A number of minor accidents occurred not of sufficient importance to require individual mention.

Eye accidents continue at several collieries, due to pieces of proud coal flying from the pick-point causing ulceration of the cornea. The importance of at once obtaining medical assistance is generally understood, and consequently the effects of injuries from this cause are decreasing rapidly. Gauze shields are also worn over the eyes for protection.

The question of fan ventilation is receiving attention, and several coal-owners are having fans built on the same principle as that designed by the Inspecting Engineer, and described in last year's report on goldfields.

I have, &c.,

E. R. GREEN,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

APPENDIX I.

MINING MANAGERS' EXAMINATION PAPERS.

QUESTIONS USED IN EXAMINATION OF MINING MANAGERS FOR FIRST-CLASS CERTIFICATES.

SUBJECT No. 1.—*On Prospecting, Sinking, Tunnelling, and opening out a Colliery.*

1. In prospecting a new field for coal, describe how you would proceed, and what indications would guide you as to the probability or otherwise of finding coal.
2. Describe the mode of putting down bore-holes:
   (*a*) With diamond-drill;
   (*b*) Hand-rods;
and state under what conditions you would use the above, and why.
3. Describe the method of sinking a pit 14 ft. diameter through quicksand, supposing it to be 60 yards before a suitable place occurs for a wedge-ring to be put in, the tubbing to be of iron. Also give thickness and size of tubbing.
4. Explain how you would keep the shaft circular and plumb while sinking.
5. (*a*) What precautions would you use whilst sinking as to (*a*) scaffolding; (*b*) firing shots; (*c*) signalling; and how would you ventilate the shaft during operations?
6. In opening up a new coalfield describe fully how you would determine the position of shafts or adits for winning coal; assume conditions.
7. Draw a ground-plan showing surface arrangements for a mine to deal with an output of 800 tons per day of eight hours.

SUBJECT No. 2.—*On working Coal and Timbering underground.*

1. Sketch the various systems of setting timber with which you are acquainted, and explain the advantages in each case.
2. Describe the different systems of coal working, and under what conditions each system works best. Give a rough sketch of the system adopted at any mine you are acquainted with, stating thickness of seam, quality of roof, floor, &c.
3. Give your experience in taking out pillars, and describe how you protect yourself from falls of roof.
4. In working a seam of coal on bord-and-pillar system, state what conditions would guide you as to size of pillars.
5. What are the requirements of the Coal-mines Act as to timbering and spragging?
6. In a seam of coal lying at an angle of 18°, what angle would you set the props to support roof?
7. Under what conditions would you use wooden chocks for timbering? Describe the operation of drawing timber, and precautions necessary for safety.

SUBJECT No. 3.—*On the Gases of Mines, Spontaneous Combustion, and Ventilation.*

1. Describe the different gases met with in coal-mines in the order of their specific gravities, their occurrences, properties, and effects.
2. State which, in your opinion, are the best mining-lamps in use at present, and define exactly the points in which each lamp you approve of excels the other.
3. What are the chief points to be kept in view when constructing an airway with the object of passing a large volume of air with the minimum expenditure of power.
4. Describe the barometer, anemometer, and water-gauge, and their uses.
5. If 40,000 ft. of air per minute is passing through an airway 9 ft. square at a velocity of 493·827 lineal feet per minute, what would be the horse-power of same supposing length of airway to be 2,000 ft.?
6. Which do you consider should be the largest: the area of the openings that admit the fresh air or the openings for the efflux of the vitiated air; and give reasons?
7. How would you detect the first symptoms of spontaneous combustion in mines: State your opinion of causes; and explain the different modes of extinguishing underground fires?

SUBJECT No. 4.—*On dealing with Old Workings and other Sources of Danger.*

1. What precautions would you adopt in approaching old workings likely to contain gas or water?
2. Describe the operation of shot-firing in a coal-mine, and the conditions to be observed. What is a blown-shot, and its effects under different conditions?