

Facts about Cigarettes.

A recent number of the *Scientific American* contains an interesting communication on the subject of cigarettes from the pen of J. W. Mallet, Professor of Chemistry in the University of Virginia. Professor Mallet says:—

TO THE EDITOR OF THE SCIENTIFIC AMERICAN.

Dear Sir:—The recent publication in your journal of the results of an examination by me of some brands of cigarettes in general use has led to my receiving a number of letters of inquiry, some in reference to the mode of making the examination, some in regard to the names of the brands examined, and others expressing some surprise at the results reported and seeking confirmation of the statements which have been published.

The examination in question looked simply to ascertaining whether the cigarettes tested did or did not contain any traces of foreign adulterating materials alleged to be sometimes introduced by the manufacturers.

The methods of testing were simple, well approved and easily applied, and the results were clear and positive. In such matters a competent chemist reaches conclusions which admit of no doubt or uncertainty, and the results reported are not opinions, but scientifically ascertained facts.

It is the more remarkable that there should be any hesitation in accepting these conclusions, and that any credit should be given to the reckless assertion sometimes made as to the general adulteration of cigarettes with opium, etc., since numerous other analyses have before now been made by other trustworthy chemists, and in all cases the same general result has been recorded. I know of no scientific evidence to the contrary.

It is, moreover, apparent to any unprejudiced person, competent to

consider the facts, that such adulterations as have been alleged could only be made out of sheer perversity and would be in plain contravention of the business interests of the manufacturers.

Ignorance of easily ascertainable scientific facts is, however, common enough, as is often illustrated by the brown, oily material formed in the smoking of tobacco being pointed out as nicotine, though in reality this is merely the *tar* produced by the action of heat on the woody fiber of the leaf.

Nicotine when pure is a colorless fluid of somewhat oily consistence and strong, peculiar, penetrating odor, but it darkens on exposure to air and light, becoming first yellow and then brown, so that it *looks*, in this darkened condition, something like the tarry matter which soils a smoker's fingers or a handkerchief through which tobacco smoke is exhaled, or is often noticed as deposited in the stem of a pipe. This tarry deposit has nothing essential in common with nicotine, and contains but traces of this alkaloid, when any at all. A part, but only a small part (about one seventh in the experiments of Melsens), of the real nicotine of tobacco is volatilized without decomposition; the remainder is burned and destroyed in the process of smoking.

The sensational statements occasionally made in regard to arsenic, copper, etc., as present in the paper wrappers would be at once seen to be grossly improbable if it were but remembered that the wrapper of a single cigarette weighs little more than half a grain, and that in such a minute quantity of thin, delicate white paper there could be introduced but infinitesimal amounts of such foreign adulterants without their presence becoming perceptible to common observation, by the senses, aside from the positive scientific evidence that they are *not* present.

The simple facts are, that such cigarettes as I have examined, representing a large part of those in general use throughout the United States, are made from pure, light-yellow tobacco of the high grade produced on certain special soils, prominently in certain of the southern counties of Virginia and the adjacent portion of North Carolina, with wrappers of the best quality of harmless vegetable fiber paper, and are entirely free from the adulterants which it has been asserted are present, with no evidence in favor of such assertion, and in absolute contradiction of the scientific evidence actually available.

I am, sir,

Your obedient servant,

(Signed)

J. W. MALLET,
Charlottesville, Va.