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(54) Title: MID-BODY OBTURATOR FOR A GUN-LAUNCHED PROJECTILE

(57) Abstract: An obturator is provided for a projectile launched from a gun barrel. The projectile has a mid-body annular groove that includes a shaped surface. The obturator includes an annular ring having an inner surface in contact with the shaped surface of the annular groove of the projectile. The annular ring further includes an outer surface. When the projectile is in the gun barrel, the outer surface of the annular ring contacts an inner surface of a bore of the gun barrel. The radial distance between the inner surface and the outer surface of the annular ring substantially equals or exceeds the radial distance between the shaped surface of the annular groove and the inner surface of the bore of the gun barrel at at least one point when the projectile is positioned in the barrel. This feature restricts a flow of charge gases from an aft end of the projectile to a forward end of the projectile when the projectile is launched from the gun barrel.

WO 01/06201 A2