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A1D D1D5D

(56) Documents Cited
WO 94/15449 A **FR 002550415 A** **US 4541570 A**
US 4072272 A

(58) Field of Search
UK CL (Edition M) **A1D D1D5D**
INT CL⁵ **A01D 3/06**
ONLINE DATABASES : WPI

(54) **Material spreader**

(57) The material spreader comprises a wheeled chassis 1 with a material container 2 being tiltable to feed material onto a vibratory plate 3 whereby it is fed to the rotary spreading disc 5 which discharges the material out of the spreader. A metering gate 4 is provided to prevent the movement of material into the spreading disc 5 during transport to a field and to meter the flow of material to the spreading disc 5 during operation so that materials having a variety of consistencies may be spread. The rotation speed of the spreading disc 5 is also variable to cater for a variety of materials.

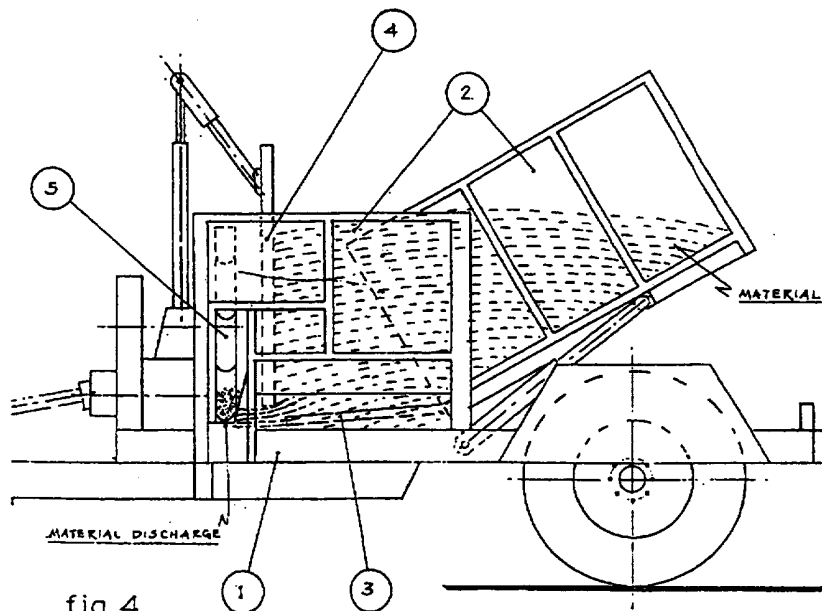


fig 4
1: 25

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

At least one of these pages has been prepared from an original which was unsuitable for direct photoreproduction.

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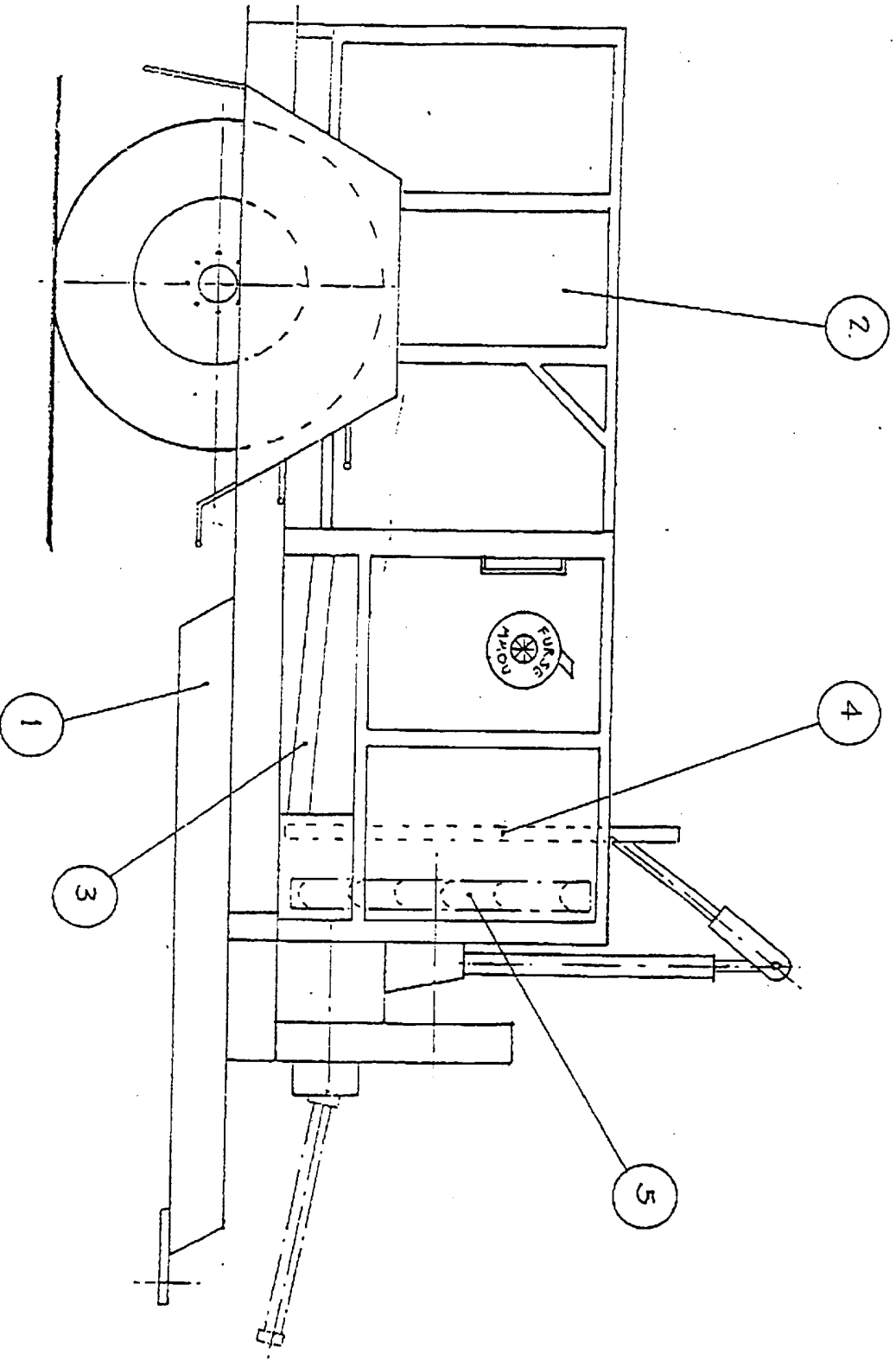


fig. 1
(1:25)

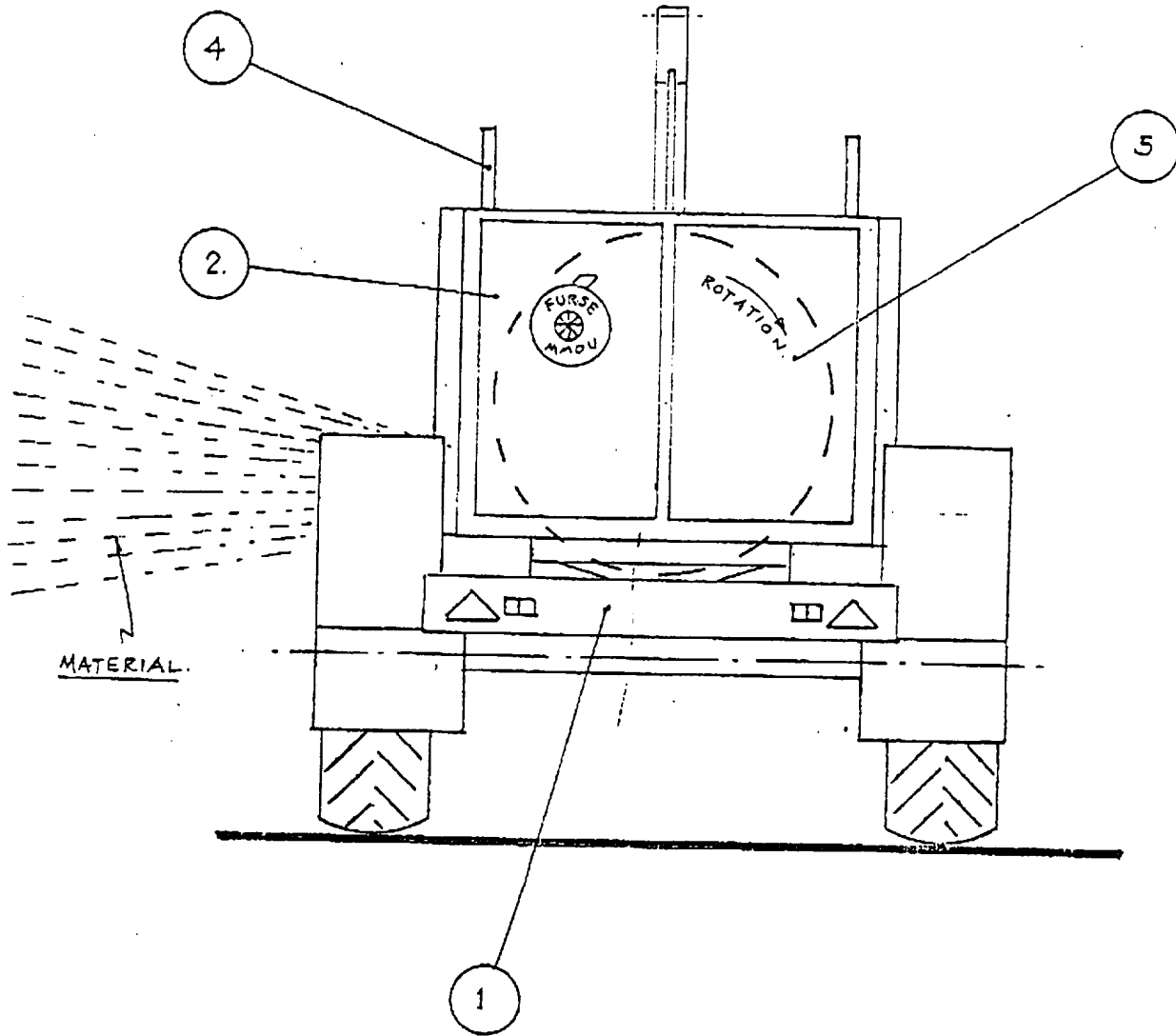


fig. 2
(1:25)

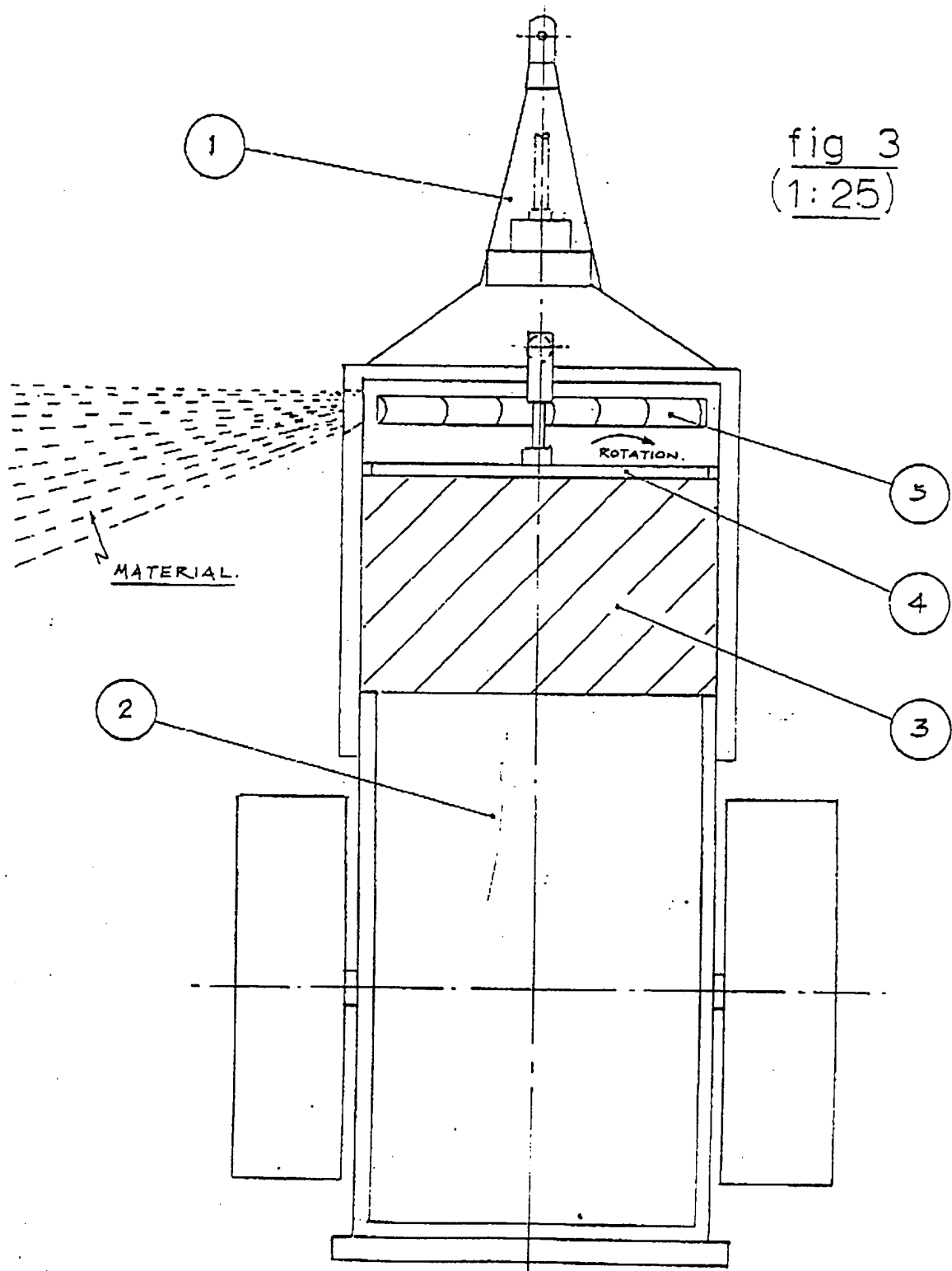


fig 3
(1:25)

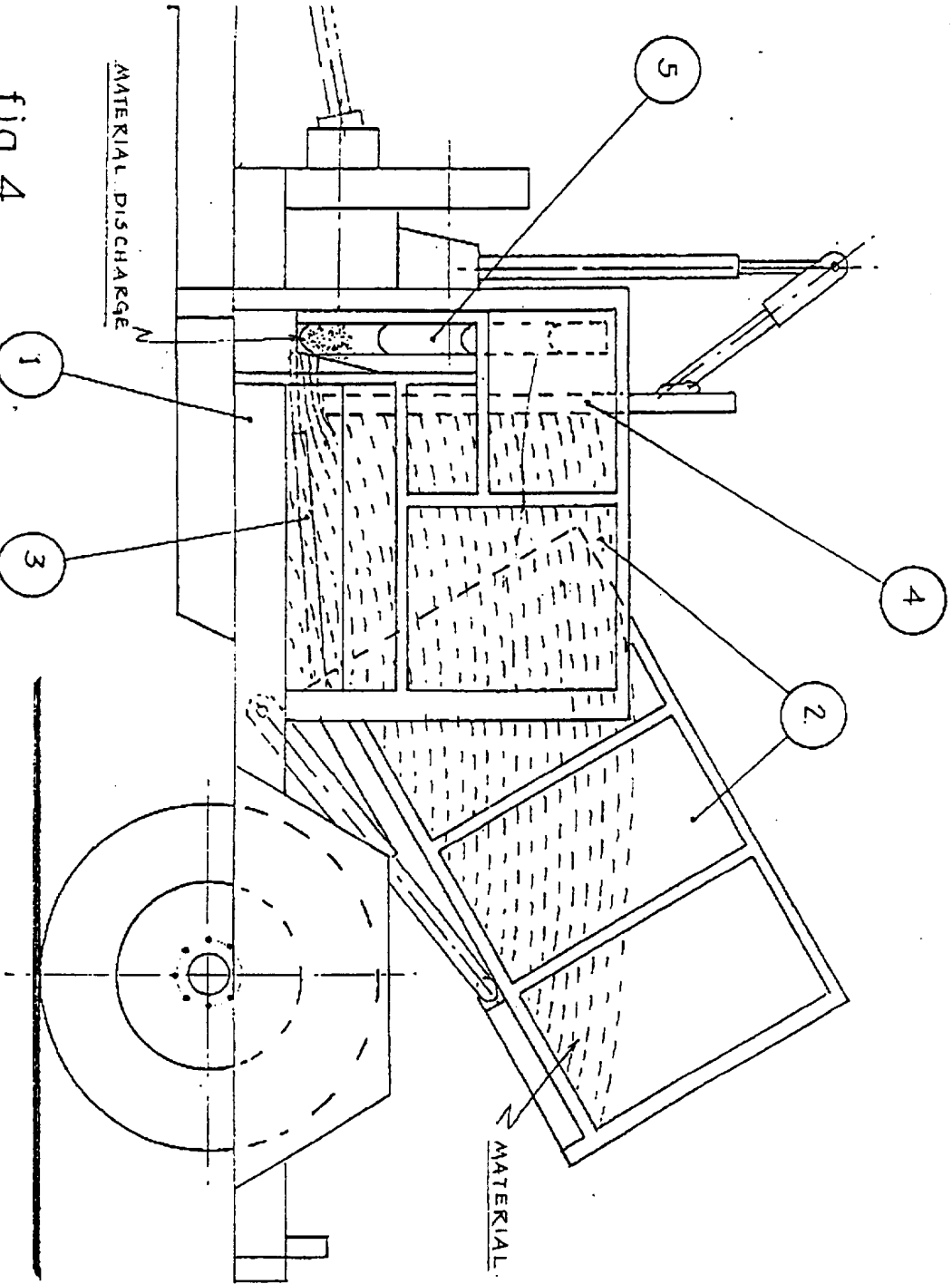


fig 4
1:25

- 1 -

MULTI MATERIAL DISCHARGE UNIT

This invention relates to a Multi Material Discharge Unit. (Referred to as M.M.D.U. hereafter).

Bulk material spreaders are machines well known in many industries and are used for spreading a variety from dry solid to wet slurry type materials.

Present bulk material spreaders are however sometimes complicated machines which are not suited to evenly spreading both dry solid and wet slurry type materials without modifications. They are also prone to problems caused by foreign matter clogging the spreading mechanism (e.g. stones, wood etc.,) Some types of machine also have high power requirements to spread the materials.

The present invention simply comprises a container which holds the material to be spread, a vibrating screen, a metering gate and a rotating disc which shreads and discharges the material.

An example of the invention will be described with reference to the accompanying drawings.

Figure 1 - Shows the M.M.D.U. side view comprising:-

- 1 - wheeled chassis
- 2 - half tilting material container
- 3 - vibrating screen
- 4 - metering gate
- 5 - rotating disc

Figure 2 - Shows the M.M.D.U. rear view and direction of discharged material. (Itemised details as above)

Figure 3 - Shows the M.M.D.U. top view and direction of discharged material. (Itemised details as above)

Figure 4 - Shows the M.M.D.U. side view in the spreading mode with metering gate open and body tipped. (Itemised details as above)

To operate the machine the metering gate (4) is closed to prevent leakage of material. The machine is then loaded with the material to be spread. The machine is then taken to a place where the spreading is to take place.

The rotating disc (5) is set in motion to the required speed.

The metering gate (4) is then opened to the required amount and material spreading can then commence.

The metering gate (4) can be adjusted in order to achieve an acceptable spread rate and pattern.

CLAIMS

1. A M.M.D.U. comprising a wheeled chassis, a half tilting material container, a vibrating screen, a metering gate and rotating disc.
2. A M.M.D.U. which will spread both dry solid type material and wet slurry type material with only simple field adjustments i.e. adjust rotating disc speed and metering gate opening.
3. A M.M.D.U. that will not be prone to blockages by foreign objects i.e. stones, wood etc.,
4. A M.M.D.U. that will with simple field adjustments give a wide and consistent spread of material with high spreading capability.
5. A M.M.D.U. that is simple in design and construction, simple to operate with a low power requirement.

Relevant Technical Fields

(i) UK Cl (Ed.M) A10 D1D5D

(ii) Int Cl (Ed.5) A01D 3/06

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASES: WPI

Search Examiner
 MR S WALLER

Date of completion of Search
 12 DECEMBER 1994

Documents considered relevant following a search in respect of Claims :-
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Categories of documents

- | | |
|---|---|
| X: Document indicating lack of novelty or of inventive step. | P: Document published on or after the declared priority date but before the filing date of the present application. |
| Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. | E: Patent document published on or after, but with priority date earlier than, the filing date of the present application. |
| A: Document indicating technological background and/or state of the art. | &: Member of the same patent family; corresponding document. |

Category	Identity of document and relevant passages	Relevant to claim(s)
Y	WO 94/15449 (KEENAN) see Figure 2, isolating plate 55, spreader 30	1
Y	US 4541570 (PAUL REVERE CORP) see Figures 1 and 2, plate 46	1
Y	US 4072272 (HARCO) see Figures 7 and 8	1
X,Y	FR 2550415 (DELAUNAY) see page 3 lines 21 to 34	1

Databases:The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).