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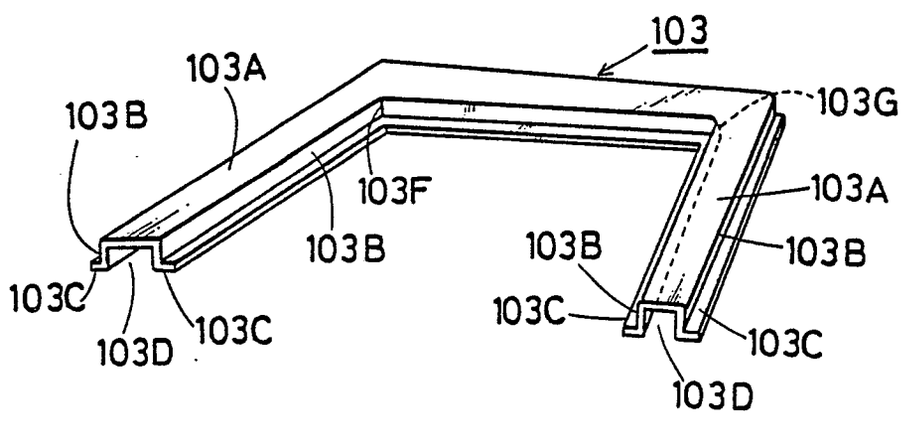
(54) Masking member.

(57) A masking member consisting of an upper wall and a pair of side walls which extend from both sides of said upper wall wherein said masking member is made of an elastic material, and narrow width part(s) is(are) formed between said pair of side walls is provided in the present invention. Said masking member is used to protect a pillar, frame, and the like from a surface treatment such as coating.

Fig.1



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MASKING MEMBER

BACKGROUND OF THE INVENTION

The present invention relates to a masking member which protects a part of an article from a surface treatment such as coating, plating, vacuum evaporation, phosphatizing, and the like. More particularly, the present invention relates to a masking member consisting of an upper wall and a pair of side walls which extend from both sides of said upper wall wherein said masking member is made of an elastic material, and narrow width part(s) is-(are) formed between said pair of side walls. When a surface treatment is effected on the surface of an article, and if said surface of said article has part(s) on which said surface treatment should not be effected for the reason that another surface treatment is effected on said part(s) after said surface treatment or said surface treatment spoils the appearance of said article and so on, said part(s) of said surface of said article may be covered and protected with said masking member.

DESCRIPTION OF THE PRIOR ART

Hitherto, adhesive tape has been used as a masking member to protect a pillar, frame, and the like. Namely, the adhesive tape is wound round said pillar, frame, and the like to protect them from said surface treatment and after said surface treatment, said adhesive tape is removed from said pillar, frame, and the like. Said pillar, frame, and the like may be not effected by said surface treatment since said pillar, frame, and the like were covered with said adhesive tape during said surface treatment.

Nevertheless, adhesive tape as a masking member has faults in that attaching and removing of the adhesive tape to/from a pillar, frame, and the like take time and have a high labor cost, and further, the adhesive tape wound round a pillar, frame, and the like is buried in the layer of said surface treatment and it is very difficult to find the outer end of said buried adhesive tape to remove said adhesive tape. Said faults of adhesive tape may seriously obstruct a mass-production line such as a coating line for automobiles.

SUMMARY OF THE INVENTION

Accordingly, an object of the present invention is to save trouble when the masking member is attached/removed to/from a part to be protected such as a pillar, frame, and the like. According to the present invention, there is provided a masking member consisting of an upper wall and a pair of side walls which extend from both sides of said upper wall wherein said masking member is made of an elastic material, and narrow width part(s) is-(are) formed between said pair of side walls. Said masking member may be attached on a pillar, frame and the like by placing said pillar, frame, and the like between said pair of side walls. Said masking member may be fixed on a pillar, frame, and the like by the elasticity thereof at the narrow width part(s) of said masking member.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 to FIG. 6 relate to a first embodiment of the present invention.

FIG. 1 is a perspective view of the masking member.

FIG. 2 is a cross sectional view of the masking member.

FIG. 3 is a front view of a door of an automobile.

FIG. 4 is a front view of a door of an automobile after coating and attaching the masking member onto the frame of the door.

FIG. 5 is a sectional view taken along the line A-A of FIG. 4.

FIG. 6 is a front view of a door of an automobile after coating with two kinds of paint.

FIG. 7 to FIG. 11 relate to a second embodiment of the present invention.

FIG. 7 is a partial perspective view of a divided masking member.

FIG. 8 is a partial perspective view of another divided masking member.

FIG. 9 is a partial perspective view of still another divided masking member.

FIG. 10 is a front view of the upper part of a door of an automobile, on the frame of which combined masking members are attached.

FIG. 11 is a sectional view taken along the line B-B of FIG. 10.

DETAILED DESCRIPTION

FIG. 1 to FIG. 6 relate to a first embodiment of the present invention. Referring now to FIG. 1 to FIG. 6, a masking member(103) consists of an upper wall(103A), a pair of side walls(103B),(103B) which extend from both sides of said upper wall-(103A), and a pair of flanges(103C),(103C) which respectively extend from the edges of said side

walls (103B),(103B) and an open part(103D) is formed between the edges of said side walls-(103B),(103B). The width between said pair of walls(103B),(103B) of said masking member(103) gradually decreases as the width approaches said open part(103D) of said masking member(103) so that a narrow width part(103E) is formed at said open part(103D) of said masking member(103). Further, cutting lines(103F),(103G) are formed on bending parts of said masking member(103).

As shown in FIGs. 2, 3 and 4, said masking member(103) is attached on the frame(101A) of a door(101) of an automobile by placing said frame-(101A) between said pair of side walls(103B),(103B) before coating and said masking member (103) is fixed by the elasticity thereof at the narrow width part(103E) of said masking member(103), and then said door (101) is coated by spraying a colored paint(102A) thereon. Said frame(101A) of said door-(101) is not coated with said colored paint since said frame(101A) is protected by said masking member(103).

After coating, said masking member(103) is removed from said frame(101A) and said frame-(101) is coated by spraying another colored paint-(102B) thereon. When said frame(101A) is coated the lower half(101B) of said door(101) is covered with a sheet such as paper and the like. As the result, said door(101) is coated with two kinds of paint(102A),(102B) having a different color respectively as shown in FIG. 6.

FIG. 7 to FIG. 11 relate to a second embodiment of the present invention. Referring now to FIG. 7 to FIG. 11, a masking member(203) consists of three divided masking members(204), (205), and (206). As shown in FIGs. 7, 8 and 9, each divided masking member(204), (205) and (206) consist of an upper wall(204A), (205A) and (206A), a pair of side walls(204B),(204B), (205B),(205B) and (206B),-(206B) which extend from both sides of said upper wall(204A), (205A) and (206A), and a pair of flanges(204C),(204C), (205C),(205C), and (206C),-(206C) which respectively extend from the edges of said side wall(204B),(204B), (205B),(205B), and (206B),(206B). The width between said pair of side walls(204B),(204B), (205B),(205B), and (206B),-(206B) of each divided masking member(204), (205) and (206) gradually increases as the width approaches said open part(204D), (205D) and (206D) of each said divided masking member(204), 205) and (206) and an open part(204D), (205D) and (206D) is formed between the edges of said walls-(204B),(204B), (205B),(205B) and (206B),(206B). Further, ribs(204F),(204F), (205F),(205F), and (206F),(206F) are formed on the insides of said pair of side walls(204B),(204B), (205B),(205B), and (206B),(206B) so that a narrow width part(204E), (205E) and (206E) is formed between said ribs-(204F),(204F), (205F), (205F) and (206F),(206F) of said side walls(204B),(204B), (205B),(205B) and (206B),(206B).

Each said divided masking member(204), (205) and (206) is respectively attached on the frame-(201A) of a door(201) of an automobile as shown in FIG. 10 and as the result, said frame(201A) is protected by a masking member(203) consisting of three divided masking members(204), (205) and (206) and the end of each said divided masking member(204), (205) and (206) is overlapped respectively at the joint between each said divided masking member(204) and (205), and each said divided masking member(205) and (206).

Each divided masking member(204), (205) and (206) is fixed by elasticity thereof at the narrow width part(204E), (205E), and (206E), wherein said ribs(204F),(204F), (205F),(205F), and (206F),(206F), respectively engage the back side of said frame-(201A).

In the second embodiment, a two-color coating is effected on said door(201) the same as the first embodiment.

The masking member of the present invention is made of an elastic material such as from plastics such as polystyrene, polyethylene, polypropylene, polyvinylchloride, polyurethane, melamine resin, urea resin and the like; plastic foams of said plastics; laminated material of said plastic foams and said plastics; fiber materials such as fabric, knitting, non-woven fabric, paper, corrugated card-board and the like; thermoplastic resin - impregnated fiber material; thermosetting resin - impregnated fiber material; wooden board such as wood board, hardboard, plywood and the like; metal and the like; and the masking member of the present invention may be produced by vacuum forming, press, extrusion, injection molding, and the like.

In case that said masking member is made of plastics, it is desirable to mix inorganic filler such as calcium carbonate, talc, bentonite, stone powder, blast furnace slag, flyash, and the like in said plastics since heat resistance, mechanical properties and the like of said masking member are improved by said inorganic filler and further, when used masking member is burnt in the combustion furnace, smaller combustion energy is produced so that said combustion furnace stands long use. Usually, 10 to 500 weight parts, desirably 20 to 400 weight parts of said inorganic filler is mixed in said plastics.

Polyolefin such as polyethylene, polypropylene and the like is desirable plastics for the material of masking member of the present invention since said polyolefin has high solvent resistance and is inexpensive, and of course, polyolefin in which said inorganic filler is mixed is desirable material of said masking member.

Polystyrene foam is also desirable material of said masking member since said polystyrene foam is light and inexpensive nevertheless since said polystyrene foam has low solvent resistance and low heat resistance, it is desirable to laminate a suitable plastic on said polystyrene foam.

Claims

1. A masking member consisting of an upper wall and a pair of side walls which extend from both sides of said upper wall wherein said masking member is made of an elastic material, and narrow width part(s) is(are) formed between said pair of side walls.

2. A masking member in accordance with Claim 1, wherein said elastic material is plastics.

3. A masking member in accordance with Claim 2, wherein inorganic filler is mixed in said plastics.

4. A masking member in accordance with Claim 1 and 2, wherein said plastics is polyolefin.

5. A masking member in accordance with Claim 4, wherein said polyolefin is polypropylene.

6. A masking member in accordance with Claim 1, wherein said elastic material is fiber material.

7. A masking member in accordance with Claim 6, wherein thermoplastic resin and/or thermosetting resin is impregnated in said fiber material.

Fig.1

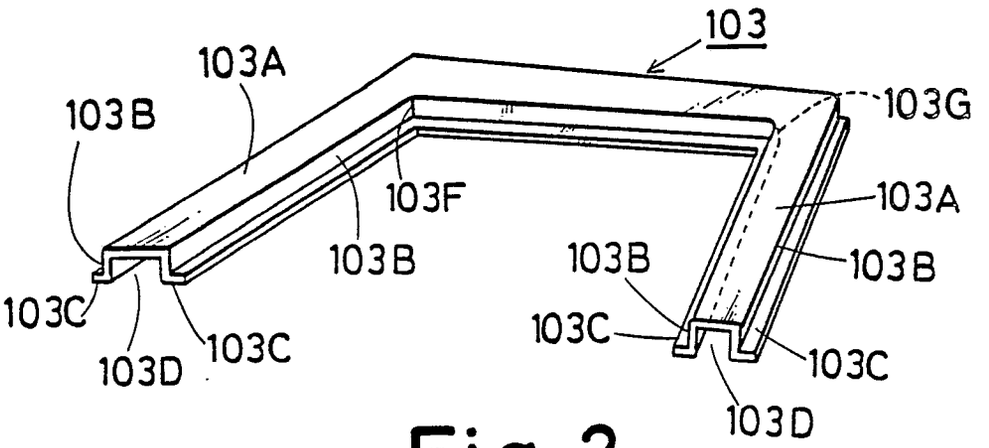


Fig.2

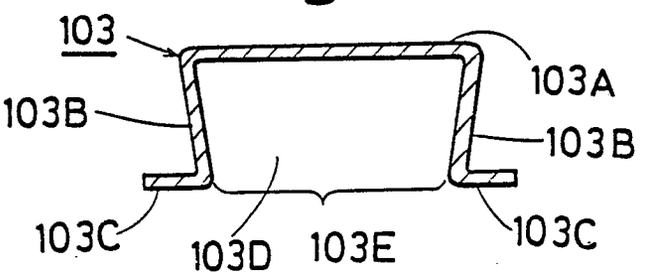


Fig.3

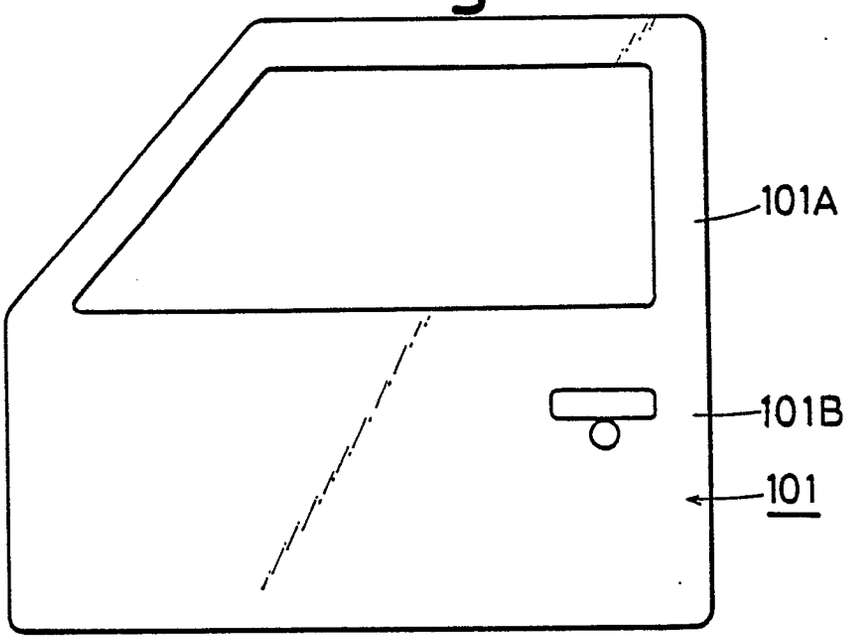


Fig. 4

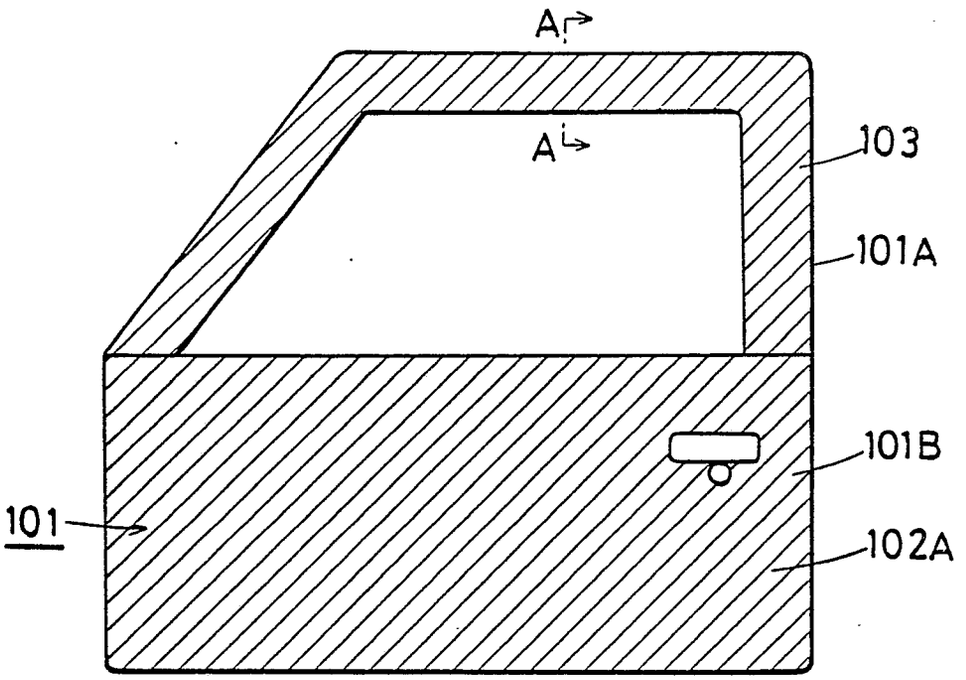


Fig. 5

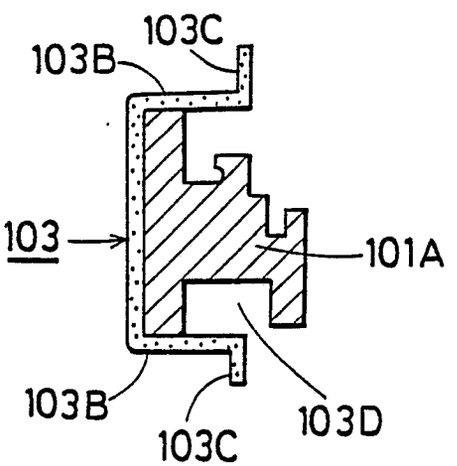


Fig.6

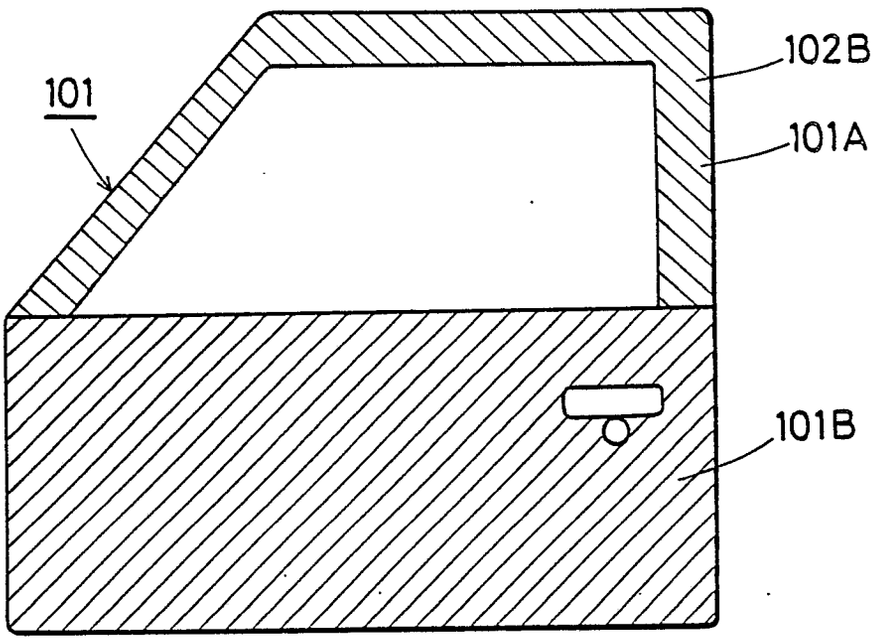

101
102B
101A
101B

Fig.7

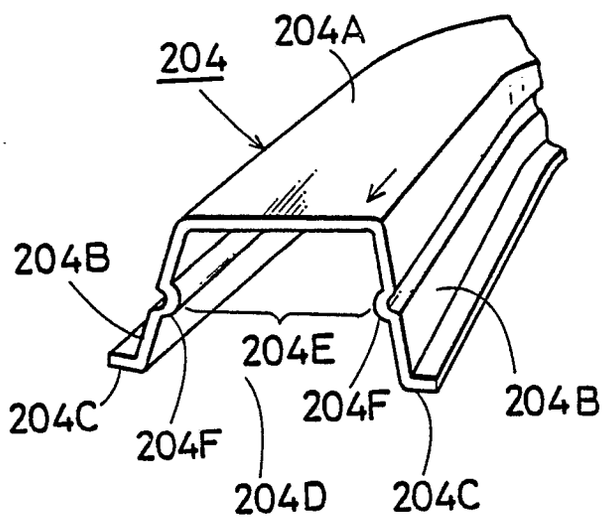

204
204A
204B
204C
204F
204E
204D
204F
204C
204B

Fig.8

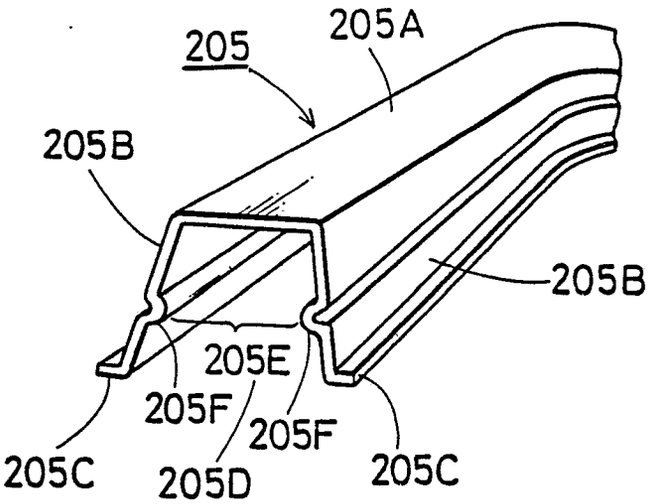

205
205A
205B
205B
205E
205F
205F
205C
205D
205C

Fig.9

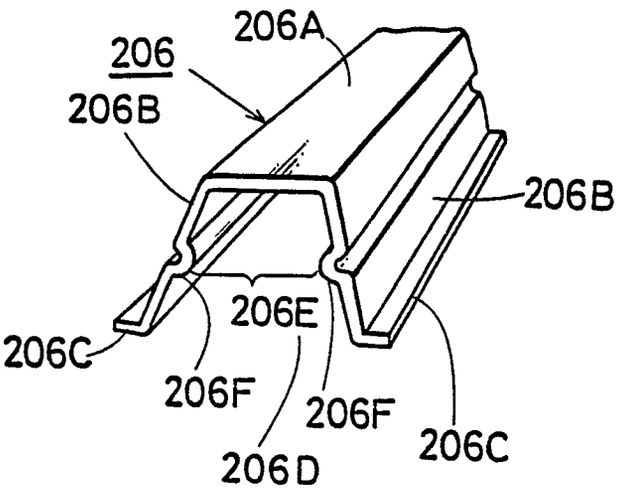

206A
206
206B
206B
206E
206C
206F
206F
206C
206D

Fig.10

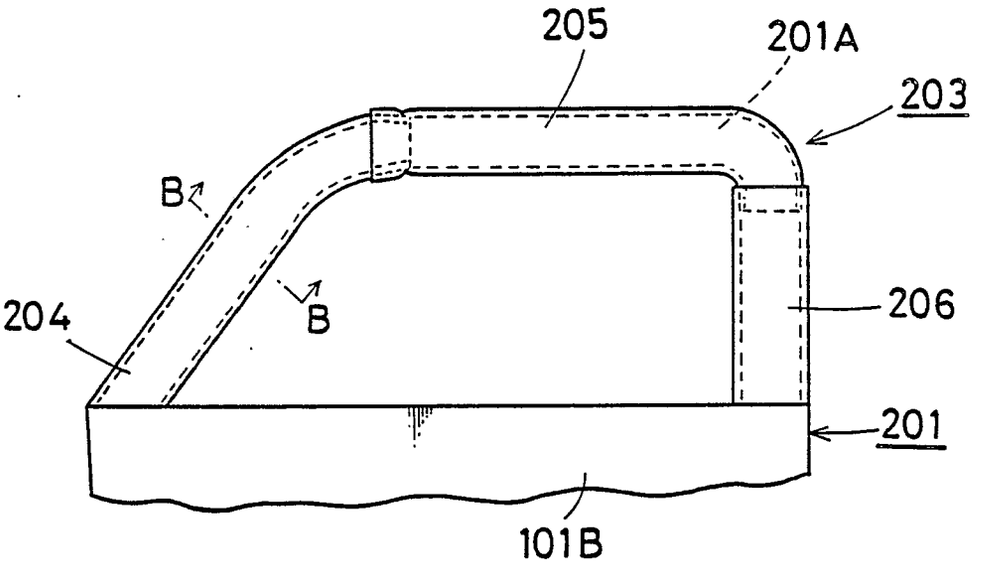
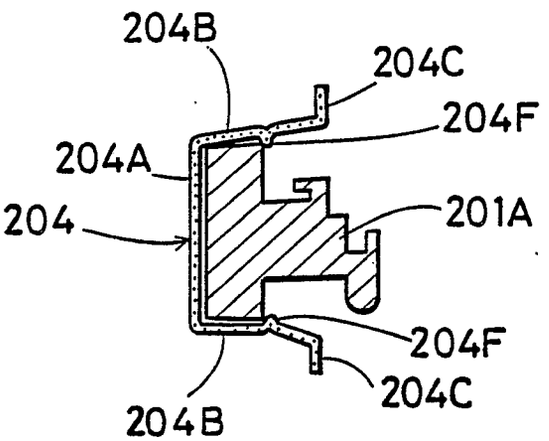

205
201A
203
B
B
204
206
201
101B

Fig.11


204B
204C
204F
204A
204
201A
204F
204C
204B