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(71) Applicant: **X DEVELOPMENT LLC** [US/US]; 1600
Amphitheatre Parkway, Mountain View, CA 94043 (US).

(72) Inventors: **NAGATANI JR, Ray, Anthony**; 1600 Am-
phitheatre Parkway, Mountain View, CA 94043 (US). **PA-**

PANIA-DAVIS, Antonio, Raymond; 1600 Amphitheatre
Parkway, Mountain View, CA 94043 (US).

(74) Agent: **HOOVER, Kenneth, J.**; Fish & Richardson P.C.,
PO Box 1022, Minneapolis, MN 55440 (US).

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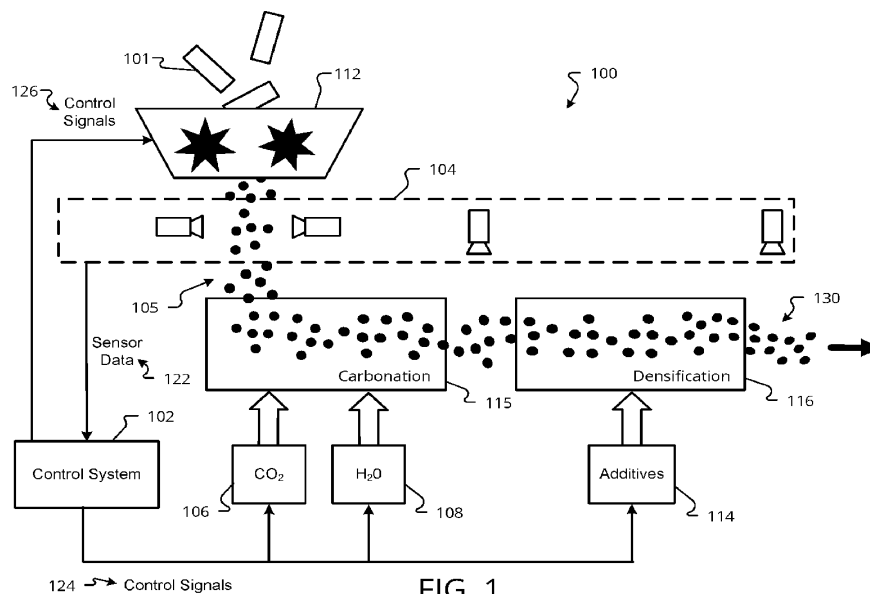


FIG. 1

(57) Abstract: Methods, systems, and apparatus, including computer programs encoded on computer storage media, for processing recycled concrete aggregate (RCA). One of the methods includes obtaining first optical measurements of RCA particles; determining an initial characterization of the RCA particles; iteratively performing a carbonation process on the RCA particles, obtaining second optical measurements of the RCA particles, and determining a second characterization of the RCA particles, where conditions of the carbonation process are initially set based on the initial characterization, and the conditions of the carbonation process are adjusted based on the second characterization; iteratively performing a densification process on the RCA particles, obtaining third optical measurements of the RCA particles, and determining a third characterization of the RCA particles, where conditions of the densification process are initially set based on the initial characterization or the second characterization, and the conditions of the densification process are

[Continued on next page]

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adjusted based on the third characterization.