

Title (en)

COOKTOP GAS SAFETY VALVE HOLD OPEN CIRCUIT WITH CERAMIC HEATER

Title (de)

GASSICHERHEITSVENTIL-NIEDERHALTERKREIS FÜR KOCHHERDE MIT KERAMISCHEM HEIZER

Title (fr)

CIRCUIT OUVERT DE MAINTIEN DE SOUPAPE DE SÉCURITÉ POUR GAZ DE TABLE DE CUISSON AVEC ÉLÉMENT CHAUFFANT EN CÉRAMIQUE

Publication

EP 4176206 A1 20230510 (EN)

Application

EP 21831645 A 20210630

Priority

- US 202063047088 P 20200701
- US 2021039785 W 20210630

Abstract (en)

[origin: US2022003419A1] A cooking gas safety apparatus is shown and described. The apparatus includes a cooking gas safety valve assembly that supplies cooking gas to one or more burners. The cooking gas safety assembly includes at least one coil that is energizable to hold the valve assembly in an open position when subjected to a current that exceeds a threshold value and a hold open circuit. The hold open circuit comprises the coil and a hot surface igniter that is in electrical communication with the coil. The valve assembly is actuated by manually opening the valve and energizing the igniter such that it receives a threshold current that corresponds to an autoignition temperature of the gas. At the threshold current, an electromagnet in the cooking gas safety valve assembly holds the valve open so that it remains open without user intervention. In the event of an igniter failure, the current flow to the coil ceases, causing the valve to shut and cease gas flow to the burner. In certain examples, hold open circuit allows the igniter to operate off of alternating current while the coil receives a time-varying, direct current.

IPC 8 full level

F24C 3/10 (2006.01); **F23Q 7/10** (2006.01); **F23Q 7/12** (2006.01); **F24C 3/12** (2006.01)

CPC (source: EP US)

F23N 1/005 (2013.01 - US); **F23N 5/107** (2013.01 - EP); **F23N 5/203** (2013.01 - EP); **F23Q 7/12** (2013.01 - EP); **F23Q 7/26** (2013.01 - EP); **F24C 3/126** (2013.01 - US); **F23K 2900/05002** (2013.01 - EP); **F23N 2227/28** (2020.01 - EP); **F23N 2227/32** (2020.01 - EP); **F23N 2227/42** (2020.01 - EP); **F23N 2231/06** (2020.01 - EP); **F23N 2235/14** (2020.01 - EP US); **F23N 2235/16** (2020.01 - EP); **F23N 2235/22** (2020.01 - EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

US 2022003419 A1 20220106; CA 3177140 A1 20220106; CN 115667802 A 20230131; EP 4176206 A1 20230510; JP 2023531886 A 20230726; WO 2022006213 A1 20220106

DOCDB simple family (application)

US 202117363232 A 20210630; CA 3177140 A 20210630; CN 202180039417 A 20210630; EP 21831645 A 20210630; JP 2022576870 A 20210630; US 2021039785 W 20210630