```matlab
function [A, B] = cw_state_space(n)

A = zeros(6,6);
A(1,4) = 1;
A(2,5) = 1;
A(3,6) = 1;


A(4,1) = 3*n^2;
A(4,5) = 2*n;


A(5,4) = -2*n;


A(6,3) = -n^2;

B = zeros(6,3);
B(4,1) = 1;
B(5,2) = 1;
B(6,3) = 1;

end
```