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[Continued on next page]

(54) Title: SUBMERGED PLATE FORWARD OSMOSIS SYSTEMS

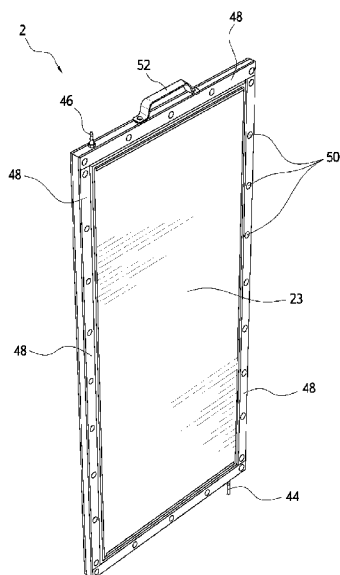


FIG. 1A

(57) Abstract: Described herein is a submerged plate membrane device in-  
tended for use in forward osmosis processes, particularly for concentrating  
various process streams such as those in ponds. Particular examples of feed  
streams that may be concentrated are for example the following feed solu-  
tions: brines, seawater, drilling mud, waste water, bio-digestate, and the like.  
Thus, the process and device described herein are useful for de-watering, and  
thus concentrating, the content of solar evaporation ponds and drilling mud  
ponds.



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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C02F 9/00 (2013.01)

USPC - 210/641

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - B01D 61/08; C02F 1/44,9/00 (2013.01)

USPC - 202/200; 203/10; 210/205,206,209,259,321.6,321.64,637,639,641,652

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CPC - B01D 61/08; C02F 1/44,9/00 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Google Patents

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|------------------------------------------------------------------------------------|-----------------------|
| X         | US 2006/0144789 A1 (CATH et al) 06 July 2006 (06.07.2006) entire document          | 1,2,5                 |
| Y         |                                                                                    | 3,4,6-13              |
| Y         | US 2010/0213129 A1 (JONES et al) 26 August 2010 (26.08.2010) entire document       | 3,4,6-13              |

☐ Further documents are listed in the continuation of Box C.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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