

## SCIENTIFIC DEPARTMENT.

"What is the use of the Public Analysts of the Dominion?" said a prominent manufacturer of this city to the writer not long ago, "every year the Commissioner of Inland Revenue issues a report stating the number of samples of various substances that have been examined by the analysts, and the proportion of these in which adulteration has been detected. Here the matter ends." The truth of this statement cannot be questioned, for we never hear of any one being prosecuted for adulterating food. The extent to which coffee and spices are adulterated by those who grind them in this city is something frightful. Tons of "smut-dust"—i.e., the dust taken out of the wheat before it is ground—are sold annually to coffee and spice dealers. Indeed, these parties appear to make no secret of this matter, for it is no rare thing to see loads of this or similar material delivered at their premises. There is a crying necessity in our land for some regulation to prevent the adulteration of food. In Paris there is what is called a Municipal Laboratory for testing all matters having any bearing on health. During April about seven hundred objects were presented for examination, and nearly eighty per cent. of these were adulterated. Wherever adulteration is detected the manufacturer or dealer is prosecuted. A notable feature in this Laboratory is the attention paid to testing for Trichinæ. An instrument has been constructed for boring small holes in hams, which are not visible when the ham is cooked. The flesh taken out is examined with the microscope.

At a *conversazione* recently given to Prof. Helmholtz at London, an unpublished letter from Sir Isaac Newton was exhibited. This letter is most interesting when we consider the numerous applications of electricity in use at the present time. It is as follows, with a few changes in spelling:

"London, Dec. 15th, 1716.

"Dear Doctor: He that in the mine of knowledge deepest diggeth, hath like every other miner, the least breathing time, and must sometimes at least come to *terr. alt.* for air.

"In one of these respiratory intervals I now sit down to write to you, my friend.

"You ask me how, with so much study, I manage to retain my health. Ah, my dear doctor, you have a better opinion of your lazy friend than he hath of himself. Morpheus is my best companion; without eight or nine hours of him your correspondent is not worth one scavenger's peruke. My practices did at the first hurt my stomach, but now I eat heartily enow, as you will see when I come down beside you.

"I have been much amused by the singular phenomena resulting from bringing of a needle into contact with a piece of amber or resin fricated on silk cloth. The flame putteth me in mind of sheet lightning on a small—how very small—scale. But I shall in my epistles abjure Philosophy, whereof when I come down to Sakly I'll give you enow. I began to scrawl at 5 min-