US009410719B2

(12) **United States Patent**
Furmanek et al.

(10) **Patent No.: US 9,410,719 B2**
(45) **Date of Patent: Aug. 9, 2016**

(54) **SYSTEMS AND METHODS FOR CONTROLLING GAS POWERED APPLIANCES**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 324 days.

(21) Appl. No.: **14/120,281**

(22) Filed: **May 14, 2014**

(65) **Prior Publication Data**

US 2015/0330664 A1 Nov. 19, 2015

(51) **Int. Cl.**

F24H 9/20	(2006.01)
F24H 1/18	(2006.01)
F23N 5/24	(2006.01)

(52) **U.S. Cl.**

CPC ***F24H 9/2021*** (2013.01); ***F23N 5/24*** (2013.01); ***F24H 1/186*** (2013.01); ***F24H 9/2035*** (2013.01)

(58) **Field of Classification Search**

CPC F24H 9/2021

See application file for complete search history.

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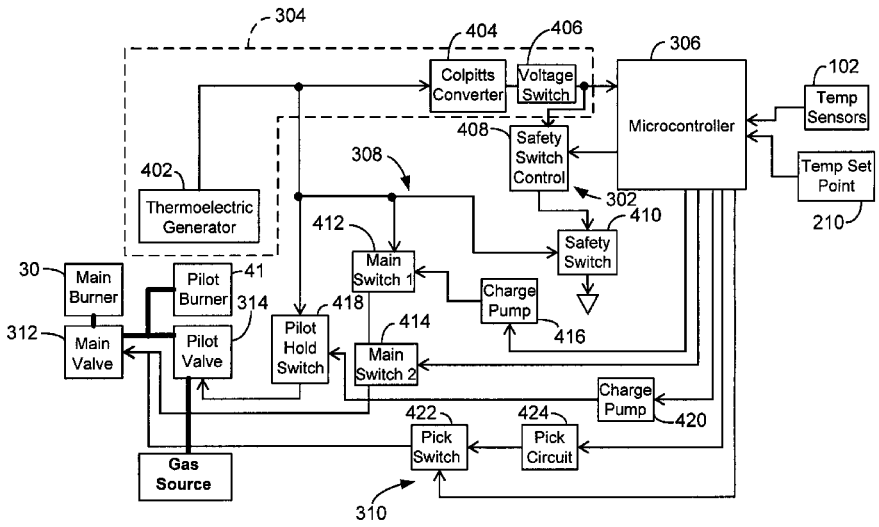
(57) **ABSTRACT**

A control system for a gas powered appliance includes a power source to provide electrical power to control at least one electrically actuated gas valve, a valve control system to selectively couple electrical power from the power source to the electrically actuated gas valve, and a controller. The valve control system includes a first switch and a second switch. The first switch and the second switch are electrically connected in series between the power source and the electrically actuated gas valve. The controller is operatively connected to the first switch and the second switch and configured to control the first switch and the second switch to selectively couple power from the power source to the electrically actuated gas valve.

18 Claims, 9 Drawing Sheets