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chine so that said lumen communicates with said  
respirator machine in a closed system;  
upon connection of said respirator machine to said  
endotracheal tube, performing a surgical operation  
on the patient;  
maintaining said lumen free of obstructions during  
performance of said operation;  
during performance of said operation, emitting ultra-  
sonic pressure waves from a distal end portion of  
said endotracheal tube in the direction of insertion  
of said endotracheal tube;  
automatically sensing ultrasonic waves reflected  
from internal tissues in the patient;

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automatically analyzing the sensed ultrasonic waves  
to determine an internal structure of the patient;  
upon placement of said endotracheal tube at said  
predetermined position within the patient's trachea  
and prior to the performance of said surgical opera-  
tion, storing, as reference data in encoded form,  
selected internal organic structures of the patient at  
said predetermined position; and  
during performance of said operation, automatically  
comparing the automatically determined internal  
structure with said reference data to determine  
whether said distal end of said endotracheal tube  
has moved from said predetermined position.

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