Nov. 15, 1955 W. A. RINGLER 2,723,488

BOTTLE CARRIER CONVERTIBLE TO A TOY

Filed Oct. 18, 1950 2 Sheets-Sheet 1

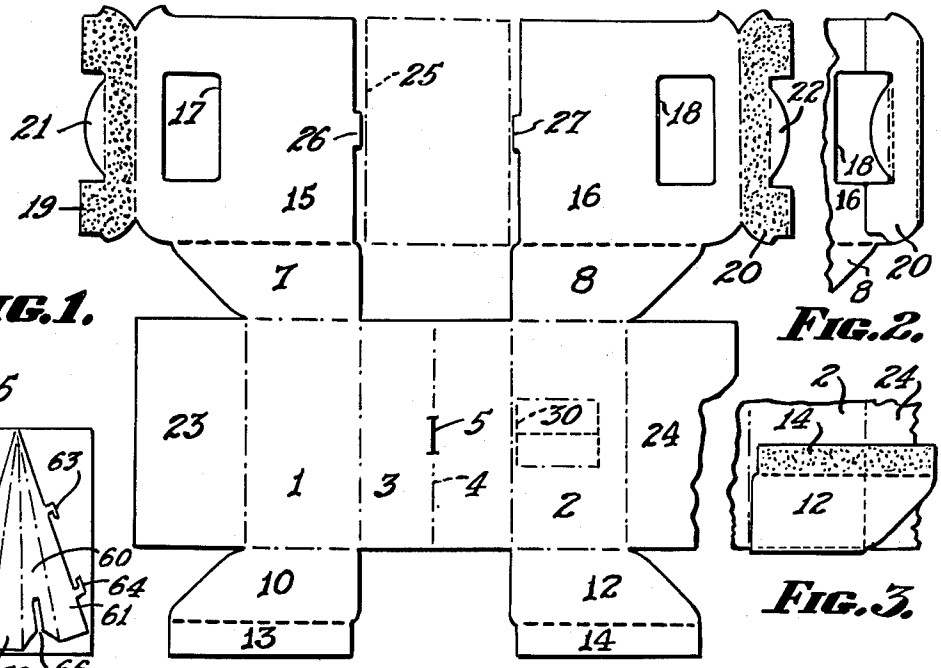


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 15.

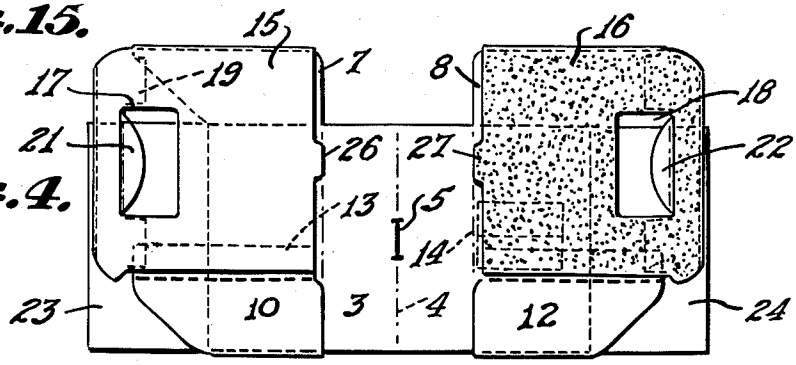


FIG. 4.

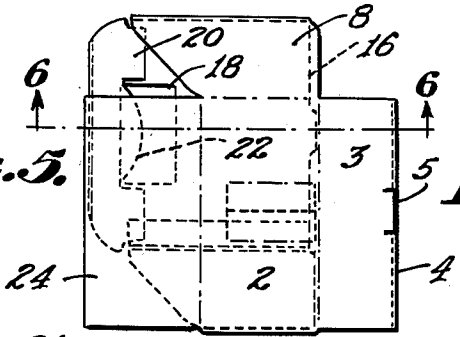


FIG. 5.

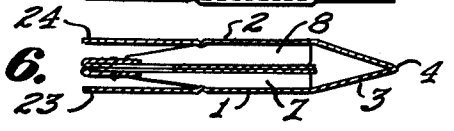


FIG. 6.

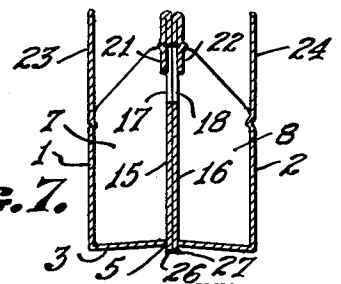


FIG. 7.

INVENTOR.
WILLIAM A. RINGLER,
BY
Allen & Allen
ATTORNEYS.

Nov. 15, 1955 W. A. RINGLER 2,723,488

BOTTLE CARRIER CONVERTIBLE TO A TOY

Filed Oct. 18, 1950 2 Sheets-Sheet 2

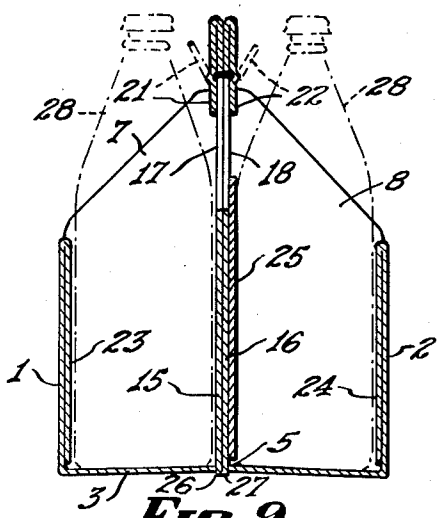


FIG. 9.

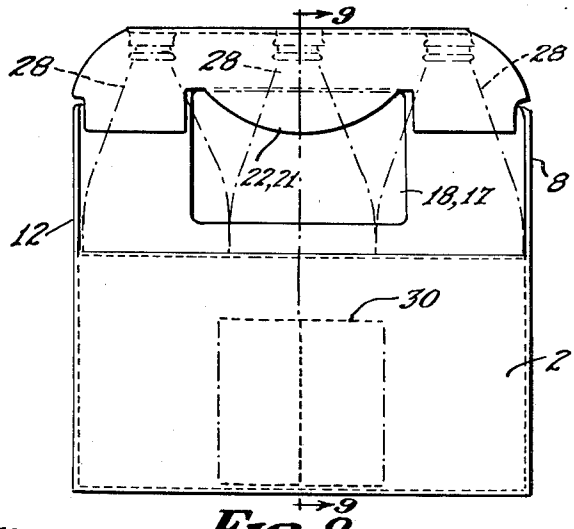


FIG. 8.

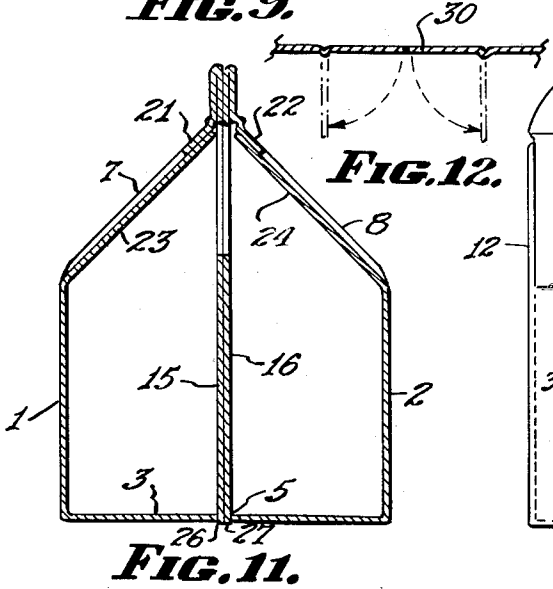


FIG. 12.

FIG. 11.

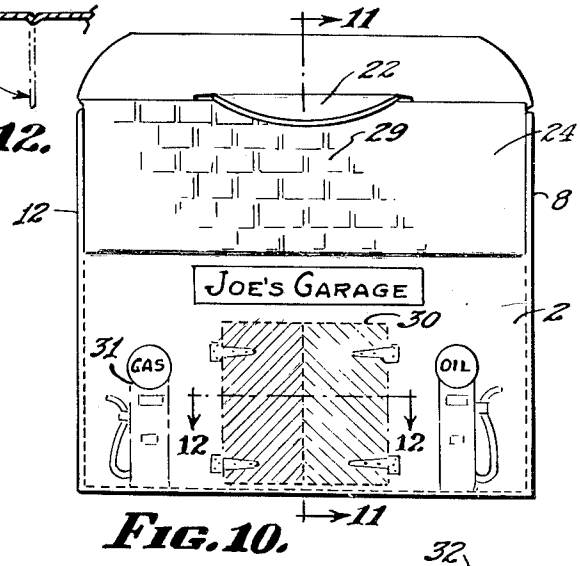


FIG. 10.

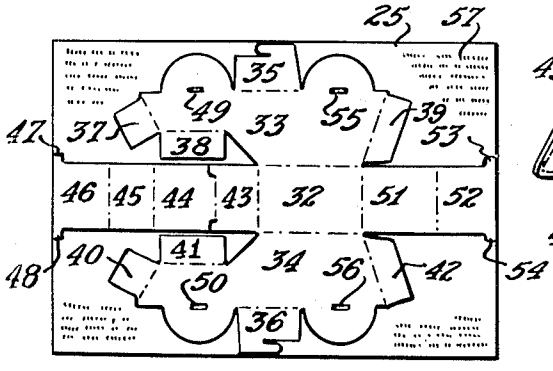


FIG. 13.

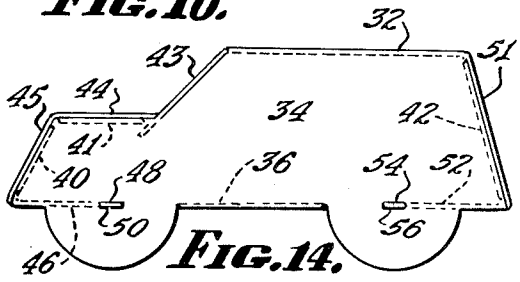


FIG. 14.

INVENTOR.
WILLIAM A. RINGLER,
BY Allen & Allen
ATTORNEYS.

United States Patent Office 2,723,488 Patented Nov. 15, 1955

2,723,488

BOTTLE CARRIER CONVERTIBLE TO A TOY

William A. Ringler, Wayne, Pa., assignor to The Gardner Board and Carton Co., Middletown, Ohio, a corporation of Ohio

Application October 18, 1950, Serial No. 190,815

3 Claims. (Cl. 46—11)

My invention relates to carriers for sales units of such articles as bottles of beverage, cans and the like. The practice, for example, of selling soft drinks in sales units of six bottles in a paperboard carrier is old and well-known; and many varieties of paperboard carrier have hitherto been developed. Many such carriers are designed for heavy duty and the making of a number of sales or delivery trips. The mortality is, however, high and many carriers are never returned by the purchaser. The more recent development of disposable bottles, cans and the like has created a demand for various forms of light-duty carriers which are not to be returned; but such carriers if very cheaply made are frequently inadequate or present other disadvantages.

A primary object of my invention is to provide a carrier which not only will be adequate for the merchandising and transportation of a sales unit of articles but also will have a separate utility to the purchaser of the sales unit, thus enhancing the merchandising appeal of the sales unit itself and justifying costwise the use of a carrier of sufficiently sturdy construction to serve the primary purpose, even though the carrier is not to be returned.

It is an object of my invention to provide a carrier having the advantages set forth above which may be made inexpensively and with little waste of board so that the purposes of this invention may be attained at substantially no extra cost, weight for weight, of the paperboard involved.

It is an object of my invention to provide a carrier having the above advantages which is capable of being loaded and unloaded by mechanical means while positioned in an appropriate bottle crate, which is coming to be a current practice in the soft drink industry.

It is an object of my invention to provide a carrier having the above advantages and in addition a novel means for maintaining the carrier in erected position for loading and for other purposes.

These and other objects of my invention, which will be set forth hereinafter or will be apparent to one skilled in the art upon reading these specifications, I accomplish by that structure and arrangement of parts of which I shall now describe an exemplary embodiment. Reference is made to the accompanying drawings wherein:

Figure 1 is a plan view of a blank for my carrier.

Figures 2, 3, 4 and 5 are respectively plan views of the carrier in the different stages of folding and gluing to produce the collapsed or knocked down structure.

Figure 6 is a sectional view of the collapsed structure taken along the line 6—6 of Figure 5.

Figure 7 is a transverse section of the erected carrier.

Figure 8 is a side elevation of the erected carrier showing a load of bottles in dotted lines.

Figure 9 is a transverse section of the erected carrier taken along the line 9—9 of Figure 8.

Figure 10 is a side elevation of the carrier with the parts in the position they occupy when the carrier is performing its secondary function.

Figure 11 is a transverse sectional view taken along the line 11—11 of Figure 10.

Figure 12 is a partial sectional view taken along the line 12—12 of Figure 10 showing the operation of door elements.

Figure 13 is a plan view of a blank for a supplementary structure.

Figure 14 is an elevational view of the supplementary structure formed from the blank of Figure 13.

Figure 15 is a plan view of a blank for another type of supplementary structure.

In the several figures solid lines indicate lines of cut, dot-dash lines indicate lines of displacement score, and dashed lines indicate cut scores or lines along which the paperboard may be severed by the user. The specific nature of the score lines does not form a limitation on the invention, the skilled worker being readily able to choose suitable types of score lines in accordance with the bending requirements of the weights of board selected by him. Likewise, the weight and characteristics of the paperboard per se form no limitations on the invention and may be widely varied in accordance with the requirements of use.

In Figure 1 I have shown a blank of paperboard cut and scored to present a pair of side wall elements 1 and 2 connected by a bottom element 3 which has a medial score line 4. A slit 5, preferably in the form of an H-shaped cut, is located centrally of the score line 4. Partial end wall forming elements 7, 8, 10 and 12 are articulated to the ends of the side walls 1 and 2 respectively. Two of these end wall forming elements are provided with articulated glue flaps 13 and 14. The other two carry in articulation central longitudinal partition forming elements 15 and 16. These partition forming elements are of greater depth than the side walls 1 and 2. Their precise depth may be varied as desired and will be varied usually depending upon the height of the articles to be placed in the carrier. Upper portions of the end wall forming elements 7, 8, 10 and 12 are tapered as shown substantially from the upper edges of the side wall elements to positions at or near the tops of the partition forming elements.

The partition forming elements may be provided with hand holes 17 and 18 and also are preferably provided with articulated reinforcing elements 19 and 20. The shape of these reinforcing elements may be varied; but they are provided with small articulated tongues 21 and 22 designed, when the reinforcing elements are bent over and secured, to extend slightly into the areas of the hand holes 17 and 18, the reinforcing elements being otherwise cut away over the areas of the hand holes.

The upper edges of the side walls 1 and 2 are provided with articulated panel elements 23 and 24. The purposes of these elements and their dimensions will hereinafter be set forth.

It will be noted that the blank of Figure 1 provides a space between the central partition forming elements 15 and 16 and that a card-like element 25 has been shown in this space. Its utility will be later disclosed; but it will be seen that the blank and the card can be formed concurrently from a larger sheet with very little wastage of board, and that the blanks as shown are well adapted to be formed in multiples on larger sheets, as is current practice in the carton industry. The blanks are formed on conventional cutting and scoring presses from sheets of paperboard which may be printed as desired.

I shall now describe the manner in which an operative carrier can be formed from the blank of Figure 1, it being understood that the folding and gluing operations may be performed on conventional folding and gluing machinery, either all on the same machine, or certain operations on different machines. The reinforcing ele-

ments, 19 and 20 indicated as covered with a glue deposit by the stippling in Figure 1, are folded over and adhered against the central longitudinal partition forming elements 15 and 16 as shown in Figure 2. This operation is preferably performed first. Next, the partial end forming elements 10 and 12 are folded inwardly overlying the side walls 1 and 2 and their associated panels 23 and 24, as shown in Figure 3, where stippling indicates that a deposit of glue may be formed on the glue flaps 13 and 14. The longitudinal partition forming elements 15 and 16 are then folded over on their score lines. This results in bringing their outer edges into overlapping relationship with the glue flaps and adhering them thereto as illustrated in Figure 4 of the drawings. Finally, with a glue deposit on one of the longitudinal partition forming elements, as shown by stippling in Figure 4, the blank is folded along the medial score line 4 of the bottom element 3. This results in juxtaposition and adhesive union of the longitudinal partition forming elements 15 and 16; and the carrier is thus finished in knocked down or collapsed condition as illustrated in Figure 5 and in section in Figure 6. It will be observed that the carrier is of the type in which collapsibility is attained by lateral displacement of the longitudinal partition with respect to the side walls and a folding of the bottom element along its medial score line. The carrier may be erected by moving the longitudinal partition to a position in alignment with and wholly between the side wall elements. This results in separation of the side wall elements through the action of the partial end wall elements 7, 8, 10 and 12 together with an unfolding of the parts of the bottom panel 3.

Referring again to the blank of Figure 1, it will be seen that the lower edges of the longitudinal partition forming elements are relieved upwardly excepting at the center so as to provide a pair of shallow downwardly extending tongues 26 and 27. The erected condition of the carrier may initially be maintained by pressing upwardly on the central part of the bottom panel 3 so that these tongues enter the slit 5. This is illustrated in Figure 7 where it will also be noted that the panel elements 23 and 24 are now extending upwardly from the side walls. Before the carrier is filled, these panels are folded down inside the side walls 1 and 2, as shown in Figure 9, where they also serve to maintain the carrier in erected position. The carrier can then be filled with the bottles 28 or other articles to be carried. This may be done by machinery because the carrier will maintain itself in erected condition as described and in the erected condition presents no parts which will interfere with the entry of the guiding fingers of the bottle loading machines. I have shown in Figures 8 and 9 a carrier in which the central partition does not rise above the tops of the bottles so as to permit stacking, but other configurations may be employed. For example, it is within the scope of my invention to employ a wire handle extending above the tops of the handles or to prolong the partition so as to provide a hand hole above the tops of the bottles, the parts being foldable for stacking if desired. It will be seen that the upwardly tapered extensions of the end wall forming elements brace the central partition and prevent its displacement.

The assembled and filled carrier will be ready for merchandising purposes upon the insertion of the card 25 (Figure 9) alongside the central partition and between it and one row of the bottles. The small tongues 21 and 22 do not interfere with the carrying of the assembly and will usually automatically fold upwardly, as shown in dotted lines in Figure 9, during this operation.

It has been indicated above that one of the objects of the invention is to provide a secondary utility for the carrier after it has served its primary purpose. In this instance the secondary utility of the structure is that of providing a toy for the children of the household. When the bottles have been removed from the carrier, the

panels 23 and 24 are withdrawn from the interior of the carrier and placed in the positions shown in Figures 10 and 11. They now lie slantwise upwardly, extending from the upper edges of the side walls 1 and 2 to a line near the upper portion of the central partition, where their upper edges may be caught under the small tongues 21 and 22, as indicated. In this position the end edges of the panels 23 and 24 will lie inside the edges of the tapered parts of the end wall forming elements, and the erected condition of the carrier will be maintained irrespective of the engagement of the tongues 26, 27 in the slot 5.

It will now be evident from Figures 10 and 11 that the carrier has taken the form of a small or toy building. The carrier may initially be appropriately printed for this purpose such, for example, as providing a representation of roofing 29 on the panels 23 and 24 and by printing the side and end walls of the structure with representations of brick or other siding, windows, doors and other appurtenances. It will be understood that advertising matter or indications of the original contents of the carrier may be included on various parts of it, as may be desired.

In Figure 1 I have shown at 30 an organization of cut scores and displacement scores in a side wall 2 such that when the board is severed along the lines of cut scores, double doors will be formed, their operation being shown in Figure 12 of the drawings. These doors may be appropriately printed, as shown in Figure 10, and other single or double doors may be formed in the other side wall or in end walls of the structure including, if desired, openable windows and the like. The particular structure shown in Figure 10 is a garage and representations of gasoline pumps or the like may be included, as at 31.

Further, my invention contemplates the provision of supplementary structures to increase the utility of the building and its interest for children. If the building represents a garage, such a supplementary structure may be a small automobile. This is formed in knocked down condition from the carton element 25 mentioned above, appropriately printed and cut and scored as shown in Figure 13. Here a panel 32 forms the top of the car, while laterally articulated panels 33 and 34 are configured to form side members inclusive of the sides of the body, the hood and fenders and the lower parts of the wheels. Locking tongues 35 and 36 are provided to be interengaged beneath the body when the side panels are bent at right angles to the top panel 32. The side panels are provided with various supporting tongues 37–42 inclusive. At the ends of the panel 32, I provide extensions, the first of which has a panel 43 forming the windshield and having small tongues to engage beneath the supporting tongues 38 and 41, together with a panel 44 forming the top of the hood, a panel 45 forming the front of the car and a panel 46 foldable beneath the structure and having end tongues 47 and 48 which engage in slots 49 and 50 in the representations of the front wheels. The second extension of the panel 32 is configured to provide a panel 51 forming the rear portion of the body and a panel 52 which again folds beneath the structure and is provided with end tongues 53 and 54 to engage in slots 55 and 56 in the representations of the rear wheels. The erected structure is shown as such in Figure 14; but it will be understood that it will be appropriately printed to enhance the representation of an automobile, truck or the like. The lines of cut in the card 25 may be interrupted at intervals so that the blank for the automobile will remain in assembly with the card until removed therefrom; and the card may be printed with instructions, as at 57.

The supplementary structure illustrated in Figures 13 and 14 is an assembly only of structures which may be supplied with my carriers. The carriers may be printed to represent different types of buildings so that a child

can collect and assemble an entire village. A supplementary structure in the form of a car or truck is, of course, appropriate to a garage or even to a private dwelling; a fire engine is appropriate to a fire house; a boat is appropriate to a boat house, and the like. Other supplementary structures such as those forming fences, small bridges, etc. may be supplied. If the building represents a church, a supplementary structure to form a steeple is appropriate. Such a structure is illustrated in exemplary form in Figure 15 where the card **25** is cut and scored to provide panels **58–61** for the side elements of the structure together with a slotted attachment flap **62** on one of the panels and locking tongues **63** and **64** on the opposite one of the panels. A pair of panels, which will lie opposite each other in the erected steeple structure, may be provided with slots **65** and **66** to accommodate the projecting portion of the carrier handle which, as will be seen in Figures 10 and 11, forms a roof ridge. Thus the steeple may be held in place on the carrier.

Modifications may be made in my invention without departing from the spirit of it, the embodiments herein described being exemplary only. Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a dual purpose collapsible bottle carrier, a medially scored bottom panel, side wall panels articulated to opposite side edges of said bottom panel, medially scored end wall panels articulated to the end edges of said side wall panels, and a central longitudinal partition of greater depth than said side wall panels articulated at its ends to said end walls and projecting upwardly above the sides of said carrier, the side edges of said end wall panels tapering upwardly from the upper edges of said side wall panels to positions near the top of said central longitudinal partition, additional panels articulated to the upper edges of said side walls, said additional panels having a width substantially equal to the length of the tapered side edges of said end wall panels and adapted to lie in two positions in the erected carrier, a first position in which said additional panels are juxtaposed to the inner surfaces of said side walls when the carrier is in use for carrying bottles, and a second position in which said additional panels extend aslant upwardly from the side

walls to the center partition in alignment with the tapered edges of the said end wall panels to form roof elements of a toy building the walls of which are defined by the side and end wall panels of the carrier and the gables of which are formed by the tapered portions of the said end walls, and a displaceable element formed in at least one of said side wall panels by cut and displacement score lines, said element being displaceable upon severance of said cut score lines, one of said additional panels when in the said first mentioned position covering said displaceable element to prevent accidental displacement thereof by the contents of the carrier.

2. The dual purpose structure claimed in claim 1 wherein said central partition comprises a pair of juxtaposed partition elements having mating hand-hole openings and articulated reinforcement elements along their top edges, which reinforcement elements lie in infolded and adhesively secured condition, said reinforcement elements including downwardly extending tongues which, when said additional panels are in the said second position, engage edge portions of the said panels to maintain them in place, and projections on the bottom edges of said center partition forming elements co-acting with said bottom panel to maintain the carrier in the erected condition.

3. The structure claimed in claim 2 in combination with a planar card element insertable in said carrier between the central partition and the contents thereof, said card element being printed, cut and scored to form an appurtenant structure for the said toy building.

References Cited in the file of this patent

UNITED STATES PATENTS

619,757	Johnstone et al.	Feb. 21, 1899
1,911,215	Walter	May 30, 1933
1,941,538	Costello	Jan. 2, 1934
1,973,035	Barron	Sept. 11, 1934
2,147,675	Shoemaker et al.	Feb. 21, 1939
2,306,343	Neubecker et al.	Dec. 22, 1942
2,529,675	Brulin	Nov. 14, 1950
2,598,920	Keith	June 3, 1952

FOREIGN PATENTS

803,112	France	June 29, 1936