

**In the Matter of**

**CERTAIN VINYL-COVERED  
FOAM BLOCKS**

**Investigation No. 337-TA-178**



**USITC PUBLICATION 1604**

**NOVEMBER 1984**

**UNITED STATES INTERNATIONAL TRADE COMMISSION**

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UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C. 20436

In the Matter of )

CERTAIN VINYL-COVERED FOAM )  
BLOCKS )

) Investigation No. 337-TA-178  
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COMMISSION ACTION AND ORDER

Procedural History

On November 23, 1983, The Dolly Toy Co. of Tipp City, Ohio, filed a complaint under section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) alleging unfair methods of competition and unfair acts in the importation and sale of certain vinyl-covered foam blocks which allegedly infringe U.S. Letters Patent 3,518,786, the effect or tendency of which is to destroy or substantially injure an efficiently and economically operated industry in the United States. The complaint named as respondents Candid Industries of Hong Kong and Talbot Toys, Inc., of New York City. Notice of institution of the investigation was published in the Federal Register on December 29, 1983 (48 F.R. 57384).

On July 9, 1983, the presiding administrative law judge (ALJ) issued an initial determination (Order No. 4) granting a joint motion by complainant. The Dolly Toy Co. and the Commission investigative attorney moved for termination of respondent Talbot Toys, Inc., on the basis of consent order. The Commission subsequently decided not to review the initial determination, and it became the Commission determination on August 8, 1984.

On June 29, 1984, complainant The Dolly Toy Co. filed a motion for summary determination of violation of section 337. (Motion No. 178-6). The motion was supported by the Commission investigative attorney and was not opposed by any respondent.

On July 26, 1984, the ALJ issued Order No. 5, an initial determination granting summary determination and finding that there have been violations of section 337 due to the importation and sale of vinyl-covered foam blocks which infringe claims 1 or 2 of U.S. Letters Patent 3,518,786.

The Commission issued a notice on August 24, 1984 (49 F.R. 34424), declining to review the initial determination of July 26, 1984, and requesting written submissions on questions of remedy, the public interest, and bonding.

#### Action

Having reviewed the submissions received on the questions of remedy, bonding, and public interest and the record compiled in this investigation, the Commission has determined that a general exclusion order should be issued against vinyl-covered foam blocks that infringe claims 1 or 2 of U.S. Letters Patent 3,518,786, that the public-interest factors enumerated in section 337(d) do not preclude issuance of this remedy, and that a bond of 150 percent of the entered value of the articles concerned should be imposed during the Presidential review period.

## Order

Accordingly, it is hereby ORDERED THAT--

1. Vinyl-covered foam blocks that infringe claims 1 or 2 of U.S. Letters Patent 3,518,786 are excluded from entry into the United States except under license of the patent owner for the remaining term of the patent.
2. The articles ordered to be excluded from entry into the United States shall be entitled to entry under bond in the amount of 150 percent of the entered value of the subject articles from the day after this order is received by the President pursuant to subsection (g) of section 337 of the Tariff Act of 1930, and until such time as the President notifies the Commission that he approves or disapproves this action, but in any event, not later than 60 days after the date of receipt of this action.
3. The Commission may amend this order in accordance with the procedure described in section 211.57 of the Commission's Rules of Practice and Procedure (19 CFR § 211.57).
4. The Secretary shall serve Copies of this Commission Action and Order and the Commission Opinion in support thereof upon each party of record to this investigation and shall publish notice of this Action and Order in the Federal Register.

By order of the Commission.

Kenneth R. Mason  
Secretary

Issued:



UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C. 20436

In the Matter of )

CERTAIN VINYL-COVERED FOAM )  
BLOCKS )

Investigation No. 337-TA-178

COMMISSION OPINION ON REMEDY, THE PUBLIC INTEREST, AND BONDING

I. Remedy

A general exclusion order prohibiting the entry of any and all vinyl-covered foam blocks that infringe claims 1 or 2 of U.S. Letters Patent 3,518,786 is the appropriate remedy in this investigation. The record contains facts sufficient to meet the guidelines for the issuance of general exclusion orders established by the Commission in Certain Airless Paint Spray Pumps and Components Thereof. 1/

In Paint Spray Pumps, the Commission said that, to obtain a general exclusion order, a complainant must prove a widespread pattern of unauthorized use of its patented invention and certain business conditions which will support a reasonable inference that foreign manufacturers other than the respondents may attempt to enter the U.S. market with infringing articles. 2/

The purpose of these requirements is "to balance the complainant's interest in obtaining complete protection from all potential foreign

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1/ Inv. No. 337-TA-90, USITC Pub. 1199 (1981); see also Certain Self-Stripping Electrical Tap Connectors, Inv. No. 337-TA-150.

2/ Id. at 18.

infringers through a single investigation with the inherent potential of a general exclusion order to disrupt legitimate trade." 3/ Where it appears that there may be numerous undiscovered infringers, it would be unduly burdensome to require complainant to seek a new section 337 investigation on the same patent as soon as new imported infringing articles are discovered.

Both of these requirements have been met in this investigation. Although only two respondents were named, the investigation showed that others who were not named as parties were making substantial importations and sales. 4/ Since the time of filing its motion for summary determination, complainant has discovered another importer of a substantial number of blocks. 5/ The sales on record in this investigation have been substantial and have been made to at least one nationwide chain 6/ and to other smaller companies around the country. 7/

The record shows that there is an established demand for the vinyl-covered foam blocks. 8/ Complainant notes that importers and sellers of toys often have established channels which can readily be used for the distribution and marketing of foam blocks. 9/ Finally, only a small capital investment is required for the manufacture and distribution of foam blocks. 10/

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3/ The concern is that a general exclusion order may dampen interest in importing noninfringing goods by reason of uncertainty over the interpretation of the coverage of the patent by the U.S. Customs Service.

4/ Initial Determination ("ID"), Order No. 5, at 4; Sullivan Affidavit attached to Complainant the Dolly Toy Company's Motion for Summary Determination [hereinafter Motion for Summary Determination] para. 18.

5/ Brief of Complainant the Dolly Toy Company on Remedy, Public Interest, and Bonding [hereinafter Complainant's Brief] at 5 and Confidential Exhibit C.

6/ Motion for Summary Determination, Exhibits 9 and Confidential affidavit.

7/ Id., Exhibit 10 and Exhibit 14; Affidavit of Dennis J. Sullivan.

8/ Complaint, Confidential Exhibit 1.

9/ Complainants' Brief at 6; Motion for Summary determination, exhibits 5-10.

10/ Affidavits of Dennis J. Sullivan and Confidential Affidavit. Briefs of Complainant and Commission Investigative Attorney on Remedy, Bonding, and the Public interest.



In addition, respondent Candid Industries of Hong Kong in a letter to the Commission has said it will continue to sell its blocks to various unnamed Hong Kong trading companies. Since the physical exhibit of respondent Candid's blocks does not indicate the source, these blocks could easily enter the United States by way of trading companies if either a limited exclusion order prohibiting entry of only Candid's blocks or a cease and desist order directed to Candid were issued. Moreover, there are other Hong Kong manufacturers of infringing blocks not known to complainant that could continue to export infringing blocks to the United States under a more limited remedy, and the Taiwanese source for Talbot Toys, the U.S. respondent terminated by a consent order, could easily ship the infringing blocks through other importers. Thus, we conclude that the appropriate remedy in this investigation is a general exclusion order.

## II. Public Interest

We find that the issuance of a general exclusion order in this matter will have no adverse affect on the public interest factors enumerated in section 337(d). Exclusion of infringing vinyl-covered foam blocks will have no negative effect on the public health and welfare. The blocks are only one form of baby toy; unlike medicines, for example, they are not essential to the public health or welfare. Moreover, there are competitive, non-infringing blocks on the market. Thus, with the availability of alternative blocks and the patented blocks of complainant, U.S. consumers will not be adversely affected by exclusion of those that infringe the subject patent.

## III. Bonding

The Senate Finance Committee Report on the 1974 amendments to section 337 says that the bond is to be set at a level sufficient to "offset any

competitive advantage resulting from the unfair method of competition or unfair act enjoyed by the persons benefiting from the importation." 12/ When possible in the past, the Commission has based the bond on the difference between complainant's selling price of the domestic product and the entered value of the imported product. In this case the record established an average price for complainant's foam blocks of 56¢ each. 13/ The Taiwanese blocks that were the subject of this investigation were 20¢-25¢ f.o.b. Taiwan. 14/

The average price paid for the imported infringing blocks is 22.5¢. On that basis we set the bond at 150 percent.

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12/ S. Rep. No. 1298, 94d Cong., 2d Sess. 198 (1974).

13/ Complaint, Confidential Exhibit 2. Complainants' Brief, Confidential Exhibit D.

14/ Motion for Summary Determination, Confidential Exhibit B. We did not find nor did the parties to the investigation cite information on the entered value prices of the foam blocks produced in Hong Kong and imported by Candid, hence we have used f.o.b. Taiwan prices.

This is an initial determination issued by a Commission administrative law judge that the Commission determined not to review. The initial determination has, therefore, become the Commission determination in this investigation on the issue of violation of section 337. See section 210.53(h) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.53(h)) and the notice published in the Federal Register on August 30, 1984 (49 Fed. Reg. 34,424).

Respondent Candid Industries, the only foreign respondent, filed a letter on January 25, 1984, stating: "I received the above-mentioned notice. I deny the allegations in the complaint."

On June 14, 1984, sanctions were imposed on Candid Industries for failure to comply with Order No. 2 compelling discovery. (Order No. 3). The following facts were deemed to have been established:

- a. Candid Industries has manufactured in Hong Kong and has exported to the United States vinyl-covered foam blocks that infringe U.S. Patent No. 3,518,786.
- b. Candid Industries has offered for sale and sold in the United States imported vinyl-covered foam blocks that infringe the '786 patent.
- c. Candid Industries has the capacity to manufacture and to export to the United States a sufficient number of infringing vinyl-covered foam blocks to meet the current demand in the United States market.
- d. Candid Industries intends to continue to export to the United States infringing vinyl-covered foam blocks.
- e. Candid Industries intends to continue offering for sale in the United States imported infringing vinyl-covered foam blocks.

- f. Candid Industries has sold and offered for sale in the United States imported infringing vinyl-covered foam blocks at prices lower than those charged by Dolly Toy for its vinyl-covered foam blocks covered by the '786 patent.
- g. Candid Industries' importation and sale of infringing vinyl-covered foam blocks have the effect and tendency to injure substantially the domestic industry engaged in the manufacture and sale of vinyl-covered foam blocks made under the '786 patent.

On June 20, 1984, Candid filed a letter which was treated as an answer to the complaint and notice of investigation. Candid was advised that the sanctions issued in Order No. 3 might be lifted on motion by Candid if Candid provided discovery as ordered in Order No. 2. No further information was submitted by Candid.

Although Candid Industries denied infringement of the '786 patent, it offered no facts in support of its position on infringement. The letter of June 20 indicated that Candid had 10 employees, and that it does manufacture foam blocks for babies. It has stopped ~~exporting the blocks to the United States~~ States, but will continue to sell them elsewhere. Candid states that it cannot afford to hire a lawyer to defend this lawsuit. It did not respond to Dolly Toy's motion for summary determination. Dolly Toy, through affidavits and exhibits accompanying this motion, has presented facts showing violation of Section 337. No opposing affidavits have been filed showing that there is a

genuine issue of material fact to be litigated. Dolly Toy is entitled to summary determination. Dolly Toy's case is supported by certain admissions contained in Candid's letter filed on June 20, 1984.

## 2. Jurisdiction

The Commission has subject matter jurisdiction in this case since the complaint alleges unfair acts in the importation and sale of certain foam blocks. Importation and sale of the blocks have been established.

The Commission has in personam jurisdiction over Candid Industries. The June 20 letter from Candid establishes that Candid has had minimum contacts with the United States in the past. Candid has received the notice of investigation, and it states that it immediately stopped offering and exporting blocks to the United States. No shipments have been made to the United States since about January, 1984.

## 3. Importation and sale

In addition to the exportation of blocks by Candid Industries to the United States, Dolly Toy has filed affidavits establishing substantial importations and sales by others who are not named as parties to this investigation.

The Hoffman affidavit establishes that Friendly Home Parties of Albany, N. Y., purchased [ ] of vinyl-covered foam blocks from [ Conf. ] and that the blocks were Conf. manufactured in Hong Kong.

The Pilarz affidavit states that J. C. Penney Co., Inc. purchased from Talbot Toys vinyl-covered foam blocks manufactured in Taiwan.

The Sullivan affidavit states that in 1981, Stahlwood Toy Mfg. Co. was distributing imported infringing blocks manufactured in Hong Kong.

Finally, the June 20 letter from Candid establishes that this respondent has manufactured in Hong Kong and has exported to the United States vinyl-covered foam blocks.

#### 4. Patent validity

Dolly Toy is the owner by assignment of U. S. Patent No. 3,518,786. (Sullivan affidavit, Exs. 2 and 3). Under Section 282 of the Patent Act, a patent is presumed valid. 35 U.S.C. §282. The burden of proving invalidity by clear and convincing evidence is on the respondents. American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350 (Fed. Cir. 1984). No evidence contesting the validity or enforceability of the '786 patent has been submitted. It is therefore found that for the purposes of this proceeding the '786 patent is valid and enforceable.

#### 5. Infringement

The '786 patent relates to a safe toy block for children. The block includes a flexible vinyl plastic outer shell around a cube of foam which always returns to its original shape.

Claims 1 and 2 read as follows:

1. A child's safety toy block comprising a unitary core of resilient foam, formed in a symmetrical geometric three-dimensional configuration including at least two substantially planar surfaces defining respectively the top and bottom thereof, said foam having interconnected pores so that air may move without substantial restriction from one portion of the core to another thus providing little resistance to deformation upon the application of a distorting force to one or more of the surfaces thereof while providing a constant restoring force tending to return the block fully to its original configuration upon the removal of such distorting force, and side surfaces connecting said top and bottom surfaces, and a soft, thin, flexible and printable heat sealable plastic covering formed about said core and closely conforming to the shape of said core including surfaces corresponding to said core surfaces in closely spaced but non-adhesive relation thereto, said plastic covering being heat sealed without substantial overlap about two perimeters of said core corresponding to the junctions of the sides thereof with its top surfaces thereof and its bottom surface fully enclosing said core therein said block being of a size rendering it conveniently holdable, manipulable and throwable by a child of the size normally attained during normal teething years.

2. The block of claim 1 in which said covering is formed in three pieces including a top piece, a bottom piece and a single side piece with said side piece joining said top and bottom pieces at said core perimeters and said side piece being joined to itself adjacent one vertical edge of said core extending between said perimeters.

The Marcus affidavit (paragraphs 11-16) states that a block manufactured by Candid (Ex. D) literally infringes claims 1 and 2 of the '786 patent. (See also claim chart, Ex. E.) Since the inner construction of the block cannot be seen, the Marcus affidavit is necessary to establish infringement of each element of claims 1 and 2.

Another block made by Candid, shown in Ex. F, was submitted to the Commission as Complaint Phys. Ex. 2. Dolly Toy alleges that this block



infringes claim 1 literally, and infringes claim 2 under the doctrine of equivalents. Phys. Ex. 2 to the complaint was the only block of this type in the possession of Dolly Toy, and it has not been seen by this office. Even if it had been seen, the Marcus affidavit would be required to establish infringement of claim 1. It is found that Exhibit D infringes claims 1 and 2 of the '786 patent, and that Phys. Ex. 2 to the complaint infringes at least claim 1.

#### 6. Domestic Industry

The Sullivan and Marcus depositions establish that Dolly Toy manufactures in Tipp City, Ohio, vinyl-covered foam blocks covered by the claims of the '786 patent. (See Ex. C). In addition to domestically manufacturing vinyl-covered foam blocks, Dolly Toy inspects, packages and stores the blocks at its Tipp City facility. (Sullivan affidavit paragraph 6).

Dolly Toy uses modern equipment in the production, management, manufacture and inventory control of its vinyl-covered foam blocks. About 185 full-time and 40 seasonal employees are employed, with 12 employees allocated to the foam block portion of Dolly Toy's business. Dolly Toy has been consistently profitable both in its overall operations and those dedicated to vinyl-covered foam blocks. (Marcus affidavit paragraph 7, Sullivan affidavit paragraph 6, Ex. 4).

It is found that there is an efficiently and economically operated domestic industry consisting of Dolly Toy's operations devoted to the manufacture and sale of vinyl-covered foam blocks under the patent.

7. Injury

Dolly Toy has submitted evidence by affidavit establishing that substantial quantities of vinyl-covered foam blocks have been imported and sold at prices which undercut those of Dolly Toy. (Sullivan affidavit paragraph 20, Pilarz affidavit, Hoffman affidavit).

For example, the J. C. Penney Co., which has purchased vinyl-covered foam blocks from Dolly Toy, purchased [ ] of imported foam blocks from Talbot Toys in 1983. These imported blocks were advertised in Penney's 1983 Christmas catalog at a price of \$5.99 per set of nine. (Pilarz affidavit, Ex. 16). Dolly Toy's retail price for similar blocks is about \$6.00 per set of six. (Sullivan affidavit paragraph 20). In this instance, imported blocks were being sold at about two-thirds the price of the domestic patented blocks. Since J. C. Penney has been a customer of Dolly Toy in the past, it may be inferred that Dolly Toy would have made the sale to J. C. Penney but for the availability of lower-priced imported blocks. At any rate, as the owner of a valid U. S. patent, Dolly Toy is entitled to exclude others from making, using, or selling infringing blocks in the United States. Conf.

Another example of a Dolly Toy customer purchasing imported vinyl-covered foam blocks is that of Friendly Home Products, which purchased [ ] of blocks from Hong Kong between 1980 and 1983. (See Sullivan affidavit paragraph 12 and Hoffman affidavit.) Conf.

Confidential Exhibit 4 shows that dollar sales, unit sales, and profits for Dolly Toy's vinyl-covered foam blocks declined each year from 1979-1982.

It is found that importation of infringing vinyl-covered foam blocks has had the effect of substantially injuring the domestic industry.

Continued importation of infringing blocks would have the tendency to injure substantially the domestic industry. Foreign manufacturers and exporters have demonstrated the ability to supply substantial quantities of the foam blocks to the U. S. market. The capital investment required to begin or to expand manufacturing is minimal. (Marcus affidavit paragraph 17). The June 20, 1984, letter from respondent Candid Industries demonstrates an intention to continue manufacturing and marketing the blocks in question through trading companies.

#### 8. Conclusion

Complainant Dolly Toy is entitled to summary determination as a matter of law on the basis of the undisputed facts asserted in the pleadings and affidavits on file.

It is found that respondent Candid Industries, and others not named as parties to this investigation, have engaged in unfair acts violating Section 337 of the Tariff Act, as amended, in connection with the importation into the United States and the sale of certain vinyl-covered foam blocks by reason of the infringement of the '786 patent, the effect and tendency of which is to injure substantially an efficiently and economically operated industry in the United States.

Motion 178-6 is granted.<sup>1/</sup> The record, consisting of Motion 178-6 and all papers filed in connection therewith, together with the pleadings and all requests filed in this matter, is certified to the Commission.

*Janet D. Saxon*

Janet D. Saxon  
Administrative Law Judge

Issued: July 26, 1984

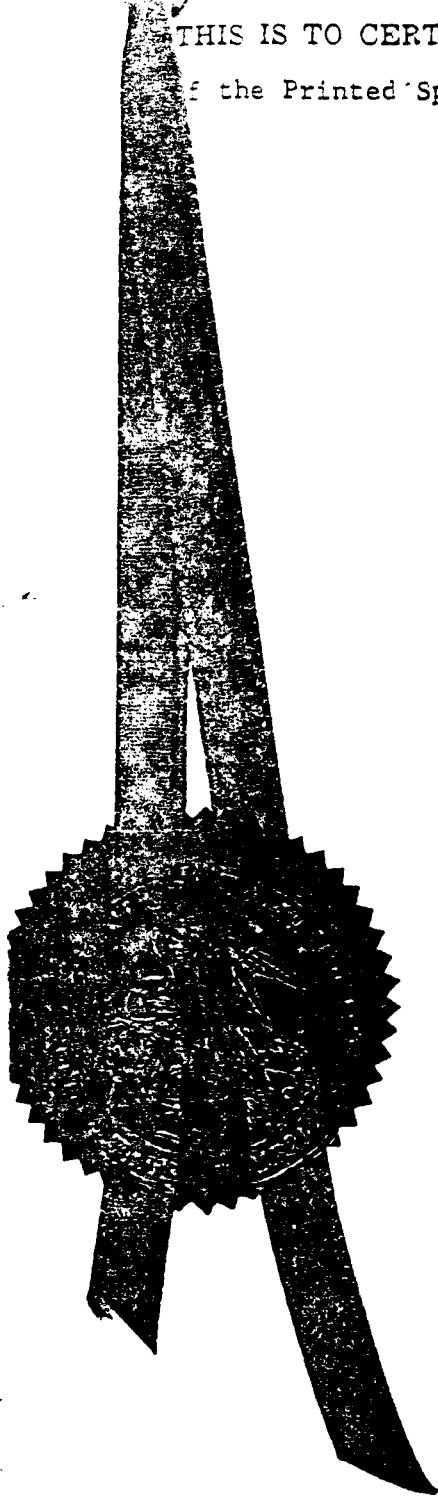
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<sup>1/</sup> Pursuant to Section 210.53(h) of the Commission's Rules the initial determination shall become the determination of the Commission unless a party files a petition for review of the initial determination pursuant to Section 210.54, or the Commission pursuant to Section 210.55 orders on its own motion a review of the initial determination or certain issues therein. For computation of time, see Section 201.14. For computation of additional time after service by mail, see Section 201.16(d).

U. S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

November 9, 1983  
(Date)

THIS IS TO CERTIFY that the annexed is a true copy from the records of this office  
of the Printed Specification and Drawings of U. S. Patent 3,518,786.



By authority of the  
COMMISSIONER OF PATENTS AND TRADEMARKS

*B. E. Hanson*  
Certifying Officer.

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3,518,786

**BLOCK WITH RESILIENT FOAM CORE AND PLASTIC COVER**

John H. Holtvoigt, Tipp City, Ohio, assignor to The Dolly Toy Co., Tipp City, Ohio, a corporation of Ohio  
 Filed Apr. 30, 1968, Ser. No. 725,366

Int. Cl. A63h 33/06

U.S. Cl. 46-24

2 Claims

**ABSTRACT OF THE DISCLOSURE**

A child's safety toy block constructed of resilient and flexible materials so that the child will not be injured if he falls on or attempts to bite into the block. The block includes a flexible outer shell of vinyl plastic having the configuration of a cube which surrounds a similarly shaped cube of polyurethane open cell foam which always returns the configuration of the block to its original shape.

**BACKGROUND OF THE INVENTION**

One of the most popular toys for young children is building blocks made of wood and colorfully painted with numbers, animal pictures, etc. These blocks have aided the development of the child's ability to utilize his hands, as well as the recognition of the material painted on the blocks. In addition, they permitted the child to play by himself and to be occupied for substantial periods of time.

However, these blocks often caused injury to the child when he would fall on the blocks causing painful bruises and sometimes cuts. Moreover, young children, while they are teething, frequently insert the block in the mouth and attempt to chew on the wood. As a result, slivers and small pieces of wood were frequently swallowed, as well as the paint chipped from the blocks, creating sickness of the child. A further disadvantage of these blocks is that they are rather heavy so that when the child threw the block it could do substantial damage when hitting a piece of wooden furniture or another child or adult.

**SUMMARY OF THE INVENTION**

Accordingly, this invention provides a safety toy block which will not normally create injuries when a child falls on, chews, or throws it. The block includes an outer shell having a predetermined configuration and constructed from a relatively thin flexible material which can be printed. The shell surrounds a core of resilient foam having an outer shape substantially identical to the predetermined configuration of the outer shell for maintaining the configuration of the outer shell while permitting the block to be resilient.

In the preferred embodiment, the block is a cube, the outer shell is composed of a soft vinyl plastic and the foam material is polyurethane open cell foam. In addition, in the preferred embodiment, the outer shell is substantially sealed so that it is air tight and the air provides a portion of the resilience of the block. The block is also light weight, inexpensive, free from sharp edges, and colorfully printed.

**BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a perspective view of a plurality of stacked blocks in accordance with the invention;

FIG. 2 is a larger perspective view of one of the blocks;

FIG. 3 is an exploded view showing the various components of the block before assembly;

FIG. 4 is a sectional view taken along the line 4-4 of FIG. 2;

FIG. 5 is an enlargement of one corner of the block;

FIG. 6 is a fragmentary view of a portion of the polyurethane open cell foam; and

FIG. 7 is a perspective view showing the manner in which the block deforms under pressure.

**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

FIGS. 1 and 2 illustrate the toy blocks 10 in accordance with the invention in form of cubes having the outer shell or cover 11 with four side walls 12, 13, 14 and 15 and the top and bottom walls 16 and 17. Each of the walls is colorfully printed so that the blocks 10 are attractive to children and so they provide an educational purpose when the child begins to recognize the letters and the animal figures thereon.

The shell 11 can be cut from an endless strip of material having a width equal to the height of the block so that the four side walls 12-15 are formed integrally and the extreme ends 18 of the strip are secured together to form a short tubular section (FIG. 3). The top and bottom walls 16 and 17 can likewise be cut from the strip and be secured to the top edges 21 and the bottom edges 22 of the block 10 in a conventional manner.

The outer shell 11 is preferably made of a soft flexible vinyl plastic which allows the seams or edges 18, 21 and 22 to be sealed dielectrically by the use of high frequency current. In addition, it is desirable to form a crease at each of the corners 23 of the block to facilitate formation and maintenance of the square corners and edges on the blocks 10. Moreover, the outer shell may be provided with a vent to prohibit bursting thereof when a substantial force is applied thereto.

The inner core 25 (FIGS. 3 and 4) is likewise a cube having dimensions substantially identical to the inner dimensions of the outer shell 11 so that the core always provides the resilience for returning the outer shell to its original configuration. As shown in the greatly enlarged view of FIG. 6, the preferred material is polyurethane open cell foam which is composed of uniformly distributed interconnecting strands 26 which form a three-dimensional structure of openings or pores, without a covering membrane or surface of the type often found in foam rubber materials. The random arrangement of the pores eliminates straight channels through this material so that air flows readily therethrough with minimum resistance. While the pores are not precisely the same size, they are predominately within a range of similar sizes so that the air flow therethrough is uniform throughout.

Thus, when the block 10 is properly formed, the open cell foam core 25 permits the travel of air from one portion of the block to another without any substantial restriction as would occur with conventional closed cell foams. The block 10 therefore acts as if it is filled with air with the foam providing little resistance to deformation, but providing the force for always returning the block to its original configuration.

The numerous safety features make the block 10 exceptionally suited for use by a child. Because the block is light in weight, it can be easily lifted by the child, and will do little or no damage to furniture or another child if thrown. The light weight allows the block to be made larger, e.g. 3-4 inches on a side, whereas a wooden block of the same size would be too heavy for a young child. Likewise, the child will not be injured if he falls on the block and, in fact, the block will cushion his fall. Because of the flexible outer shell 11, the child cannot puncture the block or otherwise be harmed by attempting to chew on the block. The use of vinyl outer shell permits each of the walls 12-17 to be printed continuously, e.g. by a web press, if so desired thereby reducing the cost of manufacturing.

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While the block has been shown as a cube, it is within the scope of the invention to use other configurations, such as pyramids, cones, spheres, etc. Likewise the materials used for the outer shell 11 can be varied without departing from the scope of the invention so long as they provide a soft flexible exterior for the core 25, which also may be formed of other foam materials so long as the necessary resilience is provided to the block.

While the form of apparatus herein described constitute a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of apparatus, and that changes may be made therein without departing from the scope of the invention.

\* What is claimed is:

1. A child's safety toy block comprising a unitary core of resilient foam formed in a symmetrical geometric three-dimensional configuration including at least two substantially planar surfaces defining respectively the top and bottom thereof, said foam having interconnected pores so that air may move without substantial restriction from one portion of the core to another thus providing little resistance to deformation upon the application of a distorting force to one or more of the surfaces thereof while providing a constant restoring force tending to return the block fully to its original configuration upon the removal of such distorting force, and side surfaces connecting said top and bottom surfaces, and a soft, thin, flexible and printable heat sealable plastic covering formed about said core and closely conforming to the shape of said core including surfaces corresponding to said core surfaces in closely spaced but non-adhesive relation thereto, said plastic covering being heat sealed without substantial overlap about two perimeters of said core corresponding to the junctions of the sides thereof with its top surface thereof and its bottom surface fully

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enclosing said core therein said block being of a size rendering it conveniently holdable, manipulable and throwable by a child of the size normally attained during normal teething years.

2. The block of claim 1 in which said covering is formed in three pieces including a top piece, a bottom piece and a single side piece with said side piece joining said top and bottom pieces at said core perimeters and said side piece being joined to itself adjacent one vertical edge of said core extending between said perimeters.

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F. BARRY SHAY, Primary Examiner

U.S. Cl. X.R.

5-355; 273-58

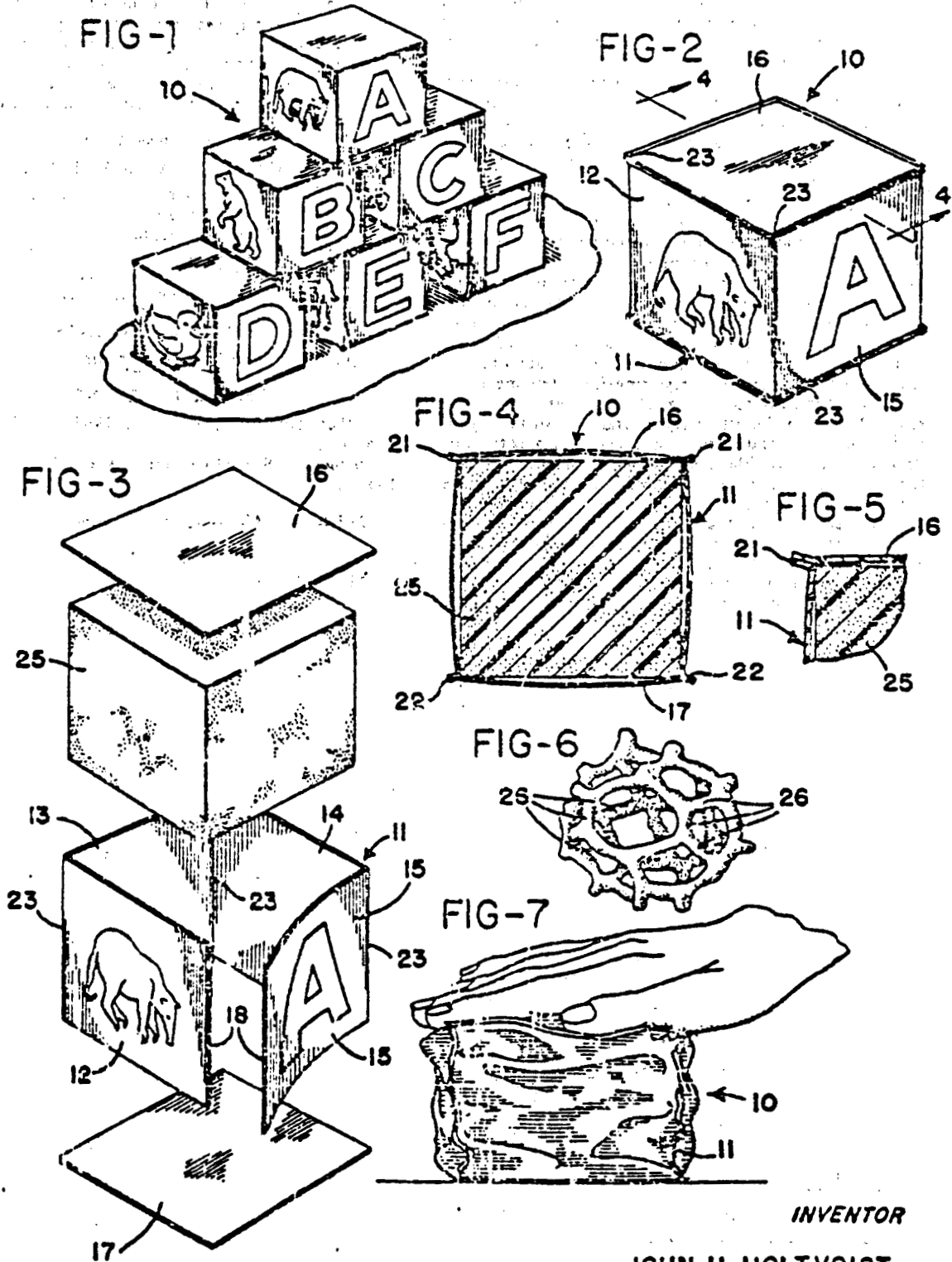
July 7, 1970

J. H. HOLTVOIGT

3,518,786

BLOCK WITH RESILIENT FOAM CORE AND PLASTIC COVER

Filed April 30, 1968



INVENTOR

JOHN H. HOLTVOIGT

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