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Garfinkel et al.

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(54) **AUTOMATED CONCRETE STRUCTURAL MEMBER FABRICATION SYSTEM, APPARATUS AND METHOD**

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CPC ... **B28B 7/10** (2013.01); **B28B 1/14** (2013.01);
B28B 7/22 (2013.01); **B28B 11/245** (2013.01);
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(58) **Field of Classification Search**
CPC B28B 7/0044; B28B 7/183; B28B 7/285
See application file for complete search history.

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(57) **ABSTRACT**

A casting machine (722) for fabrication of precast concrete structural members (1) is disclosed, which includes side walls with integrally formed end dams (784) which are movable from an open position (78) to a closed position (80), and a bottom casting surface (88), where the bottom casting surface (788) and side walls (784) serving to form a mold (812) surrounding a cavity (108) configured to contain wet concrete (26). Concrete (26) is pumped into the cavity (108) when the self-releasing mold (812) is in closed position (80). The side walls (784) are automatically movable to the open position (78) when the concrete (26) has solidified so that a precast concrete structural member (30) is automatically released from the self-releasing mold (812). Also disclosed is a precast modular system (710) for automated concrete structural member fabrication, which includes a concrete mixing system (716), a concrete delivery subsystem (764), a block transport subsystem (720), and a plurality of casting machines (722), where each casting machine (722) includes a self-releasing mold (812).

12 Claims, 48 Drawing Sheets

