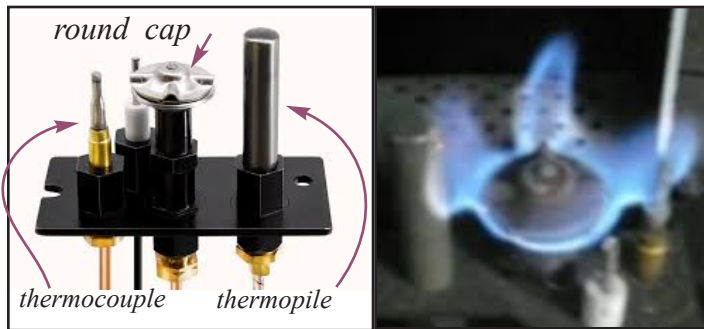


## Pilot will not light (26 year-old Fireside Franklin Gas Stove)

This can happen when the stove has not been used for extended periods of time. Insects can get into the air feeder holes at the base of the pilot and block gas flow.

In the early years, the Fireside Franklin was equipped with an S.I.T. Pilot assembly (S.I.T. makes the gas valves for the Fireside Franklin). The sit pilot assembly is easy to identify because it has a round cap.



### Why a flame in 3 directions?

When the pilot is ignited it produces a flame in three directions. The pilot flame heats both the thermocouple and the thermopile. When the thermocouple is heated, it sends a very small millivolt signal to the gas controller, essentially telling the controller that the pilot flame is active. If the controller does not receive a millivolt signal that the thermopile is hot, it shuts off the gas to the pilot. This is a safety feature that prevents the controller from releasing gas to the pilot without a flame to burn it.

The heated thermopile performs the same function, but for the gas supply to the main burner. If the thermopile is hot, it sends a millivolt signal to the gas controller telling it that the gas burner can receive gas.

Our customer called to say that he was able to ignite a very strong pilot flame, but as soon as he released the igniter button the flame went out. Because the pilot would not stay lighted, he could not light the burner. A photo of his pilot light is shown at the upper right.

Note that although the pilot flame is indeed very strong (showing that the supply of gas is not an issue),

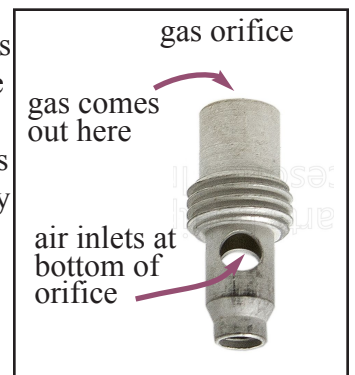


the flame does not make contact with the thermopile. In fact, the customer bent the thermopile in order to try to get it in contact with the flame.

At the risk of jumping ahead too fast, once the pilot orifice was cleaned, the pilot flame performed as expected. See the photo below.



The pilot orifice is located under the round cap. The pilot orifice has two holes in the bottom to let air in, and a small gas outlet at the top, under the round cap. If the pilot orifice becomes plugged, typically by insects or debris entering where the air holes are located at the bottom of the orifice. If this happens, the pilot will likely not light.



## How to Inspect and Clean the Orifice

The round cap on the pilot can be removed by gently pulling it straight up.



Beneath the round hood is a one-piece pilot orifice, which can be removed with a 5/32 hex wrench. Gently insert the hex wrench and unscrew the pilot from the housing. Lift the pilot out of the housing.



If you look carefully at the photo at the upper right on the previous page, you will realize that the flames were coming out of the air holes at the bottom of the opening at the top of the orifice.

Once the orifice was cleaned with alcohol, it worked as designed. The pilot stayed lit, and the burner would go on and off as intended.