

A special meeting of this taxpayers' protective association has been called to be held this evening at 7:30 o'clock. \* \* \*

'The passage of the proposed ordinance,' said a prominent taxpayer this forenoon, 'would be nothing short of an outrage.'

I wonder what this 'prominent taxpayer' thinks about the ordinance now. It is a sad thing to suggest, but possibly he himself or some member of his family has died as a result of the senseless opposition, in which he took part, to a reasonable and public-spirited health measure.

In an evening paper of March 28, 1902, there appeared a note to the effect that a correspondent of the Associated Press had a talk with the State Health Officer of Texas, regarding the mosquito theory. He was reported as of the opinion that 'The theory won't hold water,' and stated that he would not accept it. He stated that he had been familiar with yellow fever from childhood and 'knew enough to keep rigid quarantine and disinfecting rules in effect.' A little more than a year later, however, he had a new lesson in the Texas outbreak of yellow fever in the late summer and autumn of 1903, and he too changed his mind in regard to mosquitoes.

L. O. HOWARD.

#### THE POSSIBILITY OF ABSORPTION BY HUMAN BEINGS OF NITROGEN FROM THE ATMOSPHERE.

ANY one reading this article would conclude that it has been proved that plants can absorb free nitrogen from the atmosphere without the aid of bacteria, and that Dr. Wohltmann is a believer in this. The quotation which the writer gives does not bear out this interpretation of Dr. Wohltmann's work:

The association of the plant with the bacteria is not a necessity but an expedient, and whenever there is a rich supply of nitrogenous elements in the soil, they (the plants) dispense with the bacteria and *with the free nitrogen*, which the latter make available, by directly secreting it from the chemical combination of soil or air in which it is held suspended.

The italics are mine, but the translation is by Mr. Gibson. Dr. Wohltmann is far from saying that plants absorb free nitrogen in the

absence of bacteria; but distinctly says, in the above quotation, that in the absence of the bacteria they dispense with the free nitrogen and take the nitrogen necessary for their growth in combination from the soil.

This is no new discovery, for Hellriegel, in 1886 and later, showed by decisive experiments that when the bacteria are absent, Leguminosæ, like other plants, can only take their nitrogen in compounds, and their growth, within limits, is a function of the combined nitrogen presented. In the presence of bacteria Leguminosæ can utilize the free nitrogen of the air, and build it up into organic compounds.

Before speculating on the possibility of the absorption of free nitrogen by human beings, it is well to remember that there is no evidence that higher plants can assimilate nitrogen of the air without aid of bacteria.

G. S. FRAPS.

#### A TREE'S LIMB WITHOUT BARK.

TO THE EDITOR OF SCIENCE: In the summer of 1902 a large ash tree, some two feet in diameter, on the university campus was struck by lightning. The current, after knocking off a few branches, passed down on both sides of the main trunk leaving here merely two small furrows in the bark. From one limb, some six inches in diameter and perhaps ten feet from the ground, the bark all around was completely stripped for a distance of about five feet. To the surprise of some of us the leaves on this branch did not wither, nor fall to the ground till the leaves of the rest of the tree fell in the autumn. The next spring the leaves put out on this branch as on the rest of the tree; so again in 1904 and again the present year. In other words, the vegetation of this branch, wholly girdled for a space of several feet, differs from that of the rest of the tree only in being slightly less vigorous. The wood of the girdled portion looks much like a seasoned log of ash wood. The tree itself is rather less vigorous than the neighboring ashes, and will probably survive but a few years longer. Is it common for a limb,