

map-concat-filter-lemma2^{11,40}

$$\begin{aligned} & \forall C:(\text{Id} \rightarrow \text{Type}), A, B:\text{Type}, L_2:((tg:\text{Id} \times (A \rightarrow B \rightarrow (C(tg) \text{ List}))) \text{ List}), \\ & L:((l:\text{IdLnk} \times (t:\text{Id} \times C(t))) \text{ List}), tg:\text{Id}, a:A, b:B. \\ & \{(\text{map}(\lambda x.x.2;L) \\ & = \\ & \quad \text{concat}(\text{map}(\lambda tgf.\text{map}(\lambda x.<tgf.1, x>;(tgf.2)(a,b));L_2)) \\ & \quad \in ((tg:\text{Id} \times C(tg)) \text{ List})) \\ & \Rightarrow (\neg(tg \in \text{map}(\lambda p.p.1;L_2))) \\ & \Rightarrow (\|\text{filter}(\lambda ms.(ms.2).1 = tg;L)\| = 0)\} \end{aligned}$$