where

$$A = \frac{a^2}{3y} + \frac{y}{3} + \frac{\pi}{2} a, \qquad D = a + \frac{\pi}{2} y$$
$$B = \frac{a}{2} + \frac{\pi}{2} y, \qquad C = \frac{a^2}{2y} + \frac{\pi}{2} a \tag{10}$$

$$E = \frac{a}{2} - \frac{\dot{a}^2}{2} - \frac{1}{6}\frac{(4x-1)a^2\dot{x}^2}{y^2} - \frac{a\dot{a}\dot{x}}{y} - \frac{\dot{x}^2}{6} - \frac{y\dot{x}\dot{a}}{3a} - \frac{\pi}{2}\frac{xya^2}{a} - \frac{\pi}{2}\frac{axx^2}{y} - \pi\dot{x}\dot{a} \tag{11}$$

$$F = a - \frac{\dot{a}^2}{2} + \frac{(1-2x)a^2\dot{x}^2}{2y^2} - \frac{a\dot{x}\dot{a}}{y} + \frac{\dot{x}^2}{6} - \pi\frac{y\dot{x}\dot{a}}{x}$$

and

$$y = x(1-x) \tag{12}$$

These equations have been integrated numerically by Miriam Caldwell. Initial conditions corresponding to a wave of very low amplitude were chosen as follows: $a = .01$, $\dot{a} = .0177$, $x = .5$, $\dot{x} = 0$. The results of the numerical integration are given in Table I.

t	a	b	x
0	.0100	.0100	.500
.5	.0243	.0228	.484
1.0	.0628	.0468	.427
1.5	.192	.083	.303
2.0	.584	.115	.165
2.5	1.218	.144	.106
3.0	2.195	.170	.072

Table I

The four columns of the table give, respectively: the time in units $\sqrt{\frac{\lambda}{2g}}$; the two amplitudes of the wave, a and b, below and above the original surface of the liquid expressed in units $\lambda/2$; and the quantity x that measures the asymmetry of the wave ($x = .5$ corresponding to a symmetrical wave). $x < .5$ corresponds to a wave in which the half wave below the original liquid surface is narrower than the half wave above. From an inspection of the table one will recognize that up to about $t = 1$, the two amplitudes, a and b, have rather close values and they grow approximately exponentially with a period