

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 1919

BY

R. R. SIMPSON, M.Sc.

Offg. Chief Inspector of Mines in India



CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
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The delay in the issue of this publication was due to the Press strike.

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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 1919.

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.
								Adult males.	Adult females.	Children (under 13).	Total below ground.	Adult males.	Adult females.	Children (under 13).	Total above ground.	
Assam	Lakhimpur	6	4	2	4	8	259,652	1,661	160	...	1,830	638	214	58	908	2,738
	Naga Hills	1	...	1	1	1	29,941	204	2	4	210	179	21	5	205	415
	Sibsagar	1	...	1	...	...	1,541	20	...	...	20	25	...	...	25	45
	TOTAL	8	4	4	5	9	291,134	1,885	171	4	2,060	840	235	63	1,138	3,198
Baluchistan	Lalalai	1	...	1	...	...	165	20	...	...	20	15	...	...	15	35
	Quetta-Pishin	6	...	6	...	...	5,256	114	...	...	114	25	...	...	25	139
	Sibi-Khost	6	2	4	...	...	23,703	368	...	...	368	338	8	14	360	728
	TOTAL	13	2	11	...	...	29,124	502	...	...	502	378	8	14	400	902
Bengal	Bankura, Raniganj	2	...	2	1	1	6,950	34	23	...	57	20	16	1	37	91
	Birbhum "	1	...	1	...	...	1,910	20	25	...	45	6	3	...	9	54
	Burdwan "	213	165	48	101	181	5,768,772	18,707	11,349	215	80,271	11,280	6,598	345	18,223	48,494
	TOTAL	216	165	51	102	182	5,777,632	18,761	11,397	215	30,373	11,306	6,617	346	18,260	48,642

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 1919—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.								Grand total below and above ground.	
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				ABOVE GROUND.					
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.		
Bihar and Orissa .	A.—COAL—concl'd.																
	Hazaribagh	Bokaro-Ramgarh	6	2	4	1	1	722,682	3,302	2,457	15	5,774	1,025	1,354	43	3,022	8,796
		Giridih . . .	8	4	4	950,045	5,468	2,029	1	8,098	2,002	779	12	2,853	10,951
		Jharia . . .	9	5	4	3	3	176,937	492	439	10	941	402	361	25	788	1,729
	Manbhum	Jharia . . .	335	173	162	123	254	11,968,981	31,097	25,676	297	57,070	23,451	12,137	1,426	37,014	94,084
		Raniganj . . .	97	16	81	37	60	1,033,702	3,640	2,274	33	5,947	2,803	1,823	189	4,815	10,762
	Palamau, Daltonganj . . .	1	1	...	1	2	63,250	265	133	24	422	251	62	35	348	770	
	Sambalpur, Hingir-Rampur . . .	3	1	2	...	...	45,574	360	201	...	561	258	110	...	368	929
	Sonthal Parganas.	Jainty . . .	4	4	...	1	2	152,941	369	494	...	863	509	264	76	849	1,712
		Raniganj . . .	3	...	3	3,792	28	23	...	51	18	6	...	24	75
	TOTAL . . .	466	306	260	166	322	15,117,903	45,021	34,326	980	79,727	31,379	16,896	1,806	50,081	120,808	
Central Provinces	Chanda, Ballarpur . . .	8	6	2	2	4	126,366	789	123	...	912	587	171	17	775	1,637	
	Ohhindwara, Pench Valley . . .	12	8	4	6	6	285,356	1,552	662	56	2,370	445	276	54	774	3,044	
	Narsinghpur, Mohpani . . .	1	1	...	...	...	85,299	601	384	...	985	556	31	...	587	1,672
	Yeotmal . . .	1	1	...	...	...	...	...	...	...	...	3	...	...	3	3
	TOTAL . . .	22	16	6	8	10	497,021	2,942	1,169	56	4,167	1,591	477	71	2,130	6,306	

North-West Frontier Province.	Hazara	1	...	1	...	...	20	5	...	...	5	...	...	...	...	6
Panjab	Jhelum	10	...	10	...	...	35,845	480	26	52	567	341	...	33	370	946
	Mianwali	2	...	2	...	...	5,822	40	...	...	40	63	...	...	63	123
	Shahpur	3	...	3	...	...	5,226	53	...	...	53	69	...	...	69	122
	TOTAL	15	...	15	...	...	46,893	582	96	52	660	493	...	33	531	1,101
	GRAND TOTAL (COAL) FOR 1919	741	393	348	281	623	21,759,727	89,898	47,089	707	117,494	45,987	24,233	2,338	72,558	190,052	
	" " OF PRE-CEDEING YEAR	719	367	352	389	724	19,847,039	65,433	43,447	681	109,561	42,857	21,547	2,304	66,708	176,269	
	DIFFERENCE	+22	+26	-4	-108	-201	+1,912,688	+4,265	+3,642	+26	+7,933	+3,130	+2,686	+34	+5,850	+13,783	
Bihar and Orissa	B.-MICA.																
							Cwts.										
	Gaya	45	...	45	...	...	5,007	630	430	97	1,166	244	225	93	562	1,728
	Hazaribagh	452	61	391	10	24	25,678	6,085	3,052	1,180	10,317	2,376	1,076	1,078	5,130	15,447	
	Manbhum	1	...	1	...	...	10	4	3	...	7	2	2	...	4	11
	Monghyr	27	1	26	...	...	1,580	317	134	4	455	142	117	60	319	774
Sambalpur	1	...	1	...	...	15	50	25	5	80	21	15	21	60	140	
	TOTAL	526	62	464	19	24	32,290	7,005	3,644	1,286	12,025	2,785	2,035	1,255	6,075	18,100	
Madras	Kistna	1	...	1	...	...	57	16	16	...	32	1	7	2	10	42
	Nellore	106	18	88	...	...	7,858	1,601	993	117	2,801	410	410	207	1,036	3,837*
	Salem	3	...	3	...	...	323	30	...	...	89	56	71	14	141	180
	TOTAL	110	18	92	...	...	8,238	1,746	1,009	117	2,872	467	407	223	1,187	4,059

* Including figures for Samarskito.

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 1919—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.								Grand total below and above ground.
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				ABOVE GROUND.				
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.	
Rajputana	Ajmer-Merwara	37	...	37	1,079	284	85	34	403	67	22	...	89	492
		1	...	1	76	7	2	1	10	1	1	11
	TOTAL	38	...	38	1,155	291	87	35	413	68	22	...	90	503
	GRAND TOTAL (MICA FOR 1919.	674	80	594	19	24	41,883	8,132	4,740	1,438	15,310	3,320	2,554	1,478	7,352	22,862
" " OF PRECEDING YEAR.	623	77	546	58	60	51,572	10,894	4,353	1,567	16,814	3,766	2,925	2,087	8,778	25,592	
DIFFERENCE	+51	+3	+48	-39	-36	-9,889	-1,762	+357	-129	-1,504	-446	-371	-609	-1,426	-2,930	
Bombay	Panch Mahals	2	2	22,510	536	312	118	966	216	53	15	284	1,280
		26	1	25	2	3	199,089	2,288	2,376	192	4,856	560	475	116	1,151	6,007
	3	...	3	...	...	23,405	244	270	26	542	101	33	4	134	680
	2	2	...	...	...	52,595	224	280	11	515	191	74	12	257	712
	22	2	20	...	...	112,777	1,119	1,188	21	2,528	619	410	70	1,190	3,427
TOTAL	53	6	48	2	3	387,806	3,875	4,114	252	8,241	1,471	972	202	2,345	10,883	

Madras	Vinagapatam	4	...	4	...	...	2,778	71	46	7	124	74	49	10	133	257
	GRAND TOTAL (MANGANESE) FOR 1919.	59	7	52	2	3	420,184	4,482	4,502	377	9,361	1,761	1,074	227	3,069	12,423
	" " OF PRECEDING YEAR.	58	5	53	...	...	415,357	5,390	5,160	316	10,896	1,731	1,031	193	2,917	13,443
	DIFFERENCE . . .	+1	+2	-1	+2	+3	+4,827	-908	-658	+31	-1,535	+28	+43	+41	+115	-1,420
	D.—LIMESTONE. Tons.															
Central Provinces	Bilaspur	1	...	1	...	-	4,396	29	62	3	94	22	10	...	32	126
	Jabalpur, Katni	29	1	28	...	...	133,016	659	1,130	35	1,824	163	243	19	427	2,231
	TOTAL	30	1	29	...	...	137,412	688	1,192	38	1,918	187	253	19	459	2,357
Panjab	Hoshiarpur	1	...	1	...	...	9,428	23	...	...	23	25	...	2	27	50
	GRAND TOTAL (LIMESTONE) FOR 1919.	31	1	30	...	...	146,840	711	1,192	38	1,941	212	253	21	486	2,427
	" " OF PRECEDING YEAR.	26	1	25	...	...	131,451	573	921	32	1,526	240	260	24	524	3,050
	DIFFERENCE . . .	+5	...	+5	...	...	+15,389	+138	+271	+6	+415	-28	-7	-3	-38	+377
	E.—SALT. Tons.															
Panjab	Jhelum	2	1	1	...	...	154,168	419	325	56	800	72	1	...	73	873
	Mianwali	1	...	1	...	...	5,529	38	...	11	49	...	...	...	...	49
	Shahpur	1	1	...	...	...	15,277	45	31	5	81	...	...	...	...	81
	GRAND TOTAL (SALT) FOR 1919.	4	2	2	...	...	174,974	502	356	72	930	72	1	...	73	1,003
	" " OF PRECEDING YEAR.	4	1	3	3	5	158,513	508	321	80	909	71	...	...	71	980
	DIFFERENCE . . .	...	+1	-1	-3	-5	+16,461	-6	+35	-8	+21	+1	+1	...	+2	+23

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 1919—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.			
								Adult males.	Adult females.	Children (under 13).	Total below ground.	Adult males.	Adult females.	Children (under 13).	Total above ground.				
Barma	Mogok	4	2	2	F.—GEMS.		Carats. 88,847	850	...	...	850	469	...	...	469	1,319
	Mogok				(a) Rubies.												3	4	47,286
	Mogok				(b) Sapphires.												22,444
	Mogok	(c) Spinels.		...	...	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	4	2	2	3	4	158,577	850	...	...	850	469	...	...	469	1,319
	GRAND TOTAL (GEMS) FOR 1919	4	2	2	3	4	158,577	850	...	...	850	469	...	...	469	1,319
" " OF PRECEDING YEAR	3	2	1	...	...	164,115	778	...	...	778	522	...	...	522	1,800	
DIFFERENCE	+1	...	+1	+3	+4	-5,538	+72	...	...	+72	-53	...	...	-53	+19	
Bihar and Orissa	Monghyr	5	...	5	...	...	Tons. 3,033	148	161	29	338	67	...	...	67	405
	Gerdaspur	1	...	1	...	...	84	6	...	...	6	...	...	...	...	6
Panjab	Gurgaon	5	...	5	...	...	2,651	109	...	65	174	35	...	...	43	217
	Kangra	4	...	4	...	...	5,323	112	...	...	112	20	32	16	63	180

		TOTAL	10	...	10	...	...	8,038	227	...	65	202	55	33	21	111	403
		GRAND TOTAL (SLATE) FOR 1919.	15	...	15	...	...	11,091	375	161	94	680	122	32	24	178	808
		" " OF PRECEDING YEAR.	15	...	15	...	...	9,935	343	78	77	498	115	51	26	192	690
		DIFFERENCE . . .	...	...	...	...	...	+1,156	+32	+83	+17	+132	+7	-19	-2	-14	+118
		H.—GOLD.															
Bihar and Orissa . . .	Singhbhum		1	1	...	...	...	Ozs. 173	59	17	...	76	62	88	7	152	228
Madras	Anantapur		3	3	...	...	...	11,018	114	...	...	114	329	60	51	440	554*
		GRAND TOTAL (GOLD) FOR 1919.	4	4	...	...	...	11,191	173	17	...	190	391	143	58	592	762
		" " OF PRECEDING YEAR.	4	3	1	...	...	10,916	530	11	...	541	440	140	66	646	1,187
		DIFFERENCE . . .	...	+1	-1	...	...	-8,725	-857	+6	...	-351	-49	+3	-8	-51	-405
		I.—IRON ORE.															
Bihar and Orissa . . .	Singhbhum		2	1	1	...	...	Tons. 100,210	362	291	73	726	175	80	5	260	986
Central Provinces . . .	Jabalpur		1	...	1	...	...	1,112	20	55	15	90	20	10	10	40	130
Rajputana	Ajmer-Merwara		1	...	1	...	...	...	2	...	...	2	...	...	...	...	2
		GRAND TOTAL (IRON) FOR 1919.	4	1	3	...	...	101,322	364	346	88	818	195	90	15	300	1,118
		" " OF PRECEDING YEAR.	5	1	4	...	...	115,890	482	358	72	912	523	67	7	327	1,239
		DIFFERENCE . . .	-1	...	-1	...	...	-14,568	-68	-12	+16	-94	-328	+23	+8	-27	-121

*Includes figures for silver.

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 1919—contd.

PROVINCES.	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.
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.	
Bihar and Orissa	Singbhum	1	...	1	...	...	30	9	2	...	11	8	1	...	9	20
Burma	Mergui	2	...	2	...	...	3,056	224	...	...	224	284	22	...	806	530
	Tavoy	109	4	105	6	7	54,394	4,810	27	8	4,845	3,169	240	92	3,401	8,336
	Thaton	11	1	10	...	...	630	355	75	28	458	215	130	25	370	828
	TOTAL	122	5	117	6	7	58,079	5,389	102	36	5,527	3,668	392	117	4,167	9,694
	GRAND TOTAL (WOLFRAM) FOR 1919.	123	5	118	6	7	58,109	5,398	104	36	5,538	3,668	393	117	4,176	9,714
	" " OF PRECEDING YEAR.	114	5	109	33	81	72,189	5,376	133	50	5,559	4,279	407	133	4,810	10,378
	DIFFERENCE	+9	...	+9	-27	-74	-14,080	+22	-29	-14	-21	-611	-14	-16	-634	-664

		K.—MAGNESITE.														
		Tons.														
Madras	Salem	1	...	1	...	...	13,013	221	169	361	651	60	...	27	87	738
	TOTAL OF PRECEDING YEAR .	1	...	1	1	1	5,773	105	85	131	321	26	...	6	93	353
	DIFFERENCE . . . . .	...	...	...	-1	-1	+7,239	+116	+84	+130	+330	+34	...	+21	+55	+385
		L.—CHROMITE.														
		Cwts.														
Baluchistan	Zhob	22	...	22	...	...	264,467	226	...	...	226	53	...	...	53	279
Bihar and Orissa	Singhbhum	4	-	4	...	...	16,878	42	51	7	100	47	31	15	86	186
	GRAND TOTAL (CHROMITE) FOR 1919,	26	...	26	...	...	281,343	268	51	7	326	93	31	15	139	465
	" " OF PRECEDING YEAR.	27	...	27	...	...	450,590	203	102	10	315	93	4	1	98	413
	DIFFERENCE	-1	...	-1	...	...	-169,247	+65	-51	-3	+11	...	+27	+14	+41	+52

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 1919—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.								Grand total below and above ground.	
			Worked by mechanical power.	Not worked by mechanical power.	Number of mines inspected.	Number of inspections.		BELOW GROUND.				ABOVE GROUND.					
								Adult males.	Adult females.	Children (under 13).	Total below ground.	Adult males.	Adult females.	Children (under 13).	Total above ground.		
							M.—COPPER ORE.										
Bihar and Orissa	Singbhum	1	1	...	1	3	32,756	642	...	...	642	1,152	782	52	1,986	2,628
Central Provinces	Balaghat	1	...	1	...	...	...	10	12	4	26	4	6	2	12	38
	GRAND TOTAL (COPPER) FOR 1919.	2	1	1	1	8	32,756	652	12	4	668	1,156	788	54	1,998	2,666	
	" " OF PRECEDING YEAR.	3	1	2	1	2	3,619	198	9	...	207	794	312	43	1,149	1,356	
	DIFFERENCE	-1	...	-1	...	+1	+29,137	+454	+3	+4	+461	+362	+476	+11	+849	+1,310	
							N.—BAUXITE.										
Central Provinces	Jabalpur	1	...	1	...	...	33,640	52	68	1	121	4	...	...	4	125
	TOTAL OF PRECEDING YEAR	1	...	1	...	...	23,840	45	70	1	116	4	...	...	4	120
	DIFFERENCE	...	...	...	...	...	+9,800	+7	-2	...	+5	...	...	...	...	+5

		O.—CLAY.					Tons.										
Bihar and Orissa	Bhagalpur	2	...	2	...	...	651	60	31	...	91	78	51	21	153	214
	Mantham	1	1	...	...	...	31,584	72	55	24	152	96	80	48	224	376
	Palamau	1	...	1	...	...	6,274	27	13	11	51	61	31	20	108	159
	TOTAL	4	1	3	...	...	38,409	159	100	35	294	228	168	89	485	779
Central Province	Jabalpur	4	2	2	...	...	60,037	412	571	30	1,025	48	...	...	48	1,073*
Delhi	Delhi	1	...	1	...	...	714	8	...	...	8	8	4	...	12	20
	GRAND TOTAL (CLAY) FOR 1919.	9	3	6	...	...	99,760	579	674	74	1,327	284	172	89	545	1,873
	" " OF PRECEDING YEAR.	9	2	7	...	...	91,392	318	281	53	682	222	181	14	417	1,079
	DIFFERENCE . . . . .	...	+1	-1	...	...	+8,368	+261	+393	+21	+665	+62	-9	+75	+128	+793
		P.—GALENA.					Cwts.										
Central Provinces	Drug	1	...	1	...	...	50	5	10	...	15	5	10	...	15	30
	TOTAL OF PRECEDING YEAR .	1	...	1	...	...	60	4	10	..	14	2	10	...	12	26
	DIFFERENCE . . . . .	...	...	...	...	...	-10	+1	...	...	+1	+3	...	..	+3	+4
		Q.—TIN.					Cwts.										
Bihar and Orissa	Hazaribagh	1	1	...	...	...	...	34	31	28	93	31	26	22	79	173
Burma	Mergui	2	...	2	...	...	689	37	6	...	43	10	3	...	13	56
	Tavoy	4	1	3	...	...	12,741	47	10	4	61	83	...	...	88	149
	Thaton	1	...	1	...	...	601	15	10	5	30	5	...	...	5	35
	TOTAL	7	1	6	...	..	14,011	99	26	9	134	103	3	...	106	240
	GRAND TOTAL (TIN) FOR 1919.	8	2	6	...	...	14,011	138	57	37	227	134	29	23	185	412
	" " OF PRECEDING YEAR.	4	1	3	...	6	12,023	188	10	...	198	196	24	5	225	423	
	DIFFERENCE	+4	+1	+3	-3	-6	+1,988	-55	+47	+37	+29	-02	+5	+17	-40	-11	

*Includes figures for fuller's earth.

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 1919—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.	
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.		
R.—STEATITE.																	
Central Provinces	Jabalpur	3	...	3	...	...	Cwts. 29,041	64	40	...	110	17	41	11	69	179
Madras	Kurnool	1	...	1	...	...	81	3	7	...	10	4	2	...	6	16
	GRAND TOTAL (STEATITE) FOR 1919	4	...	4	...	...	29,122	67	53	...	120	21	43	11	75	195
	" " OF PRECEDING YEAR.	4	...	4	...	...	61,119	63	46	2	111	24	45	7	76	187
	DIFFERENCE	...	...	...	...	...	-31,997	+4	+7	-2	+9	-3	-2	+4	-1	+8
S.—FULLER'S EARTH.																	
Central Provinces	Jabalpur	Tons. 247	...	(Labour figures included with those for Jabalpur Limestone)								...
	TOTAL OF PRECEDING YEAR	...	...	...	...	...	218	...	...	...	...	...	...	...	...	...
	DIFFERENCE	...	...	...	...	...	+29	...	...	...	...	...	...	...	...	...

Madras	Anantapur . . . . .	...	...	...	T.—SILVER.			Ozs.	...	(Labour figures included with those for Anantapur gold.)							...
							753	...									
	TOTAL OF PRECEDING YEAR . . . . .	...	...	...	...	...	1,169	...	...	...	...	...	...	...	...	...	...
	DIFFERENCE . . . . .	...	...	...	...	...	-416	...	...	...	...	...	...	...	...	...	...
Madras	Nellore . . . . .	...	...	...	U.—SAMARSKITE.			Cwts.	...	(Labour figures included with those for Nellore mica)							...
							2½	...									
	TOTAL OF PRECEDING YEAR . . . . .	...	...	...	...	...	1½	...	...	...	...	...	...	...	...	...	...
	DIFFERENCE . . . . .	...	...	...	-	...	+1	...	...	...	...	...	...	...	...	...	...
Rajputana	Ajmer-Merwara	4	...	4	V.—GRAPHITE.			Cwts.	12	5	...	17	4	1	...	5	23
							103	...	...	...	...	...	...	...	...	...	...
	TOTAL OF PRECEDING YEAR	2	...	2	...	...	20	8	...	...	8	2	5	3	10	18	
	DIFFERENCE	+2	...	+2	...	...	+83	+4	+5	...	+9	+2	-4	-3	-5	+4	
Bihar and Orissa	Puri	1	1	...	W.—OCHRE.			Tons.	12	...	...	12	18	...	13	31	43
							184	...	...	...	...	...	...	...	...	...
	TOTAL OF PRECEDING YEAR	1	1	...	...	...	93	10	...	...	10	12	...	7	19	29	
	DIFFERENCE . . . . .	...	...	...	...	...	+91	+2	...	...	+2	+6	...	+6	+12	+14	
Burma	Tavoy	1	...	1	X.—MOLYBDENITE.			Cwts.	5	...	...	5	5	...	...	5	10
							4½	...	...	...	...	...	...	...	...	...
	TOTAL OF PRECEDING YEAR	1	...	1	...	...	4	10	...	...	10	5	...	...	5	15	
	DIFFERENCE . . . . .	...	...	...	...	...	+½	-5	...	...	-5	...	...	...	...	-5	

APPENDIX I—*concl.*

STATISTICS OF MINES AND MINERALS—*concl.*

Table No. 1—*concl.*

Number of mines regulated by the Indian Mines Act, 1901, number of workers and output of minerals, during the year 1919—*concl.*

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.	
								Adult males.	Adult females.	Children (under 12).	Total below ground.	Adult males.	Adult females.	Children (under 12).	Total above ground.		
							Y.—APATITE.										
							Tons.										
Bihar and Orissa	Singhbhum	1	...	1	...	...	500	115	65	...	180	30	40	...	70	250
	TOTAL OF PRECEDING YEAR	1	...	1	...	...	5,100	45	30	4	79	41	25	5	71	150
	DIFFERENCE . . . . .	...	...	...	...	...	-4,600	+70	+35	-4	+101	-11	+15	-5	-1	+100
							Z.—POTASH.										
							Tons.										
Punjab	Jhelum	83	...	<i>(Labour figures included with those for Jhelum salt, see page 27.)</i>								
	TOTAL OF PRECEDING YEAR	...	...	...	...	...	135	...	...	...	...	...	...	...	...	...
	DIFFERENCE . . . . .	...	...	...	...	...	-52	...	...	...	...	...	...	...	...	...

AA.—BARYTES.

							Cwts.										
Madras	Kurnool	1	...	1	...	...	4,610	4	...	6	10	2	7	1	10	20
TOTAL OF PRECEDING YEAR		1	...	1	...	...	21,000	13	7	...	19	6	16	...	22	41
DIFFERENCE		...	...	...	...	...	-19,300	-8	-7	+6	-9	-4	-9	+1	-12	-21
GRAND TOTAL (ALL MINERALS) 1919.		1,719	502	1,217	312	564	Tons. 22,760,680 Cwts. 482,708 Carats. 158,577 Troy ounces. 11,844	93,830	59,671	3,240	156,741	58,011	29,894	4,510	82,415	249,158	
GRAND TOTAL OF PRECEDING YEAR.		1,627	467	1,160	498	879	Tons. 20,764,515 Cwts. 725,418 Carats. 164,115 Troy ounces. 21,085	91,516	55,442	3,108	150,084	55,703	27,050	4,821	87,874	237,738	
DIFFERENCE		+92	+35	+57	-186	-316	Tons. +1,976,165 Cwts. -262,710 Carats. -5,538 Troy ounces. -9,141	+2,314	+4,220	+134	+6,677	+2,308	+2,844	-411	+4,741	+11,418	

APPENDIX I—contd.

Table No. 2.

Analyses of figures relating to output of coal.

PROVINCE.	District and mineral field.	OPENING STOCKS.		RAISINGS.		TOTAL.		DESPATCHES.		COLLIERY CONSUMPTION.		COAL DELIVERED TO COKING.		CLOSING STOCKS.		COKE MADE.	
		Steam.	Slack.	Steam.	Slack.	Steam.	Slack.	Steam.	Slack.	Steam.	Slack.	Steam.	Slack.	Steam.	Slack.	Hard coke.	Soft coke.
		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Assam	Lakhimpur	1,919	...	259,652	...	261,571	...	254,530	..	3,073	...	493	...	3,476	...	164	...
	Naga Hills	411	...	29,941	...	30,352	...	29,221	...	229	...	...	...	902	...	...	...
	Sibsagar . . . . .	...	30	1,541	...	1,541	30	1,541	30	...	...	...	...	...	...	...	...
	TOTAL	2,330	30	291,134	...	293,464	30	285,292	30	3,302	...	493	...	4,377	...	164	...
Baluchistan	Loralai	10	...	165	...	175	...	155	...	...	...	...	...	20	...	...	...
	Quetta-Pishin	446	987	942	4,914	788	5,901	374	4,454	45	26	...	...	369	1,421	...	...
	Sibi-Khost	205	429	6,156	17,547	6,361	17,976	6,277	12,787	20	4,851	...	...	64	398	...	...
	TOTAL	661	1,416	6,663	22,461	7,324	23,877	6,806	17,241	65	4,877	...	...	463	1,759	...	...
Bengal	Bankura-Raniganj . . . . .	...	921	5,024	1,926	5,024	2,347	4,182	13	834	1,084	...	...	8	1,750	...	...
	Birbhum	219	12	1,434	476	1,653	488	1,379	19	174	469	...	...	100	...	...	...
	Burdwan	270,715	44,025	4,819,063	949,709	5,089,778	999,734	4,092,571	390,776	127,656	522,676	89,888	12,372	770,663	67,910	1,556	80,614
	TOTAL	270,934	44,958	4,825,521	952,111	5,096,455	997,669	4,098,132	390,809	128,664	524,220	89,888	12,372	779,771	69,800	1,556	80,614

Bihar and Orissa	Bokaro Bangaru	17,339	3,333	59,008	123,019	616,437	137,349	383,233	107,983	1,737	7,586	...	8,819	31,481	3,150	20	5,691	
		Hazaribagh { Giridih	13,522	3,539	726,199	223,816	739,721	227,384	715,503	106,681	1,318	56,498	20	60,199	22,580	4,036	45,862	9
		Jharia	41,692	10,803	150,998	25,933	192,690	36,741	101,636	5,915	8,771	8,183	160	4,627	82,133	18,116	1,765	100
	Manbhum { Jharia	931,065	151,432	10,007,955	1,931,928	10,983,120	2,116,358	7,441,302	725,105	333,180	709,798	337,441	338,495	2,876,517	342,600	222,347	140,240	
		Raniganj	167,810	36,577	851,632	179,020	1,022,492	315,597	510,855	82,949	55,588	69,808	153,308	19,356	302,741	43,583	6,759	101,911
	Palamau-Daltonganj	784	956	53,938	9,312	54,722	10,263	49,252	6,380	5,112	3,841	...	...	358	47	...	...
	Sambelpur-Hingir Rampur . . . . .	...	29	36,650	8,924	36,650	8,953	26,397	4,123	10,262	4,801	...	...	1	29	...	...
	Santal-Paraganas. { Jainty	19,030	766	134,727	18,314	153,757	18,950	127,364	4,715	6,658	7,030	...	...	19,835	7,175	...	...
		Raniganj	1,456	569	3,417	375	4,573	944	3,654	306	184	...	...	1,035	638	...	...
TOTAL		1,242,748	211,605	12,566,734	2,551,169	13,809,482	2,762,774	9,559,239	1,041,319	422,810	567,606	490,919	431,498	3,336,464	419,353	276,753	247,951	
Central Provinces	Chanda	821	1,621	97,741	28,625	98,562	30,246	95,010	13,917	2,546	13,683	...	...	1,006	2,046	...	...
	Chhindwara	909	1,181	243,199	42,157	244,168	43,338	241,136	19,926	1,814	21,123	...	...	1,218	2,289	...	...
	Narsinghpur	311	1,558	58,640	26,659	59,951	28,217	54,915	14,053	4,007	8,540	...	...	29	5,624	...	...
	Yeotmal . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	2,101	4,360	399,580	97,441	401,631	101,801	391,001	47,896	8,367	43,346	...	...	2,253	10,559	...	...
North-West Frontier Province.	Hazara . . . . .	...	...	20	...	20	...	20	...	...	...	...	...	...	...	...
Panjab	Jhelum . . . . .	...	3,009	2,398	83,447	2,398	36,456	2,138	32,937	260	1,471	...	...	...	2,048	...	...
	Mianwali . . . . .	...	238	641	5,181	641	5,419	641	4,270	...	...	...	...	...	1,140	...	...
	Shahpur . . . . .	...	1,120	228	4,996	228	6,118	228	4,997	...	87	...	...	...	1,044	...	...
	TOTAL	...	4,367	3,267	43,626	3,267	47,993	8,007	42,194	260	1,558	...	...	...	4,241	...	...
GRAND TOTAL 1919		1,518,774	266,786	18,092,919	3,666,808	19,611,693	3,933,514	14,343,607	1,542,488	563,468	1,441,616	581,300	443,968	4,123,318	605,572	278,473	308,565	

APPENDIX I—contd.

Table No. 3,
Number of mines opened and closed during the year ending 31st
December 1919.

Province.	District.	Number of mines opened.	Number of mines closed.	
A.—COAL.				
ASSAM	Sibsagar . . . . .	...	1
BALUCHISTAN	Loralai . . . . .	...	1
	Sibi-Khost . . . . .	...	1
	TOTAL . . . . .	...	2
BENGAL	Bankura . . . . .	...	1
	Burdwan-Raniganj	13	13	
	TOTAL	13	14	
BIHAR AND ORISSA	Hazaribagh {	Jharia	1	1
		Giridih	1	...
	Manbhum {	Jharia	21	30
		Raniganj	9	4
	Sonthal Parganas, Jainty . . . . .	...	1
TOTAL	32	43		
CENTRAL PROVINCES	Chanda	1	1	
	Cbbindwara	1	4	
	TOTAL	2	5	
PANJAB	Jhelum	2	...	
NORTH-WEST FRONTIER PROVINCE	Hazara . . . . .	...	1
TOTAL (COAL)		49	65	

APPENDIX I—*contd.*

Table No. 3—*contd.*
 Number of mines opened and closed during the year ending 31st
 December 1919—*contd.*

Province.	District.	Number of mines opened.	Number of mines closed.
	B.—MICA.		
BIHAR AND ORISSA	Gaya	9	19
	Hazaribagh	109	124
	Monghyr	3	20
	TOTAL .	121	163
MADRAS	Nellore	28	13
RAJPUTANA	Ajmer-Merwara	28	0
	TOTAL (MICA) .	177	185
	C.—MANGANESE.		
CENTRAL PROVINCES	Balaghat . . . . .	...	5
	Nagpur	1	2
	TOTAL .	1	7
MADRAS	Vizagapatam	1	1
	TOTAL (MANGANESE) .	2	8
	D.—GEMS.		
BURMA	Māgok	1	...

APPENDIX I—*contd.*

Table No. 3—*contd.*
 Number of mines opened and closed during the year ending 31st
 December 1919—*contd.*

Province.	District.	Number of mines opened.	Number of mines closed.
E.—LIMESTONE.			
CENTRAL PROVINCES	Jabalpur	2	4
F.—WOLFRAM.			
BIHAR AND ORISSA	Singhbhum . . . . .	...	1
BURMA	Tavoy	14	57
	Thaton	2	4
	TOTAL BURMA	16	61
	TOTAL (WOLFRAM)	16	62
G.—GOLD.			
MADRAS	Anantapur . . . . .	...	2
H.—COPPER.			
CENTRAL PROVINCES	Balaghat	1	...
I.—CLAY.			
BIHAR AND ORISSA	Bhagalpur	1	1
J.—APATITE.			
BIHAR AND ORISSA	Singhbhum . . . . .	...	1
K.—BAUXITE.			
CENTRAL PROVINCES	Jabalpur . . . . .	...	1

APPENDIX I—*concl.*

Table No. 3—*concl.*
 Number of mines opened and closed during the year ending 31st
 December 1919—*concl.*

Province.	District.	Number of mines opened.	Number of mines closed.
L.—BARYTES.			
MADRAS	Kurnool	1	1
M.—GALENA.			
CENTRAL PROVINCES	Drug	1	1
N.—TIN.			
BIHAR AND ORISSA	Hazaribagh	1	...
BURMA	Tavoy	1	1
	TOTAL (TIN)	2	1
O.—GRAPHITE.			
RAJPUTANA	Ajmer-Merwara	4	1
GRAND TOTAL (ALL MINES)		257	333

APPENDIX I—concl'd.

Table No. 4.

The following table shows the 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, tin, steatite, clay, galena, bauxite, fuller's earth, silver, graphite, molybdenite, ochre, samarskite, apatite, potash, and barytes.

YEAR.	Coal.	Manganese.	Mica.	Limestone.	Salt.	Wolfram.	Gold.	Copper ore.	Iron ore.	Chromite.
	Tons.	Tons.	Cwts.	Tons.	Tons.	Cwts.	Troy ozs.	Tons.	Tons.	Cwts.
1910 .	11,357,716	468,069	21,375	81,258	119,867	18	3,269	864	17,646	6,440
1911 .	12,048,726	441,426	31,686	92,692	124,003	8,394	8,277	2,079	36,801	5,380
1912 .	14,044,368	423,464	41,660	91,784	131,233	25,401	7,269	8,984	79,383	120
1913 .	15,486,918	637,391	43,650	71,259	138,510	27,520	11,019	3,639	98,371	68,280
1914 .	15,727,631	555,672	88,189	146,505	135,518	31,528	19,873	4,400	167,000	60,126
1915 .	16,352,480	378,172	24,063	64,179	144,770	39,432	24,320	8,010	126,617	29,300
1916 .	16,419,082	568,032	35,978	45,290	180,357	59,094	23,235	2,671	142,606	100,980
1917 .	17,326,884	497,052	35,896	82,340	152,542	79,312	22,991	20,108	173,303	345,329
1918 .	19,847,039	415,357	51,572	131,461	158,513	72,189	19,916	3,819	115,890	480,510
1919 .	21,759,727	420,184	41,683	146,840	174,974	58,109	11,191	32,756	101,322	281,343

Table No. 5.

The following table shows the amount of coal raised, the average number of persons working daily and the death-rates during the years 1910 to 1919 in respect of coal mines under the Indian Mines Act, 1901 :—

YEAR.	Amount of coal raised.	Average number of persons working daily below and above ground.	Number of deaths below and above ground.	DEATH-RATES.	
				Per 1,000,000 tons raised.	Per 1,000 persons working daily below and above ground.
1910 . . .	11,387,716	105,285	169	14.05	1.52
1911 . . .	12,048,726	108,598	148	12.28	1.38
1912 . . .	14,044,368	121,302	157	11.17	1.29
1913 . . .	15,486,918	133,042	185	11.96	1.39
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	10.29	1.18
1917 . . .	17,326,884	153,683	163	9.41	1.06
1918 . . .	19,847,039	176,269	197	9.93	1.12
1919 . . .	21,759,727	190,052	260	11.96	1.37

APPENDIX II.
ACCIDENTS IN MINES.

Table No. I.

List of Fatal Accidents in mines regulated by the Indian Mines Act, 1901, during the year 1919.

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.
			EXPLOSION OF FIRE-DAMP (1 death).			
1	4th December, 7-30 A.M.	Nodiha mine, Deshgarih P. O., Bihar and Orissa.	Nodiha Coal Co., Ltd.	Sufal Manjhi, (m.), 35, Coal-cutter.	Coal	Deceased, carrying an open light, ignited a small accumulation of fire damp in an unventilated gallery and was seriously burnt about the body. He died seven days later. Fire-damp had previously never been found at the colliery. Open lights were in use. Inspection and inquiry made. (See Report, page 6.)
			FALLS OF ROOF AND SIDES (170 deaths).			
			(a) Falls of roof (93 deaths).			
2	1st January, 1-30 P.M.	Charki-Khanahie mine, Ganwan P. O., Hazariabagh.	F. F. Chrestien & Co., Ltd.	Kowal Gopo, (m.), 19, Driller.	Mica	Whilst deceased was drilling a shot hole, a mass of schist, weighing about 500 lbs., fell from a height of six feet causing injuries to which he succumbed three days later.
3	1st January, 2-15 A.M.	Craddock mine, Pench P. O., Central Provinces.	Central Pench Coal Co., Ltd.	(1) Anta Gond, (m.), 36, Coal-cutter. (2) Mintoo Gond, (m.), 32, Coolie.	Coal	The two deceased, with another man who was injured, were loading coal in a pillar-cutting area, when a mass of stone, measuring about 3' 6" x 5' x 1' 6", fell from the roof killing them instantly. The injured man sustained a fracture of the leg.
4	11th January, 11-30 A.M.	Hariachak mine, Banajora P. O., Bihar and Orissa.	Jharia Coal Association	Uchab Deswali, (m.), 40, Coal-cutter.	Coal	Deceased passed through a fence, and, whilst cutting coal in the face of a gallery, was killed by a mass of stone, 13' x 7' x 3" to 9" thick, which fell from the roof 8 feet above. Inspection and inquiry made.
5	12th January, 7-45 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodua Coal Co., Ltd.	Bhadri Kora, (m.), 19, Bhaju Kora, (m.), 32, Coal-cutters.	Coal	The two deceased and a woman, who was injured, went down an incline early in the morning before the sirdar had made his inspection, and commenced cutting coal from a 'stook' on the edge of a goaf. A piece of coal fell over from the side of the pillar, knocked out three props and released a mass of roof coal, measuring 12' 0" x 4' 0" x 0' 10", which fell from a height of 9 feet. The two deceased were buried under the fall and sustained serious injuries to which they succumbed immediately. The woman sustained a fracture of the left leg. Inspection and inquiry made. (See Report, page 7.)

APPENDIX II—contd.

Fatal Accidents, 1919—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.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—contd.						
6	23rd January, 7 A.M.	Dadkha mine, Asansol P. O., Bengal.	Dadkha Coal Co.	Khagu Roy, (m.), 45, Underground sirdar; Bhudu Kol, (m.), 31, Coal-cutter.	Coal	The deceased persons went into a goaf from which the timbers had been withdrawn. A mass of roof fell without any warning over an area of 3,200 square feet and buried them. Inspection and inquiry made.
7	26th January, 12 midnight.	Chanch mine, Chirkunda P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Gonesh Manjhi, (m.), 33, Coal-cutter.	Coal	Deceased was working in the face of a gallery, when a triangular mass of stone, measuring 10' 0" x 4' to 5' x 1' 6", fell away from a concealed "slip" at a height of 6 feet. He was struck down and sustained a fracture of the right thigh, and serious internal injuries to which he succumbed one hour later. Inspection and inquiry made.
8	3rd February, 9 P.M.	Chowrassie mine, Dishegarh P. O., Bihar and Orissa.	Equitable Coal Co., Ltd.	Phalu Bauri, (m.), 24, Coolie.	Coal	Deceased was helping to withdraw timbers from a goaf when some of the props were swayed out. He tripped and fell as he was running to safety and was struck by one of the falling timbers. He sustained serious injuries and died two days later. Inspection and inquiry made.
9	11th February, 4 P.M.	Baraboni mine, Ranigunge P. O., Bengal.	Baraboni Coal Concern, Ltd.	Gopal Bauri, (m.), 60, Coal-cutter.	Coal	Deceased went through a fence and commenced cutting coal from the side of a pillar, when a mass of overhanging coal, measuring 15' 0" x 7' 0" x 2' 6", fell upon him from a height of 7 feet. He was killed instantly. Inspection and inquiry made.
10	16th February, 1-30 A.M.	South Bulliari mine, Kusumda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Kartic Singh, (m.), 22, Coal-cutter.	Coal	Deceased passed through a fence and robbed coal from the corner of a pillar. He was killed by a mass of about two tons of roof coal which fell from a height of 7 feet. Inspection and inquiry made.
11	1st March, 9-45 A.M.	Chaitodih mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Kuha Manjhi, (m.), 32; Dukhan Manjhi, (m.), 29, Coal-cutters.	Coal	The two deceased broke down a fence and began to cut coal in the face of a gallery at a fault. They were struck down by a mass of stone, weighing about two tons, which fell from between "slips" in the roof, 9 feet above. Kuha was killed on the spot, and Dukhan died in hospital a few hours afterwards. Inspection and inquiry made.
12	3rd March, 3 A.M.	Sodepur mine, Dishegarh P. O., Bengal.	Bengal Coal Co., Ltd.	Ramsai Mahato, (m.), 30, Stone-cutter.	Coal	A gang of stone-cutters were making height for an endless haulage larding. The timbers had been removed and the roof blasted down. While they were making holes in the side for the fresh timbers, a mass of stone, 13' 0" x 7' 0" x 1' 6", fell from the roof at a height of 9 feet, and killed deceased instantly; another person was injured. Inspection and inquiry made.

13	5th March, 4-30 P.M.	North Singaran mine, Toposi P. O., Bengal.	S. Chowdhury	Tusa Mejhian, (f.), 24, Coal-carrier.	Coal	Deceased was killed by a small piece of coal which fell from a height of about 20 feet, shortly after roof coal had been blasted. The stone struck her on the head and caused injuries from which she died five hours later. Inspection and inquiry made.
14	7th March, 5 A.M.	Alkusa (South) mine, Kusunda P. O., Bihar and Orissa.	Raniganj Coal Association, Ltd.	Jata Bhakta, (m.), 26, Coal-cutter.	Coal	Deceased was employed in an area where pillars 20 feet in height were being extracted. He was driving a "split", 6 feet in height, through the lower part of a pillar, and had just holed through into the goaf, when a mass of coal, weighing about 5 cwts., fell from between "slips" in the roof. He was struck on the head and killed instantly. Inspection and inquiry made.
15	10th March, 1 A.M.	Baraboni mine, Ranigunge P. O., Bengal.	Baraboni Coal Concern, Ltd.	Lakhi Manjhi, (m.), 25, Coal-cutter.	Coal	Deceased, who was sleeping on the side of a gallery, was struck by a mass of roof coal, which fell without warning from a height of 12 feet. He was killed instantly. Inspection and inquiry made.
16	27th March, 4 P.M.	Nandi mine, Nandi P. O., Bengal.	Nandi Coal Association	Sambhu Manjhi, (m.), 29, Coal-cutter.	Coal	Deceased went through a fence into a disused gallery for the purpose of recovering some coal brought down by a fall of "local" roof. A further fall occurred, part of which struck him, causing serious injuries to which he succumbed fourteen hours later. Inspection and inquiry made.
17	28th March, 4-30 P.M.	Sutikdih mine, Bhujudih P. O., Bihar and Orissa.	Sutikdih Coal Co., Ltd.	Beni Barri, (m.), 36, Coal-cutter.	Coal	Deceased was withdrawn from a gallery on account of unsound roof. He disobeyed orders and returned to the place. He was killed by a mass of stone, 12' 0" x 2' 0" x 1' 3", which fell from the roof 8 feet above. Inspection and inquiry made.
18	29th March, 2 A.M.	Deoghar mine, Karmatar P. O., Bihar and Orissa.	Deoghar Colliery, Ltd.	Babu Lal Dheba, (m.), 36, Roof-dressing coolie.	Coal	Deceased went over a fencing wall into a disused gallery and lay down to sleep. A mass of shaley roof stone fell from a height of five feet, and a piece of it, measuring 2' 0" x 1' 0" x 0' 6", struck him on the head, inflicting serious injuries to which he succumbed almost immediately. Inspection and inquiry made.
19	29th March, 9-30 P.M.	Gopalichuck West mine, Kusunda P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Lakhiram Mahate (m.), 30, Coal-cutter.	Coal	Deceased was employed in cutting side coal in a gallery. A mass of roof coal, measuring 6' 0" x 4' 0" x 2' 0", fell from the roof and killed him. Inspection and inquiry made.
20	31st March, 5-30 A.M.	Bamanband mine, Chora P. O., Bengal.	Bamanband Coal Co., Ltd.	Madhusudan Manjhi, (m.), 36, Coal-cutter.	Coal	Deceased presumably went through a fence into a disused gallery for the purpose of getting some easy coal. His body was found underneath a piece of stone measuring 5' 6" x 1' 6" x 1' 3" which had fallen from a height of eight feet. Death must have been instantaneous. Inspection and inquiry made.
21	4th April, 1 P.M.	Chattadanga mine, Mugna P. O., Bihar and Orissa.	Safya Bhusan Banerjee	Guhiram Korah, (m.), 25, Coal-cutter.	Coal	Deceased was standing on a stool wedging down some roof coal in a gallery 10 feet in height when a piece of coal, measuring 5' 4" x 5' 0" x 2' 4", fell out of a 'pot hole' overhead and killed him instantly. Inspection and inquiry made.
22	7th April, 7-30 P.M.	Binadikatta mine, Samdi P. O., Bengal.	Shew Narayan Marwari	Boul Manjhi, (m.), 36, Sirdar; Suko Manjhi, (m.), 32, Coal-cutter.	Coal	The two deceased went inside a fence into a disused gallery at the edge of a quarry, in order to get some easily won coal from the edge of a pillar. The weakened pillar collapsed and brought down a mass of overlying strata, which killed them instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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—contd.						
23	12th April, 10-30 A.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Sukia Karmi, (m.), 30, Coal-cutter.	Coal	Deceased was in the act of setting a ladder for the shot-firer to examine the roof, after a shot had been fired in roof coal. Several small pieces of roof coal fell on his head and his back from a height of 22 feet, causing injuries from which he died two hours later. The shot-firer had ordered deceased not to go back to the place until further orders, as the roof sounded rather heavy. The shot-firer was in another part of the mine when the accident occurred. Inspection and inquiry made.
24	13th April, 10 A.M.	Maung Pok mine, Tavoy P. O., Burma.	The London Burmese Wolfram Co., Ltd.	Law Lee, (m.), 45; Law Loo, (m.), 40, Miners.	Wolfram	The two deceased were overhand stoping, against orders, in a place where work had been suspended, as it was unsafe. They were killed instantly by a heavy fall of roof.
25	17th April, 5 A.M.	Ena mine, Jharia P. O., Bihar and Orissa.	North-West Coal Co., Ltd.	Agnoo Meah, (m.), 40, Coal-cutter.	Coal	Deceased was cutting floor coal with two other men, when a piece of the roof, about 8' 0" x 6' 0" x 4' 6", fell out from a 'slip' at a height of about 12 feet. The overman, who was present at the time, heard the roof crack and shouted a warning. The two other men escaped, but the deceased was caught and was killed on the spot. Inspection and inquiry made.
26	25th April, 10-30 A.M.	Nyadee and North Kusunda mine, Kusunda P. O., Bihar and Orissa.	Kusunda and Nyadee Collieries, Ltd.	Gendia Chamarin, (f.), 43, Coal-carrier.	Coal	A miner was dressing top coal and was standing on a stool about 6 feet high, and deceased was filling coal at the foot of the stool. A piece of coal, weighing about 80 lbs., suddenly came away. It knocked over the stool and fell upon deceased. She died on the following day. The miner was slightly injured. Inspection and inquiry made.
27	28th April, 9 P.M.	Alkusa (South) mine, Kusunda P. O., Bihar and Orissa.	Raniganj Coal Association, Ltd.	Jalis Mosal, (f.), 20, Coal-carrier.	Coal	Deceased went through two fences and up to the edge of a goaf, when a slab of roof coal, 20' x 6' x 8', fell upon her from the roof, 6 feet above. She was killed on the spot. Inspection and inquiry made.
28	29th April, 4-30 A.M.	Bhagrard mine, Salonpur P. O., Bengal.	Borrea Coal Co., Ltd.	Jungi Mejhian, (f.), 21, Coal-carrier.	Coal	Deceased, in the absence of the sirdar, went through a fence for the purpose of filling loose coal on the edge of a goaf. A fall occurred which knocked out a prop on the goaf edge. Deceased was struck on the head by the falling prop and killed instantly. Inspection and inquiry made.
29	30th April, 6 P.M.	Joyrampore mine, Jharia P. O., Bihar and Orissa.	Joyrampore Agarwala Ramjash	Jhoomak Singh, (m.), 44, Carpenter.	Coal	Deceased was setting a prop when a piece of coal, weighing about 10 lbs., fell on him from a height of 20 feet. He died a few days later. Inspection and inquiry made.

30	2nd May, 12-30 P.M.	West Chandrabad mine, Jharra P. O., Bihar and Orissa.	Ramjash Agarwala	Manu Kora, (m.), 35, Coal-cutter.	Coal	Deceased left his working place and went into a dip gallery, which had been stopped and fenced off for nearly a month on account of bad roof. He went through a fence and was caught by a fall of roof stone, 8' 0" x 3' 6" x 3' 6", which fell from a height of 5 feet. He was killed on the spot. Inspection and inquiry made.
31	6th May, 2 A.M.	Chowrasia mine, Dishergarh P. O., Bihar and Orissa.	Equitable Coal Co., Ld.	Dhanu Manjhi, (m.), 16, Coal-cutter.	Coal	Deceased was filling a basket of coal close to a pillar in course of extraction, when a portion of the roof on the edge of the goaf broke away and swayed out some timbers. One of the falling props struck him on the head. He died two hours later. Inspection and inquiry made.
32	13th May, 11-30 A.M.	Damadapur mine, Nandi P. O., Bengal.	Bengal Coal Co., Ld.	Nathuni Ram, (m.), 42, Stone-cutter.	Coal	Deceased was ordered to dress down a projecting piece of shale on the side of a gallery. He went underneath it in order to examine it prior to getting it down when it fell on to him without warning. He sustained a fractured spine and died a few hours later. Inspection and inquiry made.
33	13th May, 2 P.M.	Damarkunda mine, Chirkunda P. O., Bihar and Orissa.	Bengal Coal Co., Ld.	Makai Mejhian, (f.), 23, Coal-carrier.	Coal	A portion of the roof, close to a pillar under extraction, was found to be unsound. The sirdar fenced the place off, pending the erection of timbers. Whilst the carpenter was preparing props, a stone, measuring 4' 0" x 4' 0" x 1' 4", fell from a height of 7 feet and struck deceased who was standing close to the fence. She was killed instantly. Inspection and inquiry made.
34	16th May, 3-30 P.M.	Choitodih mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ld.	Dukhu Bauri, (m.), 27, Coal-cutter.	Coal	Whilst deceased was working at the face of a gallery, 12 feet wide and 6 feet high, a mass of roof stone, 80' 0" x 7' 0" x 3' 0", fell from between two parallel 'slips.' He was killed instantly. Inspection and inquiry made.
35	17th May, 6 A.M.	Bhuggatdih mine, Jharra P. O., Bihar and Orissa.	Bengal Nagpur Coal Co., Ld.	1. Krija Mahata, (m.), 24, 2. Fngoo Meah, (m.), 24, 3. Bonary Meah, (m.), 25, Coal-cutters ; 4. Koodia Mahatan, (f.), 25, Coal-carrier.	Coal	A gang of eight persons, entered a goaf which had been abandoned and fenced off four days before. They passed through a fence and whilst engaged in loading fallen coal, a mass of roof coal, 20' 0" x 20' 0" x 3' 6", fell upon them. The four deceased were killed instantly and one other man was seriously injured. Inspection and inquiry made. (See Report, page 7.)
36	22nd May, 5 P.M.	West Tetturiya mine, Katrasgarh P. O., Bihar and Orissa.	West Tetturiya Collieries, Ld.	Budloo Meah, (m.), 37, Mining Sirdar.	Coal	Deceased was drawing timber from a place which had just been stopped on account of bad roof. He withdrew safely all the props except one, upon which a great deal of weight was thrown, but which he persisted in trying to draw in spite of warnings from his assistant. The roof suddenly came down breaking the prop and killing deceased on the spot. Inspection and inquiry made.
37	23rd May, 10 P.M.	Craddock mine, Pench P. O., Central Provinces.	Central Pench Coal Co., Ld.	Hirjoo Gond, (m.), 35, Timber Mistry.	Coal	Whilst deceased was drawing timber from a goaf, a piece of stone, measuring 14' 0" x 5' 0" x 0' 5", fell from a height of 6 feet. A portion broke away from the main stone and struck deceased, fracturing his skull and killing him instantly.
38	30th May, 10 A.M.	Joyramdanga mine, Asansol P. O., Bengal.	New Beerbhun Coal Co., Ld.	1. Ramsi Bhoorian, (m.), 15, Coal-carrier ; 2. Mogal Bhoorian, (m.), 26, Coal-cutter.	Coal	The roof coal in a working place in a goafing district was found to be unsafe and orders were given for timbers to be set underneath it before allowing miners to work. Several props were set and in the absence of the sirdar, who was measuring others, the deceased contrary to orders commenced to cut down a portion of the unsound roof. A mass of coal, measuring, 10' 0" x 7' 0" x 1' 3", fell from a height of 12 feet on to them killing one of them outright and severely injuring the other who died within a few hours. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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 ROOFS AND SIDE—contd.						
(a) Falls of roof—contd.						
39	30th May, 1-45 P.M.	Barelia mine, Chora P. O., Bengal.	Burrakar Coal Co., Ld.	Joy Kumar Roy, (m.), 38, Propping carpenter.	Coal	Deceased was engaged in getting down a slab of stone, measuring 3' 0" x 4' 0" x 0' 7", from the roof of an underground pump room. The stone broke away, fell from a height of 7 feet to the ground and rolled over pinning his left foot against the pump seating. He died of tetanus thirteen days later. Inspection and inquiry made.
40	3rd June, 3-40 P.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Gheraw Musalman, (m.), 85, Sirdar.	Coal	Deceased was killed by a mass of 6 tons of coal which fell suddenly from the roof at a cross road. Inspection and inquiry made.
41	11th June, 8-30 P.M.	Jamuria mine, Nandi P. O., Bengal.	Equitable Coal Co., Ld.	Jota Manjhi, (m.), 30, Coal-cutter.	Coal	Deceased, when in the act of loading a basket with coal, was struck by a mass of roof coal, measuring 8' 0" x 3' 0" x 3' 0", which fell without warning from a 'slip' at a height of 9 feet. He was killed instantly. Inspection and inquiry made.
42	13th June, 3-31 A.M.	Akhalpur mine, Nandi P. O., Bengal.	Hurriladih Coal Company, Ld.	Lakhi Mejhian, (f.), 30, Coal-carrier.	Coal	Some minors were engaged in cutting roof coal on the edge of a large goaf. The roof in the goaf came on 'weight', swayed out sixty props, and released a mass of roof stone. Deceased was trapped under the fall before she could escape and was suffocated. Inspection and inquiry made. (See Report, page 8.)
43	16th June, 11 A.M.	Bhutgoria mine, Jamadoba P. O., Bihar and Orissa.	Aldih Coal Company, Ld.	Jhagroo Mahato, (m.), 35, Prop setter; Sukhoo Manjhi, (m.), 21, Coal-cutter.	Coal	The deceased Jhagroo, a prop setter, although warned not to do so, was sitting under some bad roof stone, preparing timber and the deceased Sukhoo, a coal cutter, was sitting near him. A slab of stone, about 18' 0" x 5' 0" x 0' 8", fell suddenly from a height of 7 feet, killing both the deceased instantly. Another man was injured. Inspection and inquiry made.
44	17th June, 4-30 P.M.	Jamdiha mine, Mohoda P. O., Bihar and Orissa.	Jamdiha Coal Company	Ali Baurin, (f.), 30, Coal-carrier.	Coal	Deceased removed a fence and entered a gallery which had been stopped and fenced on account of bad roof. Whilst she was loading slack coal, a piece of stone 6' 0" x 3' 0" x 1' 6" fell from a height of 7 feet, killing her instantly. Inspection and inquiry made.
45	23rd June, 10 P.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Amaram Gharty, (m.), 25, Coal-carrier.	Coal	Whilst carrying a basket of coal from a "chamber", 30' 0" x 20' 0" x 7' 0", deceased was killed by the sudden fall of about 2 tons of coal from the roof.
46	2nd July, 1 A.M.	Narsamuda mine, Asansol P. O., Bengal.	Sitarampur Coal Company, Ld.	Tini Bantir, (f.), 13, Bailer.	Coal	Deceased was one of six women who were bailing water out of a dip gallery. A mass of shale, measuring 10' 0" x 6' 0" x 0' 8", broke away from the roof at the entrance to the gallery and struck deceased killing her instantly. Inspection and inquiry made.

47	3rd July, 12 midnight.	Central Kurkend mine, Kusunda P. O., Bihar and Orissa.	Central Kurkend Coal Company, Ld.	Chuni Kaharin, (f.), 43, Coal-carrier.	Coal	Deceased entered a working place whilst it was temporarily stopped for timbering, and, whilst the miners and their loaders, of whom she was one, were sitting in a gallery near by, waiting for the carpenter to put up timber, some roof and stone, about 5' 0" x 2' 6" x 1' 0", fell out at some 'slips' from a height of about 7 feet. She sustained injuries to which she succumbed 6 days later. Inspection and inquiry made.
48	4th July, 6 A.M.	Kirkend mine, Kusunda P. O., Bihar and Orissa.	Motiram Coal Company	Manarath Roy, (m.), 40, Coal-cutter.	Coal	Deceased was standing on a stool, 8 feet high, cutting an ironstone nodule out of roof coal when his pick glanced off and he over balanced himself and fell off the stool. The nodule which he had released also fell a moment afterwards and struck him on the back of his head killing him instantly. The nodule was 2' 0" x 1' 6" x 1' 3" and weighed about 400 lbs. It fell from a height of 14 feet. Inspection and inquiry made.
40	11th July, 12 noon.	Sodepur (Outerop) mine, Sitarampur P. O., Bengal.	Bengal Coal Company, Ld.	Duli Mejhian, (f.), 28, Coal-carrier.	Coal	Deceased, whilst carrying a basket of coal along a travelling road, was struck by a piece of coal, 4' 0" x 2' 0" x 0' 10", which fell from the side of a pillar at a height of 14 feet. She was killed instantly. Inspection and inquiry made.
50	12th July, 5-30 P.M.	Damudapur mine, Nandi P. O., Bengal.	Bengal Coal Company, Ld.	Jagu Meah, (m.), 42, Coal-cutter,	Coal	Deceased, contrary to orders, went through a fence and commenced to rob coal from a wedge shaped 'stook', 8' 6" x 1' 6" x 11 feet high. The 'stook' collapsed and deceased was struck by the falling coal before he could escape. He died from his injuries three days later. Inspection and inquiry made.
51	30th July, 8-30 A.M.	Baraboni mine, Asansol P. O., Bengal.	New Beerbhum Coal Co., Ld.	Dhona Manjhi, (m.), 40, Coal-cutter.	Coal	Deceased was loading into a basket some coal, robbed from the bottom of a pillar, when a nodular piece of coal, weighing about 30 lbs., fell from the roof at a height of 13 feet and struck him on the back fracturing his spine. He died shortly after. Inspection and inquiry made.
52	6th August, 11-30 P.M.	Chatabar mine, Nagma P. O., Bihar and Orissa.	Chatabar Colliery, Ld.	Noni Mejhian, (f.), 18, Coal-carrier.	Coal	Deceased was picking up coal in the face of a gallery, when a piece of shale, measuring 6' 0" x 5' 0" x 2' 0", fell without warning from the roof at a height of 7 feet and struck her, killing her instantly. Inspection and inquiry made.
53	11th August, 2-30 P.M.	Chanck mine, Chirkunda P. O., Bihar and Orissa.	Bengal Coal Company, Ld.	Bhakta Manjhi, (m.), 27; Hopna Manjhi, (m.), 28, Coal-cutters.	Coal	The deceased were instructed to dress down some overhanging coal in a gallery. One of them, contrary to orders, commenced undercutting at the side of a pillar, beneath the overhanging coal. He thus released a mass of roof coal, measuring 5' 0" x 0' 0" x 3' 0", which fell on to him from a height of 6 feet, killing him instantly. His companion, on hearing the coal breaking away, attempted to drag him into safety and was himself struck by the fall and sustained serious injuries to which he succumbed two hours later. Inspection and inquiry made.
54	1st September, 10 A.M.	New Tetturiya mine, Katraagarh P. O., Bihar and Orissa.	New Tetturiya Coal Co., Ld.	Munshi Dosadh, (m.), 26, Lino coolie. Ganloo Teli, (m.), 45, Bailing coolie.	Coal	Whilst tubs were being pushed in a gallery, 12 feet wide and 8 feet high, one of the tubs knocked out a prop and brought about a fall of roof stone, 1' 6" thick over an area 20 feet long and 8 feet wide. The two deceased were killed instantly, one other man was seriously injured and two others were slightly injured. Inspection and inquiry made.
55	2nd September, 1 P.M.	Nodiha mine, Dishegarh P. O., Bihar and Orissa.	Nodiha Coal Co., Ld.	Budhon Manjhi, (m.), 12, Coal-carrier.	Coal	Deceased was filling a basket of coal close to a pillar in course of extraction when a piece of overhanging shale, measuring 2' 6" x 1' 6" x 0' 4", fell from a height of 6 feet and struck him. He sustained serious injuries and died on the following day. Inspection and inquiry made. (See Report, page 7.)

APPENDIX II—contd.

Fatal Accidents, 1919—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—contd.						
56	7th September, 12-30 P.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Patu Maharaj, (m.), 48, <i>Underground Sirdar</i> ; Megna Napit, (m.), 38, <i>Line mistry.</i>	Coal .	The deceased were engaged in erecting a timber cog on a haulage incline when a mass of roof coal, about one ton in weight, fell without warning from a height of 14 feet. They were struck by the falling coal and sustained serious injuries to which they subsequently succumbed. Inspection and inquiry made.
57	10th September, 1 A.M.	Nandi mine, Nandi P. O., Bengal.	Adjai Coal Company, Ltd.	Choti Suki Mejhian, (f.), 12, <i>Coal-carrier.</i>	Coal .	Deceased and four other women were loading fallen roof coal in a gallery when a mass of shale, measuring 14' 0" x 6' 0" x 0' 8", fell on to them from the roof at a height of 11 feet. Deceased died one hour later as a result of her injuries. The others escaped with minor injuries. Inspection and inquiry made.
58	25th September, 2-15 P.M.	Nodhia mine, Dishergarh P. O., Bihar and Orissa.	Nodhia Coal Co., Ltd.	Holu Bauri, (m.), 36, Protap Bauri, (m.), 28, Panu Bauri, (m.), 30, Kangal Mullick, (m.), 40, <i>Coal-cutters</i> ; Purna Mullickain, (f.), 35, Kumoda Mullickain, (f.), 16, Nani Mullickain, (f.), 48, <i>Coal-carriers.</i>	Coal .	The last pillar of a panel was being extracted in a seam having an inclination of 24°. Five miners and three coal-carriers were at work in the place. A mass of 'local' roof, 2 feet in thickness, broke away without warning from a height of 7 feet, completely swayed out the timbers, and buried the deceased. Subsequently a further fall occurred which prevented the rescue party from saving those who were not killed outright by the first fall. Inspection and inquiry made. (<i>See Report, page 8.</i>)
59	30th September, 11-30 A.M.	Murhidih mine, Mohuda P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Harkoo Napit, (m.), 22, <i>Timbering coolie.</i>	Coal .	Deceased was cutting a hole for a prop to be set under some shaley coal when some of this band, about 8' x 4' x 3" thick, suddenly fell off at a 'slip' from a height of 6 feet. Some of the pieces struck him on the head and fractured his skull, killing him instantly. Inspection and inquiry made.
60	7th October, 5-30 P.M.	Rampur mine, Jharsaguda P. O., Bihar and Orissa.	Hingir Rampur Co., Ltd.	Birato Gandain, (f.), 35, <i>Tub loader.</i>	Coal .	Deceased entered a gallery immediately after a shot had been fired. She was struck by a fall of roof, 6' 0" x 3' 0" x 1' 0", and succumbed to her injuries two hours later. She was one of a gang of loaders that had been warned by the shotfirer not to enter this gallery until the roof had been

61	8th October, 3-30 A.M.	Kendwadih mine, Kusunda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Ram Manjhi, (m.), 20, Coal-cutter.	Coal .	Deceased and another coal-cutter were employed in cutting roof coal in a gallery 11 feet high. Whilst they were filling coal into baskets, a mass of coal and shale, weighing about 1½ cwt., fell upon them. Deceased died a few hours later. The other man was seriously injured. Inspection and inquiry made.
62	17th October, 8 A.M.	Rajhara mine, Rajhara P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Jhouria Noonis, (m.), 16, Coal-cutter.	Coal .	Deceased left his proper working place, and, breaking down two fences, went into an area of pillars which had been fenced off some months before. He began cutting coal from the side of an old pillar and brought about a fall of roof stone and side coal from a height of 9 feet. A portion of this fell upon him and killed him instantly. Inspection and inquiry made.
63	20th October, 1 P.M.	Sijas mine, Sijua P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Badar Ali, (m.), 45, Coal-cutter.	Coal .	Deceased passed through a fence and was robbing coal from the corner of a pillar. This brought about a fall of roof stone, nearly a ton in weight, from a height of 9 feet. He was killed instantly. Inspection and inquiry made. (See Report, page 7.)
64	1st November, 12-30 P.M.	Sudamdih mine, Bhujudih P. O., Bihar and Orissa.	Sudamdih Coal Co., Ltd.	Kurjoo Roy, (m.), 36, Coal-cutter.	Coal .	Deceased left his working place and, passing through a fence, entered an area of disused workings. Whilst he was robbing coal from a pillar, an area of roof stone, measuring 12' 0" x 12' 0" x 1' 6", fell upon him from a height of 15 feet. He died shortly after. Inspection and inquiry made.
65	4th November, 7 A.M.	Nandi mine, Nandi P. O., Bengal.	Adjai Coal Co., Ltd.	Lafar Mahato, (m.), 32, Carpenters' Coolie.	Coal .	Timbers were being withdrawn on the edge of a goaf when a fall of roof occurred inside the goaf. A piece of stone rolled down and knocked out one of the props which struck the injured man before he withdrew to safety. He sustained serious injuries to the skull from which he died two days afterwards. Inspection and inquiry made.
66	6th November, 9-45 A.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., Ltd.	Gonesh Turi, (m.), 48, Timber-man.	Coal .	Whilst deceased was taking out timber, preparatory to dropping roof coal, he was partly buried by a mass of roof coal, which fell upon him from a height of 6 feet. He succumbed to his injuries a few hours later. Inspection and inquiry made.
67	12th November, 9 A.M.	Khas Jayrampur mine, Jharia P. O., Bihar and Orissa.	Khengarji Trikoo and Co.	Ram Manjhi, (m.), 45, Miner's Sirdar; Bejnath Kamar, (m.), 35, Coal-cutter; Rasmi Kamin, (f.), 20, Mani Manjhan, (f.), 25, Coal-carriers; Sona Manjhi, (m.), 45, Sirdar; Kadru Manjhi, (m.), 20, Coal-cutter.	Coal .	A miners' sirdar, with two coal-cutters and two coal-carriers, entered a fenced off goaf, from which the timber had been drawn the day before, in order to steal some fallen coal. An overman and a sirdar finding them there, went to call them out. A fall of roof coal and stone, about 30' 0" x 30' 0" x 3' 0" thick occurred, killing four of these persons and seriously injuring two others, one of whom died the next day. Inspection and inquiry made.
68	21st November, 9-30 A.M.	South Bulliari mine, Kusunda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Kub Lal Mosal (m.), 40, Head fitter.	Coal .	Deceased was levelling an iron girder at the inset at the bottom of a shaft, when a piece of roof stone and coal, 7' 0" x 1' 6" x 5' 6" thick, fell from the lip of the shaft, 8 feet above, and killed him instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
FALLS OF ROOF AND SIDES—contd.						
<i>(a) Falls of roof—concl'd.</i>						
69	6th December, 7-30 A.M.	Salarwal mine, Pind Dadan Khan P. O., Punjab.	Ishar Das Kapur and C. Bevan Petman.	Babadar, (m.), 28, Carpenter.	Coal .	Whilst engaged in timbering, deceased was struck by stone falling from the roof at a 'slip'. He sustained injuries which terminated fatally three months later.
70	17th December, 2-30 A.M.	New Kessurgurah mine, Nowgarh P. O., Bihar and Orissa.	New Kessurgurah Coal Co., Ltd.	Chandi Manjhi, (m.), 35, Coal-cutter.	Coal .	Whilst two coal-cutters were sitting down at rest near their working galleries, a slab of shale, 2' x 1' 6" x 6" thick, fell upon them from the roof, at a height of 6 feet. Deceased sustained injuries to the leg and thigh which resulted in death two days later. The other man escaped with a severe cut on the thigh. Inspection and inquiry made.
71	28th December, 2 P.M.	Thitkado mine, Tavoy P. O., Burma.	Osman Mustikhan & Co.	Bijar, (m.), 50, Coolie.	Wolfram .	Deceased was killed by the collapse of a tunnel while he was examining the vein.
<i>(b) Falls of side (75 deaths).</i>						
72	1st January, 2-30 P.M.	Gajarmara mine, Hazariabagh P. O., Bihar and Orissa.	Prithir Raj	Sheikh Tanu, (m.), 35, Minor; Sakra Bhuiya, (m.), 16, Sugia Jolabin, (f.), 24, Stone-carriers.	Mica .	Whilst twelve persons were at work in the bottom of a small quarry, 28 feet deep, a mass of soft schist, 14' 0" x 8' 0" x 3' 6", fell upon them from the overhanging side. They were killed on the spot. Inspection and inquiry made.
73	3rd January, 8-15 A.M.	Tirap mine, Margherita P. O., Assam.	Assam Railways and Trad- ing Co., Ltd.	Eca Hin Fat, (m.), 42, Baska Wallah.	Coal .	Deceased was killed by a fall of side coal in an opening. About two tons fell from an unseen 'slip'.
74	10th January, 12-15 P.M.	Chandametta mine, Pench P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Harilal Mansa, (m.), 22, Stone-cutter.	Coal .	Deceased was killed by a mass of 1½ cwts. of shale, which fell from the side of a sinking shaft, at a height of 8 feet from the bottom.
75	18th January, 3 A.M.	Fularibad mine, Jharia P. O., Bihar and Orissa.	Khas Jharia Coal Co. .	Guru Charan Kora, (m.), 42, Coal-cutter.	Coal .	Deceased was one of a gang of coal-cutters engaged in extracting a pillar 1½ feet in height. Hearing a slight noise he looked upwards, and a piece of coal, about one pound in weight, fell from the top of the pillar and struck him on the nose. He became unconscious, but recovered and was able to walk out of the mine unaided. He died some 12 hours later. Inspection and inquiry made.

76	25th January, 11 A.M.	Wilnos mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Ah. Chu., (m.), 20, Coolie.	Wolfram	Deceased was killed by a fall of side, 3' 6" x 10" x 6' 6" (deep), which fell from the overhanging wall of a lode and broke his back.
77	26th January, 5 A.M.	Sudreadih mine, Nowagarh P. O., Bihar and Orissa.	Jainarain Ramjash, Agarwalla.	Jangli Roy, (m.), 35, Sirdar.	Coal	Deceased broke down a fence and, whilst engaged in robbing coal from a pillar was struck down by a mass of coal, weighing some 10 tons, which fell from the roof and side at a height of 10 feet. His skull was fractured and he died 5 hours later. Inspection and inquiry made.
78	1st February, 5 P.M.	New Kessurgurah mine, Nowagarh P. O., Bihar and Orissa.	New Kessurgurah Coal Co., Ltd.	Charan Manjhi, (m.), 34, Coal-carrier.	Coal	Deceased was employed in carrying coal cut from a bench of roof coal, 7 feet thick, in a gallery already 8' high. Whilst the miner was cutting coal, the deceased, unknown to him, began to load a basket below. About 1 cwt. of coal fell upon deceased causing injuries to which he succumbed six hours later. Inspection and inquiry made.
79	5th February, 9 P.M.	Bullnari mine, Jainadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Kharu Ghatwal, (m.), 16, Coal-loader.	Coal	Deceased and another coal-cutter were employed in cutting a bench of roof coal, 9 feet thick, in a gallery 9 feet high. About 6 cwts. of coal fell from the side at a height of 10 feet. Deceased sustained an injury to the spine which proved fatal within two hours. Inspection and inquiry made.
80	14th February, 8 A.M.	Ipaungdaw mine, Tavoy P. O., Burma.	The High Speed Steel Alloys Mining Co., Ltd.	Yup Chan, (m.), 34, Tributer.	Wolfram	Deceased, who was a tributer, was working in an open cut, against the express orders of his foreman. During a heavy shower of rain, which loosened the ground, about a ton of earth fell on him from the side of the open cut. He was killed on the spot. Inquiry held.
81	22nd February, 4 P.M.	Tagu Mine, Tagu mine P. O., Morgul, Burma.	E. Ahmed	Lock Tannag, (m.), 60, Miner.	Wolfram	Deceased was killed by a fall of side in an open cut.
82	22nd February, 4-15 P.M.	Fularibad mine, Jharra P. O., Bihar and Orissa.	Khas Jharra Coal Co.	Balo Korn, (m.), 34, Coal-cutter.	Coal	Four coal-cutters were engaged in extracting a pillar in a coal seam, 14 feet thick. A rib of coal had been left unworked to keep back fallen stones lying in the "goaf." A massive slab of roof stone rolled down against the rib, broke through it, and knocked out three props. One of the props struck deceased on the head and killed him on the spot. Inspection and inquiry made.
83	23rd February, 12-30 P.M.	Ramnagar mine, Kulti P. O., Bengal.	Bengal Iron & Steel Co., Ltd.	Jitoo Kol, (m.), 48, Amoya Kol, (m.), 35, Coal-cutters; Sujjiya Kolia, (f.), 40, Coal-carrier.	Coal	The three deceased left their working place in a quarry and went to cut in another place. They were killed by a fall of side coal, 9' 0" x 6' 0" x 2' 0", which fell from a height of 10 feet. Inspection and inquiry made.
84	20th February, 9 P.M.	Bhalgora mine, Jharra P. O., Bihar and Orissa.	Bhalgora Coal Co., Ltd.	Radha Kannu, (m.), 40, Coal-carrier.	Coal	A pillar of coal, 30 feet square and 25 feet high, was under extraction. The first cut was being taken from a platform fixed near the roof. Some of the coal-cutters, however, commenced to rob coal from another side of the pillar near the floor. A mass of 8 tons of coal fell from the side, at a height of 10 feet. Deceased was struck by the coal and killed on the spot. Inspection and inquiry made.
85	11th March, 4 P.M.	Tikak mine, Mergherita P. O., Assam.	Assam Railways & Trad- ing Co., Ltd.	Lanting Chainman, (m.), 38, Tub filler.	Coal	Whilst loading a tub deceased was struck by a fall of clay band. He succumbed to an attack of pneumonia 11 days later.

APPENDIX II—contd.

Fatal Accidents, 1919—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 ROOFS AND SIDE—contd.						
(b) Falls of side—contd.						
86	27th March, 6-30 A.M.	Joyrampur mine, Jharua P. O., Bihar and Orissa.	Jainarain Ramjash Agar- walla.	Sadbram Chamar, (m.), 40, Coal-cutter ; Jhilat Chamarin, (f.), 35, Coal-carrier.	Coal	Deceased were employed in a mine where pillars, 22 feet in height, were being extracted. They passed through a fence and whilst cutting and loading coal there, were struck down by a mass of some 4 tons of coal, which fell from a height of 18 feet. They were killed instantly. Inspection and inquiry made.
87	29th March, 9 A.M.	Khas Jharua mine, Jharua P. O., Bihar and Orissa.	Jagannath Ramjash Agar- walla.	Nando Lal Chamar, (m.), 36, Miner's Sirdar.	Coal	Deceased went through a fence into an unused gallery, and whilst he was there a mass of some 18 tons of coal fell from the corner of a pillar, 35 feet high. He sustained injuries to which he succumbed about an hour later. Inspection and inquiry made.
88	24th April, 1 P.M.	Wagon mine, Tavoy P. O., Burma.	Wagon Pachaung Wol- fram Mines, Ld.	Ah Yon, (m.), 29, Miner.	Wolfram	Deceased was killed instantly by a fall of earth from the side of an excavation, from a point fifteen feet above where he was working.
89	9th May, 11-30 A.M.	Derichoung mine, Tavoy P. O., Burma.	Messrs. Tata Sons, Ld.	Bigan, (m.), 35, Mine Coolie.	Wolfram	Deceased was instructed to dislodge a large boulder which was hanging from the lode. He appears to have seen some wolfram in the lode, below the boulder, and attempted to get it. In doing so, the boulder fell on him, from a height of 6 feet and killed him.
90	11th May, 1 P. M.	Het Kantra mine, Bhojudih P. O., Bihar and Orissa.	Govinda Chandra Bose	Kenti Mallik, (f.), 25, Coal-carrier.	Coal	Deceased was employed in a quarry. She passed through a fence and entered a disused part of the quarry. A large fall of side occurred and she was buried beneath it. Her body was recovered a month later. Inspection and inquiry made.
91	13th May, 1-45 P.M.	Aulajhari mines, Bharweli P. O., Central Provinces.	Khan Bahadur Byramji Pestunji.	1. Chotoo Koli, (m.), 15, 2. Lachman Lohar, (m.), 25, Earth-cutters ; 3. Sonu Lohar, (f.), 23, 4. Goneshi Gond, (f.), 30, Carriers.	Manganese	The four deceased and two other persons were ordered to dress down a dangerous overhanging portion of the foot-wall in an open cast mine. In the absence of the mate, they went underneath it and were engaged in getting ore when a portion of the foot-wall, 6 feet in height, broke away and fell over on to them. Lachman Lohar and Sena Lohar were killed on the spot and Chotoo Koli and Goneshi Gond died on their way to Hospital. The two other persons were injured. Inspection and inquiry made.
92	14th May, 6 P.M.	Benahir mine, Jharua P. O., Bihar and Orissa.	Standard Coal Co., Ld.	Ramdhari Misir, (m.), 36, Coal-cutter.	Coal	Deceased was standing on a ladder and dressing the side of a pillar, 27 feet in height. Some of the coal which he dislodged fell upon and broke the ladder. He fell to the ground and was killed instantly. Inspection and inquiry made.

93	10th May, 2 P.M.	Fadauk mine, Tavoy P. O., Burma.	Tata Sons, Ltd.	Balli, (m.), 35, Coolie.	Wolfram .	Deceased was killed in an open cast working by a fall of boulders, which were probably loosened by heavy rain. Another man sustained injuries which necessitated the amputation of his leg.
94	23rd May, 10 A.M.	Kalonta mine, Tavoy P. O., Burma.	Tavoy Concessions, Ltd.	Sardar Khaut, (m.), 45, Coolie.	Wolfram .	Deceased was killed by a fall of half a ton of earth from the side of an open-cut, 5 feet above him.
95	24th May, 2-30 P.M.	Merwara (Plots Nos. 11-47 and 1150) mine, Katni P. O., Central Provinces.	Thakur Ramaiwas Sinha	Kusee, (m.), 65, Labourer.	Limestone .	Deceased was sitting by the side of a quarry where blasting operations had previously been carried out. About 4 cwts. of earth, which had apparently been loosened during the blasting, came away, from a height of 3 or 4 feet, and killed him.
96	29th May, 11 A.M.	Loyabad mine, Bansjora P. O., Bihar and Orissa.	Barakar Coal Co., Ltd.	Jito Bauri, (m.), 30, Sinker.	Coal .	Deceased, with nine other sinkers, was engaged in dressing the sides of a sinking shaft. A piece of stone, weighing about 10 lbs., fell from the side of the shaft and struck him on the head, killing him instantly. Inspection and inquiry made.
97	31st May, 8-30 A.M.	Bamboni mine, Asansol P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Birdhan Manjhi, (m.), 27, Coal-cutter.	Coal .	Deceased under cut the side of a pillar. A mass of coal, measuring 10' 8" x 8' 4" x 3' 3", broke away from a 'slip' and fell over on to him, killing him instantly. Inspection and inquiry made.
98	4th June, 8-30 A.M.	Kurhurbareo mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Company.	Tilki Kolin, (f.), 14, Coal-carrier.	Coal .	Deceased passed through a fence into an area of disused workings. She was struck by coal falling from the side of a pillar, and sustained injuries to which she succumbed shortly afterwards.
99	4th June, 1-30 P.M.	Jamaldi mine, Kulti P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Chandra Bauri, (m.), 35, Trammer.	Coal .	Deceased with a companion was sitting down, sheltering from the sun, at the bottom of a quarry when a portion of the side, which overhung slightly, broke away and fell upon him, from a height of 5 feet, killing him instantly. His companion escaped with a few minor injuries. Inspection and inquiry made.
100	8th June, 4 A.M.	Sitalpur mine, Sitarampur P. O., Bengal.	Bengal Coal Co., Ltd.	Gopal Manjhi, (m.), 30, Coal-cutter.	Coal .	Deceased was found lying under a fall of 2½ tons of side coal which occurred in a disused and forced gallery. He sustained serious injuries to the left arm and foot and died five days later. Coal had been robbed from the side of the pillar where the fall occurred. Inspection and inquiry made.
101	0th June, 2 P.M.	Paonin mine, Dongri P. O., Central Provinces.	Central Provinces Pros- pecting Syndicate, Ltd.	1. Asvee, (f.), 20; 2. Mathri, (f.), 12; 3. Sumathri, (f.), 8; Coolies.	Manganese .	While coolies were removing an old dump of boulder earth, a portion of the dump, measuring 14' 0" x 6' 0" x 8' 6", fell away. The three deceased were buried under the fallen earth and killed.
102	11th June, 7 P.M.	Alkusa South mine, Kusunda P. O., Bihar & Orissa.	Raneegango Coal Associa- tion, Ltd.	Bhatto Rayani, (m.), 30, Coal-cutter.	Coal .	Deceased left his working place and passing through a fence, began to rob coal from the corner of a pillar. A mass of coal, 9' 0" x 6' 0" x 2' 6", fell from the corner of a pillar, 20 feet high, and killed him on the spot. Inspection and inquiry made.
103	22nd June, 8 A.M.	Jambad (East) mine, Chora P. O., Bengal.	East Jambad Coal Concern	Muchiram Manjhi, (m.), 35, Coal-cutter.	Coal .	Deceased broke down a fence and went into a disused gallery to rob coal from the side of a pillar. A mass of side coal, weighing about 2 tons, fell over and a portion of it struck him. He died eighteen hours later of heart failure. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
FALLS OF ROOFS AND SIDE—contd.						
(b) Falls of side—contd.						
104	27th June, 3 A.M.	Toposi mine, Toposi P. O., Bengal.	Bansara Coal Co., Ltd.	Mohuri Baurin, (f.), 19, Kusami Baurin, (f.) 20, Mohini Baurin, (f.) 25, Coal-carriers.	Coal .	The three deceased went through a fence to collect slack coal in some disused workings. A piece of coal, about 2 tons in weight, fell on to them from the side of a pillar, at a height of 25 feet, killing them instantly. Inspection and inquiry made. (See Report, page 9.)
105	28th June, 3 A.M.	Karmatand mine, Nowagarh P. O., Bihar & Orissa.	Sriram Coal Company	Jiton Mahato, (m.), 20, Coal-cutter.	Coal .	Deceased, accompanied by his carrier, went through a fence and began to cut coal from the side of a pillar, 20 feet in height. He was killed by a mass of coal, weighing about 10 tons, which fell from the side, at a height of 12 feet. His carrier was seriously injured. Inspection and inquiry made.
106	30th June	Palauk mine, Palauk, Mergui, Burma.	E. Ahmed	Nga Tun Shwe, (m.), 30, Mining Coolie.	Wolfram .	Deceased was killed by a fall of earth from the side of a hill which was being hydraulically sluiced.
107	6th July, 9 A.M.	Kanbank mine, Tavoy P. O., Burma.	Kanbank (Burma) Wolfram Mines, Limited.	Lee Ngoo, (m.), 32, Miner.	Wolfram .	Deceased whilst at work in an open cut, was killed by a fall of boulders and earth, weighing about half a ton.
108	8th July, 2-30 P.M.	Seetalpore mine, Disbergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Sunia Mejhian, (f.), 14, Coal-carrier.	Coal .	Deceased was loading coal which had been robbed from the corner of a pillar, when a mass of overhanging coal, weighing about 2 tons, broke away from the side of the pillar and fell on to her, killing her instantly. Inspection and inquiry made.
109	11th July, 2 P.M.	Kendwadih mine, Kusunda P. O., Bihar & Orissa.	East Indian Coal Co., Ltd.	Taju Bhuia, (m.), 30, Coal-cutter.	Coal .	Deceased, with two other miners, was dressing overhanging coal on the side of a pillar. Directly against orders, he went under the overhang to throw out some of the fallon coal. About 3 cwts. of coal fell upon him from a height of 15 feet. He was killed on the spot. Inspection and inquiry made.
110	12th July, 2 A.M.	Chanck mine, Chirkunda P. O., Bihar & Orissa.	Bengal Coal Co., Ltd.	Borka Manjhi, (m.), 45, Coal-cutter.	Coal .	Deceased broke down a fence and was robbing coal from the bottom of a pillar, when a mass of side coal, about 2 tons in weight, broke away from a 'slip' and fell upon him. He sustained a fracture of the spine and died five hours later. Inspection and inquiry made.

111	1st August, 2 A.M.	Dhadka mine, Asansol P. O., Bengal.	Dhadka Coal Co.	Bhima Kol, (m.), 32, Coal-cutter.	Coal	Deceased, in spite of being warned not to do so, undercut the coal at the base of a pillar. A piece of coal, measuring 3' 0" x 2' 6" x 1' 0", fell over from a concealed 'slip' and struck him on the head. He died half an hour later. Inspection and inquiry made.
112	3rd August, 3 P.M.	Thingandon mine, Tavoy P. O., Burma.	The Tavoy Concessions, Ltd.	Maung U Kin, (m.), 30, Tributor.	Wolfram	Deceased was killed by a fall of side in an open cut.
113	9th August, 4 A.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Matabhik, (m.), 42, Coal-cutter.	Coal	Deceased broke down a fence and went into a disused gallery to rob coal. A piece of coal, measuring 5' 0" x 5' 0" x 4", broke away from the side and struck him. He sustained a fracture of the spine and died 20 hours later. Inspection and inquiry made.
114	24th August, 4 A.M.	Jharis Khas mine, Jharis P. O., Bihar & Orissa.	Standard Coal Co., Ltd.	Dubraj Singh, (m.), 32 Coal-cutter.	Coal	Deceased was sleeping at the entrance to his working place whilst a coal cutter, with whom he worked, was sitting near him. A piece of coal, weighing about 2 cwt., fell off the side of the gallery, from a height of about 10 feet injuring deceased so severely that he died 3 or 4 hours later. Inspection and inquiry made.
115	16th September, 11-30 A.M.	Satikdih mine, Bhojudih P. O., Bihar and Orissa.	Satikdih Coal Co., Ltd.	Lakhiram Kahl, (m.), 24, Coal-cutter.	Coal	Deceased undercut the corner of a pillar 9 feet from the face of the gallery in which he worked. A mass of coal, about 1 ton in weight, fell upon him and killed him instantly. The gallery was 10 feet high. Inspection and inquiry made.
116	20th September, 4-15 P.M.	Chapui mine, Kulipahari P. O., Bengal.	Maharaja M. C. Nandi	Laln Mahato, (m.), 37, Stone-cutters' Sirdar.	Coal	Deceased was standing at the bottom of a sinking shaft, 143 feet in depth, when a piece of stone, measuring 0' 10" x 0' 5" x 0' 5", fell from the side of the shaft and struck him on the head. He died fifteen minutes later. Inspection and inquiry made.
117	28th September, 6-15 P.M.	Chanoh mine, Barnkar P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Bhaugot Manjhi, (m.), 25; Sukn Manjhi, (m.), 33, Coal-cutters.	Coal	The deceased, in the absence of the sirdar, broke down a fence and were robbing coal from the side of a pillar, when a triangular shaped mass of coal, measuring 7' 0" x 2' 0" x 1' 6", fell over upon them killing them instantly. Inspection and inquiry made.
118	30th September, 7-30 P.M.	Jamadoba mine, (No. 1 Division), Jamadoba P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Sukhada Kora, (f.), 30; Dhani Kora, (f.), 14; Sori Kora, (f.), 20, Coal-carriers.	Coal	The three deceased women were employed in carrying coal in a pillaring district in a coal seam 7 feet thick. They went through a fence and whilst loading loose coal, a mass of overhanging side coal, 10' 0" x 3' 0" x 2' 0", fell upon them and killed them instantly. Inspection and inquiry made.
119	2nd October, 3 A.M.	Jenlgora mine, Jamadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Chatoo Manjhi, (m.), 30, Coal-cutter.	Coal	Deceased left his working place and began to rob coal from the side of a gallery. A slab of iron stone band, weighing about 3 cwt., fell upon him, from a height of 4 feet, killing him instantly. Inspection and inquiry made.
120	7th October, 11 A.M.	Bhelatand mine, Sijun P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Bistu Towari, (m.), 36, Sinker.	Coal	Deceased was working in a pit bottom with 16 other sinkers and a chargeman, when a piece of stone, weighing about 8 lbs., fell from a 'slip' in the side of the shaft, about 120 feet from the bottom. He was struck on the head and killed instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents, 1919—*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 ROOFS AND SIDE—<i>concl'd.</i>						
(b) Falls of side—<i>concl'd.</i>						
121	11th October, 2 P.M.	Pathariachuck mine, Nowgarh P. O., Bihar and Orissa.	Sheo Persan Tewary	Bhiku Rajwar, (m.), 40, Coal-cutter.	Coal	Deceased left his working place in a quarry and undercut the side in a disused part of the quarry. A mass of coal, weighing about 1½ cwts., fell upon him from a height of 5 feet. He sustained injuries to which he succumbed a few hours later. Inspection and inquiry made.
122	18th October, 11 P.M.	Bhulanbararee mine, Jharra P. O., Bihar and Orissa.	Bhulanbararee Coal Co., Ltd.	Sufal Manjhi, (m.), 42, Coal-cutter; Mangli Manjhian, (f.), 16, Coal-carrier.	Coal	The two deceased left their proper working place and, crossing a fence, entered a disused gallery, from the side of which they commenced to undercut some coal. About 2 tons of coal fell suddenly from the side, at a height of 12 feet, near the roof and killed them both on the spot. Inspection and inquiry made.
123	19th October, 1 P.M.	Rakha Hills mine, Rakha Mines P. O., Chota-Nagpur.	Cape Copper Co., Ltd.	Moonusawmy Naidu, (m.), 40, Underground Timber mistry.	Copper	Deceased, who was an experienced timberman, was ordered to take down unsound rock from the hanging wall of a level. Instead of standing in a place of safety he stood underneath the stone. A slab, measuring 4' 0" × 5' 0" × 1½" to 6", fell upon him from the side at a height of 4 feet. He sustained injuries which resulted in death four days later. Inspection and inquiry made.
124	28th October, 10 A.M.	Taungpila mine, Tavoy P. O., Burma.	Quah Cheng Guan	Wong San, (m.), 38, Miner.	Wolfram	Deceased was killed by a fall of earth in an adit in which he was working.
125	22nd November, 5 A.M.	Khas Joyrampur P. O., Jharra P. O., Bihar and Orissa.	Jainarain Ramjash Agar- walla.	Gamari Pankar, (m.), 35, Coal-cutter.	Coal	Deceased passed through a fence into an area of disused workings and began to rob coal from the corner of a pillar, 25 feet high. A mass of coal, weighing about 7 tons, fell from the side at the top of the pillar. He was struck by some of the falling coal and killed instantly. Inspection and inquiry made.
126	30th November, 6-30 A.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Collieries, Ld.	Damraj Koiri, (m.), 19, Stone-cutter.	Coal	Deceased was working in the sump of a sinking shaft, 1,150 feet in depth, when a small piece of stone struck him on the head, causing serious injuries to which he succumbed a few minutes later. Inspection and inquiry made.

127	9th December, 9 P.M.	Duis mine, Manharpur P. O., Bihar and Orissa.	Bengal Iron & Steel Co., Ltd.	Maki Kolin, (f.), 30; Jingi Kolin (f.), 23;	Iron ore	Whilst a gang of 45 persons were engaged in loading ore from a dump, a mass of some 10 tons of ore dust slipped down suddenly and buried the two deceased. Death was due to suffocation. Inspection and inquiry made. (See Report, page 9.)
128	30th December, 2 P.M.	Duis mine, Manharpur P. O., Bihar and Orissa.	Bengal Iron and Steel Co., Ltd.	Roibari Tanti, (f.), 22, Loaders.	Iron ore	Deceased was one of a gang of 27 women, employed in loading iron ore from a dump. She fell down and was found to have sustained a fracture of the skull which caused death within a few minutes. It was presumed that a lump of ore rolled down the dump and struck her, but no one saw this happen. Inspection and inquiry made.
129	31st December, 7 A.M.	New Kendah mine, Jamuria P. O., Bengal.	New Kendah Coal Co., Ltd.	Ram Saran Gope, (m.), 32, Coal-cutter.	Coal	Deceased was robbing coal from the side of a pillar when a mass of coal, weighing about 6 cwts., fell over on to him, killing him instantly. Inspection and inquiry made.

IN SHAFTS, ROPES AND CHAINS BREAKING
—(14 deaths).

130	24th November, 8 A.M.	Khatore South mine, Kusunda P. O., Bihar and Orissa.	Raniganj Coal Association, Ltd.	1. Raghunath Chamar, (m.), 30; 2. Nanoo Dhikai, (m.), 30; 3. Beesan Pankha, (m.), 28; 4. Jungloo Gara, (m.), 25; 5. Bultoo Gara, (m.), 30; 6. Lochan Gara, (m.), 20; Coal-cutters. 7. Majid (m.), 30; Line Khalassies. 8. Ram Varas Gola, (m.), 40; 9. Budan Bauri, (m.), 40; Pump Khalassies. 10. Sarali Moah, (m.), 28; Overman. 11. Sukar Manjhi, (m.), 12; Underground Gate Boy. 12. Lahn Singh, (m.), 25; Tindal. 13. Faguni Moosa, (m.), 32; Trolleyman. 14. Foolkunnari, (f.) 20; Coal-carrier.	Coal	Whilst nine persons were being lowered and twelve persons were being raised in the cages at a shaft, 525 feet deep, the main shackle broke. The cage near the top of the shaft fell to the bottom and struck the other cage. All those in the top cage and four of those in the other cage were killed instantly. Another man succumbed to his injuries on the next day. Two men were slightly injured and five others escaped without injury. Inspection and inquiry made. (See Report, page 9.)
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APPENDIX II—contd.

Fatal Accidents, 1919—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—WHILE ASCENDING OR DESCENDING BY MACHINERY—(8 deaths).						
131	10th January, 7-30 P.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Budhu Manjhi, (m.), 24, Coal-cutter.	Coal	Deceased, with five other persons, was in a cage descending a shaft, 1,100 feet deep, when the engineman caused the cage to shake violently. Deceased fell out of the cage to the shaft bottom, and was killed instantly. Inspection and inquiry made. (See Report, page 11.)
132	24th February, 9-30 A.M.	Nigavalley mine, Kalipahari P. O., Bengal.	The Nigavalley Collieries, Ltd.	Gobinda Bauri, (m.), 24, Khalassie.	Coal	Deceased was descending a shaft in a bucket, and, fearing the ascending bucket was going to collide with it, he attempted to push it away. In doing so he fell to the bottom of the shaft 40 feet below. He was injured internally and died about 6 hours afterwards. Inspection and inquiry made.
133	2nd March; 1 P.M.	South Bulliaree mine, Kuzunda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Dayem Meah, (m.), 28, Pump Khalassie.	Coal	Whilst deceased and another man were being lowered in a bucket at a sinking shaft, 500 feet deep, the winding engineman lost control of the engine. The bucket was dashed violently into water at the shaft bottom. Deceased was struck on the head by the rope capping, and was killed instantly. The other man was slightly injured. Inspection and inquiry made.
134	19th March, 5 A.M.	Kalithan Surataud mine, Jharia P. O., Bihar and Orissa.	Kunjo Behari Seal	Rupan Turi, (m.), 35, Sirdar.	Coal	A goaf, 135 feet square, 21 feet high and 150 feet below the surface, collapsed suddenly to surface. The rush of air caused by the collapse blew the cages up in a winding shaft, 100 feet distant from the goaf. When the cage fell back it broke the winding rope, and the cage fell to the shaft bottom. Deceased, who was being raised in the cage at the time, was killed on the spot. (See Report, page 11.)
135	1st August, 8-30 P.M.	Choitodih mine, Katragarh P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Sukram Manjhi, (m.), 35, Coal-cutter.	Coal	Whilst being lowered in a cage in a winding shaft, 333 feet deep, deceased thinking the cage had reached the bottom, unhooked the safety chain and stepped out. He fell to the bottom 6 feet below and the cage came down upon him killing him instantly. A child who was with him in the cage also fell out and was slightly injured. Inspection and inquiry made.
136	2nd August, 8-30 A.M.	Kirkend mine, Kuzunda P. O., Bihar and Orissa.	R. B. Sircar and Sons	Mahi Mejbhan, (f.), 40, Coal-carrier.	Coal	Deceased, who was being lowered in a shaft, 276 feet deep, stepped out of the cage and fell to the bottom four or five feet below. The cage came down upon her and caused injuries to which she succumbed on the following day. The cage was fitted with safety chains. Inspection and inquiry made.
137	22nd October, 11-30 P.M.	Lutchipore mine, Sitarampur P. O., Bengal.	Lutchipore Coal Co., Ltd.	Pemi Mahata, (f.), 22, Coal-Carrier.	Coal	In the temporary absence of the winding engine man, an unauthorised person attempted to lower a cage, containing five persons, down a shaft over 300 feet in depth. The engine got out of control and the descending cage was dashed violently to the shaft bottom. The deceased sustained injuries to which she succumbed two months later. Inspection and inquiry made.

138	11th December, 10-45 A.M.	Bansjora mine, Bansjora P. O., Bihar and Orissa.	Bansjora Coal Co., Ltd.	Balak Manjhi, (m.), 34, <i>Sinking Sirdar.</i>	Coal	Deceased, whilst being lowered in a sinking shaft, 67 feet deep, lost hold of the rope and fell to the bottom of the shaft, 67 feet below. He was killed instantly. Inspection and inquiry made.
IN SHAFTS—FALLING INTO THE SHAFT FROM THE SURFACE.—(9 deaths).						
139	24th January, 10 P.M.	Borrea mine, Sitarampur P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Kadir Khan, (m.), 35, <i>Coolie.</i>	Coal	Deceased was assisting a carpenter to nail down new flooring planks on the top of a shaft. When in the act of stepping from the planks to 'terra firma', he missed his footing and fell a distance of 235 feet to the bottom of the shaft, and was killed instantly. Inspection and inquiry made.
140	4th February, About 11 A.M.	Burelia mine, Panuria P. O., Bengal.	Burelia Coal Co., Ltd.	Mohamad Ismail, (m.), 25, <i>Chaprassi.</i>	Coal	The body of deceased was found in the sump of an upcast shaft, 290 feet deep. It was presumed that he fell from the fan drift into the shaft.
141	15th February, 6 A.M.	South Baraboni mine, Charanpur P. O., Bengal.	South Baraboni Coal Co.	Dhanu Bauri, (m.), 40, <i>Line Mistry.</i>	Coal	Deceased fell down a shaft, 126 feet in depth, and was killed instantly. The shaft was securely fenced. He was seen leaning over the fence and probably over-balanced. Inspection and inquiry made.
142	26th March, 8 P.M.	East Jambad mine, Ranigunge P. O., Bengal.	East Jambad Coal Concern	Aku Bauri, (m.), 40, <i>Banksman.</i>	Coal	Deceased, when in the act of landing a bucket of water on a platform at the top of a shaft containing 50 feet of water, over-balanced, fell into the shaft and was drowned. Inspection and inquiry made.
143	1st June, 2 P.M.	Jamgram mine, Panuria P. O., Bengal.	Burrakar Coal Co., Ltd.	Hari Pada Singh, (m.), 25, <i>Depot peon.</i>	Coal	The body of deceased was found in the water at the bottom of a discontinued shaft, 430 feet deep. The shaft was securely fenced. Inspection and inquiry made.
144	23rd June, 2-30 P.M.	Central Kenda mine, Toposi P. O., Bengal.	Bajjnath Ram Kumar Marwari.	Khukhi Baurin, (f.), 23, <i>Coal-carrier.</i>	Coal	Deceased fell from the top to the bottom of a shaft, 80 feet deep, and was killed instantly. The shaft was fenced. Inspection and inquiry made.
145	30th July, 12-30 P.M.	Pandaveswar Mine, Pandaveswar P. O., Bengal.	Jainty West Coal Co., Ltd.	Posu Bauri, (m.), 35, <i>Stone-cutter.</i>	Coal	Deceased was standing at the top of a sinking shaft, 90 feet in depth, waiting to descend. The trolley was drawn back from the shaft but the temporary fence appears to have been fixed. Deceased went within the temporary fence in order to converse with some one on the opposite side of the pit, lost his footing and fell to the bottom of the shaft. He sustained serious injuries and died half an hour later. Inspection and inquiry made.
146	26th August, 8-30 P.M.	Bhowra Mine, Jamadoba P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Sabrou Mahato, (m.), 22, <i>Banksman.</i>	Coal	Deceased left open the gate at the top of a shaft and on bringing forward another empty tub pushed the tub into the shaft and fell with it to the bottom, 356 feet below. He was killed instantly. It was presumed that he either pushed it further than he intended or was under the impression that the cage had come up again. Inspection and inquiry made.
147	27th October, 7 P.M.	Barareo Mine, Jamadoba P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Kabal Kumar, (m.), 18, <i>Sinker.</i>	Coal	Deceased was raised in the bucket in a sinking shaft and, whilst the banksman were pushing the trolley over the mouth of the shaft, he attempted to jump from the bucket to the trolley. He slipped and fell to the bottom of the shaft 80 feet below. He was killed instantly. He fell upon one of a gang of twelve men who were working in the shaft bottom. This man was injured but recovered. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
IN SHAFTS—FALLING INTO SHAFT FROM PART OF THE WAY DOWN—(5 deaths).						
148	3rd February, 9 A.M.	Bhelatand mine, Sijua P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Basu Manjhi, (m.), 25, <i>Sinker.</i>	Coal .	Deceased with three other sinkers and a European assistant were lowered in a bucket in a sinking shaft to a depth of 360 feet, where there was a suspended scaffold from which they intended to work. One of the sinkers got out of the bucket and on to the scaffold, and deceased, in attempting to do so, slipped between the bucket and the scaffold and fell to the shaft bottom 95 feet below. He was instantly killed. Inspection and inquiry made.
149	7th February, 9-30 A.M.	Malkera mine, Katrasgarh P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Ugni Turin, (f.), 32, <i>Coal-carrier.</i>	Coal .	Six persons entered a cage and were lowered in a shaft, 530 feet deep. The cage was stopped at a pump station about half way down where a fitter got out. Deceased, presumably thinking that the cage had reached the bottom of the shaft, stepped out, fell to the bottom of the shaft, and was killed instantly. Inspection and inquiry made.
150	3rd March, 4-30 A.M.	Hatgarooie mine, Sitarampur P. O., Bengal.	Lutchipore Coal Co., Ltd.	Hiron Kolo, (m.), 23, <i>Coal-cutter.</i>	Coal .	Deceased fell out of a cage while descending a shaft at night. It is not known why he fell out, but the evidence points to the fact that he had been asleep and was probably half asleep when he fell. Inspection and inquiry made.
151	22nd March, 8-20 A.M.	Jamodaba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Sonar Ram Mahato, (m.), 20, <i>Surveyor's Khalassie.</i>	Coal .	Deceased, whilst attempting to enter the cage at a mid inset in a shaft, 306 feet deep, slipped between the cage and the platform, and, falling to the bottom of the shaft, was killed instantly. Inspection and inquiry made.
152	26th July, 9 P.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ltd.	Jungli Bhuian, (m.), 41, <i>Miner's Sirdar.</i>	Coal .	Deceased, whilst being lowered in a shaft, 165 feet deep, fell from the cage to the shaft bottom and sustained injuries to which he succumbed three hours later. By mistake a loaded tub had been placed in the ascending cage but as the catch had not been placed in position the tub fell from the cage, the resulting jerk caused deceased to fall from the descending cage. Inspection and inquiry made.
IN SHAFTS—THINGS FALLING FROM THE SURFACE—(2 deaths).						
168	24th February, 11-0 A.M.	Kustore (North) mine, Kusunda P. O., Bihar and Orissa.	Raniganj Coal Association, Ltd.	Raju Bauri, (m.), 35, <i>Sinker.</i>	Coal .	A blasting sirdar, whilst preparing fuses at the top of a sinking pit, allowed his knife to slip through a crevice, 4" wide, in the planking covering the top of the shaft. Seventeen men were at work in the shaft bottom, 230 feet below. Deceased, who was one of these men, was pierced to the heart by the knife and was killed on the spot. Inspection and inquiry made.

154	20th December, 5 P.M.	West Dohalia mine, Kalipahari P. O., Bengal.	West Dohalia Coal Co.	Gonesh Manjhi, (m.), 34, Coal-cutter.	Coal .	A bucket of coal was being raised from a shaft, 97 feet in depth. Deceased, in spite of being warned not to do so, attempted to put some coal into the empty bucket on the other rope, before the trolley was pushed over the shaft. A piece of coal, weighing about 2 lbs., fell from the loaded bucket and struck him on the head killing him instantly. Inspection and inquiry made.
IN SHAFTS—THINGS FALLING FROM PART OF THE WAY DOWN—(3 deaths).						
155	15th January, 11 P.M.	Bokaro-Jharia mine, Nawagarh P. O., Bihar and Orissa.	Bokaro-Jharia Coalfields, Ld.	Mangal Micah, (m.), 25, Shaft-sinker.	Coal .	Deceased was at work at the bottom of a sinking shaft, 53 feet in depth. Whilst a basket of debris was being raised to the surface, a piece of stone fell from it and struck him on the head. He was killed instantly. Inspection and inquiry made.
156	11th March, 5 A.M.	Lutchipore mine, Sitarampore P. O., Bengal.	Lutchipore Coal Co., Ld.	Radhoo Kumar, (m.), 35, Sinker.	Coal .	Deceased was killed by a piece of stone falling from a bucket in a sinking pit. The bucket was probably overloaded. Inspection and inquiry made.
157	15th April, 10 P.M.	Amlabad mine, Jumadoba P. O., Bihar and Orissa.	Eastern Coal Co., Ld.	Bhim Ray, (m.), 34, Hookman.	Coal .	Deceased was a hookman at the bottom of a sinking shaft, 47 feet deep. In sending up a basketful of shale, he slung it slightly crooked and a small piece of shale fell from the basket, struck him on the head and killed him instantly. Inspection and inquiry made.

IN SHAFTS—MISCELLANEOUS—(6 deaths).

158	21st March, 3-30 P.M.	Bhatdih mine, Mahuda P. O., Bihar and Orissa.	Bengal Bhatdih Coal Co., Ld.	Madhu Teli, (m.), 30, Coal-cutter.	Coal .	Deceased, whilst walking across a pit bottom, was crushed by the descending cage. He sustained injuries to which he succumbed a month later. A proper pass-by was provided. Inspection and inquiry made.
159	31st March, 6-0 A.M.	Bhelatand mine, Sijua P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ld.	Usman Khan, (m.), 25, Pump khalassie.	Coal .	Deceased attended to a steam pump in a sinking shaft, at a depth of 540 feet. He was found lying unconscious in the bottom of the bucket and he died two hours later. The cause of death was obscure. Inspection and inquiry made.
160	15th April, 12 noon.	Lutchipore mine, Sitarampur P. O., Bengal.	Dumuda Coal Co., Ld.	Sukaram Gope, (m.), 30, Coolie.	Coal .	Deceased was found under the cage at the bottom of a shaft, 370 feet deep. It was presumed that he walked under the cage as it was being lowered to the bottom. Inspection and inquiry made.
161	11th July, 11 A.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhun Coal Co., Ld.	Mohan Meah, (m.), 30, Onsetter.	Coal .	Deceased walked under the descending cage in a shaft. The cage came down upon him and killed him instantly. A proper travelling road was provided around the shaft. Inspection and inquiry made.
162	19th July, 1-30 P.M.	Chapui mine, Kalipahari P. O., Bengal.	Maharaja H. C. Nandi	Baboo Jal Muehi, (m.), 42, Stone-cutter.	Coal .	A bucket was being lowered down a sinking shaft. Deceased, who was working at the shaft bottom, was warned to get out of the way. He delayed doing so and the bucket struck a crow bar in his hand and swung against him. He sustained serious injuries to which he succumbed fourteen hours later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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—MISCELLANEOUS—concl'd.						
163	15th August, 12 noon.	Purusathampur, Paudaveswar P. O., Bengal.	Tata Iron & Steel Co., Ltd.	Bishnu Manjhi, (m.), 34, Stone-cutter.	Coal .	The walling scaffold in a sinking shaft was raised and placed on the top of the last length of walling so as to enable another length to be built up. The ends of the main timbers of the scaffold were evidently placed too near the apertures through which they were raised before being placed on the top of the walling and they therefore broke down the newly constructed brickwork, and the scaffold, upon which fifteen men were at work, fell a distance of 90 feet to the bottom of the shaft. All the men on the scaffold escaped injuries excepting deceased who was killed instantly. Inspection and inquiry made. (See Report, page 12).
BY EXPLOSIVES—(7 deaths).						
164	27th January, 1 P.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Company.	Tribhuban Teli, (m.), 20, Stone-cutter.	Coal .	Deceased was drilling a shot hole near another hole in which a shot had misfired. The misfired charge exploded causing serious injuries from which he died six weeks later.
165	10th February, 3-30 P.M.	Tellabada mine, Sydapuram, P. O., Madras.	W. A. Beardsell & Co., Ltd.	C. Penchitgadu, (m.), 35, Coolie.	Mica .	Deceased, with two other men, was ordered to drill a hole near a misfire. He disobeyed orders and attempted to extract the misfired charge which exploded causing injuries which resulted in death nine days later. The other two men received minor injuries.
166	29th May, 1 A.M.	Sor-Range mine, Quetta P. O., Baluchistan.	North-Western Railway .	Ismail, (m.), 40, Coal-cutter.	Coal .	Deceased without waiting for the prescribed period of time, returned to a working in which a misfire had occurred. The charge exploded and he sustained injuries which caused death eleven days later.
167	9th June, 4 A.M.	Bangabari mine, Hazaribagh P. O., Bihar and Orissa.	Rup Narain Ram .	Salai Manjhi, (m.), 30, Coolie.	Mica .	Deceased was drilling a shot hole near an unexploded charge. The misfired charge exploded causing serious bodily injuries to which he succumbed soon after.
168	2nd July, 11-30 A.M.	Borra mine, Kulti P. O., Bengal.	New Beerbhun Coal Co., Ltd.	Mohomed, (m.), 30, Stone-cutter.	Coal .	Four shot holes were charged, primed and lit by a shot-firer. Three of them exploded, but the fourth hung fire. The shot-firer went away to drink water, and in his absence, deceased, who had previously been warned not to do so, went to examine the shot which had not exploded. The charge went off as he was examining it and killed him instantly. Inspection and inquiry made.
169	8th October, 9 A.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ltd.	Sib Charan Passi, (m.), 47, Coal-cutter.	Coal .	Deceased was blasting coal with gunpowder and, after lighting two shots, retired to the next gallery to await the explosions. He heard only one explosion but thought that both charges had exploded together and, after waiting about an half hour, he returned to the place. The second shot exploded hurling about 6 cwt. of coal against him and killing him on the spot. Inspection

170	25th December, 3 P.M.	Rakha Hills mine, Rakha Mines P. O., Bihar and Orissa.	Cape Copper Co., Ltd.	Pirani Nair, (m.), 33, Blaster.	Copper	Deceased, who was an experienced blaster, was engaged in charging shot holes with gelignite in an underground stope. After placing gelignite in six of the nine holes, he was ramming the first two cartridges into the seventh hole by means of a wooden tamping rod, when an explosion occurred. The deceased was killed on the spot. A driller and his labourer were severely injured, and another labourer was slightly hurt. Deceased was using too much force, and the gelignite was probably defective. Inspection and inquiry made. (See Report, page 13).
IRRUPTIONS OF WATER OR FALLING INTO WATER—(1 death).						
171	10th November, 10-30 A.M.	Kalichedu mine, Nellore P. O., Madras.	F. F. Chrestien & Co., Ltd.	Natakarani China Abbi- Gadu, (m.), 40, Coolie.	Mica	Deceased whilst engaged in cleaning the suction pipe of an underground pump, fell into the water and was drowned.
HAULAGE—(41 deaths).						
172	8th January, 9-46 A.M.	Bagdiggi mine, Jharia P. O., Bihar and Orissa.	C. J. Smith	Chota Shambu Gorla, (m.), 20, Tub-pusher.	Coal	Deceased was employed in pushing tubs on a tramming level. Whilst a loaded tub was running down a slight grade he rode on its frame. Derailment occurred, and he was thrown off. His head struck the side of a pillar, and his skull was fractured. Death was instantaneous. Riding on tubs is forbidden at the colliery. Inspection and inquiry made.
173	10th January, 9-30 A.M.	Bhugband mine, Jharia P. O., Bihar and Orissa.	Borren Coal Co., Ltd.	Bhutni Mejhian, (f.), 18, Coal-carrier.	Coal	Whilst a train of ten empty tubs was being lowered on a haulage slope, the front tub became uncoupled and ran wild as far as the landing station. Deceased, who was walking along the landing at the time, was struck by the tub and sustained injuries to the head which caused her death twelve hours later. Inspection and inquiry made.
174	4th February, 1 A.M.	Lodna mine, Jharia P. O., Bihar and Orissa.	Lodna Colliery Co., Ltd.	Maki Mejhian, (f.), 20, Coal-carrier.	Coal	Whilst a train of seven tubs was descending a haulage slope a coupling link fell off and the leading tub ran wild. Deceased was lying asleep at the corner of a landing 130 feet further down the slope. A coal-cutter named Mahanando ran across the road, and whilst trying to awaken the deceased, the tub ran into them. Deceased was killed outright, and the coal cutter sustained a fracture of the thigh. Inspection and inquiry made.
175	5th March, 1 P.M.	Koradih (East) mine, Samdi P. O., Bihar and Orissa.	Koradih Colliery, Ltd.	Bhukhi Deswali, (f.), 14, Coal-carrier.	Coal	Four empty tubs were hauled out of a level and lowered down a main haulage road dipping at 1 in 4. A coupling fell off, and three of the tubs ran wild. Deceased, who was landing a tub at a buffer, about 60 feet below, was struck by the tubs and killed on the spot. Inspection and inquiry made.
176	10th March, 7-15 A.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Robi Pahari, (m.), 30, Tub-filler.	Coal	Deceased attempted to jump on to a train of moving tubs on a haulage road. He fell and was crushed between the tubs and sides of the incline. He sustained injuries to which he succumbed a few hours later. Inspection and inquiry made.
177	12th March, 0-15 A.M.	South East Baraboni Khas mine, Baraboni P. O., Bengal.	Maharaja M. C. Nandi	Lokhi Mejhian, (f.), 14, Coal-carrier.	Coal	Deceased crossed the line in front of a set of tubs which was being lowered into a branch road. Two of the tubs became derailed and struck deceased inflicting serious internal injuries to which she succumbed two hours later. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
HAULAGE—contd.						
178	13th March, 3-30 A.M.	Barkui mine, Pench P. O., Central Provinces.	Pench Valley Coal Co., Ld.	Pachia Gondui, (f.), 20, Coal-filler.	Coal .	Three full tubs, which had not been properly spragged, began to move on a loading level underground. Deceased got frightened and crossed in front of them. She was knocked down and killed.
179	13th March, 8-30 P.M.	Choitodih mine, Sijua P. O., Bihar and Orissa.	Lutchipur Coal Co., Ld.	Sarup Dosadh, (m.), 32, Lisman.	Coal	Deceased, during the temporary absence of the hauling engine-driver, attempted to lower a train of empty tubs on a dip haulage road, but lost control of the engine. The tubs derailed at the cut-rail, and the rope end became detached from the tub. He then reversed the engine, and the rope was wound up rapidly. The capping of the rope struck him on the head, and fractured his skull. He died within a few minutes. Inspection and inquiry made.
180	11th April, 1 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Dhanjoo Teli, (m.), 26, Tub-pusher.	Coal	Deceased was sitting at the foot of an incline. He was struck by a full tub which had run wild because the empty tub had not been properly coupled. He died shortly after. Inspection and inquiry made.
181	17th April, 2 A.M.	Serampur mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Company.	Bodni Jollin, (f.), 14, Coal-carrier.	Coal	Deceased was pushing a tub on an underground tram line when she slipped and was run over by a following tub which was being pushed by other trammers. She sustained a compound fracture of the right leg and died in hospital two days later. Death was said to have been due to influenza and not to the accident.
182	1st May, 9 P.M.	Khost mine, Khost P. O., Baluchistan.	North-Western Railway	(1) Hussain, (m.), 32, Assistant Banksman. (2) Dhaniram, (m.), 30, Carpenter.	Coal	Deceased and another man after rerailing a train of two trams on a haulage plane, dipping at 45°, were following up the train when it suddenly ran back and into them. Hussain was killed instantly and Dhaniram sustained injuries to which he succumbed a month later.
183	16th May, 3-30 A.M.	Mohpani mine, Mohpani P. O., Central Provinces.	Great Indian Peninsula Railway Co.	Sandaria Badhain, (f.), 33, Coal-carrier.	Coal	Deceased, in spite of being warned, went into the landing of a haulage plane and was caught by an incoming train of tubs. She received injuries from which she died a few hours later.
184	26th May, 10 P.M.	Ballarpur mine, Ballarpur P. O., Central Provinces.	Sir Kas'urchand Daga and M. B. Dadabhoi.	Sadhoo, (m.), 35, Trammer.	Coal	Deceased was struck by coal which fell from loaded tubs in collision with a run-away tub. He received injuries to which he succumbed five days later.
185	17th June, 12 noon.	Chowrassie mine, Dishegarh P. O., Bihar and Orissa.	Equitable Coal Co., Ld.	Obilass Bauri, (m.), 26, Hookman.	Coal	A set of loaded tubs was being raised up an incline when the two leading tubs became derailed. Deceased, who was evidently riding on the front coupling, was thrown off and dragged some distance before the engine could be stopped. He sustained serious injuries and died twenty-six hours later. Inspection and inquiry made.

186	19th June, 0-16 A.M.	Bhutgoria mine, Jamadoba P. O., Bihar and Orissa.	Aldih Coal Co., Ltd.	Meghna Gope, (m.), 24, <i>Looseman at curve.</i>	Coal	Deceased was standing at a curve and guiding the first tub of a train of tubs. His foot slipped under the wheel and he sustained an injury which necessitated amputation of the foot. He died in hospital eight days later. Inspection and inquiry made. (See Report, page 13).
187	22nd June, 1 A.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ld.	Dakoo, (m.), 35, <i>Trolleyman.</i>	Coal	Deceased was standing at a curve to receive a set of empty tubs coming down an incline, when the first three tubs became uncoupled and were thrown off the line at the curve. Deceased was pinned against the side of the gallery and died the same day as a result of the injuries received. Inspection and inquiry made.
188	5th July, 6 A.M.	Ekra Khas mine, Bansjora P. O., Bihar and Orissa.	Maharaja M. C. Nandi	Punia Mahato, (m.), 22, <i>Trolleyman.</i>	Coal	Deceased was standing at a curve in readiness to guide a train of nine tubs round the curve. A coupling chain fell off and seven tubs ran wild. Deceased was run over and killed instantly. Inspection and inquiry made. (See Report, page 13).
189	13th July, 3 A.M.	South-East Baraboni or Yanora Khas mine, Charanpur P. O., Bengal.	Maharaja M. C. Nandi.	Gondoria Ghatwal, (m.), 25, <i>Trammer.</i>	Coal	A hookman unhooked the rope of an empty tub on a main incline, having previously put one sprag in the wheel. This failed to hold the tub, which ran wild, killing deceased at the bottom of the haulage plane. Inspection and inquiry made.
190	7th August, 2 P.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ld.	Narathom Makrani, (m.), 35, <i>Tub-pusher.</i>	Coal	After helping to release a tub which had jammed in a narrow gallery, deceased stepped aside to let it pass. He apparently miscalculated the clearance between the side of the road and the tub. His head was crushed between the tub and the side of the road and he was killed instantly. Inspection and inquiry made.
191	7th August, 5 P.M.	Bhulanbararee mine, Jharia P. O., Bihar and Orissa.	Bhulanbararee Coal Co., Ld.	Babu Lall Banis, (m.), 32, <i>Trolleyman.</i>	Coal	Deceased, whilst crossing an underground haulage slope, was struck by a runaway tub. He succumbed to his injuries three hours later. Inspection and inquiry made.
192	21st August, 6 A.M.	Baraboni mine, Asansol P. O., Bengal.	New Beerblum Coal Co., Ld.	Lokhu Mejhian, (f.), 20, <i>Slack-carrier.</i>	Coal	Deceased was sleeping on the side of a main haulage road. A set of loaded tubs, being raised from a lower level, came into contact with an empty tub which was lying on its side on the curve of an upper level. The two front tubs were derailed and deceased was pinned under one of them. She sustained serious internal injuries and died eight days later. Inspection and inquiry made.
193	21st August, 6-30 A.M.	Bagdigi mine, Jharia P. O., Bihar and Orissa.	C. J. Smith	Ghendi Bhumij, (f.), 49, <i>Coal-carrier.</i>	Coal	Deceased was walking up a haulage incline whilst the rope was in motion. She was struck by it and thrown against the side of the gallery, sustaining injuries to which she succumbed a fortnight later. Inspection and inquiry made.
194	23rd August, 3 A.M.	Khost mine, Khost P. O., Baluchistan.	North-Western Railway	Shadman, (m.), 20, <i>Bellman.</i>	Coal	Whilst deceased was taking a full tub to attach it to a train, he was caught by a following tub, his head being crushed against roof timber. He died on the next day.
195	24th August, 5 A.M.	Mohpani mine, Mohpani P. O., Central Provinces.	Great Indian Peninsula Railway Co.	Munshi Musalman, (m.), 22, <i>Banksman.</i>	Coal	Deceased signalled from the in-by end of an engine plane for a set of tubs to be sent into the mine. He then appears to have sat down on the rails and fallen asleep. He was run over by the set when it arrived and killed.
196	24th September, 6 P.M.	Khas Joyrampur mine, Jharia P. O., Bihar and Orissa.	Khengorji Triku and Co.	Hanuman Show, (m.), 35, <i>Hookman.</i>	Coal	Owing to a fracture of the pinion of a hauling engine, five loaded tubs ran wild on a haulage slope. Deceased was run over and killed instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
HAULAGE—concl'd.						
107	26th September, 6 P.M.	Jharia Khas mine, Jharia P. O., Bihar and Orissa.	Standard Coal Co., Ltd.	Arjoon Chamar, (m.), 55, Sirdar.	Coal .	Deceased, whilst walking up a haulage incline upon which travelling was not allowed, was struck by run-away tubs and sustained injuries which resulted in death four hours later. Inspection and inquiry made.
108	30th September, 5 A.M.	Sodepur mine, Sitarampur P. O., Bengal.	Bengal Coal Co., Ltd.	Bimala Mahalin, (f.), 24, Coal-carrier.	Coal .	The tubs on a self-acting haulage plane were being balanced so as to work the load from an intermediate level. In order to make the rope move, the brake was released and men were jerking the rope up and down. The rope moved suddenly and the brakesman lost control, consequently an empty tub was carried towards the wheel at the top of the incline. Deceased, who was sitting down on the top level, was struck by the empty tub and flung against the side of a pillar. She sustained serious injuries and died twelve hours later. Inspection and inquiry made.
199	10th October, 8 A.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Jamadha Turi, (m.), 80, Trolleyman.	Coal .	Deceased was walking up a haulage incline where travelling was prohibited. A train of tubs, which was being lowered, became derailed and struck the side of the road causing a mass of coal, weighing about one ton, to fall. The coal fell upon deceased killing him instantly. Inspection and inquiry made.
200	15th October, 11-30 P.M.	Charaupur mine, Charanpur P. O., Bengal.	Apcar Collieries, Limited	Srimati Mejhian, (f.), 50, Dust-carrier.	Coal .	Deceased failed to get out of the way of a tub of slack which was being trammed down a gradient of 1 in 23 into a siding. Her right arm was pinned between a tub which she was pushing and the second tub. She died in hospital ten hours later. Inspection and inquiry made.
201	18th October, 2 A.M.	Bhagaband Mine, Jharia P. O., Bihar and Orissa.	Bores Coal Co., Ltd.	Jhalka Manjhi, (m.), 35, Coal-cutter.	Coal	Deceased was sleeping near the curve of a haulage level and, upon being warned that the trams were coming, attempted to cross the tram line. He was run over by full trams which were being run down from the workings by gravity. He was killed on the spot. Inspection and inquiry made.
202	24th October, 8 A.M.	Rajhara mine, Rajhara P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Simarbasia Noonian, (f.), 12, Coal-carrier.	Coal .	Deceased, whilst loading a tub on a level, was run over by empty tubs which were being shunted by miners contrary to orders. She sustained injuries which caused death four hours later. Inspection and inquiry made.
203	5th November, 9 A.M.	Ledo mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sarada Bhumij, (f.), 26, Tub-pusher.	Coal .	Whilst deceased and others were working at an in-by siding, the haulage rope slipped off a roller and caught both deceased and a fellow worker, inflicting injuries to their legs. Deceased died from gangrene twenty-two days later. Inspection and inquiry made.
204	6th November, 1-30 P.M.	(Nunidih) Bhulanbararee mine, Jharia P. O., Bihar and Orissa.	Bhulanbararee Coal Co., Ltd.	Doman Mahato, (m.), 18, Filler markman.	Coal .	Whilst a train of empty tubs was being lowered over the brow of an incline the leading tub ran wild and was derailed at the run-away switch. Deceased and another man, who were walking up the incline, whilst attempting to get into a manhole, were struck by the derailed tub. Deceased died on the way to hospital and the other man was seriously injured. Inspection and inquiry made.

205	8th November, 9-30 P.M.	Bhowra mine, Jamadoba P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Ram Sumar Misser, (m.), 15, Coolie.	Coal .	Owing to the fracture of a draw bar, three loaded trams ran wild on a haulage slope. Deceased was run over and died a few hours after. Inspection and inquiry made.
206	11th November, 8-30 A.M.	Ledo Valley mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Mohamad Hossein, (m.), 36, Contractor.	Coal .	While ascending a self-acting incline, deceased was killed by a tub which had run wild owing to the trammer at the top not fixing the stop block properly. Inspection and inquiry made.
207	20th November, 2 A.M.	Chanch mine, Chirkunda P. O., Bihar and Orissa.	Bengal Coal Co., Ltd.	Lakhi Bhuian, (f.), 60, Dust-carrier.	Coal .	A set of five loaded tubs was being trammed along an underground level. Deceased got confused and went in front of them. The wheels of the front tub passed over her thigh and fractured it. She died fourteen hours later, after the limb had been amputated. Inspection and inquiry made.
208	23rd December, 10-30 A.M.	Jainty Central mine, Karmatar P. O., Bihar and Orissa.	Jainty Central Colliery, Ltd.	Mahabir Meah, (m.), 20, Trammer.	Coal .	Deceased was evidently riding on the front of an empty tub which was being hauled out of an incline. The tub became derailed at the entrance to the mine and he fell off and was run over, being killed instantly. Inspection and inquiry made.
209	24th December, 2 A.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Monbharan Rai, (m.), 34, Hooker on.	Coal .	Deceased, who was working at the bottom of a brake, omitted to attach the empty tub to the rope. In consequence the full tub ran wild and caught deceased. He died from his injuries two weeks later. Inspection and inquiry made.
210	24th December, 11 A.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Chand Manjhi, (m.), 38, Coal-cutter.	Coal .	A train of six loaded and four empty tubs was being raised up an underground haulage road. The rope broke and the tubs ran back. Deceased, who was sitting on the side of the haulage road, ran down to the dip and was overtaken by the run-away tubs. He died from his injuries five days later. Inspection and inquiry made.
211	27th December, 3 A.M.	Ghusick mine, Kalipahari P. O., Bengal.	Ghusick and Musila, Collieries, Ltd.	Bisco Kol, (m.), 20, Coal-cutter.	Coal .	Four loaded tubs were being moved by gravity out of the face of a level. The centre coupling was not fastened and the two front tubs ran ahead and came to a standstill. Deceased walked on to the line and was caught by the rear tubs and crushed between them and the stationary tubs. He was killed instantly. Inspection and inquiry made.

BY UNDERGROUND MACHINERY.—(1 death).

212	14th May, 12 midnight.	Murwara mine No. 1162, Katni P. O., Central Provinces.	D. A. David Bros.	Bhura, (m.), 45, Coolie.	Limestone .	A wooden trestle, supporting a suction pipe, suddenly collapsed. The pipe, in falling, struck deceased and killed him.
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SUNDRIES UNDERGROUND. (11 deaths).

213	15th February, 5 A.M.	Loyabad mine, Bansjora P. O., Bihar and Orissa.	Barakar Coal Co., Ltd.	Budhan Manli, (m.), 45, Coal-cutter.	Coal .	Deceased was employed in a pillar cutting area. Whilst he and other miners were extracting a pillar, a loud noise was heard in the goaf. Every one ran out of the place. Deceased, whilst running, fell down and expired within half an hour. In the absence of injuries of any kind, death was attributed to heart failure. Inspection and inquiry made.
214	10th February, 9-30 P.M.	Sorampur mine, Giridih P. O., Hazaribagh.	East Indian Railway Co.	Uban Mallah, (m.), 33, Coal-cutter.	Coal .	Deceased was killed by the fall of a prop which was displaced by a piece of coal rolling against it.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
SUNDRIES UNDERGROUND—contd.						
216	29th May, 2 P.M.	Tikak mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Sreepoti Lama, (m.), 25, Tub-filler.	Coal	Whilst walking towards a tub, deceased fell and sustained slight injuries to his leg. He died from blood poisoning three and a half months later. Inspection and inquiry made.
216	22nd June, 10 A.M.	Muktia mine (Sq. No. D-35), Inzaribagh P. O., Bihar and Orissa.	Hqare Miller & Co.	(1) Raj Bullav Singh, (m.), 32, Fitter; (2) Sukar Musoher, (m.), 20, (3) Pancha Chamar, (m.), 25, Coolies.	Mica	The deceased fitter, accompanied by two coolies, went underground to start a petrol pump and took with him a naked light instead of the electric lamp supplied for the purpose. The feed cock from the petrol tank had been left open and the vapour ignited. They were burnt so severely that all died within two days. Inspection and inquiry made. (See Report, page 13).
217	9th July, 2-45 A.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Dalsing Lama, (m.), 30, Air-way man (Road-cleaner.)	Coal	Whilst carrying shovels down an incline, deceased fell and injured his knee-joint. He contracted pneumonia and died 16 days after the accident. Inspection and inquiry made.
218	1st August, 6-30 P.M.	Ranadanga mine, Charanpur P. O., Bengal.	Economic Coal Co., Ltd.	Kousla Kol, (f.) 13, Coal-carrier.	Coal	A derailed side-tipping tub was being lifted on to the tram line when, owing to the stop catch being open, the upper portion tilted and swung over. Deceased, who was standing on the lower side of the tub, was struck on the head and body by the tipping portion of the tub and sustained serious injuries to which she succumbed three and a half hours later. Inspection and inquiry made.
219	10th August, 4 A.M.	Chasnala mine, Bhujudih P. O., Bihar and Orissa.	Lodna Colliery Co., Ltd.	Basoo Manjhi, (m.), 35, Coal-cutter.	Coal	Deceased, having cut a quantity of coal in a level, pushed most of it over a ledge to the next level and then went down to that level to load it up. He had left some of the coal close to the edge of the 'drop' on the upper level and a portion of it fell, about 15 to 20 feet, on to his head, killing him on the spot. Inspection and inquiry made.
220	20th November, 12 midnight.	Kutehidbana mine, Raukona P. O., Central Provinces.	The Indian Manganese Co., Ltd.	Baloo, (m.), 18, Coolie.	Manganese	Deceased was removing overburden in a quarry. He slipped and fell a distance of 10 feet sustaining internal injuries which caused death two days later.
221	27th December, 8-30 P.M.	Loyabad mine, Banejora P. O., Bihar and Orissa.	Burrakar Coal Co., Ltd.	Jhari Hajjam, (m.), 10, Coolie.	Coal	Deceased was employed as companion to a pump minder. Whilst lying asleep near a pump, his clothes caught fire from an open lamp and he was severely burned. He died in hospital two months later. Inspection and inquiry made.

222	9th February, 6 A.M.	Rakha Hills mine, Rakha Mines P. O., Bihar and Orissa.	Cape Copper Co., Ltd.	Nabi Bux, (m.), 20, <i>Electric Hoist Driver.</i>	Copper	Deceased, contrary to orders, was riding in an electric hoist. He lost control and an overwind occurred, causing the wire ropes to break. The cage fell a distance of 60 feet. He was killed instantly. Inspection and inquiry made.
223	30th May, 10 A.M.	Ghugna mine, Ballarpur P. O., Central Provinces.	Sir Kusturchand Daga and M. B. Dadabhoj.	Vistari Zitroo Kunbi, (m.), 50, <i>Coolie.</i>	Coal	A fan was being erected, and the fan shaft was lifted off the journals. The shaft swung round and pinned deceased against another part of the machinery, causing wounds from which he died three hours afterwards.
224	30th June, 12-30 P.M.	Central Dharmaband mine, Katrasgarh P. O., Bihar and Orissa.	Central Dharmaband Coal Co., Ltd.	Tagoo Mahato, (m.), 22, <i>Engine driver.</i>	Coal	Deceased was driving a small hauling winch and it is supposed that, for some reason, he put his hand on the incoming rope. He was dragged under the rope and carried round on the drum, being killed instantly. Inspection and inquiry made.
225	1st December, 1-30 P.M.	Bharraghat mine, Katni P. O., Central Provinces.	Katni Cement and Indus- trial Co., Ltd.	Hussaini, (m.), 26, <i>Fitter.</i>	Steatite	Whilst a vertical boiler was being placed in position by means of a derrick, one of the legs of the derrick slipped. The boiler fell upon deceased causing injuries to which he succumbed on the same day. Inspection and inquiry made.

**ON SURFACE RAILWAYS AND TRAMWAYS
BELONGING TO THE MINE—(4 deaths).**

226	11th May, 6 A.M.	Kondwadih (Kirkond), Kusunda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Dhuba Roy, (m.), 20, <i>Trolleyman.</i>	Coal	Deceased, with two other men, was pushing a side-tipping tub on a surface tram line. The tub became derailed and tipped over on to deceased. He died almost immediately. Inspection and inquiry made.
227	23rd May, 3 A.M.	Simlabahal mine, Jharia P. O., Bihar and Orissa.	Bhargora Coal Co., Ltd.	Brihaspat Dasadh, (m.), 45, <i>Trolleyman.</i>	Coal	Deceased was pushing an empty coal tub up a slight grade on a stock heap when, owing to carelessness of fellow-workmen, a full tub ran down the grade, and collided with the empty tub. He sustained injuries which caused death ten days later. Inspection and inquiry made.
228	8th July, 6 P.M.	Namdang mine, Margherita P. O., Assam.	Assam Railways and Trad- ing Co., Ltd.	Pashupati (m.), 35, <i>Tub-filler.</i>	Coal	Deceased was walking up a self-acting incline on surface. He was knocked down and killed by a loaded tram. Inspection and inquiry made.
229	9th August, 4 P.M.	Balughat mine, Balughat P. O., Central Provinces.	Central Provinces Pros- pecting Syndicate, Ltd.	Hagha, (m.), 25, <i>Mate.</i>	Manganese	Deceased slipped off the frame of a moving tub. In doing so he fell against the tub and received internal injuries, which resulted in death on the following day.

MISCELLANEOUS ON SURFACE—(23 deaths).

230	29th January, 9-35 A.M.	Loyaband mine, Sijma P. O., Bihar and Orissa.	Burrakar Coal Co., Ltd.	Sakhawat Mistri, (m.), 38, <i>Mason.</i>	Coal	Deceased was employed in plastering the wall of an electric winding engine house. The platform on which he worked was about 8 feet from the transmission wires carrying electricity at 550 volts. He left the platform and climbed along the scaffolding poles over the top of the wires. In doing so, he touched the wires, fell upon them and was electrocuted. Inspection and inquiry made.
231	11th February, 9-30 A.M.	Taungpilla mine, Tavoy P. O., Burma.	Tavoy Wolfram, Ltd.	Ngá Pu, (m.), 30, <i>Coolie.</i>	Wolfram	Whilst a tree was being felled, deceased was struck on the head by a falling branch. He sustained concussion of the brain and expired a few hours later. Inspection and inquiry made.
232	22nd February, 6 A.M.	Dishergarh mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Poorní Chamar, (m.), 36, <i>Coolie.</i>	Coal	Deceased was found drowned in a large boiler tank which was properly fenced all round. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents, 1919—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—contd.						
233	20th March, 11 A.M.	Hpaungdaw mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Harr Dutt, (m.), 30, Coolie.	Wolframi	Deceased and another man were sawing a log on the slope of a hill. Another log slid end-on down the hill-side and struck the log being sawn. The impact moved the log. Deceased was crushed between the log being sawn and a third log. He died in hospital an hour afterwards. Inquiry held.
234	28th March, 6 P.M.	Widnes mine, Tavoy P. O., Burma.	The High Speed Steel Alloys Mining Co., Ltd.	Maung Tak, (m.), 58, Sawyer.	Wolfram	Whilst employed in moving logs, deceased fell and fractured his ribs. He succumbed to his injuries later.
235	25th April	Kurhurbaree mine, Giridih P. O., Bihar and Orissa.	East Indian Railway Com- pany.	Bhatni Kolin, (f.) 13, Coal-carrier.	Coal	Deceased was found drowned in a fouled boiler tank.
236	28th May, 3 P.M.	Central Jharlia mine, Jharlia P. O., Bihar and Orissa.	Jairam Shivjee & Co.	Rajoni Bauri, (m.), 20, Coolie.	Coal	Whilst a boiler shed was being erected the ridge pole fell accidentally from a height of 11 feet. Deceased was struck on the head and killed instantly. Inspection and inquiry made.
237	20th June, 3 A.M.	Phalaritand mine, Katrasgarh P. O., Bihar and Orissa.	Phalaritand Coal Co., Ltd.	Akloo Kahar, (m.), 30, Pump Khalasie.	Coal	Owing to heavy rain a shelter shed on surface collapsed. Deceased, who was sleeping in the shed, was crushed by the falling timbers and killed instantly. Inspection and inquiry made.
238	23rd June, 10-55 A.M.	Sodepur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Futteh Mohammad, (m.), 35, Coolie.	Coal	Deceased, who was helping to erect the head-gear at a shaft, lost his footing and fell to the ground from a height of 50 feet. He sustained a fractured skull and died soon afterwards. Inspection and inquiry made.
239	10th July, 8-0 A.M.	Tikuri mine, Katni P. O., Central Provinces.	Katni Cement and Indus- trial Co., Ltd.	Hansi Korin, (f.), 22, Coolie.	Limestone	Some person unknown removed a length of 300 feet of wire from an aerial transmission line. Subsequently the current was switched on. Deceased came in contact with the trailing wire and was killed. Inspection and inquiry made by the Electric Inspector.
240	14th July, 9 A.M.	Rakha Hills mine, Rakha Mines P. O., Bihar and Orissa.	Cape Copper Co., Ltd.	Nursing Bhomij, (m.), 30, Fireman.	Copper	Deceased was carrying an iron rake, 10 feet long, which came in contact with overhead electric transmission wires. The electric current passed through his body, killing him instantly. Inspection and inquiry made by Electric Inspector.
241	30th July, 4 P.M.	Kustore South mine, Kusunda P. O., Bihar and Orissa.	Raniganj Coal Association, Ltd.	Mushau Dary, (m.), 32, Trolleyman.	Coal	An empty tub had been over turned on a covered opening in the floor of a heapstead. The cover consisted of an iron sheet and planks. While deceased and another man were turning the tub upright, the cover gave way and the two men with the tub fell to the ground, 18 feet below. Deceased was killed instantly and the other man was slightly hurt. Inspection and inquiry made.

242	24th August, 1 P.M.	Khas Joyrampur mine, Jharia P. O., Bihar and Orissa.	Jainarain Ramjash Agar- wala.	Jhurar Bauri, (m.), 13, Coolie.	Coal .	Deceased was drowned in a boiler feed tank which was properly walled round. Washing in the tank was not allowed, but deceased disregarded the prohibition. Inspection and inquiry made.
243	26th August, 3 P.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ld.	Dinoo Roy, (m.), 34, Coal-cutter.	Coal .	Deceased passed through a fence, and, whilst trying to dig coal for his own purposes from a subsided coal working, was killed instantly by the fall of overburden weighing about one ton. Inspection and enquiry made.
244	6th September, 3 P.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Limited. Syndicate,	1. Sundha Mangla, (m.), 34, 2. Chhotu Gulla, (m.), 21, Coolies.	Manganese .	The two deceased whilst bathing in a water-logged quarry, were drowned.
245	10th June, 10-16 A.M.	Phuletto mine, Tavoy P. O., Burma.	Phuletto Mining Syndicate.	Leong Chiao, (m.), 26, Tributor.	Wolfram .	Whilst engaged in ground sluicing, deceased was struck by a tree blown down by high wind. He was killed instantly.
246	0th September, 11 A.M.	South Barora mine, Nowagarh P. O., Bihar and Orissa.	Messrs. Chunder and Dass.	Haricharan Beldar, (m.), 30, Earth-cutter.	Coal .	Deceased and other coolies were engaged in throwing up an embankment, 12 feet high. Owing to the weight of the embankment, the surface overlying an old mine broke down. Deceased fell into the subsidence and was buried by the earth. When his body was recovered about an hour afterwards, life was found to be extinct.
247	27th September, 1 P.M.	Taungonll mine, Tavoy P. O., Burma.	Tavoy Wolfram, Limited	Mg Tha Nyni, (m.), 18, Tributor.	Wolfram .	Deceased and another man, whilst working against orders in an abandoned open-cut, brought about a fall of overburden. Deceased was killed instantly and the other man slightly injured.
248	13th October, 5 A.M.	Sijua mine, Sijua P. O., Bihar and Orissa.	Tata Iron & Steel Co., Ld.	Gonga Singh, (m.), 20, Coolie.	Coal .	Whilst a guide rope was being fixed in a shaft, the chain, by which it was suspended, broke and the rope fell down the shaft. The loose end struck deceased on the head inflicting injuries from which he died on the next day. Inspection and inquiry made.
249	18th October, 9 A.M.	Lakurka mine, Katraagarh P. O., Bihar and Orissa.	Lakurka Coal Co., Ld.	Ramdin Gwala, (m.), 30, Coolie.	Coal .	Deceased and another coolie were carrying a prop, 13 feet long. Deceased failed to let the prop fall at the same time as the other man. The weight of the prop came upon him and fractured his collar bone. He died three days later. Inspection and inquiry made.
250	6th November, (unknown.)	Purusathampur mine, Pandavapur P. O., Bengal.	Tata Iron & Steel Co., Ld.	Rampadarat Singh, (m.), 30, Store Peon.	Coal .	Deceased went to sleep in an unventilated room, connected with a colliery store godown, in which a coal fire was burning and in consequence died of suffocation. Inspection and inquiry made.
251	24th November, 11 A.M.	Ukwa mine, Balighat P. O., Central Provinces.	Carnegie Steel Co.	Talsi, (m.), 45, Coolie.	Manganese	Deceased whilst working with a crowbar on the edge of an excavation, overbalanced and fell a distance of 7 feet. He sustained internal injuries and expired five hours later.
252	23rd December, 12-5 A.M.	Fargali mine, Bokaro P. O., Bihar and Orissa.	Great Indian Peninsular Railway Co.	(1) Badal Khan, (m.), 25, Pump Khalasi. (2) Thanu Meah, (m.), 40, Boiler Fireman.	Coal .	The two deceased attempted to steal oil from a pressure fed oil lamp used for illuminating a coal quarry. The lamp caught fire and they were severely burnt. Badal Khan succumbed on the following day and Thanu Meah a month later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents, 1919—*contd.*

Serial number.	Date and hour of acc. dent.	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—(46 deaths).							
1	4th January, 5 A.M.	Kalikapur mine, Mejia P. O., Bengal.	Reghunath Banerjee & others.	Sabitri Goalini, (f.), 80.	Coal	Not employed.	Owing to the collapse of mine workings, a subsidence of the surface took place. Deceased, who was sleeping in a hut on the surface, was engulfed before she could escape. Inspection and inquiry made.
2	20th January, 2 P.M.	Joyrampur mine, Jharis P. O., Bihar and Orissa.	B. R. & Co.	Pattu Bhuiyan, (f.), 13, Coal loader.	Coal	Not a mining accident.	Whilst bathing in an abandoned quarry deceased got out of her depth, and was drowned. Inspection and inquiry made.
3	12th February, 8 A.M.	South Kujama mine, Jharis P. O., Bihar and Orissa.	Bagliggi Kujama Col- lieries, Ld.	Digam Deswali, (m.), 10.	Coal	Not employed	Deceased climbed on to the top of a wall, 4 feet high, fencing a reservoir, and fell into water 7' 0" deep. He was drowned. Inspection and inquiry made.
4	12th February, 10 A.M.	Jogta mine, Sijua P. O., Bihar and Orissa.	Agabeg Brothers	Delchand Turi, (m.), 3,	Coal	Not employed	Deceased fell into a surface reservoir and was drowned. Inspection and inquiry made.
5	28th February, 2-30 P.M.	South Govindpur mine, Katrasgarh P. O., Bihar and Orissa.	South Gobindpur Colliery, Ld.	Bandia Gowalin, (f.), 7.	Coal	Not employed	Deceased, who was deaf and dumb and partly blind, was run over by a tub on a surface tram line. She was so severely injured that she died in hospital ten days later. Inspection and inquiry made.
6	9th April, between 6 and 7 A.M.	Kusunda and Nyadeo mine, Kusunda P. O., Bihar and Orissa.	Kusunda and Nayada Collieries, Limited.	Name not known, (m.), about 30 to 35.	Coal	Not employed.	Deceased, jumped into a well and was drowned. The well was surrounded by a wall 5 feet high. Inspection and inquiry made.
7	15th April, about 6 A.M.	Khas Jharis mine, Jharis P. O., Bihar and Orissa.	Jagarnath Ramjash Agarwalla.	Names not known, (1) (m.), 26; (2) (m.), 23.	Coal	Not employed.	The two deceased were unknown in the district. They appear to have jumped at night, over a wall surrounding the cutting of an incline, thinking they were jumping on the solid ground on the other side. In the morning they were found at the bottom of the cutting, one was dead and the other died about 15 minutes later without making any statement. They fell about 70 feet. Inspection and inquiry made.
8	20th April, 3-15 P.M.	Tectulmuri mine, Sijua P. O., Bihar and Orissa.	Tectulmuri Collieries, Limi- ted.	Footia Bhnia, (m.), 13, Shal-picker.	Coal	Not a mining accident.	Deceased was struck by lightning and killed.

9	23rd April, 3 P.M.	Mohpani mine, Mohpani P. O., Central Provinces.	Great Indian Peninsular Railway Co.	Binia Darzan, (f.), 8, Water-carrier.	Coal	Not a mining accident.	Deceased, with several other women, took shelter under a railway wagon during a storm. The high wind set another wagon in motion and when they saw it approaching they attempted to run out from under the wagon. Deceased was run over and killed; one of the other women was severely injured.
10	26th April, 12 midnight.	Gopalichuck mine, Bansjora P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Nishi Baurin, (f.), 30.	Coal	Not employed.	The body of deceased was found in the sump at the bottom of the shaft, 288 feet deep. The shaft was fenced and it was presumed that she had jumped into the shaft. Inspection and inquiry made.
11	29th April, 8 P.M.	Madhobpur mine, Ranigunge P. O., Bergal.	Imperial Coal Co., Ltd.	Khadi Bagdi, (f.), 30, Coolie.	Coal	Not a mining accident.	Deceased, whilst cooking food on the verandah of a hut, set the roof on fire. She was severely burnt and died a week later. Inspection and inquiry made.
12	1st May, 3 P.M.	Bansdeopur mine, Kusunda P. O., Bihar and Orissa.	Bansdeopur Coal Co., Ltd.	Ajinashia (f.), 50, Loading Coolie.	Coal	Not a mining accident.	Whilst sheltering behind a railway wagon, which moved under the impulse of the wind, deceased attempted to run out but was run over and injured so severely that she died 16 days later. Inspection and inquiry made.
13	1st May, 3-15 P.M.	Gopalichuck West mine, Kusunda P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Sohagi Dosadhin, (f.), 23, Wagon loader.	Coal	Not a mining accident.	During a storm, deceased took shelter behind railway wagons. The wind moved the wagons and she was crushed between the buffers, being killed instantly. Inspection and inquiry made.
14	19th May, 11-30 P.M.	Badjna mine, Mugma P. O., Bihar and Orissa.	Western Coal Co., Ltd.	Mahadeb Keot, (m.), 35.	Coal	Not employed.	Deceased threw himself down a shaft, 264 feet deep, and was killed instantly. The shaft was adequately fenced. Inspection and inquiry made.
15	17th May, 9 A.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndicate, Ltd.	Ruti Dewa, (f.), 2.	Manganese	Not employed	Deceased was run over by a loaded tub, at a bend, and succumbed thirteen days later.
16	22nd May, 6 P.M.	Jharia Khas (Angrapathra) mine, Sijua P. O., Bihar and Orissa.	Trigunait Brothers	Tribeni Bhuia, (m.), 21.	Coal	Not employed.	Deceased was found drowned in a bathing tank. The tank was properly fenced. Inspection and inquiry made.
17	3rd June, 1 P.M.	Khudia mine, Mugma P. O., Bihar and Orissa.	Khudia Coal Co., Ltd.	Rajani Roy, (m.), 5.	Coal	Not employed	Deceased fell into a boiler tank and was drowned. There was a wire fence around the tank. Inspection and inquiry made.
18	16th June, about 7-30 A.M.	(Widnes), Hpaungdaw mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	(1) Kasi Ram, (m.), 18. (2) Tek Bahadur, (m.), 30. (3) Patima, (f.), 25. (4) Tilla, (f.), 21. Tributors.	Wolfram	Not a mining accident.	During a severe storm, a tree was blown over and fell on the hut occupied by the four deceased. They were killed on the spot. Inquiry held.
19	22nd July,	Nudkurkee mine, Nowagarh P. O., Bihar and Orissa.	Ganendra Nath Ghose	Kunia Jolani, (f.), 10.	Coal	Not employed	Whilst picking leaves inside the walling of a cutting for an inoline, deceased slipped into water and was drowned.

APPENDIX II—contd.

Fatal Accidents, 1919—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.
DEATH NOT INCLUDED IN THE STATISTICS.							
20	26th July, 11-30 A.M.	Jogta mine, Sijua P. O., Bihar and Orissa.	Agabeg Brothers	Rampal Bhuiya, (m.), 2.	Coal	Not employed	Whilst at play near a soft coke depot, deceased fell into a small water hole, 2 feet deep, and was drowned.
21	31st July, 5 P.M.	North Mudidih mine, Sijua P. O., Bihar and Orissa.	Reliance Coal Co., Ltd.	Dewarka Gossai, (m.), 5.	Coal	Not employed	Deceased was found drowned in a boiler feed tank. The tank was walled but there was a small opening at one corner of the walling. Inspection and inquiry made.
22	1st August, 7 A.M.	Nimoha mine, Ranigunj P. O., Bengal.	Baraboni Coal Concern, Ltd.	Makhu Mejhian, (f.), 8.	Coal	Not employed	Deceased fell into a boiler tank, 7 feet deep, and was drowned. The tank was fenced. Inspection and inquiry made.
23	13th August, 11 A.M.	Bhalgora mine, Jharia P. O., Bihar and Orissa.	Bhalgora Coal Co., Ltd.	Suran Sing, (m.), 33.	Coal	Not employed	Deceased jumped down a shaft, 165 feet deep, and was killed instantly.
24	26th August, 8 A.M.	Madhabpur mine, Ranigunge P. O., Bengal.	Imperial Coal Co., Ltd.	Koka Kora, (m.), 4.	Coal	Not employed	Deceased was found drowned in a brick-makers' excavation, containing 3 feet of water.
25	20th September, 4 P.M.	Pootkee mine, Bansjora P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Muchiram Kora, (m.), 2.	Coal	Not employed	Deceased was found drowned in an excavation made by brick-makers. The depth of water was only 1½ inches. Inspection and inquiry made.
26	23rd September, between 2 and 6 P.M.	Gopalichuck West mine, Kusanda P. O., Bihar and Orissa.	Gopalichuck Coal Co., Ltd.	Alkee Dasnd, (f.), 9.	Coal	Not employed	Deceased was found drowned in a boiler feed tank which was properly fenced. Inspection and inquiry made.
27	24th September, 1 P.M.	Basudev mine, Jharia P. O., Bihar and Orissa.	Basudev Colliery Company	Daskhora, (m.), 4.	Coal	Not employed	Deceased fell into a water-logged quarry and was drowned. A wall was being built round the quarry, but deceased, during the temporary absence of the masons, passed through a gap. Inspection and inquiry made.
28	8th October, 9 A.M.	Deshergarh mine, Deshergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Debisaran Pasi, (m.), 8.	Coal	Not employed	Deceased attempted to ride on an empty tub on a surface haulage driven by an endless rope. He slipped and fell in front of the moving tub, which passed over and fractured his leg. He died three days later. Inspection and inquiry made.

29	10th October, 12-30 P.M.	Ehuggudih mine, Jharia P. O., Bihar and Orissa.	Bengal-Nagpur Coal Co., Ltd.	Nathu Beldar, (m.), 4.	Coal	Not employed	A cutting had been made for a road in a new earth bank, 30 feet wide by 10 feet high. Deceased's mother, who had been carrying earth from a cutting, sat down at the side of the cutting, with the child, to eat food. About a cubic yard of earth fell upon them from the side of the cutting. The woman was unhurt but the child was killed instantly. Inspection and inquiry made.
30	10th October, 1 P.M.	Lachipur mine, Sitarampur P. O., Bengal.	Jalota Lachipur Coal Co.	(1) Name not known, (f.), 5; (2) Name not known, (f.), 7.	Coal	Not employed	The bodies of the deceased were found floating in an old shaft containing water. The water in the shaft was used for drinking purposes, and the shaft was adequately fenced. Inspection and inquiry made.
31	11th October, 4-30 P.M.	Bansjora mine, Bansjora P. O., Bihar and Orissa.	Bansjora Coal Co., Ltd.	Mongar Pashi, (m.), 30, <i>Trolleyman.</i>	Coal	Not a mining accident.	Deceased, with a number of other persons, took shelter in a surface engine house during a thunderstorm. The house was struck by lightning, and deceased was killed instantly and another man was slightly burnt. Inspection and inquiry made.
32	18th October	Nandi mine, Nandi P. O., Bengal.	Adjai Coal Co., Ltd.	Name not known, (m.), 60.	Coal	Not employed	The body of deceased was found in water at the bottom of a shaft, 100 feet in depth. The shaft was adequately fenced. Inspection and inquiry made.
33	19th October, 8 P.M.	Widnes Hpaungadaw mine, Tavoy P. O., Burma.	High Speed Steel Alloys Mining Co., Ltd.	Lee Quine, (m.), 25, <i>Tributor.</i>	Wolfram	Not a mining accident.	Deceased was cooking food in a coolie lines. Stolon explosives had been buried there. His fire caused them to explode. He was killed instantly.
34	22nd October, 8 P.M.	Pootkee mine, Bansjora P. O., Bihar and Orissa.	Eastern Coal Co., Ltd.	Mahi Ali Saheikh, (m.), 65.	Coal	Not employed	Deceased was crossing a surface tramway at night and was run over by a train of loaded trams. He was killed instantly. Inspection and inquiry made.
35	18th November, 12 (noon).	Ghnaick mine, Kalipahari P. O., Bengal.	Ghnaick Coal Co.	Sobu Bauri, (m.), 43.	Coal	Not employed	Deceased, a person of unsound mind, fell from the surface into a shaft, 112 feet in depth, and was killed instantly. The shaft was fenced. Inspection and inquiry made.
36	28th November, 1 P.M.	Deoli mine, Deshergarh P. O., Bihar and Orissa.	Deoli Coal Co., Ltd.	Belas Bauri, (m.), 15.	Coal	Not employed	Deceased was riding on the front tub of a set of six loaded tubs on an endless haulage. The set rider warned him to get off. When doing so he slipped and fell in front of the moving tubs and was dragged along by them. He sustained serious injuries and died three hours later. Inspection and inquiry made.
37	28th November, 6-30 A.M.	New Kessurgurah mine, Nowagarh P. O., Bihar and Orissa.	New Kessurgurah Coal Co., Ltd.	Ramdhani Mejhian, (f.), 13, <i>Coal-carrier.</i>	Coal	Not a mining accident.	Whilst drawing water from a disused well, the deceased over-balanced and was drowned. Inspection and inquiry made.
38	4th November, 11 P.M.	Raghunathbati mine, Sitarampur P. O., Bengal.	Raghunathbati Coal Co., Ltd.	Tribhanga Bauri, (m.), 18, <i>Coolie.</i>	Coal	Not a mining accident.	A basket of debris was being raised from a well, 50 feet in depth. A piece of stone, weighing about 2 lbs., fell out of the basket and struck deceased, who was at the bottom of the well. He sustained a fracture of the skull and died twenty-two days later. Inspection and inquiry made.
39	11th December, 9-30 P.M.	South Bulliari mine, Knsunda P. O., Bihar and Orissa.	East Indian Coal Co., Ltd.	Ratni Ghosain, (f.), 18, <i>Mason's Coolie.</i>	Coal	Not a mining accident.	Deceased was burnt to death in a hut which caught fire.

APPENDIX II—concl'd.

Fatal Accidents, 1919—concl'd.

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—concl'd.							
40	23rd December, 9-30 P.M.	Jamadoba mine, Jamadoba P. O., Bihar and Orissa.	Tata Iron and Steel Co., Ltd.	Prasadi Rana, (m.), 24, Sinker.	Coal	Not a mining accident.	Whilst sleeping near a fire in a hut, the clothes of deceased became ignited and he was burnt to death.
41	26th December, 9-30 A.M.	Duis mine, Monharpur P. O., Bihar and Orissa.	Bengal Iron Co., Ltd.	Guru Charan Tanti, (m.), 35, Shop-keeper.	Iron	Not a mining accident.	Deceased was not an employé of the Company. Whilst attempting to jump on a moving train of ore wagons, he slipped and fell under the wheels. His leg was almost covered and he died from the resulting hæmorrhage, within a few hours. Inspection and inquiry made.

APPENDIX II.

Table No. 2.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1919.

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 serious 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.														
Assam	Lakhimpur	2,738	13	12	1	13	90	65	0	91	6.56	1.10	4.75	
	Naga Hills	415	...	...	...	...	...	...	...	...	...	...	...
	Sibsagar	45	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	3,198	13	12	1	13	90	65	0	91	6.33	.88	4.07	
Baluchistan	Loralai	35	...	...	...	...	...	...	...	...	...	...	...
	Quetta-Pishin	139	1	1	...	1	1	...	1	8.77	...	7.11		
	Sibi-Khoet	728	2	3	...	3	1	...	1	8.15	...	4.12		
	TOTAL	902	3	4	...	4	2	1	1	2	7.97	...	4.43	
Bengal	Bankura, Raniganj	94	...	...	...	...	...	...	...	...	...	...	...
	Dinabhadra "	54	...	...	...	...	...	...	...	...	...	...	...
	Burdwan "	48,494	63	69	3	72	59	45	17	62	2.28	.16	1.43	
	TOTAL	48,642	63	69	3	72	59	45	17	62	2.27	.16	1.48	
Bihar and Orissa	Hazaribagh {	Bokaro	8,796	1	...	2	2	7	1	6	766	.23
		Ranigarh	10,951	5	4	1	5	13	13	1	14	.49	.35	.46
		Giridih	1,729	2	2	...	2	2	1	1	2	2.13	...	1.16
	Maubhum, Jharra	94,384	97	113	12	125	98	72	26	100	1.98	.32	1.33	
	" Raniganj	10,562	14	22	...	22	5	3	2	5	3.70	...	2.04	
	Palamu, Daltonganj	770	2	2	...	2	...	...	...	...	4.74	...	2.60
	Sambalpur, Hingir-Rampur	929	1	1	...	1	...	...	...	...	1.78	...	1.08
	Sonthal Parganas, Jainty	1,712	2	2	...	2	2	1	1	2	2.32	...	1.17	
	" Raniganj	75	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	129,808	124	146	15	161	127	91	39	130	1.83	.50	1.44	
Central Provinces	Chanda, Ballarpur	1,687	2	1	1	2	5	3	3	6	1.10	1.29	1.19	
	Chhindwara, Pech Valley	3,044	4	5	...	5	5	7	...	7	2.20	...	1.04	
	Narsinghpur, Mohpani	1,572	2	2	...	2	9	5	8	13	2.03	...	1.27	
	Yeotmal	3	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	6,306	8	8	1	9	19	15	11	26	1.02	.47	1.13	
North-West Province.	Frontier	Hazara	5	...	...	...	...	...	...	...	...	...	...
Panjab	Jhelum	946	...	...	...	...	1	2	...	3	...	...	...
	Minnowali	123	1	1	...	1	...	...	...	25.00	...	...	...
	Shahpur	122	...	...	...	...	...	...	...	...	...	...	8.13
	TOTAL	1,191	1	1	...	1	1	2	...	3	1.52	...	.84
GRAND TOTAL (COAL)		190,052	212	240	20	260	209	238	70	314	2.04	.28	1.37	

APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1919—contd.

PROVINCES.	District and mineral field.	Total average number of persons employed daily.	FATAL ACCIDENTS.			SERIOUS ACCIDENTS.			DEATH-RATE P 1,000 PERSON 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.		Total deaths.	Below ground.			Above ground.	Total number of persons injured.
B.—MICA.												
Bihar and Orissa .	Gaya	1,728	...	...	...	...	1	1	...	1	...	...
	Manbhum	11	...	...	...	...	...	...	...	...	...	...
	Hazaribagh	15,417	4	8	...	8	10	12	...	12	78	...
	Monghyr	774	...	...	...	...	1	1	...	1	...	...
	Sambalpur	140	...	...	...	...	...	...	...	...	...	...
	TOTAL	18,100	4	8	...	8	12	14	...	14	76	...
Madras	Kistna	42	...	...	...	...	...	...	...	...	...	...
	Nellore	3,837	2	2	...	2	...	...	...	...	71	...
	Salom	180	...	...	...	...	...	...	...	...	...	...
	TOTAL	4,059	2	2	...	2	...	...	...	...	70	...
Rajputana	Ajmer-Merwara	492	...	...	...	...	...	...	...	...	...	...
	Nasirabad	11	...	...	...	...	...	...	...	...	...	...
	TOTAL	503	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (MICA)	22,662	6	10	...	10	12	14	...	14	85	...
C.—MANGANESE.												
Bombay	Panch Mahals	1,280	1	...	2	2	2	1	1	2	...	704
Central Provinces .	Balaghat	6,007	4	7	2	9	...	...	...	...	144	174
	Bhandara	680	...	...	...	...	...	...	...	...	...	...
	Chhindwara	772	1	1	...	1	...	...	...	...	94	...
	Nagpur	3,427	...	...	...	...	...	...	...	...	...	...
	TOTAL	10,886	5	8	2	10	...	...	...	...	97	76
Madras	Vizagapatam	257	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (MANGANESE)	12,423	6	8	4	12	2	1	1	2	85	131
D.—LIMESTONE.												
Central Provinces .	Bilaspur	126	...	...	...	...	...	...	...	...	...	...
	Jabalpur-Katni	2,251	3	2	1	3	...	...	...	...	110	234
	TOTAL	2,377	3	2	1	3	...	...	...	...	104	218
Panjab	Hoshiarpur	50	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (LIMESTONE)	2,427	3	2	1	3	...	...	...	...	108	208

APPENDIX II—contd.

Table No. 2—contd.

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1919—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.
E.—SALT.													
Punjab	Jhelum	873	...	...	...	...	6	6	...	6	...	...	...
	Mianwali	49	...	...	...	...	...	...	...	...	...	...	...
	Shahpur	81	...	...	...	...	...	...	...	...	...	...	...
	GRAND TOTAL (SALT)	1,003	...	...	...	...	6	6	...	6	...	...	...
F.—GEMS.													
Burma	Mogok (Rubies, etc.)	1,319	...	...	...	...	1	...	1	1	...	...	...
G.—SLATE.													
Bihar and Orissa	Monghyr	405	...	...	...	...	...	...	...	...	...	...	...
Punjab	Gurdaspur	6	...	...	...	...	...	...	...	...	...	...	...
	Gurgoon	217	...	...	...	...	...	...	...	...	...	...	...
	Kangra	160	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	43	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL (SLATE)	809	...	...	...	...	...	...	...	...	...	...	...
H.—GOLD.													
Bihar and Orissa	Singhbhum	228	...	...	...	...	1	...	1	1	...	...	...
Madras	Anantapur	554	...	...	...	...	2	3	1	4	...	...	...
GRAND TOTAL (GOLD)	782	...	...	...	...	3	3	2	5	...	...	...
I.—IRON ORE.													
Bihar and Orissa	Singhbhum	986	2	3	...	3	...	...	...	...	4.13	...	3.04
Central Provinces	Jabalpur	130	...	...	...	...	...	...	...	...	...	...	...
Rajputana	Ajmer-Merwara	2	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL (IRON ORE)	1,118	2	3	...	3	...	...	...	...	...	3.67	...	2.68
J.—WOLFRAM.													
Bihar and Orissa	Singhbhum	20	...	...	...	...	1	1	...	1	...	...	...
Burma	Mergui	530	2	2	...	2	1	...	1	1	8.93	...	3.77
	Tavoy	8,136	16	12	5	17	7	3	5	8	2.48	1.43	2.04
	Thatou	828	...	...	...	...	...	...	...	...	...	...	...
	TOTAL	9,604	18	14	5	19	8	3	6	9	2.53	1.20	1.96
GRAND TOTAL (WOLFRAM).	9,714	18	14	5	19	9	4	6	10	2.53	1.20	1.96	

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

Statement of fatal and serious accidents in and about mines regulated by the Indian Mines Act, 1901, during the year 1919—*concl.*

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 death.	Below ground.				Above ground.	Total number of persons injured.
R.—STEATITE.													
Central Provinces	Jabalpur	179	1	...	1	1	...	...	...	...	13.49	5.59
Madras	Kurnool	16	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL (STEATITE).		195	1	...	1	1	...	...	...	...	13.33	5.13
S.—OCHRE.													
Bihar and Orissa	Puri	43	...	...	...	...	...	...	...	...	...	...
T.—GRAPHITE.													
Rajputana	Ajmer-Merwara	22	...	...	...	...	...	...	...	...	...	...
U.—APATITE.													
Bihar and Orissa	Singbhum	250	...	...	...	...	...	...	...	...	...	...
V.—MOLYBDENITE.													
Burma	Favoy	10	...	...	...	...	...	...	...	...	...	...
W.—BARYTES.													
Madras	Kurnool	20	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL (ALL MINES)		219,156	262	279	33	312	350	272	100	372	1.78	.86	1.25

APPENDIX II—contd.

Table No. 3.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1919, classified according to the age and sex of the workers.

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 15).	Total.	Adult males.	Adult females.	Children (under 15).	Total.	
	Assam, Lakhimpur	13	11	1	...	12	1	...	...	1	13
	Baluchistan { Quetta Pishin	1	1	...	...	1	...	...	...	...	1
	{ Sibi, Khost	2	3	...	...	3	...	...	...	...	3
	TOTAL BALUCHISTAN	3	4	...	...	4	...	...	...	...	4
	Bengal, Raniganj	63	51	18	...	69	3	...	...	3	72
	Hazaribagh { Bokaro, Ramgarh	1	...	...	...	...	2	...	...	2	2
	{ Giridih	5	2	2	...	4	...	...	...	1	5
	{ Jharia	2	2	...	...	2	...	...	...	...	2
	Bihar and Orissa { Manbhum, Jharia	97	92	20	1	113	12	...	...	12	125
	{ Manbhum, Raniganj	14	16	6	...	22	...	...	...	...	22
	{ Palamau, Daltonganj	2	1	1	...	2	...	...	...	...	2
	{ Sonbhal Parganas, Jainty	2	2	...	...	2	...	...	...	...	2
	{ Sambalpur-Hingir Rampur	1	...	1	...	1	...	...	...	...	1
	TOTAL BIHAR AND ORISSA	124	115	30	1	146	14	1	...	15	161
	Central Provinces { Chanda	2	1	...	...	1	1	...	...	1	2
	{ Chhindwara	4	4	1	...	5	...	...	...	...	5
	{ Narsinghpur	2	1	1	...	2	...	...	...	...	2
	TOTAL CENTRAL PROVINCES	8	6	2	...	8	1	...	...	1	9
	Punjab, Mianwali	1	1	...	...	1	...	...	...	...	1
	TOTAL COAL	212	183	51	1	240	19	1	...	20	260

APPENDIX II—*concl.*Table No. 3—*concl.*

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1919, classified according to the age and sex of the workers—*concl.*

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.	
MICA	Bihar and Orissa, Hazaribagh	4	7	1	...	8	..	...	...	...	8
	Madras, Nellore	2	2	...	...	2	...	...	...	...	2
	TOTAL MICA	6	9	1	....	10	...	...	...	...	10
MANGANESE	Central Provinces { Balaghat Chhindwara	4	2	4	1	7	2	...	...	2	9
		1	1	...	...	1	...	...	...	...	1
	TOTAL CENTRAL PROVINCES	5	3	4	1	8	2	...	...	2	10
	Bombay, Panchmahals	1	...	...	...	...	2	...	...	2	2
	TOTAL MANGANESE	6	3	4	1	8	4	...	...	4	12
LIMESTONE	Central Provinces, Jabalpur	3	2	...	...	2	...	1	...	1	3
STEATITE	Central Provinces, Jabalpur	1	...	...	...	...	1	...	...	1	1
IRON ORE	Bihar and Orissa, Singhbhum	2	...	3	...	3	...	...	...	...	3
WOLFRAM	Burma { Mergui Tavoy	2	2	...	...	2	...	...	...	...	2
		16	12	...	...	12	6	...	...	5	17
	TOTAL WOLFRAM	18	14	...	...	14	6	...	...	5	19
COPPER	Bihar and Orissa, Singhbhum	4	2	...	...	2	2	...	...	2	4
GRAND TOTAL (ALL MINERALS)		252	215	59	2	279	31	2	...	33	312

APPENDIX II—concl'd.

Table No. 4.

Statement of fatal accidents in mines regulated by the Indian Mines Act, 1901, during the year 1919, 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 or falling into water.	Haulage.	Miscellaneous below ground.	Surface.	Total deaths.	Below ground.	Above ground.	Below and above ground.
Coal	212	1	91	49	47	...	4	...	41	7	21	260	2.04	.28	1.37
Copper	4	...	...	1	...	...	1	...	...	...	2	4	2.99	1.00	1.50
Iron	2	...	...	3	...	...	...	...	...	...	...	3	3.67	...	2.68
Limestone	3	...	...	1	...	...	...	...	...	1	1	3	1.63	2.06	1.24
Manganese	6	...	...	7	...	...	...	...	...	1	4	12	.85	1.31	.97
Mica	6	...	1	3	...	...	2	1	...	3	...	10	.65	...	.44
Steatite	1	...	...	...	...	...	...	...	...	...	1	1	...	13.33	5.13
Wolfram	18	...	3	11	...	...	...	...	...	...	5	19	2.53	1.20	1.96
TOTAL 1919	252	1	95	75	47	...	7	1	41	12	33	312	1.78	.36	1.25
TOTAL PRECEDING YEAR	209	12	70	56	21	...	9	6	22	16	31	243	1.37	.42	1.02
DIFFERENCE	+43	-11	+25	+19	+26	...	-2	-5	+19	-4	+2	+69	+.41	-.06	+.23

APPENDIX III.

PROSECUTIONS UNDER THE INDIAN MINES ACT, 1901.

Statement of prosecutions instituted under the Indian Mines Act, 1901, during the year 1919.

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	2	2	Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904.	Acquitted.
	Do.	1	2	2	Section 20, Rules 3, 19 and 22 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1	Section 20, Rule 3 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	3	3	Section 20, Rule 19 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1	Section 20, Rules 1(2), 7 and 14 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	4	1	Section 20, Rule 19 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	...		
	Do.	1	1	1	Section 20, Rule 12 of Notification No. 864-68-20, dated 10th March 1904.	
	Hazaribagh	1	2	2	Section 20, Rule 19 of Notification No. 6436-152, dated 2nd September 1911.	
	Do.	1	1	1	Section 20, Rule 4 of Notification No. 11793-103, dated 30th December 1908 as amended by Notification No. 5072-113, dated 1st July 1916.	
	Do.	1	3	3	Section 20, Rule 3 of Notification No. 8436-152, dated 2nd September 1911.	
	Manbhum	1	1	1		Withdrawn. Accused not traceable.
	Do.	1	1	1		
	Do.	1	1	1		
	Do.	1	1	...		
	Hazaribagh	1	2	2		Withdrawn. Accused not traceable.
	Do.	1	1	1		
	Do.	1	1	...		
	Do.	1	2	1		Section 20, Rule 1 of Notification No. 11793-103, dated 30th December 1908, as amended by Notification No. 5072-113, dated 1st July 1916.
	Do.	1	1	...		
Do.	1	2	1			
Do.	1	1	1			
Do.	1	2	1			
Do.	1	2	2			
Do.	1	1	...	Acquitted.		

APPENDIX III—concl'd.

PROSECUTIONS UNDER THE INDIAN MINES ACT, 1901—concl'd.

Statement of prosecutions instituted under the Indian Mines Act, 1901, during the year 1919—concl'd.

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 3, 4 and 19 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1	Section 13 (1), and Rule 19 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1	Section 13 (1), and Rule 1(a) of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	2	2	Section 20, Rules 3, 7 and 10 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	2	2	Section 20, Rules 7, 13 and 19 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1	Section 20, Rules 7 and 20 of Notification No. 864-68-20, dated 10th March 1904.	
	Do.	1	1	1		
	Do.	1	2	...	Section 20, Rule 1 of Notification No. 11793-103, dated 30th December 1908, as amended by Notification No. 5072-113, dated 1st July 1916.	Withdrawn.
Central Provinces	Jabalpur	1	2	...		Acquitted.
Madras	Nellore	1	3	3		

APPENDIX IV.
MISCELLANEOUS.

Statement No. 1.

List of Inspection Circles.

No. 1 Circle.	No. 2 Circle.
<p>1. All mines in Bihar and Orissa except mines in the district of the Santhal Parganas and such mines in the district of Manbhum as lie 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.</p> <p>2. All mines in Baluchistan.</p> <p>3. All mines in the North-West Frontier Province.</p> <p>4. All mines in the Panjab.</p> <p>5. All mines in Rajputana.</p> <p>6. All mines in Assam.</p>	<p>1. All mines in Bengal.</p> <p>2. Such mines in Bihar and Orissa as lie in the district of the Santhal 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.</p> <p>3. All mines in Bombay.</p> <p>4. All mines in the Central Provinces.</p> <p>5. All mines in Madras.</p> <p>6. All mines in Burma, other than those in the Tavoy District.</p>
<p style="text-align: center;">No. 3. Circle. All mines in the district of Tavoy, Lower Burma.</p>	

Statement No. 2.

List of holders of certificates as managers of coal mines in British India.

(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.
Provan, Joseph Chapman	212	22nd January 1919	2348	13th January 1904.
Curley, James	213	Ditto	1522	16th June 1899.
Ford, Leo Dorey	214	Ditto	16	30th January 1913.
Potter, Robert	215	17th February 1919	364	24th January 1917.
Robb, William David	216	7th July 1919	427	27th July 1917.
Weir, Walter	217	Ditto	1732	19th June 1900.
Cox, John William	218	26th July 1919	163	26th January 1915.
Prentice, John Robertson	219	Ditto	485	24th January 1918.
Brown, Hugh	220	Ditto	401	27th July 1917.
Brady, Hugh	221	13th October 1919	4	30th January 1913.
Hanson, William Brooks	222	Ditto	411	27th July 1917.
Spray, William Alfred	223	Ditto	561	26th July 1918.
Bryan, Robert	224	Ditto	373	27th July 1917.
Smillie, James	225	Ditto	4070	10th June 1912.
Wilcox, William, H.	226	Ditto	3644	9th June 1910.
Semple, Francis Bernard	227	Ditto	180	26th January 1915.
Cunningham, Andrew Mitchell	228	Ditto	4033	10th June 1912.

APPENDIX IV—*contd.*MISCELLANEOUS—*contd.*Statement No. 2—*contd.*List of holders of certificates as managers of coal mines in British India—*contd.*

(b) Certificates of competency.

FIRST CLASS.

NAME.	No. of certificate.	Date of certificate.	REMARKS.
Adamson, Bertie	111	7th July 1919.	
Mukherji, Indu Bhusan	112	Ditto.	
Ward, Wesley Ashbury	113	Ditto.	

SECOND CLASS.

Gibson, Albert	168	15th July 1919	} 1st class candidates recommended for 2nd class certificates.
Allan, Herbert Durham	169	Ditto	
Connolly, William John	170	Ditto.	
Sleehan, Frederick George	171	Ditto.	
Banerji, Jotindra Nath	172	Ditto.	
Caddy, Douglas George	173	Ditto.	
Durham, Vivian Clyde	174	Ditto.	
Roy, Ram Gobinda	175	Ditto.	
Simon, Cyril Paul	176	Ditto.	
Chatterji, Aroon Kinkar	177	Ditto.	
Mitra, Birendra Nath	178	Ditto.	
Mukherji, Pataki Charan	179	Ditto.	
Mazumdar, Pravakar	180	Ditto.	
Chatterji, Kshetra Mohan	181	Ditto.	
Samanta, Satya Kinkar	182	Ditto.	
Mahata, Jyotish Chandra	183	Ditto.	
Chatterji, Hrishikesh	184	Ditto.	
Mukherji, Dharendra Nath	185	Ditto.	
Varma, D. R.	186	Ditto.	
Roy, Asita Bhusan	187	Ditto.	
Banerji, Aditya Chandra	188	Ditto.	
Chatterji, Nriyaya Gopal	189	Ditto.	
Goswami, Bhola Nath	190	Ditto.	

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

Statement No. 2—*concl'd.*

List of holders of certificates as managers of coal mines in British India—*concl'd.*

(c) Certificates of service.

FIRST CLASS.

NAME.	No. of certificate.	Date of certificate.	REMARKS.
Tyore, John Emanuel	151	22nd January 1919.	
Hyde, Joseph	152	15th July 1919.	
Biddle, Leonard Alexander	153	Ditto.	
Mondol, Upendra Nath	154	Ditto.	
Griffiths, James	155	Ditto.	

(d) Certificates of service.

SECOND CLASS.

NAME.	No. of certificate.	Date of certificate.	REMARKS.
Parsons, Issachar	199	15th July 1919.	
York, Benjamin	200	26th July 1919.	
While, Benjamin	201	Ditto.	
Ahmad, Qurban	202	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, 1901.

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 1909.
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.

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

Statement No. 4.

BENGAL ENGINEERING COLLEGE.

THE MINING CLASSES.

Admissions to the Diploma Course in Mining at the Civil Engineering College, Sibpur.

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 (under ground.)

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 Civil 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; Bankipore and Ranchi 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.

B. HEATON,

Principal, Bengal Engineering College, Sibpur.

APPENDIX IV—contd.

MISCELLANEOUS—contd.

Statement No. 5.

MINING INSTRUCTION IN BENGAL AND 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 comprises two parts, the lectures in which are delivered in alternate years as follows:—

The principles of Coal Mining 1920-21, 1922-23, etc.

The principles of Mechanical Engineering of Coal Mines 1919-20, 1921-22, etc.

A fee of Rs. 5 (five rupees) payable to the Mining Instructor on the first registration of his name is charged to each student for each year's series of lectures. This fee is non-returnable.

Programme for Session 1919-20.

LECTURES on the Principles of Mechanical Engineering of Coal Mines will be delivered in English by Mr. H. C. Read, Mining Instructor, as follows:—

JHARIA COAL-FIELD.

Jharia	...	Lecture-room near Club	...	Mondays	...	5-30 P.M.
Sijua	...	Lecture-room near Station	...	Tuesdays	...	5-0 "

RANIGANJ COAL-FIELD.

Deshergarh	...	Lecture-room near Club	...	Wednesdays	5-30 P.M.
Raniganj	...	Old Railway Institute	...	Thursdays	5-0 "
Jamuria	...	Chief Mining Engineer's office, Sibpur Colliery	...	Fridays	5-30 "

The course of instruction, consisting of not less than 30 lectures, will commence the first week in September and end in the following April. The examination will be held early in May. Candidates who pass the examination will receive a certificate recording their success. 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.

Rupees 100 monthly is offered in scholarships awarded by the Mining Education Advisory Board on the results of the examination, these will be tenable for two years at the Bengal Engineering College and are granted to enable the holders to attend the full course for the Diploma in the Principles of Mining. One scholarship of Rs. 50 is reserved for Europeans and two of Rs. 25 are awarded to Indians.

The following Local Committees have been appointed:—

RANIGANJ COAL-FIELD.

<i>Deshergarh Centre.</i>	<i>Jamuria Centre.</i>	<i>Raniganj Centre.</i>
Mr. H. Lancaster, <i>Chairman.</i>	Mr. H. Lancaster, <i>Chairman.</i>	Mr. H. Lancaster, <i>Chairman.</i>
" J. B. Wardlaw (Deshergarh).	" P. S. Keelan (Charanpur).	" P. S. Keelan (Charanpur).
" Geo. Miller (Sitarampur).	" T. Samson (Charanpur).	" A. T. Creet (Kalipahari).
" F. Owen (Deshergarh).	" H. L. Wilkinson (Sibpur).	" W. J. Rees (Raniganj).
Babu M. N. Roy (Begunia).	" W. S. Elphinstone (Asansol).	Babu Promotho Nath Hazra (Toposi).
" P. C. Tarafdar (Mugma).	Babu Atul Shashi Mitra (Asansol).	" Kali Kumar Misra (Searsole Raj Estate).
" S. N. Ghosh (Barakar).		" S. Chaudhuri (Jamehari, Raniganj).

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

JHARIA COAL-FIELD.

Jharia Centre.

Mr. F. L. G. Simpson, *Chairman.*
 „ R. G. M. Bathgate (Jamadoba).
 „ J. Kirk (Kuatore).
 „ J. B. Argyte (Lodna).
 „ R. Barrowman (Standard Coal Company,
 Jharia).
 Babu Goburdhan Das Manishankar (Jharia).
 „ Narendra Nath Sarkar (South Kujama,
 Jharia).

Sijua Centre.

Mr. F. L. G. Simpson, *Chairman.*
 „ A. A. Agabeg (Sijua).
 „ R. Heron (Ekra, Bansjora).
 „ H. M. Bull (Bansjora).
 „ G. C. Leach (Sijua P. O.)
 Babu Trikundas Doyal (Bansjora).
 „ Basanta Kumar Roy (Kirkend).

B. HEATON,

*Secretary, Mining Education Advisory Board,
 B. E. College, Sibpur Botanic Garden, P. O. Howrah.*

SYLLABUS OF THE COURSE OF INSTRUCTION.

The lectures in the following courses are delivered in alternate years:—

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 borcholes 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 longwall and chambering methods.

6. *Supporting.*—Props and lids, bars, chocks or cogs, square sets, special timbering of 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 experiment; types of safety lamps; firedamp detectors.

THE PRINCIPLES OF MECHANICAL ENGINEERING OF COAL MINES.

1. *Applied Mechanics.*—Mensuration; definitions of force, motion, friction, work and energy; the simple machines; mechanical and electrical units; hydrostatics; the siphon; pressure of gases; Boyle's law.

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

2. *Steam, Electricity and Compressed air.*—Theory of steam boilers and their fittings; the steam engine; the dynamo; the electric motor; 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; tipplers; simple screening and sizing; railway sidings; aerial ropeways.

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

Adopted by the Mining Education Advisory Board at their meeting of 27th January 1917. Copies of this circular may be obtained from the Secretary or from the Instructor.

B. HEATON,

Secretary.

BENGAL ENGINEERING COLLEGE, SIBPUR;

The 6th August 1919.

Statement No. 6.

Regulations made by the Board of Examiners under Rule 30 of the rules applying to coal-mines made under Section 20 of the Indian Mines Act, 1901, for the conduct of examinations for Colliery Managers' certificates of competency.

(1) No member of the Board of Examiners shall act as a local examiner, except in emergent cases.

(2) When possible one or more members of the Board of Examiners shall attend every examination on at least one of the days.

(3) So far as is practicable, the local examiners shall be:—

(a) An Inspector of Mines, who shall be Secretary to the local examiners.

(b) Two Mining Engineers or Colliery Managers who must be the holders of first class certificates. Provided that a Mining Professor may be appointed instead of one of the Mining Engineers or Managers.

(4) The remuneration of each local non-official examiner shall be Rs. 150 for each examination, and a capitation fee of Rs. 2 for each first class candidate and Re. 1 for each second class candidate examined, and travelling expenses and halting allowances on the first class scale under the Civil Service Regulations; but an Inspector of Mines, acting as a local examiner, shall not be entitled to any fee or remuneration whatsoever, beyond the travelling expenses and halting allowances due to him in his official capacity.

(5) The examinations will be advertised at least four months before the date of the examinations and applications, supported by original certificates, as to experience and character and fees will be received up to a date, duly advertised, one month prior to the examinations. No application which is not supported by the certificates and fees referred

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

to above will be considered by the Board if submitted after the advertised date for receiving such applications and fees.

(6) The subjects for examination shall be:—

(a) *Arithmetic and handwriting.*

(b) *Practical and theoretical coal-mining*, including surface and underground arrangements, sinking, timbering, ventilation, gases met with in coal-mines, a knowledge of plans, surveying and levelling, and of the various instruments used in mining. Questions may also be asked upon geology, sanitation, hydraulics, explosives, safety lamps and similar subjects. The candidates may also be required to show how to arrange the ventilation and haulage of a mine on a given plan.

(c) *Practical mechanics*, including steam, steam-engines, steam-boilers, pumps and strength of materials; and questions may be asked upon electricity and compressed air as applied to coal-mining.

(d) *The Indian Mines Act, 1901, and rules made under the Act.*

(7) The examination shall be both written and oral and the subjects and conditions shall be the same for candidates for both classes of certificates; but the examination questions shall be made suitable for each class of certificate.

The examiners shall have power to eliminate the oral examination in the case of candidates who do not reach a standard in the written examination to be prescribed by the Board of Examiners.

(8) The following should be the maximum number of marks given for each subject:—

Subject.	FIRST CLASS.			SECOND CLASS.		
	Papers.	Viva voce.	Total.	Papers.	Viva voce.	Total.
1	2	3	4	5	6	7
(a) Arithmetic and handwriting	50	...	50	50	...	50
(b) Mining	160	60	220	140	80	220
(c) Mechanics	110	40	150	100	50	150
(d) Indian Mines Act	60	20	80	60	30	80
TOTAL	380	120	500	340	160	500

(9) No candidate who fails to obtain 66 per cent. of the total number of marks or 33 per cent. in either of the subjects of mining or mechanics, shall be passed by the examiners, and if a candidate fails to obtain 33 per cent. of the marks given for either of the subjects of Arithmetic and handwriting or the Indian Mines Act, any marks he may have obtained in such subjects shall not be included when the total is determined.

(10) Before each examination each candidate shall declare whether he presents himself for a first or second class certificate. No candidate for a second class certificate shall be eligible at that examination for a first class certificate, but a candidate for a first class certificate, who does not reach the necessary standard, may, nevertheless, at the discretion of the local examiners, be recommended, to the Board of Examiners for a second class certificate, if, in their opinion, he has done sufficiently well to deserve it.

(11) The Secretary to the local examiners shall report, by registered post, the result of the examination giving the number of marks obtained by each candidate in each subject, to the President of the Board of Examiners within one month of the close of the examination.

(12) The questions which the local examiners intend to put in the examination papers shall be submitted in draft to the Board of Examiners, for approval, at least six weeks before the date of the examination. Answers to questions on Arithmetic and those involving calculations and all plottings and levellings must be submitted to the Board of Examiners along with the question papers.

(13) At least one examination for first class candidates and at least one examination for second class candidates shall be held annually in one of the Bengal or Bihar and Orissa

APPENDIX IV—*concl'd.*MISCELLANEOUS—*cont'd.*Statement No. 6—*concl'd.*

coal-fields; and in other parts of India examinations will be held whenever, in the opinion of the Board of Examiners, the number of candidates in a coal-mining centre justifies the holding of an examination.

(14) No candidate will be allowed to take part in the examination until he has produced an authorization from the Board of Examiners.

(15) Every candidate before taking his seat must sign a register, in which he will be given a definite number. He must sign his name and write his registered number at the top of every page of the paper on which he writes the answers to the questions.

(16) The number of the question must be given in bold figures before the answer to each question.

(17) The calculations and work by which a result is obtained must be clearly shown in immediate connection with the answer to each question.

(18) Answers must be strictly confined to the questions asked.

(19) Sketches may be made to make answers clear.

(20) When sketches are asked for, it should be understood that, unless otherwise stated, freehand sketches, with dimensions, are all that is necessary, and candidates should not spend time in making finished drawings.

(21) Any candidate speaking to any other candidate during the examination, or using any book, notes or private paper, or acting in any manner which the examiners consider improper will be liable to be disqualified at their discretion. The Board of Examiners may in such a case use their discretion as to allowing the candidate to sit at any future examination.

(22) When a candidate has completed the answers to the questions, or when the time allowed for answering the questions has elapsed, or he has been disqualified, he must hand the paper of questions and his answers to the examiners, and at once leave the examination room.

(23) A time table will be supplied to each candidate at the commencement of the first day's examination.

(24) The oral examination will be held at a subsequent date. Only those candidates who obtain a certain degree of proficiency in the written examination will be examined orally. Due notice of time and place will be sent to each candidate required by the examiners for oral examination.

(25) The number of marks given for each question will be shown in brackets at the end of the question.

(26) Ink and paper will be provided, and no paper other than the official paper provided may be used. Candidates must bring their own pens and pencils, drawing pens and drawing instruments, including a protractor.

All previous Regulations are hereby cancelled.

G. F. ADAMS,

*Chief Inspector of Mines in India and ex-officio
President of the Board of Examiners.*

DHANBAD, }
The 24th February 1919. }

Statement No. 7.

No. 219-D.

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE AND INDUSTRY.

Delhi, the 17th January 1920.

NOTIFICATION.

(MINES REGULATIONS.)

In exercise of the power conferred by section 20 of the Indian Mines Act, 1901 (VIII of 1901), Governor-General in Council is pleased to direct that in the rules regarding Mines

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

Managers and their certificates published with the notification of the Government of India in the Department of Commerce and Industry, No. 2968-82 (G. & M.), dated the 21st April 1906, as subsequently amended, the following amendments shall be made, namely :—

(1) For rule 29 of the said rules the following shall be substituted, namely :—

“ 29. Certificates of competency under these rules shall be granted by the Board of Examiners and their decision regarding the grant of such certificates shall be final. Certificates granted by the Board shall hold good throughout British India, and shall be of two classes, namely, first and second class.”

(2) Rules 38, 39 and 40 of the said rules are hereby cancelled.

2. The amendments shall take effect from the 30th June 1920.

A. H. LEY,

Secretary to the Government of India.

Statement No. 8.

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.