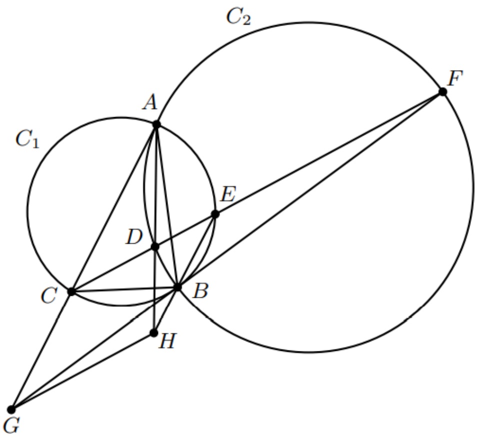
Example 196 : As shown in Figure 1 , two circles intersect at points $A$ and $B$, and a straight line intersects two circles at four points $D$, $D$, $E$, and $F$. $G$ is the intersection of $AC$ and $BF$, *and* $H$ is the intersection of $AD$ and $BE$. Prove: $GH \parallel CF$.

Proof: As a $\dfrac{\dfrac{H-A}{H-E}}{\dfrac{G-A}{G-F}} = \dfrac{\dfrac{B-A}{H-E}\dfrac{H-A}{C-F}}{\dfrac{G-A}{C-F}\dfrac{B-A}{G-F}}$ result $\angle AGB = \angle AHB$, the four points $\angle ACF = \angle ABE = \angle AGH$ $A$, $B$, $H$, and $G$ *share a circle,* .




Explanation: Since the *GH line is added last and does not appear in any conditions, it is impossible to obtain terms like* $G-F$ by conditional simplification, so it is difficult to solve the identity directly in one step, and can only be handled around the corner .