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(54) Title: INGOT PULLER APPARATUS INCLUDING AUTOMATED CLAMP

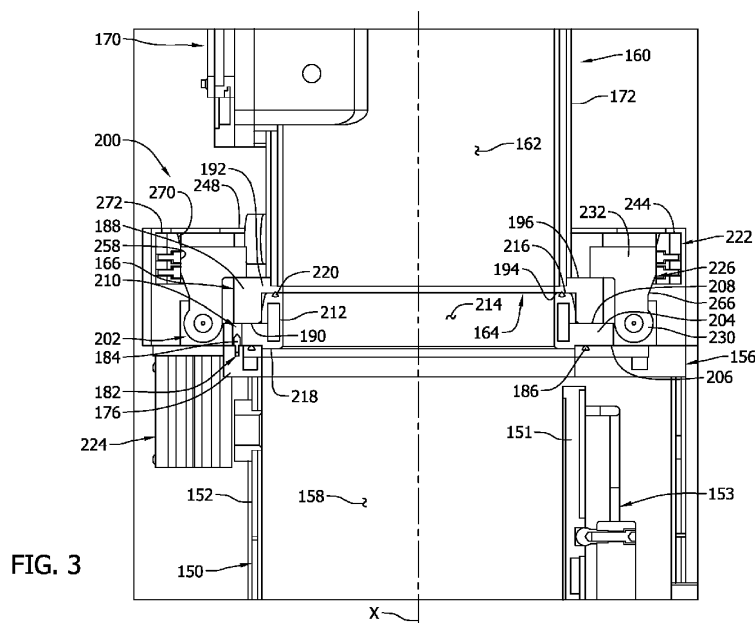


FIG. 3

(57) Abstract: An ingot puller apparatus includes a housing defining a growth chamber and a growth chamber outlet, an isolation valve having a first valve end connected to the growth chamber outlet and a second valve end, an ingot receiving vessel defining an ingot receiving chamber and a receiving chamber inlet at a receiving vessel end, a clamp including a clamp base connected to the second valve end, and a controller. The clamp includes a clamping mechanism to releasably connect the receiving vessel end to the clamp base and an actuator to cause movement of the clamping mechanism between a clamping position in which the clamping mechanism connects the receiving vessel end to the clamp base, and a releasing position in which the receiving vessel end is releasable from the clamp base. The controller is connected to the actuator to control movement of the clamping mechanism between the clamping and releasing positions.

[Continued on next page]

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