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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1818	Press	
~~B.P. No.~~		~~Mis.~~	
Dated	19-7-	1876	~~195~~ .

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 19th July 1876. No. 1,818.

Read the following papers:—

No. 295. Endorsement of the Consulting Engineer for Railways, dated Madras, 25th May 1876, No. 256.

From W. S. BETTS, Esq., Agent, South Indian Railway, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Negapatam, 22nd May 1876, No. 1,693.

I FORWARD herewith copy of a report from the Acting Chief Engineer, regarding the accident which occurred in Madras on the 13th instant, through the falling in of the iron roofing in course of erection over the engine shed at that station.

SOUTH INDIAN RAILWAY.

Letter from the Acting Chief Engineer, to the Agent, dated Madras, 17th May 1876, No. 11,404½.

IN continuation of my telegram of the 13th instant, reporting an accident at the engine shed, Madras, I have now to inform you that I have to-day visited the scene of the accident and beg to furnish you with the following particulars concerning it. The main building of the engine shed is 200 feet by 80 feet wide, and it is to be covered with an iron roof of two bays, the two bays meeting upon a central row of wrought-iron girders supported upon seven cast-iron columns. The erection of the roof had been in progress for about six weeks and was reaching completion. The work was placed by Mr. Fox under the charge of an Inspector, by name Duval; this man had considerable experience in such work having, since his entertainment in the Company's service, superintended the erection of a similar roof at the engine shed, Trichinopoly junction. At the date of the accident the whole of the main principals were in position; the ends of those which met over the central girders were bolted down to the shoe-plates, the other ends rested loosely on the masonry. Three rows of purlins on each half span tied the principals continuously from end to end, each purlin where it fell over a principal was secured to it by a half-inch bolt. The masonry gables of the building have not been built up, but, in lieu of the support which they would have offered, a large derrick pole, securely guyed, was fixed in the line of the most easterly principal in each of the bays, and these principals were securely lashed to the derricks. In this position the roof stood on the evening of the 12th instant. Mr. Fox reports having visited it then and seen that all was right. Inspector Duval states that when he came to work on the morning of the 13th instant, he observed that all the principals of the north bay were leaning over towards the south about 6 inches past the vertical at the peak, and he determined to pull them back to the vertical with ropes. He appears to have given instructions to an East Indian Maistry named Monisse, to attach three ropes one at each end of the building and one in the centre, and by pulling simultaneously at these ropes to bring the couples back to the plumb. Inspector Duval did not wait to see this operation performed, but left the work, according to his own statement, at 11-30; as the accident took place at that hour, it is probable that he left for breakfast somewhat earlier. Monisse acknowledges having received the above instructions, but did not carry them out; he states that he attached one rope only to the roof, to the principal neck, and that which was lashed to the derrick; with twenty men pulling from below and fifteen others assisting on the roof he had succeeded in bringing the couples back to the vertical, when the rope gave way; the principals relieved from the pull, rebounded from the direction in which they have been pulled and fell over on the opposite one; all but the two principals which were lashed to the derricks and six of those in the southern bay fell to the ground. I examined the rope which was stated to have given way; it is of hemp, 1 inch in diameter and old, and it is much too weak to bear such a strain as must have been brought upon it. Mr. Fox states that he saw depending from the two principals immediately after the accident some purlins, the bolts which attached these to the principals did not appear to have been subjected to any strain, and

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I am driven to the conclusion that to facilitate bringing back the couples to the perpendicular, the Maistry must have disconnected the purlins which held the remainder of the roof to the one securely fastened principal at the end. Had this connection remained intact the breaking of the rope could not have resulted so disastrously. The iron of the principals is much bent save in many cases the T iron is fractured. Twenty-one of the wrought-iron shoes over the central girders are broken, the girders and columns have sustained no damage; the latter have bent from the perpendicular and have been saved by the stones upon which they rested tilting up. I am glad to state that the loss of life and injury are not so great as at first supposed. Two persons were killed, one a woman 60 years of age who happened to be in the shed, although not engaged in the work then; the other, a male child of about one year, who must have been left by his mother to shelter in the shed while she worked outside. In addition to these fatalities fifteen persons were more or less injured, but in only one case is the injury of a serious nature. An inquest was opened on the morning of the 14th instant, and after the examination of Mr. Fox and Inspector Duval it was adjourned until the 29th instant. I do not consider that any blame attaches to Mr. Fox, the system upon which the work was carried on was an ordinary and safe one; he was not present at the time of the accident, having been out during the morning at the end of his district.

2. Inspector Duval was sent from the Southern Extension to Mr. Fox, who, in consideration of his previous experience in this class of work, was justified in placing confidence in him.

3. The Inspector by his own showing left the work before the coolies did, and delegated to his Maistry a critical operation which he should have personally superintended, and to the failure to see his instructions carried out the accident may be attributed. I have consequently arrived at the conclusion that after giving Inspector Duval every consideration for past services, I have no cause left to me but to dismiss him. Tabular statements of the killed and injured will reach you in due course.

(True Copy.)

NEGAPATAM,
22nd *May* 1876.

(Signed) W. S. BETTS,
Agent.

SUBMITTED for the information of Government.

2. The engine-shed was inspected by me immediately after the accident had occurred, and the information then elicited regarding its cause corresponds in all essential particulars with the facts stated in Mr. White's report.

3. The accident shall be again reported upon after the conclusion of the inquest, which I understand has now been adjourned a second time until the 1st June.

(Signed) J. H. M. SHAW-STEWART, Lieut.-Col., R.E.,
Consulting Engineer for Railways.

No. 295-A. From Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 28th June 1876, No. 310.

IN continuation of the papers laid before Government on the 25th ultimo, with No. 256, I have the honor to submit copies of the proceedings of the inquest held upon the 14th ultimo and the 1st instant, upon the bodies of the two persons killed in the recent accident at the South Indian Railway Company's engine shed, and a letter* from the Agent of the Company, forwarding a further report from the Acting Chief Engineer upon the subject. An accident report in the usual form is also enclosed.

*No. 1,801, 19th June 1876.

Proceedings of the Madras Government, Public Works Department,
19th July 1876. *No.* 1,818.

2. The building where the accident occurred is the engine shed now under construction at the Madras terminus of the South Indian Railway. The main body of the building is 200 feet in length and 80 feet in width. It is designed to carry an iron roof in two spans of 40 feet each, supported in the centre by a line of wrought-iron girders resting upon seven cast-iron columns. The principals in each span are twenty-three in number, and 8 feet 4 inches from centre to centre.

3. Upon the evening of the 12th of May, the whole of the principals of the roof are stated to have been placed correctly in position; the inner ends being bolted to the shoe-plates on the centre girders, and the outer ends resting upon the walls of the building, but unsecured. The principals were secured to each other by three rows of purlins to each half span, (the full number being seven); the purlins being made fast to the rafters by ½ inch bolts. The masonry gables at the east and west ends of the shed had not been built, but an attempt had been made to supply the support which they would have afforded by attaching the principal at the east end of each span to a large derrick pole firmly fixed in position by means of guy ropes.

4. Upon the morning of the 13th, it was observed by the Inspector in charge that the principals in the north span had a cant of some 6 inches towards the west. This Inspector, Duval by name, appears to have given orders to an East Indian Maistry, named Monisse, to attach three additional ropes to the roof, in order to bring it back to its proper position. These ropes, according to Duval's statement, are marked E, F and G, in the accompanying rough sketch. The other four ropes shown in the sketch A, B, C and D, were then in position; A and B being attached to the derrick pole at the east end, and C and D to the principal at the west end. Duval's intention, according to his own statement, was to bring the principals back to the vertical by hauling at the three ropes D, F and G. After giving these instructions, Duval appears to have left the work and gone to breakfast; at 11-30 A.M., according to his own account, but probably some time before that.

5. Instead of carrying out these instructions, Monisse appears to have attached one rope only (marked G on the sketch) to the second principal from the east end of the roof. Upon this rope he set some forty coolies to haul, when suddenly the rope gave way; and the roof springing back with a rebound from the direction in which they had been pulling, fell over in the other direction, and the whole structure came down. Two persons were killed by the accident; one, a woman sixty years old, and the other, a boy, one year old. Fifteen other persons were more or less injured. Strangely enough, not one of the people at work within the shed was killed; the two deaths were those of persons who had no business to be in the shed.

6. There can be no doubt that this accident was directly due to gross neglect of duty. The Inspector in charge gave certain instructions for carrying out an important operation in which great care was needed. He neglected his duty in not staying upon the ground to see the work carried out, and the result was that the work was undertaken in a most careless and irregular manner. Two of the three ropes, regarding which instructions had been given, were altogether omitted; while the rope which was actually used was an old one, insufficient in size and strength for the strain to which it was subjected.

7. In addition to this gross neglect of duty in carrying out the work, it seems to me that the accident is also to be traced to errors of system in the mode of

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construction. I cannot avoid the conclusion that there were at least two such errors; first, in erecting the principals before the gable ends of the east and west walls had been built; and, second, in erecting the whole of the trusses from end to end of the roof with temporary and inefficient fastenings, instead of dealing with each truss as erected, and securing it permanently, by bolting the outer as well as the inner end, and fixing the full number of the purlins with rivets. In the enclosed letter from the Acting Chief Engineer, the reasons are given for omitting the precautions in question; but, after allowing full weight to those reasons, I am of opinion that the system followed was wrong upon those points. If the latter only of the two precautions alluded to had been taken, I am of opinion that the accident could not have occurred.

8. I have not yet heard whether all the injured persons have recovered, but a further report upon this point shall be submitted.

From W. S. BETTS, Esq., Agent, South Indian Railway, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Negapatam, 19th June 1876, No. 1,801.

Your letter, No. 590, of the 6th instant.

Attached hereto I forward a copy of an expression of opinion by the Acting Chief Engineer on two points in connection with the late accident to the engine-shed roof at Madras.

SOUTH INDIAN RAILWAY.

Letter from the Acting Chief Engineer, to the Agent, dated Trichinopoly, 17th June 1876, *No.* 13,762.

Your No. 5,908-2,762, *of 10th instant.*

Re Accident to Engine-shed Roof, Madras.—

I HAVE the pleasure to reply as follows to the two questions asked by the Consulting Engineer in connection with the above subject.

1*st.*—The erection of the engine-shed roof was pushed forward with the view of having the building ready for occupation by the date fixed for opening the line to Tindevanam. The completion of the gables was delayed owing to the difficulty of fixing the hooks for the large doors; these hooks required to be bedded into the stones which are built into the brickwork. I am informed that the necessary stone-cutting labor was difficult to procure, and to avoid delay it was determined to erect the principals before the gables were built up. I do not think there was any danger in adopting this course. Had both gables been up it is true they might have afforded some support to the principals, but in their absence the same support was afforded by means of guyed derriks. This course is the only one which can be adopted in the case of roof which have no gables at all, as for instance, the roof of the passenger station, Trichinopoly Fort, and the accident cannot be attributed to the absence of the gables.

2*nd.*—I think it would have been better to permanently rivet up the purlins and fix the diagonal wind-ties as the erection of the roof proceeded. I am assured that wherever a purlin fell over a principal, the two were united with a bolt, and if these bolts were tightly screwed up they were as secure as rivets would have been. It is quite a common practice in roof designs to dispense with rivets and use bolts only. The inner ends of the principals were all securely bolted to the tops of the columns and the outer ends were left loose, because when the weight of the purlins, boarding and sheet iron comes upon the principals, a slight deflection takes place, causing a horizontal thrust which, if the outer ends of the principals are bolted down, would endanger the stability of the wall. It therefore becomes necessary to fully weight the principals

Proceedings of the Madras Government, Public Works Department,
19th July 1876. *No.* 1,818.

before screwing up the bolts which secures their outer ends. It may be urged in justification of the course pursued that the erection of the whole of the principals occupied only seven days, and that during a portion of that time preparations were being made to commence the rivetting up by adjusting the purlins.

Whatever course was adopted in the erection, there could not fail to be a considerable amount of risk involved, which could only be met by the exercise of the greatest care on the part of the Inspector in charge, and I have already expressed my opinion (see my No. 11,404½, of 17th May 1876,) that the accident was due to the want of the most ordinary care and not to the system upon which the work was carried out.

NEGAPATAM, (True Copy.)

(Signed) W. S. BETTS,

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Proceedings of the Madras Government, Public Works Department,
19th July 1876. No. 1,818.

SOUTH INDIAN RAILWAY.

AGENT'S DEPARTMENT.

No. 1,123

Report of Accident.

Col. 1	2	3	4	5	6	7	8	9	10	11	12
Medical Collectorate.	Railway District, Section and Mile.	Between what two Stations and Name of nearest village.	Whether in a level crossing or not.	Date and hour of Accident.	Nature of the Accident.	Nature of Assistance rendered.	Name, Age, Caste and Occupation.	Circumstances which caused the Accident	Whether reported to the Police. Arbitration or verdict of Inquest. (If any.)	Remarks by the Chief Engineer. Penalty or Damages paid by Offenders.	Remarks by the Chief Engineer.
Madras.	Section No. 1, Mile No. 1.	Goods Station.	Level Crossing.	13th May 1876, at about 11-30 A.M.	Several severe bruises on left side of abdomen and back, and slight swelling over spleen. An incised wound on chin about an inch long and half an inch deep, together with contusion on right forearm. The shock to the system was considerable. Slight contusion on lower part of spine and thigh. A few bruises on the right leg...	Bruising about the abdomen on the left side of head, a few bruises on the knee and considerable shock to the system. An incised wound about 3 inches long and half an inch deep immediately below the knee. An oblique fracture of the left side of the lower jaw in a line with the centre tooth. A severe incised wound on chin.	Sent to the Veperi Hospital.	Yali Ammu, aged 20, caste Maldevar. Coolly woman employed in carrying bricks. Mani, aged 35, caste Malabar. Coolly woman employed in carrying bricks. Baradee, aged 35, caste Parish. Coolly employed in erecting engine-shed roof. Ranganaswmy, aged 30, caste Malabar. Coolly employed in erecting engine-shed roof. Moorooganeph, aged 35, caste Parish. Employed in erecting engine-shed roof. Sent to the General Hospital.	Yali Ammu, aged 20, caste Maldevar. Coolly woman employed in carrying bricks. Mani, aged 35, caste Malabar. Coolly woman employed in carrying bricks. Baradee, aged 35, caste Parish. Coolly employed in erecting engine-shed roof. Ranganaswmy, aged 30, caste Malabar. Coolly employed in erecting engine-shed roof. Moorooganeph, aged 35, caste Parish. Employed in erecting engine-shed roof. Nagiah, aged 35, caste Malabar. Coolly employed in erecting engine-shed roof. Poongan, aged 35, caste Parish. Coolly employed in erecting engine-shed roof. Moonesamy, aged 35, caste Malabar. Coolly employed in erecting engine-shed roof.	Will be reported hereafter.

Proceedings of the Madras Government, Public Works Department,
19th July 1876. No. 1,818.

No. 1,693, to Consulting Engineer.

on date of Accident.

Reported to Police

See Agent's letter

Bruising about the abdomen and back, a few bruises on the knee and considerable shock to the system.

An incised wound about 3 inches long and half an inch deep immediately below the knee.

An oblique fracture of the left side of the lower jaw in a line with the centre tooth.

A severe incised wound on chin.

Several severe bruises on left side of abdomen and back, and slight swelling over spleen.

An incised wound on chin about an inch long and half an inch deep, together with contusion on right forearm. The shock to the system was considerable.

Slight contusion on lower part of spine and thigh.

A few bruises on the right leg...

Contusion on left thigh and knee.

A few bruises on right thigh and knee and a slight bruise on right side.

A bruise on instep of left leg and slight cut on chin.

An incised wound over outer angle of right eye about one and half inch in length.

Fracture of the left forearm immediately behind the wrist.

Fracturing skull and causing instantaneous death.

Slight contusion over right shoulder.

Death ... ...

Removed under cover and treated by Railway Apothecary.

The bodies were removed to the Goods shed to await inquest.

Fall of Engine-shed Roof. Injudicious treatment of roof during

the absence of Inspector, whose instructions were not carried out.

Sent to the General Hospital.

Senna Ammal, aged 60, caste Vaddar. Coolly woman employed in earthwork outside engine shed.

Arumoottoo Pillay, aged 39, caste Siva. Coolly employed in erecting engine-shed roof.

Tangappen, aged 35, caste Parish. Coolly employed in erecting engine-shed roof.

Venkatasawmy, aged 45, caste Hindu. Coolly employed in erecting engine-shed roof.

Ragavien, aged 25, caste Hindu. Coolly employed in erecting engine-shed roof.

Arumuugum Pillay, aged 35, caste Siva. Coolly employed in erecting engine-shed roof.

Chinnasawmy, aged 20, caste Pollgar. Coolly employed in erecting engine-shed roof.

Munigiah, aged 1 year, caste Vaddar.

Reported to the Police on date of accident. The inquest having been adjourned till the 29th instant, the verdict of the jury cannot be given.

Will be reported

A dangerous practice prevails of bringing young children on the works. Mothers have been repeatedly asked to place their children out of danger. In the present instance the mother was working outside the shed and had placed the child in a cover of the building to be in the shade.

The woman had no right to leave her work and enter the shed. Her work was strictly connected to fill a large tank with earth brought from the Coonum River.

MADRAS,
31st May 1876.

(Signed) W. S. BETTS,
Agent.

No 1723

Agents' Department
Report of Accident

Collectorate 1	Railway District Section & Mile 2	Between what two Stations & Name of nearest village 3	Whether at a level Crossing or not 4	Date & hour of Accident 5	Nature of the Accident 6	Circumstances which caused the accident 7	Nature of Assistance afforded 8	Name, Age, Caste and Occupation 9	Gratuity proposed to be given or not, if so how much 10	Whether reported to the Police authorities or verdict of Inquest (if any) 11	Remarks by the Company's Officers 12	Remarks by the Cons. Eng. 13
Madras	District No 1. N. E. Section No 1. Mile No 1.	At Madras Goods Station	Not at a Level Crossing	13th May 1876. At about 11.30 A.M.	Swelling about the size of an egg on the left side of head, a few bruises on the knee & considerable shock to the system.	Fall of Engine Shed Roof. Injudicious treatment of roof during the absence of Inspector, whose instructions were not carried out.	Sent to the Vepery Hospital.	Vali Amma, aged 20 Caste Nardoo. Cooly woman employed in carrying bricks.	Will be reported hereafter	Reported to Police on date of Accident.	See Agent's letter No 1693. to Consulting Engineer	
					An incised wound about 3 inches long and ½ an inch deep immediately below the knee.			Manga, aged 25, Caste Nardoo Cooly woman employed in carrying bricks.				
					An oblique fracture of the left side of the lower jaw in a line with the Canine teeth.			Barsadee, aged 22, Caste Pariah, Cooly employed in erecting Engine shed roof.				
					A severe incised wound on Chin.			Rungasawmy, aged 30, Caste Naick, cooly employed in erecting Engine shed roof.				
					Severe contusion of left thigh and knee.		Sent to the General Hospital	Mooroogasingh, aged 25, Caste Pariah, employed in erecting Engine shed roof.				
					Several severe bruises on left side of abdomen and back and slight swelling over Spleen.			Nagiah, aged 22, Caste Naick cooly employed in erecting Engine shed roof.				
					An incised wound on chin about an inch long and half an inch deep together with contusion on right fore arm. The shock to the system was considerable.			Mooroogasingh, aged 25, Caste Hindu Cooly employed in erecting Engine shed roof.				
					Slight contusion on lower part of spine and thigh.			Poongan, aged 35, Caste Pariah cooly employed in erecting Engine shed roof.				
					A few bruises on the right leg.		Removed under cover and treated by Railway Apothecary	Moonesawmy, aged 22, Caste Naick, cooly employed in erecting Engine shed roof.				
					Slight contusion over right shoulder			Anamoottoo Pillay, aged 29 Caste Siva, Cooly employed in erecting Engine shed roof.				
					Contusion on left thigh and knee.			Tangappen, aged 35, Caste Pariah, cooly employed in erecting Engine shed roof.				
					A few bruises on right thigh and leg and a slight bruise on right side.			Vencatasawmy, aged 45, Caste Hindu, cooly employed in erecting Engine shed roof.				
					A bruise on instep of left leg and slight cut on chin			Ragavien, aged 25, Caste Hindu, cooly employed in erecting Engine shed roof.				
					An incised wound over outer angle of right eye about one and half inch in length.			Aurumugum Pillay, aged 35, Caste Siva, cooly employed in erecting Engine shed roof.				
					Fracture of the left fore arm, immediately behind the wrist.			Chinnasawmy, aged 20, Caste Poligar, cooly employed in erecting Engine shed roof.				
					Fracturing skull and causing instantaneous death.			Mungiah, aged 1 year, Caste Vaddar.			A dangerous practice prevails of bringing young children on the Works. Mothers have been repeatedly asked to place their children out of danger. In the present instance the mother was working outside the shed and had placed the child in a corner of the building to be in the Shade	
					Death.		The bodies were removed to the Goods Shed to await inquest	Senna Ammal, aged 60, Caste Vaddar, cooly woman employed in Earthwork outside Engine shed.		Reported to the Police on date of accident. The inquest having been adjourned till the 29th Inst. the verdict of the Jury cannot be given.	The woman had no right to leave her work & enter the Shed. Her work was strictly confined to filling a large tank with earth brought from the Corum River	

Agent's Office
Negapatam
31st May 1876

To The Consulting Engineer for Railways
Madras

William S. Bell
Agent

Proceedings of the Madras Government, Public Works Department,
19th July 1876. *No.* 1,818.

No. 296. ORDER THEREON, 19th July 1876, No. 1,818.

RAILWAY, No. 31.

HIS GRACE the Governor in Council fully concurs in the conclusion arrived at by the Consulting Engineer for Railways that the accident reported in these papers, which proved fatal to two persons and caused injury to fifteen others, was directly due to gross neglect of duty. In delegating a critical operation to be performed in his absence by a Maistry, the Inspector failed to realize the responsibility of his charge. The Maistry is equally to blame for his disobedience of the orders which he had received as to the way in which the operation was to be carried out. Both men are, in the opinion of the Governor in Council, unfit for future employment on any work in the Madras Presidency.

2. The reason adduced by the Acting Chief Engineer for omitting to fasten down the principals suggests doubts as to the stability of the structure, the details of which should be carefully scrutinized by the Chief Engineer.

(True Extract.).

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

15

INFORMATIONS of Witnesses severally taken and acknowledged touching the Deaths of [illegible]

at Egmore

13

The Jury beg the Coroner to request the South Indian Railway Company to exercise more careful Supervision to prevent the recurrence of similar accidents.

Dated 1st June 1876.

/Signed/ H. Stanbrough
Coroner

(A True Copy)
H. Stanbrough.
Coroner

M.

[illegible] where rivetting was going on. I heard a noise as if the roofing was falling down, and on looking up I saw it falling. I do not know the cause of the downfall. I did not recognize the deceased amongst the people present, but I saw the Woman and the Child removed after death

Railway

13

B.M. 4628/96.

157

INFORMATIONS of Witnesses severally taken and acknowledged touching the Deaths of Chinnamah and Mungadoo at the South Indian Railway Station at Egmore within the limits of Madras, on the Fourteenth day of May One thousand eight hundred and seventy-six before Henry Hanbrough Esquire, Coroner of Madras, on an Inquisition then and there taken on view of the bodies of the said Chinnamah and Mungadoo taken and there lying dead, as follows: to wit,

Cunniappah Maistry on solemn affirmation in Tamil deposeth and sayeth I am a rivet Maistry Carnatic Railway and live at Chintadrepettah, I do not know either of the deceased. About 12 noon yesterday about 50 Coolies were engaged on different work beneath the new shed, I was standing near the 3rd pillar looking up to the roof (iron) where rivetting was going on. I heard a noise as if the roofing was falling down, and on looking up I saw it falling. I do not know the cause of its doing so. I did not recognize the deceased as amongst the people present, but I saw the Woman and the child removed after death

from

from the Corner of the ruins. Through fear my eyes became dim and I did not see whether other people were hurt.

The above information was taken and acknowledged on the day year and at the place first above mentioned, the Contents having been previously explained by the sworn Interpreter.

Before me

(Signed) H. Stanbrough
Coroner

(Sd) Cunnappah Maistry
A true Interpretation
(Sd) T. Mahomed Esoff
Sworn Interpreter

Nursoo on solemn affirmation in Teloogoo deposeth and sayeth I am a deputy Maistry or overlooker for Coolies, Yesterday about 11½ A.M. I was about 100 yards from the shed, the deceased Woman was engaged amongst 100 others Coolies carrying earth on the Works, and had gone beneath the shed into the shade about that time I heard a noise as of a heavy substance falling I turned and looked and saw the roof falling, I ran up, and on entering the shed saw the deceased amongst the ruined iron roofing her name is Chinnamah about 60 years of age, my aunt

aunt. I removed her from beneath the ruins she was at the time alive, but died immediately afterwards, she did not speak a word I do not know anything more, I do not know the child and did not see it removed.

The above information was taken and acknowledged on the day year and at the place first above mentioned, the Contents having been previously explained by the sworn Interpreter.

Before me

(Sd) H. Stanbrough
Coroner

(Md) Nursoo.
A True Interpretation
(Sd) T. Mahomed Esoff
Sworn Interpreter

Venketamah on solemn affirmation in Teloogoo deposeth and sayeth I am a Cooly Woman and mother of the deceased Moongoodoo aged about 1 year. I was engaged Yesterday with other Coolies removing earth at the Carnatic Railway works about 11½ A.M. Yesterday I left the child within the shed for shade near the wall and went to work, shortly afterwards I heard a noise and saw the roof falling. I ran towards the child and found it quite dead and covered with the debris of the fallen roof. That is all I know

known

The above information was taken and acknowledged on the day year and at the place first above mentioned, the contents having been previously explained by the sworn Interpreter.

Before me
(signed) H. Stanbrough
Coroner

(Sd.) Mr. Pukotamah
A True Interpretation
(Sd.) T. Mahomed Esoff
Sworn Interpreter

Arthur Luke Hackett sworn deposeth and sayeth I am Offg: Surgeon 3rd District. I have heard the evidence of the former witnesses and examined the bodies of the deceased, one of which an old woman of 60 years of age and the other a male child about 1 year of age. The woman had several ribs on the left side and right leg beneath the knee broken. She also received a violent blow across the spine and died from shock caused by the injuries she had received, the child's roof of skull was fractured and brain protruded, its death must have been almost instantaneous.

The above information was taken and acknowledged on the day year and at the place first above mentioned.

Before me
(signed) H. Stanbrough
Coroner

(Sd.) A. L. Hackett.

Arthur Douglas Fox being duly sworn deposeth and sayeth I am Resident Engineer Carnatic Railway and live in Egmore. I was not present at the time of the accidents but arrived on the spot about 10 minutes afterwards. The principals of the iron roofing of the shed had got slightly out of the perpendicular, men were engaged pulling at a rope to rectify the same, and whilst doing so the rope about one inch diameter broke and the shock caused by its breaking made the principal spring backwards, and the whole of the skeleton iron roofing fell in about 200 feet in length with a span of 40 feet. If the rope had not broken, the accident would not have occurred, including the two deaths 14 or 15 others were more or less injured. On examining the rope it is my opinion the rope should have been stronger. The work was under the supervision of Inspector Duval.

The above information was taken and acknowledged on the day year and at the place first above mentioned.

Before me
(signed) H. Stanbrough
Coroner

(Sd.) A. D. Fox

Emille Duval sworn deposeth and sayeth I am an Inspector on this Railway about 11½ A.M. I was superviewing the raising of the principals of the iron roofing of the new shed. I had ordered 3 ropes to be affixed for so doing and had gone to breakfast and during my absence the Coolies only worked with one rope about 1 inch diameter. I heard the noise and Mr. Fox sent for me. It is my opinion that had the men worked with the 3 ropes the accident would not have taken place. other work of the same character had been performed, and when doing so, ropes would be used according to the weight of iron required to be moved. I gave directions for the 3 ropes to be used to Moonisse and Dimmea who were my Maistries. These 2 people are responsible for carrying out my orders when absent. There is no notice put up to warn people from going in, nor a peon kept for that purpose. There are particular orders that people should not go into the shed.

The above information was taken and acknowledged on the day year and at the place first above mentioned.
Before me
(signed) H. Stanbrough
Coroner

(Sd.) E. Duval

Anthony Monisse sworn deposeth and sayeth I am a Maistry employed by the Southern India Railway. I was engaged 13th May about 11 or 12 O'Clock on the top of the roof fixing 3 ropes by the order of my Engineer Mr. Duval in order to bring the iron roofing up to plumb, as it was a little out of the perpendicular, there were some 20 Coolies above and the same quantity below, when suddenly the rope gave way. There were 3 ropes, 2 of which were slack fastened to a crowbar in the ground, the 3d or end rope was the one we were working or pulling at and which gave way. That was the proper way to perform the work. The rope was about 1 inch in diameter. The rope was spliced and it is my belief the splicing gave way which caused the accident. It was an old rope but pretty strong. It was a hemp rope, if it had not been spliced it was a strong rope. The Engineer Officer always gives directions to the Maistries or Overseers before going away and then comes back again frequently. This is the rope.

The above information was taken and acknowledged at the S.I.R. Station Goods shed at Egmore on the 1st June 1876, the Contents having been previously explained by the sworn Interpreter.
Before me
(Sd.) H. Stanbrough
Coroner

(Mr.) Anthony Monisse

Mathew Dimmea sworn deposeth and sayeth I am a Maistry or Superintendent over coolies and have been employed at the Southern India Railway about a Month, before that was employed as an Overseer in the D.P.W. for 3 1/2 years. I recollect the 13th May, and was directed Mr. Duval before going to breakfast to put on 3 guy ropes and pull the iron roofing straight after the iron rivetting was done, but the 3 ropes were put on before it was completed. The ropes should not have been fixed, before I was myself present, and I was 50 yards from the place when the roofing fell down. I intended asking Mr. Duval when he came back from breakfast for fresh ropes as there was not a proper rope to fix on. The 2 ropes at the other end were of no use, there should have been a rope in the Center. The 2 ropes I mentioned ~~been~~ were for fixing the 1st angle and of no further use. Mr. Moonisse must have affixed the rope which broke. Mr. Moonisse and I are of the same rank or position neither of us are superior. I have seen

seen the same sort of work before. If I had been present I should not have allowed the work to proceed with these ropes.

The above information was taken and acknowledged at the South India Railway station Goods shed at Egmore on the 1st June 1876
Before me
(Signed) H. Stanbrough
Coroner.

(Sd.) M. Dimmey

William Henry Coaker sworn deposeth & Sayeth I am Captain R.E. and holding the appointment of Deputy Consulting Engineer for Railways I remember 13th May, and came to the seat of accident about 2 1/2 P.M. on a report from Mr. Fox the Resident Engineer of the S.I. Railway, that an Engineer Officer might come and examine it, and at the request of the Coroner revisited the spot on the 15th. I may at once state that I have never put up a roof of this Construction and therefore can only report up on the forces brought into play. The immediate Cause of the accident was the breaking or giving way of the splicing of the rope which the Coolies were working at.

at Captain Coaker puts in a sketch drawn by Mr. Duval shewing the order he had given to the overseers or Masters before proceeding to break [illegible]. Only one rope was fixed at the Eastern end of the shed which broke upon the Coolies pulling it and the shock produced the rebounding or springing of the rafters which brought them down. Had Mr. Duvals order been carried out and three ropes put to the 3 ropes it is my opinion the accident would not have occurred. If the rope had been a new one it would have been capable of sustaining 1½ Tons although more than it should have been subjected to. The weight would have been distributed had the 3 ropes been used. that is each would have sustained ½ a ton, which they are quite capable of. The ropes had to overcome about 1½ Tons if properly affixed to the roofing.

s/d W. H. Coaker
Lieut. R. E. and
Captain

The above information was taken and acknowledged at the S.E.R. Station Goods shed at Egmore on the 1st June 1876.

Before me
s/gned/ H. Stanbrough
Coroner.

Arthur Douglas Fox examined on his former Oath states, I have perfect Confidence in Mr. Duval, but it is my opinion on such a particular and responsible work he should have been present, Mr. Duval in engaging the services of Mr. Monsee stated he had been engaged in large work in Madras and also in erecting a high Chimney and that he had Confidence in him, and as we were pushed for time to open the Railway 1st July, I Consented to his engagement Mr. Duval is a professional French Engineer, I think it was his duty to have satisfied himself that the ropes were proper before he left the works. I mean he should have ordered the ropes to be fixed, and then have seen them before raising the roofing to its perpendicular. The time for working is upto 12 noon, and then recommences at 1 P.M. Mr. Duval left a few minutes before 12.

The above information was taken and acknowledged at the S.E.R. Station Goods shed at Egmore on the 1st June 1876.

Before me
s/gned/ H. Stanbrough.
Coroner.

s/d/ A. D. Fox.

A True Copy
H. Stanbrough.
Coroner.

AN INQUISITION taken at the South Indian Railway Station at Egmore within the limits of Madras, on the Fourteenth day of May One thousand eight hundred and seventy Six before Henry Stanbrough Esqre Coroner of Madras, on view of the body of Mungadoo then and there lying dead and by adjournment at the South I. R. Station Goods Shed at Egmore on the First day of June in the Year aforesaid upon the Oath of Charles Strange Harvey, Daniel Ledshaw, Sydapet Runganayookaloo Chetty, Mullyan-Cooppum Pasala Poorooshothovum Naidoo, Jane-yavooloo Rajaruthnum Naidoo, William Walker, & Kennar Rutnavaloo Moodelly then and there duly sworn and charged to inquire when, how, and by what means the said Mungadoo came to his Death

We the said Jurors find unanimously that the death of the said

Mungadoo

Munga doo _____ was caused at
the South Indian Railway Station at Egmore
on or about the Thirteenth day of May
One thousand eight hundred and seventy six from fracture
of the Skull accidentally caused by the
Iron roofing of the South Indian
Railway falling down.

And so say the Jurors upon their Oath aforesaid.

Witness our hands

Signed H. Stanbrough
Coroner

A True Copy

H. Stanbrough
Coroner.

P. W. 4628/76
5

No. 24

14th May 1876.

An Inquisition taken on view of the body of Mungadoo at the South Indian Railway Station at Egmore within the limits of Madras and by adjournment at the S. I. R. Station Goods shed at Egmore on the 1st June 1876.

Verdict

Died from shock received by the iron roofing of the South Indian Railway accidentally falling down.

W. [illegible]

31

AN INQUISITION taken at the South Indian Railway Station at Egmore within the limits of Madras, on the Fourteenth day of May One thousand eight hundred and seventy Six before Henry Stanbrough Esqre. Coroner of Madras, on view of the body of Chinnamah then and there lying dead and by adjournment at the S. I. R. Station Goods shed at Egmore on the First day of June in the Year aforesaid upon the Oath of Charles Strange Harvey, Daniel Ledsham, Sydapet Runganayookaloo Chetty, Mullyan-Coppum Pasala Poorooshothovum Naidoo, Janeyavooloo Rajaruthnum Naidoo, William Walker ~~[illegible]~~ Moodelly then and there duly sworn and charged to inquire when, how, and by what means the said Chinnamah came to her Death

We the said Jurors find unanimously that the death of the said Chinnamah

No. 1801 GREAT SOUTHERN OF INDIA RAILWAY.

South Indian

AGENT'S OFFICE,

NEGAPATAM, 19th June 1876.

35

om

THE AGENT, South Indian
Great Southern of India Railway,

The Consulting Engineer for Railways
Madras

SIR,

Your letter No 590 of the 6th Inst. Attached hereto I forward copy of an expression of opinion by the Acting Chief Engineer on two points in connection with the late accident to the engine shed roof at Madras.

I have the honour to be
Sir,
Your Most Obedt Servant

Williams Bth
Agent

No. 23

14th [illegible] 1876

An Inquisition taken on view of the body of Chinnamah at the South Indian Railway Station at Egmore within the limits of Madras and by adjournment at the G.S.R. Station Goods shed at Egmore on the 1st June 1876.

Verdict

Died from shock received by the iron roofing of the South Indian Railway accidentally falling down.

W. [illegible]

B. 4628/96

South Indian Railway

Letter from the Acting Chief Engineer to the Agent
dated Erichnopoly 17th June 1896 No. 13762.

Your No. 5908/2762 of 10th inst.
re-accident to Engine Shed roof - Madras.

I have the pleasure to reply as follows to the two questions asked by the Consulting Engineer in connection with the above subject -

1st. The erection of the Engine Shed roof was pushed forward with the view of having the building ready for occupation by the date fixed for opening the line to Tindivanam. The completion of the gables was delayed owing to the difficulty of fixing the hooks for the large doors: these hooks required to be bedded into the stones which are built into the brickwork. I am informed that the necessary stone cutting labour was difficult to procure, and to avoid delay it was determined to erect the principals before the gables were built up. I do not think there was any danger in adopting this course. Had both gables been up it is true they might have afforded some support to the principals but in their absence the same support was afforded by means of guyed derricks. This course is the only one which can be adopted in the case of roof which have no gables at all, as for instance the roof of the Passenger Station, Erichinopoly Fort, and the accident cannot be attributed to the absence of the Gables.

2nd. I think it would have been better to permanently rivet up the purlins and fix the diagonal windbars as the erection of the roof proceeded. I am assured that wherever a purlin fell over a principal the two were united with a bolt and if these bolts were tightly screwed up they were as secure as rivets would have been. It is a quite common practice in roof

designs

designs to dispense with rivets and use bolts only. The inner ends of the principals were all securely bolted to the tops of the Columns and the outer ends were left loose because when the weight of the Purlins boarding and sheet iron comes upon the principals, a slight deflection takes place causing a horizontal thrust which if the outer ends of the principals are bolted down would endanger the stability of the wall. It therefore becomes necessary to fully weight the principals before screwing up the bolts which secures their outer ends. It may be urged in justification of the course pursued that the erection of the whole of the principals occupied only 7 days, and that during a portion of that time preparations were being made to commence the rivetting up by adjusting the Purlins.

They are now being fastened when put up

Whatever course was adopted in the erection there could not fail to be a considerable amount of risk involved which could only be met by the exercise of the greatest care on the part of the Inspector in charge and I have already expressed my opinion (see my No. 11404½ of 17.5.76) that the accident was due to the want of the most ordinary care and not to the system upon which the work was carried out.

(True Copy)

William S Bett
Agent

Negapatam
Agents Office
19 June 1876

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,
Madras, 28th June 1876.

No. 310

From

LIEUT.-COLONEL J. H. M. SHAW-STEWART, R.E.,
Consulting Engineer for Railways,

To

MAJOR-GENERAL G. W. WALKER, R.E.,
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

In continuation of the papers laid before Government on the 25th ultimo, with No 256, I have the honour to submit copies of the Proceedings of the Inquest held upon the 14th ultimo and the 1st instant upon the bodies of the two persons killed in the recent accident at the South Indian Railway Company's Engine shed, and a letter* from the Agent of the

No 1801
19 June 76

the Company forwarding a further report from the Acting Chief Engineer upon the subject. An accident report in the usual form is also enclosed.

2. The building where the accident occurred is the engine shed now under construction at the Madras terminus of the South Indian Railway. The main body of the building is 200 feet in length, and 80 feet in width. It is designed to carry an iron roof in two spans of 40 feet each, supported in the centre by a line of wrought iron girders resting upon seven cast iron columns.

The principals in each span are 23 in number, and 8 feet 4 inches from centre to centre.

3. Upon the evening of the 12th of May the whole of the principals of the roof are stated to have been placed correctly in position; the inner ends being bolted to the shoe plates on the centre girders, and the outer ends resting upon the walls of the building, but unsecured. The principals were secured to each other by three rows of purlins to each half span, / the full number being seven /; the purlins being made fast to the rafters by 1/2 inch bolts. The masonry

gables

gables at the east and west ends of the shed had not been built, but an attempt had been made to supply the support which they would have afforded by attaching the principal at the east end of each span to a large derrick pole firmly fixed in position by means of guy ropes.

4. Upon the morning of the 13th it was observed by the Inspector in charge that the principals in the north span had a cant of some 6 inches towards the west. This Inspector, Duval by name, appears to have given orders to an

East Indian Maistry named Moniree to attach three additional ropes to the roof, in order to bring it back to its proper position. These ropes, according to Duval's statement, are marked E, F, and G, in the accompanying rough sketch. The other four ropes shown in the sketch, A, B, C, and D, were then in position; A and B being attached to the derrick pole at the east end, and C and D to the principal at the west end. Duval's intention, according to his own statement, was to bring the principals back to the vertical by hauling at the three ropes D, F, and G. After giving

giving these instructions, Duval appears to have left the work, and gone to breakfast; at 11.30 a.m. according to his own account, but probably some time before that.

5. Instead of carrying out these instructions, Ironsides appear to have attached one rope only (marked C on the sketch) to the second principal from the east end of the roof. Upon this rope he set some 40 coolies to haul, when suddenly the rope gave way, and the roof springing back with a rebound from the direction in which they had been pulling, fell over

over in the other direction, and the whole structure came down. Two persons were killed by the accident; one, a woman 60 years old, and the other, a boy, one year old. Fifteen other persons were more or less injured. Strangely enough, not one of the people at work within the shed was killed; the two deaths were those of persons who had no business to be in the shed.

6. There can be no doubt that this accident was directly due to gross neglect of duty. The Inspector in charge gave certain instructions for carrying out an important operation in

in which great care was needed. He neglected his duty in not staying upon the ground to see the work carried out, and the result was that the work was undertaken in a most careless and irregular manner.

Two of the three ropes, regarding which instructions had been given, were altogether omitted; while the rope which was actually used was an old one, insufficient in size and strength for the strain to which it was subjected.

7. In addition to this gross neglect of duty in carrying out the work, it seems to me that the accident is also to be traced to errors of system in the mode of construction I cannot and the conclusion that there were at least two such errors; first, in erecting the principals before the gable ends of the east and west walls had been built; and, second, in erecting the whole of the trusses from end to end of the roof with temporary and insufficient fastenings, instead of dealing with each truss as erected, and securing it permanently, by bolting the outer as well as the inner end, and fixing the full number of the purlins with rivets. In the

enclosed

enclosed letter from the Acting Chief Engineer the reasons are given for omitting the precautions in question; but, after allowing full weight to those reasons, I am of opinion that the system followed was wrong upon those points. If the latter only of the two precautions alluded to had been taken, I am of opinion that the accident would not have occurred.

8. I have not yet heard whether all the injured persons have recovered, but a further report upon this point shall

shall be submitted.

I have the honour to be
Sir
Your Most obedt Servt.
[signature] Lt Col. R.E.
Cons Engineer for Railways

P. W. 1876. Department

No. 4628

Pros. 19th July /76
L 2295a

No. 2295a

Rec'd 13.7.76 Rtd 19.7.76
Cir 3.7.76 Rtd 13.7.76
Dept. 29-6.76

RAILWAY DEPARTMENT.

From

The Consulting Engineer
for Railways,

To

The Secretary to Government,
P. W. Department,
Fort Saint George.

Dated 28th June 1876.
Received 29th June
L. 8. 76 No. 310
Submitting for
the papers in regard
to the recent acci-
dent at the Madras
Goodshed.

Public Works Dept.

Letter from the Consulting Engineer for Railways No. 310. dated 28th June 1876.

For Orders.

I see nothing in them of [illegible] to change my opinion that the Maistry is equally deserving of blame

Submitted for Orders with previous report.

The question had a certain amount of risk - but the amount was unmistakably caused by gross negligence of the [illegible] of the Maistry [illegible] with disobedience of orders [illegible] of the latter - both are [illegible] future employ on any [illegible] of [illegible] Madras Presidency - If there is any thing in the [illegible] given for not fastening down the [illegible] the [illegible] is [illegible] slight - [illegible] the [illegible] [illegible]

Major Genl. R.E.
Secretary to Govt. D.P.W.

Enclosure

No. 1193

South Indian

GREAT SOUTHERN OF INDIA RAILWAY.

AGENT'S OFFICE,

NEGAPATAM, 22 May 1876.

From

THE AGENT,

South Indian
Great Southern of India Railway,

To

The Consulting Engineer for Railways
Madras.

SIR,

I forward herewith copy of a report from the Acting Chief Engineer, regarding the accident which occurred in Madras on the 13th Inst. thro' the falling in of the iron roofing in course of erection over the engine shed at that station.

I have the honour to be,
Sir,
Your most Obedt Servant.
[illegible]
Agent

P.W. 3789/2/96.

No. 295

From
The Agent
S. I. Ry
To
The Bow. Engr
for Railways

Dated 22 May 76
Recd 25 May 76

No 1693

Forwards report of
Chief Engr re Ac-
cident at Madras
Engine Shed

South Indian Railway

Letter from the Acting Chief Engineer to the Agent dated Madras 17th May 1876 No. 11404/2

In continuation of my telegram of the 13th Inst. reporting an accident at the engine shed Madras I have now to inform you that I have today visited the scene of the accident and beg to furnish you with the following particulars concerning it. The main building of the Engine Shed is 200 ft by 80 ft wide, and it is to be covered with an iron roof of two bays - the two bays meeting upon a central row of wrought iron girders supported upon 7 cast iron columns. The erection of the roof had been in progress for about six weeks and was reaching completion. The work was placed by Mr. Fox under the Charge of an Inspector, by name Orval; this man had considerable experience in such work having since his entertainment in the Company's service superintended the erection of a similar roof at the Engine Shed Trichy Junction at the date of the accident. the whole of the main principals were in position; the ends of those which met over the central girders were bolted down to the shoe plates - the other ends rested loosely on the masonry. Three rows of purlins on each half span tied the principals continuously from end to end - each purlin where it fell over a principal was secured to it by a half inch bolt. The masonry gables of the building have not been built up - but in lieu of the support which they would have offered a large derrick pole, securely gauged was fixed in the line of the most easterly principal in each of the bays, and these principals were securely lashed to the derricks. In this position the roof stood

on the evening of the 12th Inst. Mr. Fox reports having visited it then and seen that all was right. Inspector Duval states that when he came to work on the evening of the 15 inst. he observed that all the principals of the north bay were leaning over towards the south about 6 inches past the vertical at the peak and he determined to pull them back to the vertical with ropes. He appears to have given instructions to an East Indian Maistry named Moniess to attach three ropes - one at each end of the building and one in the centre, and by pulling simultaneously at these ropes to bring the couples back to the plumb. Inspector Duval did not wait to see this operation performed, but left the work according to his own statement, at 11-30 - as the accident took place at that hour it is probable that he left for breakfast somewhat earlier. Moniess acknowledges having received the above instructions; but did not carry them out. he states that he attached one rope only to the roof to the principal next & that which was lashed to the derrick. with 20 men pulling from below and 15 others assisting on the roof he had succeeded in bringing the couples back to the vertical, when the rope gave way the principals relieved from the pull, rebounded from the direction in which they have been pulled and fell over in the opposite one - all but the two principals which were lashed to the derricks and six of those in the southern bay fell to the ground. I examined the rope which was stated to have given way: it is of hemp 1 inch in diameter and old - and it is much too weak to bear such a strain as must have been brought upon it. Mr. Fox states that he saw depending from the

What time

two and principals immediately after the accident some purlins - the bolts which attached these to the principals did not appear to have been subjected to any strain, and I am driven to the conclusion that to facilitate bringing back the couples to the perpendicular - the maistry must have disconnected the purlins which held the remainder of the roof to the one securely fastened principal at the end. Had this connexion remained intact the breaking of the rope could not have resulted so disastrously. The iron of the principals is much bent and in many cases the T iron is fractured. Twenty one of the wrought iron shoes over the central girders are broken - the girders and columns have sustained no damage - the latter have bent from the perpendicular and have been saved by the stones upon which they rested tilting up. I am glad to state that the loss of life and injury are not so great as at first supposed. Two persons were killed. one a woman 60 years of age who happened to be in the shed altho not engaged in the work there. the other a male child of about one year, who have been left by his mother to shelter in the shed while she worked outside. In addition to these fatalities 15 persons were more or less injured, but in only one case is the injury of a serious nature. An inquest was opened on the morning of the 14th Inst and after the examination of Mr. Fox and Inspector Duval it was adjourned until the 29th Instant. I do not consider that any blame attaches to Mr. Fox - the system upon which the work was carried on was an ordinary and safe one - he was not present at the time of the accident having been out during the morning at the end of his district.

Inspector Duval was sent from the southern extension

P.W. 3789/76.

Extension to Mr. Fox who in consideration of his previous experience in this class of work was justified in placing confidence in him.

The Inspector by his own showing left the work before the coolies did and delegated to his maistry a critical operation which he should have personally superintended and to the failure to see his instructions carried out the accident may be attributed. I have consequently arrived at the conclusion that after giving Inspector Duval every consideration for past service I have no course left to me but to dismiss him. Tabular statements of the killed and injured will reach you in due course.

(True Copy)

Negapatam
Agents Office
22d May 1876

William S. Betts
Agent

RAILWAY DEPARTMENT.

Consulting Engineer's Office,
Madras, 25 May 1876.

No. 256

SUBMITTED for the information OF GOVERNMENT.

2. The engine-shed was inspected by me immediately after the accident had occurred, and the information then elicited regarding its cause corresponds in all essential particulars with the facts stated in Mr. White's report.

3. The accident shall be again reported upon after the conclusion of the inquest, which I understand has now been adjourned a second time until the 1st June.

[signature]
Lt. Col. R.E.
Cons. Engineer for Railways

No. 1818 Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

UNDER date the 19th July/76.

READ the following:—

From
The Consulting Engineer for Railways } (H.E. No. 256 d/25th May/76)
Do Do (" " 310 " 28th June/76)

His Grace the Governor in Council fully concurs in the conclusion arrived at by the Consulting Engineer for Railways that the accident reported in these papers, which proved fatal to two persons and caused injury to fifteen others, was directly due to gross neglect of duty. In delegating a critical operation to be performed in his absence by a Maistry, the Inspector

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Recorded pending submission of proceedings of the Court of Inquest.

[illegible]

No. 295
Cir. 30/5/76
Despatch 26-5-76

RAILWAY DEPARTMENT.

187

From
The Consulting Engineer for Railways,

To
The Secretary to Government,
P. W. Department,
Fort St. George.

Dated 25th May 1876.
Received 26th May 1876.

No. 256

Enclosures. 2.

Reporting that engine shed in course of erection fell on 13 May 1876 at Goodshed Madras.

Rec'd 13.7.76
Rec'd 3.7.76

Inspector failed to realize the responsibility of his charge. The Maistry is equally to blame for his disobedience of the Orders which he had received as to the way in which the operation was to be carried out. Both men are, in the opinion of the Governor in Council, unfit for future employment on any work in the Madras Presidency.

The reason adduced by the Acting Chief Engineer for omitting to fasten down the principals suggests doubts as to the stability of the Structure, the details of which should be

be carefully scrutinized by the Chief Engineer.

[illegible]

2 Cons: Engr: for Railways. √
7 Judicial Dept. — √

[illegible] 8-8-76.

1° attd.

Recd. 3.7.76 [illegible]

3789/85
462

Govt. of {1876} Madras.

PUBLIC WORKS.

To

The Const. Engr. for Ags.

Dated

Issued

Recd. Encl.

G. O. 19 July 1876, No. 1878

Nos. 2956

Accident (S.I.Ry)

Passing orders on Report submitted by the Con. Engr. of an — by the falling in of an Engine shed in course of Erection at the Goodshed Madras on the 13th May 1876.