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(54) **GAS TURBINE ENGINE WITH INTEGRATED BOTTOMING CYCLE SYSTEM**

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See application file for complete search history.

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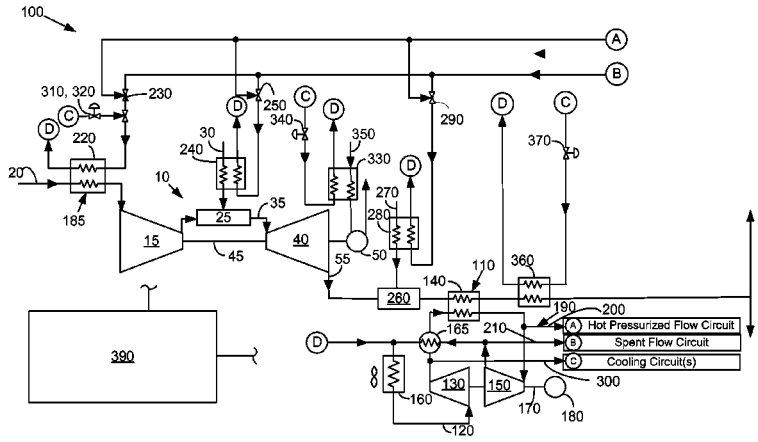
(57) **ABSTRACT**

The present application provides an integrated bottoming cycle system for use with a gas turbine engine. The integrated bottoming cycle system described herein may include a compressor/pump, a cooling circuit downstream of the compressor/pump, a bottoming cycle heat exchanger, a heating circuit downstream of the bottoming cycle heat exchanger, and a number of turbine components in communication with the cooling circuit and/or the heating circuit to maximize the overall plant efficiency and economics.

15 Claims, 2 Drawing Sheets