surface water in excess of the doming to be expected from the lowered air pressure. There is no way for the excess water to escape except downward, and this piled-up sea water is lighter than normal.

There are three factors which affect the density of sea water: the temperature, the pressure, and especially the salinity. In the interior of a hurricane, typhoon, or extratropical cyclone, the pressure is lower and the temperature is higher than in the surroundings. Hence, the surface water expands, and the density is less. Furthermore, there is heavy precipitation, so that the salinity is lessened and the density decreased. Therefore, the piled-up lighter surface waters, escaping downward through the core of the water vortex, penetrate into the heavier water at depth. Buoyancy will come into play. The downward-plunging lighter water will be stopped and forced back upward by the surrounding heavier water, and thus vertical oscillation of the vortex will begin. Since the vortex, as stated, must extend to the sea bottom, the vortex oscillator will deliver to the ocean bed a series of blows which will set the ground vibrating and cause it to radiate elastic waves. A hurricane may have a horizontal diameter of 200–300 miles, and an extratropical cyclone may cover a much greater area. Hence, the mass of water in motion is great, and its vibratory momentum will be ample to account for the observed energy of the microseisms.

Let the linear vector velocity of a small portion of the water be $\mathbf{q}$. Let ρ be the density, and let $\frac{D}{Dt}$ be the Stokes operator. Then the Eulerian equation of motion of the water will be $\frac{D\mathbf{q}}{Dt} = \frac{\partial \mathbf{q}}{\partial t} + \mathbf{q} \cdot \nabla \mathbf{q}$, and the equation of continuity, $\frac{\partial \rho}{\partial t} + \rho \operatorname{div} \mathbf{q} + \mathbf{q} \cdot \nabla \rho = 0$.

To simplify the discussion, let us assume a columnar vortex, in which the angular velocity ω is the same for all parts and $\frac{D\omega}{Dt} = \omega \cdot \nabla \mathbf{q}$, and a region outside this core, in which the curl vanishes, the motion depending on a velocity potential ϕ, so that $\mathbf{q} = \operatorname{grad} \phi$ and $\frac{D\rho}{Dt} = \rho \nabla^2 \phi$.

Let the average density of the normal sea water in the surroundings be $\rho_0 = 1.027$, and the density of the lighter water piled up to an average excess height h, $\rho_1 = 1.02$. Let the time of motion of the lighter water down and back be the period of oscillation of the vortex and the same as that of the microseisms, $T = 6$ seconds. Then, combining Newton's second law of motion with the buoyancy law, we find that $h = 2$ mm. Assuming a depth of 7 kil. and a radius of 200 kil., the kinetic energy involved in one blow on the ocean bed will be about 10^{17} ergs.

Using a formula given by Jeffreys (*Geophys. Suppl. Monthly Not. R.A.S.*, 1928, **1**, 22–31), $E = 8\pi^3 \rho R \sin \Delta \frac{a^2 H V\, dt}{T^2}$, where R is the radius of the earth and ρ is its density, Δ is the arcual distance from the wave source to the point of observation, a is the amplitude of horizontal motion, H is 1.12 times the wave length, V is the wave velocity, and T is the wave period, we obtain for microseisms of 10 μ range also about 10^{17} ergs as the energy radiated in one wave.

This tentative solution is offered merely as a suggestion in the hope that it will stimulate further investigation of the problem.

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Verb Derived From "Fission"

The present letter was stimulated by the communication from Ira M. Freeman (*Science*, 1946, **104**, 87) in which the adjective derivable from the noun ''fission'' was discussed.

In conversations with the ''atomizers'' one often hears the verb, presumably derived from this noun. The verb, as used, is spelled ''fiss'' and pronounced similarly to ''fish.'' I maintain that if there is a verb derivable from this noun, the above verb is certainly incorrect, for it does not seem to fit into the general scheme of the derivations in English grammar. I should welcome an appropriate authoritative commentary on what seems to me an interesting variation of the language.

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Adjective Derived From "Fission"

Concerning the recent letter by Ira M. Freeman on the use of the term ''fission'' (*Science*, 1946, **104**, 87), I have found use of the word ''fissionable'' objectionable even in scientific articles. As Dr. Freeman points out, the proper word is ''fissile,'' but this is not wholly satisfactory, as it usually carries the idea of splitting into layers or plates. Might it not be wise to replace ''fissionable'' by a new word, ''fissible,'' which would be applied only to those substances capable of undergoing nuclear fission?

I would suggest that the word be pronounced as spelled. To pronounce it ''fishible'' would be unfortunate.

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Successful Use of Oxidized Cellulose in Surgery of the Uterus

During the last few years the experimental use of oxidized cellulose as an absorbable hemostatic surgical dressing has increased rapidly. The material has been used successfully in brain surgery and the abdominal cavity. Among the favorable attributes of this material are the absence of foreign-body reactions and its rapid dissolution *in vivo*.

This report is a preliminary note concerning the successful application of oxidized cellulose (kindly supplied by Johnson and Johnson) to experimental uterine surgery in the dog. Pregnant females near term were subjected to unilateral Cesarean section under pentothal or ether anesthesia. One horn of the uterus was emptied and