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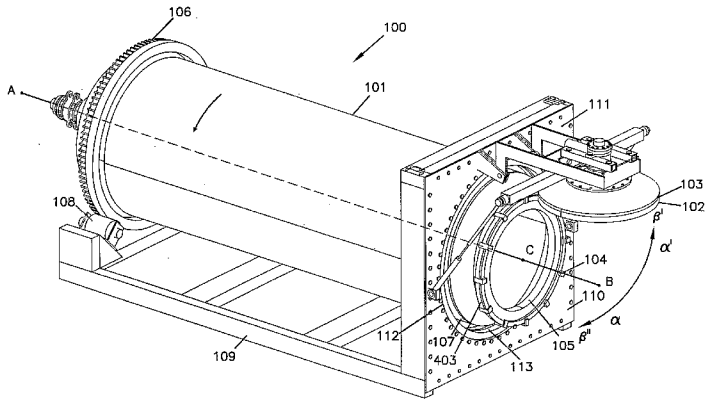
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(54) **Title:** ROTARY BEARING SUPPORT



(57) **Abstract:** An apparatus and method, for processing solid waste to produce a solid fuel product and a recycling stream, involves an elongated, generally cylindrical shape rotating pressure vessel that can use the effects of heat, humidity and pressure to convert the solid waste into a burnable fuel and can produce a glass, a metal or a plastic recycle stream. The pressure vessel is adapted to be rotated along its axis or rotation in order to ensure close contact between the solid waste and internal humidity at elevated temperatures and pressures to result in the conversion of the solid waste into a useful fuel and recycle stream. The driving mechanism and support structure for the vessel requires substantial strength and resistance to wear. The pressure vessel of the invention, while requiring rotation around its axis of rotation, also requires the pressure vessel to be movable in the vertical plane. Accordingly, the pressure vessel rotates on its axis of rotation and moves through an are in the vertical plane for charging, processing and discharge. The support structure for the vessel must both support the weight of the vessel and cause the vessel to rotate along its axis of rotation. The support system maintains the pressure vessel in a useful position throughout its axis of rotation and through its angle of orientation. The invention involves a support structure and drive mechanism that can actuate the rotational and arcuate movement.

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