haben, erhalten wir die Lösung des Problems (18), (20) in der Form

$$u(t, x) = \varphi_0(0) + t\,\varphi_1(0) + \psi_1(0) + tx\,\psi_1'(0) +$$

$$+ [\varphi_0(x) - \varphi_0(0) - x\,\varphi_0'(0)] \cos\frac{ct}{a} + \frac{a}{c}[\varphi_1(x) - \varphi_1(0) - x\,\varphi_1'(0)] \sin\frac{ct}{a} +$$

$$+ [\psi_0(t) - \psi_0(0) - t\,\psi_0'(0)] \cosh\frac{x}{a} + a[\psi_1(t) - \psi_1(0) - t\,\psi_1'(0)] \sinh\frac{x}{a} +$$

$$+ \sum_{m=1}^{\infty} \left\{ \frac{1}{a^{2m}} \left[\iint_{2m} \varphi_0(x)\,dx - \frac{x^{2m}}{(2m)!}\varphi_0(0) - \frac{x^{2m+1}}{(2m+1)!}\varphi_0'(0) \right] \sum_{n=1}^{\infty} \frac{(-1)^n}{(2n)!} \cdot \right.$$

$$\cdot \binom{n+m-1}{m} \left(\frac{ct}{a}\right)^{2n} + \frac{1}{a^{2m}}\frac{a}{c} \left[\iint_{2m} \varphi_1(x)\,dx - \frac{x^{2m}}{(2m)!}\varphi_1(0) - \right.$$

$$\left. - \frac{x^{2m+1}}{(2m+1)!}\varphi_1'(0) \right] \sum_{n=1}^{\infty} \frac{(-1)^n}{(2n+1)!} \binom{n+m-1}{m} \left(\frac{ct}{a}\right)^{2n+1} +$$

$$+ (-1)^m \left(\frac{c}{a}\right)^{2m} \left[\iint_{2m} \psi_0(t)\,dt - \frac{t^{2m}}{(2m)!}\psi_0(0) - \frac{t^{2m+1}}{(2m+1)!}\psi_0'(0) \right] \cdot$$

$$\cdot \sum_{n=1}^{\infty} \frac{1}{(2n)!} \binom{n+m-1}{m} \left(\frac{x}{a}\right)^{2n} + (-1)^m \left(\frac{c}{a}\right)^{2m} a \left[\iint_{2m} \psi_1(t)\,dt - \right.$$

$$\left. \left. - \frac{t^{2m}}{(2m)!}\psi_1(0) - \frac{t^{2m+1}}{(2m+1)!}\psi_1'(0) \sum_{n=1}^{\infty} \frac{1}{(2n+1)!} \binom{n+m-1}{m} \left(\frac{x}{a}\right)^{2n+1} \right\} .$$

Literatur

[1] *A. E. H. Love:* A Treatise on the Mathematical Theory of Elasticity, Cambridge 1952.
[2] *E. Kamke:* Differentialgleichungen II, Leipzig 1962.

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