exchange on the strong H...O interactions, and this is confirmed by the experimental results.

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Mechanism of the Bursting of Bubbles

THE formation of drops, as the result of a gas or vapour bubble bursting at the surface of water, has been attributed to the break-up of the jet formed when liquid flows into the crater left by the burst bubble, and photographic evidence indicates that large drops are, in fact, formed in this way[1].

We have observed, however, that two separate mechanisms are involved in the bursting of a bubble—

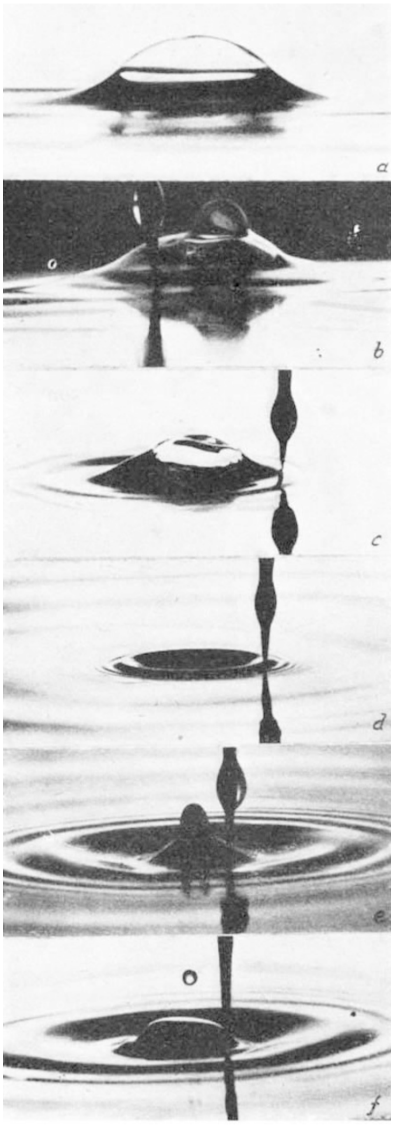

Fig. 1

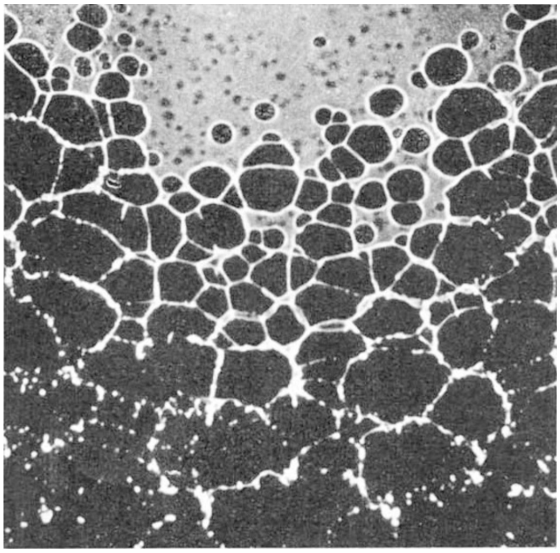

Fig. 2

one producing a cloud of droplets of diameter about 60 microns, and the other a few comparatively large drops of diameter about 1 mm. The various stages of the collapse are illustrated in Fig. 1, *a–f*. It will be observed that in the initial stage a protuberance develops on the hemispherical surface of the bubble, (*b*), the collapse of which produces the cloud of fine droplets and leaves a large gap in the bubble envelope (*c*). The escape of gas through this gap effectively disperses the cloud and imparts to the droplets a high velocity. Thereafter a crater is formed at the site of the bubble (*d*), and the incoming rush of liquid produces an unstable jet (*e*), which breaks up into one or more large drops (*f*).

Fig. 2 illustrates the way in which a thin film of liquid disintegrates to give the fine droplets observed in the initial stage of the burst.

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A Long Spacing at about 30 kX. confirmed from a Fireclay

THE white clay from the Kurata Mine, Yamaguchi Prefecture, Japan, is largely composed of kaolinite; in flinty massive specimens it is commonly well crystallized, whereas in powdery massive specimens it is disordered. The clear resolution of the $(11\bar{1})$, $(1\bar{1}\bar{1})$ doublet is revealed in X-ray powder reflexions of a certain flinty specimen. The disordered behaviour is marked by a band of the two-dimensional type associated with (020). These facts were first reported by G. W. Brindley and K. Robinson for specimens from England. It is noteworthy in the present case that reflexions from the latter type are frequently accompanied by those of montmorillonite as well as a clear powder reflexion at 29·8 ($\pm$ 0·5) kX. The basal reflexions of the montmorillonite are