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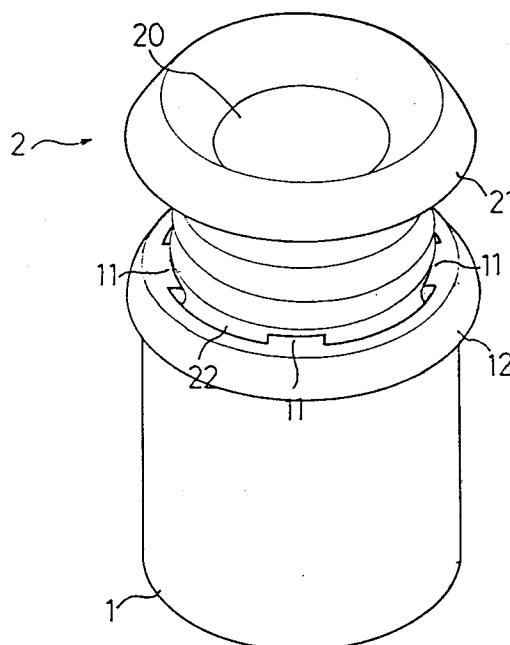
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CH-8152 Glattbrugg (CH)(54) **A litter bin.**

(57) This invention relates to a litter bin and in particular to one including an outer container (1) formed with a recess (10) a plurality of protuberances (11) extending towards a center line thereof, and a flange (12) around an upper edge thereof, and an inner container (2) having a longitudinal hole (20) extending through the center line thereof, a flange (21) around the upper edge thereof, a plurality of raised annular members (22) along the length thereof, and an engaging projection at the lower portion thereof. The inner container may be force-fitted into the recess of the outer container so that the inner container may be moved up and down as desired so as to adjust the volume of the litter bin to adapt to the quantity of litter.

**FIG. 2****EP 0 567 666 A1**

BACKGROUND OF THE INVENTION

It is found that the prior art litter bin (see FIG. 6) is simply a container for receiving litter and is fixed in volume thereby making it impossible to become larger for receiving more litter. Further, such prior art bin occupies a large space when not in use hence rendering it difficult for stowage and transportation.

Therefore, it is an object of the present invention to provide an adjustable litter bin which may obviate and mitigate the above-mentioned drawbacks.

SUMMARY OF THE INVENTION

This invention relates to an adjustable litter bin.

It is the primary object of the present invention to provide a litter bin which is adjustable in volume.

It is another object of the present invention to provide a litter bin which is simple in construction.

It is still another object of the present invention to provide a litter bin which may be easily dismantled for cleaning.

It is still another object of the present invention to provide a litter bin which is convenient for stowage and transportation.

It is a further object of the present invention to provide a litter bin which is convenient in use.

Other objects and merits and a fuller understanding of the present invention will be obtained by those having ordinary skill in the art when the following detailed description of the preferred embodiment is read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view of a litter bin according to the present invention;

FIG. 2 is a perspective view of the litter bin;

FIG. 3 is a sectional view of the litter bin;

FIGS. 4A, 4B and 4C show the principle of the present invention;

FIGS. 5A, 5B and 5C show the way to separate the inner container from the outer container for cleaning; and

FIG. 6 is a perspective view of a prior art litter bin.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

For purpose to promoting an understanding of the principles of the invention, reference will now be made to the embodiment illustrated in the drawings. Specific language will be used to describe same. It will, nevertheless, be understood that no

limitation of the scope of the invention is thereby intended, such alternations and further modifications in the illustrated device, and such further applications of the principles of the invention as illustrated herein being contemplated as would normally occur to one skilled in the art to which the invention relates.

With reference to the drawings and in particular to FIG. 1 thereof, the litter bin according to the present invention mainly comprises an outer container 1 and an inner container 2. The outer container 1 is a generally cylindrical member with a recess 10, a plurality of protuberances 11 extending towards the center line of the outer container 1, and a flange 12 around the upper edge of the outer container 1.

The inner container 2 is formed with a longitudinal hole 20 extending through the center line thereof, a flange 21 around the upper edge thereof, a plurality of raised annular members 22 along the length thereof, and an engaging projection 23 at the lower portion. The engaging projection 23 is larger than the annular member 22 in diameter and formed with an upper curved surface 24 and a lower curved surface 25 which are of different curvatures.

In assembly (see FIGS. 1, 2 and 3), the inner container 2 is simply force-fitted into the recess 10 of the outer container 1 so that the inner container 2 may be moved up and down as desired so as to adjust the volume of the litter bin. As the engaging projection 23 is of a larger diameter than the annular member 22 and the upper curved surface 24 is larger than the lower curved surface 25 in curvature, the inner container 2 will be easily inserted into the outer container 1, but will be more difficult to be pulled out therefrom.

When desired to receive more trash, simply pull up the inner container 2 with respect to the outer container 1 to enlarge the volume of the litter bin to adapt to the quantity of litter. Hence, the litter bin according to the present invention is adjustable in volume.

Further, when desired to wash the litter bin with water, simply pull up the inner container 2 from the outer container 1 and clean the containers 1 and 2 as shown in FIGS. 5A, 5B and 5C.

Although the present invention has been described with a certain degree of particularity, it is understood that the present disclosure is made by way of example only and that numerous changes in the detail of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

Claims**1.** A litter bin comprising:

an outer container formed with a recess, a plurality of protuberances extending towards a center line thereof, and a flange around an upper edge thereof; and 5

an inner container having a longitudinal hole extending through a center line thereof, a flange around an upper edge thereof, a plurality of raised annular members along a length thereof, and an engaging projection at a lower portion thereof, said inner container being able to be force-fitted into the recess of said outer container so that said inner container may be moved up and down as desired so as to adjust volume of said litter bin. 10 15

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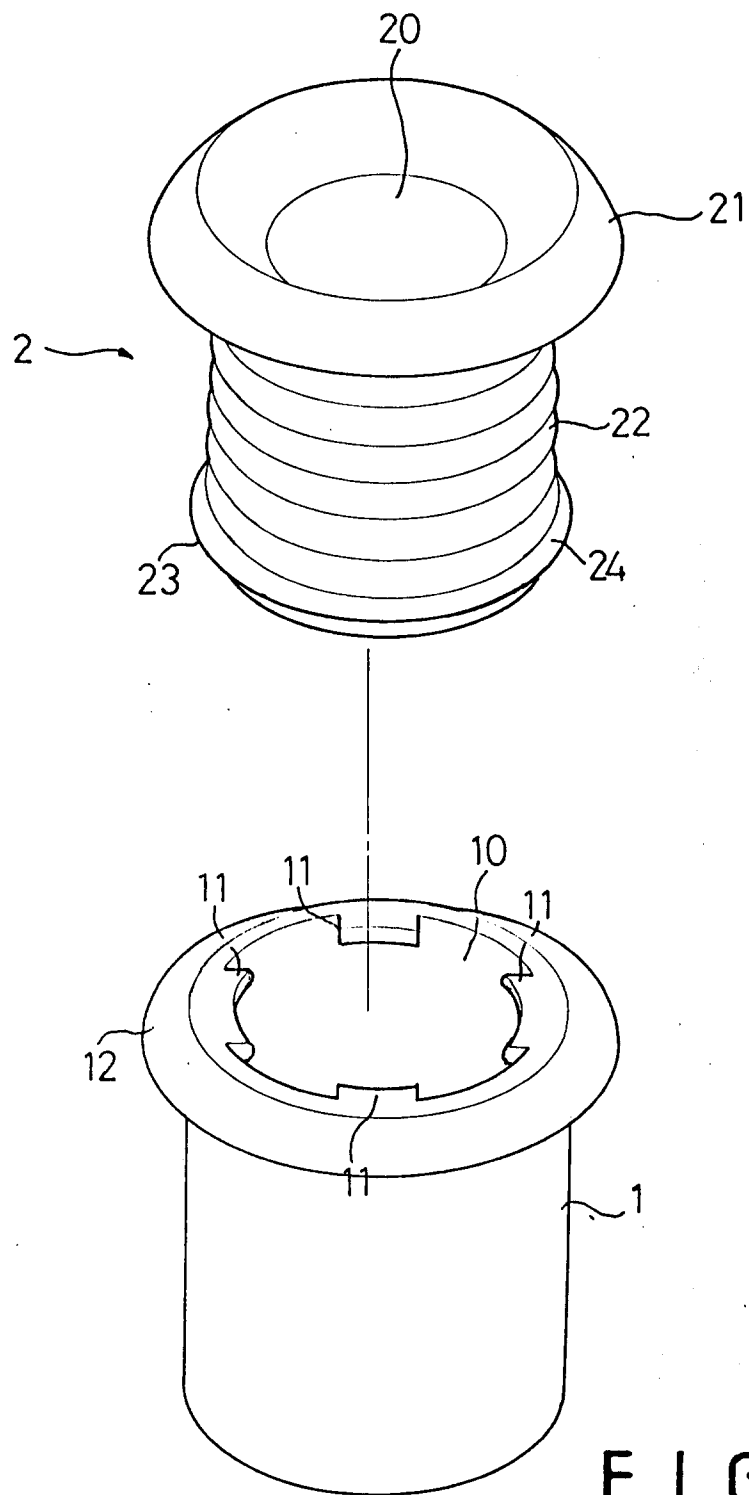


FIG. 1

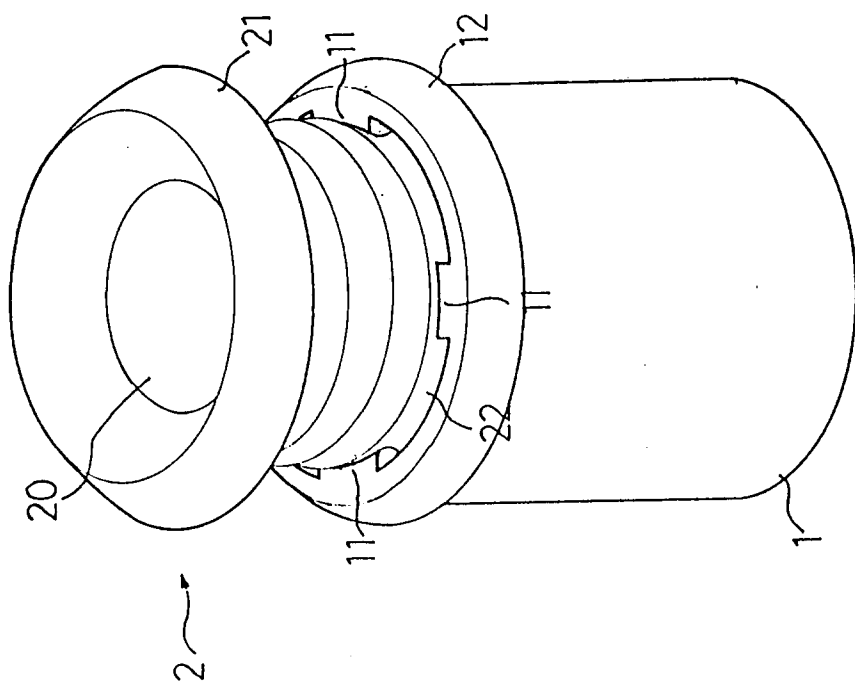


FIG. 2

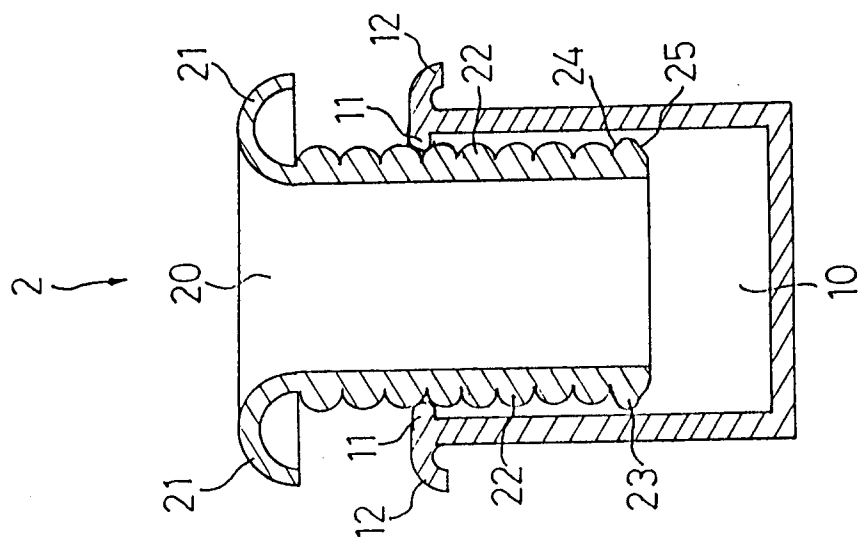


FIG. 3

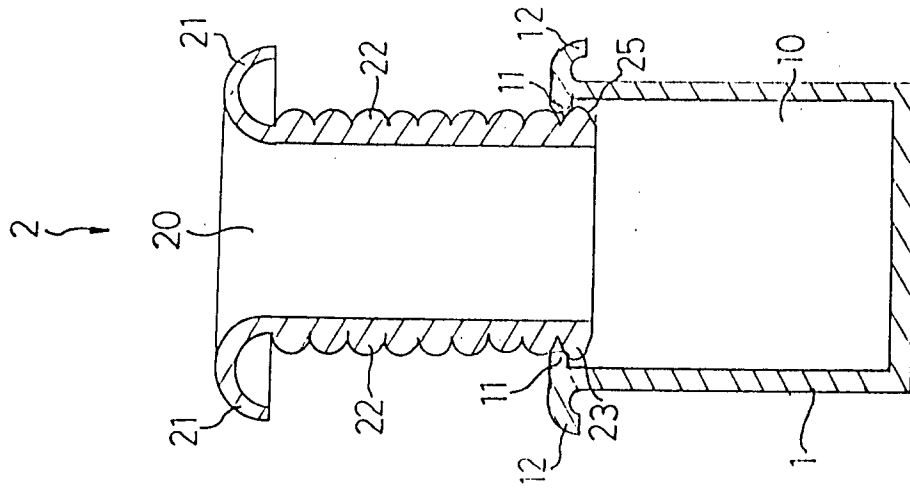


FIG. 4C

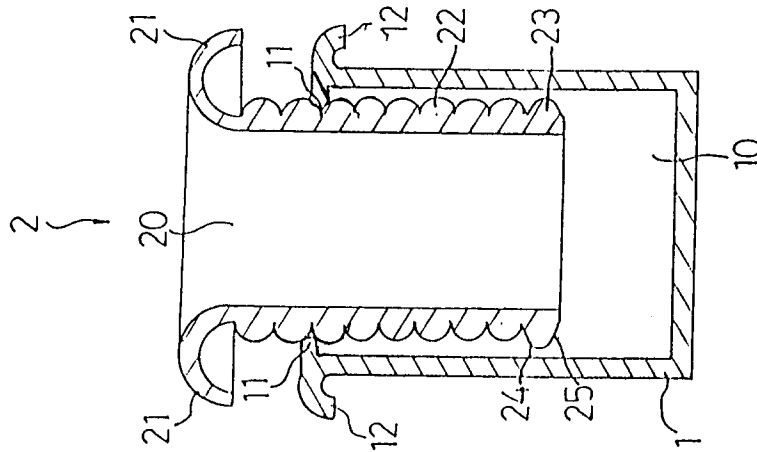


FIG. 4B

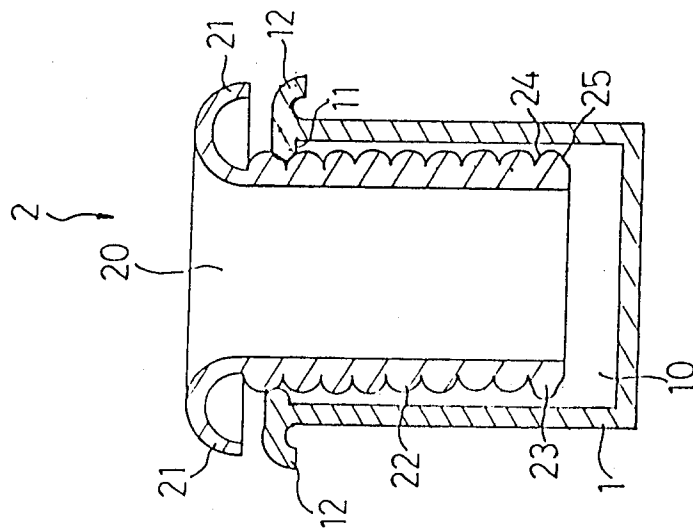


FIG. 4A

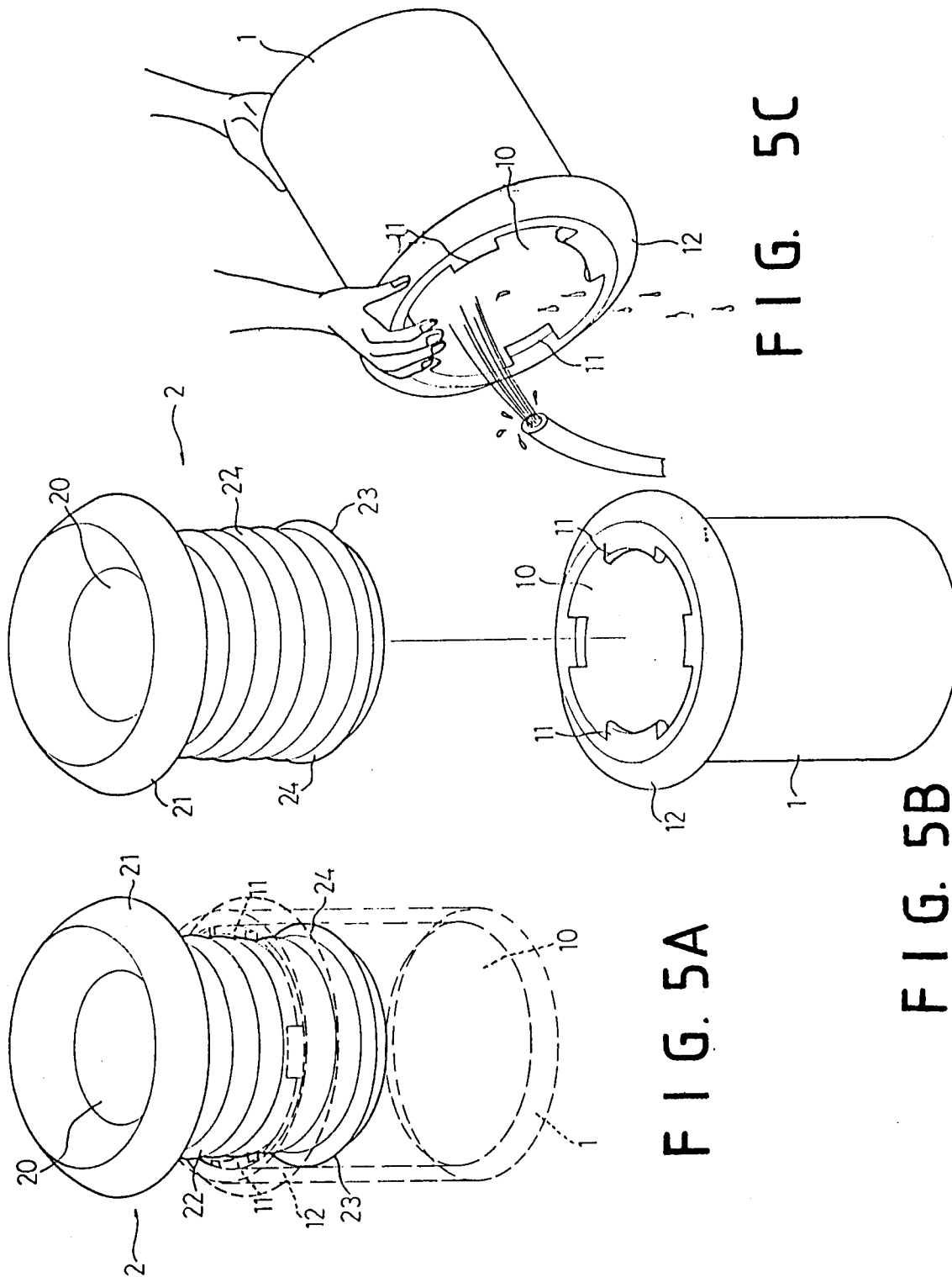


FIG. 5A

FIG. 5B

FIG. 5C

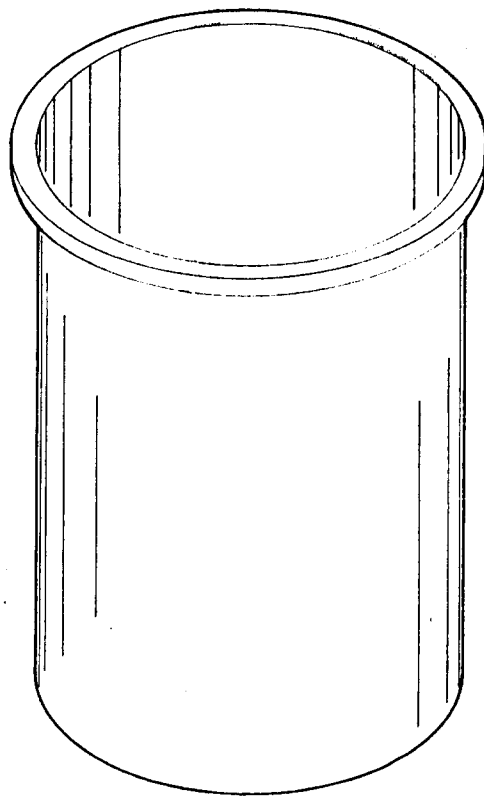


FIG. 6



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 92 10 7113

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.5)
A	CH-A-363 615 (W. STEINER) * the whole document * ---	1	B65F1/14
A	DE-U-9 014 222 (H. FRÖHLICH) * the whole document * ---	1	
A	DE-U-9 101 222 (HERLITZ AG) * page 4, line 27 - page 5, line 26 * * figures 1,2 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B65F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10 DECEMBER 1992	Examiner SMOLDERS R.C.H.
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			