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(54) Title: ELECTROLYZER WITH HORIZONTAL CATHODE

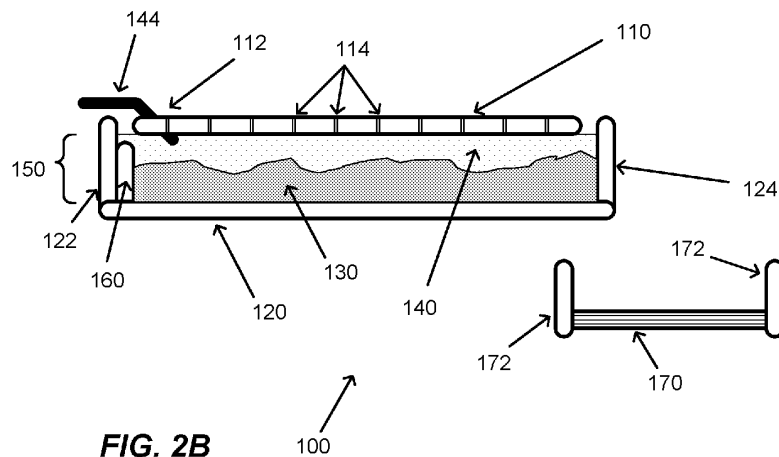


FIG. 2B

(57) Abstract: Disclosed herein is an electrolyzer comprising a horizontal cathode located below a suspended anode for purposes of performing electrolysis on metal-bearing mixtures or solutions. The horizontal cathode may comprise the bottom surface of a compartment for containing a mixture or solution of metal components, electrolyte, and/or supplemental chemicals. The horizontal anode may engage the upper surface of the mixture or solution in the compartment. A removal mechanism for facilitating removal of the end-products of the mixture or solution from the compartment (and the surface of the horizontal cathode) through the gate may also be employed. These implementations may be used in recycling of lead acid batteries (LABs) without any need for smelting, and also may be applied to a variety of different electrolytical operations.

[Continued on next page]

LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI,
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