(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 427 631 A1**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **90403170.5**

(51) Int. Cl.5: **B65D 71/00**, A47G 19/22

(22) Date of filing: **07.11.90**

(30) Priority: **08.11.89 IL 92244**

(43) Date of publication of application:
15.05.91 Bulletin 91/20

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

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(54) Combination can carrier device and cup set.

(57) A combination can carrier and cup set comprises in structural combination a plurality of cups (1) provided with connecting means for releasably connecting the inner portion of the cup, when positioned upside down, to the upper rim of a beverage can (11), and means (5, 6) for detacheably connecting together a plurality of cups, each cup being separately connected to the means (5, 6) for connecting a plurality of cups together.

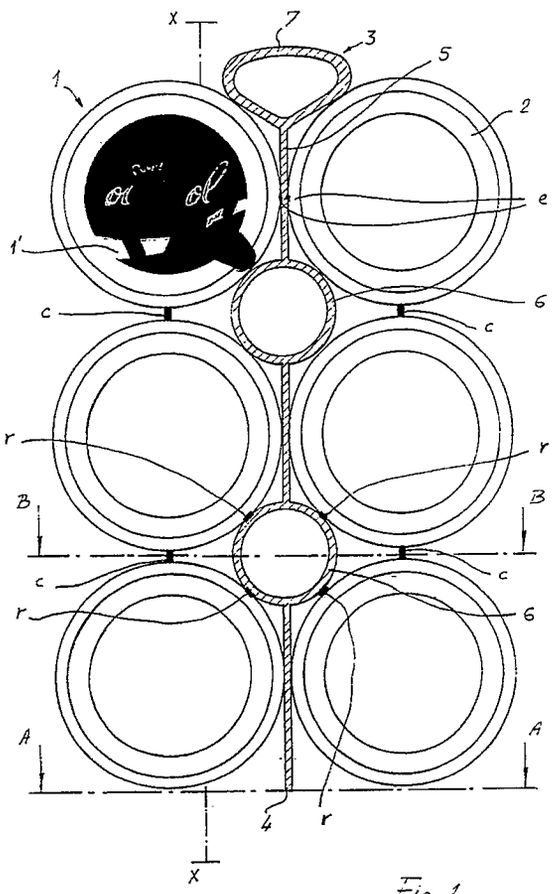

Fig 1

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COMBINATION CAN CARRIER DEVICE AND CUP SET

Field of The Invention

The present invention relates to a combination can carrier device and cup set. More particularly, the invention relates to a device which can be used for directly drinking a liquid from a beverage can in a detached form, and can be used to carry a plurality of cans when in combination with connecting means.

The Prior Art

An attempt to provide a device of this type was made in U.S. Patent No. 4,721,222, which describes a combination beverage can carrier and drinking accessory in which a plurality of hollow cylindrical extension members are connected to one another, and they are shaped so as to fit snugly around the circumference of a can, so as to hold the can and, in practice, connect a number of cans together. The device described in this patent has several major drawbacks. Firstly, the shape of the drinking accessory is limited to a substantially smooth cylindrical shape, because it must fit around the can. This is disadvantageous for a number of reasons, e.g., because stacking cups or sets of cups having a cylindrical shape is difficult and requires relatively large spaces. Secondly, no handling means can be provided in the device of the aforesaid patent, so that handling the cans when in combination with this device is awkward. Thirdly, the drinking accessory must be shaped so that it can extend telescopically along the can, and it must be connected to the can by pressure caused by the elastic forces of its bottom, which is shaped so as to fit below the upper rim of the can. Thus, removing the can from the device, and connecting the drinking accessory to the can is relatively difficult. Furthermore, the cups are in closed positioned relationship, and cannot be easily produced by injection, because of the contact or near contact of the cups with one another.

SUMMARY OF THE INVENTION

The present invention is directed to a combination can carrier device and cup set which is essentially free of all aforesaid disadvantages, and which in addition presents several advantages, which will become apparent throughout this specification.

It is thus an object of the invention to provide a combination can carrier device and cup set which is not limited to a specific shape of the cup, which is provided with convenient and strong handling and carrying means, and which is simple and convenient in production and use.

It is another object of the invention to provide a device which can be easily produced by injection of a plastic material, without resulting in injection problems and waste of material.

The combination can carrier device and cup set according to the invention comprises in structural combination a plurality of cups provided with connecting means for releasably connecting the inner portion of a cup, when positioned upside down, to the upper rim of a beverage can, and means for detacheably connecting together a plurality of cups, each cup being separately connected to the said means for connecting a plurality of cups together.

According to a preferred embodiment of invention, the means for connecting a plurality of cups together comprise at least one central connecting body surrounded by and connected to a plurality of cups. The said connecting body may have any convenient shape, such as a substantially circular, square, parallelepypedal or diamond-like shape.

In another preferred embodiment of the invention the connecting means comprise a connecting key comprising at least one elongated portion and at least one central connecting body, as hereinbefore defined, the said key being substantially positioned along the axis of symmetry of the device, each cup being connected to the said key at at least one point, and being connected substantially at one point to each adjacent cup located on the same side of the said axis of symmetry.

The word "key" is used herein to indicate the connecting portion of the device of the invention, as will be explained hereinafter.

Detailed Description of Preferred Embodiments

In order to illustrate the invention, the following description of preferred embodiments is provided, which is not intended to constitute a limitation of the invention. For the sake of clarity, the invention will be illustrated with reference to the drinking aid or cup which is described in the French Patent Application No. 8906516 of the same applicant, it being understood that, again, this is meant only to illustrate the invention, and that it is not intended to limit the invention in any way to cups according to the aforesaid French patent application.

The invention will thus be described with reference to the preferred embodiments of the invention, and with reference to the appended drawings,

wherein:

--Fig. 1 is a top view of a device according to the invention, a number of possible different combinations being shown;

--Fig. 2 is a cross section of the device of Fig. 1, taken along the XX axis;

--Fig. 3 is a cross section of the device of invention, taken along the AA axis;

--Fig. 4 is 2 perspectiveview of the device according to Fig. 1.; and

--Fig. 5 shows different shapes of the central connecting means.

With reference now to Fig. 1, numeral 1 generally indicates a cup according to FR 8906516. Connecting means for connecting the cup to the can are located below the lower portion 2 of the cup, and are not seen in this figure. Numeral 3 indicates the key, viz., the connecting portion of the device of this embodiment of invention. Fig. 1 shows different possible alternative arrangements. If four cans are to be connected in one device, then the device will extend, according to this particular embodiment of invention, up to the BB axis. If six cans are to be connected in one device, then the arrangement of the entire device as shown in the figure will be used. If on the other hand, it is desired for example to connect together twelve beverage cans, then the device will be doubled at the AA axis and a substantially mirror image of the device of Fig. 1 would be created, which would be connected to the existing device through the elongated portion of the key, at the point indicated by 4 on the AA axis, as well as by connections of the cups to one another, as illustrated in the figure. The key 3 is comprised of three different sections, viz., elongated portion 5, central connecting means, which in this particular embodiment of the invention comprise a substantially circular portion 6, and handling means 7. The handling means 7 shown in this figure are, of course, only one possible type of handling means, and different shapes, sizes and location can be provided by the skilled person. Also more than one handling means can be provided. The key is positioned so that its elongated portion substantially lies on the axis of symmetry of the device. Cups which are located on one side of the axis of symmetry are connected to one another, by connecting points (c), while two cups located on different sides of the axis of symmetry are not directly connected to one another, but each of said cups is connected to the key. Connection to the key may be effected either through the connecting points (e), viz. by providing connection points between the cup and the key at its elongated portion, or connection can be effected at the semi-circular (if the device ends at the BB axis) or circular portion of the key, as indicated by connection points (r). Of course, each cup may be connected at more than one contact point with the key, e.g., at a central connecting body and at an elongated segment of the key, as well as at any point of contact existing with the handling means.

A sealing cover 1′ is conveniently provided in this embodiment of the invention, to cover the upper portion of the can, to prevent dirt from depositing thereon, and it may also have a visible message, e.g., an advertisement, printed thereon.

Turning now to Fig. 2, the cup according to one embodiment of FR 8906516 is shown in a cross-section taken along the XX axis of Fig. 1, viz., along an axis which is parallel to the axis of symmetry of the device, and which passes through the cups. In this figure it can be seen that connecting means 8 are provided, for releasably connecting the inner part of the cup to the upper rim of the beverage can. Additional connecting means 9 are provided at the bottom portion of the cup, for connecting the cup, again to the upper rim of the beverage can, when in drinking position. It should be understood that the words "up" and "down" in this specification refer to the operating position of the cup, viz., to the situation in which the cup is mounted on the beverage can for drinking. It can be seen in Fig. 2 that the cup may have a shape which substantially departs from the cylindrical shape, and no shape limitation relating to the connection of the cups, or the mounting thereof, on the beverage can exists in this device. A tapered shape can be convenient for stacking several devices on one another, and may also be more convenient for drinking. The cups which lie on one side of the axis of symmetry of the device are connected to one another at connection point (c), as is seen in the figure. According to a preferred embodiment of the invention these connections, as well as the connections of the cups to the key, are effected at or near the position indicated by 10, in which the thickness of the material is the greatest, or nearly the greatest, and which therefore affords a stronger connection point.

Fig. 3 is a front view of the device of Fig. 1 (or the cross-section of the device taken along the AA axis, depending on whether the device is a six-pack or a twelve-pack device). The end point, 4, of the elongated portion 5 of the key is clearly seen. Connection of the elongated portion 5 to the cup is done when producing the device, preferably by injection, and the connection must be made to be easily detachable, which is well within the scope of the skilled engineer. Alternatively, the cups and the connecting means may be connected together by techniques known in the art, such as by sealing techniques like ultrasonic, friction, heat or the like, or by glueing techniques, all of which are known to the skilled person, and therefore not described here in detail.

Fig. 4 is a schematic representation of Fig. 1 in which the cans, indicated by numeral 11, have been connected, viz., in the operational position in which the assembly must be carried. It can be easily seen that the assembly can be carried either by taking a firm grip on handling means 7, or by introducing the fingers into circles 12 and 13, which are also carrying means. Thus, if the central connecting means are designed so as to be easily used as carrying means, the handling portion 7 of the key 3 may be dispensed with.

Fig. 5 schematically shows three additional possible shapes of the central connecting body, viz., circular shape (Fig. 5 (a)) or square or diamond-like (Figs. 5 (b) and 5 (c)). Any of the above shapes can be used with or without an elongated key portion. Therefore, if four cups are connected together, only the central connecting means is required, whereas if six cups are to be connected, an additional central connecting member or a section thereof will be added, as will be clearly understood by a skilled person, preferably together with an elongated member connecting them.

As will be easily understood by a person skilled in the art, among the various advantages of the invention, and in addition to the structural and functional advantages provided thereby, a great additional advantage is the ease of production. The device of invention can be easily produced by injection, and injection can be effected at a location in the mould which corresponds to a point located on the key. In this way, an even distribution of injected material throughout the mould is obtained, with the considerable advantages which are apparent to anybody skilled in this art. Preferably the injection mould cavity has the external shape of the key 3 and of the set of cups 1 to be manufactured.

The invention has been described with reference to preferred embodiment thereof, but is not intended to be limited thereto. The combination can carrier device and cup set of the invention can be quite different in shape, the key may be differently shaped as well, and different shapes of the handling means can be provided. Furthermore, the central connecting means of the device can be of many different shapes, and the elongated portion of the key may be round in cross-section, or may have different cross-sections, such as square sections, all without exceeding the scope of the invention.

Claims

1. A combination can carrier device and cup set, comprising in structural combination a plurality of cups (1) provided with connecting means for releasably connecting with the inner portion of the cup, when positioned upside down, to the upper rim of a beverage can (11), and means (5, 6) for detacheably connecting together a plurality of cups, each cup being separately connected to the said means for connecting a plurality of cups together.

2. A device according to claim 1, wherein the means for connecting a plurality of cups (1) together comprise at least one central connecting body (6) surrounded by and connected to a plurality of cups.

3. A device according to claim 2, wherein the central connecting body (6) has a shape selected from a substantially circular, square, parallelepypedal or diamond-like shape.

4. A device according to anyone of the preceding claims, wherein the means for connecting a plurality of cups together and the cups are connected to one another by plastic connecting techniques.

5. A device according to anyone of the preceding claims, wherein the means for connecting a plurality of cups together comprise a connecting key (3) comprising at least one elongated portion (5) and at least one central connecting body (6), the said key being substantially portioned along the axis of symmetry of the device, each cup (1) being connected to the said key at at least one point, and being connected substantially at one point (e) to each adjacent cup located on the same side of the said axis of symmetry.

6. A device according to anyone of the preceding claims, wherein the key (3) is provided with handling means (7) for handling the device in combination with beverage cans (11).

7. A device according to claim 5 or 6, wherein the connecting point (e) between the key (3) and the cup (1) is located on the elongated portion (5) of the key.

8. A device according to claim 5 or 6, wherein the connecting point (e) between the key (3) and the cup (1) is located on the central connecting body (6).

9. A device according to anyone of the preceding claims, wherein the connecting points (e) between the cup (1) and the key (3), and/or between one cup (1) and an adjacent cup (1), are located at the height of the bottom portion of the cup having the maximal cross-section, or close thereto.

10. A method for producing a combination can carrier device and cup set, according to anyone of the preceding claims, comprising providing a mould in the shape of the key (3) and cup set combination, and injecting the plastic material into the mould at a portion located along the key.

11. A method of producing a combination can carrier device and cup set, comprising providing separate cups (1) or sets of cups (1) and cor-

responding connecting means (5, 6,), and connecting them together in the desired positioned relationship by plastic-connecting techniques.

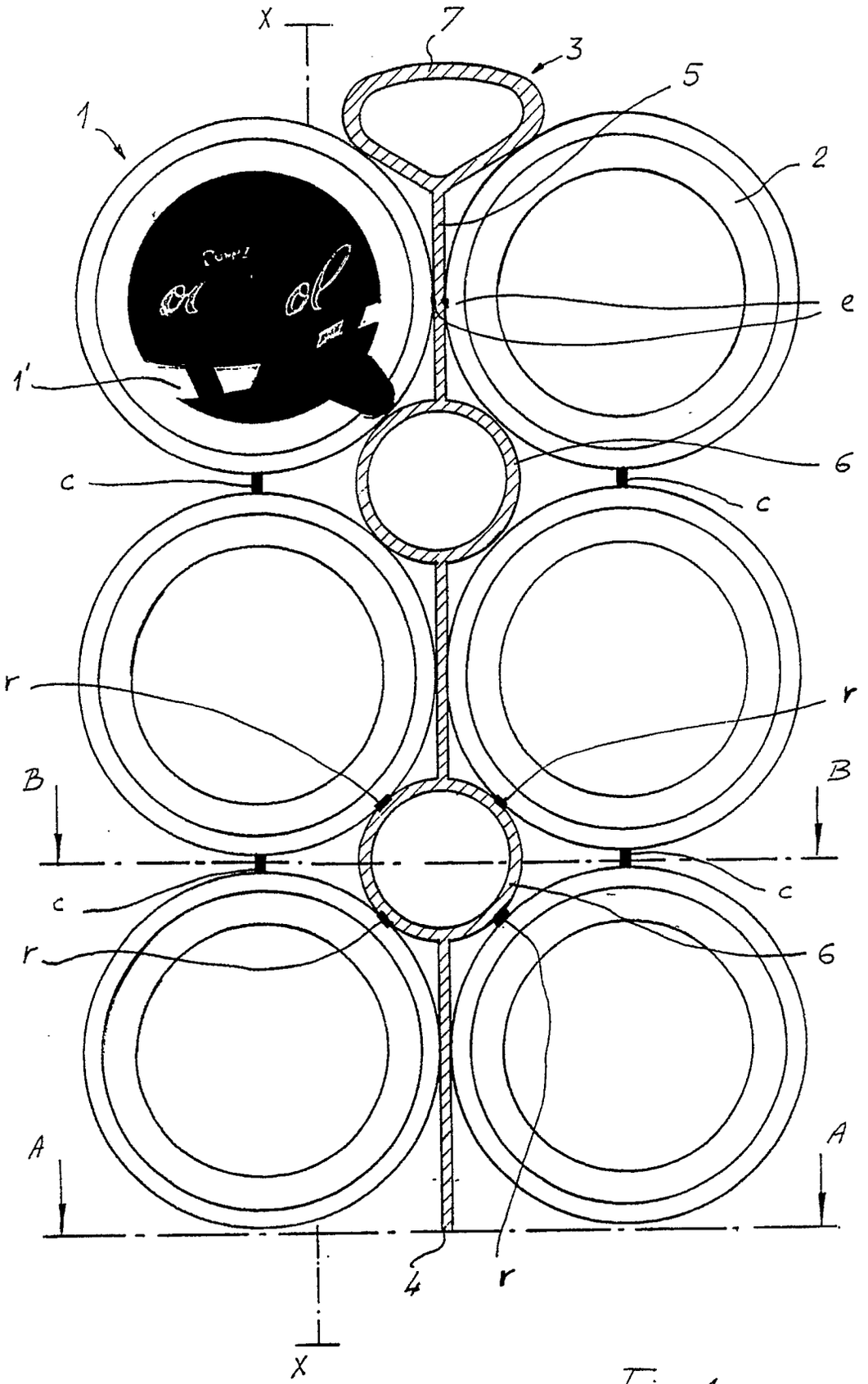


Fig. 1

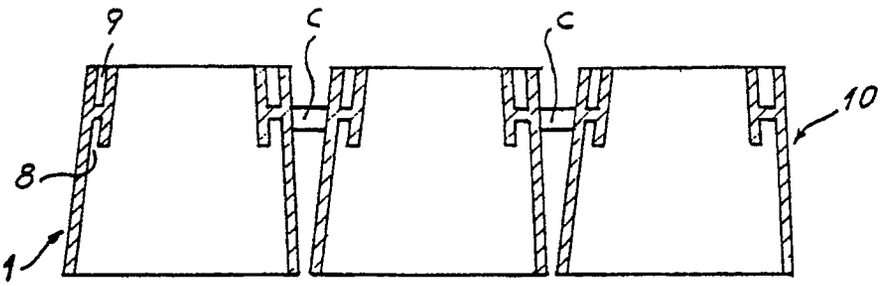


Fig. 2

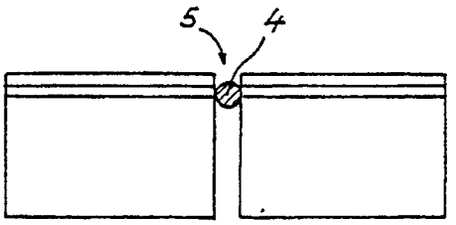


Fig. 3

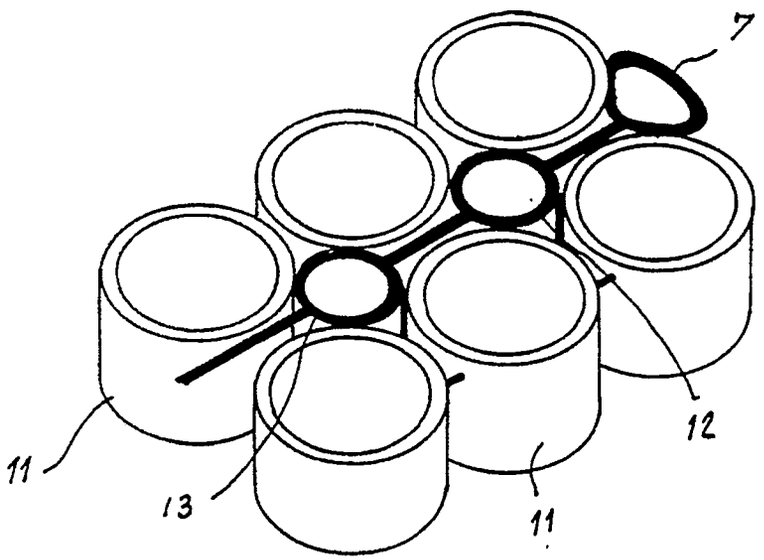
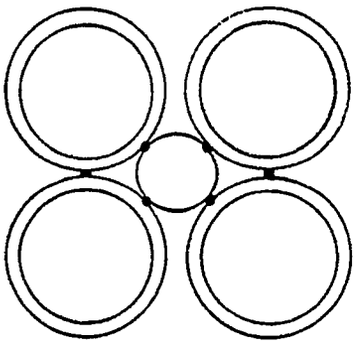
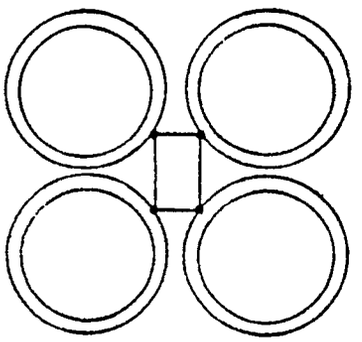


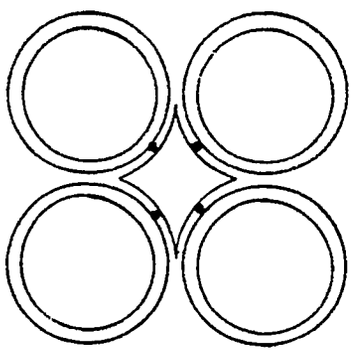
Fig. 4



(a)



(b)



(c)

Fig. 5

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EUROPEAN SEARCH REPORT

Application Number

EP 90 40 3170

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)
Y	US-A-3038602 (RAPATA) * figures 1-3 *	1-4, 6, 8, 9	B65D71/00 A47G19/22
Y,D	US-A-4721222 (HAYTHORNTHWAITE) * the whole document *	1-4, 6, 8, 9	
X	US-A-3630350 (BOLTON) * column 1, lines 52 - 54 * * column 2, lines 16 - 20 *	10, 11	
X	US-A-3321076 (POUPITCH) * column 2, lines 57 - 66; figure 1 *	10	
A		1-8	

TECHNICAL FIELDS SEARCHED (Int. Cl.5)
B65D A47G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	25 FEBRUARY 1991	BEUGELING G.L.H.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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