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(71) Applicant: **Unox S.p.A.**  
**35010 Vigodarzere (Padova) (IT)**

(72) Inventor: **Franzolin, Enrico**  
**35010 Vigodarzere PD (IT)**

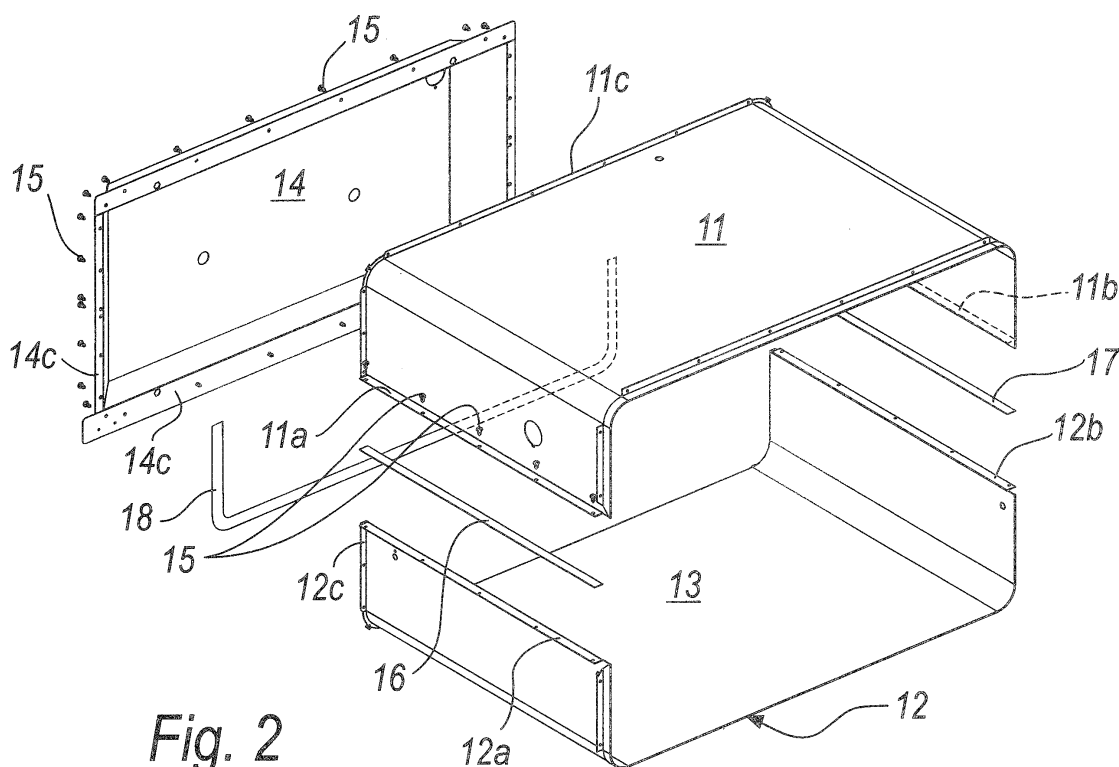
(74) Representative: **Modiano, Micaela Nadia et al**  
**Dr. Modiano & Associati S.p.A.**  
**Via Meravigli 16**  
**20123 Milano (IT)**

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(54) **Muffle for a cooking oven**

(57) An improved muffle for cooking ovens particularly for food and the like, comprising two substantially C-shaped parts (11, 12), which face each other with their respective concavities so as to form a cooking compartment (13), which is closed at the rear by a back (14); the two parts (11, 12) are connected to each other and to the back (14) by way of corresponding flaps (11a, 11b, 11c,

12a, 12b, 12c, 14a, 14b, 14c) that are coupled by way of connecting means. The connecting means are constituted by threaded elements (15); gasket elements suitable to contain the escape of hot air from the muffle (10) are interposed between the lateral connecting flaps (11a, 11b, 12a, 12b) of the two parts (11, 12) and between at least part of the rear flaps (11c, 12c) of the two parts (11, 12) and the flaps (14c) of the back (14).



**Fig. 2**

## Description

[0001] The present invention relates to an improved muffle for ovens intended to cook particularly food and the like.

[0002] The invention also relates to a cooking oven particularly for food and the like.

[0003] The term "muffle" is used to designate the internal chamber of an oven for food and the like that is suitable to accommodate for example the dishes to be heated or cooked.

[0004] Muffles constituted by two substantially C-shaped parts, the respective concavities of which face each other so as to form a cooking compartment, are currently known and widespread.

[0005] Such cooking compartment is closed at the rear by a back and at the front by the door for inserting/removing the items that are to be cooked or have been cooked.

[0006] The two C-shaped parts are connected to each other and to the back by means of corresponding flaps, which are coupled by way of connecting means.

[0007] Such connecting means are generally constituted by a continuous braze welding of the overlapping flaps, so that said flaps are sealed and ensure good tightness with respect to the hot air that circulates inside the muffle.

[0008] As an alternative to continuous braze welding, the connection can be provided by spot welding and by subsequent internal enameling at the lines of contact between the welded flaps.

[0009] In this manner, the portions left free between the spot welds are sealed by the layer of enamel.

[0010] Both of the operations described above, continuous braze welding and spot welding with subsequent enameling, are expensive both in terms of raw materials and in terms of machine time and therefore labor.

[0011] The aim of the present invention is to provide an improved muffle that can be assembled easily and more rapidly and cheaply than known types of muffle.

[0012] Within this aim, an object of the present invention is to provide an improved muffle in which the heat retention characteristics are not lower than in known muffles.

[0013] Another object of the present invention is to provide a muffle that can be installed easily even in known and already commercially available types of oven.

[0014] Another object of the present invention is to provide an improved muffle that can be manufactured with known systems and technologies.

[0015] This aim and these and other objects that will become better apparent hereinafter are achieved by an improved muffle for cooking ovens particularly for food and the like, of the type constituted by two substantially C-shaped parts, which face each other with their respective concavities so as to form a cooking compartment, which is closed at the rear by a back, said two parts being connected to each other and to said back by way of cor-

responding flaps that are coupled by way of connecting means, said improved muffle being characterized that said connecting means are constituted by threaded elements, gasket elements suitable to contain the escape of hot air from said muffle being interposed between the lateral connecting flaps of said two parts and between at least part of the rear flaps of the two parts and the flaps of the back.

[0016] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment thereof, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a muffle according to the invention;

Figure 2 is an exploded perspective view of a muffle according to the invention;

Figure 3 is a sectional side view of a portion of a cooking oven particularly for food and the like;

Figure 4 is an exploded perspective view of a detail of the portion shown in Figure 3.

[0017] With reference to the figures, an improved muffle for cooking ovens particularly for food and the like according to the invention is generally designated by the reference numeral 10.

[0018] The muffle 10 is constituted by two parts 11 and 12, which are substantially C-shaped.

[0019] Those two parts, a first upper part 11 and a second lower part 12, face each other with their respective concavities so as to form a cooking compartment 13.

[0020] The compartment 13 is closed at the rear by a back 14.

[0021] The two parts 11 and 12 each have two lateral connecting flaps, designated respectively by the reference numerals 11a and 11b for the first part 11 and 12a and 12b for the second part.

[0022] The first part 11 also has a rear flap 11c for connection to a corresponding perimetric flap 14c of the back 14.

[0023] Likewise, the second part 12 is provided with a rear flap 12c, which is also suitable for connection to the perimetric flap 14c of the back 14.

[0024] Therefore, the lateral flaps 11a and 12a, 11b and 12b are connected to each other, and the rear flaps 11c and 12c are connected to the perimetric flaps 14c of the back 14.

[0025] Such pairs of flaps are mutually locked by way of connecting means.

[0026] The connecting means are constituted by a plurality of threaded elements 15, of the screw-and-nut type, for fastening the interposed flaps.

[0027] Moreover, between the lateral flaps 11a and 11b of the first part 11 and the facing flaps 12a and 12b of the second part 12 there are gasket elements, which are suitable to contain the escape of hot air from the muffle 10.

[0028] Likewise, additional gasket elements are interposed between the lower profile of the perimetric flaps 14c of the back and the rear flaps 12c of the second part 12.

[0029] The gasket elements and additional gasket elements are constituted by strips of plastic material, respectively designated by the reference numerals 16, 17 and 18.

[0030] The strip 18 is substantially U-shaped, so as to mate with the lower profile of the back 14 and with the lower flaps 12c.

[0031] A muffle 10 assembled with connecting means such as the ones described allows to avoid expensive welding and enameling operations, with evident advantages in terms of labor and material costs, as well as in terms of manufacturing time.

[0032] The invention also relates to a cooking oven, of the type that comprises supporting feet 20 fixed to the bottom 22 of the box-like shell 21 of the oven.

[0033] The feet 20 are coupled to the bottom 22 by way of snap-acting engagement means.

[0034] In known types of cooking oven, the engagement means are constituted by two elastically deformable tabs 24 provided with a grip tooth 25.

[0035] The tabs 24 enter with a snap action complementarily shaped slots 26 that are open on the bottom 22 of the shell 21.

[0036] The slots 26 necessarily have a larger cross-section than the tab 24 below the grip tooth.

[0037] Inevitably, therefore, the tab 24 is arranged in the corresponding slot 26 with a certain play, which is harmful when it is necessary to drag the oven for any reason.

[0038] In this case, since the tabs 24 can move freely within their slot 26, the tabs may tilt together with the foot 20 of which they are part.

[0039] This is all detrimental to the overall stability of the oven; moreover, the tilted tab 24 subjected to the weight of the oven runs the risk of flexing beyond its elastic capacity and of undergoing irreparable damage.

[0040] The breakage of a tab 24 can entail the separation of a foot 20 and a consequent unstable configuration of the oven.

[0041] In the oven 30 according to the invention, a protrusion 27 is provided between the tabs 24 and enters without play a corresponding hole 28 in the bottom 22.

[0042] The protrusion 27 is substantially a cylindrical pin.

[0043] The protrusion 27 prevents the tilting of the foot 20, facilitating the integrity of the tabs 24 and therefore the stability of the oven 30.

[0044] In practice it has been found that the invention thus described solves the problems noted in known types of muffle.

[0045] In particular, the present invention provides an improved muffle for cooking ovens particularly for food and the like that can be assembled easily more rapidly and cheaply than known types of muffle.

[0046] Moreover, the present invention provides an improved muffle in which the heat retention characteristics are not lower than in known muffles.

[0047] Further, the present invention provides a muffle that can be installed easily even in known and already commercially available oven types.

[0048] Moreover, the present invention provides an improved muffle that can be manufactured with known systems and technologies.

[0049] Further, the present invention also provides a cooking oven particularly for food and the like that is provided with supporting feet that are stronger and more stable than in known types of oven.

[0050] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

[0051] In practice, the materials employed, so long as they are compatible with the specific use, as well as the dimensions, may be any according to requirements and to the state of the art.

[0052] The disclosures in Italian Patent Application No. PD2004A000270 from which this application claims priority are incorporated herein by reference.

[0053] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

## Claims

1. An improved muffle for cooking ovens particularly for food and the like, of the type constituted by two substantially C-shaped parts (11, 12), which face each other with their respective concavities so as to form a cooking compartment (13), which is closed at the rear by a back (14), said two parts (11, 12) being connected to each other and to said back (14) by way of corresponding flaps (11a, 11b, 11c, 12a, 12b, 12c, 14a, 14b, 14c) that are coupled by way of connecting means, said improved muffle (10) being **characterized** that said connecting means are constituted by threaded elements (15), gasket elements suitable to contain the escape of hot air from said muffle (10) being interposed between the lateral connecting flaps (11a, 11b, 12a, 12b) of said two parts (11, 12) and between at least part of the rear flaps (11c, 12c) of the two parts (11, 12) and the flaps (14c) of the back (14).
2. The improved muffle according to claim 1, **characterized in that** said gasket elements are constituted by strips (16, 17, 18) made of plastic material.

3. The muffle according to one or more of the preceding claims, **characterized in that** it is provided with a gasket strip (18) between the rear flaps (12c) of the lower part (12) of the muffle (10) and the corresponding flaps (14c) of said back (14). 5
4. The cooking oven particularly for food and the like, of the type that comprises supporting feet (20), which are fixed to the bottom (22) of the box-like shell (21) of the oven by way of snap-acting engagement means, which are constituted, for each foot (20), by two elastically deformable tabs (24) provided with a grip tooth (25), said tabs (24) being suitable to enter with a snap action complementarily shaped slots (26) that are open on the bottom (22) of said shell (21), said oven (30) being **characterized in that** between said tabs (24) there is a protrusion (27), which is suitable to enter without play a corresponding hole (28) in said bottom (22). 10 15 20
5. The oven according to claim 4, **characterized in that** said protrusion (27) is substantially a cylindrical pin. 25

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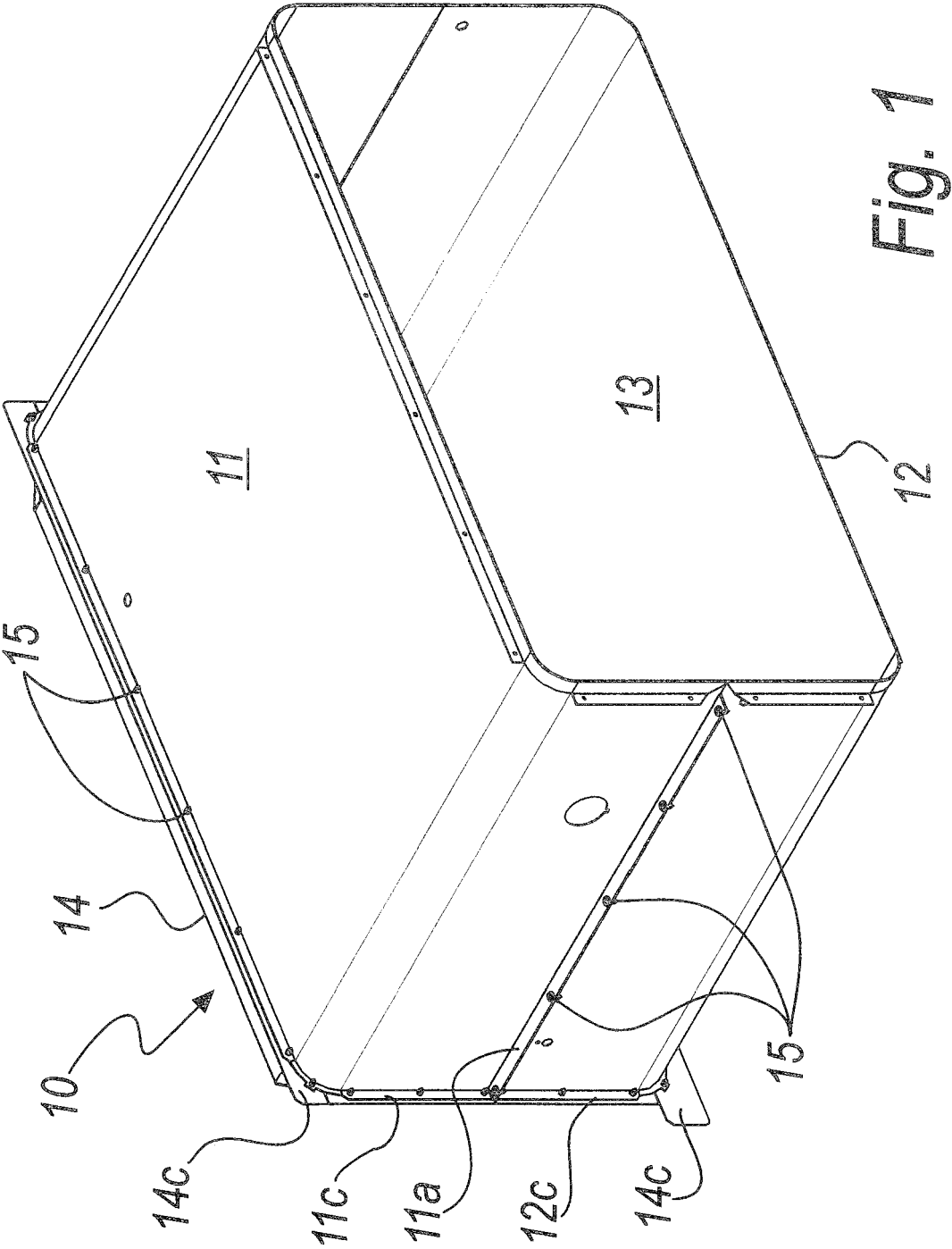


Fig. 1

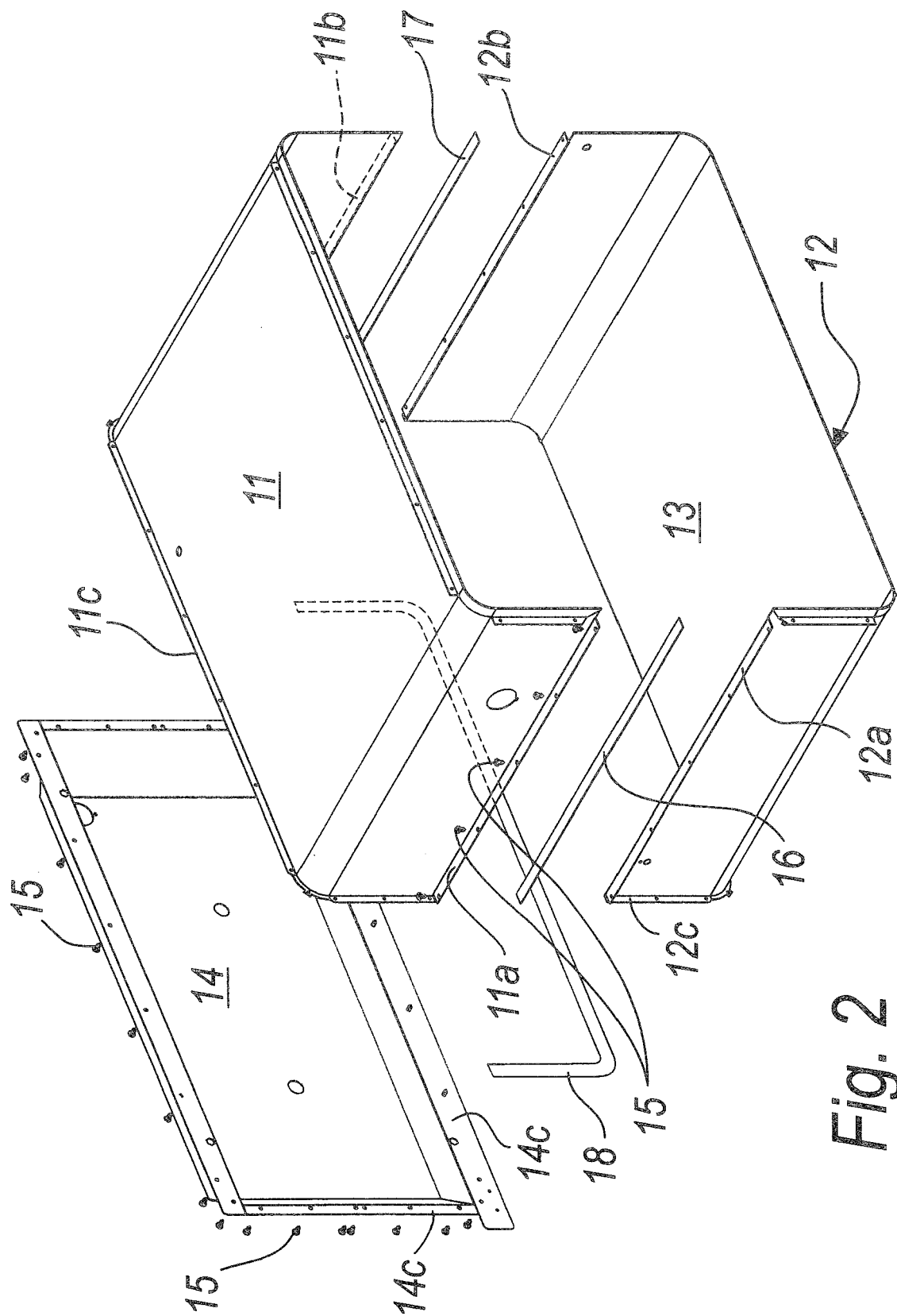


Fig. 2

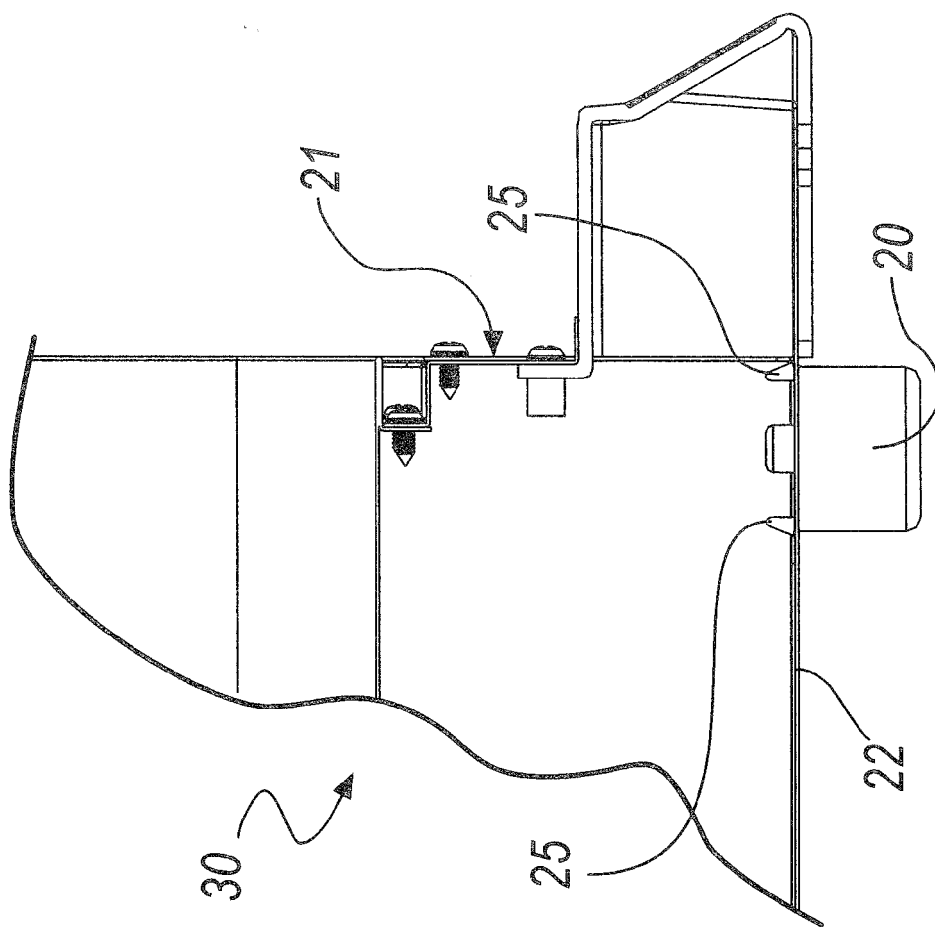


Fig. 3

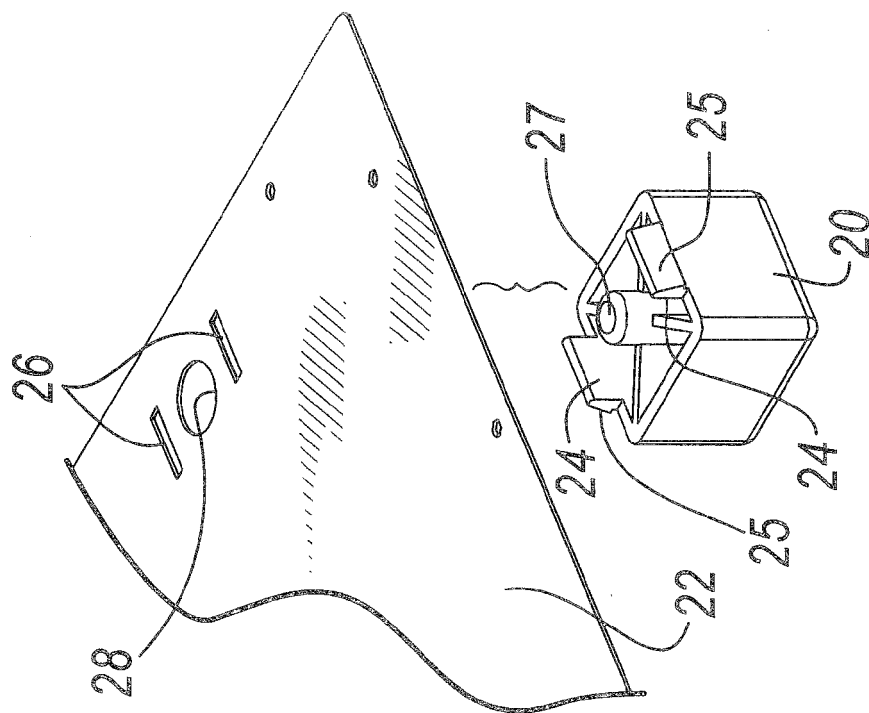


Fig. 4