interleaving_of_cons[4,23]

$\forall T$:Type, x:T, L, L_1, L_2:T List.
interleaving$(T;L_1;L_2;x.L)$
$\Leftrightarrow$
$0 < \|L_1\|$ & $L_1[0] = x$ & interleaving$(T;\text{tl}(L_1);L_2;L)$
$\lor$ $0 < \|L_2\|$ & $L_2[0] = x$ & interleaving$(T;L_1;\text{tl}(L_2);L)$