In most fire extinguishers either or both of these principles are involved. When water is thrown upon a fire to put it out the result is plainly to cool the burning materials below the point of ignition, although when the material is flooded with water the air is also excluded. When a fire extinguisher, like soda, is thrown upon a burning surface the result is more or less twofold. The cold powder helps to chill the flaming material below the point of ignition, and at the same time excludes the air by two means: first, by giving off carbon dioxide, and, second, by covering the burning surface with a non-inflammable material.

It has not occurred to the reader, perhaps, that sometimes it may be very dangerous to throw water on a flaming material. Yet such is the actual condition. For example, if liquid paraffin be on fire the addition of water may cause an explosion. The hot paraffin floats upon the water, and in this way prevents the steam escaping, until suddenly the steam escapes with an explosive rush, carrying with it the flaming paraffin in a burst of blaze, which almost fills the room, and then the burning proceeds more violently than before. The same thing happens with all burning oils and easily combustible liquid organic substances, which float on water. Burning benzol, benzine, naphtha, gasoline, kerosene and acetone all burn in the same way, so that for these fires water should not be used, but sand is the best known extinguisher.

A barrel of fine sand, standing in a readily accessible place, is a most valuable fire extinguisher to possess. When the sand is fine and clean it is easily scattered over the burning surface, and chills the surface below the point of ignition as well as excluding the air. The sand is easily swept up and removed after the fire has been put out, and everything that has been damaged by the fire remains in perfect condition.

J. ROBILLARD, '16.