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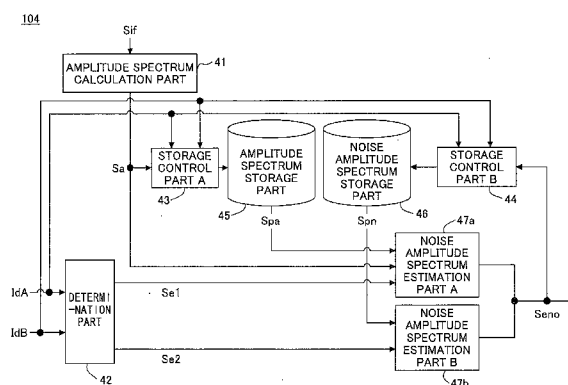
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(54) **Title:** PROCESSING APPARATUS, PROCESSING METHOD, PROGRAM, COMPUTER READABLE INFORMATION RECORDING MEDIUM AND PROCESSING SYSTEM

FIG.4



(57) **Abstract:** A processing apparatus estimates a noise amplitude spectrum of noise included in a sound signal. The processing apparatus includes an amplitude spectrum calculation part configured to calculate an amplitude spectrum of the sound signal for each one of frames obtained from dividing the sound signal into units of time; and a noise amplitude spectrum estimation part configured to estimate the noise amplitude spectrum of the noise detected from the frame. The noise amplitude spectrum estimation part includes a first estimation part configured to estimate the noise amplitude spectrum based on a difference between the amplitude spectrum calculated by the amplitude spectrum calculation part and the amplitude spectrum of the frame occurring before the noise is detected, and a second estimation part configured to estimate the noise amplitude spectrum based on an attenuation function obtained from noise amplitude spectra of the frames occurring after the noise is detected.