```
mt_append  THM

⊢  ∀'a:Type, l,ll:'a List. mt(l @ ll) ⟺ mt(l) & mt(ll)
| by Id THEN StrongAuto THEN Try (Complete (Unfold `label` 0))
|
|\
| 1. 'a : Type
| 2. l : 'a List
| 3. ll : 'a List
| 4. mt(l @ ll)
| ⊢  mt(l)
|   by Last MoveToConcl THEN Analyze 3 THEN Analyze 2 THEN Simp
|      THEN
|      StrongAuto
|
|\
| 1. 'a : Type
| 2. l : 'a List
| 3. ll : 'a List
| 4. mt(l @ ll)
| ⊢  mt(ll)
|   by Last MoveToConcl THEN Analyze 3 THEN Analyze 2 THEN Simp
|      THEN
|      StrongAuto
|
.\
. 1. 'a : Type
. 2. l : 'a List
. 3. ll : 'a List
. 4. mt(l)
. 5. mt(ll)
. ⊢  mt(l @ ll)
.   by OnHyps [5;4] MoveToConcl THEN Analyze 3 THEN Analyze 2
.      THEN
.      Simp
.      THEN
.      StrongAuto
END
```