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(54) **PORT TAP CABLE HAVING IN-LINE FURCATION FOR PROVIDING LIVE OPTICAL CONNECTIONS AND TAP OPTICAL CONNECTION IN A FIBER OPTIC NETWORK, AND RELATED SYSTEMS, COMPONENTS, AND METHODS**

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CPC ***G02B 6/4472*** (2013.01); ***G02B 6/4475*** (2013.01); *G02B 6/2817* (2013.01); *G02B 6/4479* (2013.01); *Y10T 29/49826* (2015.01)

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See application file for complete search history.

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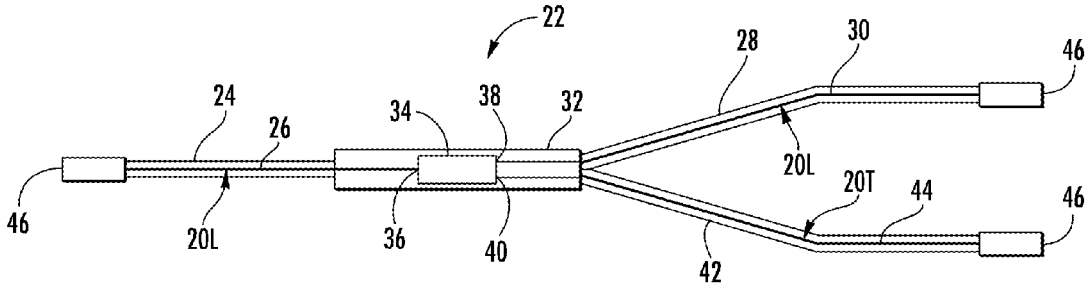
(57) **ABSTRACT**

A port tap cable for supporting live optical connections in a fiber optic network includes one or more fiber optic splitters, which each receive an optical signal from a live input optical fiber of a live input fiber optic cable leg. Each fiber optic splitter splits each optical signal and transmits the signal to a live output optical fiber of a live output fiber optic cable leg and a tap output optical fiber of a tap output fiber optic cable leg. The one or more splitters are enclosed in a furcation, thereby forming a port tap cable that allows for monitoring of optical signals within an active fiber optic network without the need for interrupting network operations. This arrangement also allows for monitoring individual ports in an existing network installation.

23 Claims, 10 Drawing Sheets