Otherwise the symptomatology of subacute intoxications occurring at the shale oil plant does not differ from that described by Larsen [12] (1944) and will not be dealt with more closely here. The period of healing has been four days on the average; only in one case has a malignant keratitis complicated the disease, and it occurred without permanently impairing the visual acuity.

The therapy is primarily intended to prevent secondary infection, as mentioned above. If the photophobia and the pain are intense, a drop of tetracaine hydrochloride U. S. P. (pontocaine® hydrochloride) solution is instilled, followed by an antiseptic ointment and a loose bandage. If no complications arise, the patient usually is free of subjective troubles after twelve hours of this treatment.

Persons with chronic inflammation of the eyes should not be employed in work exposed to hydrogen sulfide. Repeated subacute poisonings do not cause chronic eye troubles, however.

### So-Called Chronic Hydrogen Sulfide Poisoning

This state of disease would mean a lingering poisoning, conditioned by the action over a long period, or repeatedly, of concentrations which in themselves would not occasion symptoms of acute or subacute poisoning. The symptoms would probably be like those of the residual conditions found after acute poisoning, and therefore one expects to find mainly neurasthenic or otoneurological symptoms.

Five cases have occurred in which there has been reason to take the diagnosis of chronic hydrogen sulfide poisoning into consideration. All the patients complained of serious neurasthenic troubles; conditions for exposure existed but these patients had experienced no symptoms of acute or subacute poisoning. They recovered after about a month's rest from work. It is to be noted, however, that three of them had earlier presented nerve diseases of other origin without signs of sequelae, and it is possible that symptoms had developed only through the psychic strain of working at a place where there was risk of poisoning. It is also worthy of mention that all these three patients have shown psychogenic reactions during the examinations. Only in one case were otoneurological symptoms observed, and they could be explained as from the patient's previous nerve disease.

With the comparatively high frequency of acute and subacute poisonings within the shale oil industry one would rather have expected to find a high frequency also of so-called chronic poisonings. Their low frequency and the existence of earlier nerve diseases among the few cases contribute to one's reluctance to cite these cases as proof of the occurrence of chronic hydrogen sulfide poisoning.

*Investigation.*—In order to attempt a more detailed study of the question whether chronic hydrogen sulfide poisoning exists, we have tried to compare two groups of workers—more and less exposed—anamnestically and clinically. Group 1 consists of workers from divisions *A* to *E* (chart 1) who are, with considerable certainty, exposed to hydrogen sulfide in their daily work, often in concentrations exceeding 0.002 per cent. The men in group 2 work in the transport division, the shale quarry, the crushing house and the silos and are generally not exposed. It is probable, however, that occasionally this group, too, is exposed to hydrogen sulfide, for example when transporting to exposed divisions with the wind blowing in the direction from the sulfur plant to the shale quarry.