$$= \sum_{n=1}^{G(z)-1} H(\lambda_n) \left(\frac{\cos\left(x\sqrt{\lambda_n} - \frac{3\pi}{4}\right)}{\lambda_n^{\frac{3}{4}}} - \frac{\cos\left(x\sqrt{\lambda_{n+1}} - \frac{3\pi}{4}\right)}{\lambda_{n+1}^{\frac{3}{4}}} \right)$$

$$+ \frac{H(\tau)\cos\left(x\sqrt{\tau} - \frac{3\pi}{4}\right)}{\tau^{\frac{3}{4}}}$$

$$= -\sum_{n=1}^{G(z)-1} H(\lambda_n) \int_{\lambda_n}^{\lambda_{n+1}} \frac{d}{dy} \left(\frac{\cos\left(x\sqrt{y} - \frac{3\pi}{4}\right)}{y^{\frac{3}{4}}} \right) dy$$

$$+ \frac{H(\tau)\cos\left(x\sqrt{\tau} - \frac{3\pi}{4}\right)}{\tau^{\frac{3}{4}}}$$

$$= -\sum_{n=1}^{G(z)-1} \int_{\lambda_n}^{\lambda_{n+1}} H(y) \frac{d}{dy} \left(\frac{\cos\left(x\sqrt{y} - \frac{3\pi}{4}\right)}{y^{\frac{3}{4}}} \right) dy$$

$$+ \frac{H(\tau)\cos\left(x\sqrt{\tau} - \frac{3\pi}{4}\right)}{\tau^{\frac{3}{4}}}$$

$$= -\int_0^{\tau} H(y) \frac{d}{dy} \left(\frac{\cos\left(x\sqrt{y} - \frac{3\pi}{4}\right)}{y^{\frac{3}{4}}} \right) dy$$

$$+ \frac{H(\tau)\cos\left(x\sqrt{\tau} - \frac{3\pi}{4}\right)}{\tau^{\frac{3}{4}}}.$$

Nach (27) ist

$$H(y) = \frac{\pi\sqrt{\Delta}}{2}\delta y + K(y), \quad K(y) = O\left(y^{\frac{1}{4}-\varepsilon}\right).$$