

[54] **BUILDING BLOCK OF EMPTY CANS**

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[51] Int. Cl. **E04c 1/06**

[58] Field of Search... **52/381, 577, 415, 442, DIG. 9, 52/408, 303, 382, 750, 613; 206/65. C**

[56] **References Cited**

UNITED STATES PATENTS

1,239,770	9/1917	Coleman	52/576 X
1,382,095	6/1921	Lambert	52/DIG. 9
1,465,653	8/1923	Olander	52/382
1,477,520	12/1923	Pittman	52/DIG. 9
2,667,995	2/1954	Bruce et al.	206/65 C
3,416,217	12/1968	Walker	52/DIG. 9
984,541	2/1911	Coleman	52/408

FOREIGN PATENTS OR APPLICATIONS

35,816	10/1922	Norway	52/576
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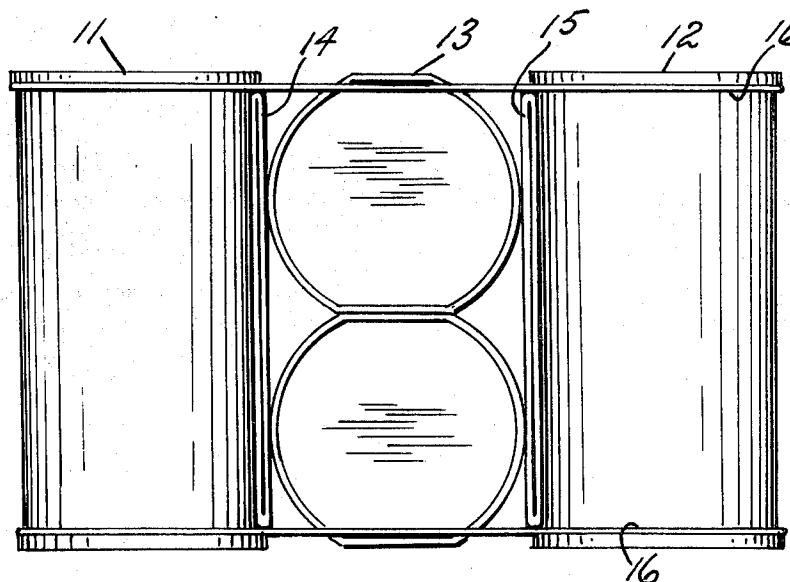
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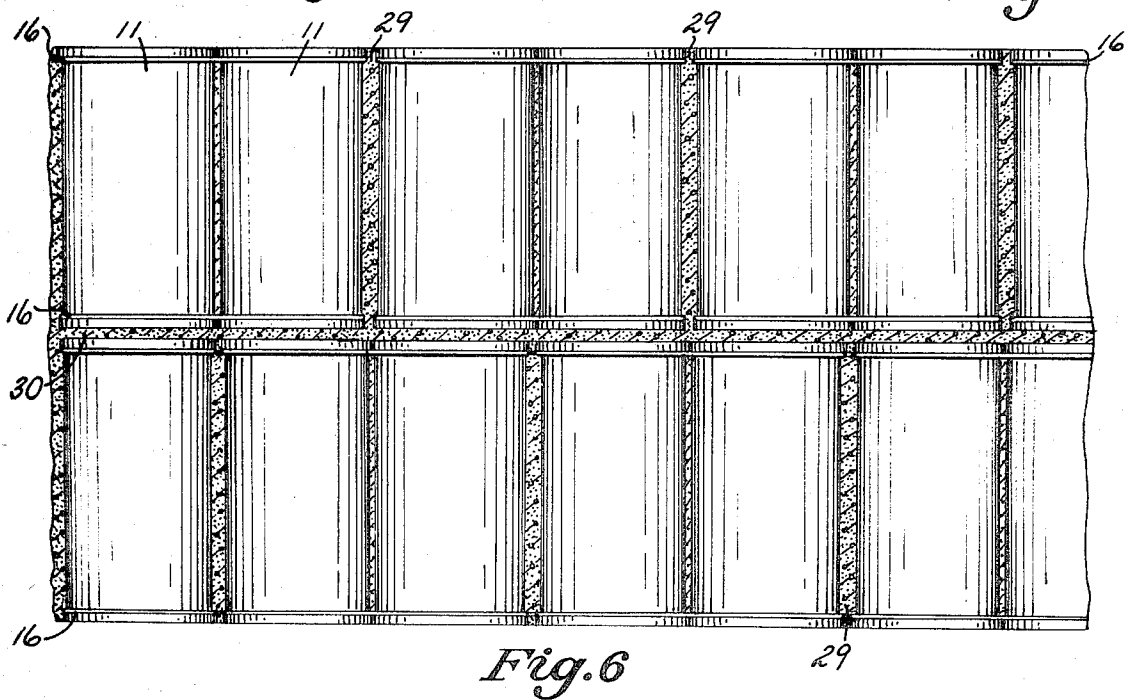
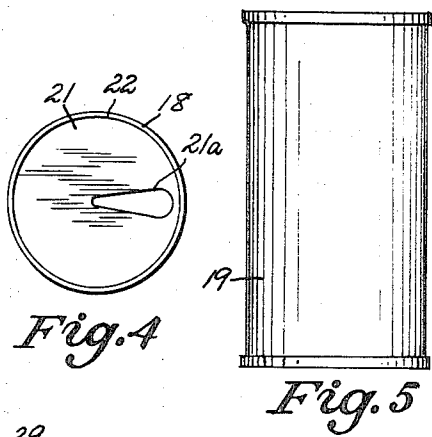
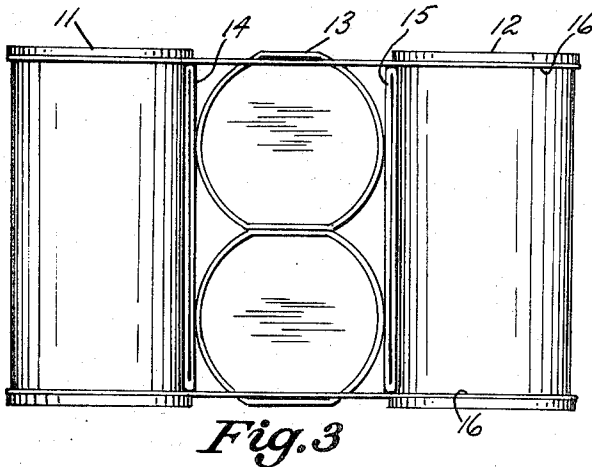
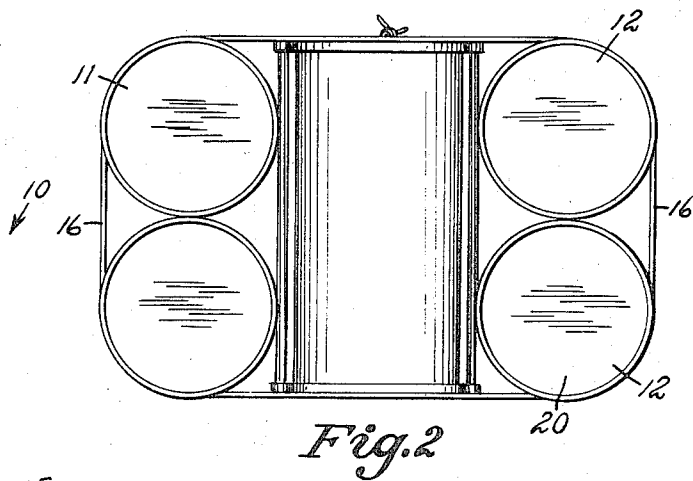
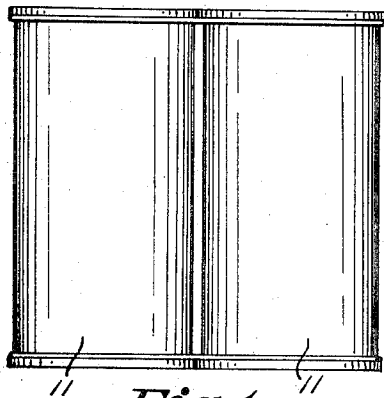
Attorney—Charles E. Temko

[57] **ABSTRACT**

A building element or block consisting of empty substantially uniformly sized cans which are assembled in a wall-like structure using mortar joints and without the necessity of embedding the cans in concrete or other cementitious material. Each element consists of first and second pairs of cans standing in a first direction, a third pair of cans disposed intermediate said first and second pairs, the principal axes of which are at right angles with respect to those of said first and second pairs. A seventh can is reduced to flattened condition and positioned between said first mentioned and third mentioned pair of cans, and an eighth can is similarly flattened to be positioned between said second pair and said third pair to serve as weather stops. The assembled element is maintained in such condition by wire cinctures held in position by the rims of said first and second pairs of cans.

4 Claims, 6 Drawing Figures





BUILDING BLOCK OF EMPTY CANS

This invention relates generally to the field of building elements or blocks, and more particularly to an improved block made almost entirely of waste materials, so that use of the block not only disposes of the waste materials, but provides a source of low cost building material.

In recent years, there has been a tendency to package comestible liquids in cans, as distinguished from previously used bottles, so that the containers are essentially of a non-returnable nature. While such packaging does reduce the cost of distribution, a concomitant result is the ever increasing amount of garbage of a non-combustible nature which must be removed from the point of consumption. In the case of soft drinks and beer, it is common practice to employ a 12 fluid ounce can, the diameter of which is approximately half the height. The removal of the contents from the can is normally accomplished by rupturing a tear-seal to provide a small opening through which the contents can be poured, leaving the end wall in which the opening is disposed substantially intact, so that the mechanical strength of the can is not appreciably impaired. The interior of the can quickly dries, so that even a washing operation is not required. The empty can, therefore, provides a good structural unit available in ever increasing abundance at practically no cost.

It is known in the art to incorporate empty cans as fillers in concrete and other cementitious material building blocks in which the cans serve the function of producing voids thereby lowering the overall weight of the building element, and the amount of cementitious material necessary to manufacture it. However, such building elements are still relatively heavy, expensive to manufacture, and the saving in cost effected by the use of the cans is not substantial.

It is therefore among the principal objects of the present invention to provide an improved building element or block, in which substantially all of the material comprising the same is essentially waste material.

Another object of the invention lies in the provision of an improved building element or block in which the cost of fabrication may be of an extremely low order, far below that of existing prior art devices.

Yet another object of the invention lies in the provision of an improved building element or block, possessed of the above advantages, which is held together by wire prior to use, and which offers irregular surfaces on at least four sides thereof, whereby the same may be conveniently interconnected to similar units by conventional mortar joints.

Still another object of the invention lies in the provision of an improved building element or block which may be of very light weight, consistent with high mechanical strength, thereby permitting a relatively large number of such blocks to be laid over a relatively short period of time.

These objects, as well as other incidental ends and advantages, will more fully appear in the progress of the following disclosure, and be pointed out in the appended claims.

In the drawing, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIG. 1 is a front end elevational view of an embodiment of the invention.

FIG. 2 is a top plan view thereof.

FIG. 3 is a side elevational view thereof, as seen from the right hand portion of FIG. 1.

FIG. 4 is an end elevational view of an individual can after the original contents thereof have been drained.

FIG. 5 is a side elevational view of the can shown in FIG. 4.

FIG. 6 is a view in elevation showing a wall-like structure constructed using a plurality of elements shown in FIGS. 1 to 3, inclusive.

In accordance with the invention, the device, generally indicated by reference character 10, comprises broadly: a first pair of cans 11, a second pair of cans 12, a third pair of cans 13, a first weather stop 14, a second weather stop 15, and wire cinctures 16.

Although almost any size and shape of can maybe employed, empty beverage cans have the advantage of a relatively intact pair of end walls, thereby assuring adequate mechanical strength. Thus, as seen in FIGS. 4 and 5 in the drawing, the individual can 18 includes a tubular side wall 19 having an intact end wall 20 and a second end wall 21 having only a relatively small opening 21a therein, both end walls being interconnected to the side wall 19 by rims 22.

Assembly of the unit is illustrated in FIGS. 1 to 3, inclusive, in which the first pair of cans 11 are stood with their axes in vertical orientation. The second pair of cans 12 is similarly positioned therebehind. In the interstice therebetween, the third pair of cans 13 is placed with the principal axes thereof at right angles with respect to the axes of the first and second pairs, and the third pair is separated from the first and second pairs by the weather stops 14 and 15 which are most conveniently formed by merely flattening two additional cans. The unit is then maintained in assembled condition by first and second lengths of wire 16 forming cinctures which are twisted together to tighten the unit, and are maintained thereon by engagement with the rims 22 of the first and second pairs. In assembled condition, the unit may be conveniently handled without fear of disassembly much in the manner of a conventional building block.

FIG. 6 illustrates the building of a wall using a plurality of devices 10, in which the units are assembled in staggered relation. Because of the presence of end walls on four of the six sides of the device, adequate vertical and horizontal mortar joints 29 and 30, respectively, are easily made, and when set, the wall-like structure has great mechanical strength. It may be used exactly as shown, with only the curvilinear surfaces of the first pairs of cans exposed, or where a more attractive appearance is desired, the surfaces may be stuccoed in well known manner to provide a smooth outer surface.

The inner surface may be similarly stuccoed, or covered with sheets of aluminum foil to serve as insulation.

It may thus be seen that my unit offers many advantages lacking in prior art construction. Rather than using the cans as mere fillers, there has been created a structural unit made entirely of used cans, using the cans in such manner as to obtain maximum advantage from each can for mechanical strength, insulation and weather stopping. The unit may be made and laid by a relatively unskilled person, and its use reduces the demand for wood in residential construction. An inexpen-

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sive means is provided whereby more square footage can be built for the same cost.

I wish it to be understood that I do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the present invention relates.

I claim:

1. A building element or block consisting of a plurality of empty cylindrical cans, the height of which is approximately twice the diameter thereof, said cans including at least one pair of cans in juxtaposed parallel relation, the axes of which extend in a first direction, a second pair of cans arranged in juxtaposed relation with respect to said first pair of cans, and with the principal axes of said second pair of cans substantially per-

pendicular to the axes of said first pair of cans; a planar weather stop member positioned between said first and second pairs of cans, and means encircling said first and second pairs of cans to maintain the same in assembled condition.

2. Structure in accordance with claim 1, including a third pair of cans, the axes of which are parallel to said first pair of cans, and disposed adjacent an opposite side of said second pair of cans.

3. Structure in accordance with claim 2, including a second planar weather stop member disposed between said second and third pairs of cans.

4. Structure in accordance with claim 1, in which said encircling means is in the form of wire cinctures.

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