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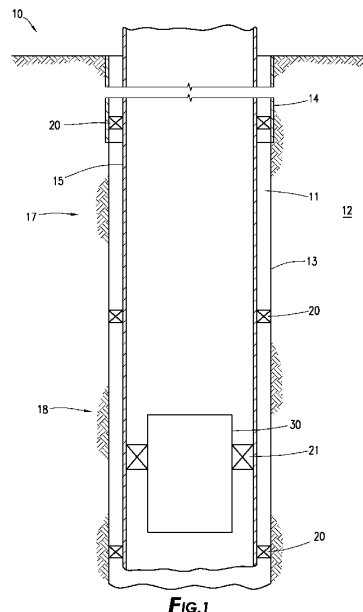
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(54) Title: CARBON-SWELLABLE SEALING ELEMENT



(57) Abstract: Methods of capturing carbon dioxide in a wellbore can include installing a sealing element in the wellbore. The sealing element swells in the presence of carbon dioxide and can be used for capturing the carbon. The sealing element can include a carbon-swelling material, such as a carbon-swelling polymers, metal-based materials, or combinations of elastomeric polymers and metal-based materials. The sealing element can also include combinations of different carbon-swelling materials, fillers or other compounds, and materials that are not carbon swell able. The sealing element can create a seal, form an anchor, or create a seal and form an anchor in the wellbore after swelling.

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