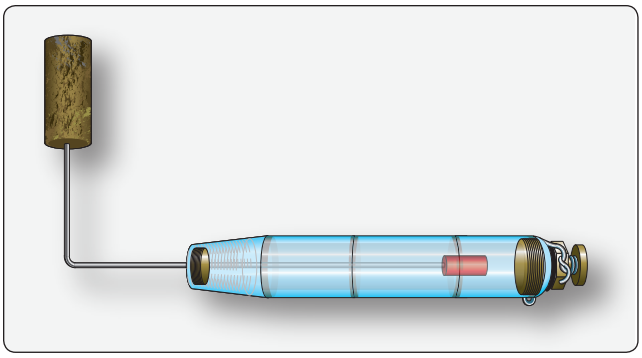

Figure 14-67. *A float-type sight gauge fuel quantity indicator.*

Electric fuel quantity indicators are more common than mechanical indicators in modern aircraft. Most of these units operate with direct current (DC) and use variable resistance in a circuit to drive a ratiometer-type indicator. The movement of a float in the tank moves a connecting arm to the wiper on a variable resistor in the tank unit. This resistor is wired in series with one of the coils of the ratiometer-type fuel gauge in the instrument panel. Changes to the current flowing through the tank unit resistor change the current flowing through one of the coils in the indicator. This alters the magnetic field in which the indicating pointer pivots. The calibrated dial indicates the corresponding fuel quantity. *[Figure 14-69]*

Digital indicators are available that work with the same variable resistance signal from the tank unit. They convert the variable resistance into a digital display in the cockpit instrument head. *[Figure 14-70]* Fully digital instrumentation systems, such as those found in a glass cockpit aircraft, convert the variable resistance into a digital signal to be processed in a computer and displayed on a flat screen panel.

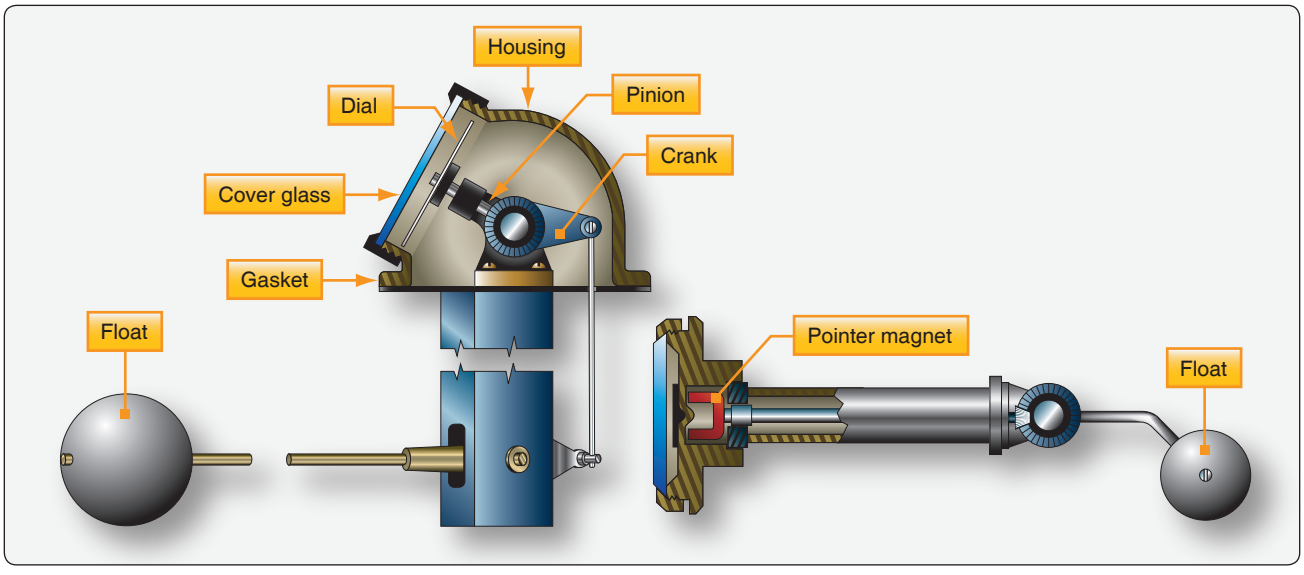

Figure 14-68. *Simple mechanical fuel indicators used on light aircraft with fuel tanks in close proximity to the pilot.*

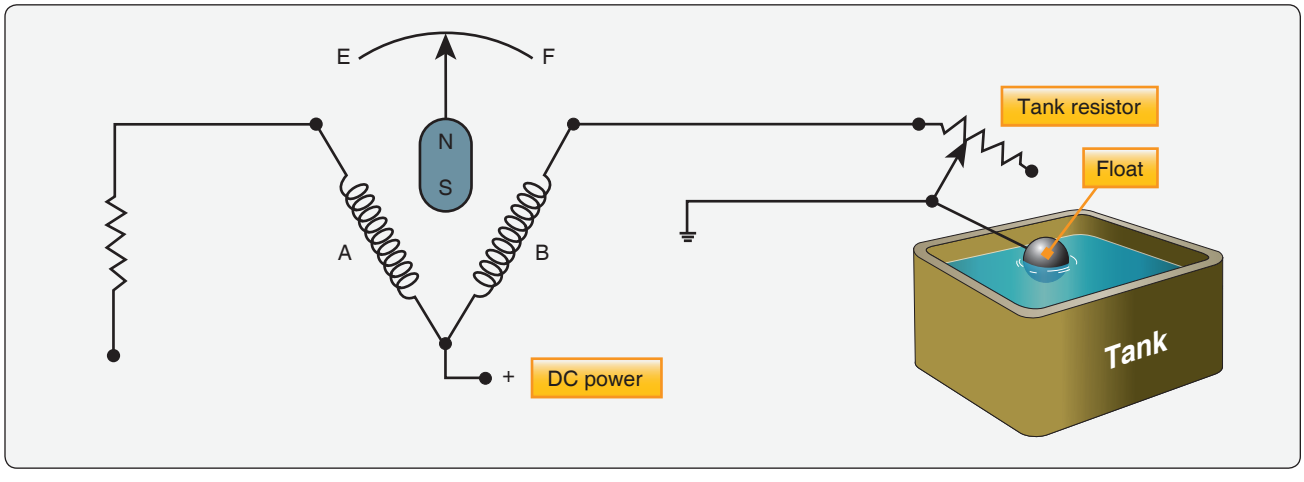

Figure 14-69. *A DC electric fuel quantity indicator uses a variable resistor in the tank unit, which is moved by a float arm.*