

March 1, 1933

Dr. D. W. Johnson
52 Greenridge Avenue
White Plains
New York

Dear Doctor Johnson:

As a medical consultant of the Ethyl Gasoline Corporation, I have had brought to my attention a case of dermatitis in a patient of yours, a Mr. [REDACTED]. The matter was brought to my attention through the New York office of the Ethyl Gasoline Corporation by way of a field representative who, I believe, talked with you about the case.

My reason for writing you is that I and my associates have had some experience with certain cases of dermatitis in various parts of the United States in gasoline handlers. A rather interesting situation has developed in that shortly after the introduction of Ethyl Gasoline to the general market, certain complaints arose in different parts of the country as to the injurious effects of Ethyl Gasoline. A very large proportion of all of these cases were skin irritations so that we became interested in the question of a possible contribution of the ingredients of Ethyl Fluid to the skin irritation which resulted from gasoline alone. After some considerable investigation of the matter both experimentally and clinically, we have established the fact that neither tetraethyl lead nor ethylene di-bromide is responsible for the skin irritation but that certain complex compounds which occur in particularly high concentration in "cracked" gasolines are responsible for the development of sensitivity phenomena similar to those which are associated with foreign proteins and certain other large molecules of complex chemical structure. These are either gums or gum forming materials in gasoline. We have seen a few patients who have developed this sensitivity to "cracked" gasolines regardless of whether the gasoline contained or did not contain Ethyl Fluid. My associate Dr. Machle has isolated these materials in one of the high boiling point fractions of gasoline. On the other hand, no reaction is produced by fumes of gasoline unless there is a low boiling point fraction to aid as the carrier. That is to say, these materials are so slightly volatile themselves that they require a volatile solvent or carrier to produce the effect. We are interested in the matter experi-

mentally and we hope eventually to identify the substance or group of substances which are responsible for this activity. It is apparent that before the days of "cracking" which developed almost simultaneous with the development of Ethyl Gasoline, there was either no such substance in gasoline or they were present in such small amounts as to be of relatively little importance.

Dr. Machle has not published his observations as yet and he does not feel that he wishes to do so until he has had an opportunity to carry out further experimental work. Moreover, so far as I know, there is nothing in the medical literature on this subject. Since this is a matter of considerable scientific interest as well as of practical importance, I should be glad if you would give me any details as to your observations in the case of Mr. Harding.

Very truly yours,

RAK:IS