CHEMISTRY

German War Gas Pioneer Helps in Search for Gas Defense

Dr. Haber on International Red Cross Jury to Reward Finding of Long-Sought Mustard Gas Detector

YPERITE, or mustard gas, the terror of the trenches, is now being combated by the German chemist, who, perhaps more than anyone else, made chemical warfare an effective part of modern battle.

A touch of drama is added to the search of the International Red Cross for an effective means for detecting mustard gas in small atmospheric concentrations, by the presence on its jury of awards of Dr. Fritz Haber of Berlin-Dahlem. A prize of 100,000 gold francs has been offered for the most efficient detector, and tests of about a score of entries will be made in Paris soon.

Associated with Dr. Haber will be a brilliant group of scientists representing nations formerly enemies of his own, as well as one neutral power. They are Sir William Jackson Pope, professor at Cambridge University, England; Prof. M. F. Swarts of the University of Ghent, Belgium; Prof. M. G. Urbain of the Sorbonne University, France; and Prof. H. Zangger of the University of Zurich, Switzerland. Dr. L. Demolis, technical counsellor of the International Red Cross Committee, will act as secretary of the jury.

In the near future the International Red Cross Committee hopes to organize two similar competitions, one for the best anti-gas mask and the other for large-scale shelters against poison gas. The organization of competitions of this kind is in line with the campaign for the protection of civilians against chemical warfare which the International Committee is conducting and in connection with which it has brought about the formation in a number of countries of mixed commissions composed of chemists, doctors, technicians, representatives of the Government and of the Red Cross, to work out methods of defense.

Yperite has been termed the "most formidable weapon of aggression" because of its unusual characteristics of permanence and insidiousness. Mere contact with the soil or contaminated objects as much as two or three days after the attack is sufficient for a good case of being gassed. An odor of mustard is all that, at first, tells the tale. It is only after four to six hours that the victim begins to feel the effects—temporary blindness, suffocation, burning and blistering from the gas that penetrates all ordinary clothing. This retarded action is due to the fact that yperite is projected not in a gaseous state but as droplets.

To date yperite has eluded all attempts at mastery. The gas mask had, by 1918, been perfected to the point of protecting the wearer against all chemical warfare gases. Yperite, however, requires special protective clothing as well as a gas mask. Although many detectors were used during the war, none was completely successful in finding the whereabouts of the elusive mustard gas. The ideal detector is still being sought. It must be sensitive enough to signal even a feeble trace of the gas; and function rapidly enough to give time for self-protection. It must be easily handled and sufficiently inconspicuous for placement in front of the lines if necessary. Finally, it should be able to detect all the various gases used in chemical warfare.

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A seismologist declares that people in houses feel exaggerated effects of an earthquake, whereas people in automobiles get a minimum shock.

ECOLOGY

March Snowstorm Will Help Rather Than Hurt May Flowers

MARCH has brought more real winter weather to most of the country than any of the three preceding months, but even if the "blizzard" that marked the month's first week-end should be repeated it would probably not do the spring flowers any harm. More likely it would benefit them, for the country in general is still below the season's rainfall quota.

The sprouting plants and precocious flowers that come as early as the middle of March are always ready for a little snow, anyway, and no temperature above zero Fahrenheit bothers them.

One very curious plant, that seeks its place in the sun while winter still lingers in the skunk-cabbage. It sends up its fleshy-hooded purplish flower-structure when only the top of the soil has thawed, and frequently actually cracks the thin ice that lies over it in flooded swamps.

Another strange flower that is in bloom in the woods now, in spite of belated rough weather, is the witch hazel. This is a bush, whose bark, twigs and leaves are used in medicine. Its flowers always come in the winter. They are little, inconspicuous things, with narrow petals, that look like bits of yellow string, but they are genuine flowers none the less. They begin to blossom in late November or in December, usually stop during January and February, and then wake up and finish the job in March.

It is the early birds, rather than the precocious flowers, that are more likely to suffer from an encounter with a heavy March storm. Most of the hardy early comers, like robins and redwing blackbirds and cardinals, do not mind a few days of snow and wind; migrating birds are well used to fasting anyway.

But if a March storm turns partly to rain, freezing into "glaze" as it falls, it may coat their feathers and make them unable to move. In such frozen straitjackets the poor things of course very easily perish. Or, if the birds are well sheltered during the storm they may fly forth afterward, seeking food but not finding it, because every weed stalk and tree twig is cased in impervious ice. At such times it is well for charitable householders to remember the migrating birds with gifts of crumbs, and a pan of warm water set where cats can't stalk the birds as they drink.

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