

United States District Court,
D. Connecticut.

INLINE PLASTICS CORP,
Plaintiff and Counterclaim Defendant.

v.

TENNECO PACKING CORP,
Defendant and Counterclaim Plaintiff.

Civil No. 3:95cv00200(AVC)

Feb. 20, 1997.

Alleged infringer sought declaratory judgment determining invalidity of patent for locking mechanism for plastic food containers. Patentee filed counterclaim for infringement. Parties moved to ascertain interpretation of term "shoulder structure." The District Court, Covello, J., held that term "shoulders" or "shoulder" meant an enlargement or projection for keeping something in place or preventing movement past a projection, located at ends of male rib and female recess, consisting of definite breaks or sharp edges, that does not offer smooth transition when male rib is pressed into female recess during latching.

So ordered.

In patent for locking mechanism for plastic food containers, term "shoulders" or "shoulder" meant an enlargement or projection for keeping something in place or preventing movement past a projection, located at ends of male rib and female recess, consisting of definite breaks or sharp edges, that does not offer smooth transition when male rib is pressed into female recess during latching.

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CLAIMS INTERPRETATION IN RE: '659 PATENT

COVELLO, District Judge.

This is an action for damages, declaratory and injunctive relief. It concerns the validity and alleged infringement of a patent. The parties now move to ascertain an interpretation of the "shoulder structure" as used in U.S. Patent No. 5,046,659 (" '659 patent"), by the court pursuant to the holding in *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

The issue before the court is the proper construction of the term "shoulder structure" as used in the '659 patent claims. For the reasons hereinafter set forth, the court concludes that the term "shoulders" or "shoulder" as used in the '659 patent means an enlargement or projection for keeping something in place or

preventing movement past a projection, located at the ends of the male rib and female recess, consisting of definite breaks or sharp edges, that does not offer a smooth transition when the male rib is pressed into the female recess during latching.

FACTS

Examination of the complaint, patent records and other supporting material discloses the following undisputed, material facts. The plaintiff, Inline Plastic Corporation (hereinafter "Inline") is a Connecticut corporation. The defendant, Tenneco Packing Corporation (hereinafter "Tenneco") is a corporation organized and existing under the laws of the state of Delaware.

On September 10, 1991, the United States Patent and Trademark Office (PTO), granted Tenneco's predecessor in interest, Mobil Oil Corporation, a New York Corporation, (hereinafter "Mobil") patent '659 for "latching structure for food containers." As disclosed and claimed, the invention relates to a locking mechanism for plastic food containers such as those ordinarily utilized for salad bars and "other take out" foods. Specifically, Claim 1 of the '659 patent provides that the subject matter is, FN1

FN1. The numbers appearing in bold face do not appear in the original. The numbers correspond to the numbers utilized in the drawings of the '659 Patent. See Exhibit 1.

[a] container [10] for food or other articles comprising: a lid [11] having a horizontal flange [14] extending around the periphery thereof. [A] base [12] having a horizontal flange [16] extending around the periphery thereof and adapted for engagement with the horizontal flange [14] of said lid [11] when said container [10] is in a closed condition, means for latching said lid [11] to said base [12], said latching means including: at least one substantially rectangular male rib [20] depending from said horizontal flange [14] of said lid [11], the opposite ends of said rib [20] having outwardly extending shoulder structure [20a], the sides [20b] of said rib [20] being substantially straight, at least one substantially rectangular female recess [21] in said flange [16] of said base [12] dimensioned to receive a cooperating said male rib [20] in said lid, the opposite ends of said female recess having inwardly extending shoulder structure [21a] adapted to mate with said outwardly extending shoulder structure [20a] of the said male rib [20] in said lid [11] and sides [21b] of said female recess [21] being substantially straight, said ends of said male rib and said ends of said female recess being constructed and arranged to deflect with respect to each other so that when said male rib [20] is pressed into said female recess [21] said shoulder structure [20a] on said male rib will snap into position beneath said shoulder structure [21a] in said female recess [21] and interlock therewith to latch said lid [11] to said base [12].

United States Patent No. 5,046,659 (See Exhibit 1, Figures 1A and 1B). In other words, the '659 patent latch uses "shoulder structures" on the ends of the latch elements to secure the lid to the base. The male and female elements of the patent latch are not frictionally pressed into each other in the process of latching FN2 but, instead, "snap" into the locked position with the male "shoulder structures" fitting beneath the female "shoulder structures."

FN2. The latches in use prior to the '659 patent operated by pressing a cylindrical male element into a cylindrical female recess that was roughly the same size as the male element. These prior latches were called "interference" or "friction" latches. The two parts were forced together. The interference or friction between the parts kept the latch closed.

On December 15, 1992, Mobil notified Inline that Inline's "Linelock" latch on its food containers infringed upon Mobil's patent. Inline did not respond. On March 7, 1993, Inline initiated reexamination proceedings, FN3 challenging the validity of Mobil's patent. The PTO granted reexamination on May 18, 1993.

FN3. The purpose of reexamination proceedings is to "permit efficient resolution of questions about the validity of issued patents without recourse to expensive and lengthy infringement litigation." H.R.Rep. No. 1307, 96th Cong., 2d Sess. 4, *reprinted in* 1980 U.S.C.C.A.N. 6460, 6463.

On August 16, 1993, following the initial reexamination, the examiner stated that the '659 patent was unpatentable in view of U.S. Patent No. 3,565,146, to Arnolds. The examiner concluded, *inter alia*, that the '659 patent was anticipated by Arnolds' latching mechanism which utilized outwardly extending shoulder structures.FN4 See Exhibit 2, Figure 4.

FN4. Specifically, the patent examiner stated that, "Arnold discloses a container that has a base and cover, both with a flange about its parameters. The flanges have a series of male and female ribs which interlock to secure the base to the cover. Each female rib has *inwardly extending shoulders* on the ends and straight sides. The male ribs have corresponding *outwardly extending shoulders* which interlock with the *shoulder structure* of the female recess. The cover may be hinged to the base." U.S. Patent Office Action In Reexamination at 2 (August 16, 1993) (emphasis added).

In response to this office action, Mobil submitted arguments distinguishing the '659 invention over Arnolds on the basis of the meaning of the term "shoulder structure." The examiner withdrew his rejection in light of these arguments. The examiner allowed the claims of the '659 patent on reexamination, stating that the '659 patent utilizes "shoulder structures", whereas the Arnolds patent "shows a container with a series of protuberances and recesses. The ends of the protuberances (17) and the recesses (24) are straight and cannot be considered to have shoulder structures." See Exhibit 2, Figure 4.

On February 12, 1995, Inline initiated the within action seeking a declaratory judgment determining that Mobil's patent is invalid. On March 27, 1995, Mobil in turn, filed a counterclaim seeking damages and injunctive relief alleging patent infringement. On November 17, 1995, Mobil transferred all rights and liabilities with respect to this action to Tenneco.

STANDARD

[1] [2] "The construction of a patent, including terms of art within its claim, is exclusively within the province of the court." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, ----, 116 S.Ct. 1384, 1386, 134 L.Ed.2d 577 (1996). In determining the meaning of a claim, the court first examines the intrinsic evidence of the record, including the claims, specifications, and the prosecution history. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). Such intrinsic evidence is "the most significant source of the legally operative meaning of disputed claim language." *Id.* at 1582. If the intrinsic evidence does not resolve ambiguities, then the court analyzes extrinsic evidence, such as expert and inventor testimony, in order to "[come] to the proper understanding of the claims." *Id.* at 1583.

DISCUSSION

I

Intrinsic Evidence

1. Language of The Claim

[3] [4] "A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention." *Corning Glass Works v. Sumitomo Elec.*, 868 F.2d 1251, 1257 (Fed.Cir.1989). The claim is described "by a series of limiting words or phrases (limitations)." *Id.* at 1258. The words used in the claim must be given their common meanings unless the inventor used them differently. *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 759 (Fed.Cir.1984). The "ordinary" meaning is the meaning the claim would have had to one of ordinary skill in the art. *McGill v. John Zink Co.*, 736 F.2d 666 (Fed.Cir.1984).

Applying these principles to the instant case, the court concludes that as Tenneco submits, the term "shoulder", as used in Claim 1 of the '659 patent, is consistent with the relevant, common dictionary meaning of the word "shoulder", that is, any "projection for keeping something in place, or preventing movement past the projection." See Funk and Wagnall, *Standard College Dictionary*, (1963). Claim 1 provides that the male "shoulder structures" are "outwardly extending" from the opposite ends of the latch. The female "shoulder structures" are "inwardly extending" from the opposite ends of the latch and are "adapted to mate with said male rib ..." when the male rib "snap[s] into position beneath" the female shoulder structure. The shoulder structure of the male rib is designed to "deflect" with the female shoulder structure as the male rib enters the female recess. During closure of the container, the shoulders must deflect and snap into position. This action latches the container lid against its base. Both the male and female shoulder structures "keep [the lid and base] in place", that is, closed, and, "prevent movement." Accordingly, the meaning of the term "shoulder" in the '659 patent is consistent with the above stated common dictionary definition of "shoulder."

2. The Specification

Inline argues, however, that "the specification suggests that the term 'shoulder structure' is limited to that which is shown in [Exhibit 3, Figures 3 and 3A]." Specifically, Inline argues that the only place throughout the specification where the term "shoulder structure" is defined in any way, is in connection with the specification drawings. Accordingly, "the only way to interpret the term 'shoulder structure' is in view of what is shown in the drawings, that is, [a structure] with definite breaks or sharp edges serving as boundaries of a linear or planar surface.' "

Tenneco responds that "the specification provides additional information, illuminating the fact that a 'shoulder' is merely a projection from the opposite ends of the latch, for keeping something in place or preventing movement past the projection."

[5] [6] [7] The court concludes that the term shoulder structure, as used in both the specification and claim 1, means a "projection for keeping something in place", but "requiring definite breaks or sharp edges." Patent claims must be construed in light of the other parts of the patent document, (including diagrams or figures), which collectively are referred to as the "specification." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, ---- - ----, 116 S.Ct. 1384, 1387-88, 134 L.Ed.2d 577 (1996); *see also Al- Site Corp. v. Bonneau Co.*, 22 F.3d 1107 (Fed.Cir.1994). "The specification contains a written description of the invention that must enable one of ordinary skill in the art to make and use the invention. For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed.Cir.1995)(internal citations omitted). "The caveat is that any special definition given to a word must be clearly defined in the specification." *Intellicall, Inc., v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed.Cir.1992). "[W]hile the specification may be referred to limit the claim, it can never be made available to expand it." *McClain v. Ortmayer*, 141 U.S. 419, 424, 12 S.Ct. 76, 77, 35 L.Ed. 800 (1891).

The specification in the instant case provides, *inter alia*,

As may be seen in FIGS.3 and 3A the substantially rectangular male rib 20 has at its opposite ends

outwardly extending shoulder structure 20a. Also as shown in FIG.3A the opposite ends of the female recess 21 have *inwardly extending shoulder structure* 21a adapted to mate with the outwardly extending shoulder structure 20a on the male rib 20 of the lid 11 when the container 10 is in closed condition ... When the lid 11 of the container moves from the open condition in FIG. 3A to the closed condition of FIG. 3 the latching structure including the rib 20 moves from the position in FIG.3A to the closed or latched position shown in FIG. 3. During this movement the *cam surfaces* 20c on the male rib 20 engage the *inclined cam surfaces* 21d on the female recess 21 causing the *cam surfaces* 21d to move outwardly and permit the shoulders 20a on the male rib 20 to move beneath the shoulders 21a on the female recess 21 thus bringing the surfaces 20a and 21a into engagement. Likewise, the mating surfaces 20d and 21d move into engagement and similarly the surfaces 20c and 21c move into engagement. This is clearly illustrated in FIG. 3.

See United States Patent No. 5,046,659 to *Warburton*, at Col. 3 (Sept. 10, 1991) (emphasis added). The specification uses identical terms as those used in claim 1, such as "outwardly extending shoulder structure", and "inwardly extending shoulder structure." Further, Exhibit 3, Figures 3 and 3A show that the shoulder structure on the male rib (marked as 20a) projects outward from the ends and that the shoulder structure in the female recess projects inward from the ends *to prevent movement past each other* when the '659 patent latch is in the locked position. Accordingly, the specification term "shoulder structure" may be read to mean a "projection for keeping something in place, or preventing movement past the projection." Moreover, the shoulder structure cam surfaces depicted in Exhibit 3, Figure 3A at 20c, increase in diameter until the point of the shoulder structure at 20a. There is, accordingly, an increase in diameter or projection at the opposite ends of the latch element, consistent with the common meaning of "shoulder" as described in claim 1.

However, the specification drawings, or figures, explain by illustration that the claimed subject matter is something less than generally a "projection for keeping something in place or preventing movement past the projection." The shoulder structure, as illustrated, is explained as requiring sharp edges that serve as boundaries of a linear or planar surface, i.e., the latch element. Since words defined in the specification must be given the same meaning as used in the claim, the court concludes that the term shoulder structure, as used in both the specification and claim 1, means a "projection for keeping something in place", but "requiring definite breaks or sharp edges."

3. The Prosecution History

Inline further argues that under the doctrine of file history estoppel, Tenneco cannot recapture what is shown in the prior art and disclaimed by Mobil during the reexamination proceedings. Specifically, Inline asserts that Mobil, during the reexamination proceedings, distinguished its '659 invention from Arnolds, by arguing that the scope of the term "shoulder structure" in the '659 patent does not include a latching structure that passes smoothly from one surface to another surface. Since Inline asserts that its "Linelock" latch utilizes the smooth surface transition as found in the Arnolds' invention, the "Linelock" latch is outside the legally permissible scope of the '659 patent claims.

Tenneco responds that the prosecution history of the '659 patent removes any doubt that a "shoulder" is a projection located at the end surfaces of the latch elements for keeping something in place or preventing movement past the projection, and that Inline's "Linelock" latch includes "shoulders".

For the reasons that hereinafter follow, the court concludes that the file history of the '659 patent demonstrates that a "shoulder" is a projection for keeping something in place or preventing movement past a projection, located at the ends of the male rib and female recess, that does not offer a smooth transition when the male rib is pressed into the female recess during latching.

[8] [9] The undisputed public record of the proceedings in the Patent and Trademark Office is of primary significance in understanding the claims. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980-981

(Fed.Cir.1995). File history limits the permitted construction of claim terminology so as to exclude any interpretation that was disclaimed during prosecution. *Southwall Technologies, Inc. v. Cardinal IG Co.*, 54 F.3d 1570 (Fed.Cir.) *cert. denied*, 516 U.S. 987, 116 S.Ct. 515, 133 L.Ed.2d 424 (1995) (noting that claims cannot be constructed narrowly in order to uphold validity, and then expanded in order to find infringement). *See also* *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878 (Fed.Cir.1988). Further, the Federal circuit has instructed that statements made by the applicant to distinguish over cited prior art references or otherwise to obtain allowance of the claims are "particularly relevant" to what the applicant meant by certain terms. *Lemelson v. General Mills, Inc.*, 968 F.2d 1202 (Fed.Cir.1992).

[10] [11] Under the doctrine of equivalents, a product that does not literally infringe a claim may nevertheless act as an infringing product if it performs substantially the same function in substantially the same way to obtain the same result. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608, 70 S.Ct. 854, 856, 94 L.Ed. 1097 (1950). However, the doctrine of file history estoppel limits the range of equivalents available to the patentee by preventing the recapture of subject matter surrendered during the prosecution of the patent. *Southwall Technologies, Inc. v. Cardinal IG Company*, 54 F.3d 1570 (Fed.Cir.1995).

The relevant, undisputed file history reveals that, in the initial action in reexamination, dated August 16, 1993, the examiner stated that the invention of the '659 patent was unpatentable in view of U.S. Patent No. 3,565,146 to Arnolds. The examiner had concluded, *inter alia*, that the '659 patent was anticipated by Arnolds' latching mechanism which the examiner concluded utilized outwardly extending shoulder structures.

On November 9, 1993, Mobil submitted arguments in response to the August 16, 1993 office action, distinguishing the '659 patent over Arnolds on the basis of the meaning of the term "shoulder structure".FN5 Specifically, Mobil pointed out that the projections in Arnolds were located at the "corners" formed by the top and the sides of the latch and did not extend or project out from the end surfaces. See Exhibit 3, Figure 4. In order to be considered "outwardly extending shoulder structures" the projections would have to extend outward from the ends. Arnolds did not. Further, Mobil argued that, unlike the '659 patent, the protuberances (10) of Arnolds latch have flat surfaces (17) which pass over smoothly into the flat ends (24) of the female protuberance (9), and do not have any projections extending out of the surface of the plane to hold the cooperating part in place. See Exhibit 3, Figure 4. Accordingly, the smooth surface (17) on the ends of the protuberance (10) do not fall within the meaning of the terms "outwardly extending shoulder structure" as used in the '659 patent or within the ordinary definition of the term "shoulder".FN6

FN5. See Supplemental Amendment to PTO Reexamination of the Warburton Patent No. 5,046,659, Remarks at p. 6-20 (November 9, 1993).

FN6. Specifically, "[i]t is submitted that [the] definition of shoulder is not applicable to the transition of the Arnolds surface 16 to the 17 or the transition of the surface 27 to the surface 19." In Webster's Third New International Dictionary ... the definition of a shoulder with respect to a roadway is "either edge of a roadway; specif [ically]: the part of a roadway outside of the traveled way on which the vehicles may be parked in an emergency." It is recognized that with a shoulder on a road or highway the shoulder is something in addition to the hard surface road on which the automobile rides. In the Warburton patent ['659] the shoulder on the ends of the ribs and recess is *something in addition* on the ends of these items. It is not a corner of either the rib or recess. [Washburn, Mobil's representative] has made additional research into definitions of the term "shoulder". In McGraw-Hill Dictionary of Scientific and Technical Terms-Third Edition, the engineering definition for "shoulder" is "a projection made on a piece of shaped wood, metal, or stone, where its width or thickness is suddenly changed." The design engineering definition for the word "shoulder" is "the portion of a shaft, stepped object, or a flanged object that shows an increase in diameter."

None of these definitions correspond with a corner such as the transition from surface 24 to the surface 19 in Arnolds.

In response to the November 9 amendment, the examiner changed his position that Arnolds' had shoulders located at the ends. He accepted Mobil's position that the flat, uninterrupted ends of the Arnolds' latch could not be considered "shoulders" because there was no projection out of the surface of the ends to hold something in place. Rather, Arnolds merely had corners which are not the same as "shoulders" described in the '659 patent.

On December 12, 1993, the PTO issued a Notice of Intent to Issue Reexamination Certificate ("PTO Reexamination Notice"), holding that,

[t]he reference to Arnolds shows a container with a series of protuberances and recesses namely, [each male and female latch action]. The ends of the protuberances (17) and the recesses (24) are straight and cannot be considered to be shoulder structures ... Moreover, the female shoulder structure [of Arnolds] as thus interpreted would neither deflect with respect to the male shoulder structure or have the male shoulder structure "snap into position beneath" it.

See *Notice of Intent To Issue Reexamination Certificate* (December 12, 1993).

The file history therefore indicates that the term "shoulder structure" generally refers to a projection located at the ends of the latch elements for keeping something in place or preventing movement past the projection. However, by the doctrine of file history estoppel, the scope of the term "shoulder" is limited to a protuberance located at the ends of the male rib and female recess, that does not offer a smooth transition when the male rib is pressed into the female recess during latching, but instead deflects in the latching process, causing the male shoulder to snap into position beneath the female shoulder structure.

II

Extrinsic Evidence

[12] [13] The court concludes that use of the extrinsic evidence is unnecessary in this case. "The court may, in its discretion, receive extrinsic evidence in order to 'aid the court in coming to a correct conclusion' as to the 'true meaning of the language employed' in the patent." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed.Cir.1995) (internal citations omitted). "[I]t may be used only to help the court come to the proper understanding of the claims; it may not be used to vary or contradict the claim language." *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1584 (Fed.Cir.1996). "[R]eliance on such evidence is unnecessary, and indeed improper, when the disputed terms can be understood from a careful reading of the public record [that is, the claims, specification, and file history]." *Id.* at 1584.

In this case, the court is satisfied that the definition of the term "shoulder structure" as used in the '659 patent can be understood from a careful reading of the public record. Accordingly, the extrinsic evidence is unnecessary.

CONCLUSION

[14] For the foregoing reasons, the court concludes that the term "shoulders" or "shoulder" as used in the '659 patent means an enlargement or projection for keeping something in place or preventing movement past a projection, located at the ends of the male rib and female recess, consisting of definite breaks or sharp edges, that does not offer a smooth transition when the male rib is pressed into the female recess during latching.

EXHIBIT 1

Illustration of the '659 Patent to Warburton

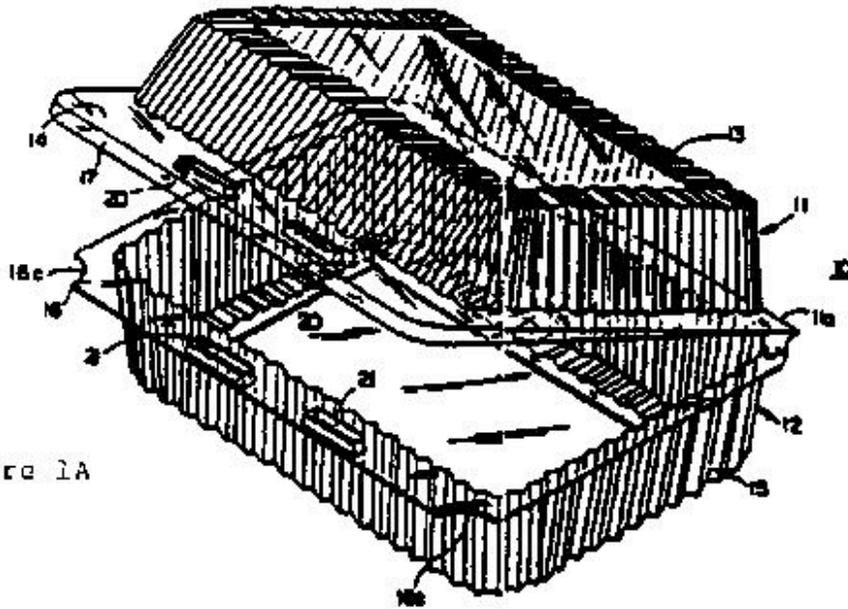


Figure 1A

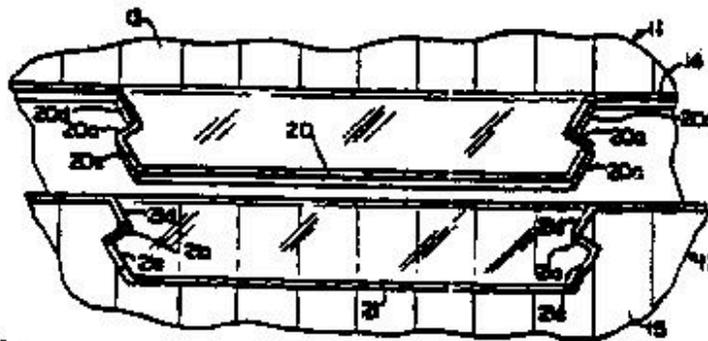


Figure 1B

"Latching Mechanism"

EXHIBIT 2

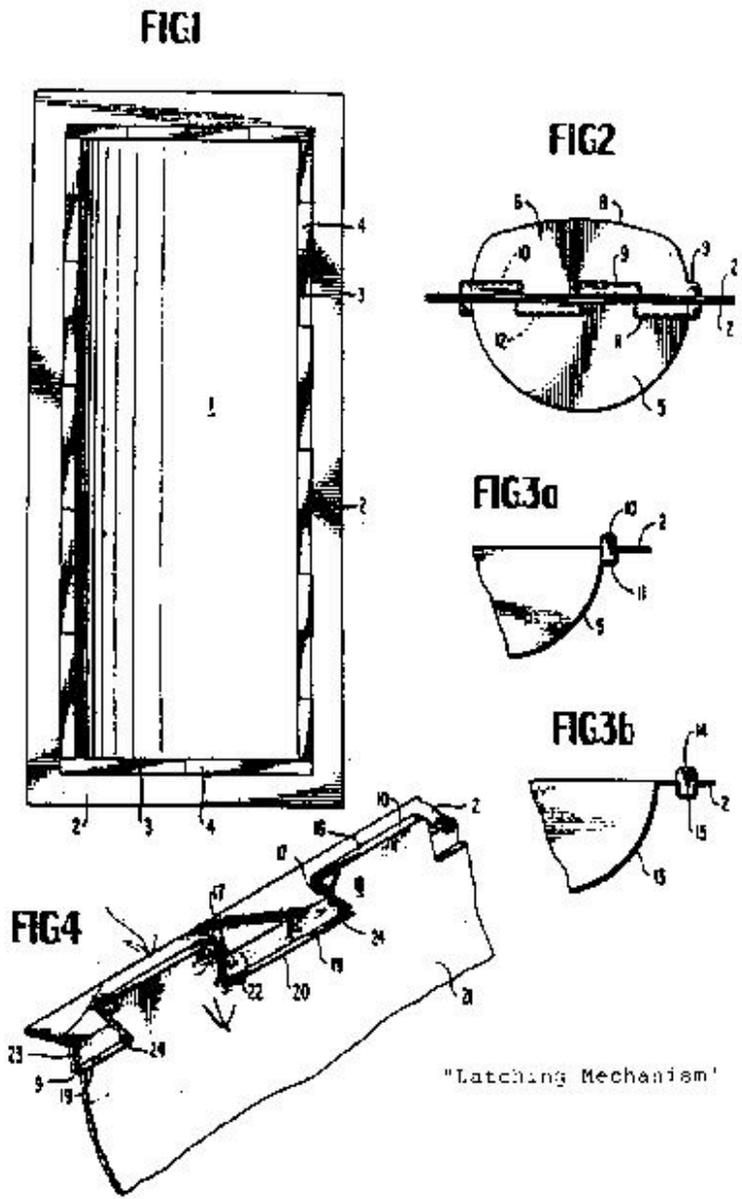


EXHIBIT 3

FIG. 3

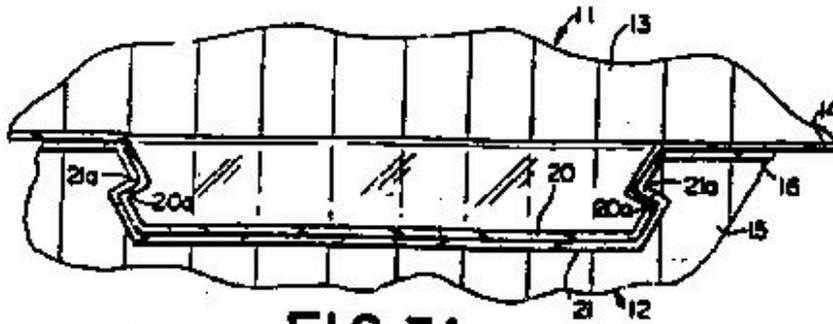


FIG. 3A

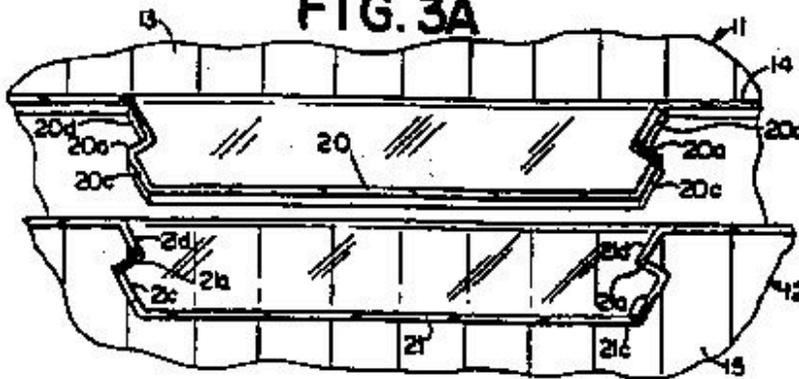


FIG. 4A

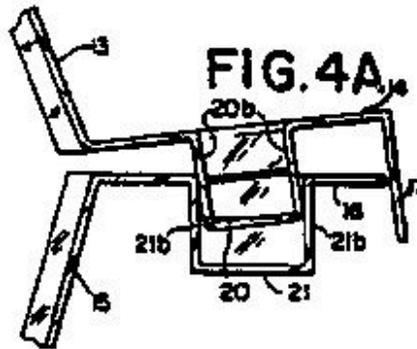
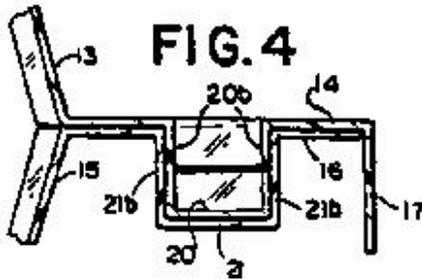


FIG. 4



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