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(54) **TANK FOR STORAGE AND EXTRACTION OF PELLETS**

(57) Tank (S) for the storage and the extraction of pellets, comprising a cylindrical hollow container (1), within which a mass of said pellets is suitable to be stored, said container (1) being provided with a closure cap upper

portion (2) having a well inlet mouth (3) of said pellets and a lower portion (4) of conical shape provided with an opening mouth (5) for the extraction of said pellets; said lower portion (4) has walls inclined at an angle of 47°.

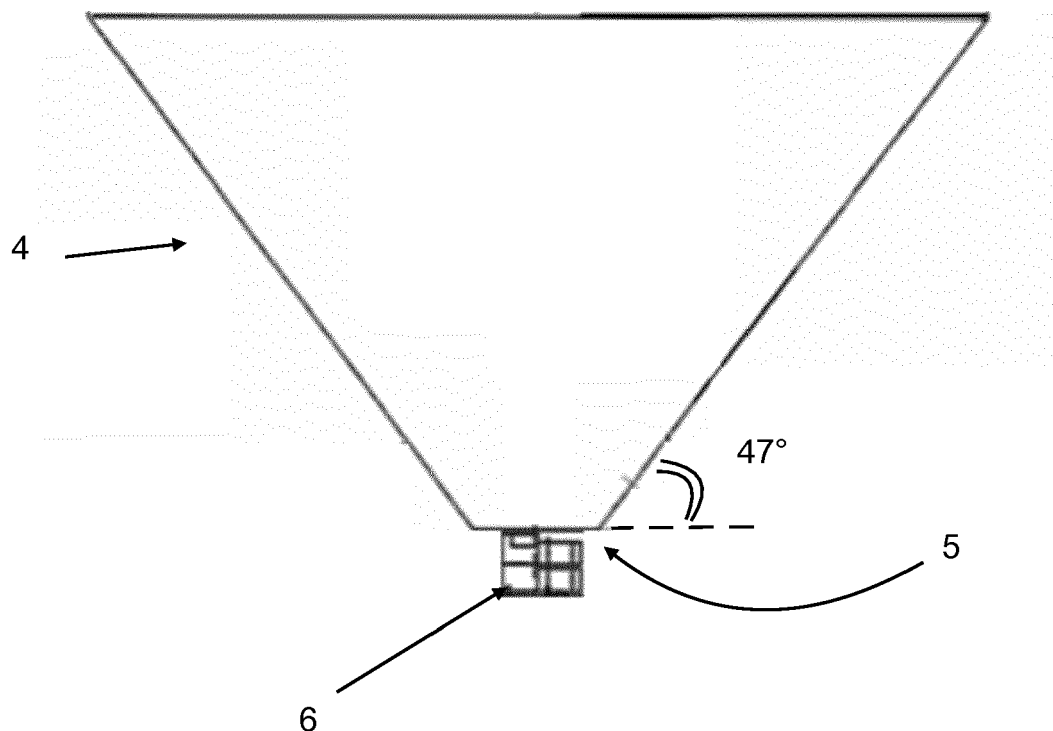


FIG. 2

Description

[0001] The present invention relates to a tank for the storage and the extraction of pellets.

[0002] In particular, the present invention is advantageously used for the storage, preferably in buried mode, in order to free up useful space, and for the extraction of pellets produced from pressed wood residues for use as ecological fuel in heating systems of buildings in general, to which the following description will make explicit reference without for this reason losing generality.

[0003] The object of the present invention is to provide a tank that allows optimal and dry storage of pellets without the effectiveness and the characteristics of perfect combustion.

[0004] Another object of the present invention is to provide a tank from which pellets can be extracted for use without forming blocks or lumps along the walls of the lower portion of the tank itself.

[0005] The structural and functional features of the present invention and its advantages over the known art will become even more apparent and evident from the claims below, and in particular from an examination of the description that follows, made with reference to the attached drawings which show a preferred but non-limiting embodiment of a tank for the storage and the extraction of pellets, wherein:

- Figure 1 shows the tank object of the present invention schematically and in section; and
- Figure 2 shows a terminal portion of the tank of Figure 1.

[0006] With reference to Figure 1, a tank S for the storage and the extraction of pellets (known and not shown) comprises a cylindrical hollow container 1, within which a pellet mass is suitable to be stored, said container being provided of a closure cap upper portion 2 of the container 1 provided with a well inlet mouth 3 of the pellets themselves.

[0007] Preferably, but without limitation thereto, the tank S is made of steel sheet S235JR with the aforementioned adjustable upper well 3 (200 mm and 10° max) and with a galvanized heavy duty middle cover at "0" level, fixed well with an outer fibreglass coating and a galvanized cover.

[0008] The tank S is also equipped with an outer coating made of resin reinforced with 2.5 mm thick anti-corrosion fibreglass with cathode protection up to 30,000 volts and with the top surface having a thickness of 5 mm in order to avoid any condensation problems.

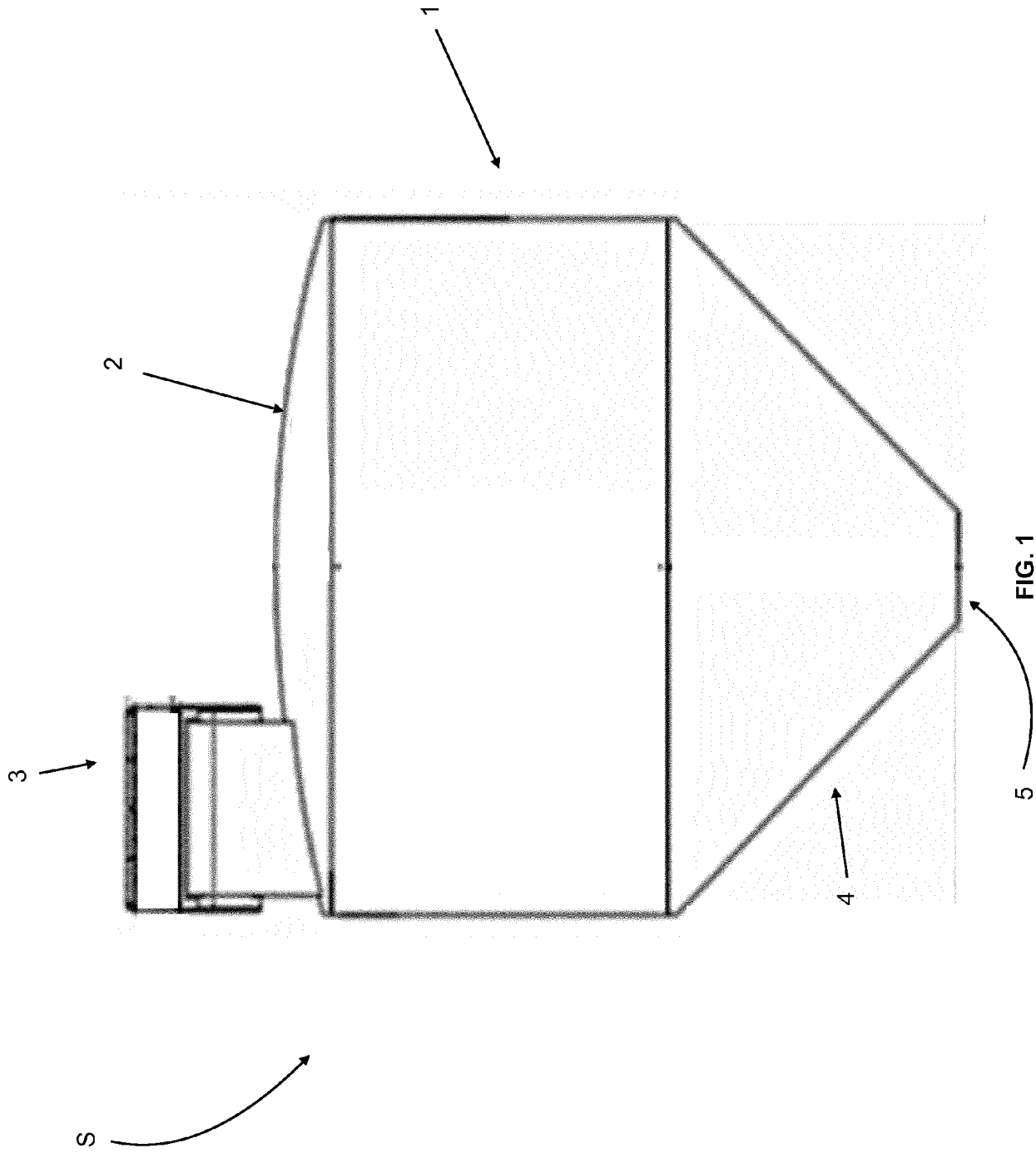
[0009] As illustrated in Figs. 1 and particularly 2, the container 1 is provided with a lower portion 4 of a frusto-conical shape of an opening mouth 5 for the extraction of pellets, at the outer end of which a depth probe 6 is arranged. In order to avoid the damaging formation of pellet accumulations or lumps usually forming along the inner walls of portion 4, causing considerable problems

in the correct sliding of pellets, the inclination of such walls with respect to the horizontal is provided at an angle of 47°.

[0010] Preferably, but without limitation thereto, the height of such conical portion 4 is 115 cm, with a diameter of said outlet mouth 5 set at 35 cm.

Claims

1. Tank (S) for the storage and the extraction of pellets, comprising a cylindrical hollow container (1), within which a mass of said pellets is suitable to be stored, said container (1) being provided with a closure cap upper portion (2) having a well inlet mouth (3) of said pellets and a lower portion (4) of frusto-conical shape provided with an opening mouth (5) for the extraction of said pellets; **characterized in that** said lower portion (4) has walls inclined at an angle of 47°.
2. Tank according to claim 1, **characterized in that** said closure cap upper portion (2) is provided with a well inlet (3) for introducing said pellets inside said container (1).
3. Tank according to claim 1 or 2, **characterized in that** it is made of steel sheet.
4. Tank according to claim 3, **characterized in that** it is provided with an outer coating made of resin reinforced with anti-corrosion fibreglass.
5. Tank according to one or more of the preceding claims, **characterized in that** a depth probe (6) is provided at the outer end of said lower portion (4).



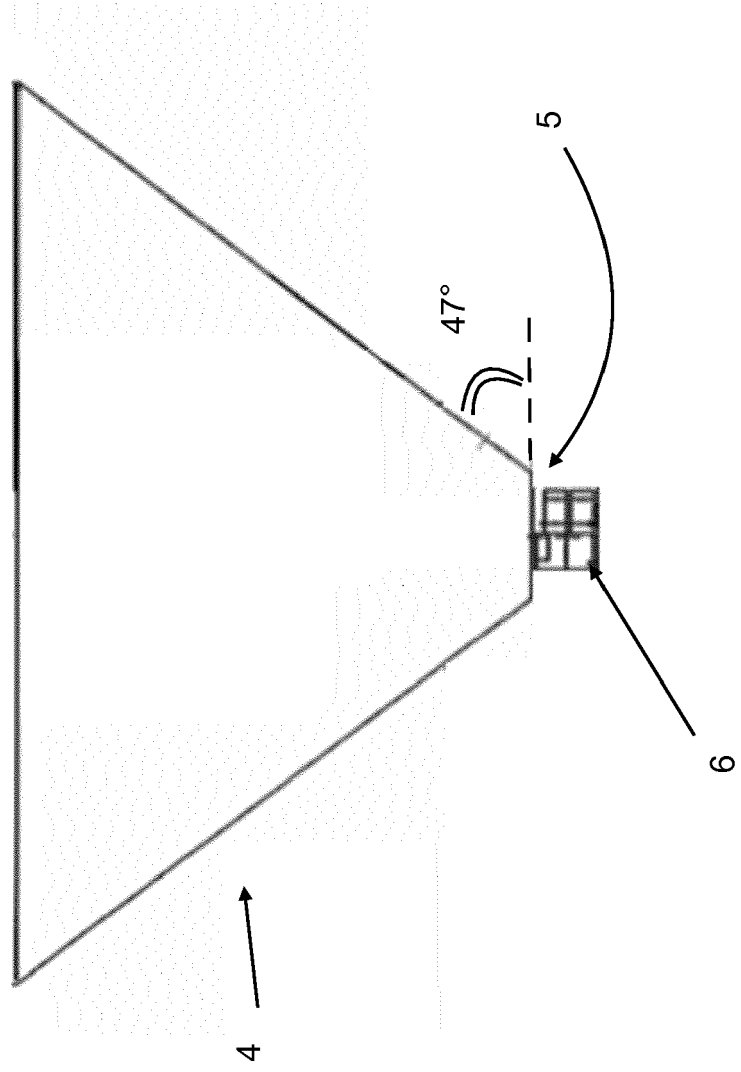


FIG. 2



EUROPEAN SEARCH REPORT

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EP 17 17 8576

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 November 2017	Examiner Piolat, Olivier
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 17 17 8576

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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