These results suggest that the localization of the negative d.c. corona is an effect due to the electrode, and that the mechanism of the discharge is not much different whether it is localized or not. It is surmised that each individual discharge is associated with a cathode spot which, in the case of a stationary electrode, maintains its position by thermionic emission.

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Specific Heat and Heat of Wetting of Wood

Kelsey and Clarke[1] have recently discussed the variation with temperature of the integral heat of sorption of water by wood (ΔH), and its bearing on the specific heat (c_m) of wood containing m gm. of moisture per gm. of dry wood. Empirically, it is found that c_m is greater than the specific heat (c) calculated from the specific heats and proportions of the components, assuming a simple mixture law[2]. This effect is not confined to cellulosic materials, but has been observed on starch[3], gelatin[4], dried foods[5] and other hygroscopic substances. The suggestion has previously been made[6] that the excess specific heat could be accounted for in terms of the change in ΔH with temperature (T); Kelsey and Clarke quote the appropriate thermodynamic equation as

$$c_m = \frac{1}{1+m}\left\{mc_w + c_0 + \left(\frac{\partial \Delta H}{\partial T}\right)_{p,m}\right\}$$

where c_w is the specific heat of the water, and c_0 is the specific heat of the dry wood. Putting $c_w = 1$, and noting that

$$c = (m + c_0)/(1 + m), \qquad (1)$$

then

$$c_m - c = \Delta c = (\partial \Delta H/\partial T)/(1 + m) \qquad (2)$$

where Δc is the excess specific heat.

During the past two years, we have measured the specific heat and heat of sorption of a batch of beech sawdust as a function of temperature and moisture content[2,6]. Our results enable a direct check on equation (2) to be made (Table 1).

Measurements at temperatures of 30, 40, 50, 60° C. gave $c_0 = 0{\cdot}31$, $0{\cdot}32$, $0{\cdot}33$ and $0{\cdot}34$, respectively. The values of Δc in Table 1 were obtained by computing c from equation (1) and subtracting it from the observed specific heat (c_m). The values of $(\partial \Delta H/\partial T)/(1 + m)$ were obtained by plotting ΔH at a given moisture content against temperature, fitting a curve by eye and differentiating graphically. The error in the measurement of c_m is estimated to be about $0{\cdot}005$; but owing to the accumulation of errors in the measurements, in drawing the curves, and in the graphical differentiation, the uncertainty in $(\partial \Delta H/\partial T)/(1 + m)$ is at least $0{\cdot}01$. To the accuracy of the results, therefore, the values in Table 1 satisfy equation (2) completely.

Table 1

m	T (° C.)	Δc	$(\partial \Delta H/\partial T)/(1+m)$
0·107	30	0·02	0·02
	40	0·02	0·02
	50	0·02	0·03
	60	0·04	0·05
0·140	30	0·02	0·02
	40	0·03	0·03
	50	0·03	0·04
	60	0·06	0·05
0·216	30	0·03	0·03
	40	0·04	0·04
	50	0·05	0·06
	60	0·08	0·07
0·310	30	0·04	0·05
	40	0·05	0·06
	50	0·06	0·07
	60	0·09	0·09

Equation (1) is often used for calculating the specific heat of wood for technical applications[7]; but this procedure can evidently lead to errors of the order of 10 per cent. The general agreement between our results and those of Kelsey and Clarke, obtained on an entirely different species, is good, and suggests that the specific heat of wood containing moisture will not depend greatly on species. This suggestion is supported by the work of Dunlap[8], who found the specific heat of dry woods to be practically independent of species.

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Canals within Pancreas Cells

There have recently appeared in *Nature* and elsewhere articles by Lacy[1] describing canals within pancreas cells. These he believes represent the Golgi apparatus; and he has published[2] an electron photomicrograph purporting to show one of these "Golgi canals" in section.

In point of fact, intracellular canals have been described in the pancreas by numerous observers, especially Müller[3] and Holmgren[4]; but the possibility that the Golgi apparatus of the pancreas cells may be no other than a deposit of silver or osmium upon the pre-existing canals of a functional intracellular duct system seems to have been overlooked by most workers, with the exception of Saguchi[5]. Lacy, however, has overlooked Saguchi's classical study, though he has undoubtedly re-described the same intracellular canals depicted by the Japanese worker. Further, Lacy assumes in contradistinction a physiological function for his "Golgi canals" by postulating a role for them in a "lipoidal secretion cycle". He also claims that his discovery of the canals necessarily disproves the Golgi artefact theory.

In order to test Saguchi's conclusions, I have attempted to inject the intracellular canals from the pancreatic ducts with a 'mass' consisting of a laked blood medium. After sectioning, the hæmatin was revealed by staining the preparations with a hæmatoxylin solution. This procedure was found to give a brilliancy and precision hitherto unobtainable