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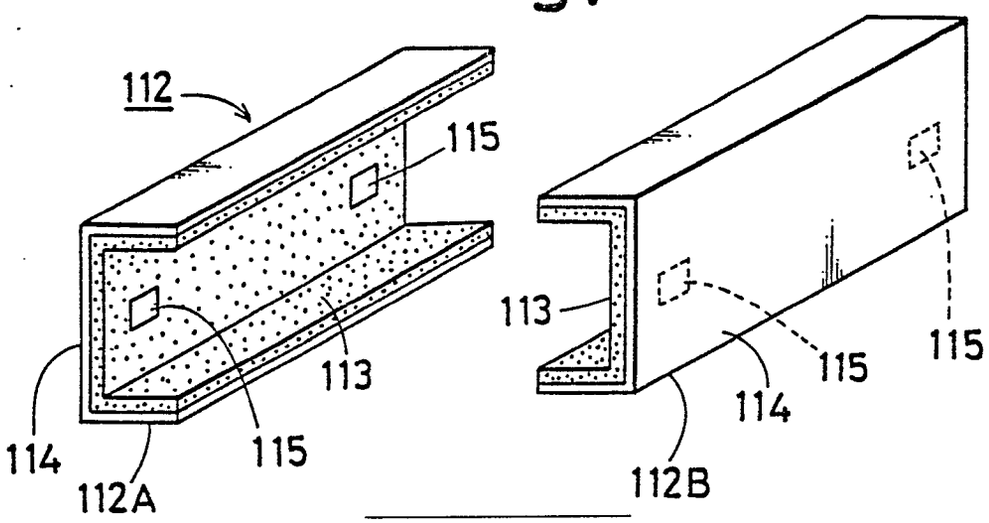
(54) Masking member.

(57) A masking member consisting of a pair of divided cylindrical parts, wherein said masking member surrounds a circumference of a pillar part of an article by combining said pair of divided cylindrical parts 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 a pair of divided cylindrical parts, wherein said masking member surrounds a circumference of a pillar part of an article by combining said pair of divided cylindrical parts. When a surface treatment is effected on the surface of an article, and if said surface of said article has a 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 was 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 a pair of divided cylindrical parts, wherein said masking member surrounds a circumference of a pillar part of an article by combining said pair of divided cylindrical parts. Said masking member may be attached on a pillar, frame, and the like by bending said masking member along said groove(s) to surround said pillar, frame, and the like.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 to FIG. 4 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 showing that the masking member is attached on a pillar.

FIG. 3 is a partial front view of the pillar after coating.

FIG. 4 is a partial front view of the pillar after the masking member is removed.

FIG. 5 and FIG. 6 relate to a second embodiment of the present invention.

FIG. 5 is a perspective view of the masking member.

FIG. 6 is a perspective view showing that the masking member is attached on a pillar.

FIG. 7 is a cross sectional view showing that the masking member of a third embodiment is attached on a pillar.

DETAILED DESCRIPTION

Fig. 1 to Fig. 4 relate to a first embodiment of the present invention. Referring now to Fig. 1 to Fig. 4, a masking member (112) consists of a pair of divided cylindrical parts (112A) and (112B) and adhesive layers (115) are respectively formed on the inside of said pair of divided cylindrical parts (112A) and (112B). The inside of said masking member (112) is made of a polystyrene foam sheet (113) and the outside of said masking member (112) is made of a non-foamed polystyrene film (114) which is laminated on said polystyrene foam sheet (113).

Said pair of divided cylindrical parts (112A) and (112B) are respectively attached on the circumference of a part (111A) of a pillar (111) of the door of an automobile by said adhesive layers (115) to set up said masking member (112) as shown in Fig. 2. After said part (111A) of said pillar (111) is covered with said masking member (112) consisting of said pair of divided cylindrical parts (112A) and (112B), said pillar (111) is coated by spraying

a paint (116) as shown in Fig. 3, and said part (111A) of said pillar (111) which is covered with said masking member (112) is not coated with said paint (116). After coating, said pair of divided cylindrical parts (112A) and (112B) of said masking member (112) are respectively removed from said part (111A) of said pillar (111) and said pillar (111) has said part (111A) which is not coated with said paint as shown in Fig. 4. In this embodiment, said polystyrene foam sheet (113) having a low solvent resistance and a low heat resistance is protected by said non-foamed polystyrene film (114) which covers the outside of said polystyrene foam sheet (113) so that said masking member (112) has an improved solvent resistance and an improved heat resistance and said masking member (112) may not deform when said masking member (112) is heated around 150 °C during a drying process so as to be able to reuse said masking member (112).

Fig. 5 and Fig. 6 relate to a second embodiment of the present invention. Referring now to Fig. 5 and Fig. 6, a masking member (122) consists of a pair of divided cylindrical parts (122A) and (122B) and two indented parts (123) are respectively formed in both edges of said one divided cylindrical part (122A) and two insert parts (124) are respectively formed in both edges of said other divided cylindrical part (122B). Said masking member (122) is made of a polypropylene in which 30% by weight of calcium carbonate is mixed. Said pair of divided cylindrical parts (122A) and (122B) are respectively attached on the circumference of a part (121A) of a pillar (121) and said insert parts (124) of said divided cylindrical part (122B) are respectively inserted into said indented parts (123) of said divided cylindrical part (122A) to secure said divided cylindrical part (122B) respectively, and said masking member (122) is assembled from said pair of divided cylindrical parts (122A) and (122B) as shown in Fig. 6. After a surface treatment, said divided cylindrical parts (122A) and (122B) are respectively removed from said part (121A) of said pillar (121) by hand, hook, and the like.

Fig. 7 relates to a third embodiment of the present invention. Referring now to Fig. 7, a masking member (132) consists of a pair of divided cylindrical parts (132A) and (132B) made of an elastic material, and clip parts (133) are respectively formed at both edges of said divided cylindrical parts (132A) and (132B). Said pair of divided cylindrical parts (132A) and (132B) are respectively attached on the circumference of a part (131A) of a pillar (131) and fixed by pinching respectively said part (131A) of said pillar (131) between said clip parts (133) of said divided cylindrical parts (132A) and (132B) and said masking member (132) is assembled from said divided cylindrical parts (132A) and (132B).

The masking member of the present invention is made of an elastic sheet such as from plastics such as polystyrene, polyethylene, polypropylene, polyvinylchloride, polyurethane, melamine resin, urea resin and the like; plastic foams of said plastics; laminated sheet of said plastic foams and said plastics; fiber sheet such as fabric, knitting, nonwoven fabric, paper, corrugated card board and the like; thermoplastic resin - impregnated fiber sheet; thermosetting resin - impregnated fiber sheet; wooden sheet such as wood board, hardboard, plywood and the like; metal sheet and the like.

In cases where 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 into 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 a combustion furnace, a smaller combustion energy is produced so that said combustion furnace will stand long use. Usualy, 10 to 500 weight parts, desirably 20 to 400 weight part of said inorganic filler are mixed into said plastics. Polyolefin such as polyethylene, polypropylene and the like is desirable plastics for the material of the 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 a desirable material for said masking member. Polystyrene foam is also a desirable material for said masking member since said polystyrene foam is light and inexpensive, nevertheless, since said polystyrene foam has a low solvent resistance and a low heat resistance, it is desirable to laminate a suitable plastic onto said polystyrene foam.

Claims

1. A masking member consisting of a pair of divided cylindrical parts, wherein said masking member surrounds a circumference of a pillar part of an article by combining said pair of divided cylindrical parts.

2. A masking member in accordance with Claim 1, wherein said masking member is made of a polystyrene foam sheet.

3. A masking member in accordance with Claim 1, wherein said masking member is made of a laminated sheet of a plastic film and a polystyrene foam sheet.

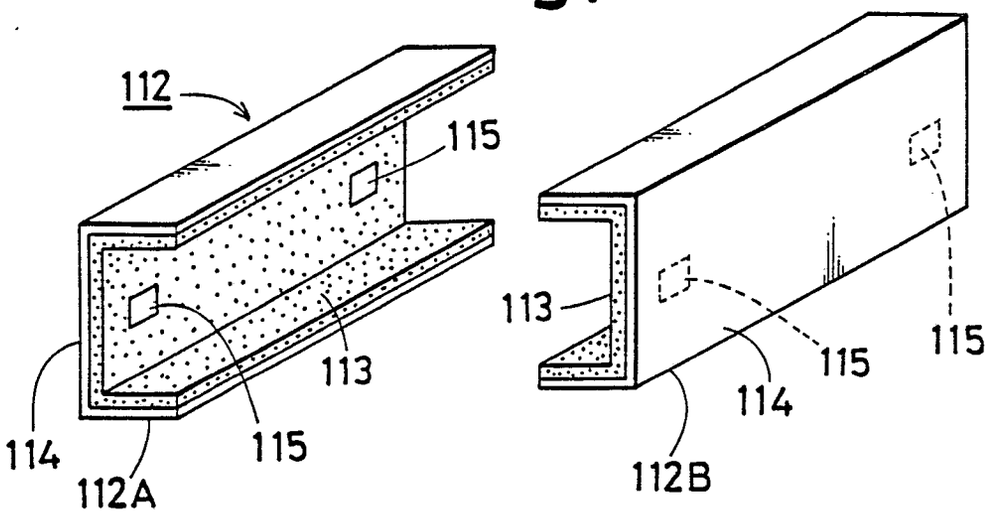
4. A masking member in accordance with Claim 1, wherein said masking member is made of a thermoplastic sheet.

5. A masking member in accordance with Claim 4, wherein an inorganic filler is mixed in said thermoplastic sheet.

6. A masking member in accordance with Claim 1, wherein said masking member is made of a fiber sheet.

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

Fig. 1


112
115
113
114
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112A
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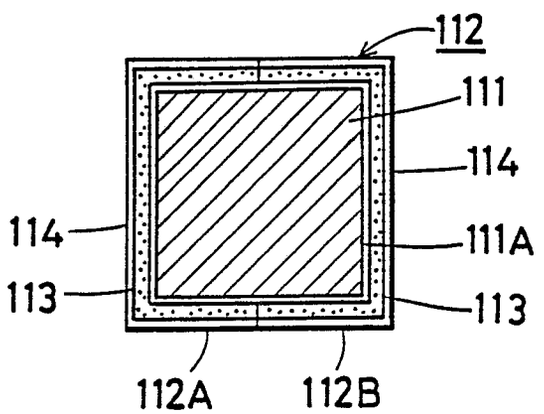
115
114
112B

Fig. 2


112
111
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111A
113
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112A
112B

Fig. 3

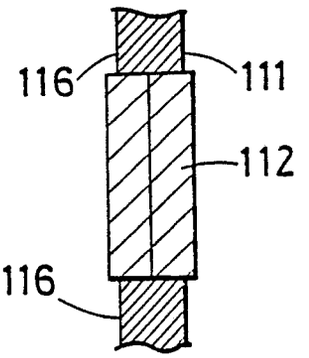


Fig. 4

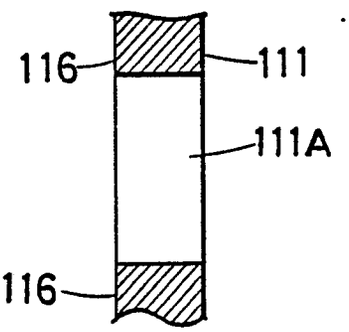
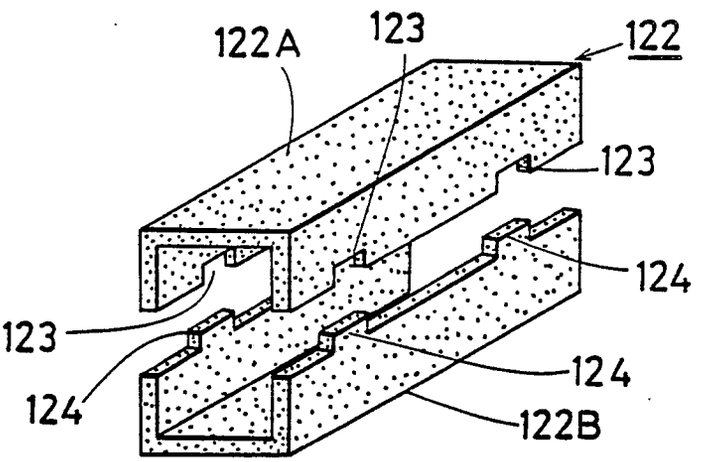


Fig. 5


122A
123
122
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124
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124
124
122B

Fig. 6

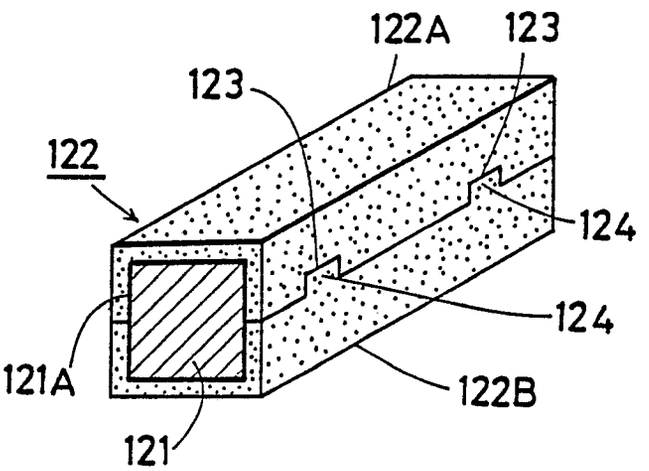
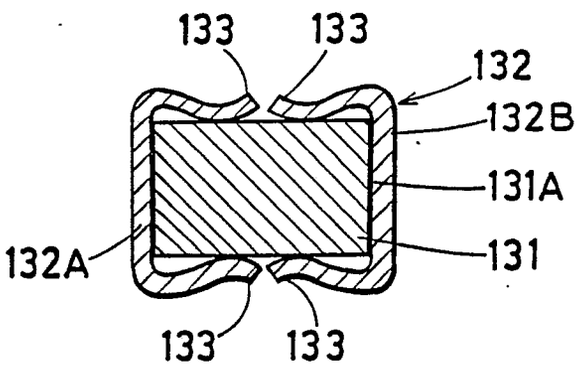

122A
123
123
122
124
124
121A
122B
121

Fig. 7



European Patent Office

EUROPEAN SEARCH REPORT

Application number

EP 89120299.6

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	EP - A2 - 0 248 652 (NAGOYA OILCHEMICAL CO., LTD.) * Claims 1,2 *	1,2	B 05 B 15/04 B 05 C 17/06
A	EP - A2/A3 - 0 262 946 (NAGOYA OILCHEMICAL CO., LTD.) * Claims 1,4,5,6 *	1,2,4	

TECHNICAL FIELDS SEARCHED (Int. Cl.[5])

B 05 B 15/00
B 05 C 17/00
B 05 C 21/00
B 05 D 1/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	02-02-1990	DUNGLER

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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