The invention relates to thermal power engineering, and can be used in devices for burning low-enriched hydrocarbon fuel, in particular biogas with a biomethane content of up to 30...40%.

The device, according to the invention, comprises a burner with a chamber for preliminary preparation and mixing of fuel components, a gas and air supply line with a system for oxygen enrichment of the combustion mixture placed therein, and a branch pipe for the outlet of the nitrogen-containing part of the air flow, equipped with a damper.

Claims: 4 Fig.: 1