METHOD FOR PRODUCING MARINE PHANEROGAMS

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PATENT STATUS: GRANTED

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Invention

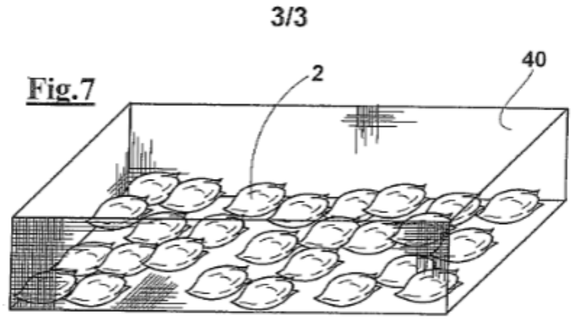
Marine phanerogams are aquatic plants that play a critical ecological role and provide numerous ecosystem goods and services. *Posidonia oceanica*, phanerogama endemic to the Mediterranean, is considered a threatened species and its habitat deserving of protection at national and European level.

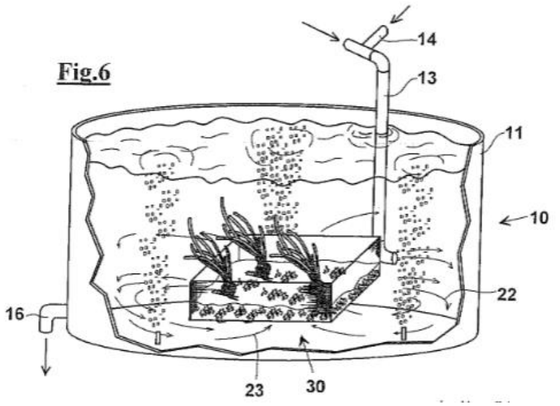
Transplantation of *P. oceanica* cuttings is considered by national legislation as a useful environmental mitigation/recovery measure and pilot transplantation interventions have been carried out in several Mediterranean locations.

To date, the cuttings used in these types of interventions are taken from "donor" prairies in good condition, and this practice can have negative consequences by triggering erosion processes within them.

The patented system exploits the fact that during exceptional P. oceanica flowering events (which occur periodically) millions of fruits are washed onto our coasts by storm surges. The seeds taken from these fruits are germinated under controlled conditions and the resulting seedlings grown in specially prepared and equipped aquaculture tanks.

Drawings & pictures





Industrial applications

The system offers the great advantage of being able to provide large quantities of plants to be used for the restoration of marine environments without causing any damage to the existing prairies of *P. oceanica.*

The system could be of interest to environmental agencies and firms whose activities may have direct or indirect effects on the marine environment and *P. oceanica* grasslands. If these activities are subject to an EIA (*environmental impact assessment*) procedure, transplanting seedlings produced under controlled conditions could improve the effectiveness of mitigation and/or compensation measures. Aquaculture or mariculture facilities in the national and European territory could take advantage of the system to expand the range of their products and services by including among their activities the supply of *P. oceanica* seedlings.

Possible developments

The research team is interested in working with industrial partners to increase the technological maturity of the invention and to consider licensing the patented technology.

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