Claims.

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1.- Device for the in situ underwater removal of a layer of sludge and/or sand from the bottom of a wetland, the device containing:
- a diving bell with an open bottom and a lower free edge;
- means of driving the diving bell with its lower edge to a desired depth into the layer of sludge to be removed;
- a dredge pump installed in the space of the diving bell and provided with an inlet for pumping up the sludge and/or an outlet to which a pipe is connected for pumping the pumped up sludge and/or sand to a collector;
- a compressor for pumping gas under pressure into the space of the diving bell during dredging,
characterised in that the diving bell is also provided with a gas outlet for the compressed gas, which gas outlet is adjustable in height in the diving bell because the gas outlet is attached to a float that can float on the sludge.

2.- Device according to claim 1, characterised in that the gas outlet is formed by the open end of a pipe which releases via an opening at the top of the diving bell into the environment.

3.- Device according to claim 2, characterised in that the pipe discharges above the water level of the wetland.

4.- Device according to any one of the previous claims, characterised in that the outlet is located with its upper

edge at a ~~small~~ height above the float.

5.- Device according to any one of the previous claims, characterised in that the float with the outlet mounted on it, is suspended in the diving bell by means of a chain or the like, the length of which is such that when the diving bell is taken out of the water, the float with its underside is approximately at the level of the lower edge of the diving bell.

6.- Device according to any one of the previous claims, characterised in that the float is such that it floats on the sludge, but does not have sufficient buoyancy to allow the compressed gas outlet to float on the water, together with the weight of the pipe and the outlet.

7.- Device according to claim 6, characterised in that the float is formed by a sufficiently dimensioned sheet to bear the weight of the pipe on the sheet on the sludge.

8.- Device according to any one of the previous claims, characterised in that the pipe is formed by a rigid metal tube which rests and is attached to the float with one end and with the other end releases via a flexible coupling at the top of the diving bell into the environment of the diving bell.

9.- Device according to any one of the previous claims, characterised in that the dredge pump is attached to a fixed place in the diving bell with its inlet on the level of the

lower free edge of the diving bell.

10.- Device according to any one of the previous claims, characterised in that the maximum pressure to which the compressor is set is higher than the pressure of a water column with a height equal to the difference in level between the water surface of the wetland and the lower free edge of the diving bell.

11.- Device according to any one of the previous claims, characterised in that the lower free edge of the diving bell is made as a blade.

12.- Device according to any one of the previous claims, characterised in that near the lower edge of the diving bell it is provided with a water jet that is fed by a jet pump that sprays water into the sludge inside.

13.- Device according to claim 12, characterised in that the jet pump is mounted on the outside of the diving bell and via pipes is connected with passages in the wall of the diving bell, which pipes discharge in the diving bell in a direction perpendicular to this wall.

14.- Device according to any one of the previous claims 12 or 13, characterised in that the means to drive the diving bell in the sludge are formed by a hydraulic crane with a hydraulic unit that supplies the hydraulic power to drive the dredge pump and the optional jet pump.

15.- Device according to ~~any one of the previous~~ claim~~s~~ 14, characterised in that the hydraulic crane is set up on a work boat or a pontoon, together with the aforementioned compressor.

16.- Device according to any one of the previous claims, characterised in that it is provided with means to assess the depth of the diving bell in the layer of sludge.

17.- Device according to claim 16~~15~~, characterised in that the means to assess the depth of the diving bell in the sludge are formed by a depth scale on the sidewall of the diving bell and a camera.

18.- Device according to any one of the previous claims, characterised in that it is provided with means to assess the thickness of the layer of sludge.

19.- Use of a device according to any one of the previous claims, characterised in that the device is used for the removal of a layer of sludge and/or sand from the bottom of a wetland.