

# Patents News

Recent publications in the noise field

## VIBRATION-DAMPING, NOISE-REDUCING, HEAT-SHIELDING VEHICLE TRIM

Patent number: US6302466.  
Publication date: 16 October 2001  
Inventor: Evelyn Zwick  
Applicant: Rieter Automotive  
Int AG(US)  
Equivalents: EP1062124  
WO9946147

This vehicle lining has a vibration, damping and heat, shielding action, and is applied in the area of curved body parts of the vehicle. The lining's heat shield is placed on an exterior facing side of the vehicle and lightly affixed to the curved body part. The heat shield part has a supporting sheet-metal plate and an elastic insulating pad. The need for vibration damping at the level of an interior vehicle lining is eliminated or reduced by the vibration damping offered by the disclosed vehicle lining.

## NOISE SUPPRESSION LOUDSPEAKER

Patent number: U5 2001031052  
Publication date: 18 October 2001  
Inventor(s): Graham Oliver Jones (NZ),  
Mark Donaldson (NZ),  
John Fredrick Corey (NZ),  
Christopher Colin Lock  
(NZ), Kelly Charles  
Waterman (NZ)

This loudspeaker, intended for active noise reduction, has a substantially flat or planar diaphragm which is vibrated by an appropriate driver to generate a cancelling signal to cancel noise in the vicinity of the loudspeaker. The loudspeaker includes an input transducer such as a microphone which detects the ambient noise. The microphone is preferably incorporated in the panel structure of the loudspeaker in such a way that the ambient noise information can be captured and presented to active noise cancelling circuitry. The circuitry then provides an appropriate signal to the loudspeaker driver so that the cancelling sound source is provided by the loudspeaker. The use of flat panel loudspeaker technology has been found to provide effective noise reduction and is very appropriate for circumstances in which noise reduction is desirable, for example in aircraft, bus or vehicle seats or telephone kiosks.

## NOISE REDUCING VORTEX GENERATORS ON AIRCRAFT WING CONTROL SURFACES

Patent number: US2001032907  
Publication Date: 25 October 2001  
Inventor(s): Ingo Borchers (DE),  
Roger Drobietz (DE),  
Knut Mau (DE),  
Michael Gruenewald  
(DE), Johann  
Reichenberger (DE)  
Equivalents: DE1002017  
EP1149761

Vortex generators are arranged on the edges of aircraft wing control surfaces to generate smaller vortices that weaken the main vortex that would otherwise be generated at these areas, and thereby reduce the aerodynamic generation of noise. Each vortex generator includes plural elongated elements in the form of rigid roots or flexible bristles protruding laterally outwardly from the respective edge of the control surface. The vortex generators are preferably arranged on the inboard and outboard edges of high lift flaps and slats.