

about it. It is very unfair, I think, to expect 5,000 men in a plant to be very happy about wearing goggles all day long and do a good job if you do not render this service that I am talking about.

"Cafeteria" Service

CHAIRMAN CAMERON: I think maybe we have another answer here to that same question while we are on it. Mr. Simpson, of the Caterpillar Tractor Company, I think has a cafeteria wagon that goes around and fits goggles. Will you tell them about that, Mr. Simpson?

H. S. SIMPSON: We have the problem of some 160 or 170 acres of property, of which 70 acres are covered with buildings. There is a lot of walking involved. We pay people to work, and if they are in the back end of the shop, we figured that we could save money by using a push cart. One of those ice cream carts, with a lot of disinfectants, etc. That cart is in circulation in each division continually on each shift. The operator of a cart goes right down an aisle and stops and talks to the machine operator, or whoever the person might be. One of those service men will cover from 100 to 150 employees per shift. There are five people doing that. It means that I continually have my hands on the focal point of that many conversations with that many employees. There are a lot of duplications, but it gives one a very good opportunity to know what the feeling is on certain things. It gives you a rather rapid return on the fittings.

On this fitting proposition and on prescription glasses, our safety glasses do fit very definitely into the program, but they themselves are not the total answer. The goggle manufacturer cannot make brains for your men.

Wednesday night five of our executives flew in here, and the top man of the group had his safety glasses on. He had gotten 155 miles away from the plant and had not thought of them yet—so they must have hurt his eyes very much. In decentering, we have an overall geometric sign through the center of the lens and quite often we can decenter two millimeters each way. We like to go a little to the outside, but if we go too far, on the second shift where we have artificial illumination we get back fighting

which gives you more trouble than anything else.

CHAIRMAN CAMERON: We haven't answered your question yet; we are still hoping that we may get the answer.

MR. WARZALA: I know that, Mr. Chairman. I think that in any intelligent discussion of the goggle question, we ought to make some distinction between goggles that are used in plants where corrosive liquids are handled and plants that do not handle them. On the train coming to Chicago I heard about an interesting accident. An office girl was sitting down doing her work, and another girl standing in back of her was handing her a piece of paper. In taking it, somehow the sheet of paper hit her eye. It came right across the ball of the eye. The girl naturally blinked her eye and continued working and did not report to the medical department that day. She reported the following day and by that time infection had set in, and I understand that the girl right now is in the Eye and Ear Hospital in New York City.

When you are handling corrosive materials the plain eye glass kind of a goggle will not do. Neither will the cup goggle with ventilation, that is, with screens, baffles or other things. We have used the nod-and-shake goggles, but there is a complaint against them. It is a small goggle that fits tightly over the eye. The frame is filled with water. When the goggle fogs up and you cannot see, you just shake your head and the water in the goggle washes it off. There is distortion of vision, headaches, and a lot of other things. Now these rubber cup goggles cover the eyes completely, but they are not satisfactory. So in any discussion of goggles that anybody makes, I should like to see a distinction drawn. Let us talk about goggles for non-corrosive materials and goggles for corrosive materials.

Suggested Committee Study

CHAIRMAN CAMERON: Let me ask Mrs. Merrill a question. Would it be possible to set up a technical subcommittee within the National Society that could study this problem during the year and report back to the Congress next year, or if there is a report in the meantime, could it be made available to the National Safety Council?

MRS. MERRILL: I think, if we can have the cooperation of our Industrial Advisory Committee and of the Safety Directors, that it would be possible through the National Society to carry a clearing of that information and to assemble material.

CHAIRMAN CAMERON: How does that sound to you folks in the audience?

MR. BOYLE: I was in the Willis Morrell plant at Elmira to get the result of an eye survey. This was prior to the time they made physical examinations of employees. A number of accidents had occurred and they found that two employees were totally blind in one eye and did not know it. I will ask the lady if she has ever had that experience.

MRS. MERRILL: I think for that particular question, the leader of the discussion might want to ask someone else for an answer.

CHAIRMAN CAMERON: Yes, I have quite a few questions just on physical examinations and how much stress should be laid on the eyes. Let's try to settle this equipment problem if we can. Is there anybody in the audience who has made a homemade goggle or something else that answers this drastic and corrosive problem?

Mining Experience

A. AMRAM (Hamlin & Co., New York City): We have been discussing eye protection for various industries, and I dare say the industry in which they have more accidents than anywhere else is the mining industry. According to Dr. Davidson, 28 per cent have defective vision, a larger percentage than in any other industry.

I should like to go on record as saying that I do not quite agree with the comment that this is perhaps due to inferior intelligence. In my work, which takes me to a few mines—I am not a mine inspector but nevertheless it is one of my duties and I am referring to southeastern Missouri, to Utah, and Nevada—I find that the miner is just as intelligent as any industrial worker.

We have the greatest difficulty, especially out in the western mines, to get the proper type of protection. I might perhaps illustrate that by a letter I have just received from a mine superintendent who is out in California. He says:

"Referring to our conversation in regard

to making our men wear goggles, we wish to speed this matter all possible. We just had another very bitter experience; one of our men had a little dust in his eye and the local doctor treated it for about ten days."

I might say that we are eighty miles away from any doctor, or at least from any eye specialist. The letter continues:

"As he did not improve, we sent him to a specialist and he reports that the man will have permanent impaired vision; probably due to improper treatment. As we told you, 60 per cent of our accidents are eye trouble caused by dust and if we can find goggles that can be worn underground without fogging we want to start using them at once."

Well, I thought of a friend of mine, a superintendent of a mine, who had had a great deal of trouble getting the men to wear the right type of goggles, but he finally thought that he had solved the problem; so I wrote to him so that I could inform our mutual friend in California what he had done. This is what he says:

"At one time we thought we had solved the problem with a certain type of glass goggle, but it turned out that due to certain air currents and conditions these goggles only worked satisfactorily in one place. With the same men wearing the same goggles and being transferred to another part of the mine, the glass fogged up immediately and it was impossible to use them successfully."

"These glass goggles are much more satisfactory where there is a perceptible movement of air, as it seems to take care of the fogging."

"We still use in most cases a very crude wire goggle, which you are perfectly familiar with and we all consider very crude."

DR. M. DAVIDSON: Mr. Chairman, may I say that I did not mean to reflect on the intelligence of miners. I used that word because Mr. Murray, who reported his findings, explained the eye incidence among miners on that basis and I was just quoting him.

A. H. TRESTRAIL (Pickands, Mather & Co., Caspian, Mich.): I have been in mining about twenty-one years. When we first started out we had the goggle question. We still have it somewhat. At first we tried to get men in certain occupations to wear goggles, and while we saved some eyes that