHECK RAIL TSC (SHEET NO) 46 (SHEET NO) 48	DRAWING NUMBER	PAGE NO	SLIDE CHAIR	LEADING	ORDINARY FOLLOWING		ALTERNATIVE LEADING FOLLOWING		FOR ORDINARY	FOR ALTERNATIVE	
										1ST	2ND	3RD					
B.G.	4 725 & 4 265	1 IN 8 1/2	52 kg	TA 20806		T 4776(M)	TA 20805	TSC 22	T 19501	T 264(M)	T 265(M)	-	-	-	-	T 263(M)	-
					TSC 7		TA 20836	TSC 32		T 10632	T 10633	T 10634	-	-	-	-	-
	4 725 & 4 265	1 IN 12	52 kg	TA 20812		T 4777(M)	TA 20823	TSC 32	T 19505	T 10629	T 10630	T 10631	-	-	-	T 10309	-
							TA 20802	TSC 27		T 264(M)	T 265(M)	-	-	-	-	-	T 263(M)
M.G.	4 265	1 IN 8 1/2	75 R.	TA 20803		T 4776(M)	TA 20832	TSC 36	T 19501	T 10505	T 10506	T 10507	-	-	-	T 263(A)(M)	-
					TSC 12		TA 20808	TSC 27		T 10310	T 10311	-	-	-	-	-	T 10309
	4 265	1 IN 12	75 R.	TA 20809		T 4777(M)	TA 20840	TSC 36	T 19505	T 10342	T 10343	T 10344	-	-	-	T 10309(A)	-
							TA 21020	TSC 34		T 10319	T 10320	T 10621	-	-	-	-	-
				TA 21003	TSC 14	T 19003	TA 21002	TSC 29	T 19504	T 10319	-	-	-	-	T 10585	T 10586	

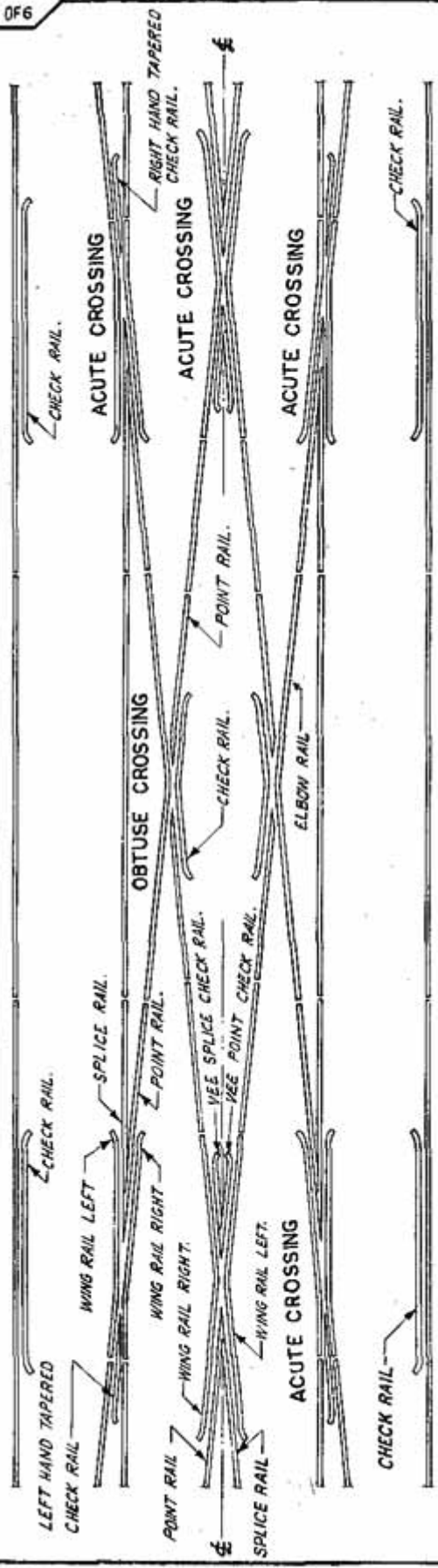


## DEFINITIONS OF SCISSORS CROSSOVERS

### SCISSORS CROSSOVER WITH ORDINARY CHECK RAILS

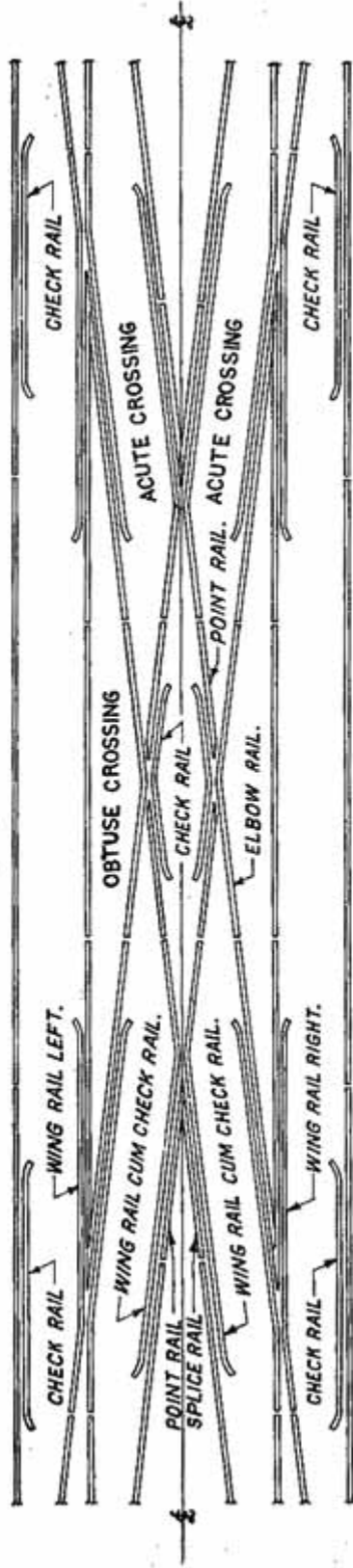


### SCISSORS CROSSOVER WITH SPECIAL CHECK RAILS

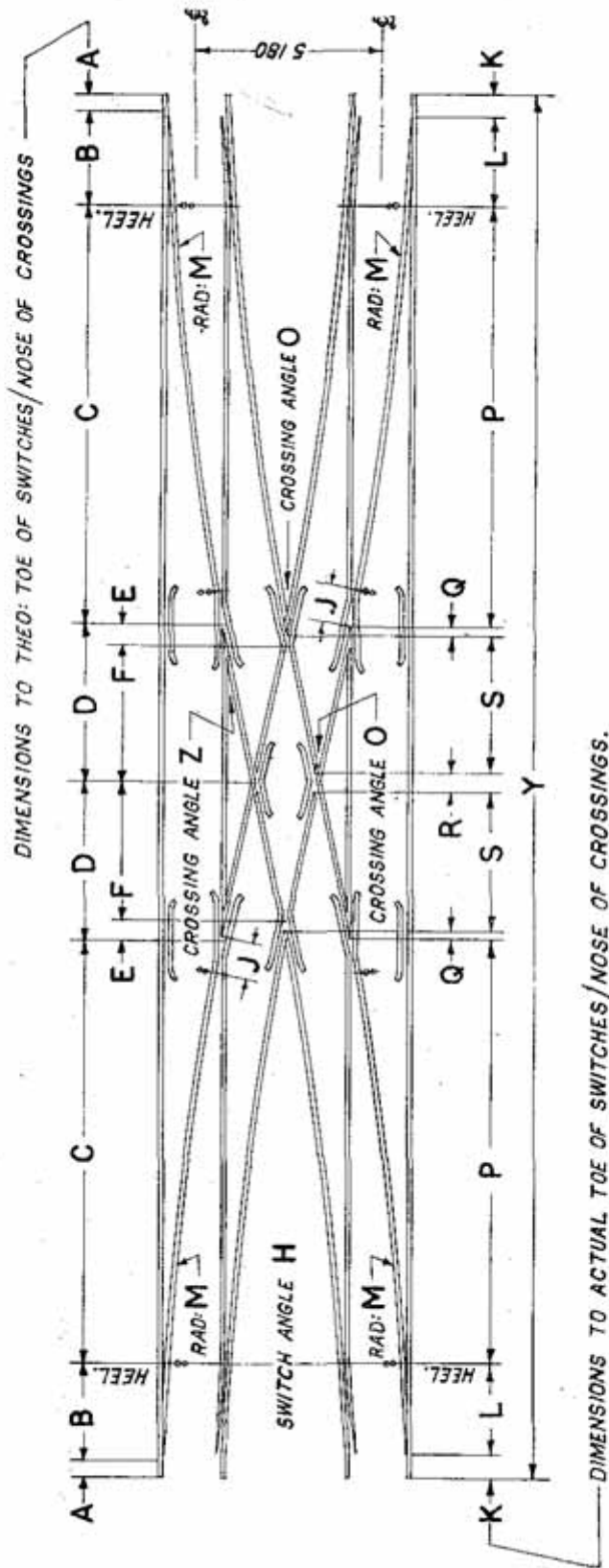


# DEFINITIONS OF SCISSORS CROSSOVERS

## SCISSORS CROSSOVER WITH SPECIAL WING CUM CHECK RAILS



**MAIN DIMENSIONS FOR SCISSORS CROSSOVERS**  
**5180<sup>m</sup>m TRACK CENTRES B.G.**



**TABLE OF MAIN DIMENSIONS**

RAIL SECTION	ASSEMBLY DRG. N <sup>o</sup>	CROSSING	D I M E N S I O N S (mm)																	
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
52 kg	TA 20190	1 N 87	615	4950	20730	7720	548	7172	996	840	4725	20862	350	508	6984	222360	13-25-10	6-42-35	1-34-27	66030
			615	4950	20730	7720	548	7172	982	840	4725	20849	371	494	6984	222360	13-25-10	6-42-35	1-34-27	66030
52 kg	TA 20200	1 N 12	1176	6724	29200	10933	842	10091	1418	1500	6400	29386	569	716	9826	442120	9-31-38	4-45-49	1-8-0	96066
			1176	6724	29200	10933	842	10091	1399	1500	6400	29367	592	696	9826	442120	9-31-38	4-45-49	1-8-0	96066

# MAIN DIMENSIONS FOR SCISSORS CROSSOVERS

4725<sub>mm</sub> TRACK CENTRES B. G.

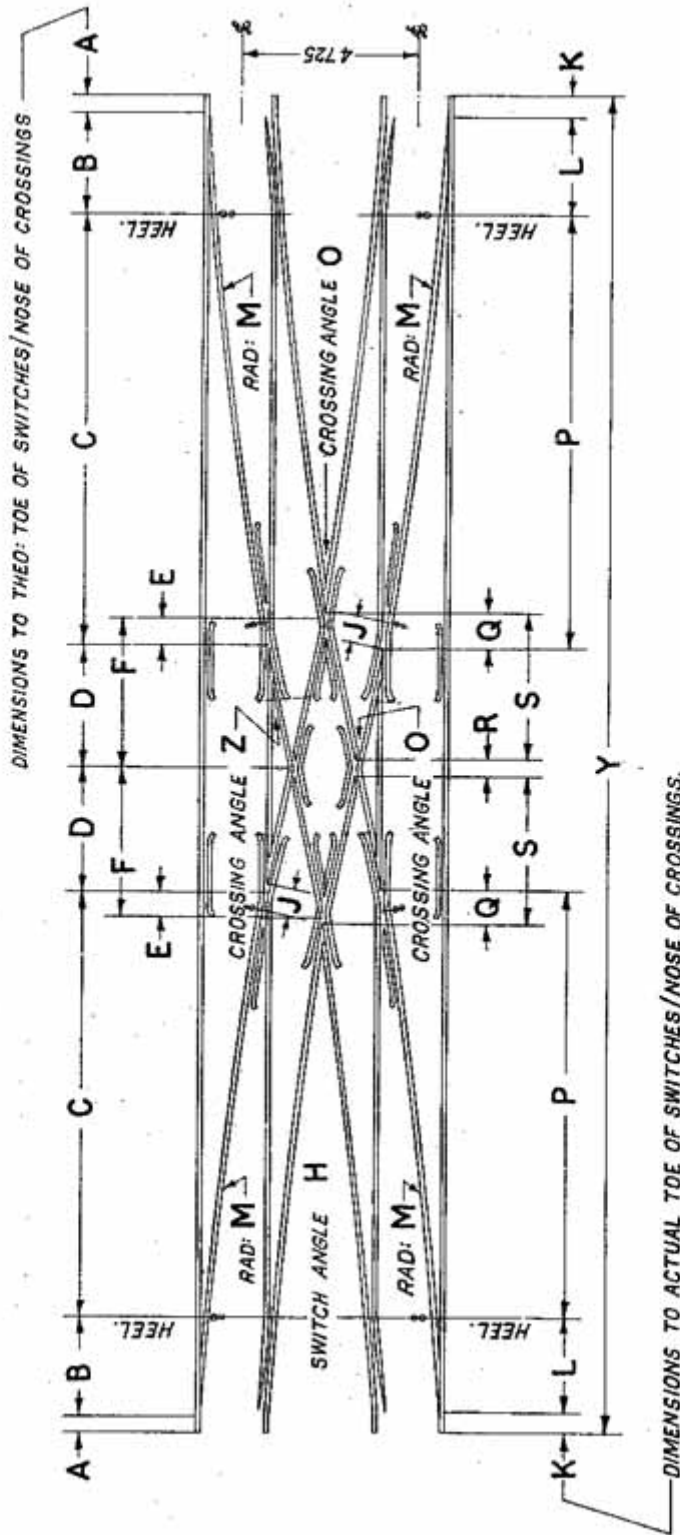


TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRAWING N <sup>o</sup>	CROSSING	D I M E N S I O N S (m <sup>m</sup> )																	
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
52 kg	TA 20/86	1/IN R <sup>1/2</sup>	6/5	4950	20730	5786	1386	7172	996	840	4725	20862	1584	508	6984	222360	13-25-0	6-42-35	1-34-27	64162
90 R.	TA 20/58		6/5	4950	20730	5786	1386	7172	982	840	4725	20848	1563	494	6984	222360	13-25-0	6-42-35	1-34-27	64162
52 kg	TA 20/04	1/IN R	1176	6724	29200	8203	1888	10091	1418	1500	6400	29386	2167	716	9826	442120	9-31-38	4-45-49	1-8-0	90606
90 R.	TA 20/67		1176	6724	29200	8203	1888	10091	1399	1500	6400	29367	2138	696	9826	442120	9-31-38	4-45-49	1-8-0	90606

**MAIN DIMENSIONS FOR SCISSORS CROSSOVERS**  
**4725mm TRACK CENTRES WITH CURVED SWITCHES B. G.**

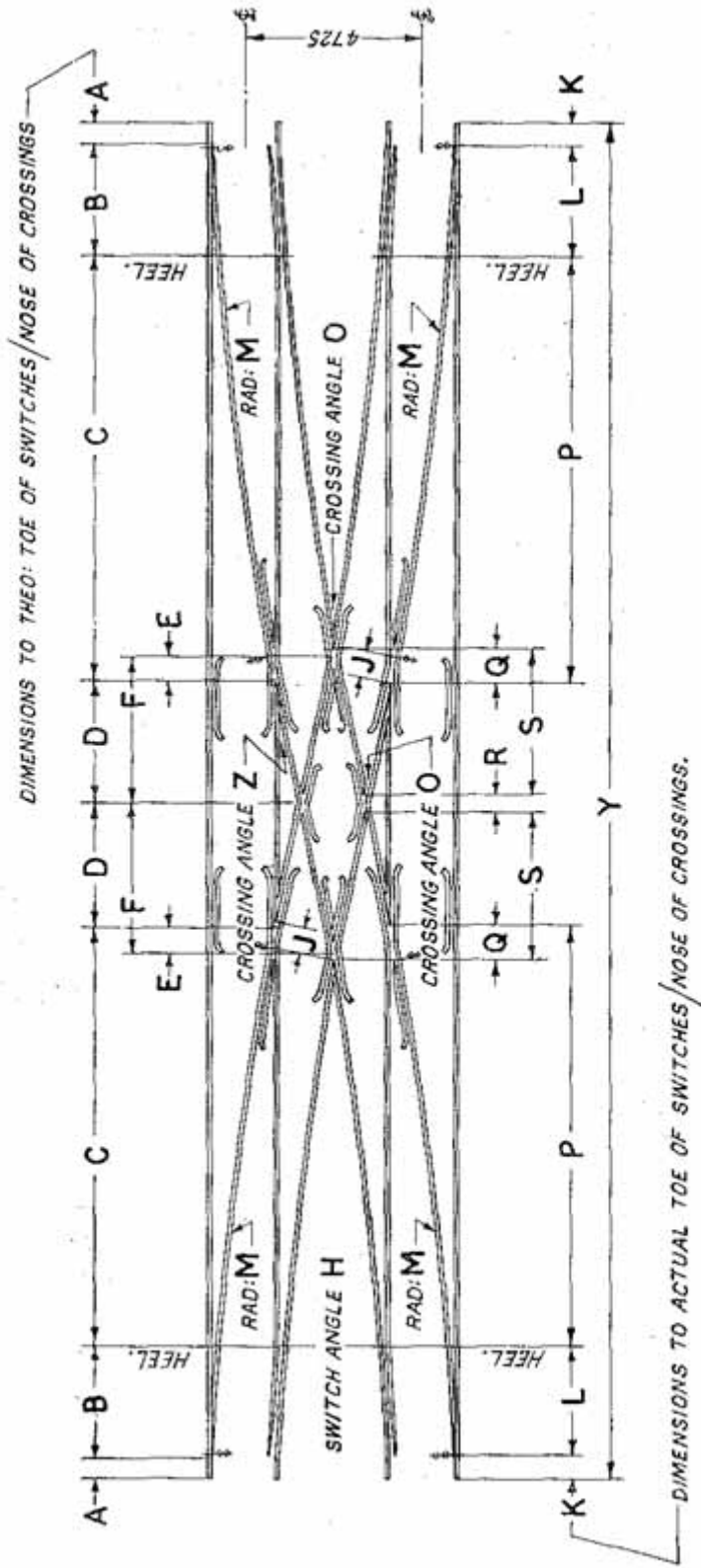


TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRAWING No	CROSSING	D I M E N S I O N S (m m)																	
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
52 kg	TA 20227	1/18 1/2	1065	6835	18395	5786	1386	7172	996	1500	6400	18527	1584	508	6984	232320	13-25-10	6-42-35	0-47-27	64162
90 R.	TA 20234		1065	6835	18395	5786	1386	7172	962	1500	6400	18513	1563	494	6984	232320	13-25-10	6-42-35	0-47-27	64162
52 kg	TA 20226	1/12	752	8478	27870	8203	1888	10091	1418	1500	7730	28056	2167	716	9826	458120	9-31-38	4-45-49	0-27-35	90606
90 R.	TA 20235		752	8478	27870	8203	1888	10091	1399	1500	7730	28037	2138	696	9826	458120	9-31-38	4-45-49	0-27-35	90606





**MAIN DIMENSIONS FOR SCISSORS CROSSOVERS**  
**4420 mm AND 4265 mm TRACK CENTRES M.G.**

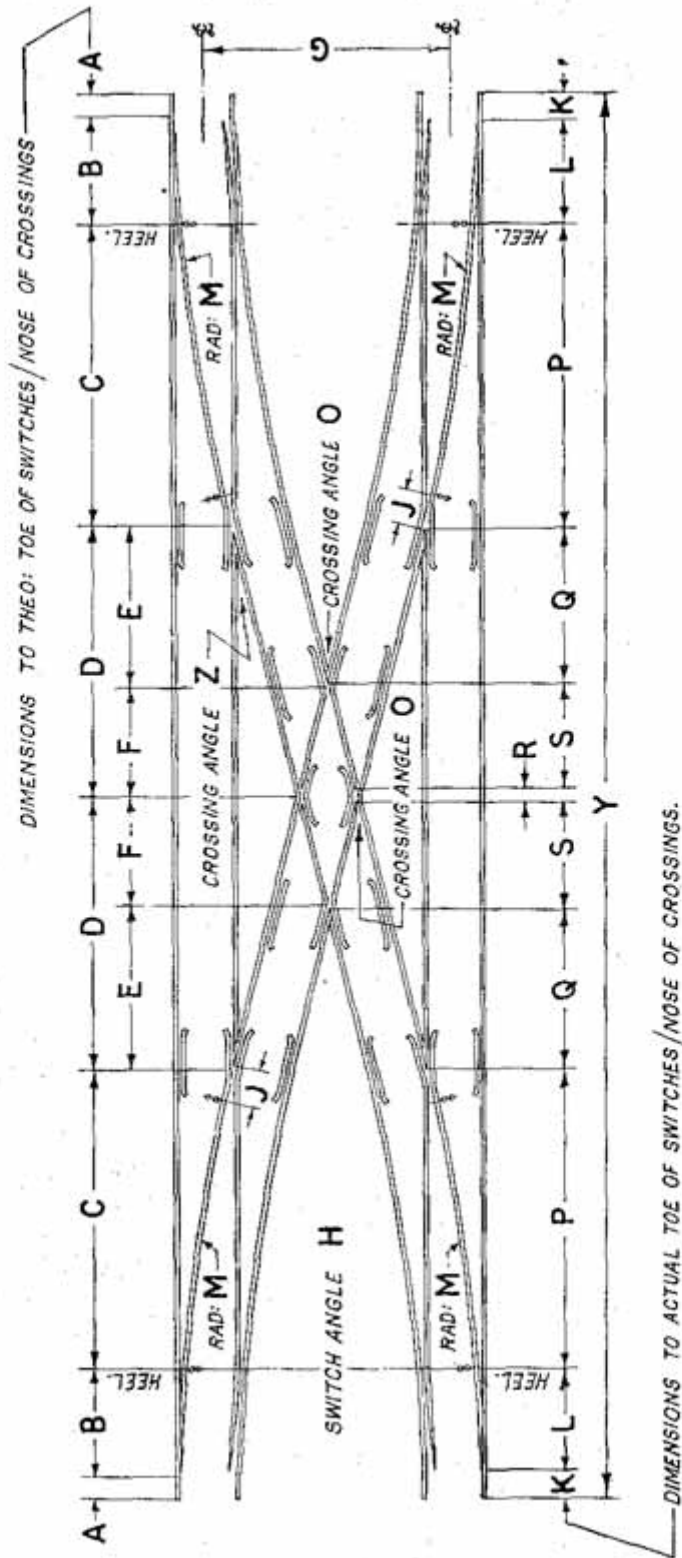
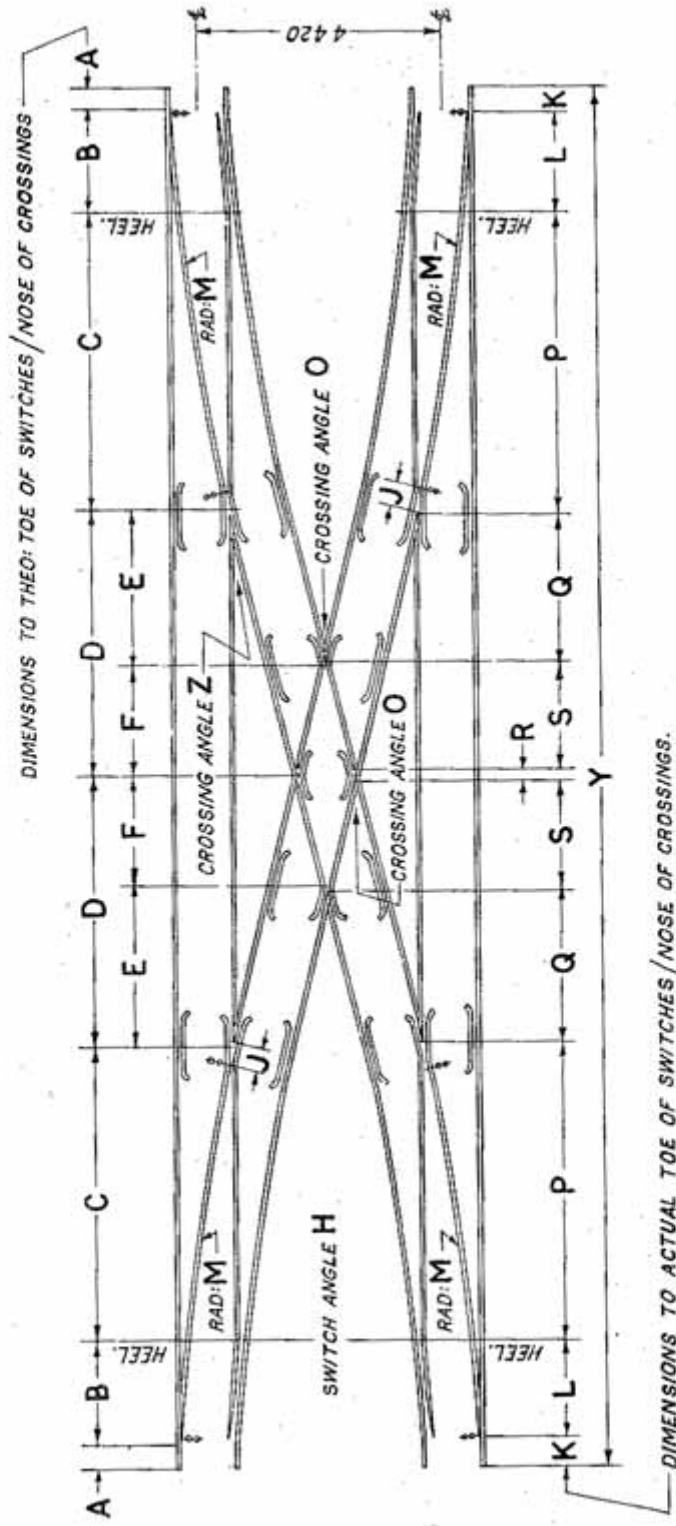


TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRG: NO	TRACK CENTRES	CROSSING	DIMENSIONS (mm)																	
				A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
75 R.	TA 20434	420	1 IN 6 1/2	635	4320	11560	10255	5975	4280	827	640	4115	11672	5807	462	4105	119610	13240	64200	13520	53540
60 R.	TA 20430			635	4320	11560	10256	5977	4279	1010	640	4115	11655	5835	446	4103	119510	13250	64200	13530	53540
75 R.	TA 20476	420	1 IN 12	1208	5777	16323	14500	8479	6021	1377	1500	5485	16480	8243	652	5774	240000	93400	64540	19380	75616
60 R.	TA 20436			1208	5777	16323	14500	8479	6021	1354	1500	5485	16457	8276	628	5774	240000	93400	64540	19380	75616
75 R.	TA 20484	425	1 IN 6 1/2	635	4320	11560	9597	5317	4280	1027	840	4115	11672	5449	462	4105	119610	13240	64200	13540	52224
60 R.	TA 20442			635	4320	11560	9597	5318	4279	1010	840	4115	11655	5176	446	4103	119510	13250	64200	13530	52224
75 R.	TA 20480	425	1 IN 12	1208	5777	16323	13520	7549	6021	1377	1500	5485	16480	7313	652	5774	240000	93400	64540	19380	73156

**MAIN DIMENSIONS FOR SCISSORS CROSSOVERS**  
**4420<sup>mm</sup> TRACK CENTRES WITH CURVED SWITCHES M.G.**



DIMENSIONS TO ACTUAL TOE OF SWITCHES/NOSE OF CROSSINGS.



**MAIN DIMENSIONS FOR SCISSORS CROSSOVERS**  
**4420<sup>mm</sup> AND 4265<sup>mm</sup> TRACK CENTRES WITH PARTLY CURVED SWITCHES M.G.**

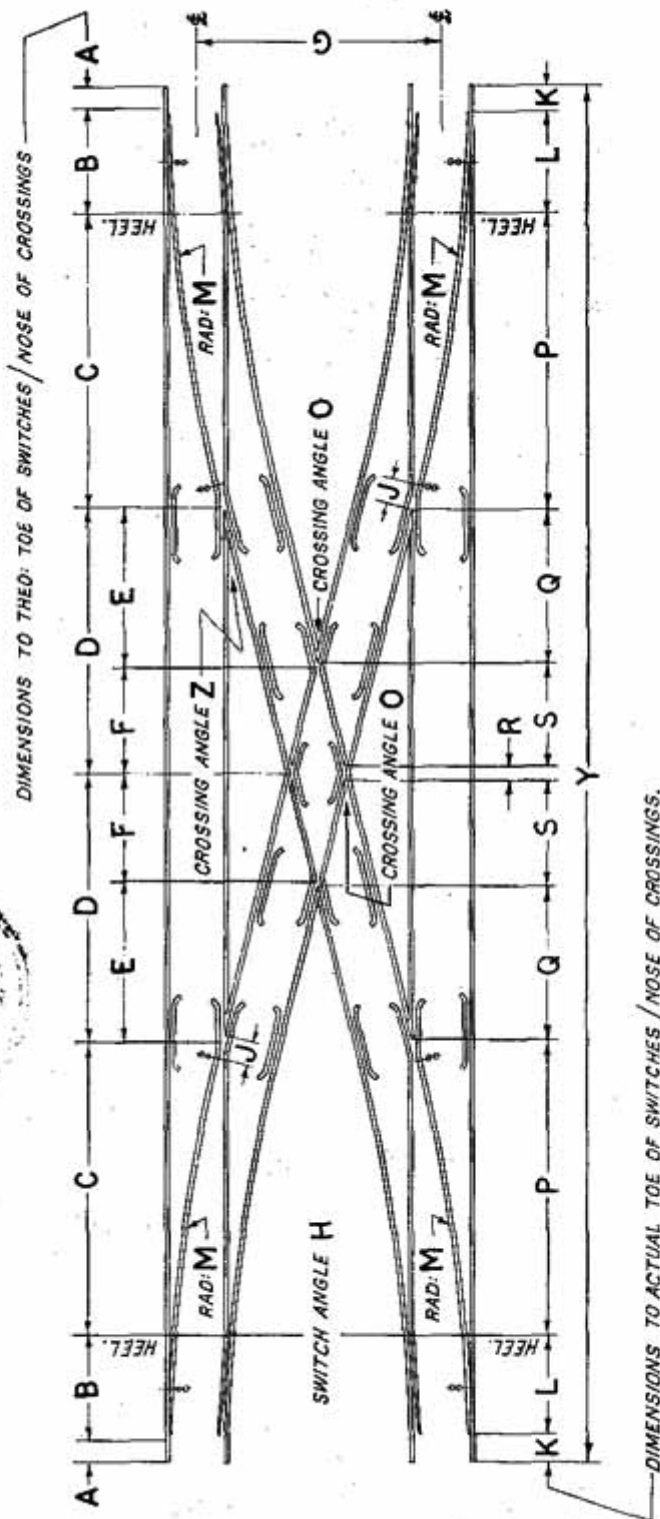


TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRG:NR	CROSSING	TRACK CENTRES	DIMENSIONS (mm)																	
				A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
75 R.	TA 20486	1 IN 12	4420	656	7544	15108	14500	8479	6021	1377	1500	6700	15265	8243	652	5774	258300	9-31-38	445430	2427	75616
75 R.	TA 20487	1 IN 12	4265	656	7544	15106	13570	7549	6021	1377	1500	6700	15265	7313	652	5774	258300	9-31-38	445430	2427	75616



# MAIN DIMENSIONS FOR SCISSORS CROSSOVERS

3810 mm TRACK CENTRES M.G.

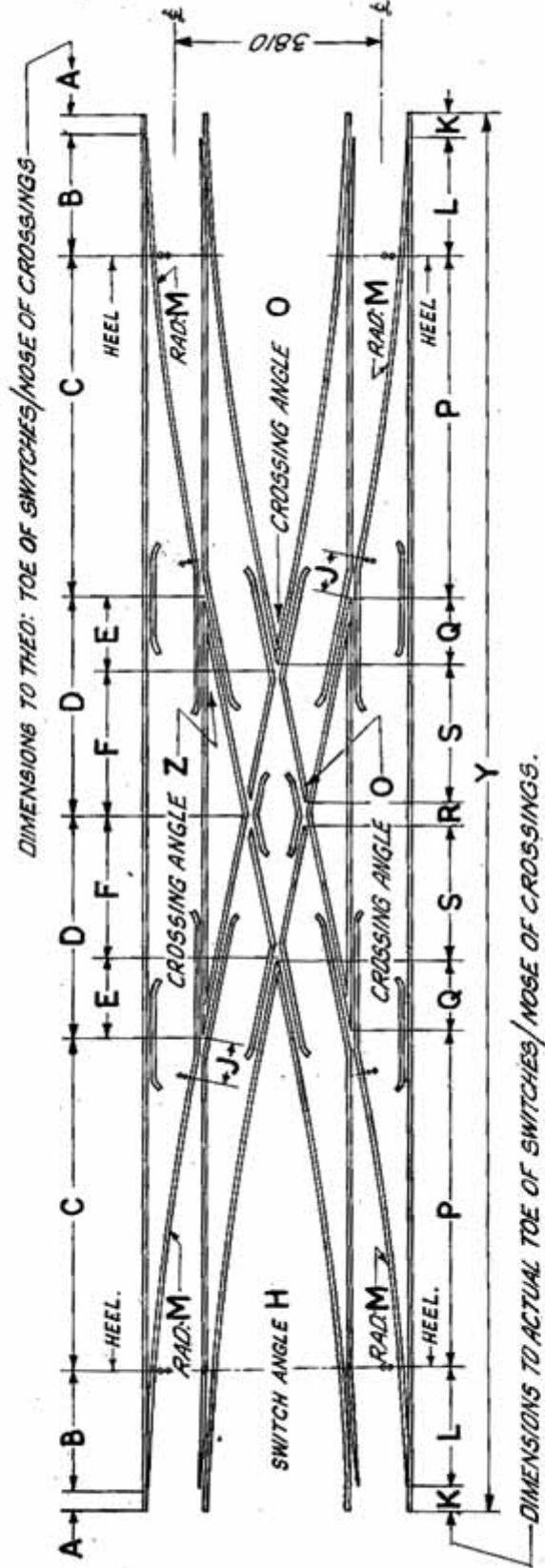
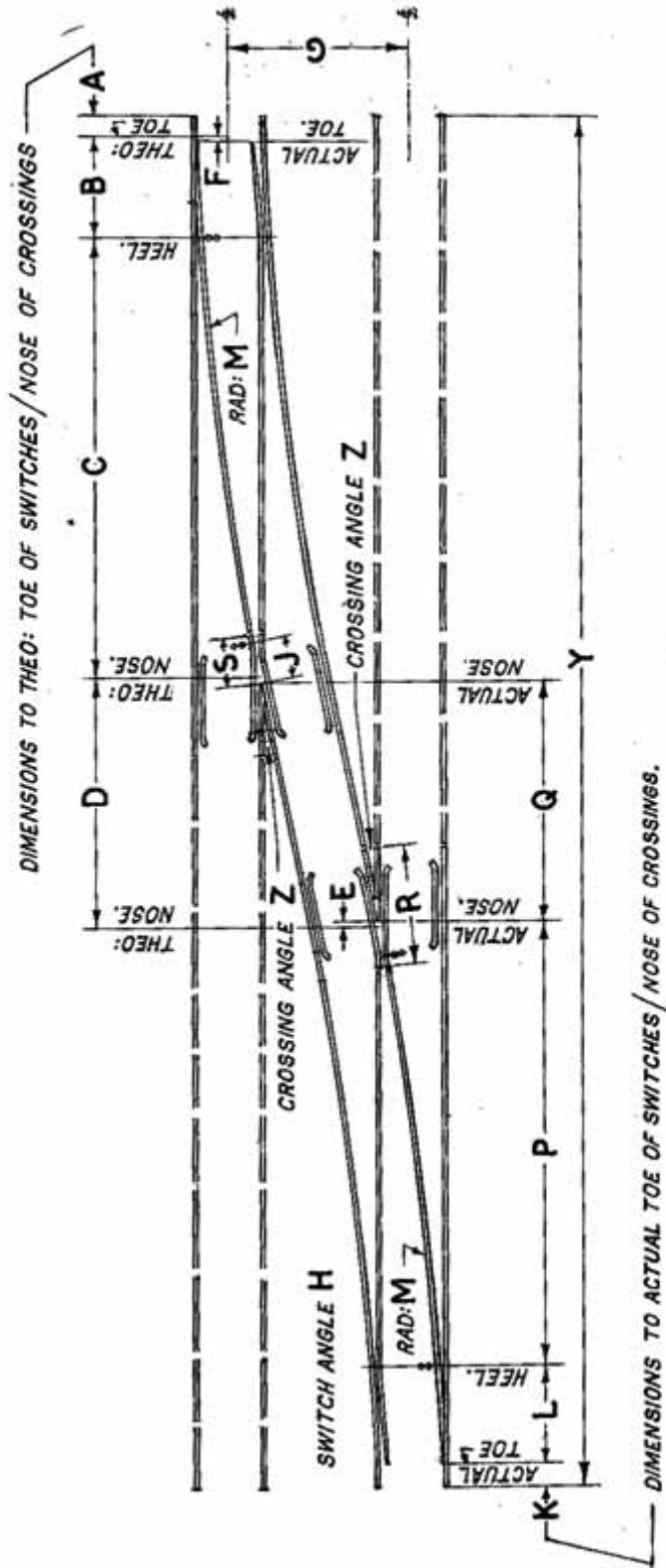


TABLE OF MAIN DIMENSIONS.

RAIL SECTION	ASSEMBLY DRG-NR	CROSSING	DIMENSIONS (in in)																	
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	O	Z	H	Y
60R.	TA 20443	1 in 8 1/2	635	4320	11560	7663	3384	4279	1010	840	4115	11655	3242	446	4103	119610	132510	64235	13530	48356



**MAIN DIMENSIONS FOR L.H. CROSSOVERS**  
**4725 mm AND 4265 mm TRACK CENTRES B.G.**

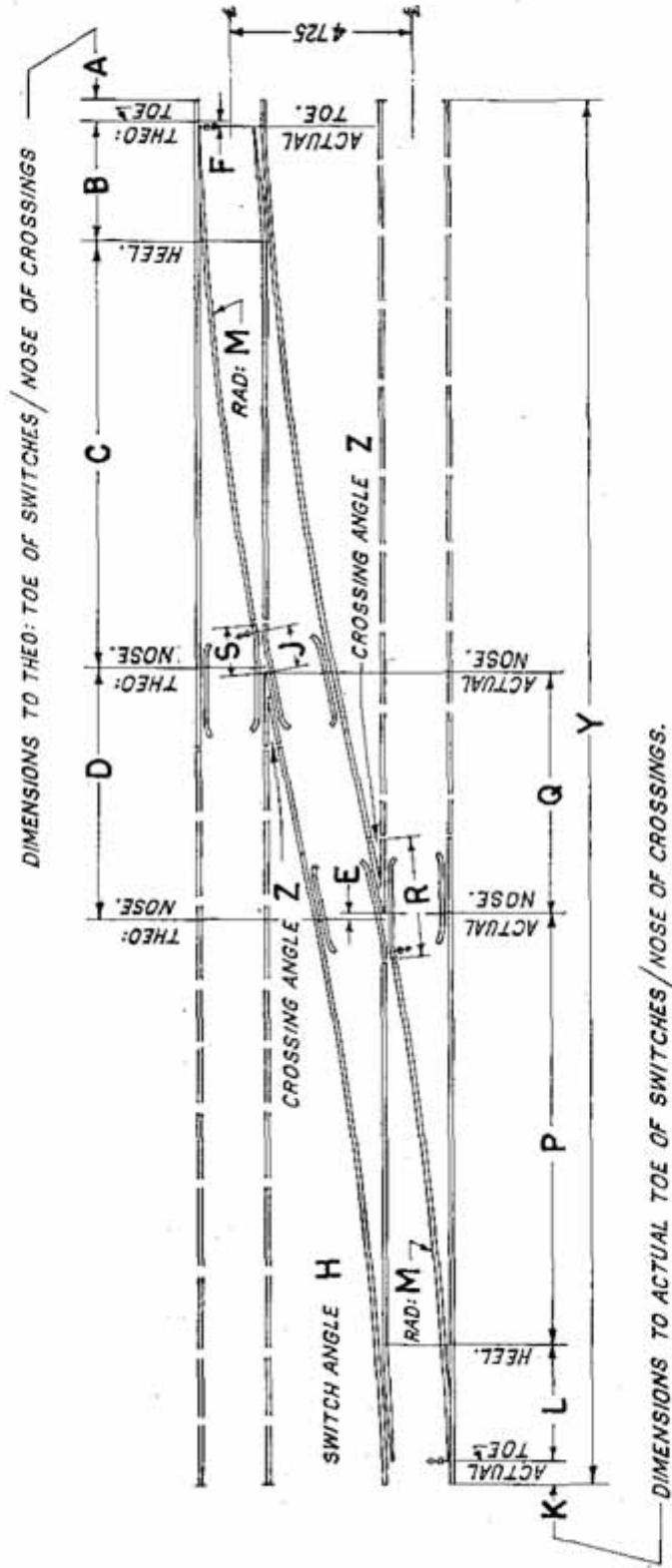


DIMENSIONS TO ACTUAL TOE OF SWITCHES / NOSE OF CROSSINGS.

TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRAWING NO	CROSSING	TRACK CENTRES G	DIMENSIONS (mm)																
				A	B	C	D	E	F	J	K	L	P	Q	R	S	M	Z	H	Y
52 kg 90 R.	TA 20826	1/18 0°	4725	615	4950	20730	11572	132	225	996	840	4725	20862	11308	4800	1815	222360	6'42'35"	34'27"	64'62"
	TA 20820			615	4950	20730	11572	118	225	982	840	4725	20848	11336	4800	1815	222360	6'42'35"	34'27"	64'62"
52 kg 90 R.	TA 20824	1/12	4265	1176	6724	29200	16406	186	324	1418	1500	6400	29386	16034	5970	2325	442120	4'45'48"	1'8'0"	90'60"
	TA 20818			1176	6724	29200	16408	167	324	1399	1500	6400	29367	16072	5970	2325	442120	4'45'48"	1'8'0"	90'60"
52 kg 90 R.	TA 20827	1/18 0°	4265	615	4950	20730	7662	132	225	996	840	4725	20862	7398	4800	1815	222360	6'42'35"	34'27"	60'252"
	TA 20821			615	4950	20730	7662	118	225	982	840	4725	20848	7426	4800	1815	222360	6'42'35"	34'27"	60'252"
52 kg 90 R.	TA 20825	1/12	4265	1176	6724	29200	10886	186	324	1418	1500	6400	29386	10514	5970	2325	442120	4'45'48"	1'8'0"	85'086"
	TA 20819			1176	6724	29200	10886	167	324	1399	1500	6400	29367	10552	5970	2325	442120	4'45'48"	1'8'0"	85'086"

**MAIN DIMENSIONS FOR L.H. CROSSOVERS**  
**4725 mm TRACK CENTRES WITH CURVED SWITCHES B. G.**

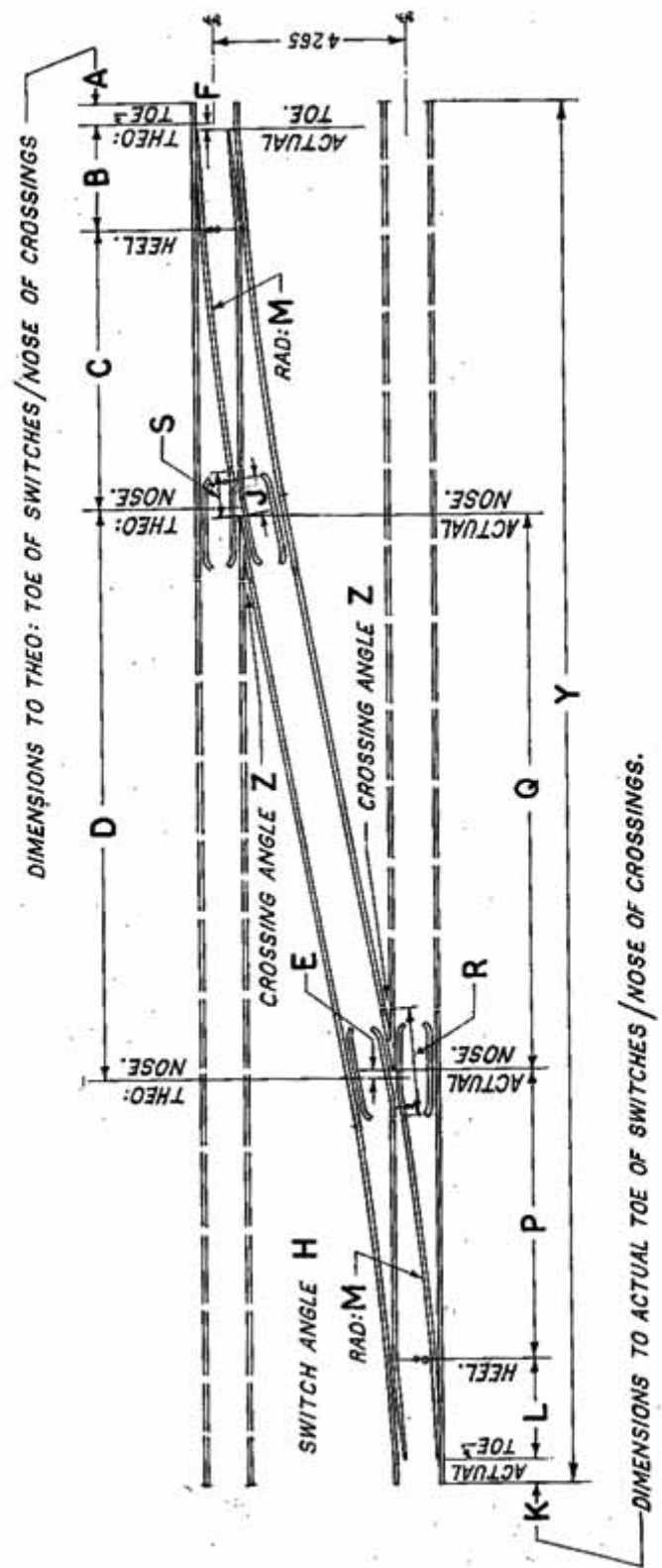


DIMENSIONS TO ACTUAL TOE OF SWITCHES / NOSE OF CROSSINGS.

**TABLE OF MAIN DIMENSIONS**

RAIL SECTION	ASSEMBLY DRG. NR.	CROSSING	D I M E N S I O N S (mm)																
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	Z	H	Y
52 kg	TA 20837	1 / IN 81	1065	6835	18395	11572	132	435	896	1500	6400	18527	11308	4800	1815	232320	6°-42'-35"	0°-47'-27"	64162
	TA 20841		1065	6835	18395	11572	118	435	982	1500	6400	18513	11336	4800	1815	232320	6°-42'-35"	0°-47'-27"	64162
52 kg	TA 20838	1 / IN 12	752	8478	27870	16406	186	748	1418	1500	7730	28056	16034	5970	2325	458120	4°-45'-49"	0°-27'-35"	90606
	TA 20842		752	8478	27870	16406	167	748	1399	1500	7750	28037	16072	5970	2325	458120	4°-45'-49"	0°-27'-35"	90606

**MAIN DIMENSIONS FOR L.H. CROSSOVERS**  
**4265 mm TRACK CENTRES M.G.**

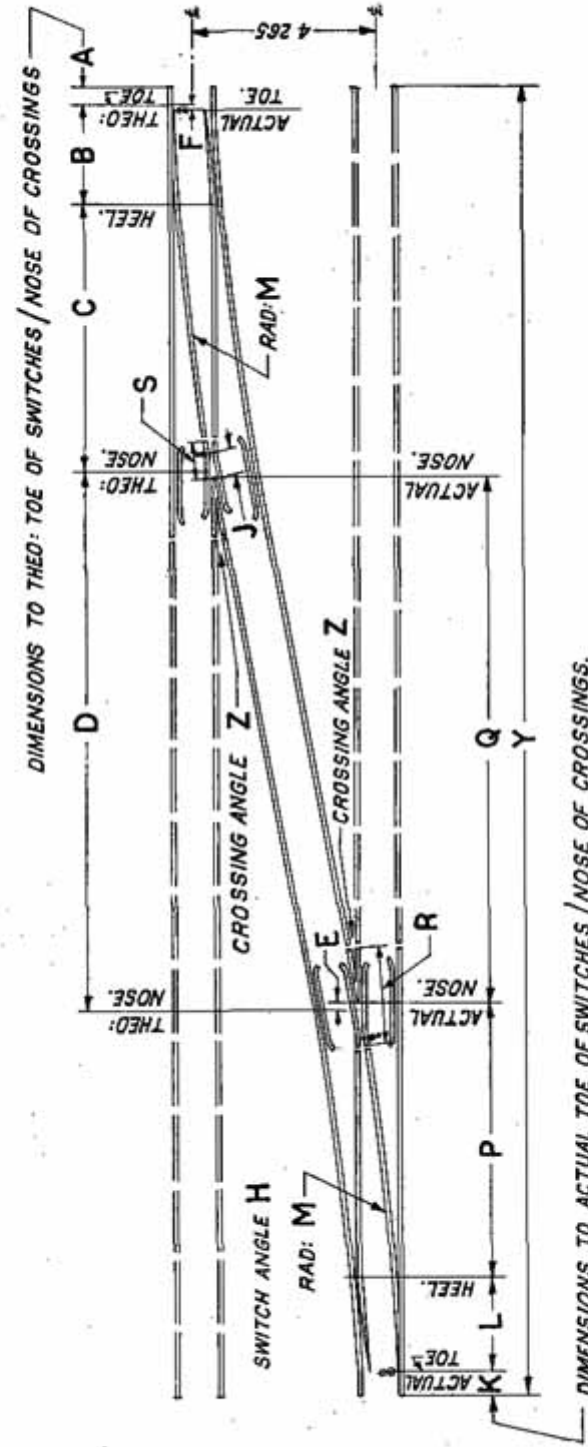


DIMENSIONS TO ACTUAL TOE OF SWITCHES / NOSE OF CROSSINGS.

TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRG. NO.	CROSSING	DIMENSIONS (mm)																
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	Z	H	Y
75 R.	TA 21018	1 IN 12	1208	5777	16323	27138	157	292	1377	1500	5485	16480	26824	4800	1815	240600	4°-45'-48"	1°-9'-39"	73754

**MAIN DIMENSIONS FOR L.H. CROSSOVERS**  
**4265mm TRACK CENTRES WITH CURVED SWITCHES M.G.**



DIMENSIONS TO ACTUAL TOE OF SWITCHES / NOSE OF CROSSINGS.

DIMENSIONS TO THEO: TOE OF SWITCHES / NOSE OF CROSSINGS

TABLE OF MAIN DIMENSIONS

RAIL SECTION	ASSEMBLY DRG. NO.	CROSSING	D I M E N S I O N S <small>(mm)</small>																
			A	B	C	D	E	F	J	K	L	P	Q	R	S	M	Z	H	Y
75 R.	74 21021	1 N 81	794	6206	9515	19194	112	706	1027	1500	5500	9627	18970	4800	1815	130210	6-42'-35"	0'-29'-14"	52224



LENGTH OF RAILS FOR 1 IN 8 1/2 SCISSORS CROSSOVERS

5180<sup>mm</sup> TRACK CENTRES B. G.

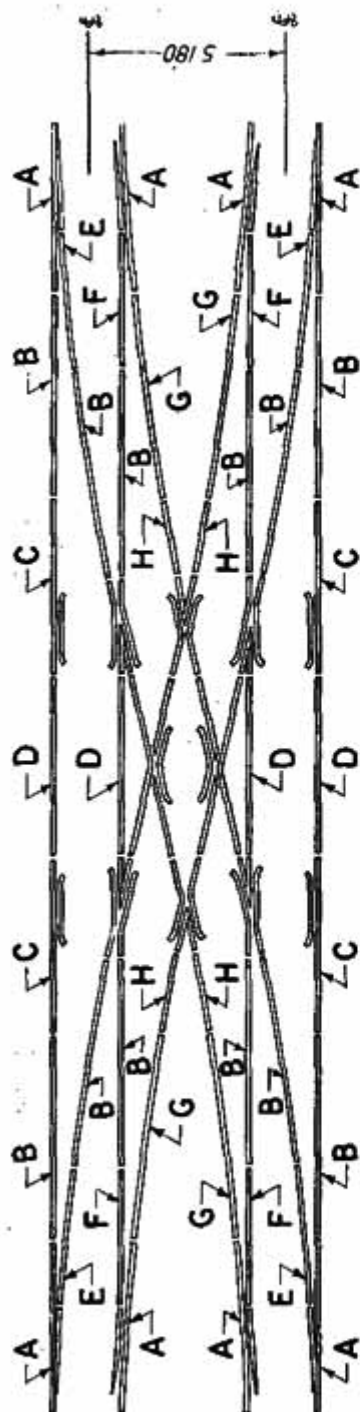


TABLE OF RAIL LENGTHS

RAIL SECTION	ASSEMBLY DRAWING	DIMENSIONS (mm)							
		A	B	C	D	E	F	G	H
52 kg	TA 20190	9000	11000	9405	9184	8097	8032	11000	4626
90R.	TA 20150	9000	11000	9391	9212	8083	8018	11000	4631

LENGTH OF RAILS FOR 1 IN 12 SCISSORS CROSSOVERS  
5180 mm TRACK CENTRES B.G.

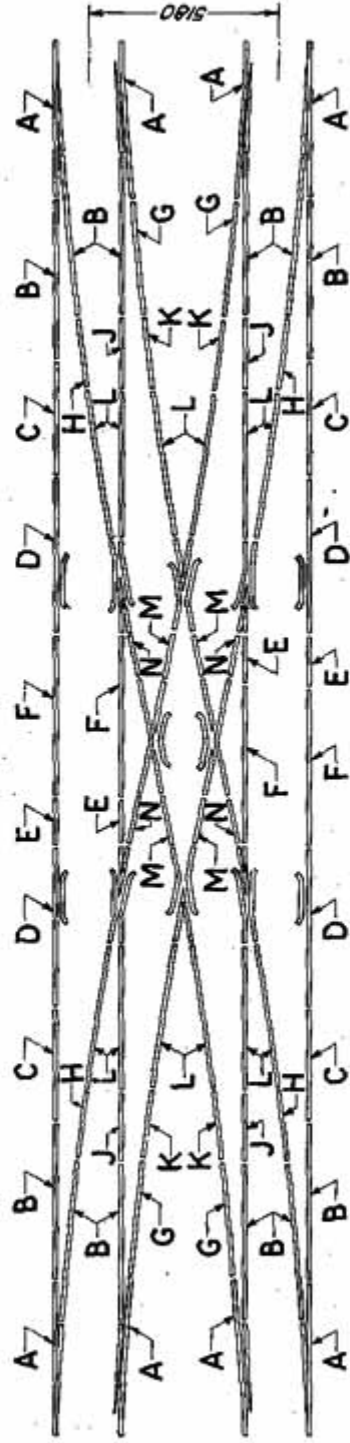


TABLE OF RAIL LENGTHS.

RAIL SECTION	ASSEMBLY DRG: N <sup>o</sup>	DIMENSIONS (in mm)													
		A	B	C	D	E	F	G	H	J	K	L	M	N	
52 kg	TA 20200	11000	11000	7916	11000	3180	11000	9000	4862	4817	4937	10000	3233	3204	
90R.	TA 20163	11000	11000	7897	11000	3218	11000	9000	4843	4798	4947	10000	3242	3242	

LENGTH OF RAILS FOR 1 IN 8½ SCISSORS CROSSOVERS

4725 mm TRACK CENTRES B. G.

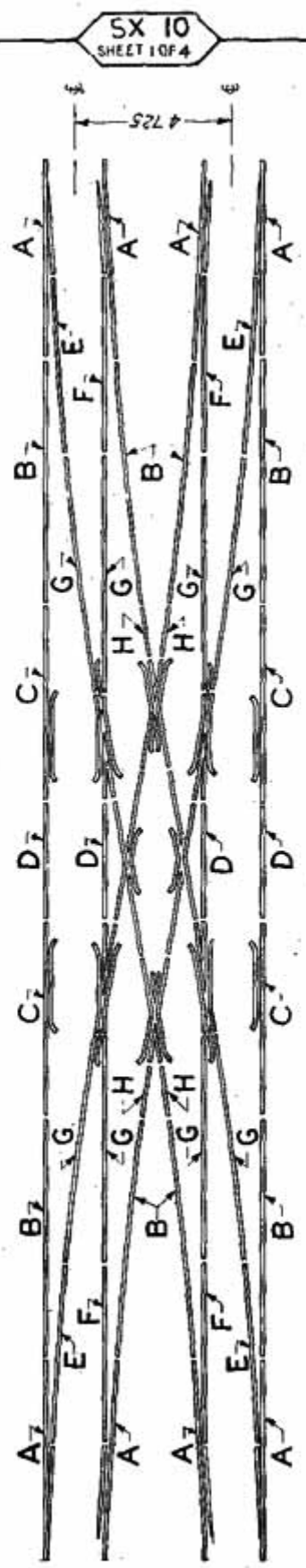


TABLE OF RAIL LENGTHS

RAIL SECTION	ASSEMBLY ORG. NR	D I M E N S I O N S (mm)							
		A	B	C	D	E	F	G	H
52 kg	TH 20186	9000	11000	9405	5316	8097	8032	11000	2680
90 R.	TH 20158	9000	11000	9391	5344	8083	8018	11000	2687

LENGTH OF RAILS FOR 1 IN 8½ SCISSORS CROSSOVERS  
4725 mm TRACK CENTRES WITH CURVED SWITCHES B. G.

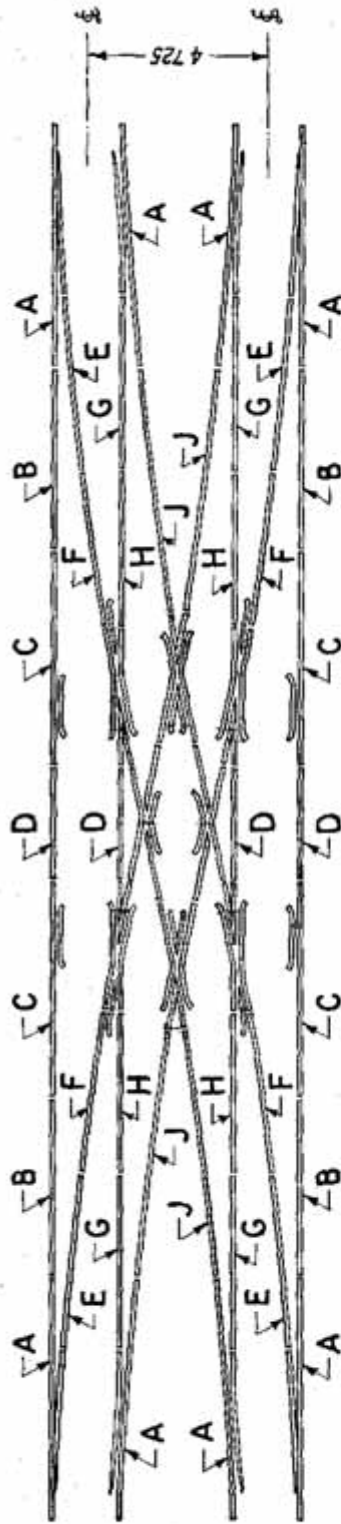
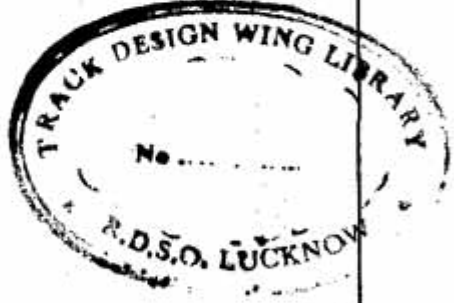


TABLE OF RAIL LENGTHS

RAIL SECTION	ASSEMBLY DRG. NR	D I M E N S I O N S (in mm)									
		A	B	C	D	E	F	G	H	J	
52 kg	7A 20227	11000	8000	10405	5316	8000	7540	8000	7471	11689	
90 R.	7A 20234	11000	9000	9391	5344	7529	8000	7460	8000	11696	





LENGTH OF RAILS FOR 1 IN 12 SCISSORS CROSSOVERS

4725 mm TRACK CENTRES B.G.

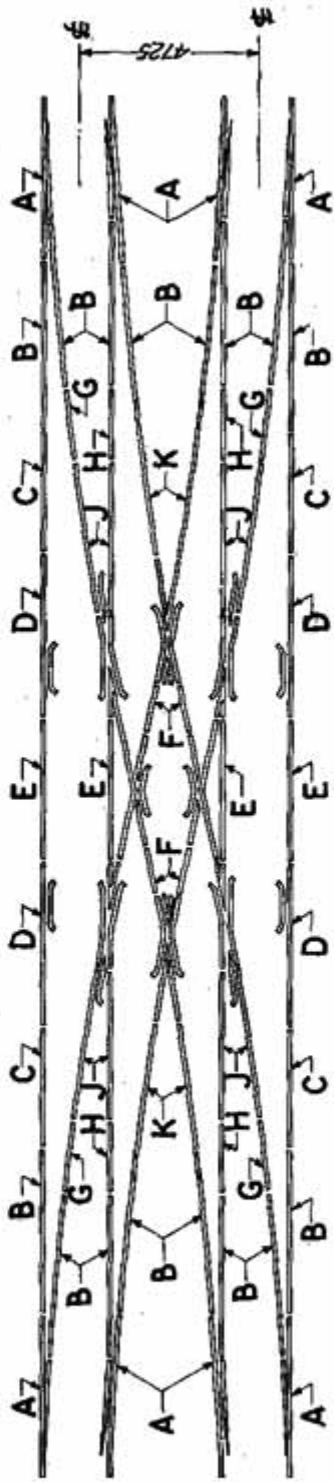


TABLE OF RAIL LENGTHS

RAIL SECTION	ASSEMBLY DRG: No.	DIMENSIONS (in mm)									
		A	B	C	D	E	F	G	H	J	K
52 kg.	TA 20204	11000	11000	7916	11000	8726	3245	4862	4817	10000	10203
90R.	TA 20167	11000	11000	7897	11000	8764	3242	4843	4798	10000	10213