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(72) Inventor: **Borlini Perani, Stefania**

**24020 Gorno (VA) (IT)**

(74) Representative: **Pistolessi, Roberto et al**

**Dragotti & Associati srl**

**Via Marina 6**

**20121 Milano (IT)**

(71) Applicant: **Brandart Image Packaging Srl**

**21052 Busto Arsizio, MI (IT)**

(54) **Case with magnetic closure**

(57) A case comprises two oppositely arranged shells (2, 4) on which at least one pair of oppositely charged magnets (14, 16) are arranged, each magnet

being associated with one of said shells in positions which, when the shells are closed, are situated opposite each other.

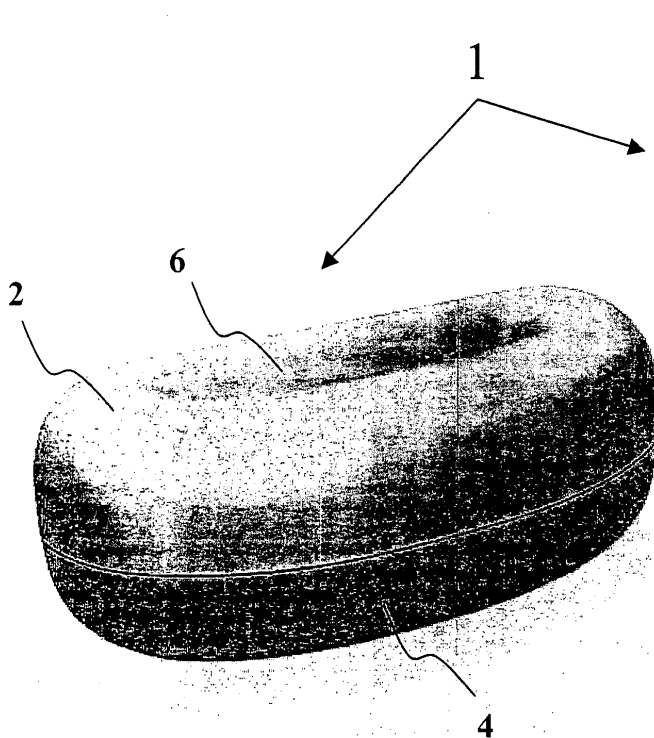


Fig. 1a

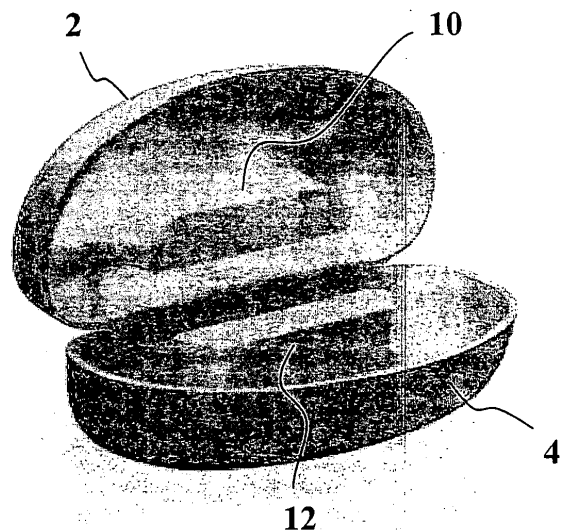


Fig. 1b

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## Description

**[0001]** The present invention relates to a case and in particular to a case for containing spectacles.

**[0002]** As is well-known, a spectacle case acts as a structure for storing and protecting spectacles when they are not worn.

**[0003]** A first example of a spectacle case is a "soft" type case, i.e. one which can be deformed without any effort and which is usually made of fabric; it has typically the form of a sheath which is open at one end so as to allow the spectacles to be inserted.

**[0004]** Although such a spectacle case provides efficient protection against contamination by dust and/or scoring of the lens, it does not ensure to the slightest degree protection against knocks.

**[0005]** Another type of case is made of rigid material; normally this type of case consists of two shells which, when closed, are situated substantially on top of each other.

**[0006]** The two shells are hinged with each other and are able to rotate both during opening and during closing along a portion of their perimeter on which the rotational hinge is mounted. A spring associated with the rotational hinge allows the open and closed conditions to be maintained; this spring exerts a recall force opposing the force exerted during opening or closing by a user.

**[0007]** However, with use, the recall spring may lose its elastic force so that undesirable opening of the case may occur.

**[0008]** In other types of spectacle cases made of rigid material it is envisaged using a zip fastener, the joining edges of which are each mounted on a portion consisting of the perimeter of each shell; the two shells are, in any case, hinged on a rotational hinge and able to rotate both during opening and during closing along a portion of their perimeter on which the abovementioned rotational hinge is mounted.

**[0009]** The use of a zip fastener ensures secure closing of the case, but is incompatible with rigid spectacle cases, namely thermoformed, injected, metal-lined or similar cases which however ensure optimum protection against knocks.

**[0010]** The object of the present invention is to provide a rigid spectacle case which is improved in terms of ease of opening and closing.

**[0011]** A further object is to ensure efficient closing of the case.

**[0012]** The technical problem is solved by a case of the type comprising two oppositely arranged shells associated with each other along part of their perimeter and characterized in that it further comprises:

- at least one pair of oppositely charged magnets each associated with one of said shells in positions which, when the shells are closed, are situated opposite each other.

**[0013]** The characteristic features and advantages of the invention will emerge from the description provided below of an example of embodiment thereof provided hereinbelow purely by way of a non-limiting example with reference to the accompanying drawings in which:

Figure 1a shows a front perspective view of a spectacle case in the closed condition according to the invention;

Figure 1b shows a front perspective view of a spectacle case in the open condition according to the invention;

Figure 2 shows a cross-sectional view of the spectacle case according to Figure 1b.

Figure 3 shows a cross-sectional view of the spectacle case according to Figure 1a.

Figure 4 shows a longitudinally sectioned view of the spectacle case according to Figures 1a and 1b.

**[0014]** With reference to the Figures, a spectacle case 1 comprises two oppositely arranged shells 2 and 4 which are preferably joined together and rotationally constrained to each other along an axis of rotation A-A, by means of a strip of fabric 5 or other material which is easily deformable and is fixed onto an outer part of both the shells 2 and 4, adjacent to and along the axis of rotation A-A itself; the piece of material 5 keeps the shells joined together during the opening and closing rotational movement about the abovementioned axis.

**[0015]** The shells have respective cavities 6, 8 which are arranged longitudinally with respect to the case, namely parallel to the axis of rotation A-A, and with lengthwise dimensions which are proportional to the longitudinal dimension of the case 1.

**[0016]** The cavities 6, 8, viewed from inside the shells 2, 4, house a first projecting portion 10 and a second projecting portion 12 which, from the internal surface of the abovementioned shells, extend towards the inside of the case 1 so as to approach each other and in particular mate with each other substantially along the plane defined by the perimeters of the shells 2 and 4 in the closed condition.

**[0017]** The projecting portions 10, 12 are provided with respective magnets 14, 16 which are oppositely charged so as to ensure magnet attraction and arranged in such a way that the spectacle case 1 in the closed condition ensures efficient closure. In the preferred embodiment, each projecting portion 10, 12 is provided with a single magnet 14, 16.

**[0018]** Alternatively, a second embodiment envisages the use of several magnets that are associated with the projecting portions 10, 12, so as to distribute to a greater degree the force of magnetic attraction, while maintaining the form and original dimensions of each projecting portion.

**[0019]** By way of a further alternative, in a third embodiment, the first projecting portion 10 may be divided into a plurality of half-projections, each provided with its

own magnet and situated opposite the second projecting portion 12 which is essentially divided up in the same manner as the first projecting portion 10, but has magnets with a polarity which is opposite to that of the first portion.

**[0020]** This system for joining together the projecting portions 10, 12 ensures a suitable efficiency during closure and, at the same time, easier opening compared to the conventional hinge/spring system of the prior art.

**[0021]** In the same way, the form of the half-projections may be varied, albeit remaining substantially in the direction of the longitudinal axis of the case 1 of the first embodiment; the variation in the form of the half-projections allows better seating of the spectacles which are to be stored.

**[0022]** In general, the concept of a magnetic joining system according to the invention may be applied to any type of container provided with a lid.

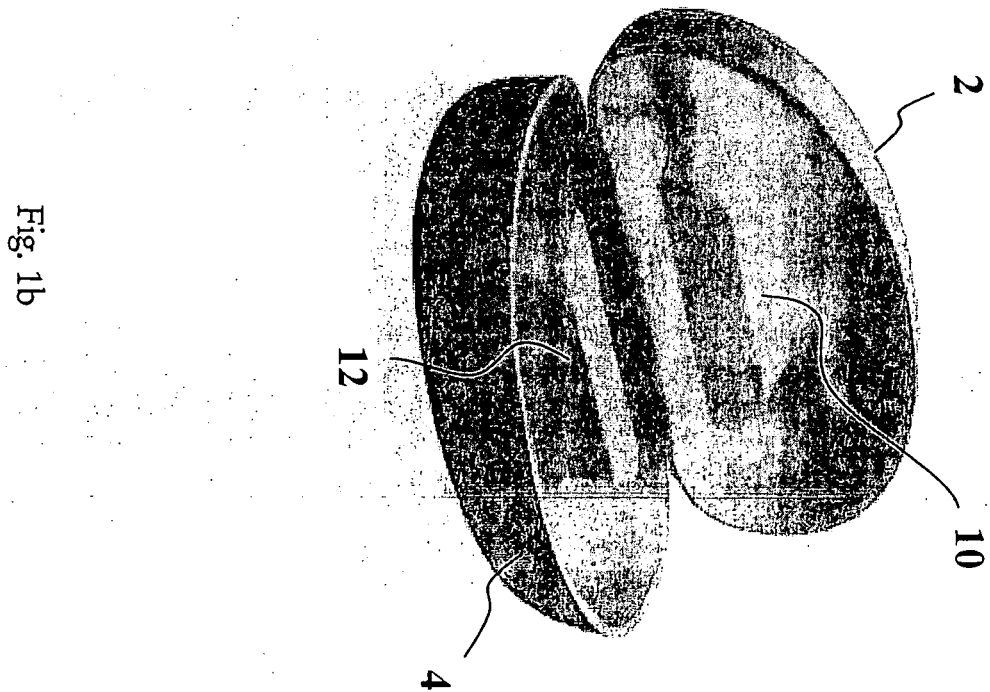
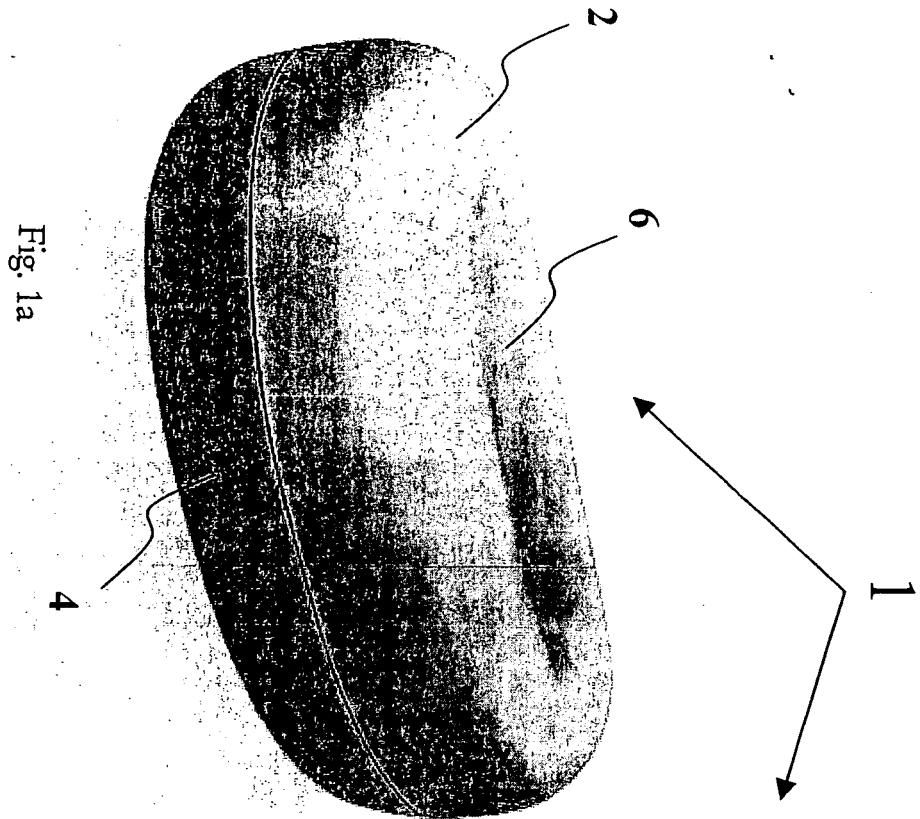
**[0023]** In this case, pairs of oppositely charged magnets are associated with the container and the lid in positions which, in the closed condition, are situated opposite each other.

**[0024]** Examples of containers of this type are jewelry boxes, cigarette cases, pill boxes and the like.

of which is associated with the container and the other with the lid in positions which, in the closed condition, are situated opposite each other.

## Claims

1. Case (1) of the type comprising two oppositely arranged shells (2, 4) associated with each other along at least part of their perimeter and **characterized in that** it further comprises:
  - at least one pair of oppositely charged magnets (14, 16) each associated with one of said shells in positions which, when the shells are closed, are situated opposite each other.
2. Case according to Claim 1, in which said at least one pair of magnets (14, 16) is positioned on at least one pair of projecting portions (10, 12) which extend from the housing of said case (1) towards the inside of said oppositely arranged shells (2, 4).
3. Case according to Claim 2, in which each projecting portion (10, 12) of said at least one pair of projecting portions (10, 12) comprises a plurality of half-projections which extend from the housing of said case (1) towards the inside of said oppositely arranged shells (2, 4).
4. Case according to Claim 3, in which a plurality of pairs of magnets is associated with each plurality of half-projections.
5. Container provided with a lid, situated opposite each other and associated with each other along parts of their perimeter, **characterized in that** it comprises at least one pair of oppositely charged magnets, one



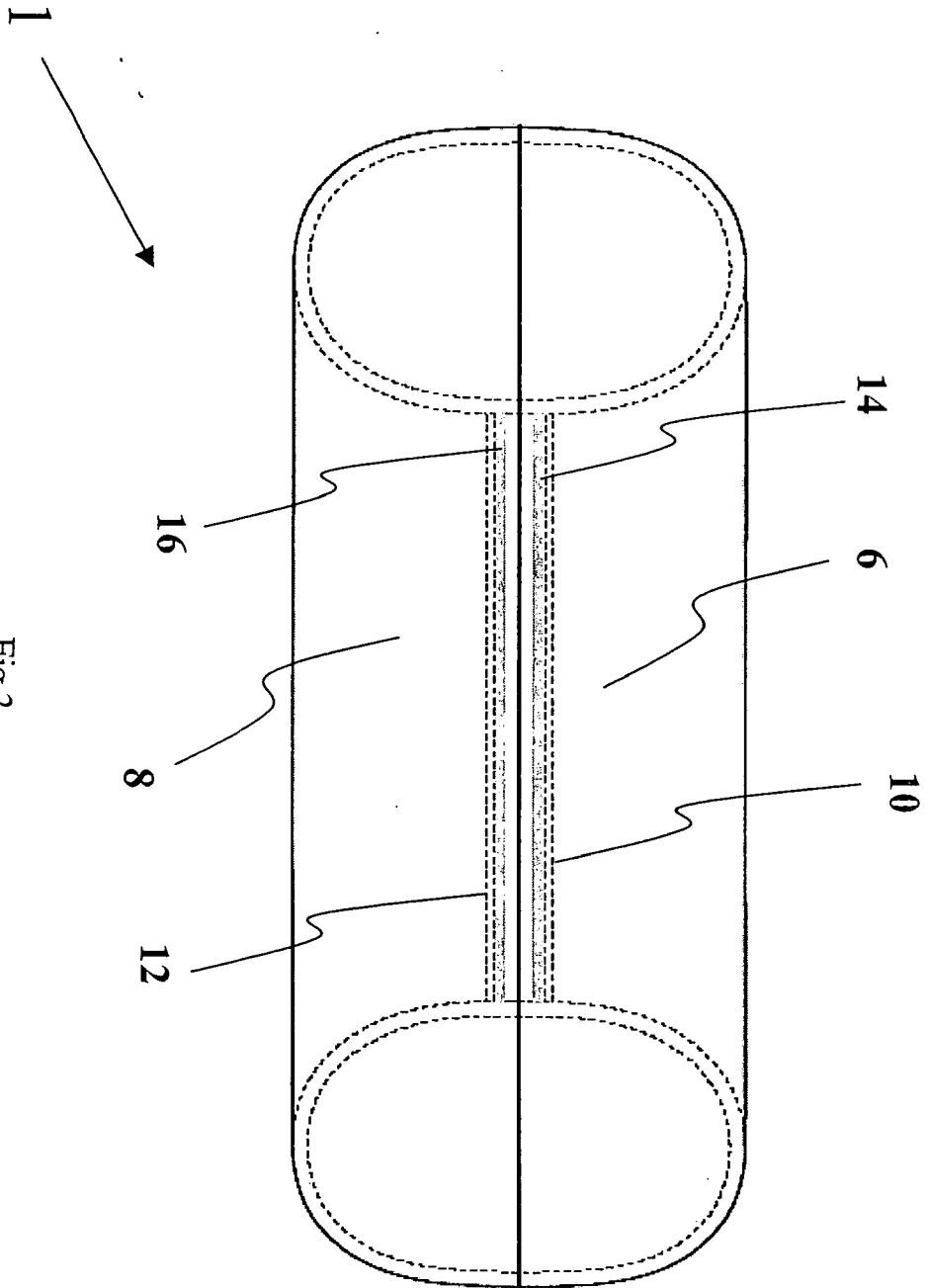


Fig.2

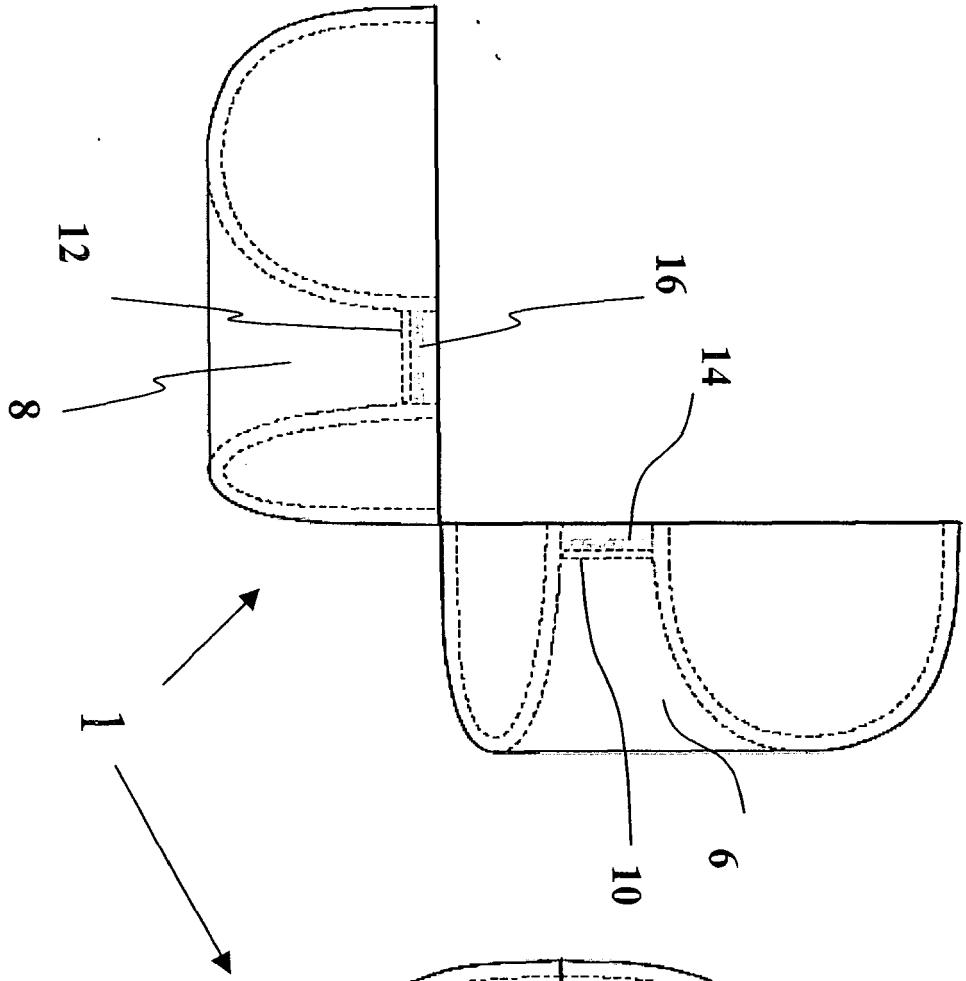


Fig. 3

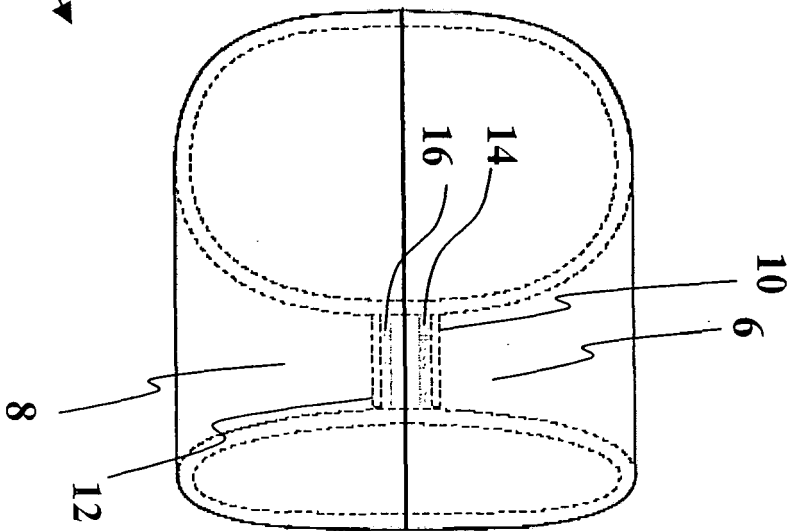


Fig. 4



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The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>20 April 2007</b>	Examiner <b>Nicolás, Carlos</b>
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Place of search The Hague		Date of completion of the search 20 April 2007	Examiner Nicolás, Carlos
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