

516. I take it that it did leave some mark?—It showed evidences on the props.

517. But it is coked very heavily quite close to the hole?—Yes; and you will find some slack coal on the low side of the bord.

518. Is not that rather against the theory of a coal-dust explosion?—Not all, because there would be a tremendous rush of flame here, and the intense heat would develop an immense amount of hydrogen gas. This would be burnt, and we had evidence that it had burnt.

519. Yes; but where the blown-out shot was, would it not distil enough gas to char the coal?—It produces a temperature of 4,000°, and I think that is ample to distil it.

520. At any rate, it is ample to create fire?—Quite.

521. Then, all your evidence as to the coal-dust explosion comes to the fact that from 60 to 80 yards from the scene of the explosion there was the greatest heat?—The greatest force, not necessarily the greatest heat. I found evidences of great heat in several places, but there the conditions were favourable to it.

522. There was nothing like this heat in other portions of the mine?—Not to the same extent as in the blown-out shot bord.

523. Did you examine this lower slit [indicated on the plan]?—Yes.

524. Can you say from the appearance of that slit which way the explosion went?—We understood that it had gone down, and then had made a back-lash and come up.

525. Were there any indications of that being the case?—One indication seemed to lead to another. If you examined carefully you could see indications both ways.

526. Would you state the indications?—The indications were interlaced one with the other, and it was only by very close examination that you could see them. The first evidences indeed seemed very contradictory.

527. Did you see any other portions of the mine where the flame went down the split and back again; where it came up and shot down?—No. I will read you some other evidence on that point. Mr. Blackett's Summary says (see Appendix, p. 9, of Mr. Hayes's Authorities), "Possibly the shape of the road, the temperature, and the pressure of the air may also be important factors. His explanations of the many-observed differences in dust explosions is that the in-rush of the air after the first out-rush produces secondary effects that hide the indications of the directions of the primary explosion." That is what I consider took place there.

528. Do you think that there would be a back-lash up this split [indicated on plan]?—Most decidedly.

529. Would it not rush down and come round the bottom bords?—[Witness explained the direction the force appeared to have taken from the plan.]

530. If that were the case you should have the force showing in this direction [indicated on plan]?—There is the rebound to be considered. The position is that the back-rush was nearly as severe as the inward-rush, and that something of the sort has occurred is to my mind quite plain, on account of the tremendous amount of soot.

531. There is a heavier deposit of soot in that place [indicated] than in any other portion of the mine?—Yes; and it is also heavy here [indicated].

532. You say that at the time of the explosion the force split and went upwards and downwards?—To some extent; but I consider that the greatest force is shown here [indicated on plan].

533. So that the explosion took three different directions?—I think that it took two in its initial stage. [Indicated on plan].

534. If there had been some gas in the bord near the fall [indicated], do you think that it would have assisted the explosion?—Supposing that there had been a large amount of gas there, the only effect it would have would be that it would fill the vacuum caused by this explosion. Then, of course, it would reach the vacuum and intensify the explosion at this point [indicated].

535. Did you examine Worthley's bord?—I did.

536. There is some conflicting evidence there, is there not?—What I noticed particularly was that the force of the explosion entered at No. 3 incline; it did not travel through it, for the simple reason that there was practically no through thoroughfare. I saw Worthley's bord before I saw the blown-out shot, and I had some thought that it might have started at Worthley's. When I had finished the whole of the dip I went back to that bord and examined it very carefully, and the opinion I formed after the second and third examinations was that the flame or force went into it and practically spent itself near the end. I found evidence of charred or coked dust near the mouth, and I only found evidence of heat at the top end. The heat had caused the resin to exude from the props a little. It certainly had been a clean fire along there, not a dust-fire.

537. What do you mean by a clean fire?—Simply clean heat.

538. Mr. Lindop's evidence was to the effect that Worthley's face showed two lines of force?—It shows a certain amount of force having gone into the split and having gone back again.

539. That was the place that gave you some trouble at first?—Just at first. I went and satisfied myself on the whole point.

540. And were you satisfied that there was no cause there?—I was satisfied that there was nothing in that portion of the mine to produce an explosion.

541. Regarding the coal-dust fallen near the blown-out shot hole, perhaps that has come from the roof?—It may have done. There is a bit of roof-coal in it.

542. The shot-hole would be in 4ft. under ordinary circumstances?—Probably 3ft., or a little more.

543. Assuming the hole was 4ft. deep, there is 1ft. 11in. depth of coal gone away somewhere?—Yes.

544. That would be a considerable amount?—Perhaps as much as is lying there, but we have no direct evidence as to the depth of that shot-hole. It would probably be 3ft. 6in. or 4ft. 6in.

545. Can you account for the dust which has not been burnt, and also the pieces of timber lying unburnt?—Yes, because the heat at the bottom would not be so great as at the top.