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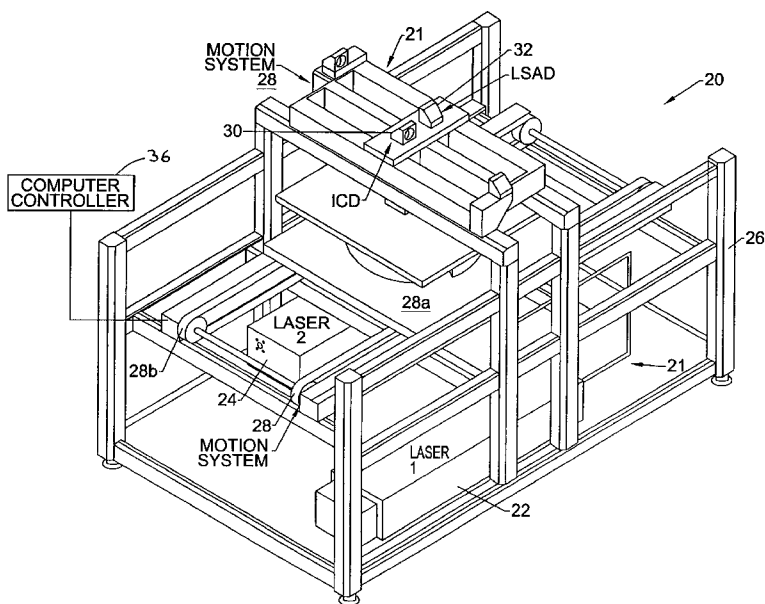
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(54) Title: METHOD AND APPARATUS FOR SEPARATING NON-METALLIC MATERIALS



(57) Abstract: A method and apparatus for splitting non-metallic substrates includes a laser for generating a laser beam. An integrated cracking device receives the laser beam and directs the laser beam onto a non-metallic substrate to define the heat affected zone and quench the substrate at a quenching region contained within the heat affected zone. This integrated cracking device includes a housing and optics fitted within the housing for receiving and directing the laser beam onto the substrate. A quenching nozzle is mounted on the housing for quenching the substrate at a quenching region defined within the heat affected zone.



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