

connexions between web-tube condensers in air, and then again in water, noting the discrepancies.

It still remains true, however, that with the lay-out described in my article, and under the limitations of use which I there set out, the 'capacitances' which I measured are predominantly due to capacity. For example, the soil-water experiment which I presented was preceded by trials of such condensers in liquids of varied conductivity; a typical set of readings was as follows:

Air	10	m μ F.
Distilled water	44½	"
Nitric acid, 0.001 per cent.	49	"
" 0.010 "	56	"
" 0.100 "	57½	"
" 1.000 "	59	"

It follows that such changes in conductivity as are likely to be found in a soil might be expected to deflect the readings by some 5 m μ F. at most, whereas the range shown in the actual soil-water experiment was around 50 m μ F.

In his numerical examples, Dr. Schofield makes a slight mistake by calculating for resistances in series, whereas these are really in parallel, whether for the case of a web-tube or for a cotton-bale. Resistances of the order of 1,000 ohms in series would obviously dominate the situation, as he says. Actually the correct formula is:

$$\text{'Capacitance'} = \sqrt{C^2 + 1/w^2R^2},$$

and so long as R is not unduly small (for example, when the bale hoops are shorted by a saturated hessian covering) its variations are relatively not important.

In dealing with the physical properties of cotton we are on a fairly well-known ground, and experiments on the changes in 'capacitance' of a perforated plate condenser containing cotton have been made similarly to those in which Slater³ and Goshawk⁴ measured the changes of conductivity and of dimensions under various moisture contents. The 'capacitance' changes are directly proportional in outline to the weight changes until very dry conditions are reached, less than 2 per cent of moisture content; at this point the phase change first discovered by Slater is clearly seen, as if the dielectric constant of the water had there altered to less than half its usual value. But the region of practical working conditions for testing freshly pressed cotton bales (around 8½ per cent moisture content) is far above this, and is equally far below the occurrence of such low resistances in parallel as would seriously deflect the readings.

In these circumstances, Dr. Schofield will forgive me if I venture to disagree with his contention that there is nothing in my article to show that I was not mainly engaged in measuring resistances. The article would not have been published if that were so. Of course, the absence of explicit references therein to elementary trials which were made with non-inductive resistances in circuit, as well as test-alterations of frequency, may well have misled him into thinking that the work was even more amateurish than my apology indicated it to be.

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Feb. 1.

¹ NATURE, 131, 96, Jan. 21, 1933.

² Moulton, E. B., "Radio-Frequency Measurements", Griffin, 1931, in preface.

³ Slater, F. P., *Proc. Roy. Soc., A.*, 1906. See also (4).

⁴ In W. L. Balls, "Quality in Cotton", Chap. iii.

Is Plasticine Edible?

WE were keeping some snails (*Helix pomatia*) without food, under a bell-jar with a wide tubulure at the top; in the tubulure was a cork bearing a thermometer. We found that the snails ate the cork, so, to protect it, we covered it with a thick layer of red Harbutt's plasticine. To our surprise, the snails ate away a large amount of the plasticine, and produced faeces consisting of plasticine 'mouthfuls' loosely stuck together into irregular cylinders.

At the time of eating plasticine, the snails had been hibernating in a cold store for 18 months, after which they were brought into a warm room and made to emerge by immersion in water. They were therefore extremely hungry. In 24 hours a snail weighing 25 gm. ate 0.5 gm. of plasticine and produced the same amount as faeces. This is as if a 10-stone man were to eat 3 lb. of plasticine in a day.

We have heard many strange stories of substances eaten by hungry snails, but believe this to be the strangest.

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Hermaphrodite Frog

A FROG with abnormal genitalia was brought to my notice during class work. A pad was present on the forefingers as in a normal male. The kidneys were longer than in a normal frog and reminiscent of those of the newt. The right testis was normal but the left had embedded in it very distinct ova. Vasa efferentia arose from both testes. The left oviduct was similar to that of a normal female but the right was thinner and only vaguely connected with the cloaca. The mesonephric ducts were normal but apparently lacked vesiculae seminales.

The specimen, with others, was collected from a pond near Radley College, Abington, Berks, and it will be interesting to discover if others occur in this area.

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Caution in Christening

THE names of public characters should be chosen circumspectly. To christen the antiscorbutic agent (granted, that we at last have it in hand) *ascorbic acid* is to do it slight justice—even to rob it of the public appreciation it deserves. The name, in fact, is a scurvy one: neither has it obvious significance nor can it well be transposed into either French or German; in no tongue will it have lilt.

Skorbut, whence scorbutic, apparently is of low German or Dutch origin. Why not call the spade a spade: simply, *antiscorbutic acid*—antiskorbutsäure—acide antiscorbutique? I hope the distinguished magician who has so deftly conjured one of the great mysteries of our being into tangible form will accept the suggestion.

HENRY E. ARMSTRONG.