```
discrete_equality_properties  THM

⊢  ∀eq:{T=₂}. (∀x,y:T. eq(x,y) ⟺ x = y) & eq ∈ T→T→𝔹
| by Unfold ‘discrete_equality‘ 0 THEN UnivCD THEN Analyze -1
|
1. T : Type
2. eq : T→T→𝔹
3. ∀x,y:T. eq(x,y) ⟺ x = y  [not for witness]
⊢  (∀x,y:T. eq(x,y) ⟺ x = y) & eq ∈ T→T→𝔹  by UnhideSqStableHyp1 3
|
|\
| .....sq stable .....
| ⊢  SqStable(∀x,y:T. eq(x,y) ⟺ x = y)  by ProveSqStable1
|
.\
. 3. ∀x,y:T. eq(x,y) ⟺ x = y
. ⊢  (∀x,y:T. eq(x,y) ⟺ x = y) & eq ∈ T→T→𝔹  by Auto
. |
. |\
. | 4. x : T
. | 5. y : T
. | 6. eq(x,y)
. | ⊢  x = y  by HypBackchain
. |
. .\
. . 4. x : T
. . 5. y : T
. . 6. x = y
. . ⊢  eq(x,y)  by HypBackchain
END
```