

Temperance Department.

Alcohol—What is it, And How Produced.

Alcohol is a colorless, intoxicating liquid produced by fermentation. It looks so much like water that it might be readily mistaken for it at first sight. But it is so much unlike it in its real nature, that you can easily make some striking experiments.

Water will put out fire. Alcohol will feed a fire. It will also burn by itself.

Suppose, then, you have two clear glass vials filled, one with alcohol, one with water.

You may fold a slip of paper, and dip one end into the alcohol, and the other into the water. Touch the latter with a match; it will not burn. Touch the light to the other end; it will flame up at once. Let it burn till it reaches the part wet with water, when it will go out.

Alcohol is made by art and man's device. You may look for it in nature. You may hunt through all the forests, and examine all the springs, and the caves, and the rivers, and the ponds, the dew of grass, the honey of flowers, the sap of trees, the juices of fruits, and the milk of animals, and you will find no alcohol in any of them. So far as we know, the Creator has never made alcohol.

Men make alcohol by letting sweet liquids stand and decay. The sweet juices of apples, berries grapes, and other fruits are often used for this purpose.

In Asia they make an alcoholic drink from rice. In all countries where fruits and grains are grown, men can make some of them into alcoholic drinks, if they wish to do so but these alcoholic drinks are never found ready made.

There is no alcohol in the fruits and grains. The sugar in the fruit is changed into alcohol, by fermentation. Or, if grain is used, the starch is first changed to sugar, and then the sugar is changed into alcohol, by fermentation.

This fermentation is nothing but the decay of a sweet liquid. You may have seen apples, or pumpkins or tomatoes decay and go to pieces.

Some of the juice runs away, some of the solid matter turns into gas, and goes off into the air, until in some way all is gone. When the sweet fruit juices are pressed out and put into a dish, they too decay and go to pieces, new sub-

stances are formed, and one of these new substances is alcohol. This decay is a filthy process.

When it takes place in our stewed fruits we do not eat them, but quickly send them away from the table. All alcoholic drinks are decayed drinks, for they are made of the decay of sweet liquids, or distilling out the alcohol which has been produced by decay.—*Julia Coleman.*

Temperance Items.

—Compulsory temperance education campaigns are being pushed in Michigan, Indiana and Ohio by the Woman's Christian Temperance Union.

—Elementary physiology and hygiene, with special instruction upon the effects of stimulants and intoxicants upon the human system, are now among the required subjects in the Vermont schools.

—Cardinal Manning writes to one of the Middlesboro' Temperance Society: "I can on my own knowledge derived from Sir Garnet Wolseley's own lips, affirm that he is a strict total abstainer. His army in Egypt is the first, I believe, who ever carried tea in their canteens to assault an entrenched camp."

—At the opening of the public water-works at Kilcreggan, Scotland, the Duke of Argyll said that, in letting out land for building purposes, he now did so only on the express condition that no whisky-shops should be erected on the land; and to this mode of fighting the liquor evil he intends to adhere in the future.

—A letter from India reports that one of the various obstacles to the work of teaching the children of the poor is the increasing intemperance of the lower classes in Bengal. Within a few years the price of intoxicating liquor has become so low, and the manufacture of it so general, that even the women and children are forming intemperate habits.

—As a specimen of the promptness and efficiency with which the laws are enforced in the city of New York, where the liquor-dealers are concerned, it is stated that the District Attorney's office in this city now holds six thousand indictments against liquor sellers. Probably not six of the six thousand men are in any fear about the matter.—*Observer.*

—Two years ago, Rockford, Ill., which had been for some time a "no-license" town, voted for licen-

sing. As a result it was found necessary to increase the police force from one to eight, and on Christmas Day the Mayor was obliged to order the closing of the saloons in the afternoon, as the police were unable to cope with the prevalent disorder.

—In accordance with the recent decision of the Executive Committee of the Woman's Christian Temperance Union, the two temperance papers, *Our Union* and the *Signal*, have been consolidated. The new paper is called the *Union Signal*; it is published weekly in Chicago, and is to be the sole official organ of the Woman's Christian Temperance Union.

—In the recent circular sent out by the Executive Committee of the National Organization of Liquor Dealers, it is conceded that "neither separate communities nor single States can successfully fight the battle against prohibition," and this fact is used as an evidence that "a national anti-prohibition organization has become a necessity." That ought to prove encouraging news for temperance workers.

—Temperance work is looming up in India. Fifteen years ago there was no temperance society in Calcutta; now there are several, both for adults and juveniles. The Brahmo Somaj, the new religious body in India, takes strong ground against the use of all intoxicating liquors and also against that of tobacco and opium. There are one or two temperance papers, and some others willingly print temperance articles and news.

—The consumption of beer in the German Empire amounted last year to the enormous total of 830,000,000 gallons—Bavaria taking 265,000,000, and the smaller States the rest. Thus the general average for each individual is eighty quarts a year, but the average inhabitant of Baden drinks about 170 quarts annually, or nearly a pint a day, while it is estimated that, due allowance being made for women and children, the adult male Bavarian must account for nearly two quarts a day. The taxes on German breweries amount to, one way or another, to about \$4,200,000 annually, besides some \$100,000 levied on exports of beer.

Tobacco vs. Education.

It is safe to regard tobacco as a poison and class it with arsenic, lead, corrosive sublimate, etc., this being still more active and deadly.

Taking this for granted, therefore, it is reasonable to infer that while the hardy out-of-door laborer, for a time, may use tobacco and not seem to be very much injured by it, those of sedentary habits are the special victims. Brain labor diverts vitality from the stomach under the most favorable circumstances; and when to all of this, we add the direct effects of tobacco on the digestive powers and the indirect tendencies in the line of general depression—the semi-paralysis, as the legitimate action of nicotine—we need not be surprised at the fact that the victim of the weed, in the matter of mental vivacity, power and true development is not the equal of the non-user. If, to the sedative effects we add the debilitating influences, we shall easily see the reason for the fact that indolence in mental pursuits is perfectly legitimate. This class lack the vim, the activity, the energy and endurance of the average student.

On this point we have ample testimony. In 1862, the Emperor of France issued an edict forbidding the use of tobacco in the public institutions in consequence of learning that the average standing, both mental and moral, was lower among the pupils in colleges and schools of those who used tobacco, compared with the abstainers. And since that time the minister of public instruction, learning from the proffers that "in every grade the students who did not smoke outranked those who did, and that the scholarship of the smokers steadily deteriorated as the smoking continued," has issued a circular to the teachers in both colleges and schools forbidding tobacco, as injurious to physical and intellectual development.

On the authority of the *British Medical Journal*, the observations of a medical gentleman are given who carefully watched the effects of tobacco on thirty-eight boys, between the ages of nine and fifteen years. Of this number, he learned twenty-seven gave evidence of nicotine poisoning, twenty-three various derangements of the *intellectual faculties* and a strong appetite for ardent spirits, with various other physical ailments.

In Germany, a nation of smokers, the government is so convinced of the evils of the use of tobacco, especially upon the young, that it has taken measures to suppress smoking in the streets, the law to apply to all under sixteen years of age, or the students more especially.

I may add that in our schools, es-