

X 2 (03) 2 r
F3

Department of Mines, India



REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

UNDER THE INDIAN MINES ACT (VIII OF 1901)

FOR THE YEAR ENDING

31st December 1923

BY

R. R. SIMPSON, Esq., M.Sc.,
Chief Inspector of Mines in India



CALCUTTA: GOVERNMENT OF INDIA
CENTRAL PUBLICATION BRANCH
1924

**Government of India Publications are obtainable from Government
of India Central Publication Branch, 8, Hastings Street,
Calcutta, and from the following Agents :—**

EUROPE.

**OFFICE OF THE HIGH COMMISSIONER FOR INDIA,
42, GROSVENOR GARDENS, LONDON, S.W. 1.**

Constable & Co., 10, Orange Street, Leicester Square,
London, W.C.
Kegan Paul, Trench, Trübner & Co., 68-74, Carter
Lane, E.C., and 39, New Oxford Street, London,
W.C.
Bernard Quaritch, 11, Grafton Street, New Bond
Street, London, W.
P. S. King & Sons, 2 & 4, Great Smith Street, West-
minster, London, S.W.
Grindlay & Co., 54, Parliament Street, London, S.W.
Luzac & Co., 46, Great Russell Street, London, W.C.
W. Thacker & Co., 2, Creed Lane, London, E.C.
T. Fisher Unwin, Ltd., 1, Adelphi Terrace, London,
W.C.

Wheldon & Wesley, Ltd., 2, 3 & 4, Arthur Street, New
Oxford Street, London, W.C. 2.
East & West, Ltd., 3, Victoria Street, London, S.W. 1.
B. H. Blackwell, 50 & 51, Broad Street, Oxford.
Deighton Bell & Co., Ltd., Cambridge.
Oliver and Boyd, Tweeddale Court, Edinburgh.
E. Ponsonby, Ltd., 116, Grafton Street, Dublin.
Ernest Leroux, 28, Rue Bonaparte, Paris.
Martinus Nijhoff, The Hague, Holland.
Otto Harrassowitz, Leipzig.
Friedländer und Sohn, Berlin.

INDIA AND CEYLON.

Thacker, Spink & Co., Calcutta and Simla.
W. Newman & Co., Ltd., Calcutta.
R. Cambay & Co., Calcutta.
S. K. Lahiri & Co., Calcutta.
The Indian School Supply Depot, 309, Bow Bazar
Street, Calcutta, and 226, Nawabpur, Dacca.
Butterworth & Co. (India), Ltd., Calcutta.
Rai M. C. Sarcar Bahadur & Sons, 90/2-A, Harrison
Road, Calcutta.
The Weldon Library, 26, Chowringhee Road,
Calcutta.
Standard Literature Company, Limited, Calcutta.
Association Press, Calcutta.
Chakerverty, Chatterjee & Co., Ltd., 13, College
Square, Calcutta.
Higginbotham & Co., Madras.
V. Kalyanarama Iyer & Co., Madras.
P. R. Rama Iyer & Co., Madras.
Rochouse and Sons, Madras
Bright & Co., Trivandrum.
V. S. Swaminathan, Bookseller, West Tower Street,
Madura.
Thacker & Co., Ltd., Bombay.
D. B. Taraporevala, Sons & Co., Bombay.
Sunder Pandurang, Bombay.
Ram Chandra Govind & Sons, Kalbadevi, Bombay.
N. M. Tripathi & Co., Booksellers, Princess Street
Kalbadevi Road, Bombay.
Proprietor, New Kitabkhana, Poona.
The Manager, Oriental Book Supplying Agency, 16,
Shukrawar, Poona City.
R. S. Gondhalekar's Book Depot, Publisher and
Bookseller, Budhwar Chawk, Poona City.
Managing Director, Co-Operative Bookstall, Book-
sellers and Publishers, Poona City.
The Standard Bookstall, Karachi, Rawalpindi,
Murree, Lahore, Peshawar and Quetta.

Karsandas Narandas & Sons, Surat.
A. H. Wheeler & Co., Allahabad, Calcutta and Bombay.
N. B. Mathur, Supt., Nazir Kanun Hind Press,
Allahabad.
The North India Christian Tract and Book Society,
18, Clive Road, Allahabad.
Ram Dayal Agarwala, 184, Katra, Allahabad.
Manager, Newal Kishore Press, Lucknow.
The Upper India Publishing House, Ltd., 41, Aminabad
Park, Lucknow.
Munshi Sitaram, Managing Proprietor, Indian Army
Book Depot, Juhi, Cawnpore.
Rai Sahib M. Gulab Sing & Sons, Muft-i-Am Press,
Lahore and Allahabad.
Rama Krishna & Sons, Booksellers, Anarkali,
Lahore.
Puri Brothers, {Booksellers and Publishers, Katcheri
Road, Lahore.
Manager of the Imperial Book Depot, 63, Chandney
Chawk Street, Delhi.
Oxford Book and Stationery Company, Delhi.
Supt., American Baptist Mission Press, Rangoon.
Proprietor, Rangoon Times Press, Rangoon.
The Modern Publishing House, Ltd., 30, Phayre
Street, Rangoon.
The International Buddhist Book Depot, Post Box
No. 971, Rangoon.
Manager, the "Hitavada," Nagpur.
S. C. Talukdar, Proprietor, Students & Co., Cooch
Behar.
Times of Ceylon Co., Ltd.
The Manager, Ceylon Observer, Colombo.
The Manager, the Indian Bookshop, Benares City.
B. C. Basak, Esq., Proprietor, Albert Library, Dacca.

CONTENTS.

PAGE.

INTRODUCTION—

Relates to administration of the Act	1
Other mining statistical publications	1

SECTION I.—PERSONS EMPLOYED—

Average figures of labour	1
Increase compared with previous year	1
Supply of labour in Bengal and Bihar and Orissa coalfields	1
Labour troubles in the Giridih coalfield	1
Supply of labour in Assam	2
" " " " the Central Provinces	2
Average output of coal per person employed in India	2
" " " " " " " " Great Britain	2
" " " " " " " " the United States of America	2
Comparison between wages paid to coal and other miners in the different provinces of India	2
Liberal wages paid to the Indian coal miner	2
Statement of hours worked and wages paid at a large representative mine in each important mining field in British India	3
Physical conditions of mining in the Indian coalfields	3
Conditions of employment underground imposed by Indian Mines Act, 1923	3
Advantages of system of working in shifts	3
Employment of women in underground mines	4
Conditions under which Indian labourers live at mines	4
Jharia Mines Board of Health's campaign for improvement of housing	4

SECTION II.—OUTPUT OF MINERALS—

Coal output in various provinces	4
" " increase on previous year	5
" " opening and closing stocks	5
" " chart of monthly raisings and despatches of coal	5
" " despatches	5
" " amount delivered to coking	5
" " " of hard and of soft coke made	5
" " increase in Bihar and Orissa	5
" " " " Bengal	5
" " decrease in Central Provinces and other Provinces	5
" " percentage of increase on previous year's output in the Jharia coalfield	5
" " percentage of increase on previous year's output in the Raniganj coalfield	5
" " attempt to recover lost export trade	6
" " depression in Central Provinces coal trade	6
" " number of mines at which electric power used	6
" " increase in the number of coal cutting machines	6
" " number of coal cutting machines in use at different coalfields	6
" " amount of square feet of coal undercut by coal cutting machines	6
" " increase in use of explosives at mines	6
" " improvements made in collieries in Jharia coalfield	6
Mica output, increase in	6
" " compared with previous year	6
" " demand for better qualities of mica	6
Manganese ore output, increase in	7
" " " compared with previous year	7
" " " good demand throughout the year.	7
" " " rise in price	7
Rock salt output, decrease in	7
" " " " " due to weakness of demand	7
Lead-Silver ores output, increase in	7
" " " " compared with previous year	7
" " " " average prices of refined lead and refined silver	7
Wolfram and tin ores output, decline in	7
" " " " " compared with previous year	7

SECTION III.—ACCIDENTS—*contd.*

PAGE.

Falls of side—

Accident at Messrs Hajeebboy Laljee and Company's Mahakali coal mine	17
" " the Bokaro-Ramagur Limited's Dhori coal mine	17
" " Mr. A. H. Gaston's Cherangode mica mine	18

Enfocaction by gases—

Accident at the Pench Valley Coal Company, Limited's Chandametta coal mine	18
" " " Bengal Coal Company, Limited's Sodepur coal mine	18-20

In shafts—

Accident at the Burma Corporation, Limited's Bawdwin lead-silver mine	20
" " " Central Kurkend Coal Company, Limited's Central Kurkend coal mine	20

Sundries underground—

Accident at the Khas Jherria Colliery Company, Limited's Khas Jherria coal mine	20, 21
---	--------

Miscellaneous on surface—

Accident at Messrs. Villiers, Limited's Beglizzi coal mine	21
--	----

SECTION IV.—PROSECUTIONS AND ADDITIONS TO THE ACT—

Prosecutions under the Indian Mines Act and Indian Penal Code—

J. P. Laha's Tundū Khas coal mine	21
Framode Kumar Sen Gupta	21
Dharani Dhar Chowdhuri	21
Hajeebboy Laljee's Mahakali coal mine	22
W. C. Bhattacharji's Egareoor coal mine	22
A. H. Gaston's Cherangode mica mine	22
Sheoperman Tewari's Patharischuck coal mine	22
S. N. Bose's Banderbua coal mine	22
Tata Iron and Steel Company, Limited's Choitodih coal mine	22
B. P. Singh's Kalipahari coal mine	22
G. L. Mukherji's Parhargora coal mine	22
Rai Sahib H. Verma and M. Kanhaiyalal, Limited's Rawanwara coal mine	22
The owners of 17 mines for non-submission of Annual Returns for 1922	22

Prosecutions of employes—

Central Provinces Prospecting Syndicate, Limited's Balaghat manganese mine	22
Semla Govindpur Collieries, Limited's Baidyanathpur coal mine	22
Bengal Iron Company, Limited's Ramnagore coal mine	22
Burrakur Coal Company, Limited's Joba coal mine	22
" " " " Charanpur coal mine	23
Central Kurkend Coal Company, Limited's Central Kurkend coal mine	23
Bansdeopur Coal Company, Limited's Bansdeopur coal mine	23
Jharia Coal Association's Harinachak coal mine	23
Great Indian Peninsula Railway Company's Mohpani coal mine	23

Indian Mines Act, 1901—

Section 20—Publication of rules for the examination and certification of underground airways	23
Section 21—Establishment of special Rules at coal and non-coal mines	23

SECTION V.—GENERAL REMARKS—

Health and Sanitation—

Assesal Mines Board of Health—

Number of meetings	23
Epidemic diseases	23
Anti-malarial operations	23
Death rate per thousand	23
Birth rate per thousand	23

Jharia Mines Board of Health—

Number of meetings	23
Epidemic diseases	23

	PAGE.
SECTION V.—GENERAL REMARKS—<i>contd.</i>	
Jharia Mines Board of Health—<i>contd.</i>	
Death rate per thousand	23
Birth rate per thousand	23
Measures for improvement of housing of colliery labour	23
Rainfall statistics—	
Coalfields of Jharia, Raniganj and Giridih	24
Mining Education—	
Report of Principal, Bengal Engineering College	24
Annual Mining Camp, " " " "	24
Mining Education Advisory Board, Meetings held by	24
Introduction of new course of instruction in the Raniganj coalfield	24
Delivery of lectures in Hindi in the Jharia coalfield	24
" " " " Bengali in the Raniganj coalfield	24
Introduction of a course of instruction in mining in the Pench Valley coalfield	24
Board of Examiners for Coal Mine Managers' Certificates—	
Number of meetings held	25
" " Indian certificates granted in lieu of British certificates	25
Results of examinations for colliery managers' certificates of competency	25
Local Examiners and Secretaries	25
Publication of question papers	25
Mining Boards—	
Number of meetings	25
Business transacted	25
Mining and Geological Institute of India—	
Membership	25
Number of meetings held	25
Business transacted	25
Award of Government prize	25
" " Institute's medals	25
Association of Colliery Managers in India—	
Questions dealt with by Council	26
Ambulance work in the coalfields—	
St. John Ambulance Association, Formation of local centres in the Jharia and Raniganj coalfields	26
St. John Ambulance Association, Grant of First Aid Certificates	26
Land Acquisition (Mines) Act, 1885—	
Number of cases disposed of	26
Applications for employment—	
Register of applicants for employment holding first or second class colliery managers' certificates	26
Coal Dust Committee—	
Appointment of Committee	26
Personnel of "	26
Terms of reference	27
Sum allotted for expenditure in 1923-24	27
Nature of work performed	27
Official duties—	
Personnel	27

CONTENTS.

v

		PAGE.
APPENDIX I.—Statistics of Mines and Minerals—		
Table No. 1.—Number of mines and workers and output of Minerals		29—41
" " 2.—Analyses of figures relating to output of coal and coke		42—43
" " 3.—Number of mines opened and closed		44—47
" " 4.—Fluctuations of outputs		48
" " 5.—Coal raised and death rates		48
" " 6.—Aggregate horse power and purpose for use of electric motors installed at coal mines		49
" " 7.—Aggregate horse power of electric motors installed at all mines		49
" " 8.—Number and type of coal cutting machines at work in coal mines		50
" " 9.—Number of mechanical ventilators in use at coal mines		50
" " 10.—Number of safety lamps in use at coal mines		50
APPENDIX II.—Accidents in Mines—		
Table No. 1.—List of fatal accidents		51—90
" " 2.—Fatal and serious accidents		91—96
" " 3.—Fatal accidents and deaths classified according to age and sex		97—98
" " 4.—Fatal accidents classified according to cause		99
APPENDIX III.—Prosecutions under the Act		100—101
APPENDIX IV.—Miscellaneous—		
Statement No. 1.—List of inspection circles		102
" " 2.—List of certificate holders		102—104
" " 3.—List of Mining Universities and Colleges approved by Government for purposes of Rules 32 and 33 of the Act		106
" " 4.—Bengal Engineering College Mining classes		106
" " 5.—Mining Instruction in the coalfield of Bengal and Bihar and Orissa		107—109
" " 6.—Mining Instruction in Bihar and Orissa		110—112
" " 7.—Question papers set at examinations for colliery managers' certificates of competency		112—117
" " 8.—Government of India, Department of Industries and Labour, Notification regarding the examination and certification of underground sirdars		117—119
" " 9.—Particulars to be furnished under Section 4, Land Acquisition (Mines) Act, 1885		120

APPENDIX I.

STATISTICS OF MINES AND MINERALS.

Table No. 1.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.								Total below ground.	ABOVE GROUND.				Grand total below and above ground.
								MINERS.				OTHERS.					Adult males.	Adult females.	Children.	Total above ground.	
								Adult males.	Adult females.	Children.	Total.	Adult males.	Adult females.	Children.	Total.						
A.—COAL.																					
Assam	Lakhimpur	6	5	1	6	10	Tons. 270,348	1,688	169	..	2,057	..	..	..	..	2,057	884	275	86	1,245	3,302
	Naga Hills	1	..	1	1	2	55,606	140	..	..	140	240	..	..	240	389	203	7	..	210	699
	Sibsagar	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	7	5	2	7	12	325,949	2,028	169	..	2,197	240	..	..	240	2,446	1,087	282	86	1,455	3,901
Baluchistan	Kalat	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Loralai	1	..	1	..	..	148	35	..	..	35	..	..	..	35	55	..	..	..	55	90
	Quetta-Pishin	8	..	8	..	..	4,979	77	..	..	77	..	..	..	77	39	..	..	39	116	
	Sibi-Khost	5	1	4	..	..	26,504	229	..	..	229	246	..	..	246	476	361	..	7	368	843
	TOTAL	14	1	13	..	..	31,626	341	..	..	341	246	..	..	246	587	455	..	7	462	1,040
Bengal	Bankura, Raniganj	4	..	4	2	2	8,510	54	57	..	111	10	..	..	10	121	87	84	..	71	192
	Birbhum	6	8	8	..	..	18,881	101	16	..	117	18	8	1	22	189	80	45	1	135	271
	Burdwan	200	210	44	231	460	4,504,187	11,905	6,816	26	18,837	5,897	3,049	24	8,970	27,807	10,371	5,272	385	16,078	43,785
	TOTAL	270	219	51	233	462	4,621,578	12,150	6,880	26	19,065	5,925	3,052	25	9,002	28,067	10,497	5,351	336	16,184	44,253

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—contd.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.														
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				Total below ground.	ABOVE GROUND.									
								MINERS.					OTHERS.				Adult males.	Adult females.	Children.	Total above ground.	Grand total below and above ground.	
			Adult males.	Adult females.	Children.	Total.		Adult males.	Adult females.	Children.	Total.											
A.—COAL—contd.																						
Tons.																						
Bihar and Orissa	Hazaribagh	Bokaro	5	4	1	4	5	1,080,366	2,498	2,578	22	5,003	716	628	62	1,406	6,409	2,958	1,573	344	4,875	11,374
		Giridih	12	4	8	11	16	680,782	3,565	1,253	19	4,837	374	82	..	456	5,293	1,504	777	12	2,293	7,586
		Jharia	13	5	8	11	13	173,080	438	310	1	749	124	33	28	185	934	686	369	49	1,104	2,038
		Ramgarh	3	..	3	4,197	28	42	..	70	1	1	71	82	16	36	133	204
	Manbhum	Jharia	398	205	188	327	741	10,172,935	21,314	17,532	134	38,980	8,708	3,506	68	12,282	51,262	23,265	12,108	1,838	37,211	88,473
		Raniganj	114	22	92	80	139	849,545	2,845	1,208	..	4,053	763	454	10	1,217	5,270	2,471	1,360	103	3,934	9,204
		Palamau, Daltonganj	1	1	..	1	1	11,816	65	34	6	105	25	10	4	39	144	54	52	14	120	264
		Sambalpur, Hingir-Rampur	2	1	1	2	2	50,796	54	7	..	61	134	83	..	217	278	142	31	3	176	454
	Sonthal Parganas.	Jainty	7	4	3	3	3	82,166	366	175	..	541	181	85	..	266	807	256	97	..	353	1,160
		Raniganj	7	6	1	2	2	86,301	337	178	..	485	52	78	..	125	610	297	212	10	519	1,129
	TOTAL	557	252	305	441	922	13,171,983	31,480	23,312	182	54,974	11,068	4,954	172	16,194	71,168	31,715	16,504	2,409	50,718	121,826	
Burma.	Mergui	1	..	1	..	..	163	14	..	..	14	..	..	..	..	14	34	..	..	34	48
	Southern Shan States	2	1	1	..	..	1,108	33	..	..	33	..	..	..	..	33	76	..	..	76	109
	TOTAL	3	1	2	..	..	1,271	47	..	..	47	..	..	..	..	47	110	..	..	110	157
Central Provinces	Betul	9	..	9	2	3	2,048	35	29	..	64	22	12	4	38	102	64	30	7	101	203	
	Chanda, Ballarpur	9	6	3	6	12	112,362	579	34	7	620	352	147	6	505	1,125	723	193	36	957	2,082	
	Chhindwara, Pench Valley	47	8	39	34	50	346,094	1,475	564	179	2,218	542	634	74	1,250	3,468	1,326	722	268	2,316	5,784	
	Narsinghpur, Mohpani	1	1	..	1	2	87,387	312	..	..	312	459	338	..	797	1,100	499	91	..	590	1,699
	Yeotmal	2	1	1	..	..	168	2	2	..	4	..	..	..	..	4	26	10	5	41	45
	TOTAL	68	16	52	43	66	548,059	2,403	629	186	3,218	1,375	1,181	84	2,590	5,808	2,643	1,046	316	4,005	9,813	

Punjab	Jhelum	21	..	21	..	..	42,253	443	..	3	446	295	..	7	302	748	498	..	11	800	1,237
	Mianwali	1	..	1	..	..	11,965	56	..	..	58	4	..	..	4	60	77	2	..	70	139
	Shahpur	1	..	1	..	..	8,233	42	..	..	43	20	..	..	20	63	55	..	..	85	148
	TOTAL	23	..	23	..	..	63,501	542	..	3	545	319	..	7	326	871	600	2	11	673	1,514
GRAND TOTAL (COAL) FOR 1923		942	494	448	724	1,402	18,763,967	48,901	30,999	397	80,387	19,182	9,137	288	23,607	108,994	47,187	23,275	3,165	73,007	182,601
	" " OF PRECEDING YEAR	953	486	467	766	1,644	18,16,988	48,380	29,314	492	78,186	18,574	10,439	295	29,308	107,494	48,563	23,036	3,200	76,861	184,355
	DIFFERENCE	-11	+8	-19	-42	-142	+594,979	+611	+1,685	-95	+2,201	+608	-1,302	-7	-701	+1,500	-1,399	-1,781	-95	-3,234	-1,754
B.—MICA.																					
Bihar and Orissa							Cwt.														
	Gaya	14	..	14	6	12	2,949	336	169	42]	547	30	11	..	41	583	98	80	29	177	785
	Hazaribagh	275	32	248	108	127	19,289	2,465	706	235	3,406	425	662	517	1,604	5,010	1,122	596	583	2,301	7,311
	Monghyr	1	..	1	..	..	15	18	20	..	38	..	..	..	..	38	5	..	6	11	49
	Sambalpur	2	..	2	..	..	..	16	..	..	16	9	42	9	60	76	8	..	..	8	84
TOTAL	292	32	200	109	139	22,253	2,835	8,955	277	4,007	464	715	556	1,706	5,712	1,333	646	618	2,497	8,209	
Madras	Nellore	41	18	28	..	..	8,071	559	149	17	725	206	193	16	415	1,140	305	322	201	828	1,968
	Nilgiris	3	..	3	1	1	148	34	..	..	34	7	11	..	18	52	22	13	18	48	100
	TOTAL	44	18	31	1	1	8,814	593	149	17	759	213	204	16	433	1,192	327	335	219	876	2,068
Rajputana	Ajmer-Merwara	19	..	19	..	..	538	142	30	12	184	29	26	..	55	239	52	11	..	63	302
GRAND TOTAL (MICA) FOR 1923		855	46	310	110	140	31,605	3,570	1,074	306	4,950	706	945	542	2,193	7,143	1,612	992	832	3,436	10,579
	" " OF PRECEDING YEAR	441	49	302	30	30	30,080	3,358	1,275	461	5,094	567	624	356	1,547	6,641	2,146	1,219	1,009	4,464	11,105
	DIFFERENCE	-86	-4	-82	+80	+110	+1,516	+212	-201	-155	-144	+189	+321	+186	+646	+502	-534	-227	-207	-1,028	-526

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—contd.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		"TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				ABOVE GROUND.				Total below ground.	Adult males.	Adult females.	Children.	Total above ground.	Grand total below and above ground.
								MINERS.		OTHERS.		Adult males.	Adult females.	Children.	Total.						
								Adult males.	Adult females.	Children.	Total.										
C.—MANGANESE ORE.																					
Bombay	Panch Mahals	2	..	2	..	..	Tons. 35,354	531	389	..	920	66	..	..	66	986	235	81	102	418	1,404
Central Provinces	Balaghat	32	1	31	13	15	198,162	1,844	2,138	88	4,070	81	..	..	81	4,151	760	589	84	1,423	5,574
	Bhandara	6	..	6	2	3	69,164	339	550	64	953	3	..	..	3	956	177	139	5	321	1,277
	Chhindwara	3	1	2	1	1	30,066	287	327	..	614	..	..	..	..	614	168	41	29	228	842
	Jubbulpore	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	22	7	..	29	29
	Nagpur	25	2	23	11	11	188,679	1,624	1,850	25	3,499	109	35	..	144	3,643	671	431	39	1,141	4,784
	TOTAL	67	4	63	27	30	486,071	4,094	4,865	177	9,136	193	35	..	228	9,364	1,778	1,207	157	3,142	12,506
Madras	Bellary	1	..	1	..	..	2,429	238	165	15	418	..	..	..	..	418	48	49	..	97	515
	Vizagapatam	9	..	9	..	..	22,524	570	304	91	965	9	..	..	9	974	179	44	7	230	1,204
	TOTAL	10	..	10	..	..	24,953	808	469	106	1,383	9	..	..	9	1,392	227	93	7	327	1,719
GRAND TOTAL (MANGANESE ORE) FOR 1923		79	4	75	27	30	646,378	5,433	5,723	283	11,439	268	35	..	303	11,742	2,240	1,391	266	3,867	16,629
" " OF PRECEDING YEAR		54	4	50	26	28	392,322	4,034	4,424	202	8,660	194	4	..	198	8,858	1,729	1,129	3,309	3,167	12,025
DIFFERENCE		+25	..	+25	+1	+2	+154,056	+1,399	+1,299	+81	+2,779	+74	+31	..	+105	+2,884	+511	+262	-43	+730	+3,904

D.—LIMESTONE.

Burma	Northern Shan States	2	..	2	1	1	Tons. 12,667	120	..	..	120	133	..	..	133	253	35	..	..	35	268
Central Provinces	Bilaspur	1	..	1	..	..	7,570	35	..	..	35	5	30	4	39	74	62	50	7	119	193
	Jubbulpore, Katni	22	2	20	22	24	215,924	1,575	966	25	2,566	490	2,332	1	2,823	5,369	542	425	71	1,038	6,427
	TOTAL	23	2	21	22	24	223,494	1,610	966	25	2,601	495	2,362	5	2,862	5,463	604	475	78	1,157	6,620
	GRAND TOTAL (LIMESTONE) FOR 1923	25	2	23	23	25	236,161	1,730	966	25	2,721	628	2,362	5	2,995	5,716	639	475	78	1,192	6,908
	" " OF PRECEDING YEAR	27	2	25	20	20	140,507	1,155	936	50	2,141	96	946	53	1,095	3,236	467	386	97	950	4,186
DIFFERENCE	-2	..	-2	+3	+5	+95,654	+575	+30	-25	+580	+532	+1,416	-48	4,900	+2,480	+172	+89	-19	+342	+2,722	

E.—SALT.

Punjab	Jhelum	1	1	..	1	1	Tons. 91,184	186	125	20	331	155	..	..	155	486	..	..	..	..	436
	Mianwali	1	..	1	..	..	3,999	37	..	4	41	..	..	..	..	41	..	..	..	..	41
	Shahpur	1	..	1	..	..	18,517	42	28	3	73	..	..	..	..	73	..	..	..	..	73
	GRAND TOTAL (SALT) FOR 1923	3	1	2	1	1	113,700	265	153	27	445	155	155	600	600
	" " OF PRECEDING YEAR	3	1	2	2	7	187,167	648	35	3	631	103	478	55	636	1,317	45	45	1,302
DIFFERENCE . . . . .	..	..	..	-1	-6	-73,467	-378	+118	+24	-236	+52	-478	-55	-481	-717	-45	..	..	..	-45	-702

F.—GEMS.

Burma	Katha	2	2	..	5	5	Carats. (a) Rubies. 92,592	638	..	..	638	153	..	..	153	791	494	..	..	494	1,285																				
							(b) Sapphires. 65,692																																		
							(c) Spinel. 28,726																																		
							TOTAL															2	2	..	5	5	187,010	638	638	153	153	791	494	494	1,285
							TOTAL OF PRECEDING YEAR															5	2	3	231,160	624	624	135	135	759	405	405	1,254
DIFFERENCE	-3	..	-3	+5	+5	-44,150	+14	..	..	+14	+18	..	..	+18	+32	-1	..	..	-1	+31																					

33

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—contd.

PROVINCE.	District and minerals field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.														
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				ABOVE GROUND.				Grand total below and above ground.						
								MINERS.				OTHERS.										
			Adult males.	Adult females.	Children.	Total.		Adult males.	Adult females.	Children.	Total.	Total below ground.	Adult males.	Adult females.	Children.	Total above ground.						
G.—SLATE.																						
Tons.																						
Bihar and Orissa	Monghyr	5	..	5	..	..	2,637	132	101	60	293	..	..	..	..	293	123	..	..	123	416
Punjab	Gurdaspur
	Gurgaon	5	..	5	..	..	2,832	112	8	16	136	..	..	16	16	152	24	..	4	28	180
	Kangra	5	..	5	..	..	5,087	157	16	9	182	..	..	..	..	182	49	13	19	81	263
	TOTAL	10	..	10	..	..	7,919	299	24	25	318	..	..	16	16	334	73	13	23	109	443
GRAND TOTAL (SLATE) FOR 1923								401	125	85	611	..	..	16	16	627	196	13	23	232	859
.. .. OF PRECEDING YEAR								262	103	65	430	66	..	34	100	530	171	23	14	208	738	
DIFFERENCE								+139	+22	+20	+181	-66	..	-18	-84	+97	+25	-10	+9	+24	+121	
H.—GOLD.																						
Ozs.																						
Madras	Anantapur	2	1	1	..	..	1,519	6	..	..	6	103	..	..	103	109	138	14	14	166	275
TOTAL OF PRECEDING YEAR								58	..	..	58	48	..	..	48	106	203	79	31	403	509
DIFFERENCE								-52	..	..	-52	+55	..	..	+55	+3	-155	-65	-17	-237	-234

L.—IRON ORE.

						Tons.															
Bihar and Orissa	Singhbhum	3	..	3	2	2	215,448	614	283	19	916	..	..	..	..	916	839	609	84	1,502	2,418
Burma	Mandalay	1	..	1	..	..	329	..	..	..	..	..	..	..	..	..	145	5	..	150	150
	Northern Shan States	4	..	4	1	1	52,911	700	..	..	700	..	..	..	..	700	282	78	..	300	1,060
	TOTAL	5	..	5	1	1	58,240	700	..	..	700	..	..	..	..	700	427	83	..	510	1,310
Central Provinces	Chanda	1	..	1	..	..	23,345	61	18	..	79	..	..	..	79	67	64	22	173	252	
GRAND TOTAL (IRON ORE) FOR 1923		9	..	9	3	3	292,038	1,375	301	19	1,695	..	..	..	1,695	1,353	756	76	2,185	3,890	
" " OF PRECEDING YEAR		10	1	9	3	7	240,383	612	495	30	1,137	228	17	..	245	1,382	570	162	56	788	2,170
DIFFERENCE		-1	-1	..	..	-4	+51,650	+763	-194	-11	+558	-228	-17	..	-245	+313	+783	+594	+20	+1,397	+1,710

J.—WOLFRAM ORE.

						Tons.	Labour figures included with those for tin ore.															
Burma	Mergul	..	..	..	..	..	871															
	Tavoy	..	..	..	..	..											
	Thaton	..	..	..	..	..											
TOTAL		..	..	..	..	..	872	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL OF PRECEDING YEAR		3	..	3	..	..	942	167	..	..	167	..	..	..	..	167	82	..	..	32	199	
DIFFERENCE		-3	..	-3	..	..	-70	-167	..	..	-167	..	..	..	-167	-82	..	..	-32	-199		

K.—MAGNESITE.

						Tons.														
Madras	Salem	2	..	2	..	..	19,386	415	298	672	1,385	..	..	..	1,385	102	15	60	177	1,502
TOTAL OF PRECEDING YEAR		2	..	2	1	1	18,417	269	248	408	925	..	..	..	925	112	..	40	152	1,077
DIFFERENCE		..	..	..	-1	-1	+919	+146	+50	+264	+460	..	..	..	+460	-10	+15	+20	+25	+425

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—contd.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT. Tons.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.							ABOVE GROUND.				Grand total below and above ground.		
								MINERS.				OTHERS.			Total below ground.	Adult males.	Adult females.	Children.		Total above ground.	
			Adult males.	Adult females.	Children.	Total.		Adult males.	Adult females.	Children.	Total.										
L.—CHROMITE ORE.																					
Baluchistan	Quetta-Pishin	3	..	3	..	..	1,257	23	..	..	23	..	..	..	..	23	10	..	..	10	33
	Zhob	31	..	31	..	..	23,062	242	..	..	242	..	..	..	..	242	271	..	..	271	513
	TOTAL	34	..	34	..	..	24,319	265	..	..	265	..	..	..	..	265	281	..	..	281	546
Bihar and Orissa	Singhbhum	3	..	3	..	..	914	51	46	23	120	..	..	..	..	120	20	11	4	35	155
	GRAND TOTAL (CHROMITE ORE) FOR 1923	37	..	37	..	..	25,233	316	46	23	385	..	..	..	..	385	301	11	4	316	701
	TOTAL OF PRECEDING YEAR	25	..	25	1	1	19,605	209	55	20	284	..	..	..	..	284	169	22	4	195	479
	DIFFERENCE	+12	..	+12	-1	-1	+5,628	+107	-9	+3	+101	..	..	..	..	+101	+132	-11	..	+121	+222
M.—COPPER ORE.																					
Bihar and Orissa	Singhbhum	4	3	1	3	4	6,550	1,238	5	..	1,243	..	..	..	..	1,243	946	452	31	1,429	2,672
Central Provinces	Balaghat	1	..	1	..	..	..	23	8	..	31	1	..	..	1	32	9	5	..	14	46
	GRAND TOTAL (COPPER ORE) FOR 1923	5	3	2	3	4	6,550	1,261	13	..	1,274	1	..	..	1	1,275	955	457	31	1,443	2,718
	" " OF PRECEDING YEAR	5	2	3	2	4	30,764	821	6	..	827	4	..	..	4	831	1,320	526	79	1,934	2,765
	DIFFERENCE	..	+1	-1	+1	..	-24,214	+440	+7	..	+447	-3	..	..	-3	+444	-374	-79	-48	-491	-47

		N.—BAUXITE.																			
							Cwt.														
Bombay	Katra	1	..	1	..	..	115,355	93	63	..	156	3	..	..	3	159	17	..	19	36	195
Central Provinces	Jubbulpore	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (BAUXITE) FOR 1923	1	..	1	1	1	115,355	93	63	..	156	3	..	..	3	159	17	..	19	36	195
	TOTAL OF PRECEDING YEAR	1	..	1	..	..	79,740	23	30	..	53	5	..	..	5	58	24	33	5	62	120
	DIFFERENCE	..	..	..	+1	+1	+35,615	+70	+33	..	+103	-2	..	..	-2	+101	-7	-33	+14	-26	+75
		O.—CLAY.																			
							Tons.														
Bihar and Orissa	Manbhum	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
	Palaman	1	..	1	..	..	5,667	14	8	2	24	2	..	..	2	26	22	78	12	52	78
	TOTAL	2	..	2	..	..	5,667	14	8	2	24	2	..	..	2	26	22	18	12	53	79
Central Provinces	Jubbulpore	3	2	1	2	2	31,392	114	242	18	374	..	..	..	..	374	31	..	..	31	405
Delhi	Delhi	4	..	4	..	..	3,676	30	..	..	30	..	..	..	..	30	26	1	..	27	57
	GRAND TOTAL (CLAY) FOR 1923	9	2	7	2	2	40,735	158	250	20	428	2	..	..	2	430	80	19	12	111	541
	TOTAL OF PRECEDING YEAR	12	2	10	5	5	57,918	183	322	13	518	14	100	..	114	632	91	15	14	120	752
	DIFFERENCE	-3	..	-3	-3	-3	-17,183	-25	-72	+7	-90	-12	-100	..	-112	-202	-11	+4	-2	-9	-211
		P.—LEAD ORE.																			
							Tons.														
Burma	Northern Shan States	1	1	..	1	4	*245,802	1,791	..	..	1,791	158	..	..	158	1,049	720	..	..	720	2,669
	Southern Shan States	2	1	1	..	..	33	53	..	..	53	..	..	..	53	32	..	..	..	32	85
	TOTAL	3	2	1	1	4	245,925	1,844	..	..	1,844	158	..	..	158	2,002	752	..	..	752	2,754
	TOTAL OF PRECEDING YEAR	2	1	1	..	..	172,018	1,166	12	..	1,178	120	..	..	120	1,298	544	12	..	556	1,854
	DIFFERENCE	+1	+1	..	+1	+4	+73,907	+678	-12	..	+666	+38	..	..	+38	+704	+208	-12	..	+196	+900
		Q.—TIN ORE.																			
							Tons.														
Burma	Mergul	17	..	17	..	..	255	391	10	..	401	14	..	..	14	415	177	20	6	202	617
	Tavoy	23	2	21	..	..	763	1,852	15	8	1,870	16	2	..	18	1,888	389	25	14	428	2,316
	Thaton	1	..	1	..	..	8	4	10	..	14	..	..	..	14	8	..	..	..	8	17
	TOTAL	41	2	39	..	..	1,021	2,247	35	8	2,285	30	2	..	32	2,317	569	45	19	633	2,950
	TOTAL OF PRECEDING YEAR	44	1	43	11	12	1,080	2,245	65	7	2,317	10	4	..	14	2,331	607	20	..	627	2,958
	DIFFERENCE	-3	+1	-4	-11	-12	-59	+2	-30	-4	-32	+20	-2	..	+18	-14	-38	+25	+19	+6	-8

* Amount of refined lead extracted 46,060 tons.

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—contd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—contd.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.								ABOVE GROUND.				Grand total below and above ground.	
								MINERS.				OTHERS.				Total below ground.	Adult males.	Adult females.	Children.		Total above ground.
			Adult males.	Adult females.	Children.	Total.		Adult males.	Adult females.	Children.	Total.										
			R.—STEATITE.																		
							Cwt.														
Central Provinces	Jubbulpore	2	..	2	3	3	19,978	56	16	..	72	30	60	..	90	162	24	36	16	76	238
Madras	Kurnool	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	9	4	..	13	13
	Nellore }	2	..	2	..	..	1,543	19	1	..	20	..	..	..	20	20	7	4	2	13	33
	(TOTAL	3	..	3	..	..	1,543	19	1	..	20	..	..	..	20	20	16	8	2	26	46
	GRAND TOTAL (STEATITE) FOR 1923	5	..	5	3	3	21,521	75	17	..	92	30	60	..	90	182	40	44	18	102	284
GRAND TOTAL OF PRECEDING YEAR	4	..	4	5	5	3,204	31	6	..	37	..	..	..	37	37	11	15	3	29	60	
DIFFERENCE	+1	..	+1	-2	-2	+18,817	+44	+11	..	+55	+30	+60	..	+90	+145	+29	+29	+15	+73	+218	
			S.—FULLERS' EARTH.																		
							Tons.														
Central Provinces	Jubbulpore . . . . .	..	..	..	..	..	80														
			Labour figures included with those for limestone.																		
	TOTAL OF PRECEDING YEAR . . . . .	..	..	..	..	..	162	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	DIFFERENCE . . . . .	..	..	..	..	..	-72	..	..	..	..	..	..	..	..	..	..	..	..	..	..

		T.—SILVER.																				
								Ozs.														
Burma	Northern Shan States . . . . .	..	..	..	..	..	4,843,939	Labour figures included with those for lead ore.													
Madras	Anantapur . . . . .	..	..	..	..	..	103	Labour figures included with those for gold.													
GRAND TOTAL (SILVER) FOR 1923 . . . . .		..	..	..	..	..	4,844,042	..	..	..	..	..	..	..	..	..	..	..	..	..
" " OF PRECEDING YEAR . . . . .		..	..	..	..	..	4,206,138	..	..	..	..	..	..	..	..	..	..	..	..	..
DIFFERENCE . . . . .		..	..	..	..	..	+637,904	..	..	..	..	..	..	..	..	..	..	..	..	..
		U.—APATITE.																				
								Tons.														
Bihar and Orissa	Singhbhum	1	..	1	..	..	1,082	42	..	..	42	3	21	..	24	26	34	9	..	43	109
TOTAL OF PRECEDING YEAR		1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	35	54	..	89	89
DIFFERENCE . . . . .		..	..	..	..	..	+1,082	+42	..	..	+42	+3	+21	..	+24	+66	-1	-45	..	-46	+20
		V.—GRAPHITE.																				
								Cwt.														
Central Provinces	Betul	1	..	1	..	..	..	2	1	..	3	..	..	..	..	3	1	1	..	2	5
TOTAL OF PRECEDING YEAR		1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5	5
DIFFERENCE . . . . .		..	..	..	..	..	..	+2	+1	..	+3	..	..	..	..	+3	-2	-1	..	-3	..
		W.—OCHRE.																				
								Tons.														
Bihar and Orissa	Puri	1	1	..	..	..	350	8	..	..	8	..	..	..	..	8	16	..	..	16	24
Central Provinces	Jubbulpore	2	..	2	..	..	2,328	44	17	11	72	..	..	..	..	72	109	45	10	168	230
GRAND TOTAL (OCHRE) FOR 1923		3	1	2	..	..	2,678	52	17	11	80	..	..	..	..	80	119	45	10	174	254
" " OF PRECEDING YEAR		3	1	2	..	..	994	48	9	4	61	..	..	..	..	61	131	46	11	188	249
DIFFERENCE . . . . .		..	..	..	..	..	+1,684	+4	+8	+7	+19	..	..	..	..	+19	-12	-1	-1	-14	+5

APPENDIX I—contd.

STATISTICS OF MINES AND MINERALS—contd.

Table No. 1—concl'd.

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1923—concl'd.

PROVINCE.	District and mineral field.	Number of mines under the scope of the Act.	NUMBER OF MINES.		NUMBER OF MINES INSPECTED DURING THE YEAR.		TOTAL OUTPUT.	AVERAGE NUMBER OF PERSONS EMPLOYED DAILY IN AND ABOUT THE MINES.													
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.								ABOVE GROUND.				Grand total below and above ground.	
								MINERS.				OTHERS.				Total below ground.	Adult males.	Adult females.	Children.		Total above ground.
			Adult males.	Adult females.	Children.	Total.		Adult males.	Adult females.	Children.	Total.										
X.—BARYTES.																					
Cwt.																					
Bihar and Orissa	Singhbhum	1	..	1	..	..	..	58	33	..	91	..	..	..	..	91	6	6	1	13	104
Madras	Kurnool	1	..	1	..	..	20,000	20	..	10	30	..	..	..	..	30	12	20	..	32	62
	TOTAL	2	..	2	..	..	20,000	78	33	10	121	..	..	..	..	121	18	26	1	45	166
	TOTAL OF PRECEDING YEAR	3	..	3	..	..	15,785	64	..	6	70	..	..	..	..	70	18	30	20	124	194
	DIFFERENCE	-1	..	-1	..	..	+4,215	+14	+33	+4	+51	..	..	..	..	+51	..	-54	-25	-79	-28
Y.—HYALITE.																					
Cwt.																					
Burma	Katha	1	..	1	..	..	12½	9	..	..	9	..	..	..	..	9	..	..	..	..	..
	TOTAL OF PRECEDING YEAR . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	DIFFERENCE	+1	..	+1	..	..	+12½	+9	..	..	+9	..	..	..	..	+9	..	..	..	..	+9

GRAND TOTAL (ALL MINERALS) 1923	1,543	559	984	903	1,680	Tons. 20,306,307 Cwt. 188,493 Carats 187,010 Troyounces 4,845,561	69,001	40,114	1,881	110,998	21,422	12,562	851	34,836	145,831	56,827	27,978	4,623	89,033	234,864
GRAND TOTAL OF PRECEDING YEAR	1,618	555	1,063	877	1,766	Tons. 19,469,561 Cwt. 128,818 Carats 231,100 Troyounces 4,214,526	64,352	37,335	1,761	103,448	20,164	12,612	793	33,569	137,017	57,587	28,659	5,048	91,494	223,511
DIFFERENCE	-75	+4	-79	+26	-86	Tons. +836,746 Cwt. +59,675 Carats. -44,150 Troyounces +631,035	+4,649	+2,779	+120	+7,548	+1,258	-50	+58	+1,266	+8,814	-760	-1,281	-420	-2,461	+6,353

APPENDIX I—contd.

Table No. 2.

Analyses of figures relating to output of Coal and Coke.

PROVINCE	District and mineral field.	COAL								COKE							
		Opening stock.	Raisings.	TOTAL.	Despatches.	Colliery consumption.	Coal delivered to coking.	Coal despatched to coke factories.	Closing stock.	OPENING STOCK.		COKE MADE.		DESPATCHES.		CLOSING STOCK.	
										Hard.	Soft.	Hard.	Soft.	Hard.	Soft.	Hard.	Soft.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
Assam	Lakhimpur	32	270,343	270,375	258,638	9,956	1,226	..	555	..	..	409	..	409	..	..	..
	Naga Hills	412	55,006	56,018	55,405	420	..	..	193	..	..	..	..	..	..	..	..
	Sibsagar . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	444	325,949	326,393	314,043	10,376	1,226	..	748	..	..	409	..	409	..	..	..
Baluchistan	Kalat . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Loralai	14	143	157	143	..	..	..	14	..	..	..	..	..	..	..	..
	Quetta-Fishin	1,164	4,979	6,143	4,338	..	..	..	1,805	..	..	..	..	..	..	..	..
	Sibi-Khost	4,254	26,504	30,758	23,795	4,860	..	..	2,103	..	..	..	..	..	..	..	..
	TOTAL	5,432	31,626	37,058	28,276	4,860	..	..	3,922	..	..	..	..	..	..	..	..
Bengal	Bankura-Raniganj	1,712	8,510	10,222	7,647	1,738	..	..	837	..	..	..	..	..	..	..	..
	Birbhum	411	18,881	19,292	11,395	4,493	..	..	3,414	..	..	..	..	..	..	..	..
	Burdwan	222,604	4,594,187	4,816,791	3,662,590	698,535	14,509	..	441,157	15	383	747	8,005	418	7,046	344	742
	TOTAL	224,727	4,621,578	4,846,305	3,681,632	704,756	14,509	..	445,408	15	383	747	8,005	418	7,046	344	742

Bihar and Orissa	Hazaribagh	Bokaro	9,373	1,060,366	1,069,739	1,006,263	32,274	7,315	..	23,887	..	280	..	4,842	..	4,851	..	271
		Giridih	11,943	680,782	692,725	555,854	66,781	50,926	..	19,164	40,884	..	40,765	..	119	..
		Jharis	37,069	173,080	210,149	115,353	18,123	1,318	..	75,355	27	9	..	766	..	335	27	440
		Ramgarh	353	4,197	4,550	3,683	33	334
	Manbhum	Jharis	2,107,696	10,172,935	12,280,831	8,598,200	1,255,981	231,518	762,257	2,194,932	4,968	18,004	40,720	112,698	34,439	112,160	11,249	18,542
		Raniganj	170,762	849,545	1,020,307	512,780	139,347	144,105	..	224,075	39	9,239	81	93,374	72	94,590	48	8,023
	Palamau-Daltonganj	11,043	11,815	22,858	5,737	3,700	13,421
	Sambalpur-Hingir-Rampur	Jainty	1,541	82,166	83,707	70,444	9,263	4,000
		Raniganj	8,009	86,301	94,310	62,806	15,762	100	..	15,642	64	..	31	..	33
		TOTAL	2,358,638	13,171,983	15,530,621	10,962,430	1,561,142	435,282	762,257	2,571,767	5,034	27,532	81,685	211,744	75,276	211,907	11,443	27,309
Burma	Mergui	..	163	163	163	..	..	..	..	..	..	..	..	..	..	..	..
	Southern Shan States	55	1,108	1,163	429	84	650	..	..	..	94	..	312	..	406	..	..
	TOTAL	55	1,271	1,326	592	84	650	..	..	..	94	..	312	..	406	..	..
Central Provinces	Betul	559	2,048	2,607	760	..	..	..	1,847	..	..	..	..	..	..	..	..
	Chanda	4,879	112,362	117,241	85,970	24,888	..	..	6,383	..	..	..	..	..	..	..	..
	Chhindwara	23,496	346,094	369,590	301,359	37,835	..	..	30,396	..	..	..	..	..	..	..	..
	Narsinghpur	5,607	87,387	92,994	73,091	9,907	..	..	9,996	..	..	..	..	..	..	..	..
	Yeotmal	..	168	168	32	..	..	..	136	..	..	..	..	..	..	..	..
	TOTAL	34,541	548,059	582,600	461,212	72,630	..	..	48,758	..	..	..	..	..	..	..	..
Punjab	Jhelum	3,228	43,253	46,481	40,763	2,908	..	..	2,810	..	..	..	..	..	..	..	..
	Mianwali	1,633	11,965	13,598	12,396	31	..	..	1,171	..	..	..	..	..	..	..	..
	Shahpur	504	8,283	8,787	8,760	27	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	5,365	63,501	68,866	61,919	2,966	..	..	3,981	..	..	..	..	..	..	..	..
GRAND TOTAL 1923			2,629,202	18,763,967	21,393,169	15,510,104	2,356,814	451,607	762,257	3,074,584	5,049	28,009	82,841	220,061	76,103	220,019	11,787	28,051

APPENDIX I—contd.

Table No. 3.

Number of mines opened and closed during the year ending 31st
December 1923.

Province.	District.	Number of mines opened.	Number of mines closed.	
	A.—COAL.			
ASSAM	Lakhimpur	1	..	
	Sibsagar . . . . .	..	..
	TOTAL	1	..	
BALUCHISTAN	Kalat . . . . .	..	..
	Loralai . . . . .	..	..
	Quetta-Pishin	1	1	
	Sibi-Khost . . . . .	..	1
	TOTAL	1	2	
BENGAL	Bankura . . . . .	..	1
	Birbhum . . . . .	..	3
	Burdwan-Raniganj	11	36	
	TOTAL	11	40	
BIHAR AND ORISSA	Hazaribagh	Bokaro
		Giridih	1	1
		Jharla	3	5
		Ramgarh	1	..
	Manbhum	Jharla	16	68
		Raniganj	5	28
	Sambalpur-Hingir-Rampur . . . . .	..	1
	Sonthal Parganas	Jainty	2	1
		Raniganj	1
	TOTAL	28	105	
BURMA	Mergui	1	..	
	Southern Shan States	1	2	
	TOTAL	2	2	

APPENDIX I—contd.

Table No. 3—contd.

Number of mines opened and closed during the year ending 31st
December 1923—contd.

Province.	District.	Number of mines opened.	Number of mines closed.
CENTRAL PROVINCES	Betul	6	4
	Chanda	1	4
	Chhindwara	6	17
	Yeotmal . . . . .	..	1
	TOTAL	13	26
PUNJAB	Jhelum	7	7
	Shahpur . . . . .	..	..
	TOTAL	7	7
TOTAL (COAL)		63	182
B.—MICA.			
BIHAR AND ORISSA	Gaya	2	2
	Hazaribagh	82	54
	Monghyr	1	..
	Sambalpur	2	1
	TOTAL	87	57
MADRAS	Nellore	16	3
	Nilgiris	1	1
	TOTAL	17	4
RAJPUTANA	Ajmer-Merwara	4	10
	Beawar . . . . .	..	..
	TOTAL	4	10
	TOTAL (MICA)	108	71

APPENDIX I—*contd.*Table No. 3—*contd.*

Number of mines opened and closed during the year ending 31st
December 1923—*contd.*

Province.	District.	Number of mines opened.	Number of mines closed.
	C.—MANGANESE ORE.		
CENTRAL PROVINCES	Balaghat	13	..
	Bhandara	2	..
	Chhindwara	2	..
	Jubbulpore . . . . .	..	1
	Nagpur	7	1
	TOTAL	24	2
MADRAS	Bollary	1	..
	Vizagapatam	5	2
	TOTAL	6	2
	TOTAL (MANGANESE ORE)	30	4
	D.—LIMESTONE.		
Burma	Northern Shan States	1	..
CENTRAL PROVINCES	Bilaspur . . . . .	..	..
	Jubbulpore	2	6
	TOTAL (LIMESTONE)	3	6
	E.—SLATE.		
PUNJAB	Gurdaspur . . . . .	..	..
	Gurgaon	1	1
	Kangra . . . . .	..	1
	TOTAL (SLATE)	1	2
	F.—IRON ORE.		
BURMA	Northern Shan States	1	..
CENTRAL PROVINCES	Chanda	1	..
	TOTAL (IRON ORE)	2	..

APPENDIX I—*contd.*Table No. 3—*concl'd.*

Number of mines opened and closed during the year ending 31st
December 1923—*concl'd.*

Province.	District.	Number of mines opened.	Number of mines closed.
	G.—CHROMITE ORE.		
BALUCHISTAN	Quetta-Fishin	3	..
	Zhob	9	..
	TOTAL	12	..
BIHAR AND ORISSA	Singhbhum . . . . .	..	1
	TOTAL (CHROMITE ORE)	12	1
	H.—COPPER ORE.		
BIHAR AND ORISSA	Singhbhum . . . . .	..	1
	I.—BAUXITE.		
BOMBAY	Kaira.	1	..
	J.—CLAY.		
CENTRAL PROVINCES	Jubbulpore	1	..
DELHI	Delhi	4	4
....	TOTAL (CLAY)	5	4
	K.—LEAD ORE.		
BURMA	Southern Shan States	2	..
	L.—TIN AND WOLFRAM ORE.		
BURMA	Mergui	8	..
	Tavoy	5	..
	Thaton . . . . .	..	..
	TOTAL (TIN ORE)	13	..
	M.—GRAPHITE.		
CENTRAL PROVINCES.	Betal . . . . .	..	1
	N.—OCHRE.		
CENTRAL PROVINCES	Jubbulpore . . . . .	..	2
	O.—BARYTES.		
BIHAR AND ORISSA	Singhbhum	1	..
MADRAS	Kurnool	1	1
	TOTAL (BARYTES)	2	1
	P.—HYALITE.		
BURMA	Katha . . . . .	..	1
	GRAND TOTAL (ALL MINES)	242	276

APPENDIX I—contd.

Table No. 4.

Fluctuations in the output of the principal minerals raised from mines classed under the Indian Mines Act, 1901. The other minerals raised are gems, slate, magnesite, steatite, clay, bauxite, fuller's earth, graphite, molybdenite, ochre, barytes, apatite, calcite and hyalite.

YEAR.	Coal.	Manga- nese ore.	Silica.	Lime- stone.	Salt.	Gold.	Cop- per ore.	Wol- fram ore.	Iron ore.	Chro- mite ore.	Tin ore.	Lead ore.	Silver.
	Tons.	Tons.	Cwt.	Tons.	Tons.	Troy ozs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Troy ozs.
1914	15,727,631	555,672	88,189	146,505	135,518	19,873	4,400	1,576	167,600	3,006	45	8½	..
1915	16,352,480	878,172	24,068	64,179	144,770	24,320	8,010	1,972	126,617	1,465	14	7	612
1916	16,419,082	568,032	35,978	45,290	160,357	23,235	2,671	2,955	142,606	5,004	88	7	1,362
1917	17,326,884	497,052	35,806	82,340	152,542	22,991	20,108	3,966	178,303	17,266	182	..	1,281
1918	19,847,039	415,357	51,572	131,451	158,518	19,916	3,619	3,609	115,890	24,030	602	3	1,169
1919	21,759,727	420,184	41,683	146,810	174,974	11,101	32,756	2,905	101,322	14,067	701	2½	753
1920	17,082,711	532,636	44,666½	161,340	181,092	13,645	28,167	1,733½	148,472	23,123	1,056	128,008	2,870,595
1921	18,358,934	284,254	20,470	284,252	123,084	10,108	32,560	884½	286,190	27,727	1,032	144,089½	3,555,640
1922	18,168,988	302,322	30,089	140,507	187,157	8,388	30,764	942	240,383	10,695	1,080	172,018	4,206,138
1923	18,763,967	546,378	31,605	286,161	113,700	1,519	6,550	872	292,033	25,235	1,021	245,925	4,844,042

Table No. 5.

Amount of coal raised, the average number of persons working daily and the death-rates during the years 1914 to 1923 in respect of coal mines under the Indian Mines Act, 1901 :—

YEAR.	Amount of coal raised.	Average number of persons work- ing daily below and above ground.	Number of deaths below and above ground.	DEATH-RATES.	
				Per 1,000,000 tons raised.	Per 1,000 per- sons working daily below and above ground.
	Tons.				
1914	15,727,631	137,851	145	9.22	1.05
1915	16,352,480	145,537	166	10.15	1.14
1916	16,419,082	143,459	169	10.20	1.18
1917	17,326,884	153,983	163	9.41	1.06
1918	19,847,039	176,269	197	9.93	1.12
1919	21,759,727	190,052	260	11.95	1.37
1920	17,082,711	175,943	172	10.07	0.98
1921	18,358,934	190,647	257	13.90	1.35
1922	18,168,988	184,355	209	11.50	1.13
1923	18,763,967	182,601	332	17.69	1.82

APPENDIX I—contd.

Table No. 6.

Aggregate horse power and purpose for use of electric motors installed both on the surface and underground at coal mines under the Indian Mines Act, 1901 :—

Coal-field.	HORSE POWER ON SURFACE.						HORSE POWER BELOW GROUND.					Total horse power of motors installed.
	Wind-ing.	Ventil-ation.	Haulage.	Coal wash-ing or screen-ing.	Miscel-laneous.	TOTAL.	Haul-ags.	Pump-ing.	Port-able machi-nery.	Miscel-laneous.	TOTAL.	
Assam . . . . .	..	..	..	..	..	..	..	30	..	..	30	30
Dokaro . . . . .	..	..	..	..	22	22	..	..	..	..	..	22
Burma	12	..	..	..	..	12	..	..	..	..	..	12
Central Provinces . . . . .	..	160	..	50	60	270	91	322	..	..	413	683
Girdih . . . . .	..	..	..	110	58	168	105	960	15	..	1,080	1,248
Jharia	2,026	407	1,781	271	702	5,186	2,991	10,842	1,619	289	15,741	20,927
Baniganj	2,402	928	680	225	188	4,423	2,608	4,888	967	205	8,668	13,086
TOTAL	4,430	1,495	2,461	656	1,030	10,081	5,795	17,037	2,601	494	25,927	36,008

Table No. 7.

Number of mines under the Indian Mines Act, 1901, where electrical power is used, and the aggregate horse power of electric motors installed :—

Province,	MINERALS WORKED.						Total horse power of motors installed.
	COAL.		CLAY.		SUNDRY MINERALS.		
	Number of mines.	Horse power.	Number of mines.	Horse power.	Number of mines.	Horse power.	
Assam	1	30	..	..	..	..	30
Bengal	34	10,238	..	..	..	..	10,238
Bihar and Orissa	53	25,045	..	..	1	1,656	26,701
Burma	1	12	..	..	5	3,098	3,110
Central Provinces	2	683	1	60	1	49	792
TOTAL	91	36,008	1	60	7	4,803	40,871

APPENDIX I—concl'd.

Table No. 8.

Number and type of coal cutting machines at work in coal mines under the Indian Mines Act, 1901 :—

Maker.	British.	American.	Chain.	Bar.	Percussion.	POWER.			Total number of machines.
						Electricity.		Compressed air.	
						A. C.	D. C.		
Anderson Boyes . . .	2	..	2	..	..	2	..	..	2
Diamond	1	..	1	..	..	1	..	..	1
Goodman . . . . .	..	23	23	..	..	16	7	..	23
Hardlax	12	..	..	..	12	..	..	12	12
Ingersoll Rand . . .	..	3	..	3	..	..	..	3	3
Mavor and Coulson . .	27	..	..	27	..	24	..	3	27
Slakol	5	..	..	..	5	..	..	5	5
Sullivan . . . . .	..	20	20	..	..	20	..	..	20
TOTAL	47	46	46	30	17	63	7	23	93

Jharia coal-field	44 machines.	} Total number of square feet undercut 3,230,584.
Raniganj „	42 „	
Bokaro „	1 machine.	
Central Provinces	3 machines.	
Punjab	3	

Table No. 9.

Number of mechanical ventilators in use at coal mines under the Indian Mines Act, 1901 :—

Assam.	Bengal.	Bihar and Orissa.	Central Provinces.	Punjab.	TOTAL.
10	11	24	9	1	55

Table No. 10.

Number of safety lamps in use at coal mines under the Indian Mines Act, 1901 :—

Assam.	Baluchistan.	Bengal.	Bihar and Orissa.	Central Provinces.	Punjab.	TOTAL.
1,698	1,253	6,026	2,793	1,499	3	13,272

1,453 were looked by screws, 7,562 by lead rivets and 4,257 by magnetic means.

APPENDIX II.
ACCIDENTS IN MINES.

Table No. 1.

List of Fatal Accidents in mines regulated by the Indian Mines Act, 1901, during the year 1923.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
	4th January, 7 A.M.	Parbelia mine, Disergarh P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	<p style="text-align: center;">EXPLOSIONS AND IGNITIONS OF FIRE-DAMP—(75 deaths).</p> Sudhir Kumar Ghosh, (m.), 22, <i>Overman</i> ; Atwary Barhi, (m.), 30, <i>Sirdar</i> ; Hari Singh, (m.), 23, Jeo Hazra, (m.), 38, Bhatoo Ram, (m.), 33, Bodi Singh, (m.), 24, Jaffoor Meah, (m.), 34, Jadu Shaw, (m.), 31, Baboo Lall Shaw, (m.), 28, Puran Singh, (m.), 25, Jogon Barhi, (m.), 20, Bhatoo Meah, (m.), 35, Bhola Singh, (m.), 26, Hari Singh, (m.), 27, Dalu Roy, (m.), 22, <i>Stone-cutters</i> ;	Coal	The deceased were killed by an explosion of coal dust in the under-ground workings of the mine. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents, 1923—*contd.*

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
1—(<i>contd.</i>)				<p style="text-align: center;">EXPLOSIONS AND IGNITIONS OF FIRE-DAMP—(75 deaths)—<i>contd.</i></p> <p>Gonori Barhi, (<i>m.</i>), 38, Basoo Mahaton, (<i>m.</i>), 25, Taloo Meah, (<i>m.</i>), 33, Khagoo Meah, (<i>m.</i>), 30, Tajoo Barhi, (<i>m.</i>), 27, Dooli Meah, (<i>m.</i>), 25, Bhikoo Meah, (<i>m.</i>), 38, Nabi Meah, (<i>m.</i>), 22, Fagon Gope, (<i>m.</i>), 27, Dhari Teli, (<i>m.</i>), 33, Dukhon Teli, (<i>m.</i>), 28, Saleram Teli, (<i>m.</i>), 37, Mohon Singh, (<i>m.</i>), 40, Balchand Gope, (<i>m.</i>), 49, Niroo Meah, (<i>m.</i>), 25, Rotu Baurin, (<i>f.</i>), 22, Chai Baurin, (<i>f.</i>), 15, Kumari Baurin, (<i>f.</i>), 14, Sarali Baurin, (<i>f.</i>), 13,</p>		

Triguni Baurin,
 (f.), 14,
 Dooli Baurin,
 (f.), 21,
 Fuki Baurin,
 (f.), 18,
 Tushi Baurin,
 (f.), 37,
 Jamuna Baurin (1),
 (f.), 20,
 Jamuna Baurin (2),
 (f.), 18,
 Polu Baurin,
 (f.), 16,
 Suki Baurin,
 (f.), 45,
 Kamini Baurin,
 (f.), 17,
 Chuni Baurin,
 (f.), 18,
 Tulshi Majhian,
 (f.), 27,
 Moni Majhian,
 (f.), 29,
 Pari Majhian,
 (f.), 23,
 Rani Majhian,
 (f.), 27,
 Rojoni Majhian,
 (f.), 23,
 Lobin Majhian,
 (f.), 15,
 Tupli Majhian,
 (f.), 22,
 Pudi Majhian,
 (f.), 21,
Coal-carriers :
 Khapa Manjhi,
 (m.), 20,
 Kishoon Manjhi,
 (m.), 35,
 Bali Manjhi,
 (m.), 33,
 Sitaram Manjhi,
 (m.), 33,
 Bhim Manjhi,
 (m.), 30,
 Monsa Manjhi,
 (m.), 26,
 Dasoo Manjhi,
 (m.), 33,
 Budha Manjhi,
 (m.), 16,

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
1—(concl.)				<p>EXPLOSIONS AND IGNITIONS OF FIRE-DAMP—(75 deaths)—concl.</p> <p>Rabon Manjhi, (m.), 24, Tuta Manjhi, (m.), 14, Mochak Manjhi, (m.), 30, Chandra Manjhi, (m.), 20, Dukhoo Manjhi, (m.), 25, <i>Coal-cutters ;</i> Lall Singh, (m.), 36, Faijoo Singh, (m.), 37, <i>Coal-cutting</i> <i>Machine men ;</i> Adhor Bauri, (m.), 25, Hari Bauri, (m.), 20, Shomro Bauri, (m.), 25, Rojoni Bauri, (m.), 26, Saboo Bauri, (m.), 22, Jugal Bauri, (m.), 28, Rojon Bauri, (m.), 31, <i>Trolley-men.</i></p>		
2	2nd November, 7 A.M.	Deoli mine, Disergarh P. O., Bihar and Orissa.	Deoli Coal Co., Ltd.	Chuna Manjhi, (m.), 19, <i>Coal-cutter.</i>	Coal	Deceased ignited a small accumulation of fire-damp at the face of an advance gallery and was so severely burnt that he died a few days later. Inspection and inquiry made.

FALLS OF ROOF AND SIDES.

(a) Falls of roof—(92 deaths).

3	9th January, 9-30 P.M.	New Ghusick mine, Kalipahari P. O., Bengal.	New Ghusick Coal Co.	Bara Sukha Manjhi, (m.), 28, Coal-cutter.	Coal	Deceased was ordered to dress down some overhanging roof coal at the side of a pillar where he was working. Contrary to orders he commenced cutting the side of the pillar beneath the overhanging coal. He thus released a mass of roof coal, 4' x 3' x 9", which fell on him from a height of 9 feet. He sustained serious injuries to which he succumbed an hour later. Inspection and inquiry made.
4	23th January, 3-10 P.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ld.	Thon Tai, (m.), 31, Miner.	Silver-Lead-Zinc	Whilst the deceased was barring down loose ground in a stope a piece of heavy ore fell on him, killing him instantly. Inspection and inquiry made.
5	1st February, 11-50 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ld.	Dhan Singh, (m.), 44, Miner.	Silver-Lead-Zinc	Deceased attempted to take out the old "sets" of timber in a roadway before fixing the new "sets" properly. He was killed by the subsequent fall of ground. Inspection and inquiry made.
6	5th February, 7-30 P.M.	Sudi mine, Sitarampur P. O., Bengal.	Morarji Mulraj & Co.	Chand Manjhi, (m.), 35, Sirdar.	Coal	Deceased was killed by a fall of roof which occurred while he was withdrawing props. Inspection and inquiry made.
7	10th February, 2-30 A.M.	Chanoh mine, Barakar P. O., Bihar and Orissa.	Bengal Coal Co., Ld.	Lakhoo Manjhi, (m.), 22, Coal-cutter.	Coal	Deceased went through a fence and was killed by a mass of roof stone, 8' x 4' x 6", which fell from a height of 7 feet. Inspection and inquiry made.
8	11th February, 7-30 P.M.	Khost mine, Khost P. O., Baluchistan.	North Western Railway	Gulab, (m.), 28, Labourer.	Coal	Whilst engaged in timbering an inclined shaft deceased was struck on the head and killed by a slab of stone, 2' x 2' x 6" which fell from the roof. Inspection and inquiry made.
9	17th February, 1 P.M.	Shampore mine, Mugma P. O., Bihar and Orissa.	Shampore Coal Co., Ld.	Choudhury Bauri, (m.), 40, Coal-cutter.	Coal	Deceased went through a fence and while robbing coal was injured by a mass of roof coal, 12' x 4' x 18", which fell from a height of 8 feet. He died four days later. Inspection and inquiry made.
10	20th February, 2 P.M.	Raniganj mine, Raniganj P. O., Bengal.	Bengal Coal Co., Ld.	Upendra Bauri, (m.), 35, Judhistir Bauri, (m.), 40, Khara Manjhi, (m.), 19, Lordha Manjhi, (m.), 27, Coal-cutters.	Coal	The four deceased were killed by a mass of stone, 26' x 12' x 4', weighing over 30 tons, which fell without warning from a "slip" in the roof. One other person was seriously injured. Inspection and inquiry made.
11	22nd February, 2 P.M.	Burra Gola mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Kantaram Gogoi, (m.), 17, Mason.	Coal	Whilst deceased was assisting in the erection of masonry support at a point where a previous fall had occurred, he was killed by a slab of stone, weighing about 5 tons, which fell without warning. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—(92 deaths)—contd.						
12	24th February, 1 A.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co. (1920), Ld.	Alidasi Rajwarin, (f.), 35, Coal-carrier.	Coal	While deceased was returning to the face of the gallery in which she was working, a mass of coal, 15'×12'×6", fell from a "slip" in the roof (about 20 feet high), killing her instantly. Inspection and inquiry made.
13	24th February, 12-30 P.M.	Ghugus mine, Ballarpur P. O., Central Provinces.	Sir K. C. Daga & Bros. and Hon'ble Sir M. B. Dadabhoy	Bajinath, (m.), 18, Trammer.	Coal	Against orders and for the purpose of loading coal, deceased went into a place after blasting had been done. A piece of shale 3'×2'×2" fell from the roof, 7 feet above, and struck him on the foot. He died from blood poisoning two months later. Inspection and inquiry made.
14	25th February, 5 A.M.	Sonardih mine, Kātrasgarh P. O., Bihar and Orissa.	Baraboni Coal Concern, Ld.	Ugar Thakore, (m.), 35, Coal-cutter.	Coal	Deceased was filling his basket in an underground gallery, when some roof stone fell and broke his leg. He died fourteen days later. Inspection and inquiry made.
15	2nd March, 4 A.M.	Bankola mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ld.	Meher Sheik, (m.), 28, Anu Sheik, (m.), 23, Labourers.	Coal	The deceased in spite of being warned not to do so, walked into a gallery, the roof of which was known to be unsound. A piece of shale, weighing 2 cwt., fell upon them from a height of 16 feet. Anu Sheik was killed instantly, and the other man sustained injuries which appeared to be slight but died of shock shortly afterwards. Inspection and inquiry made.
16	2nd March, 9 A.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Arjoon Gowala, (m.), 20, Labourer.	Coal	Whilst deceased was loading coal in a gallery, 5'×5', he was buried by a mass of roof coal which fell without warning from a "slip." He received injuries from which he died ten days later. Inspection and inquiry made.
17	7th March, 10-45 A.M.	Ghugus mine, Ballarpur P. O., Central Provinces.	Sir K. C. Daga & Bros. and Hon'ble Sir M. B. Dadabhoy	Goria Panchan, (m.), 15, Trammer.	Coal	Deceased, against orders, went into a place after it had been blasted to load coal. A piece of coal, 5'×3'×2', fell from the roof, a height of 6 feet. He was killed instantly. Inspection and inquiry made.
18	8th March, 10-30 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ld.	Lee Chan Chuai, (m.), — Miner.	Silver-Lead- Zinc	Whilst deceased was engaged in timbering some weak ground he was killed by a fall of roof. Inspection and inquiry made.

19	10th March, 9-30 A.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ld.	Maikoo Chamar, (m.), 40, Coal-cutter.	Coal	Deceased was loading coal in an underground gallery, when a block of coal, weighing about 7 tons, fell and killed him instantly. Inspection and inquiry made.
20	12th March, 8 P.M.	Nandi mine, Nandi P. O., Bengal.	Adjai Coal Co., Ld.	Jirooa Chamarin, (f.), 40, Coal-carrier.	Coal	Deceased went through a fence to load loose coal and was killed instantly by a mass of roof stone which fell from a "slip" in the roof. Inspection and inquiry made.
21	22nd March, 12-30 A.M.	Sripore mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920) Ld.	Hopni Majhian, (f.), 20, Makhani Majhian, (f.), 32, Coal-carriers.	Coal	The deceased and another woman were loading coal from a pillar under extraction, when a mass of roof stone, 45' x 20' x 3', fell without warning from a height of 15 feet. The deceased were killed instantly, and the other woman was seriously injured. Inspection and inquiry made.
22	30th March, 11 A.M.	Baidyanathpur mine, Pandaveswar P. O., Bengal.	Samla Govindpur Collieries, Ld.	Budni Kolin, (f.), 55, Coal-carrier.	Coal	Roof coal was being wedged down when deceased was struck by mass of it, weighing about 2 tons, which fell from a height of 10 feet. She was killed instantly. Inspection and inquiry made.
23	5th April, 2 P.M.	Central Nodiha mine, Ukhra P. O., Bengal.	Central Nodiha Colliery Co., Ld.	Maku Majhian, (f.), 17, Coal-carrier.	Coal	Whilst coal was being stripped from the side of a gallery, a mass of roof stone 11' x 24' x 9', fell from height of 6 feet, killing deceased instantly. A miner was also injured. Inspection and inquiry made.
24	14th April, 10 A.M.	Rawanwara mine, Pench, P. O., Central Provinces.	H. Verma and Munshi Kanhaiyalal, Ld.	Jungi, (f.), 14, Mst. Haswa, (f.), 15, Mst. Agasia, (f.), 45, Baboo Lall, (m.), 14, Giridhari, (m.) 13, Putta, (m.), 13, Mahabir, (m.), 13, Tota, (m.), 15, Sahadeo, (m.), 33, Mst. Juggi, (f.), 13, Labourers; Baora, (m.), 20, Pannoo, (m.), 30, Amilall, (m.), 40, Coal-cutters;	Coal	Whilst three of the deceased were engaged in setting timber in a mine, where pillars were being partially extracted, the workings collapsed, and they were killed. The air in the mine was expelled with such violence through the inclined entrances from the surface that twelve persons were killed and two injured outside the mine. One of the latter died two months later. Inspection and inquiry made.

APPENDIX II—contd

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—(92 deaths)—contd.						
25	24th April, 5 A.M.	Bhutgoria mine, Jamadoba P. O., Bihar and Orissa.	Aldih Coal Co., Ltd.	Muria, (m.), 45, Contractor ; Muria, (m.), 35, Timberman; Mat. Parvati, (f.), 35, Not employed.	Coal	While cutting coal, deceased was struck by a piece of stone bands 5'×2'×1', which fell from a height of 8 feet. He received injuries from which he died shortly afterwards. Inspection and inquiry made.
26	24th April, 6-30 A.M.	Khost mine, Khost P. O., Baluchistan.	North Western Railway	Rustam, (m.), 32, Coal-cutter.	Coal	Deceased was injured by a fall of roof in his working place. He died four days later. Inspection and inquiry made.
27	24th April, 2 P.M.	Hurriladih mine, Jamadoba P. O., Bihar and Orissa.	Equitable Coal Co., Ltd.	Gouri Prosad Gosain, (m.), 30, Overman.	Coal	While the roof of a gallery was being tested by a roof dresser, a piece of coal, 13'×4'×2½', fell from a "slip" in the roof—a height of 8 feet. Deceased, who was standing near, was killed instantly, and another person was injured. Inspection and inquiry made.
28	27th April, 9-30 P.M.	Pandaveswar mine, Pandaveswar P. O., Bengal.	Highfield Colliery, Ltd.	Sonku Manjhi, (m.), 45, Coal-cutter.	Coal	Deceased was robbing coal from a fenced-off gallery, when a piece of roof coal, weighing over 3 tons, fell and killed him instantly. Inspection and inquiry made.
29	3rd May, 4-30 A.M.	Dishergarh mine, Disergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Mungia Chamarin, (f.), 20, Labourer.	Coal	Whilst fallen coal was being loaded in a district which was being reopened, a mass of roof stone, 50'×10'×3', fell from a height of 15 feet. Deceased was struck by the falling stone and was killed. Inspection and inquiry made.

30	10th May, 1 P.M.	Joyrampur mine, Jharia P. O., Bihar and Orissa.	B. R. & Co.	Chakor Bauri, (m.), 25, Coal-cutter; Sabi Baurin, (f.), 20, Coal-carrier.	Coal	Whilst three coal-cutters were engaged in widening a roadway for a tram line, a mass of roof coal 20' x 12' x 3', fell upon them from a concealed "slip" at a height of 7 feet. They were killed instantly. Inspection and inquiry made.
31	12th May, 4-45 P.M.	Khost mine, Khost P. O., Baluchistan.	North Western Railway	Mir Mahomed, (m.), 28, Packer.	Coal	Deceased was removing a wooden plank from a goaf when a fall of roof occurred killing him instantly. Inspection and inquiry made.
32	19th May, 4 P.M.	South Mudidih mine, Sijua P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Ramdih Kurmi, (m.), 28, Coal-cutter.	Coal	Deceased was standing on a ladder and levering down roof coal at a height of 18 feet. He overbalanced and fell from the ladder and sustained serious injuries which terminated fatally shortly afterwards. Inspection and inquiry made.
33	25th May, 3 P.M.	Ekra Khas mine, Bansjora P. O., Bihar and Orissa.	Maharaja of Cossimbazar	Pindu Majhian, (f.), 20, Coal-carrier.	Coal	Deceased was sitting near a place where roof coal was being dressed down, when a piece of coal weighing about 30 lb., fell upon her from a height of 10 feet, causing serious injuries. She died of shock five hours later. Inspection and inquiry made.
34	30th May 12-30 P.M.	Jinagara mine, Jharia P. O., Bihar and Orissa.	New Jinagora Coal Co., Ld.	Nanki Panka, (m.), 45, Coal-cutter.	Coal	Deceased was dressing down some overhanging roof coal, when a mass of coal, weighing about 8 cwt., fell upon him from a "slip" at a height of 5 feet. He was killed instantly. Inspection and inquiry made.
35	1st June, 12 P.M.	Alkusa South mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Dhaniah Meah, (m.), 22, Coal-cutter.	Coal	Deceased was struck by a piece of coal, 10' x 8' x 6', which fell from the roof—a height of 13 feet. He was killed instantly. Inspection and inquiry made.
36	4th June, 11-30 P.M.	Garh Dhemio mine, Charanpur P. O., Bengal.	Garh Dhemio Coal Co.	Ramu Singh, (m.), 35, Coal-cutter.	Coal	Deceased, whilst working in an underground gallery, was killed instantly by a fall of roof stone weighing about 1 ton. Inspection and inquiry made.
37	16th June, 5-30 A.M.	Sanctoria mine, Disergarh P. O., Bengal.	Bengal Coal Co., Ld.	Gokul Mahaton, (m.), 55, Coal-cutter.	Coal	Deceased went through a fence to load fallen roof coal and was killed by a mass of roof stone, 20' x 12' x 18", which fell from a height of 14 feet. Inspection and inquiry made.
38	16th June, 10-30 A.M.	Malkera mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ld.	Guru Charan, (m.), 35, Labourer.	Coal	A fall of roof, 18' x 15' x 3'-6", took place at a junction on a haulage road. The brick and steel supports collapsed. Deceased was struck and killed by a falling girder. Inspection and inquiry made.
39	15th July, 6 A.M.	Benahir mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ld.	Amrit Rajaswar, (m.), 26, Coal-cutter.	Coal	Whilst deceased was cutting floor coal in a gallery, a mass of stone, 3' x 2' x 2", fell upon him from a height of 17 feet. He sustained serious injuries to which he succumbed ten hours later. Inspection and inquiry made.
40	28th July, 1 A.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Jion Megan, (m.), 20, Labourer.	Coal	Whilst deceased was loading coal near the entrance of an "opening" or chamber, a mass of roof coal, weighing about 2 tons, fell upon him from a height of 20 feet. He was killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
<i>(a) Falls of roof—(92 deaths)—contd.</i>						
41	7th August, 11-45 A.M.	Ghusick mine, Kalipahari P. O., Bengal.	Ghusick and Muslia Collieries, Ld.	Baharam Manjhi, (m.), 28, Coal-cutter.	Coal	Whilst deceased was cutting coal in a fenced-off gallery he was killed by a mass of roof stone, 8'×4'×9", which fell from a height of 6 feet. Inspection and inquiry made.
42	17th August, 8 A.M.	Bhagaband mine, Jharia, P. O., Bihar and Orissa.	Borrea Coal Co., Ld.	Bhatu Gope, (m.), 45, Timberman.	Coal	Whilst deceased was withdrawing timber from beneath an unsound roof in a road, 12 feet wide, a mass of stone, 12'×4'×1', suddenly fell away and forced out a prop which struck deceased and pinned him against the side. He sustained serious injuries to which he succumbed one hour later. Inspection and inquiry made.
43	31st August, 11-50 A.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Sakina Mussalman, (f.), 24, Labourer.	Coal	Deceased was assisting to clean up the dirt from a new level road preparatory to laying a tram line, when a mass of roof coal, weighing about 2 cwt., fell upon her from a height of 6 feet. She succumbed to her injuries shortly afterwards. Inspection and inquiry made.
44	4th September, 6 P.M.	Dishergarh mine, Disergarh P. O., Bengal.	Equitable Coal Co., Ld.	Sakhu Kuri, (m.), 18, Coal-cutter.	Coal	Whilst deceased was loading coal which had been blasted down from a pillar, a mass of roof coal, weighing about 1 ton, fell from a "slip" in the roof killing the deceased instantly. Inspection and inquiry made.
45	8th September, 5 P.M.	South East Baraboni mine, Charanpur P. O., Bengal.	Maharaja of Cossimbazar	Noona Kole, (m.), 18, Jhaboo Kole, (m.), 50, Coal-cutters.	Coal	Whilst the deceased, with others, were engaged in extracting a pillar adjacent to a goaf from which the props had just been withdrawn, a mass of roof coal, 20'×24'×1' fell from a height of 14 feet. Noona was killed instantly and Jhaboo succumbed to his injuries nine days later. Three other persons were injured. Inspection and inquiry made.
46	20th September, 5-30 A.M.	Alkusa North mine, Kusunda P.O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Kunita Bhaktani, (f.), 20, Coal-carrier.	Coal	Deceased and two other persons passed through a fence and entered a roadway to which access was forbidden. They were struck by a mass of stone, 12'×9'×2", which fell from the roof, 8 feet above. Deceased was killed instantly, and the other two persons received serious injuries. Inspection and inquiry made.
47	20th September, 8-15 A.M.	Sripore mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920) Ld.	Sewraj Gowala, (m.), 35, Coal-cutter.	Coal	After shots had been fired, deceased, using a long pole, attempted to get down some roof coal. A mass of about 6 tons of this coal fell and killed him instantly. Inspection and inquiry made.

48	22nd September, 2-30 A.M.	New Tetturya mine, Katrasgarh P. O., Bihar and Orissa.	New Tetturya Coal Co., Ld.	Khooroo Dhobi, (m.), 33, Mangloo Marar. (m.), 35, Coal-cutters.	Coal	The deceased were cutting coal, when a mass of roof coal, 18' x 10' x 1'-6", fell away from between two "slips" at a height of 8 feet and forced out some props which struck the deceased. Khooroo was killed instantly and Mangloo sustained serious injuries to which he succumbed three hours later. Inspection and inquiry made.
49	26th September, 9-30 A.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ld.	Gopal Turi, (m.), 45, Coal-cutter.	Coal	Coal cutting was being done near a fenced-off area. Deceased passed through the fence, when a mass of stone, weighing 50 tons, fell upon him from between two converging "slips" at a height of 25 feet. He was killed instantly. Inspection and inquiry made.
50	27th September, 8 P.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ld.	Khudi Ram Bauri, (m.), 26, Coal-cutter.	Coal	Deceased passed under some roof-stone, which another miner was dressing. A large piece of stone fell and broke his neck. Inspection and inquiry made.
51	28th September, 5-30 A.M.	Sendra mine, Bansjora P. O., Bihar and Orissa.	Sendra Coal Co., Ld.	Puran Roy, (m.), 32, Coal-cutter.	Coal	Deceased, whilst engaged in extracting a portion of a pillar of coal, was struck by a piece of stone, 6' x 2' x 9", which fell from the roof, a height of 9 feet. He was killed instantly. Inspection and inquiry made.
52	13th October, 1-30 P.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ld.	Ghunaru Bilaspuri, (m.), 18, Coal-cutter.	Coal	After blasting, the deceased returned to his working place without authority and was killed by a fall of roof coal. Inspection and inquiry made.
53	15th October, 6-30 A.M.	Joyramdanga mine, Asansol P. O., Bengal.	New Beerbhoom Coal Co., Ld.	Chandwa Kole, (m.), 45, Coal-cutter.	Coal	Deceased went through a fence into a goaf to get fallen coal. He was killed by a fall of stone from the roof. Inspection and inquiry made.
54	16th October, 5 A.M.	Rampur mine, Jharsaguda P. O., Bihar and Orissa.	Hingir-Rampur Coal Co., Ld.	Gocul Munda, (m.), 30, Coal-cutter.	Coal	After blasting in roof coal deceased was engaged in getting down loose coal. A slab of shale 3' x 2'-6" x 2" fell on his head and killed him instantly. Inspection and inquiry made.
55	30th October, 6-30 A.M.	Bhuggutdih mine, Jharia P. O., Bihar and Orissa.	Bengal Nagpur Coal Co., Ld.	Rudan Chamar, (m.), 42, Coal-cutter.	Coal	Deceased left his appointed working place, passed through a fence, and was robbing coal from the side of a pillar, when a mass of coal weighing about 10 tons, fell away from three "slips" at a height of 9 feet. He was killed instantly. Inspection and inquiry made.
56	2nd November, 12-30 P.M.	Jainty Central mine, Karmatar P. O., Bihar and Orissa.	Jainty Central Colliery, Ld.	Bhatu Roy, (m.), 45, Coal-cutter.	Coal	Deceased went through a fence and commenced picking up fallen coal in a goaf, when a mass of stone, 8' x 5' x 1', fell upon him from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
57	2nd November, 7 P.M.	Seetalpur mine, Disergarh P. O., Bengal.	Bengal Coal Co., Ld.	Hosini Meah, (m.), 40, Timberman.	Coal	Deceased, whilst withdrawing props underground, was pinned to the floor by falling props and stone. He sustained injuries from which he died twelve hours later. Inspection and inquiry made.
58	23rd November, 12-10 P.M.	Pootkee mine, Kusunda P. O., Bihar and Orissa.	Eastern Coal Co., Ld.	Nanda Lal Singh, (m.), 21, Stone-cutter.	Coal	Deceased was sitting at a cross road on a main haulage slope when a mass of stone, 30' x 30' x 1', fell from the roof, 6 feet above. He was killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd. (a) Falls of roof—(92 deaths)—contd.						
59	6th December, 4 A.M.	Alkusa South mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Nathu Bhakta, (m.), 30, Coal-cutter.	Coal	Whilst engaged in pillar cutting operations, deceased was killed by a block of coal weighing about 1 cwt. which fell on him from a height of 12 feet. Inspection and inquiry made.
60	15th December, 2-30 A.M.	Kajora mine, Andal P. O., Bengal.	Kajora Coal Co., Ld.	Shaheb Chamar, (m.), 36, Coal-cutter.	Coal	Deceased went through a fence and was robbing coal from the side of a pillar, when a mass of overhanging coal, 4'×2'×1', fell upon him from a height of 13 feet. He was killed instantly. Inspection and inquiry made.
61	21st December, 6 A.M.	Benahir mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ld.	Srimati Majhian, (f.), 26, Sankar Manjhi, (m.), 7, Labourers. Botel Singh, (m.), 22, Coal-cutter. Nanki Majhian, (f.), 14, Mani Majhian, (f.), 24, Coal-carriers.	Coal	The deceased, who were sitting at the junction of three galleries were killed by a fall of roof stone, 12'×7'×9", from a height of 25 feet. Inspection and inquiry made.
62	24th December, 2-30 P.M.	Kankani mine, Bansjora P. O., Bihar and Orissa.	Eastern Coal Co., Ld.	Tekoo Mahaton, (m.), 35, Coal-cutter.	Coal	Deceased left his working place and was loading coal near the edge of a goaf when he was killed instantly by a fall of roof, weighing about 2 tons. Inspection and inquiry made.
63	27th December, 6-30 P.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ld.	Jahar Meah, (m.), 30, Bandhu Chamar, (m.), 32, Bharas Chamar, (m.), 36, Sonai Chamar, (m.), 25, Labourers. Romai Chamar, (m.), 24, Coal-cutter.	Coal	The deceased were killed by a fall of roof coal weighing about 25 tons in a gallery 25 feet high. Inspection and inquiry made.

(b) Falls of side—(101 deaths).

64	2nd January, 5 P.M.	Kurburbarce mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Fatan Roy, (m.), 32, Coal-cutter.	Coal	Deceased was struck by a prop which was knocked down by a piece of coal, 5' x 4' x 2', weighing 30 cwt., which fell from the side, a height of 16 feet. He was killed instantly. Inspection and inquiry made.
65	6th January, 4 A.M.	Burra Golai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Gonesh Kole, (m.), 30, Permanent way workman.	Coal	Whilst deceased was engaged in repairing a tramline he was injured by a fall of side coal. He died from his injuries next day. Inspection and inquiry made.
66	18th January, 11-30 P.M.	Joba mine, Kalipahari P. O., Bengal.	Burrakur Coal Co., Ltd.	Hardeogir Gossai, (m.), 35, Coal-cutter.	Coal	Whilst deceased was levering down some overhanging coal, which he had been forbidden to touch, the coal fell upon him, causing injuries from which he died within a few hours. Two other persons were slightly injured. Inspection and inquiry made.
67	20th January, 5-30 P.M.	Durgapur mine, Jharis P. O., Bihar and Orissa.	P. D. Hamir & Co.	Manvati Gond, (f.), 45, Coal-carrier.	Coal	Whilst engaged in loading coal which had been blasted down in a gallery, deceased was struck by a block of coal, weighing about 1 ton, which fell from a height of 20 feet. Inspection and inquiry made.
68	20th January, 7 P.M.	Pootkee mine, Kusunda P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Doman Rowani, (m.), 26, Coal-cutter.	Coal	Deceased was loading coal in a gallery when a piece of overhanging coal, weighing about 15 cwt., fell, killing him instantly. Inspection and inquiry made.
69	25th January, 8-30 A.M.	Mahakali mine, Chanda P. O., Central Provinces.	Hajeebhoy Lalljee & Co.	Gonda Rama, (m.), 26, Raja Asha, (m.), 26, Pooia Brishnath, (m.), 26, Sadar Poohi, (f.), 13, Puiller Kitta, (m.), 13, Anki Ram, (f.), 13, Bhagi Nago, (f.), 14, Laijedharma, (f.), 13, Labourers.	Coal	A gang of persons was engaged in cleaning out a drain running down the centre of a new inclined cutting, the greatest depth of which was 19 feet. A portion of one of the sides suddenly collapsed, and some 3 tons of debris fell upon the deceased. Before they could be extricated they died from suffocation. Seven bodies were got out within two hours, but owing to a further fall of several tons of debris one body was not recovered until about two days later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(b) Falls of side—(101 deaths)—contd.						
70	7th February, 5 A.M.	Bagdigi mine, Jharia P.O., Bihar and Orissa.	Villiers, Ltd.	Khabloo Bilaspuri, (m.), 16, Coal-cutter. Bhukhli Bilaspurin, (f.), 14, Coal-carrier.	Coal	The deceased were cutting floor-coal in an underground gallery, when some 4 tons of coal fell from the side, killing them instantly. Inspection and inquiry made.
71	15th February, 8-30 A.M.	New Kessurgurah mine, Nawagarh P. O., Bihar and Orissa.	New Kessurgurah Coal Co., Ltd.	Mongal Manjhi, (m.), 20, Coal-cutter.	Coal	Whilst engaged in the extraction of a pillar which had been undercut below a band of stone in the coal seam, deceased was killed by the fall of a slab of this stone, 15"×30"×12", from a height of 8 feet. Inspection and inquiry made.
72	19th February, 1-45 P.M.	Borrea mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Dhanu Mahaton, (m.), 48, Labourer.	Coal	Whilst deceased was preparing to erect timber in a place where pillar extraction was going on, he was struck by a small piece of coal which fell from a height of 18 feet. He received injuries from which he died four days later. Another person received slight injuries. Inspection and inquiry made.
73	20th February, 10 A.M.	Cherangcode mine, Cherambadi P. O., Nilgiris, Madras.	A. H. Gaston	Narayanan Nair, (m.), 35, Assistant mistry ; Oonia Kutty K., (m.), 25, Mistry ; Kungamu, (m.), 25, Koyamu K, (m.), 32, Oonia Kutty M., (m.), 25, Idross, (m.), 20, Kungalan, (m.), 22, Labourers.	Mica	Whilst a gang of miners was at work in the bottom of an open cast, one side collapsed and buried ten persons. Seven were killed and one was seriously injured. Inspection and inquiry made.

74	20th February, 5 P.M.	Kurhurbaree mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Bahadur Meah, (m.), 23, Coal-cutter.	Coal	Deceased was struck by a piece of coal, 10' × 6' × 2', which fell from the side, a height of 8 feet. He received injuries from which he died almost immediately. Inspection and inquiry made.
75	21st February, 11 A.M.	Bharatchak mine, Sunderchak P. O., Bengal.	B. N. Sanyal	Menoka Baurin, (f.), 35, Labourer.	Coal	Deceased was killed by a fall of stone from the sides of an open cutting. The place was said to have been fenced-off. Inspection and inquiry made.
76	21st February, 10 P.M.	Alkusa North mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Sukar Santal, (m.), 30, Labourer.	Coal	Deceased, whilst sitting in his working place, was killed by some side coal, about 3 tons, which fell from a height of 15 feet. Inspection and inquiry made.
77	1st March, 12-30 P.M.	Rajhara Bhuyakhad mine, Rajhara P. O., Bihar and Orissa.	Bengal Coal Co., Ld.	Bhajan Noonis, (m.), 70, Labourer.	Fireclay	Deceased was sitting in a quarry when about 1 cwt. of fireclay fell from the side and struck him on the back, causing fatal injuries. Inspection and inquiry made.
78	1st March, 2-30 P. M.	Jeenagora mine, Jharia P. O., Bihar and Orissa.	East Bararee Coal Co.	Baharan Bhaina, (m.), 30, Coal-cutter.	Coal	Deceased and another man went through a fence and commenced to cut coal from the side of a pillar which was known to be dangerous. A block of coal, 4'-6" × 3' × 15", fell on them from a height of about 7 feet. Deceased died from his injuries a few hours afterwards and the other man sustained a simple fracture of the right leg. Inspection and inquiry made.
79	7th March, 10 P.M.	Damagurria mine, Kulti P. O., Bengal.	Damagurria Coal Co., Ld.	Tota Manjhi, (m.), 30, Coal-cutter.	Coal	Deceased undercut the face of a quarry and brought about the fall of a mass of coal, 4'-6" × 4'-6" × 2'-6", from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
80	18th March, 7-30 A.M.	Kirkend mine, Kusunda P. O., Bihar and Orissa.	R. B. Sircar & Sons	Jharna Dosadh, (m.), 20, Coal-cutter.	Coal	Deceased, who was engaged in pillar-cutting, was in the act of loading a basket of coal when a block of coal, about 15 cwt., fell on him from a height of 10 feet, killing him instantly. Inspection and inquiry made.
81	20th March, 12-45 P.M.	Kustore North mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Shanee Roy, (m.), 35, Coal-cutter.	Coal	Deceased passed through a fence and was robbing a pillar when a piece of coal, 8' × 6' × 3' fell from a height of 5 feet, and killed him instantly. Inspection and inquiry made.
82	26th March, 3-30 P.M.	Bonbiddih mine, Samdi P. O., Bengal.	U. N. Mondal	Gobinda Bauri, (m.), 35, Robi Kora, (m.), 28, Kedar Bauri, (m.), 45, Makunda Mali, (m.), 40, Coal-cutters.	Coal	The deceased left their working places in a quarry and went into a fenced-off portion of the quarry to shelter from the sun, when about 7 tons of soft overburden fell upon them from a height of 13 feet. Gobinda and Robi were killed instantly. The other two men were injured and subsequently died. Inspection and inquiry made.
83	4th April, 9-30 A.M.	Chanch mine, Barakai P. O., Bihar and Orissa.	Bengal Coal Co., Ld.	Ramsahai Manjhi, (m.), 20, Coal-cutter.	Coal	Whilst robbing pillars in a fenced-off area, deceased was killed by a fall of some 3 tons of side coal. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(b) Falls of side—(101 deaths)—contd.						
84	17th April, 10-30 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Fa Ka Chone, (m.), 27, Miner.	Silver-Lead- Zinc.	Deceased was at work in a stope timbered with square sets, and was cutting away some ore in order to make room for lagging, when a mass of ore fell from the side. He sustained serious injuries from which he died a few hours later. Inspection and inquiry made.
85	21st April, 3-30 P.M.	Bhulanbararee mine, Pathardihi P. O., Bihar and Orissa.	Bhulanbararee Coal Co., Ltd.	Sunder Rajwar, (m.), 25, Coal-cutter.	Coal	Deceased was sitting down near one side of a narrow quarry when a large fall of overburden took place on the opposite side, and about 2 cwt. of earth fell on him. Death was due to suffocation. His body was not recovered until the following day as rescue work was conducted on the main fall where it was thought deceased had been buried. Inspection and inquiry made.
86	30th April, 11-45 A.M.	Lutchipore mine, Sitarampur P. O., Bengal.	Burrakur Coal Co., Ltd.	Doman Bhumji, (m.), 56, Coal-cutter.	Coal	Deceased passed through a fence to rob coal in an underground gallery. About 10 cwt. of coal fell from the side of the gallery and killed him instantly. Inspection and inquiry made.
87	5th May, 7-30 P.M.	Bankols mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ltd.	Madan Bauri, (m.), 19, Coal-cutter.	Coal	After blasting in an underground gallery, deceased stood under some unsafe coal which fell and killed him. Inspection and inquiry made.
88	8th May, 2 P.M.	Gopaljehuck West mine, Kusūnda P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Bander Noonis, (m.), 35, Coal-cutter.	Coal	Deceased left his appointed working place and began to cut coal from the side of a pillar. A mass of coal, weighing about 5 cwt., fell upon him from a "slip" at a height of 10 feet, causing injuries from which he died seventeen hours later. Inspection and inquiry made.
89	25th May, 2-30 P.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Hemia Jolbin, (f.), 35, Coal-carrier.	Coal	Deceased, whilst loading coal robbed by miners from the corner of a pillar, was killed by a fall of overhanging coal. Inspection and inquiry made.
90	8th June, 3 P.M.	Bhowra mine, Jamadoba P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Lila Bauri, (m.), 26, Coal-cutter; Sani Baurin, (f.), 16, Coal-carrier.	Coal	The deceased were cutting floor coal in a gallery, when a mass of coal 16' × 13' × 2' fell from the side. Lila was killed instantly, and Sani died four hours later. Inspection and inquiry made.

91	9th June, 1-45 P.M.	Budroochuck mine, Sijua P. O., Bihar and Orissa.	Budroochuck Coal Mining Co., Ld.	Rana Bhattacharjee, (m.), 25, Coal-cutter.	Coal	Deceased was dressing down some side coal after blasting, when a mass of coal, weighing about 8 cwt., fell upon him from a height of 10 feet. He was killed instantly. Inspection and inquiry made.
92	13th June, 5-30 A.M.	Jobs mine, Kalipahari P. O., Bengal.	Burrakur Coal Co., Ld.	Mungri Chamar, (f.), 16, Coal-carrier.	Coal	Deceased was loading coal in an underground gallery when about a ton of coal fell from the side she sustained fatal injuries. Another person was seriously injured. Inspection and inquiry made.
93	21st June, 5 P.M.	Dhori mine, Bokarc P. O., Bihar and Orissa.	Bokaro-Ramgur, Ld.	Bansidhari, (m.), 60, Manti, (f.), 50, Phagani, (f.), 35, Labourers ; Padma, (m.), 26, Coal-cutter ; Bansi, (f.), 19, Pachunia, (f.), 16, Phafi, (f.), 15, Coal-carriers.	Coal	The deceased were cutting floor coal in a quarry, when a mass of coal and overburden, 80'×39'×5', fell from a "slip" in the side. They were killed instantly. Inspection and inquiry made.
94	26th June, 7-30 A.M.	Shampore mine, Nirshachati P. O., Bihar and Orissa.	Shampore Coal Co., Ld.	Mukut Ram, (m.), 30, Coal-cutter. Bahura, (f.), 34, Coal-carrier.	Coal	The deceased, against orders, went to work in a dangerous part of a quarry and were killed by a mass of side coal, 18'×8'×1'-9", which fell on them. Inspection and inquiry made.
95	28th June, 1 A.M.	Bolompore mine, Raniganj P. O., Bengal.	Bolompore Coal Co., Ld.	Mukunda Bauri, (m.), 32, Coal-cutter.	Coal	Deceased went through a fence and undercut the corner of a pillar causing a mass of coal, 2'-9"×2'-9"×2'-6", to fall on him. He received injuries from which he died shortly after. Inspection and inquiry made.
96	1st July, 8-30 A.M.	Kyaukpon mine, Karathuri P. O., Burma.	A. H. Morgan & S. O. Holmes	Hon San, (m.), 35, Overseer.	Tin ore	Deceased was killed by a fall of side in an open cutting.
97	4th July, 11-30 P.M.	Douia (Pansira-Buru) mine, Manharpur P. O., Bihar and Orissa.	Bengal Iron Co., Ld.	Chandmoni, (f.), 17, Labourer ; Popat Lall, (m.), 35, Chargeman.	Iron ore	The deceased and several other persons passed through a fence in a quarry and were picking up ore in a prohibited area, when a fall of about 50 tons of soft ore and overburden took place. The deceased were completely buried and their bodies were not recovered until ten hours later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name, and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(b) Falls of side—(101 deaths)—contd.						
98	13th July, 9-30 A.M.	Kanbauk mine, Tavoy P. O., Burma.	Kanbauk (Burma) Wolfram Mines, Ld.	Gin Lone, (m.), 28, <i>Mining Tributer.</i>	Tin and Wol- fram ores	Deceased was killed by a fall of side in an open excavation.
99	14th July, 8-30 A.M.	Sitasaongi mine, Dongri P. O., Bhandara, Central Provinces.	Central Provinces Prospect- ing Syndicate, Ld.	Musamat Jakho, (f.), 18, <i>Labourer.</i>	Manganese ore	Deceased, whilst engaged in loading rock in a cutting, was fatally crushed by a falling mass of rock. The rock measured 2'×2'— 6"×1'—6", and fell a distance of 18 inches only.
100	24th July, 1 P.M.	Bankola mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ld.	Baldeo-Sinha. (m.), 37, <i>Coal-cutter.</i>	Coal	After blasting down coal in an underground gallery deceased returned to the place before the smoke had cleared. A large block of coal fell and killed him. Inspection and inquiry made.
101	25th July, 3 P.M.	Viceroy mine, Nandi P. O., Bengal.	Minto Coal Co., Ld.	Jitoo Manjhi, (m.), 28, <i>Coal-cutter.</i>	Coal	Whilst deceased was extracting a "stook" of coal the "stook" collapsed. He failed to get clear and received injuries from which he died shortly after. Inspection and inquiry made.
102	26th July, 1 P.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Nikaram Jaisi, (m.), 28, <i>Labourer.</i>	Coal	Deceased was loading coal near the entrance of an "opening" or chamber when a mass coal, weighing about 10 cwt., fell upon him from a "slip" at a height of 15 feet. He was killed instantly. Inspection and inquiry made.
103	21st August, 4 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Subhagon Chamar, (m.), 32, <i>Coal-cutter.</i>	Coal	Deceased, whilst cutting coal in a quarry, was struck by a fall of overburden, weighing about 4 cwt. He was killed instantly. Inspection and inquiry made.
104	22nd August, 10-30 A.M.	Chowrassie mine, Disergarh P. O., Bihar and Orissa.	Equitable Coal Co., Ld.	Maku Bauri, (m.) 40, <i>Coal-cutter.</i>	Coal	Whilst deceased was working on a pillar which was almost extract- ed, some roof coal in the goaf fell, causing the remaining rib of the pillar to collapse. Deceased was severely injured and died shortly afterwards. Inspection and inquiry made.
105	23rd August, 9-30 A.M.	Hermyingyi mine, Hermyingyi P. O., Burma.	Burma Finance and Mining Co., Ld.	Chong Tuck, (m.), 50, <i>Labourer.</i>	Tin and Wol- fram ores.	Whilst engaged in sluicing operations on a hillside, deceased was fatally injured by a fall of ground.

106	6th September, 9-30 A.M.	Tootlmuri mine, Sijua P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Parbatia Beldarin, (f.), 23, Labourer.	Coal	Deceased entered a fenced area in a quarry and was struck by a piece of stone, weighing about 10 lb., which fell from the side at a height of 20 feet. Inspection and inquiry made.
107	6th September, 1-30 P.M.	Loyabad mine, Bansjora P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Sitaram Mahaton, (m.), 50, Coal-cutter.	Coal	Deceased and another coal-cutter passed through a fence and were robbing coal from the side of a pillar. A mass of coal, 4' x 2' x 1', fell upon deceased from a "slip" and killed him instantly. Inspection and inquiry made.
108	7th September, 11-30 A.M.	Sodepur mine, Sunderchak P. O., Bengal.	Bengal Coal Co., Ltd.	Khari Majhian, (f.), 23, Coal-carrier.	Coal	A miner was taking down overhanging coal. Deceased, who was standing too near, was struck by the falling coal and received injuries from which she died a month later. Inspection and inquiry made.
109	10th September, 7-30 A.M.	Karathuri mine, Karathuri P. O., Burma.	Kaington	Ah Tin Na, (m.), 35, Labourer.	Tin ore	Deceased was killed by a fall of side in an open excavation.
110	13th September, 4-30 P.M.	Baramasia mine, Ganwan P. O., Bihar and Orissa.	Bhagwan Das Marwari	Hopna Manjhi, (m.), 28, Labourer.	Mica	Deceased, whilst engaged with others in removing the overburden of an old tunnel, was struck on the head by a piece of rock, 2' x 2' x 1', which fell from a height of 7 feet and killed him instantly. Inspection and inquiry made.
111.	15th September, 4 P.M.	Karathuri mine, Karathuri P. O., Burma.	Ma Me	Hpon Shein, (m.), 38, Labourer.	Tin ore	Deceased was killed by a fall of side in an open excavation.
112	22nd September, 3 A.M.	Kosoonda and Nyadee mine, No. 1 Division, Kusunda P. O., Bihar and Orissa.	Kosoonda and Nyadee Collieries, Ltd.	Bhodi Dosadh, (m.), 35, Coal-cutter.	Coal	Deceased, whilst endeavouring to take down some overhanging side coal, was struck by a piece of coal, 4' x 4' x 18", which fell from a "slip" at a height of 5 feet. He received fatal injuries. Inspection and inquiry made.
113	23rd September, 7-30 A.M.	Ena mine, Jharia P. O., Bihar and Orissa.	North West Coal Co., Ltd.	Lelua Hazan, (m.), 25, Coal-cutter.	Coal	Deceased passed through a fence and was robbing coal from the corner of a pillar near his working place, when a mass of coal, weighing about 10 cwt., fell upon him from a height of 6 feet. He sustained serious injuries to which he succumbed two hours later. Inspection and inquiry made.
114	26th September, 4-30 A.M.	Chanoh mine, Barakar P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Fakan Roy, (m.), 30, Shyam Lal Roy, (m.), 22, Coal-cutters.	Coal	Whilst the deceased were robbing coal from the corner of a pillar, they were killed by a mass of some 5 tons of coal which fell from a "cleat" which they had exposed. Inspection and inquiry made.
115	1st October, 1 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Ramsingh Ahir, (m.), 38, Santey Kami, (m.), 29, Trammers.	Coal	The deceased were pushing a loaded tub along a level road, when a fall of some 2 tons of side and roof coal took place and pushed out a setting of timber. They were buried. Santey was killed instantly and Ramsingh sustained serious injuries to which he succumbed an hour later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(b) Falls of side—(101 deaths)—contd.						
116	2nd October, 1-30 A.M.	Burra Dhemio mine, Sitarampur P. O., Bengal.	Burra Dhemio Coal Co., Ltd.	Loli Manjhi, (m.), 20, Coal-cutter.	Coal	Whilst deceased was loading coal under some overhanging coal which was being taken down, the overhanging coal collapsed and killed him instantly. Two other persons were seriously injured. Inspection and inquiry made.
117	5th October, 11-30 A.M.	Churulia mine, Panuria P. O., Bengal.	Churulia Coal Co., Ltd.	Duli Muchi, (f.), 13, Labourer.	Coal	The fall of a mass of coal, 7'-6"×3'-9"×3'-6", brought about the fall of an iron rail from which a range of pipes was suspended. Deceased, who was passing at the time, was struck by the rail and received fatal injuries. Inspection and inquiry made.
118	7th October, 6 A.M.	Rampur mine, Asansol P. O., Bengal.	A. N. Sircar	Jugal Bauri, (m.), 45, Coal-cutter.	Coal	Deceased went to a fenced-off part of a quarry to cut coal. Some overburden fell upon him, causing injuries from which he died four days later. Inspection and inquiry made.
119	20th October, 2 P.M.	Baraipat mine, Tisri P. O., Bihar and Orissa.	F. F. Chrestien & Co., Ltd.	Tilak Roy, (m.), 17, Miner.	Mica	Deceased, whilst in a seated position and engaged in recovering mica from a dump 6 feet deep, was buried by the fall of side, 5'×3'-6"×3', undercut by him. He was suffocated. Inspection and inquiry made.
120	30th October, 10 A.M.	Banstacola mine, Jharis P. O., Bihar and Orissa.	New Beerbhoom Coal Co., Ltd.	Firingi Dosadh, (m.), 32, Labourer.	Coal	Deceased was in an underground gallery, on a ladder, attempting to take down some side coal. The coal, against which the ladder was resting, fell, causing the ladder to slip. Deceased fell to the ground and was killed instantly. Inspection and inquiry made.
121	9th November, 4 P.M.	Nand mine, Sidhbari P. O., Punjab.	Sridhar Mehta	Ludar, (m.), 45, Miner.	Slate	Deceased was killed by a fall of side in a quarry.
122	11th November, 5-30 A.M.	Katras mine, Katrasgarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Durpad Chamin, (f.), 35, Coal-carrier.	Coal	Whilst a miner was cutting coal from the side of a pillar, a piece of coal, 6'×2'×18", fell from a height of 8 feet, and dislodged a prop. The falling prop struck deceased who received serious injuries and died three months later. Inspection and inquiry made.
123	16th November, 1 A.M.	Fularibad mine, Jharis P. O., Bihar and Orissa.	Fularibad Coal Co., Ltd.	Mukhi Bilaspuri, (m.), 24, Labourer.	Coal	Deceased, against orders, commenced to load coal under the side of a pillar which was being dressed. A mass of coal, weighing about 1½ tons, fell on him from a height of 15 feet, killing him instantly. Inspection and inquiry made.

124	16th November, 2-30 P.M.	Lohara mine, Balaghat P. O., Central Provinces.	Tata Iron & Steel Co., Ld.	Vaktia, (m.), 60, Miner.	Iron ore	Deceased was killed by a fall of side in quarry.
125	21st November, 5-30 A.M.	Bararee mine, Jamadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ld.	Gambhir Panika, (m.), 35, Coal-cutter.	Coal	Whilst deceased was standing on a ladder and dressing the side of a pillar of coal, 28 feet in height, a piece of coal, 8'x3'x3', fell against the ladder. He was thrown off and fell to the floor of the gallery where he was struck by some of the falling coal and killed instantly. Inspection and inquiry made.
126	27th November, 4 P.M.	Netra mine, Katanghiri P. O., Central Provinces.	Netra Manganese Co., Ld.	Makya Mahar, (m.), 28, Labourer.	Manganese ore	Deceased was injured by a fall of side in a quarry. He died subsequently.
127	5th December, 10-30 P.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ld.	Sarada Devi, (f.), 16, Coal-carrier.	Coal	Deceased went inside a fence to load coal, and was struck by a mass of coal, 7'x4'x2', which fell from a "slip" in the side and from a height of 15 feet. She was killed instantly. Inspection and inquiry made.
128	6th December, 3 A.M.	Awadaung mine, Mergui, P. O., Burma.	J. F. Leslie and the Burma Malaya Mines, Ld.	Ah Kyim, (m.), 40, Tributer.	Tin ore	Deceased was killed by a fall of side in an open cut.
120	7th December, 2 P.M.	Lalki mine, Tisri P. O., Bihar and Orissa.	F. F. Chrestien & Co., Ld.	Basarat Kalal, (m.), 21, Labourer.	Mica	Deceased was employed in picking out pieces of mica from a waste dump. He under mined the side of a shallow excavation in the dump. The side of this excavation collapsed and buried him. He was suffocated.
130	11th December, 5-6 A.M.	Alkusa North mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Dookan Meah, (m.), 20, Coal-cutter.	Coal	Deceased, whilst robbing a pillar, was struck by a mass of coal 11'x5'x2', which fell from a "slip" in the corner of the pillar. He was killed instantly. Inspection and inquiry made.
131	12th December, 4 P.M.	Sikdardih mine, Giridih P. O., Bihar and Orissa.	Bayra Coal Association	Mungri Musoharin, (f.), 23, Coal-carrier.	Coal	Deceased was killed by the premature fall of a mass of some 3 tons of coal in a working place where a pillar of coal was under extraction. Inspection and inquiry made.
132	17th December, 1-30 P.M.	Kurhurbaree mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Lakhia Dosadhin, (f.), 20, Coal-carrier.	Coal	For the purpose of stealing coal deceased trespassed beyond a fence in a quarry and was struck by coal falling from the side. She died three months later.
133	21st December, 7-30 P.M.	Bhulanbararee mine, Pathardihi P. O., Bihar and Orissa.	Bhulanbararee Coal Co., Ld.	Gouri Mahaton, (m.), 40, Ram Lall Mahaton, (m.), 35, Coal-cutters.	Coal	The deceased were killed by a fall of about 10 tons of coal from the side of a pillar. Inspection and inquiry made.
134	28th December, 11-45 P.M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	Villiers, Ld.	Ghamandi Damuk, (m.), 30, Coal-carrier.	Coal	Deceased was killed instantly by a fall of coal, weighing about 4 tons, from the side of a pillar in a seam 27 feet high. Inspection and inquiry made.
135	29th December, 1 A.M.	Bararee mine, Jamadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ld.	Dhojua Rohidas, (m.), 32, Coal-cutter.	Coal	Deceased passed through a fence and was robbing the corner of a pillar of coal in a seam 25 feet high when a mass of coal, weighing about 10 tons, fell on him killing him instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
IN SHAFTS—(32 deaths).						
In shafts—Whilst ascending or descending by machinery—(12 deaths).						
136	1st February, 1 P.M.	Rampur mine, Jharsuguda P. O., Bihar and Orissa.	Hingir-Rampur Coal Co., Ltd.	Dhundi Kisan, (m.), 32, Signalman; Baleswar Kulta, (m.), 22, Fitter.	Coal	The deceased were being raised in a bucket in a shaft 335 feet deep. When 35 feet from the bottom of the shaft, the bucket caught a supporting clamp near the side of the shaft and was detached from the spring hook. The bucket fell to the bottom of the shaft and the deceased were killed. Inspection and inquiry made.
137	19th February, 2-50 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Tai Yee Nyain, (m.), —, Ywang Chin, (m.), 22, Yan Shao, (m.), —, Bhani Singh, (m.), —, Wang Sai Shin, (m.), —, Ling, Yoo, (m.), —, Miners.	Silver-Lead —Zinc	Whilst seven persons were being lowered in a shaft, a bolt on the friction clutch of the winding drum broke, causing the cage to fall away. The brake was applied, but failed to stop the cage, which crashed on the landing beams. Of the seven persons in the cage six died of injuries received and the other was severely injured. Inspection and inquiry made.
138	23rd March, 12 A.M.	Central Kurkend mine, Kusunda P. O., Bihar and Orissa.	Central Kurkend Coal Co., Ltd.	Tarak Nath Sircar, (m.), 18, Electrical Wireman.	Coal	Deceased and three others boarded a sinking bucket at a mid-inset in a shaft which contained water up to a point about 40 feet below the inset. The bucket instead of being raised in compliance with signals given was lowered into the water. Deceased was drowned but the other three persons contrived to get clear of the bucket and swam in the water till they were rescued. Inspection and inquiry made.
139	14th July, 9-30 P.M.	Nandi mine, Nandi P. O., Bengal.	Nandi Coal Association	Jani Majhian, (f.), 14, Labourer.	Coal	Deceased, with three other persons, was in a cage descending a shaft, 150 feet deep, when the spur-wheel of the winding engine broke causing the cage to be jerked violently. Deceased fell out of the cage to the bottom of the shaft and was killed instantly. Inspection and inquiry made.

140	25th August, 2-20 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ld.	Chu Cho Than, (m.), 33, Trammer.	Silver-Lead- Zinc.	Deceased, in attempting to step from a bucket to the edge of a winze, missed his footing and fell to the next level 130 feet below. He was killed instantly. Inspection and inquiry made.
141.	27th August, 3-50 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ld.	Moti Lall, (m.), 22, Tool Nipper.	Silver-Lead- Zinc.	Deceased and another man were engaged in raising steel drills in a cage when three other men, in defiance of standing orders, entered the cage. The cage being overcrowded, deceased got pushed out and was crushed between the cage and the timbering of the shaft, being killed instantly. Inspection and inquiry made.
(b) In shafts—Falling into the shaft from the surface—(2 deaths).						
142	24th April, 6 A.M.	Mosaboni mine, Rakha Mines P. O., Bihar and Orissa.	Cordoba Copper Co. Ld.	Noah, (f.), 16, Labourer.	Copper ore	Deceased was lying on the landing platform of a sinking well, 48 feet deep. She was suddenly startled and fell to the bottom of the well. She sustained serious injuries to which she succumbed two hours later. Inspection and inquiry made.
143	25th April, 7-10 P.M.	Jheterbad mine, Ukhra P. O., Bengal.	Sir Nilratan Sircar	Upendra Bauri, (m.), 35, Coal-cutter.	Coal	Deceased was being raised in a shallow shaft. Instead of waiting for the tub to be lowered on to the landing trolley, he jumped off and, missing his footing, fell to the bottom of the shaft. He was killed instantly. Inspection and inquiry made.
144	4th June, 9 A.M.	Shampore mine, Nirshachati P. O., Bihar and Orissa.	Shampore Coal Co., Ld.	Chiragdin, (m.), 28, Labourer.	Coal	Deceased, while standing on a sinking trolley at the top of a shaft 113 feet deep, slipped and fell down the shaft, being killed instantly. Inspection and inquiry made.
145	19th November, 8 P.M.	Pretoria mine, Charanpur P. O., Bengal.	Seebpore Coal Co., Ld.	Boson Singh, (m.), 22, Labourer.	Coal	A guide rope was being lowered in a shaft, 316 feet deep. The rope had been lowered 300 feet when it caught on the side of the shaft. Deceased was standing on a buntion across the top of the shaft trying to release the rope when it suddenly became free and pulled him into the shaft. He fell to the bottom of the shaft and was killed instantly. Inspection and inquiry made.
(c) In shafts—Falling from part of the way down—(10 deaths).						
146	9th January, 11-30 A.M.	Mosaboni mine, Rakha Mines, P. O., Bihar and Orissa.	Cordoba Copper Co., Ld.	Kannar Palany, (m.), 35, Labourer.	Copper ore	Deceased fell from an inset in a shaft into the sump 87 feet below. He was killed instantly. Inspection and inquiry made.
147	20th January, 9 A.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ld.	Debi Singh, (m.), 40, Jemadar.	Coal	While preparing to ascend from the foot of a shaft, which was in course of being fitted up, the deceased fell into the shaft sump, 30 feet deep, and was killed. Inspection and inquiry made.
148	7th March, Unknown.	Mahrauli mine, Mahrauli P. O., Delhi.	Hari Krishan & Brothers	Badlu, (m.), 40, Labourer.	Clay	Deceased was being raised in a shaft, 45 feet deep, by means of a rope and iron hook in which his foot rested. He slipped and fell 30 feet to the bottom of the shaft, and was killed.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
<p>IN SHAFTS—(32 deaths)—contd.</p> <p>(c) In shafts—Falling from part of the way down—(10 deaths)—contd.</p>						
149	22nd May, 9-30 A.M.	North Lakurka mine, Katrasgarh P. O., Bihar and Orissa.	R. C. Guha & Co.	Mukunda Bauri, (m.), 22, Sinker.	Coal	Whilst climbing the winding rope in a sinking shaft, 38 feet deep, deceased lost his grip and fell to the bottom. He succumbed to his injuries shortly after. Inspection and inquiry made.
150	27th May, 6 P.M.	Balaghat mine, Bharweli P. O., Central Provinces.	Central Provinces Prospect- ing Syndicate, Ld.	Sahu Lodhi, (m.), 14, Labourer.	Manganese ore.	Deceased fell down a ladderway in a shaft and was killed. Inspection and inquiry made.
151	16th September, 8 A.M.	West Tetturiya mine, Katrasgarh P. O., Bihar and Orissa.	West Tetturiya Collieries, Ld.	Lukhri Bhuiya, (m.), 30, Trolleyman.	Coal	Whilst deceased was being lowered in a shaft, 174 feet deep, he fell from the cage and was killed instantly. Inspection and inquiry made.
152	25th September, 3-30 P.M.	North Kujama mine, Jharia P. O., Bihar and Orissa.	Gangji Dossa & Sons	Devi Kamin, (f.), 18, Labourer.	Coal	Whilst deceased and five other women were descending a shaft, some object (presumably some bolts and nuts) fell from the surface, and, striking the top of the cage, caused the occupants to become alarmed. In the confusion deceased fell from the cage into the sump. She was found drowned shortly afterwards. Inspection and inquiry made.
153	26th September, 8-30 A.M.	Mosaboni mine, Rakha Mines P. O., Bihar and Orissa.	Cordoba Copper Co., Ld.	Shaik Panchoo, (m.), 30, Bellman.	Copper ore	Deceased fell into the sump at the bottom of a shaft, and was drowned. Inspection and inquiry made.
154	16th November, 5 P.M.	Lakurka mine, Katrasgarh P. O., Bihar and Orissa.	Lakurka Coal Co., Ld.	Isra Turi, (m.), 25, Signalman.	Coal	Whilst the covering of a shaft at a landing was partially open for repairs, deceased attempted to cross the shaft. He slipped and fell to the shaft bottom 50 feet below. He received fatal injuries. Inspection and inquiry made.

74

155	25th November, 9-30 A.M.	Mosaboni mine, Rakha Mines P. O., Bihar and Orissa.	Cordoba Copper Co., Ltd.	Munslamani, (m.), 28, Labourer.	Copper ore	Deceased was climbing up the ladders in a shaft and when he was near the surface a pipe, 6 feet long and 4 inches in diameter, supported at the shaft top, became disconnected and fell on him. He fell to the bottom of the shaft, 180 feet deep, and was killed instantly. Inspection and inquiry made.
(d) In shafts—Things falling from the surface—(1 death).						
156	10th December, 6 A.M.	Khas Sitalpur mine, Chora P. O., Bengal.	Khas Sitalpur Colliery Co.	Abjal Saha, (m.), 40, Stone-cutter.	Coal	When a bucket was being raised from the landing trolley at the top of a sinking shaft, 75 feet deep, it struck the fence at the end of the trolley. The fence was broken and part of it fell down the shaft. Deceased was struck on the head and died from his injuries fifteen hours later. Inspection and inquiry made.
(e) In shafts—Things falling from part of the way down—(1 death).						
157	26th May, 12-30 P.M.	Tisra mine, Jharis P. O., Bihar and Orissa.	Diamond Coal Co.	Jadu Gorai, (m.), 25, Sinker.	Coal	A plumb bob was being lowered in a sinking shaft, 100 feet deep when the string holding the bob broke. The bob struck deceased upon the head causing serious injuries to which he succumbed within a few days. Inspection and inquiry made.
(f) In shafts—Miscellaneous—(4 deaths).						
158	2nd July, 11-30 A.M.	Khas Joyrampur mine, Jharis P. O., Bihar and Orissa.	Khengarji Trikoo & Co.	Kaimuddin, (m.), 25, Labourer.	Coal	Deceased, with two other men, was engaged in cleaning out a shaft sump by means of a bucket. On the bucket being lowered he attempted to push it to the opposite side of the shaft, when it swung back and struck him on the head. He was killed instantly. Inspection and inquiry made.
159	10th July, 7 A.M.	Lodna mine, Jharis P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ltd.	Bangalia Musahar, (m.), 14, Door attendant.	Coal	Deceased attempted to cross the bottom of a shaft and was struck by the descending cage. He received injuries from which he died four hours later. Inspection and inquiry made.
160	31st July, 6 A.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Colliery, Ltd.	Ashu Hari Punjabi, (m.), 35, Labourer.	Coal	Deceased and another man were working in a shaft fixing the anchor beams which were temporarily attached to a guide rope. This guide rope was attached to a winch by a rope which crossed over a railway siding. The funnel of a locomotive caught this rope and jerked the guide rope causing both men to be thrown into the sump. Deceased was killed. Inspection and inquiry made.
161	3rd September, 5-30 P.M.	Mudidih mine, Sijua P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Gangu Bhar, (m.), 50, Pumpman.	Coal	Deceased was in charge of a pump at the bottom of a shaft. Whilst the cages were in motion he attempted to look into the sump, and was crushed beneath the descending cage. He was killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
SUFFOCATION BY GASES—(12 deaths).						
162	13th April, 5-45 P.M.	Chandametta mine, Parasia P.O., Central Provinces.	Pench Valley Coal Co., Ltd.	Thenwarin Dhimran, (f.), 10, Mahatram Dhimran, (m.), 12, <i>Labourers.</i>	Coal	The two deceased and three others while working in a mine near an area of workings suspected of being on fire were overcome by foul gases. The other three recovered. Inspection and inquiry made.
163	1st May, 11-30 P.M.	Sodepur mine, Sitarampur P. O., Bengal.	Bengal Coal Co., Ltd.	Mr. Dean, (m.), 23, <i>Mining Assistant</i> ; Suk Mongal Singh, (m.), 30, <i>Sirdar</i> ; Moti Bauri, (m.), 18, <i>Pumpman</i> ; Rakhal Bhuya, (m.) 17, Suri Baurin, (f.), 15, Bedanee Baurin, (f.), 12, Koomi Baurin, (f.), 30, Susilla Baurin, (f.), 16, Behari Bauri, (m.), 40, <i>Labourers.</i>	Coal	Whilst the deceased were proceeding to their working places in a mine they were overcome by foul gas generated by an underground fire. Inspection and inquiry made.
164	5th June, 4 P.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Shiray Larki, (m.), 30, <i>Opening man.</i>	Coal	With the object of recovering some tools deceased broke down a stopping and entered a disused working. He was asphyxiated by foul gas. Inspection and inquiry made.
EXPLOSIVES—(11 deaths).						
165	27th March, 8-30 P.M.	Asakuti mine, Katrasgarh P. O., Bihar and Orissa.	Royal Coal Co., Ltd.	Lochmon Gowala, (m.), 24, <i>Shot-firer.</i>	Coal	Deceased charged and lighted two shots, one of which hung fire. Instead of waiting for the prescribed time he returned to the place almost at once and was killed by the explosion of the shot. Inspection and inquiry made.

166	25th May, 1-30 P.M.	Kendra mine, Pandaveswar P. O., Bengal.	Samsa Kendra Collieries, Ld.	Jogeswar Chamar, (m.), 24, <i>Labourer.</i>	Coal	Deceased lit the fuse of a charged shot-hole, and apparently went back before it exploded. He received injuries from which he died a few hours later. Inspection and inquiry made.	
167	30th May, 2-30 P.M.	Central Kurkend mine, Kusunda P. O., Bihar and Orissa.	Central Kurkend Coal Co., Ld.	Janki Gope, (m.), 25, Dalu Mullick, (m.), 45, <i>Stone-cutters.</i>	Coal	In the shot-firer's absence a box containing gunpowder cartridges was opened and the cartridges ignited by some means. The deceased were burnt and subsequently died. Another man was seriously injured. Inspection and inquiry made.	
168	21st June, 12 P.M.	Tiera mine, Jharia P. O., Bihar and Orissa.	Alliance Colliery Co.	Purna Kamin, (f.), 35, <i>Coal-carrier.</i>	Coal	Deceased went unobserved near to a quarry in which blasting was being done, and was struck on the head by a projected piece of stone, weighing about 5 lb. She was killed instantly. Inspection and inquiry made.	
169	28th September, 6-30 P.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ld.	Ramchand Teli, (m.), 36, <i>Coal-cutter.</i>	Coal	Deceased, thinking that a shot had misfired, returned to the place when the charge exploded. He sustained serious injuries to which he succumbed eight days later. Inspection and inquiry made.	
170	8th October, 2 P.M.	Kandri mine, Kandri P. O., Central Provinces.	Central Provinces Prospecting Syndicate, Ld.	Baradi, (m.), 16, <i>Labourer.</i>	Manganese ore	Deceased drilled into a charge of gelignite causing it to explode. He sustained an injury to the hand and died from tetanus a week later.	
171	23rd October, 6-30 P.M.	Fularibad mine, Jharia P. O., Bihar and Orissa.	Fularibad Coal Co., Ld.	Gokul Bilaspuri, (m.), 35, <i>Coal-cutter.</i>	Coal	Deceased was assisting to make gunpowder cartridges. He threw a little of the loose powder on to a lamp, and the bulk of the powder became ignited. He was severely burnt and subsequently died. Inspection and inquiry made.	
172	11th November, 10 A.M.	Lakurka mine, Katrasgarh P. O., Bihar and Orissa.	Lakurka Coal Co., Ld.	Kripa Rohida s, (m.), 30, <i>Labourer.</i>	Coal	Whilst deceased was carrying a tin of loose gunpowder a cigarette which he was smoking fell among the powder and ignited it. He sustained burns from which he died fourteen hours later. Inspection and inquiry made.	
173	19th November, 11 P.M.	South Kustore mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ld.	Khedan Hazan, (m.), 28, Khemam Hazan, (m.), 27, <i>Stone-cutters.</i>	Coal	The deceased remained too long in the vicinity of a round of shots which they had been lighting. They were killed by the discharge. Inspection and inquiry made.	
HAULAGE—(29 deaths).							
174	19th January, 8-15 P.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ld.	Ishwari Panday, (m.), 40, <i>Pumpman.</i>	Coal	Deceased was struck by a runaway tub on an underground haulage plane and received injuries from which he died. Inspection and inquiry made.	
175	24th January, 8 P.M.	Khost mine, Khost P. O., Baluchistan.	North Western Railway	Shahdad, (m.), 35, <i>Bellman.</i>	Coal	Deceased, after giving the signal to raise the train, attempted to get into the train. He was crushed between the tubs and the timbering, and fatally injured. Inspection and inquiry made.	

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
HAULAGE—(29 deaths)—contd.						
176	4th February, 1 A.M.	Kendra mine, Pandaveswar P. O., Bengal.	Samla Kendra Collieries, Ld.	Mongal Kole, (m.), 38, Coal-cutter.	Coal	An empty tub had been uncoupled on a haulage slope at a landing. Owing to a misunderstanding the points had been wrongly set, and the tub ran wild down the incline, a distance of two hundred feet, to where deceased was sitting. He received injuries from which he died shortly after. Inspection and inquiry made.
177	7th February, 8-30 P.M.	Deoli mine, Disergarh P. O., Bihar and Orissa.	Deoli Coal Co., Ld.	Damin Baurin, (f.) 13, Loader.	Coal	Deceased whilst sitting near a fire by the side of a surface haulage road, was knocked down by a train of tubs. She received injuries from which she died four days later. Inspection and inquiry made.
178	1st March, 7-30 P.M.	Budroochuck mine, Sijua P. O., Bihar and Orissa.	Budroochuck Coal Mining Co., Ld.	Bhikhani Rajwarin, (f.), 46, Loader.	Coal	Deceased, who was standing at one side of the foot of a self-acting jig when an empty tub broke away on the incline, instead of staying where she was, attempted to cross the foot of the jig to get to the other side, and was struck by the tub and killed. Inspection and inquiry made.
179	18th March, 1 A.M.	Choitodih mine, Katrasgarh P. O., Bihar and Orissa.	Burrakar Coal Co., Ld.	Latoo Ram Kahar, (m.), 21, Signalman.	Coal	Deceased was sitting at an intermediate crosscut on a main dip haulage when four empty tubs became uncoupled from a set of eight. The tubs knocked out a prop to which the signal wire was attached and the prop struck deceased on the head with such force that he was killed instantly. Inspection and inquiry made.
180	7th April, 4-30 P.M.	Bansra mine, Raniganj P. O., Bengal	Presidency Coal Co	Norendra Nath Roy, (m.), 23, Signalman.	Coal	Whilst a train of three loaded tubs was being hauled up an incline the two rear tubs became uncoupled, ran wild down the incline and struck deceased. He received injuries which proved fatal. Inspection and inquiry made.
181	18th April, 8-10 A.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., (1920) Ld.	Punia Chamin, (f.), 23, Coal-carrier.	Coal	Deceased, with three other persons, in spite of being warned not to do so, was sitting at the corner of a level. A train of empty tubs was being lowered down an incline, when the front tub became detached from the rest of the train, ran wild, and was derailed at the level where deceased was sitting. She was struck by the tub and killed instantly. Inspection and inquiry made.
182	21st April, 7 A.M.	Aldih mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ld.	Sida Manjhi, (m.), 32, Sirdar.	Coal	Whilst a set of loaded tubs was being hauled up an incline, the haulage rope slipped off the pulleys at a curve. The rope caught the deceased on the leg and caused injuries which necessitated amputation. He died twelve hours later. Inspection and inquiry made.

183	28th April, 2-30 P.M.	Damagurria mine, Kulti P. O., Bengal.	Damagurria Coal Co., Ld.	Kadu Baurin, (f.), 10, Labourer.	Coal	Deceased put her leg through a small opening in the fencing of the return wheel of an endless rope haulage. She sustained injuries which caused death five days later. Inspection and inquiry made.
184	28th April, 5 P.M.	Katras mine, Katrasgarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Rasul Turi, (m.), 15, Engine-cleaner.	Coal	A train of sixteen tubs was being hauled up an incline. There should have been no more than ten tubs on the train and, due to the excessive load, the electric switch at the motor was "cut-out." The engineman was unable to control the load with the brake and the train ran back and demolished the stop block at the bottom of the incline. Deceased, who was sitting just below the stop block, was struck by the tubs and killed. Inspection and inquiry made.
185	23rd May, 10 A.M.	Dishergarh mine, Disergarh P. O., Bengal.	Equitable Coal Co., Ld.	Sambha Manjhi, (m.), 18, Coal-cutter.	Coal	Whilst a loaded train of tubs was being hauled up an incline a draw-bar broke and the last four tubs ran back, left the rails, and crushed the deceased against the corner of a pillar. Inspection and inquiry made.
186	23rd May, 8-30 P.M.	Malkera mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ld.	Damini Hari, (f.), 15, Coal-carrier.	Coal	Deceased was knocked down by a loaded tub which was gravitating towards the bottom of a shaft. She received injuries from which she died four days later. Inspection and inquiry made.
187	27th June, 6-30 P.M.	Loyabad mine, Bansjora P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Ram Prasad Dhobi, (m.), 25, Hookman.	Coal	Whilst deceased was walking up a steep haulage slope a train of loaded tubs became derailed. He was crushed between the tubs and the side of the road, and sustained fatal injuries. Inspection and inquiry made.
188	5th July, 7-45 A.M.	Kondwadih mine, Kusunda P. O., Bihar and Orissa.	East Indian Coal Co., Ld.	Roghubar Koiree, (m.), 18, Trolleyman.	Coal	A tub was being loaded on a grade of 1 in 30. The wheels were not spragged and the tub ran forward crushing deceased between it and the other loaded tubs. He was killed instantly. Inspection and inquiry made.
189	2nd August, 4-30 P.M.	Tisra mine, Jharia P. O., Bihar and Orissa.	Diamond Coal Co.	Garula Rohidas, (f.), 35, Coal-carrier.	Coal	Deceased, whilst walking on a haulage incline, was killed by a train of empty tubs which ran wild owing to the breaking of a draw-bar. Inspection and inquiry made.
190	8th August, 7-30 A.M.	Mohpani mine, Mohpani P. O., Central Provinces.	Great Indian Peninsula Rail- way Co.	Jankia Ahiran, (f.), 45, Coal-carrier.	Coal	Whilst standing on a haulage landing, deceased was knocked down by an incoming train. She received injuries from which she died four days later. Inspection and inquiry made.
191	9th August, 1 P.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Mani Dosadh, (m.), 32, Trolleyman.	Coal	Deceased was re-railing a tub on an endless rope haulage road. The rope started to move, and he was crushed between the tub and the side of the road. He died two days later. Inspection and inquiry made.
192	14th September, 1 P.M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	Villiers, Ld.	Kusum, (f.), 40, Coal-carrier.	Coal	A train of eight tubs was standing against a temporary stone buffer on a road with an inclination of 1 in 9. Deceased was standing between two tubs loading coal when the train ran a few feet over the buffer. One of the tubs became derailed, turned over on to deceased and killed her instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial Number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accident and remarks.
HAULAGE—(29 deaths)—contd.						
193	19th September, 10-30 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Young Quai, (m.), 25, Trammer.	Silver-Lead- Zinc	Deceased was crushed between an ore truck and the corner of a chute. He received injuries from which he died on the following day. Inspection and inquiry made.
194	29th September, 9-30 P.M.	Choitodih mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Mahadeo, (m.), 32, Trolleyman.	Coal	Deceased, whilst riding in front of a train of tubs, dropped his lamp, and, in trying to recover it, fell off. He received injuries from which he died on the following day. Inspection and inquiry made.
195	7th October, 5 A.M.	Damudapur mine, Nandi P. O., Bengal.	Bengal Coal Co. Ltd.	Sambhu Bauri, (m.), 25, Trammer.	Coal	Deceased was knocked down by a runaway tub on an underground haulage plane. He sustained injuries from which he died twenty-four hours later. Inspection and inquiry made.
196	20th October, 11-30 A.M.	Ghugus mine, Ballarpur P. O., Central Provinces.	Sir K. C. Daga & Bros. and Hon'ble Sir M. B. Dada- bhoy.	Balliga, (m.), 30, Plateman.	Coal	Deceased was crushed between the side of a pillar of coal and a train of eight tubs which had run wild. He was killed. Inspection and inquiry made.
197	12th November, 12-30 P.M.	Dandot mine, Dandot P. O., Panjab.	Thakur Das and Ramji Das	Gulab, (m.), 25, Coal-cutter.	Coal	Deceased was pulling a tub on a tram line in a narrow underground road. On coming to a down grade he lost control of the tub and was crushed between it and the side of the road. He received injuries from which he died two days later. Inspection and inquiry made.
198	20th November, 11 A.M.	Khewra mine, Khewra P. O., Punjab.	Government of India	Ghulam Mahomed, (m.), 38, Miner.	Salt	Deceased was run over on an underground haulage road. His leg was injured and he died two months later.
199	19th December, 11 A.M.	Saltore mine, Disergarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Karbni Bauri, (m.), 35, Trolleyman.	Coal	Deceased was standing behind a train of four loaded tubs on a slightly inclined road, when another loaded tub ran away from inbye and crushed him against the tubs. He was killed instantly. Inspection and inquiry made.
200	20th December, 2 A.M.	Tirap mine, Margherita P. O., Assam.	Assam Railways & Trading Co., Ltd.	Balla Teli, (m.), 32, Trolleyman.	Coal	Deceased was lying asleep by the side of a tramming road when a full tub passed over his thumb and crushed it. Gangrene set in and he died nine days later. Inspection and inquiry made.

201	26th December, 3-45 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways & Trading Co., Ltd.	Monbir Lama, (m.), 24, Signalman.	Coal	Deceased failed to attach an empty tub to the rope at the bottom of a short self-acting incline with a gradient of 1 in 2½. The full tub ran wild into the empty tub, and deceased, whilst attempting to get clear, was crushed between the empty tub and the side of the road. He sustained serious injuries to which he succumbed a few minutes later. Inspection and inquiry made.
202	28th December, 4 P.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Man Bahadur, (m.), 43, Mucker.	Silver-Lead- Zinc	Deceased was crushed between a loaded ore car and the timbering of an underground road.
UNDERGROUND MACHINERY—(2 deaths).						
203	8th December, 10-30 P.M.	Purushotampur mine, Pandaveswar P. O., Bengal.	Tata Iron & Steel Co., Ltd.	Lazarus, (m.), 39, Coal-cutting Machine- man.	Coal	Whilst deceased was holding the anchor prop of a chain coal-cutting machine, the prop slipped. The picks caught his leg drawing it in below the machine. He died from his injuries shortly after. Inspection and inquiry made.
204	19th December, 9-30 A.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Gafur Meah, (m.), 14, Oiler.	Coal	Deceased was playing with a haulage rope at a point where it passes over a pulley. His fingers were caught between the rope and the pulley with the result that two fingers were cut off. He succumbed to tetanus five days later. Inspection and inquiry made.
SUNDRIES UNDERGROUND—(11 deaths).						
205	11th February, 2-30 A.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Janaki Nath Gore, (m.), 30, Coal-cutter.	Coal	Deceased was dressing roof coal in an underground gallery, when the ladder slipped and he fell to the ground. He sustained injuries which caused death eleven days later. Inspection and inquiry made.
206	23rd March, 2-30 A.M.	Kustore South mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Association, Ltd.	Radhia, (f.), 28, Coal-carrier.	Coal	Deceased pushed a tub against other standing tubs the wheels of which were not sufficiently spragged. After the impact the tubs ran backwards and the tub which deceased had been pushing passed over her body killing her instantly. Inspection and inquiry made.
207	30th April, 5 P.M.	Mail mine, Chitterpur P. O., Bihar and Orissa.	Durga Prosad Bhagat	Musamat Mohri Kurmin, (f.), 24, Labourer.	Coal	Whilst deceased was carrying a loaded basket cut of a quarry she slipped on the pathway and fell to the bottom of the excavation, sustaining fatal injuries.
208	1st May, 9-30 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Loa Tha, (m.), 40, Miner.	Silver-Lead- Zinc	Deceased fell down a chute and sustained injuries from which he died.
209	12th May, 8-45 A.M.	Bawdwin mine, Namtu P. O., Northern Shan States, Burma.	Burma Corporation, Ltd.	Narichand, (m.), 20, Miner.	Silver-Lead- Zinc	Whilst deceased was engaged in putting up a rise, a fall of ore occurred breaking the staging on which a ladder was resting. When he attempted to descend, the ladder gave way and he fell to the bottom of the rise. He received injuries from which he died a few hours later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accidents and remarks.
SUNDRIES UNDERGROUND—(11 deaths)—contd.						
210	18th June, 6-30 P.M.	Chora mine, Chora P. O., Bengal.	Chora Collieries, Ld.	Jagdew Kumar, (m.), 28, Coal-cutter.	Coal	Whilst deceased was standing on a ladder levering down a mass of roof coal, which had been loosened by blasting, the coal suddenly gave way. He lost his balance and fell from the ladder, a distance of 14 feet. He received injuries from which he died shortly after. Inspection and inquiry made.
211	23rd June, 10 A.M.	Madhudih mine, Mohuda P. O., Bihar and Orissa.	Madhudih Coal Syndicate, Ld.	Gidhni Deswalin, (f.), 14, Labourer.	Coal	Deceased, whilst going down an incline, fell and her oil-lamp overturned saturating her clothes and setting fire to them. She died of burns two days later. Inspection and inquiry made.
212	26th July, 9-30 A.M.	Pootkee mine, Kusunda P. O., Bihar and Orissa.	Eastern Coal Co., Ld.	Chanoo Baperi, (m.), 40, Coal-cutting Machineman.	Coal	Deceased, whilst setting points with a crowbar, was knocked down by the power truck of a coal cutting machine. He received injuries from which he died two days later. Inspection and inquiry made.
213	4th August, 3 P.M.	Khas Jherria mine, Jharia P. O., Bihar and Orissa.	Khas Jherria Colliery Co., Ld.	Durga C. Gossain, (m.), 30, Clerk.	Coal	Pillars of coal had been extracted and preparations were being made to withdraw the timbers. The roof began to "weight," and the workmen retired to a narrow road, 150 feet distant. The roof collapsed so suddenly as to cause an air blast, and the air attained such a velocity as to knock the men over. Five men were seriously injured and the deceased succumbed to his injuries eight days later. Inspection and inquiry made.
214	17th October, 5 A.M.	Bankola mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ld.	Faga Sinha, (m.), 26, Punjabi Workman.	Coal	Whilst deceased was demolishing a brick wall at the bottom of a shaft, the top portion of the wall fell on him, causing injuries from which he died shortly after. Inspection and inquiry made.
215	13th December, Unknown.	Hermyingyi mine, Hermyingyi P. O., Burma.	Burma Finance & Mining Co., Ld.	Shew Pak, (m.), 30, Dump-picker.	Tin and Wolf- ram ores	Deceased fell down a winze and broke his neck. He was employed on the surface and his entrance into the mine was unauthorised.
SURFACE MACHINERY—(1 death).						
216	24th October, 7-30 A.M.	Chanck mine, Barakar P. O., Bihar and Orissa.	Bengal Coal Co., Ld.	C. P. Cornish, (m.), 17, Watchman.	Coal	Deceased attempted to pass over a winding rope while it was in motion. He was pulled on to the drum and killed almost instantly. Inspection and inquiry made.

SURFACE BOILERS, OR PIPES BURSTING—(1 death).

217	30th November, 2 A.M.	Kosoonda and Nyadee mine, Kusunda P. O., Bihar and Orissa.	Kosoonda & Nyalee Collieries, Ld.	Huna Muchi, (m.), 12, Labourer.	Coal	A plug in the crown of the fire-box of a boiler blow out, and steam, water and ashes were blown out and deceased was fatally burnt. Inspection and inquiry made.
ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(4 deaths).						
218	6th April, 11-30 A.M.	Maclellan mine, Manharpur P. O., Bihar and Orissa.	Bengal Iron Co., Ld.	Balia Tamaiany, (f.), 50, Labourer.	on ore	Deceased, who was deaf, was crossing a surface tramline when she was knocked down by a loaded tram. She sustained serious injuries to which she succumbed a few hours later. Inspection and inquiry made.
219	7th April, 6-45 A.M.	Jambad mine, Chora P.O., Bengal.	Jambad Coal Concern, Ld.	Saboo Bavv, (m.) 35, Trammer.	Coal	Whilst deceased was riding on a tub on a surface tramway, the tub left the rails and fell over an embankment. Deceased sustained a compound fracture of the leg and died fifteen days later in hospital. Inspection and inquiry made.
220	13th April, 1 P.M.	Gua mine, Mahudi, P. O., Bihar and Orissa.	Indian Iron & Steel Co., Ld.	Dasso Kole, (m.), 37, Labourer.	Iron ore	Deceased attempted to cross a surface haulage incline when the trains were running. He was run over and sustained injuries which proved fatal a week later.
221	24th November, 9-30 A.M.	Maclellan mine Manharpur P. O., Bihar and Orissa.	Bengal Iron Co., Ld.	Basu Naik, (m.), 50, Labourer.	Iron ore	Deceased attempted to get on the platform of a skip after it had started to ascend a steep incline. He fell off and was run over sustaining serious injuries to which he succumbed fourteen days later. Inspection and inquiry made.
ELECTRICITY—(3 deaths).						
222	26th May, 2 A.M.	Loyabad mine, Bansjora P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Meghu Chamar, (m.), 40, Coal-cutter.	Coa	Deceased, probably while under the influence of liquor, climbed a tower supporting a 6,600 volt transmission line. He came into contact with the conductors and received a shock of about 3,800 volts causing injuries from which he died two days later. Inspection and inquiry made.
223	14th July, 12 noon.	Mudidih mine, Sijua P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Lochman Mullick, (m.), 25, Cook.	Coal	Deceased, apparently for the purpose of getting a bird's nest, climbed a tower supporting a 6,600 volt transmission line. He came into contact with the conductors and received a shock of approximately 3,800 volts causing injuries from which he died two days later. Inspection and inquiry made.
224	7th October, 9-15 A.M.	New Tetturya mine, Katrasgarh P. O., Bihar and Orissa.	New Tetturya Coal Co., Ld.	Sukur Turi, (m.), 36, Fitter.	Coal	Deceased appears to have operated the wrong switch and so failed to isolate a 550 volt A. C. overhead transmission line upon which he was about to work. Apparently thinking it was safe to do so, he climbed one of the line supports for the purpose of installing insulator guard, and, touching one of the conductors, received a shock to earth of approximately 300 volts. He almost immediately fell a distance of about 25 feet to the ground where he was found dead. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Cause of accidents and remarks.
MISCELLANEOUS ON SURFACE—(13 deaths).						
225	24th January, 8-30 A.M.	Hindubagh mine, Hindubagh P. O., Baluchistan.	Baluchistan Chrome Co., Ltd.	Nasar, (m.), 18, <i>Aerial rope-way, attendant.</i>	Chromite ore	Deceased was employed at the lower end of an aerial ropeway for the transport of bags of ore. He failed to stand clear and was struck by a bag, being killed instantly. Inspection and inquiry made.
226	16th April, 10-30 A.M.	Salem mine, Suramangalem P. O., Madras.	Magnesite Syndicate, Ltd.	Kolandai, (m.), 50, <i>Labourer.</i>	Magnesite	Deceased fell into an excavation and sustained injuries from which he died soon afterwards.
227	21st April, 11 A.M.	Moirā mine, Ukhra P. O., Bengal.	Moirā Collieries, Ltd.	Sheik-Arshad, (m.), 27, <i>Mason.</i>	Coal	Whilst the temporary supports were being removed from the arched roof of a cooly barrack, the roof collapsed burying deceased. He died from his injuries three hours later. Inspection and inquiry made.
228	23rd April, 11 A.M.	Hermyingyi mine, Hermyingyi P. O., Burma.	Burma Finance and Mining Co., Ltd.	Maung Mai, (m.), 50, <i>Sawyer</i>	Tin and Wolf-ram ores	Deceased, who was standing on the gantry of a sawpit, was struck on the legs by a falling log of timber. Gangrene supervened causing his death.
229	25th April, 11 A.M.	Bharatchak mine, Sunderchak P. O., Bengal.	B. N. Sanyal	Thaki Muchin, (f.), 36, <i>Labourer.</i>	Coal	Whilst deceased was sitting on the curb of a mortar mill, the buffaloes turning the mill took fright and bolted. Deceased was caught by the axle and crushed between it and the curb. She died shortly after. Inspection and inquiry made.
230	21st June, 1-30 P.M.	Godhur mine, Kusunda P. O., Bihar and Orissa.	S. B. Raha & Sons	Dukhni Beldarin, (f.), 13, <i>Labourer.</i>	Coal	Deceased was carrying a basket filled with <i>débris</i> on her head in a quarry, when she slipped and fell a distance of 10 feet. She sustained injuries to which she succumbed two hours later. Inspection and inquiry made.
231	6th July, 7-10 A.M.	Gazlitan mine, Sijua P. O., Bihar and Orissa.	New Manbhoom Coal Co., Ltd.	Manda Mahomed Bux, (m.), 26, <i>Labourer.</i>	Coal	Deceased, whilst working on a scaffold fixed to a headgear, fell to the ground a distance of 25 feet. He received injuries from which he died three hours later. Inspection and inquiry made.
232	4th August, 5-30 P.M.	Burra Golai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Diliram Chetri, (m.), 26, <i>Labourer.</i>	Coal	Deceased was assisting to build a scaffold round a steel chimney 45 feet high, the top section of which had become distorted. A storm arose and the affected part of the chimney was displaced, striking deceased, who fell to the ground. He sustained serious injuries and died shortly afterwards. Inspection and inquiry made.

233	21st September, 9 A.M.	Bansdeopur mine, Kusunda P. O., Bihar and Orissa.	Bansdeopur Coal Co., Ltd.	Shew Prosad Chamar, (m.), 30, <i>Stone-cutter.</i>	Coal	Deceased was levering a piece of stone from the top of the seam in a quarry. He fell over the edge of the quarry along with the stone and received injuries from which he died. Inspection and inquiry made.
234	26th September, 7-30 P.M.	Phularitand mine, Katrasgarh P. O., Bihar and Orissa.	Phularitand Coal Co., Ltd.	Guni Dosadh, (m.), 30, <i>Engineman.</i>	Coal	The crank of a haulage engine was on "dead centre." Deceased was trying to pull the fly wheel of the engine round when he slipped and fell a distance of 4 feet. He sustained internal injuries and died eight hours later. Inspection and inquiry made.
235	10th October, 8-30 A.M.	Bansjorah mine, Bansjora P. O., Bihar and Orissa.	Bansjorah Coal Co., Ltd.	Behari Rajwar, (m.), 42, <i>Coal-cutter.</i>	Coal	During blasting operations in a quarry, deceased, on receiving the necessary warning, was leaving the quarry when he slipped and fell on some sharp stones. He sustained a deep cut on the neck and died an hour later from loss of blood. Inspection and inquiry made.
236	28th October, 8-45 A.M.	Shivrajpur mine, Shivrajpur P.O., Panch Mahals, Bombay.	Shivrajpur Syndicate, Ltd.	Laloo Badhar, (m.), 35, <i>Labourer.</i>	Manganese ore	Deceased, who was working on the steeply sloping surface of the face of a quarry, complained of feeling ill and, in getting down, slipped and fell a distance of seven feet. He died shortly afterwards. Inspection and inquiry made.
237	13th December, 11 A.M.	Dhori mine, Bokaro P. O., Bihar and Orissa.	Bokaro-Ramgur, Ltd.	Dhukhiya Kolin, (f.), 43, <i>Coal-carrier.</i>	Coal	Deceased, whilst walking down a pathway in a quarry neglected to look where she was going and fell from a height of 12 feet, sustaining injuries to which she succumbed four days later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Reason for exclusion.	Cause of accident and remarks.
DEATHS NOT INCLUDED IN THE STATISTICS—(62 deaths).							
1	3rd January, 4 A.M.	Jatachappa mine, Chhindwara P. O., Central Provinces.	Upper Pench Coal Co., Ld.	Surajpal Singh, (m), 20, Banksman.	Coal	Not a mining accident.	Deceased was sleeping near a fire when his clothing became ignited, and he was severely burnt about the body. He died six days later. Inspection and inquiry made.
2	8th January, 7 P.M.	Pandaveswar mine, Pandaveswar P. O., Bengal.	Highfield Colliery, Ld.	Sona Manjhi, (m), 7, Not employed; Narayan Manjhi, (m), 30, Coal-cutter.	Coal	Not a mining accident.	The deceased were burnt by the ignition of gunpowder which had been brought to a miner's hut prior to being made into cartridges. They died seven and eight days, respectively, after the accident. Inspection and inquiry made.
3	11th January, 6 P.M.	Pretoria mine, Charanpur P. O., Bengal.	Seebpore Coal Co., Ld.]	Mohan Turi, (m), 40, Coal-cutter.	Coal	Not a mining accident.	Deceased, a person of unsound mind, jumped down an airshaft, 60 feet deep, and was killed instantly. The shaft was fenced. Inspection and inquiry made.
4	11th January, 7-15 P.M.	Budroochuck mine, Sijua P. O., Bihar and Orissa.	Budroochuck Coal Mining Co., Ld.	Bhatu Manjhi, (m), 20, Ram Manjhi, (m), 20, Lalu Manjhi, (m.), 12, Kishan Manjhi, (m.), 30, Coal-cutters ; Sumi Majhian, (f.), 20, Sughia Mahaton, (f.), 20, Coal-carriers.	Coal	Not a mining accident.	The five deceased and four other persons were sitting in a miner's hut preparing cartridges from a heap of loose gunpowder when another person entered with a lighted lamp and accidentally set fire to the gunpowder. All were more or less severely burned. Inspection and inquiry made.
5	11th January, 9-15 P.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Mohar Chamar, (m.), 55.	Coal	Not employed	Deceased was run over by a locomotive, and sustained fatal in- juries. Inspection and inquiry made.
6	8th February, 7 A.M.	Pandebera mine, Jharia P. O., Bihar and Orissa.	Pandebera Colliery Co.	Budhia Beldarin, (f.), 82.	Coal	Not employed	Deceased fell from a height of about 80 feet into a quarry contain- ing mud and water. She was found buried in the mud, and died from shock and suffocation. Inspection and inquiry made.

7	10th February, 9 A.M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	Villiers, Ld.	Sakharam Bilaspuri, (m.), 60.	Coal	Not employed	Deceased fell over the edge of a quarry, where overburden was being removed, sustaining injuries from which he died. Inspection and inquiry made.
8	13th February, 11 A.M.	Damagurria mine, Kulti P. O., Bengal.	Damagurria Coal Co., Ld.	Panana Dhibar, (f.), 30, Coal-carrier.	Coal	Not a mining accident.	Whilst deceased was asleep in a straw hut in which a fire was burning, the hut caught fire. She received injuries from which she died on the following day. One other person received severe burns. Inspection and inquiry made.
9	About 1st March, Unknown.	Northern mine, Nawagarh P. O., Bihar and Orissa.	Northern Coal Co., Ld.	Name unknown, (m.), Age unknown.	Coal	Not employed	Deceased fell into a shaft, 95 feet deep, and was killed. Inspection and inquiry made.]
10	6th March, 7-30 A.M.	Golukdih mine, Jharia P. O., Bihar and Orissa.	N. M. Choudhuri	Tufani Noonis, (m.), 35, Loader.	Coal]	Not a mining accident.	Whilst assisting in hand shunting wagons on a railway siding deceased was run over and fatally injured. Inspection and inquiry made.
11	23rd March, 6-30 A.M.	Khost mine, Khost P. O., Baluchistan.	North Western Railway	Adam, (m.), 30, Trammer.	Coal	Not a mining accident.	Whilst at work underground deceased complained of exhaustion. He was carried out of the mine, but died before he reached the surface. Death was ascribed to heart failure. Inspection and inquiry made.
12	25th April, 7 P.M.	Het Kandra mine, Pathardihi P. O., Bihar and Orissa.	Narayanjee Dhanjee Shah.	Baran Miyan, (m.), 22, Coal-cutter.	Coal	Not a mining accident.	Deceased was drowned whilst bathing in a quarry containing about 50 feet of water. Inspection and inquiry made.
13	16th May, 7-30 A.M.	Kusunda mine, Kusunda P. O., Bihar and Orissa.	K. M. Selected Coal Co.	Amola Bumia, (f.), 15, Loader.	Coal	Not a mining accident.	Deceased was found drowned in a properly fenced wall. Inspection and inquiry made.
14	18th May, 10-30 A.M.	Alkusa North mine, Kusunda P. O., Bihar and Orissa.	Raneegunge Coal Asso- ciation, Ld.	Muradha, (m.), 35, Labourer ; Bhagia, (f.), 13, Sumri, (f.), 12, Jira, (f.), 10, Kasi, (f.), 13, Shale pickers.	Coal	Not a mining accident.	Some straw saturated with coal tar had been thrown out of a railway wagon and was lying on the ground. Some one lighted the straw and it rapidly burst into flame and ignited other straw lying in the bottom of the wagon. The deceased women and children who were cleaning out the wagon at the time were severely burnt and all of them died within an hour. Muradha who went into the burning wagon to rescue his daughter was burnt to death. Inspection and inquiry made.
15	22nd May, 10-30 A.M.	Niohitpur mine, Bansjora P. O., Bihar and Orissa.	A. C. Banerjee & Co.	Durga Bhuiya, (m.), 30, Labourer.	Coal	Not a mining accident.	Deceased, whilst pushing a railway wagon, was crushed between the buffers of the latter and another wagon which collided with it from the rear. He received injuries from which he died almost immediately. Inspection and inquiry made.
16	30th May, 5 A.M.	Kurhurbaree mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Co.	Gendia Passia, (f.), 50, Labourer.	Coal	Not a mining accident.	The deceased was run over by a pilot engine on the broad gauge line. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Reason for exclusion.	Cause of accident and remarks.
DEATHS NOT INCLUDED IN THE STATISTICS—(62 deaths)—contd.							
17	30th May, 6-30 P.M.	Noonodih mine, Jamadoba P. O., Bihar and Orissa.	Bengal Iron Co., Ld.	Behari Gowala, (m.), 35, Coal-cutter.	Coal	Not a mining accident.	Deceased took 4 lb. of loose gunpowder in a canister into his house where it became ignited by some unknown means. He sustained serious burns and died four days later. Inspection and inquiry made.
18	1st June, 11 A.M.	Ekra Khas mine, Bansjora P. O., Bihar and Orissa.	Maharaja of Cossimbazar	Madhoo, (m.), 35, Bisseswar, (m.), 22, Coal-cutters ; Ganga, (f.), 7, Phackir, (f.), 2, Not employed.	Coal	Not a mining accident.	The deceased were in a miner's hut and were burnt by the ignition of some gunpowder which had been taken there instead of down the mine. Inspection and inquiry made.
19	8th June, 3-30 P.M.	New Tetturya mine, Katrasgarh, P. O., Bihar and Orissa.	New Tetturya Coal Co., Ld.	Pairee Noonia, (f.), 6.	Coal	Not employed	Deceased was found drowned in a boiler feed tank. Inspection and inquiry made.
20	10th June, 4-30 P.M.	Patmohna mine, Sitarampur P. O., Bengal.	Patmohna Collieries, Ld.	Gopal Manjhi, (m.), 12.	Coal	Not employed	Deceased climbed a standard carrying an 11,000 volts transmission line, for the purpose of getting a dead bird which was on the conductors. He came into contact with the line and received a shock of about 6,380 volts causing injuries from which he died on the following day. Inspection and inquiry made.
21	22nd June, 2-30 P.M.	Teesra mine, Jharia P. O., Bihar and Orissa.	Amarsingh Gowamal	Ganpat, (m.), 28, Coal-cutter.	Coal	Not a mining accident.	Deceased, whilst sitting at the entrance to his hut, was struck by lightning and killed instantly. Inspection and inquiry made.
22	2nd July, 10 A.M.	Sendra mine, Bansjora P. O., Bihar and Orissa.	Sendra Coal Co., Ld.	Mungli Majhian, (f.), 29, Coal-carrier.	Coal	Not a mining accident.	Deceased was severely burnt by an ignition of gunpowder which occurred in her house. Inspection and inquiry made.
23	23rd July, 5 P.M.	Central Bansjora mine, Bansjora P. O., Bihar and Orissa.	Central Bansjora Colliery Co.]	Saferoo Kole, (m.), 3.	Coal	Not employed	Deceased wandered on to a surface tram line unobserved. He was run over by the first full tub of a set of four which was being pushed. He sustained serious injuries to which he succumbed eight days later. Inspection and inquiry made.

24	24th July, 12-30 P.M.	Bankola mine, Ukhra P. O., Bengal.	Burrakur Coal Co., Ltd.	Mathani Baurin, (f.), 12, Kuturi Baurin, (f.), 13, Bhadu Baurin, (f.), 65, Sindhu Baurin, (f.), 11, Mahendra Bauri, (m.), 34, <i>Labourers.</i>	Coal	Not a mining accident.	Whilst a number of coolies were taking shelter from the rain under the roof of the boiler house a quantity of gunpowder which had been placed on top of the boilers to dry was accidentally ignited. Seven persons, three of whom died within twenty-four hours, were severely burnt. Inspection and inquiry made.
25	26th July, 12-45 P.M.	Ballarpur mine, Ballarpur P. O., Central Provinces.	Sir K. C. Daga and Bros. and Hon'ble Sir M. B. Dadabhoy.	Sale Bakhi, (f.), 12, <i>Labourer.</i>	Coal	Not a mining accident.	Deceased was run over by a locomotive in the colliery siding. She sustained fatal injuries. Inspection and inquiry made.
26	21st August, 1 P.M.	Garbham mine, Chipurupalli P. O., Madras.	Vizianagram Mining Co., Ltd.	Reddy Chenaryya, (m.), 40, <i>Storekeeper.</i>	Manganese	Not a mining accident.	Intending to smoke, deceased struck a light in a gunpowder factory. An explosion took place and he was fatally burned.
27	23rd August, 6-30 A.M.	Kusoonda and Nyadee mine, No. 2 Division, Kusoonda P. O., Bihar and Orissa.	Kusoonda and Nyadee Collieries, Ltd.	Somaru Dhorked, (m.), 32, <i>Coal-cutter</i> ; Mangloo Dhorked, (f.), 22, <i>Coal-carrier.</i>	Coal	Not a mining accident.	Somaru was making up cartridges near a fire at his dwelling house when a spark from the fire blew on to the loose powder and ignited it. Mangloo, who was standing near by, sustained serious burns and died about a day later. Somaru was also badly burnt and died two days later. Inspection and inquiry made.
28	24th August, 10 A.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Bikha, (m.), 22, <i>Trolleyman.</i>	Coal	Not a mining accident.	Deceased was drowned in a bathing tank, 12 feet deep. Inspection and inquiry made.
29	24th August, 7 P.M.	Madhuband mine, Nudkharkee P. O., Bihar and Orissa.	Burrakur Coal Co., Ltd.	Kalli Beldarini, (f.), 24, <i>Coal-carrier.</i>	Coal	Not a mining accident.	Whilst drawing water from a well 60 feet deep, deceased fell in and was drowned. Inspection and inquiry made.
30	26th August, 7 P.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Batasi, (f.), 1½.	Coal	Not employed	Deceased fell into a boiler feed tank and was drowned. Inspection and inquiry made.
31	10th September, 8 P.M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	Villiers, Ltd.	Kartick Chandra Sahana, (m.), 30, <i>Cook.</i>	Coal	Not employed	Deceased was killed by the collapse of a house due to a premature subsidence of underground workings. Inspection and inquiry made.
32	2nd October, Unknown.	Kharkharee and Mohesh- pur mine, Katrasgarh P. O., Bihar and Orissa.	Kharkharee Collieries, Ltd.	Neoki Bhuiyan, (f.), 35, <i>Labourer.</i>	Coal	Not a mining accident.	Deceased was found drowned in a well. The well had a properly built superstructure. Inspection and inquiry made.
33	8th November, Unknown.	Patmohna mine, Sitarampur P. O., Bengal.	Patmohna Collieries, Ltd.	Biswanath Singh, (m.), 50, <i>Store-peon.</i>	Coal	Not a mining accident.	Deceased went to sleep in a closed room where a fire was burning. He was asphyxiated.

APPENDIX II—contd.

Fatal Accidents, 1923—contd.

Serial number.	Date and hour of accident.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral wrought.	Reason for exclusion.	Cause of accident and remarks.
DEATHS NOT INCLUDED IN THE STATISTICS—(62 deaths)—contd.							
34	9th November, 2-30 A.M.	Egarcoor mine, Mugma, P. O., Bihar and Orissa.	Egarcoor Coal Association.	Rajbullabh Singh, (m.), 40, Peon.	Coal	Not a mining accident.	Deceased went to sleep in a closed room with an open fire burning. On the following morning he was found to have been asphyxiated. Inspection and inquiry made.
35	23rd November, 6-30 P.M.	Choitodih mine, Katrasgarh P. O., Bihar and Orissa.	Burrakur Coal Co., Ld.	Neman Gope, (m.), 25, Labourer.	Coal	Not a mining accident.	Deceased entered a water-logged quarry presumably for the purpose of bathing, got out of his depth and was drowned. Inspection and inquiry made.
36	30th November, Unknown.	Suratand mine, Jharia P. O., Bihar and Orissa.	Suratand Coal Co., Ld.	Parmeswar Lala, (m.), 3.	Coal	Not employed	Deceased fell down a shaft, 60 feet deep, and was killed. Inspection and inquiry made.
37	5th December, 7 A.M.	Ghugus mine, Ballarpur P. O., Central Provinces.	Sir K. C. Daga and Bros. and Hon'ble Sir M. Dadabhoy.	Baijnath, (m.), 38, Screen Mate.	Coal	Not a mining accident.	Deceased was crushed between two wagons during shunting operations on a railway siding.
38	16th December, 7 A.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ld.	Biseswar Ojha, (m.), 25, Labourer.	Coal	Not a mining accident.	Deceased attempted to cross in front of a railway train and was knocked down and killed. Inspection and inquiry made.
39	19th December, 2 P.M.	Bararee mine, Jamadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ld.	Mohan Bhuiya, (m.), 4.	Coal	Not employed	Deceased was buried by a fall of loose debris in a quarry. Inspection and inquiry made.
40	19th December, 2-30 P.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Seth Khora Ramji.	Bhatua Noonis, (f.), 3.	Coal	Not employed	Deceased fell into a blow-off drain from a range of boilers when one of the boilers was being blown off and was scalded to death. Inspection and inquiry made.
1	27th December, 12 P.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ld.	Ram Bharas, (m.), 32, Sirdar ; Brij Lal, (m.), 30, Coal-cutter ; Gurbarin, (f.), 28, Rupatin, (f.), 26, Coal-carriers.	Coal	Not a mining accident.	The deceased were burnt to death by an explosion of gunpowder in their dwelling house. Inspection and inquiry made.

APPENDIX II.

Table No. 2.

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE PER 1,000 PERSONS EMPLOYED.					
			Number of separate fatal accidents.	NUMBER OF DEATHS		Number of serious non-fatal accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.		Below ground.	Above ground.	Below and above ground.			
				Below ground.	Above ground.		Total deaths.	Below ground.				Above ground.	Total number of persons injured.	
Assam	Lakhimpur Naga Hills Sibsagar	3,302	12	12	1	13	28	23	5	28	5.83	.80	3.94	
		599	1	1	..	1
	
	TOTAL	3,901	12	12	1	13	29	24	5	29	4.91	.68	3.33	
Baluchistan	Kalat Loralai Quetta, Pishin Sibi, Khost	..	..	..	..	..	..	..	..	..	..	..	..
		90	..	..	..	..	..	..	..	..	..	..	..
		116	..	..	..	..	..	..	..	..	..	..	..
	843	4	4	..	..	..	2	2	..	2	8.42	..	4.74
TOTAL	1,049	4	4	..	..	..	2	2	..	2	6.81	..	3.81
Bengal	Bankura, Raniganj Birbhum Purdwan	192	..	..	..	..	..	..	..	..	..	..	..
		274	..	..	..	..	..	..	..	..	..	..	..
		43,785	56	69	4	73	37	29	14	43	2.48	.25	1.67	
	TOTAL	44,251	56	69	4	73	37	29	14	43	2.46	.25	1.65	
Bihar and Orissa	Hazaribagh { Bokaro Giridih Jharia Rangarh	11,374	2	7	1	8	16	4	12	16	1.08	.21	.70	
		7,586	7	7	..	7	20	17	4	21	1.32	..	.92	
		2,038	..	..	..	..	2	1	1	2	..	..	..
		204	1	1	..	1	..	..	..	..	14.08	..	4.90
	Manbhum { Jharia Raniganj	88,473	89	92	12	104	90	73	26	99	1.79	.32	1.18	
		9,204	12	85	2	87	7	6	3	9	16.13	.51	9.45	
	Palamau, Daltonganj	264	..	..	..	..	..	..	..	..	..	..	..
	Sambalpur, Hingir-Rampur	454	2	3	..	3	..	..	..	..	10.79	..	6.61
	Sonthal Parganas, Jainty	1,160	1	1	..	1	..	..	..	..	1.24	..	.86
	" Raniganj	1,129	..	..	..	..	1	1	..	1	..	..	..
TOTAL	121,886	114	196	15	211	136	102	46	148	2.75	.30	1.73		
Burma	Mergui Southern Shan States	48	..	..	..	..	..	..	..	..	..	..	..
		109	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	157	..	..	..	..	..	..	..	..	..	..	..

APPENDIX II—contd.

Table No. 2—contd.

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923—contd.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.				DEATH-RATE PER 1,000 PERSONS EMPLOYED.			
			Number of separate fatal accidents.	NUMBER OF DEATHS.		Number of serious non-fatal accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.			Below ground.	Above ground.	Below and above ground.	
				Below ground.	Above ground.		Total deaths.	Below ground.	Above ground.				Total number of persons injured.
A.—COAL—contd.													
Central Provinces	Betul	203	..	..	..	..	..	..	..	..	..	..
	Chanda, Ballarpur	2,082	4	11	..	11	1	1	..	1	9.78	..	5.28
	Chhindwara, Pench Valley	5,784	2	18	..	18	14	10	7	17	5.19	..	3.11
	Narsinghpur, Mohpani	1,699	1	1	..	1	..	..	..	..	.90	..	.59
	Yeotmal	45	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	9,813	7	30	..	30	15	11	7	18	5.17	..	3.00
Punjab	Jhelum	1,257	1	1	..	1	1	1	..	1	1.34	..	.80
	Mianwali	139	..	..	..	..	..	..	..	..	..	..	..
	Shahpur	148	..	..	..	..	..	..	..	..	..	..	..
		TOTAL	1,544	1	1	..	1	1	1	..	1	1.15	..	.65
	GRAND TOTAL (COAL)	182,601	194	312	20	332	220	169	72	241	2.86	.27	1.82
B.—MICA.													
Bihar and Orissa	Bilaspur . . . . .	..	..	..	..	..	..	..	..	..	..	..	..
	Gaya	765	..	..	..	..	1	1	..	1	..	..	..
	Hazaribagh	7,311	3	3	..	3	1	1	..	1	.60	..	.41
	Monghyr	49	..	..	..	..	..	..	..	..	..	..	..
	Sambalpur	84	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	8,209	3	3	..	3	2	2	..	2	.53	..	.37
Madras	Nellore	1,968	..	..	..	..	..	..	..	..	..	..	..
	Nilgiris	100	1	7	..	7	..	..	..	..	134.62	..	70.00
		TOTAL	2,068	1	7	..	7	..	..	..	5.87	..	3.38
Rajputana	Ajmer-Merwara	302	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (MICA)	10,579	4	10	..	10	2	2	..	2	1.40	..	.95

APPENDIX II—contd.

Table No. 2—contd.

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923—contd.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE PER 1,000 PERSONS EMPLOYED.				
			Number of separate fatal accidents.	NUMBER OF DEATHS.		Number of serious non-fatal accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.		Total number of persons injured.	Below ground.	Above ground.	Below and above ground.	
				Below ground.	Above ground.		Total deaths.	Below ground.					Above ground.
C.—MANGANESE ORE.													
Mbaya	Panch Mahals	1,404	1	1	1	4	..	4	4	..	2.39	.71	
Central Provinces	Balaghat	5,574	2	2	..	2	1	..	1	1	4.48	..	.36
	Bhandara	1,277	1	1	..	1	..	..	..	..	1.05	..	.78
	Chhindwara	842	..	..	..	..	..	..	..	..	..	..	..
	Jubbulpore	29	..	..	..	..	..	..	..	..	..	..	..
	Nagpur	4,784	1	1	..	1	7	3	4	7	.27	..	.21
	TOTAL	12,506	4	4	..	4	8	3	5	8	.43	..	.32
Madras	Bellary	515	..	..	..	..	..	..	..	..	..	..	..
	Vizagapatam	1,204	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	1,719	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (MANGANESE ORE)	15,629	5	4	1	5	12	3	9	12	.34	.26	.32
D.—LIMESTONE.													
Assam	Northern Shan States	286	..	..	..	..	..	..	..	..	..	..	..
Central Provinces	Bilaspur	193	..	..	..	..	..	..	..	..	..	..	..
	Jubbulpore-Katni	6,427	..	..	..	..	4	2	2	4	..	..	..
	TOTAL	6,620	..	..	..	..	4	2	2	4	..	..	..
	GRAND TOTAL (LIMESTONE).	6,908	..	..	..	..	4	2	2	4	..	..	..
E.—SALT.													
Punjab	Jhelum	486	1	1	..	1	2	2	..	2	2.06	..	2.06
	Mianwali	41	..	..	..	..	..	..	..	..	..	..	..
	Shahpur	73	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (SALT)	600	1	1	..	1	2	2	..	2	1.67	..	1.67
F.—GEMS.													
Assam	Katha (Rubies, etc.)	1,285	..	..	..	..	1	1	..	1	..	..	..

APPENDIX II—contd.

Table No. 2—contd.

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923—contd.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE PER 1,000 PERSONS EMPLOYED.			
			Number of separate fatal accidents.	NUMBER OF DEATHS.		Number of serious non-fatal accidents.	PERSONS SERIOUSLY INJURED.		Below ground.	Above ground.	Below and above ground.	
				Below ground.	Above ground.		Total deaths.	Below ground.				Above ground.	Total number of persons injured.
G.—SLATE.												
Bihar and Orissa	Monghyr	416	..	..	..	..	..	..	..	..	..	..
Punjab	Gurdaspur . . . . .	..	..	..	..	..	..	..	..	..	..	..
	Gurgaon	180	..	..	..	..	..	..	..	..	..	..
	Kangra	263	1	1	..	1	..	..	..	..	5-40	3-80
	TOTAL	443	1	1	..	1	..	..	..	..	2-99	2-26
	GRAND TOTAL (SLATE)	859	1	1	..	1	..	..	..	..	1-59	1-61
H.—GOLD.												
Bihar and Orissa	Singhbhum . . . . .	..	..	..	..	..	..	..	..	..	..	..
Madras	Anantapur	275	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (GOLD)	275	..	..	..	..	..	..	..	..	..	..
I.—IRON ORE.												
Bihar and Orissa	Puri . . . . .	..	..	..	..	..	..	..	..	..	..	..
	Singhbhum	2,418	4	2	3	5	5	..	5	5	2-18	2-00
	TOTAL	2,418	4	2	3	5	5	..	5	5	2-18	2-00
Burma	Mandalay	150	..	..	..	..	..	..	..	..	..	..
	Northern Shan States	1,060	..	..	..	..	1	..	1	1	..	..
	TOTAL	1,210	..	..	..	..	1	..	1	1	..	..
Central Provinces	Chanda	252	1	1	..	1	..	..	..	..	12-66	3-97
	GRAND TOTAL (IRON ORE)	3,880	5	3	3	6	6	..	6	6	1-77	1-37

APPENDIX II—contd.

Table No. 2—contd.

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923—contd.

PROVINCE.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE PER 1,000 PERSONS EMPLOYED.				
			Number of separate fatal accidents.	NUMBER OF DEATHS		Number of serious non-fatal accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.		Below ground.	Above ground.	Below and above ground.		
				Below ground.	Above ground.		Total deaths.	Below ground.				Above ground.	Total number of persons injured.
J.—TIN AND WOLFRAM ORE.													
Burma	{ Mergui Tavoy Thaton	617	4	4	..	4	..	..	..	..	9.64	..	6.48
		2,316	4	3	1	4	5	2	4	6	1.59	2.34	1.73
		17
	GRAND TOTAL (TIN AND WOLFRAM ORE).	2,950	8	7	1	8	5	2	4	6	3.02	1.58	2.71
K.—MAGNESITE.													
Madras	Salem	1,562	1	..	1	1	2	..	2	2	..	5.65	..64
L.—CHROMITE ORE.													
Baluchistan	{ Quetta-Fishin Zhob TOTAL	33	..	..	..	..	..	..	..	..	..	..	..
		513	1	..	1	1	2	1	1	2	..	3.69	1.95
		546	1	..	1	1	2	1	1	2	..	3.56	1.83
Bihar and Orissa	Singhbhum	155	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (CHROMITE ORE).	701	1	..	1	1	2	1	1	2	..	3.16	1.43
M.—COPPER ORE.													
Bihar and Orissa	Singhbhum	2,672	4	4	..	4	4	6	..	6	3.22	..	1.50
Central Provinces	Balaghat	46	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (COPPER ORE)	2,718	4	4	..	4	4	6	..	6	3.14	..	1.47
N.—BAUXITE.													
Bombay	Katra	195	..	..	..	..	..	..	..	..	..	..	..
O.—CLAY.													
Bihar and Orissa	{ Manbhum Palamau TOTAL	1	..	..	..	..	..	..	..	..	..	..	..
		78	1	1	..	1	..	..	..	..	38.46	..	12.82
		79	1	1	..	1	..	..	..	..	38.46	..	12.66
Central Provinces	Jubbulpore	405	..	..	..	..	..	..	..	..	..	..	..
Delhi	Delhi	57	1	1	..	1	..	..	..	..	33.33	..	17.54
	GRAND TOTAL (CLAY)	541	2	2	..	2	..	..	..	..	4.65	..	3.70

APPENDIX II—*contd.*Table No. 2—*contd.*

Fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1923—*concl'd.*

PROVINCE.	District and mineral field.	Total average number of persons employed.	FATAL ACCIDENTS.				SERIOUS ACCIDENTS.				DEATH RATE PER 1,000 PERSONS EMPLOYED.				
			Number of separate fatal accidents.	NUMBER OF DEATHS.			Number of serious non-fatal accidents.	NUMBER OF PERSONS SERIOUSLY INJURED.			Below ground.	Above ground.	Below ground.	Above ground.	Below ground.
				Below ground.	Above ground.	Total deaths.		Below ground.	Above ground.	Total number of persons injured.					
P.—LEAD ORE.															
Burma	Northern Shan States	2,669	11	16	..	16	60	53	7	60	8.21	..	5.4		
	Southern Shan States	85	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (LEAD ORE).	2,754	11	16	..	16	60	53	7	60	7.99	..	5.4		
R.—STEATITE.															
Central Provinces	Jubbulpore	238	..	..	..	..	..	..	..	..	..	..	..
Madras	Kurnool	13	..	..	..	..	..	..	..	..	..	..	..
	Nellore	33	..	..	..	..	..	..	..	..	..	..	..
	TOTAL	46	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (STEATITE)	284	..	..	..	..	..	..	..	..	..	..	..
S.—APATITE.															
Bihar and Orissa	Singhbhum	109	..	..	..	..	..	..	..	..	..	..	..
T.—GRAPHITE.															
Central Provinces	Betul	5	..	..	..	..	..	..	..	..	..	..	..
U.—OCHRE.															
Bihar and Orissa	Puri	24	..	..	..	..	..	..	..	..	..	..	..
Central Provinces	Jubbulpore	230	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (OCHRE)	254	..	..	..	..	..	..	..	..	..	..	..
V.—BARYTES.															
Bihar and Orissa	Singhbhum	104	..	..	..	..	..	..	..	..	..	..	..
Madras	Kurnool	62	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (BARYTES)	166	..	..	..	..	..	..	..	..	..	..	..
W.—HYALITE.															
Burma	Katha	9	..	..	..	..	..	..	..	..	..	..	..
	GRAND TOTAL (ALL MINES).	234,864	237	360	27	387	320	241	103	344	2.47	.30	1.6		

APPENDIX II—contd.

Table No. 3.

Fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1923, classified according to the age and sex of the workers—contd.

MINERAL	PROVINCE AND MINERAL FIELD.	Number of separate fatal accidents.	NUMBER OF DEATHS.								TOTAL BELOW AND ABOVE GROUND.		
			BELOW GROUND.				ABOVE GROUND.						
			Adult males.	Adult females.	Children (under 12).	TOTAL.	Adult males.	Adult females.	Children (under 12).	TOTAL.			
COAL	Assam	Lakhimpur	12	11	1	..	12	1	..	..	1	13
		Naga Hills . . . . .	..	..	..	..	..	..	..	..	..	..
		TOTAL	12	11	1	..	12	1	..	..	1	13
	Baluchistan	Quetta, Pishin . . . . .	..	..	..	..	..	..	..	..	..	..
		Sibi, Khost	4	4	..	..	4	..	..	..	..	4
		TOTAL	4	4	..	..	4	..	..	..	..	4
	Bengal, Burdwan, Raniganj	56	54	15	..	69	2	1	1	4	73		
	Bihar and Orissa	Hazariabagh	Bokaro	2	2	5	..	7	..	1	..	1	8
			Giridih	7	4	3	..	7	7
			Jharia
			Ramgarh	1	..	1	..	1	1
		Manbhum	Jharia	89	70	21	1	92	10	2	..	12	104
			Raniganj	12	92	23	..	85	1	1	..	2	87
		Palamau, Daltonganj . . . . .	..	..	..	..	..	..	..	..	..	..
		Sambalpur, Hingir-Rampur	2	3	..	..	3	..	..	..	..	3
		Sonthal Parganas	Jainty	1	1	1	1
			Raniganj
	TOTAL	114	142	53	-1	196	11	4	..	15	211		
	Central Provinces	Betul . . . . .	..	..	..	..	..	..	..	..	..	..
		Chanda	4	7	4	..	11	..	..	..	..	11
		Chhindwara	2	12	5	1	18	..	..	..	..	18
Narsinghpur		1	..	1	..	1	..	..	..	..	1	
TOTAL		7	19	10	1	30	..	..	..	..	30	
Punjab, Jhelum	1	1	..	..	1	..	..	..	..	1		
TOTAL (COAL)	194	231	79	2	312	14	5	1	20	332			
MICA	Bihar and Orissa, Hazariabagh	3	3	..	..	3	..	..	..	..	3	
	Madras, Nilgiris	1	7	..	..	7	..	..	..	..	7	
	TOTAL (MICA)	4	10	..	..	10	..	..	..	..	10	

APPENDIX II—contd.

Table No. 3—concl'd.

Fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1923, classified according to the age and sex of the workers—concl'd.

MINERAL.	PROVINCE AND MINERAL FIELD.	Number of separate fatal accidents.	NUMBER OF DEATHS.								TOTAL BELOW AND ABOVE GROUND.
			BELOW GROUND.				ABOVE GROUND.				
			Adult males.	Adult females.	Children (under 12).	TOTAL.	Adult males.	Adult females.	Children (under 12).	TOTAL.	
MANGANESE ORE	Bombay, Panch Mahals . . .	1	..	..	..	..	1	..	..	1	1
	Central Provinces {	Balaghat . . .	2	2	..	..	2	..	..	..	2
		Bhandara . . .	1	..	1	..	1	..	..	..	1
		Nagpur . . .	1	1	..	..	1	..	..	..	1
	TOTAL . . .	4	3	1	..	4	..	..	..	4	
TOTAL (MANGANESE ORE)	5	3	1	..	4	1	..	..	1	5	
SALT	Punjab {	Jhelum . . .	1	1	..	..	1	..	..	..	1
		Mianwali . . .	..	..	..	..	..	..	..	..	..
	TOTAL (SALT)	1	1	..	..	1	..	..	..	1	
Slate	Punjab, Kangra	1	1	..	..	1	..	..	..	1	
IRON ORE	Bihar and Orissa, Singhbhum . . .	4	1	1	..	2	2	1	..	3	5
	Central Provinces, Chanda	1	1	..	..	1	..	..	..	1	
	TOTAL (IRON ORE)	5	2	1	..	3	2	1	..	3	6
WOLFRAM ORE	Burma {	Mergui . . . . .	..	..	..	..	..	..	..	..	..
		Tavoy	3	2	2	1	1	3
	TOTAL (WOLFRAM ORE)	3	2	..	..	2	1	..	..	1	3
MAGNESITE	Madras, Salem	1	..	..	..	..	1	..	..	1	1
CHROMITE ORE	Baluchistan, Zhob	1	..	..	..	..	1	..	..	1	1
COPPER ORE	Bihar and Orissa, Singhbhum . . .	4	3	1	..	4	..	..	..	4	
CLAY	Bihar and Orissa, Palamau	1	1	..	..	1	..	..	..	1	
	Dolhi	1	1	..	..	1	..	..	..	1	
	TOTAL (CLAY)	2	2	..	..	2	..	..	..	2	
LEAD ORE	Burma, Northern Shan States . . .	11	16	..	..	16	..	..	..	16	
TIN ORE	Burma {	Mergui	4	4	..	..	4	..	..	..	4
		Tavoy	1	1	..	..	1	..	..	..	1
	TOTAL (TIN ORE)	5	5	..	..	5	..	..	..	5	
GRAND TOTAL (ALL MINERALS)		237	276	82	2	300	20	6	1	27	387

APPENDIX II—concl'd.

Table No. 4.

Fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1923, classified according to cause of accident.

Mineral worked.	Number of separate fatal accidents.	NUMBER OF PERSONS KILLED.											DEATH-RATE PER 1,000 PERSONS EMPLOYED.			
		Explosions of fire-damp.	Falls of roof.	Falls of side.	In shafts.	Suffocation by gases.	By explosives.	Irruptions of water.	Haulage.	Miscellaneous below ground.	Electricity.	Surface.	Total deaths.	Below ground.	Above ground.	Below and above ground.
Coal . . .	194	76	80	77	18	12	10	..	26	10	3	12	332	2-86	27	1-82
Chromite Ore .	1	..	..	..	..	..	..	..	..	..	..	1	1	..	3-16	1-43
Clay . . .	2	..	..	1	1	..	..	..	..	..	..	..	2	4-65	..	3-70
Copper Ore .	4	..	..	..	4	..	..	..	..	..	..	..	4	3-14	..	1-47
Iron Ore . . .	6	..	..	3	..	..	..	..	..	..	..	3	6	1-77	1-37	1-55
Lead Ore . . .	11	..	3	1	8	..	..	..	2	2	..	..	16	7-99	..	5-81
Magnesite .	1	..	..	..	..	..	..	..	..	..	..	1	1	..	5-65	..64
Manganese Ore .	5	..	..	2	1	..	1	..	..	..	..	1	5	..34	..26	..32
Mica . . .	4	..	..	10	..	..	..	..	..	..	..	..	10	1-40	..	..95
Salt . . .	1	..	..	..	..	..	..	..	1	..	..	..	1	1-67	..	1-67
Slate . . .	1	..	..	1	..	..	..	..	..	..	..	..	1	1-59	..	1-16
Tin Ore . . .	5	..	..	5	..	..	..	..	..	..	..	..	5	} 3-02	1-58	2-71
Wolfram Ore .	3	..	..	1	..	..	..	..	..	1	..	1	3			
TOTAL 1923 .	237	75	92	101	32	12	11	..	29	13	3	10	387	2-47	30	1-65
TOTAL PRECEDING YEAR.	205	21	57	65	35	..	9	1	20	10	3	22	243	1-57	31	1-66
DIFFERENCE .	+32	+54	+35	+36	-3	+12	+2	-1	+9	+3	..	-3	+144	+90	-01	+59

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, 1901, and Indian Penal Code during the year 1923.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number convicted.	Numbers of rules and sections of the Act contravened.	REMARKS.
Bengal	Burdwan	1	2	2	Section 20, Rules 2 and 22 of Notification No. 864-68-20, dated the 10th March 1904 and Rule 2 of Government of Bengal, Notification No. 3070-Com., dated the 28th August 1918.	
	Do.	1	2	2	Section 20, Rule 12 of Notification No. 864-68-20, dated the 10th March 1904.	
	Do.	4	7	5	Section 20, Rule 1 of Notification No. 11793-103, dated the 30th December 1908, as amended by Notifications No. 5072-113, dated the 1st July 1916, No. M-205-7, dated the 13th September 1920, and No. M-498, dated the 29th June 1922.	Two accused were acquitted.
	Do.	1	1	..	Section 21, Special Rules 15 and 21	Case dismissed.
	Do.	1	1	1	" " " Rule 47.	
	Do.	1	1	..	" " " " 46	Accused absconded.
	Do.	1	..	..	" " " " 4	Case withdrawn.
	Bhagalpur	1	3	..	Section 20, Rule 1 of Notification No. 11793-103, dated the 30th December 1908, as amended by Notifications No. 5072-113, dated the 1st July 1916, No. M-205-7, dated the 13th September 1920, and No. M-498, dated the 29th June 1922.	Case withdrawn.
	Gaya	2	3	..	Do. do. do.	One accused could not be traced. Cases against the other two accused were withdrawn.
	Bihar and Orissa.	Hazaribagh	2	2	..	Do. do. do.	Case against one accused is pending.
Manbhum		6	9	8	Do. do. do.	One accused died.
Do.		2	2	2	Section 22 (1) (d).	
Do.		1	2	2	Section 20, Rules 3 and 7 of Notification No. 864-68-20, dated the 10th March 1904.	
Do.		1	1	1	Section 13 (1).	
Do.		1	1	1	Section 20, Rule 12 of Notification No. 864-68-20, dated the 10th March 1904.	
Do.		1	2	2	Section 20, Rules 3 and 19 of Notification and Rule 3 of Bihar and Orissa Government Notification No. 11761-M., dated the 23rd August 1918.	
Do.		1	1	1	Indian Electricity Rules, 1922.	
Do.		1	1	1	Section 21, Special Rules 3, 5 and 6.	

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, 1901, and Indian Penal Code during the year 1923—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number convicted.	Numbers of rules and sections of the Act contravened.	REMARKS.
Bihar and Orissa	Manbhum .	1	3	3	Section 21, Special Rule 4.	<i>Accused absconded.</i>
	Do. .	1	1	1	" " " Rules 61 and 96 .	
	Do. .	1	2	2	" " " Rule 4.	
Central vinces.	Balaghat .	1	2	2	Section 20, Rules 14 and 15 of Notification No. 6436-152, dated the 2nd September 1911.	<i>One accused was acquitted</i>
	Chanda .	1	2	1	Section 20, Rule 3 of Notification No. 864-68-20, dated the 10th March 1904.	
	Chhindwara .	1	3	3	Section 20, Rules 1 (a), 3 and 4 (a) of Notification No. 864-68-20, dated the 10th March 1904, and Rules 2 and 3 of Notification No. 11793-103, dated the 30th December 1908, as amended by Notifications No. 5072-113, dated the 1st July 1916, No. M.-205-7, dated the 13th September 1920, and No. M.-498, dated the 29th June 1922.	
	Jubbulpore .	1	2	2	Section 20, Rule 1 of Notification No. 11793-103, dated the 30th December 1908, as amended by Notifications No. 5072-113, dated the 1st July 1916, No. 205-7, dated the 13th September 1920, and No. M.-498, dated the 29th June 1922.	
	Narsinghpur	1	2	2	Section 304, Indian Penal Code.	
	Madras .	Nilgiris .	1	1	1		Sections 32 and 304, Indian Penal Code.
Rajputana	Ajmer-Merwara.	1	2	1	Do. do. do. do.	<i>One accused was acquitted.</i>

APPENDIX IV.
MISCELLANEOUS.

Statement No. 1.

List of Inspection Circles.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan. 2. All mines in Bihar and Orissa except mines in the district of the Sonthal Parganas and such mines in the district of Manbhum as lie west of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the district. 3. All mines in the North-West Frontier Province. 4. All mines in the Punjab. 5. All mines in Rajputana.	1. All mines in Assam. 2. All mines in Bengal. 3. Such mines in Bihar and Orissa as lie in the district of the Sonthal Parganas and in the district of Manbhum east of a line drawn from mile 175 on the Bengal Nagpur Railway to mile 169 on the Grand Trunk Road and continued in a straight line across the district. 4. All mines in Bombay. 5. All mines in Burma. 6. All mines in the Central Provinces. 7. All mines in Madras.

Statement No. 2.

Names of persons to whom first and second class certificates to manage a coal mine were granted during the year 1923.

(a) Certificates granted to holders of English certificates of competency.

FIRST CLASS.

NAME.	No. of Indian certificate.	Date of Indian certificate.	No. of English certificate.	Date of English certificate.
Barnard, Robert	293	19th February 1923	896	12th June 1895.
Cunningham, John Gough	294	Ditto	978	12th July 1921.
Marshall, James	295	Ditto	1143	12th August 1922.
Taylor, James Holmes	296	Ditto	883	12th February 1921.
Caldwell, George Seddon	297	17th May 1923	1895	25th June 1901.
Thomson, John Moore	298	31st July 1923	885	12th February 1921.
Cochrane, Arthur	299	18th December 1923	584	27th January 1919.
Emmerson, Thomas Humble	300	Ditto	376	27th July 1917.
Erskine, James	301	Ditto	834	11th August 1920.
Galbraith, James	302	Ditto	1276	3rd February 1923.
Moyes, Eric Milne	303	Ditto	975	11th May 1921.
Thomas, Evan Owen	304	Ditto	1161	12th August 1922.

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 2—contd.

Names of persons to whom first and second class certificates to manage a coal mine
were granted during the year 1923—*contd.*

(b) Certificates of competency.

FIRST CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Mack, Alexander	155	16th May 1923.	
Starling, Robert Edwin Macnovin	156	Ditto.	
Bhattacharjee, Tarapada	157	Ditto.	
Penman, Robert Brown	158	Ditto.	
Gittings, Harry	159	Ditto.	
Bose, Sudhindra Narayan	160	Ditto.	
Ashcroft, Fredorick Joshua	161	Ditto.	
Roy Chowdhury, Abola Bandhu	162	Ditto.	
Deb, Brij Chandra	163	Ditto.	
Stewart, William	164	Ditto.	
Ghosh, Niranjan	165	Ditto.	
McCulloch, John	166	Ditto.	

(a) Certificates granted to holders of English certificates of competency.

SECOND CLASS.

Name.	No. of Indian certificate.	Date of Indian certificate.	No. of English certificate.	Date of English certificate.
Challenor, Thomas	26	18th December 1923	1139	30th July 1919.

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 2—concl'd.

Names of persons to whom first and second class certificates to manage a coal mine
were granted during the year 1923—concl'd.

(b) Certificates of competency.

SECOND CLASS.

Name.	No. of certificate.	Date of certificate.	REMARKS.
Chatterjee, Bejoy Krishna	305	16th May 1923.	
Roy Chowdhury, Sunil Krishna	306	Ditto.	
Sen, Profulla Chandra	307	Ditto.	
Bose, Jitendra Kumar	308	Ditto.	
Chatterjee, Surendra Nath	309	Ditto.	
Bhattacharyya, Indu Bhusan	310	Ditto.	
Sinha, Sarat Chandra	311	Ditto.	
Sui, Sorabji Hormasji	312	Ditto.	
Sen, Santo Jyoti	313	Ditto.	
Mukherjee, Sambhu Nath	314	Ditto.	
Sinha, Jatindra Mohan	315	Ditto.	
Mitra, Manmatha Nath	316	Ditto.	
Das, Dharendra Nath	317	Ditto.	
Chatterjee, Sanat Kumar	318	Ditto.	
Bhattacharjee, Nalini Kanta	319	Ditto.	
Ghosh, Sakti Kinkar	320	Ditto.	
Ferguson, James Arthur	321	Ditto.	
Roy, Kishori Mohan	322	Ditto.	
Banerjee, Hem Chandra	323	Ditto.	
Chatterjee, Hari Sadhan	324	Ditto.	
Mitra, Manindra Chandra	325	Ditto.	
Ghose, Prokash Chandra	326	Ditto.	
Sinha Roy, Kamala Kinkar	327	Ditto.	
Mukherjee, Naranath	328	Ditto.	
Mitter, Kalipada	329	Ditto.	
Bagchi, Benode Behary Nath	330	Ditto.	
Dey, Kiron Chandra	331	Ditto.	
Ghosh, Pashupati	332	Ditto.	
Bhaduri, Nripendra Nath	333	Ditto.	
Banerjee, Bibhuti Bhusan	334	Ditto.	
Chatterji, Mrityunjoy	333	Ditto.	
Bose, Kali Krishna	336	Ditto.	
Bose, Rajendra Nath	337	Ditto.	
Acharyya, Jnanada Prosad	338	Ditto.	
Chowdhury, Rajendra Lal	339	Ditto.	

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*

Statement No. 3.

List of Universities and Colleges approved by the Governor-General in Council for the purposes of Rules 32 and 33 under the Indian Mines Act.

Name of Institution and Degree or Diploma.	Date.
University of Birmingham in respect of its Degree of B.Sc. in Mining and Diploma in Mining.	11th June, 1904.
University College of Bristol in respect of its Senior Diploma in Mining.	16th September, 1904.
University of Cambridge in respect of its Diploma in Mining Engineering.	6th June, 1905.
University of Durham in respect of its Degree of B.Sc. in Mining	21st December, 1903.
Durham College of Science in respect of its Diploma in Mining	29th June, 1904.
University of Glasgow in respect of its Degree and Diploma in Mining	28th September, 1904.
Glasgow and West of Scotland Technical College in respect of its Diploma in Mining.	28th June, 1904.
University of Leeds in respect of its Degree of B.Sc. in Mining and Diploma in Mining.	21st November, 1904.
University of London in respect of its B.Sc. Degree in Mining for Internal Students, subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a mine.	9th June, 1905.
University of London in respect of its B.Sc. Degree in Mining for External Students, subject to the Degree being endorsed by the University with a certificate of four months' practical experience in a mine.	7th August, 1906.
Royal School of Mines in respect of its Associateship in Mining	24th March, 1904.
University of Oxford in respect of its Diploma B. for Colliery Engineers (in Scientific Engineering and Mining subjects).	11th February, 1905.
University College of Sheffield in respect of its Diploma in Mining	15th July, 1904.
University College of South Wales and Monmouthshire in respect of its Diploma in Mining.	19th April, 1904.
Wigan Mining and Technical College in respect of its Diploma in Mining.	26th August, 1904.
Bengal Engineering College, Sibpur, in respect of its Diploma in Mining.	22nd February, 1907.
Merchant Venturers' Technical College, Bristol, in respect of its Diploma in Mining Engineering.	5th October, 1905.
Victoria University of Manchester in respect of its Degree and Certificate of Mining.	14th February, 1906.
University College of Nottingham in respect of its Diploma in Mining Engineering.	28th March, 1906.
University of Sheffield in respect of its Degree of Bachelor of Engineering (Mining).	30th June, 1906.
Heriot-Watt College in respect of its certificate in Mining Engineering	16th January, 1908.
Calcutta University in respect of its Degree of Bachelor of Engineering in the Branch of Mining Engineering.	24th September, 1910.
Harvard University, Cambridge, Massachusetts, in respect of its Diploma in Mining Engineering.	22nd February, 1913.
Columbia University, New York, in respect of its Degree of Engineer of Mines.	13th March, 1915.
California University, United States of America, in respect of its Degree of Mining Engineer.	19th February, 1916.
Pittsburg University, United States of America, in respect of its Degree of Engineer of Mines.	19th February, 1916.
Leland Stanford Junior University, California, in respect of its Degree of Bachelor of Arts, in Geology and Mining.	10th August, 1918.
Carnegie Institute of Technology, Pittsburg, Pennsylvania, in respect of its Degree of B.Sc., in Mining Engineering	26th February, 1923.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*

Statement No. 4.

BENGAL ENGINEERING COLLEGE.

THE MINING CLASSES.

Admissions to the Diploma Course in Mining at the Bengal Engineering College.

THE Diploma Course covers two sessions, commencing yearly in April, and lasting till the examinations in the following March. (There is a vacation of about three months in August, September and October.) Six weeks of each session is spent at a camp of mine surveying in the colliery districts.

Two classes of students are admitted—

Regular—who need have no experience of mining.

Special—who have had about two years' previous experience of coal-mining (underground).

Admissions are made as follows:—

Regular students.—Age may not exceed 20 on January 1st of the year of admission—

A.—Through a special preparatory course of one year's duration at the Bengal Engineering College. Admissions at the beginning of February.

B.—Through the Sub-Overseer classes (a two years' course) at Dacca, Burdwan, Rajshahi and Pabna in Bengal; Patna in Bihar and Orissa.

Special students—

C.—Direct from the mines to the Mining classes without passing through either A or B. Admissions at the beginning of April. Applications must be made by 1st March accompanied by certificates from the colliery managers under whom the candidate has served, showing the period and nature of his employment underground.

Admission qualifications to A, B and C—

The passing of the Matriculation Examination, the Junior Cambridge Examination, the Examination held at the end of the supplementary course for elementary European schools, or equivalent.

The number that can be admitted is limited. The selection of candidates rests with the Principal who, all other things being equal, will prefer the younger of two candidates.

Scholarships awarded by the Bengal Government—

For regular students—

Scholarships of the following number and value are available for regular students admitted under A, these are awarded on the result of the examination held at the end of the preparatory course A:—

Two of Rs. 12 monthly.

Three „ 6 „

Stipends awarded by the Bihar and Orissa Government—

Two Boarding stipends of Rs. 15 monthly tenable for three years by poor and capable students of that Province. These are available in either the Mining or Mechanical and Electrical Engineering classes.

For special students.—Awarded by the Bengal Government—

Awarded on the result of the examination held at the end of the lectures given in the colliery districts by the Instructor in Mining—

One of Rs. 50 for Europeans.

One or two of Rs. 25 for Indians.

These amounts should be sufficient to maintain a special student resident at the college.

For further particulars apply for the Apprentice Department Circular.

T. H. RICHARDSON,

*Principal, Bengal Engineering College,
Botanic Garden P. O.*

APPENDIX IV—contd.

MISCELLANEOUS—contd.

Statement No. 5.

MINING INSTRUCTION IN THE COALFIELDS OF BENGAL AND BIHAR AND ORISSA.

THE full course covers a period of three years, and the following is an abstract of the syllabus :—

First year—

- (1) Mathematics.
- (2) Elementary Science.

Second year—

- (1) Elementary Mechanics.
- (2) Mechanical Drawing.
- (3) Elementary Mining and Surveying.

Third year—

- (1) The Principles of Coal Mining.
- (2) Mechanical and Electrical Engineering of Collieries.

Copies of detailed syllabus may be obtained from the Secretary and the Lecturer.

A fee of Rs. 5 is payable by each student to the Mining Lecturer on the first registration of his name for the first or second year's course of lectures. The fee for the third year's course is Rs. 10. These fees are not returnable.

The class arrangements for all the courses will be arranged by the Lecturer on the night of enrolment. Students should enrol at the first meeting so that the class work may be commenced without delay.

The course of instruction will commence in the first week in September and end in the following May. The examination will be held in May. Candidates who pass the final examination will receive a certificate recording their success. No certificates will be given to candidates unless they attend the second and third years. No candidate will, however, be permitted to sit for the examination unless he has attended 50 per cent. of the lectures and received 40 per cent. of the marks allotted for home work.

During session 1923-24 lectures on Mathematics and Science will be delivered in Bengal on two nights each week ; in Bihar and Orissa lectures on all years of the course will be delivered.

The Mining Lecturer will also deliver in Bengal, during the session 1923-24 only, the series of lectures on the Principles of Mechanical Engineering of Coal Mines as laid down in the old course one night weekly. Only students who have qualified in other part of the old course will be admitted to this course.

Lecture Centres.

Bengal.	Bihar and Orissa.
Raniganj Lecture Hall. Sitarampur ditto.	Jharis Lecture Hall. Sijua ditto.

The following Local Committees have been appointed, 1923-24 :—

Bengal Coalfields.

Raniganj Centre.	Sitarampur Centre.
Mr. J. H. Lang, Chairman.	Mr. J. H. Lang, Chairman.
" P. S. Koolan (Charanpur).	" J. B. Wardlaw (Dishergarh).
" A. T. Creet (Kalipahari).	" W. S. Elphinstone (Asansol).
" W. J. Rees (Raniganj).	" W. Weir (Kulti).
Babu Promothonath Hazra Toposi.	Babu U. N. Mondal (Dishergarh).
" Purna Chandra Bagchi (Kalipahari).	" S. N. Banerjee (Faridpur).
" S. Chaudhuri (Jamchhari).	" S. N. Ghosh (Barakar).

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 5—contd.

MINING INSTRUCTION IN THE COALFIELDS OF BENGAL AND BIHAR AND ORISSA.

Bihar and Orissa Coalfields.

Jharia Centre.	Sijua Centre.
Mr. D. Penman, Chairman.	Mr. D. Penman, Chairman.
" G. Jones, Lecturer.	" G. Jones, Lecturer.
" R. G. M. Bathgate (Jamadoba).	" A. A. Agabeg (Sijua).
" J. Murray (Kustore).	" J. T. Mackenzie (Katras).
" J. B. Argyle (Lodna).	" H. M. Bull (Bansjora).
" R. Barrowman (Standard Coal Co., Jharia).	" G. C. Leach (Sijua).
" Narendra Nath Sarkar (South Kujama, Jharia).	Babu Trikundas Doyal (Bullibari Colliery, Kusunda P.O.).
" S. M. Chatterjee (Kalithan Suratand, Jharia).	Mr. Meghji Bhimji Relia (Angrapathra).

[*The Mining Education Advisory Board desire that Colliery Managers will kindly publish this information in their Collieries. An appeal is also made to them to support the lectures by seeing that members of their colliery staff, who are suitable, take advantage of the lectures and attend them regularly.*]

T. H. RICHARDSON,
Secretary, Mining Education Advisory Board.

BENGAL ENGINEERING COLLEGE, BOTANIC GARDEN P. O.,
The 18th July 1923.

SYLLABUS OF THE COURSE OF INSTRUCTION.

First Year Course.

1. *Mathematics*.—Arithmetic and Algebra up to simple equations. Mensuration and use of squared paper. Trigonometry up to solution of triangles.

2. *Elementary Science*.—*Physics*.—Volume of displacement, Balances, Density, Specific gravity bottle, Fluid pressure, Hydrometer, Syphon, Barometer, Ideas of forces, Equilibrium of three forces, Centres of gravity, Fraction, Thermometer, Expansion due to heat, Latent heat of steam, Properties of solids, liquids and gases, Boyle's Law, Hydrostatics, Elements of Electricity and Magnetism, Electrical units.

Chemistry.—Atomic theory, elements, compounds, mixtures, acids, bases, composition of the atmosphere and of gases met with in mines.

Second Year Course.

1. *Mechanics*.—Units of Mass, Length and time, Levers, Pulleys, Wedges, Gearing, Simple machines, Equilibrium, Units of work and energy, Horse-power, Stress and strain, Design and headgears, Strength of ropes, chains, boilers, etc. The elementary principles of Hydraulics.

2. *Mechanical Drawing*.—Conventional signs, Construction of Scales, Nuts, Bolts, Screw threads, simple parts of machines, Engines and Pumps. The elementary principles of Geometry.

3. *Mining Surveying*.—Use of pens, scales and protectors, Surveying by means of the chain only. The Miner's Dial, Loose needle surveying, Fixed needle surveying, Levelling, Field books, Contouring. The use of the Plane Table. The Theodolite and its uses, Plotting by co-ordinates. Setting out and alignment. The adjustment of instruments.

Third Year Course.

1. *The Principles of Coal Mining*.—(1) *Geology*.—General structure of the earth's crust, igneous and aqueous rocks; definitions of outcrop, dip, strike, fault, roll, wash-out and dyke,

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 5—*concl.*

etc.; recording geological observations; reading a geological map; description of the Indian coal-bearing rocks; composition and properties of coal; commercial values of coal.

(2) *Exploration*.—Prospecting, trial shafts and trenching, advantages of boring, methods of boring, driving through faults, uses of boreholes in mines, etc.

(3) *Breaking ground*.—Common tools, storage and use of explosives, electric fuses, machine drills, coal-cutting machines.

(4) *Sinking*.—Site of colliery, position of inclines and shafts, their excavation and shape, apparatus used in sinking, lining shafts, arrangements at top of sinking shafts, brief mention of special methods of sinking.

(5) *Methods of working*.—Quarrying, advantages of bench work, disposal of soil, shaft pillars, pillar and gallery method, working thick seams in stages, extraction of pillars, panels, brief description of long wall and chambering methods.

(6) *Supporting*.—Props and lids, bars, chocks or cogs, square sets, special timbering in loose ground, arching, steel girders, packing, dry and hydraulic stowing.

(7) *Mine gases*.—Their experimental preparation by chemicals and illustration of their physical and physiological properties, their chemical composition, methods of detecting explosions, spontaneous combustion of coal, dangers of coal dust.

(8) *Ventilation*.—Ascensional currents, currents induced by the heat of steam or furnace, mine fans, friction of air in mines, theory of splitting the air, calculations of ventilating pressure, etc., coursing the air, measurement of quantity of air, use of anemometer, watergauge, thermometer and barometer, reserving the air current.

(9) *Safety lamps*.—Principle of the safety lamps, Sir Humphrey Davy's experiments, types of safety lamps, firedamp detectors.

2. *The Principles of Mechanical and Electrical Engineering of Coal Mines*.—(1) *Applied Mechanics*.—The practical application of the principles taught in the 1st and 2nd years.

(2) *Steam, Electricity and Compressed Air*.—Theory of steam boilers and their fittings, the steam engine, the dynamo, the electric motor, electric lighting and airing, the air compressor.

(3) *Winding*.—Types of winding engines and description of parts, calculation of the dimensions of winding engines, strength of ropes and chains, detaching hooks, over-winding prevention devices, rope cappings, care and examination of ropes, buckets, cages, guide ropes.

(4) *Pumping*.—The lift pump, the force pump, sinking pumps, pumps with positive valve motion, the pulsometer, turbine pumps, calculations of the dimensions of pumps, methods of supporting pumps and pipes, strength of pipes, pipe joints, dams to hold back water.

(5) *Hauling*.—Tramways, tubs, hand tramming, horse haulage, self-acting inclines, locomotives, single rope haulage, main and tail rope haulage, endless rope or chain haulage, calculations of the dimensions of hauling engines, ropes, etc., capping of haulage ropes, couplings, haulage clips, etc., signalling.

(6) *Surface arrangements*.—Headframes and pulleys, receiving frames, keds, arrangements of roads on pit bank, tippers, simple screening and sizing, railway sidings, aerial ropeways.

(7) Simple treatment of coking and bye-product ovens.

T. H. RICHARDSON,
Secretary, Mining Education Advisory Board.

APPENDIX IV—contd.

MISCELLANEOUS—contd.

Statement No. 6.

MINING INSTRUCTION IN BIHAR AND ORISSA.

(The Mining Education Advisory Board desire that Colliery Managers will kindly publish this information in their collieries. An appeal is also made to them to support the lectures by seeing that members of their colliery staff, who are suitable, take advantage of the lectures and attend them regularly.)

The full course covers a period of three years and the following is an abstract of the syllabus :

First year.—(1) Mathematics, (2) Elementary Science.

Second year.—(1) Elementary Mechanics, (2) Mechanical Drawing, (3) Elementary Mining Surveying.

Third year.—(1) Mining Surveying, (2) The Principles of Coal Mining, (3) Mechanical and Electrical Engineering of Collieries.

A fee of Rs. 5 (five rupees) is payable by each student to the Mining Lecturer on the first registration of his name for the first or the second year's course of lectures. The fee for the third year's course is Rs. 10. These fees are not returnable.

Programme for Session 1923-24.

During session 1923-24 instruction in all the years of the course will be provided. Lectures in each subject will be delivered each week.

Lecturer.

Mr. Griffith Jones, B.Sc., first class certificated Colliery Manager and Surveyor.

Assistant Lecturers.

N. N. Sen, L.M.E., and

All students should enrol as follows :—

Jharia Lecture Hall.—Monday, September 3, at 5 P.M. and Thursday, September 6, at 5 P.M.

Sijua Lecture Hall.—Tuesday, September 5, at 5 P.M. and Friday, September 7, at 5 P.M.

The class arrangements for all the courses will be arranged by the lecturers on the enrolling nights. Students should enrol during the first week so that the class work may be commenced without delay.

The course of instruction will commence in the first week in September and end in the following May. The examination will be held in May. No certificate shall be given to candidates unless they pass the 2nd and 3rd year's examinations. No candidate will, however, be permitted to sit for the examination unless he has attended 50 per cent. of the lectures and received 40 per cent. of the marks allotted for home work.

The following Local Committees have been appointed :—

JHARIA COALFIELD.

Jharia Centre.	Sijua Centre.
Mr. D. Penman, Chairman.	Mr. D. Penman, Chairman.
„ G. Jones, Lecturer.	„ G. Jones, Lecturer.
„ R. G. M. Bathgate (Jamadoba).	„ A. A. Agabeg (Sijua).
„ J. Murray (Kustore).	„ R. Heron (Bhalgora, Jharia P. O.).
„ J. B. Argyle (Lodna).	„ H. M. Bull (Bansjora).
„ R. Barrowman (Standard Coal Company, Jharia)	„ G. C. Leach (Sijua P. O.)
„ Narendra Nath Sarkar (South Kujama, Jharia).	Babu Trikumdas Doyal (Bullihari Colliery, Kusunda P. O.).
„ S. M. Chatterjee (Kalithan Suratand, Jharia).	Mr. Meghji Bhimji Relia (Angrapatra).

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*contd.*

MINING INSTRUCTION IN THE COALFIELDS OF BIHAR AND ORISSA.

SYLLABUS OF THE COURSE OF INSTRUCTION.

First Year Course.

1. *Mathematics.*—Arithmetic and Algebra up to simple equations. Mensuration and use of squared paper. Trigonometry—up to solution of Triangles.

2. *Elementary Science.—Physics.*—Volume of displacement, Balances, Density, Specific gravity bottle, Fluid pressure, Hydrometer, Syphon, Barometer, Ideas of forces, Equilibrium of three forces, Centres of gravity, Fraction, Thermometer, Expansion due to heat, Latent heat of steam, Properties of solids, Liquids and gases, Boyle's Law, Hydrostatics, Elements of electricity and Magnetism, Electrical units.

Chemistry.—Atomic Theory, Elements, Compounds, mixtures, acids, bases, composition of the atmosphere and of gases met with in Mines.

Second Year Course.

1. *Mechanics.*—Units of Mass, Length and time, Levers, Pulleys, Wedges, Gearing Simple Machines, Equilibrium, Units of work and energy, Horse Power, Stress and Strain, Design and headgears, Strength of ropes, chains, boilers, etc. The elementary principles of hydraulics.

2. *Mechanical Drawing.*—Conventional signs, Construction of Scales, Nuts, Bolts, Screw threads, Simple parts of machines, Engines and Pumps. The elementary principles of geometry.

3. *Elementary Mining Surveying.*—Use of pens, Scales and Protectors, Surveying by means of the chain only. The plotting of simple Surveys and Levelling sections. The Miner's Dial. Loose needle surveying.

Third Year Course.

1. *Mining Surveying.*—Fixed needle surveying, Levelling, Field books, Contouring. The use of the Plane Table. Theodolite and its uses, Plotting by co-ordinates. Setting out and alignment. The adjustment of instruments.

2. *The Principles of Coal Mining.*—(1) *Geology.*—General structure of the earth's crust, igneous and aqueous rocks; definitions of outcrop, dip, strike, fault, roll, wash-out and dyke, etc., recording geological observations reading a geological map, description of the Indian coal-bearing rocks, composition and properties of coal, commercial values of coal.

(2) *Exploration.*—Prospecting, trial shafts and trenching, advantages of boring, methods of boring, driving through faults, uses of boreholes in mines, etc.

(3) *Breaking ground.*—Common tools, storage and use of explosives, electric fuses, machine drills, coal-cutting machines.

(4) *Sinking.*—Site of colliery position of inclines and shafts, their excavation and shape, apparatus used in sinking, lining shafts, arrangements at top of sinking shaft, brief mention of special methods of sinking.

(5) *Methods of working.*—Quarrying, advantages of bench work, disposal of soil; shaft pillars, pillar and gallery method, working thick seams in stages, extraction of pillars, panels, brief description of long wall and chambering methods.

(6) *Supporting.*—Props and lids, bars, chocks or cogs, square sets, special timbering in loose ground, arching, steel girders, packing, dry and hydraulic stowing.

(7) *Mine gases.*—Their experimental preparation by chemicals and illustration of their physical and physiological properties, their chemical composition, methods of detecting explosions, spontaneous combustion of coal, dangers of coal dust.

(8) *Ventilation.*—Ascensional currents, currents induced by the heat of steam or furnace, mine fans, friction of air in mines, theory of splitting the air, calculations of ventilating pressure, etc., coursing the air, measurement of quantity of air, use of anemometer, watergauge, thermometer and barometer, reversing the air current.

(9) *Safety lamps.*—Principle of the safety lamps, Sir Humphrey Davy's experiments, types of safety lamps, firedamp detectors.

3. *The Principles of Mechanical and Electrical Engineering of Coal Mines—*

(1) *Applied Mechanics.*—The practical application of the principles taught in the 1st and 2nd years,

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 6—*concl.*

(2) *Steam electricity and compressed air.*—Theory of steam boilers and their fittings, the steam engine, the dynamo, the electric motor, electric lighting and airing, the air compressor.

(3) *Winding.*—Types of winding engines and description of parts, calculation of the dimensions of winding engines, strength of ropes and chains, detaching hooks, over-winding prevention devices, rope cappings, care and examination of ropes, buckets, cages, guide ropes.

(4) *Pumping.*—The lift pump, the force pump, sinking pumps, pumps with positive valve motion, the pulsometer, turbine pumps, calculations of the dimensions of pumps, methods of supporting pumps and pipes, strength of pipes, pipe joints, dams to hold back water.

(5) *Hauling.*—Tramways, tubs, hand tramping, horse haulage, self-acting inclines, locomotives, single rope haulage, main and tail rope haulage, endless rope or chain haulage, calculations of the dimensions of hauling engines, ropes, etc., capping of haulage ropes, couplings, haulage clips, etc., signalling.

(6) *Surface arrangements.*—Headframes and pulleys, receiving frames, keps, arrangements of roads on pit bank, tippers, simple screening and sizing, railway sidings, aerial ropeways.

(7) Simple treatment of coking and bye-product ovens.

D. PENMAN,

Assistant Secretary,

Mining Education Advisory Board.

DEPARTMENT OF MINES, DHANBAD :

The 1st August 1923.

Statement No. 7.

INDIAN MINES ACT, 1901.

EXAMINATION FOR COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.

First class.

GEOLOGY AND MINING.

19th February 1923.

10 a.m. to 1-30 p.m.

NOTE.—The questions should not be copied. They may be answered in any order.

1. An extensive property is adjacent to a river, and contains a coal seam, 16' thick, dipping at 1 in 5, and lying at a depth of 500 ft. Sketch and describe how you would develop the property on modern lines. What are the governing factors in selecting the sites of the shafts? (25).

2. In the first working of a coal seam 24 ft. thick, and at a depth of 400 ft. what precautions would you adopt to avoid "creep" and "thrust"? State how you would extract the pillars, and the precautions necessary when setting and withdrawing timber. Illustrate your answer by sketches. (25).

3. Give, with examples, an account of the character and mode of occurrence of the intrusive igneous rocks in the Indian coal-fields. How do they affect the working of a mine? (15).

4. What in your opinion are the best explosives now being used in Indian coal mines :—

(a) For blasting coal ;

(b) For blasting stone ?

Give the general characteristics and composition of each.

Show by dimensioned sketches how you would arrange the shot holes, and the order of firing the shots in :—

(a) An undercut gallery in coal ;

(b) A stone drift. (15).

5. A diamond borehole has passed through a friable stratum, 20 ft. thick, at a depth of 1,000 ft. Small pieces of stone keep dropping into the hole from this stratum, tending to jam the rods. How would you overcome the difficulty so as to continue boring? (15).

6. Describe what you consider to be the best method of supporting the sides of a shaft, 18 ft. diameter, which is being sunk to depth of 1,200 ft. through comparatively soft strata? (15).

APPENDIX IV—contd.
MISCELLANEOUS—contd.

Statement No. 7—contd.

INDIAN MINES ACT, 1901.

EXAMINATION FOR COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.

First Class.

MANAGEMENT AND MINING LEGISLATION.

10th February 1923.

3 P.M. to 5 P.M.

NOTE.—The questions should not be copied. They may be answered in any order.

1. State briefly the General and Special Rules regarding "fencing". What would you consider to be a proper fence in each of the following circumstances?—

- (a) An abandoned quarry, 40 ft. deep, with perpendicular sides and full of water.
- (b) The top of a working shaft.
- (c) An abandoned shaft.
- (d) An area on the surface which was believed to be unstable through the extraction of pillars underground.
- (e) Underground galleries not in actual use. (10).

2. Write a report, not on any prescribed form, as to the condition of the mine, such as you might expect to be made by the undermanager to the manager at the end of the shift. (10).

3. When part of a mine has suddenly become dangerous, what are the requirements of the rules? (8).

4. Give in your own words the General Rules regarding machinery used for raising and lowering persons. (10).

5. Explain:—

What is meant by a "ventilating district", and "an adequate amount of ventilation"? What do you consider to be the maximum permissible percentages of:—firedamp, blackdamp, and white-damp in the air consistent with "adequate ventilation"? Where must safety lamps be used in a mine? (10).

6. Describe carefully the provision and arrangements you would make on a large colliery employing 1,000 persons, for the treatment and care of injured persons, and for their transport from the mine to the place of treatment. Give a dimensioned line drawing of a small hospital and dispensary to serve such a colliery. (12).

VENTILATION, EXPLOSIONS, UNDERGROUND FIRES AND INUNDATIONS.

20th February 1923.

10 A.M. to 1 P.M.

NOTE.—The questions should not be copied. They may be answered in any order.

1. Review briefly the possible causes of spontaneous combustion in mines. What steps would you take to guard against it? (12).

2. Describe briefly the various improvements made in the construction and design of the safety lamp since it was first brought into use in coal mines. What parts of the safety lamp are most likely to get out of order? (12).

3. Show by means of the usual symbols how you would ventilate the workings on the annexed plan. Indicate on the plan the main haulage roads. (15).

4. Explain the advantages to be obtained by "splitting" the air. If half an inch of W. G. causes 30,000 cu. ft. of air per minute to flow through an airway 1,000 ft. long, what quantity of air will, with the same W. G., pass through—

- (a) Two similar airways connected in parallel.
- (b) Three similar airways connected in parallel? (12).

5. Under what conditions is coal dust capable of causing or aiding an explosion in a mine? What precautions are advisable? (12).

6. Describe, with sketches, the precautions you would take in a sinking shaft in which firedamp is being given off freely. (12).

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 7—*contd.*

INDIAN MINES ACT, 1901.

EXAMINATION FOR COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.

*First Class.*MACHINERY—*contd.*

5. If you had occasion to indent for an electrically driven centrifugal pump to deal with 30,000 gallons per hour against a head of 600 ft., what are the chief points you would put before the makers ? (15).

6. If 200 tons of coal are to be hauled in 10 hours up an incline half a mile long at a gradient of 1 in 6, show by separate calculations the H. P. of engine required for direct and endless haulage, respectively. (15).

Second Class.

GEOLOGY AND MINING.

26th February 1923.

10 A.M. to 1-30 P.M.

NOTE—The questions should not be copied. They may be answered in any order.

1. Describe, with sketches, the different kinds of faults encountered in coal mining. If a fault met with in a level throws out all the coal, how can you tell whether the coal is thrown up or down? If it is thrown up, in what direction would you drive to find the coal supposing the dip of the seam to be 1 in 6 to the South? (20).

2. What is a detonator? describe it and explain how it is used. How would you charge and fire shots in a sinking shaft? (15).

3. How would you ensure that a shaft was being sunk plumb; and how would you accurately measure the depth of a deep shaft? (15).

4. A seam of coal has been worked by driving galleries, 10 ft. high and 12 ft. wide, on the floor, and the total thickness of the seam is 20 ft. with a moderately good shale roof. Describe, with sketches, how you would work the roof coal and extract the pillars. (20).

5. It is expected to find the outcrop of a coal seam under 50 ft. of cover. Describe how you would prove the seam, and the tools you would use for putting down a borehole. (15).

6. An underground dam has to be put in to resist a head of 150 ft. of water in a roadway 14 ft. wide by 10 ft. high. What circumstances should be taken into consideration in selecting the site for the dam. Show by sketches how you would construct the dam, and state what materials you would use. (15).

MANAGEMENT AND MINING LEGISLATION.

26th February 1923.

3 P.M. to 5 P.M.

NOTE—The questions should not be copied. They may be answered in any order.

1. State the necessary qualifications of the manager of a colliery having an average output of 2,000 tons per month, and give a brief outline of his duties as set out in the Special Rules. (8).

2. Assume that you have been appointed manager of a colliery with an average output of 2,000 tons per month, and that there is one winding shaft, one haulage incline, two carrying inclines, and one quarry. Assume that you have not previously worked in the colliery, and explain briefly to what points you would pay special attention in your first round of inspection. (8).

3. State the duties of a chargeman in a sinking shaft as set out in the Special Rules. (8).

4. What are the precautions against accidents which in accordance with the General and Special Rules require to be taken when:—

(a) A shot hole is being charged.

(b) A shot is about to be fired.

(c) A shot misses fire.

(d) A shot is about to be fired in a working which has approached within eight feet of another working? (10).

5. Describe an efficient system of registering each workman underground in each shift. (8).

6. Describe the construction you would adopt for the top of a well for drinking water, to comply with the following requirements:—

(a) The safety and convenience of persons drawing water.

(b) The prevention of the pollution of the well by surface water and refuse.

Your answer should be illustrated by sketches, (8).

APPENDIX IV—contd.

MISCELLANEOUS—contd.

Statement No. 7—contd.

INDIAN MINES ACT, 1901.

EXAMINATION FOR COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.

Second Class.

VENTILATION, EXPLOSIONS, UNDERGROUND FIRES AND INUNDATIONS.

27th February 1923.

10 A.M. to 1 P.M.

NOTE.—The questions should not be copied. They may be answered in any order.

1. What is the object of mine ventilation? What is natural ventilation and how is it brought about? (10).

2. Describe the following and explain their use:—

- (a) A water gauge.
- (b) An anemometer.
- (c) An air crossing.
- (d) A stopping.
- (e) An air door.
- (f) A brattice. (12).

3. If an airway is 5'-6" high, 9'-3" wide, and 2,584 feet long, find:—

- (a) the rubbing surface in square feet;
- (b) the sectional area; and
- (c) the perimeter.

If the velocity of the air current is 250 ft. per minute, what is the quantity of air in cu. ft. per minute? (12).

4. Describe the characteristics of carbon monoxide and carbon dioxide. To what extent are they dangerous to life, and how can their presence be detected? (12).

5. If a fire stopping in a mine has collapsed, and gases are being emitted, how would you proceed to rebuild it with safety to those employed? (12).

6. On what principle does the safety lamp depend? Give a sketch of a safety lamp, and explain how it should be examined to find out if it is in proper order. What are the advantages and disadvantages of electric safety lamps? (12).

SURVEYING, LEVELLING AND MENSURATION.

27th February 1923.

2-30 P.M. to 5 P.M.

NOTE.—The questions should not be copied. They may be answered in any order.

1. Describe fully how you would ascertain and record the levelling of the surface between two points, and mention the instruments you would require for the purpose. What are contour lines? (7)

2. Plot the following survey to a scale of 200 ft. to 1 inch:—

S. 72½ E.	460 Ft.	
S. 51½ W.	790 Ft.	
N. 25 W.	700 Ft.	
N. 54½ W.	340 Ft.	
N. 32½ E.	530 Ft.	
S. 72 E.	290 Ft.	
S. 31½ E.	370 Ft.	(10).

3. Explain in full detail the method of loose needle surveying. State its advantages and disadvantages. (6).

4. A stack of coal measures 180' × 90' at the base, 150' × 6' at the top, and is 20' high. Calculate the weight of coal in tons. Assume that the coal in the solid weighs 0.9 ton per cu. yd., and in the heap weighs 60 per cent. of the weight of the coal in the solid. (7).

5. Draw on your paper an irregularly bounded area. Show how you would set off triangles, etc. in order to make a chain survey. State how you would range in poles for the purpose of chaining a line across a valley. (7).

6. Explain in full detail how you would proceed if you were asked to find the position of a surface point exactly above a certain point underground (8).

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 7—*contd.*

INDIAN MINES ACT, 1901.

EXAMINATION FOR COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.

Second Class.

MACHINERY.

28th February 1923.

10 A.M. to 2 P.M.

NOTE.—The questions should not be copied. They may be answered in any order.

1. A road dips at the rate of 1 in 3 ; find the tractive force necessary to draw up a train of tubs weighing 10 tons. Find the useful horsepower developed if the speed is 8 miles per hour. Assume that the combined coefficient of friction of the tubs and rope is $1/56$. (14).
2. A windlass has a barrel 10" in diameter, and the circle described by the handles, is 4 ft. in dia. What weight can be raised with two men at each handle, each exerting 26 lbs. pressure ? (12).
3. What is meant by :—
 - (a) An electrical conductor.
 - (b) An insulator.
 - (c) A dynamo.
 - (d) An electric motor.
 - (e) A fuse.
 - (f) A double pole switch ? (12).
4. Sketch and describe fully a simple non-condensing steam engine with reversing gear. What is a compound steam engine ? (14).
5. Sketch and describe the arrangements you would make for slinging a steam pump in a sinking shaft, 200 ft. deep, which is to be sunk to a depth of 300 ft. Assume that the maximum quantity of water will not be more than 7,000 gallons per hour. (14).
6. Enumerate the essential fittings on a vertical boiler. Why is the manhole oval in shape ? What is the effect of sediment or incrustation forming in a boiler, and how may danger arise therefrom ? (14).

Statement No. 8.

DEPARTMENT OF INDUSTRIES AND LABOUR.

NOTIFICATION.

Simla, the 14th April 1924.

No. M.-498.—In exercise of the power conferred by section 20 of the Indian Mines Act, 1901 (VIII of 1901), the Governor General in Council is pleased to direct that the following further amendments shall be made in the rules published with the notification of the Government of India in the Department of Revenue and Agriculture, No. 864—68-20, dated the 10th March 1904, the same having been previously published as required by sub-section (3) of the said section, namely :—

After rule 54 of the said rules, the following heading and rules shall be inserted, namely :—

" Rules for the examination and certification of underground sirdars.

Rule 55.—With effect from the first day of January 1926, no person shall, save as hereinafter provided, be appointed to make the inspection required by sub-rule (a) of rule 4 unless he—

- (i) has within the preceding five years obtained a certificate from an authority and in a form to be prescribed by the Board of Examiners constituted under rule 28 to the effect that his powers of eyesight and hearing are such as to enable him to make the inspection efficiently and

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 8—*contd.*

- (ii) (a) holds a first or second class certificate of competency granted under these rules or a permit granted under rule 41, or is for the time being authorised under rule 49 to act as manager of the mine in which the inspection is to be made, or
- (b) holds a certificate, hereinafter referred to as an underground sirdar's certificate, to the effect that he is competent to perform the inspection required by rule 4 :

Provided that the holder of an underground sirdar's certificate shall not be appointed to make the inspection required by sub-rule (a) of rule 4 in a mine in which safety lamps are used or in which inflammable gas is likely to occur, unless his certificate bears an endorsement to the effect that he is competent to test for and detect the presence of inflammable gas.

Rule 56.—Where an emergency exists, the owner, agent or manager of a mine may appoint any person to make the inspection required by sub-rule (a) of rule 4 who, in his opinion, is competent to make such inspection, notwithstanding the fact that such person does not possess the qualifications prescribed in rule 55 :

Provided that such appointment shall not extend over a period exceeding one month :

Provided further that every such appointment and the reasons therefor shall forthwith be reported to the Chief Inspector of Mines. The Chief Inspector may cancel any such appointment and such cancellation shall be final.

Rule 57.—Underground sirdars' certificates shall be granted by the Board of Examiners constituted under rule 28 after such examination and in such form as the Board may, subject to the provisions of these rules, from time to time prescribe. The decision of the Board in regard to the grant or refusal of such certificate to any candidate for the same shall be final.

Rule 58.—Examinations for underground sirdars' certificates shall be held at such place and time as the Board of Examiners may from time to time prescribe, and shall be conducted by local examiners appointed by the Board. Such local examiners shall be subject to the orders of the Board in respect of all matters relating to the conduct of the examination and shall receive such remuneration as the Board may, with the sanction of the Governor General in Council, determine.

Rule 59.—(1) Examinations for underground sirdars' certificates shall be conducted orally in English or in the vernacular language of the district in which the examination is held and shall be designed to test the candidate's knowledge of the following subjects, namely :—

- (a) timbering,
- (b) methods of examination of the roof and sides of working places and travelling roads,
- (c) shot-firing,
- (d) mine gases and ventilation,
- (e) the provisions of the General and Special Rules for the time being in force under the Indian Mines Act, 1901, relating to the safety of persons employed in mines,
- (f) in the case of candidates for the endorsement referred to in the proviso to rule 55 the methods of testing for and detecting the presence of inflammable gas.

(2) The Board of Examiners may from time to time make regulations consistent with this rule in regard to the conduct of such examinations and every regulation so made shall be published in the local official Gazette.

Rule 60.—No person shall be permitted to appear as a candidate at an examination for an underground sirdar's certificate unless he has attained the age of 21 years and has satisfied the Board of Examiners that he has had not less than three years' practical experience in a coal-mine.

Rule 61.—(1) A fee of Rs. 5 shall be levied from every applicant for permission to appear as a candidate at an examination for an underground sirdar's certificate, and the amount of such fee shall in no case be refunded.

(2) A fee of Re. 1 shall be levied from every person, not being a candidate for an underground sirdar's certificate, whose eyesight and hearing are examined by the authority referred to in clause (i) of rule 55.

Rule 62.—If, in the opinion of an Inspector of Mines, a person to whom an underground sirdar's certificate has been granted under these rules is guilty of misconduct or incompetence in the discharge of his duties, the Inspector of Mines may suspend his certificate, and recommend its cancellation by the Board of Examiners. The Board shall, at its discretion, either remove the suspension or cancel the certificate, and the decision of the Board shall be final.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 8—*concl.*

Rule 63.—(1) The Chief Inspector of Mines shall issue to every person to whom the Board of Examiners grants an underground sirdar's certificate, a metal check marked with the registered number of his certificate.

(2) The person to whom such metal check is issued shall, so long as the corresponding certificate remains in force, retain such check in his immediate possession, and shall not transfer it or dispose of it in any way. In the event of the corresponding certificate being cancelled, the check shall be returned to the Chief Inspector of Mines.

(3) No person other than the holder of the corresponding certificate for the time being in force, shall be in possession of a metal check issued under this rule.

Rule 64.—(1) The holder of an underground sirdar's certificate, granted under these rules, shall deliver such certificate to the owner, agent, or manager of any mine in which he is for the time being employed; and such owner, agent, or manager shall in exchange for the certificate deliver a receipt for the same to the holder and shall retain the certificate so long as the holder thereof is employed in such mine, and shall return it to the holder on his ceasing to be so employed.

(2) The owner, agent, or manager of any mine shall, on the demand of an Inspector of Mines, produce any underground sirdar's certificate held by a person employed in the mine.

Rule 65.—A register showing the names and addresses of all holders of underground sirdar's certificate shall be maintained in the office of the Chief Inspector of Mines, and a note of the cancellation of any such certificate shall be entered in such register.

Rule 66.—If any person proves to the satisfaction of the Board of Examiners that he has without any fault on his part lost or been deprived of a certificate granted to him under rule 57 otherwise than by the Board of Examiners under rule 62, the Board of Examiners may, upon such terms and conditions as they may determine, cause a copy of the certificate to which the applicant appears by the register to be entitled, to be delivered to him. The word "Duplicate" shall be stamped across every such copy, and a fee of Re. 1, which shall be payable in advance to the Chief Inspector of Mines at his office, shall be charged for it.

Rule 67.—If any person proves to the satisfaction of the Chief Inspector of Mines that he has without any fault on his part lost or been deprived of the metal check issued to him under sub-rule (1) of rule 63 otherwise than under the provisions of sub-rule (2) of rule 63, the Chief Inspector of Mines may, upon such terms and conditions as he may determine, cause a second metal check bearing the registered number of his certificate to be delivered to him. The letter "D" shall be stamped on the reverse of every such check, and a fee of annas 4, payable in advance to the Chief Inspector of Mines at his office, shall be charged for it."

A. H. LEY,

Secretary to the Government of India.

A copy is forwarded to all Local Governments and Administrations for information.

Chief Inspector of Mines in India

Railway Department

A copy is also forwarded to the

Joint Hony. Secy., Mining and Geological Institute of India,

Secretary, Indian Mining Association,

Secretary, Indian Mining Federation,

for information.

By order, etc.,

J. P. GANGULI,

Assistant Secy. to the Govt. of India.

APPENDIX IV—concl'd.

MISCELLANEOUS—concl'd.

Statement No. 9.

LAND ACQUISITION (MINES) ACT, 1885.

Particulars required to be furnished by colliery owners to Local Governments when giving notice under Section IV of the Land Acquisition (Mines) Act, 1885, of their intention to work coal under land acquired for a railway:—

- (a) The name, residence and profession of the person giving the notice.
- (b) The name of the mine, together with that of the village and district in which the mine is situate.
- (c) The name of the railway line or of the siding and the main line to which the siding is attached, under which the mine is situate.
- (d) The names of the railway stations and the mileage between which the said siding or the said portion of the railway land, under which the mine is situate, falls.
- (e) The number and date of the declaration under which the land was acquired.
- (f) A tracing showing the boundaries of, and the area over which, the acquired land extends.