```
bequal_bools  THM

⊢  ∀x,y:𝔹. x = y ⟺ (x ⟺ y)  by RepeatMFor 4 (Analyze 0)
|
|\
| 1. x : 𝔹
| 2. y : 𝔹
| 3. x = y
| ⊢  x ⟺ y  by BoolNorm THEN Simp
|
.\
. 1. x : 𝔹
. 2. y : 𝔹
. 3. x ⟺ y
. ⊢  x = y  by BoolNorm THEN StrongAuto
. |
. |\
. | 1. False ⇒ True
. | 2. False ⇐ True
. | ⊢  false2 = true2  by Analyze 2
. |
. .\
. . 1. True ⇒ False
. . 2. True ⇐ False
. . ⊢  true2 = false2  by Analyze 1
END
```