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ANNUAL REPORT

OF THE

CHIEF INSPECTOR OF MINES IN INDIA

FOR THE YEAR ENDING

31st DECEMBER 1940

(ABRIDGED EDITION)



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FROM

W. KIRBY, Esq., B.Sc., M. I. MIN. E.,

CHIEF INSPECTOR OF MINES IN INDIA,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

DEPARTMENT OF LABOUR,

NEW DELHI.

Dated Dhanbad, the 13th May 1941.

SIR,

I have the honour to submit the report upon the inspection of mines in British India for the year ending 31st December 1940.

INTRODUCTION.

The Indian Mines Act, 1923, applies to British India only and not to the Indian States. For the complete figures of production of all minerals raised from excavations of all depths in British India and the Indian States reference may be made to the statements of the "Mineral Production of India" published annually in the "records of the Geological Survey of India" and to the Quinquennial Review of the Mineral Production of India" published every five years by the same Department. Detailed information of the mineral industries in Mysore—where the Kolar gold field is situated—and Hyderabad (Nizam's Dominions) is given in the annual reports of the Chief Inspector of Mines in those States.

Section III.—Accidents.

The causes of the fatal accidents have been classified as follows :—

	No. of fatal accidents.	Percentage of total number of fatal accidents.
Misadventure	197	75.48
Fault of deceased	21	8.05
Fault of fellow workmen	10	3.83
Fault of subordinate officials	20	7.66
Fault of management	11	4.21
Faulty material	2	.77
Total	261	100.00

I have analysed the serious accidents and find that out of the total of 1,483 persons seriously injured one was permanently and totally disabled; 67 were permanently partially disabled, and 1,415 were only temporarily disabled.

In addition, it was reported that 12,880 persons received minor injuries which necessitated the enforced absence from work for a period exceeding forty-eight hours.

Explosions and Ignitions of Fire-damp and Coal-dust.—There was one fatal accident by an ignition of fire-damp.

Falls of roof and sides.—Falls of roof and sides caused 153 fatal accidents and 353 serious accidents. As compared with the figures under this head in the previous year the total number of accidents increased from 470 to 506; the number of persons killed increased from 180 to 198, and the number of persons seriously injured increased from 314 to 371. In one case eight lives, in one case six lives, in one case four lives, in one case three lives and in six cases two lives were lost in depillaring areas; also in one case three and in eight cases two lives were lost in galleries by falls of roof. The accidents by falls of sides include one in which six persons, one in which four persons and one in which two persons were killed in galleries; also in one case four lives and in one case two lives were lost in open workings.

In Shafts.—There were 20 fatal accidents and 25 serious accidents in shafts, as compared with 14 fatal accidents and 34 serious accidents in the previous year.

Suffocation by gases.—There were 2 fatal accidents by suffocation by gases.

Explosives.—There were 7 fatal accidents and 26 serious accidents caused by explosives. In the previous year the figures were 16 and 28 respectively.

Haulage.—There were 32 fatal accidents and 307 serious accidents on haulage roads. The accidents due to haulage have been classified as follows :—

Classification.	Fatal.	Serious.	Total.
Haulage rope breaking	4	2	6
Coupling chains and hooks breaking	—	—	—
Drawbars breaking	—	—	—
Couplings becoming detached	7	4	11
Riding on sets (authorised)	—	6	6
Riding on sets (unauthorised)	—	9	9
Allowing tubs to run uncontrolled	6	46	52
While hand-tramming tubs	3	41	44
While guiding tubs on a curve	1	11	12
Following derailment or re-railing tubs	4	60	64
While coupling or uncoupling	—	33	33
While resting on or loitering about haulage roads or tramming levels	3	17	20
Crushed against tubs, sides of roadways, doors, etc.	1	18	19
While spragging moving tubs	—	21	21
Unclassified	3	39	42
Total	32	307	339

I give below a table showing the fatal and serious accidents on haulage roads during the last five years :—

	Fatal.	Serious.
1936	24	189
1937	32	218
1938	40	257
1939	38	280
1940	32	307

It will be seen that there was an appreciable reduction in the fatal accidents but there was a regrettable increase in the number of serious accidents, as compared with the preceding year.

There was a considerable increase in the number of accidents due to the breaking of haulage ropes, there being 6 in 1940, as compared with one in 1939. Some of the accidents under this heading can be minimised if ropes of adequate strength and suitable material are used and thorough examinations are made so that when ropes show signs of deterioration they can be rejected. It is encouraging to note that there was no accident due to the breaking of coupling chains, hooks and drawbars and there was also a reduction in accidents due to couplings becoming detached.

There was an appreciable reduction in the number of accidents resulting from set riding, there being no fatal accident in 1940, as compared with 4 in 1939. Nine out of fifteen serious accidents under this heading occurred due to unauthorised persons riding on sets. Most of these accidents could have been avoided by stricter supervision on the part of officials. When unauthorised persons are discovered riding on sets the manager should take such action as will have a salutary effect.

There was a considerable increase in the number of accidents both fatal and serious, resulting from tubs being allowed to run uncontrolled, there being 52 accidents in 1940, as compared with 14 in 1939. Attention is drawn to the necessity of providing a sufficient number of suitable iron sprags on the loading lines and their regular use should be insisted on by the underground officials. Stop-blocks and catches provided at suitable points on tramlines having variable gradients and also the extended use of inter-locked stop-blocks and runaway switches at the top of haulage inclines would reduce this type of accident.

There was an improvement in the number of accidents resulting from hand tramming. These accidents could be considerably reduced if precautions were taken to keep the tubs under control, specially where the gradients are undulating, by preventing tubs overtaking and injuring persons pushing tubs in front. There was also a considerable reduction in accidents due to guiding tubs round curves.

There was an appreciable increase in the number of accidents following the derailment or re-railing of tubs. Derailments are chiefly caused by badly laid tracks, specially at crossings and the junction of haulage roads, badly designed curves, dirty roads and badly maintained tubs, and a great improvement could be effected by officials devoting more attention to these essential details.

Although the number of accidents to persons while resting on or loitering about haulage roads and tramming levels has slightly improved, it is still excessive and indicates the necessity for stricter supervision by the underground officials. As many of these accidents are avoidable I again draw the attention of managers and other responsible officials to the advisability of providing gates or other suitable contrivances on the tramming levels to prevent persons inadvertently going on to the haulage roads.

The accidents under the heading "unclassified" have considerably decreased. As several accidents under this heading were caused at the time of cleaning haulage roads when the rope was in motion, a further reduction of this type of accident could be effected by doing such work when the rope was stopped.

Underground Machinery.—Two fatal and 21 serious accidents were caused by underground machinery.

Sundries Underground.—Eighteen fatal accidents and 380 serious accidents were due to miscellaneous causes underground.

Surface Machinery.—Four fatal accidents and 21 serious accidents were caused by surface machinery.

Surface Railways and Tramways.—Fourteen fatal accidents and 177 serious accidents took place on surface railways and tramways.

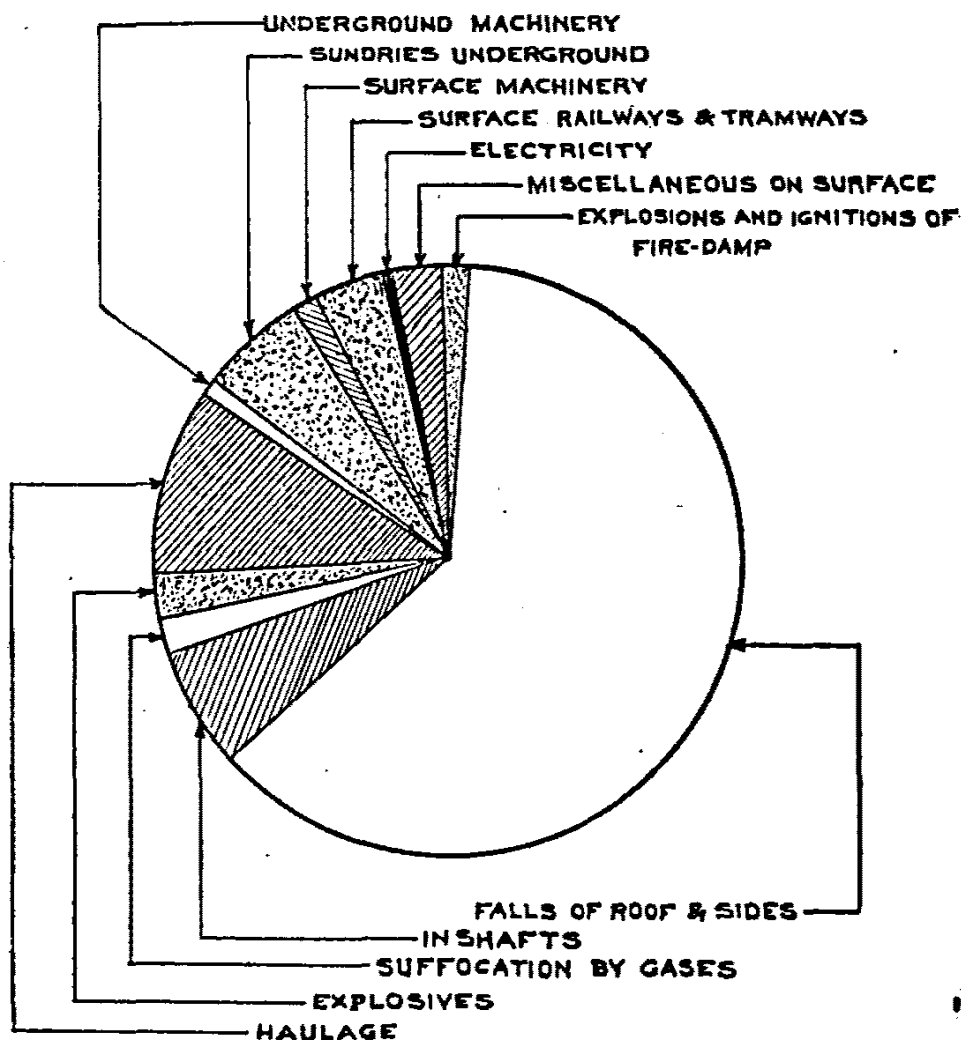
Electricity.—There were one fatal accident and three serious accidents attributable to the use of electricity.

Miscellaneous on the Surface.—Seven fatal accidents and 100 serious accidents of this kind took place on the surface.

Accidents excluded from the statistics.—Eighteen accidents, causing 19 deaths and injury to two persons, were excluded from the statistics for reasons which are given in Appendix II.

The accompanying chart shows the relative importance of the various causes of accidents in coal mines during 1940.

CHART SHOWING
DISTRIBUTION OF CAUSES OF PERSONS KILLED IN AND ABOUT COAL MINES
IN THE YEAR 1940.



A list of the fatal accidents appears in Appendix II, Table 1, where each is briefly described. The details of certain accidents are reported at greater length as follows :—

EXPLOSIONS AND IGNITIONS OF INFLAMMABLE GAS.

No. 1. The Equitable Coal Company, Limited's Raneepore coal mine.

(Four persons killed and one injured.)

This mine was served by two shafts, 531 and 571 feet deep. The Dishergarh seam, about 15 feet in thickness, was worked. Galleries, 7 feet

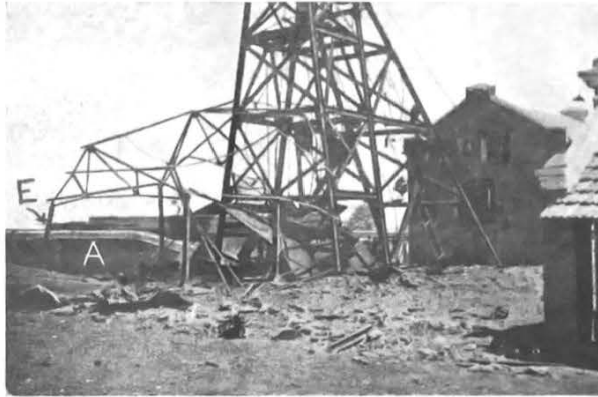
high, were driven, leaving $3\frac{1}{2}$ feet of coal in the roof and $4\frac{1}{2}$ feet in the floor. The mine was opened in June 1930 and was in course of development at time of accident. Plan No. 1 shows the extent of the workings. This was a gassy mine and safety lamps of the Cambrian 9 E. type and magnetically locked were in use, while the "permitted" explosive Stonobel was used. Bye-laws for the treatment of coal-dust had been in force since September 1936. The mine was ventilated by a double inlet Sirocco fan, 6 feet in diameter, which circulated about 90,000 cubic feet per minute at a water gauge of '9" when running at 240 revolutions per minute.

The following details of the accident are given by Mr. N. Barraclough, Deputy Chief Inspector of Mines in India, who held an enquiry into this accident:—

Narrative of events prior to accident.

At 9 P.M. on the 15th April 1940, the overman, Mahadeb Pashaman, who was in charge of the east dip district, gave instructions for the face of No. 21 east level to be undercut and at 9-30 P.M. when this had been done he arranged for the slack and dust coal, produced during undercutting, to be removed and for the shot-holes to be drilled. This work was completed by about 10 P.M. and the overman sent instructions to the shot-firer, Abinash Roy, to fire three shots in the gallery.

At about 11 P.M. Abinash Roy with his assistant, Bilas Ram Kahar, went into No. 21 level to fire the three shots. The shot-firer was qualified in conformity with Regulation 115(a) to fire shots in a fiery mine and before charging the first hole he tested for inflammable gas. The centre hole in the lower $3\frac{1}{2}$ feet of the face was charged and fired, and the shot-firer and his assistant remained for 5 to 7 minutes at a point some 150 feet from the face, from where the shot was fired, to allow the explosive fumes to disperse. The shot-firer then returned to the face and again tested for inflammable gas before charging and firing the second hole at the rise side of the gallery. After waiting 5 to 7 minutes to allow the explosive fumes to clear, the shot-firer again returned to the face and tested for inflammable gas. The third hole, which was at the dip side of the gallery, was then charged and fired. It was the firing of this shot which caused the fire underground. Both the shot-firer and his assistant deposed that this shot sounded like a normal shot which had done a proper amount of work and did not sound like a blown-out shot. When the shot-firer went towards the face of the gallery, he found smoke at a point 100 feet from the face on the intake air side of the brattice. He was unable to penetrate to the face of the gallery and could not say whether the smoke was due to an ignition of inflammable gas or to the brattice or coal being set on fire. The shot-firer stated in evidence that he saw a small flash when the third shot was fired and he waited a few minutes before going towards the face. The shot-firer's assistant, however, observed nothing unusual about the third shot and stated that the shot-firer waited the usual period to allow the fumes of the explosive to clear before going back towards the face. The shot-firer's assistant was engaged in coiling up the electric shot-firing cable as if nothing unusual had happened when the shot-firer returned to him and told him about the smoke in the gallery. The cause of the fire is a matter of conjecture and I shall discuss this point more fully at a later stage.



View of top of upcast shaft before removal of wreckage was commenced. A. Fandriff. E. Fan Evasec.



Close up view of wreckage at top of upcast shaft.

Photo.-Litho. Office, Survey of India.



General view with downcast shaft in foreground and conveyor. C. which was used for conveying earth to seal the bottom of the shaft.



View of fan drift roof which was destroyed by first explosion. The four deceased fell into fan drift at points XX. Note the temporary seal over fan evasee at E.

Photo.-Litho. Office, Survey of India.



View of upcast shaft after explosions. T. A tub blown up the shaft.



View showing kee beams and mouth of upcast shaft after wrecked cage had been removed.

Photo-Litho. Office, Survey of India.

The shot-firer then acted promptly; he sent his assistant to the surface to inform Mr. D. N. Ghosh, the assistant manager of the day relay, and he himself went to inform the overman who was in charge of the district and was at that time in No. 20 level. The overman went with the shot-firer to No. 21 level and found thick smoke on the return side of the brattice. By this time the level was filled with smoke from the face to the end of the brattice at No. 8 rise gallery (see sketch Plan No. 2). Realising the gravity of the situation the overman sent a worker to inform Mr. T. Archer, the assistant manager of the relay, who was subsequently killed, and he with the shot-firer went round the working places in the district and removed all workmen. At 11-30 P.M. Mr. D. N. Ghosh received the information on the surface. He sent the shot-firer's assistant to inform Mr. K. G. Craig, the night relay assistant, and himself proceeded underground. On his way down the east dip district haulage road he met Mr. T. Archer and they went together to No. 21 level where they met the overman and shot-firer. Mr. Craig joined them a few minutes later. They found dense smoke in the level at a point 500 feet back from the face. The smoke appeared to them to be coming out of the roof coal. The roof coal was cracking and they anticipated a fall of roof. The three assistants decided to withdraw all persons from the mine and each one undertook to make a tour of a district and remove the workers. All persons had returned to the surface before 1 A.M.

The manager, Mr. Slatter, who was informed at about 1 A.M. reached the mine before 1-30 A.M. After informing the Colliery Superintendent by telephone he assured himself that all persons had been withdrawn by calling the gang sirdars and by checking the registers. Then he had the speed of the fan reduced to about half of its normal speed.

The Colliery Superintendent, Mr. Manley, and the agent, Mr. Burch, who reached the mine at 3 A.M. were informed by the manager, assistants, overman and shot-firer of the nature of the occurrence. They went to the fan evasé from which smoke was issuing and on testing for inflammable gas in the mouth of the evasé with a safety lamp it was found that the atmosphere being exhausted from the mine contained 5 per cent. of inflammable gas. Mr. Manley, Mr. Burch, Mr. Slatter, Mr. Craig and an overman went underground to make an inspection. On No. 21 level they met dense smoke at a point about 600 feet from the face and in the smoke a test with a safety lamp showed about 3 per cent. of inflammable gas. They decided to return as they considered it was dangerous to remain in the mine. While they were underground, Mr. D. N. Ghosh informed Mr. G. S. Cameron, Inspector of Mines, No. 2 Circle, of the occurrence by telephone.* On returning to the surface Mr. Burch spoke to Mr. Cameron on the telephone and Mr. Cameron expressed the opinion that the mine openings should be sealed at the surface. When Mr. Cameron reached the mine at 6-30 A.M. he found the sealing of the upcast shaft was almost completed and the sealing of the downcast shaft and the fan evasé was in progress. At about 6 A.M. the Chief Inspector was informed and at about 6-30 A.M. he spoke to Mr. Manley on the telephone. Mr. Manley informed him that sealing operations were progressing satisfactorily and would soon be completed. At about 8-45 A.M. Mr. Cameron informed the Chief Inspector by telephone of the first explosion and accident.

Circumstances attending the accident.—The temporary sealing of the two shafts had been completed, the mouth of the fan evasé had been covered with rails, iron sheets and earth, and temporary walls of bricks laid in clay which were being built round the fan evasé to complete the sealing operations were almost finished when the first explosion occurred at 8-15 A.M. At the time Mr. Cameron, Mr. Burch, Mr. Slatter, Mr. Craig, Mr. D. N. Ghosh, and the four deceased were on the roof of the fan drift at various points round the fan evasé. The explosion, which was a mild one compared with subsequent explosions, destroyed part of the roof of the fan drift. Mr. Burch, Mr. Slatter, and Mr. Craig were blown bodily off the fan drift roof and fell 14 feet to ground level; Mr. Cameron was blown upwards and fell face downwards on the girders which had supported the roof of the drift, the four deceased who were running down the sloping roof of the fan drift were blown upwards and fell back into the drift. The roof of the fan drift at the points where the four deceased fell inside the drift was completely destroyed.

The seal over the downcast shaft was destroyed but that over the upcast shaft remained intact.

Owing to the dense smoke and fumes which filled the fan drift it was impossible to recover the four men who had fallen into the drift by entering from the roof level. The air lock doors of the fan chamber were opened but it was found impossible to enter the fan drift by this way because the reversing doors had been blown open and were tightly wedged across the side passages of the fan chamber. Subsequently it was found that the reversing doors had been bent and the tiles and debris from the roof had fallen behind the doors. The four deceased were probably killed outright by the explosion but if any of them did survive the explosion they would succumb to the smoke and fumes within the course of one or two minutes.

The bodies of the deceased could not be recovered until 5 P.M. on the 17th April.

Narrative of events subsequent to the accident.—The first explosion was followed by a series of explosions which occurred at 8-45 A.M., 9-25 A.M. and 9-45 A.M., each one being more violent than the previous one and the structures at the top of the shafts were seriously damaged.

After the arrival of the Chief Inspector at the mine, a conference was held and it was decided that more explosions might occur and that no work should be done for some time in the vicinity of the shafts. It was also decided to use a Jigging conveyor to convey earth from a distance and tip the earth into the downcast shaft in order to seal the bottom of the shaft, thereby avoiding the employment of many persons near the mouth of the shaft.

Mr. L. J. Barraclough, Chief Mining Engineer of Messrs. Andrew Yules' collieries, arranged for a conveyor to be brought from Poidih colliery but this did not arrive at the mine until about 5-30 P.M. that day because of the difficulty in transporting a heavy piece of machinery across the unbridged Damuda river which at Dishergarh is more than half a mile in width. By the time I arrived at the mine—1-30 P.M., as no further explosion had occurred, it had been decided to commence the sealing of the downcast shaft by hand

labour and a gang of 50 or more persons had been engaged to cut earth in the vicinity of the shaft. The formation of a plug of earth in the bottom of the downcast shaft proceeded without incident until 5-45 p.m. During this time dense smoke and acrid fumes came out of the upcast shaft and fan drift, the fumes being so strong that work had to be suspended at the downcast shaft whenever the wind blew them in that direction. At 5-45 p.m. the fifth explosion occurred, and this was the most violent of all the explosions.

The extent of the damage done by the explosions to the winding equipment of this shaft may be seen from the attached photographs which were taken on the 19th April when clearing of the wreckage was in progress.

After the fifth explosion at 5-45 p.m. on the 16th April it was decided to suspend all work until the following day. Three more explosions at 1-20 a.m., 1-30 a.m., and 4-55 a.m. occurred during the night, the explosions at 1-20 a.m., and 1-30 a.m. being mild but the last one was said to have been almost equal in violence to the most violent of the explosions at 5-45 p.m. of the previous day. On the 17th April the Jigging conveyor was installed and by about 3-45 p.m. the plug of earth in the bottom of the downcast shaft became effective. Filling of earth into the shaft with the conveyor was, however, continued throughout the night and up to 8 a.m. the following day to ensure a tight seal. By 4-45 p.m. on the 17th April the smoke coming up the upcast shaft had decreased to an almost negligible quantity and it became possible to cut a hole in the outer wall of the fan-drift and recover the bodies of the deceased.

The permanent seal at the top of the downcast shaft and a stopping across the fan drift were completed on the 19th April and the permanent seal at the top of the upcast shaft was completed on the 21st April.

Discussion of probable causes of fire.—From the evidence of the shot-firer and his assistant it is evident that the fire in No. 21 level face was ignited by the third shot which was fired in the bottom part of the face. When giving his evidence the shot-firer first said he saw sparks on the third shot being fired. On being asked to describe the sparks he said he did not see sparks but he saw a flash which was a small flash. The shot-firer's assistant, however, did not see any flash or sparks and the two men appear to have waited the usual period for the explosive fumes to clear before returning to the face of the gallery. The overman in charge of the district had inspected that gallery at about 10 p.m. and the shot-firer deposed that he made inspections before each shot was fired but no inflammable gas was found at the face. The quantity of air entering the district as measured on 2nd April 1940, was 28,000 cubic feet per minute. This measurement was made at the point marked $\frac{M}{5}$ on plan No. 1 just below the air crossing over the haulage road at No. 17 level. There were tramlines in Nos. 18, 19 and 20 levels and to prevent short circuiting of the ventilation there were doors in each of these levels at the points as shown on the plan. In the galleries at the rise side of No. 20 level there were stoppings and there was a door across this level inbye of the eighth rise gallery so that provided all the doors in the district were closed the major part of the air entering the district would have to pass along No. 21 level. Allowing for normal leakage through doors, etc., the quantity of air passing along No. 21 level was probably not less than 15,000 cubic feet per

minute. From the bottom of the eighth gallery on the rise side of No. 21 level the ventilation had to be conducted up to the face of the level, a distance of about 250 feet, by means of a brattice which was composed of strong hessian cloth plastered with clay and supported on vertical props at frequent intervals. As leakage through such a brattice cannot be prevented it is very probable that not more than 5,000 cubic feet of air per minute actually reached the face of No. 21 level. This quantity would be sufficient to keep the face clear of inflammable gas provided there was not a heavy blower of gas at the face.

At this mine a special record of the occurrences of inflammable gas was maintained.

At the end of March 1940, coal raising from the West dip district was suspended because the working faces had encountered a dyke and certain alterations were then made to the ventilation system which resulted in a reduction of air entering the West dip district and an increase of about 10,000 cubic feet per minute in the East dip district. After these alterations were effected no inflammable gas was found in the East dip district up to the day of accident.

The manager, assistants and other witnesses all stated that the brattice in No. 21 level reached within 12 or 15 feet of the face and at the end of the brattice there was a roll of hessian cloth kept in readiness for extending the brattice. From the report books and records and from the evidence of witnesses it is apparent that no inflammable gas was found in No. 21 level after the end of March 1940. If the shot-firer did make the inspections which he was required to make in conformity with Regulation 115(b), and which he said he did make, there was no inflammable gas in the gallery before firing any of the three shots singly and it is to be presumed that a heavy blower of gas was not released by either of the first two shots.

The probable causes of the fire were :—

- (a) The ventilation brattice being set on fire by a blown-out shot.
- (b) The ignition of a small blower of gas by the third shot which subsequently ignited the coal in the face and the ventilation brattice.
- (c) The ignition of a small accumulation of inflammable gas which had gathered near the face between the firing of the first and third shots and which set fire to the brattice.
- (d) The ignition of inflammable gas in a break in the third shot-hole and subsequent ignition of the coal and brattice.

I am inclined to dismiss the first of these causes because many reliable witnesses stated that the end of the brattice was 12 to 15 feet from the face and I consider it extremely unlikely that sparks from a blown-out shot of a "permitted" explosive would retain sufficient heat after travelling through air for a distance of 12 feet to ignite a piece of hessian cloth. Moreover, it is unlikely that the third shot would blow out of the hole because the coal was undercut, it had been broken down in the middle of the gallery by the first shot and these conditions would not be conducive to a blown-out shot. Both the shot-firer and his assistant stated that the third shot sounded quite normal and not like a blown-out shot. If the statements made by the

shot-firer and his assistant are true the second and third of the causes of ignition are ruled out because the shot-firer would have discovered the presence of the inflammable gas and he would not have fired the third shot. But if the third shot did ignite a small accumulation or a small blower of inflammable gas, the shot firer would endeavour to conceal the truth because he should have tested for and discovered the presence of the inflammable gas before firing the third shot. If the statements of the shot-firer and his assistant are ignored, the latter three causes of the ignition are equal probabilities and of equal merit. In the absence of more conclusive evidence it would be unreasonable to assume that the shot-firer was negligent in the performance of his duties, and the cause of this ignition must always remain a matter of conjecture.

In support of the fourth theory to account for the ignition is the fact that the shot-firer did not use a scraper rod or a wooden rod provided with a special tip with which he could ascertain if there was a break or fissure in the third shot hole because he admitted in his evidence that he tested the hole with an ordinary tamping stick before charging it. If there was a fissure or break in the shot hole which was filled with inflammable gas, it is quite conceivable that the fire was started as a result of ignition of the gas in the fissure.

Nature of Explosions.—The explosions appear to have been explosions of inflammable gas and if coal-dust did augment them it did so to a very limited extent. I base this opinion on reasons as follows :—

- (a) It is known that there was a high percentage of inflammable gas in the atmosphere exhausted from the mine when the fan was running at half of its normal speed, several hours before the first explosion occurred and it can be assumed that there was an explosive mixture in the return airway from the East dip district even at that time.
- (b) If the first explosion had been augmented by coal-dust it would have attained greater violence. As it was this explosion was comparatively mild and it did very little damage to the winding equipment.
- (c) At the time of the fifth explosion a dense cloud of dust was blown out of the mine but the dust cloud was not ignited by the flame which came out of the downcast shaft.
- (d) No small globules of coked dust could be found in the dust expelled from the mine by the eight explosions.

The major part of the inflammable gas consumed in the explosions would be the products of distillation by the fire.

RECOMMENDATIONS.

1. *Explosives.*—The igniting medium was a shot of Stonobel—a “Permitted” explosive—which probably ignited inflammable gas which in turn set fire to a brattice and to the coal roof and sides of a gallery. Although a “Permitted” explosive gives a greater degree of safety than a non-permitted explosive, it is definitely not safe for use if inflammable gas is present and

many ignitions and explosions have resulted from the use of such explosives. Although no explosive can be deemed to be entirely safe for use in the presence of inflammable gas, it has been established that a sheathed explosive gives a much greater degree of safety in gassy mines.

2. *Brattice materials*.—Although it has not been definitely established that the brattice cloth was the first solid material to be set on fire, in view of the rapidity with which the gallery filled with smoke, it appears very probable that the brattice cloth played an important part in this accident. Recently at another gassy mine in the Raniganj coalfield a hessian cloth brattice was ignited under mysterious circumstances but in that case the fire was extinguished by the prompt action of the manager.

Brattices constructed of inflammable material are a danger in any mine whether the mine is gassy or not, and the more extensive use of non-inflammable material for this purpose in all mines is to be recommended.

3. *Testing of shot-holes for fissures*.—The shot-firer admitted when giving evidence that he tested the shot-hole with a plain wooden tamping rod and, therefore, he could not have tested the hole for a fissure or break. One probable cause of the ignition was the ignition of inflammable gas in a fissure connected with the shot-hole.

I recommend that every shot-firer in gassy mines be provided with a special testing rod suitable for testing a shot-hole for breaks or fissures and shot-firers should be required carefully to test every shot-hole for breaks and test for inflammable gas at the mouth of every shot-hole before charging the hole.

I issued a circular to owners, agents and managers of mines, recommending that (a) in mines where safety lamps are required to be used sheathed explosives should be employed; (b) non-inflammable material should be used for ventilation purposes both in gassy and non-gassy mines; and (c) every shot-firer in a gassy mine should be provided with a special testing rod or scraper to enable him to test a shot-hole for breaks or fissures and shot-firers should also be required to test carefully for inflammable gas at the mouth of a shot-hole before charging the hole.

FALLS OF ROOF.

No. 12. The Bengal Coal Company, Limited's Banksimulla coal mine.

(Six persons killed.)

This accident occurred during depillaring operations in the Koithi seam at a depth of about 277 feet. The seam is 12 feet thick and is overlain by 15 inches of shaley coal, above which is 4½ inches of soft friable shale, which is overlain by the main roof consisting of shaley sandstone. The place of accident is indicated on the plan and sections (No. 3).

A certain amount of depillaring had been done before the working of this seam was discontinued in October 1938. Working was recommenced in

October 1939 and the splitting of some pillars was first undertaken and complete extraction was commenced in December 1939. Up to the time of the accident only $1\frac{1}{2}$ pillars had been completely extracted. The top 4 feet of roof coal was not worked and about 1,288 square yards of this roof coal had fallen in the goaf. An area of 360 square yards of coal had, however, not fallen in the goaf east of the working place. The extraction of two 'stooks' was nearing completion and these measured $15' \times 10'$ and $19' \times 9'$.

The place appears to have been adequately timbered by means of props and two cogs. It is difficult, however, to state definitely how many props were set but the Inspector of Mines, who held an enquiry into this accident, was satisfied that the place was adequately timbered to ensure safety under all normal conditions. During the relay regular inspections were made by the sirdar and propping mistry and up to the time of the occurrence no indications of roof "weight" were detected, either by the officials or by the work-persons themselves.

During the second relay which commenced at 4 P.M. and terminated at 12 mid-night, ten persons including miners and loaders were employed on the extraction of the two "stooks" X and Y. The miners were in charge of a certificated sirdar who was also supervising the work of other miners on another pillar near-by. At 11-30 P.M. the sirdar visited the place of accident and informed the miners that it was getting near the end of the shift and he then went to the other adjoining working place. Immediately afterwards the accident happened. A mass of coal, $50' \times 46' \times 4'$ in thickness, fell from the roof, swinging over the props and the two cogs. The "stooks" X and Y were also partially crushed. Five miners were buried under this fall and a sixth was so severely injured that he died eight hours later.

Immediately after the occurrence it was disclosed that there was a clean parting between the 15 inches of shaley coal and the $4\frac{1}{2}$ inches of friable shale and a number of cross cleats were seen in the roof. An examination of the props and their lids supported the statements of witnesses that there were no indications of "weight" during the period of the relay. All the miners employed in the place were experienced men and had there been previous warning of "weighting" they would no doubt have left the place immediately on their own initiative. Another factor which has a large bearing on the cause of the accident is that to the dip of the "stooks" X and Y there was a certain amount of hanging coal which had not fallen and this, in all probability, was supported by the "stooks". It is considered that during the process of extraction the "stooks" X and Y were reduced to a point where they could not support the weight of the hanging roof coal on the dip side. The "stooks", therefore, collapsed and caused the roof coal to collapse at the clean "parting" and swing over the props and cogs. It is also possible that the roof coal was weakened by the cross cleats and also by the hanging coal in the goaf on the east side, although this did not fall until after the accident.

To prevent a recurrence of this type of accident it was decided to alter the system of working so as to obviate large areas of roof coal falling unexpectedly and displacing the supports.

No. 77. *Maharaja S. C. Nandi's Ekra Khas coal mine.*

(Eight persons killed.)

This accident occurred during pillar extraction in No. 13 seam which is 20 feet thick. No. 14 seam is 25 feet thick and is separated from No. 13 seam by about 8 feet of strata. In the old workings most of the galleries had been driven nearly the full height of the seams. Both these seams were developed many years ago. When extracting pillars in these seams the line of extraction in the upper seam (No. 14) is kept a pillar ahead of that in the lower seam (No. 13). During depillaring operations ample warning is usually obtained of any "weighting", and workers are withdrawn until conditions become normal. Due to the comparatively thin "parting" between the two seams any extensive falls in 14 seam cause this thin "parting" to collapse. The extraction of pillars was commenced at the place of accident about six months previous to the occurrence and only a few pillars were extracted from the two seams. The area extracted was not sufficiently large to cause a main break to surface, but there were occasional falls in the goaf and some "weighting".

At 10 P.M. on the 3rd December, the overman noticed "weighting" in No. 14 seam goaf and in accordance with the recognised practice he ordered the sirdar in charge to withdraw all workers from this particular section in Nos. 13 and 14 seams. The gang of miners and loaders employed in this section left the mine and all approaches to the working places were fenced off. At the same time the eight deceased were engaged in cutting floor coal and in driving a rise gallery some 300 feet west of the depillaring section. The sirdar stated that on his way to No. 14 seam he warned the deceased not to approach the depillaring area as he apprehended a collapse of roof accompanied by an air-blast. The sirdar stayed in No. 14 seam to watch any developments until 3 A.M. the following morning, when he again visited the working places of the deceased and found that they had loaded seven out of eight tubs supplied to them. The sirdar then returned to No. 14 seam. The anticipated fall occurred at about 5 A.M. and the sirdar returned to the fenced off area in No. 13 seam to see the effect of the fall. He then proceeded to the working places of deceased and finding nobody there he concluded that the gang had completed its work and he left the mine. On reaching the surface he discovered that the deceased had not come out of the mine. Suspecting that the deceased might have gone into the prohibited area where the accident happened, the sirdar returned to the edge of the fall and called out the names of the deceased. After a while, one person of the gang responded and he informed the sirdar that he had been caught between pieces of stone and that his companions had been completely buried.

Operations to rescue the entombed miner, who was still alive, were undertaken immediately. It was decided to drive a gallery through the pillar adjoining the fall as near as possible, consistent with safety, to the presumed position of the entrapped miner. A gallery was started but had to be abandoned after an hour as a further fall occurred and blocked up the entrance to the gallery. After this fall no further response could be obtained from the entombed miner. It was then decided to drive a narrow gallery with a Siskol coal cutter, and a connection was made with the main fall some 28 hours later.

This connection was completely blocked by the fallen stone. As no response had been received from the entombed miner since the fall which blocked the entrance of the first gallery, it was presumed that this fall killed him. Any further attempt at rescue work would have been undertaken at grave risk and as there was no hope of finding anybody alive rescue work was abandoned.

It is presumed that the deceased entered the prohibited depillaring area to pick up fallen coal in order to complete the filling of their empty tubs.

FALLS OF SIDE.

No. 89. Messrs. K. B. Seal & Sons, Kalithan-Gurgaon coal mine.

(Four persons killed.)

This accident occurred in No. 17 seam which is 14 feet thick and very steeply inclined, the dip being as much as 1 in 1.3. This seam had been developed by driving galleries 12' × 12' on the dip and on the levels the galleries were made 14 feet in height, i.e., the full thickness of the seam, forming pillars 70 feet on the dip and 60 feet on the strike. The general practice was to drive the galleries in the first instance of much smaller dimensions and then to enlarge them by working the floor coal. At the time of accident coal from the floor of a gallery was being extracted and the usual practice of driving galleries was being followed.

A gang of 17, consisting of 8 pick miners and 9 loaders, was set to work by the overman in charge to cut and load floor coal from the dip side of the gallery where the accident happened. Floor coal had been cut on the rise side of the gallery, thereby exposing the floor stone. Work proceeded normally for about five hours, when a mass of side coal, measuring 25' × 10' × 3½'-4' thick fell without warning from concealed cleavage planes in the side and roof, killing the deceased on the spot.

Floor coal had been cut in all other levels and there were no indications whatsoever that the side which fell was unsound. The place was properly examined by two overmen at different times during the relay and when the sides were tested there were no signs of insecurity. The mass of coal that fell was so large that it was impossible to test by the ordinary "jowling" method. The fall was undoubtedly due to the concealed cleavage planes in the rise side of the gallery and the roof and a contributory factor was the slippery nature of the floor which facilitated the fall. During the course of my enquiry into this accident I inspected the mine and found that the precautionary method of setting struts in the galleries to prevent loose portions of the sides falling away unexpectedly had been adopted even where the sides appeared perfectly sound. There is no doubt that the accident was primarily due to the concealed cleavage planes and the mass of coal was so large that its insecurity could not be detected.

In order to prevent masses of side coal falling away unexpectedly in the event of concealed cleavage planes, slips, faults or other geological disturbances occurring in the sides of galleries, in steep workings of this nature, it is considered that floor coal should be left until the pillars are extracted. In

similar conditions not less than 3 feet of floor coal should be left on the rise side and 6 feet on the dip side of level galleries, which will act as a strut against masses of side coal falling away unexpectedly. The management agreed to adopt this precautionary measure in order to prevent a recurrence of this type of accident.

No. 140. Messrs. P. S. Sial Soapstone Company's Porcupine steatite mine.

(Four persons killed and two injured.)

At this mine "soapstone" or "steatite" occurs in irregular veins varying in thickness from 2 to 4 feet. The veins are almost vertical and are mined by quarrying.

On the day of accident a gang of males and females was set to work in the quarry where the accident happened by the manager, who inspected the sides of the quarry and considered the working places safe. At the time of the enquiry into this accident, however, the manager admitted that the side where the accident happened had been undercut to a depth of 1' to 1½', but he did not consider it to be dangerous. He further stated that this undercutting had existed for two or three days previous to the accident. The workers were engaged to work in the vicinity of this overhanging side and after being employed for several hours a mass of the undercut side, measuring about 33' × 8' × 4', suddenly collapsed without any warning. The deceased persons were buried under the fall and were suffocated before they could be extricated.

The cause of this accident was undoubtedly due to the side which fell being undercut to a dangerous extent in contravention of Regulation 38 of the Indian Metalliferous Mines Regulations, 1926, which requires that "the sides of open workings should be sloped, stepped or secured in such a manner as to prevent danger from falls of material". If this regulation had been complied with the accident would have been avoided.

Criminal proceedings were instituted against the manager.

No. 143. The Bhulanbararee Coal Company, Limited's Bhulanbararee coal mine.

(Six persons killed and five injured.)

This accident occurred in No. 15 seam which is 28 feet thick and in some of the old workings galleries have been made as much as 25 feet in height. Due to the excessive height the galleries were stowed with sand to within 10 to 12 feet of the roof immediately prior to depillaring operations.

Pillar extraction had not been started in the district where the accident happened but about six weeks previous to the accident it was decided to stow this area to enable pillars to be extracted in the usual manner. Therefore, work on consolidating the old pillars in this area by partial stowing was commenced. The loose coal, which had fallen from the sides of these old pillars, was recovered as the sand stowing proceeded inbye. Before starting to fill out this fallen coal the sirdar examined the sides of the galleries and was satisfied that they were secure. The loaders had been employed for

about an hour when a large mass of side coal, measuring 30'×20'×5' thick, suddenly fell, killing six persons and seriously injuring five others.

After the accident a careful examination revealed that the side which fell had not been overhanging nor was there any sign of "pillar robbing". The side fell from a barrier pillar which was not subjected to any "weight", e.g., from an adjoining goaf. The sirdar admitted that there were cracks in the side but it appeared secure when he tested it by the ordinary "jowling" method. Experience has, however, disclosed that weaknesses in large masses of coal and stone cannot be detected by ordinary "jowling" or "sounding" methods, and in high galleries large masses of side which may appear safe on testing, may fall away unexpectedly from concealed "slips" or pronounced "partings" in the side. It would appear that the mass of coal which fell was partially supported by the fallen coal piled up in the gallery and as the removal of this loose coal proceeded and the support decreased the side fell away.

In order to prevent a recurrence of this type of accident, the management agreed that no attempt should be made to recover fallen coal from old workings where the galleries were excessively high and that sand stowing should be done to within a height of 12 feet of the roof with the object of preventing such large masses of coal falling unexpectedly from the sides of the galleries.

SUFFOCATION BY GASES.

No. 176. The Raneegunge Coal Association, Limited's Kustore coal mine.

(Four persons killed.)

This accident occurred in No. 13 seam, 18'—22' in thickness. The plan No. 4 shows No. 5 East Panel district where the accident happened. No coal had been raised from No. 5 East Panel district for between five and six years. After completing pillar extraction, this area was isolated by stoppings and doors were built in two of the stoppings in order to obtain access to the area for inspection purposes. Since coal getting from No. 5 East Panel was stopped the only work done in this area was to renew or tighten timber supports as considered necessary by the officials during the course of their inspections. It was the duty of the overman, Nritya Gopal Chowdhury (one of the deceased) to inspect this and other areas in which coal raising had been discontinued to see if conditions were satisfactory and if any timber supports required renewing or tightening up. On the morning of the 26th December, Nritya Gopal Chowdhury, deceased overman, came on to work at 6 A.M., and proceeded to make his inspection as usual. During the course of this inspection he found that some timber "chocks" at the points "E" and "F" as shown on the plan were loose and required tightening against the roof. At about 8 A.M., he took a carpenter and four timber coolies to tighten these "chocks" and the work was completed by 2 P.M., the same day. All these timbermen had open oil lamps. Between 2 P.M., on the 26th December and 7 A.M., the next morning, when the overman made his next inspection, nobody entered this district. At about 7 A.M., Nritya Gopal Chowdhury, deceased overman, was making his inspection as usual when he

found smoke at the point "B". He immediately reported this occurrence to the manager and when he and the manager made a joint inspection a little later smoke was found at the points "B" and "C". The point "C" was reached by passing through the door at "D". The following morning, accompanied by the Agent, the manager and the deceased overman, I made an inspection of the area concerned, when dense smoke was found at the point "A" and at the small door built in the stopping "D". It was obviously dangerous to attempt to proceed further and we returned, the manager ordering the overman, Nritya Gopal Chowdhury, to fasten securely the doors through which we had passed. There was no doubt about there being an active fire in this district and I discussed with the management the precautionary measures to be taken. At about 3 P.M. the same day the Agent informed me by telephone that Mr. T. G. Barker, an assistant manager in No. 12 seam, the overman, Nritya Gopal Chowdhury, who had accompanied us on our inspection in the morning with two mistries had been seen to enter the fire area at about mid-day and had not returned. Arrangements were made immediately with the Chief Mining Engineer, Messrs. Bird and Company, for rescue teams to proceed to the mine at once, as in view of the conditions in the affected area it was almost certain that rescue apparatus would be necessary in order to recover the four men who had entered the area. When the manager was informed at about 2 P.M. about the missing men, who had gone into the area, he made an inspection and penetrated into the area as far as he considered it prudent to go, and as the deceased could not be traced it was presumed that they had gone too far into the noxious gases given off by the fire and had been overcome.

Two rescue teams trained by Messrs. Bird and Company and under the supervision of Mr. Payton arrived at the mine. After selecting a suitable base "H", from which to conduct rescue operations the two rescue teams, comprising twelve men, went underground to commence rescue work. The first team began operations from the base "H" at 6-45 P.M. They proceeded inbye until they found the four deceased at the points X X X X. All the bodies were recovered by 8 P.M. Great credit is due to these rescue teams for their admirable and gallant work. There appears to be no doubt that without rescue apparatus the bodies could not have been recovered because of the very poisonous atmosphere.

It will be observed from the plan that the deceased penetrated a considerable distance into the fire area before they were overcome. Presumably they were walking along hoping to locate the seat of the fire, when they were overcome by the poisonous gases.

Mr. T. G. Barker had been an assistant at this mine for a number of years. He was a competent and industrious official with a wide experience of underground conditions, and in 1938 was awarded the Edward Medal for an act of bravery in this mine.

It was decided that an attempt should be made to locate the fire and arrangements were accordingly made with Mr. S. F. Tarlton, Chief Mining Engineer, Messrs. Bird and Company, that the rescue teams should again go into the area with the object of locating the fire so that steps could be taken to extinguish it. Before the rescue teams could start operations in this connection it was necessary to build an air-lock adjoining the door "D" to

obviate any contact between the fire area and the outside atmosphere. When the air-lock had been constructed the stopping in which the door "D" was built was partially demolished to facilitate the passage of the rescue teams. The first rescue team entered the area through the air-lock at the point "D" and located the fire at the point marked on the plan. The captain of the team reported "a coal and timber fire located. The fire had almost burnt itself out and the area of the fire and debris was approximately 25 feet in diameter". When the position of the fire was known a pipe was taken through the stopping at "Y" and water under pressure sprayed on to the fire. Two days later another team, wearing rescue apparatus, entered the area and found that the fire had been extinguished and that the galleries in the vicinity were partly submerged in water.

There is no doubt that this fire was caused (a) by one or more of the open lights of the timbermen, who had been engaged by the overman on the morning of the 26th December to tighten up the "chocks" as previously referred to; or (b) due to the timbermen smoking and carelessly throwing away a lighted match which set fire to a timber "chock" at the point O, or to wood "cuttings" being lighted, which in turn set fire to the wood "chock".

A circular was issued to owners, agents and managers of mines in which naked lights are in use, and where it is necessary to do work of any description in isolated areas of workings in which work has been temporarily discontinued, to the advisability of work-persons using only enclosed lights, e.g., safety lamps and electric torches and not open lights of any description, in order to remove the danger of igniting timber or any other inflammable material. An inspection should also be made by an official at the completion of each relay, until the work in hand has been completed, to see that no fire has been started.

These simple precautionary measures are recommended with a view to preventing outbreaks of fire which may be accompanied by disastrous results where workers are only occasionally employed, and a fire may remain undetected for some considerable time.

EXPLOSIVES.

The Chrestien Mining Company, Limited's Jamunia mica mine.

(Two persons injured.)

A shot-firer and his assistant charged six shots in a winze. The shot-firer ignited the fuses by means of a candle and when he and his assistant were climbing a ladder to a higher level the shot-firer's candle was extinguished by drops of water falling on to it from the winze. While the assistant shot-firer was going to the assistance of the shot-firer his candle was also extinguished. The two men were attempting to climb the ladder in darkness, when the first shot exploded and they were seriously injured by projected pieces of stone.

Several similar accidents have happened at metalliferous mines during the year and the managements agreed to provide the shot-firers with electric torches so that if their open lights, used for igniting the fuses of snots were extinguished, in any way, the shot-firers were not left in darkness and their retreat to a place of safety hampered.

HAULAGE.

No. 200. Messrs. Khas Kirkend Colliery Company's Khas Kirkend coal mine.

(Two persons killed.)

This accident occurred on a haulage road about 900 feet long and dipping at 1 in 6 to 1 in 8. Five empty tubs were being lowered down the road, when the two leading tubs became uncoupled, and after running amain for a distance of 350 feet, they were derailed and the two deceased, who were resting at the foot of the haulage road, were struck and fatally injured by the runaway tubs. An enquiry into this accident disclosed that the type of coupling in use was unsatisfactory.

Several similar accidents occurred during the year. In my Annual Report for 1938 suitable types of couplings were illustrated and they should be introduced in those mines where they are not already being used. As pointed out in my Annual Report last year a further precautionary measure, where there is any likelihood of tubs becoming uncoupled, is to use "safety chains" or ropes which extend over the sets of tubs and are very easily attached. A number of mines have adopted this simple precautionary measure and there is no reason why it should not be universally adopted on haulage roads where there is any likelihood of tubs becoming uncoupled through any cause.

SECTION IV.—PROSECUTIONS AND AMENDMENTS TO THE ACT, REGULATIONS, RULES AND ORDERS MADE THEREUNDER.

(PROSECUTIONS.)

During the year judgments in prosecutions were delivered as follows:—

The owner and manager of a mica mine in the Bhagalpur district were prosecuted (1) for failing to provide at the mine the requisite ambulance appliances and medicines; (2) for not having the sides of an open excavation properly sloped or stepped; and (3) for employing in the mine four females under fifteen years of age. They were fined Rs. 40 each.

Two shot-firers of a coal mine in the Raniganj coalfield were prosecuted (1) for having charged and fired two shots in a working place one of which exploded and fatally injured a loader and (2) for having fired two shots simultaneously in the same place although the explosive used was not a "permitted" type, and the conditions in the working place did not comply with the requirements of the regulations. They were fined Rs. 20 each.

The owner of a coal mine in the Raniganj coalfield was prosecuted in that two inclines and one old shaft were not fenced; the fence walls around two other old shafts had collapsed and the fence around a third incline was not in repair. The case was withdrawn due to a dispute regarding ownership of the mine.

The owner and manager of a coal mine in the Jharia coalfield were prosecuted in that (1) a second outlet from the mine was not available for use; (2) the gates at the entrances of two inclines were not in working order; and (3) galleries were being driven and had been allowed to approach to within ten or fifteen feet of waterlogged workings, without any of the precautions prescribed under the regulations being taken. The owner was fined Rs. 20, and the manager Rs. 5.

Five owners and the agent of a coal mine in the Jharia coalfield were prosecuted for working a mine without a qualified manager. One owner and the agent were fined Rs. 20 each, while the case against the other four owners was withdrawn.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for not providing the requisite ambulance appliances and medicines at the mine, and (2) for failing to keep a number of incline cuttings properly fenced on the surface. He was fined Rs. 20.

The owner of a coal mine in the Jharia coalfield was prosecuted for working a mine without a qualified manager. He was fined Rs. 100.

The agent and manager of a coal mine in the Jharia coalfield were prosecuted for blasting roof coal and increasing the width of galleries beyond the limits specified under the regulations. They were fined Rs. 10 each.

The agent, manager and attendance clerk of a coal mine in the Jharia coalfield were prosecuted (1) for employing children underground; and (2) for not showing the names of all persons at work in the mine in the attendance register. They were fined Rs. 10 each.

The three owners and manager of a coal mine in the Jharia coalfield were prosecuted (1) for not re-capping the winding ropes, annealing the cage chains and cleaning the safety hooks within the specified period; and (2) for continuing to use a haulage rope which was in a dangerous condition. Two owners and the manager were fined Rs. 20 each. The third owner was reported to have died.

The owner of a coal mine in the Raniganj coalfield was prosecuted (1) for working the mine without a qualified manager though warned to discontinue operations unless the services of a qualified manager were obtained; (2) for not maintaining a register of persons employed in the mine; and (3) for not recording reports of inspections made under Regulation 70 (2), made under Section 29 of the Indian Mines Act. He was fined Rs. 15.

The six owners and the agent of a coal mine in the Raniganj coalfield were prosecuted for continuing to work a mine without a manager with the prescribed qualifications. As a change in the ownership of the mine was expected to take place shortly, the case was withdrawn.

The owner and manager of a coal mine in the Raniganj coalfield were prosecuted (1) for failing to slope or step the sides of an incline so as to prevent danger from falls of material; (2) for failing to have two inclines adequately ventilated; and (3) for failing to fence entrances to disused galleries driven from the bed of a quarry. They were fined Rs. 20 each.

The owner and manager of a fireclay mine in the Raniganj coalfield were prosecuted (1) for not having the overburden sloped or stepped; (2) for not maintaining a register of employees as prescribed under the regulations; and (3) for not maintaining a report book. The owner was fined Rs. 40, and the manager Rs. 20.

The agent and manager of a mica mine in the Gaya district were prosecuted in that (1) the sides of a shaft in use were unsafe and had not been made secure with suitable timber-work or other means of support; and (2) work was being carried on in the shaft without a competent person having been placed in charge. The agent was acquitted and the manager fined Rs. 300.

Three applicants for sirdars' certificates were prosecuted for submitting false certificates of practical underground experience. They were acquitted.

The three owners of a coal mine in the Raniganj coalfield were prosecuted for continuing to work a mine without a manager with the prescribed qualifications. As a qualified manager was subsequently appointed, the case was withdrawn.

A fitter employed in a coal mine in the Jharia coalfield was prosecuted for interfering with and negligently and wilfully mishandling a winding engine thereby endangering the lives of two persons who were being lowered in a shaft. He was fined Rs. 20.

The attendance clerk of a coal mine in the Jharia coalfield was prosecuted for (1) absenting himself from duty without permission and without being relieved by a person appointed by the manager in writing and for failing to maintain a correct record of persons at work underground. He was fined Rs. 20.

A sirdar and two attendance clerks of a coal mine in the Jharia coalfield were prosecuted, the sirdar for sleeping whilst on duty; one of the attendance clerks for absenting himself from the mine without permission and without being relieved by a person appointed by the manager in writing, and both clerks for not maintaining a correct record of persons at work underground. The sirdar was fined Rs. 20, one attendance clerk Rs. 30 and the other Rs. 20.

The attendance clerk and overman of a coal mine in the Raniganj coalfield were prosecuted, the former for failing to maintain a correct record of persons who had entered the mine and the latter for not making an inspection of the working places before commencement of work on the night relay and also for not being present while persons were at work on the night relay. The attendance clerk was fined Rs. 5, and the overman Rs. 15.

The owner and temporary manager of a coal mine in the Jharia coalfield were prosecuted in that (1) pillars of underground workings were made of dimensions smaller than those specified under the regulations. The owner further failed to intimate to the Chief Inspector of Mines in India the

appointment of a temporary manager in the absence of the permanent incumbent. * The owner and temporary manager were fined Rs. 30 and Rs. 20, respectively.

The owner of a coal mine in the Jharia coalfield was prosecuted (1) for permitting the "robbing" of pillars and the cutting of coal in inclines liable to inundation from an adjoining colliery; (2) for failing to maintain a correct register of persons employed underground; (3) for working the mine without a qualified manager; and (4) for failing to keep a person in authority present while work was in progress underground. He was fined Rs. 60.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of the main excavation sloped, stepped or secured so as to prevent falls of material; (2) for not providing proper foot-paths in the excavation; and (3) for not providing proper arrangements for persons to descend to and ascend from the mine at the outlets. He was fined Rs. 20.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of the mine sloped, stepped or secured so as to prevent danger from falls of material; (2) for not providing proper foot-paths in an excavation; and (3) for not providing proper arrangements for persons to descend to and ascend from the mine at the outlets. He was fined Rs. 20.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of the mine sloped, stepped or secured so as to prevent danger from falls of material; (2) for not providing proper arrangements for persons to descend to and ascend from the mine at the outlets; and (3) for not properly fencing an excavation. He was fined Rs. 20.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of an excavation sloped, stepped or secured so as to prevent danger from falls of material; (2) for not providing proper arrangements for persons to descend to and ascend from the mine at the outlets; and (3) for not properly fencing some pits. He was fined Rs. 20.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of an excavation sloped, stepped or secured so as to prevent danger from falls of material; (2) for not providing proper arrangements for persons to descend to and ascend from the mine at the outlets; and (3) for not properly fencing an excavation. He was fined Rs. 20.

The owner of a steatite mine in the United Provinces was prosecuted (1) for not keeping the sides of a pit sloped, stepped or secured so as to prevent danger from falls of material; (2) for not providing proper foot-paths in an excavation; and (3) for not providing an excavation with proper fencing. He was fined Rs. 20.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to submit a formal notice of the closing of the mine to the Chief Inspector of Mines in India within the prescribed period. The case was withdrawn.

The agent of a coal mine in the Jharia coalfield was prosecuted in that he continued to work the mine without a manager having the prescribed qualifications. He was fined Rs. 20.

The five owners and temporary manager of a coal mine in the Raniganj coalfield were prosecuted (1) for failing to have the soft overburden in two quarries sloped or stepped back; (2) for failing to fence the edges of two quarries securely; and (3) for failing to fence two disused shafts. The case against two of the owners was dropped while that against the others is pending.

The two owners and manager of a coal mine in the Jharia coalfield were prosecuted (1) for driving galleries and extracting pillars within a distance of 25 feet of the boundary claimed by the owners of an adjoining colliery in spite of repeated warnings; (2) for forming pillars of smaller dimensions than those specified in the regulations; and (3) for not keeping inclines and quarries properly fenced. The two owners were fined Rs. 40 each and the manager Rs. 30.

The agent and manager of a coal mine in the Raniganj coalfield were prosecuted for permitting the extraction of pillars in close proximity to an occupied dwelling without giving notice in writing to the Chief Inspector of Mines in India. The case against the agent was withdrawn, while the manager was fined Rs. 15.

The owner and temporary manager of a coal mine in the Jharia coalfield were prosecuted (1) for allowing pillars which were already smaller than the dimensions specified under the regulations to be further reduced in spite of previous warnings; (2) for failing to keep a runaway switch on a haulage road in proper working order; (3) for failing to provide a sufficient number of manholes; and (4) for permitting the sides of a quarry to be undercut to a dangerous extent. They were fined Rs. 40 each.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to keep two pits properly fenced and the fencing of an incline was not kept in repair. He was fined Rs. 50.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to submit a copy of the plan showing the discontinued workings of the mine to the Chief Inspector of Mines in India within the prescribed period. He was fined Rs. 20.

The owner of a coal mine in the Jharia coalfield was prosecuted in that he failed to submit a copy of the plan showing the discontinued workings of the mine to the Chief Inspector of Mines in India within the prescribed period. The case was withdrawn as the accused subsequently submitted the plan.

The manager of a steatite mine in the Jubbulpore district was prosecuted in that he failed to secure the sides of a quarry so as to prevent danger from falls of material, with the result that a large portion of the side collapsed, causing the death of four persons and serious injuries to two others. The case is pending.

The owner, manager and mate of a stone quarry in the Punjab were prosecuted in that they failed to keep the working faces of the quarry sloped or stepped back with the result that a fatal accident occurred by a fall of side. The case is pending.

Three miners of a coal mine in the Raniganj coalfield were prosecuted for (1) permitting an empty tub to run uncontrolled down an underground haulage road with the result that a labourer was crushed between the tub and a set of empty tubs. The case is pending.

Three cases were instituted against five owners and an agent for failing to submit annual returns to the Chief Inspector of Mines in India. The cases against four owners were withdrawn while one owner and an agent were fined Rs. 25 each.

The manager and a blasting supervisor of a mica mine in Madras were prosecuted in that (1) the latter failed to make a proper inspection in order to ascertain whether all shots had exploded with the result that a driller was seriously injured; and (2) both failed to maintain a book for the recording of misfired shots. The manager was fined Rs. 15, and the blasting supervisor Rs. 5.

The two owners of a coal mine in the Jharia coalfield were prosecuted for continuing to work the mine without a qualified manager. They were fined Rs. 100 each.

The six owners of a coal mine in the Raniganj coalfield were prosecuted for continuing to work the mine without a qualified manager. The case is pending.

The manager of a coal mine in the Central Provinces was prosecuted (1) for failing to appoint a competent person to supervise the movement of wagons during shunting operations; (2) for permitting a wagon to be moved without the brake being controlled; and (3) for permitting more than one wagon to be moved on the same line without being coupled. As a result of these contraventions a labourer was fatally injured. He was fined Rs. 60.

The two owners of a mica mine in the Hazaribagh district were prosecuted for failing to submit a copy of the plan showing workings of the mine to the Chief Inspector of Mines in India within the prescribed period. They were fined Rs. 25 each.

Information was received of the following prosecutions instituted by mine officials against subordinate staff and workmen.

An underground trammer of a coal mine in the Pench Valley coalfield was prosecuted for riding on a set of empty tubs. He was fined Rs. 10.

Two coal cutters of a coal mine in the Pench Valley coalfield were prosecuted for travelling on a haulage road. One was fined Rs. 2 and the other Re. 1.

Two trammers of a coal mine in the Pench Valley coalfield were prosecuted under Regulation 95(2) and fined Rs. 5 each.

A shot-firer and a miner of a coal mine in the Pench Valley coalfield were prosecuted for violating Regulations 101, 144 and 145, thereby causing serious injury to the miner. The shot-firer was fined Rs. 15 and sentenced to rigorous imprisonment for three months. The case against the miner was withdrawn.

An underground writer and a head trammer of a coal mine in the Pench Valley coalfield were prosecuted for riding on a set of empty tubs. They were fined Rs. 5 and Rs. 4, respectively.

Two coal cutters of a coal mine in the Pench Valley coalfield were prosecuted under Regulations 84(2) and 108(1). One was fined Rs. 45, and the other was acquitted.

A sirdar of a coal mine in the Raniganj coalfield was prosecuted for sleeping whilst on duty. He was fined Rs. 10.

Two trammers of a coal mine in the Pench Valley coalfield were prosecuted for riding on a set of tubs. One was fined Rs. 20, and the other Rs. 10.

A platelayer of a coal mine in the Pench Valley coalfield was prosecuted for riding on a set of tubs. He was fined Rs. 5.

Two miners of a coal mine in the Jharia coalfield were prosecuted for causing grievous hurt to another miner. They were sentenced to six weeks rigorous imprisonment each.

A banksman of a coal mine in the Jharia coalfield was prosecuted for violating Regulation 144. He was fined Rs. 25.

A shot-firer in the Pench Valley coalfield was prosecuted (1) for not exercising personal supervision during the stemming and firing of a shot as required by Regulation 108, and (2) for failing to see that all persons had taken proper shelter before firing a shot as required by Regulation 109. His negligence resulted in a miner being seriously injured. He was fined Rs. 30.

A shot-firer of a coal mine in the Pench Valley coalfield was prosecuted for violating Coal Mines Regulations Nos. 118, 119 and 120. He was fined Rs. 45.

AMENDMENTS TO THE INDIAN MINES ACT AND TO THE REGULATIONS, RULES AND BYE-LAWS MADE UNDER THE ACT.

In Notification No. M-1051, dated the 4th January 1940, the Central Government directed that further amendments shall be made to the notification of the Government of India, in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 3.

In Notifications Nos. M-1055 (1) and M-1055 (2), dated the 14th March 1940, the Central Government directed that certain further amendments shall be made in the Indian Coal Mines Regulations, 1926, and the Indian Metalliferous Mines Regulations, 1926, respectively. These notifications are reproduced in Appendix IV, Statements Nos. 4 and 5.

Act XXIV of 1940.—An Act to amend the Indian Mines Act, 1923, came into force on the 10th April 1940. This is reproduced in Appendix IV, Statement No. 6.

In Notification No. M-955, dated the 11th April 1940, the Central Government directed that certain amendments shall be made in the Coal Mines Rescue Rules, 1939. The notification is reproduced in Appendix IV, Statement No. 7.

In Notification No. M-1278, dated the 16th April 1940, the Central Government, after consulting the Rescue Stations Committee, fixed 1½ pies per ton as the rate at which the duty of excise referred to in rule 19 of the Coal Mines Rescue Rules, 1939, shall be levied and collected with effect from the 1st May 1940.

In Notification No. M-1051, dated the 8th May 1940, the Central Government directed that a further amendment shall be made in the notification of the Government of India in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 8.

In Notification No. M-955, dated the 4th July 1940, the Central Government directed that certain amendments shall be made in the Coal Mines Rescue Rules, 1939. The notification is reproduced in Appendix IV, Statement No. 9.

In Notification No. M-1051, dated the 1st August 1940, the Central Government directed that certain further amendments shall be made in the notification of the Government of India in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 10.

In Notification No. M-1055, dated the 14th August 1940, the Central Government nominated Mr. P. N. McWilliam, I.C.S., District Magistrate of Burdwan, as a member of the Mining Board constituted for the province of Bengal, *vice* Mr. B. Sarkar.

In Notification No. 1051, dated the 13th November 1940, the Central Government directed that a further amendment shall be made in the notification of the Government of India in the Department of Labour, No. M-1051, dated the 20th January 1938. The notification is reproduced in Appendix IV, Statement No. 11.

By the end of the year bye-laws under Section 32 of the Act had been established at six hundred and twenty-seven coal mines and twenty-seven mines other than coal. Amended bye-laws had been established at four hundred and fifteen coal mines.

Bye-laws for the treatment of coal-dust had also been established at forty-eight coal mines.

During the year two circular letters were issued to the owners, agents and managers of coal mines. They are reproduced in Appendix IV, Statements Nos. 12 and 13.

The following notifications relating to the Coal Mines Safety (Stowing) Act were issued during the year :—

In Notification No. M-955, dated the 8th February 1940, the Central Government fixed five as the percentage which each Railway Administration shall be entitled to deduct, towards the cost of collection, from the total amount of excise duty collected by it under Rule 27 of the Coal Mines Safety (Stowing) Rules, 1939.

In Notification No. M-955, dated the 27th June 1940, the Central Government directed that an amendment shall be made in the Coal Mines Safety (Stowing) Rules, 1939. The notification is reproduced in Appendix IV, Statement No. 14.

In Notification No. M-1276, dated the 17th June 1940, the Central Government directed that an amendment shall be made in the Coal Mines Safety (Stowing) Rules, 1939. The notification is reproduced in Appendix IV, Statement No. 15.

In Notification No. M-1276, dated the 23rd September 1940, the Central Government directed that a further amendment shall be made in the Coal Mines Safety (Stowing) Rules, 1939. The notification is reproduced in Appendix IV, Statement No. 16.

SECTION V.—GENERAL REMARKS.

PROTECTIVE EQUIPMENT.

Reference was made in my Annual Report for 1939 to the use of "safety hats" made of bamboo at a number of mines in the Jharia and Raniganj coalfields. These hats are supplied to the workers free and their use is steadily increasing. At one group of mines in the Jharia coalfield an average of 2,665 bamboo hats were worn in each relay during 1939, whereas in 1940 at the same mines, 4,448 hats were worn. The Chief Mining Engineer of this group of mines informed me that with a little encouragement to the workers there is no difficulty in introducing these "safety hats" and when the men realise the benefits to be derived by wearing them they prefer to have them. Some managers have stated that the workers have refused to wear these hats, but experience has shown that it only requires a little perseverance on the part of the management to overcome this reluctance. At a few mines bamboo "safety hats" are worn by all underground employees, while at some mines hats are worn in depillaring areas only, where the workers are exposed to most danger from falls of roof and sides. There is no reason why the use of these hats should not be greatly extended and they should, at least, be worn in all depillaring areas.

"BUMPS" AND THE WORKING OF A THICK SEAM BY LONGWALL IN SECTIONS.

In my Annual Report for last year reference was made to a number of accidents due to "bumps" in working seams at great depths and some suggestions were made to mitigate the effects of "bumps". At Parbelia mine, owned by the Bengal Coal Company, Limited, in the Raniganj coalfield, an experimental longwall system of working in sections with solid sand stowing has been introduced, and I am indebted to the Chief Mining Engineer of this mine for the following details of this system of working. He states that "the Dishergarh seam, 15 to 16 feet thick and overlaid by strong sandstone beds, is worked from two shafts, 1,466 and 1,478 feet deep. Sandstowing arrangements were completed in 1938 and depillaring was commenced at a depth of

1,700 feet. Despite the solid sandstowing of the goaves severe "bumps" occurred continuously and the management decided to experiment with the longwall system of working of the seam in two sections. The attached plan No. 5 shows the experimental method of working in the lower 7 feet of the seam by a longwall retreating conveyor face. The coal is worked by hand on the 300 feet long face and filled on to a belt conveyor which delivers it to the loading road. The belt is moved every 12 feet of advance and sand is solidly packed close to the belt as early as possible after the move up. The minimum distance of the sand pack from the face is 8 feet; and the maximum distance 26 feet, although a lesser distance is generally aimed at. The face retreated a distance of 1,300 feet and no trouble with "bumps" or falls was experienced. The loading and return roads stand well."

Convergence measurements taken in the centre of the face showed the daily average convergence was less than 0.5" and the average convergence for a 20 feet face advance over a period of 9 days was only $2\frac{1}{2}$ "; this indicates the high efficiency of the sandstowing. In the roadways the total convergence over a period of 7 months was 10.82 inches whilst the face retreated a distance of over 600 feet. Convergence measurements at selected sites in advance of the face established that strata movements occurred as far ahead of the face as 300 feet when a small increase in height between roof and floor was measured. Convergence was first recorded when the face was 80 feet from the measuring point and thereafter was continuous; when the face had retreated to the measuring site the extent of convergence was nearly one inch. The extent and nature of convergence is of importance in roof control and further work on the subject is being undertaken.

In another section of the mine at a similar depth galleries had been driven 15 feet wide by 7 feet high at 100 feet centres. Attempts to extract the pillars so formed by taking 7 feet of bottom coal by longwall sandstowed conveyor faces 300 feet long were abandoned as heavy "bumping" occurred each time the face approached within 30 feet of a parallel gallery.

The evidence so far gathered from these experimental longwall workings is that "bumps" can be eliminated by working this thick seam in sections by sandstowed longwall faces and that under the given conditions such work is preferable to the system of driving galleries to form pillars and then extracting the pillars.

It would appear that the working of thick seams in sections with solid stowing prevents sudden ruptures in the main roof which cause "bumps", and it is anticipated that a system of work as detailed above will prove successful in eliminating the serious "bumps" which are now being experienced in extracting pillars in thick seams at great depths.

HEALTH AND SANITATION.

The Asansol Mines Board of Health held twelve ordinary and four special meetings during the year. The improvement in the general health of the population, which was noticed in 1939, was maintained in greater degree during the year 1940. There was a marked decline in the death-rate—from 21.4 per 1,000 in 1939 to 17.8 per 1,000 in 1940. The decline in infant mortality

rate was even more satisfactory. It stood at 137·2 per 1,000 in 1938, fell to 129·8 in 1939 and to 109·7 per 1,000 in the year under report. The standard of health in collieries was at a higher level than that of the general population. The monthly mortality rate among the resident colliery population fluctuated from 6·4 to 13·0 per 1,000 while that from the Mining Settlement as a whole ranged between 14·3 and 22·3 per 1,000. The sickness rate among the mining population was 8·8 per cent. in February, the healthiest month of the year, and 15·5 per cent. in July. The birth-rate stood at 28·3 per 1,000 against 30·0 per 1,000 in the preceding year.

Cholera did not assume epidemic proportions at any time during the year. There was a higher level of incidence from March to August compared to the remaining months of the year. Out of 325 cases, 73 were reported from collieries, 230 from villages and 22 from the municipal towns. Timely notification was the basis of all epidemic measures which included isolation of the sick, segregation of contacts and protection of water supply, 26,833 people were inoculated, of whom 9,322 were from collieries. Owing to prevalence of small-pox during the latter part of 1939, mass re-vaccination on a large scale was carried out throughout the Mining Settlement. Over one-fourth of the total population was protected by vaccination during the first four months of the year. The total number of vaccinations performed was 137,054 of which 11,372 were primary and 125,682 were re-vaccinations. That collieries were more thoroughly protected than rural and urban areas will be evident from the fact that only 59 out of 881 cases of small-pox were reported from the former. Delayed notification was responsible for outbreaks in Asansol town and a bazar area. Intensive vaccination and measures taken under Small-pox Regulations helped to control the epidemic. Vaccination was made obligatory in areas declared to be infected under the regulations. Eleven cases of cerebro-spinal meningitis with 4 deaths were reported during the year. All the cases were of a sporadic nature. Isolation and quarantine were enforced while overcrowding was reduced in the localities at risk.

Two new Maternity and Infant Welfare centres were opened during the year making a total of twelve. The majority of the centres are accommodated in houses either newly built or suitably adapted for the purpose by colliery authorities. Forty collieries, 54 villages, and one town with an approximate population of 125,000 are being served by the scheme. 348 infants and 217 toddlers attended the morning clinics at the centres. 2,484 confinements were supervised by the staff of the Welfare centres out of a total of 9,962 births in the Mining Settlement. 23 new dais were trained during the year and 130 attended the re-training course. Out of 79 dais who appeared in the examination conducted by a Board of Examiners, 65 received certificates. 1,832 expectant mothers came under ante-natal supervision while post-natal visits were paid by the Health Visitors to 2,587 cases after child birth. 2,255 infants and 1,523 toddlers were visited in their homes and 2,046 friendly visits were paid to the mothers. 162 mothers and 318 girls attended the weekly classes held in the centres for health talks, lessons on elementary first-aid and home-nursing and for sewing. The mortality rate among babies under one month in the areas under supervision was 33·2 per 1,000, as against 65·4 per 1,000 in the entire Mining Settlement. The McNeill's Welfare centres in three collieries continued to do useful work throughout the year.

Anti-leprosy work was carried out by the Board of Health in co-ordination with the Asansol Leprosy Relief Association. The total number of cases was found on survey to be 5,622, of whom 1,290 were infectious. The incidence in collieries is 0·8 per cent., while in rural areas it is 1·7 per cent. All the collieries and the majority of villages are thoroughly surveyed by trained Leprosy Assistants once a year for detection of fresh cases in addition to periodic home-visiting which includes examination of contacts and advice about home isolation. 7,762 students were examined in 142 schools and the incidence was found to be 1·6 per cent. As a result of treatment in fifteen Leprosy clinics of 3,116 registered cases 91 were discharged, 195 became symptom-free while 71 infectious cases became non-infectious. The Asansol Leper Hospital and Settlement, which was opened by His Excellency the Governor of Bengal in December 1940, has accommodation for 18 cases in the hospital and 52 in the Settlement meant for segregation for infectious cases and of leper beggars. Arrangements for segregation of 35 cases also exist in other parts of the Mining Settlement. The annual Leper Day collection came to about Rs. 15,000 and helps to maintain the clinics and the Segregation Camps.

As a result of intensive anti-malaria measures carried out during the last few years two malarious areas have been cleaned out—the spleen index which stood at 47 per cent. and 37 per cent. in the two areas at the beginning of the campaign having come down to below 5 per cent. A third area shows a definite reduction as a result of two years' campaign from 80 to 55 per cent. To encourage and support local effort activities of a limited nature were undertaken in six selected malarious places. Distribution of quinine was arranged during the malaria season.

The annual Health and Baby Week was organised in eleven places in the Mining Settlement during the first three months of the year. The activities consisted of a travelling Health Exhibition, Baby Show and Competitions in first-aid, and ambulance among school boys and colliery employees. The Health Exhibition included sections on Rural Reconstruction in addition to a section on health and disease. 42 colliery teams entered the ambulance competition, of which 17 were holders of the St. John Certificate and 10 were recruited from miners. Special competitions, preceded by intensive coaching, were held in first-aid, home-nursing, and mother-craft among school girls and labour class girls attending the Welfare centres.

During the year the Jharia Mines Board of Health held 12 ordinary and eight special meetings and one joint meeting with the Jharia Water Board. The estimated population of the Settlement was 572,124 persons. The death rate was 13·85 per thousand, as compared with 15·05 in the previous year. There were 132 cases of suspected cholera with 54 deaths, as compared with 246 cases with 90 deaths in the previous year. The number of deaths on collieries from cholera was 15, as compared with 20 in the previous year. The total number of anti-cholera inoculations performed was 6,115. During the year, there were 2,388 cases of suspected small-pox with 233 deaths, as compared with 1,896 cases with 203 deaths in the previous year. Four hundred and thirty samples of food were analysed in the Board's laboratory and prosecutions were ordered in all cases of adulteration. The five years'

housing programme, enforced by the Board in 1936, was completed during the year. Subjects chosen for propaganda were leprosy, maternity, and child welfare, general hygiene, sanitation, dietetics, vitamins and temperance.

The Dhanbad and District Leprosy Relief Fund continued to be in sole charge of all leprosy relief work in the Mining Settlement.

The Jharia Water Board continued to function throughout the year. The total quantity of water supplied during the year under review was about 568 million gallons as per details given below :—

	Gallons.
1. Collieries	471,680,000
2. Non-colliery premises (domestic and non-domestic supply)	36,865,000
3. Bazars of Jharia, Katras and Kirkend and other places supplied through stand-posts.	59,495,000
Total .	567,940,000

INSPECTIONS MADE BY MEDICAL OFFICERS AS *ex-officio* INSPECTORS OF MINES.

During the year many reports were received from provincial and district Medical Officers of Health concerning health and sanitation. All the reports were dealt with and most of the recommendations were carried out.

STATISTICS OF RAINFALL.

Statistics of rainfall in the eastern coalfields have been recorded as follows :—

	Rainfall in inches.	
	1940.	1939.
Jharia Coalfield—		
Jeaigora	45.90	52.55
Topchanchi	44.24	63.88
Raniganj Coalfield—		
Asansol	49.44	56.86
Dishergarh	54.46	66.35
Giridih Coalfield—		
Giridih	52.91	64.40

During the year 1940, the rainfall in the catchment area at Topchanchi was comparatively low. The total rainfall for the year was 44.24 inches only, as against 63.88 inches in the previous year, with the result that the lake storage fell short of the full capacity by about 25 per cent. Extension work was taken in hand during the latter part of the year at an estimated cost of

Rs. 15,500. This work was necessary due to the existing catchment area not being adequate and it will increase the catchment capacity of the water-works by about 15 per cent. About one million cubic feet of de-silting work was also done to increase the storage capacity of the reservoir.

AMBULANCE WORK.

During the year three meetings of the Executive Committee of the Dhanbad-Jharia Coalfield centre of the St. John Ambulance Association were held.

Lectures in first-aid were given at eighteen centres in the Jharia coalfield and at four centres in the Dhanbad civil area. During the year 429 persons appeared for examination in first-aid of whom 334 were successful. The growth and importance of this centre is demonstrated by the increase in the number of persons examined and the number of certificates awarded.

Year.	No. examined.	No. successful.
1935	169	117
1936	256	219
1937	380	282
1938	313	255
1939	396	316
1940	429	334

The Association also assisted in the formation, organisation and training of eight divisions of the St. John Ambulance Brigade. To ensure correct procedure and training of these Ambulance Divisions the services of Dr. S. Mukherjee, a Staff Instructor of the Calcutta Brigade, were obtained.

In the Raniganj coalfield classes in first-aid to the injured were held at eleven centres. Three hundred and twenty-nine students attended these classes, of whom 265 passed and received their certificates, as compared with 312 and 234, respectively, in the previous year. The following shields were competed for during the year :—

- (1) Senior Inter-colliery Competition. (St. John Ambulance Shield).
Winners :—Seetalpur Colliery (Messrs. Bengal Coal Company, Limited).
- (2) Junior Inter-colliery Competition. (Lang Memorial Shield).
Winners :—Jamuria (A. & B. Pits) Colliery (Messrs. Equitable Coal Company, Limited). This competition is open to non-certificate holders only.
- (3) Junior Inter-colliery Competition. (Cunningham Shield.)
Winners :—Seetalpur Colliery (Messrs. Bengal Coal Company, Limited). This competition is open to miners only—non-certificate holders.
- (4) Inter-School Ambulance Competition. Winners :—Sanctoria H. E. School.

It will be noticed that competitions Nos. 2, 3 and 4 are only open to persons who have not obtained the St. John's First-Aid certificate, the aim being to stimulate interest especially among miners and so encourage them to attend the regular First-Aid classes with the object of gaining the St. John's First-Aid certificates. These competitions are held at Asansol during the Health Exhibition Week arranged by the Asansol Mines Board of Health where they create much interest among the general public. In addition Messrs. Bengal Coal Company, Limited, inaugurated Inter-colliery competitions in connection with their own collieries. The competitions were divided into three groups, viz., Senior Team (shield), Junior Team (shield) and Miners' Team (suitable prizes). In the initial stages 44 different teams competed and 15 of these teams competed in the final.

I desire to express my thanks to the lecturers and examiners for the valuable work done in the two major coalfields and other mining districts.

MINING BOARDS IN BENGAL, BIHAR AND THE CENTRAL PROVINCES.

The Bengal Mining Board did not meet during the year. The subjects dealt with by correspondence were :—(a) Draft amendments to the Indian Coal and Metalliferous Mines Regulations, 1926; (b) draft amendments to Rule 19 of the Coal Mines Rescue Rules; and (c) draft amendments to the Coal Mines Safety (Stowing) Rules, 1939. The non-official members of the Board were Messrs. F. W. Manley, A. L. Ojha and Rai Sahib Upendra Nath Mondal.

The Bihar Mining Board for coal mines did not meet during the year. The subjects dealt with by correspondence concerned certain amendments to the Indian Coal Mines Regulations, 1926, and Rule 19 of the Coal Mines Rescue Rules. The non-official members of the Board were Messrs. J. E. Phelps, A. L. Ojha, Shiva Kali Bose and S. B. Sen.

The Bihar Mining Board for mines other than coal mines did not meet during the year. The non-official members of the Board were Dr. H. W. T. Martin, Mr. J. E. Phelps and Rao Bahadur D. D. Thacker.

The Central Provinces and Berar Mining Board did not meet during the year. The only subject dealt with by correspondence concerned draft amendments to the Indian Coal Mines Regulations, 1926. The non-official members of the Board were Messrs. L. H. Bartlett, O.B.E., Shamsher Bahadur Verma, Punjilal Tuljaram Mehta, Gulabchand Chaudhury and Mrs. D. E. Jackson.

BOARD OF EXAMINERS.

Five meetings of the Board of Examiners were held during the year. The non-official members of the Board were Messrs. J. E. Phelps, G. Castles and H. K. Nag. The local examiners appointed were Messrs. D. Heron and J. Thomson for coal mine managers' first class certificates; Messrs. B. Panda and B. B. Biswas for coal mine managers' second class certificates, and Mr. A. Mack for the examination for coal mine surveyors' certificates. Mr. N. G. Chatterjee, Inspector of Mines, was also an examiner and acted as Secretary for the coal mine managers' first and second class and coal mine surveyors' examinations.

Three first class and two second class certificates of competency to manage coal mines were granted in lieu of British certificates of the same classes. At the examination for coal mine managers' certificates held at Dhanbad in February, 127 candidates were permitted to appear for first class certificates and 131 for second class certificates. Eight certificates of the first class and fourteen of the second class were granted. Of the successful candidates one for a first class and seven for second class certificates were re-examined only in the one subject in which they had failed to satisfy the examiners in the previous year. At the examination for coal mine surveyors' certificates of competency held in November, 88 candidates attended the examination. Thirteen of them were successful.

Seven hundred and thirty-eight persons were examined for coal mine sirdars' certificates of competency and 565 certificates were granted. Out of 774 holders of sirdars' certificates examined in gas testing, 532 were successful and their certificates were duly endorsed to that effect. 835 holders of sirdars' certificates appeared for re-examination in eyesight and hearing, 803 were successful and their certificates were duly endorsed. Under Coal Mines Regulation 49, the certificates of six sirdars were suspended for a period varying from two to three months. During the year 23 duplicate sirdars' certificates and 66 duplicate discs were issued.

One thousand and six candidates were examined for the shot-firers' certificates and 900 of them were successful.

MINING EDUCATION.

At the Indian School of Mines the total number of students on the roll during the session 1939-40 was 93, as compared with 90 during the previous session. 22 students were in the first year, 26 in the second year, 26 in the third year, and 19 in the fourth year. At the end of the session 22 first year students were promoted to the second year and 24 second year students were promoted to the third year. The number of candidates appearing at the final examinations held in July 1940 were as follows :—

Diploma or Certificates.	No. of candidates appeared.	No. of successful candidates.
Diploma of Associateship in Geology	2	1 (Class I). 1 (Class II).
Diploma of Associateship in Mining Engineering	17	1 (Class I). 16 (Class II).
Certificate in Geology	3	3
Certificate in Metal Mining
Certificate in Coal Mining	23	23

There were 68 students at the mining survey camp held at the Indian Iron and Steel Company, Limited's Ramnagore colliery in November and 3 at the geology survey camp at the same colliery. The usual excursions and visits to mines were held throughout the year. Nine former students obtained the

second class colliery managers' certificate and were placed second, third, fifth, sixth, seventh and eighth in order of merit. Four former students obtained the first class colliery managers' certificate and were placed first, third and fourth in order of merit. Eleven obtained the surveyors' certificate of competency and obtained the first and fourth places in order of merit.

In the Department of Mining and Metallurgy at the Benares Hindu University there were 123 students at the beginning of the session, as compared with 118 students at the beginning of the previous session. Two students passed the final examination for the Degree of B. Sc. in Mining and 14 in Metallurgy. Up to date the total number of Mining graduates is 39 and the total number of Metallurgy graduates 91. Most of the graduates were employed almost immediately after qualifying. Tours of inspection were paid to the mica mines belonging to Messrs. The Chrestien Mining Company, Limited, at Kodarma and to the coal mines of Messrs. McNeil & Company, Limited, in the Raniganj coalfield. Geological field work for the second year students was conducted in the Barakar area and geological mapping work of the final year mining students was held at Khanudih. During the summer vacation 51 students were sent for practical training in the leading Mining and Metallurgical Works, including the lead and silver mines of Upper Burma and petroleum mines at Digboi (Assam). One mining graduate of this University was successful at the first class colliery managers' examination held in February 1940.

Evening Mining classes (in English) continued to be held as usual, both in the Bengal and Bihar coalfields, at Sitarampur and Parascole in Bengal and at Jharia and Sijua centres in Bihar. The total number of students enrolled in these classes was 72 for Bengal and 185 for Bihar, as against 148 (Bihar only) in the previous year. A whole-time lecturer and a whole-time assistant lecturer were appointed for the Bengal classes from the commencement of the session in June 1940. A permanent lecturer was appointed for the Bihar classes. Twenty-eight of the third year students (8 in Bengal and 20 in Bihar) appeared at the final examination and 16 were successful (7 in Bengal and 9 in Bihar). The results of the Bengal centres were very satisfactory. In both the coalfields, courses of lectures were delivered in the modern Indian language to overmen and sirdars, in the Raniganj coalfield in Bengali, and in the Jharia coalfield in Hindi. The number of centres in the Raniganj coalfield was 8 and 135 students were enrolled for this course. In the Jharia coalfield there were six centres with a total enrolment of 306. Classes in gas testing were also held as usual at Sitarampur and Jamuria in the Raniganj coalfield and at Jharia in the Jharia coalfield for the training of colliery sirdars and shot-firers in gas testing. The number of candidates enrolled for these classes in the Raniganj coalfield was 32 and in the Jharia coalfield 37.

SCIENTIFIC AND TECHNICAL ASSOCIATIONS.

(a) *Mining, Geological and Metallurgical Institute of India.*

The total number of members, including subscribers, at the end of the financial year of the Institute, *i. e.*, on the 31st October 1940, was 479. In addition to the annual meeting, five ordinary general meetings were held for

the reading and discussion of papers. Visits were also paid to the Tata Iron and Steel Company, Limited's Sulapat iron ore mine in the Singhbhum district; to the laboratory and the library of the Geological Survey of India, Calcutta; to the Palandu Tea Estate at Ranchi of the Assam Frontier Tea Company, Limited, of which Messrs. Shaw Wallace & Company are the Managing Agents, and to the works and laboratory of the Indian Lac Research Institute, Ranchi.

Three parts of the *Transactions* were published, forming Parts 3 and 4 of Volume 35 and Part I of Volume 36. The Government of India prize was awarded to Mr. G. Vernon Hobson for his paper entitled "The development of the mineral deposit at Mawchi as determined by its geology and genesis". The Institute gold medal was awarded to Mr. G. Vernon Hobson for his above-mentioned paper, and the Institute bronze medal to Mr. James Lomax for his paper entitled "Some aspects of surveying in Indian Coal Mines". The Pickering medal, presented by the Institute for the best student in mining at the Indian School of Mines, was awarded to Mr. Sailajananda Sen and the Hayden medal to the best student in geology was awarded to Mr. Dev Raj Singh Mehta.

(b) *The Geological, Mining and Metallurgical Society of India.*

At the close of the session 1939-40 the total membership on the roll was 214. In addition to the annual general meeting ten ordinary general meetings were held. All these meetings were held in the Geological Laboratory, Presidency College, Calcutta. Nineteen original papers on various aspects of Geology, Mining and Metallurgy were read and discussed at these meetings. During the year Parts 3 and 4 of Volume XI and Part I of Volume XII of the Quarterly Journal of the Society were issued. One bulletin was also published entitled "The Economic aspect of the boulder bed in Radhaballavpur near Salanpur in Burdwan district". Two excursions to the following places were arranged:—(i) The India Machinery Company, Limited, Dasnagar, Howrah; and (ii) The Bengal Enamel Works, Limited, Palta, 24-Parganas.

(c) *The National Association of Colliery Managers (Indian Branch).*

The number of members of the National Association of Colliery Managers (Indian Branch,) at the end of the year was 101. Some of the subjects dealt with by the Council during the year were:—A request to the Mining Education Advisory Board to resume the special classes for surveying in Bihar; the proposed amendments to the Indian Coal Mines Regulations, the Coal Mines Safety (Stowing) Rules, and the Coal Mines Rescue Rules; the views on several points in connection with the Jharia coalfield labour submitted to the labour Sub-Committee of the Indian Mining Association; representation was made to the Additional Deputy Commissioner regarding the additional conditions for high explosive licenses in the Jharia coalfield as they were not considered suitable to collieries, and some amendments were accordingly made. Mr. J. Thomas was the Association's representative on the General Council in Great Britain. Mr. W. V. Curtain was joint representative of the National Association of Colliery Managers (Indian Branch) and the Indian

Mine Managers' Association on the Asansol Mines Board of Health; Mr. J. H. Paterson represented the Association on the Mining Education, Advisory Board; Mr. W. McDonald represented the Association on the Rescue Stations Committee and Mr. R. J. Legg was the representative on the Central Committee, Asansol Health and Baby Welfare. Mr. J. H. Paterson represented the Association on the Executive Committee of the Asansol District Charitable Society, while Mr. H. S. Allen was the representative on the Dhanbad and District Leprosy Relief Fund. Messrs. L. S. Buxton and W. M. Burch were the Association's representatives on the Railways and Collieries Advisory Board; and Messrs. H. S. Allen and T. Morrison represented the Association on the Dhanbad and Collieries Cemetery Committee.

During the year a paper on "Malaria, its occurrence and prevention" by Mr. W. B. Penman was read and discussed, and Dr. Charles Forrester read a paper on "Some Aspects of Coal Cleaning in India".

(d) *The Indian Mine Managers' Association.*

The membership of the Indian Mine Managers' Association at the end of the year was 250. Among the activities of the Association during the year were the following:—(1) Consideration of the proposed amendments to the Rules and Bye-laws of the Association; (2) consideration of the amendments to the Coal Mines Safety (Stowing) Rules, 1939; (3) consideration of the amendments to the Indian Coal Mines Regulations, 1926; (4) consideration of the amendments to the Coal Mines Rescue Rules, 1938; (5) consideration of the Bengal Boiler Attendants' Rules, 1939; (6) consideration of the additional conditions for licenses in Forms E and F in connection with the use and storage of high explosives; (7) consideration of a case instituted against a member of this Association for the contravention of Rule 17-A; (8) consideration of the proposal to compile the notes on experience gained by individual members with particular reference to any special difficulty met with; (9) consideration of the proposal to print a second volume of the "Coal Mines Manual" containing Electricity, Boiler, Explosives and other Acts and Regulations and Rules connected with the Mining Industry; (10) consideration of the position of members with second class colliery managers' certificates and the ways and means to alleviate their grievances; (11) circulation of the lists of typical accidents at mines under the Indian Mines Act, 1923, with suggested remedial measures received from the Chief Inspector of Mines in India, amongst the members of this Association with a view to impress on the workmen the needs of exercising greater personal care, to impress on the mine officials the necessity of stricter supervision and suitable precautions to be taken to guard against the recurrence of similar accidents; (12) participation in the activities of the Safety First Association of India, Bombay; (13) participation in the Railways and Collieries Advisory Board meetings; (14) excursions to various places of interest; (15) nomination of a representative of the Association on the Leprosy Board, Asansol; (16) nomination of a representative of the Association on the Asansol Sub-divisional War Committee; (17) nomination of a representative of the Association on the Asansol District Charitable Society; (18) Re-printing of the "Coal Mines Manual", Part I, as amended up to December 1940, and the recent amendments in loose leaf form. Mr. S. C. Ghosh was the representative

on the Mining Education Advisory Board, on the Asansol Health and Baby Welfare Society (Central Committee) and on the Asansol District Charitable Society; Dr. R. P. Sinha was the representative on the Coal Mines Rescue Stations Committee; Mr. K. M. Chatterjee was the representative on the Asansol Sub-divisional War Committee; Mr. S. N. Mitter was the representative on the Leprosy Board, Asansol, and Mr. W. V. Curtain of the National Association of Colliery Managers (Indian Branch) represented this Association jointly with the National Association of Colliery Managers (Indian Branch) on the Asansol Mines Board of Health.

(e) The Railways and Collieries Advisory Board.

The following are among the subjects dealt with by the Railways and Collieries Advisory Board during the year :—

(1) Realisation of stowing excise duty in connection with coal and coke traffic booked under "To Pay" invoices from colliery stations on the East Indian Railway to stations outside British India; (2) levy of surcharge, stowing cess and excise duty on overloaded coal and coke returned to the colliery sidings from weigh bridges; (3) unloading and re-loading of wagons returned from weigh bridges as defective (on account of deficient bottom boards) resulting in unnecessary expenses and inconvenience to collieries; and (4) the supply of open wagons to collieries fitted with mechanical screening and loading appliances and covered wagons to others.

Three meetings of the Board were held during the year. The Divisional Superintendent, East Indian Railway, Asansol, was the President and the Coal Area Superintendent, East Indian Railway, was the Honorary Secretary.

THE COAL MINES STOWING BOARD.

The Board which began to function from the 1st November 1939, and to which reference was made in my last Annual Report, continued throughout the year without any change in personnel. The Board held seventeen meetings during the year.

The protective works at Jharia, which were undertaken by the Board from the 15th July, were continued on an increasing scale and towards the end of the year about 1,000 tons of sand a day were being "blanketed" on this area. The protective works at Kari Jore were continued throughout the year under the supervision of the management of Bhuggutdih colliery, owned by the Bengal Nagpur Coal Company, Limited. Although very good progress has been made with these protective measures, the work will be considerably expedited when the railway siding at Bhojudih has been extended to enable 100 wagons a day to be filled with sand from the Damuda river.

A large number of applications for assistance for voluntary stowing was received by the Board, and in order to obtain the benefit of independent and expert opinion the Board constituted a technical committee consisting of the following mining engineers to consider and report on these applications in regard to certain terms of reference laid down by the Board :—(1) Mr. J. E. Phelps, Chief Mining Engineer, Messrs. Jardine Skinner & Company; (2) Mr. G. Castles, Chief Mining Engineer, Messrs. Shaw Wallace & Company; (3) Mr. H. K. Nag, Mining Engineer and Geologist, Calcutta; and (4) Mr. J. K.

Dholakia, Mining Engineer, Messrs. Ballihari Colliery Company, Limited. Mr. Phelps was elected Chairman of the committee and the Secretary of the Coal Mines Stowing Board acted as *ex-officio* Secretary of the committee.

THE RESCUE STATIONS COMMITTEE.

During the year, the personnel of the Committee remained the same as originally constituted and notified by the Government of India in Notification No. M-955, dated the 20th April 1939. The Committee held twenty-four meetings at which, with only a few exceptions, all members were present.

The detailed building plans, specifications, bills of quantities, conditions of contract, etc., for the construction of the Rescue Station in the Raniganj Coalfield were completed and on the 7th February, Mr. A. K. Aditya, a building contractor of Calcutta, was accorded the contract. Proceedings for the acquisition of the sites for the Rescue Stations were completed and possession of the sites in the Raniganj and Jharia coalfields was obtained on the 19th January and 4th February, respectively. Construction work was not actually commenced until towards the end of March as some time was taken by the contractors in arranging for materials and collecting them at the sites.

The Committee arranged to purchase the rescue equipment of the Loyabad Rescue Station and Kustore colliery from the Burrakur Coal Company, Limited, and the Raneegunge Coal Association, Limited, respectively, at valuation, and the remaining rescue apparatus required for the two Rescue Stations was ordered from Messrs. Siebe Gorman & Company, Limited, through Messrs. Burn & Company, Limited, Calcutta. Orders were placed with Messrs. E. Thomas & Williams, Limited, Aberdare, for electric safety lamps and charging sets, and with Messrs. Martin & Company for flame safety lamps. The contract for the sanitation and water supply schemes for both Rescue Stations was accorded to Messrs. J. B. Norton & Sons, Calcutta. Electrical wiring and fittings in the Rescue Stations were prepared and the contract for this work was given to Messrs. General Electric Company, Limited, Calcutta. By the end of the year, the buildings of both Rescue Stations were approaching completion. It is estimated that the cost of each Rescue Station, when completed and fully equipped, will be about Rs. 1,85,000.

LABOUR INQUIRY COMMITTEE.

The Committee appointed by the Government of Bihar, details of which appeared in my Annual Report for the year 1938, submitted its report to the Provincial Government.

LABOUR ASSOCIATIONS.

(a) *The Indian Colliery Labour Union.*

This Union is registered under the Indian Trade Union Act, 1926. The number of members on the roll is given as 9,117, consisting chiefly of miners and skilled and unskilled labourers at mines. The rates of subscription are given as from three pies to four annas per month. It is claimed that the Union has assisted members in compensation claims and wage disputes. Lectures were given during the year on welfare schemes.

(b) The Indian Miners' Association.

The Indian Miners' Association is registered under the Indian Trade Union Act. The membership at the end of the year was 7,300 and the members are stated to be chiefly miners and other manual workers at mines. The rates of subscription are given as from one anna to four annas per member per month according to the scale of pay. The Association conducted meetings and lantern lectures on general education, hygiene and temperance, etc. During the year the Association assisted some of its members in wage disputes and claims for compensation.

(c) The Tata's Collieries Labour Association.

This Association is registered under the Indian Trade Union Act. The number of subscribing members is given as 2,573, consisting chiefly of miners and unskilled labourers. The rates of subscription are given as from one anna to rupee one and annas eight per month according to the scale of wages.

VISITORS TO THE COALFIELDS.

The Hon'ble Mr. M. S. A. Hydari, C.I.E., I.C.S., Secretary to the Government of India, Department of Labour, accompanied by the Chairman, Coal Mines Stowing Board, visited the Damuda river, the Bhojudih sand siding and the Jharia and Kari Jore fire areas in the Jharia coalfield on the 16th August. On the following day an inspection was made of the stowing plant at the Barakar river and at Nos. 9 and 10 pits, Sodepur colliery, owned by the Bengal Coal Company, Limited.

His Excellency Sir Thomas Alexander Stewart, K.C.S.I., K.C.I.E., I.C.S., Governor of Bihar, visited the Jharia fire area, Damuda river, Bhulanbararee colliery and Jamadoba Hospital on the morning of 19th August. The following day His Excellency visited Pure Jharia colliery and the Topchanchi Water Works.

His Excellency the Most Honourable Victor Alexander John Hope, Marquess of Linlithgow, P.C., K.T., G.M.S.I., G.M.I.E., O.B.E., D.L., T.D., Viceroy and Governor General of India, accompanied by the Chairman and members of the Coal Mines Stowing Board, visited and inspected the work being done by the Board in connection with the Jharia and Kari Jore fire areas on the morning of the 14th December, and in the afternoon His Excellency inspected the stowing plant at the Barakar river and at Nos. 9 and 10 pits, Sodepur colliery, owned by the Bengal Coal Company, Limited.

OFFICIAL DUTIES, 1940.

Mr. W. Kirby was Chief Inspector of Mines throughout the year.

Mr. N. Barraclough was in charge as Inspector of Mines, No. 1 Circle, from 1st January to 31st March, and was promoted to be Deputy Chief Inspector of Mines in India from 1st April.

Mr. G. S. Cameron, Inspector of Mines, was on leave up to 14th January and held charge of No. 2 Circle from 15th January to the end of the year.

Mr. N. G. Chatterjee, Inspector of Mines, held charge of No. 2 Circle, up to 14th January and charge of No. 1 Circle from 1st August to the end of the year. From 15th January to 31st March he was Inspector of Mines without circle. He was on leave from 1st April to 31st July.

Rai Bahadur H. M. Mitra was Electric Inspector of Mines, from 1st January to 30th May and retired from service from 31st May.

Rai Bahadur H. M. Mitra joined this department as Electric Inspector of Mines on 1st May 1924. His high technical and practical abilities were recognised by the mining community and his opinion on electrical matters concerned with mines was often sought. He was greatly respected by all his colleagues and has left an admirable record.

Mr. N. N. Sen Gupta was appointed Electric Inspector of Mines, from 31st May to the end of the year.

Mr. H. K. Chatterjee, Junior Inspector of Mines, officiated as Inspector of Mines and held charge of No. 1 Circle from 1st April to 31st July. He was on leave from 7th December.

Mr. S. S. Grewal, Junior Inspector of Mines, was on leave from 2nd January to 29th February.

Mr. V. S. Chopra, Junior Inspector of Mines, was on leave from 13th August to 4th October.

Mr. G. S. Jabbi, Junior Inspector of Mines, was on leave from 9th to 23rd December.

Mr. I. J. Badhwar, Assistant Inspector of Mines, was promoted to be Junior Inspector of Mines, from 17th December.

Mr. M. Yasin, Assistant Inspector of Mines, was on leave from 23rd June to 4th July.

The number of coal mines worked during the year was 613, which is six less than in the previous year. The number of metalliferous (including stone, etc.) mines at work was 1,194, as compared with 1,245 in 1939.

During the year 1,181 mines were inspected, many of them being inspected several times. 3,227 separate inspections were made. The cause and circumstances of nearly all fatal accidents and serious accidents of importance, and all complaints of breaches of regulations and rules were investigated. Many inspections were made at the invitation of mine-owners, superintendents and managers desirous of obtaining advice on safety matters. In the major coalfields a large portion of the time of the Inspectors was occupied in investigating cases of actual or threatened damage to dwellings and roads by reason of the underground working of coal mines, in dealing with underground fires and in examining protective works against the risk of inundation. In addition a large number of inspections of the sanitary conditions at mines were made by medical officers as *ex-officio* Inspectors of Mines.

Orders were issued and withdrawn as follows :—

Section, Regulation or Rules.	Orders issued.	Orders withdrawn.
Under Section 19 (1)	1	..
Under Section 19 (1-A)	2	2
Under Section 19 (2)	7	2

Exemptions, partial or complete, and permissions were granted and withdrawn as follows :—

Regulation.	Number of cases.	Number withdrawn.
Under Coal Mines Regulation 76	4	..
Under Coal Mines Regulation 77	13	..
Under Coal Mines Regulation 80 (3)	3	..
Under Coal Mines Regulation 87-H	2	..
Under Coal Mines Regulation 106	2	..
Under Coal Mines Regulation 116	3	..

Information was received of seventeen dangerous occurrences underground. Two of these were due to the outbreak of fire at old fire areas underground; thirteen to spontaneous heating underground; one to a fire in a coal stack on the surface, and one in an underground return airway, presumably due to an open light.

The number of original cases under the Land Acquisition (Mines) Act, 1885, at the end of 1940, stood at 786, eighteen of which were cases dealt with during the year. There were fourteen applications for modifications of restrictions, and four complaints of violations of restrictions, all of which were dealt with. The Act applies to Bengal, Bihar and Orissa only. In other provinces where Government owns the minerals, Provincial Governments were advised as to the restrictions necessary in cases where mine-owners sought permission to work minerals beneath railways, villages, etc.

I have the honour to be,
 Sir,
 Your most obedient servant,
 W. KIRBY,

Chief Inspector of Mines in India.

APPENDIX II.
Accidents in Mines.

APPENDIX II.
ACCIDENTS IN MINES.

Table No 1.

Fatal Accidents during the year 1940.

Serial Number.	Date and hour of accidents.	Name and situation of mine.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accidents and remarks.
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EXPLOSIONS AND IGNITIONS OF FIRE-DAMP AND COAL DUST—(4 deaths).

1	16th April, 8-15 A.M.	Raneepur mine, Dishegarh P.O., Bihar.	Equitable Coal Co., Ltd.	Terrence Archer, (m.), 40, <i>Assistant Manager.</i> Ahmed Sheikh, (m.), 35; Chowdhuri Sheikh, (m.), 40; <i>Masons.</i> Rashu Singh, (m.), 20, <i>Trammer.</i>	Coal	While sealing of the shafts and fan evasé on the surface of a mine in which there was a severe underground fire was in progress an explosion of inflammable gas occurred. The roof of the fan-drift on which the four deceased were at work was destroyed and they fell into the drift. They were either killed outright by the explosion or they succumbed to noxious gases and the dense smoke which filled the drift after the explosion. The mine manager who was blown off the roof of the fan drift and fell 14 feet to the ground was seriously injured. Inspection and inquiry made.
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FALLS OF ROOF AND SIDES.

(a) Falls of roof—(119 deaths).

2	5th January, 2-30 P.M.	Namdang mine, Margherita P.O., Assam.	Assam Railways and Trading Co., Ltd.	Pendagol Pathan, (m.), 28, <i>Coal-cutter.</i>	Coal	Deceased was working in an "opening" when he was struck by a mass of roof coal and stone, weighing several tons, which fell from a height of 6 feet. He was killed instantly. Inspection and inquiry made.
3	15th January, 7-30 A.M.	Dandot mine, Dandot P.O., Punjab.	Dalmia Jain and Co., Ltd.	Jafar, (m.), 20, <i>Labourer.</i>	Coal	Deceased was bailing out water from a longwall face when a mass of shale, 1'6" x 6" x 3" thick, fell on his back from the roof from a height of 4 feet. He sustained injuries which proved fatal a short time later. Inspection and inquiry made.

4	27th January, 1-30 P.M.	Chasnalla mine, Pathardihi P.O., Bihar.	Indian Iron and Steel Co., Ltd.	Nitai Bauri, (m.), 35, <i>Coal-cutter.</i>	Coal .	While engaged in cutting coal at the face of a gallery, deceased was struck and killed on the spot by a mass of stone which fell unexpectedly from a concealed "slip" in the roof at a height of about 4 feet. Inspection and inquiry made.
5	28th January, 10-30 A.M.	Bornwa mine, Jhumri-Telsiya P.O., Bihar.	Chatturam Horil- ram, Ltd.	Banshi Majhi, (m.), 25; <i>Labourer.</i>	Mica .	While deceased was engaged in preparing holes on the floor of an adit in order to set props, a large mass of roof stone fell from a height of 7 feet, dislodging a few bars and side supports. Deceased was struck by the falling stone and fatally injured. Inspection and inquiry made.
6	31st January, 4 A.M.	Sijua mine, Sijua P.O., Bihar.	Tata Iron and Steel Co., Ltd.	Choubey Pasi, (m.), 40, <i>Loader.</i>	Coal .	During pillar extraction operations in a seam 9 feet thick, there was an extensive collapse of interior roof coal and stone in the adjoining goaf, and part of the rib of coal, 10 feet thick, on which work was in progress, also collapsed. Deceased was killed instantly. Inspection and inquiry made.
7	31st January, 5 A.M.	Kurhurbaree mine, Giridih P.O., Bihar.	State Railways' Coal Department.	Janki Meah, (m.), 28; Fagu Meah, (m.), 29; <i>Coal-cutters.</i>	Coal .	While eight persons were engaged in depillaring operations in a seam, 7' thick, the main roof collapsed unexpectedly from between two "slips". The deceased were killed instantly while three other persons received serious injuries. Inspection and inquiry made.
8	14th February, 11 A.M.	Rawanwara mine, Parasia P.O., Central Provinces.	Amalgamated Coalfields Ltd.	Nirbhay Kurmi, (m.), 32, <i>Coal-cutter.</i>	Coal .	Deceased, contrary to orders, entered a gallery which was being secured, when a mass of stone, 6'x3'x1'3", suddenly fell from the roof from a height of about 6 feet and killed him on the spot. Inspection and inquiry made.
9	17th February, 6-45 A.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sundarchak P.O., Bengal.	Bengal Coal Co., Ltd.	Barkoo Majhi, (m.), 35, <i>Coal-cutter.</i>	Coal .	While at work in a depillaring area deceased was struck and killed on the spot by a mass of coal, weighing about 2 tons, which fell from the roof at a height of 11 feet. Another person was seriously injured by a prop which was dislodged by the fall. Inspection and inquiry made.
10	24th February, 8-45 A.M.	Ballarpur mine, Chanda P.O., Central Provinces.	Ballarpur Collieries Co.	Lachhman Datadin, (m.), 30, Gokul Baburam, (m.), 45, <i>Timbermen.</i>	Coal .	While two timbermen were measuring the height of their working place for the purpose of setting props, a mass of coal, 10'x8'x4" thick, fell from between two "slips" in the roof at a height of 10 feet, killing both of them on the spot. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—contd.

(a) Falls of roof—contd.

11	25th February, 5 A.M.	South East Baraboni mine, Charanpur P.O., Bengal.	Maharaja S. C. Nandi.	Mahabir Mahato, (m.), 38, Coal-cutter.	Coal	While two persons were loading coal in a gallery, 12 feet wide and 6½ feet high, a mass of coal weighing about 1 cwt. fell on them from a concealed "cleat" in the roof. Both were seriously injured and deceased succumbed to his injuries about a month later. Inspection and inquiry made.
12	27th February, 11-45 P.M.	Banksimulla mine, Charanpur P.O., Bengal.	Bengal Coal Co., Ltd.	Dukhan Kole, (m.), 39, Coal-cutter. Kali Singh, (m.), 29; Birso Kole, (m.), 35; Dasu Kole, (m.), 36; Sanker Majhi, (m.), 28; Girish Majhi, (m.), 32; Loaders.	Coal	While a number of loaders and a coal-cutter were completing the extraction of two "stooks" of coal in a depillaring area, the "stooks" collapsed without warning and a mass of roof coal, 50'×46'×4' thick, fell from a height of 8 feet, over-riding a large number of props. Five of the deceased were killed instantly and one person was fatally injured. Inspection and inquiry made.
13	29th February, 5-30 A.M.	Seetalpur mine, Dishergarh P.O., Bengal.	Bengal Coal Co., Ltd.	Bhatar Majhi, (m.); 58, Coal-cutter.	Coal	While deceased was filling a tub with coal in a gallery, a mass of coal and shale, measuring about 32'×24'×3'6", unexpectedly fell from the roof at a height of 7 feet. He was struck and killed instantly. Inspection and inquiry made.
14	11th March, 4 P.M.	Serampore mine, Giridhi P.O., Bihar.	State Railways' Coal Department.	Arjun Dosad, (m.), 32, Coal-cutter.	Coal	A mass of coal and stone fell from the roof at a height of 9 feet in a depillaring area and dislodged a prop which seriously

15	13th March, 2-40 A.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Jokhu Chamar, (m.), 25, <i>Loader.</i>	Coal	While deceased was engaged in loading coal blasted from the roof of a gallery, 12 feet high, in a depillaring area, a mass of coal, 20 feet × 10 feet × 1' to 1'6" thick, suddenly fell from the roof. He ran under the falling coal and was killed instantly. Inspection and inquiry made.
16	13th March, 10 A.M.	Kendwadih mine, Bhaga P. O., Bihar.	Hurriladih Coal Co., Ltd.	Pashu Mahali, (m.), 33, <i>Timberman.</i>	Coal	While props were being withdrawn in a depillaring area a mass of roof-stone, 16' × 7' × 6" thick, suddenly collapsed and dislodged a prop, 7 feet long, and liberated a mass of stone which struck deceased and inflicted fatal injuries. Inspection and inquiry made.
17	13th March, 9 P.M.	Baragolsai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Muhamad Makrani, (m.), 28, <i>Coal-cutter.</i>	Coal	While deceased was preparing a shot hole in an "opening" a mass of coal and shale, weighing about one and a half tons, fell from the roof from a height of 14 feet. He was struck and killed instantly. Inspection and inquiry made.
18	16th March, 1-10 P.M.	Shivrajpur, Shivrajpur P. O., Bombay.	Shivraj Syndicate Ltd.	Latchman Hari, (m.), 32, <i>Miner.</i>	Manga- nese.	While deceased was walking in a stope a mass of stone, 20' × 5' × 3', fell on him from the roof, inflicting fatal injuries.
19	21st March, 5 P.M.	No. 2 South Jhakkarkot mine, Dhak P. O., The Punjab.	Rai Sahib, Lala Ishar Das Kapoor and Dewan Das Kirpa Ram.	Barkburdar, (m.), 26, <i>Coal-cutter.</i>	Coal	While working on a longwall face, deceased was killed by a mass of roof shale, 5' × 2'3" × 2', which fell from a height of 3½ feet. Inspection and inquiry made.
20	25th March, 12 noon.	Ramnagar mine, Kulti P. O., Bengal.	Bengal Iron Co., Ltd. (In Liquidation.)	Behari Bauri, (m.), 38, <i>Timberman.</i>	Coal	While deceased was picking up a prop which had been dislodged in a depillaring area, a mass of coal 20' × 4' × 3'6" fell on him from the roof. He sustained serious injuries and died a few minutes later. Inspection and inquiry made.
21	26th March, 11-30 A.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Ssnichar Bhuiya, (m.), 58, <i>Coal-cutter.</i>	Coal	Contrary to orders, deceased was sitting down in a gallery, which was being timbered, when a mass of roof 6' × 2'6" × 2", fell on him from a height of 10 feet, inflicting fatal injuries. Inspection and inquiry made.
22	27th March, 2-45 P.M.	Pure Damuda mine, Nudkharkee P. O., Bihar.	Ram Bhaju Upa- dhya.	Sukan Rajwar, (m.), 35, <i>Coal-cutter.</i> Dharu Turi, (m.), 34, <i>Loader.</i>	Coal	While floor coal was being cut in a gallery, 7' × 7' which was in the vicinity of a fault a mass of coal 25' × 7' × 18", suddenly fell from a concealed "slip" in the roof and killed a miner and a loader instantly. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal accidents during the year 1940—*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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—*contd.*

(a) Falls of roof—*contd.*

23	4th April, 7-45 P.M.	Mudidih mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Somar Roy, (m.), 28, Coal-cutter.	Coal	In a depillaring area, a mass of roof coal 15'×6'×1'6" which was supported on props, fell from a height of 11 feet and killed deceased instantly. Inspection and inquiry made.
24	7th April, 4-45 A.M.	Pure Dishergarh mine, Sitarampur P. O., Bengal.	Pure Dishergarh Colliery Co.	Badla Majhi, (m.), 40, Coal-cutter.	Coal	Deceased passed through a fence into a goafed area to load fallen coal when he was fatally injured by a mass of coal 7'×2'6"×1'3", which fell from the roof from a height of about 10 feet. Inspection and inquiry made.
25	15th April, 4 P.M.	Seetalpore No. 3 Pit mine, Dishergarh P. O., Bengal.	The Bengal Coal Co., Ltd.	Bistoo Bauri, (m.), 33, Trammer.	Coal	While a trammer was endeavouring to release a sprag in the wheel of a loaded tub, which he was about to lower in a gallery, a mass of roof coal, 4'×1'×1' thick, fell from a height of 7 feet. He was struck by a piece of the falling coal and fatally injured. Inspection and inquiry made.
26	23rd April, 4-30 A.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Chandradip Upadhyaya, (m.), 45, Contractor's Supervisor. Sarju Sukul, (m.), 46, Coal-cutter.	Coal	While assisting to dress down loose coal after blasting in a machine cut gallery, 8 feet high, the deceased were struck and fatally injured by a mass of roof shale, 6'×4'×6". Inspection and inquiry made.
27	4th May, 12-45 P.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Shewnandan Chamar, (m.), 35, Trammer.	Coal	While working in a depillaring area deceased was struck and fatally injured by a mass of roof coal, 4'6"×1'6"×12" thick, which fell from a concealed "slip" at a height of 25 feet. Inspection and inquiry made.

28	7th May, 4-40 P.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Deesai Kahar, (m.), 40, <i>Labourer.</i>	Coal .	While deceased was assisting to tighten a prop at a junction of four galleries, 15 feet high, a mass of coal and shale 4'x2'6" x1'6", fell from a "slip" in the roof and struck him. He was killed instantly. Inspection and inquiry made.
29	7th May, 7 P.M.	Barkui mine, Parasia P. O., Central Provinces.	Pench Valley Coal Co., Ltd.	Daulat Singh, (m.), 20, <i>Shot-firer.</i> Anak Lal, (m.), 30, <i>Driller.</i> Lalman, (m.), 20, <i>Loader.</i>	Coal .	While a number of persons was engaged in a stone drift after blasting, a mass of stone, 30'x6' 9"x6" to 1½" thick, fell without warning from between two concealed "slips" and a clean "parting" in the roof at a height of 4½ feet. Two persons were killed instantly, one was fatally injured and another sustained serious injuries. Inspection and inquiry made.
30	23rd May, 5 A.M.	Poriapur mine, Churulia P.O., Bihar.	Kasta and Bihar Collieries, Ltd.	Supal Majhi, (m.), 34, <i>Coal-cutter.</i>	Coal .	While deceased was engaged in cutting down roof coal in a gallery being driven through a pillar in a depillaring area, a mass of coal, 6'x3'6"x3' thick, fell from between two concealed "slips" in the roof at height of about 6 feet and struck him, causing fatal injuries. Inspection and inquiry made.
31	8th June, 4 A.M.	Bejdih mine, Sundarchak P.O., Bengal.	Equitable Coal Co., Ltd.	Manger Mesh, (m.), 36, <i>Coal-cutter.</i>	Coal .	While engaged in loading coal in a depillaring area, deceased was struck and fatally injured by a prop which was dislodged by a fall of roof at the edge of an adjoining goaf. Inspection and inquiry made.
32	12th June, 5-30 A.M.	Ekra Khas mine, Bansjora P.O., Bihar.	Maharaja S. C. Nandy.	Sundar Pasi, (m.), 35, <i>Coal-cutter.</i>	Coal .	Deceased was removing coal which had rolled into a goafed area, when a mass of roof stone, 12'x8'x6'x1'6" thick, fell off a "slip" from a height of 12 feet into the goaf. Some pieces of the broken stone struck deceased, inflicting fatal injuries. Inspection and inquiry made.
33	12th June, 12-15 P.M.	Kustore mine, Kusunda P.O., Bihar.	Raneegunge Coal Association, Ltd.	Sukhu Rana, (m.), 48, <i>Coal-cutter.</i>	Coal .	While at work in a depillaring area, deceased was struck and fatally injured by a mass of roof coal, 10'x7'x9", which fell from a height of 12 feet between roof supports. Inspection and inquiry made.
34	18th June, 4 A.M.	West Jamuria mine, Charanpur P.O., Bengal.	West Jamuria Coal Co., Ltd.	Mangal Chamar, (m.), 39, <i>Coal-cutter.</i>	Coal .	While sitting a few feet from a pillar under extraction, deceased was struck by a piece of shale, 1'6"x1'x1" thick, which fell from the roof at a height of 13 feet. He sustained spinal injuries and died six months later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—*contd.*

(a) Falls of roof—*contd.*

35	20th June, 10 P.M.	Baliary mine, Kusunda P. O., Bihar.	Chunilal Ticam- chand Coal Co., Ltd.	Meghu Gossain, (m.), 50, <i>Sirdar.</i>	Coal	While supervising the work in a depillaring area deceased was struck and fatally injured by a prop, 11 feet long, which was dislodged by a fall of roof in the depillaring area. Inspection and inquiry made.
36	22nd June, 6 A.M.	Murlipahari mine, Giridih P. O., Bihar.	Indian Mica Sup- ply Co., Ltd.	Pokhan Ram, (m.), 33 ; <i>Labourer.</i>	Mica	While deceased was engaged in dressing down some weak roof in a gallery, a mass of stone, 6'×3'×3' thick, fell from the roof at a height of about 6 feet and killed him instantly. A "slip" and a smooth parting along the roof were exposed after the fall. Inspection and inquiry made.
37	25th June, 1-30 P.M.	South Samla mine, Pandaveswar P. O., Bengal.	South Samla Col- liery Co.	Suku Majhi, (m.), 28, <i>Coal-cutter.</i>	Coal	While deceased was "robbing" coal inside a fenced off gallery, a mass of coal, 9'×3'6"×2', fell from between two "slips" in the roof, at a height of 9 feet. He was struck and killed instantly. Inspection and inquiry made.
38	3rd July, 5-30 A.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Hari Meah, (m.), 36, <i>Timberman.</i>	Coal	While a timberman was lifting a prop which had been with- drawn by a "sylvester" at the edge of a goaf, a mass of roof coal and shale 4'×3'×2'6", fell from a height of 12 feet, striking one end of the prop. This caused the other end to strike deceased, inflicting fatal injuries. Inspection and inquiry made.
39	4th July, 1 P.M.	Sripur (Nos. 1, 2 & 3 Pits) mine, Kalipabari P. O., Bengal.	Lodna Colliery Co., (1920), Ltd.	Teju Singh, (m.), 38, <i>Sirdar.</i>	Coal	While a sirdar was supervising the loading of blasted roof coal in a gallery, a mass of coal, 15'×8'×1'6", fell from a "slip" in the roof at a height of 8 feet. He was killed on the spot and a loader sustained serious injuries. If the roof had been supported, the accident would not have occurred. Inspection and inquiry made.

40	4th Jul 9.30 A.M.	Parbelia mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Hira Routh, (m.), 28, <i>Labourer.</i>	Coal	While deceased was working in a gallery a mass of roof coal, 5'x3'x6", suddenly fell from a height of 7 feet and struck him. He received serious injuries which proved fatal 26 days later. Inspection and inquiry made.
41	10th July, 6 A.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Churaman Hazam, (m.), 52; Seikh Farid, (m.), 28; <i>Loaders.</i>	Coal	In a seam 25 feet thick, five loaders were engaged in loading coal in a depillaring area in which some props had been dislodged, when a mass of stone, 9'x4'x2', fell from an unsupported part of the roof. One of the loaders was killed instantly and another was fatally injured while the remainder received serious injuries. Inspection and inquiry made.
42	10th July, 6-30 P.M.	Central Jinagora mine, Jharia P. O., Bihar.	Central Jinagora Coal Co., Ltd.	Bodi Kora, (m.), 25, <i>Coal-cutter.</i>	Coal	While working in a gallery deceased was struck and fatally injured by a mass of stone, 8'x3'10"x12" thick, which fell off a "slickenside" in the roof at a height of 5½ feet. Inspection and inquiry made.
43	11th July, 4-45 P. M.	Kankanee mine, Bansjora P. O., Bihar.	Eastern Coal Co., Ltd.	Kajoo Chamar, (m.), 28, <i>Loader.</i>	Coal	While deceased was loading coal in a gallery adjacent to a depillaring area, a mass of stone, 5'x3'x1'8", fell on him from the roof from a height of 11 feet and killed him instantly. Inspection and inquiry made.
44	17th July, 11-30 P. M.	Newton Chickli mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries, Ltd.	Bhura Gond, (m.), 30, <i>Labourer.</i>	Coal	While a piece of stone was being levered down from the roof of a level, 6 feet high, preparatory to setting supports, it suddenly fell and struck deceased, who was fatally injured. Inspection and inquiry made.
45	21st July, 6-15 A. M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Akhru Bhuiya, (m.), 55, <i>Loader.</i>	Coal	While at work in a depillaring area two persons were seriously injured by a thin band of stone, 5'x4'x1" to 4" thick, which fell from the roof at a height of 25 feet. One of the injured persons succumbed to his injuries 7 hours later. Inspection and inquiry made.
46	24th July, 4-40 A. M.	West Bhuggatdih, Jharia P. O., Bihar.	Kalyanji Mavji & Co.	Khalif Rajwar, (m.), 32, <i>Coal-cutter.</i>	Coal	While a miner was cutting coal from the side of a pillar in a depillaring area another miner, who was dressing the overhanging roof 3 feet away, released a mass of coal weighing about 8 cwt. He was struck by the falling coal and killed instantly. The two miners should not have worked so close together. Inspection and inquiry made.
47	1st August, 5 P.M.	Ambara mine, Junnordeo P. O., Central Provinces.	N. H. Ojha & Co., Ltd.	Ramswaroop Thakur, (m.), 25, <i>Timberman.</i>	Coal	While a prop was being knocked out in a depillaring area, in a seam 5'6" thick, a mass of stone, about 3'x2'x1', fell from a 'slip' in the roof. Deceased was struck and fatally injured. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—*contd.*

(a) Falls of roof—*contd.*

48	2nd August, 11 P. M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Tilai Mahato, (m.), 32, Loader.	Coal	While at work in a depillaring area a loader was struck and killed instantly by a mass of roof coal, 18' × 15' × 5', which fell from a height of 8 feet. Inspection and inquiry made.
49	8th August, 5-30 P. M.	Ekra Khas mine, Bansjora P. O., Bihar.	Maharaja S. C. Nandy.	Kairu Pasi, (m.), 35, Coal-cutter.	Coal	While deceased was assisting to place a ladder in a gallery. a triangular piece of coal, 9' × 7' × 6', suddenly fell on him from the roof at a height of 14 feet. He was killed instantly. The fall exposed two converging "slips" in the roof. Inspection and inquiry made.
50	13th August, 5 A. M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Pirthi Mehra, (m.), 30, Loader.	Coal	While carrying a basket of coal deceased slipped and fell against a prop, which was dislodged, and a mass of coal, 5' × 3' × 1' 3", was released from the roof at a height of 7 feet. He was struck and fatally injured. Inspection and inquiry made.
51	14 August, 10-45 P. M.	Banksimulla mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Narain Mondal, (m.), 37, Loader.	Coal	While deceased was loading coal in a depillaring area after blasting. a mass of shale, 8" × 8" × 4", fell unexpectedly from a "slip" in the roof at a height of about 16 feet and struck him. He sustained serious injuries and died of septicaemia 15 days later. Inspection and inquiry made.
52	15th August, 2-30 A. M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Collieries, Ltd.	Rajkumar Keot, (m.), 34, Coal-cutter.	Coal	While two persons were preparing to set a cog beneath roof stone in a gallery adjoining an old goaf, a mass of roof coal, 5' × 4' × 1' 6" thick, fell off the edge of roof coal just on the dip side of the place to be supported, and struck them, inflicting serious injuries. One of them succumbed to his injuries 7 days later. Inspection and inquiry made.

53	19th August, 10-30 P.M.	Barmondia mine, Sitarampur P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Nankoo Pathan, (m.), 38, <i>Timberman.</i>	Coal .	While three timbermen were engaged in extracting a cog from under loose roof coal near the edge of an old goaf, with a "sylvester" drawer, a large mass of roof coal fell killing deceased on the spot. Inspection and inquiry made.
54	21st August, 3-45 P.M.	Saltore mine, Dishergarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Chuto Turi, (m.), 25, <i>Coal-cutter.</i>	Coal .	While deceased was loading roof coal which had been dressed down in a gallery a "bump" occurred, causing a mass of roof coal, 35'×3'6"×5', to fall from a height of 11 feet. He was struck and killed instantly. Inspection and inquiry made.
55	22nd August, 2-30 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Rahan Mahto, (m.), 24, <i>Loader.</i>	Coal .	Deceased was struck and fatally injured by a mass of coal, 10'×9'×1'6", which fell from the roof of a gallery at a height of 5½ feet. Inspection and inquiry made.
56	24th August, 5 A.M.	Upper Kajora mine, Kajoragram P. O., Bengal.	C. Bhowaingha	Somaru Bilaspuri, (m.) 29; Siricharan Brah- min, (m.), 30; <i>Coal-cutters.</i>	Coal .	Two miners and a loader were working in a gallery 17 feet high near a depillaring area. One miner was dressing roof coal, while standing on a ladder, when a mass of coal, 12'×8'×2', fell from the roof and the miner on the ladder was knocked down and killed on the spot. The other miner succumbed to his injuries 34 hours later, and the loader sustained serious injuries. Inspection and inquiry made.
57	3rd September, 11-30 A.M.	Kurhurbaree mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Sardua Barhi, (m.), 22; Majid Meah, (m.), 18; <i>Coal-cutters.</i>	Coal .	The deceased were killed by a mass of roof coal, 4'×2'×1'9", which suddenly became dislodged from two "slips" at a height of 10 feet on account of a "bump" in a depillaring area. Inspection and inquiry made.
58	6th September, 5-30 A.M.	Balliary mine, Kusunda P. O., Bihar.	Chunilal Ticum- chand Coal Co., Ltd.	Khubia Chamar, (m.), 34, <i>Coal-cutter.</i>	Coal .	A gang of miners was at work in a depillaring area, when a mass of stone, 4'×3'×6", fell from the roof at a height of 12 feet, on deceased, inflicting fatal injuries. Inspection and inquiry made.
59	7th September, 3-15 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Doman Meah, (m.), 25; Buttan Meah, (m.), 25; Choto Meah, (m.), 30; <i>Loaders.</i>	Coal .	While five persons were engaged in loading coal from a depillaring area in a seam 14 feet thick, a mass of stone, 40'×25'×2'9", fell from the roof killing three of them on the spot. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—*contd.*

(a) Falls of roof—*contd.*

60	14th September, 11-30 P.M.	Saltore mine, Dishergarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Kaila Majhi, (m.), 32, <i>Loader.</i>	Coal.	While loading coal in a depillaring area a "bump" occurred and a mass of shale, 8'×3' 6"×2½" thick, fell from a "slip" in the roof at a height of about 15 feet and struck deceased, causing fatal injuries. Inspection and inquiry made.
61	29th September, 3 A.M.	Pure Dishergarh mine, Sitarampur P. O., Bengal.	Pure Dishergarh Coal Co.	Joya Majhi, (m.), 30, <i>Coal-cutter.</i>	Coal.	While four men were cutting coal in a depillaring area, a mass of coal, 7'×3'×6" thick, fell from the roof at a height of 8 feet. Deceased was struck on the head and died one hour later. Inspection and inquiry made.
62	1st October, 3 P.M.	Mudidih mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Janki Dhobi, (m.), 38, <i>Stone-cutter.</i>	Coal.	While deceased was levering down roof coal in a gallery after blasting, he lost his balance and fell down. A mass of coal, weighing about one ton fell on him from the roof at a height of 7 feet and killed him instantly. Inspection and inquiry made.
63	4th October, 2 A.M.	Jatachappa mine, Parasia P. O., Central Provinces.	A m a l g a m a t e d Coalfields, Ltd.	Raghobban Singh, (m.), 23, <i>Coal-cutter.</i> Hari Singh Gond, (m.), 25, <i>Loader.</i>	Coal.	While a number of persons was at work in a gallery, 5½ feet high, a mass of roof, 9'×6'×2', suddenly collapsed from between a fault and a concealed 'slip'. The deceased were killed on the spot. Inspection and inquiry made.
64	5th October, 2 A.M.	Isabella mine, Nudkharkee P. O., Bihar.	Kumar Sarat Kumar Roy.	Shouna Kole, (m.), 40, <i>Coal-cutter.</i>	Coal.	While working in a depillaring area, deceased was fatally injured by a piece of roof-coal, 3'×2'×6" thick, which fell from height of 8 feet. A "slip" was exposed after the fall. Inspection and inquiry made.

65	15th October, 11 A.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Banjo Bhuia, (m.), 40, <i>Loader.</i>	Coal	While deceased was loading coal in a depillaring area, a mass of shale, 5' x 2' 6" to 4' 6" wide x 2½" to 3" thick, fell without warning from the roof at a height of 15 feet and struck him. He sustained serious injuries to which he succumbed three hours later. If the roof had been properly supported the accident would not have occurred. Inspection and inquiry made.
66	24th October, 11-30 P.M.	Ekra Khas mine, Bansjora P. O., Bihar.	Cassimbazar Raj Ward Estate.	Kishon Bhuia, (m.), 40, <i>Labourer.</i>	Coal	While props were being set in a depillaring area in a seam, 24 feet thick, a mass of stone, 20' x 12' x 6", fell from the roof, and killed deceased instantly. Inspection and inquiry made.
67	25th October, 1-15 P.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ramgur Ltd.	Puran Turi, (m.), 23, <i>Coal-cutter.</i>	Coal	While standing in a gallery, 17 feet wide deceased was struck and fatally injured by a mass of coal, 8' x 6' x 2', which fell off a "slip" at a height of 10 feet. Another person sustained serious injuries. Inspection and inquiry made.
68	28th October, 6-25 A.M.	Sitalpur mine, Sitarampore P. O., Bengal.	Bengal Coal Co., Ltd.	Gujrah Chamar, (m.), 38; Rasik Majhi, (m.), 35; <i>Coal-cutters.</i>	Coal	During depillaring operations a severe "bump" occurred in a seam, 10 feet thick, lying at a depth of 1,300 feet from the surface, and caused a large quantity of coal and stone to fall from the roof and sides. Two miners were killed instantly, while another miner and a timberman were seriously injured. Inspection and inquiry made.
69	4th November, 4 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raniganj Coal Association, Ltd.	Bodi Singh, (m.), 52, <i>Shot-firer.</i>	Coal	While deceased was dressing down roof coal in a depillaring area, a mass of coal, 4' x 3' x 1' thick, fell on him from a height of 8 feet. He succumbed to his injuries thirteen days later. Inspection and inquiry made.
70	6th November, 12-15 A.M.	Banksimulla mine, Charanpur P. O., Bengal.	Ben Coal Co., Ltd.	Etwari Chamar, (m.), 35, <i>Loader.</i>	Coal	While deceased was loading roof coal which had been blasted in a depillaring area, a mass of shale about 1'3" x 1'3" x 1" thick, fell from the roof from a height of 16 feet and struck him, causing serious injuries which proved fatal 12 hours later. Inspection and inquiry made.
71	8th November, 9-30 P.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Lusroo Pasi, (m.), 55, <i>Coal-cutter.</i>	Coal	While a number of miners was working in a depillaring area a mass of stone, 7' x 6' x 9", fell from the roof from a height of 23 feet. Deceased was killed instantly and another person sustained serious injuries. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1910—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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
(a) Falls of roof—contd.						
72	9th November, 4-30 P.M.	South East Baraboni mine, Charanpur P.O., Bengal.	Maharaja S. C. Nandy.	Bonowari Kole, (m.), 37, Loader.	Coal	A loader entered a gallery which was fenced off, in order to collect some fallen coal. He was struck and fatally injured by a piece of stone, 10"×6"×2", which fell from the roof at a height of 13 feet. Inspection and inquiry made.
73	15th November, 6 A.M.	Kustore mine, Kusunda P.O., Bihar.	Raneegunge Coal Association, Ltd.	Jiblal Mahato, (m.), 25, Timberman.	Coal	While props were being withdrawn in a depillaring area, a mass of coal, weighing about 2 cwt., fell from the roof from a height of 14 feet, killing deceased on the spot. Inspection and inquiry made.
74	21st November, 1-30 A.M.	Datla mine, Junnordeo P.O., Central Provinces.	Amalgamated Coal-fields Ltd.	Dadoo, (m.), 20, Loader.	Coal	While a number of men was working in a depillaring area, a mass of coal, 2'×1'3"×5", fell from the roof at a height of 9 feet. Two men were struck by the falling coal and seriously injured. One of them died 27 days later. Inspection and inquiry made.
75	23rd November, 12-30 P.M.	South Bulliari mine, Kusunda P.O., Bihar.	East Indian Coal Co., Ltd.	Jhari Shaw, (m.), 36, Coal-cutter.	Coal	Deceased returned to his working place after blasting before it had been examined. A mass of coal, weighing about 2 cwt., suddenly fell on him from a height of 20 feet, inflicting fatal injuries. Inspection and inquiry made.
76	3rd December, 1 A.M.	Barkui mine, Parasia P.O., Central Provinces.	Pench Valley Coal Co., Ltd.	Jhinoo, (m.), 30, Loader.	Coal	Deceased was loading coal in a machine cut gallery after blasting when a mass of coal fell on him from between "slips" in the roof, inflicting fatal injuries.

77	4th December, 5 A.M.	Ekra Khas mine, Bansjora P.O., Bihar.	Maharaja S. C. Nandi.	Shew Singh Kurmi, (m.), 35 ; Jadoo Ram Gope, (m.), 37 ; Ladoo Ram Gope, (m.), 33 ; Janak Kurmi, (m.), 35 ; Sambhu Gope, (m.), 36 ; Somait Gope, (m.), 28 ; Ram Adhin Gope, (m.), 35 ; Raman Dhibour, (m.), 58 ; <i>Coal-cutters.</i>	Coal	With a view to removing some fallen coal, eight miners left their appointed working place and entered a depillaring area, which had been fenced off owing to the "weighting" of the roof. An extensive fall of roof-stone occurred, burying seven of them. While an attempt to rescue the only survivor was being made, another fall of roof took place, and he was killed. Inspection and inquiry made.
78	4th December, 7 A.M.	Benahir mine, Jharia P.O., Bihar.	Standard Coal Co., Ltd.	Abdul Kadir, (m.), 30, <i>Stone-cutter.</i>	Coal	Deceased was levering down roof stone in a gallery after blasting, when a mass of stone, 7'×4'×1' 2", fell from a height of 6 feet and fatally injured him. Inspection and inquiry made.
79	9th December, 1-30 P.M.	Eklehra mine, Parasia P.O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Buddhimansingh, (m.), 28, <i>Coal-cutter.</i>	Coal	Deceased passed through a fence and entered a goafed area, when a mass of roof measuring, 6'×4'×2' fell on him. He was killed instantly.
80	12th December, 4-30 P.M.	Junnordeo No. 2 mine, Junnordeo P.O., Central Provinces.	C. P. Syndicate, Ltd.	Lal Mohammad, (m.), 45, <i>Coal-cutter.</i>	Coal	Deceased was loading coal after blasting in a depillaring area when a mass of stone fell from between "slips" at a height of 10 feet, killing him on the spot.
81	13th December, 3-30 A.M.	West Jamuria mine, Charanpur P.O., Bengal.	West Jamuria Coal Co., Ltd.	Timol Chamar, (m.), 37 ; Dhonraj Chamar, (m.), 38 ; <i>Coal-cutters.</i>	Coal	While two miners were dressing roof coal in a seam, 13 feet thick, a mass of stone fell in an adjacent goaf and partly broke through a thin "stook" behind which they were working. A prop was dislodged and struck one of the miners, killing him instantly. Another miner was seriously injured by the falling stone and died four months later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
<i>(a) Falls of roof—<i>concl'd.</i></i>						
82	14th December, 2-45 A.M.	Methani mine, Sitarampore P.O., Bengal.	Aldihi Coal Co., Ltd.	Dewan Dusad, (m.), 37, Loader.	Coal	While four men were engaged in loading fallen coal in a gallery, near a dipillaring area, a mass of shale, 11'×5'×3", fell from the roof at a height of 12 feet, killing one man on the spot and seriously injuring two others. Inspection and inquiry made.
83	14th December, 8 A.M.	New Marine mine, Kusunda P.O., Bihar.	New Marine Coal Co., Ltd.	Tharu Majhi, (m.), 32; Jhari Majhi, (m.), 33; Coal-cutters.	Coal	A gang of miners was at work in a depillaring area, when a mass of roof-stone, 25'×20'×6" thick, suddenly fell, from a height of 21 feet killing one man and seriously injuring another, who died a month later. Two parallel "slips" in the roof were exposed after the fall. Inspection and inquiry made.
84	15th December, 5 A.M.	Jitpur mine, Bhaga P.O., Bihar.	Bengal Iron Co., Ltd. (In Liquidation.)	Manihar Rajwar, (m.), 40; Hari Gore, (m.), 30; Bisram Teli, (m.), 26; Bhikom Patel, (m.), 30; Coal-cutters.	Coal	While a gang of miners was at work in a depillaring area, an extensive fall of roof occurred, burying four of them. Two were killed instantly and two others succumbed to their injuries shortly afterwards. Another miner was slightly injured. Inspection and inquiry made.
85	21st December, 3-30 A.M.	East Ena mine, Jharia P.O., Bihar.	East Ena Colliery Co., Ltd.	Raghnandan Dusad, (m.), 38, Loader.	Coal	While filling his basket with coal in a depillaring area, deceased was killed by a mass of roof-coal, 4'×2'×1'6" thick, which fell on him from a height of 20 feet. Inspection and inquiry made.

86	21st December, 8-30 P.M.	Saltore mine, Disbhergarh P. O., Bihar.	Burrakar Coal Co., Ltd.	Teju Mia, (m.), 32; Guru Mia, (m.), 45; <i>Coal-cutters.</i>	Coal	The deceased were filling roof coal which had been cut in a gallery, when a mass of loose coal fell from the roof at a height of 8 feet. They were killed instantly. Inspection and inquiry made.
87	22nd December, 4 A.M.	Nandi mine, Jamuria P. O., Bengal.	Mondol Brothers.	Banoari Chamar, (m.), 38, <i>Coal-cutter.</i>	Coal	While five miners were loading coal in a gallery, 15 feet high, a prop was displaced and released a piece of stone, 3'×2'×3", which fell and struck one of the miners, killing him instantly. Inspection and inquiry made.
88	27th December, 8-30 P.M.	Poidih mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Mangal Gope, (m.), 55; Baseswar Gope, (m.), 38; <i>Coal-cutters.</i>	Coal	While the deceased were loading roof coal in a gallery, a bump occurred and a mass of stone, 5'×5'×6" thick, fell from the roof at a height of 16 feet. They were killed on the spot. Inspection and inquiry made.

(b) Falls of Sides—(79 Deaths.)

89	5th January, 2 A.M.	Kalithan Gurgaon, Bhojudih P. O., Bihar.	K. B. Seal & Sons.	Nagar Majhi, (m.), 40; Phucha Majhi, (m.), 35; Pairag Kora, (m.), 25; Nakul Kora, (m.), 35; <i>Coal-cutters.</i>	Coal	The deceased were cutting floor coal in a gallery, when they were killed on the spot by a mass of side coal, measuring 25'×10'×3' 6" to 4' thick, which fell unexpectedly from pronounced cleavage planes in the roof and side. Inspection and inquiry made.
90	5th January, 11 A.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Behari Hazra, (m.), 30, <i>Coal-cutter.</i>	Coal	While a gang of miners was at work in a depillaring area, a mass of coal, 8'×5'×2' 6" fell from a "stook", dislodging four props, one of which struck deceased, killing him instantly. Inspection and inquiry made.
91	9th January, 10 A.M.	Jharia Khas, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Balkaran Kurmi, (m.), 24, <i>Coal-cutter.</i>	Coal	While deceased was dressing the side of a gallery, 13 feet high, where the side had been found unsafe, he over-balanced and fell off the ladder on which he was working when a mass of coal, weighing about 5 tons, suddenly fell from the side. A piece of coal fell on his leg causing injuries to which he succumbed two months later. Inspection and inquiry made.
92	9th January, 11-15 P.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Kamta Ahir, (m.), 35, <i>Loader.</i>	Coal	Deceased was loading coal in a depillaring area, when due to a sudden "bump" a mass of coal, 6'×4'×1' thick, fell from a concealed "cleat" in the side of a pillar at a height of 15 feet and struck him, causing fatal injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
<i>(b) Falls of sides—contd.</i>						
93	13th January, 12.30 A.M.	Bararee, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Ganpat Sukul, (m.), 34, Coal-cutter.	Coal	While deceased was sitting in a gallery adjoining a depillaring area, a mass of coal, weighing about 2 cwt., fell unexpectedly from the side of a pillar at a height of about 16 feet and struck him, causing fatal injuries. Inspection and inquiry made.
94	26th January, 2 P.M.	Seetalpur No. 3 Pit, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Haril Dosadh, (m.), 60, Coal-cutter.	Coal	While deceased was filling a basket with coal in a gallery, 14 feet wide and 9½ feet high, a mass of coal, 5' x 3' x 1' 6" fell from the side from a height of 5 feet. He was struck by the falling coal and sustained injuries, which proved fatal 16 hours later. Inspection and inquiry made.
95	3rd February, 1.30 P.M.	Jogta mine, Sijua P. O., Bihar.	Agabeg Brothers, Ltd.	Rathi Deswalin, (f.), 20, Coal-carrier.	Coal	While coal was being loaded in a quarry, 20 feet deep a mass of overburden 17' x 14' x 1' 6", fell from the side from a height of 7 feet. Deceased was struck and killed instantly, and another person was seriously injured. If the side had not been undercut the accident would not have occurred. Inspection and inquiry made.
96	5th February, 2.30 P.M.	Varadaraja mica mine, Chennur P. O., Madras.	Rayi Subba Naidu	Mopur Venkataswamy, (m.), 30, Miner.	Mica	While dressing down the loose sides in a level drive deceased dislodged a piece of stone, 8' x 6' x 5", which struck him on the leg. He sustained serious injuries and died six months later. Inspection and inquiry made.
97	10th February, 9.45 A.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Chilangi Meah, (m.), 40, Miner.	Coal	In a depillaring area in a seam, 26 feet thick, a mass of coal weighing about 100 lbs. fell off the side from a height of about 20 feet and struck deceased, killing him instantly.

98	16th February, 1 P.M.	Pallawaram Stone mine, Pallawaram P. O., Madras.	Corporation of Madras.	Kaliyamma, (f.), 25, Labourer.	Stone .	While several persons were working near the foot of a vertical side of a quarry a mass of stone fell from a height of 60 feet and deceased was killed on the spot. Inspection and inquiry made.
99	19th February, 12-30 P.M.	Victoria West mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Mitoo Chamar, (m.), 48, Coal-cutter.	Coal .	While the extraction of a pillar adjoining a dyke was proceeding, a piece of "jhamma", 2' x 1' 6" x 7", suddenly fell from the side at a height of 9 feet and dislodged a prop, which in falling, knocked down another prop. Deceased was struck by the second prop and sustained fatal injuries. Inspection and inquiry made.
100	27th February, 4 A.M.	Deoli mine, Dishergarh P. O., Bengal.	Deoli Coal Co., Ltd.	Singrai Majhi, (m.), 38, Coal-cutter.	Coal .	While at work in a gallery being driven through a pillar preparatory to its extraction, deceased was struck by a mass of coal, 2' x 1' 6" x 1', which he had dislodged from the side at a height of 9 feet. He received internal injuries to which he succumbed a few days later. Inspection and inquiry made.
101	18th March, 12 Midnight.	Bhagath Bathan mine, Rajhat P. O., Bihar.	Karanpura Mining Co.	Maghey Bhola, (m.), 22, Labourer.	Mica .	While deceased was engaged at the bottom of a shaft, 26 feet deep, a mass of soft stone, 5' x 4' x 1' 6", suddenly fell from the side from a height of 16 feet. He was struck and fatally injured. Had the soft sides of the shaft been supported the accident would not have occurred. Inspection and inquiry made.
102	19th March, 8-45 A.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndi- cate, Ltd.	Ghemla Tidia, (m.), 25, Miner.	Manga- nese.	Deceased was digging earth at the bottom of a shallow pit, when a mass of side, weighing about half a ton fell on him, inflicting fatal injuries.
103	27th March, 12 Noon.	Kajora mine, Kajoragram P. O., Bengal.	Roy Dutta & Co.	Kanak Majhi, (m.), 32, Loader.	Coal .	While deceased was filling a basket with coal in a gallery, 9 feet wide and 7 feet high, a mass of coal, 6' x 6' x 1' 6", fell off the side from a pronounced "slip". He sustained injuries to which he succumbed one hour later. Inspection and inquiry made.
104	28th March, 9 A.M.	Leases No. 126, Nos. 1 and 2 Inclines, Quetta P. O., Baluchistan.	Rai Sahib Tikham Dass Girdhari- dass.	Mohammad Ali Khan, (m.), 36, Coal-cutter.	Coal .	Deceased was struck and fatally injured by a mass of earth, 3' x 2' x 1' 6", which fell from the side of a gallery from a height of 4 feet. Had the overhanging side been dressed down and adequately supported, the accident would not have occurred. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(b) Falls of sides—<i>contd.</i>						
105	29th March, 5 P.M.	Pindkepar mine, Katori P. O., Central Pro- vinces.	Cheniram Jesraj .	Manya Gowara, (m.), 20, <i>Miner.</i> Bhagi Gowara, (f.), 30, <i>Labourer.</i>	Manga- nese.	While at work in an open excavation 12 feet deep, the deceased were killed instantly by a mass of stone, 4'×4'×2", which fell from the side at a height of about 6 feet. Inspection and inquiry made.
106	5th April, 10 P.M.	Benahir mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Ananta Rajwar, (m.), 28, <i>Loader.</i>	Coal .	While working in a gallery, deceased was seriously injured by a mass of side coal, 7'×6'×8" thick, which fell from a height of 7 feet. He succumbed to his injuries 9 days later. Inspection and inquiry made.
107	6th April, 1 P.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Lurkhu Lohar, (m.), 45, <i>Loader.</i>	Coal .	While loading coal in a gallery, deceased was fatally injured by a mass of coal, 4'×4'×3", which fell off a concealed "slip" from the side of a pillar at a height of 12 feet. Inspection and inquiry made.
108	24th April, 1-30 P.M.	Sitanala, Bhojudih P. O., Bihar.	Mohata Brothers .	Sambhu Majhi, (m.), 26, <i>Coal-cutter.</i>	Coal .	In a seam dipping at 1 in 1.5, deceased was cutting down a bridge of roof coal in a level gallery, 10 feet wide and 7 feet high, when a mass of coal, 12'×6'×2'6", fell without warning from the roof and rise side of the gallery. He was struck by the falling coal and killed instantly. Inspection and inquiry made.
109	28th April, 9 A.M.	Panduranga mine, Gudur P. O., Madras.	B. Ramkrishniah .	Vaikuti Subbadu, (m.), 20, <i>Labourer.</i>	Mica .	While at work in a quarry deceased was killed by a mass of overhanging side, 4'6"×4'×2'6", which fell on him from a height of 7 feet. Inspection and inquiry made.

110	11th May, 3-30 A.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Sakhichand Malla, (m.), 42, Coal-cutter.	Coal	While working in a quarry deceased was buried and suffocated by a mass of coal, 4' x 6' x 1' 6" thick, which fell from the side at a height of 10 feet. Inspection and inquiry made.
111	15th May, 3 P.M.	Pirpahar mine, Rajmahal P. O., Bihar.	Probodh Kumar Sirkar.	Ashari Mushahar, (m.), 30, Quarryman.	Stone	Deceased was fatally injured by a fall of side in a quarry.
112	16th May, 9-15 P.M.	Sendra mine, Bansjora P. O., Bihar.	Sendra Coal Co., Ltd.	Latif Meah, (m.), 25, Coal-cutter.	Coal	While sitting down near a pillar, deceased was struck by a piece of side coal, 10" x 8" x 6", which fell on his back from a height of 8 feet. He sustained a fracture of the spine and died 3½ months later. Inspection and inquiry made.
113	23rd May, 3 A.M.	Parbelia mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Basarath Meah, (m.), 38, Stone-cutter.	Coal	Deceased, while standing on a ladder, was preparing a shot-hole in a projecting mass of stone, near the bottom of a sinking shaft, when a piece of stone fell from above and struck him. He was thrown into the sump and fatally injured. Inspection and inquiry made.
114	1st June, 12-30 P.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Utah Ali Meah, (m.), 37, Coal-cutter.	Coal	While the extraction of a pillar was proceeding in a seam 8 feet thick, deceased was struck and fatally injured by a mass of coal, weighing about a ton which fell on him from the side. Another person was seriously injured. Inspection and inquiry made.
115	2nd June, 6 A.M.	Bejdih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Sobrati Meah, (m.), 50, Coal-cutter.	Coal	While deceased was engaged in cutting floor coal in a gallery adjoining a depillaring area, he was struck and fatally injured by a mass of coal, 12' x 7' x 1' thick, which fell off a "cleat" in the side of the pillar from a height of about 8 feet. Inspection and inquiry made.
116	21st June, 9-15 P.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ram- gur, Ltd.	Mansu Majhi, (m.), 23, Coal-cutter.	Coal	A mass of coal, 3' x 6' x 3' fell off a "slip" from the side of a pillar and dislodged a prop which struck deceased and fatally injured him. Inspection and inquiry made.
117	24th June, 11-30 P.M.	Bejdih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Jaksu Meah, (m.), 30, Coal-cutter.	Coal	While deceased was engaged in loading coal in a gallery adjoining a depillaring area, a mass of coal, weighing about one cwt., fell from the side from a height of 15 feet. He sustained injuries to which he succumbed shortly afterwards. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
<i>(b) Falls of sides—contd.</i>						
118	26th June, 6-15 P.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Surju Koiri, (m.), 35, <i>Coal-cutter.</i>	Coal	In a seam, 24 feet thick, deceased was dressing the side of a "rib" of coal against a goaf in a depillaring area when a portion of the "rib" suddenly collapsed and he was buried under about 50 tons of coal and stone which rolled down from the goaf edge. Deceased was killed instantly. Inspection and inquiry made.
119	27th June, 2 A.M.	Sripur (Nos. 1, 2 and 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Churu Meah, (m.), 30, Beju Meah, (m.), 25, <i>Loaders.</i>	Coal	While a gang of loaders was engaged in loading blasted roof coal in a gallery, a mass of coal, 13'×13'×3', burst off the side of a pillar from between two concealed "slips". One loader was killed instantly, one was fatally injured and another sustained serious injuries. Inspection and inquiry made.
120	29th June, 5 A.M.	Victoria West mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Badi Majhi, (m.), 38, <i>Coal-cutter.</i>	Coal	While deceased was resting in a gallery adjacent to a depillar-ing section, a mass of coal, 2'×1'×1', suddenly burst off the corner of a pillar and dislodged a prop. The prop struck deceased injuring him so severely that he died shortly afterwards. Inspection and inquiry made.
121	29th June, 2-45 P.M.	Patharghatta mine, Colgong P. O., Bihar.	Bengal Potteries, Ltd.	Raghua Tanti, (m.), 18, <i>Labourer.</i>	China clay.	While working in a narrow gallery deceased was fatally injured by a mass of clay, 4' 8"×4' 8"×12", which fell from the side at a height of 7 feet. Inspection and inquiry made.

122	6th July, 6-30 P.M.	Jhandawala mine, New Delhi.	stone, Chief Commissioner, Delhi.	Mam Raj, (m.), 55, Quarryman.	Stone .	While deceased, with three others, was levering down a piece of overhanging stone from a quarry face 28 feet high, he released a mass of stone, 8'×4'6"×2'6", lost his balance and fell to the bottom of the quarry. He was buried by the fall and was dead when extricated. Inspection and inquiry made.
123	7th July, 2 A.M.	Poniaty mine, Charanpur P. O., Bengal.	Poniaty Collieries, Ltd.	Mahadev Bhar, (m.), 32, Coal-cutter.	Coal .	Deceased was dressing down loose coal after blasting in the side of a pillar, when a mass of coal, 3'×1'6"×6", fell on him from a "slip" in the side at a height of 8 feet. He sustained serious injuries which proved fatal shortly afterwards. Inspection and inquiry made.
124	13th July, 2-15 P.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Chesto Bauri, (m.), 27, Loader.	Coal .	While deceased was filling a basket with coal in a gallery 28 feet high, in which floor coal was being removed, a piece of coal, weighing about 5 lbs. fell from the side from a height of 25 feet. He was struck on the head by the falling coal and killed instantly. Inspection and inquiry made.
125	14th July, 6 A.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Shyam Meah, (m.), 36, Loader.	Coal .	While two miners were loading fallen coal in a gallery adjoining a depillaring area, a mass of coal, 12'×7'×1' thick, fell without warning from the side of a pillar from a height of about 6 feet. Deceased sustained injuries to which he succumbed four days later. Inspection and inquiry made.
126	17th July, 4-15 P.M.	Tisra mine, Jharia P. O., Bihar.	Dhanji Devji & Sons.	Rasu Majhi, (m.), 32, Shot-firer.	Coal .	After a shot had been fired in the side of a pillar under extraction, deceased entered the place to make an examination, when he was struck and seriously injured by a mass of coal, 2'×1'6"×8", which fell from a height of 20 feet from the side of the pillar. He succumbed to his injuries 15 hours later. Inspection and inquiry made.
127	28th July, 5 A.M.	Central Kurkend mine, Kusunda P. O., Bihar.	Central Kurkend Coal Co., Ltd.	Amrit Roy, (m.), 35, Coal-cutter.	Coal .	A mass of coal, 6'×4'×1', fell from the side of a pillar adjoining a depillaring area and dislodged a prop, which struck deceased, inflicting fatal injuries. Inspection and inquiry made.
128	29th July, 10-30 P.M.	Mudidih mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Jata Majhi, (m.), 35, Loader.	Coal .	While working in a depillaring area, deceased was struck and fatally injured by a mass of coal, 4'×3'×1', which fell from the side of a pillar off a "slip" at a height of 4 feet. Inspection and inquiry made.
129	10th August, 4-45 P.M.	Bararee mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Mahajar Bhuiya, (m.), 30, Loader.	Coal .	While working in a depillaring area, a loader was killed by a mass of coal, 5'×2'×1', which fell on him from the side at a height of 12 feet. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—<i>contd.</i>						
(b) Falls of sides—<i>contd.</i>						
130	19th August, 6 P.M.	Kustore mine, Knsunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Ramsarup Pasi, (m.), 24, <i>Loader.</i>	Coal	While resting in a gallery, deceased was fatally injured by a mass of coal, 3' 6" × 1' 6" × 10", which fell from the side of a pillar at a height of 4 feet. Inspection and inquiry made.
131	24th August, 6 P.M.	South Kujama mine, Jharia P. O., Bihar.	Bagdigi Kujama Colliery Co.	Karu Bhuiya, (m.), <i>Coal-cutter.</i>	Coal	While the side of a pillar under extraction was being dressed after blasting, deceased was struck and killed instantly by a mass of coal weighing about half a ton, which fell from the side from a height of 16 feet. Inspection and inquiry made.
132	26th August, 11-10 A.M.	Shivrajpur mine, Shivrajpur P. O., Bombay.	Shivrajpur Syndi- cate, Ltd.	Jugri Yusuf, (m.), 45, <i>Assistant Machineman.</i>	Manga- nese.	While deceased with others was timbering the roof of a stope a mass of stone, weighing about a ton, fell from the side displacing the supports. Deceased was fatally injured and another person was seriously injured.
133	27th August, 2 P.M.	Mudidih mine, Sijua P. O., Bihar.	Burrakur Coal Co., Ltd.	Kishan Bhuiya, (m.), 30, <i>Coal-cutter.</i>	Coal	While deceased was at work in a gallery, 20 feet high, adjacent to a depillaring area, a mass of coal, weighing about 10 cwts. fell from the side near the roof. He was struck and killed instantly. Inspection and inquiry made.
134	15th September, 5 A.M.	Amlabad mine, Jeaigora P. O., Bihar.	Eastern Coal Co., Ltd.	Lakhiram Bauri, (m.), 23, <i>Loader.</i>	Coal	While working in a gallery deceased was struck and fatally injured by a mass of coal, 6' × 2' 6" × 1' 3" thick, which fell from the side of a pillar at a height of 8 feet. Inspection and inquiry made.

135	23rd September, 8 P.M.	Dhemo Main mine, Sitarampur P. O., Bengal.	Dhemo Main Coal Co., Ltd.	Mangru Nunia, (m.), 32, Coal-cutter.	Coal	While deceased was picking up his tools in a gallery where he had been engaged in loading fallen coal, a mass of loose coal, 2'x2'x1'6", fell on him from the side of a pillar. He sustained serious injuries which proved fatal a few minutes later. Inspection and inquiry made.
136	26th September, 6-30 A.M.	Bejjidih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Litar Singh, (m.), 35, Coal-cutter.	Coal	While a gang of miners and loaders was engaged in loading coal in a depillaring area, there was movement in an adjoining goaf, and a mass of coal, 15'x5'x4', fell on deceased from the side of a pillar, killing him instantly. Inspection and inquiry made.
137	28th September, 10 P.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Karma Gope, (m.), 32, Coal-cutter.	Coal	While working in a depillaring area, deceased was killed by a mass of coal, weighing about 5 tons, which fell from a concealed "slip" in a pillar at a height of 28 feet. Inspection and inquiry made.
138	2nd October, 8 P.M.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Tator Turi, (m.), 25, Loader.	Coal	Deceased was loading coal in a depillaring area, when a mass of coal, weighing about 2 tons fell from the side of a pillar and dislodged a prop, which struck him, inflicting fatal injuries. Inspection and inquiry made.
139	4th October, 9 A.M.	Gumgaon mine, Khapa P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Purni, (f.), 47, Labourer.	Manga- nese.	While working in a quarry deceased was buried by a fall of side, measuring about 12'x8'x5'. She was suffocated before she could be extricated. Inspection and inquiry made.
140	5th October, 2 P.M.	Porcupine steatite mine, Barwara P. O., Central Provinces.	P. S. Sial Soap- stone Co.	Chamar Gond, (m.), 25, Chuttoo Gond, (m.), 25, Ragunandan Gond, (m.), 25, Chaptyian Gond, (m.), 17, Labourers.	Soap- stone.	While several persons were at work in an open excavation, 40 feet deep, there was a fall of side, measuring about 33'x8'x4', which had been undercut. Four persons were buried under the fall and suffocated and two other persons received injuries. Inspection and inquiry made.
141	15th October, 12-15 A.M.	Parbelia mine, Neturia P. O., Bihar.	Bengal Coal Co., Ltd.	Jadhu Majhi, (m.), 26, Trammer.	Coal	While a trammer was sitting against the side of an underground haulage road he was struck by a mass of coal, 9'x2'6"x1'6", which fell from a height of 7 feet, and killed him instantly. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
FALLS OF ROOF AND SIDES—contd.						
<i>(b) Falls of sides—contd.</i>						
142	15th October, 6.30 P.M.	Lodna (Nos. 4 and 5 Pits) mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Narpat Pasi, (m.), 45, Loader.	Coal	While filling coal in a depillaring area, deceased was struck and fatally injured by a prop, 24 feet long, which was dislodged by a fall of a mass of side coal. Inspection and inquiry made.
143	21st August, 7 P.M.	Bhulanbararee mine, Pathardih P. O., Bihar.	Bhulanbararee Coal Co., Ltd.	Ram Nehor Singh, (m.), 40; Coal-cutter. Kunjal Kahar, (m.), 25; Barhan Chamar, (m.), 26; Ibrahim Meah, (m.), 27; Sanat Bhuiya, (m.), 30; Channu Bhuiya, (m.), 35; Loaders.	Coal	While removing fallen coal from a gallery, a gang of miners and loaders was struck by a mass of coal, weighing about 80 tons, which fell from the side at a height of 20 feet. A miner and four loaders were killed instantly. Another loader succumbed to his injuries 24 hours later, while two other miners and three other loaders were seriously injured. Inspection and inquiry made.
144	22nd October, 3 P.M.	Katras-Choitodih mine, Katrasgarh P. O., Bihar.	Burrakur Coal Co., Ltd.	Churu Meah, (m.), 48, Coal-cutter.	Coal	Deceased was struck and fatally injured by a mass of coal, 2' 6" × 2' × 1' 3", which fell from the side of a pillar from a height of 6 feet, due to "weighting" in an adjoining goaf. Inspection and inquiry made.
145	27th October, 5.30 A.M.	Jamadoba mine, Jehangora P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Bhagatram Satnam, (m.), 35, Coal-cutter.	Coal	While cutting coal from the side of a pillar, deceased was fatally injured by a mass of coal, 5' × 3' × 2" thick, which fell on him from between two supports at a height of 9 feet. Inspection and inquiry made.

146	8th November	Kargali mine, Bokaro P. O., Bihar.	The Governor General of India in Council.	Rambrich Singh, (m.), 23, <i>Contractor's supervisor.</i>	Coal	Deceased was supervising the removal of debris after blasting in a quarry, when a mass of overburden fell on him, inflicting fatal injuries.
147	16th November, 10-30 A.M.	Central Tisra mine, Jharia P. O., Bihar.	Central Tisra Coal Co.	Amir Rajwar, (m.), 50, <i>Coal-cutter.</i>	Coal	While cutting coal from the side of quarry, deceased was killed by a mass of stone, 5'×3'×1' thick, which fell on him from a height of 10 feet. Inspection and inquiry made.
148	20th November, 10 P.M.	Budroochuck mine, Sijua P. O., Bihar.	Budroochuck Coal Mining Co., Ltd.	Gulu Pasi, (m.), 32, <i>Coal-cutter.</i>	Coal	While deceased was at work in a gallery adjoining a depillaring area, a mass of coal, 6'×4'×2'6", fell from the side of a pillar at a height of 22 feet. He was struck by the mass of coal and fatally injured. Inspection and inquiry made.
149	9th December, 1 P.M.	Lodna Nos. 4 & 5 Pits mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Rupon Dhobi, (m.), 28, <i>Assistant tim- berman.</i>	Coal	While a gang of labourers was at work in a depillaring area, a mass of coal, 9'×9'×1'6" thick, fell from a 'slip' in the side at a height of 24 feet and killed deceased on the spot. Inspection and inquiry made.
150	9th December, 4-30 P.M.	Sudi mine, Sitarampur P. O., Bengal.	Kalyanji Mowji & Co.	Khoka Bouri, (m.), 34, <i>Coal-cutter.</i>	Coal	While deceased was cutting coal from a "stook" near a goaf edge, a mass of coal, 2'×2'×8", burst off the side and struck him. He received serious injuries and died two days later. Inspection and inquiry made.
151	11th December, 10-30 A.M.	Paikhel stone quarry, Paikhel P. O., The Punjab.	Lala Lal Chand Kalra.	Mohammad Yar, (m.), 30, <i>Quarryman.</i>	Stone	Deceased with two others was attempting to lever down a large stone, 11'×4'×2', from a height of 35 feet on the face of a quarry. When the stone was dislodged it struck deceased and rolled down the quarry face along with him, killing him instantly. Had the face been sloped or stepped back the accident would not have occurred. Inspection and inquiry made.
152	13th December, 6-15 A.M.	Lodna Nos. 4 & 5 Pits mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Nihoot Kori, (m.), 45, <i>Coal-carrier.</i>	Coal	While carrying coal in a gallery, deceased was struck and killed instantly by a mass of coal weighing about 15 cwts., which fell from the side of a pillar from a height of 18 feet. Inspection and inquiry made.
153	19th December, 12-30 P.M.	Bejidih mine, Sundarchak P. O., Bengal.	Equitable Coal Co., Ltd.	Chobe Mia, (m.), 28, <i>Coal-cutter.</i>	Coal	While deceased was cutting floor coal in a depillaring area, a mass of overhanging coal, 12'×5'×1', fell from a height of 4 feet. He sustained serious injuries which proved fatal two days later. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
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FALLS OF ROOF AND SIDES—*concl'd.*

(b) Falls of sides—*concl'd.*

154	B7th December, 8 P.M.	Bripur mine, Kalipahari P. O., Bengal.	Lodna Collieries Co. (1920), Ltd.	Sukhu Ahir, (m.), 26, <i>Coal-cutter.</i>	Coal	While miners were testing the roof and sides in a gallery, a 'bump' in a neighbouring goaf caused a mass of coal to burst off the side of a pillar from a height of 7 feet. Deceased was killed on the spot. Inspection and inquiry made.
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IN SHAFTS (ROPES AND CHAINS BREAKING)—(2 deaths).

155	3rd October, 3-50 P.M.	Pretoria mine, Charanpur P. O., Bengal	Seebpore Coal Co., Ltd.	Sonichar Singh, (m.), 36, <i>Sirdar.</i> Hakim Meah, (m.), 38, <i>Loader.</i>	Coal	While the deceased were being raised in a cage in a shaft 485 feet deep, the rope broke and the cage fell to the bottom of the shaft. One of them was killed instantly and the other sustained injuries which proved fatal two hours later. Inspection and inquiry made.
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IN SHAFTS (WHILST ASCENDING OR DESCENDING BY MACHINERY)—(3 deaths).

156	5th December, 9-45 A.M.	Bararee mine, Jealgora P. O., Bihar.	East India Coal Co., Ltd.	Lalu Mahato, (m.), 34, <i>Loader.</i>	Coal	While descending a shaft 300 feet deep, deceased fell out of the cage and was fatally injured. Inspection and inquiry made.
157	17th December, 10 P.M.	Jambad Kajora mine. Ukhra P. O., Bengal.	Jambad Kajora Colliery Co., Ltd.	Gobinda Dhangar, (m.), 36, <i>On-seller.</i>	Coal	While deceased was ascending a shaft 194 feet deep, he fell from a cage to the bottom of the shaft and was killed instantly. If deceased had closed the rigid gates provided on the cage, the accident would not have occurred. Inspection and inquiry made.

158	19th December, 7-45 A.M.	Sodepur (Nos. 9 & 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Kali Tanti, (m.), 31, <i>Coal-cutter.</i>	Coal .	While eleven men were being raised in a cage in a shaft 912 feet deep, a guide rope broke. The cage was jerked violently and one of the gates on the cage opened. Deceased fell to the bottom of the shaft, a distance of 165 feet and was killed instantly. Inspection and inquiry made.
IN SHAFTS (FALLING DOWN SHAFT) —(8 deaths.)						
159	19th January, 1-30 P.M.	Jharia Khas mine, Sijua P. O., Bihar.	Trigunait Brothers (S. C. Mazumdar, Receiver).	Debi Turi, (m.), 35, <i>On-setter.</i>	Coal .	While passing the bottom of a winding shaft, deceased slipped and fell into the sump, which was 12 feet deep. He was drowned. Inspection and inquiry made.
160	16th June, 11-30 A.M.	Panahia mine, Deori P. O., Bihar.	Mohd. Muslim.	Tulshi Kumar, (m.), 28, <i>Labourer.</i>	Mica .	While engaged near the edge of a shaft 35 feet deep, deceased sustained injury to one of his fingers. In his confusion he stepped backwards and fell into the shaft which was incompletely fenced. He received serious injuries which proved fatal 2½ hours later. Inspection and inquiry made.
161	22nd July, 11-45 A.M.	Parghia mine, Dhab P. O., Bihar.	Harji Premji Parmar.	Deo Lal, (m.), 22, <i>Labourer.</i>	Mica .	While deceased was repairing the fencing round the top of an abandoned shaft 35 feet deep, a portion of the side of the shaft collapsed. He fell into the shaft and was suffocated before he could be extricated. Inspection and inquiry made.
162	12th September, 5-15 P.M.	Victoria West mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Dinoo Majhi, (m.), 24, <i>Trammer.</i>	Coal .	While assisting to re-rail a loaded tub which was only partly inside a cage at the inset of a shaft, deceased slipped and fell to the bottom of the shaft, a distance of 120 feet. He received serious injuries which proved fatal shortly afterwards. Inspection and inquiry made.
163	13th September, 5-45 P.M.	Newton Chickli mine, Parasia P. O., Central Provinces.	Newton Chickli Collieries Ltd.	Kedar Singh, (m.), 38, <i>Filter.</i>	Coal .	While standing in a cage which was being lowered, deceased was examining a pipe range in a shaft 334 feet deep, when he fell from the cage to the bottom of the shaft and sustained fatal injuries. Had the cage gates been closed the accident would not have happened. Inspection and inquiry made.
164	20th October, 4-30 A.M.	Bastacolla mine, Jharia P. O., Bihar.	New Beerbhoom Coal Co., Ltd.	Ghoram Dosadh, (m.), 50, <i>Coal-cutter.</i>	Coal .	Deceased attempted to cross the exposed space on an intermediate landing in a shaft. He fell a distance of 19 feet to the bottom of the shaft and was fatally injured. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
IN SHAFTS (FALLING DOWN SHAFT) —contd.						
165	9th November, 10 P.M.	Angarpathra mine, Katrasgarh P. O., Bihar.	Union Coal Co., Ltd.	Muhamed Jan, (m.), 25, Trolleyman.	Coal	Deceased was attempting to enter a cage which had just commenced descending a shaft 218 feet deep, when he was struck by the cage and fell to the bottom of the shaft. He was killed instantly. Inspection and inquiry made.
166	13th December, 8-15 P.M.	East Khas Jharia mine, Jharia P. O., Bihar.	East Khas Jharia Colliery Co., Ltd.	Sunder Thakur, (m.), 32, Trammer.	Coal	Deceased was assisting to push a loaded tub out of a cage at the top of a shaft, 246 feet deep, when the cage slipped off the keps and fell a distance of 3 feet due to slack rope. He was thrown to the bottom of the shaft and killed instantly. Inspection and inquiry made.
IN SHAFTS (THINGS FALLING DOWN SHAFT)—(3 deaths).						
167	27th February, 5 P.M.	Barasingha mine, Kodarma P. O., Bihar.	Indian Mica Supply Co., Ltd.	Dukhi Rajwar, (m.), 25, On-setter.	Mica	A loaded bucket was being hoisted up a shaft, 125 feet deep, when it became disconnected from the hook, and fell to the bottom. Deceased, who was standing at the bottom of the shaft, was struck and fatally injured. Inspection and inquiry made.
168	27th June, 7-45 P.M.	Seetalpur mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Bonwari Singh, (m.), 32, Stone-cutter.	Coal	While deceased was engaged in loading debris at the bottom of a sinking shaft, 853 feet deep, a piece of stone fell from the side and struck him on the head. He was killed instantly. Inspection and inquiry made.
169	24th August, 8-30 P.M.	Laikdih Deep mine, Chirkunda P. O., Bihar.	Bengal Coal Co., Ltd.	Pokhan Turi, (m.), 30, Sinker.	Coal	A mass of soil, measuring about 12' x 12' x 1' 6", fell from near the top of a sinking shaft, 35 feet deep, on to deceased, killing him instantly. Inspection and inquiry made.

IN SHAFTS (MISCELLANEOUS)—(5 deaths).

170	15th July, 3 P.M.	South Kujama mine, Jharia P. O., Bihar.	Bagdigi Kujama Coal Co.	Ram Lall Hazam, (m.), 39, Labourer.	Coal .	While assisting to remove a prop 25 feet long from a cage at the bottom of a shaft, deceased was struck by one end of the prop and sustained injuries to which he succumbed four days later. Inspection and inquiry made.
171	31st July, 3-30 A.M.	Gaslitan mine, Sijua P. O., Bihar.	New Manbhoom Coal Co., Ltd.	Chhotan Lohar, (m.), 32, Blacksmith.	Coal .	Deceased was working in a shaft bottom, while the cages were in motion, when he was caught by the descending cage and fatally injured. Inspection and inquiry made.
172	18th September, 5-45 A.M.	Sendra Bansjora mine, Bansjora P. O., Bihar.	Sendra Bansjora Colliery Co., Ltd.	Lagan Mahato, (m.), 20, Onsetter.	Coal .	While attempting to cross the bottom of a shaft, deceased was crushed beneath the descending cage and killed instantly. Inspection and inquiry made.
173	26th October, 11 A.M.	Banksimulla mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Amrit Pasman, (m.), 36, Trolleyman.	Coal .	Deceased attempted to cross the bottom of a shaft while the cages were in motion, when he was struck by the descending cage and sustained injuries to which he succumbed 27 hours later. Inspection and inquiry made.
174	9th November, 12-30 P.M.	New Ondal mine, Ondal P. O., Bengal.	Ondal Coal Co., Ltd.	Hopa Majhi, (m.), 30, Trammer.	Coal .	A trammer crossed the shaft bottom and was struck and killed instantly by the descending cage. A bypass was provided. Inspection and inquiry made.

SUFFOCATION BY GASES—(6 deaths).

175	16th June, 2 to 5-30 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Kaillyan Thakuri, (m.), 50, Sirdar. Toplall Sonar, (m.), 22, Assistant Sirdar.	Coal .	While a sirdar and assistant sirdar were making an inspection in a place where blackdamp was known to be present, they were overcome by the gas and suffocated. Inspection and inquiry made.
176	28th December, 12 Noon.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	T. G. Barker, (m.), 33, Assistant Manager. Nriya Gopal, Chowdhury, (m.), 35, Overman. Dukhi Bauri, (m.), 38, Mahabir Tantis, (m.), 32, Linemen.	Coal .	The deceased entered a sealed off area where a fire had broken out and were overcome by noxious gases. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
BY EXPLOSIVES—(7 deaths).						
177	5th February, 5 P.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Sahadeb Kumar, (m.), 22, Labourer.	Coal	A gunpowder factory was being dismantled and re-built on a new site and while deceased was loading tiles into a basket 5 feet from an open drying platform, he dropped a "biri". The gunpowder which had fallen off the drying platform and had become intermixed with the sand and earth round the platform was ignited and he was fatally burned. Inspection and inquiry made.
178	19th February, 12-45 P.M.	Jamuria mine, Charanpur P. O., Bengal.	Equitable Coal Co., Ltd.	Puran Chamar, (m.), 32, Loader.	Coal	Deceased was returning after blasting operations to his working place where a shot which had hung fire, exploded. He was struck by a projected piece of coal and fatally injured. Inspection and inquiry made.
179	29th February, 6-30 A.M.	Telajya Charki mine, Jhumri-Telajya P. O., Bihar.	Chatturam Horilram, Ltd.	Sobha Gope, (m.), 25, Driller.	Mica	While a shot-firer and a driller were returning after lighting six shots in the face of an underground drive, one of the shots exploded. The driller who failed to take proper shelter was struck and fatally injured. Inspection and inquiry made.
180	6th March, 12 Noon.	New Satgram mine, Searsol Rajbari P. O., Bengal.	New Satgram Coal Co., Ltd.	Dhalo Mondal, (m.), 35, Shot-firer.	Coal	Deceased returned to a gallery where a shot had hung fire, and on reaching the place of blasting the shot exploded, injuring him fatally. Inspection and inquiry made.
181	30th May, 3 P.M.	Sakuntalah mine, Jhajha P. O., Bihar.	Northern India Mining Syndicate.	Girdhar Gope, (m.), 45, Driller.	Mica	While a driller was extracting mica by means of a chisel and a hammer at the bottom of a winze where blasting had been done, it is presumed that a misfired shot was pierced and exploded. He sustained serious injuries which proved fatal 2 days later. Inspection and inquiry made.

182	30th September, 2-30 P.M.	Noonodih-Jitpur mine, Jharia P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Amal Singh, (m.), 35, <i>Shot-firer.</i>	Coal	Deceased returned to a gallery where a shot had hung fire, and when within ten feet of the place the shot exploded injuring him fatally. Inspection and inquiry made.
183	28th December, 12 A.M.	Dumarkhar mine, Sasaram P. O., Bihar.	Messrs. Stone Sup- pliers Ltd.	Naraini, (f.), 16, <i>Loader.</i>	Lime stone.	Deceased was struck and fatally injured by a piece of stone projected during blasting operations.

HAULAGE—(33 deaths).

184	4th January, 7-30 P.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Dasu Bhuiya, (m.), 51, <i>Haulage attend- ant.</i>	Coal	While a rake of 8 full tubs was being hauled up an incline rising at 1 in 8 some of the tubs became derailed. A haulage attendant, who was standing at the side of the haulage road, was crushed between the derailed tubs and the side and sustained fatal injuries. Inspection and inquiry made.
185	11th January, 6-10 A.M.	Amlabad mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Kumar Kahal, (m.), 42, <i>Trammer.</i>	Coal	While a loaded tub was being lowered on a tramming level, dipping at 1 in 30, a wooden sprag controlling the tub broke and allowed the tub to run uncontrolled. It struck deceased who was pushing two other tubs on the same line and inflicted serious injuries which proved fatal 13 days later. Inspection and inquiry made.
186	12th January, 12 Noon.	Kargali mine, Bokaro P. O., Bihar.	State Railways' Coal Department.	Parsadi, (m.), 35, <i>Loader.</i>	Coal	While a set of four loaded tubs was being hauled up an endless haulage road with a gradient of 1 in 5, the clip securing the set to the rope slipped and allowed the set to run back. The runaway tubs got derailed at a junction and struck deceased, causing fatal injuries. Inspection and inquiry made.
187	18th January, 2 A.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coal- fields, Ltd.	Faren Lohar, (m.), 50, <i>Door Attendant.</i>	Coal	While attempting to open a ventilation door on an under-ground haulage road, deceased was knocked down by an empty tub which was being lowered down the road. He received serious injuries and died 18 days later. Inspection and inquiry made.
188	25th February, 5-45 A.M.	Bararee Jealgora mine, Jealgora P. O., Bihar.	East Indian Coal Co., Ltd.	Ramaais Singh, (m.), 35, <i>Trammer.</i>	Coal	While four full tubs were being lowered down a tramming road dipping at 1 in 25, two wooden sprags broke and the tubs got out of control. A trammer was struck and killed instantly by the runaway tubs. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1910—contd.

Serial Number.	Date and hour of accident.	Name, and situation of mines.	Name of owner.	Name, sex, age and occupation of person killed.	Name of mineral worked.	Cause of accident and remarks.
HAULAGE—contd.						
189	23rd March, 1-30 P.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920), Ltd.	Abdul Majid Khan, (m.), 36, <i>Labourer.</i>	Coal	While a set of four empty tubs was being lowered down a haulage road dipping at 1 in 7, the leading tub became uncoupled and ran again for 245 feet. It struck deceased who was trying to reach a place of safety and killed him instantly. A tub checker, who was travelling up the haulage road was also struck and seriously injured. A defective type of coupling was the cause of the accident. Inspection and inquiry made.
190	4th April, 4-15 P.M.	Khas Joyrampur mine, Jharia P. O., Bihar.	Seth Tarachand Ghanshyam Dass.	Shyam Mahato, (m.), 23, <i>Trammer.</i>	Coal	While a trammer was pushing a loaded tub after uncoupling it from a set of six loaded tubs which was standing on a roadway having a gradient of 1 in 60, the remaining loaded tubs were set in motion and they overtook deceased. He was crushed between the tubs and sustained fatal injuries. Inspection and inquiry made.
191	5th April, 9-30 A.M.	Kujama mine, Jharia P. O., Bihar.	K. S. Nanji & Co.	Lalu Rewani, (m.), 28, <i>Trammer.</i>	Coal	While two trammers were travelling on a gravity haulage road they were struck by a loaded set of four tubs and deceased received serious injuries to which he succumbed eight days later. Inspection and inquiry made.
192	18th April, 5 A.M.	Sijua mine, Sijua P. O., Bihar.	Tata Iron & Steel Co., Ltd.	Uday Majhi, (m.) 20, <i>Loader.</i>	Coal	Three loaded tubs, which had been spragged and left standing on a tramline, dipping at 1 in 14, were set in motion and ran wild. Deceased who was assisting to re-load some tubs at the bottom of the road was struck by the leading tub and fatally injured. Inspection and inquiry made.
193	15th May, 8 A.M.	Sripur (Nos. 1, 2 and 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co. (1920), Ltd.	Muso Kumar, (m.), 30, <i>Loader.</i>	Coal	While walking on an endless haulage road, without a light, deceased was knocked down and run over by a loaded tub. He sustained injuries to which he succumbed 5 hours later.

194	17th May, 6-30 P.M.	South East Baraboni mine, Charanpur P. O., Bengal.	Maharaja S. C. Nandi.	Fackir Bhuiya, (m.), 28, Trammer.	Coal .	If deceased had used the travelling road provided, the accident would not have occurred. Inspection and inquiry made. While pushing a loaded tub along a tramping level, deceased was struck and fatally injured by another loaded tub that approached him from behind. He died thirteen hours after the accident. Inspection and inquiry made.
195	12th June, 9 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields Ltd.	Ramcharam Mowasi, (m.), 25, Trammer.	Coal .	While deceased and another trammer were re-railing a loaded tub in a set of six, which were coupled together, one of the tubs ran on to the heel of deceased, inflicting serious injuries. Tetanus supervened and he died 18 days later. Inspection and inquiry made.
196	13th June, 6 A.M.	Methani mine, Sitarampur P. O., Bengal.	Aldih Coal Co., Ltd.	Joglal Dhobi, (m.), 30, Coal-cutter.	Coal .	While a set of four tubs was being hauled up a slope of 1 in 5.5, the rope broke and the set ran amain. It crashed into four stationary tubs, smashed a wooden buffer and struck and fatally injured deceased, who was working in a gallery just to the dip of the buffer. A drag had been attached behind the ascending set, but it failed to operate. Inspection and inquiry made.
197	19th June, 7-40 A.M.	Jinagora mine, Jharia P. O., Bihar.	Jinagora (East Bararee) Colliery Co., Ltd.	Lagnu Kahar, (m.), 24, Trammer.	Coal .	While attempting to fix a drag behind a set of loaded tubs, which was being raised up a haulage road the set was suddenly stopped and then ran back, resulting in serious injuries to deceased's foot. Tetanus supervened and he died 9 days later. Inspection and inquiry made.
198	10th June, 2-30 P.M.	Victoria mine, Kulti P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Jatan Singh, (m.), 28, Tub-checker.	Coal .	While a set of eight loaded tubs was being hauled up a slope of 1 in 8, the rope broke. The set ran back for a distance of about 80 feet, and was derailed at a crossing. Deceased, who was nearby, was struck and killed instantly. Inspection and inquiry made.
199	14th July, 6-30 A.M.	Amlabad mine, Jealgora P. O., Bihar.	Eastern Coal Co., Ltd.	Lakhu Meah, (m.), 34, Loader.	Coal .	While a set of six empty tubs was being lowered down a haulage road dipping at 1 in 5, the front five tubs, which had not been properly coupled to the rear tub, became detached and ran amain. After travelling a distance of about 330 feet they struck deceased and killed him instantly. Two other persons also received minor injuries. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
HAULAGE—contd.						
200	17th July, 12-30 A.M.	Khas Kirkend mine, Kusunda P. O., Bihar.	Khas Kirkend Colliery Co.	Jitan Meah, (m.), 32, <i>Trolleyman.</i> Bakridi Meah, (m.), 28, <i>Haulage Engine Driver.</i>	Coal	While a rake of 5 empty tubs was being lowered down a direct acting haulage dipping at 1 in 6 the two leading tubs became uncoupled and ran a main for a distance of 350 feet. A haulage engineman and a trammer who were resting at the foot of the haulage road were struck and fatally injured by the run-away tubs. They should not have rested or remained on the haulage road. The accident would also have been avoided if a safe type of drawbar hook or coupling had been used. Inspection and inquiry made.
201	31st July, 1-30 P.M.	Sikra mine, Argada P. O., Bihar.	South Karanpura Coal Co., Ltd.	Samsuddin, (m.), 20, <i>Trammer.</i>	Coal	While a set of loaded tubs was being guided round a curve on a haulage road one of the tubs got derailed. Deceased, who was caught between the derailed tub and the side of a pillar, was fatally injured. Inspection and inquiry made.
202	1st August, 11-50 P.M.	New Ondal mine, Ondal P. O., Bengal.	Ondal Coal Co., Ltd.	Munshi Manjhi, (m.), 25, <i>Coal-cutter.</i>	Coal	Three empty tubs ran away on a haulage road dipping at 1 in 10 and struck another empty tub standing on a haulage curve. This tub overturned and hit deceased, who sustained a broken leg and died four days later. Inspection and inquiry made.
203	3rd August, 7 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Mussore Gope, (m.), 30, <i>Filter.</i>	Coal	While one of a train of mine cars was being re-railed, the rope attached to the train was set in motion. Deceased, who was standing close by, was pinned by the derailed car against a wall. He sustained a fracture of the spine and expired shortly afterwards. Inspection and inquiry made.

204	19th August, 10 P.M.	Ratibati mine, Kalipahari P. O., Bengal.	Ratibati Collieries, Ltd.	Etwari Kumar, (m.), 25, Loader.	Coal	While a set of ten empty tubs was being lowered down a haulage road dipping at 1 in 12, the leading tub became uncoupled and ran amain for a distance of 100 feet before it became derailed and struck deceased, who was killed instantly. Inspection and inquiry made.
205	23rd August, 2-30 P.M.	Jharia Khas mine, Jharia P. O., Bihar.	Standard Coal Co., Ltd.	Ramlakhan Koiree, (m.), 35, Trolleyman.	Coal	While a haulage hand was guiding a set of eight loaded tubs round a curve, at the junction of a level roadway and a haulage road dipping at 1 in 6, the rope broke. The drag was bent and allowed the set to run back. Deceased was crushed against the side of the level roadway when the tubs overturned and he was fatally injured. Inspection and inquiry made.
206	25th August, 5-45 P.M.	Isabella mine, Nudkurkee P. O., Bihar.	Kumar Sarat Kumar Roy.	Charku Gope, (m.), 32, Trammer.	Coal	While a set of ten loaded tubs was being hauled up a haulage road rising at 1 in 10, the rope broke and the tubs ran amain. Deceased was struck by the runaway tubs and killed instantly. Inspection and inquiry made.
207	30th August, 4-20 P.M.	Kustore mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Razak Meah, (m.), 35, Trolleyman.	Coal	Two loaded mine cars which were supposed to have been spragged were left standing on a haulage road dipping at 1 in 30. The cars ran wild for a short distance and collided with an empty car against which deceased was standing. His leg was crushed. Gangrene set in and deceased died three days later. Inspection and inquiry made.
208	12th September, 4-30 P.M.	Prosonna Dutta Kajora mine, Kajora gram P. O., Bengal.	Prosonna Kumar Dutta & Sons.	Shyama Pada Sharma, (m.), 30, Shot-firer.	Coal	While a set of ten empty tubs was being lowered down a haulage road dipping at 1 in 20, the leading tub became uncoupled, ran amain and dislodged a prop. Deceased was struck by the prop and fatally injured. Inspection and inquiry made.
209	20th September, 6 P.M.	Lakurka mine, Katrasgarh P. O., Bihar.	Lakurka Coal Co., Ltd.	Ali Hussain, (m.), 30, Trammer.	Coal	While hand-shunting a loaded tub on a tram-line, dipping at 1 in 40, deceased was overtaken and fatally injured by another loaded tub which had been left standing unspragged on the tram-line. Inspection and inquiry made.
210	25th September, 5-45 P.M.	Poidih mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Ratan Bauri, (m.), 25, Haulage engine- man.	Coal	It is presumed that deceased was standing in front of the drum of an electric haulage engine to guide the rope on to the drum while the engine was running, when he was caught by the rope and dragged on to the drum. He sustained fatal injuries. Inspection and inquiry made.

APPENDIX II—*contd.*

Fatal Accidents during the year 1940—*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 worked.	Cause of accident and remarks.
HAULAGE—<i>concl'd.</i>						
211	26th September, 12 Noon.	Banksimulla mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Shambhoo Bauri, (m.), 25, Labourer.	Coal	Contrary to orders an empty tub was allowed to gravitate down a haulage road dipping at 1 in 7. It ran into a set of empty tubs which was standing about 50 feet below. Deceased, who was working on the road, was caught between the tubs and fatally injured. Inspection and inquiry made.
212	17th October, 2 P.M.	Banksimulla mine, Dishergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Bhatu Dosad, (m.), 30, Trammer.	Coal	Deceased, who had been engaged in hand-shunting operations near the bottom of a shaft was run over and fatally injured by a loaded tub which was unexpectedly set in motion by a set of twelve loaded tubs lowered on sprags on a gradient of 1 in 80 for a distance of 80 feet. Inspection and inquiry made.
213	8th November, 6 A.M.	Hurriladih mine, Jharia P. O., Bihar.	Equitable Coal Co., Ltd.	Lala Hazra, (m.), 36, Trammer.	Coal	While a set of empty tubs was being lowered down a haulage dip, deceased attempted to cross the line. He was knocked down and fatally injured by the tubs. Inspection and inquiry made.
214	16th November, 9 P. M.	Korrabad Nodiha mine, Churulia P. O., Bihar.	Kasta & Behar Collieries Ltd.	Paru Majhi, (m.), 40, Coal-cutter.	Coal	While two persons were attempting to cross a haulage road dipping at 1 in 2.5, the rear tub of a loaded set got detached due to a defective coupling and ran amain. They were struck and seriously injured by pieces of coal thrown off the runaway tub. One of them succumbed to his injuries three hours later. Inspection and inquiry made.
215	1st December, 7 A. M.	Loyabad mine, Banajora P. O., Bihar.	Burraker Coal Co., Ltd.	Bhagwant Dusat, (m.), 25, Trolleyman.	Coal	Deceased with two others was attempting to re-rail a loaded tub on the curve of a haulage road, when it turned over and fell on him. He sustained serious injuries to which he succumbed one day later. Inspection and inquiry made.

BY UNDERGROUND MACHINERY

—(2 deaths).

216	3rd June, 11-30 P.M.	Ramnagore mine, Kulti P. O., Bengal.	Bengal Iron Co., Ltd., (In liquidation).	Hari, Bauri, (m.), 28, <i>Haulage engine- man.</i>	Coal .	Deceased, who was in charge of an underground electric haulage, went to the front of the drum for an unknown purpose leaving the haulage running. He was caught between the haulage rope and the drum and crushed to death. Inspection and inquiry made.
217	3rd December, 12 Noon.	Sripur mine, Kalipahari P. O., Bengal.	Lodna Collieries Co. (1920) Ltd.	Kristo Chatterjee (m.), 25, <i>Conveyor- cleaner.</i>	Coal .	While inside the fence enclosing the discharge-end of a conveyor-belt in motion, deceased slipped and fell on to the belt. He was drawn between the belt and a roller, and killed instantly. Inspection and inquiry made.

SUNDRIES UNDERGROUND—(13 deaths).

218	31st January, 4 P.M.	Madhuband mine, Nudkharkee P. O., Bihar.	Karamchand Thapar & Bros., Ltd.	Sreenath Mahato, (m.), 38, <i>Labourer.</i>	Coal .	Deceased was engaged in withdrawing props from a depillaring area when there were signs of "weighting". While attempting to reach a place of safety he fell down and sustained internal injuries which proved fatal 21 hours later. Inspection and inquiry made.
219	14th February, 7-30 A.M.	Poidih mine, Sundarchak P. O., Bengal.	The Bengal Coal Co., Ltd.	Tekoo Suri, (m.), 45, <i>Mining Sirdar.</i>	Coal .	While props were being withdrawn after the extraction of a pillar, some stone fell from the roof and displaced a prop which, in falling, struck deceased and fatally injured him. Inspection and inquiry made.
220	27th February, 9-30 A.M.	Khas Joyrampur mine, Jharria P. O., Bihar.	Seth Tarachand Ghanshyamdass.	Dasu Berhi, (m.), 30, <i>Timberman.</i>	Coal .	Deceased was setting a prop in a shaft level 6 feet high when a "lid" placed on top of the prop slipped and fell on his nose. Before the wound was completely healed symptoms of cerebral malaria developed and death resulted about a month later. Inspection and inquiry made.
221	13th April, 9 A.M.	Karjara mine, Wazirganj P. O., Bihar.	Seth Bhagwan Dass	Man Kaur, (f.), 27, <i>Labourer.</i>	Stone .	Deceased was fatally injured by a mass of stone, 4'×4'×3', which was rolled down the face of a quarry from a height of about 80 feet. Inspection and inquiry made.
222	25th April, 9-30 A.M.	Madhuband, Nudkharkee P. O., Bihar.	Karamchand Thapar & Bros., Ltd.	Charku Rai, (m.), 31, <i>Loader.</i>	Coal .	While working in a depillaring area, deceased was struck and fatally injured by a prop 18 feet long which was dislodged by a mass of stone, 16'×6'×3', which rolled down from the edge of a goaf. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
SUNDRIES UNDERGROUND—concl'd.						
223	12th May, 8.30 A.M.	Poidih mine, Sundarchak P. O., Bengal	Bengal Coal Co., Ltd.	Janu Meah, (m.), 35, Timberman.	Coal	In a depillaring area, a prop was being withdrawn by a "Sylvester" prop withdrawer, when it fell and knocked out another prop, which struck deceased on the head, inflicting fatal injuries. Inspection and inquiry made.
224	25th May, 4 A.M.	Industry mine, Jharia P. O., Bihar.	Kalyanji Mavji & Co.	Hela Roy, (m.), 35, Pump-man.	Coal	While deceased was passing by the side of a small excavation containing 2 feet of steam heated water in a fenced off gallery, he slipped and fell down in to the hot water and was fatally burnt. Inspection and inquiry made.
225	2nd July, 7 A.M.	Polipathar mine, Jubbulpore P. O., Central Provinces.	Perfect Pottery Co., Ltd.	Sukhdeo Kole, (m.), 40, Miner.	F i r e clay.	Deceased was dressing the side of a quarry when he slipped and fell to the bottom, a distance of 35 feet. He sustained serious injuries to which he succumbed shortly afterwards.
226	8th August, 3 P.M.	Kurhurbari mine, Giridih P. O., Bihar.	Government of India, State Railway Depart- ment.	Ajodhya Kahar, (m.), 34, Labourer.	Coal	Deceased bumped his left knee against an electrical switch and sustained a fractured knee cap. He developed pneumonia and died 5 days later. Inspection and inquiry made.
227	11th August, 5 A.M.	Jogtiabad mine, Giridih P. O., Bihar.	State Railways' Coal Department.	Ghanshyandas Teli, (m.), 48, Stone-cutter.	Coal	Deceased was drilling a shot hole by standing on a wooden ladder, when it broke. He fell through a height of 10 feet, and sustained fatal injuries. Inspection and inquiry made.
228	6th September, Time not known.	Dishergarh West mine, Dishergarh P. O., Bengal.	Equitable Coal Co., Ltd.	Suphla Majhi, (m.), 42, Coal-cutter.	Coal	It is presumed that deceased sustained injuries while working underground and died two days later. Inspection and inquiry made.

229	7th September, 2-30 A.M.	Sripur (Nos. 1, 2 and 3 Pits) mine, Kalipahari P. O., Bengal.	Lodna Colliery Co., (1920) Ltd.	Raghubar Pasi, (m.), 42, Coal-cutter.	Coal	A fall of roof occurred in a goaf and deceased, who was working nearby, attempted to run to safety, when he fell down and received serious injuries. Septicaemia supervened and he died four months after the accident. Inspection and inquiry made.
230	8th October, 4-30 P.M.	Junnordeo No. 2 mine, Junnordeo P. O., Central Provinces.	Central Provinces Syndicate, Ltd. (Receivers).	Kumarman Kosti, (m.), 25, Loader.	Coal	While deceased was loading a tub, a piece of coal, weighing about 20 lbs. fell from his basket on to his abdomen. He sustained serious injuries and died of septicaemia 3 days later. Inspection and inquiry made.
231	15th November, 8-30 A.M.	Sitalpur mine, Disbergarh P. O., Bengal.	Bengal Coal Co., Ltd.	Sripati Mallik, (m.), 35, Coal-cutter.	Coal	While passing through a ventilation door, deceased was struck and fatally injured by the door which swung back with unusual force due to an airblast caused by a fall of roof in an adjoining goaf. Inspection and inquiry made.
232	18th November, 9 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Hansa Lohar, (m.), 25, Timberman.	Coal	Deceased with two others was setting timber supports in a gallery by standing on an oil drum, when he overbalanced and fell. One of the timber supports fell on deceased, inflicting injuries which proved fatal a month later.
233	20th November, 3-30 A.M.	Lodna mine, Jharia P. O., Bihar.	North Burrakur Coal Co., Ltd.	Ghatoari Mahato, (m.), 26, Loader.	Coal	While removing fallen coal from a heap on the floor of a gallery, a large piece of coal was liberated. It struck deceased, inflicting fatal injuries. Inspection and inquiry made.
234	7th December, 6-30 P.M.	Datla mine, Junnordeo P. O., Central Provinces.	Amalgamated Coalfields, Ltd.	Sumera, (m.), 24, Loader.	Coal	While deceased was carrying a piece of coal on his head along an underground gallery he fell down and sustained fatal injuries.
235	28th December, 4 P.M.	Deoli mine, Disbergarh P. O., Bihar.	Deoli Coal Co., Ltd.	Kumar Dosadh, (m.), 22, Loader.	Coal	While a loader was filling a basket on a bench of floor coal 5 feet high in a depillaring area, a small quantity of coal burst from the side of the pillar, and in stepping back to avoid being struck by the coal he overbalanced, and fell off the bench. He sustained spinal injuries to which he succumbed six weeks later. Inspection and inquiry made.
BY SURFACE MACHINERY—(4 deaths).						
236	31st January, 10-35 P.M.	Poidih mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Bonomali Hari, (m.), 55, Fan attendant.	Coal	While deceased was feeling the bearing of a driving pulley, a loose wrapper he was wearing was caught in the friction clutch connecting the motor and the driving pulley. He was pulled over the shafting and sustained serious injuries to which he succumbed six days later. Inspection and inquiry made.

APPENDIX II—contd.
Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
BY SURFACE MACHINERY—contd.						
237	26th September, 3-30 P.M.	West Gopalichuck mine, Kusunda P. O., Bihar.	Central Kurkend Coal Co., Ltd.	Mukhi Mejhian, (f.), 30, Labourer.	Coal	Deceased was knocked down by a tub which was set in motion by a creeper chain. She sustained fatal injuries. Inspection and inquiry made.
238	27th October, 2 A.M.	Jote Dhemio mine, Ukhra P. O., Bengal.	Jote Dhemio Colliery Co., Ltd.	Ram Bhadra Bauri, (m.), 44, Fitter.	Coal	Deceased was asleep near the drum of a winding engine, when his body was caught in the drum and he was killed instantly. Inspection and inquiry made.
239	19th November, 4 P.M.	Sodepur (Nos. 9 and 10 Pits) mine, Sundarchak P. O., Bengal.	Bengal Coal Co., Ltd.	Gobardhan Mahato, (m.), 30, Fitter.	Coal	Deceased was working on a sand conveyor when his arm was caught in one of the rollers of the "loop" gear. He was fatally injured. Inspection and inquiry made.
ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—(14 deaths).						
240	4th January, 4 P.M.	Pirpsahar mine, Mansi Junction P. O., Bihar.	B. and N. W. Railway.	Ramautar Singh, (m.), 40, Trammer.	Stone	In attempting to pass between two wagons during hand shunting operations on a surface railway, deceased was caught between the buffers and fatally injured. Inspection and inquiry made.
241	10th March, 9-30 A.M.	Banksimula mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Chintamani Gowala, (m.), 50, Loader.	Coal	Deceased attempted to pass between wagons which were being hand-shunted on a railway siding when he was crushed between two wagons and fatally injured. Inspection and inquiry made.
242	14th March, 10 P.M.	Dhori mine, Bokaro P. O., Bihar.	Bokaro and Ramgur. Ltd.	Patit Roy, (m.), 40, Trammer.	Coal	A surface trammer was struck by a set of 12 empty tubs which was being lowered after dark down a surface haulage road. He was fatally injured. Inspection and inquiry made.

243	19th March, 12-30 P.M.	West Jamuria mine, Charanpur P. O., Bengal.	West Jamuria Coal Co., Ltd.	Nilmoni Korani, (f.), 45, <i>Labourer.</i>	Coal	While wagons were being hand-shunted on a railway siding, deceased attempted to pass between two wagons. She was pressed between the buffers and fatally injured. Inspection and inquiry made.
244	6th April, 10-40 P.M.	Banksimula (7 and 8 Pits) mine, Charanpur P.O., Bengal.	Bengal Coal Co., Ltd.	Balai Dome, (m.), 55, <i>Labourer.</i>	Coal	While two labourers were lifting a plank lying alongside and within 6 inches of a railway siding, they were struck and knocked down by a light engine. They received serious injuries and one of them died nine hours later. Inspection and inquiry made.
245	17th April, 4-30 P.M.	Baragolai mine, Margherita P. O., Assam.	Assam Railways and Trading Co., Ltd.	Parbati Gore, (f.), 45, <i>Labourer.</i>	Coal	While engaged in moving empty wagons a labourer was crushed between one of the wagons and the side of the loading wharf. She was fatally injured. Inspection and inquiry made.
246	24th July, 6-30 A.M.	Lodna mine, Jharia P. O., Bihar.	Lodna Colliery Co. (1920) Ltd.	Sattar Meah, (m.), 15, <i>Labourer.</i>	Coal	While assisting in the hand-shunting of an empty wagon on a colliery siding, deceased fell under it and was run over. He sustained injuries which proved fatal seven days later. Inspection and inquiry made.
247	19th August, 1 P.M.	Ballarpur mine, Chanda P. O., Central Provinces.	Ballarpur Collieries Co.	Sailu Lachmaya, (m.), 29, <i>Labourer.</i>	Coal	While two railway wagons were being moved by hand on a colliery siding, deceased was crushed between the buffers of the wagons and succumbed to his injuries one hour later. Inspection and inquiry made.
248	6th September, 9 A.M.	Chasnalla mine, Pathardih P. O., Bihar.	Indian Iron & Steel Co., Ltd.	Abhoy Bauri, (m.), 30, <i>Coal-cutter.</i>	Coal	While crossing a railway line deceased was knocked down by a passing train. He sustained serious injuries to which he succumbed eight hours later. Inspection and inquiry made.
249	6th September, 10 A.M.	Nichitpur mine, Bansjora P. O., Bihar.	Nichitpur Coal Co.	Rudia Rajwar, (m.), 46, <i>Trammer.</i>	Coal	Deceased was attempting to push a loaded tub up a slight gradient when the tub ran back and injured his left leg. Septicæmia supervened and he died about three months later. Inspection and inquiry made.
250	17th October, 2-30 P.M.	Gumgaon mine, Khapa P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Bajia, (m.), 30, <i>Labourer.</i>	Manga- nesc.	Deceased was assisting to push a side tipping tub round a curve on a surface tram line when the body of the tub fell over on to him. He sustained injuries which proved fatal five months later.
251	15th November, 3 A.M.	Kendwadih mine, Kusnoda P. O., Bihar.	Hurriladih Coal Co., Ltd.	Basdeb Singh, (m.), 30, <i>Labourer.</i>	Coal	Deceased was standing on a colliery siding while wagons were being hand-shunted. He was caught between the buffers of two loaded wagons and was fatally injured. Inspection and inquiry made.

APPENDIX II—contd.

Fatal Accidents during the year 1940—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 worked.	Cause of accident and remarks.
ON SURFACE RAILWAYS AND TRAMWAYS BELONGING TO THE MINE—concl'd.						
252	21st November, 3 P.M.	Sial Ghorī mine, Junrordeo P. O., Central Provinces.	P. S. Sial & Sons.	Samerhal, (m.), 25, <i>Coal-cutter.</i>	Coal	Deceased was attempting to get on a set of tubs being hauled by a surface locomotive, when he fell between the tubs and was fatally injured.
253	28th November, 7 P.M.	South Kujama mine, Jharia P. O., Bihar.	Bagdigi Kujama Collieries Co.	Gangoo Pasi, (m.), 30, <i>Trammer.</i>	Coal	While a set of loaded tubs was being hauled up an endless haulage road with a gradient of 1 in 50, the clip failed and the set ran back. Deceased who was following the set, was struck by the runaway tubs and sustained internal injuries which proved fatal 10 days later. Inspection and inquiry made.
BY ELECTRICITY—(1 death).						
254	18th June, 4 P.M.	Dharmaband mine, Katrasgarh P. O., Bihar.	New Tetturya Coal Co., Ltd.	Joy Mahato, (m.), 27, <i>Coal-cutter.</i>	Coal	While pushing a tub, deceased came in contact with a "live" conductor in a joint box, the top cover of which was broken, and he received an electric shock which proved fatal. Another person who went to the assistance of deceased was severely burned. Inspection and inquiry made.
MISCELLANEOUS ON SURFACE—(7 deaths).						
255	5th February, 4-45 P.M.	Pootkee mine, Kusunda P. O., Bihar.	Eastern Coal Co., Ltd.	Baran Shaw, (m.), 38, <i>Fitter.</i>	Coal	A mechanical fitter ascended a headgear to make his daily examination and as he was climbing down from the pulley wheel platform to the bell-box platform by stepping on the spokes of the pulley wheel, winding was commenced. He was taken round with the pulley wheel and then fell on the bell-box platform, receiving fatal injuries. If he had taken the precaution to warn the banksman and winding engineer to stop winding while he made his inspection, the accident would not have occurred. Inspection and inquiry made.

256	7th April, 3-30 A.M.	Victoria West mine, Barakar P. O., Bengal.	New Beerbhoom Coal Co., Ltd.	Feku Chamar, (m.), 25, Labourer.	Coal .	Deceased was carrying a basket of slack along a loading plank, when it slipped from the side of the wagon. He was thrown to the ground and killed instantly. Inspection and inquiry made.
257	19th May, 9-45 A.M.	Bharweli mine, (Ukwa-Balaghat Ropeway) Bharweli P. O., Central Provinces.	Central Provinces Manganese Ore Co., Ltd.	Holoo Kolar, (m.), 31, Lineman.	Manga- nese.	While examining the pulleys on a trestle of an aerial ropeway, deceased fell from a height of about 42 feet and was fatally injured. Inspection and inquiry made.
258	10th June, 8-30 A.M.	Ghorawari mine, Junnordeo P. O., Central Provinces.	Hirdagarh Col- lieries, Ltd.	Rupehand, (m.), 35, Labourer.	Coal .	While a fitter assisted by two other persons was attending to a mine car, 18'×5'×2', which was supported on jacks at one end, the end fell down unexpectedly pinning one of the assistants under it. He received internal injuries which proved fatal shortly after. Inspection and inquiry made.
259	3rd July, 8-30 P.M.	Loyabad mine, Bansjora P. O., Bihar.	Burrakur Coal Co., Ltd.	Bishambhar Dosadh, (m.), 32, Labourer.	Coal .	While deceased was feeding material in a bunker for hydraulic stowing, he accidentally slipped and fell into the bunker. He was buried by the material and was suffocated before he could be extricated. Inspection and inquiry made.
260	18th October, 4-30 P.M.	West Jote Dhemu mine, Ukhra P. O., Bengal.	West Jote Dhemu Coal Co., Ltd.	Nilmoni Bhakta, (f.), 50, Labourer.	Coal .	While deceased was sitting on one side of a loaded cart, she overbalanced and fell off. She was run over and fatally injured by one of the wheels of the cart. Inspection and inquiry made.
261	19th December, 5-45 P.M.	Ena mine, Jharis P. O., Bihar.	North-West Coal Co., Ltd.	Hari Singh, (m.), 20, Labourer.	Coal .	While an Oxy-acetylene welding plant was being loaded on a lorry, an explosion took place and the gas container was blown a distance of 50 feet. One of the men engaged in carrying the apparatus was fatally injured. Inspection and inquiry made.

APPENDIX II -*contd.*

Fatal Accidents during the year 1940-- *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 worked.	Reason for exclusion.	Cause of accident and remarks.
FATAL ACCIDENTS NOT INCLUDED IN THE STATISTICS—(19 deaths).							
1	14th January, 6 P.M.	Ramnagore mine, Kulti P. O., Bengal.	Bengal Iron Co., Ltd. (In liquidation).	Tara Tanti, (f.), 22, Lachman Tanti, (m.), 2½,	Coal	Not a mining accident.	Owing to an unexpected collapse of old underground workings, a surface subsidence took place, causing a portion of a dwelling to be wrecked. A woman and a child, who were in the dwelling, were engulfed in the subsidence and were dead when extricated. Inspection and inquiry made.
2	14th February, 9 A.M.	West Gopalichuck mine, Kusunda P. O., Bihar.	Central Kurkend Coal Co., Ltd.	Baran Koiri, (m.), 35, Coal-cutter.	Coal	Not a mining accident.	Deceased was drowned in a surface water storage tank, 8 feet deep, which was surrounded by a wall, 4 feet high. Inspection and inquiry made.
3	7th March, 3 A.M.	Palachauri mine, Junnordeo P. O., Central Provinces.	N. H. Ojha & Co., Ltd.	Kalli Kole, (f.), 26, Trammer.	Coal	Not a mining accident.	While tramping coal to a siding, deceased accidentally set her clothing on fire from a naked light which she was carrying. She received extensive burns from which she died 17 hours later. Inspection and inquiry made.
4	14th March, 12-15 P.M.	Footkee mine, Kusunda P. O., Bihar.	Eastern Coal Co., Ltd.	Ratho Kamar, (m.), 22, Loader.	Coal	Not a mining accident.	A wagon loader was drowned in a surface storage tank containing water 10 feet deep. The tank was adequately fenced with a wall 5½ feet high. Inspection and inquiry made.
5	9th April, 3-30 A.M.	Lodna mine, Jharia P. O., Bihar.	New Standard Coal Co., Ltd.	Sibal Singh, (m.), 38, Coal-cutter.	Coal	Not a mining accident.	While resting near his working place underground, a miner collapsed and died due to natural causes. Inspection and inquiry made.
6	27th April, 9 A.M.	Thatri mine, Kunyara P. O., Punjab.	Kangra Valley Slate Co., Ltd.	Tani Batwal, (m.), 18, Labourer.	Slate	Not a mining accident.	While deceased was walking along a pathway on the slope of a steep hill, a piece of stone, 6 lbs. in weight, rolled down from above and struck him on the head, inflicting fatal injuries. Inspection and inquiry made.
7	1st June.	Ghogri mine, Junnordeo P. O., Central Provinces.	P. S. Sial & Sons.	Shivchand, (m.), 22, Labourer.	Coal	Not a mining accident.	Deceased was resting on the top of a wall surrounding a boiler feed tank containing 6 feet of water when he accidentally fell into it and was drowned. Inspection and inquiry made.

8	8th June, 10-40 P.M.	Banksimulla mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Baldeo Bhuiya, (m.), 13.	Coal	Not employed.	While deceased was attempting to ride on a loaded rake of ten tubs, being hauled on a surface endless haulage road, during the hours of darkness, he fell down and was run over. He was killed instantly. Inspection and inquiry made.
9	15th June, 9 A.M.	Banksimulla mine, Charanpur P. O., Bengal.	Bengal Coal Co., Ltd.	Nankoo Halwai, (m.), 32, Mason.	Coal	Not a mining accident.	While the roof of a room in a newly constructed block of dwellings was being repaired, it showed signs of collapsing. A gang of 9 persons engaged in this repair work jumped on to the roof of two adjoining dwellings, which collapsed. A mason was killed instantly and two other persons were seriously injured. Inspection and inquiry made.
10	16th July, 3-45 P.M.	Budroochuck mine, Sijua P. O., Bihar.	Budroochuck Coal Mining Co., Ltd.	Dhiroo Bhuiya, (m.), 34, Trammer.	Coal	Not a mining accident.	While at work underground deceased suddenly collapsed and expired as a result of heart failure. Inspection and inquiry made.
11	19th August, 5-30 P.M.	Jamadoba mine, Jealgora P. O., Bihar.	Tata Iron and Steel Co., Ltd.	Muluk Singh, (m.), About 11.	Coal	Not employed.	Deceased apparently climbed a post of a transmission line, came in contact with a "live" conductor and received fatal injuries at a voltage of about 3,300 volts to earth. Inspection and inquiry made.
12	27th August, 12 Noon.	Lutchipur mine, Sitarampur P.O., Bengal.	R. M. Jagani	Mamtaz Meah, (m.), 55, Boiler fire- man.	Coal	Not a mining accident.	Deceased was found drowned in a boiler feed tank which contained 8½ feet of water and was adequately fenced. Inspection and inquiry made.
13	18th September, 10-30 A.M.	Datla mine, Junnordeo P. O., Central Pro- vinces.	Amalgamated Coalfields, Ltd.	Nawadi, (f.), 42, Labourer.	Coal	Not a mining accident.	While engaged in carrying timber in a colliery siding deceased suddenly collapsed and expired almost immediately. Inspection and inquiry made.
14	7th October, 8-45 A.M.	Mosaboni mine, Ghataila P. O., Bihar.	Indian Copper Corporation, Ltd.	Lakhan, (m.), 29, Labourer.	Copper	Not a mining accident.	While cleaning a drain 2 feet in depth, deceased slipped and fell into it, sustaining minor injuries. Septicaemia supervened and he died 48 days later. Inspection and inquiry made.
15	29th November, 9-30 A.M.	Dandot mine, Dandot P. O., Punjab.	Dalmia Jain and Co., Ltd.	Krishna alias Kastu, (f.), 45.	Coal	Not employed.	Whilst deceased was walking on a surface haulage incline, she was run over and killed instantly by a set of seven loaded tubs, which was being lowered down the haulage plane. Inspection and inquiry made.
16	13th December, 1 P.M.	Timpowa mine, Kodarma P. O., Bihar.	Chotonagpur Mica Syndicate (1932) Ltd.	Chutu Kandu, (m.), 45.	Mica	Not employed.	While deceased was working in an old abandoned pit, 8 feet deep, a mass of earth, measuring about 1½ cwts., fell from the side from a height of 4 feet and buried him. He was dead when extricated. Inspection and inquiry made.
17	20th December, 12-30 P.M.	Loyabad mine, Bansjora P. O., Bihar.	Burrakur Coal Co., Ltd.	Churki Majhian, (f.), 45.	Coal	Not employed.	While crossing a surface endless haulage road in an intoxicated state deceased fell over the haulage rope, which was in motion, and was fatally injured. Inspection and inquiry made.
18	30th December, 12 Mid- night.	Alkusa mine, Kusunda P. O., Bihar.	Raneegunge Coal Association, Ltd.	Gogla Dosadh, (m.), 40, Peon.	Coal	Not a mining accident.	While deceased was sitting near a fire in the verandah of his dwelling his clothing caught fire and he was fatally burned. Inspection and inquiry made.

APPENDIX III.

Statement of prosecutions under the Indian Mines Act, during the year 1940.

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bengal	Burdwan	1	2	2	Regulations 108 and 116-B of the Indian Coal Mines Regulations, 1926.	
	Do.	1	1	..	Regulation 137 (2) of the Indian Coal Mines Regulations, 1926 and Rule 18 of the Rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	Case dropped due to a dispute regarding ownership of the mine.
	Do.	1	1	1	Sections 15 and 28 (1) of the Indian Mines Act, 1923 and Regulation 70 (2) of the Indian Coal Mines Regulations, 1926.	
	Do.	1	7	..	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	Case withdrawn due to an impending change of ownership of the mine.
	Do.	1	3	..	Section 15 (1) of the Indian Mines Act read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	Case dropped as the violation was remedied.
	Do.	1	2	2	Regulation 149 of the Indian Coal Mines Regulations, 1926 and Rule 9 of the Rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923, Regulation 70 (2) of the Indian Coal Mines Regulations, 1926 and Bye-law 31 made under Section 32 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1940—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bengal <i>—contd.</i>	Burdwan .	1	2	1	Rules 12 and 17-A of the Rules made by the Bengal Government under Section 30 of the Indian Mines Act, 1923.	One of the accused was acquitted.
	Do. .	1	2	2	Regulation 3(2) of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	3	..	Regulations 95(1) and 143 of the Indian Coal Mines Regulations, 1926.	The case is pending.
	Do. .	1	2	2	Regulations 20, 38, 40 and 43 of the Indian Metalliferous Mines Regulations, 1926 and Rule 9 of the Rules made by the Bengal Government under Section 30 read with Section 28 of the Indian Mines Act, 1923.	
	Do. .	1	1	1	Regulation 145 of the Indian Coal Mines Regulations, 1926.	
Bihar .	Bhagalpur .	1	2	2	Rule 8 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, Regulation 38 of the Indian Metalliferous Mines Regulations, 1926, Section 26 read with Section 3(c) of the Indian Mines Act, 1923.	
	Gaya . .	1	2	1	Regulations 42 and 44 of the Indian Metalliferous Mines Regulations, 1926.	One of the accused was acquitted.
	Hazaribagh .	2	4	..	Regulation 3(1) of the Indian Metalliferous Mines Regulations, 1926.	The cases were withdrawn.
	Do. .	1	2	2	Regulation 18 of the Indian Metalliferous Regulation, 1926.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1940—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.	
Bihar— <i>contd.</i> 21	Manbhum .	1	2	2	Regulations 53(1), 74 and 138 of the Indian Coal Mines Regulations, 1926.	The case against four of the accused was withdrawn.	
	Do. . .	1	6	2	Section 15 of the Indian Mines Act, 1923 read with Regulation 24(3)(b) of the Indian Coal Mines Regulations, 1926.		
	Do. . .	1	1	1	Rule 8 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923 and Regulation 137 of the Indian Coal Mines Regulations, 1926.		
	Do. . .	1	1	1	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.		
	Do. . .	1	2	2	Regulation 77(5) of the Indian Coal Mines Regulations, 1926.		
	Do. . .	1	3	3	Sections 26 and 26-A read with Section 3(c) of the Indian Mines Act, 1923, Rules 23, 28 and 29 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, and Section 28(4) of the Indian Mines Act, 1923, read with Rule 9-A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.		
	Do. . .	1	4	3	Regulation 66(1) of the Indian Coal Mines Regulations, 1926.		One of the accused died.
	Do. . .	1	2	2	Regulations 69(2), 121 and 139 of the Indian Coal Mines Regulations, 1926.		

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1940—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar— <i>contd.</i>	Manbhum .	1	1	1	Bye-law 14 of the Bye-laws made under Section 32 of the Indian Mines Act, 1923 and Regulation 148 of the Indian Coal Mines Regulations, 1926.	The accused were acquitted.
	Do. . .	1	3	..	Section 35(c) of the Indian Mines Act, 1923.	
	Do. . .	1	1	1	Regulations 144 and 149 of the Indian Coal Mines Regulations, 1926, read with Section 28(4) of the Indian Mines Act, 1923 and Rule 9-A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	3	3	Regulations 145, 144 and 149 of the Indian Coal Mines Regulations, 1926 read with Section 28(4) of the Indian Mines Act, 1923 and Rule 9-A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. . .	1	2	2	Regulations 77(5) (a), 77(5) (c) and 24(3) (c) of the Indian Coal Mines Regulations, 1926.	
	Do. . .	1	1	1	Order under Section 19(2) of the Indian Mines Act, 1923, Rule 9-A of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923, read with Regulation 149 of the Indian Coal Mines Regulations, 1926, Section 15 of the Indian Mines Act, 1923 and Bye-Law 31 of the Bye-Laws made under Section 32 of the Indian Mines Act, 1923.	

APPENDIX III—*contd.*Statement of prosecutions under the Indian Mines Act, during the year 1940—*contd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, Bye-laws and Rules and Sections of the Act contravened.	REMARKS.
Bihar— <i>concl'd.</i>	Manbhum .	1	1	..	Regulation 5 of the Indian Coal Mines Regulations, 1926.	The case was withdrawn.
	Do. .	1	1	1	Section 15(1) of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	6	..	Regulations 69(2), 137(1) and 137(2) of the Indian Coal Mines Regulations, 1926.	The case against two of the accused was dropped while that against the rest is pending.
	Do. .	1	3	3	Regulations 76, 77(4) and 137 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	2	2	Regulations 77(5), 92, and 69(2) of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Rule 18 of the Rules made by the Bihar Government under Section 30 of the Indian Mines Act, 1923.	
	Do. .	2	2	2	Regulation 17 of the Indian Coal Mines Regulations, 1926.	
	Do. .	2	8	2	Section 15 of the Indian Mines Act, 1923, read with Regulation 23 of the Indian Coal Mines Regulations, 1926.	The case against six of the accused is pending.
	Do. .	1	2	2	Bye-Law No. 8, made under Section 32 of the Indian Mines Act, 1923.	
	Do. .	1	1	1	Regulation 144 of the Indian Coal Mines Regulations, 1926.	
Central Provinces.	Jubbulpore .	1	1	..	Regulation 38 of the Indian Metalliferous Mines Regulations, 1926.	The case is pending.

APPENDIX III—*concl'd.*Statement of prosecutions under the Indian Mines Act, during the year 1940—*concl'd.*

Province.	District.	Number of prosecutions.	Number of persons prosecuted.	Number of persons convicted.	Number of Regulations, By-laws and Rules and Sections of the Act contravened.	REMARKS.
Central Provinces — <i>concl'd.</i>	Chanda .	1	1	1	Regulation 151 of the Indian Coal Mines Regulations, 1926.	
	Chhindwara .	1	4	4	Bye-Law 11, made under Section 32 of the Indian Mines Act, 1923 and Regulation 95(2) of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	2	1	Regulation 144 of the Indian Coal Mines Regulations, 1926.	The case against one of the accused was withdrawn.
	Do. .	4	6	6	Regulation 95(2) of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	2	1	Regulations 84 (2) and 108 (1) of the Indian Coal Mines Regulations, 1926.	One of the accused was acquitted.
	Do. .	1	1	1	Regulations 108 and 109 of the Indian Coal Mines Regulations, 1926.	
	Do. .	1	1	1	Regulations 118, 119 and 120 of the Indian Coal Mines Regulations, 1926.	
Madras .	Nellore .	1	2	2	Regulations 72 and 81 of the Indian Metalliferous Mines Regulations, 1926.	
Punjab .	Raikhel .	1	3	..	Regulations 38 and 40 of the Indian Metalliferous Mines Regulations, 1926.	The case is pending.
	Hamirpur .	2	2	2	Regulations 38, 41 (a) and 23 (2) of the Indian Metalliferous Mines Regulations, 1926.	
United Provinces.	Do. .	3	3	3	Regulations 38, 23 (2) and 46 of the Indian Metalliferous Mines Regulations, 1926.	
	Do. .	1	1	1	Regulations 38, 41-A and 46 of the Indian Metalliferous Mines Regulations, 1926.	

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar 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.	2. All mines in Bengal.
3. All mines in Orissa.	3. Such mines in Bihar 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.
4. All mines in the North-West Frontier Province.	4. All mines in Bombay.
5. All mines in the Punjab.	5. All mines in the Central Provinces.
6. All mines in Rajputana.	6. All mines in Madras.
7. All mines in the United Provinces.	
8. All mines in Sindh.	

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1940.

Certificates granted to holders of British certificates of competency.

(a) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Dayton, Ernest	415	..	2750	21st July 1939.
Jayne, Harold Spencer . .	418	12th Nov. 1940 .	1744	5th February 1939.
Wade, David William Blaisdon	417	12th Nov. 1940 .	3180	12th August 1939.

(b) SECOND CLASS.

Name.	Number of Indian certificate.	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Stirling, John Macpherson . .	34	11th January 1940	3920	12th August 1939.
Muir, Duncan McIntyre . . .	35	11th January 1940	2740	3rd February 1939.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1940—*contd.*

INDIAN CERTIFICATES.

(a) FIRST CLASS.

Name.	Number of certificate.	Date of certificate.	REMARKS.
Gorgo, Daya Prakash	275	6th April 1940.	
Guisse, Paul Elmore Colin	276	Ditto.	
Gupte, Dwarkanath Gajanan	277	Ditto.	
Sabhlok, Shiv Ram	278	Ditto.	
Wacha, Fredoon Savaksha	279	Ditto.	
Anand, Trilok Chand	280	Ditto.	
Niven, David Coates	281	Ditto.	
Chatterjee, Debi Pada	282	Ditto	Re-examined in one subject only.

(b) SECOND CLASS.

Name.	Number of certificate.	Date of certificate.	REMARKS.
Bag, Baidya Nath	587	6th April 1940.	
Sabhlok, Shiv Ram	588	Ditto.	
Batra, Worshisht Nath	589	Ditto.	
Rai, Narpal	590	Ditto.	
Temurnikar, Prabhakar Shanker	591	Ditto.	
Banerjee, Hemanta Kumar	592	Ditto.	
Samanta, Lalit Madhab	593	Ditto.	

APPENDIX IV.

Miscellaneous.

Statement No. 1.

LIST OF INSPECTION CIRCLE.

No. 1 Circle.	No. 2 Circle.
1. All mines in Baluchistan.	1. All mines in Assam.
2. All mines in Bihar 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.	2. All mines in Bengal.
3. All mines in Orissa.	3. Such mines in Bihar 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.
4. All mines in the North-West Frontier Province.	4. All mines in Bombay.
5. All mines in the Punjab.	5. All mines in the Central Provinces.
6. All mines in Rajputana.	6. All mines in Madras.
7. All mines in the United Provinces.	
8. All mines in Sindh.	

Statement No. 2.

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1940.

Certificates granted to holders of British certificates of competency.

(a) FIRST CLASS.

Name.	Number of Indian certificate.	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Dayton, Ernest	415	..	2750	21st July 1933.
Jayne, Harold Spencer .	416	12th Nov. 1940 .	1744	5th February 1925.
Wade, David William Blaisdon	417	12th Nov. 1940 .	3180	12th August 1939.

(b) SECOND CLASS.

Name.	Number of Indian certificate.	Date of Indian Certificate.	Number of British Certificate.	Date of British Certificate.
Stirling, John Macpherson .	34	11th January 1940	3920	12th August 1939.
Muir, Duncan McIntyre . .	35	11th January 1940	2740	3rd February 1928.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*contd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1940—*contd.*

INDIAN CERTIFICATES.

(a) FIRST CLASS.

Name.	Number of certificate.	Date of certificate.	REMARKS.
Gorge, Daya Prakash	275	6th April 1940.	
Guise, Paul Elmore Colin	276	Ditto.	
Gupte, Dwarkanath Gajanan	277	Ditto.	
Sabblok, Shiv Ram	278	Ditto.	
Watcha, Fredoon Savaksha	279	Ditto.	
Anand, Trilok Chand	280	Ditto.	
Niven, David Coates	281	Ditto.	
Chatterjee, Debi Pada	282	Ditto	Re-examined in one subject only.

(b) SECOND CLASS.

Name.	Number of certificate.	Date of certificate.	REMARKS.
Bag, Baidya Nath	587	6th April 1940.	
Sabblok, Shiv Ram	588	Ditto.	
Batra, Worshisht Nath	589	Ditto.	
Raj, Narpat	590	Ditto.	
Tomurnikar, Prabhakar Shanker	591	Ditto.	
Banerjee, Hemanta Kumar	592	Ditto.	
Samanta, Lalit Madhab	593	Ditto.	

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 2—*concl'd.*

Names of persons to whom first and second class coal mine managers' certificates of competency and surveyors' certificates of competency were granted during the year 1940—*contd.*

INDIAN CERTIFICATES—*concl'd.*(b) SECOND CLASS—*concl'd.*

Name.	Number of certificate.	Date of certificate.	REMARKS.
Carapiet, Andranick George . . .	504	6th April 1940.	Re-examined in one subject only.
Mitra, Nokuleswar	505	Ditto	Ditto.
Chakravarty, Kalish Chandra	506	Ditto	Ditto.
Kazmi, Syed Bashir Ahmed	507	Ditto	Ditto.
Roy Chowdhury, Sowmondu Bhusan . .	508	Ditto	Ditto.
Sinha, Ram Rup	509	Ditto	Ditto.
Vaahisht, Dina Nath	600	Ditto	Ditto.

(c) SURVEYORS' CERTIFICATES.

Name.	Number of certificate.	Date of certificate.	REMARKS.
Chawla, Baldev Sahal	134	15th January 1941.	
Khan, Anwar All	135	Ditto.	
Rao, S. Narayana	136	Ditto.	
Dev, Matilal	137	Ditto.	
Mitra, Sakti Pada	138	Ditto.	
Singh, Karam	139	Ditto.	
Ghosh, Promode Ranjan	140	Ditto.	
Roy, Sudhansu	141	Ditto.	
Ojha, Prabhulal	142	Ditto.	
Shrivastava, Kamal Narayan	143	Ditto.	
Singhal, Hulas Rai	144	Ditto.	
Sharma, Jagat Ram	145	Ditto.	
Tara, Raton M. R.	146	Ditto.	

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 3.

NOTIFICATION.

New Delhi, the 4th January 1910.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the notification of the Government of India in the Department of Labour, No. M-1051, dated the 28th January 1938, namely :—

In Appendix I to the Schedule annexed to the said notification—

I. Before the head " Bengal " the following head, sub-head, and entry shall be inserted, namely :—

Assam Stone Mine.

1. Jagi Quarry.	Road	Assam Bengal Railway Company, Limited.	Jagi Road Station.	Landing	Nowgong.
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II. Under the head " Bihar "—

(i) to the entries under the sub-head " Stone Mines ", the following entry shall be added, namely :—

95. Tinpahar	Shivanand Shivamoy and Company.	Tinpahar	Rajmahal	Santhal Parganas.
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(ii) for the sub-head " Limestone Mine ", the sub-head " Limestone Mines " shall be substituted and the entry under the said sub-head, the following entries shall be added, namely :—

2. Khalari	Associated Cement Companies Limited.	Khalari	Ranchi	Ranchi.
3. Pusulata and Govindpur.	Porahat Stone Lime Company.	Pusulata and Govindpur.	Chakradharpur	Singbhum.

(iii) after the entries under the sub-head " Limestone Mines ", the following sub-head and entry shall be inserted, namely :—

Sandstone Mine.

1. Amra and Auri.	Ramlobhi Singh and Reliaram Melaram.	Auri	Sasaram	Shahabad.
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III. Under the head " Bombay " and the sub-head " Stone Mines "—

(i) entries Nos. 14 and 15 shall be omitted ;

(ii) entries Nos. 2 to 13 and 16 and 17 shall be re-numbered as entries 3 to 16 ;

(iii) for entry No. 1, the following entries shall be substituted, namely :—

1. Danda Government Quarry.	Government of Bombay, Revenue Department.	Danda	South Salsette	Bombay Suburban.
2. Danda Municipal Quarry.	Bandra Municipality	Do.	Do.	Do.

(iv) for entry No. 14 as re-numbered, the following entry shall be substituted, namely :—

14. Gilbert Hill (Andheri) quarries.	Government of Bombay	Andheri	South Salsette	Bombay Suburban.
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APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 3—*contd.*

IV. Under the head "Central Provinces and Berar," and the sub-head "Bauxite Mines", entry No. 3 shall be omitted.

V. Under the head "Madras"—

(i) to the entries under the sub-head "Stone Mines", the following entries shall be added, namely :—

23. Vayalur (S. No. 150-2-B).	V. Mathu	Vayalur Vrindachalam Talug.	Chidambaram	South Arcot.
24. Vayalur (S. No. 155).	Government of Madras, Revenue Department	Do.	Do.	Do.
25. Tiruvakkarai and Nemali.	Do.	Tiruvakkarai and Nemali, Tindivanam Talug.	Do.	Do.
26. Siruvakkur and Kalpathu.	Do.	Siruvakkur and Kalpathu, Villupura Talug.	Do.	Do.
27. Kuthimalai	G. S. Guandikam Pillai	Pirattiyour	Trichinopoly	Trichinopoly.
28. Khajamalai- patti.	Gunna J. Krishnam and Brothers.	Abhisheka- puram.	Do.	Do.
29. Palamatti (S. F. 248-2).	S. M. Ramasubramanya Ayyar.	Pirattiyur	Do.	Do.
30. Krishnapuram	South Indian Railway Company, Limited.	At mile 1-412, Tinevelly- Tiruchedur Rly.	Udaiyarplayam	Do.
31. Vadamala- puram.	Do.	At mile Q391/ 8-9 on Ten- kassi Chord Line.	Kovilpatti	Tinevelly.

(ii) After the entry under the sub-head "Limestone Mine", the following sub-head and entry shall be inserted, namely :—

Ochre Mine.

1. S. No. 1176	T. Ranganathaiyar	Betamcherla	Dhone	Kurnool.
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VI. Under the head "Punjab", to the entries under the sub-head "Limestone Mines", the following entry shall be added, namely :—

6. Tarki	Bhai Gianchand Sundar- dass.	Tarki	Jhelum	Jholum.
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VII. Under the head "United Provinces", to the entries under the sub-head "Stone Mines" the following entry shall be added, namely :—

18. Marwari Siding No. 4.	Gobind Ram	Shankerghar	Allahabad	Allahabad.
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M. S. A. HYDARI,

Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 4.

NOTIFICATION.

New Delhi, the 14th March 1940.

No. M.-1055 (1).—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Coal Mines Regulations, 1926, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

In the Forms set forth in Schedule I to the said Regulations—

(1) In Form II-A—

- (i) in item A of Parts I and II, for the entries " I. Males " and " II. Females ", the entry " Males " shall be substituted ;
- (ii) in the Note, for the word " persons ", the word " Males " shall be substituted ;

(2) In Form III—

- (i) in item A, for the entry " I. Males ", the entry " Males " shall be substituted and the entry " II. Females " shall be omitted ;
- (ii) in Note (1), for the word " persons ", the word " males " shall be substituted.

(3) In Form VII, in the columns under the head " Coal-cutting machines "—

- (i) for the sub-head " Name and type ", the sub-head " Name and number of each type separately " and for the sub-head " Total number of square feet cut " the sub-head " Tonnage of coal cut " shall be substituted, and
- (ii) the sub-head " Number in use " and the column thereunder shall be omitted.

H. TUFNELL-BARRETT,

Deputy Secretary to the Government of India.

Statement No. 5.

NOTIFICATION.

New Delhi, the 14th March 1940.

No. M.-1055 (2).—In exercise of the powers conferred by section 29 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the Indian Metalliferous Mines Regulations, 1926, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

In Form II of the Forms set out in the Schedule to the said Regulations—

- (i) in item A, for the entry " I. Males ", the entry " Males " shall be substituted and the entry " II. Females " shall be omitted ;
- (ii) in Note (1) for the word " persons ", the word " males " shall be substituted.

H. TUFNELL-BARRETT,

Deputy Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 6.

ACT No. XXIV OF 1940.

[PASSED BY THE INDIAN LEGISLATURE.]

*(Received the assent of the Governor General on the 10th April, 1940.)***An Act further to amend the Indian Mines Act, 1923.**

WHEREAS it is expedient further to amend the Indian Mines Act, 1923,* for the purposes herein after appearing ;

It is hereby enacted as follows :—

1. *Short title.*—This Act may be called the Indian Mines (Amendment) Act, 1940.
2. *Amendment of section 10, Act IV of 1923.*—In clause (a) of sub-section (1) of section 10 of the Indian Mines Act, 1923† (hereinafter referred to as the said Act), for the words “ the Government ” the words “ the Crown ” shall be substituted.
3. *Amendment of section 19, Act IV of 1923.*—In sub-section (1A) of section 19 of the said Act—
 - (a) the brackets and letter “ (a) ” at the beginning, and the word “ or ” at the end of clause (a) shall be omitted ; and
 - (b) clause (b) shall be omitted.
4. *Amendment of section 29, Act IV of 1923.*—In section 29 of the said Act, after clause (k) the following clause shall be inserted, namely :—

“(kk) for prohibiting the employment in a mine either as manager or in any other specified capacity of any persons except persons paid by the owner of the mine and directly answerable to the owner or manager of the mine.”

* IV of 1923.

† IV of 1923.

Statement No. 7.

NOTIFICATION.

New Delhi, the 11th April 1940.

No. M.-955.—In exercise of the powers conferred by section 30-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following amendments shall be made in the Coal Mines Rescue Rules, 1939, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

In sub-rule (2) of rule 27 of the said Rules :—

- (i) in clause (a) for the words “at the junction of the Jharra and Sijua roads near the Imperial Bank of India”, the words “within a radius of four miles from the Dhanbad Railway station” shall be substituted.
- (ii) in clause (b) for the words “near Asansol” the words “within a radius of five miles from the Asansol Railway station” shall be substituted.

H. TUFNELL-BARRETT,
Deputy Secy. to the Govt. of India.

APPENDIX IV—*contd.*

 Miscellaneous—*contd.*

 Statement No. 8.

NOTIFICATION.

Simla, the 8th May 1940.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendment shall be made in the notification of the Government of India in the Department of Labour, No. M.-1051, dated the 20th January 1938, namely :—

In Appendix I to the Schedule annexed to the said notification under the head "United Provinces" and the sub-head "Stone Mines" entry No. 10 shall be omitted.

H. TUFNELL-BARRETT,

Deputy Secy. to the Govt. of India.

 Statement No. 9.

NOTIFICATION.

Simla, the 4th July 1940.

No. M.-955.—In exercise of the powers conferred by section 30-A of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following amendments shall be made in the Coal Mines Rescue Rules, 1939, the same having been previously published as required by sub-section (1) of section 31 of the said Act, namely :—

In rule 19 of the said Rules—

- (i) after the word "collieries" the words "or coko plants" shall be inserted; and
- (ii) for the proviso, the following proviso shall be substituted, namely :—

"Provided that, when it is proved to the satisfaction of the Committee or any person authorised in this behalf by the Committee, that any coal, on which the duty of excise had previously been collected, has been used in the manufacture of any coke on which also the duty has been collected, the Committee or the person authorised in this behalf by the Committee may order refund of an amount equal to the duty collected on such coal to the person from whom such duty was collected."

S. H. ZAHEER,

Addl. Deputy Secy. to the Govt. of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 10.

NOTIFICATION.

Simla, the 1st August 1940.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendments shall be made in the notification of the Government of India in the Department of Labour, No. M.-1051, dated the 20th January 1938, namely:—

In Appendix I to the Schedule annexed to the said notification—

I. Under the head "Bengal" to the entries under sub-head "clay mines" the following entry shall be added, namely:—

5. Raniganj Clay No. 6 Bansara Do. Do.

II. Under the head "Bihar"—

(i) to the entries under the sub-head "Stone Mines" the following entries shall be added, namely:—

96. Abgilla-Manpur . Syed Abdul Hafiz . Manpur . Gaya-Sadr . Gaya.

97. Pretsilla Shamji Ratansi Near Niazpur Do. Do.

98. Sikoria Seth Premchand . Sikoria . Sasaram . Shahabad.

(ii) To the entries under the sub-head "Fireclay Mines" the following entries shall be added, namely:—

12. Rajhara . Bengal Coal Co., Ltd. . Pandua . Palamau . Palamau.

13. Dhura . Behar Fire Bricks and Dhurna . Dhanbad . Manbhum.
Potteries, Limited.

III. Under the head "Central Provinces and Berar" to the entries under the sub-head "Bauxite Mines" the following entry shall be added, namely:—

3. Kunjri Kusmi . Macpherson and Company . Murwara . Dhanbad . Manbhum.

IV. Under the head "Madras"—

(a) Under the sub-head "stone mines"—

(i) for the entries in the column headed "Sub-Division" against entries Nos. 23, 25 and 26 entries "Vridhachalam", "Tindivanam" and "Villupuram" respectively shall be substituted and the entry in the said column against entry No. 30 shall be omitted.

(ii) for the entry in the column headed "District" against entry No. 30 the entry "Tinnevely" shall be substituted.

(iii) to the entries under the said sub-head, the following entry shall be added, namely:—

32. Iringal Amsem . South Indian Railway Company . Iringal . Kurumbranand
Malabar.

(b) to the entries under the sub-head "Barytes Mines" the following entries shall be added, namely:—

8. Vemula C. C. Obeyya Chhety . Vemula . Pulivendla Do.

9. Narayanaraswamy Rao Bahadur B. P. Do. Do. Do.
Sesha Reddy.

APPENDIX IV—*contd.*Miscellaneous—*contd.*Statement No. 10—*contd.*

(c) under the sub-head "Ochre Mine" for the entry in the column headed "Name of owner" the entry "R. Ranganathaiyar" shall be substituted.

V. Before the head "Punjab" the following head, sub-head and entry shall be inserted, namely:—

ORISSA.

Fireclay Mine.

1. Belpahar . Tata Iron and Steel Co., Ltd. Joraboja . Sambalpur . Sambalpur.

VI. Under the head "Punjab" to the entries under the sub-head "Stone Mines" the following entry shall be added, namely:—

8. Sikhawala . Public Works Department, Chak 113 S. B. Sargodha . Sargodha.
Irrigation Branch, and Chak 116
Punjab. S. B.

VII. Under the head "United Provinces" to the entries under the sub-head "Stone Mines" the following entries shall be added, namely:—

19. Badama . Lakshmi Narayan Gupta . Lakhanpur & Tala . Do. Do.

20. Shankargarh Seth Basant Ram Sindhi . Lakhanpur . Do. Do.
No. 2 E. I. R.
or Lakhanpur
Quarry No. 2.

21. Rampura . Pandit Shiamlal Tara- Rampura . Lalitpur . Jharua.
chand & Co.

S. H. ZAHEER,

Additional Deputy Secretary to the Government of India.

Statement No. 11.

NOTIFICATION.

New Delhi, the 13th November 1940.

No. M.-1051.—In exercise of the powers conferred by section 46 of the Indian Mines Act, 1923 (IV of 1923), the Central Government is pleased to direct that the following further amendment shall be made in the notification of the Government of India in the Department of Labour, No. M.-1051, dated the 20th January 1938, namely:—

In Appendix I to the Schedule annexed to the said Notification, under the head "Central Provinces and Berar", and the sub-head "Bauxite Mines" for entry No. 3 the following entry shall be substituted, namely:—

3. Khajuri-Kusmi . Macpherson and Company . Khajuri-Kusmi . Do. Do.

S. H. ZAHEER,

Additional Deputy Secretary to the Government of India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 12.

CIRCULAR NO. 1 OF 1940.

Dhanbad, the 15th May 1940.

FROM

W. KIRBY, Esq., B.Sc., M.I.MIN.E.,
CHIEF INSPECTOR OF MINES IN INDIA,

TO

THE OWNER, AGENT AND MANAGER,
COAL MINE.
MEMORANDUM.

In view of a serious accident which recently occurred, resulting in a mine where safety lamps and "permitted" explosives were being used being set on fire during shot-firing operations, the attention of Owners, Agents and Managers of mines is hereby drawn to the desirability of adopting the following precautionary measures in the circumstances enumerated below.

1. In mines where safety lamps are required to be used sheathed explosives should be employed. A sheathed explosive is any type of "permitted" explosive which is enclosed and completely surrounded in a cartridge of some cooling salt which quenches the flame of the explosive. Sheathed explosives are much safer to use in gassy mines than ordinary "permitted" explosives. This type of explosive, which is only slightly more expensive than the ordinary "permitted" explosive, has been in use in one large group of gassy mines in India for the last two to three years.

The use of sheathed explosives in mines where safety lamps are used is strongly recommended.

2. Ordinary brattice cloth or any inflammable material used for ventilating purposes, either in gassy or non-gassy mines, is a potential danger.

In gassy mines the cloth or any other inflammable material may become ignited during blasting operations as is presumed to have been the case in the recent serious accident referred to, and in non-gassy mines the material may be readily ignited in various ways.

In some mines corrugated sheets and in others galvanised iron sheets are being used as a precaution against these dangers. The use of non-inflammable material for this purpose is, therefore, strongly advocated in all mines.

3. Wooden tamping rods are unsuitable for testing shot holes for breaks or fissures in gassy mines.

In Great Britain a shot-firer is required by regulation to test every shot hole for breaks and except in mines in which inflammable gas is unknown he is required to test at the mouth of the shot hole for inflammable gas.

Regulation 6 (d) of the Explosives in Coal Mines, Order No. 6 of 1st January 1934, under the Coal Mines Act, 1911, reads as follows:—

"Every shot-hole shall be charged and stemmed by or under the supervision of a shot-firer. Before the hole is charged a shot-firer shall examine it for breaks running along or across, and except in mines in which inflammable gas is unknown, shall examine in manner provided below for inflammable gas issuing from it, and the hole shall not be charged if he finds any such break or any inflammable gas."

It is strongly recommended that every shot-firer in gassy mines be provided with a special testing rod or scraper to enable him to test a shot-hole for breaks or fissures and shot-firers should also be required to test carefully for inflammable gas at the mouth of a shot-hole before charging the hole.

W. KIRBY,
Chief Inspector of Mines in India.

APPENDIX IV—*contd.*Miscellaneous—*contd.*

Statement No. 13.

CIRCULAR No. 2 OF 1940.

Dhanbad, the 10th June 1940.

FROM

W. KIRBY, Esq., B.Sc., M.I.MIN.E.,
CHIEF INSPECTOR OF MINES IN INDIA,

TO

THE OWNER, AGENT AND MANAGER,
COAL MINE.

MEMORANDUM.

The Owners, Agents and Managers of mines are requested to instruct and impress on their subordinate staff responsible for handling and using explosives, particularly "high explosives" and detonators, the necessity of exercising the strictest vigilance to prevent any leakage of explosive. In this connection, attention is invited to the regulations relating to the handling and use of explosives. Unless strict supervision is exercised leakage can take place in the interval between the explosives and detonators being issued from the magazine and the return of any unused explosive thereto. Leakage may occur due to shot-firers falsifying records, and it is requested that the amount of explosive and the number of detonators used be frequently checked with the object of preventing any such leakage. Moreover, the number of authorised shot-firers should be reduced to a minimum and before they are appointed they should be found to be entirely trustworthy.

W. KIRBY,

Chief Inspector of Mines in India.

Statement No. 14.

DEPARTMENT OF LABOUR.

NOTIFICATION.

Simla, the 27th June 1940.

No. M.-955.—In exercise of the powers conferred by section 12 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased to direct that the following amendment shall be made in the Coal Mines Safety (Stowing) Rules, 1939, a draft of the said amendment having been previously published as required by sub-section (1) of section 12 of the said Act, namely:—

For sub-rule (1) of rule 24 of the said Rules, the following sub-rule shall be substituted, namely:—

"(1) The duty of excise imposed under section 5 on coal, soft coke and hard coke shall, when such coal, soft coke or hard coke is despatched by rail from collieries or coke-plants, be collected by the Railway Administrations concerned by means of a surcharge on freight, and such duty of excise shall be recovered—

- (a) from the consignor, if the freight charges are being prepaid at the forwarding station,
- (b) from the consignee, if the freight charges are collected at the destination of the consignment,
- (c) from the party paying the freight, if the consignment is booked on the "weight only" system."

S. H. ZAHEER,

Addl. Deputy Secy. to the Govt. of India.

APPENDIX IV—*concl'd.*Miscellaneous—*concl'd.*

Statement No. 15.

NOTIFICATION.

Simla, the 17th June 1940.

No. M.-1276.—In exercise of the powers conferred by section 12 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased to make the following amendment to the Coal Mines Safety (Stowing) Rules, 1939, a draft of the said amendment having been previously published as required by sub-section (1) of that section, namely :—

After Chapter II of the said Rules, the following Chapter shall be inserted, namely :—

CHAPTER II-A.

Committees of Inquiry.

22-A. Qualifications of persons nominated to panels.—No person shall be nominated to the panels referred to in clause (b) of sub-section (1) of section II, unless he holds a first class colliery manager's certificate of competency.

22-B. Nominations to panels.—(1) The first nominations to the panels referred to in clause (b) of sub-section (1) of section II shall be made in writing and sent to the Chairman so as to reach him before the 15th day of July 1940.

(2) When a vacancy occurs in any panel, the Chairman shall, by notice in writing, call upon the body concerned to nominate a person to fill the vacancy, and the nomination shall be made in writing and sent to the Chairman so as to reach him within thirty days of the date of issue of such notice.

H. TUFNELL-BARRETT,
Deputy Secy. to the Govt. of India.

Statement No. 16.

NOTIFICATION.

Simla, the 23rd September 1940.

No. M.-1276.—In exercise of the powers conferred by section 12 of the Coal Mines Safety (Stowing) Act, 1939 (XIX of 1939), the Central Government is pleased to direct that the following further amendment shall be made in the Coal Mines Safety (Stowing) Rules, 1939, the same having been previously published as required by sub-section (1) of the said section, namely :—

After sub-rule (2) of rule 22 of the said Rules, the following sub-rule shall be, and be deemed always to have been, inserted, namely :—

(3) A member including a member co-opted under sub-section (1) of section 4, performing a journey on the business of the Board with the previous approval of the Chairman shall be paid from the Fund—

(a) if a non-official, the actual travelling expenses incurred by him in performing the journey;

(b) if a Government servant, such travelling allowances as would be admissible to him under the appropriate rules if the journey had been performed on Government duty.

S. H. ZAHEER,
Deputy Secy. to the Govt. of India.