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(54) Beverage dispenser assembly

(57) A self standing and portable beverage dispensing assembly consists of a beer keg 1, a frame 4 which stands on the keg 1 through brackets 9, and a dispense unit 11 carried on the frame 4. The dispense unit has a dispense tap 12 connected through a cooler 13 in that unit to a keg tapping unit 19 for coupling to a part 3 of the keg. The load of the keg 1 provides stability to the assembly and the brackets 9 are vertically adjustable to vary the height of the tap 12 above the keg 1.

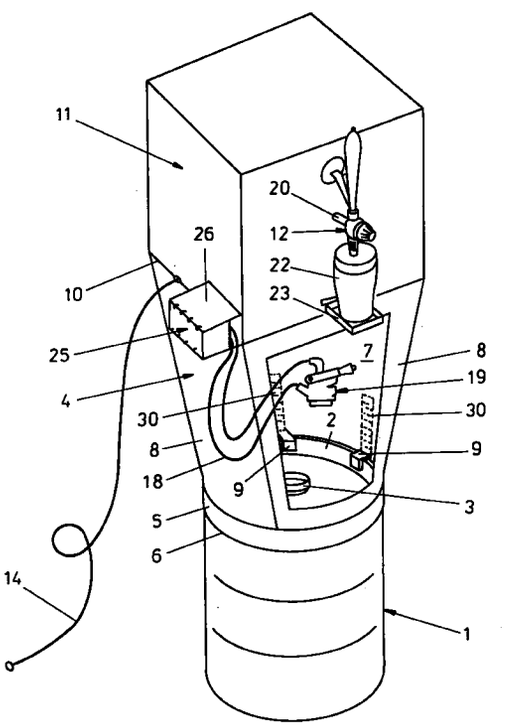

FIG. 1

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Description

TECHNICAL FIELD & BACKGROUND ART

The present invention relates to a beverage dispense assembly and is particularly concerned with such an assembly which is of a portable nature for the dispensing of beverage from a bulk container.

Dispense assemblies of the kind above mentioned are popular for the dispensing of fermented alcoholic or non-alcoholic beverages such as stout, ale, lager (or other beer) or a cider at temporary sites for social gatherings such as family or office celebrations and the well known "beer tent" frequently used at sporting occasions. Conventionally portable beverage dispense systems are somewhat of an ad-hoc arrangement calling for a table or other available piece of furniture on which to mount a dispense tap with a bulk container on the floor, possibly coupled through a cooler to the dispense tap. Sometimes the cooler is positioned on the floor by the container or placed on the table and this together with the coupling pipes presents a somewhat unsightly overall arrangement which often takes an unreasonable length of time and preferably some experience to set up correctly. It is an object of the present invention to provide a portable beverage dispense assembly which lends itself to alleviating disadvantages of conventional such assemblies as discussed above.

STATEMENT OF INVENTION & ADVANTAGES

According to the present invention there is provided a self standing and portable beverage dispense assembly comprising an upstanding frame; a bulk container of beverage co-operating with a lower part of the frame to provide stability for the frame; a dispense unit carried by an upper part of the frame, the dispense unit comprising a dispense tap and means for coupling the tap with the container for the dispensing of beverage on demand from the container through the tap.

The present invention was primarily developed for use in the dispensing of fermented beverages such as beer or cider available in a keg or cask for dispensing at a temporary site, typically a party or other social gathering. For this it is envisaged that the frame and dispense unit will usually be made available for a customer purchasing beverage in the bulk container. The assembly may therefore be portable as three individual compact units which are easily manhandled and transported by automobile for erection on site. Understandably the frame which is to carry the dispense unit in the assembly should be light in weight for ease of manhandling and of compact nature convenient for transport. Such lightweight and compact frames are often easily dislodged from their site or knocked over. However, by the present invention the bulk container of the beverage co-operates with a lower part of the frame so that the weight of the bulk container and its beverage add to the stability of the frame. The frame provides a convenient site on which is located the dispense unit with the tap (thereby avoiding the necessity of finding an available piece of furniture on which to mount the dispense tap) whilst the combined dispense unit and frame may be shaped and decorated to provide an aesthetically pleasing presentation.

The bulk container may cooperate with the lower part of the frame to provide the required stability by standing on a base part of the frame, conveniently by the container being received within the lower part of the frame. In this latter arrangement the lower part of the frame may provide a chamber within which the container is received for the frame to provide a casing about the container. Preferably however the container is of a rigid structure such as a metal cask or keg and the frame stands on the container, usually with an upper part of the container being received within a lower part of the frame, the latter conveniently providing a skirt within which the upper part of the container is received. By having the frame standing on the container there is the advantage that the height of the container (or a part of that height) may be utilised to set the height of the upper part of the frame on which the dispense unit is carried, thereby permitting use of a smaller size and lighter weight (and thereby less expensive in material cost) frame structure than may otherwise be necessary and also providing a convenient means of raising the level of the dispense tap to a height convenient for the user. Where the frame stands on the bulk container (in the sense that the frame is supported off the ground or floor by the container standing on the ground or floor) the frame should co-operate firmly with the container to provide a reasonably stable assembly so that the frame and dispense unit carried thereby are unlikely to be inadvertently displaced from the container. Preferably the frame co-operates with the container by bracket means through which the frame stands on the container. The frame may be adjustable vertically relative to a container on which it stands to vary the height of the tap of the dispense unit as convenient for its operation. Vertical adjustment may be achieved by having the aforementioned bracket means vertically adjustable on the frame, for example by use of vertical slideways over the length of which the bracket means are infinitely adjustable or by use of vertical ladders, sockets, spigots or the like presenting an array of vertically spaced seatings along which the bracket means are incrementally adjustable.

Preferably the dispense assembly includes a cooler for cooling the beverage as it flows to the tap during dispensing. Typically the cooler will be included in the dispense unit and electrically operated so that the assembly may have a power cable for connection to a convenient electrical terminal as the sole external connection required for the assembly.

The assembly will usually include a source of gas under pressure for pressurising the beverage in the con-

tainer and effecting displacement of the beverage from the container during dispensing. In a preferred arrangement the dispense unit will include a reservoir or cylinder which provides the source of gas under pressure and valve means for opening and closing communication between the reservoir and the container as required during use of the assembly. It is however possible that the bulk container of beverage will have an integral chamber that provides a source of gas under pressure for pressurising and dispensing of the beverage - metal kegs having this facility of an integral gas chamber are well known in the art for the storage and dispensing of stout.

DRAWINGS

One embodiment of a portable beverage dispense assembly constructed in accordance with the present invention will now be described, by way of example only, with reference to the accompanying illustrative drawings in which:-

Figure 1 is a perspective view of the assembly (with the dispense tap uncoupled from the bulk container), and

Figure 2 shows part of the assembly of Figure 1 during setting up of that assembly.

DETAILED DESCRIPTION OF DRAWINGS

The beverage dispense assembly includes a conventional metal beer keg 1 of generally cylindrical shape which will stand stably on one end with its axis vertical to present an upstanding circumferential flange 2 and a tapping port 3 centrally disposed in the upper end face of the keg 1. Carried on the keg 1 is a hollow frame 4 (conveniently of sheet metal) having a cylindrical lower part 5 in the form of an annular skirt 6 which opens into a chamber 7 of the frame 4. The skirt 6 is complementary to the cylindrical wall of the keg 1 and is closely received over that wall as shown in Figure 1 so that the flange 2 and tapping port 3 are presented within the chamber 7. Located on upstanding side walls 8 of the frame are L-shaped brackets 9 which engage over the flange 2 so that the frame 4 is supported firmly on the keg 1 through the brackets 9.

An upper part 10 of the frame 4 presents a generally rectangular upwardly directed platform on which is carried a dispense unit 11. The unit 11 has a conventional beer dispense tap 12 and an electrical cooling unit 13 (see Figure 2) through which beer from the keg 1 passes to be cooled prior to dispensing from the tap 12. A power cable 14 is provided for the cooling unit and this cable is the only external connection which may be required for the assembly which is a self standing stable structure as shown in Figure 1.

The dispense assembly provides a dispensing system which utilises a source of gas under pressure remote from the keg 1 and this gas, typically nitrogen and carbon dioxide, is provided by a pressurised cylinder 15 housed within a pocket 16 in the dispense unit 11 (see Figure 2). The cylinder 15 carries a valve 17 through which gas under pressure is made available via a pipe 18 to a conventional keg tapping unit 19. The tapping unit 19 also has a beer dispensing tube 20 through which it is coupled, by way of the cooling unit 13 to the dispensing tap 12. The tapping unit 19, being of conventional form, is mated with the conventional tapping port 3 by simply plugging, clamping or otherwise coupling the components together so that when gas from the cylinder 15 is made available to the interior of the keg 1 and the tap 12 is opened, the gas pressure displaces beer from the keg through the pipe 20 and its cooler 13 to be dispensed into a glass 22 carried on a platform 23 projecting from the unit 11.

When not in use, the tapping unit 19 (together with lengths of pipes 18 and 20 adjacent thereto) is conveniently housed in a box 25 on the dispense unit 11. The box 25 is provided with a hinged lid 26 to provide convenient access to the tapping unit 19. To set up the dispense apparatus and system the user simply stands the frame 4 on the upstanding keg 1, stands the dispense unit on the platform 10 of the frame, removes the tapping unit 19 from the box 25 and couples that tapping unit in conventional manner to the tapping port 3 of the keg, connects the power cable 14 to an electrical source and opens the valve 5 to admit gas to the keg 1. The assembly may therefore be set up for dispensing quickly and efficiently by an inexperienced person. Furthermore, the three components essential to the assembly, namely the keg 1, the frame 4 and the dispense unit 11 are individually portable for ease of handling and transportation (which is a particularly advantageous feature where the dispense assembly is made available on request to members of the public, say from an off-licence selling beer in the keg 1). It will be appreciated that the gas cylinder 15 will have to be re-charged or replaced periodically and this may conveniently be achieved by removing the cylinder 15 from its pocket 16 through the box 25.

From Figure 1 it will be appreciated that the height of the dispensing tap 12 is determined, in part, by the keg 1. To permit the height of the tap 12 to be changed as convenient for a particular user, the brackets 9 may be retained on the upstanding walls 8 of the frame 4 by their engagement with vertically extending ladders 30. Each bracket 9 effectively plugs into, fits over or clips onto rungs of its associated ladder 30 at a predetermined position along that ladder to permit a variation in the depth to which the upper end of the keg 1 is received within the skirt 6 of the frame 4 before the brackets 9 engage over the upstanding flange 2 (thereby varying the overall height of the dispensing tap 12 from the bottom of the keg 1).

Claims

1. A self standing and portable beverage dispense assembly comprising an upstanding frame; a bulk container of beverage co-operating with a lower part of the frame to provide stability for the frame; a dispense unit carried by an upper part of the frame, the dispense unit comprising a dispense tap and means for coupling the tap with the container for the dispensing of beverage on demand from the container through the tap.

2. An assembly as claimed in claim 1 in which the container stands on a base part of the frame.

3. An assembly as claimed in either claim 1 or claim 2 in which the container is received within the lower part of the frame.

4. An assembly as claimed in claim 3 in which the lower part of the frame provides a chamber within which the container is received for the frame to provide a casing about the container.

5. An assembly as claimed in claim 1 in which the container is rigid and the frame stands on the container.

6. An assembly as claimed in claim 5 in which at least an upper part of the container is received within the lower part of the frame.

7. An assembly as claimed in claim 6 in which the lower part of the frame provides a skirt within which at least the upper part of the container is received.

8. An assembly as claimed in either claim 6 or claim 7 in which the upper part of the container is received as a close substantially complementary fit within the lower part of the frame for the frame to be stable on the container.

9. An assembly as claimed in any one of claims 5 to 8 in which the frame comprises bracket means through which the frame stands on the container.

10. An assembly as claimed in claim 9 in which the bracket means firmly engages the container to provide a stable connection between the container and the frame.

11. An assembly as claimed in any one of claims 5 to 10 in which the frame is adjustable vertically relative to the container for varying the height of the tap of the dispense unit.

12. An assembly as claimed in claim 11 when appendant on claim 9 in which the bracket means is vertically adjustable on the frame for varying the vertical position of the frame on the container.

13. An assembly as claimed in any one of the preceding claims in which the dispense unit stands on a platform presented by the upper part of the frame.

14. An assembly as claimed in any one of the preceding claims and comprising cooler means for cooling the beverage as it flows to the tap during dispensing.

15. An assembly as claimed in claim 14 in which the dispense unit includes the cooler means.

16. An assembly as claimed in any one of the preceding claims in which a source of gas under pressure is provided for pressurising the beverage in the container and effecting displacement of the beverage from the container during dispensing.

17. An assembly as claimed in claim 16 in which the dispense unit comprises a reservoir or cylinder which provides the source of gas under pressure and valve means is provided for opening and closing communication between the reservoir and the container.

18. An assembly as claimed in claim 16 in which the container includes a chamber that provides the source of gas under pressure.

19. An assembly as claimed in any one of the preceding claims in which the bulk container comprises one of a barrel, cask or keg.

20. An assembly as claimed in any one of the preceding claims in which the assembly is portable as three individual units consisting of the frame, the bulk container and the dispense unit.

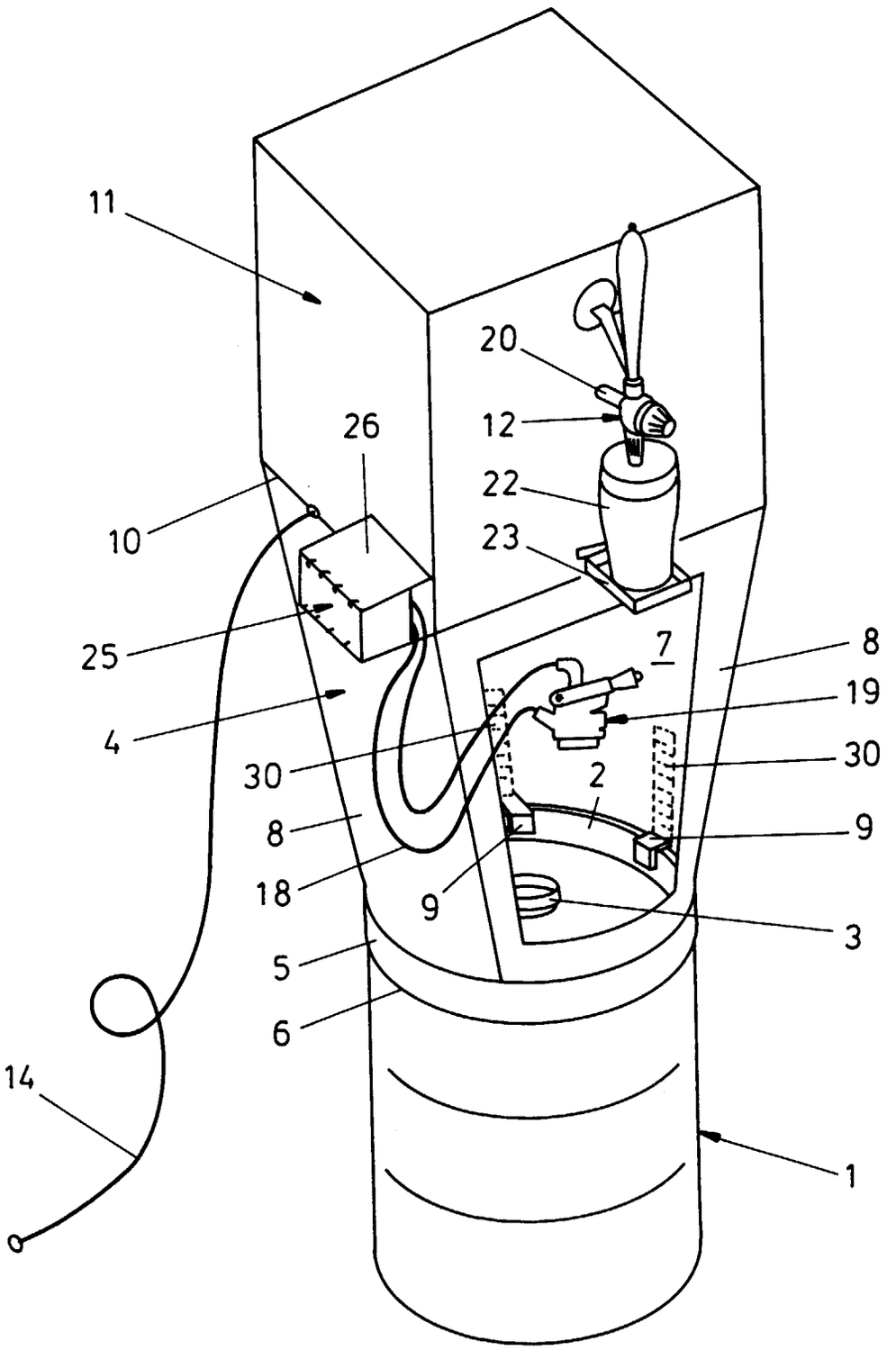

FIG. 1

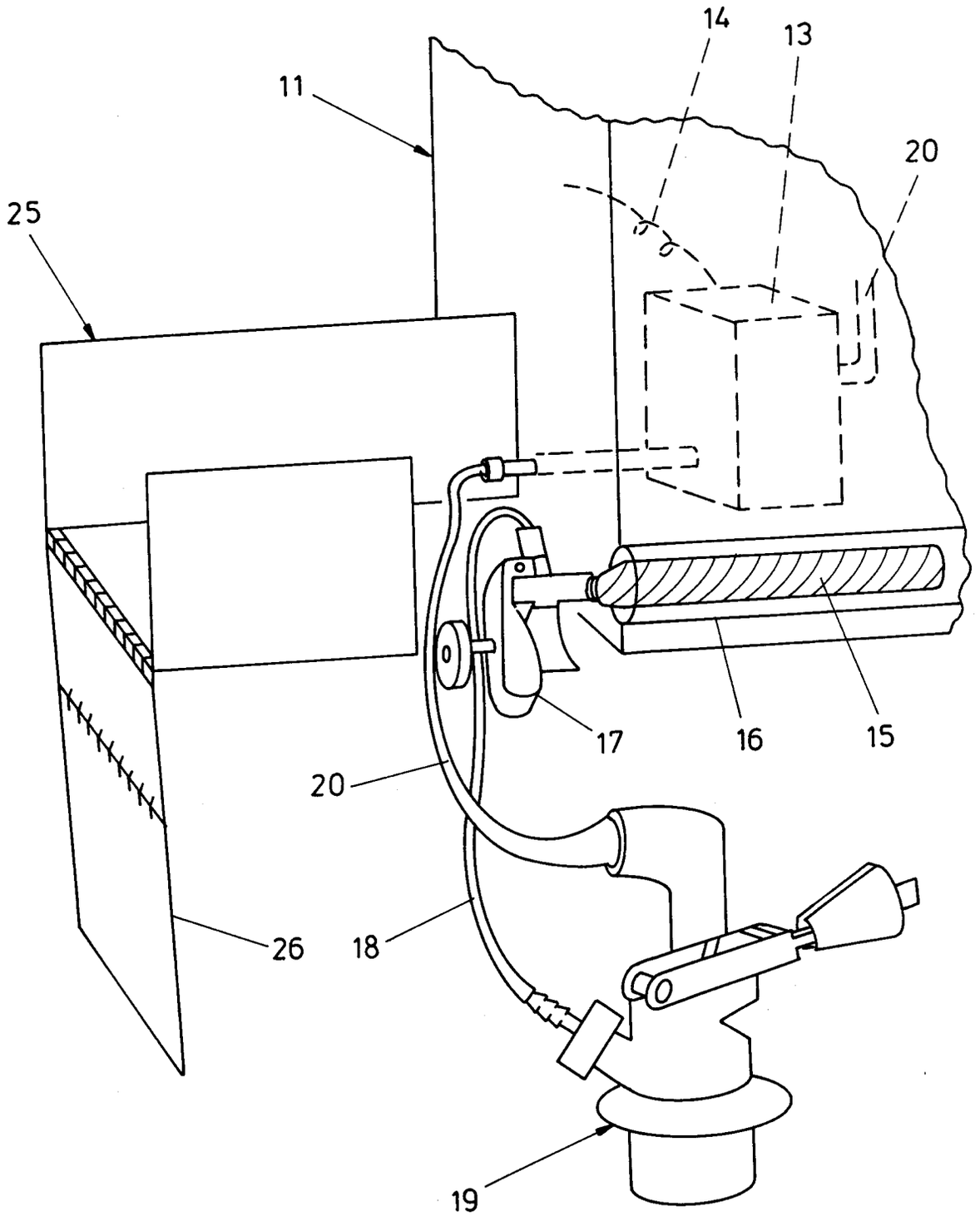

FIG. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 97 30 9959

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 129 552 A (PAINCHAUD THOMAS A ET AL) * column 1, line 58 - column 2, line 24; claims 1,2; figures 1-4 *	1,3,5-8, 13-20	B67D1/06 B67D1/08
X	GB 409 518 A (AKTIESELSKABET DE FORENEDE BRYGGERIER) * page 1, line 24 - line 50; claim 1; figure 1 *	1,2,4, 19,20	
X	DE 295 10 584 U (LAUE VOLKER) * page 6, line 12 - line 20; claim 1; figure 1 *	1,2,4, 19,20	
A	US 3 469 745 A (SERIO VINCENT J JR ET AL)		
A	US 3 508 569 A (PUSTER LOUIS M)		

TECHNICAL FIELDS SEARCHED (Int.Cl.6)
B67D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	3 April 1998	Müller, C

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
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E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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