M.R O 1—10,006—28-2-50.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE

Government of Madras

Public Works. DEPARTMENT

G.O. No. / B.P. No.	2538	Press / Mis.	Original
Dated	22-9-	1876. / 195	

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Proceedings of the Madras Government, Public Works Department,
22nd September 1876. *No.* 2,533

No. 375 Read the following Proceedings of the Government of India in the Public Works Department, dated Simla, 24th August 1876, No. 17 R —

No. 376. ORDER THEREON, 22nd September 1876, No 2,538

RAILWAY, No 36.

COMMUNICATED to the Consulting Engineer for Railways for information and guidance.

(True Extract.)

Colonel,
Offg Under Secy. to Govt, P W D.

To the Consulting Engineer for Railways

Exd E G Shunker
Spare Copies

All communications should be addressed to the Secretary

Circular No 17 R.

GOVERNMENT OF INDIA

PUBLIC WORKS DEPARTMENT.

RAILWAY.

Simla, August 24, 1876

Returns of accidents on Indian Railways for 1875.

Read—

Return of the number and nature of accidents and injuries to life and limb, which have occurred on all Railways open for traffic in India during the year, 1875

OBSERVATIONS —The following table shows the total number of accidents connected with the working of the trains on the several Indian Railways during the last six years.—

Year	East Indian	Eastern Bengal	Oudh and Rohilkhand	Punjab and Delhi	Sind	Calcutta and South Eastern State	Nalhati State	Rajputana State	Holkar State	Madras	South Indian	Great Indian Peninsula	Bombay, Baroda and Central India	Punjab Northern State	Tirhut State	Total.
1870	147	8	14	97	28	4	9			74	3	313	75			772
1871	151	2	4	87	51	1				68	2	146	36			548
1872	691	8	26	114	49	5	2			60	4	150	44			1,153
1873	216	3	36	76	41	2	1	14		64	19	111	38			621
1874	267	2	55	57	44	37	6	43	2	92	24	106	32			767
1875	157	9	123	34	55	17	6	94	81	94	21	125	42	9	1	868

From this comparison it appears that the largest number of accidents to trains, &c, on all Railways during the period referred to, excepting those in 1872, occurred during the last year.

As already explained in Circulars Nos 16 R of 10th June 1874 and 8 R of 5th June 1875, the large increase in 1872 was due to the inclusion of every accident of a minor character in the returns of the East Indian Railway at that time

The increases during 1875 occurred chiefly on the Oudh and Rohilkhand, Rajputana State and Holkar State Railways, and were due in some measure to the opening of new lengths of line, and the consequent increase of train mileage

On the Oudh and Rohilkhand Railway the mean mileage open was 542 miles in 1875 against 524 miles in 1874, and the number of accidents increased from 55 to 123. On the Rajputana State Railway the open mileage in 1875 was 344¼ miles against 173 miles in 1874 The train mileage increased from 219,971 to 517,475. The accidents on this line increased from 43 to 94.

P. W D No. 193, G. C, B Press—26-8-76—369.

The Holkar State Railway commenced working in 1874, and there were only two accidents during that year on a length of 36 miles But in 1875 the number rose to 81 with an increased length of 20 miles, 45 out of the 81 accidents on this Railway, were caused by engines or vehicles getting off the line. In a few cases only was any damage sustained by stock or road. There were 15 cases of fire.

It seems almost certain that the accidents were not reported in 1874 so faithfully as in 1875 In the latter year every petty accident appears (see Table I) to have been reported, as was done in 1872 on the East Indian Railway, (see Circular just quoted), and derailments on temporary roads and on triangles used in substitution of turntables have also been reported as accidents

It will be observed in the table given below that on the East Indian Railway, with its large traffic, only one case, and that a serious one, of getting off the line is reported in 1875.

The conclusion seems unavoidable that cases in which vehicles or engines left the rails and no injury resulted, were not reported on that line and probably on others.

The total casualties to passengers, Railway servants, and others from all causes were—

Years.	Killed.	Injured	Total.
1871			
1872	177	204	381
1873	211	224	435
1874	166	272	438
1875	221	278	499
	208	267	475

The following table shows the number and the nature of the accidents to trains, &c, which occurred on each Railway during 1875 —

Train miles per mile open.	Mean mileage open	Names of Railways	Classification of accidents					Total.
			Collisions.	Getting off the line	Fire	Running over cattle	Other causes	
3,958	1,503½	East Indian ..	4	1	8	131	13	157
3,279	158¼	Eastern Bengal		2		7		9
1,855	542	Oudh and Rohilkhand	17	32	8	51	15	123
2,011	553¾	Sind, Punjab and Delhi — Punjab Section	7	7	6	5	9	34
2,504	109¾	Sind Section						
1,419	28	Calcutta and South-Eastern (State)		...	10	22	23	55
1,119	27¼	Nalhati („)		...	..	17	...	17
1,503	344¼	Rajputana („)	..		1	4	1	6
2,419	56	Holkar („)	4	20	2	31	37	94
1,068	44	Punjab Northern (State)	1	45	15	9	11	81
958	26	Tirhut (State)		1	2	6		9
2,471	856¾	Madras		1				1
1,531	218¼	South Indian ..	6	7	34	41	6	94
	1,420	Great Indian Peninsula	1		1	13	6	21
2,499	450	Bombay, Baroda and Central India	12	31	17	36	29	125
			5	3	1	32	1	42
	6,337¾	Total	57	150	105	405	151	868

Collisions

The total number of collisions on all Railways were 57 compared with 68 in 1874, 2 were caused by defects in rolling stock or road and works, 14 are attributed to the Locomotive Department, 3 to guards, 13 to the Traffic Department, 1 to defect in working signals; 12 to carelessness of pointsmen; 12 to workmen employed on the line, 1 was caused by a truck placed on the main road by some malicious persons, and 3 were either unavoidable or not accounted for.

The total casualties were 11 injured compared with 6 killed and 56 injured in the previous year

East Indian Railway —Four during 1875 against 36 in previous year, 3 occurred to goods trains, and 1 to the engine of a coal train, 1 was caused by the negligence of a pointsman, 2 by the carelessness of the Locomotive and Traffic Departments, and 1 by a heavy storm which set in motion a local passenger train causing it to run out of the siding into the main road while a goods train was entering the station

These accidents resulted in some cases in considerable damage to the rolling stock The casualties were 2 Railway servants injured

Oudh and Rohilkhand Railway —Seventeen accidents occurred against 5 in the previous year, 10 are attributed to the faults of pointsmen and drivers; 4 to workmen employed on the line, 2 to the Traffic Department, and 1 to the carelessness of a guard. In 6 cases lorries were run over There was 1 Railway servant injured.

Sind, Punjab and Delhi Railway—Punjab Section —Seven cases One attributed to defect in rolling stock, 3, in which trollies were run over, to carelessness of workmen; 1 to the fault of an engine-driver, and 2 to carelessness in shunting No one was injured

Rajputana State Railway —Of 4 cases 2 were caused by the fault of the Locomotive Department, and 2 by the Traffic Department, the damages were slight In one instance the Station Master was punished

Holkar State Railway —There was only 1 case of collision, and that was between an engine and its own train. No casualties

Madras Railway —Six collisions occurred against 1 in the previous year; 3 were caused by men employed in running trollies, &c, 1 by a truck placed on the line by some malicious persons, and 2 were from causes unknown There were no casualties.

South Indian Railway —One accident occurred in which 4 trucks were damaged and several axle-boxes broken, due to defect in way and works No one was injured

Great Indian Peninsula Railway —Of 12 collisions, 1 occurred between a passenger and a goods train at Kasara, causing slight injury to 2 passengers Another took place between a down-goods and an up-goods train at Shahapur, in which the engines of both trains were damaged, 4 wagons smashed and 2 firemen and a guard injured In one case a material lorry was run over through the fault of an Inspector A collision between an engine and some Ghât brakes took place at Lonauli through the fault of the signalman at that place At Chinch Bunder there was a collision between a Great Indian Peninsula Railway Company's goods train and a goods train of the Bombay, Baroda and Central India Railway. The engine of the former went off the line, and the front brake-van was smashed. The driver of the Great Indian Peninsula Railway Company's train was to blame

Bombay, Baroda and Central India Railway.—There were 5 accidents, 2 are attributed to the fault of the Locomotive Department, 2 to the Traffic Department, and 1 to the Permanent-way Department. The casualties were 3 Railway servants injured

Getting off the Line.

The total number of these accidents amounted to 150, being 47 more than in the previous year. Eight were either unavoidable or not accounted for, 14 were due to defects in rolling stock, 56 to defects in road and works; 5

to the malicious acts of persons not under the control of the Railway Management, and the rest to the carelessness of the Locomotive Department, the station staff and servants employed on the line

East Indian Railway —Only 1 case of engine and vehicles leaving the rails occurred, but the accident was of a serious nature, resulting in the death of 11 persons and in injury to 15 others It is supposed to have been caused by the engine running over the cow-catcher which had worked loose and dropped on the rails The train was a down-mail from Jabalpur, and was going at high speed, when about 3 miles from Katni the engine left the rails and the carriages overrode each other and became a complete wreck, except 4 in the rear

The line for a distance of 50 or 60 yards was completely broken up

Oudh and Rohilkhand Railway.—Thirty-two cases occurred; 2 from causes unknown, 1 from defect in rolling stock; 5 from defects in road and works, 8 are attributed to the faults of the Locomotive Department, 1 to a guard, 4 to the Traffic Department; 11 to the negligence of pointsmen, and 1 to the malicious acts of persons unconnected with the service. The rolling stock and permanent-way were in some cases more or less damaged The casualties were 3 Railway servants killed and 2 injured.

Sind, Punjab and Delhi Railway—Punjab Section —Seven cases; 5 were caused by the negligence of pointsmen, and 1 by defect in rolling stock, the cause of 1 is unknown The damages were slight, and no one was injured

Rajputana State Railway —Twenty accidents occurred; 2 from causes unavoidable or unknown, 3 from defects in road and works, 4 were due to the faults of the Locomotive Department, 1 to the Traffic Department, and 1 to a pointsman In one case a wagon derailed and was dragged for a distance of 6 miles when it again got on the line at a crossing In another case the engine of a goods train with 11 wagons ran off the road at Jillana Bridge. The train was not stopped at the signal as directed, and ran on to the bridge where a rail was out. Several wagons were broken up, and the driver was severely injured There were no other casualties

Holkar State Railway —There were 45 cases against 1 only in the previous year Of this number no less than 37 were caused by defects in road and works Of the remaining accidents, 4 are attributed to the faults of the Locomotive Department; 1 to Traffic; 2 to pointsmen, and 1 to workmen employed on the line The cause of 1 is unknown. But although the number of accidents was large, no casualties occurred

In a few cases only was any damage sustained by either road or stock.

Many of these cases occurred with engines of class C which, it has been found here and elsewhere, cannot be got round 100 metre curves without risk of derailment.

Punjab Northern State Railway —There was only 1 accident, the cause of which is unknown.

Tirhut State Railway —One accident occurred in which a special train got off the rails at Darbhangha from the negligence of the driver. No damage was done

Madras Railway —Seven cases occurred, of which 2 are attributed to defects in rolling stock and in road and works, and the rest to the faults of the Railway servants There were no casualties

Great Indian Peninsula Railway —There were 31 accidents, 7 of which were due to faults of the station staff, 12 to defects in rolling stock and in road and works, 2 to carelessness of the Locomotive Department, 1 to the fault of a guard, 6 to pointsmen; 2 to the malicious acts of persons not under the control of the Company, and 1 to causes unknown One passenger was injured

Bombay, Baroda and Central India Railway —Of 3 cases, 1 resulted from carelessness on the part of the station staff, 1 from the negligence of a pointsman, and 1 from defect in rolling stock. There were no casualties

Fire.

The total number of accidents under this head increased from 92 in 1874 to 105 in 1875 On the East Indian Railway there was a decrease of 12, a decrease of 4 on the Oudh and Rohilkhand Railway, and of 13 on the Punjab Railway The number on the Holkar State Railway was 15, on the Rajputana 2; on the South Indian 1, and on the Bombay, Baroda and Central India 1, against *nil* on all these lines in the previous year On the Madras Railway there was an increase of 15, and on the Great Indian Peninsula an increase of 6 The only Railways which were free from such accidents were the Eastern Bengal, Calcutta and South-Eastern State, and the Tirhut State Railways

Over 89 per cent of the total number of these accidents have been classified under the head of "Defects in rolling stock," by which must be understood, it is presumed, defective means of arresting the exit of sparks from the engines A really effective spark-arrester with wood-fuel is still a desideratum. Two cases were due to spontaneous combustion, 7 are unaccounted for, and 2 are attributed to the faults of the Locomotive and Traffic Departments.

The following table shows the distribution of the accidents and how they were caused —

Names of Railways	Number of cases	Caused by		Spontaneous combustion	Unavoidable or causes not known	Remarks
		Sparks from engines	Carelessness of Railway servants			
East Indian	8	8				Engines not fitted with spark-arresters
Oudh and Rohilkhand	8	7			1	Some of the engines on these lines were fitted with lengthened ash pans and all with spark arresters
Sind, Punjab and Delhi, Punjab Section	6	6				
Sind, Punjab and Delhi, Sind Section	10	10				
Nalhati State	1	1				Not stated whether spark-arresters were in use
Rajputana State	2	1	1			Spark arresters were in use
Holkar State	15	15				Wood fuel It does not appear whether spark arresters were in use.
Punjab Northern State	2	2				Wood fuel, spark arresters were used.
Madras	34	31	1		2	Wood fuel was used in 30 cases, and coal in 4, spark arresters were fitted to engines using wood
South Indian	1	1				Wood fuel was used Spark-arrester was defective
Great Indian Peninsula	17	12	..	1	4	Engines fitted with spark-arresters.
Bombay, Baroda and Central India	1			1		
Eastern Bengal						
Calcutta and South Eastern State						
Tirhut State						

Running over cattle.

These accidents numbered 405 against 407 in 1874. Of the total number, 44 were due to unavoidable or unknown causes; 346 to defective state of the fences, and 11 to faults of gatemen and police.

East Indian Railway —Out of 131 cases, 63 occurred to passenger trains. With the exception of a few instances, it is not stated whether cow-catchers were used In one case an elephant which had broken loose and strayed on to the line was run over by a goods train, but fortunately no damage was done either to stock or way In some places the animals got on to the line in consequence of the fencing being too low, but it is proposed to put a 2-wire fence as soon as wire is received. In 44 cases the fence is reported to have been in good order

Oudh and Rohilkhand Railway —There were 51 cases. In all the instances, the engines were fitted with cow-catchers, but in 8 only the animals were thrown off the line

Sind, Punjab and Delhi Railway—Punjab Section —Five accidents only against 4 in the previous year Cow-catchers are not in use on this line

Sind, Punjab and Delhi Railway—Sind Section —In 18, out of 22 cases the animals were thrown off the line. In four instances, slight damages were done to the engines

Calcutta and South-Eastern State Railway —There were 17 cases. Cow-catchers are not in use on this line, and the line is fenced only partially.

Nalhati State Railway.—Four accidents. There is no fencing, and cow-catchers are not in use.

Rajputana State Railway —Out of 31, the animals were thrown off the line in six instances. In one case, the engine was disabled, and in two others, some of the vehicles left the metals, and were more or less damaged No casualties

Holkar State Railway —There occurred 9 cases, in one of which, two wagons and a brake-van were derailed, and in 2 others, the animals were thrown off the line Cow-catchers are in use.

Punjab Northern State Railway —In 2 out of 6 cases, the cow-catchers were effective in removing the animals from the line.

Madras Railway —The cow-catchers are not in use on the Railways in the Madras Presidency, but on the Madras Railway 118 engines are being provided with them. It is singular that on this line out of 41 accidents from running over cattle, 22 occurred to mail trains only, besides 4 to mixed and 1 to a slow passenger In one instance, two vehicles left the rails, and were slightly damaged Slight damage was also done to the permanent-way, but no injury to human life.

Great Indian Peninsula Railway —Of 36 cases, 31 were due to the defective state of the fencing; 2 to faults of gatemen; 2 to faults of cartmen not under the control of the Company, and 1 to a crossing being unprotected. The latter took place on the Nizam's Railway.

Bombay, Baroda and Central India Railway —Twenty-six accidents were caused by defective fence; 5 by the negligence of gatemen, and 1 by the fault of the Traffic staff.

Other causes.

The accidents under this head numbered 151, of which 53 occurred to passenger and mixed trains. The casualties were 1 killed and 4 injured

Of the total number of cases, 59 were due to defective rolling-stock, 25 to faults of the Traffic staff, 16 to neglect of gate-keepers; 25 to acts of malicious persons, and the remainder to other causes.

East Indian Railway —In 9 out of 13 cases, the trains ran over chairs, stones, &c, placed on the rails by malicious persons, but no serious damage was done to either stock or way In 3 of these cases the offenders were found out and punished

In one instance the axle of a ballast wagon gave way, derailing the wagon, and in another a first class carriage, while being shunted at Ghaziabad, came in contact with a pillar of the station covered-way and was damaged.

Oudh and Rohilkhand Railway —All the miscellaneous accidents, with the exception of one, were caused by the carelessness of the Company's servants In four instances level-crossing gates were run through, and in 9 cases, the locked points

Sind, Punjab and Delhi Railway—Punjab Section —Of 9 accidents 3 were due to defective rolling stock, 4 to faults of the staff, and 2 to attempts of malicious persons to upset trains.

Sind, Punjab and Delhi Railway—Sind Section —Nineteen accidents out of a total of 23 were caused by the bursting of tubes and crown-plates of engines; 3 to other defects in the engines, and 1 to the carelessness of a gateman The latter was attended with a casualty of 1 killed The boiler-plates which burst on this line are under test.

Rajputana State Railway —The couplings and safety chains failed in 13 instances, and in 9 cases the trains passed over obstructions placed on the line by mischievous persons Four accidents were caused by faults of gatemen, and 7 by carelessness of the Traffic staff. The system of coupling is undoubtedly defective and has recently been reported on specially.

Holkar State Railway —In 5 cases the couplings parted and in 1 the axle of a wagon shifted Five other accidents occurred from miscellaneous causes, but there were no serious results

Madras Railway —On 3 occasions, gates were run through, and in another a mixed train ran over gates left on the line by workmen

South Indian Railway —Once a mixed train ran over an iron chair which had been fastened to a rail by some evil-disposed persons, on another occasion a special train passed through a level-crossing gate owing to the fault of the station staff The remaining 4 accidents resulted from defects in rolling stock.

Great Indian Peninsula Railway —Two attempts were made to upset the trains. In one of these cases the life-guard of the engine of a mail train was broken. Gates were run through in 4 instances, in one of which a gateman was injured. Once a pointsman fell asleep and a goods train ran through the locked points In several cases the axles failed, sometimes derailing vehicles and causing damage to stock and way.

On the Nizam's State Railway trains ran on two occasions over bolts and stones placed on the line by malicious persons Once a passenger train ran over a bullock cart at a level crossing, which was unprotected, smashing both the bullock and cart and injuring the cart-man

The number of land-slips on the Great Indian Peninsula Railway increased from 12 in 1873 and 3 in 1874 to 14 in 1875. Of these 7 occurred on the Bhore Ghât and 3 on the Thull Ghât On one occasion 1,000 cubic yards of earth and stones fell down on the Bhore Ghât incline blocking both lines, and on another about 40 tons of rock slipped from the bottom of the retaining wall at mileage 76 on the same Ghât In one instance a cooly while removing the slip was slightly hurt Two brake-vans of a mail train were damaged on the Bhore Ghât by the falling of three stones weighing from 10 to 15 lbs On the Thull Ghât an Inspector's lorry ran into a heap of stones which had fallen, thereby injuring 5 men.

During the rains the Great Indian Peninsula line was flooded in several places. On one occasion there occurred serious breaks on the North-East line at intervals over nearly 20 miles between Kareli and Chhindwara, several small bridges being damaged, and telegraph posts, ballast, &c, completely washed away The embankments were also destroyed in other places, and in one instance, the arch of an abutment fell down, and in another a culvert was carried away. It is satisfactory to notice that no accident occurred to trains from these circumstances

Bombay, Baroda and Central India Railway —One accident only. It consisted of 5 vehicles of a local passenger train having been slightly damaged by a bale of cotton projecting from a passing wagon

Accidents and Injuries to passengers

The following table exhibits the numbers of passengers killed and injured as compared with those of four previous years —

	Killed.	Injured.	Total.
1871	9	29	38
1872	9	58	67
1873	13	83	96
1874	13	70	83
1875	18	51	69

The numbers of passengers killed and injured from causes beyond their own control were 9 and 23, respectively, making a total of 32, of which 25 were due to accidents to trains and 7 to other causes. It was in one accident only that 9 persons were killed and 13 injured. This accident which occurred on the Jabalpur line of the East Indian Railway has already been noticed in a previous paragraph.

The accidents happening to passengers from their own misconduct or want of caution, were 9 killed and 28 injured, of which 6 were killed and 13 injured on the East Indian Railway alone Almost the whole of these accidents consisted of passengers falling in getting in or out of carriages and jumping out of trains in motion In one instance on the East Indian Railway a native life-prisoner jumped out of a mail train and died from the injuries received It is said that the carriage in which he was travelling was not provided with prison fittings.

The numbers of persons killed and injured per million of passengers carried were—

	From causes beyond their own control.	From misconduct or want of caution
During 1871	0 47	1 53
„ 1872	1 9	1 4
„ 1873	2 54	1 74
„ 1874	1 79	1 59
„ 1875	1 2	1 39

Accidents to Railway servants.

The following figures show the accidents to Railway servants throughout India —

From causes beyond their own control

	Killed	Injured
(1) Employed on trains in motion	6	21
(2) Ditto in stations or on line	2	4
	—	—
	8	25
From incaution or misconduct.	—	—
(1) Employed on trains in motion	18	46
(2) Ditto in stations or on line	75	129
	—	—
	93	175
	—	—
Total ..	101	200
	—	—

The distribution of the casualties to servants from causes beyond their own control is—

	Killed.	Injured
East Indian Railway	3	3
Eastern Bengal Railway	0	1
Oudh and Rohilkhand Railway	4	4
Madras Railway	0	2
Great Indian Peninsula Railway	1	12
Bombay, Baroda and Central India Railway	0	3
	—	—
	8	25
	—	—

Of the 93 servants killed and 175 injured from their own misconduct or want of caution, 12 were killed and 34 injured in attempting to get upon or off, or falling from, engines and carriages in motion, 51

killed and 25 injured while incautiously standing or walking upon the line; 5 killed and 12 injured while coupling or uncoupling carriages and wagons; and 9 killed and 22 injured while engaged in shunting trains.

The inclusion, in the returns of some of the Railways, of accidents to servants employed in workshops and on works involving no risk from the working of trains, has helped in some measure to increase the number of casualties under this head The classes of servants to be included in the accident returns are shown in Public Works Department Resolutions Nos 7 R, dated 2nd March 1874, and 17 R, dated 12th June 1874.

The following table exhibits the casualties to Railway servants, train-mileages, &c, for five consecutive years.—

Year	Killed and injured			Train mileage	Reported number of servants employed
	From causes beyond control.	From misconduct or incaution.	Total		
1871	24	222	246	13,844,840	74,650
1872 ..	47	214	261	14,525,990	80,258
1873 ...	30	206	236	15,145,205	82,201
1874	54	233	287	17,982,403	63,138
1875	33	268	301	17,616,199	67,429

Taken in connection with the train-mileage run, the number of casualties during 1875 amounted to 17 09 per million train-miles against 15 96 per million train-miles in 1874. But compared with the number of servants employed it was about the same in both years.

The miscellaneous casualties were as follows —

	Killed.	Injured.
At level-crossings	7	2
Trespassers including suicide	72	8
Miscellaneous	10	6
	—	—
Total in 1875	89	16
„ in 1874 .	102	27
„ in 1873 ..	79	27

Deaths in Trains and Stations

A detailed list of deaths of passengers and intending passengers in carriages and stations from causes unconnected with the working of Railways is appended at the end of the returns.

The total number of casualties of this sort was 212 against 133 in 1874 and 185 in 1873 Of these 124 occurred on the East Indian Railway; 5 on the Eastern Bengal, 33 on the Oudh and Rohilkhand, 13 on the Sind Punjab and Delhi Railway, 5 on the Rajputana, 8 on the Madras, 1 on the South Indian, 22 on the Great Indian Peninsula, and 1 on the Bombay, Baroda and Central India Railway.

These casualties appear to have been due in most cases to passengers undertaking journeys when in bad health.

Taking into consideration accidents to trains, &c., of all kinds and the extent of open mileage and train mileage of the different Railways, the following result is deduced .—

Railway	No of train miles run for each accident to trains, &c	Average No of trains passing over each mile	
		No	Order 1 being greatest.
Holkar (State)	1,672	2419	6
Calcutta and South-Eastern (State)	2,336	1419	11
Sind Section, Sind, Punjab and Delhi	4,997	2504	3
Nalhati (State)	5,082	1119	12
Punjab Northern (State)	5,220	1068	13
Rajputana (State)	5,505	1503	10
Oudh and Rohilkhand	8,174	1855	8
South Indian	15,909	1531	9
Madras	22,522	2471	5
Tirhut (State)	24,916	958	14
Bombay, Baroda and Central India	26,777	2499	4
Punjab and Delhi Section, Sind, Punjab and Delhi	32,754	2011	7
East Indian	37,900	3958	1
Eastern Bengal	57,664	3279	2
Great Indian Peninsula	Data wanting	Data wanting	

Resolution —It is probable that the State lines, as also the Sind, Oudh and Rohilkhand, and perhaps others, report accidents which some lines omit.

The derailments (largely due to sharp curves within station yards), fires on the Holkar line (due to the use of wood-fuel), running over cattle (on practically unfenced lines), and the defective couplings of the metre gauge account for by far the greater number of accidents recorded on these Railways.

The almost total immunity of passengers and servants from injury on the metre gauge lines, notwithstanding the number of accidents, is suggestive of less risk in working a metre gauge Railway at low speed than in working the ordinary gauge lines at high speed.

1 passenger only was injured from causes beyond his own control, and

2 passengers were injured from causes within their own control

Not one Railway servant was injured from causes beyond his own control, and only 9 were killed or injured from causes within their own control, but 5 of these 9 cases occurred to persons falling out of ballast trains and otherwise in connection with such trains.

The very numerous, though trivial, accidents on the State Railways is, no doubt, receiving the attention of the Director of State Railways.

The particular attention of the Consulting Engineer of Guaranteed Railways at Lucknow should be directed to the very high percentage of accidents of all kinds upon the Oudh and Rohilkhand Railway, and he should, in conjunction with the authorities of the line, thoroughly investigate the matter with a view to prevention of such accidents in future. And the attention of the Consulting Engineer to the Government of India, Calcutta, should be directed to the frequency of cases of running over cattle on the East Indian Railway, which appears to denote defective maintenance of fences The attention also of the Consulting Engineer at Lahore should be directed to the accident return on the Sind, Punjab and Delhi Railway, which has been unduly swelled by the occurrence of accidents on the Sind Section of the line, notably by the bursting of locomotive tubes and cases of running over cattle.

The Government of Bombay should be requested to submit separate statements of accidents on State Railways worked by the Great Indian Peninsula Railway.

In Table II, "Train mileage of all descriptions" should, in future, be substituted for "Train mileage (goods and passengers)," and after "Passenger mileage" should be added the following headings —

Per mile open

Number of passengers carried

Train mileage of all descriptions.

Passenger mileage

His Excellency the Governor General in Council desires that the earnest attention of all Railway Companies and Government Officers be paid to the detailed observations concerning accidents during the year under review, and that all possible measures be applied to reduce their number in future.

No efforts should be spared by those in authority to render the working staff of the different Railways efficient and trustworthy

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Order —Ordered, that these proceedings be communicated to the Governments and Officers noted in the margin for information and guidance, together with copies of the returns compiled

Governments of Madras and Bombay
Resident at Hyderabad
Director of State Railways
Consulting Engineers, Calcutta, Lahore, and Lucknow

Ordered also, that these papers be forwarded to the Department, Governments, Administrations and Officers marginally noted for information, and that copies be forwarded to the Secretary of State for the information of Her Majesty's Government

Home Department
Governments of Bengal, North Western Provinces and Punjab
Chief Commissioners of Oudh, Central Provinces, British Burmah, and Mysore
Agents to the Governor General for Central India and Rajputana.

Ordered further, that the papers be published in the Supplement to the *Gazette of India*, Table I excepted.

H Brunnert Colonel, R E.,

Deputy Secretary.

To The Secy. to the Govt of Madras
Public Works Dept (Railways)

With 21 Spare Copies
Accident Return

Q.C. 6 July 1876 No 1

P.W.D.

9 SEP 76

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY.

To

Circular No. 17 Railway.

Dated SIMLA, August 24, 1876.

Received

No 25387 22 Sept/76
not date
Communicated to the
Consulting Engineer for
Railways for information
and guidance.

No 3756

Observations on the returns of accidents on Indian Railways for 1875.

Cir - 13.9.76 Letter 22-9-76

65-5-5(1)

Govt. of {1876} Madras.

PUBLIC WORKS.

To

The Chief Engr for Rlys.

Dated

Issued

Recd *Encl*

G O, 22nd Sept. 1876, No. 538

Nos. 3757/76

Return of Accidents on Indian Rlys for 1875:

Ar from the Secy of Govt in Pub Wks Dept & Observations in the ——— Comd to Chief Engr for Rlys

Chief Engr Rlys 7-10-76

Cir - 13.9.76 Retd 22.9.76
Cir Ord 11.9.76