Sediment Corer

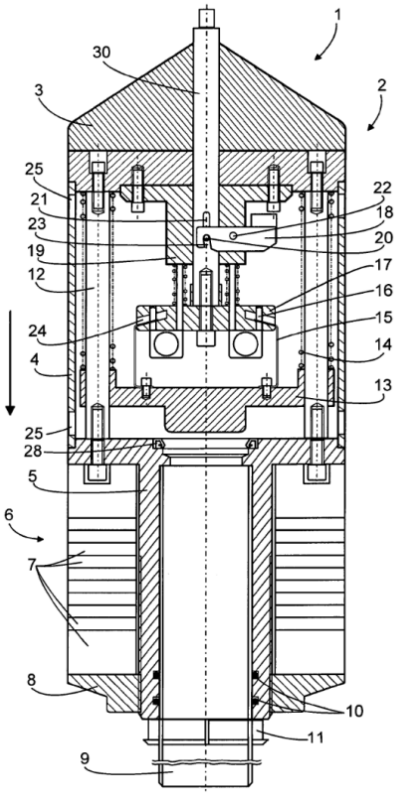
Mechanical device for sea-floor sediment core sampling

Several methods have been developed to take sediment cores from the seafloor. Conventionally a core liner is driven into the seafloor by weight and speed of the instrument. The length of the core sample is dependent on the consistency of the ground and the overall weight and it is necessary to protect the stratification of the sample throughout the heaving process.

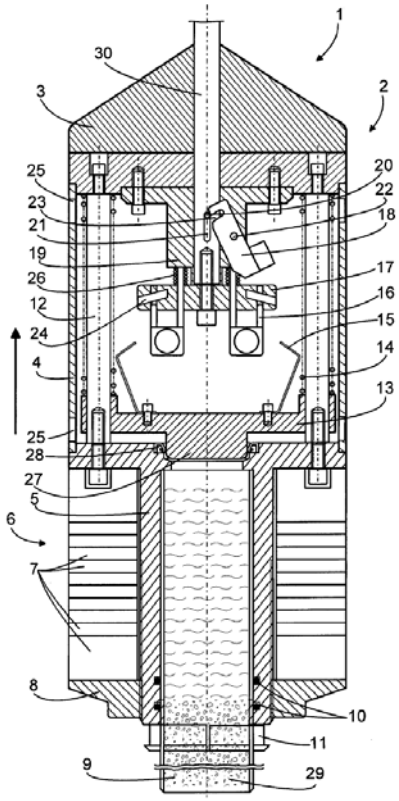
In cases where the corer needs to be lowered and heaved though an ice borehole, additional technical problems arise to save the instrument and the cores.

The Alfred Wegener Institute developed a corer for use in ice covered areas such as the Antarctic Ice Shelf. The sampler can be lowered and heaved through several 100 m deep ice boreholes. After immersion into the sea floor, a lid closes the upper end of the pipe. Under pressure prevents the loss of the core. The lower end of the pipe remains open. The specific geometry of the corer eases heaving up through ice holes without getting stuck.

- **The cylindrical form enables the use in ice boreholes**
- **Cone shaped top enables to lead the corer through the borehole while heaving**
- **Adjustable weights allow for adaptation to different sediment types**
- **Robust and simple mechanics**
- **Quick and easy exchange core pipes**



Core pipe open



Core pipe closed

IP Situation

German Patent DE10346351B3 granted

Commercial Opportunity

We look for qualified manufacturers and distributors

Contact

Please contact the Technology Transfer Office (see below) for further information.

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TechnologyTransfer

AWI

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