A novel support structure for lead shielding was designed, constructed and used to reduce the peripheral dose to the fetus of a pregnant Hodgkin's patient recently treated at our clinic. The device is not motorized yet it can be wheeled into position by a single person, without having to lift any heavy pieces of shielding. The effectiveness of the shielding was assessed using a Rando phantom and measurements by ion chamber, TLD, and MOSFET detectors. In the vicinity of the top of the fundus, the midplane dose was 0.28% for the AP treatment, with the custom cerrobend block also in place, and 0.44% for the PA treatment. However, the AP dmax dose was a factor of 1.9 lower, while the PA dmax dose was 1.2 times higher than the measured midplane dose when both fields were treated. These observations were used to infer , from in vivo TLD measurements, that 0.9 cGy per 180 cGy fraction were delivered to the patient's midplane at the top of the fundus, and just 0.4 cGy at mid uterus. Details of the design and construction will be presented, and the results will be discussed and compared to those from different shielding assemblies, such as those reported by TG36.